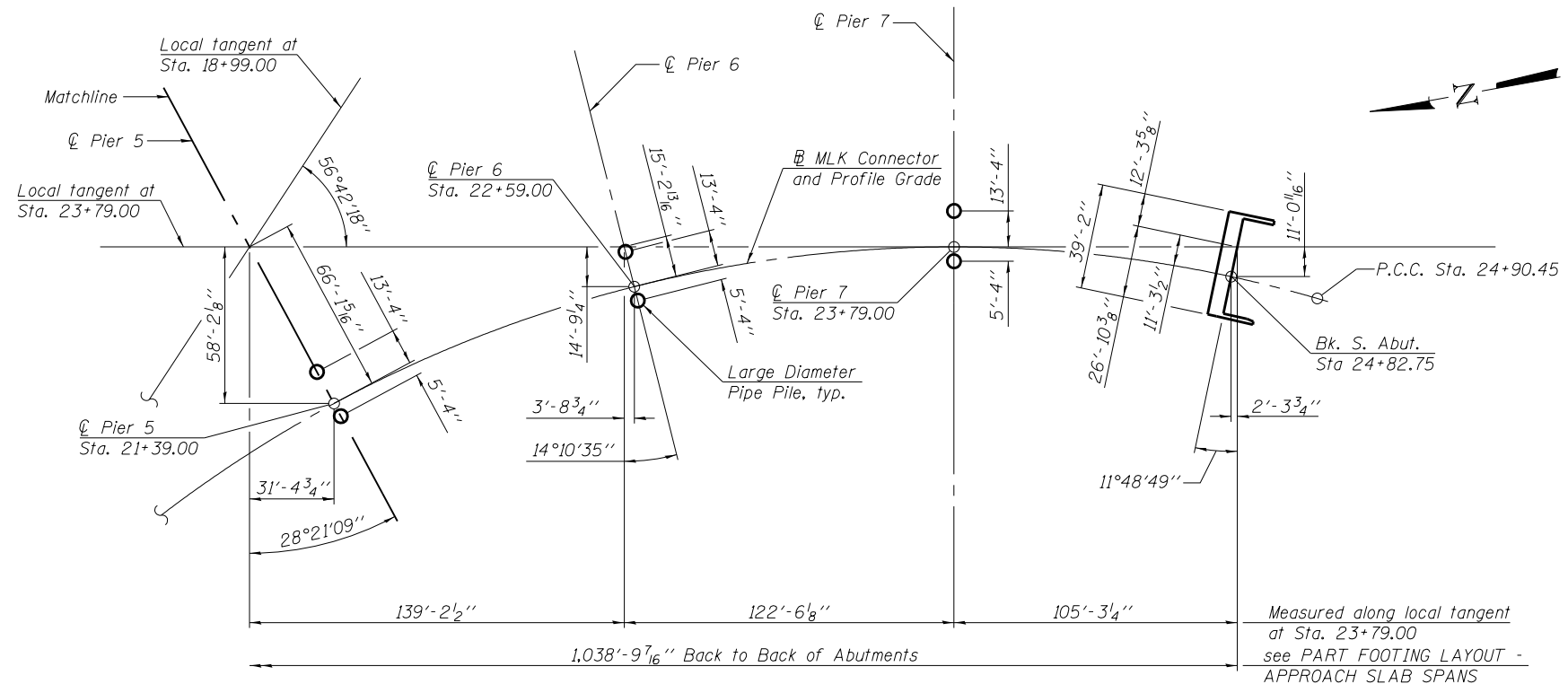


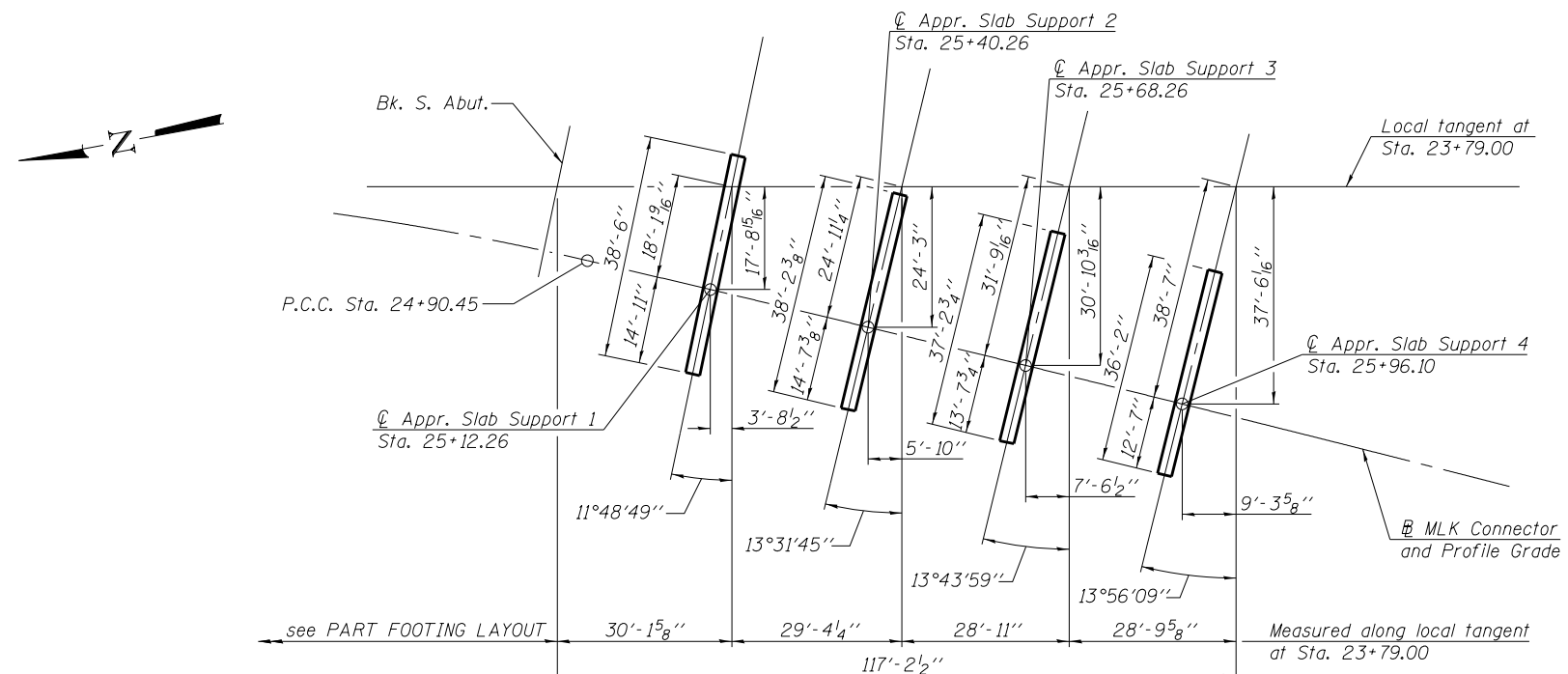
**PART FOOTING LAYOUT**

Note:  
For pier 5 to South Abutment  
and Approach Slab Spans see  
sheet 7 of 97.

FILE NAME = X:\1309400-MLK\Cad\1082034-76009.dgn 	USER NAME = elagemann PLOT SCALE = PLOT DATE = 8/7/2014	DESIGNED - E.M. Lagemann CHECKED - T.S. Friederich DRAWN - C.A. Buettner CHECKED - J.J. Derner	REVISED REVISED REVISED REVISED	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>FOOTING LAYOUT STRUCTURE NO. 082-0349</b>	F.A.I. RTE. = 64 SECTION = 82-(1,4)B-1	COUNTY = ST. CLAIR CONTRACT NO. 76G09	TOTAL SHEETS = 406 SHEET NO. = 101
	SHEET NO. 6 OF 97 SHEETS					ILLINOIS FED. AID PROJECT		

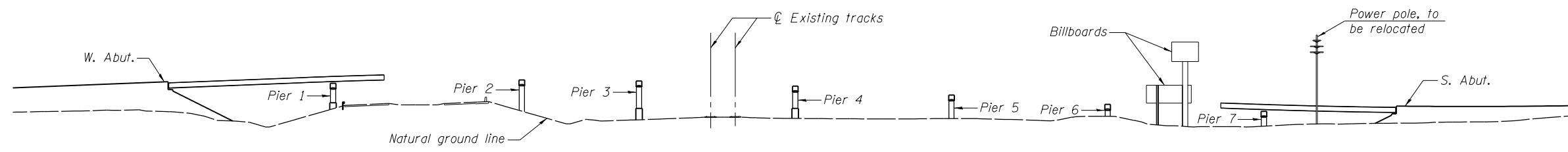


**PART FOOTING LAYOUT**

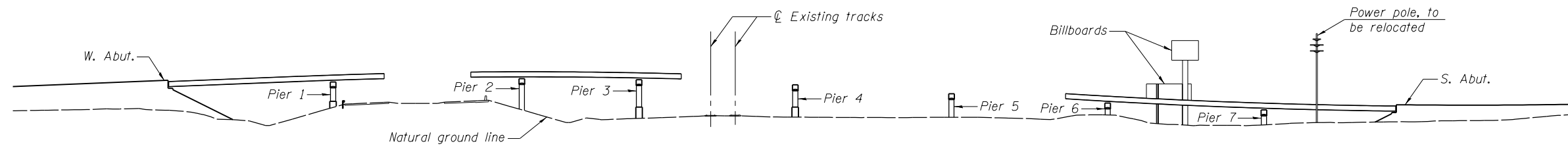


**PART FOOTING LAYOUT - APPROACH SLAB SPANS**

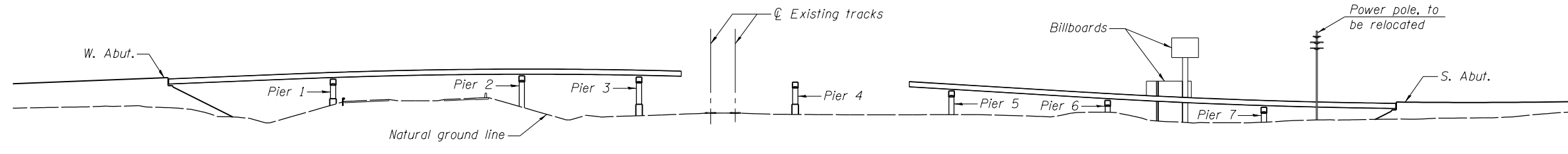
Note:  
For West Abutment to pier 5,  
see sheet 6 of 97.



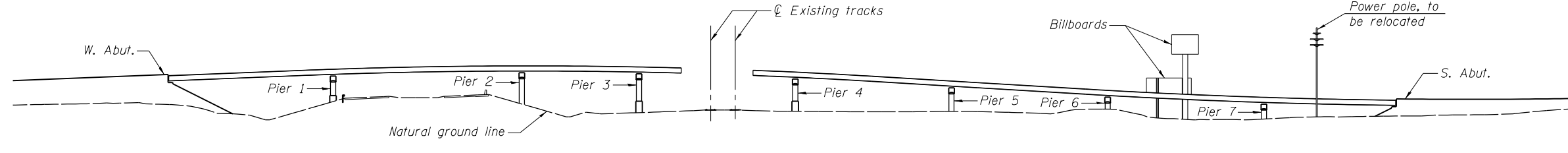
**ERECTION SEQUENCE 1**



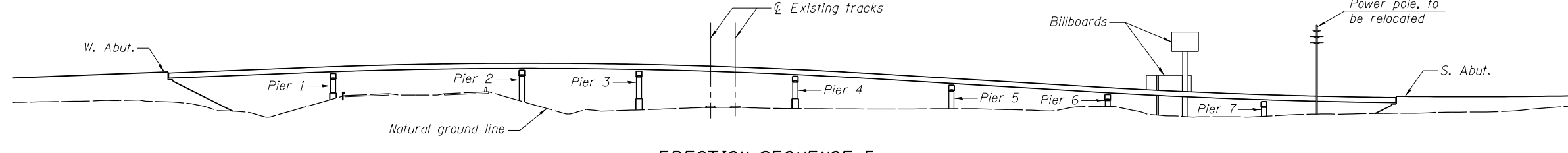
**ERECTION SEQUENCE 2**



**ERECTION SEQUENCE 3**



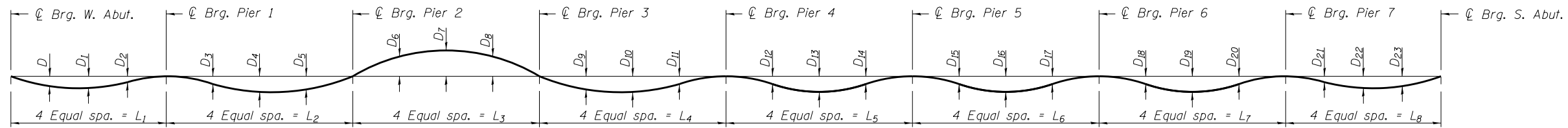
**ERECTION SEQUENCE 4**



**ERECTION SEQUENCE 5**

Note:  
Erection sequences shown are suggested. Actual erection sequence will be to the Contractor's discretion and in accordance with the special provision "Erection of Complex Steel Structures".

FILE NAME = X:\1309400-MLK\Cad\15\082034-76009.dgn USER NAME = elagemann PLOT SCALE = PLOT DATE = 8/7/2014	DESIGNED - E.M. Lagemann CHECKED - T.S. Friederich	REVISED REVISED	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SUGGESTED ERECTION SEQUENCE STRUCTURE NO. 082-0349</b>	F.A.I. RTÉ. 64	SECTION 82-1(4)B-1	COUNTY ST. CLAIR	TOTAL SHEETS 406	SHEET NO. 103
	DRAWN - C.A. Buettner CHECKED - E.M. Lagemann	REVISED REVISED			SHEET NO. 8 OF 97 SHEETS			CONTRACT NO. 76G09 <small>ILLINOIS FED. AID PROJECT</small>	

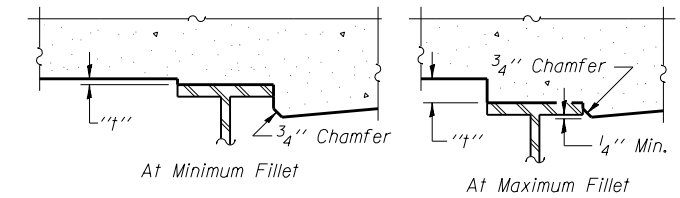


**DEAD LOAD DEFLECTION DIAGRAM**

(Includes weight of concrete only.)

Note:

The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheets 11 thru 16 of 97.

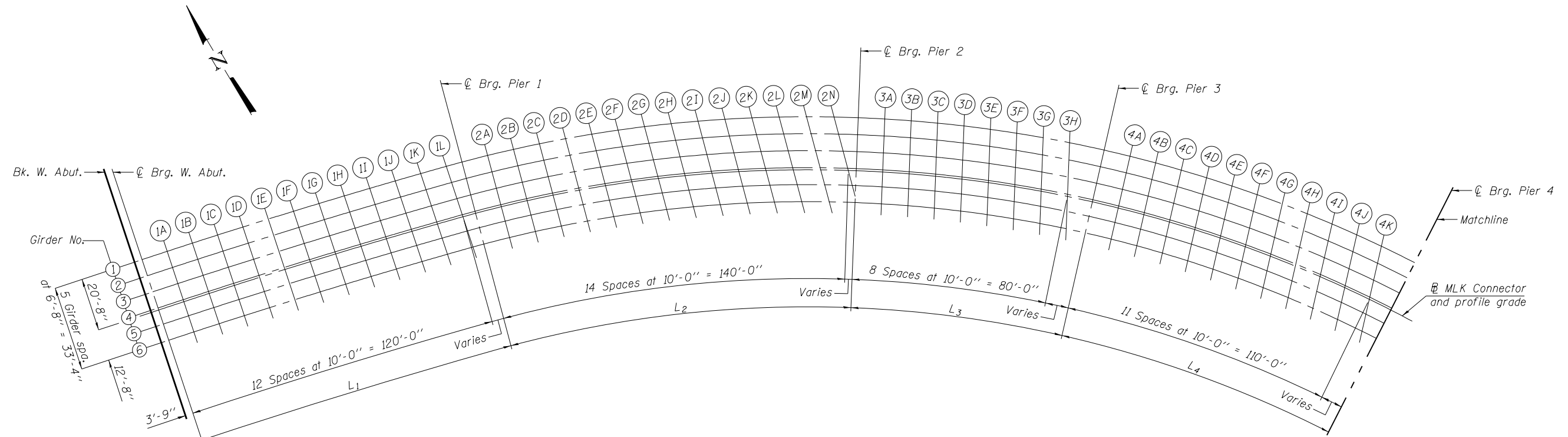


To determine "f": After all structural steel has been erected, elevations of the top flanges of the girders shall be taken at intervals shown below and on sheet 10 of 97. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheets 11 thru 16 of 97, minus slab thickness, equals the fillet heights "f" above top flange of girders.

**FILLET HEIGHTS**

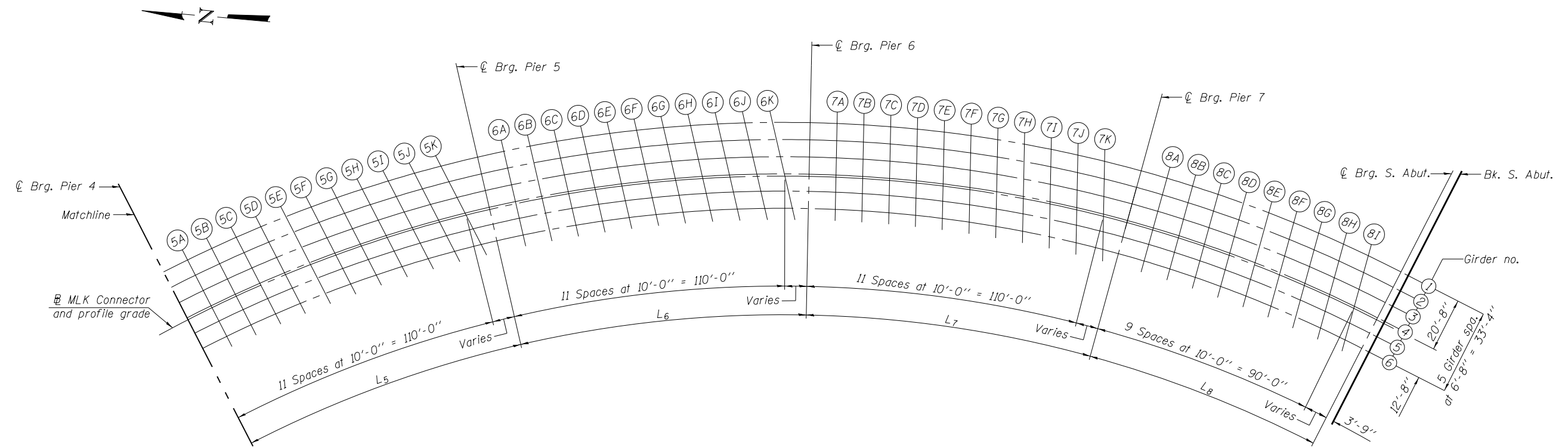
**TABLE OF "D" DIMENSIONS**

Girder No.	D	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	D <sub>4</sub>	D <sub>5</sub>	D <sub>6</sub>	D <sub>7</sub>	D <sub>8</sub>	D <sub>9</sub>	D <sub>10</sub>	D <sub>11</sub>	D <sub>12</sub>	D <sub>13</sub>	D <sub>14</sub>	D <sub>15</sub>	D <sub>16</sub>	D <sub>17</sub>	D <sub>18</sub>	D <sub>19</sub>	D <sub>20</sub>	D <sub>21</sub>	D <sub>22</sub>	D <sub>23</sub>
1	1 <sup>5</sup> / <sub>8</sub> "	1 <sup>5</sup> / <sub>8</sub> "	5 <sup>8</sup> / <sub>8</sub> "	1 <sup>2</sup> / <sub>8</sub> "	3"	2 <sup>1</sup> / <sub>8</sub> "	5 <sup>8</sup> / <sub>8</sub> "	3 <sup>4</sup> / <sub>8</sub> "	1 <sup>2</sup> / <sub>8</sub> "	1 <sup>2</sup> / <sub>8</sub> "	2 <sup>1</sup> / <sub>8</sub> "	1 <sup>8</sup> / <sub>8</sub> "	1 <sup>8</sup> / <sub>8</sub> "	3 <sup>8</sup> / <sub>8</sub> "	1 <sup>8</sup> / <sub>8</sub> "	1 <sup>8</sup> / <sub>8</sub> "	1 <sup>3</sup> / <sub>8</sub> "	3 <sup>4</sup> / <sub>8</sub> "	1 <sup>4</sup> / <sub>8</sub> "	1 <sup>2</sup> / <sub>8</sub> "	1 <sup>4</sup> / <sub>8</sub> "	3 <sup>4</sup> / <sub>8</sub> "	1 <sup>2</sup> / <sub>8</sub> "	1 <sup>8</sup> / <sub>8</sub> "
2	1 <sup>1</sup> / <sub>2</sub> "	1 <sup>5</sup> / <sub>8</sub> "	5 <sup>8</sup> / <sub>8</sub> "	1 <sup>4</sup> / <sub>8</sub> "	2 <sup>5</sup> / <sub>8</sub> "	1 <sup>8</sup> / <sub>8</sub> "	1 <sup>2</sup> / <sub>8</sub> "	5 <sup>8</sup> / <sub>8</sub> "	1 <sup>2</sup> / <sub>8</sub> "	1 <sup>3</sup> / <sub>8</sub> "	1 <sup>8</sup> / <sub>8</sub> "	1 <sup>8</sup> / <sub>8</sub> "	1 <sup>8</sup> / <sub>8</sub> "	3 <sup>8</sup> / <sub>8</sub> "	1 <sup>8</sup> / <sub>8</sub> "	3 <sup>4</sup> / <sub>8</sub> "	1 <sup>4</sup> / <sub>8</sub> "	5 <sup>8</sup> / <sub>8</sub> "	1 <sup>4</sup> / <sub>8</sub> "	1 <sup>2</sup> / <sub>8</sub> "	1 <sup>4</sup> / <sub>8</sub> "	5 <sup>8</sup> / <sub>8</sub> "	1 <sup>4</sup> / <sub>8</sub> "	1 <sup>8</sup> / <sub>8</sub> "
3	1 <sup>1</sup> / <sub>2</sub> "	1 <sup>5</sup> / <sub>8</sub> "	5 <sup>8</sup> / <sub>8</sub> "	1 <sup>8</sup> / <sub>8</sub> "	2 <sup>4</sup> / <sub>8</sub> "	1 <sup>2</sup> / <sub>8</sub> "	1 <sup>2</sup> / <sub>8</sub> "	1 <sup>2</sup> / <sub>8</sub> "	3 <sup>8</sup> / <sub>8</sub> "	1 <sup>8</sup> / <sub>8</sub> "	1 <sup>5</sup> / <sub>8</sub> "	7 <sup>8</sup> / <sub>8</sub> "	1 <sup>8</sup> / <sub>8</sub> "	3 <sup>8</sup> / <sub>8</sub> "	1 <sup>8</sup> / <sub>8</sub> "	5 <sup>8</sup> / <sub>8</sub> "	1 <sup>8</sup> / <sub>8</sub> "	5 <sup>8</sup> / <sub>8</sub> "	1 <sup>4</sup> / <sub>8</sub> "	1 <sup>2</sup> / <sub>8</sub> "	1 <sup>4</sup> / <sub>8</sub> "	1 <sup>2</sup> / <sub>8</sub> "	1 <sup>8</sup> / <sub>8</sub> "	7 <sup>8</sup> / <sub>8</sub> "
4	1 <sup>5</sup> / <sub>8</sub> "	1 <sup>3</sup> / <sub>4</sub> "	3 <sup>4</sup> / <sub>8</sub> "	7 <sup>8</sup> / <sub>8</sub> "	2"	1 <sup>2</sup> / <sub>8</sub> "	3 <sup>8</sup> / <sub>8</sub> "	3 <sup>8/<sub>8</sub>"</sup>	1 <sup>4</sup> / <sub>8</sub> "	1"	1 <sup>3</sup> / <sub>8</sub> "	3 <sup>4</sup> / <sub>8</sub> "	1 <sup>8</sup> / <sub>8</sub> "	3 <sup>8</sup> / <sub>8</sub> "	1 <sup>8</sup> / <sub>8</sub> "	5 <sup>8</sup> / <sub>8</sub> "	1"	1 <sup>2</sup> / <sub>8</sub> "	1 <sup>4</sup> / <sub>8</sub> "	1 <sup>2</sup> / <sub>8</sub> "	1 <sup>4</sup> / <sub>8</sub> "	1 <sup>2</sup> / <sub>8</sub> "	1 <sup>8</sup> / <sub>8</sub> "	7 <sup>8</sup> / <sub>8</sub> "
5	1 <sup>5</sup> / <sub>8</sub> "	1 <sup>8</sup> / <sub>8</sub> "	3 <sup>4</sup> / <sub>8</sub> "	3 <sup>4</sup> / <sub>8</sub> "	1 <sup>3</sup> / <sub>4</sub> "	1 <sup>4</sup> / <sub>8</sub> "	3 <sup>8</sup> / <sub>8</sub> "	1 <sup>4</sup> / <sub>8</sub> "	1 <sup>4</sup> / <sub>8</sub> "	7 <sup>8</sup> / <sub>8</sub> "	1 <sup>4</sup> / <sub>8</sub> "	5 <sup>8</sup> / <sub>8</sub> "	1 <sup>8</sup> / <sub>8</sub> "	3 <sup>8</sup> / <sub>8</sub> "	1 <sup>4</sup> / <sub>8</sub> "	1 <sup>2</sup> / <sub>8</sub> "	7 <sup>8</sup> / <sub>8</sub> "	1 <sup>2</sup> / <sub>8</sub> "	1 <sup>4</sup> / <sub>8</sub> "	1 <sup>2</sup> / <sub>8</sub> "	1 <sup>4</sup> / <sub>8</sub> "	3 <sup>8</sup> / <sub>8</sub> "	7 <sup>8</sup> / <sub>8</sub> "	3 <sup>4</sup> / <sub>8</sub> "
6	2 <sup>3</sup> / <sub>4</sub> "	3 <sup>1</sup> / <sub>8</sub> "	1 <sup>3</sup> / <sub>8</sub> "	1 <sup>8</sup> / <sub>8</sub> "	2 <sup>1</sup> / <sub>2</sub> "	1 <sup>3</sup> / <sub>4</sub> "	3 <sup>8</sup> / <sub>8</sub> "	3 <sup>8</sup> / <sub>8</sub> "	1 <sup>4</sup> / <sub>8</sub> "	1 <sup>4</sup> / <sub>8</sub> "	1 <sup>8</sup> / <sub>8</sub> "	1"	3 <sup>8</sup> / <sub>8</sub> "	3 <sup>4</sup> / <sub>8</sub> "	3 <sup>8</sup> / <sub>8</sub> "	3 <sup>4</sup> / <sub>8</sub> "	1 <sup>4</sup> / <sub>8</sub> "	3 <sup>4</sup> / <sub>8</sub> "	1 <sup>2</sup> / <sub>8</sub> "	7 <sup>8</sup> / <sub>8</sub> "	1 <sup>2</sup> / <sub>8</sub> "	5 <sup>8</sup> / <sub>8</sub> "	1 <sup>4</sup> / <sub>8</sub> "	1 <sup>8</sup> / <sub>8</sub> "



**PART PLAN**

Note:  
 For spans 5 thru 8, see sheet 10 of 97.  
 For Table of "L" Dimensions, see sheet 48 of 97.  
 Horizontal dimensions are given along  $\bar{C}$  individual girders.



**PART PLAN**

Notes:  
 For spans 1 thru 4, see sheet 9 of 97.  
 For Table of "L" dimensions, see sheet 48 of 97.  
 Horizontal dimensions are given along  $\phi$  individual girders.

FILE NAME = X:\1309400-MLK\Cad\15\082034-76009.dgn	DESIGNED - T.S. Friederich	REVISED
USER NAME = elagemann	CHECKED - T.P. Lohman	REVISED
PLOT SCALE =	DRAWN - C.A. Buettner	REVISED
PLOT DATE = 8/7/2014	CHECKED - J.B. Few	REVISED

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS  
 STRUCTURE NO. 082-0349**

SHEET NO. 10 OF 97 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1,41B-1	ST. CLAIR	406	105
CONTRACT NO. 76G09			ILLINOIS FED. AID PROJECT	

**GIRDER 1**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	15+35.25	-20.67	447.27	447.27
⊕ Brg. W. Abut.	15+39.00	-20.67	447.42	447.42
1A	15+48.92	-20.67	447.83	447.88
1B	15+58.84	-20.67	448.27	448.36
1C	15+68.76	-20.67	448.70	448.83
1D	15+78.69	-20.67	449.14	449.28
1E	15+88.61	-20.67	449.58	449.72
1F	15+98.53	-20.67	450.01	450.15
1G	16+08.45	-20.67	450.45	450.57
1H	16+18.37	-20.67	450.89	450.98
1I	16+28.29	-20.67	451.32	451.38
1J	16+38.21	-20.67	451.76	451.79
1K	16+48.13	-20.67	452.18	452.20
1L	16+58.03	-20.67	452.58	452.59
⊕ Brg. Pier 1	16+64.00	-20.67	452.82	452.82
2A	16+73.59	-20.67	453.17	453.19
2B	16+83.18	-20.67	453.51	453.55
2C	16+92.77	-20.67	453.82	453.90
2D	17+02.37	-20.67	454.11	454.24
2E	17+11.96	-20.67	454.38	454.55
2F	17+21.55	-20.67	454.59	454.80
2G	17+31.14	-20.67	454.78	455.02
2H	17+40.73	-20.67	454.95	455.20
2I	17+50.32	-20.67	455.10	455.35
2J	17+59.91	-20.67	455.23	455.46
2K	17+69.50	-20.67	455.34	455.53
2L	17+79.10	-20.67	455.42	455.57
2M	17+88.69	-20.67	455.49	455.58
2N	17+98.28	-20.67	455.53	455.58
⊕ Brg. Pier 2	18+09.00	-20.67	455.56	455.56
3A	18+18.59	-20.67	455.56	455.53
3B	18+28.18	-20.67	455.54	455.49
3C	18+37.77	-20.67	455.50	455.44
3D	18+47.37	-20.67	455.43	455.37
3E	18+56.96	-20.67	455.35	455.29
3F	18+66.55	-20.67	455.25	455.19
3G	18+76.14	-20.67	455.12	455.08
3H	18+85.73	-20.67	454.97	454.94
⊕ Brg. Pier 3	18+99.00	-20.67	454.74	454.74
4A	19+08.59	-20.67	454.54	454.58
4B	19+18.18	-20.67	454.32	454.40
4C	19+27.77	-20.67	454.09	454.21
4D	19+37.37	-20.67	453.83	453.98
4E	19+46.96	-20.67	453.55	453.72
4F	19+56.55	-20.67	453.25	453.42
4G	19+66.14	-20.67	452.93	453.09
4H	19+75.73	-20.67	452.59	452.73
4I	19+85.32	-20.67	452.22	452.33
4J	19+94.91	-20.67	451.84	451.91
4K	20+04.50	-20.67	451.43	451.47
⊕ Brg. Pier 4	20+19.00	-20.67	450.78	450.78

**GIRDER 2**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	15+35.25	-14.00	447.08	447.08
⊕ Brg. W. Abut.	15+39.00	-14.00	447.23	447.23
1A	15+48.95	-14.00	447.64	447.69
1B	15+58.89	-14.00	448.06	448.16
1C	15+68.84	-14.00	448.49	448.62
1D	15+78.79	-14.00	448.91	449.06
1E	15+88.73	-14.00	449.34	449.49
1F	15+98.68	-14.00	449.76	449.90
1G	16+08.63	-14.00	450.19	450.31
1H	16+18.57	-14.00	450.61	450.71
1I	16+28.52	-14.00	451.04	451.10
1J	16+38.47	-14.00	451.46	451.50
1K	16+48.41	-14.00	451.88	451.89
1L	16+58.33	-14.00	452.27	452.27
⊕ Brg. Pier 1	16+64.00	-14.00	452.48	452.48
2A	16+73.72	-14.00	452.82	452.84
2B	16+83.44	-14.00	453.15	453.19
2C	16+93.16	-14.00	453.45	453.53
2D	17+02.88	-14.00	453.74	453.85
2E	17+12.60	-14.00	453.99	454.15
2F	17+22.32	-14.00	454.21	454.39
2G	17+32.04	-14.00	454.40	454.61
2H	17+41.76	-14.00	454.57	454.79
2I	17+51.47	-14.00	454.72	454.93
2J	17+61.19	-14.00	454.84	455.04
2K	17+70.91	-14.00	454.95	455.11
2L	17+80.63	-14.00	455.03	455.16
2M	17+90.35	-14.00	455.10	455.17
2N	18+00.07	-14.00	455.14	455.17
⊕ Brg. Pier 2	18+09.00	-14.00	455.16	455.16
3A	18+18.72	-14.00	455.16	455.13
3B	18+28.44	-14.00	455.14	455.10
3C	18+38.16	-14.00	455.09	455.04
3D	18+47.88	-14.00	455.03	454.98
3E	18+57.60	-14.00	454.94	454.89
3F	18+67.32	-14.00	454.84	454.79
3G	18+77.04	-14.00	454.71	454.67
3H	18+86.76	-14.00	454.56	454.53
⊕ Brg. Pier 3	18+99.00	-14.00	454.34	454.34
4A	19+08.72	-14.00	454.14	454.17
4B	19+18.44	-14.00	453.92	453.99
4C	19+28.16	-14.00	453.68	453.78
4D	19+37.88	-14.00	453.41	453.55
4E	19+47.60	-14.00	453.13	453.28
4F	19+57.32	-14.00	452.82	452.98
4G	19+67.04	-14.00	452.50	452.64
4H	19+76.76	-14.00	452.15	452.27
4I	19+86.47	-14.00	451.78	451.87
4J	19+96.19	-14.00	451.38	451.44
4K	20+05.91	-14.00	450.97	451.00
⊕ Brg. Pier 4	20+19.00	-14.00	450.38	450.38

**GIRDER 3**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	15+35.25	-7.33	446.90	446.90
⊕ Brg. W. Abut.	15+39.00	-7.33	447.05	447.05
1A	15+48.97	-7.33	447.45	447.50
1B	15+58.94	-7.33	447.86	447.96
1C	15+68.92	-7.33	448.28	448.40
1D	15+78.89	-7.33	448.69	448.84
1E	15+88.86	-7.33	449.10	449.25
1F	15+98.83	-7.33	449.52	449.66
1G	16+08.80	-7.33	449.93	450.05
1H	16+18.78	-7.33	450.34	450.44
1I	16+28.75	-7.33	450.76	450.82
1J	16+38.72	-7.33	451.17	451.21
1K	16+48.69	-7.33	451.57	451.58
1L	16+58.65	-7.33	451.95	451.95
⊕ Brg. Pier 1	16+64.00	-7.33	452.14	452.14
2A	16+73.85	-7.33	452.48	452.49
2B	16+83.70	-7.33	452.79	452.83
2C	16+93.55	-7.33	453.09	453.16
2D	17+03.40	-7.33	453.36	453.46
2E	17+13.26	-7.33	453.61	453.74
2F	17+23.11	-7.33	453.82	453.99
2G	17+32.96	-7.33	454.01	454.20
2H	17+42.81	-7.33	454.19	454.38
2I	17+52.66	-7.33	454.33	454.52
2J	17+62.51	-7.33	454.46	454.63
2K	17+72.36	-7.33	454.56	454.70
2L	17+82.21	-7.33	454.65	454.75
2M	17+92.06	-7.33	454.71	454.77
2N	18+01.91	-7.33	454.74	454.77
⊕ Brg. Pier 2	18+09.00	-7.33	454.76	454.76
3A	18+18.85	-7.33	454.76	454.74
3B	18+28.70	-7.33	454.74	454.70
3C	18+38.55	-7.33	454.69	454.65
3D	18+48.40	-7.33	454.62	454.58
3E	18+58.26	-7.33	454.54	454.50
3F	18+68.11	-7.33	454.43	454.39
3G	18+77.96	-7.33	454.29	454.26
3H	18+87.81	-7.33	454.14	454.12
⊕ Brg. Pier 3	18+99.00	-7.33	453.94	453.94
4A	19+08.85	-7.33	453.74	453.76
4B	19+18.70	-7.33	453.51	453.57
4C	19+28.55	-7.33	453.27	453.37
4D	19+38.40	-7.33	453.00	453.12
4E	19+48.26	-7.33	452.71	452.84
4F	19+58.11	-7.33	452.40	452.53
4G	19+67.96	-7.33	452.06	452.19
4H	19+77.81	-7.33	451.71	451.81
4I	19+87.66	-7.33	451.33	451.41
4J	19+97.51	-7.33	450.93	450.98
4K	20+07.36	-7.33	450.51	450.53
⊕ Brg. Pier 4	20+19.00	-7.33	449.98	449.98

Note:  
All offsets based off ⊕ MLK Connector. Negative offset denotes left of baseline, positive offset denotes right of baseline.

**GIRDER 4**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	15+35.25	-0.67	446.71	446.71
⊕ Brg. W. Abut.	15+39.00	-0.67	446.86	446.86
1A	15+49.00	-0.67	447.26	447.31
1B	15+58.99	-0.67	447.66	447.76
1C	15+68.99	-0.67	448.06	448.19
1D	15+78.99	-0.67	448.47	448.62
1E	15+88.99	-0.67	448.87	449.02
1F	15+98.98	-0.67	449.27	449.42
1G	16+08.98	-0.67	449.67	449.80
1H	16+18.98	-0.67	450.07	450.17
1I	16+28.98	-0.67	450.47	450.54
1J	16+38.97	-0.67	450.87	450.91
1K	16+48.97	-0.67	451.26	451.28
1L	16+58.97	-0.67	451.62	451.63
⊕ Brg. Pier 1	16+64.00	-0.67	451.80	451.80
2A	16+73.99	-0.67	452.13	452.14
2B	16+83.97	-0.67	452.44	452.47
2C	16+93.96	-0.67	452.72	452.78
2D	17+03.95	-0.67	452.98	453.07
2E	17+13.93	-0.67	453.22	453.34
2F	17+23.92	-0.67	453.44	453.59
2G	17+33.90	-0.67	453.63	453.80
2H	17+43.89	-0.67	453.80	453.97
2I	17+53.88	-0.67	453.95	454.11
2J	17+63.86	-0.67	454.08	454.22
2K	17+73.85	-0.67	454.18	454.29
2L	17+83.84	-0.67	454.26	454.34
2M	17+93.82	-0.67	454.31	454.36
2N	18+03.81	-0.67	454.35	454.36
⊕ Brg. Pier 2	18+09.00	-0.67	454.36	454.36
3A	18+18.99	-0.67	454.36	454.34
3B	18+28.97	-0.67	454.33	454.31
3C	18+38.96	-0.67	454.29	454.26
3D	18+48.95	-0.67	454.22	454.19
3E	18+58.93	-0.67	454.13	454.10
3F	18+68.92	-0.67	454.02	453.99
3G	18+78.90	-0.67	453.88	453.86
3H	18+88.89	-0.67	453.72	453.71
⊕ Brg. Pier 3	18+99.00	-0.67	453.54	453.54
4A	19+08.99	-0.67	453.33	453.36
4B	19+18.97	-0.67	453.11	453.16
4C	19+28.96	-0.67	452.86	452.94
4D	19+38.95	-0.67	452.58	452.69
4E	19+48.93	-0.67	452.29	452.41
4F	19+58.92	-0.67	451.97	452.09
4G	19+68.90	-0.67	451.63	451.74
4H	19+78.89	-0.67	451.27	451.36
4I	19+88.88	-0.67	450.88	450.95
4J	19+98.86	-0.67	450.47	450.51
4K	20+08.85	-0.67	450.04	450.06
⊕ Brg. Pier 4	20+19.00	-0.67	449.58	449.58

**⊕ MLK CONNECTOR AND PROFILE GRADE**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	15+35.25	0.00	446.69	446.69
⊕ Brg. W. Abut.	15+39.00	0.00	446.84	446.84
1A	15+49.00	0.00	447.24	447.27
1B	15+59.00	0.00	447.64	447.70
1C	15+69.00	0.00	448.04	448.11
1D	15+79.00	0.00	448.44	448.52
1E	15+89.00	0.00	448.84	448.93
1F	15+99.00	0.00	449.24	449.32
1G	16+09.00	0.00	449.64	449.71
1H	16+19.00	0.00	450.04	450.10
1I	16+29.00	0.00	450.44	450.48
1J	16+39.00	0.00	450.84	450.86
1K	16+49.00	0.00	451.23	451.24
1L	16+59.00	0.00	451.59	451.59
⊕ Brg. Pier 1	16+64.00	0.00	451.77	451.77
2A	16+74.00	0.00	452.09	452.10
2B	16+84.00	0.00	452.40	452.42
2C	16+94.00	0.00	452.69	452.72
2D	17+04.00	0.00	452.95	453.00
2E	17+14.00	0.00	453.19	453.25
2F	17+24.00	0.00	453.40	453.49
2G	17+34.00	0.00	453.59	453.69
2H	17+44.00	0.00	453.76	453.86
2I	17+54.00	0.00	453.91	454.01
2J	17+64.00	0.00	454.04	454.12
2K	17+74.00	0.00	454.14	454.21
2L	17+84.00	0.00	454.22	454.27
2M	17+94.00	0.00	454.27	454.30
2N	18+04.00	0.00	454.31	454.32
⊕ Brg. Pier 2	18+09.00	0.00	454.32	454.32
3A	18+19.00	0.00	454.32	454.31
3B	18+29.00	0.00	454.29	454.28
3C	18+39.00	0.00	454.25	454.23
3D	18+49.00	0.00	454.18	454.16
3E	18+59.00	0.00	454.09	454.07
3F	18+69.00	0.00	453.98	453.96
3G	18+79.00	0.00	453.84	453.83
3H	18+89.00	0.00	453.68	453.67
⊕ Brg. Pier 3	18+99.00	0.00	453.50	453.50
4A	19+09.00	0.00	453.29	453.31
4B	19+19.00	0.00	453.07	453.10
4C	19+29.00	0.00	452.82	452.87
4D	19+39.00	0.00	452.54	452.61
4E	19+49.00	0.00	452.25	452.32
4F	19+59.00	0.00	451.93	452.00
4G	19+69.00	0.00	451.59	451.65
4H	19+79.00	0.00	451.22	451.28
4I	19+89.00	0.00	450.84	450.88
4J	19+99.00	0.00	450.43	450.45
4K	20+09.00	0.00	450.00	450.01
⊕ Brg. Pier 4	20+19.00	0.00	449.54	449.54

**GIRDER 5**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	15+35.25	6.00	446.52	446.52
⊕ Brg. W. Abut.	15+39.00	6.00	446.67	446.67
1A	15+49.02	6.00	447.07	447.13
1B	15+59.05	6.00	447.46	447.56
1C	15+69.07	6.00	447.85	447.99
1D	15+79.09	6.00	448.24	448.40
1E	15+89.12	6.00	448.63	448.79
1F	15+99.14	6.00	449.02	449.17
1G	16+09.16	6.00	449.41	449.54
1H	16+19.18	6.00	449.80	449.91
1I	16+29.21	6.00	450.19	450.26
1J	16+39.23	6.00	450.58	450.62
1K	16+49.25	6.00	450.95	450.97
1L	16+59.30	6.00	451.30	451.31
⊕ Brg. Pier 1	16+64.00	6.00	451.46	451.46
2A	16+74.13	6.00	451.78	451.79
2B	16+84.25	6.00	452.08	452.11
2C	16+94.38	6.00	452.36	452.41
2D	17+04.50	6.00	452.61	452.68
2E	17+14.63	6.00	452.84	452.94
2F	17+24.75	6.00	453.06	453.18
2G	17+34.88	6.00	453.25	453.39
2H	17+45.00	6.00	453.42	453.57
2I	17+55.13	6.00	453.57	453.71
2J	17+65.25	6.00	453.69	453.81
2K	17+75.38	6.00	453.79	453.89
2L	17+85.50	6.00	453.87	453.93
2M	17+95.63	6.00	453.92	453.96
2N	18+05.75	6.00	453.95	453.96
⊕ Brg. Pier 2	18+09.00	6.00	453.96	453.96
3A	18+19.13	6.00	453.96	453.94
3B	18+29.25	6.00	453.93	453.91
3C	18+39.38	6.00	453.89	453.86
3D	18+49.50	6.00	453.82	453.79
3E	18+59.63	6.00	453.72	453.70
3F	18+69.75	6.00	453.61	453.59
3G	18+79.88	6.00	453.47	453.45
3H	18+90.00	6.00	453.30	453.29
⊕ Brg. Pier 3	18+99.00	6.00	453.14	453.14
4A	19+09.13	6.00	452.93	452.95
4B	19+19.25	6.00	452.70	452.75
4C	19+29.38	6.00	452.45	452.52
4D	19+39.50	6.00	452.17	452.26
4E	19+49.63	6.00	451.87	451.97
4F	19+59.75	6.00	451.54	451.65
4G	19+69.88	6.00	451.20	451.29
4H	19+80.00	6.00	450.83	450.90
4I	19+90.13	6.00	450.43	450.48
4J	20+00.25	6.00	450.01	450.05
4K	20+10.38	6.00	449.57	449.59
⊕ Brg. Pier 4	20+19.00	6.00	449.18	449.18

Note:  
All offsets based off ⊕ MLK Connector. Negative offset denotes left of baseline, positive offset denotes right of baseline.



**GIRDER 6**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	15+35.25	12.67	446.34	446.34
⊕ Brg. W. Abut.	15+39.00	12.67	446.49	446.49
1A	15+49.05	12.67	446.88	446.97
1B	15+59.10	12.67	447.26	447.43
1C	15+69.15	12.67	447.64	447.87
1D	15+79.20	12.67	448.01	448.28
1E	15+89.24	12.67	448.39	448.67
1F	15+99.29	12.67	448.77	449.03
1G	16+09.34	12.67	449.15	449.38
1H	16+19.39	12.67	449.52	449.71
1I	16+29.44	12.67	449.90	450.03
1J	16+39.49	12.67	450.28	450.36
1K	16+49.54	12.67	450.64	450.68
1L	16+59.64	12.67	450.98	450.99
⊕ Brg. Pier 1	16+64.00	12.67	451.12	451.12
2A	16+74.27	12.67	451.43	451.44
2B	16+84.54	12.67	451.72	451.76
2C	16+94.80	12.67	451.99	452.06
2D	17+05.07	12.67	452.23	452.34
2E	17+15.34	12.67	452.46	452.61
2F	17+25.61	12.67	452.67	452.86
2G	17+35.88	12.67	452.87	453.07
2H	17+46.15	12.67	453.04	453.25
2I	17+56.41	12.67	453.18	453.38
2J	17+66.68	12.67	453.31	453.48
2K	17+76.95	12.67	453.40	453.54
2L	17+87.22	12.67	453.48	453.57
2M	17+97.49	12.67	453.53	453.57
⊕ Brg. Pier 2	18+09.00	12.67	453.56	453.56
3A	18+19.27	12.67	453.56	453.54
3B	18+29.54	12.67	453.53	453.51
3C	18+39.80	12.67	453.48	453.46
3D	18+50.07	12.67	453.41	453.38
3E	18+60.34	12.67	453.32	453.29
3F	18+70.61	12.67	453.19	453.17
3G	18+80.88	12.67	453.05	453.03
3H	18+91.15	12.67	452.88	452.87
⊕ Brg. Pier 3	18+99.00	12.67	452.74	452.74
4A	19+09.27	12.67	452.53	452.56
4B	19+19.54	12.67	452.29	452.36
4C	19+29.80	12.67	452.03	452.14
4D	19+40.07	12.67	451.75	451.89
4E	19+50.34	12.67	451.45	451.60
4F	19+60.61	12.67	451.12	451.27
4G	19+70.88	12.67	450.76	450.90
4H	19+81.15	12.67	450.38	450.49
4I	19+91.41	12.67	449.98	450.05
4J	20+01.68	12.67	449.55	449.59
4K	20+11.95	12.67	449.10	449.12
⊕ Brg. Pier 4	20+19.00	12.67	448.78	448.78

Note:  
All offsets based off ⊕ MLK Connector. Negative offset denotes left of baseline, positive offset denotes right of baseline.



**GIRDER 1**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊕ Brg. Pier 4	20+19.00	-20.67	450.78	450.78
5A	20+28.59	-20.67	450.32	450.32
5B	20+38.18	-20.67	449.85	449.84
5C	20+47.77	-20.67	449.35	449.35
5D	20+57.37	-20.67	448.83	448.84
5E	20+66.96	-20.67	448.28	448.31
5F	20+76.55	-20.67	447.72	447.75
5G	20+86.14	-20.67	447.15	447.18
5H	20+95.73	-20.67	446.57	446.60
5I	21+05.32	-20.67	446.00	446.01
5J	21+14.91	-20.67	445.42	445.43
5K	21+24.50	-20.67	444.85	444.84
⊕ Brg. Pier 5	21+39.00	-20.67	443.98	443.98
6A	21+48.59	-20.67	443.40	443.42
6B	21+58.18	-20.67	442.82	442.86
6C	21+67.77	-20.67	442.25	442.31
6D	21+77.37	-20.67	441.67	441.76
6E	21+86.96	-20.67	441.10	441.20
6F	21+96.55	-20.67	440.52	440.64
6G	22+06.14	-20.67	439.95	440.06
6H	22+15.73	-20.67	439.37	439.47
6I	22+25.32	-20.67	438.80	438.87
6J	22+34.91	-20.67	438.22	438.27
6K	22+44.50	-20.67	437.65	437.68
⊕ Brg. Pier 6	22+59.00	-20.67	436.81	436.81
7A	22+68.59	-20.67	436.28	436.28
7B	22+78.18	-20.67	435.76	435.77
7C	22+87.77	-20.67	435.27	435.29
7D	22+97.37	-20.67	434.79	434.82
7E	23+06.96	-20.67	434.33	434.38
7F	23+16.55	-20.67	433.90	433.94
7G	23+26.14	-20.67	433.47	433.52
7H	23+35.73	-20.67	433.07	433.11
7I	23+45.32	-20.67	432.69	432.71
7J	23+54.91	-20.67	432.32	432.34
7K	23+64.50	-20.67	431.98	431.98
⊕ Brg. Pier 7	23+79.00	-20.67	431.49	431.49
8A	23+88.59	-20.67	431.19	431.21
8B	23+98.18	-20.67	430.91	430.95
8C	24+07.77	-20.67	430.65	430.72
8D	24+17.37	-20.67	430.34	430.43
8E	24+26.96	-20.67	430.04	430.16
8F	24+36.55	-20.67	429.76	429.89
8G	24+46.14	-20.67	429.50	429.62
8H	24+55.73	-20.67	429.26	429.36
8I	24+65.32	-20.67	429.04	429.11
⊕ Brg. S. Abut.	24+79.00	-20.67	428.76	428.76
Bk. S. Abut.	24+82.75	-20.67	428.69	428.69

**GIRDER 2**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊕ Brg. Pier 4	20+19.00	-14.00	450.38	450.38
5A	20+28.72	-14.00	449.92	449.91
5B	20+38.44	-14.00	449.43	449.43
5C	20+48.16	-14.00	448.93	448.93
5D	20+57.88	-14.00	448.40	448.41
5E	20+67.60	-14.00	447.85	447.87
5F	20+77.32	-14.00	447.28	447.30
5G	20+87.04	-14.00	446.69	446.72
5H	20+96.76	-14.00	446.11	446.13
5I	21+06.47	-14.00	445.53	445.54
5J	21+16.19	-14.00	444.94	444.95
5K	21+25.91	-14.00	444.36	444.36
⊕ Brg. Pier 5	21+39.00	-14.00	443.58	443.58
6A	21+48.72	-14.00	442.99	443.01
6B	21+58.44	-14.00	442.41	442.44
6C	21+68.16	-14.00	441.83	441.88
6D	21+77.88	-14.00	441.24	441.32
6E	21+87.60	-14.00	440.66	440.75
6F	21+97.32	-14.00	440.08	440.18
6G	22+07.04	-14.00	439.49	439.59
6H	22+16.76	-14.00	438.91	438.99
6I	22+26.47	-14.00	438.33	438.39
6J	22+36.19	-14.00	437.74	437.78
6K	22+45.91	-14.00	437.17	437.19
⊕ Brg. Pier 6	22+59.00	-14.00	436.41	436.41
7A	22+68.72	-14.00	435.87	435.87
7B	22+78.44	-14.00	435.35	435.36
7C	22+88.16	-14.00	434.85	434.87
7D	22+97.88	-14.00	434.37	434.40
7E	23+07.60	-14.00	433.90	433.94
7F	23+17.32	-14.00	433.46	433.50
7G	23+27.04	-14.00	433.04	433.08
7H	23+36.76	-14.00	432.63	432.66
7I	23+46.47	-14.00	432.24	432.27
7J	23+56.19	-14.00	431.88	431.89
7K	23+65.91	-14.00	431.53	431.53
⊕ Brg. Pier 7	23+79.00	-14.00	431.09	431.09
8A	23+88.72	-14.00	430.79	430.80
8B	23+98.44	-14.00	430.51	430.54
8C	24+08.16	-14.00	430.24	430.30
8D	24+17.88	-14.00	429.95	430.03
8E	24+27.60	-14.00	429.67	429.77
8F	24+37.32	-14.00	429.41	429.52
8G	24+47.04	-14.00	429.18	429.28
8H	24+56.76	-14.00	428.96	429.04
8I	24+66.47	-14.00	428.76	428.81
⊕ Brg. S. Abut.	24+79.00	-14.00	428.53	428.53
Bk. S. Abut.	24+82.75	-14.00	428.47	428.47

**GIRDER 3**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊕ Brg. Pier 4	20+19.00	-7.33	449.98	449.98
5A	20+28.85	-7.33	449.51	449.51
5B	20+38.70	-7.33	449.02	449.02
5C	20+48.55	-7.33	448.50	448.51
5D	20+58.40	-7.33	447.97	447.99
5E	20+68.26	-7.33	447.41	447.43
5F	20+78.11	-7.33	446.83	446.86
5G	20+87.96	-7.33	446.24	446.27
5H	20+97.81	-7.33	445.65	445.67
5I	21+07.66	-7.33	445.06	445.07
5J	21+17.51	-7.33	444.47	444.47
5K	21+27.36	-7.33	443.87	443.87
⊕ Brg. Pier 5	21+39.00	-7.33	443.18	443.18
6A	21+48.85	-7.33	442.58	442.60
6B	21+58.70	-7.33	441.99	442.02
6C	21+68.55	-7.33	441.40	441.46
6D	21+78.40	-7.33	440.81	440.88
6E	21+88.26	-7.33	440.22	440.30
6F	21+98.11	-7.33	439.63	439.72
6G	22+07.96	-7.33	439.04	439.12
6H	22+17.81	-7.33	438.45	438.52
6I	22+27.66	-7.33	437.86	437.91
6J	22+37.51	-7.33	437.27	437.30
6K	22+47.36	-7.33	436.68	436.70
⊕ Brg. Pier 6	22+59.00	-7.33	436.01	436.01
7A	22+68.85	-7.33	435.46	435.47
7B	22+78.70	-7.33	434.94	434.95
7C	22+88.55	-7.33	434.43	434.45
7D	22+98.40	-7.33	433.94	433.97
7E	23+08.26	-7.33	433.47	433.51
7F	23+18.11	-7.33	433.03	433.07
7G	23+27.96	-7.33	432.60	432.64
7H	23+37.81	-7.33	432.19	432.22
7I	23+47.66	-7.33	431.80	431.82
7J	23+57.51	-7.33	431.43	431.44
7K	23+67.36	-7.33	431.08	431.08
⊕ Brg. Pier 7	23+79.00	-7.33	430.69	430.69
8A	23+88.85	-7.33	430.38	430.40
8B	23+98.70	-7.33	430.10	430.13
8C	24+08.55	-7.33	429.83	429.88
8D	24+18.40	-7.33	429.55	429.63
8E	24+28.26	-7.33	429.30	429.39
8F	24+38.11	-7.33	429.07	429.16
8G	24+47.96	-7.33	428.85	428.94
8H	24+57.81	-7.33	428.66	428.73
8I	24+67.66	-7.33	428.48	428.52
⊕ Brg. S. Abut.	24+79.00	-7.33	428.30	428.30
Bk. S. Abut.	24+82.75	-7.33	428.25	428.25

Note:  
 All offsets based off ⊕ MLK Connector. Negative offset denotes left of baseline, positive offset denotes right of baseline.

**GIRDER 4**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊕ Brg. Pier 4	20+19.00	-0.67	449.58	449.58
5A	20+28.99	-0.67	449.10	449.10
5B	20+38.97	-0.67	448.60	448.61
5C	20+48.96	-0.67	448.08	448.09
5D	20+58.95	-0.67	447.54	447.56
5E	20+68.93	-0.67	446.97	447.00
5F	20+78.92	-0.67	446.38	446.41
5G	20+88.90	-0.67	445.78	445.81
5H	20+98.89	-0.67	445.18	445.21
5I	21+08.88	-0.67	444.58	444.60
5J	21+18.86	-0.67	443.98	443.99
5K	21+28.85	-0.67	443.38	443.39
⊕ Brg. Pier 5	21+39.00	-0.67	442.78	442.78
6A	21+48.99	-0.67	442.18	442.19
6B	21+58.97	-0.67	441.58	441.61
6C	21+68.96	-0.67	440.98	441.02
6D	21+78.95	-0.67	440.38	440.44
6E	21+88.93	-0.67	439.78	439.86
6F	21+98.92	-0.67	439.18	439.26
6G	22+08.90	-0.67	438.58	438.66
6H	22+18.89	-0.67	437.98	438.05
6I	22+28.88	-0.67	437.38	437.43
6J	22+38.86	-0.67	436.78	436.81
6K	22+48.85	-0.67	436.20	436.21
⊕ Brg. Pier 6	22+59.00	-0.67	435.61	435.61
7A	22+68.99	-0.67	435.06	435.06
7B	22+78.97	-0.67	434.52	434.53
7C	22+88.96	-0.67	434.01	434.03
7D	22+98.95	-0.67	433.52	433.55
7E	23+08.93	-0.67	433.04	433.08
7F	23+18.92	-0.67	432.59	432.63
7G	23+28.90	-0.67	432.16	432.20
7H	23+38.89	-0.67	431.74	431.78
7I	23+48.88	-0.67	431.35	431.37
7J	23+58.86	-0.67	430.98	430.99
7K	23+68.85	-0.67	430.63	430.63
⊕ Brg. Pier 7	23+79.00	-0.67	430.29	430.29
8A	23+88.99	-0.67	429.98	429.99
8B	23+98.97	-0.67	429.69	429.72
8C	24+08.96	-0.67	429.42	429.47
8D	24+18.95	-0.67	429.17	429.23
8E	24+28.93	-0.67	428.93	429.02
8F	24+38.92	-0.67	428.72	428.81
8G	24+48.90	-0.67	428.53	428.61
8H	24+58.89	-0.67	428.36	428.42
8I	24+68.88	-0.67	428.21	428.24
⊕ Brg. S. Abut.	24+79.00	-0.67	428.08	428.08
Bk. S. Abut.	24+82.75	-0.67	428.03	428.03

**ⓑ MLK CONNECTOR  
AND PROFILE GRADE**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊕ Brg. Pier 4	20+19.00	0.00	0.00	449.54
5A	20+29.00	0.00	0.00	449.06
5B	20+39.00	0.00	0.00	448.56
5C	20+49.00	0.00	0.00	448.05
5D	20+59.00	0.00	0.00	447.51
5E	20+69.00	0.00	0.00	446.94
5F	20+79.00	0.00	0.00	446.35
5G	20+89.00	0.00	0.00	445.75
5H	20+99.00	0.00	0.00	445.15
5I	21+09.00	0.00	0.00	444.54
5J	21+19.00	0.00	0.00	443.94
5K	21+29.00	0.00	0.00	443.34
⊕ Brg. Pier 5	21+39.00	0.00	0.00	442.74
6A	21+49.00	0.00	0.00	442.14
6B	21+59.00	0.00	0.00	441.55
6C	21+69.00	0.00	0.00	440.96
6D	21+79.00	0.00	0.00	440.37
6E	21+89.00	0.00	0.00	439.78
6F	21+99.00	0.00	0.00	439.18
6G	22+09.00	0.00	0.00	438.58
6H	22+19.00	0.00	0.00	437.97
6I	22+29.00	0.00	0.00	437.36
6J	22+39.00	0.00	0.00	436.75
6K	22+49.00	0.00	0.00	436.15
⊕ Brg. Pier 6	22+59.00	0.00	0.00	435.57
7A	22+69.00	0.00	0.00	435.02
7B	22+79.00	0.00	0.00	434.49
7C	22+89.00	0.00	0.00	433.98
7D	22+99.00	0.00	0.00	433.49
7E	23+09.00	0.00	0.00	433.02
7F	23+19.00	0.00	0.00	432.57
7G	23+29.00	0.00	0.00	432.13
7H	23+39.00	0.00	0.00	431.72
7I	23+49.00	0.00	0.00	431.32
7J	23+59.00	0.00	0.00	430.94
7K	23+69.00	0.00	0.00	430.58
⊕ Brg. Pier 7	23+79.00	0.00	0.00	430.25
8A	23+89.00	0.00	0.00	429.95
8B	23+99.00	0.00	0.00	429.67
8C	24+09.00	0.00	0.00	429.41
8D	24+19.00	0.00	0.00	429.17
8E	24+29.00	0.00	0.00	428.95
8F	24+39.00	0.00	0.00	428.74
8G	24+49.00	0.00	0.00	428.55
8H	24+59.00	0.00	0.00	428.37
8I	24+69.00	0.00	0.00	428.20
⊕ Brg. S. Abut.	24+79.00	0.00	0.00	428.05
Bk. S. Abut.	24+82.75	0.00	0.00	428.01

**GIRDER 5**

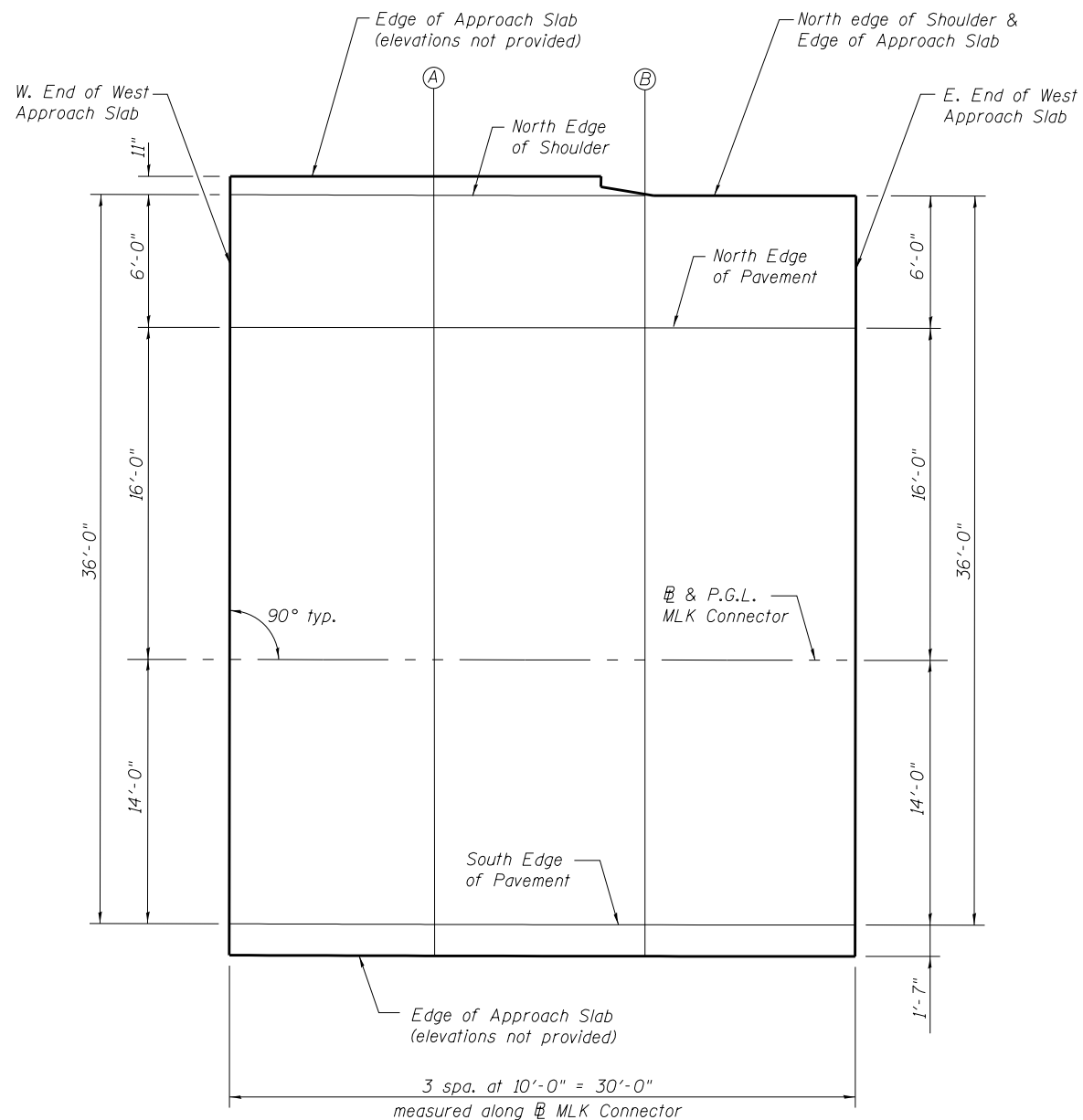
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊕ Brg. Pier 4	20+19.00	6.00	449.18	449.18
5A	20+29.13	6.00	448.70	448.70
5B	20+39.25	6.00	448.19	448.20
5C	20+49.38	6.00	447.66	447.68
5D	20+59.50	6.00	447.11	447.13
5E	20+69.63	6.00	446.53	446.56
5F	20+79.75	6.00	445.93	445.97
5G	20+89.88	6.00	445.32	445.36
5H	21+00.00	6.00	444.72	444.74
5I	21+10.13	6.00	444.11	444.13
5J	21+20.25	6.00	443.50	443.51
5K	21+30.38	6.00	442.89	442.89
⊕ Brg. Pier 5	21+39.00	6.00	442.38	442.38
6A	21+49.13	6.00	441.77	441.78
6B	21+59.25	6.00	441.16	441.19
6C	21+69.38	6.00	440.55	440.60
6D	21+79.50	6.00	439.95	440.01
6E	21+89.63	6.00	439.34	439.41
6F	21+99.75	6.00	438.73	438.80
6G	22+09.88	6.00	438.12	438.19
6H	22+20.00	6.00	437.52	437.57
6I	22+30.13	6.00	436.91	436.95
6J	22+40.25	6.00	436.30	436.32
6K	22+50.38	6.00	435.71	435.71
⊕ Brg. Pier 6	22+59.00	6.00	435.21	435.21
7A	22+69.13	6.00	434.65	434.65
7B	22+79.25	6.00	434.11	434.12
7C	22+89.38	6.00	433.59	433.61
7D	22+99.50	6.00	433.09	433.12
7E	23+09.63	6.00	432.61	432.65
7F	23+19.75	6.00	432.15	432.20
7G	23+29.88	6.00	431.72	431.76
7H	23+40.00	6.00	431.30	431.33
7I	23+50.13	6.00	430.90	430.93
7J	23+60.25	6.00	430.53	430.54
7K	23+70.38	6.00	430.18	430.18
⊕ Brg. Pier 7	23+79.00	6.00	429.89	429.89
8A	23+89.13	6.00	429.58	429.59
8B	23+99.25	6.00	429.28	429.31
8C	24+09.38	6.00	429.01	429.06
8D	24+19.50	6.00	428.78	428.84
8E	24+29.63	6.00	428.57	428.64
8F	24+39.75	6.00	428.38	428.46
8G	24+49.88	6.00	428.22	428.27
8H	24+60.00	6.00	428.07	428.11
8I	24+70.13	6.00	427.94	427.97
⊕ Brg. S. Abut.	24+79.00	6.00	427.85	427.85
Bk. S. Abut.	24+82.75	6.00	427.81	427.81

Note:  
All offsets based off ⓑ MLK Connector. Negative offset denotes left of baseline, positive offset denotes right of baseline.

**GIRDER 6**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊕ Brg. Pier 4	20+19.00	12.67	448.78	448.78
5A	20+29.27	12.67	448.29	448.29
5B	20+39.54	12.67	447.78	447.79
5C	20+49.80	12.67	447.24	447.27
5D	20+60.07	12.67	446.68	446.72
5E	20+70.34	12.67	446.09	446.15
5F	20+80.61	12.67	445.48	445.54
5G	20+90.88	12.67	444.86	444.92
5H	21+01.15	12.67	444.25	444.29
5I	21+11.41	12.67	443.63	443.66
5J	21+21.68	12.67	443.01	443.03
5K	21+31.95	12.67	442.40	442.40
⊕ Brg. Pier 5	21+39.00	12.67	441.98	441.98
6A	21+49.27	12.67	441.36	441.37
6B	21+59.54	12.67	440.74	440.78
6C	21+69.80	12.67	440.13	440.19
6D	21+80.07	12.67	439.51	439.60
6E	21+90.34	12.67	438.90	439.00
6F	22+00.61	12.67	438.28	438.39
6G	22+10.88	12.67	437.66	437.76
6H	22+21.15	12.67	437.05	437.13
6I	22+31.41	12.67	436.43	436.48
6J	22+41.68	12.67	435.81	435.84
6K	22+51.95	12.67	435.21	435.22
⊕ Brg. Pier 6	22+59.00	12.67	434.81	434.81
7A	22+69.27	12.67	434.24	434.25
7B	22+79.54	12.67	433.69	433.72
7C	22+89.80	12.67	433.17	433.21
7D	23+00.07	12.67	432.66	432.72
7E	23+10.34	12.67	432.18	432.25
7F	23+20.61	12.67	431.71	431.79
7G	23+30.88	12.67	431.27	431.34
7H	23+41.15	12.67	430.85	430.91
7I	23+51.41	12.67	430.46	430.49
7J	23+61.68	12.67	430.08	430.09
7K	23+71.95	12.67	429.72	429.73
⊕ Brg. Pier 7	23+79.00	12.67	429.49	429.49
8A	23+89.27	12.67	429.17	429.19
8B	23+99.54	12.67	428.87	428.91
8C	24+09.80	12.67	428.61	428.67
8D	24+20.07	12.67	428.40	428.49
8E	24+30.34	12.67	428.21	428.32
8F	24+40.61	12.67	428.05	428.16
8G	24+50.88	12.67	427.90	428.00
8H	24+61.15	12.67	427.78	427.85
8I	24+71.41	12.67	427.68	427.71
⊕ Brg. S. Abut.	24+79.00	12.67	427.62	427.62
Bk. S. Abut.	24+82.75	12.67	427.59	427.59

Note:  
All offsets based off ⊕ MLK Connector. Negative offset denotes left of baseline, positive offset denotes right of baseline.



**PLAN VIEW**

**NORTH EDGE OF SHOULDER**

Location	Station	Offset	Theoretical Grade Elevations
W. End of Approach Slab	15+05.75	-22.00	445.98
A	15+15.75	-22.00	446.43
B	15+25.75	-22.00	446.88
E. End of Approach Slab	15+35.75	-22.00	447.33

**NORTH EDGE OF PAVEMENT**

Location	Station	Offset	Theoretical Grade Elevations
W. End of Approach Slab	15+05.75	-16.00	445.96
A	15+15.75	-16.00	446.36
B	15+25.75	-16.00	446.76
E. End of Approach Slab	15+35.75	-16.00	447.16

**MLK & P.G.L. MLK CONNECTOR**

Location	Station	Offset	Theoretical Grade Elevations
W. End of Approach Slab	15+05.75	0	445.51
A	15+15.75	0	445.91
B	15+25.75	0	446.31
E. End of Approach Slab	15+35.75	0	446.71

**SOUTH EDGE OF APPROACH SLAB**

Location	Station	Offset	Theoretical Grade Elevations
W. End of Approach Slab	15+05.75	14.00	444.98
A	15+15.75	14.00	445.42
B	15+25.75	14.00	445.87
E. End of Approach Slab	15+35.75	14.00	446.32

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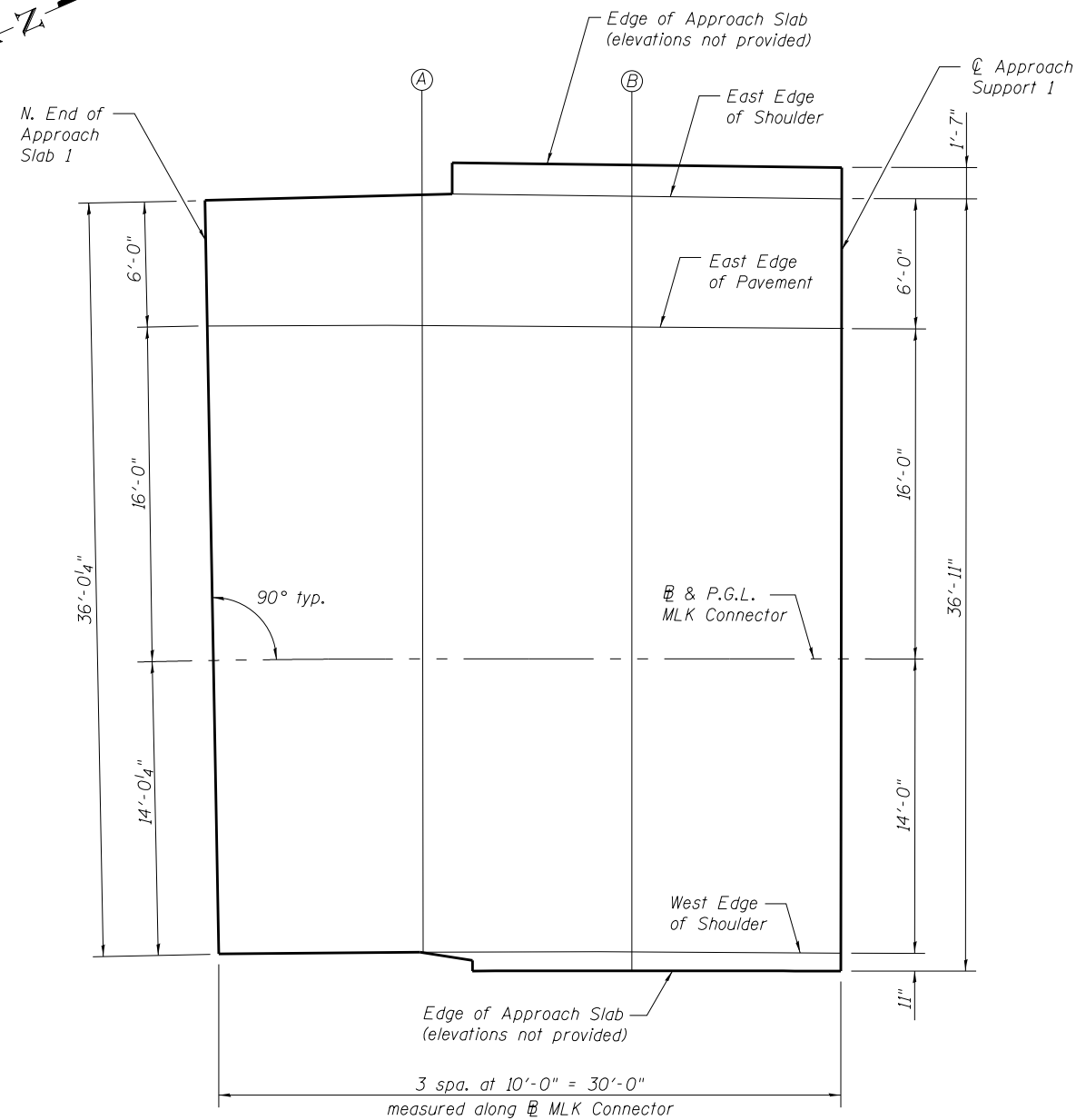
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TOP OF WEST APPROACH SLAB ELEVATIONS  
STRUCTURE NO. 082-0349**

SHEET NO. 17 OF 97 SHEETS

F.A.I. RTE. 64	SECTION 82-(1,4)B-1	COUNTY ST. CLAIR	TOTAL SHEETS 406	SHEET NO. 112
			CONTRACT NO. 76G09	
ILLINOIS FED. AID PROJECT				



**PLAN**

**EAST EDGE OF SHOULDER**

Location	Station	Offset	Theoretical Grade Elevations
N. End of Approach Slab 1	24+82.25	-22.00	428.74
A	24+92.25	-22.00	428.56
B	25+02.26	-22.00	428.40
☉ Approach Support 1	25+12.26	-22.00	428.25

**EAST EDGE OF PAVEMENT**

Location	Station	Offset	Theoretical Grade Elevations
N. End of Approach Slab 1	24+82.25	-16.00	428.54
A	24+92.25	-16.00	428.38
B	25+02.26	-16.00	428.24
☉ Approach Support 1	25+12.26	-16.00	428.12

**B & P.G.L. MLK CONNECTOR**

Location	Station	Offset	Theoretical Grade Elevations
N. End of Approach Slab 1	24+82.25	0	428.02
A	24+92.25	0	427.91
B	25+02.26	0	427.83
☉ Approach Support 1	25+12.26	0	427.77

**WEST EDGE OF SHOULDER**

Location	Station	Offset	Theoretical Grade Elevations
N. End of Approach Slab 1	24+82.25	14.02	427.56
A	24+92.25	14.04	427.50
B	25+02.26	14.00	427.47
☉ Approach Support 1	25+12.26	14.00	427.46

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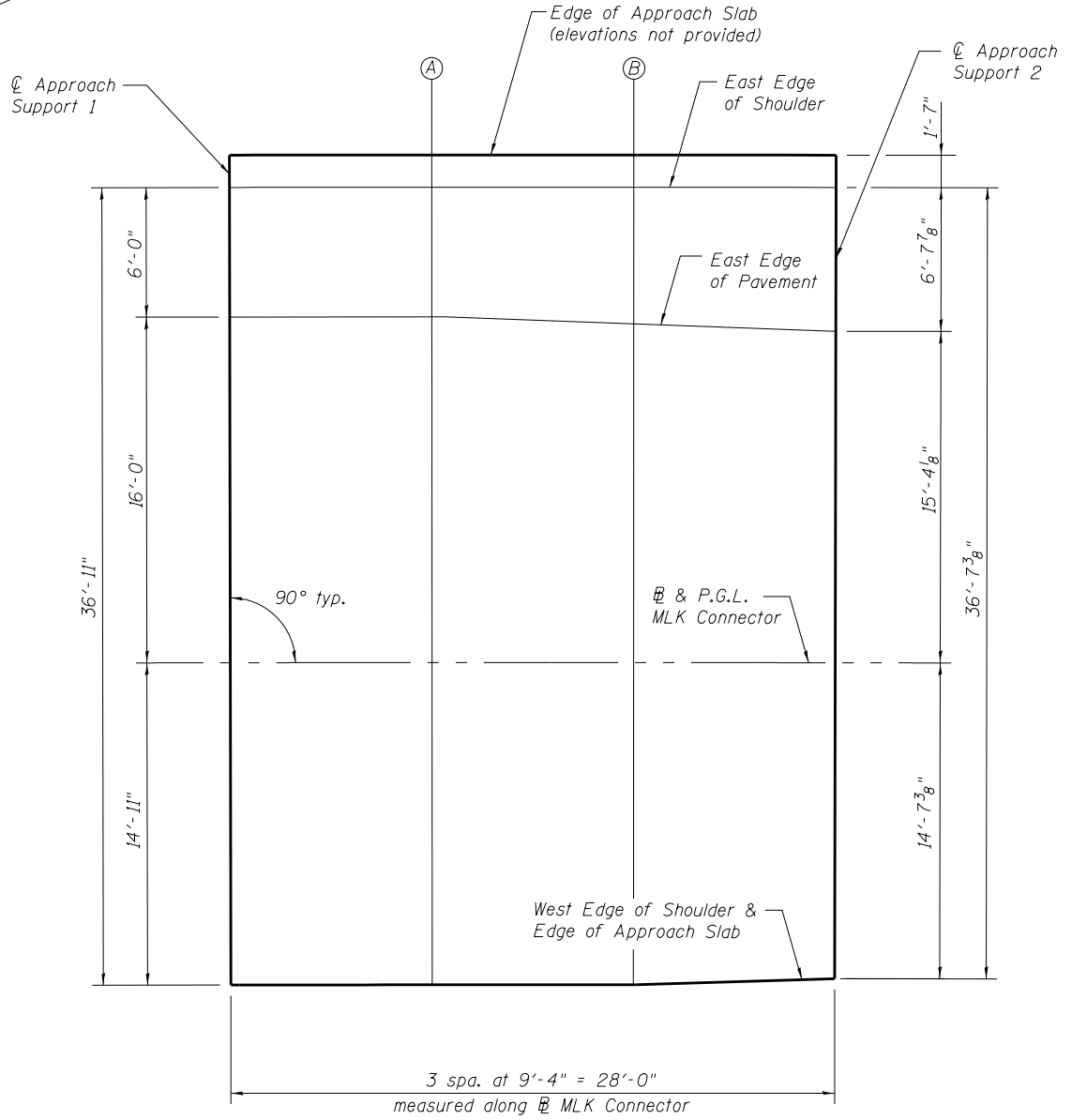
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PLOT DATE = 9/15/2014	CHECKED - CJF	REVISED

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TOP OF APPROACH SPAN 1 ELEVATIONS  
STRUCTURE NO. 082-0349**

SHEET NO. 18 OF 97 SHEETS

F.A.I. RTE. 64	SECTION 82-(1,4)B-1	COUNTY ST. CLAIR	TOTAL SHEETS 406	SHEET NO. 113
CONTRACT NO. 76G09			ILLINOIS FED. AID PROJECT	



PLAN

**EAST EDGE OF SHOULDER**

Location	Station	Offset	Theoretical Grade Elevations
☉ Approach Support 1	25+12.26	-22.00	428.25
A	25+21.59	-22.00	428.14
B	25+30.93	-22.00	428.05
☉ Approach Support 2	25+40.26	-22.00	427.97

**EAST EDGE OF PAVEMENT**

Location	Station	Offset	Theoretical Grade Elevations
☉ Approach Support 1	25+12.26	-16.00	428.12
A	25+21.59	-16.00	428.03
B	25+30.93	-15.68	427.95
☉ Approach Support 2	25+40.26	-15.34	427.89

**B & P.G.L. MLK CONNECTOR**

Location	Station	Offset	Theoretical Grade Elevations
☉ Approach Support 1	25+12.26	0	427.77
A	25+21.59	0	427.73
B	25+30.93	0	427.71
☉ Approach Support 2	25+40.26	0	427.71

**WEST EDGE OF SHOULDER & EDGE OF APPROACH SLAB**

Location	Station	Offset	Theoretical Grade Elevations
☉ Approach Support 1	25+12.26	14.92	427.44
A	25+21.59	14.92	427.46
B	25+30.93	14.92	427.49
☉ Approach Support 2	25+40.26	14.62	427.54

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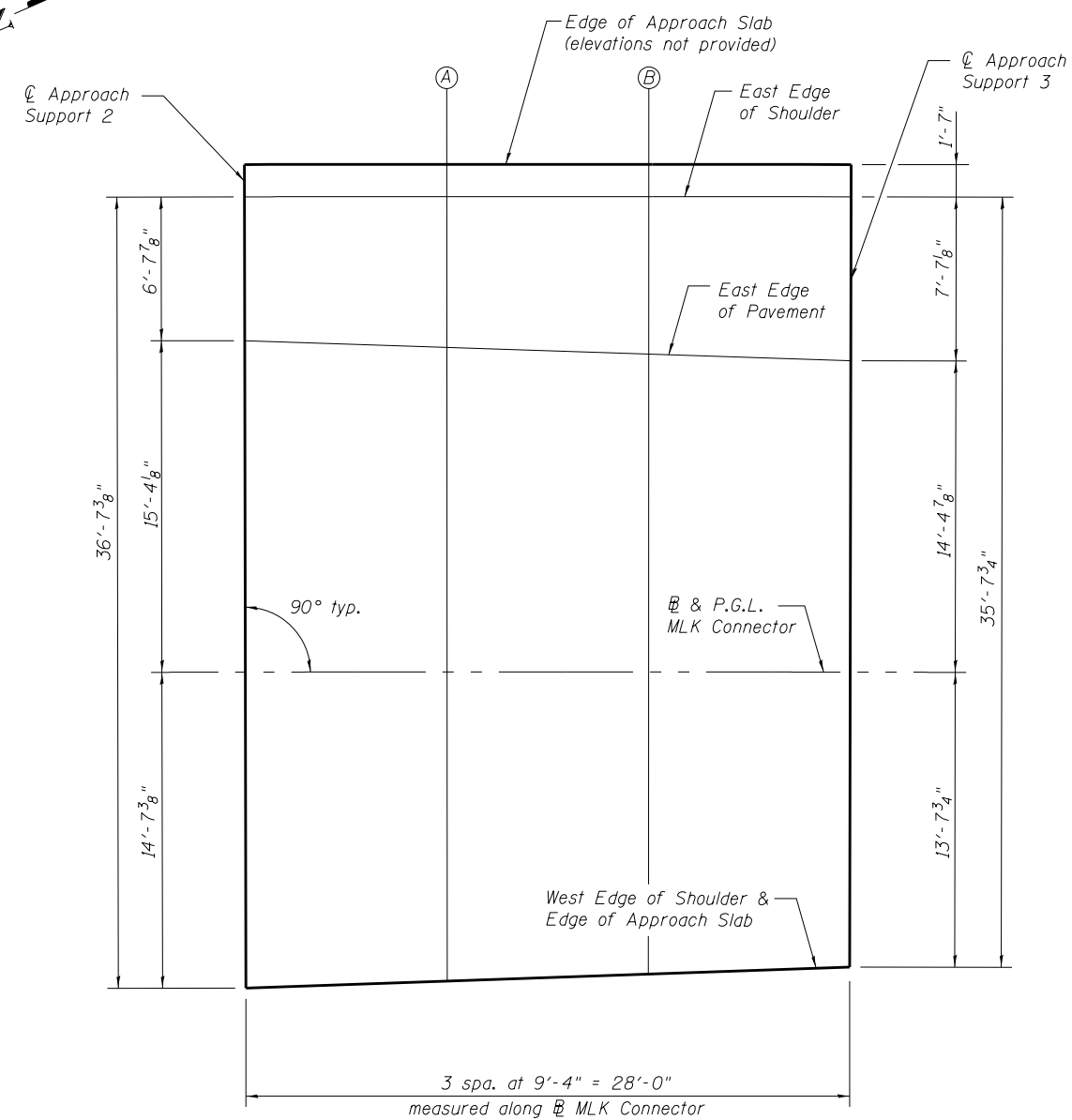
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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TOP OF APPROACH SPAN 2 ELEVATIONS  
STRUCTURE NO. 082-0349

SHEET NO. 19 OF 97 SHEETS

F.A.I. RTE. 64	SECTION 82-(1,4)B-1	COUNTY ST. CLAIR	TOTAL SHEETS 406	SHEET NO. 114
ILLINOIS FED. AID PROJECT			CONTRACT NO. 76G09	



**PLAN**

**EAST EDGE OF SHOULDER**

Location	Station	Offset	Theoretical Grade Elevations
☉ Approach Support 2	25+40.26	-22.00	427.97
A	25+49.59	-22.00	427.91
B	25+58.93	-22.00	427.85
☉ Approach Support 3	25+68.26	-22.00	427.81

**EAST EDGE OF PAVEMENT**

Location	Station	Offset	Theoretical Grade Elevations
☉ Approach Support 2	25+40.26	-15.34	427.89
A	25+49.59	-15.02	427.85
B	25+58.93	-14.71	427.82
☉ Approach Support 3	25+68.26	-14.41	427.81

**MLK & P.G.L. MLK CONNECTOR**

Location	Station	Offset	Theoretical Grade Elevations
☉ Approach Support 2	25+40.26	0	427.71
A	25+49.59	0	427.72
B	25+58.93	0	427.76
☉ Approach Support 3	25+68.26	0	427.81

**WEST EDGE OF SHOULDER & EDGE OF APPROACH SLAB**

Location	Station	Offset	Theoretical Grade Elevations
☉ Approach Support 2	25+40.26	14.62	427.54
A	25+49.59	14.31	427.60
B	25+58.93	13.98	427.70
☉ Approach Support 3	25+68.26	13.65	427.80

FILE NAME: S:\ProJects\12-0024-025 MLK Connector\Bridges\0820349-7609-020-Top of Slab S3 Elevation



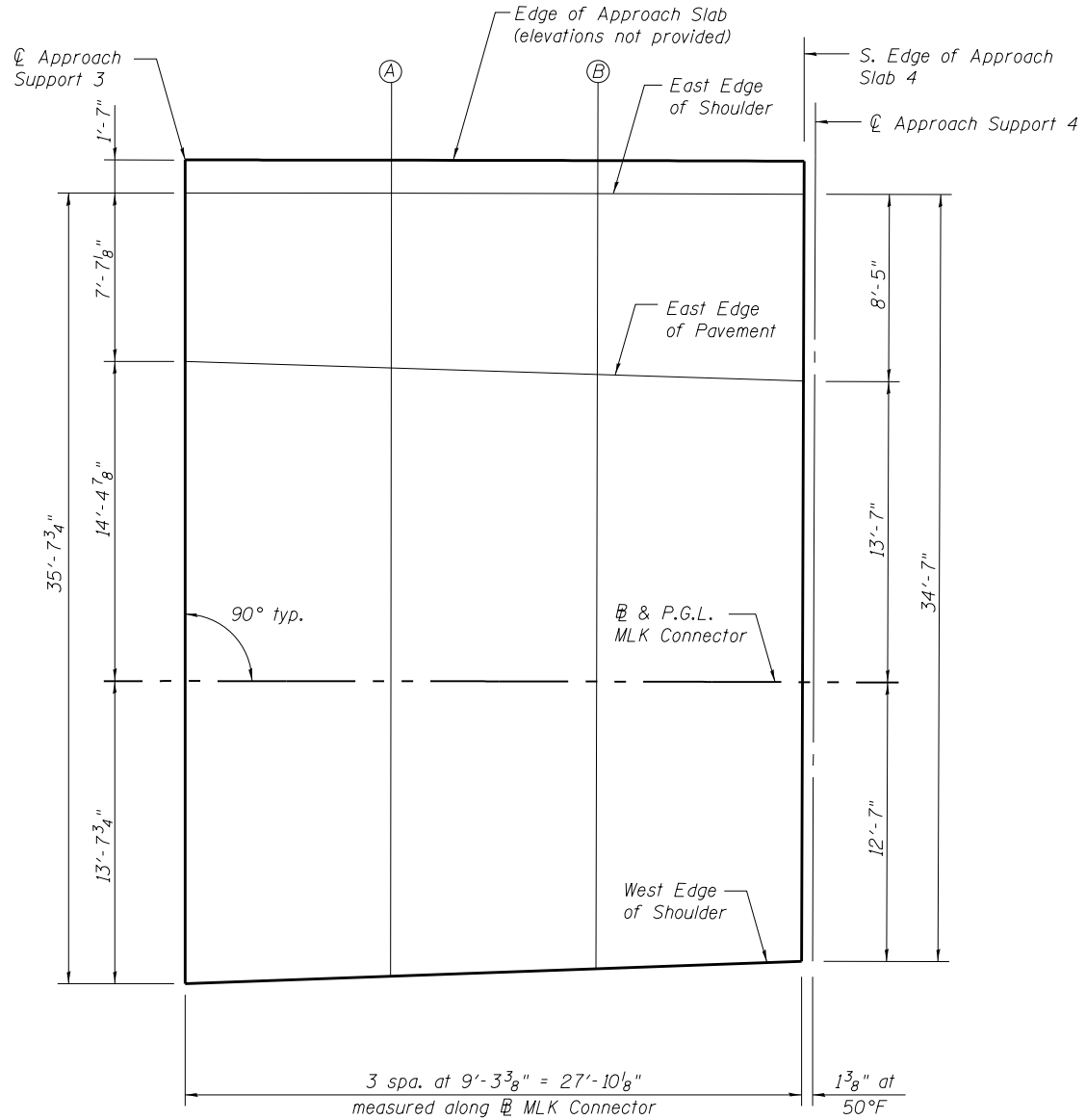
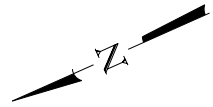
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Illinois Design Firm Number 184.001670	CHECKED - JD	REVISED
PLOT SCALE =	DRAWN - WS	REVISED
PLOT DATE = 9/15/2014	CHECKED - CJF	REVISED

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TOP OF APPROACH SPAN 3 ELEVATIONS  
STRUCTURE NO. 082-0349**

SHEET NO. 20 OF 97 SHEETS

F.A.I. RTE. = 64	SECTION = 82-(1,4)B-1	COUNTY = ST. CLAIR	TOTAL SHEETS = 406	SHEET NO. = 115
CONTRACT NO. 76G09			ILLINOIS FED. AID PROJECT	



**PLAN**

**EAST EDGE OF SHOULDER**

Location	Station	Offset	Theoretical Grade Elevations
☉ Approach Support 3	25+68.26	-22.00	427.81
A	25+77.54	-22.00	427.79
B	25+86.82	-22.00	427.79
S. Edge of Approach Slab 4	25+95.98	-22.00	427.80
☉ Approach Support 4	25+96.10	-22.00	427.80

**EAST EDGE OF PAVEMENT**

Location	Station	Offset	Theoretical Grade Elevations
☉ Approach Support 3	25+68.26	-14.41	427.81
A	25+77.54	-14.12	427.82
B	25+86.82	-13.84	427.85
S. Edge of Approach Slab 4	25+95.98	-13.58	427.90
☉ Approach Support 4	25+96.10	-13.58	427.90

**☉ & P.G.L. MLK CONNECTOR**

Location	Station	Offset	Theoretical Grade Elevations
☉ Approach Support 3	25+68.26	0	427.81
A	25+77.54	0	427.87
B	25+86.82	0	427.96
S. Edge of Approach Slab 4	25+95.98	0	428.06
☉ Approach Support 4	25+96.10	0	428.06

**WEST EDGE OF SHOULDER**

Location	Station	Offset	Theoretical Grade Elevations
☉ Approach Support 3	25+68.26	13.65	427.80
A	25+77.54	13.30	427.92
B	25+86.82	12.95	428.06
S. Edge of Approach Slab 4	25+95.98	12.58	428.21
☉ Approach Support 4	25+96.10	12.58	428.21

FILE NAME: S:\ProJects\12-0024-025 MLK Connector\Bridges\0820349-7609-021-Top of Slab S4 Elev.dgn



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Illinois Design Firm Number 184.001670	CHECKED - JD	REVISED
PLOT SCALE =	DRAWN - WS	REVISED
PLOT DATE = 9/15/2014	CHECKED - CJF	REVISED

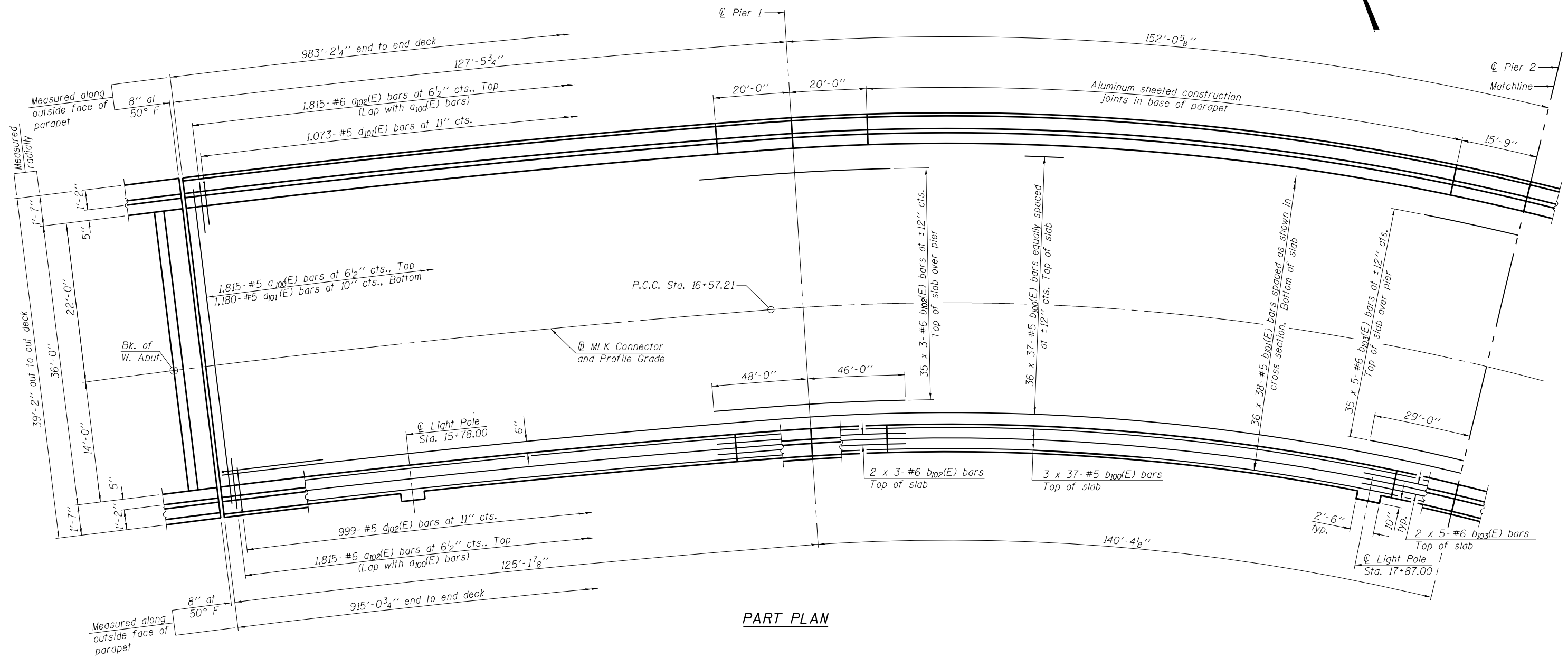
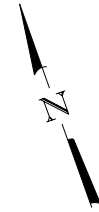
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TOP OF APPROACH SPAN 4 ELEVATIONS  
STRUCTURE NO. 082-0349**

SHEET NO. 21 OF 97 SHEETS

F.A.I. RTE. 64	SECTION 82-(1,4)B-1	COUNTY ST. CLAIR	TOTAL SHEETS 406	SHEET NO. 116
CONTRACT NO. 76G09			ILLINOIS FED. AID PROJECT	





**PART PLAN**

**MINIMUM BAR LAP**

#5 bar = 3'-3"  
 #6 bar = 3'-10"

**Notes:**  
 Bars indicated thus 35 x 3-#6 etc. indicates 35 lines of bars with 3 lengths per line.  
 The "a" bars are placed radially and spaced along left edge of deck.  
 The "b" bars are placed concentrically.  
 For spans 3 and 4, see sheet 23 of 97.  
 For spans 5 and 6, see sheet 24 of 97.  
 For spans 7 and 8, see sheet 25 of 97.  
 For parapet reinforcement, see sheets 27 and 28 of 97.  
 For Superstructure Details and Bill of Materials, see sheet 29 of 97.

FILE NAME = X:\1309400-MLK\Cad\9-76009.dgn	DESIGNED - T.S. Friederich	REVISED
USER NAME = elagemann	CHECKED - K.A. Klues	REVISED
PLOT SCALE =	DRAWN - C.A. Buettner	REVISED
PLOT DATE = 8/7/2014	CHECKED - E.M. Lagemann	REVISED

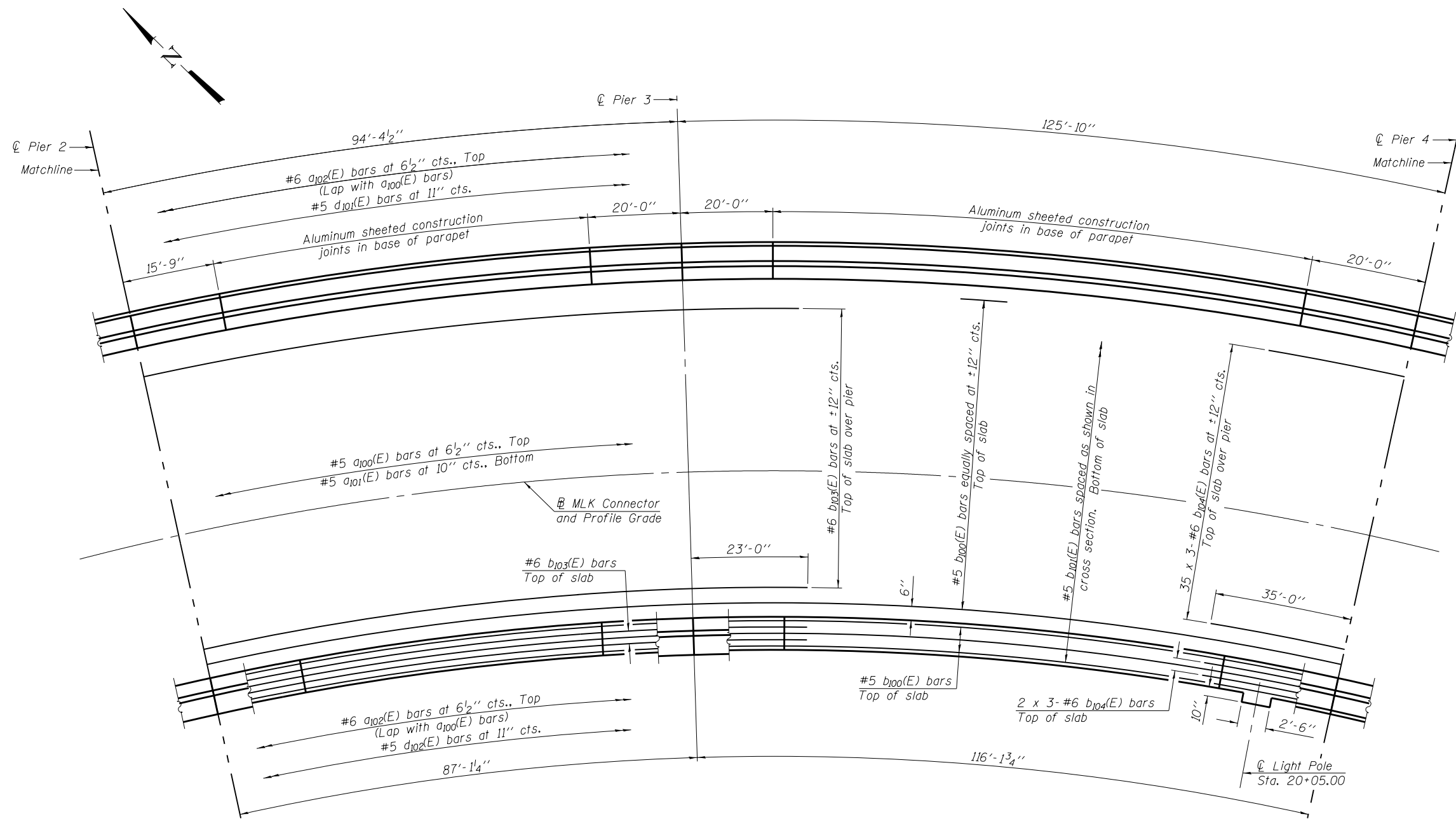


**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**SUPERSTRUCTURE DETAILS - SPANS 1 AND 2  
 STRUCTURE NO. 082-0349**

SHEET NO. 22 OF 97 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1141B-1	ST. CLAIR	406	117
CONTRACT NO. 76G09			ILLINOIS FED. AID PROJECT	



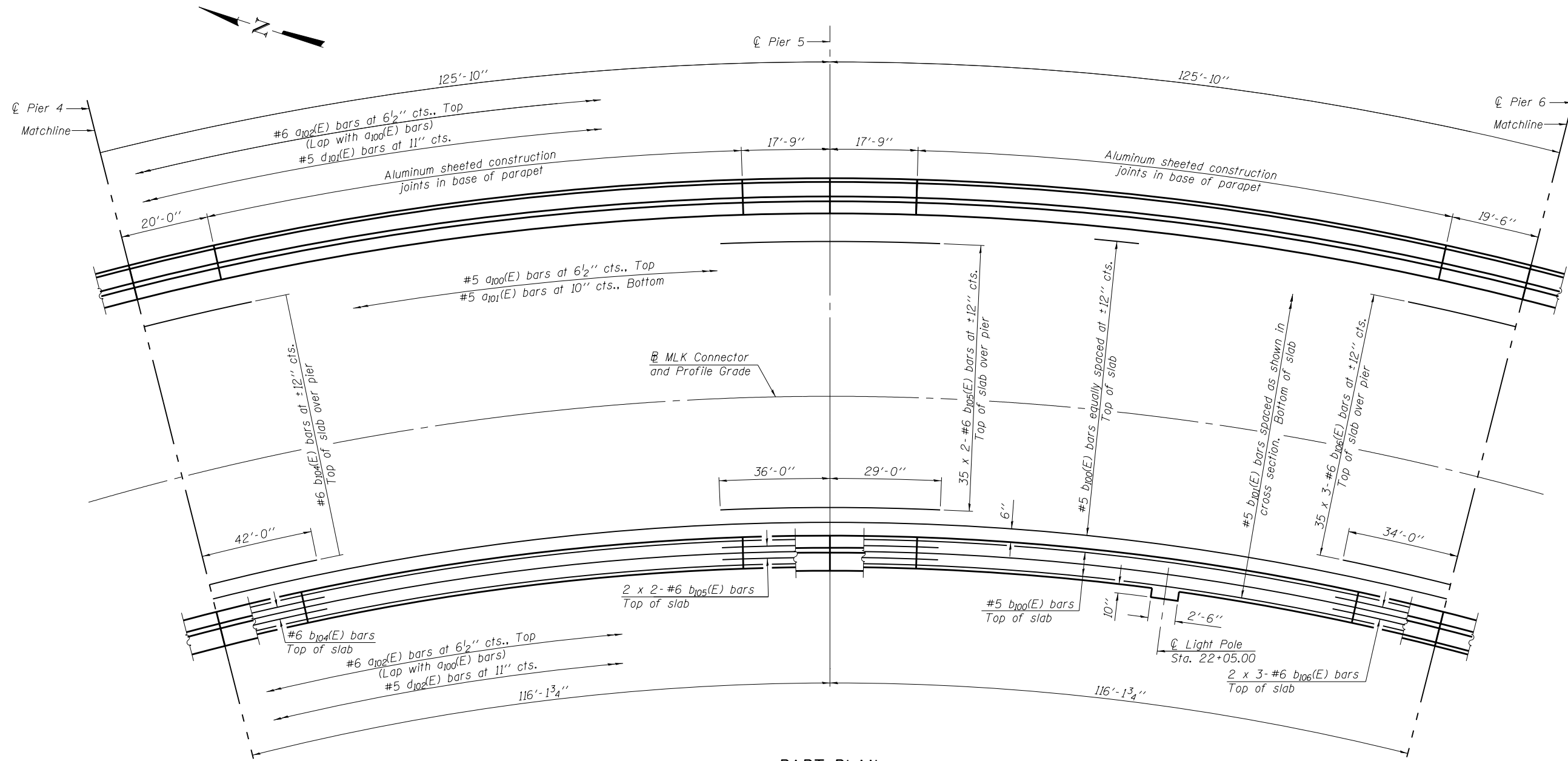
**PART PLAN**

**MINIMUM BAR LAP**

#5 bar = 3'-3"  
 #6 bar = 3'-10"

Notes:  
 Bars indicated thus 35 x 3-#6 etc. indicates 35 lines of bars with 3 lengths per line.  
 The "a" bars are placed radially and spaced along left edge of deck.  
 The "b" bars are placed concentrically.  
 For spans 1 and 2, see sheet 22 of 97.  
 For spans 5 and 6, see sheet 24 of 97.  
 For spans 7 and 8, see sheet 25 of 97.  
 For parapet reinforcement, see sheets 27 and 28 of 97.  
 For Superstructure Details and Bill of Materials, see sheet 29 of 97.

FILE NAME = X:\1309400-MLK\Cad\15082034-76009.dgn 	USER NAME = elagemann PLOT SCALE = PLOT DATE = 8/7/2014	DESIGNED - T.S. Friederich CHECKED - K.A. Klues DRAWN - C.A. Buettner CHECKED - E.M. Lagemann	REVISED REVISED REVISED REVISED	<b>STATE OF ILLINOIS          DEPARTMENT OF TRANSPORTATION</b>	<b>SUPERSTRUCTURE DETAILS - SPANS 3 AND 4          STRUCTURE NO. 082-0349</b>	F.A.I. RTE. = 64 SECTION = 82-1,41B-1	COUNTY = ST. CLAIR	TOTAL SHEETS = 406 SHEET NO. = 118	CONTRACT NO. 76G09
	SHEET NO. 23 OF 97 SHEETS					ILLINOIS FED. AID PROJECT			



**PART PLAN**

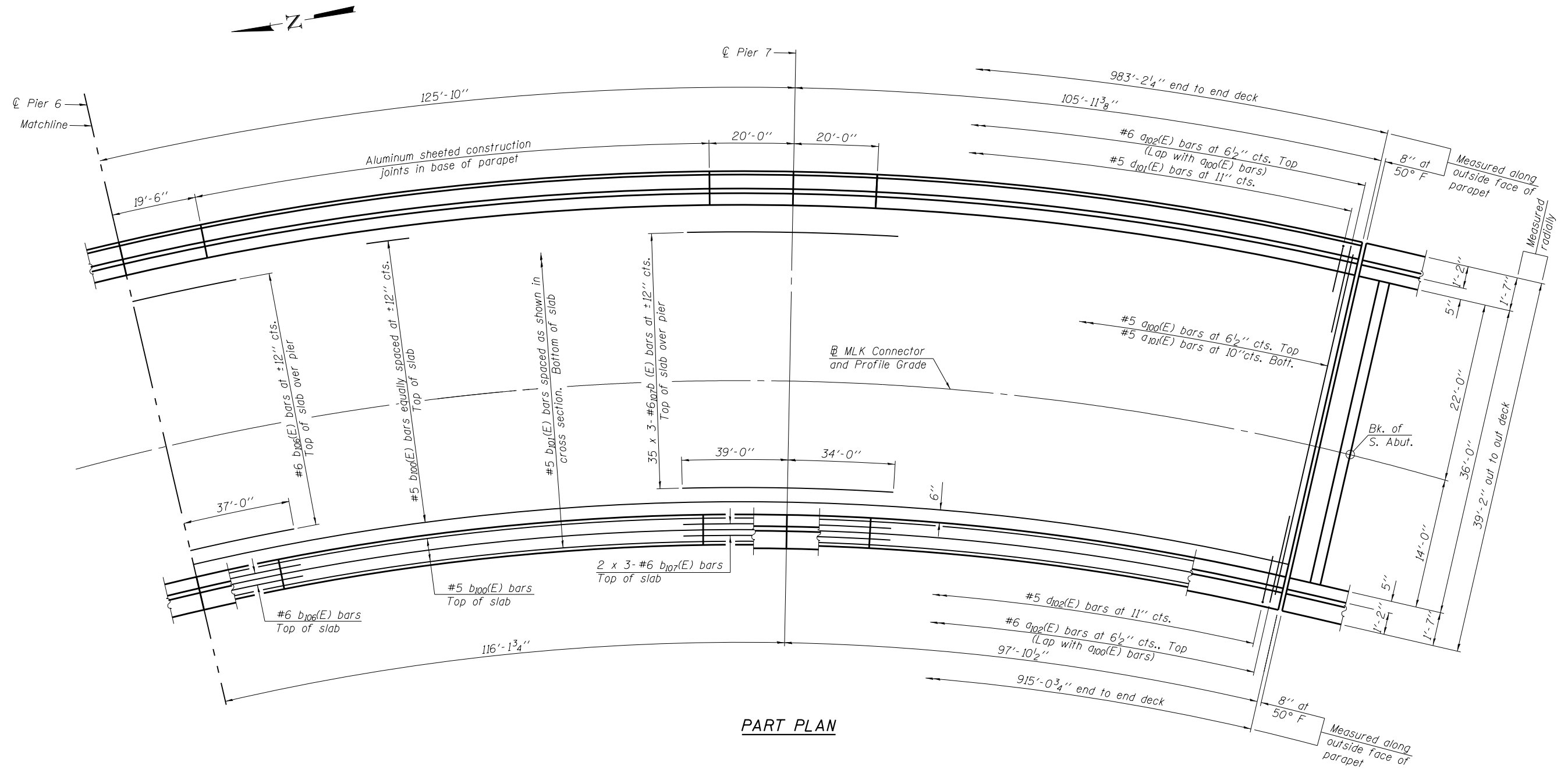
**MINIMUM BAR LAP**

#5 bar = 3'-3"  
 #6 bar = 3'-10"

Notes:  
 Bars indicated thus 35 x 3-#6 etc. indicates 35 lines of bars with 3 lengths per line.  
 The "a" bars are placed radially and spaced along left edge of deck.  
 The "b" bars are placed concentrically.  
 For spans 1 and 2, see sheet 22 of 97.  
 For spans 3 and 4, see sheet 23 of 97.  
 For spans 7 and 8, see sheet 25 of 97.  
 For parapet reinforcement, see sheets 27 and 28 of 97.  
 For Superstructure Details and Bill of Materials, see sheet 29 of 97.

FILE NAME = X:\1309400-MLK\Cad\15\082034-76009.dgn USER NAME = elagemann PLOT SCALE = PLOT DATE = 8/7/2014	DESIGNED - T.S. Friederich CHECKED - K.A. Klues	REVISED REVISED	<b>STATE OF ILLINOIS          DEPARTMENT OF TRANSPORTATION</b>	<b>SUPERSTRUCTURE DETAILS - SPANS 5 AND 6          STRUCTURE NO. 082-0349</b>	F.A.I. RE. 64	SECTION 82-11.4(B)-1	COUNTY ST. CLAIR	TOTAL SHEETS 406	SHEET NO. 119
	DRAWN - C.A. Buettner CHECKED - E.M. Lagemann	REVISED REVISED			SHEET NO. 24 OF 97 SHEETS			CONTRACT NO. 76G09	





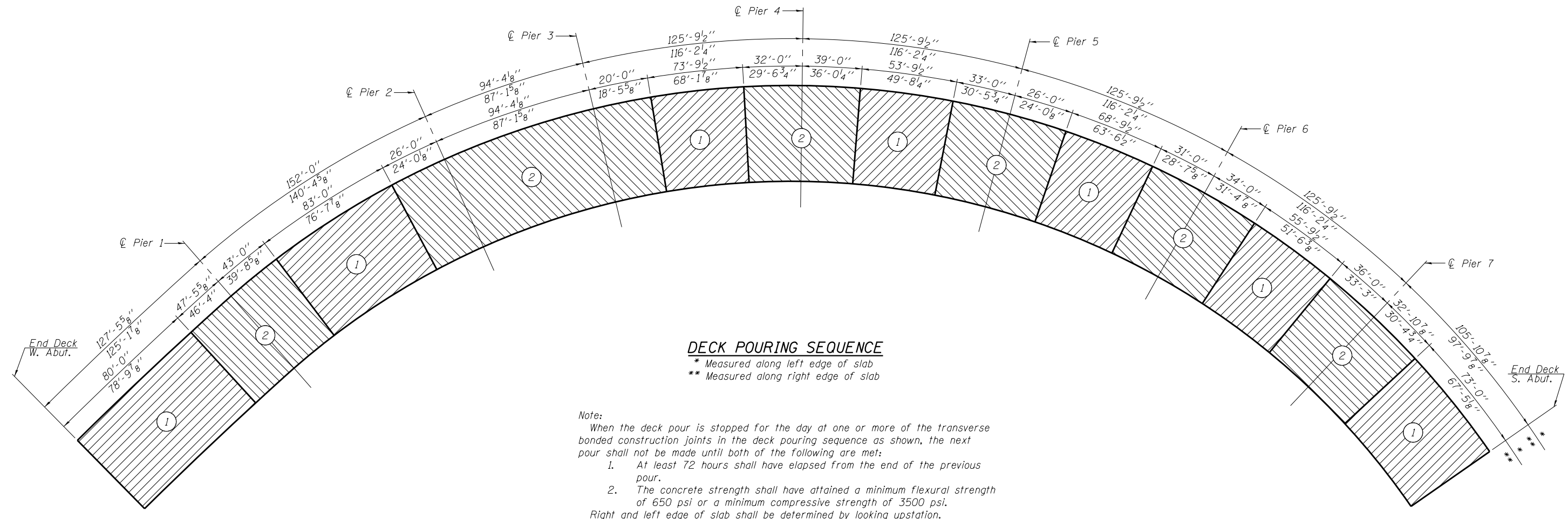
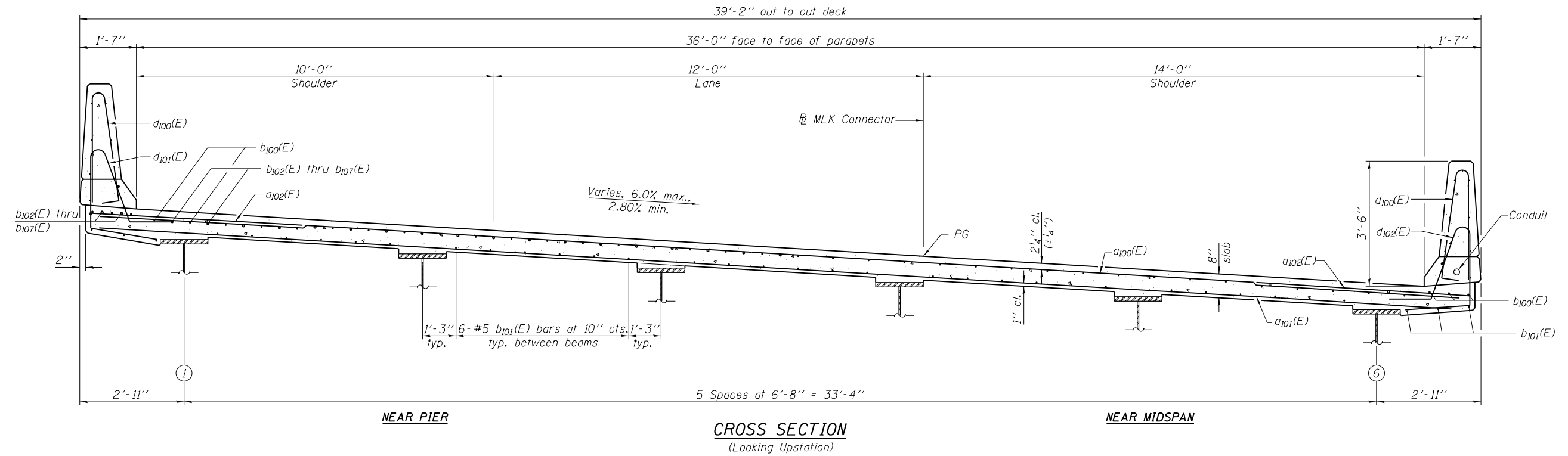
**PART PLAN**

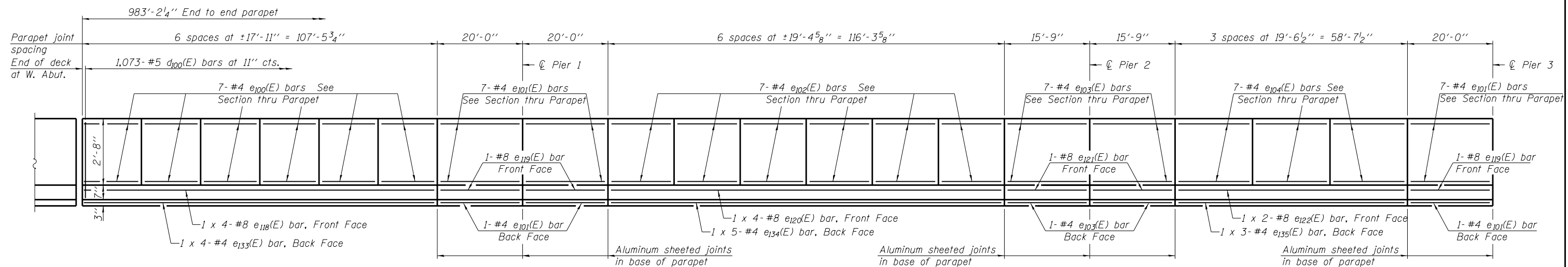
**MINIMUM BAR LAP**

#5 bar = 3'-3"  
 #6 bar = 3'-10"

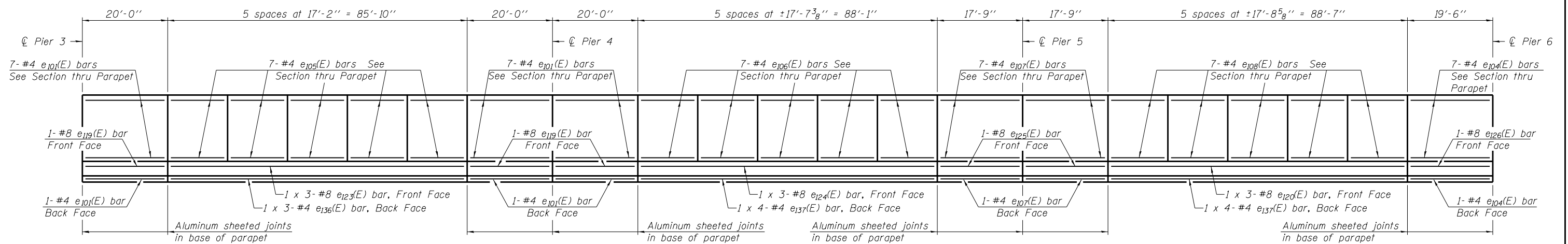
Notes:  
 Bars indicated thus 35 x 3- #6 etc. indicates 35 lines of bars with 3 lengths per line.  
 The "a" bars are placed radially and spaced along left edge of deck.  
 The "b" bars are placed concentrically.  
 For spans 1 and 2, see sheet 22 of 97.  
 For spans 3 and 4, see sheet 23 of 97.  
 For spans 5 and 6, see sheet 24 of 97.  
 For parapet reinforcement, see sheets 27 and 28 of 97.  
 For Superstructure Details and Bill of Materials, see sheet 29 of 97.

FILE NAME = X:\1309400-MLK\Cad\15\082034-76009.dgn 	USER NAME = elagemann PLOT SCALE = PLOT DATE = 8/7/2014	DESIGNED - T.S. Friederich CHECKED - K.A. Klues DRAWN - C.A. Buettner CHECKED - E.M. Lagemann	REVISED REVISED REVISED REVISED	<b>STATE OF ILLINOIS          DEPARTMENT OF TRANSPORTATION</b>	<b>SUPERSTRUCTURE DETAILS - SPANS 7 AND 8          STRUCTURE NO. 082-0349</b>	F.A.I. RTE. = 64 SECTION = 82-11,41B-1	COUNTY = ST. CLAIR CONTRACT NO. 76G09	TOTAL SHEETS = 406 SHEET NO. = 120
						SHEET NO. 25 OF 97 SHEETS		ILLINOIS FED. AID PROJECT

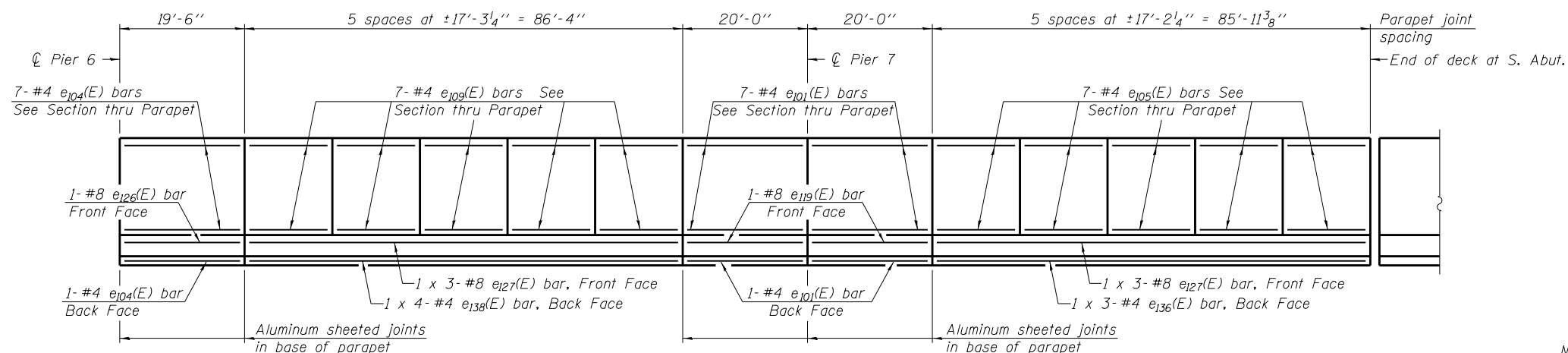




**INSIDE ELEVATION OF LEFT PARAPET - SPANS 1 THRU 3**



**INSIDE ELEVATION OF LEFT PARAPET - SPANS 4 THRU 6**



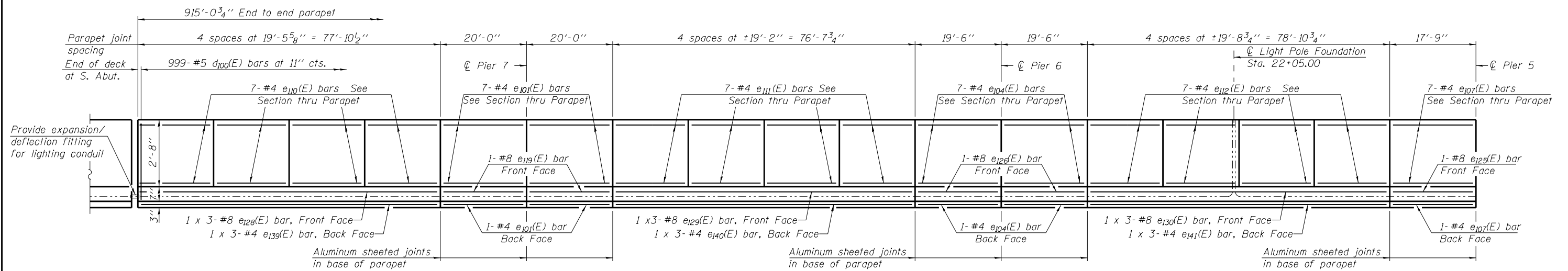
**INSIDE ELEVATION OF LEFT PARAPET - SPANS 7 AND 8**

**MINIMUM BAR LAP**

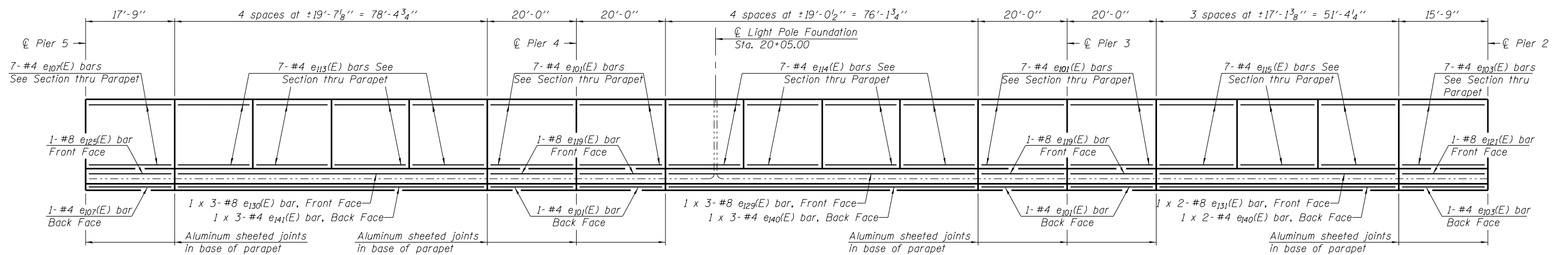
(Parapet)  
 #4 bar = 2'-0"  
 #8 bar = 5'-2"

Note:  
 Right and left parapet shall be determined by looking upstation.

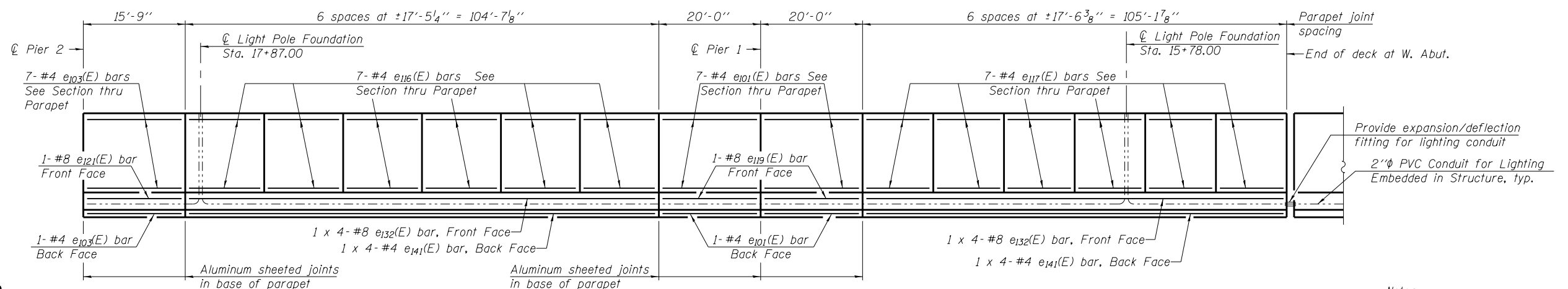
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	USER NAME = elagemann	CHECKED - K.A. Klues	REVISED			64	82-11,41B-1	ST. CLAIR	406	122
	PLOT SCALE =	DRAWN - C.A. Buettner	REVISED			CONTRACT NO. 76G09				
	PLOT DATE = 8/7/2014	CHECKED - E.M. Lagemann	REVISED			ILLINOIS FED. AID PROJECT				



**INSIDE ELEVATION OF RIGHT PARAPET - SPANS 6 THRU 8**



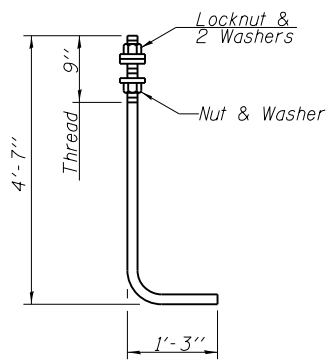
**INSIDE ELEVATION OF RIGHT PARAPET - SPANS 3 THRU 5**



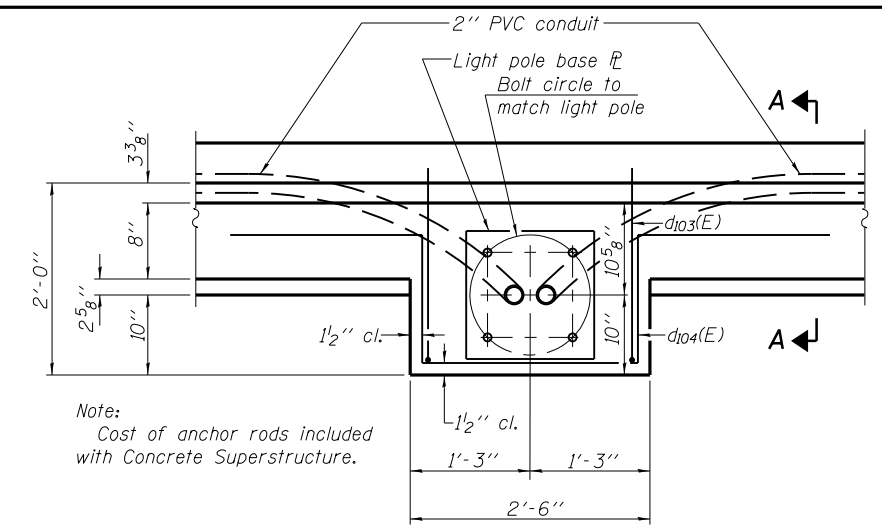
**INSIDE ELEVATION OF RIGHT PARAPET - SPANS 1 AND 2**

**MINIMUM BAR LAP**  
(Parapet)  
#4 bar = 2'-0"  
#8 bar = 5'-2"

Notes:  
Right and left parapet shall be determined by looking up station.  
For quantity of pvc conduit, see lighting plans.

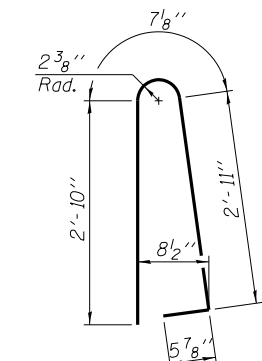


**ANCHOR ROD**  
Diameter as specified for light poles. (ASTM F 1554 Grade 105)

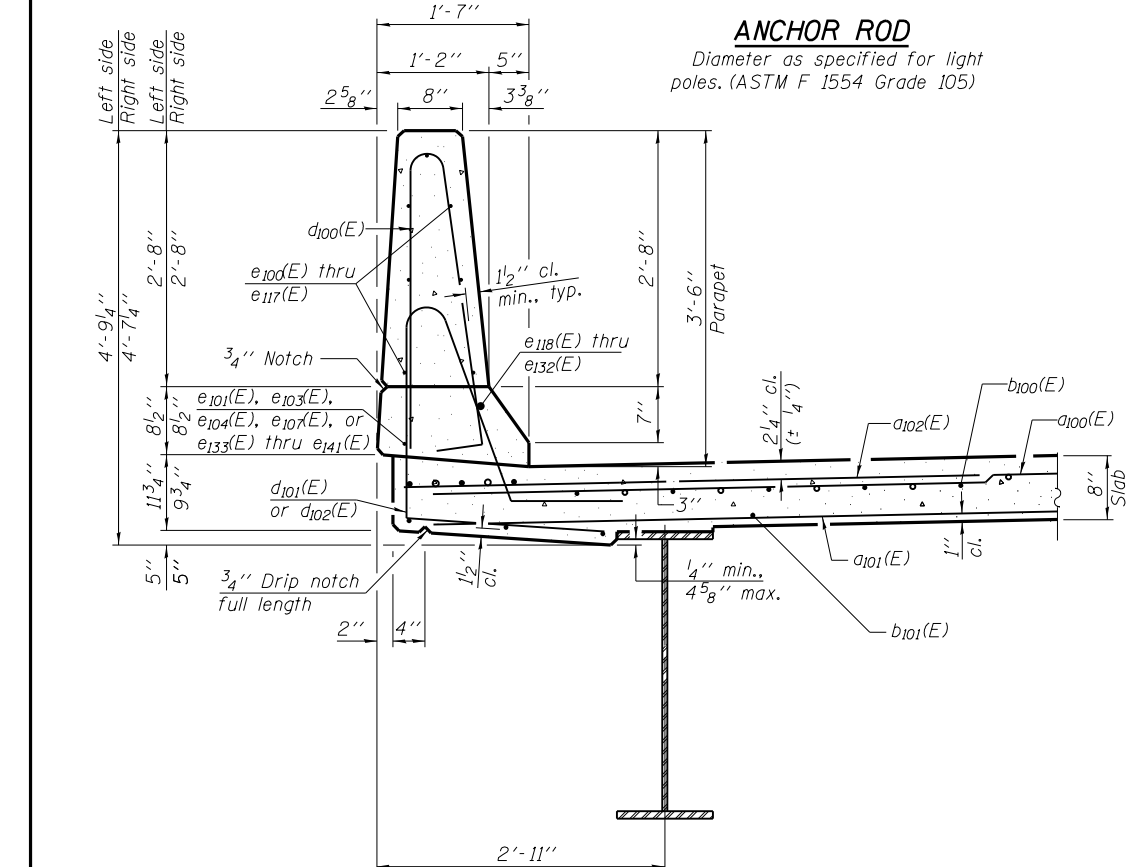


Note:  
Cost of anchor rods included with Concrete Superstructure.

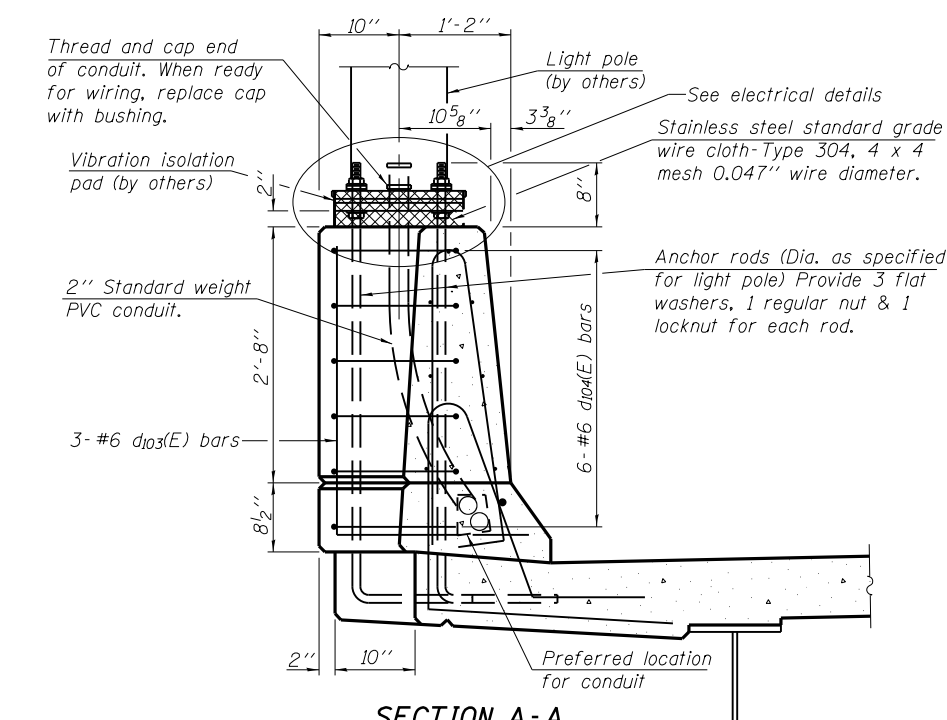
**PLAN**



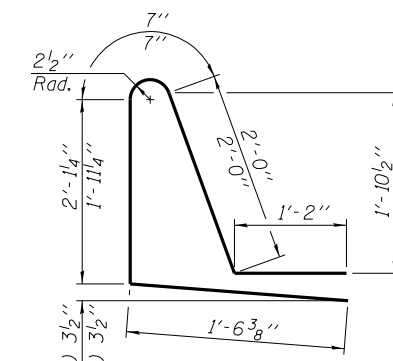
**BAR d100(E)**



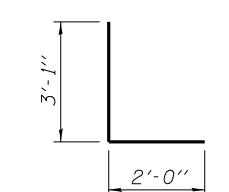
**SECTION THRU PARAPET**



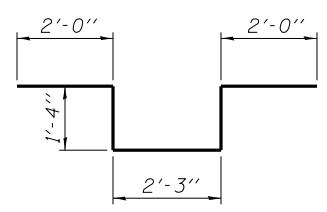
**SECTION A-A**



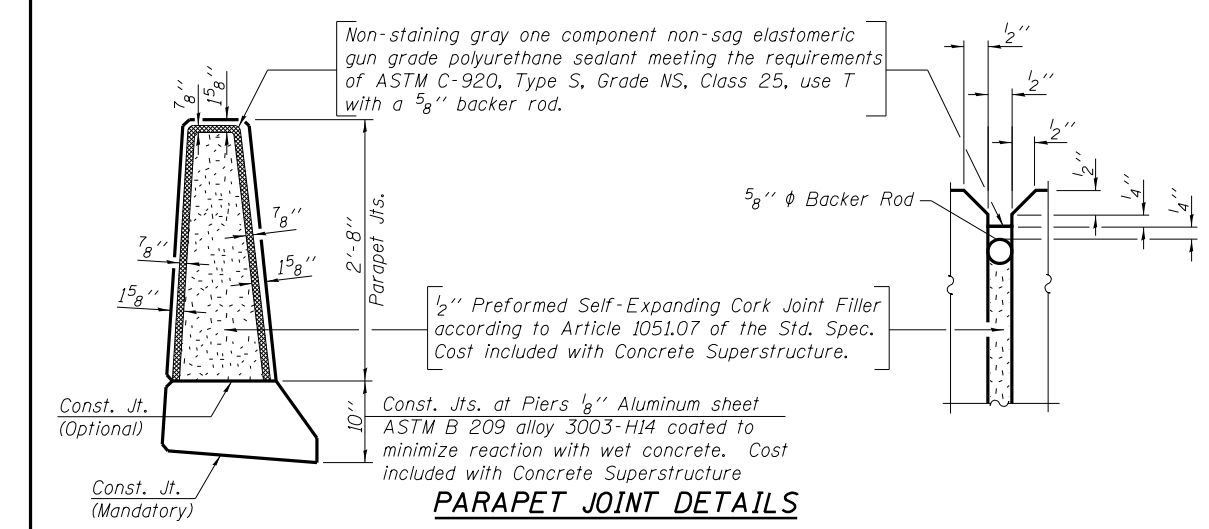
**BARS d101(E) AND d102(E)**



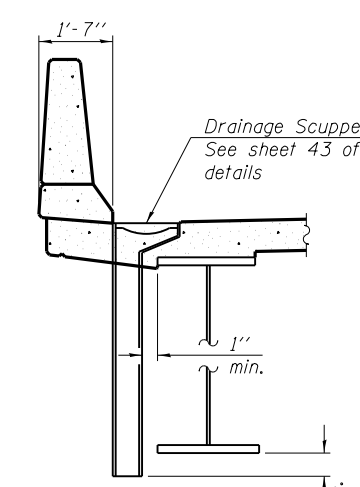
**BAR d103(E)**



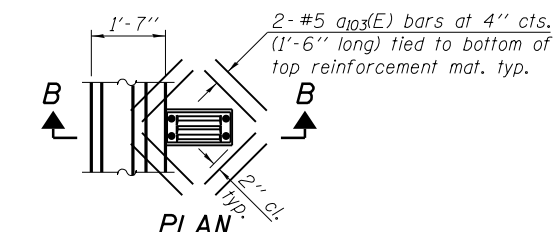
**BAR d104(E)**



**PARAPET JOINT DETAILS**



**SECTION B-B**



**PLAN**

Cut longitudinal reinforcement to clear drainage scuppers.

**SUPERSTRUCTURE  
BILL OF MATERIAL**

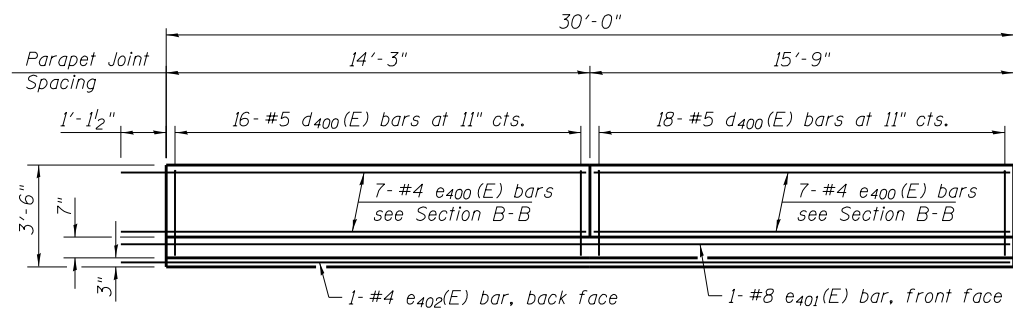
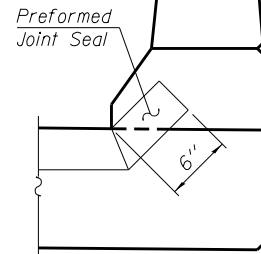
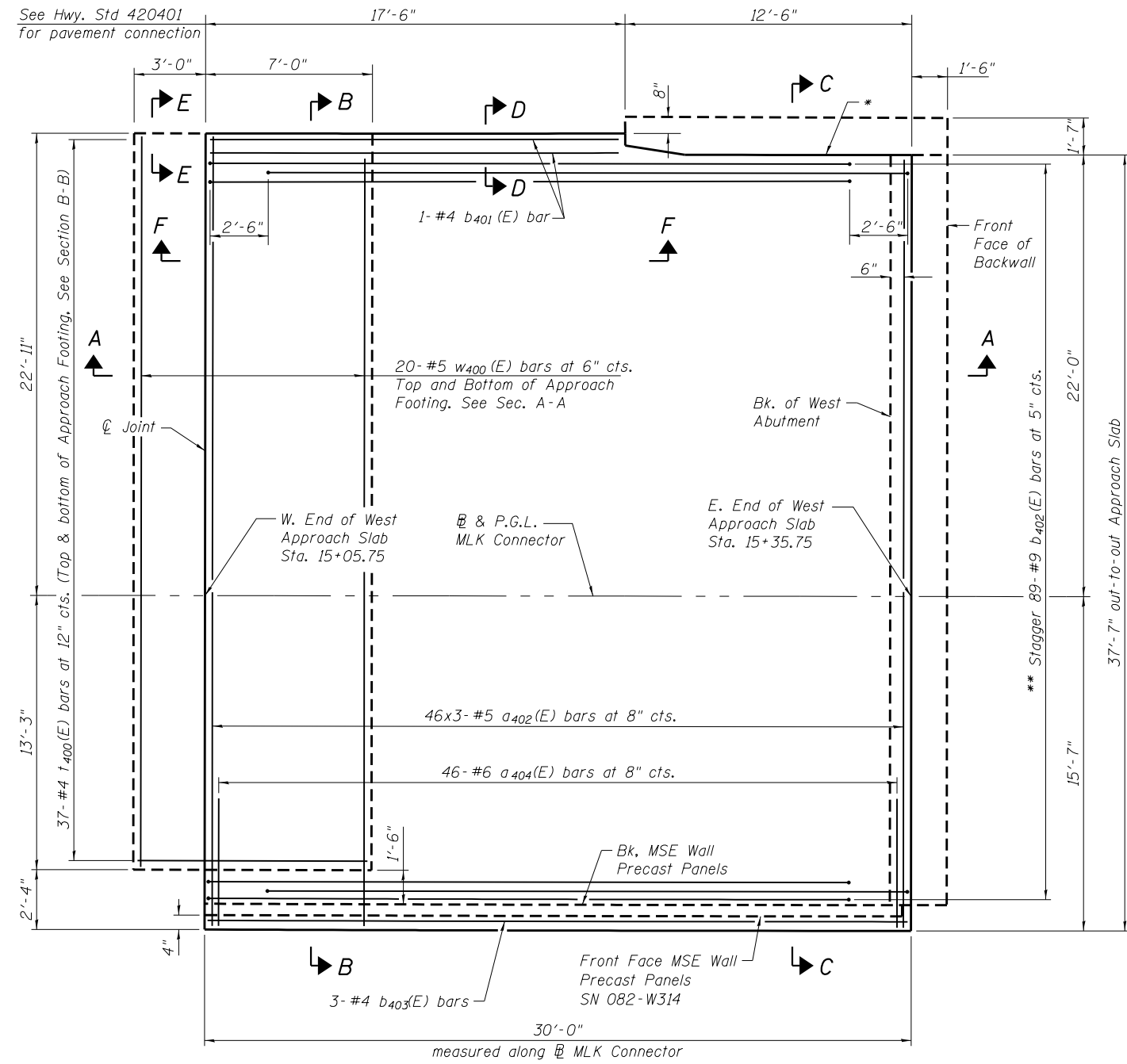
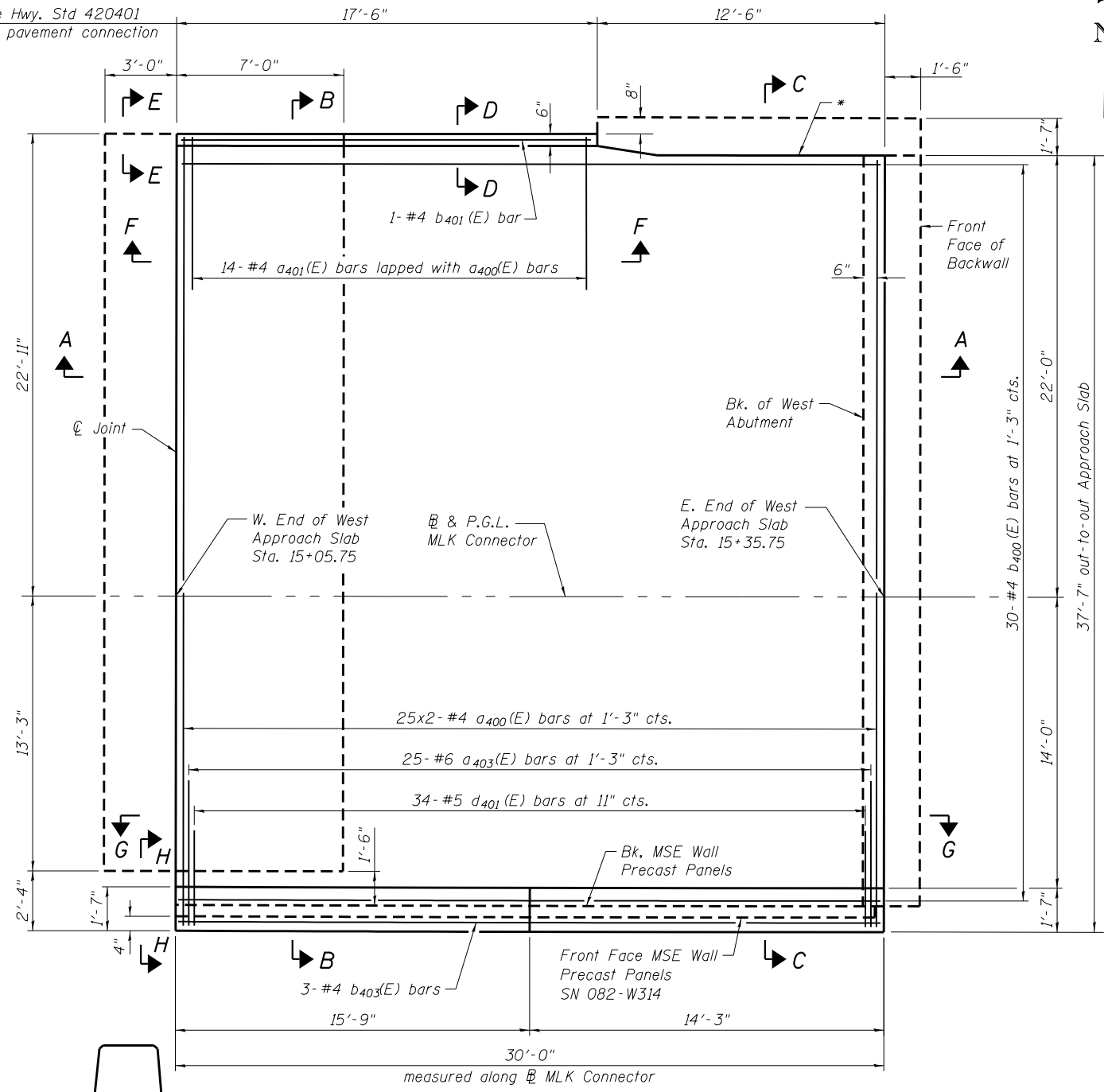
Bar	No.	Size	Length	Shape
d100(E)	1,815	#5	38'-6"	—
d101(E)	1,180	#5	37'-10"	—
d102(E)	3,630	#6	6'-6"	—
d103(E)	24	#5	1'-6"	—
b100(E)	1,554	#5	29'-9"	—
b101(E)	1,368	#5	29'-1"	—
b102(E)	117	#6	33'-11"	—
b103(E)	195	#6	32'-5"	—
b104(E)	117	#6	28'-3"	—
b105(E)	78	#6	34'-5"	—
b106(E)	117	#6	26'-3"	—
b107(E)	117	#6	26'-11"	—
d100(E)	2,072	#5	6'-10"	—
d101(E)	1,073	#5	7'-5"	—
d102(E)	999	#5	7'-3"	—
d103(E)	12	#6	5'-1"	—
d104(E)	24	#6	8'-11"	—
e100(E)	42	#4	17'-8"	—
e101(E)	128	#4	19'-9"	—
e102(E)	42	#4	19'-1"	—
e103(E)	32	#4	15'-6"	—
e104(E)	53	#4	19'-3"	—
e105(E)	70	#4	16'-11"	—
e106(E)	35	#4	17'-4"	—
e107(E)	32	#4	17'-6"	—
e108(E)	35	#4	17'-5"	—
e109(E)	35	#4	17'-0"	—
e110(E)	28	#4	19'-2"	—
e111(E)	28	#4	18'-10"	—
e112(E)	28	#4	19'-5"	—
e113(E)	28	#4	19'-4"	—
e114(E)	28	#4	18'-9"	—
e115(E)	21	#4	16'-10"	—
e116(E)	42	#4	17'-2"	—
e117(E)	42	#4	17'-3"	—
e118(E)	4	#8	30'-9"	—
e119(E)	16	#8	19'-9"	—
e120(E)	7	#8	32'-11"	—
e121(E)	4	#8	15'-6"	—
e122(E)	2	#8	31'-10"	—
e123(E)	3	#8	32'-0"	—
e124(E)	3	#8	32'-9"	—
e125(E)	4	#8	17'-6"	—
e126(E)	4	#8	19'-3"	—
e127(E)	6	#8	32'-2"	—
e128(E)	3	#8	29'-4"	—
e129(E)	6	#8	28'-11"	—
e130(E)	6	#8	29'-8"	—
e131(E)	2	#8	28'-2"	—
e132(E)	8	#8	30'-2"	—
e133(E)	4	#4	28'-4"	—
e134(E)	5	#4	24'-10"	—
e135(E)	3	#4	20'-10"	—
e136(E)	6	#4	29'-11"	—
e137(E)	8	#4	23'-7"	—
e138(E)	4	#4	23'-1"	—
e139(E)	3	#4	27'-3"	—
e140(E)	8	#4	26'-10"	—
e141(E)	14	#4	27'-9"	—
Reinforcement Bars, Epoxy Coated		Pound	325,050	
Concrete Superstructure		Cu. Yds.	1,267.3	



Notes:  
See sheet 31 of 97 for Sections A-A, B-B, C-C and Views D-D, E-E & F-F.

See Hwy. Std 420401  
For pavement connection

See Hwy. Std 420401  
For pavement connection



**MINIMUM BAR LAP**

#4 bar = 2'-0"  
#5 bar = 2'-6"

\* 1/2" Preformed Joint Filler according to Article 1051 of the Standard Specifications: full depth of slab, full length of parapet.

\*\* Tilt #9 b402 (E) bars as required to maintain clearance

FILE NAME: S:\Proj\Jobs\12-02-025 MLK Connector\Bridges\0820349\West Approach Slab Details.dgn

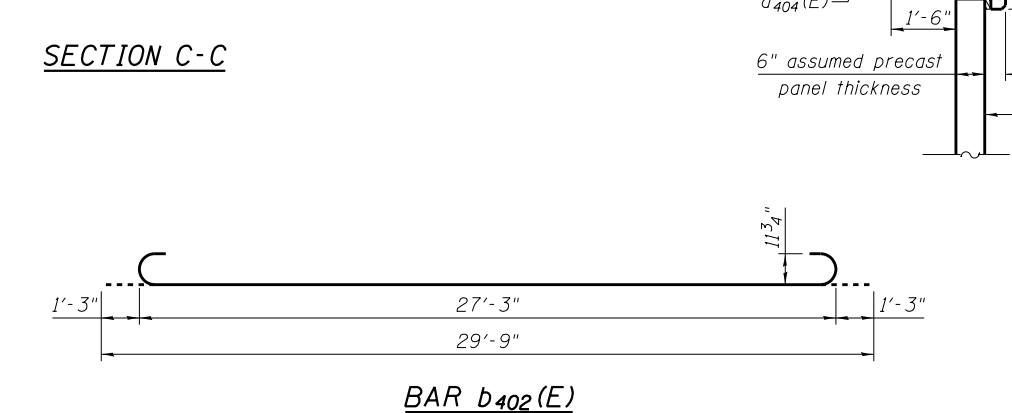
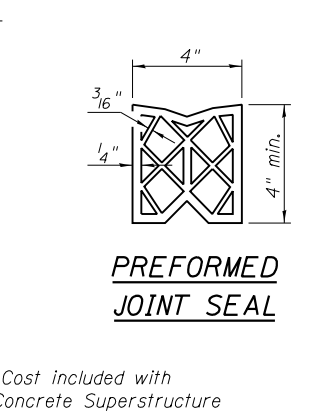
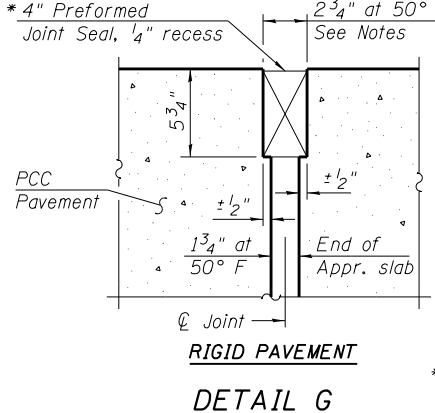
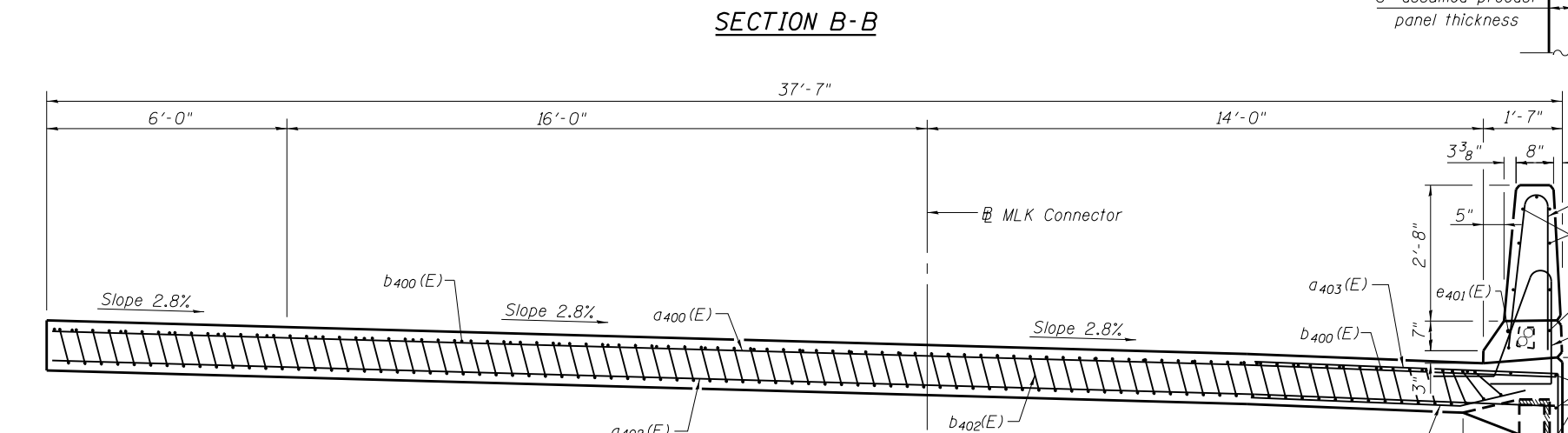
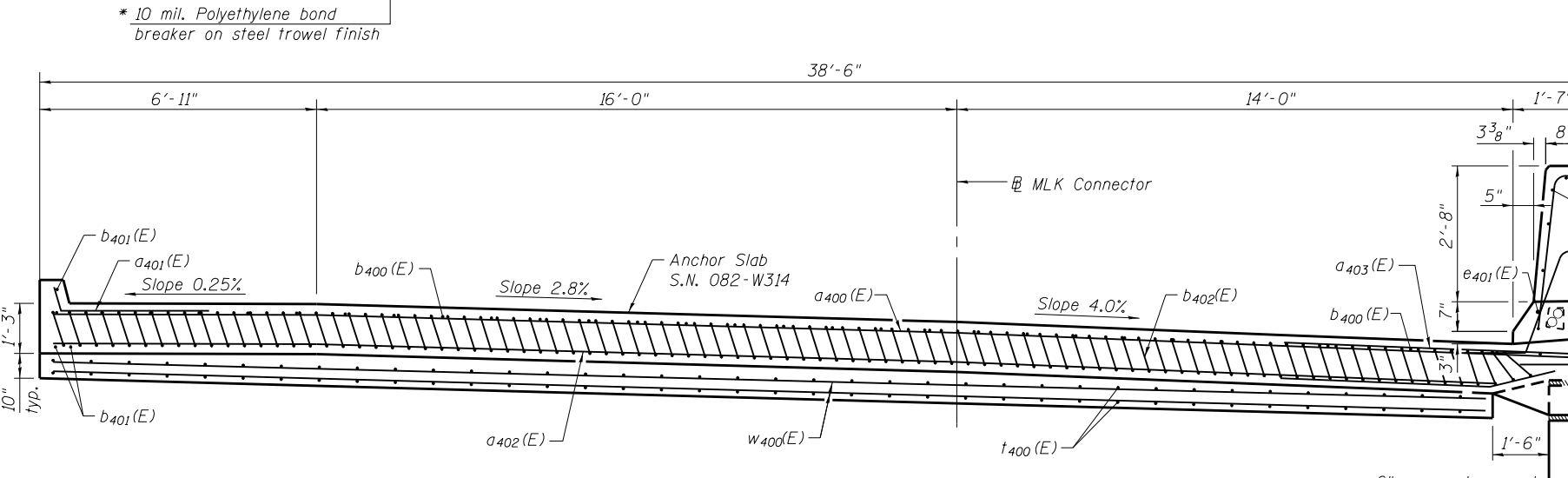
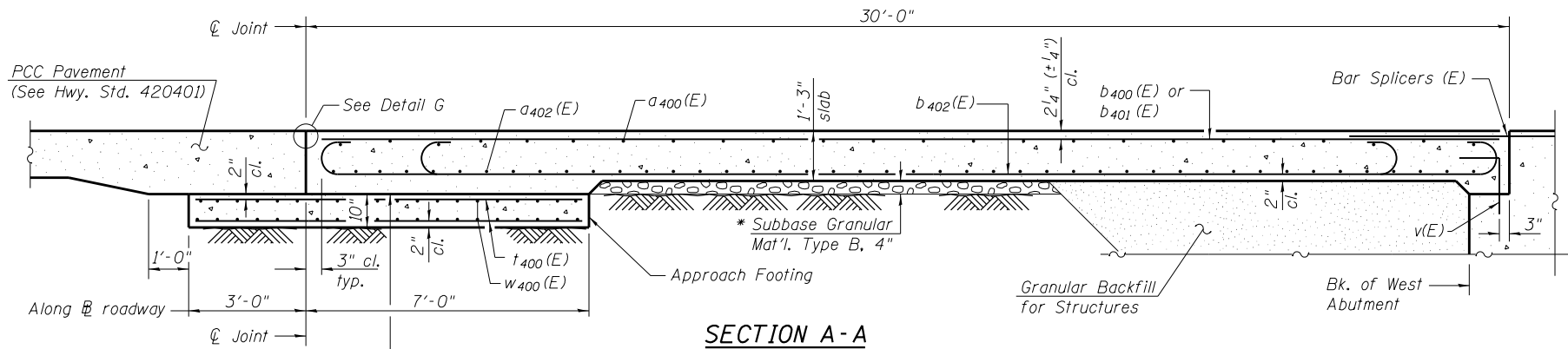


USER NAME = bbovee	DESIGNED - BB	REVISED
Illinois Design Firm Number 184,001670	CHECKED - JD	REVISED
PLOT SCALE =	DRAWN - WS	REVISED
PLOT DATE = 8/7/2014	CHECKED - CJF	REVISED

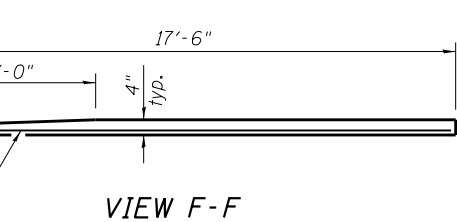
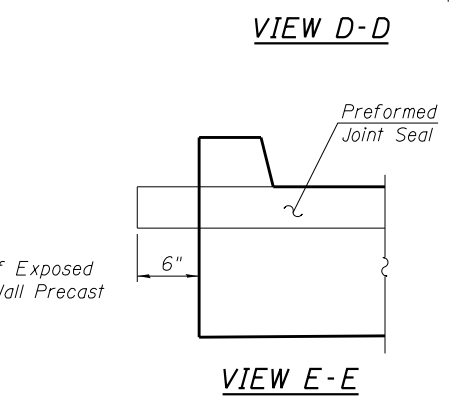
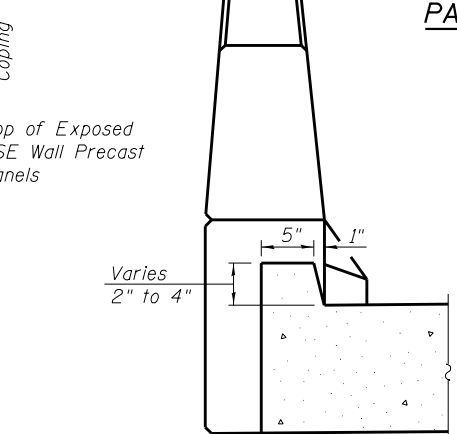
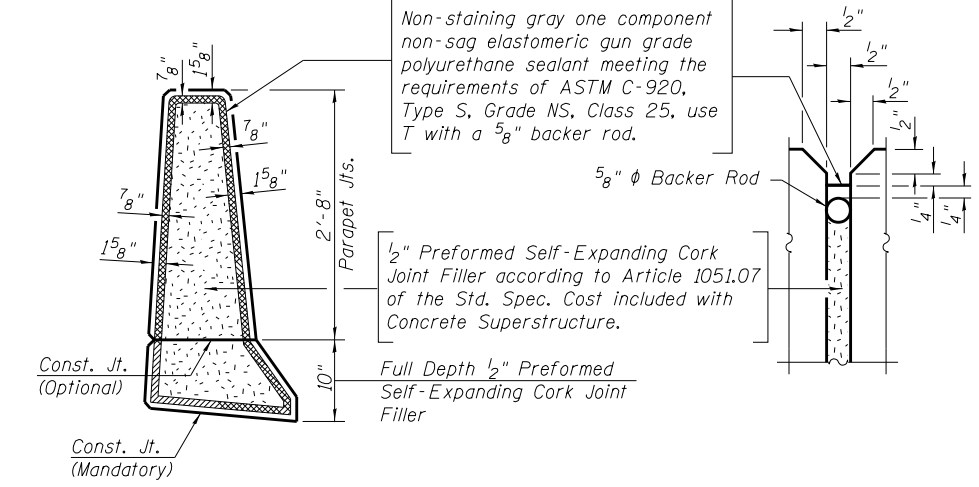
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

WEST APPROACH SLAB DETAILS  
STRUCTURE NO. 082-0349  
SHEET NO. 30 OF 97 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	125
CONTRACT NO. 76G09				
ILLINOIS FED. AID PROJECT				



Notes:  
 Approach Slab concrete shall be paid for as Concrete Superstructure.  
 Approach Footing shall be paid for as Concrete Structures.  
 The Approach Footing maximum applied service bearing pressure (Qmax) = 2.0 Ksf.  
 See sheet 75 of 97 for Bar Splicer Details.  
 Cost of excavation for Approach Footing included with Concrete Structures.  
 See sheet 75 of 97 for v(E) Bar Details.  
 See sheet 4 of 97 for Granular Backfill for Structures and Drainage Treatment Details.  
 The joint opening shall be determined per Article 520.04 of the Standard Specifications for Road and Bridge Construction. The minimum dimension shall be 1 1/2" for installation purposes.  
 See sheet 34 of 97 for additional Bar Bend Details.

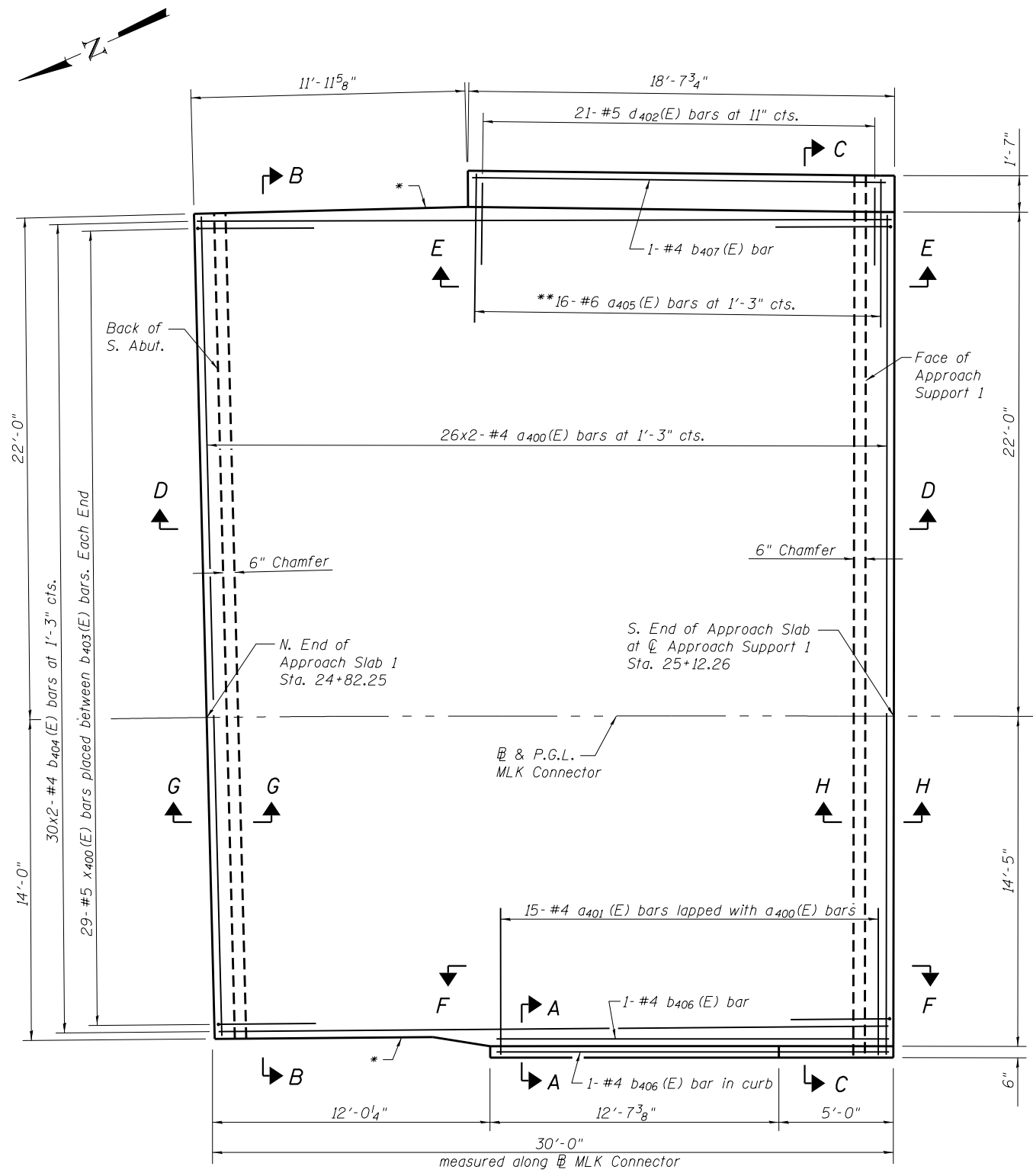


**WEST APPROACH SLAB BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a400(E)	50	#4	20'-2"	—
a401(E)	14	#4	6'-10"	—
a402(E)	138	#5	14'-5"	—
a403(E)	25	#6	7'-9"	—
a404(E)	46	#5	7'-1"	—
b400(E)	30	#4	29'-9"	—
b401(E)	3	#4	17'-3"	—
b402(E)	89	#9	29'-9"	—
b403(E)	3	#4	31'-3"	—
d400(E)	34	#5	6'-10"	—
d401(E)	34	#5	6'-10"	—
e400(E)	14	#4	15'-6"	—
e401(E)	2	#8	15'-5"	—
e402(E)	2	#4	15'-5"	—
t400(E)	74	#4	9'-8"	—
w400(E)	40	#5	35'-11"	—
Concrete Superstructure		Cu. Yd.	60.1	
Concrete Structures		Cu. Yd.	11.2	
Reinforcement Bars, Epoxy Coated		Pound	15,850	

FILE NAME: S:\Proj\Jes5412-024-025 MLK Connector\Bridges\0820349-7609-031-West Approach Slab Details.dgn

Notes:  
 See sheet 33 of 97 for View A-A and Sections B-B, C-C and D-D.  
 Dimensions along supports are radial to roadway curve.  
 Dimensions along Approach Slab are taken along curve.  
 Bars a<sub>400</sub>(E) and a<sub>402</sub>(E) are placed radially.  
 See sheet 34 of 97 for Views E-E, F-F, G-G and H-H.  
 See sheet 34 of 97 for Bar Bends and Bill of Material.  
 Bars denoted thus, 26x2-#4, indicates 26 lines of bars with 2 lengths of #4 bars per line.

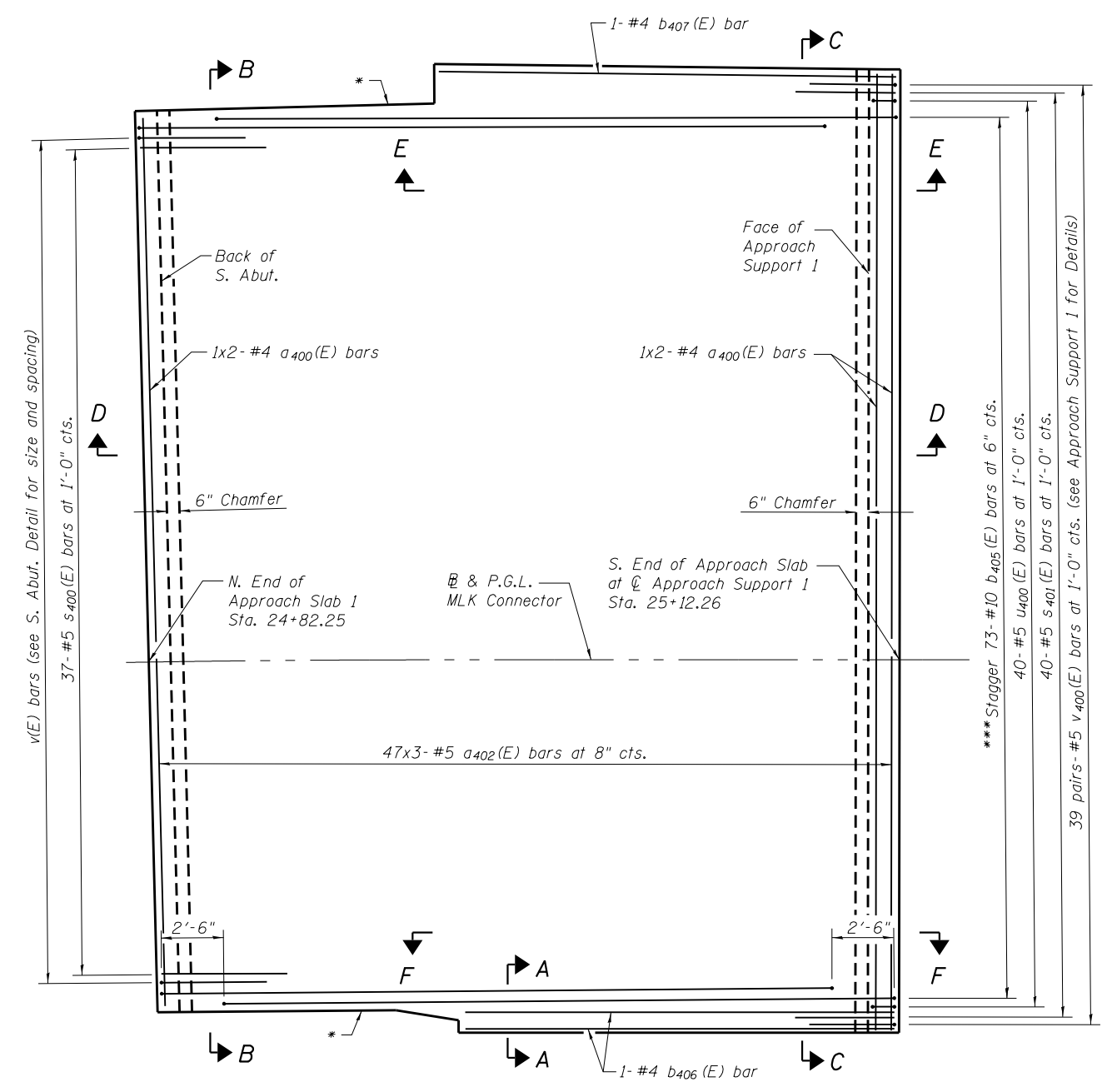


**PLAN VIEW**

(Showing Top of Slab Reinforcement)

\*\*Space between a<sub>400</sub>(E) bars

\* 1/2" Preformed Joint Filler according to Article 1051 of the Standard Specifications; full depth of slab, full length of parapet, typ. each parapet.



**PLAN VIEW**

(Showing Bottom of Slab Reinforcement)

\*\*\* Tilt #10 b<sub>405</sub>(E) bars as required to maintain clearance

**MINIMUM BAR LAP**

#4 bar = 2'-0"  
 #5 bar = 2'-6"

FILE NAME: S:\Projects\12-0024-025 MLK Connector\Bridges\0820349-7609-032-Slab Sl Details.dgn



USER NAME = bbovee  
 Illinois Design Firm Number 184,001670  
 PLOT SCALE =  
 PLOT DATE = 8/7/2014

DESIGNED - BB  
 CHECKED - JD  
 DRAWN - WS  
 CHECKED - CJF

REVISED  
 REVISED  
 REVISED  
 REVISED

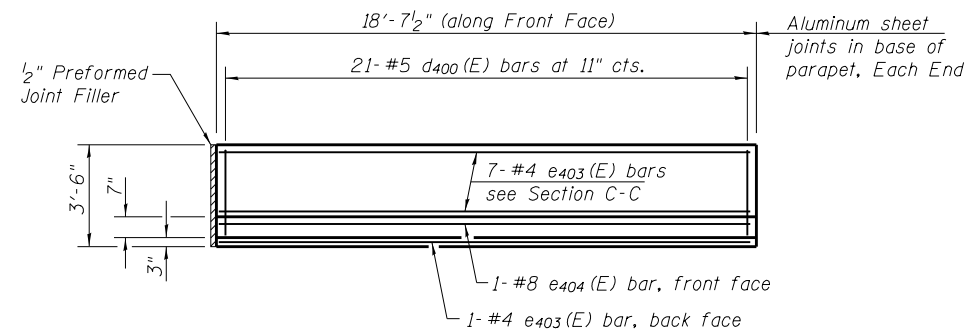
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**APPROACH SLAB 1 DETAILS  
 STRUCTURE NO. 082-0349**

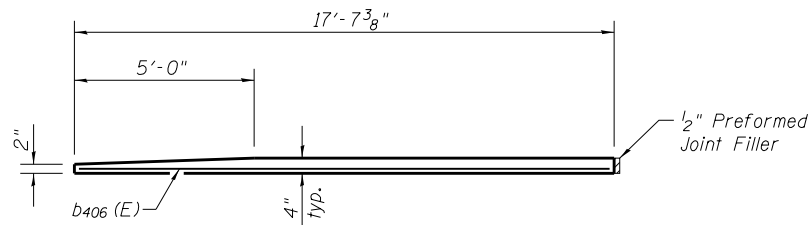
SHEET NO. 32 OF 97 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	127
CONTRACT NO. 76G09			ILLINOIS FED. AID PROJECT	

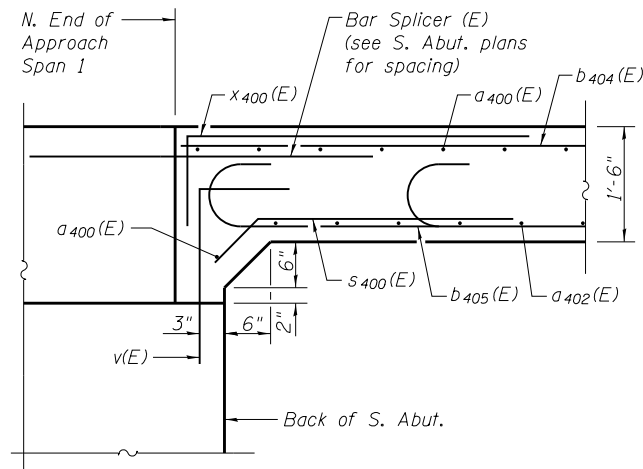




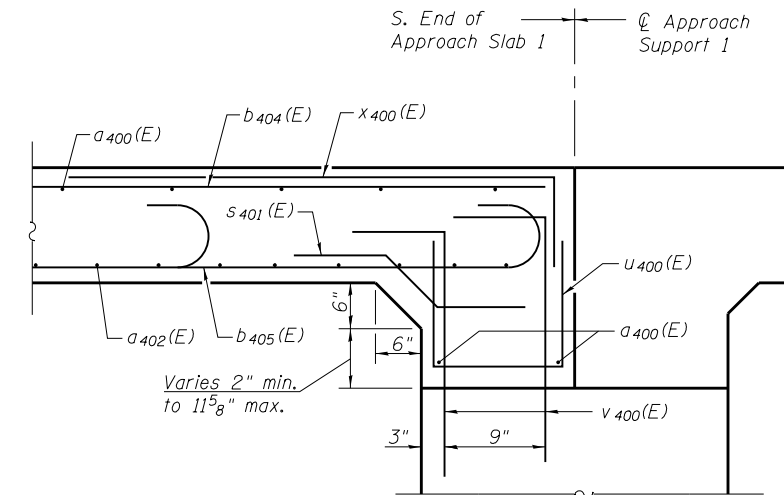
VIEW E-E



VIEW F-F

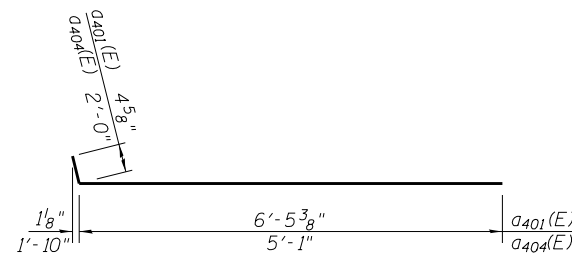


VIEW G-G

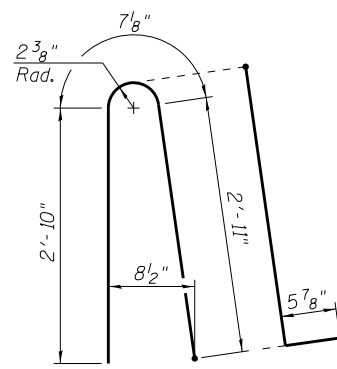


VIEW H-H

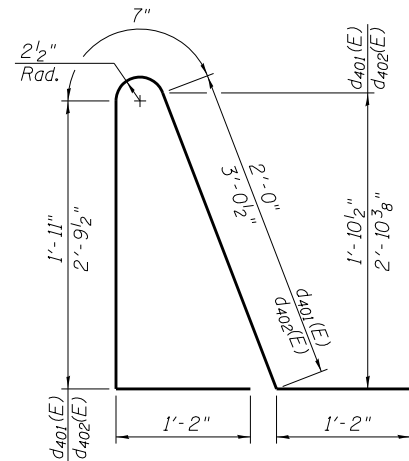
Notes:  
 See sheet 59 of 97 for v(E) Bar Details.  
 See sheet 69 of 97 for v400(E) Bar Details.  
 See sheet 75 of 97 for Bar Splicer Details.  
 See South Abutment Details for Granular Backfill for Structures and Drainage Treatment Details.



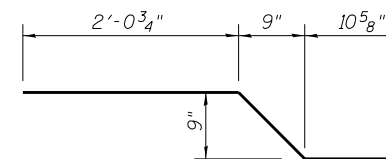
BARS a401(E) & a404(E)



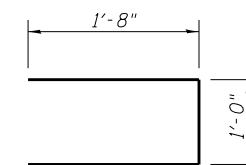
BAR d400(E)



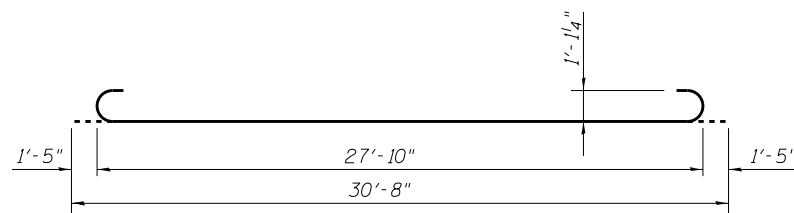
BARS d401(E) & d402(E)



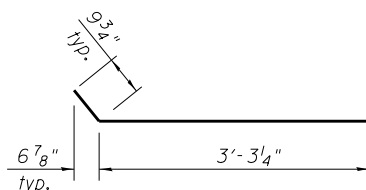
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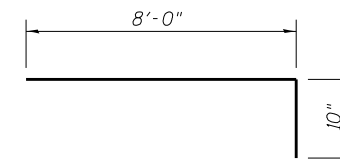
BAR u400(E)



BAR b405(E)



BAR s400(E)



BAR x400(E)

APPROACH SLAB 1  
 BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a400(E)	58	#4	20'-2"	—
a401(E)	15	#4	6'-10"	—
a402(E)	141	#5	14'-5"	—
a405(E)	16	#6	6'-6"	—
b404(E)	60	#4	16'-2"	—
b405(E)	73	#10	30'-8"	—
b406(E)	4	#4	17'-4"	—
b407(E)	2	#4	18'-4"	—
d400(E)	21	#5	6'-10"	—
d402(E)	21	#5	8'-9"	—
e403(E)	8	#4	18'-4"	—
e404(E)	1	#8	18'-4"	—
s400(E)	37	#5	4'-1"	—
s401(E)	40	#5	4'-0"	—
u400(E)	40	#5	4'-4"	—
x400(E)	58	#5	8'-10"	—
Concrete Superstructure		Cu. Yd.	68.0	
Reinforcement Bars, Epoxy Coated		Pound	15,010	

FILE NAME: S:\ProJects\412-0024-025 MLK Connector\Bridges\0820349-7609-034-Slab\_1\_Details.dwg



USER NAME = bbovee  
 Illinois Design Firm Number 184.001670  
 PLOT SCALE =  
 PLOT DATE = 8/7/2014

DESIGNED - BB  
 CHECKED - JD  
 DRAWN - WS  
 CHECKED - CJF

REVISED  
 REVISED  
 REVISED  
 REVISED

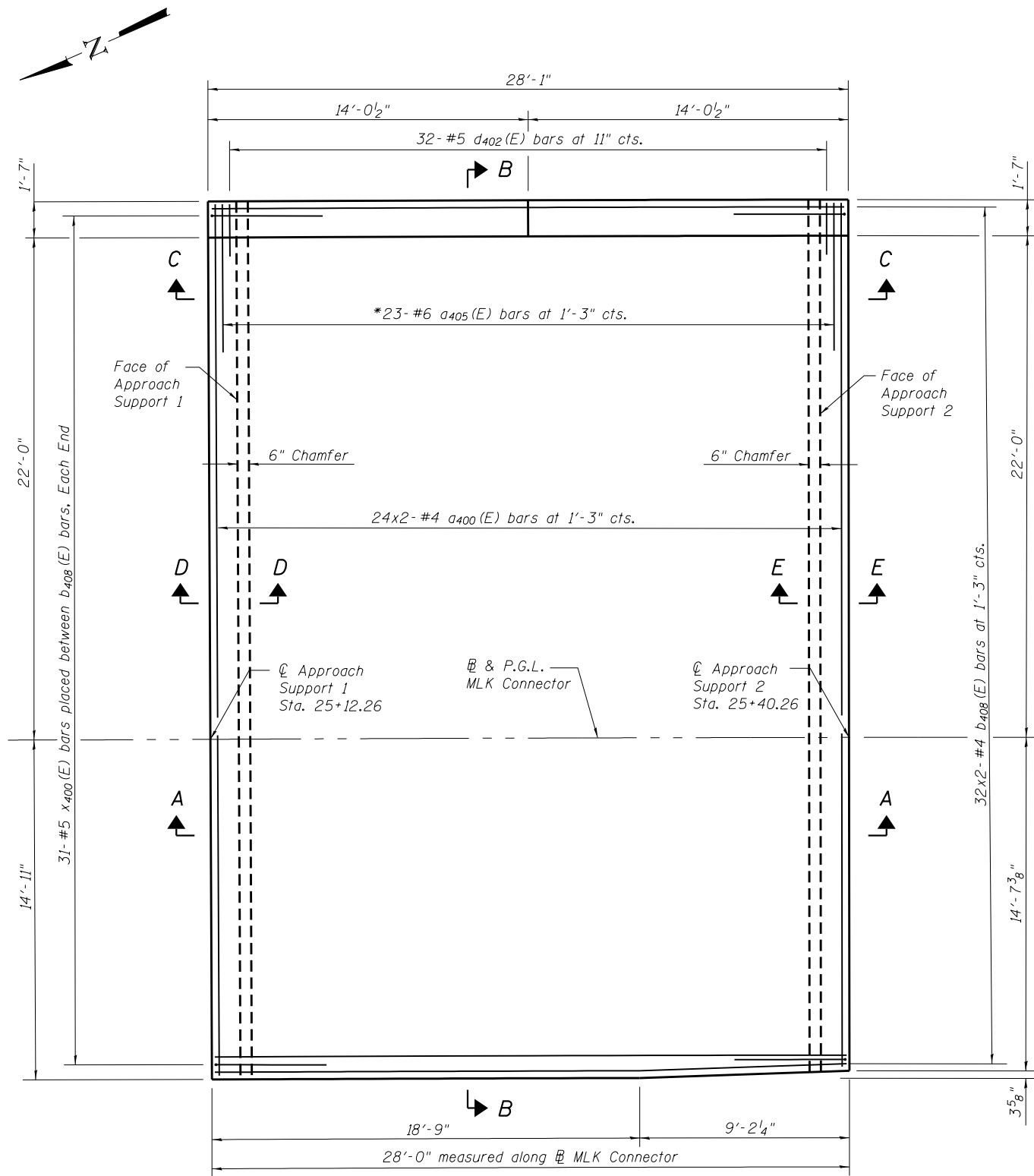
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

APPROACH SLAB 1 DETAILS  
 STRUCTURE NO. 082-0349

SHEET NO. 34 OF 97 SHEETS

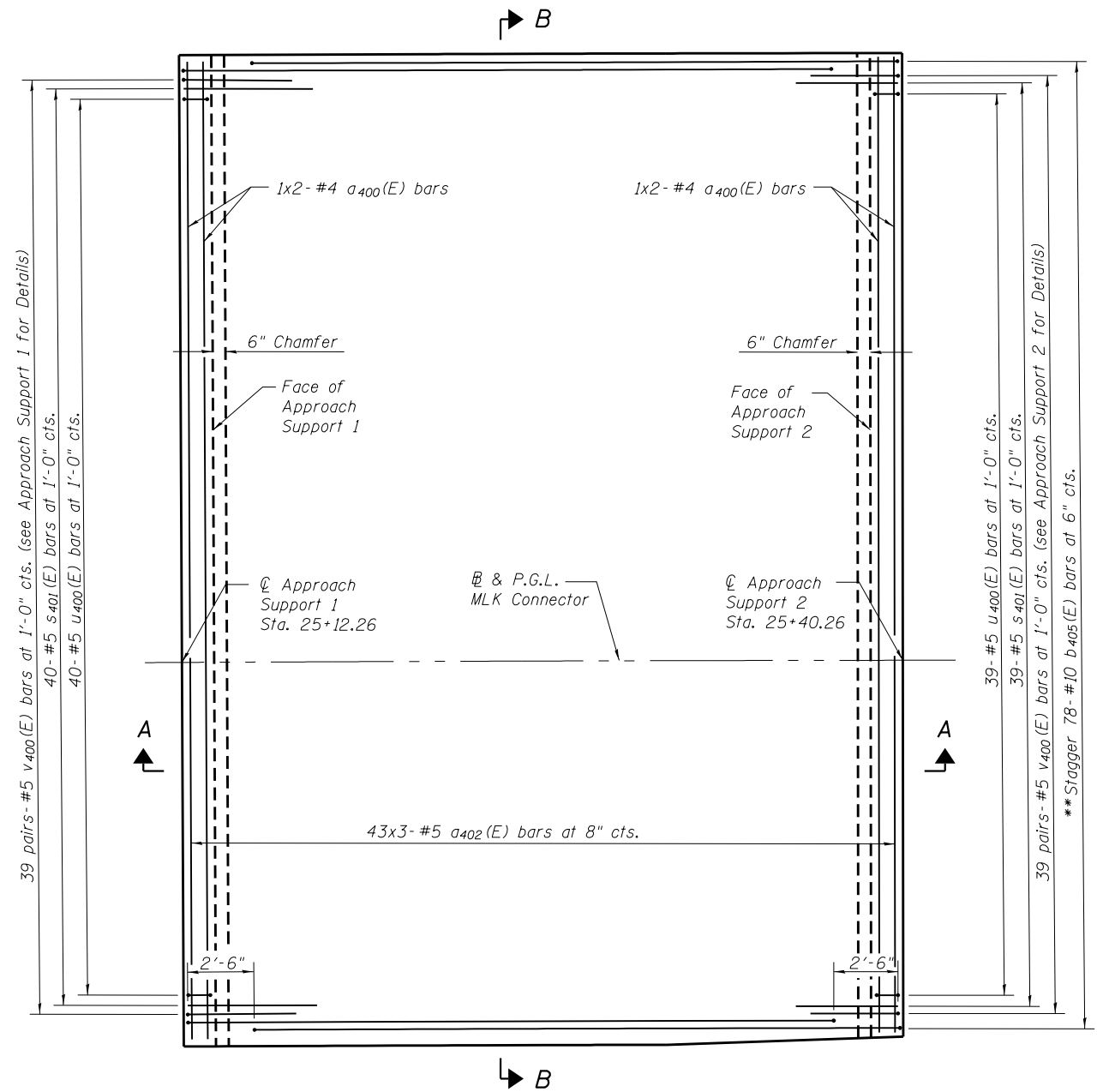
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1,41B-1	ST. CLAIR	406	129
				CONTRACT NO. 76G09
ILLINOIS FED. AID PROJECT				

Notes:  
 See sheet 36 of 97 for Sections A-A and B-B.  
 Dimensions along supports are radial to roadway curve.  
 Dimensions along Approach Slab are taken along curve.  
 Bars a<sub>400</sub>(E) and a<sub>402</sub>(E) are placed radially.  
 See sheet 36 of 97 for Views C-C, D-D and E-E.  
 See sheet 36 of 97 for Bill of Material.  
 Bars denoted thus, 24x2-#4, indicates 24 lines of bars with 2 lengths of #4 bars per line.



**PLAN VIEW**  
 (Showing Top of Slab Reinforcement)

\*Space between a<sub>400</sub>(E) bars



**MINIMUM BAR LAP**

#4 bar = 2'-0"  
 #5 bar = 2'-6"

**PLAN VIEW**  
 (Showing Bottom of Slab Reinforcement)

\*\* Tilt #10 b<sub>405</sub>(E) bars as required to maintain clearance

FILE NAME: S:\Proj\Iris\412-024-025 MLK Connector\Bridges\0820349-7609-035-Slab S2\_Details.dgn



USER NAME = bbovee  
 Illinois Design Firm Number 184,001670  
 PLOT SCALE =  
 PLOT DATE = 8/7/2014

DESIGNED - BB  
 CHECKED - JD  
 DRAWN - WS  
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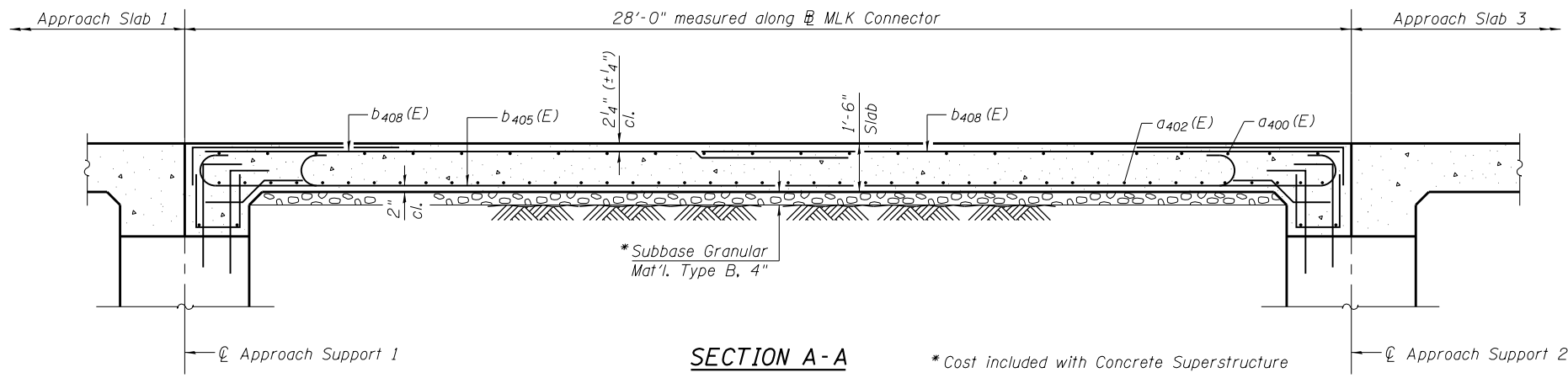
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

APPROACH SLAB 2 DETAILS  
 STRUCTURE NO. 082-0349

SHEET NO. 35 OF 97 SHEETS

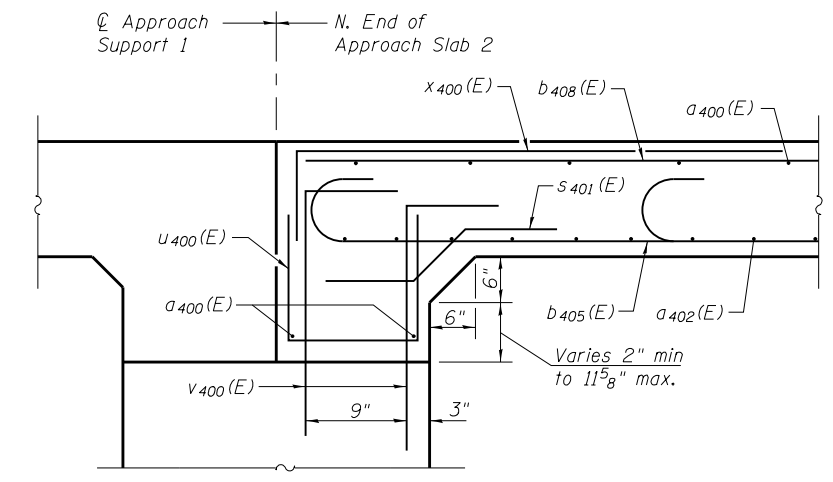
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	130
CONTRACT NO. 76G09				

ILLINOIS FED. AID PROJECT

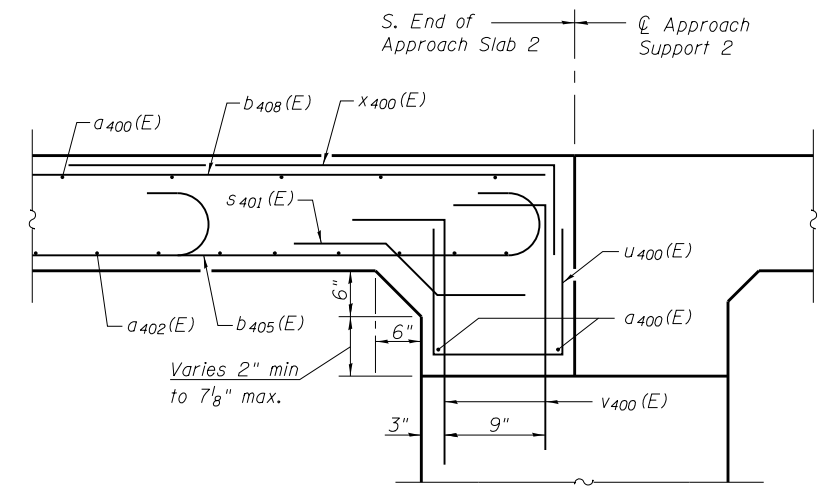


SECTION A-A

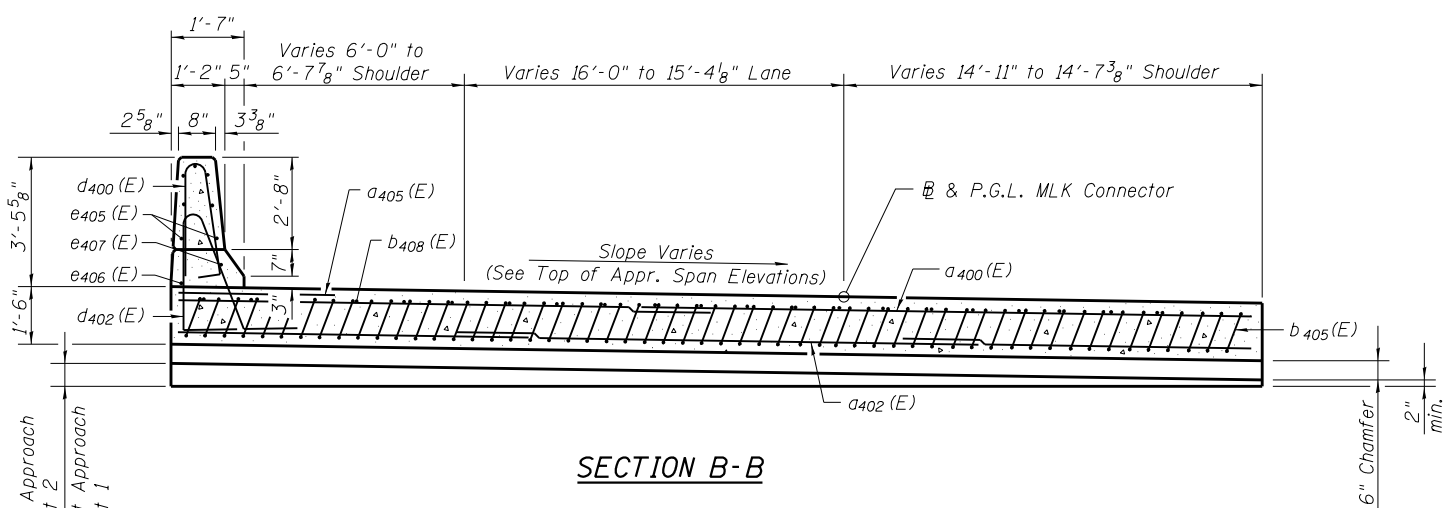
\*Cost included with Concrete Superstructure



VIEW D-D

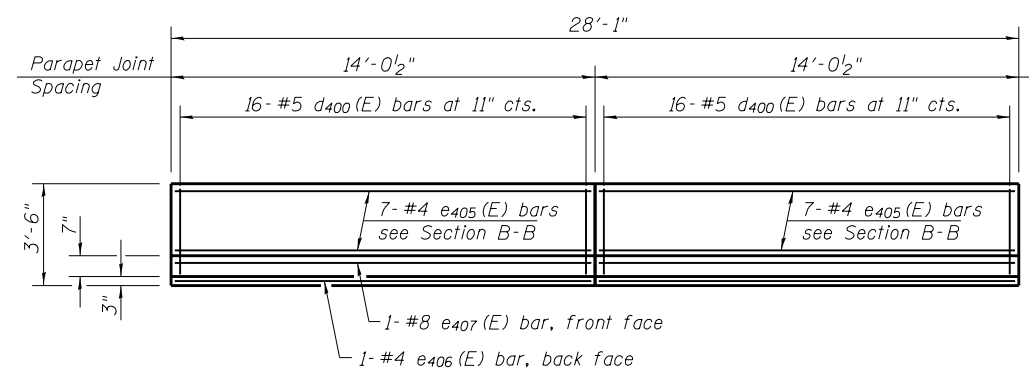


VIEW E-E



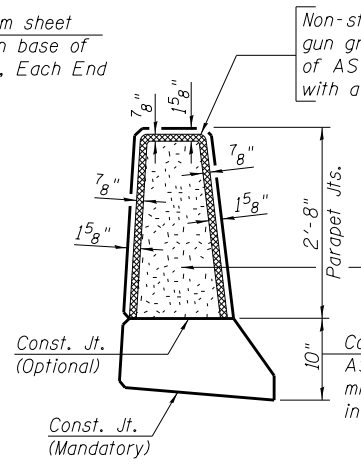
SECTION B-B

Notes:  
See sheet 69 of 97 for v400(E) Bar Details.  
See sheet 34 of 97 for Bar Bend Details.



VIEW C-C

Aluminum sheet joints in base of parapet, Each End



PARAPET JOINT DETAILS

APPROACH SLAB 2  
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d400(E)	56	#4	20'-2"	—
d402(E)	129	#5	14'-5"	—
d405(E)	23	#6	6'-6"	—
b405(E)	78	#10	30'-8"	—
b408(E)	64	#4	14'-11"	—
d400(E)	32	#5	6'-10"	⤴
d402(E)	32	#5	8'-9"	⤴
e405(E)	14	#4	13'-9"	—
e406(E)	1	#4	27'-10"	—
e407(E)	1	#8	27'-10"	—
s401(E)	79	#5	4'-0"	⤴
u400(E)	79	#5	4'-4"	⤴
x400(E)	62	#5	8'-10"	⤴
Concrete Superstructure		Cu. Yd.		67.1
Reinforcement Bars, Epoxy Coated		Pound		15,850

FILE NAME: S:\Proj\Jobs\412-024-025 MLK Connector\Bridges\0820349\_Slab\_Bridge\_Final\_Plans\0820349\_7609-036-Slab\_S2\_Details.dgn



USER NAME = bbovee  
Illinois Design Firm Number 184,001670  
PLOT SCALE =  
PLOT DATE = 8/7/2014

DESIGNED - BB  
CHECKED - JD  
DRAWN - WS  
CHECKED - CJF

REVISED  
REVISED  
REVISED  
REVISED

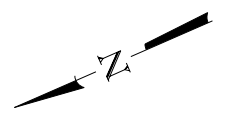
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

APPROACH SLAB 2 DETAILS  
STRUCTURE NO. 082-0349

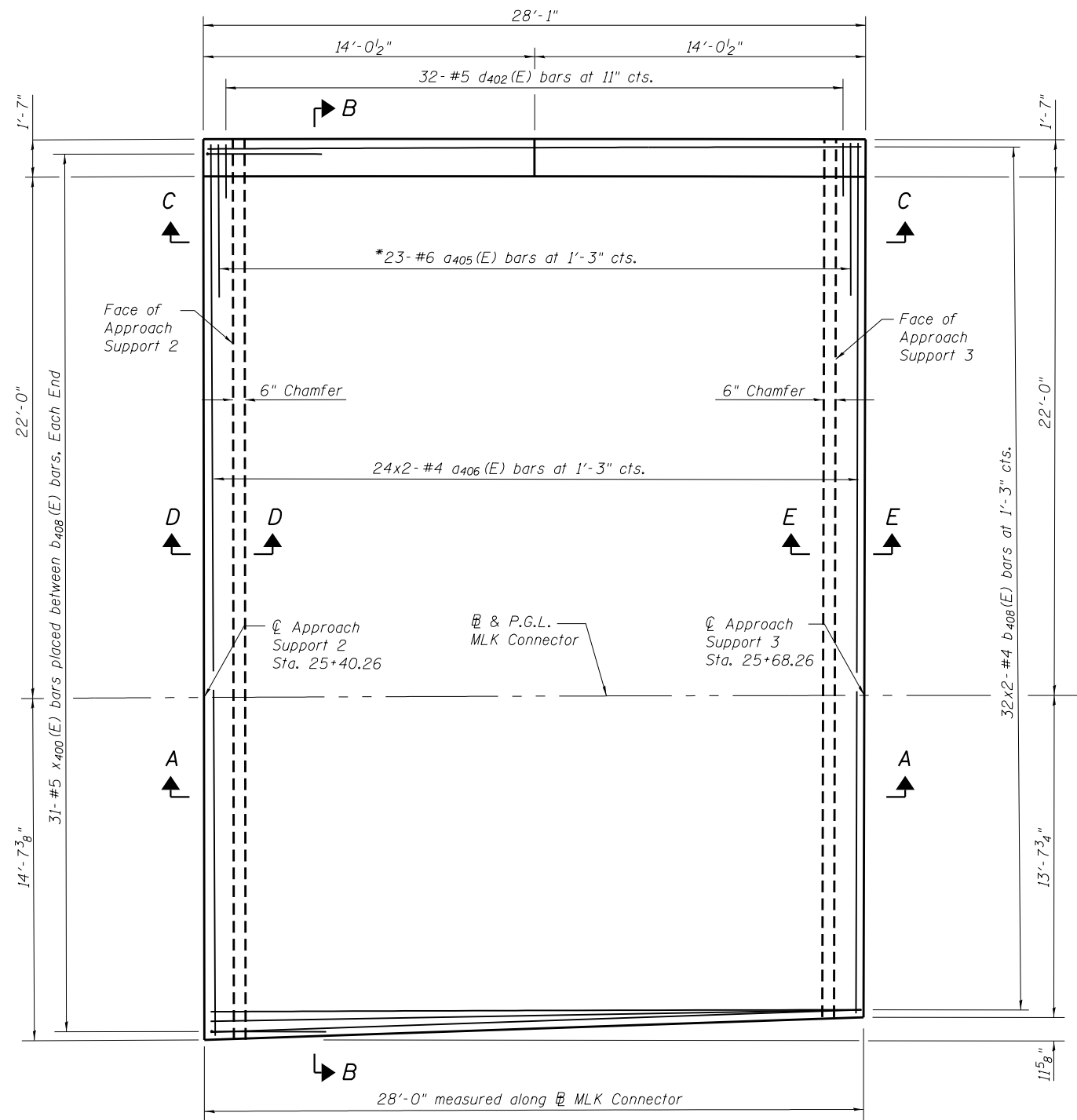
SHEET NO. 36 OF 97 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1,41B-1	ST. CLAIR	406	131
				CONTRACT NO. 76G09

ILLINOIS FED. AID PROJECT

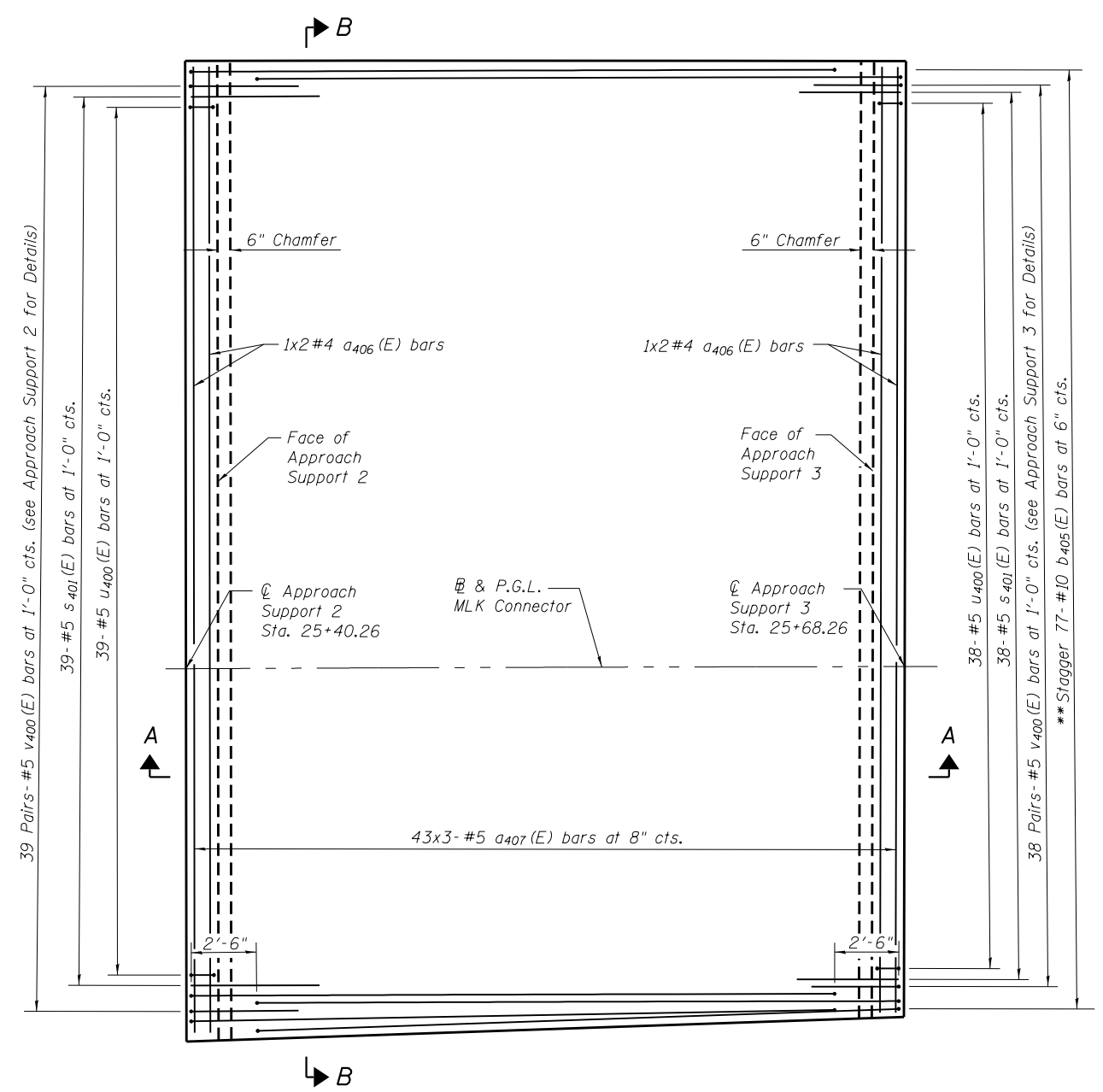


Notes:  
 See sheet 38 of 97 for Sections A-A and B-B.  
 Dimensions along supports are radial to roadway curve.  
 Dimensions along Approach Slab are taken along curve.  
 Bars a<sub>406</sub>(E) and a<sub>407</sub>(E) are placed radially.  
 See sheet 38 of 97 for Views C-C, D-D and E-E.  
 See sheet 38 of 97 for Bill of Material.  
 Bars denoted thus, 24x2-#4, indicates 24 lines of bars with 2 lengths of #4 bars per line.



**PLAN VIEW**  
 (Showing Top of Slab Reinforcement)

\*Space between a<sub>406</sub>(E) bars



**PLAN VIEW**  
 (Showing Bottom of Slab Reinforcement)

\*\* Tilt #10 b<sub>405</sub>(E) bars as required to maintain clearance

**MINIMUM BAR LAP**  
 #4 bar = 2'-0"  
 #5 bar = 2'-6"

FILE NAME: S:\Proj\Jobs\12-0024-025 MLK Connector\Bridges\0820349-7609-037-Slab\_S3\_Details.dgn



USER NAME = bbovee  
 Illinois Design Firm Number 184,001670  
 PLOT SCALE =  
 PLOT DATE = 8/7/2014

DESIGNED - BB  
 CHECKED - JD  
 DRAWN - WS  
 CHECKED - CJF

REVISED  
 REVISED  
 REVISED  
 REVISED

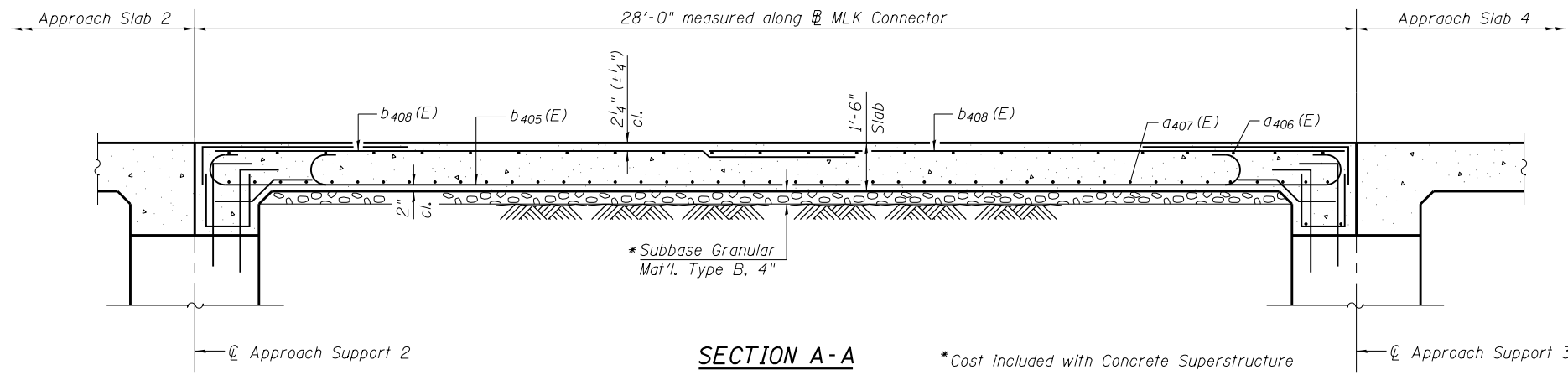
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**APPROACH SLAB 3 DETAILS  
 STRUCTURE NO. 082-0349**

SHEET NO. 37 OF 97 SHEETS

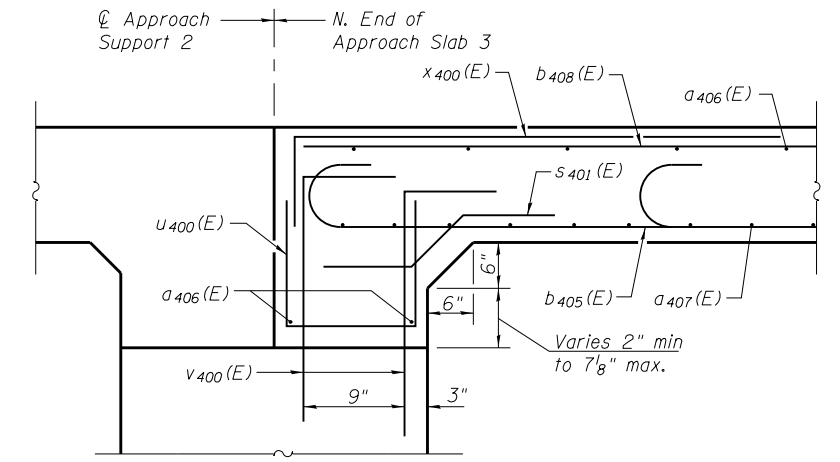
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	132
CONTRACT NO. 76G09			ILLINOIS FED. AID PROJECT	



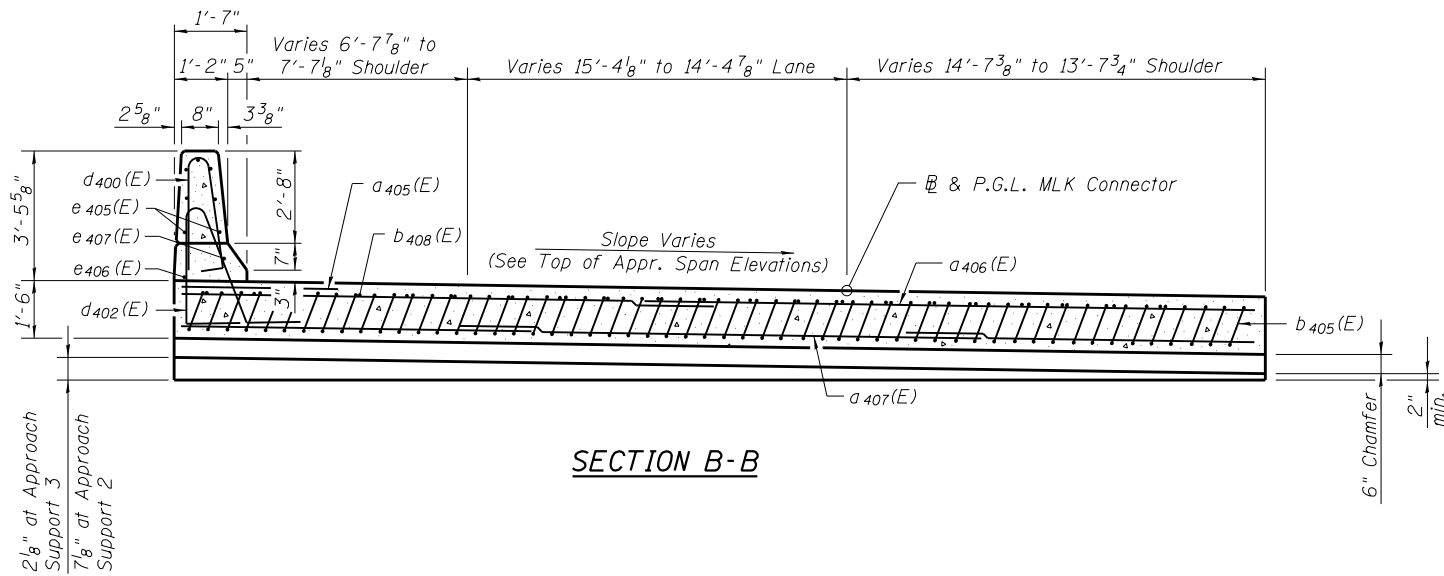


SECTION A-A

\*Cost included with Concrete Superstructure

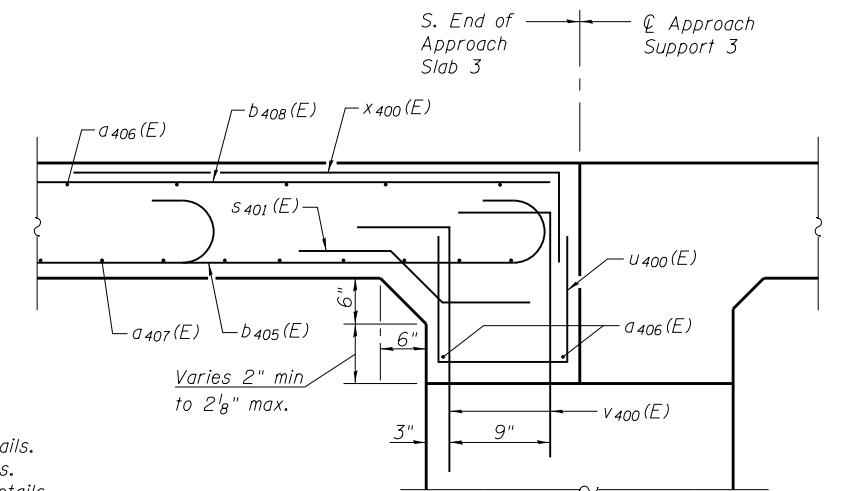


VIEW D-D

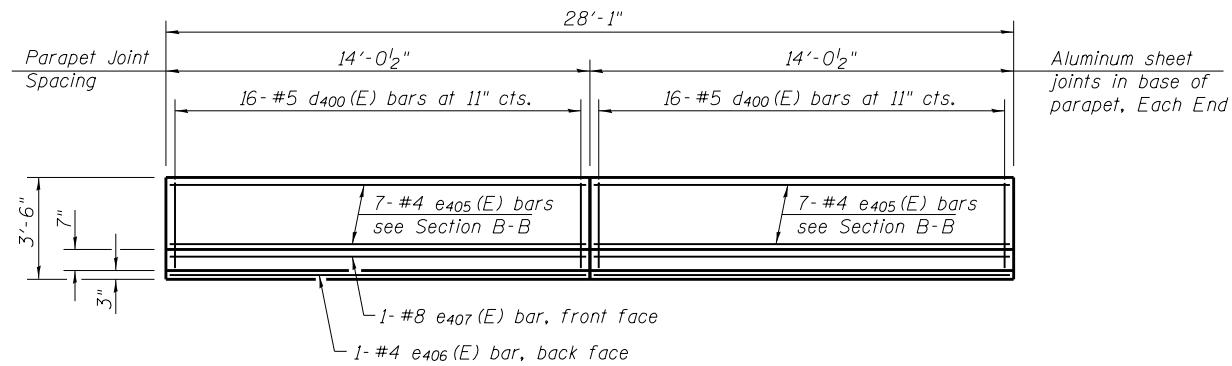


SECTION B-B

Notes:  
See sheet 69 of 97 for v400(E) Bar Details.  
See sheet 34 of 97 for Bar Bend Details.  
See sheet 36 of 97 for Parapet Joint Details.



VIEW E-E



VIEW C-C

APPROACH SLAB 3  
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a405(E)	23	#6	6'-6"	—
a406(E)	56	#4	20'-0"	—
a407(E)	129	#5	14'-4"	—
b405(E)	77	#10	30'-8"	⊔
b408(E)	64	#4	14'-11"	—
d400(E)	32	#5	6'-10"	⌒
d402(E)	32	#5	8'-9"	⌒
e405(E)	14	#4	13'-9"	—
e406(E)	1	#4	27'-10"	—
e407(E)	1	#8	27'-10"	—
s401(E)	77	#5	4'-0"	⌒
u400(E)	77	#5	4'-4"	⊔
x400(E)	62	#5	8'-10"	⌒
Concrete Superstructure		Cu. Yd.	65.7	
Reinforcement Bars, Epoxy Coated		Pound	15,690	

FILE NAME: S:\Pro\Jobs\412-0024-025 MLK Connector\Bridges\0820349-7609-038-Slab\_S3\_Details.dgn



USER NAME = bbovee	DESIGNED - BB	REVISED
Illinois Design Firm Number 184.001670	CHECKED - JD	REVISED
PLOT SCALE =	DRAWN - WS	REVISED
PLOT DATE = 8/7/2014	CHECKED - CJF	REVISED

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

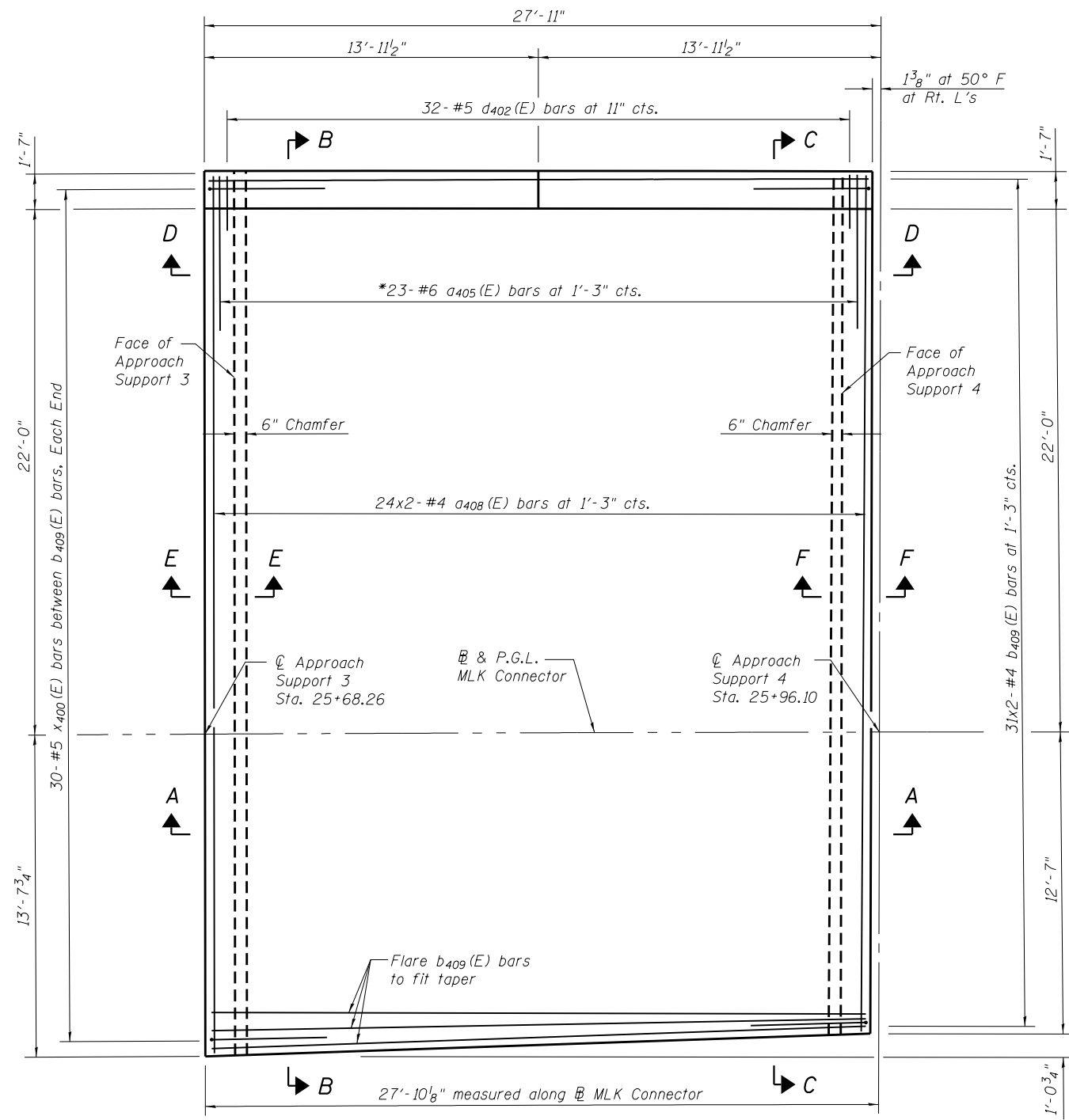
APPROACH SLAB 3 DETAILS  
STRUCTURE NO. 082-0349

SHEET NO. 38 OF 97 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	133
				CONTRACT NO. 76G09
ILLINOIS FED. AID PROJECT				

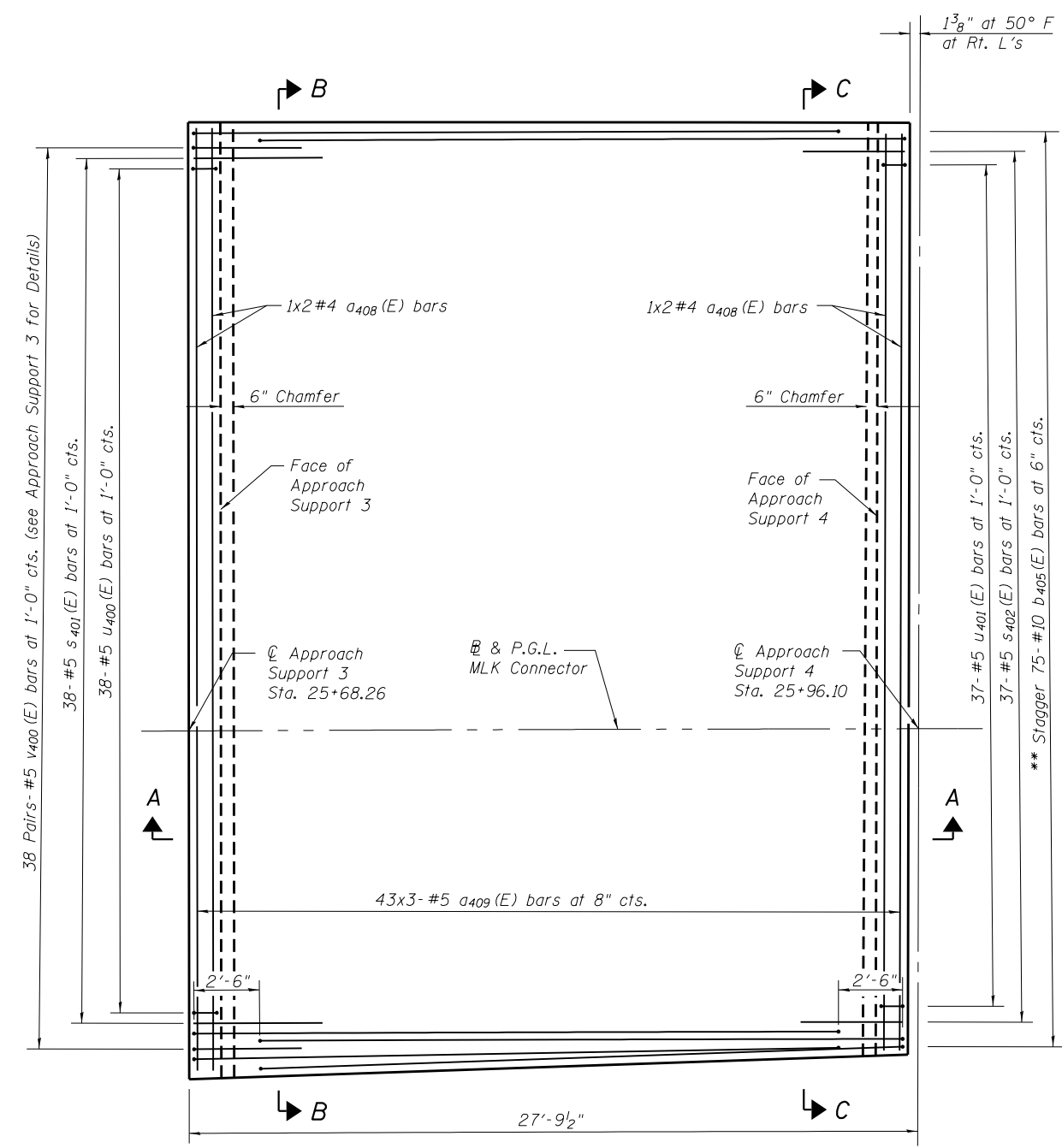


Notes:  
 See sheet 40 of 97 for Sections A-A, B-B and C-C.  
 Dimensions along supports are radial to roadway curve.  
 Dimensions along Approach Slab are taken along curve.  
 Bars a<sub>408</sub>(E) and a<sub>409</sub>(E) are placed radially.  
 See sheet 40 of 97 for Views D-D, E-E and F-F.  
 See sheet 40 of 97 for Bill of Material.  
 Bars denoted thus, 24x2-#4, indicates 24 lines of bars with 2 lengths of #4 bars per line.



**PLAN VIEW**  
 (Showing Top of Slab Reinforcement)

\*Space between a<sub>408</sub>(E) bars



**PLAN VIEW**  
 (Showing Bottom of Slab Reinforcement)

\*\* Tilt #10 b<sub>405</sub>(E) bars as required to maintain clearance

**MINIMUM BAR LAP**

- #4 bar = 2'-0"
- #5 bar = 2'-6"

FILE NAME: S:\Projects\12-0024-025 MLK Connector\Bridges\0820349\7609-039-Slab\_S4\_Details.dgn



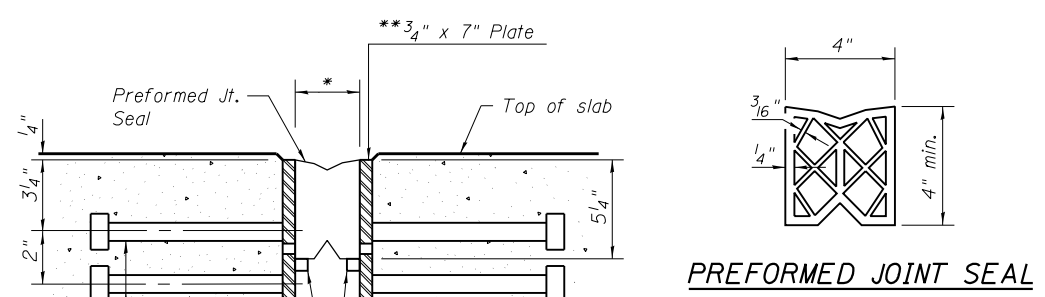
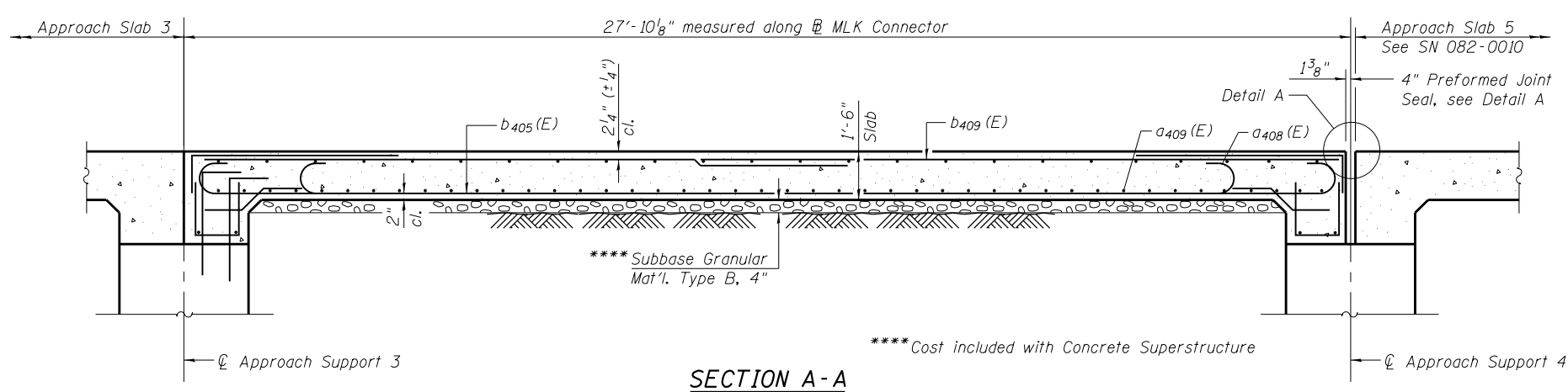
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Illinois Design Firm Number 184,001670	CHECKED - JD	REVISED
PLOT SCALE =	DRAWN - WS	REVISED
PLOT DATE = 8/7/2014	CHECKED - CJF	REVISED

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**APPROACH SLAB 4 DETAILS  
 STRUCTURE NO. 082-0349**

SHEET NO. 39 OF 97 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	134
CONTRACT NO. 76G09			ILLINOIS FED. AID PROJECT	



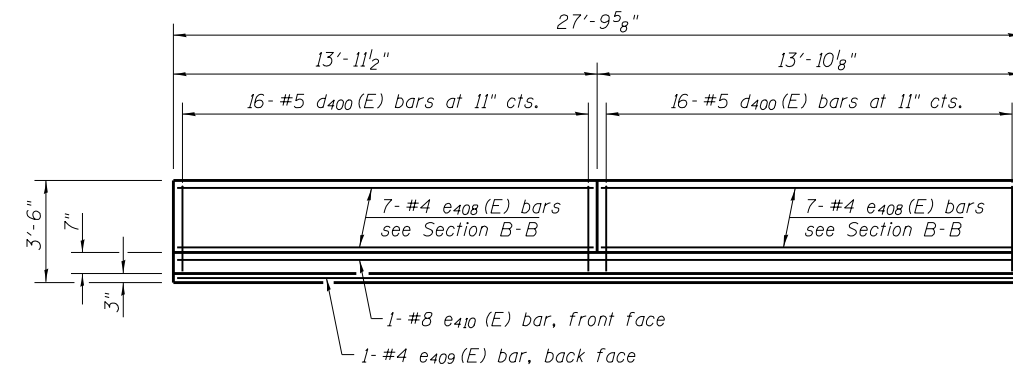
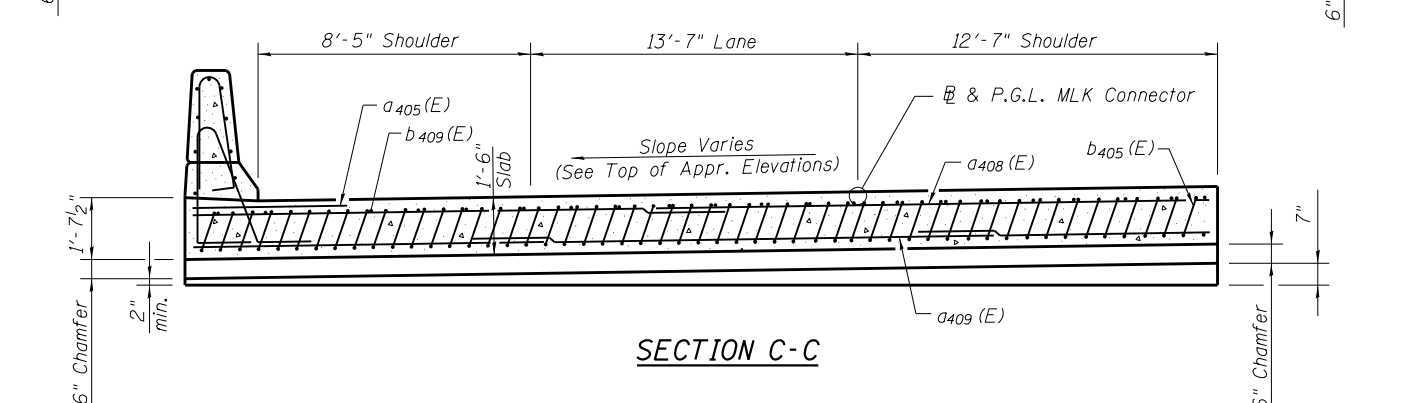
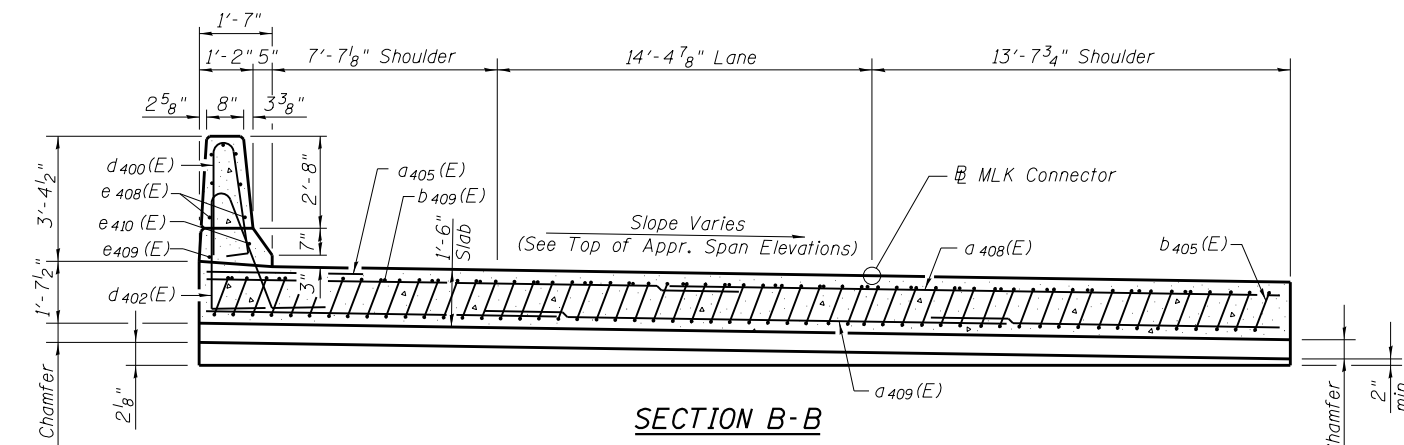
**PREFORMED JOINT SEAL**

\* 2 3/4" at 50° F at rt. L's

\*\* Furnish in segments of 20 ft. maximum length. Maximum space between installed segments shall be 3/16". Seal space with Silicone Sealant suitable for Structural Steel.

\*\*\* Cut retainer bars 6" short of End of Slab.

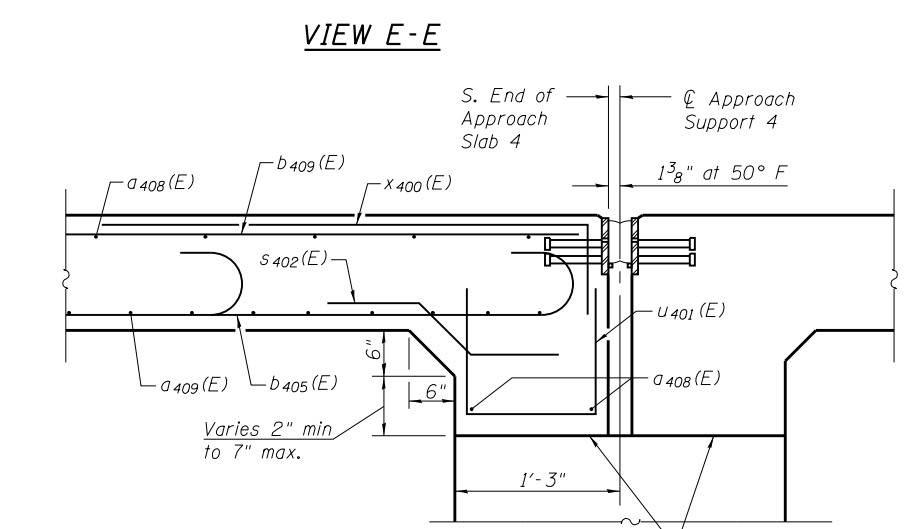
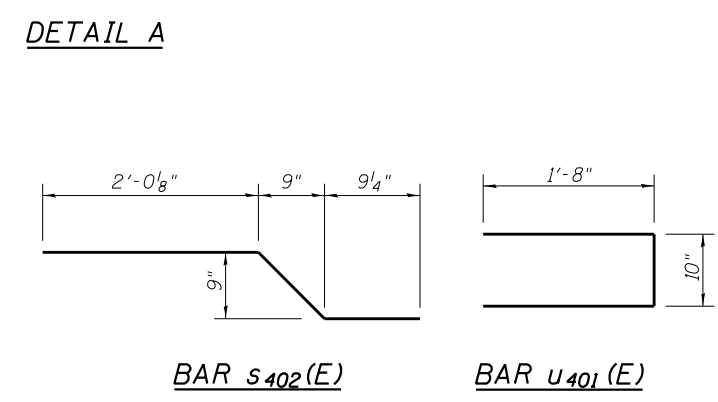
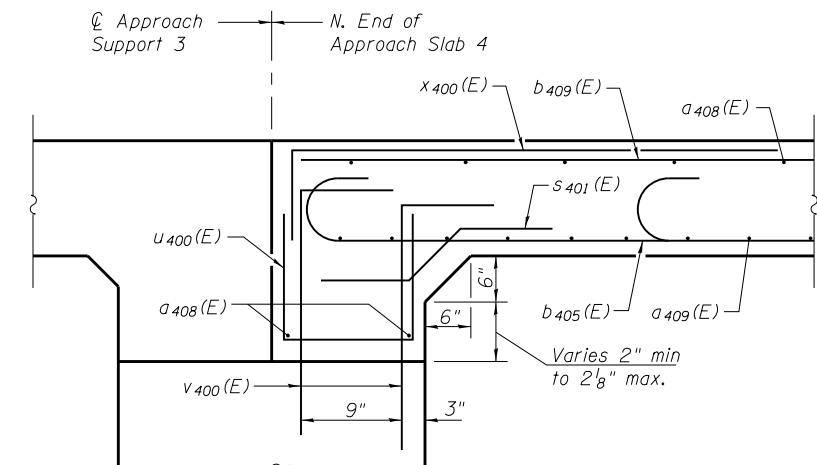
Note:  
After fabrication all surfaces of the steel plates shall be given one shop coat of paint specified for Structural Steel. No field painting required.



**MINIMUM BAR LAP**

#4 bar = 2'-0"

#5 bar = 2'-6"



**APPROACH SLAB 4  
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a405 (E)	23	#6	6'-6"	—
a408 (E)	56	#4	19'-6"	—
a409 (E)	129	#5	14'-0"	—
b405 (E)	75	#10	30'-8"	—
b409 (E)	62	#4	14'-10"	—
d400 (E)	32	#5	6'-10"	—
d402 (E)	32	#5	8'-9"	—
e408 (E)	14	#4	13'-8"	—
e409 (E)	1	#4	27'-7"	—
e410 (E)	1	#8	27'-7"	—
s401 (E)	38	#5	4'-0"	—
s402 (E)	37	#5	3'-10"	—
u400 (E)	38	#5	4'-4"	—
u401 (E)	37	#5	4'-2"	—
x400 (E)	60	#5	8'-10"	—
Concrete Superstructure		Cu. Yd.	63.6	
Preformed Joint Seal 4"		Foot	34	
Reinforcement Bars, Epoxy Coated		Pound	15,290	

Notes:  
See sheet 34 of 97 for Bar Bend Details.  
See sheet 36 of 97 for Parapet Joint Details.

FILE NAME: S:\Proj\Jobs\412-024-025 MLK Connector\Bridges\Delivery\Sem\4114 Final Plan Changes to 118\5\06\08203\497609-040-Slab\_S4 Detail.dwg



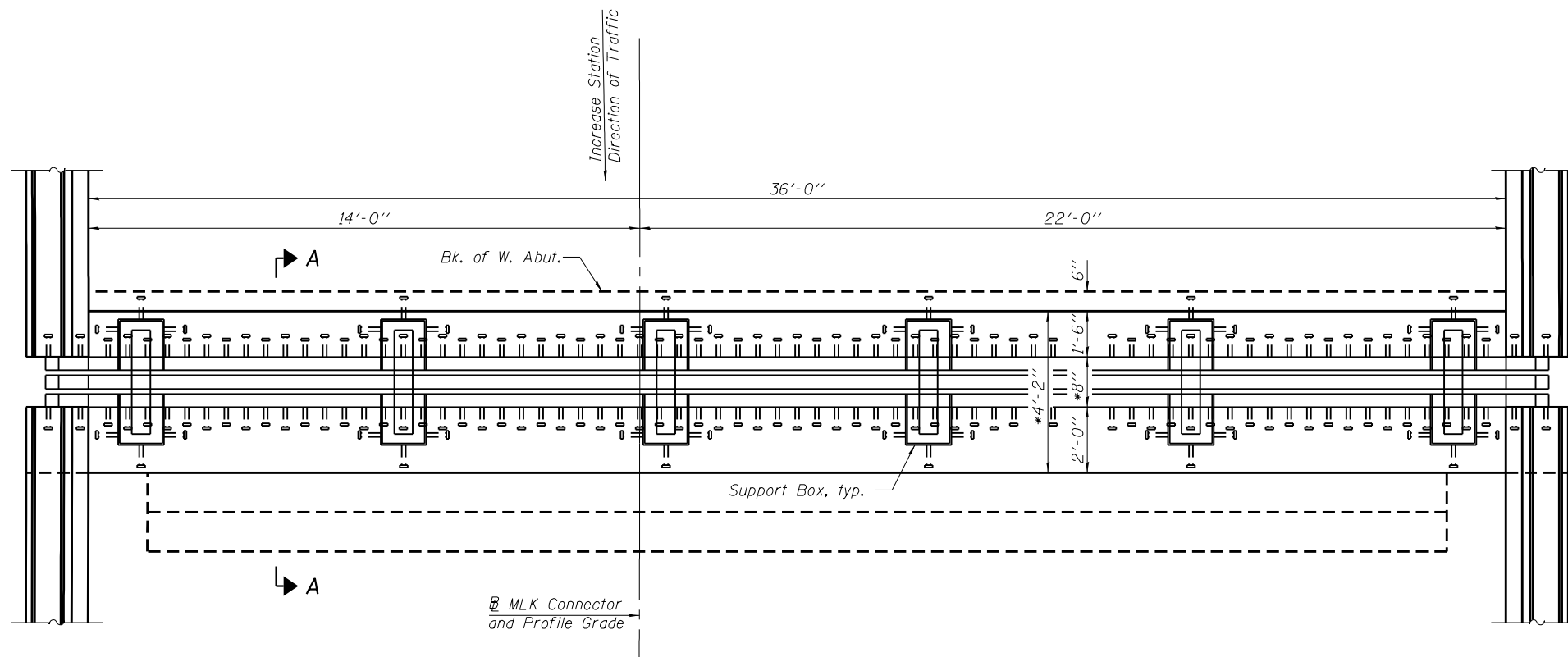
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Illinois Design Firm Number 184.001670	CHECKED - JD	REVISED
PLOT SCALE =	DRAWN - WS	REVISED
PLOT DATE = 11/14/2014	CHECKED - CJF	REVISED

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**APPROACH SLAB 4 DETAILS  
STRUCTURE NO. 082-0349**

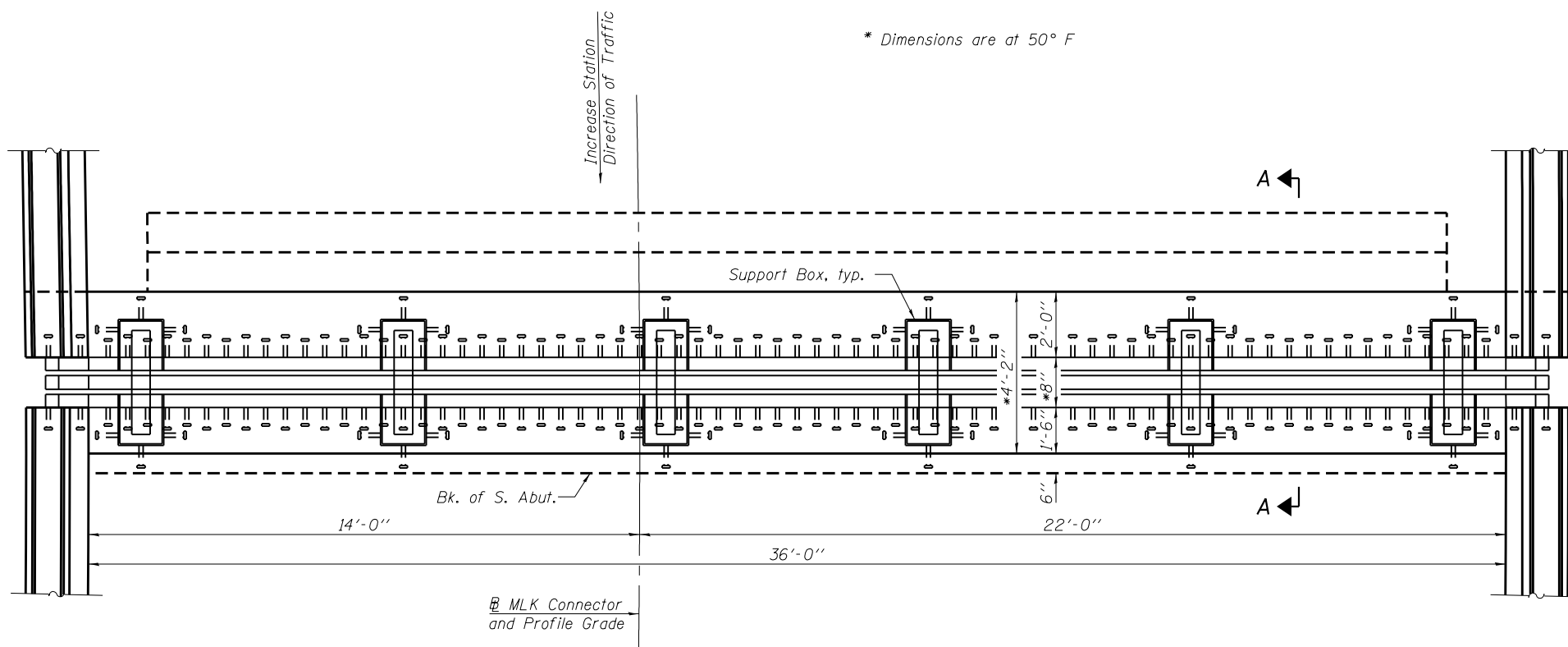
SHEET NO. 40 OF 97 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1,41B-1	ST. CLAIR	406	135
CONTRACT NO. 76G09				
ILLINOIS FED. AID PROJECT				



PLAN AT WEST ABUTMENT

\* Dimensions are at 50° F



PLAN AT SOUTH ABUTMENT

Note:  
For Section A-A, see sheet 42 of 97.

FILE NAME = X:\1309400-MLK\Cad\15082034-76009.dgn	DESIGNED - T.S. Friederich	REVISED
USER NAME = elagemann	CHECKED - E.M. Lagemann	REVISED
PLOT SCALE =	DRAWN - C.A. Buettner	REVISED
PLOT DATE = 8/7/2014	CHECKED - T.S. Friederich	REVISED

DESIGNED - T.S. Friederich	REVISED
CHECKED - E.M. Lagemann	REVISED
DRAWN - C.A. Buettner	REVISED
CHECKED - T.S. Friederich	REVISED

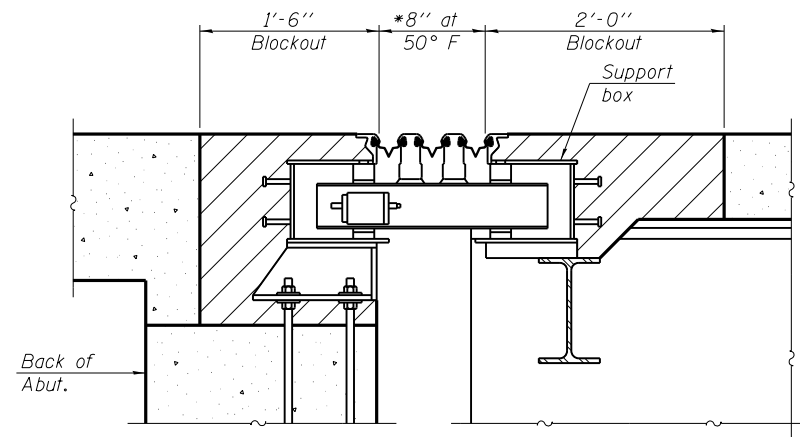
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SWIVEL TYPE MODULAR EXPANSION JOINT  
STRUCTURE NO. 082-0349

SHEET NO. 41 OF 97 SHEETS

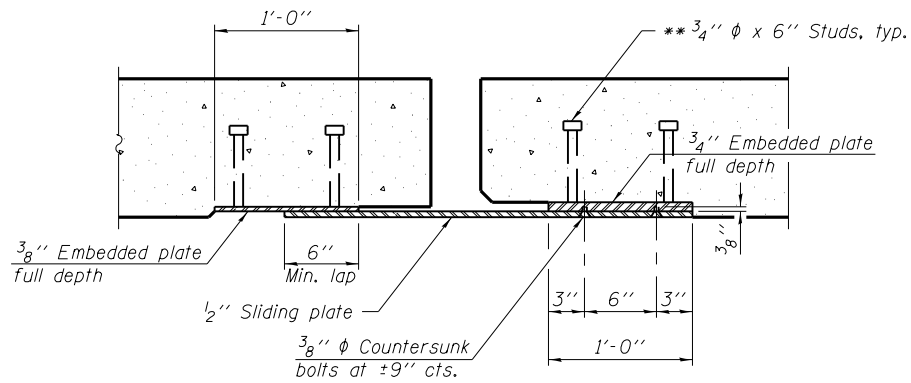
F.A.I. RTÉ.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1,41B-1	ST. CLAIR	406	136
CONTRACT NO. 76G09				

ILLINOIS FED. AID PROJECT

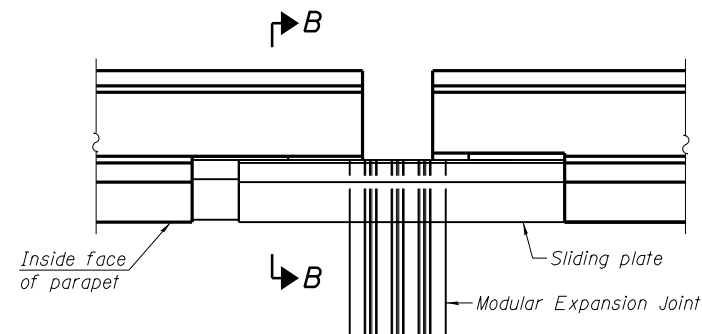


**SECTION A-A**

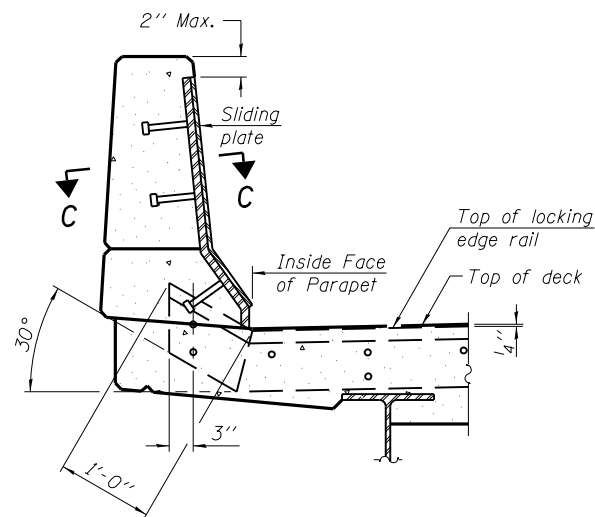
\*Number of rails determined by manufacturer.



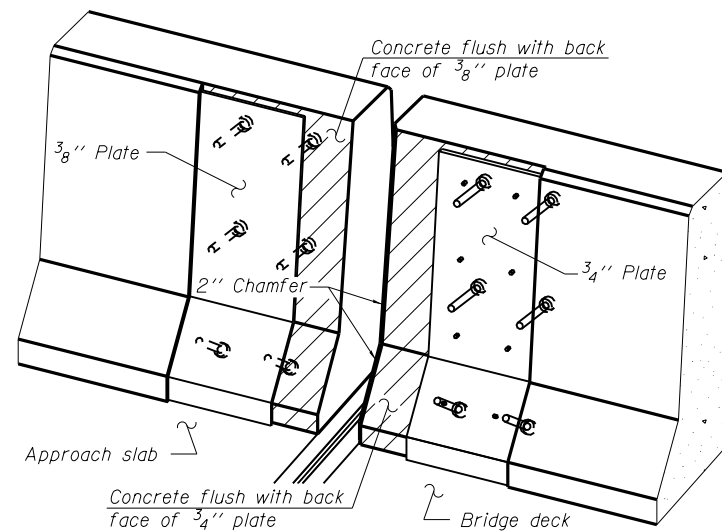
**SECTION C-C**



**PLAN AT SLIDING PLATE**



**SECTION B-B**



**TRIMETRIC VIEW**  
(Showing back plates only)

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

**Notes:**

- 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.
- Parapet plates and anchorage studs included in the cost of "Modular Expansion Joint - Swivel 6".
- Support boxes shall be rigidly attached to cross frames, girders and abutment backwalls by adjustable brackets, stools or shims. Cost of attachment included in "Modular Expansion Joint - Swivel 6".
- The number, location and orientation of support boxes shall be determined by the manufacturer. No boxes shall be located outside of the exterior girders. All boxes shall be located to miss the top flanges of the girders.
- Modular expansion joints shall be assembled in their final relative position with the ends in place for shop inspection and acceptance.
- Prior to the placement of the joint block-out, 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.
- For location of Section A-A, see sheet 41 of 97.

**BILL OF MATERIAL**

Item	Unit	Total
Modular Expansion Joint - Swivel 6"	Foot	76.0

FILE NAME = X:\1309400-MLK\Cad\15\082034-9-76009.dgn	DESIGNED - T.S. Friederich	REVISED
USER NAME = elagemann	CHECKED - E.M. Lagemann	REVISED
PLOT SCALE =	DRAWN - C.A. Buettner	REVISED
PLOT DATE = 9/16/2014	CHECKED - T.S. Friederich	REVISED

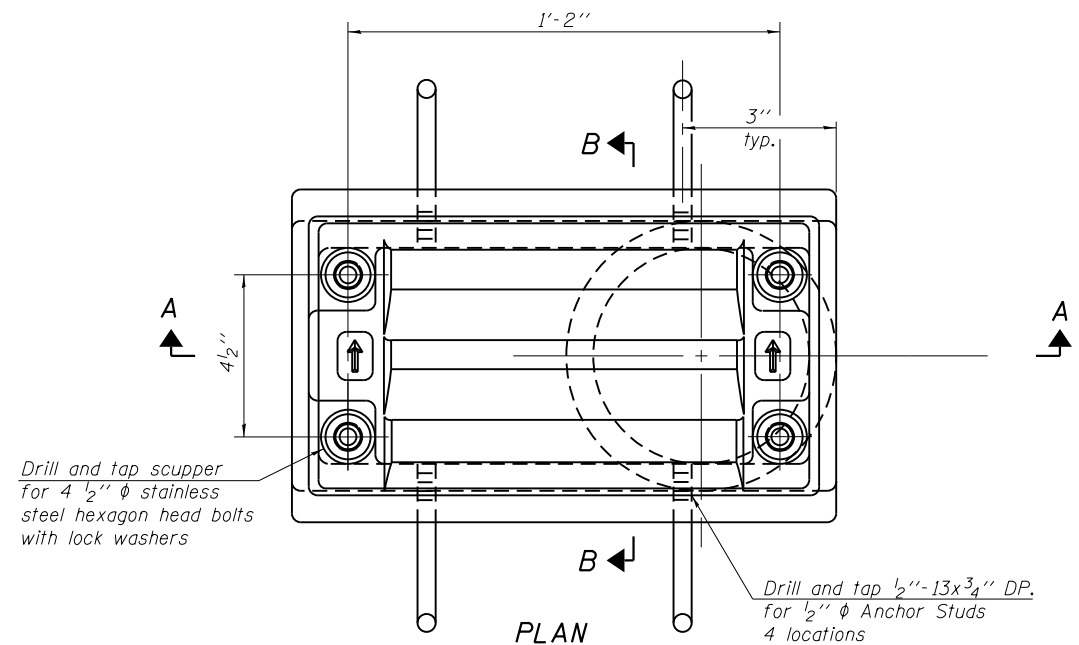


**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

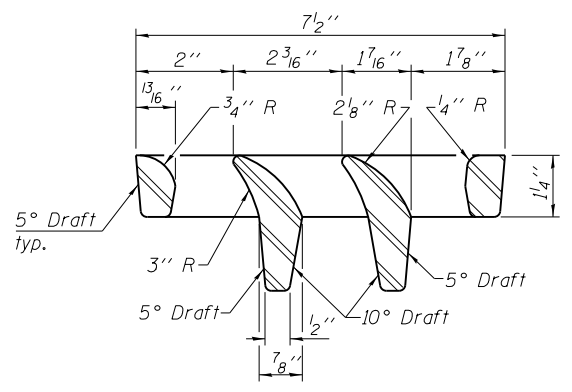
**SWIVEL TYPE MODULAR EXPANSION JOINT  
STRUCTURE NO. 082-0349**

SHEET NO. 42 OF 97 SHEETS

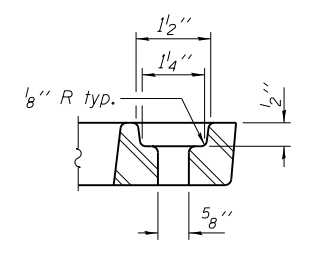
F.A.I. RE. 64	SECTION 82-(1,4)B-1	COUNTY ST. CLAIR	TOTAL SHEETS 406	SHEET NO. 137
CONTRACT NO. 76G09				ILLINOIS FED. AID PROJECT



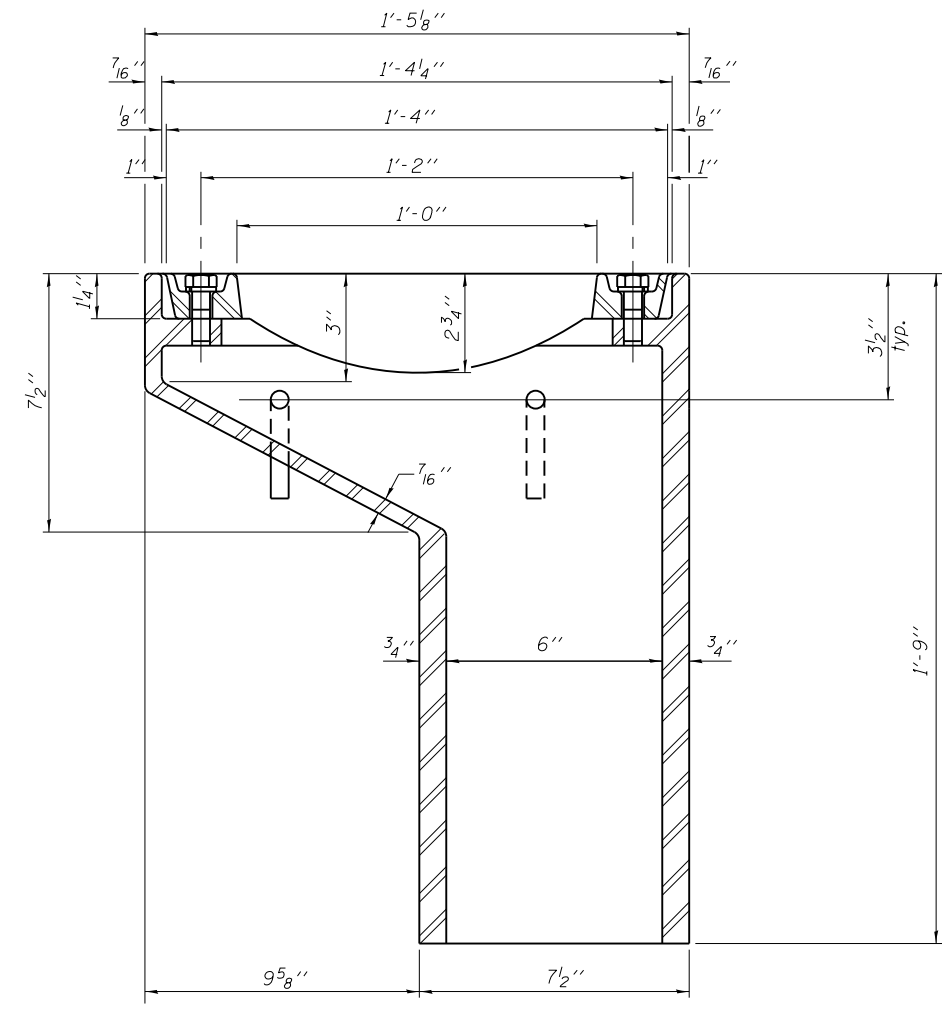
**PLAN**



**VANE GRATE DETAIL**

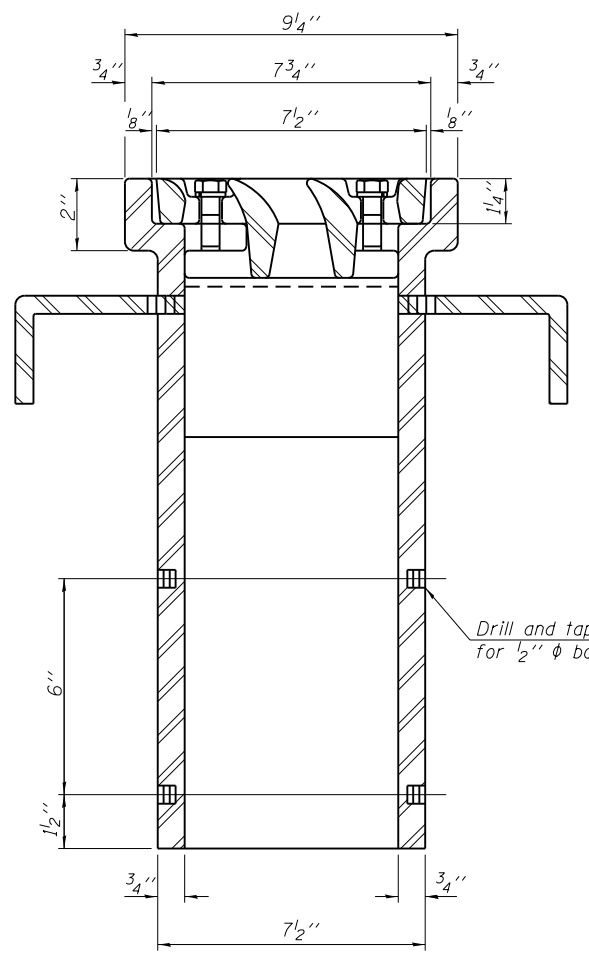


**BOLT HOLE DETAIL**

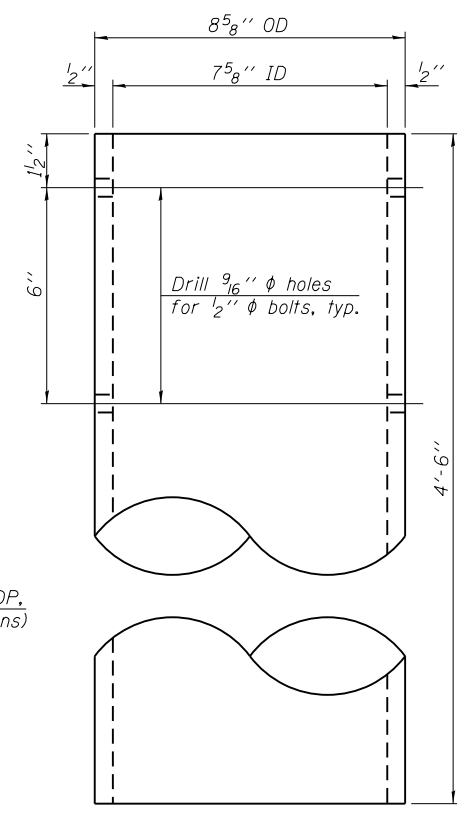


**SECTION A-A**

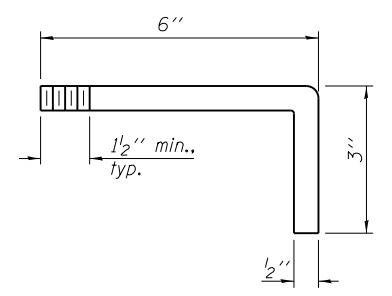
See sheet 29 of 97 for scupper location relative to parapet.



**SECTION B-B**



**DOWNSPOUT**



**ANCHOR STUD DETAIL**

**Notes:**  
 All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.  
 Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.  
 Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.  
 As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.  
 Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.  
 The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.  
 Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-11.  
 Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.

**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	3

DS-11

7-1-10

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 USER NAME = elagemann  
 PLOT SCALE =  
 PLOT DATE = 8/7/2014

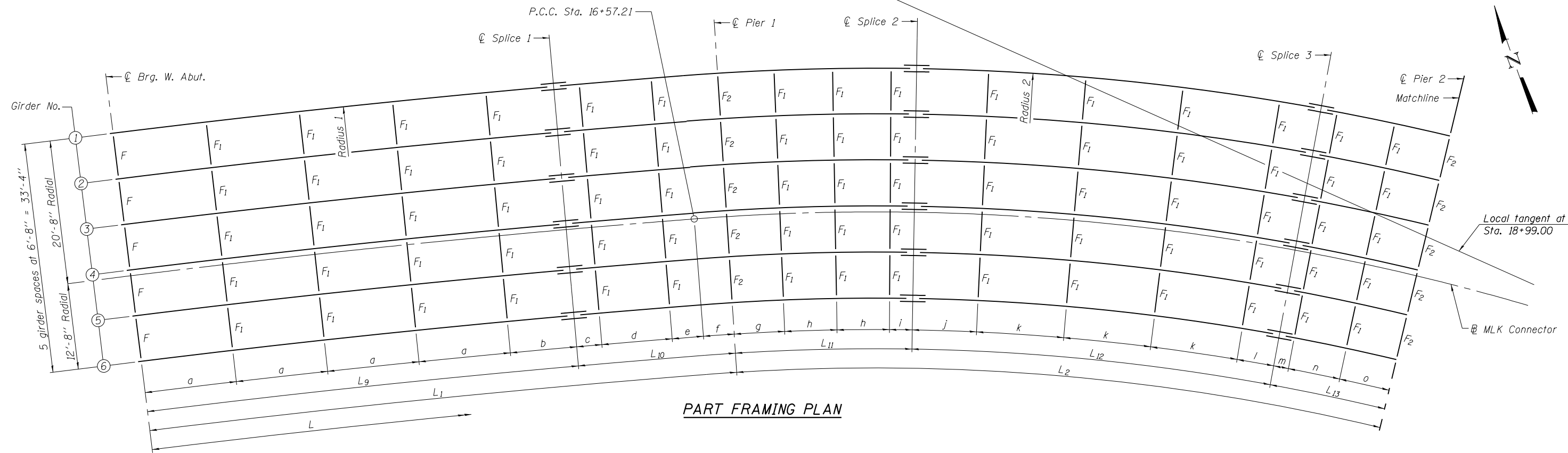
DESIGNED - E.M. Lagemann	REVISED
CHECKED - T.S. Friederich	REVISED
DRAWN - C.A. Buettner	REVISED
CHECKED - T.S. Friederich	REVISED

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

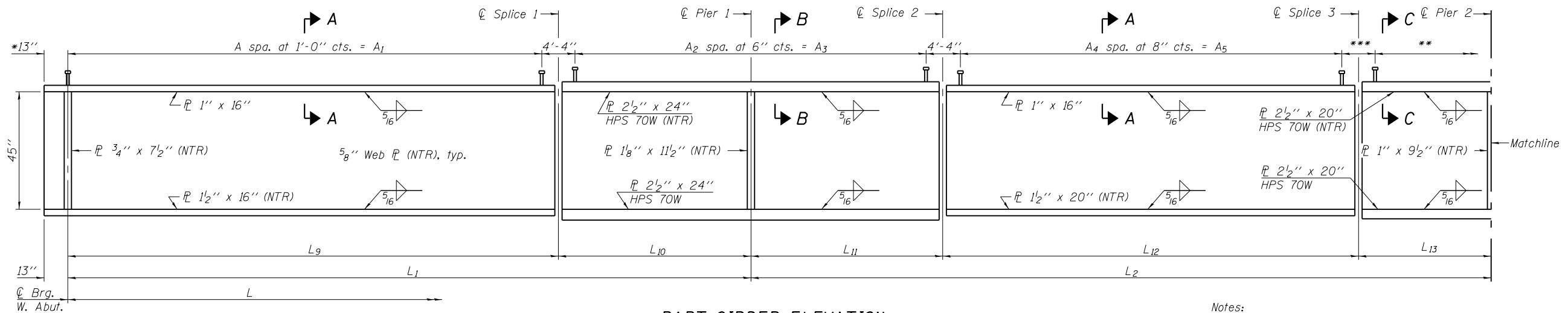
**DRAINAGE SCUPPER, DS-11  
 STRUCTURE NO. 082-0349**

SHEET NO. 43 OF 97 SHEETS

F.A.I. RE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1,41B-1	ST. CLAIR	406	138
CONTRACT NO. 76G09				
ILLINOIS FED. AID PROJECT				



**PART FRAMING PLAN**

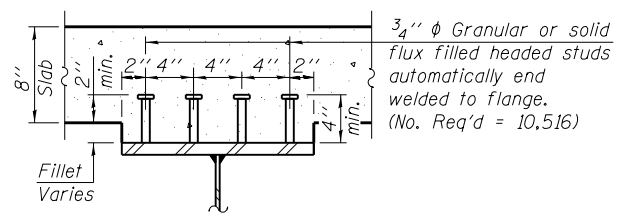


**PART GIRDER ELEVATION**

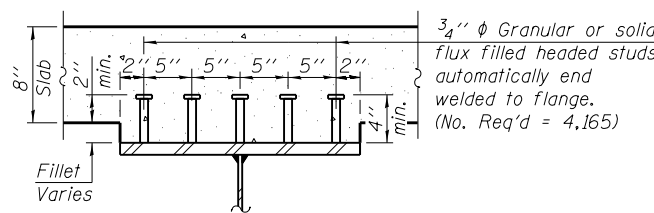
"NTR" denotes plates to which notch toughness requirements are applicable.

- \* Based on plumbed end of girder.
- \*\* A<sub>6</sub> spa. at 8" cts. = A<sub>7</sub>
- \*\*\* 4'-6" Girders 2 & 5, 4'-2" all others.

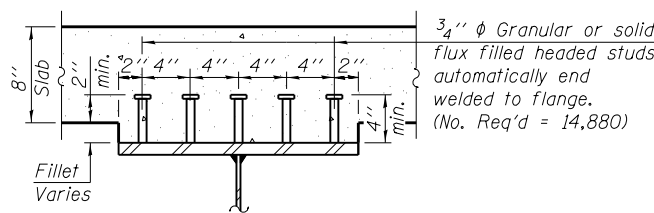
**Notes:**  
 All flanges, web plates, bearing stiffeners, and splice plates shall be AASHTO M270 Grade 50, except as noted.  
 Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.  
 Girder ends and bearing stiffeners at both Abuts. shall be fabricated parallel to the backwall in its final position.  
 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.  
 The Contractor shall either:  
 1) Ream diaphragm and/or cross frame connection holes during shop assembly, or  
 2) Provide detailing and fabrication controls acceptable to the Engineer which ensures accuracy such that field reaming will not exceed the amount permitted in Article 505.08(l) of the Standard Specifications.  
 For spans 3 and 4, see sheet 45 of 97.  
 For spans 5 and 6, see sheet 46 of 97.  
 For spans 7 and 8, see sheet 47 of 97.



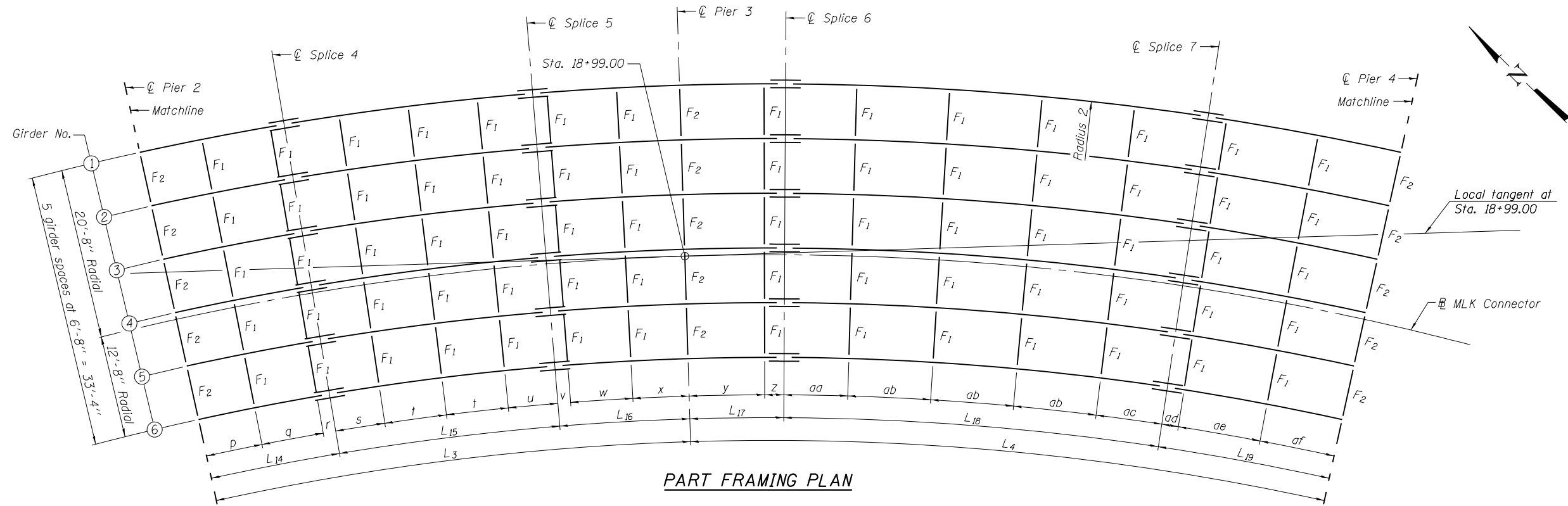
**SECTION A-A**



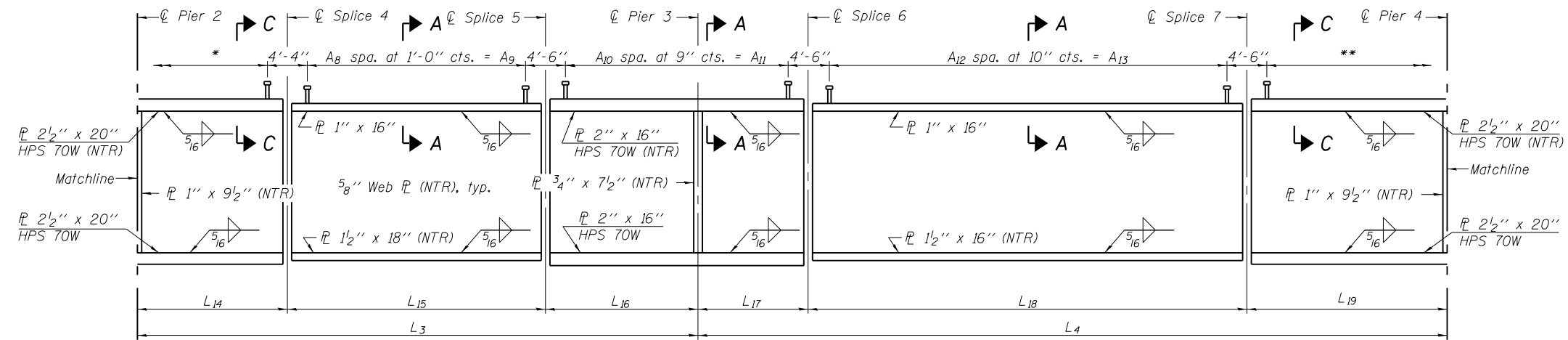
**SECTION B-B**



**SECTION C-C**



**PART FRAMING PLAN**



**PART GIRDER ELEVATION**

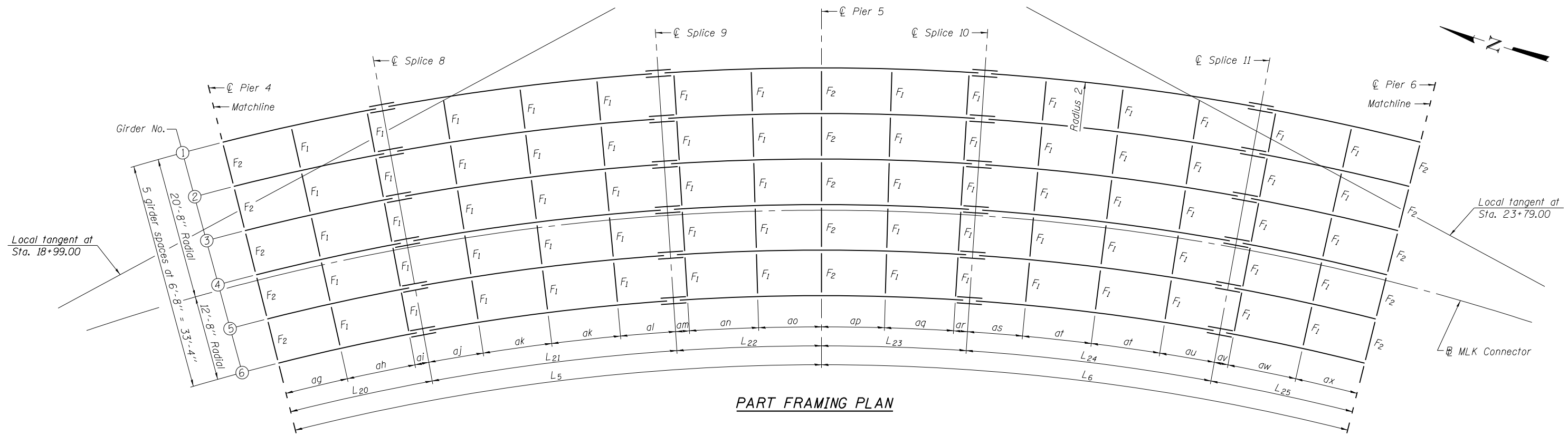
"NTR" denotes plates to which notch toughness requirements are applicable.

\* A<sub>6</sub> spa. at 8" cts. = A<sub>7</sub>  
 \*\* A<sub>14</sub> spa. at 6" cts. = A<sub>15</sub>

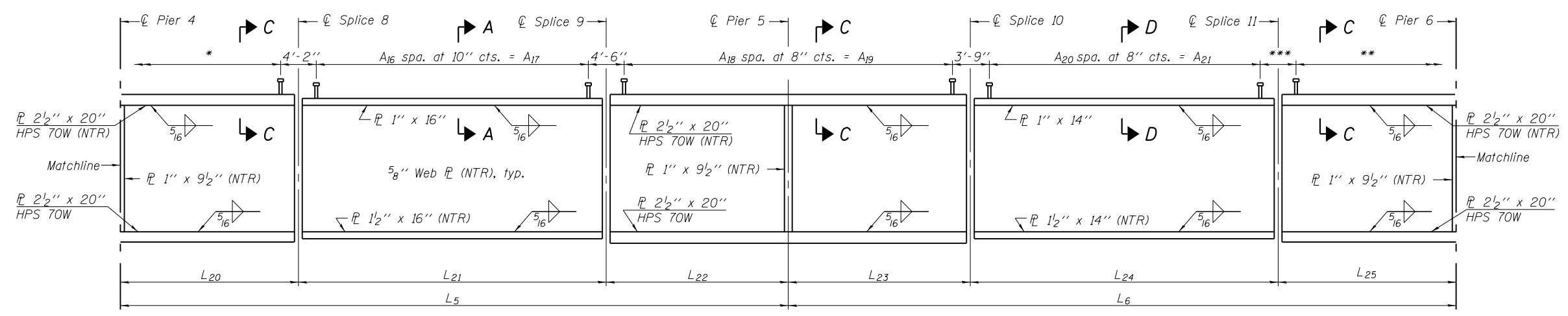
Notes:  
 For spans 1 and 2, see sheet 44 of 97.  
 For spans 5 and 6, see sheet 46 of 97.  
 For spans 7 and 8, see sheet 47 of 97.  
 For Sections A-A and C-C, see sheet 44 of 97.

FILE NAME = X:\1309400-MLK\Cad\15\082034-76009.dgn USER NAME = elagemann PLOT SCALE = PLOT DATE = 8/7/2014	DESIGNED - E.M. Lagemann CHECKED - K.A. Klues DRAWN - C.A. Buettner CHECKED - T.S. Friederich	REVISED REVISED REVISED REVISED	<b>STATE OF ILLINOIS          DEPARTMENT OF TRANSPORTATION</b>	<b>STRUCTURAL STEEL DETAILS - SPANS 3 AND 4          STRUCTURE NO. 082-0349</b>	F.A.I. RTÉ. 64	SECTION 82-1,4/B-1	COUNTY ST. CLAIR	TOTAL SHEETS 406	SHEET NO. 140
					SHEET NO. 45 OF 97 SHEETS		CONTRACT NO. 76G09 ILLINOIS FED. AID PROJECT		



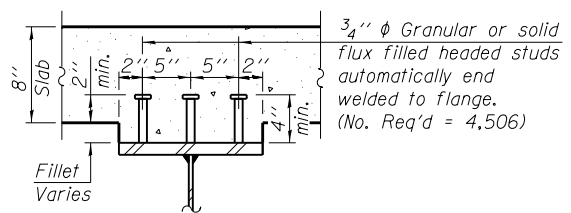


**PART FRAMING PLAN**



**PART GIRDER ELEVATION**

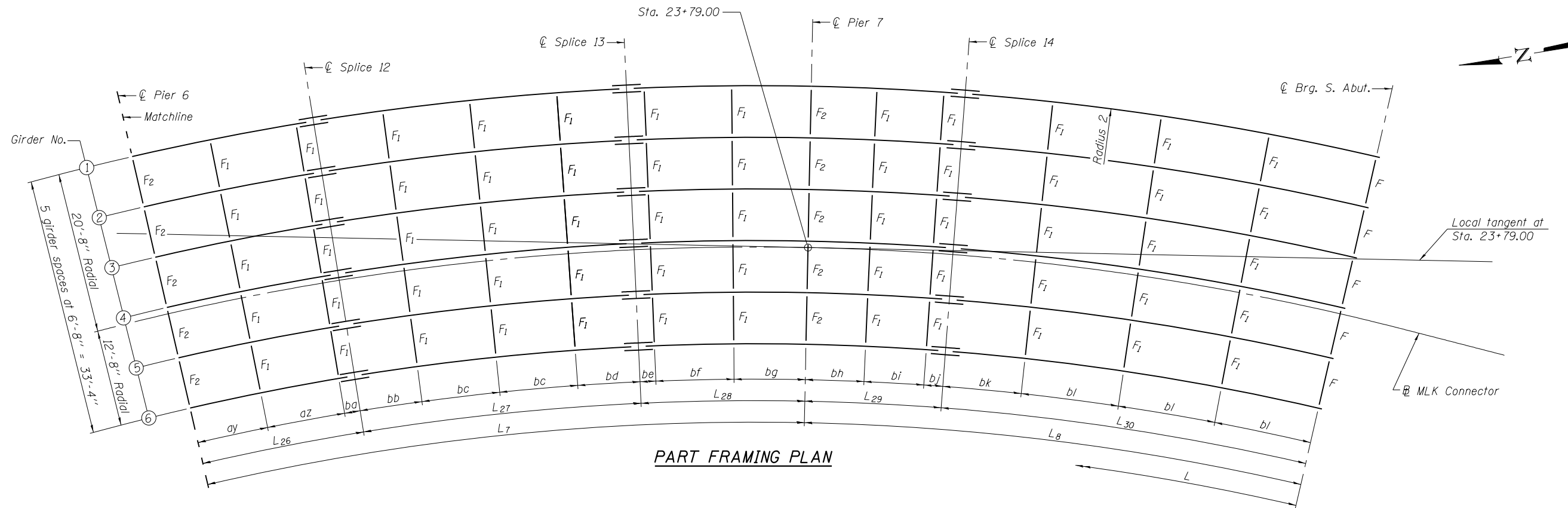
"NTR" denotes plates to which notch toughness requirements are applicable.



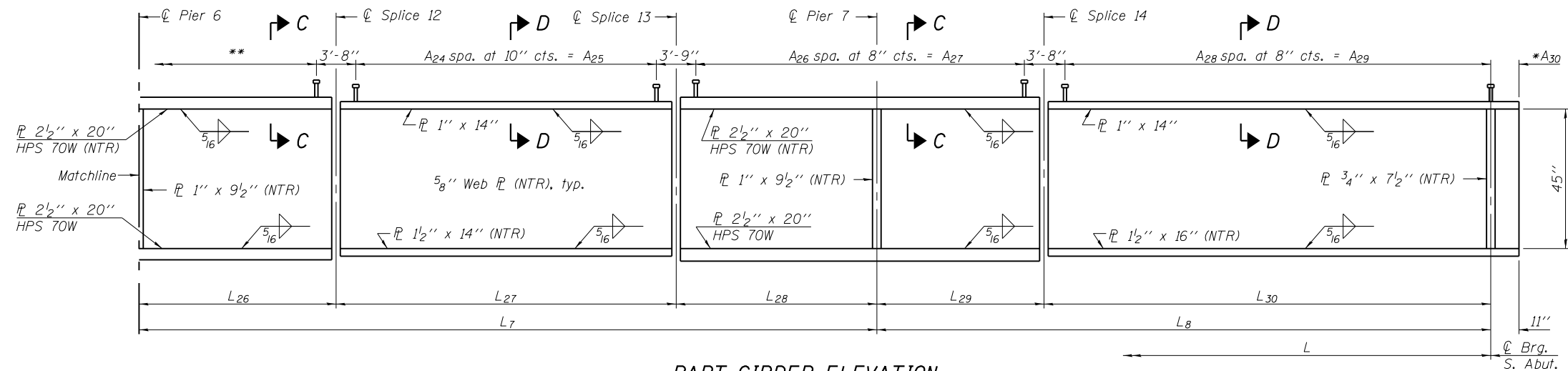
**SECTION D-D**

- \*A<sub>14</sub> spa. at 6" cts. = A<sub>15</sub>
- \*\*A<sub>22</sub> spa. at 6" cts. = A<sub>23</sub>
- \*\*\*3'-10" Girders 2 & 5, 3'-6" all others.

Notes:  
 For spans 1 and 2, see sheet 44 of 97.  
 For spans 3 and 4, see sheet 45 of 97.  
 For spans 7 and 8, see sheet 47 of 97.  
 For Sections A-A and C-C, see sheet 44 of 97.



**PART FRAMING PLAN**



**PART GIRDER ELEVATION**

"NTR" denotes plates to which notch toughness requirements are applicable.

\*Based on plumed end of girder.  
 \*\* A22 spa. at 6" cts. = A23

Notes:  
 For spans 1 and 2, see sheet 44 of 97.  
 For spans 3 and 4, see sheet 45 of 97.  
 For spans 5 and 6, see sheet 46 of 97.  
 For Section C-C, see sheet 44 of 97.  
 For Section D-D, see sheet 46 of 97.

FILE NAME = X:\1309400-MLK\Cad\15\082034-76009.dgn USER NAME = elagemann PLOT SCALE = PLOT DATE = 8/7/2014	DESIGNED - E.M. Lagemann CHECKED - K.A. Klues DRAWN - C.A. Buettner CHECKED - T.S. Friederich	REVISED REVISED REVISED REVISED	<b>STATE OF ILLINOIS          DEPARTMENT OF TRANSPORTATION</b>	<b>STRUCTURAL STEEL DETAILS - SPANS 7 AND 8          STRUCTURE NO. 082-0349</b>	F.A.I. RTÉ. 64 SECTION 82-1,41B-1 COUNTY ST. CLAIR TOTAL SHEETS 406 SHEET NO. 142 CONTRACT NO. 76G09
					SHEET NO. 47 OF 97 SHEETS

**TABLE OF "L" DIMENSIONS**

Girder No.	Radius 1 (ft.)	Radius 2 (ft.)	L	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	L <sub>4</sub>	L <sub>5</sub>	L <sub>6</sub>	L <sub>7</sub>	L <sub>8</sub>	L <sub>9</sub>	L <sub>10</sub>	L <sub>11</sub>	L <sub>12</sub>	L <sub>13</sub>	L <sub>14</sub>
1	2,625.89	505.67	975'-11 <sup>1</sup> / <sub>16</sub> "	126'-2 <sup>1</sup> / <sub>16</sub> "	151'-2 <sup>1</sup> / <sub>8</sub> "	93'-10"	125'-1 <sup>3</sup> / <sub>8</sub> "	125'-1 <sup>3</sup> / <sub>8</sub> "	125'-1 <sup>3</sup> / <sub>8</sub> "	125'-1 <sup>3</sup> / <sub>8</sub> "	104'-3 <sup>3</sup> / <sub>8</sub> "	91'-11 <sup>1</sup> / <sub>16</sub> "	34'-3"	40'-9"	83'-5 <sup>1</sup> / <sub>8</sub> "	27'-0"	25'-4"
2	2,619.23	499.00	964'-4 <sup>1</sup> / <sub>4</sub> "	125'-9 <sup>1</sup> / <sub>16</sub> "	149'-2 <sup>1</sup> / <sub>4</sub> "	92'-7 <sup>3</sup> / <sub>16</sub> "	123'-5 <sup>9</sup> / <sub>16</sub> "	123'-5 <sup>9</sup> / <sub>16</sub> "	123'-5 <sup>9</sup> / <sub>16</sub> "	123'-5 <sup>9</sup> / <sub>16</sub> "	102'-10 <sup>5</sup> / <sub>8</sub> "	91'-8 <sup>1</sup> / <sub>8</sub> "	34'-1 <sup>1</sup> / <sub>16</sub> "	40'-2 <sup>9</sup> / <sub>16</sub> "	82'-3 <sup>1</sup> / <sub>16</sub> "	26'-7 <sup>3</sup> / <sub>4</sub> "	25'-0"
3	2,612.56	492.33	952'-8 <sup>1</sup> / <sub>16</sub> "	125'-5 <sup>3</sup> / <sub>16</sub> "	147'-2 <sup>1</sup> / <sub>16</sub> "	91'-4 <sup>5</sup> / <sub>16</sub> "	121'-9 <sup>3</sup> / <sub>4</sub> "	121'-9 <sup>3</sup> / <sub>4</sub> "	121'-9 <sup>3</sup> / <sub>4</sub> "	121'-9 <sup>3</sup> / <sub>4</sub> "	101'-6 <sup>1</sup> / <sub>8</sub> "	91'-6 <sup>1</sup> / <sub>16</sub> "	33'-11 <sup>1</sup> / <sub>8</sub> "	39'-8 <sup>1</sup> / <sub>8</sub> "	81'-2 <sup>3</sup> / <sub>4</sub> "	26'-3 <sup>1</sup> / <sub>16</sub> "	24'-8"
4	2,605.89	485.67	941'-1 <sup>5</sup> / <sub>16</sub> "	125'-0 <sup>1</sup> / <sub>16</sub> "	145'-2 <sup>3</sup> / <sub>8</sub> "	90'-1 <sup>1</sup> / <sub>2</sub> "	120'-2"	120'-2"	120'-2"	120'-2"	100'-1 <sup>5</sup> / <sub>8</sub> "	91'-3 <sup>1</sup> / <sub>4</sub> "	33'-9 <sup>3</sup> / <sub>16</sub> "	39'-1 <sup>1</sup> / <sub>16</sub> "	80'-1 <sup>1</sup> / <sub>2</sub> "	25'-11 <sup>3</sup> / <sub>16</sub> "	24'-4"
5	2,599.23	479.00	929'-6 <sup>1</sup> / <sub>16</sub> "	124'-7 <sup>1</sup> / <sub>16</sub> "	143'-2 <sup>1</sup> / <sub>2</sub> "	88'-10 <sup>5</sup> / <sub>8</sub> "	118'-6 <sup>3</sup> / <sub>16</sub> "	118'-6 <sup>3</sup> / <sub>16</sub> "	118'-6 <sup>3</sup> / <sub>16</sub> "	118'-6 <sup>3</sup> / <sub>16</sub> "	98'-9 <sup>1</sup> / <sub>8</sub> "	91'-0 <sup>1</sup> / <sub>2</sub> "	33'-7 <sup>3</sup> / <sub>16</sub> "	38'-7 <sup>3</sup> / <sub>16</sub> "	79'-0 <sup>3</sup> / <sub>8</sub> "	25'-6 <sup>1</sup> / <sub>16</sub> "	23'-11 <sup>5</sup> / <sub>16</sub> "
6	2,592.56	472.33	917'-11 <sup>1</sup> / <sub>2</sub> "	124'-2 <sup>1</sup> / <sub>16</sub> "	141'-2 <sup>9</sup> / <sub>16</sub> "	87'-7 <sup>3</sup> / <sub>16</sub> "	116'-10 <sup>3</sup> / <sub>8</sub> "	116'-10 <sup>3</sup> / <sub>8</sub> "	116'-10 <sup>3</sup> / <sub>8</sub> "	116'-10 <sup>3</sup> / <sub>8</sub> "	97'-4 <sup>1</sup> / <sub>16</sub> "	90'-9 <sup>1</sup> / <sub>16</sub> "	33'-5 <sup>1</sup> / <sub>4</sub> "	38'-0 <sup>3</sup> / <sub>4</sub> "	77'-11 <sup>3</sup> / <sub>16</sub> "	25'-2 <sup>5</sup> / <sub>8</sub> "	23'-7 <sup>5</sup> / <sub>16</sub> "

Girder No.	L <sub>15</sub>	L <sub>16</sub>	L <sub>17</sub>	L <sub>18</sub>	L <sub>19</sub>	L <sub>20</sub>	L <sub>21</sub>	L <sub>22</sub>	L <sub>23</sub>	L <sub>24</sub>	L <sub>25</sub>	L <sub>26</sub>	L <sub>27</sub>	L <sub>28</sub>	L <sub>29</sub>	L <sub>30</sub>
1	43'-2"	25'-4"	18'-3"	73'-1 <sup>3</sup> / <sub>8</sub> "	33'-9"	33'-9"	57'-7 <sup>3</sup> / <sub>8</sub> "	33'-9"	33'-9"	57'-7 <sup>3</sup> / <sub>8</sub> "	33'-9"	33'-9"	57'-7 <sup>3</sup> / <sub>8</sub> "	33'-9"	28'-2"	76'-1 <sup>1</sup> / <sub>8</sub> "
2	42'-7 <sup>3</sup> / <sub>16</sub> "	25'-0"	18'-0 <sup>1</sup> / <sub>8</sub> "	72'-1 <sup>3</sup> / <sub>4</sub> "	33'-3 <sup>1</sup> / <sub>16</sub> "	33'-3 <sup>1</sup> / <sub>16</sub> "	56'-10 <sup>3</sup> / <sub>16</sub> "	33'-3 <sup>1</sup> / <sub>16</sub> "	33'-3 <sup>1</sup> / <sub>16</sub> "	56'-10 <sup>3</sup> / <sub>16</sub> "	33'-3 <sup>1</sup> / <sub>16</sub> "	33'-3 <sup>1</sup> / <sub>16</sub> "	56'-10 <sup>3</sup> / <sub>16</sub> "	33'-3 <sup>1</sup> / <sub>16</sub> "	27'-9 <sup>9</sup> / <sub>16</sub> "	75'-1 <sup>1</sup> / <sub>16</sub> "
3	42'-0 <sup>5</sup> / <sub>16</sub> "	24'-8"	17'-9 <sup>1</sup> / <sub>4</sub> "	71'-2 <sup>1</sup> / <sub>16</sub> "	32'-10 <sup>5</sup> / <sub>16</sub> "	32'-10 <sup>5</sup> / <sub>16</sub> "	56'-1 <sup>1</sup> / <sub>8</sub> "	32'-10 <sup>5</sup> / <sub>16</sub> "	32'-10 <sup>5</sup> / <sub>16</sub> "	56'-1 <sup>1</sup> / <sub>8</sub> "	32'-10 <sup>5</sup> / <sub>16</sub> "	32'-10 <sup>5</sup> / <sub>16</sub> "	56'-1 <sup>1</sup> / <sub>8</sub> "	32'-10 <sup>5</sup> / <sub>16</sub> "	27'-5 <sup>1</sup> / <sub>16</sub> "	74'-1 <sup>1</sup> / <sub>16</sub> "
4	41'-5 <sup>1</sup> / <sub>2</sub> "	24'-4"	17'-6 <sup>1</sup> / <sub>16</sub> "	70'-2 <sup>1</sup> / <sub>16</sub> "	32'-5"	32'-5"	55'-4"	32'-5"	32'-5"	55'-4"	32'-5"	32'-5"	55'-4"	32'-5"	27'-0 <sup>5</sup> / <sub>8</sub> "	73'-1"
5	40'-10 <sup>1</sup> / <sub>4</sub> "	23'-11 <sup>5</sup> / <sub>16</sub> "	17'-3 <sup>1</sup> / <sub>16</sub> "	69'-3 <sup>1</sup> / <sub>8</sub> "	31'-11 <sup>5</sup> / <sub>16</sub> "	31'-11 <sup>5</sup> / <sub>16</sub> "	54'-6 <sup>1</sup> / <sub>16</sub> "	31'-11 <sup>5</sup> / <sub>16</sub> "	31'-11 <sup>5</sup> / <sub>16</sub> "	54'-6 <sup>1</sup> / <sub>16</sub> "	31'-11 <sup>5</sup> / <sub>16</sub> "	31'-11 <sup>5</sup> / <sub>16</sub> "	54'-6 <sup>1</sup> / <sub>16</sub> "	31'-11 <sup>5</sup> / <sub>16</sub> "	26'-8 <sup>3</sup> / <sub>16</sub> "	72'-0 <sup>1</sup> / <sub>16</sub> "
6	40'-3 <sup>5</sup> / <sub>16</sub> "	23'-7 <sup>5</sup> / <sub>16</sub> "	17'-0 <sup>9</sup> / <sub>16</sub> "	68'-3 <sup>1</sup> / <sub>2</sub> "	31'-6 <sup>5</sup> / <sub>16</sub> "	31'-6 <sup>5</sup> / <sub>16</sub> "	53'-9 <sup>3</sup> / <sub>4</sub> "	31'-6 <sup>5</sup> / <sub>16</sub> "	31'-6 <sup>5</sup> / <sub>16</sub> "	53'-9 <sup>3</sup> / <sub>4</sub> "	31'-6 <sup>5</sup> / <sub>16</sub> "	31'-6 <sup>5</sup> / <sub>16</sub> "	53'-9 <sup>3</sup> / <sub>4</sub> "	31'-6 <sup>5</sup> / <sub>16</sub> "	26'-3 <sup>3</sup> / <sub>4</sub> "	71'-0 <sup>1</sup> / <sub>16</sub> "

**TABLE OF OFFSET DIMENSIONS**

Girder No.	☉ Brg. W. Abut.		☉ Splice 1		P.C.C.		☉ Pier 1		☉ Splice 2		☉ Splice 3		☉ Pier 2		☉ Splice 4		☉ Splice 5		☉ Pier 3		☉ Splice 6	
	X <sub>1</sub>	Y <sub>1</sub>	X <sub>1</sub>	Y <sub>1</sub>	X <sub>1</sub>	Y <sub>1</sub>	X <sub>1</sub>	Y <sub>1</sub>	X <sub>1</sub>	Y <sub>1</sub>	X <sub>1</sub>	Y <sub>1</sub>	X <sub>1</sub>	Y <sub>1</sub>	X <sub>1</sub>	Y <sub>1</sub>	X <sub>1</sub>	Y <sub>1</sub>	X <sub>1</sub>	Y <sub>1</sub>	X <sub>1</sub>	Y <sub>1</sub>
1	345'-1 <sup>1</sup> / <sub>8</sub> "	120'-10 <sup>7</sup> / <sub>16</sub> "	265'-6 <sup>7</sup> / <sub>8</sub> "	74'-7 <sup>5</sup> / <sub>16</sub> "	241'-9 <sup>5</sup> / <sub>16</sub> "	61'-6 <sup>9</sup> / <sub>16</sub> "	235'-6 <sup>7</sup> / <sub>16</sub> "	58'-2 <sup>1</sup> / <sub>2</sub> "	198'-9 <sup>1</sup> / <sub>16</sub> "	40'-8 <sup>3</sup> / <sub>8</sub> "	119'-8 <sup>1</sup> / <sub>4</sub> "	14'-4 <sup>1</sup> / <sub>16</sub> "	93'-3 <sup>9</sup> / <sub>16</sub> "	8'-8 <sup>3</sup> / <sub>16</sub> "	68'-3 <sup>1</sup> / <sub>2</sub> "	4'-7 <sup>9</sup> / <sub>16</sub> "	25'-3 <sup>7</sup> / <sub>8</sub> "	7 <sup>5</sup> / <sub>8</sub> "	0'-0"	0'-0"	18'-2 <sup>1</sup> / <sub>16</sub> "	3 <sup>1</sup> / <sub>16</sub> "
2	341'-7 <sup>3</sup> / <sub>4</sub> "	119'-10 <sup>7</sup> / <sub>8</sub> "	262'-3 <sup>7</sup> / <sub>8</sub> "	73'-9 <sup>1</sup> / <sub>16</sub> "	238'-7 <sup>1</sup> / <sub>16</sub> "	60'-8 <sup>1</sup> / <sub>16</sub> "	232'-5 <sup>3</sup> / <sub>16</sub> "	57'-5 <sup>1</sup> / <sub>4</sub> "	196'-1 <sup>5</sup> / <sub>8</sub> "	40'-1 <sup>5</sup> / <sub>16</sub> "	118'-1 <sup>5</sup> / <sub>16</sub> "	14'-2 <sup>1</sup> / <sub>8</sub> "	92'-0 <sup>1</sup> / <sub>16</sub> "	8'-6 <sup>1</sup> / <sub>16</sub> "	67'-4 <sup>1</sup> / <sub>16</sub> "	4'-6 <sup>1</sup> / <sub>8</sub> "	24'-11 <sup>7</sup> / <sub>8</sub> "	7 <sup>1</sup> / <sub>2</sub> "	0'-0"	0'-0"	18'-0 <sup>1</sup> / <sub>16</sub> "	3 <sup>1</sup> / <sub>8</sub> "
3	338'-2 <sup>5</sup> / <sub>16</sub> "	118'-11 <sup>5</sup> / <sub>16</sub> "	259'-0 <sup>1</sup> / <sub>16</sub> "	72'-11 <sup>1</sup> / <sub>16</sub> "	235'-4 <sup>1</sup> / <sub>16</sub> "	59'-11 <sup>1</sup> / <sub>16</sub> "	229'-3 <sup>5</sup> / <sub>16</sub> "	56'-8 <sup>1</sup> / <sub>16</sub> "	193'-6 <sup>3</sup> / <sub>16</sub> "	39'-7 <sup>1</sup> / <sub>2</sub> "	116'-6 <sup>3</sup> / <sub>8</sub> "	13'-11 <sup>1</sup> / <sub>8</sub> "	90'-10 <sup>1</sup> / <sub>16</sub> "	8'-5 <sup>1</sup> / <sub>16</sub> "	66'-5 <sup>1</sup> / <sub>8</sub> "	4'-7 <sup>1</sup> / <sub>16</sub> "	24'-7 <sup>1</sup> / <sub>8</sub> "	7 <sup>1</sup> / <sub>16</sub> "	0'-0"	0'-0"	17'-9 <sup>1</sup> / <sub>16</sub> "	3 <sup>7</sup> / <sub>8</sub> "
4	334'-8 <sup>1</sup> / <sub>16</sub> "	117'-11 <sup>1</sup> / <sub>16</sub> "	255'-9 <sup>1</sup> / <sub>16</sub> "	72'-1 <sup>1</sup> / <sub>2</sub> "	232'-2 <sup>9</sup> / <sub>16</sub> "	59'-1 <sup>3</sup> / <sub>8</sub> "	226'-2 <sup>1</sup> / <sub>16</sub> "	55'-10 <sup>7</sup> / <sub>8</sub> "	190'-10 <sup>1</sup> / <sub>16</sub> "	39'-1 <sup>1</sup> / <sub>16</sub> "	114'-11 <sup>1</sup> / <sub>16</sub> "	13'-9 <sup>5</sup> / <sub>8</sub> "	89'-7 <sup>5</sup> / <sub>16</sub> "	8'-4 <sup>1</sup> / <sub>16</sub> "	65'-7 <sup>1</sup> / <sub>8</sub> "	4'-5 <sup>3</sup> / <sub>8</sub> "	24'-3 <sup>7</sup> / <sub>8</sub> "	7 <sup>5</sup> / <sub>16</sub> "	0'-0"	0'-0"	17'-6 <sup>5</sup> / <sub>16</sub> "	3 <sup>1</sup> / <sub>16</sub> "
5	331'-3 <sup>1</sup> / <sub>16</sub> "	117'-0 <sup>1</sup> / <sub>4</sub> "	252'-7"	71'-3 <sup>3</sup> / <sub>8</sub> "	229'-0 <sup>5</sup> / <sub>16</sub> "	58'-3 <sup>3</sup> / <sub>8</sub> "	223'-1 <sup>1</sup> / <sub>16</sub> "	55'-1 <sup>5</sup> / <sub>8</sub> "	188'-3 <sup>1</sup> / <sub>4</sub> "	38'-6 <sup>5</sup> / <sub>8</sub> "	113'-4 <sup>1</sup> / <sub>2</sub> "	13'-7 <sup>3</sup> / <sub>16</sub> "	88'-4 <sup>1</sup> / <sub>2</sub> "	8'-2 <sup>1</sup> / <sub>16</sub> "	64'-8 <sup>5</sup> / <sub>16</sub> "	4'-4 <sup>1</sup> / <sub>16</sub> "	23'-11 <sup>1</sup> / <sub>8</sub> "	7 <sup>3</sup> / <sub>16</sub> "	0'-0"	0'-0"	17'-3 <sup>3</sup> / <sub>8</sub> "	3 <sup>3</sup> / <sub>4</sub> "
6	327'-10 <sup>1</sup> / <sub>8</sub> "	116'-0 <sup>1</sup> / <sub>16</sub> "	249'-4"	70'-5 <sup>1</sup> / <sub>4</sub> "	225'-10 <sup>1</sup> / <sub>16</sub> "	57'-5 <sup>1</sup> / <sub>8</sub> "	220'-0 <sup>1</sup> / <sub>8</sub> "	54'-4 <sup>1</sup> / <sub>16</sub> "	185'-7 <sup>1</sup> / <sub>16</sub> "	38'-0 <sup>3</sup> / <sub>16</sub> "	111'-9 <sup>1</sup> / <sub>16</sub> "	13'-5 <sup>1</sup> / <sub>16</sub> "	87'-1 <sup>3</sup> / <sub>4</sub> "	8'-1 <sup>5</sup> / <sub>16</sub> "	63'-9 <sup>1</sup> / <sub>2</sub> "	4'-3 <sup>1</sup> / <sub>16</sub> "	23'-7 <sup>1</sup> / <sub>16</sub> "	7 <sup>1</sup> / <sub>8</sub> "	0'-0"	0'-0"	17'-0 <sup>1</sup> / <sub>2</sub> "	3 <sup>1</sup> / <sub>16</sub> "

Girder No.	☉ Splice 7		☉ Pier 4		☉ Splice 8		☉ Splice 9		☉ Pier 5		☉ Splice 10		☉ Splice 11		☉ Pier 6		☉ Splice 12		☉ Splice 13		☉ Pier 7	
	X <sub>1</sub>	Y <sub>1</sub>	X <sub>1</sub>	Y <sub>1</sub>	X <sub>1</sub>	Y <sub>1</sub>	X <sub>1</sub>	Y <sub>1</sub>	X <sub>1</sub> , X <sub>2</sub>	Y <sub>1</sub> , Y <sub>2</sub>	X <sub>2</sub>	Y <sub>2</sub>	X <sub>2</sub>	Y <sub>2</sub>	X <sub>2</sub>	Y <sub>2</sub>	X <sub>2</sub>	Y <sub>2</sub>	X <sub>2</sub>	Y <sub>2</sub>	X <sub>2</sub>	Y <sub>2</sub>
1	90'-10 <sup>3</sup> / <sub>8</sub> "	8'-2 <sup>3</sup> / <sub>4</sub> "	123'-10 <sup>1</sup> / <sub>16</sub> "	15'-4 <sup>1</sup> / <sub>16</sub> "	156'-3 <sup>1</sup> / <sub>8</sub> "	24'-9"	209'-10 <sup>3</sup> / <sub>4</sub> "	45'-7 <sup>1</sup> / <sub>16</sub> "	240'-1 <sup>1</sup> / <sub>16</sub> "	60'-7 <sup>1</sup> / <sub>8</sub> "	209'-11 <sup>1</sup> / <sub>8</sub> "	45'-7 <sup>5</sup> / <sub>8</sub> "	156'-3 <sup>1</sup> / <sub>8</sub> "	24'-9"	123'-10 <sup>1</sup> / <sub>16</sub> "	15'-4 <sup>1</sup> / <sub>16</sub> "	90'-10 <sup>3</sup> / <sub>8</sub> "	8'-2 <sup>3</sup> / <sub>4</sub> "	33'-8 <sup>1</sup> / <sub>16</sub> "	1'-1 <sup>1</sup> / <sub>2</sub> "	0'-0"	0'-0"
2	89'-8"	8'-1 <sup>1</sup> / <sub>2</sub> "	122'-2 <sup>1</sup> / <sub>2</sub> "	15'-2 <sup>3</sup> / <sub>8</sub> "	154'-2 <sup>1</sup> / <sub>16</sub> "	24'-5 <sup>1</sup> / <sub>16</sub> "	207'-1 <sup>9</sup> / <sub>16</sub> "	45'-0 <sup>4</sup> / <sub>4</sub> "	236'-11 <sup>1</sup> / <sub>16</sub> "	59'-10 <sup>3</sup> / <sub>16</sub> "	207'-1 <sup>1</sup> / <sub>8</sub> "	45'-0 <sup>3</sup> / <sub>8</sub> "	154'-2 <sup>1</sup> / <sub>16</sub> "	24'-5 <sup>1</sup> / <sub>16</sub> "	122'-2 <sup>1</sup> / <sub>2</sub> "	15'-2 <sup>3</sup> / <sub>8</sub> "	89'-8"	8'-1 <sup>1</sup> / <sub>2</sub> "	33'-3 <sup>3</sup> / <sub>8</sub> "	1'-1 <sup>1</sup> / <sub>16</sub> "	0'-0"	0'-0"
3	88'-5 <sup>1</sup> / <sub>8</sub> "	8'-0 <sup>3</sup> / <sub>16</sub> "	120'-6 <sup>1</sup> / <sub>8</sub> "	14'-11 <sup>5</sup> / <sub>16</sub> "	152'-1 <sup>1</sup> / <sub>16</sub> "	24'-3 <sup>1</sup> / <sub>16</sub> "	204'-4 <sup>3</sup> / <sub>8</sub> "	44'-5"	233'-9 <sup>1</sup> / <sub>16</sub> "	59'-0 <sup>1</sup> / <sub>16</sub> "	204'-4 <sup>1</sup> / <sub>16</sub> "	44'-5 <sup>1</sup> / <sub>16</sub> "	152'-1 <sup>1</sup> / <sub>16</sub> "	24'-3 <sup>1</sup> / <sub>16</sub> "	120'-6 <sup>1</sup> / <sub>8</sub> "	14'-11 <sup>5</sup> / <sub>16</sub> "	88'-5 <sup>1</sup> / <sub>8</sub> "	8'-0 <sup>3</sup> / <sub>16</sub> "	32'-10"	1'-1 <sup>1</sup> / <sub>8</sub> "	0'-0"	0'-0"
4	87'-3 <sup>1</sup> / <sub>4</sub> "	7'-10 <sup>7</sup> / <sub>8</sub> "	118'-11 <sup>1</sup> / <sub>16</sub> "	14'-9 <sup>1</sup> / <sub>2</sub> "	150'-1"	23'-9 <sup>1</sup> / <sub>4</sub> "	201'-7 <sup>1</sup> / <sub>8</sub> "	43'-9 <sup>1</sup> / <sub>16</sub> "	230'-7 <sup>1</sup> / <sub>16</sub> "	58'-3 <sup>1</sup> / <sub>8</sub> "	201'-7 <sup>1</sup> / <sub>16</sub> "	43'-9 <sup>1</sup> / <sub>16</sub> "	150'-1"	23'-9 <sup>1</sup> / <sub>4</sub> "	118'-11 <sup>1</sup> / <sub>16</sub> "	14'-9 <sup>1</sup> / <sub>2</sub> "	87'-3 <sup>1</sup> / <sub>4</sub> "	7'-10 <sup>7</sup> / <sub>8</sub> "	32'-4 <sup>1</sup> / <sub>16</sub> "	1'-1"	0'-0"	0'-0"
5	86'-0 <sup>1</sup> / <sub>8</sub> "	7'-9 <sup>9</sup> / <sub>16</sub> "	117'-3 <sup>3</sup> / <sub>4</sub> "	14'-7 <sup>1</sup> / <sub>16</sub> "	148'-0 <sup>1</sup> / <sub>4</sub> "	23'-5 <sup>1</sup> / <sub>16</sub> "	198'-9 <sup>1</sup> / <sub>16</sub> "	43'-2 <sup>3</sup> / <sub>16</sub> "	227'-5 <sup>1</sup> / <sub>16</sub> "	57'-5 <sup>1</sup> / <sub>2</sub> "	198'-10 <sup>1</sup> / <sub>4</sub> "	43'-2 <sup>3</sup> / <sub>4</sub> "	148'-0 <sup>1</sup> / <sub>4</sub> "	23'-5 <sup>1</sup> / <sub>16</sub> "	117'-3 <sup>3</sup> / <sub>4</sub> "	14'-7 <sup>1</sup> / <sub>16</sub> "	86'-0 <sup>1</sup> / <sub>8</sub> "	7'-9 <sup>9</sup> / <sub>16</sub> "	31'-11 <sup>3</sup> / <sub>8</sub> "	1'-0 <sup>1</sup> / <sub>16</sub> "	0'-0"	0'-0"
6	84'-10 <sup>1</sup> / <sub>2</sub> "	7'-8 <sup>1</sup> / <sub>4</sub> "	115'-8 <sup>1</sup> / <sub>8</sub> "	14'-4 <sup>5</sup> / <sub>8</sub> "	145'-11 <sup>9</sup> / <sub>16</sub> "	23'-1 <sup>1</sup> / <sub>16</sub> "	196'-0 <sup>3</sup> / <sub>4</sub> "	42'-7 <sup>3</sup> / <sub>8</sub> "	224'-3 <sup>1</sup> / <sub>16</sub> "	56'-7 <sup>5</sup> / <sub>16</sub> "	196'-1 <sup>1</sup> / <sub>16</sub> "	42'-7 <sup>1</sup> / <sub>2</sub> "	145'-11 <sup>9</sup> / <sub>16</sub> "	23'-1 <sup>1</sup> / <sub>16</sub> "	115'-8 <sup>1</sup> / <sub>8</sub> "	14'-4 <sup>5</sup> / <sub>8</sub> "	84'-10 <sup>1</sup> / <sub>2</sub> "	7'-8 <sup>1</sup> / <sub>4</sub> "	31'-6"	1'-0 <sup>5</sup> / <sub>8</sub> "	0'-0"	0'-0"

Girder No.	☉ Splice 14		☉ Brg. S. Abut.	
	X <sub>2</sub>	Y <sub>2</sub>	X <sub>2</sub>	Y <sub>2</sub>
1	28'-1 <sup>1</sup> / <sub>16</sub> "	9 <sup>1</sup> / <sub>16</sub> "	103'-6 <sup>5</sup> / <sub>16</sub> "	10'-8 <sup>1</sup> / <sub>2</sub> "
2	27'-9 <sup>1</sup> / <sub>8</sub> "	9 <sup>1</sup> / <sub>16</sub> "	102'-1 <sup>1</sup> / <sub>16</sub> "	10'-6 <sup>1</sup> / <sub>16</sub> "
3	27'-4 <sup>1</sup> / <sub>16</sub> "	9 <sup>1</sup> / <sub>16</sub> "	100'-9 <sup>1</sup> / <sub>16</sub> "	10'-5 <sup>1</sup> / <sub>8</sub> "

TABLE OF "a" THRU "bl" DIMENSIONS

Girder No.	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v
1	19'-6"	13'-11 <sup>11</sup> / <sub>16</sub> "	5'-6 <sup>5</sup> / <sub>16</sub> "	15'-0"	6'-7 <sup>3</sup> / <sub>4</sub> "	7'-0 <sup>5</sup> / <sub>16</sub> "	11'-7 <sup>1</sup> / <sub>16</sub> "	12'-0"	5'-1 <sup>5</sup> / <sub>16</sub> "	14'-10 <sup>1</sup> / <sub>16</sub> "	20'-0"	8'-7 <sup>1</sup> / <sub>16</sub> "	3'-4 <sup>5</sup> / <sub>16</sub> "	12'-0"	11'-7 <sup>1</sup> / <sub>16</sub> "	10'-11"	12'-0"	2'-5"	9'-7"	12'-0"	9'-7"	2'-5"
2	19'-5 <sup>3</sup> / <sub>8</sub> "	13'-11 <sup>3</sup> / <sub>8</sub> "	5'-6"	14'-11 <sup>9</sup> / <sub>16</sub> "	6'-7 <sup>1</sup> / <sub>16</sub> "	6'-11 <sup>9</sup> / <sub>16</sub> "	11'-5 <sup>1</sup> / <sub>4</sub> "	11'-10 <sup>1</sup> / <sub>16</sub> "	5'-1 <sup>1</sup> / <sub>16</sub> "	14'-7 <sup>3</sup> / <sub>4</sub> "	19'-8 <sup>1</sup> / <sub>16</sub> "	8'-5 <sup>3</sup> / <sub>4</sub> "	3'-4 <sup>3</sup> / <sub>8</sub> "	11'-10 <sup>1</sup> / <sub>8</sub> "	11'-5 <sup>1</sup> / <sub>4</sub> "	10'-9 <sup>5</sup> / <sub>16</sub> "	11'-10 <sup>1</sup> / <sub>8</sub> "	2'-4 <sup>3</sup> / <sub>16</sub> "	9'-5 <sup>9</sup> / <sub>16</sub> "	11'-10 <sup>1</sup> / <sub>8</sub> "	9'-5 <sup>3</sup> / <sub>8</sub> "	2'-4 <sup>3</sup> / <sub>16</sub> "
3	19'-4 <sup>1</sup> / <sub>16</sub> "	13'-10 <sup>3</sup> / <sub>16</sub> "	5'-6"	14'-11 <sup>1</sup> / <sub>16</sub> "	6'-7 <sup>3</sup> / <sub>8</sub> "	6'-10 <sup>1</sup> / <sub>16</sub> "	11'-3 <sup>3</sup> / <sub>8</sub> "	11'-8 <sup>3</sup> / <sub>16</sub> "	5'-0 <sup>3</sup> / <sub>8</sub> "	14'-5 <sup>1</sup> / <sub>16</sub> "	19'-5 <sup>1</sup> / <sub>16</sub> "	8'-4 <sup>3</sup> / <sub>8</sub> "	3'-3 <sup>1</sup> / <sub>16</sub> "	11'-8 <sup>3</sup> / <sub>16</sub> "	11'-3 <sup>1</sup> / <sub>16</sub> "	10'-7 <sup>9</sup> / <sub>16</sub> "	11'-8 <sup>3</sup> / <sub>16</sub> "	2'-4 <sup>1</sup> / <sub>4</sub> "	9'-3 <sup>5</sup> / <sub>16</sub> "	11'-8 <sup>3</sup> / <sub>16</sub> "	9'-4"	2'-4 <sup>3</sup> / <sub>16</sub> "
4	19'-4 <sup>3</sup> / <sub>16</sub> "	13'-10 <sup>2</sup> / <sub>16</sub> "	5'-5 <sup>1</sup> / <sub>16</sub> "	14'-10 <sup>5</sup> / <sub>16</sub> "	6'-7 <sup>5</sup> / <sub>16</sub> "	6'-9 <sup>9</sup> / <sub>16</sub> "	11'-1 <sup>9</sup> / <sub>16</sub> "	11'-6 <sup>5</sup> / <sub>16</sub> "	4'-11 <sup>1</sup> / <sub>2</sub> "	14'-3"	19'-2 <sup>2</sup> / <sub>2</sub> "	8'-3"	3'-3 <sup>5</sup> / <sub>16</sub> "	11'-6 <sup>5</sup> / <sub>16</sub> "	11'-1 <sup>9</sup> / <sub>16</sub> "	10'-5 <sup>1</sup> / <sub>16</sub> "	11'-6 <sup>5</sup> / <sub>16</sub> "	2'-3 <sup>7</sup> / <sub>8</sub> "	9'-2 <sup>1</sup> / <sub>16</sub> "	11'-6 <sup>5</sup> / <sub>16</sub> "	9'-2 <sup>7</sup> / <sub>16</sub> "	2'-3 <sup>7</sup> / <sub>8</sub> "
5	19'-3 <sup>5</sup> / <sub>8</sub> "	13'-10"	5'-5 <sup>5</sup> / <sub>8</sub> "	14'-10 <sup>3</sup> / <sub>16</sub> "	6'-6 <sup>1</sup> / <sub>8</sub> "	6'-8 <sup>1</sup> / <sub>2</sub> "	10'-11 <sup>3</sup> / <sub>4</sub> "	11'-4 <sup>3</sup> / <sub>8</sub> "	4'-10 <sup>1</sup> / <sub>16</sub> "	14'-0 <sup>5</sup> / <sub>8</sub> "	18'-11 <sup>5</sup> / <sub>16</sub> "	8'-1 <sup>1</sup> / <sub>16</sub> "	3'-2 <sup>9</sup> / <sub>16</sub> "	11'-4 <sup>3</sup> / <sub>8</sub> "	11'-0"	10'-4 <sup>3</sup> / <sub>8</sub> "	11'-4 <sup>3</sup> / <sub>8</sub> "	2'-3 <sup>1</sup> / <sub>16</sub> "	9'-0 <sup>5</sup> / <sub>16</sub> "	11'-4 <sup>3</sup> / <sub>8</sub> "	9'-1 <sup>1</sup> / <sub>16</sub> "	2'-3 <sup>5</sup> / <sub>16</sub> "
6	19'-3"	13'-9 <sup>1</sup> / <sub>16</sub> "	5'-5 <sup>5</sup> / <sub>16</sub> "	14'-9 <sup>1</sup> / <sub>16</sub> "	6'-6 <sup>1</sup> / <sub>8</sub> "	6'-7 <sup>3</sup> / <sub>8</sub> "	10'-9 <sup>7</sup> / <sub>8</sub> "	11'-2 <sup>1</sup> / <sub>2</sub> "	4'-9 <sup>7</sup> / <sub>8</sub> "	13'-10 <sup>5</sup> / <sub>16</sub> "	18'-8 <sup>3</sup> / <sub>16</sub> "	8'-0 <sup>5</sup> / <sub>16</sub> "	3'-2 <sup>3</sup> / <sub>16</sub> "	11'-2 <sup>1</sup> / <sub>2</sub> "	10'-9 <sup>5</sup> / <sub>16</sub> "	10'-2 <sup>3</sup> / <sub>8</sub> "	11'-2 <sup>1</sup> / <sub>2</sub> "	2'-3 <sup>1</sup> / <sub>16</sub> "	8'-11 <sup>1</sup> / <sub>16</sub> "	11'-2 <sup>1</sup> / <sub>2</sub> "	8'-11 <sup>1</sup> / <sub>2</sub> "	2'-3"

Girder No.	w	x	y	z	aa	ab	ac	ad	ae	af	ag	ah	ai	aj	ak	al	am	an	ao	ap	aq	ar
1	12'-0"	10'-11"	14'-6 <sup>1</sup> / <sub>16</sub> "	3'-8 <sup>5</sup> / <sub>16</sub> "	12'-3 <sup>1</sup> / <sub>16</sub> "	16'-0"	12'-9 <sup>1</sup> / <sub>16</sub> "	3'-2 <sup>5</sup> / <sub>16</sub> "	16'-0"	14'-6 <sup>1</sup> / <sub>16</sub> "	14'-6 <sup>1</sup> / <sub>16</sub> "	16'-0"	3'-2 <sup>5</sup> / <sub>16</sub> "	12'-9 <sup>1</sup> / <sub>16</sub> "	16'-0"	12'-9 <sup>1</sup> / <sub>16</sub> "	3'-2 <sup>5</sup> / <sub>16</sub> "	16'-0"	14'-6 <sup>1</sup> / <sub>16</sub> "	14'-6 <sup>1</sup> / <sub>16</sub> "	16'-0"	3'-2 <sup>5</sup> / <sub>16</sub> "
2	11'-10 <sup>3</sup> / <sub>8</sub> "	10'-9 <sup>1</sup> / <sub>8</sub> "	14'-4 <sup>3</sup> / <sub>8</sub> "	3'-7 <sup>3</sup> / <sub>4</sub> "	12'-1 <sup>1</sup> / <sub>16</sub> "	15'-9 <sup>1</sup> / <sub>16</sub> "	12'-7 <sup>3</sup> / <sub>4</sub> "	3'-1 <sup>1</sup> / <sub>16</sub> "	15'-9 <sup>1</sup> / <sub>16</sub> "	14'-4 <sup>9</sup> / <sub>16</sub> "	14'-4 <sup>9</sup> / <sub>16</sub> "	15'-9 <sup>1</sup> / <sub>16</sub> "	3'-1 <sup>1</sup> / <sub>8</sub> "	12'-7 <sup>9</sup> / <sub>16</sub> "	15'-9 <sup>1</sup> / <sub>16</sub> "	12'-7 <sup>3</sup> / <sub>4</sub> "	3'-1 <sup>1</sup> / <sub>16</sub> "	15'-9 <sup>1</sup> / <sub>16</sub> "	14'-4 <sup>9</sup> / <sub>16</sub> "	14'-4 <sup>9</sup> / <sub>16</sub> "	15'-9 <sup>1</sup> / <sub>16</sub> "	3'-1 <sup>1</sup> / <sub>8</sub> "
3	11'-8 <sup>3</sup> / <sub>16</sub> "	10'-7 <sup>5</sup> / <sub>8</sub> "	14'-2 <sup>1</sup> / <sub>16</sub> "	3'-7 <sup>3</sup> / <sub>16</sub> "	11'-11 <sup>3</sup> / <sub>4</sub> "	15'-6 <sup>3</sup> / <sub>8</sub> "	12'-5 <sup>5</sup> / <sub>8</sub> "	3'-1 <sup>5</sup> / <sub>16</sub> "	15'-6 <sup>1</sup> / <sub>16</sub> "	14'-2 <sup>1</sup> / <sub>16</sub> "	14'-2 <sup>1</sup> / <sub>16</sub> "	15'-6 <sup>1</sup> / <sub>16</sub> "	3'-1 <sup>5</sup> / <sub>16</sub> "	12'-5 <sup>5</sup> / <sub>8</sub> "	15'-6 <sup>1</sup> / <sub>16</sub> "	12'-5 <sup>5</sup> / <sub>8</sub> "	3'-1 <sup>5</sup> / <sub>16</sub> "	15'-6 <sup>1</sup> / <sub>16</sub> "	14'-2 <sup>1</sup> / <sub>16</sub> "	14'-2 <sup>1</sup> / <sub>16</sub> "	15'-6 <sup>1</sup> / <sub>16</sub> "	3'-1 <sup>5</sup> / <sub>16</sub> "
4	11'-6 <sup>5</sup> / <sub>16</sub> "	10'-5 <sup>1</sup> / <sub>16</sub> "	13'-11 <sup>3</sup> / <sub>4</sub> "	3'-6 <sup>1</sup> / <sub>16</sub> "	11'-9 <sup>1</sup> / <sub>16</sub> "	15'-4 <sup>3</sup> / <sub>8</sub> "	12'-3 <sup>3</sup> / <sub>4</sub> "	3'-0 <sup>9</sup> / <sub>8</sub> "	15'-4 <sup>3</sup> / <sub>8</sub> "	14'-0"	13'-11 <sup>3</sup> / <sub>4</sub> "	15'-4 <sup>3</sup> / <sub>8</sub> "	3'-0 <sup>9</sup> / <sub>8</sub> "	12'-3 <sup>3</sup> / <sub>4</sub> "	15'-4 <sup>3</sup> / <sub>8</sub> "	12'-3 <sup>3</sup> / <sub>4</sub> "	3'-0 <sup>9</sup> / <sub>8</sub> "	15'-4 <sup>3</sup> / <sub>8</sub> "	14'-0"	13'-11 <sup>3</sup> / <sub>4</sub> "	15'-4 <sup>3</sup> / <sub>8</sub> "	3'-0 <sup>9</sup> / <sub>8</sub> "
5	11'-4 <sup>3</sup> / <sub>8</sub> "	10'-4 <sup>1</sup> / <sub>4</sub> "	13'-9 <sup>1</sup> / <sub>16</sub> "	3'-6"	11'-7 <sup>1</sup> / <sub>8</sub> "	15'-1 <sup>1</sup> / <sub>8</sub> "	12'-1 <sup>5</sup> / <sub>8</sub> "	3'-0 <sup>4</sup> / <sub>8</sub> "	15'-1 <sup>1</sup> / <sub>8</sub> "	13'-9 <sup>1</sup> / <sub>2</sub> "	13'-9 <sup>1</sup> / <sub>2</sub> "	15'-1 <sup>1</sup> / <sub>8</sub> "	3'-0 <sup>5</sup> / <sub>16</sub> "	12'-1 <sup>9</sup> / <sub>16</sub> "	15'-1 <sup>1</sup> / <sub>8</sub> "	12'-1 <sup>9</sup> / <sub>16</sub> "	3'-0 <sup>4</sup> / <sub>8</sub> "	15'-1 <sup>1</sup> / <sub>8</sub> "	13'-9 <sup>1</sup> / <sub>2</sub> "	13'-9 <sup>1</sup> / <sub>2</sub> "	15'-1 <sup>1</sup> / <sub>8</sub> "	3'-0 <sup>5</sup> / <sub>16</sub> "
6	11'-2 <sup>1</sup> / <sub>2</sub> "	10'-2 <sup>1</sup> / <sub>16</sub> "	13'-7 <sup>1</sup> / <sub>16</sub> "	3'-5 <sup>3</sup> / <sub>8</sub> "	11'-5 <sup>1</sup> / <sub>16</sub> "	14'-11 <sup>5</sup> / <sub>16</sub> "	11'-11 <sup>5</sup> / <sub>16</sub> "	2'-11 <sup>1</sup> / <sub>16</sub> "	14'-11 <sup>5</sup> / <sub>16</sub> "	13'-7 <sup>1</sup> / <sub>16</sub> "	13'-7 <sup>1</sup> / <sub>16</sub> "	14'-11 <sup>5</sup> / <sub>16</sub> "	2'-11 <sup>1</sup> / <sub>16</sub> "	11'-11 <sup>5</sup> / <sub>16</sub> "	14'-11 <sup>5</sup> / <sub>16</sub> "	11'-11 <sup>5</sup> / <sub>16</sub> "	2'-11 <sup>1</sup> / <sub>16</sub> "	14'-11 <sup>5</sup> / <sub>16</sub> "	13'-7 <sup>1</sup> / <sub>16</sub> "	13'-7 <sup>1</sup> / <sub>16</sub> "	14'-11 <sup>5</sup> / <sub>16</sub> "	2'-11 <sup>1</sup> / <sub>16</sub> "

Girder No.	as	at	au	av	aw	ax	ay	az	ba	bb	bc	bd	be	bf	bg	bh	bi	bj	bk	bl
1	12'-9 <sup>1</sup> / <sub>16</sub> "	16'-0"	12'-9 <sup>1</sup> / <sub>16</sub> "	3'-2 <sup>5</sup> / <sub>16</sub> "	16'-0"	14'-6 <sup>1</sup> / <sub>16</sub> "	14'-6 <sup>1</sup> / <sub>16</sub> "	16'-0"	3'-2 <sup>5</sup> / <sub>16</sub> "	12'-9 <sup>1</sup> / <sub>16</sub> "	16'-0"	12'-9 <sup>1</sup> / <sub>16</sub> "	3'-2 <sup>5</sup> / <sub>16</sub> "	16'-0"	14'-6 <sup>1</sup> / <sub>16</sub> "	12'-0 <sup>1</sup> / <sub>8</sub> "	12'-3"	3'-10 <sup>7</sup> / <sub>8</sub> "	16'-1 <sup>1</sup> / <sub>8</sub> "	20'-0"
2	12'-7 <sup>9</sup> / <sub>16</sub> "	15'-9 <sup>1</sup> / <sub>16</sub> "	12'-7 <sup>3</sup> / <sub>4</sub> "	3'-1 <sup>1</sup> / <sub>16</sub> "	15'-9 <sup>1</sup> / <sub>16</sub> "	14'-4 <sup>9</sup> / <sub>16</sub> "	14'-4 <sup>9</sup> / <sub>16</sub> "	15'-9 <sup>1</sup> / <sub>16</sub> "	3'-1 <sup>1</sup> / <sub>8</sub> "	12'-7 <sup>9</sup> / <sub>16</sub> "	15'-9 <sup>1</sup> / <sub>16</sub> "	12'-7 <sup>3</sup> / <sub>4</sub> "	3'-1 <sup>1</sup> / <sub>16</sub> "	15'-9 <sup>1</sup> / <sub>16</sub> "	14'-4 <sup>9</sup> / <sub>16</sub> "	11'-10 <sup>5</sup> / <sub>16</sub> "	12'-1 <sup>1</sup> / <sub>16</sub> "	3'-10 <sup>3</sup> / <sub>8</sub> "	15'-10 <sup>5</sup> / <sub>16</sub> "	19'-8 <sup>1</sup> / <sub>16</sub> "
3	12'-5 <sup>5</sup> / <sub>8</sub> "	15'-6 <sup>1</sup> / <sub>16</sub> "	12'-5 <sup>5</sup> / <sub>8</sub> "	3'-1 <sup>5</sup> / <sub>16</sub> "	15'-6 <sup>1</sup> / <sub>16</sub> "	14'-2 <sup>1</sup> / <sub>16</sub> "	14'-2 <sup>1</sup> / <sub>16</sub> "	15'-6 <sup>1</sup> / <sub>16</sub> "	3'-1 <sup>5</sup> / <sub>16</sub> "	12'-5 <sup>5</sup> / <sub>8</sub> "	15'-6 <sup>1</sup> / <sub>16</sub> "	12'-5 <sup>5</sup> / <sub>8</sub> "	3'-1 <sup>5</sup> / <sub>16</sub> "	15'-6 <sup>1</sup> / <sub>16</sub> "	14'-2 <sup>1</sup> / <sub>16</sub> "	11'-8 <sup>1</sup> / <sub>4</sub> "	11'-11 <sup>1</sup> / <sub>8</sub> "	3'-9 <sup>1</sup> / <sub>16</sub> "	15'-8"	19'-5 <sup>1</sup> / <sub>16</sub> "
4	12'-3 <sup>2</sup> / <sub>2</sub> "	15'-4 <sup>3</sup> / <sub>8</sub> "	12'-3 <sup>3</sup> / <sub>4</sub> "	3'-0 <sup>8</sup> / <sub>8</sub> "	15'-4 <sup>3</sup> / <sub>8</sub> "	14'-0"	13'-11 <sup>3</sup> / <sub>4</sub> "	15'-4 <sup>3</sup> / <sub>8</sub> "	3'-0 <sup>8</sup> / <sub>8</sub> "	12'-3 <sup>2</sup> / <sub>2</sub> "	15'-4 <sup>3</sup> / <sub>8</sub> "	12'-3 <sup>3</sup> / <sub>4</sub> "	3'-0 <sup>8</sup> / <sub>8</sub> "	15'-4 <sup>3</sup> / <sub>8</sub> "	14'-0"	11'-6 <sup>1</sup> / <sub>16</sub> "	11'-9 <sup>3</sup> / <sub>16</sub> "	3'-9"	15'-5 <sup>1</sup> / <sub>2</sub> "	19'-2 <sup>2</sup> / <sub>2</sub> "
5	12'-1 <sup>1</sup> / <sub>16</sub> "	15'-1 <sup>1</sup> / <sub>8</sub> "	12'-1 <sup>5</sup> / <sub>8</sub> "	3'-0 <sup>4</sup> / <sub>8</sub> "	15'-1 <sup>1</sup> / <sub>8</sub> "	13'-9 <sup>1</sup> / <sub>2</sub> "	13'-9 <sup>1</sup> / <sub>2</sub> "	15'-1 <sup>1</sup> / <sub>8</sub> "	3'-0 <sup>5</sup> / <sub>16</sub> "	12'-1 <sup>9</sup> / <sub>16</sub> "	15'-1 <sup>1</sup> / <sub>8</sub> "	12'-1 <sup>9</sup> / <sub>16</sub> "	3'-0 <sup>4</sup> / <sub>8</sub> "	15'-1 <sup>1</sup> / <sub>8</sub> "	13'-9 <sup>1</sup> / <sub>2</sub> "	11'-4 <sup>5</sup> / <sub>8</sub> "	11'-7 <sup>1</sup> / <sub>4</sub> "	3'-8 <sup>5</sup> / <sub>16</sub> "	15'-3"	18'-11 <sup>5</sup> / <sub>16</sub> "
6	11'-11 <sup>1</sup> / <sub>2</sub> "	14'-11 <sup>5</sup> / <sub>16</sub> "	11'-11 <sup>5</sup> / <sub>16</sub> "	2'-11 <sup>1</sup> / <sub>16</sub> "	14'-11 <sup>5</sup> / <sub>16</sub> "	13'-7 <sup>1</sup> / <sub>16</sub> "	13'-7 <sup>1</sup> / <sub>16</sub> "	14'-11 <sup>5</sup> / <sub>16</sub> "	2'-11 <sup>1</sup> / <sub>16</sub> "	11'-11 <sup>5</sup> / <sub>16</sub> "	14'-11 <sup>5</sup> / <sub>16</sub> "	11'-11 <sup>5</sup> / <sub>16</sub> "	2'-11 <sup>1</sup> / <sub>16</sub> "	14'-11 <sup>5</sup> / <sub>16</sub> "	13'-7 <sup>1</sup> / <sub>16</sub> "	11'-2 <sup>5</sup> / <sub>8</sub> "	11'-5 <sup>5</sup> / <sub>16</sub> "	3'-7 <sup>1</sup> / <sub>16</sub> "	15'-0 <sup>3</sup> / <sub>8</sub> "	18'-8 <sup>3</sup> / <sub>16</sub> "

\* TOP OF WEB ELEVATIONS

Girder No.	⊕ Brg. W. Abut.	⊕ Splice 1	⊕ Pier 1	⊕ Splice 2	⊕ Splice 3	⊕ Pier 2	⊕ Splice 4	⊕ Splice 5	⊕ Pier 3	⊕ Splice 6	⊕ Splice 7	⊕ Pier 4
1	446.59	450.43	451.73	453.27	454.58	454.55	454.41	454.10	453.74	453.48	451.26	449.78
2	446.40	450.14	451.39	452.86	454.16	454.15	454.02	453.71	453.34	453.06	450.85	449.37
3	446.21	449.85	451.05	452.45	453.74	453.74	453.63	453.32	452.93	452.65	450.43	448.97
4	446.03	449.57	450.71	452.04	453.32	453.34	453.24	452.93	452.53	452.25	450.02	448.56
5	445.84	449.28	450.38	451.64	452.91	452.91	452.85	452.54	452.13	451.84	449.61	448.16
6	445.66	449.04	450.08	451.27	452.54	452.55	452.44	452.14	451.74	451.45	449.23	447.78

Girder No.	⊕ Splice 8	⊕ Splice 9	⊕ Pier 5	⊕ Splice 10	⊕ Splice 11	⊕ Pier 6	⊕ Splice 12	⊕ Splice 13	⊕ Pier 7	⊕ Splice 14	⊕ Brg. S. Abut.
1	448.13	444.90	442.93	441.08	437.76	435.80	434.08	431.63	430.49	429.74	427.91
2	447.73	444.50	442.53	440.67	437.35	435.39	433.68	431.23	430.09	429.33	427.68
3	447.33	444.10	442.12	440.26	436.95	434.99	433.28	430.83	429.68	428.92	427.45
4	446.93	443.71	441.72	439.86	436.54	434.59	432.88	430.43	429.28	428.51	427.22
5	446.54	443.31	441.32	439.45	436.13	434.18	432.48	430.03	428.88	428.10	426.99
6	446.15	442.92	440.94	439.07	435.75	433.80	432.10	429.65	428.50	427.72	426.77

\* For Fabrication only.

GIRDER 1 DISTRIBUTION FACTOR TABLE

	0.4 Span 1	Pier 1	0.5 Span 2	Pier 2	0.5 Span 3	Pier 3	0.5 Span 4	Pier 4	0.5 Span 5	Pier 5	0.5 Span 6	Pier 6	0.5 Span 7	Pier 7	0.6 Span 8
Pos. Moment (lanes)	0.668	---	0.655	---	0.700	---	0.636	---	0.643	---	0.677	---	0.701	---	0.714
Neg. Moment (lanes)	0.683	0.988	0.614	1.106	0.858	0.923	0.592	1.070	0.656	1.058	0.661	1.075	0.685	1.099	0.691
Shear (lanes)	3.911	1.410	2.730	1.429	2.068	1.548	2.								

GIRDER 1 MOMENT TABLE																
	0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.5 Sp. 3	Pier 3	0.5 Sp. 4	Pier 4	0.5 Sp. 5	Pier 5	0.5 Sp. 6	Pier 6	0.5 Sp. 7	Pier 7	0.6 Sp. 8	
$I_s$	(in <sup>4</sup> )	25,660	72,496	27,969	61,204	26,863	40,111	25,660	61,204	25,660	61,204	23,071	61,204	23,071	61,204	24,289
$I_c(n)$	(in <sup>4</sup> )	65,992	119,411	74,203	105,618	70,183	79,108	65,992	105,618	65,992	105,618	61,402	105,618	61,402	105,618	65,734
$I_c(3n)$	(in <sup>4</sup> )	46,006	92,425	50,824	80,544	48,491	58,310	46,006	80,544	46,006	80,544	42,723	80,544	42,723	80,544	45,297
$I_c(cr)$	(in <sup>4</sup> )	31,105	77,251	34,008	65,933	32,613	44,768	31,105	65,933	31,105	65,933	28,435	65,933	28,435	65,933	29,981
$S_s$	(in <sup>3</sup> )	1,210	2,900	1,430	2,448	1,320	1,637	1,210	2,448	1,210	2,448	1,080	2,448	1,080	2,448	1,189
$S_c(n)$	(in <sup>3</sup> )	1,713	---	2,007	2,932	1,860	2,085	1,713	---	1,713	---	1,568	---	1,568	2,932	1,715
$S_c(3n)$	(in <sup>3</sup> )	1,534	---	1,802	2,701	1,668	1,893	1,534	---	1,534	---	1,399	---	1,399	2,701	1,533
$S_c(cr)$	(in <sup>3</sup> )	---	2,965	---	---	---	---	2,515	---	---	2,515	---	---	2,515	---	---
$S_{sc}$	(in <sup>3</sup> )	64	240	100	167	81	85	64	167	64	167	49	167	49	167	64
$DC1$	(k/')	0.952	1.003	1.002	1.012	1.003	0.971	0.972	1.001	0.996	1.004	0.964	1.001	0.988	0.993	0.956
$M_{DC1}$	(k)	1,066	5,130	1,267	3,290	-306	1,529	990	3,615	525	3,012	684	3,119	535	3,294	957
$DC2$	(k/')	0.321	0.321	0.321	0.321	0.321	0.321	0.321	0.321	0.321	0.321	0.321	0.321	0.321	0.321	0.321
$M_{DC2}$	(k)	202	1,014	208	805	-75	521	198	874	109	781	142	808	127	866	197
$DW$	(k/')	0.269	0.269	0.269	0.269	0.269	0.269	0.269	0.269	0.269	0.269	0.269	0.269	0.269	0.269	0.269
$M_{DW}$	(k)	272	1,055	306	732	-55	371	239	750	140	676	176	694	149	721	232
$M\ddot{L} + 1M$	(k)	1,983	3,887	1,887	3,597	1,314	2,349	1,497	3,443	1,499	3,387	1,560	3,451	1,579	3,362	1,698
$f_i$ (Strength I)	(ksi)	6.80	21.87	14.46	17.49	0.20	3.50	15.04	25.52	3.66	7.76	5.59	8.98	4.73	1.97	2.97
$M_u + 1/3 f_i S_{sc}$	(k)	5,474	16,209	5,646	12,593	1,742	7,237	4,490	12,880	3,632	11,719	4,036	12,030	3,822	12,173	4,767
$\phi_r M_n$	(k)	7,137	19,430	8,362	16,695	7,467	11,578	7,467	16,108	7,137	16,148	6,532	16,149	6,532	16,103	7,146
$f_s DC1$	(ksi)	11.20	23.15	11.87	17.96	3.07	12.36	11.15	18.68	5.74	16.34	8.72	16.92	6.81	17.96	9.98
$f_s DC2$	(ksi)	1.71	3.69	1.71	3.47	0.27	3.26	1.93	2.98	0.92	3.38	1.38	3.50	1.21	3.74	1.66
$f_s DW$	(ksi)	2.27	3.85	2.33	3.13	0.44	2.29	2.14	2.39	1.22	2.89	1.75	2.98	1.51	3.10	1.91
$f_s (\ddot{L} + 1M)$	(ksi)	14.47	13.08	12.58	14.36	7.37	13.34	11.28	13.60	11.03	13.53	13.76	13.80	13.88	13.80	12.06
$f_i$ (Service II)	(ksi)	3.46	5.15	7.31	3.45	0.43	0.26	7.64	1.84	4.32	3.60	8.12	4.55	7.60	0.91	1.69
$f_s + 1/2$ (Service II)	(ksi)	35.72	50.27	35.92	44.95	13.58	35.39	33.71	42.66	24.39	42.00	33.80	43.62	31.38	43.20	30.08
$0.95R_h F_{yf}$	(ksi)	47.50	66.50	47.50	66.50	47.50	66.50	47.50	66.50	47.50	66.50	47.50	66.50	47.50	66.50	47.50
$f_s + 1/3$ (Total)(Strength I)	(ksi)	47.13	69.50	47.31	62.43	17.81	47.48	44.32	62.97	30.69	55.25	41.20	57.14	38.16	56.59	39.52
$\phi_r F_n$	(ksi)	50.00	69.66	50.00	67.91	48.17	61.76	50.00	65.44	50.00	65.44	50.00	65.44	50.00	65.43	50.00
$V_r$	(k)	52.0	64.0	57.6	127.3	48.8	65.8	52.5	95.8	53.6	56.0	44.6	58.0	38.4	102.2	45.2

$I_s, S_s$ : 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<sup>4</sup> and in<sup>3</sup>).

$I_c(n), S_c(n)$ : 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<sup>4</sup> and in<sup>3</sup>).

$I_c(3n), S_c(3n)$ : 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<sup>4</sup> and in<sup>3</sup>).

$I_c(cr), S_c(cr)$ : 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<sup>4</sup> and in<sup>3</sup>).

$S_{sc}$ : 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<sup>3</sup>).

$DC1$ : 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.).

$M\ddot{L} + 1M$ : Un-factored live load moment plus dynamic load allowance (impact)(kip-ft.).

$M_u$  (Strength I): Factored design moment (kip-ft.).  
 $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M\ddot{L} + 1M$

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

$\phi_r M_n$ : 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.

$f_s (\ddot{L} + 1M)$ : Un-factored stress at edge of flange for controlling steel flange due to vertical composite live plus impact loads as calculated below (ksi).  
 $M\ddot{L} + 1M / S_c(n)$  or  $M_{DW} / S_c(cr)$  as applicable.

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

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

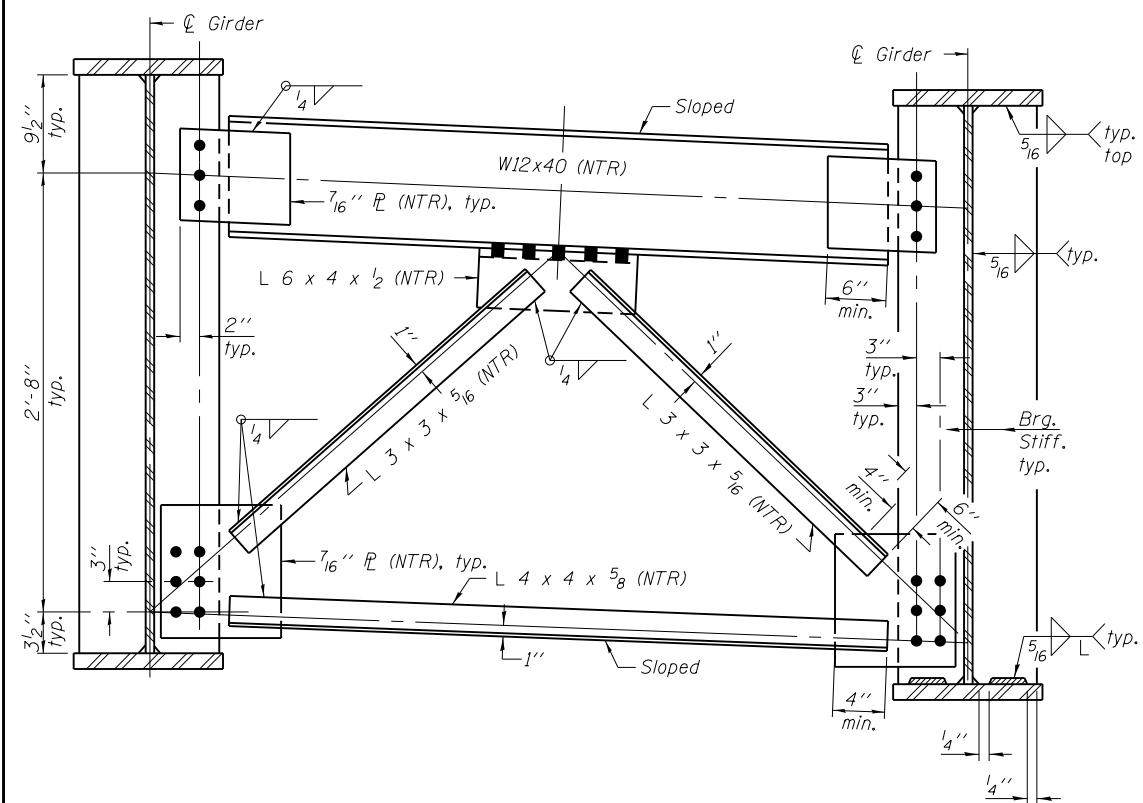
$f_s + 1/3$  (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).  
 $1.25 (f_s DC1 + f_s DC2) + 1.5 f_s DW + 1.75 f_s (\ddot{L} + 1M) + 1/3$

$\phi_r F_n$ : Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7 or 6.10.8 (ksi).

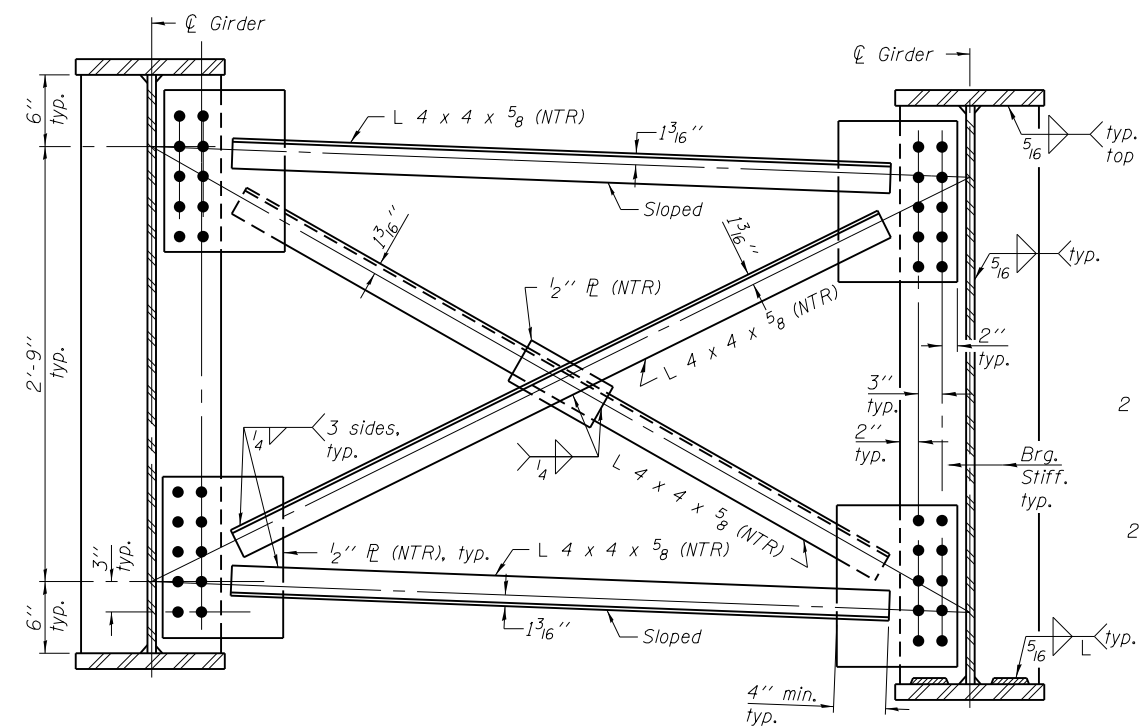
$V_r$ : Maximum factored shear range in span computed according to Article 6.10.10.

Note:  
 $M\ddot{L}$  and  $R\ddot{L}$  include the effects of centrifugal force and superelevation.

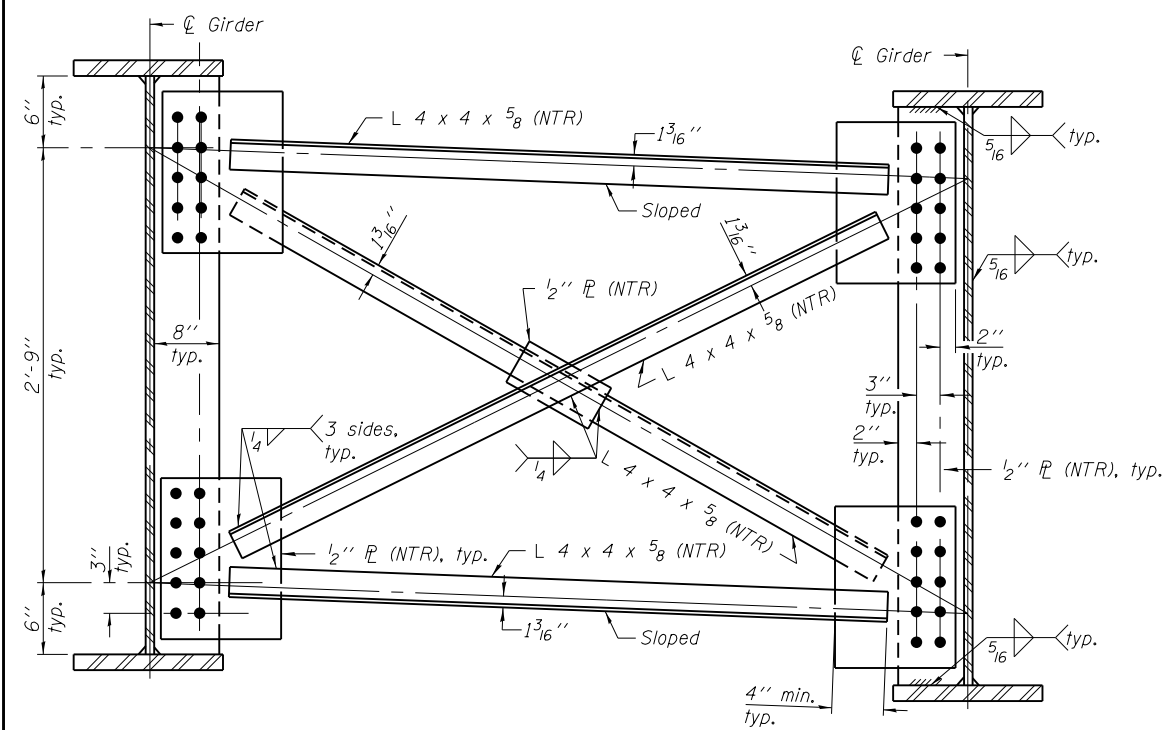
GIRDER 2 MOMENT TABLE																
	0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.5 Sp. 3	Pier 3	0.5 Sp. 4	Pier 4	0.5 Sp. 5	Pier 5	0.5 Sp. 6	Pier 6	0.5 Sp. 7	Pier 7	0.6 Sp. 8	
$I_s$	(in <sup>4</sup> )	25,660	72,496	27,969	61,204	26,863	40,111	25,660	61,204	25,660	61,204	23,071	61,204	23,071	61,204	24,289
$I_c(n)$	(in <sup>4</sup> )	67,741	122,215	76,284	108,180	72,099	81,095	67,741	108,180	67,741	108,180	63,021	108,180	63,021	108,180	67,522
$I_c(3n)$	(in <sup>4</sup> )	47,338	93,952	52,348	82,012	49,920	59,615	47,338	82,012	47,338	82,012	43,995	82,012	43,995	82,012	46,673
$I_c(cr)$	(in <sup>4</sup> )	31,673	77,771	34,640	66,448	33,214	45,266	31,673	66,448	31,673	66,448	28,991	66,448	28,991	66,448	30,573
$S_s$	(in <sup>3</sup> )	1,210	2,900	1,430	2,448	1,320	1,637	1,210	2,448	1,210	2,448	1,080	2,448	1,080	2,448	1,189
$S_c(n)$	(in <sup>3</sup> )	1,726	---	2,022	---	1,874	2,100	1,726	---	1,726	---	1,580	---	1,580	---	1,728
$S_c(3n)$	(in <sup>3</sup> )	1,549	---	1,820	---	1,685	1,908	1,549	---	1,549	---	1,414	---	1,414	---	1,549
$S_c(cr)$	(in <sup>3</sup> )	---	1,165	---	1,316	---	---	---	1,316	---	1,316	---	1,316	---	1,316	---
$S_{sc}$	(in <sup>3</sup> )	64	240	100	167	81	85	64	167	64	167	49	167	49	167	64
$DC1$	(k/')	0.938	0.986	0.984	0.997	0.979	0.956	0.955	0.981	0.979	0.984	0.948	0.983	0.971	0.969	0.939
$M_{DC1}$	(k)	1,058	5,054	1,140	3,452	232	1,405	883	2,956	496	2,796	619	2,888	500	2,642	874
$DC2$	(k/')	0.109	0.109	0.109	0.109	0.109	0.109	0.109	0.109	0.109	0.109	0.109	0.109	0.109	0.109	0.109
$M_{DC2}$	(k)	166	668	199	451	-51	224	183	424	89	342	121	372	103	353	152
$DW$	(k/')	0.327	0.327	0.327	0.327	0.327	0.327	0.327	0.327	0.327	0.327	0.327	0.327	0.327	0.327	0.327
$M_{DW}$	(k)	275	1,170	281	869	-42	378	215	729	131	694	161	715	138	628	220
$M\ddot{L} + 1M$	(k)	1,662	3,413	1,552	3,588	1,045	1,918	1,263	2,718	1,258	2,830	1,261	2,856	1,242	2,367	1,364
$f_i$ (Strength I)	(ksi)	6.55	23.60	14.82	20.39	0.54	2.46	16.35	14.17	3.29	5.96	5.99	6.78	5.30	7.78	6.67
$M_u + 1/3 f_i S_{sc}$	(k)	4,863	15,037	4,853	12,555	1,994	5,966	3,896	10,141	3,136	9,944	3,381	10,175	3,140	8,864	4,012
$\phi_r M_n$	(k)	7,192	19,559	8,424	16,866	7,538	11,686	7,192	16,286	7,192	16,295	6,582	16,293	6,582	16,245	7,200
$f_s DC1$	(ksi)	11.16	23.63	10.61	19.32	2.43	11.56	10.03	15.58	5.39	15.61	7.95	16.14	6.38	14.79	9.64
$f_s DC2$	(ksi)	1.32	2.42	1.63	1.90	0.34	1.39	1.70	0.81	1.47	1.19	1.60	0.98	1.53	1.12	
$f_s DW$	(ksi)	2.26	4.16	2.15	3.62	0.36	2.31	2.00	2.03	1.14	2.93	1.64	3.04	1.44	2.70	1.90
$f_s (\ddot{L} + 1M)$	(ksi)	12.12	11.23	10.81	14.15	6.16	10.79	10.02	9.36	9.88	11.23	11.60	11.34	11.52	11.35	10.34
$f_i$ (Service II)	(ksi)	3.33	2.33	7.45	4.35	0.04	1.50	8.25	3.57	5.15	3.21	8.62	3.61	8.08	4.19	3.53
$f_s + 1/2$ (Service II)	(ksi)	32.17	45.98	32.17	45.41	11.16	30.03	30.88	32.38	22.72	36.22	30.17	37.31	27.82	35.88	27.86
$0.95R_h F_{yf}$	(ksi)	47.50	66.50	47.50	66.50	47.50	66.50	47.50	66.50	47.50	66.50	47.50	66.50	47.50	66.50	47.50
$f_s + 1/3$ (Total)(Strength I)	(ksi															



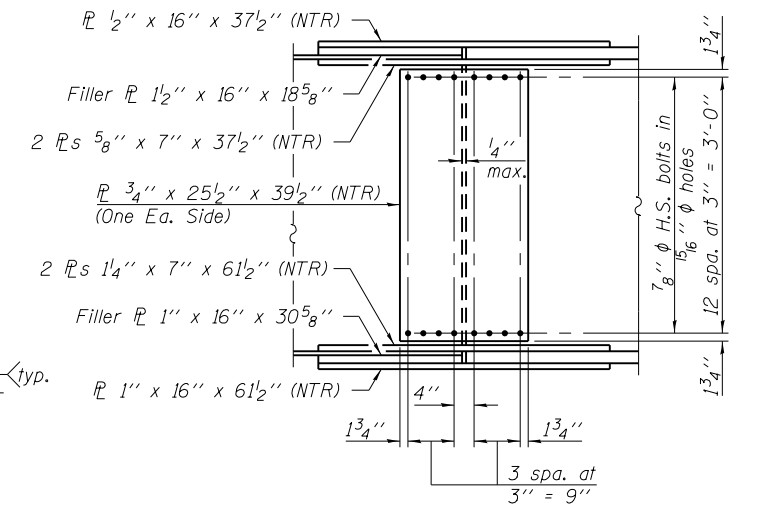
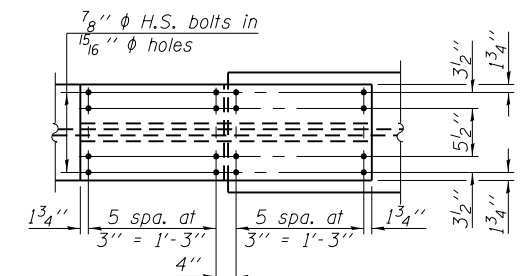
**CROSS FRAME F<sub>1</sub>**  
(10 required)



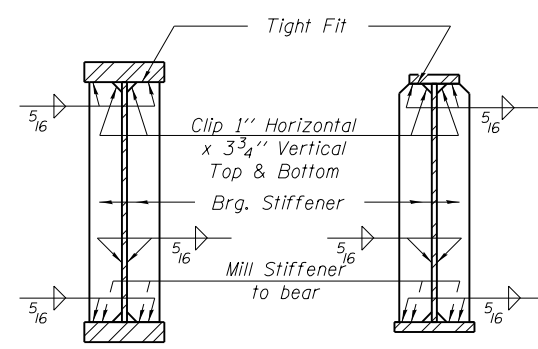
**CROSS FRAME F<sub>2</sub>**  
(35 required)



**CROSS FRAME F<sub>1</sub>**  
(275 required)

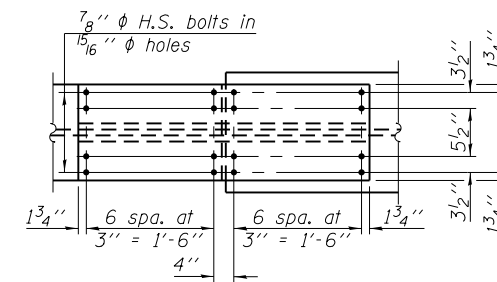
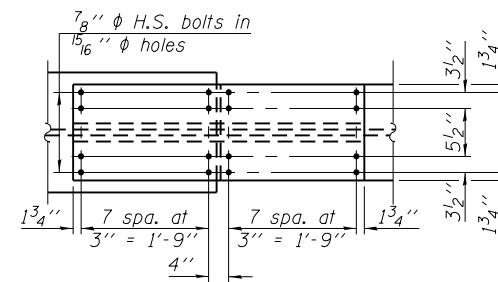
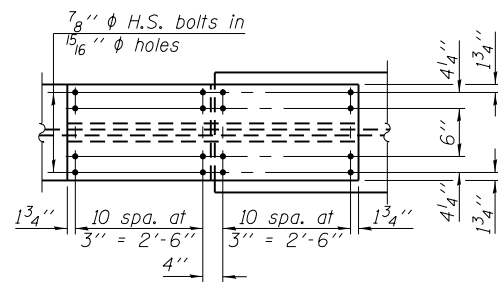
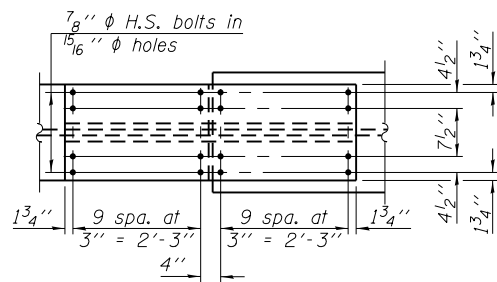
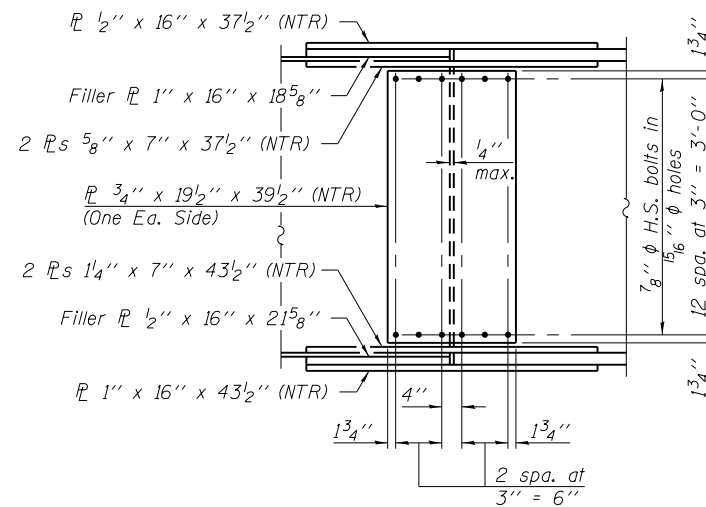
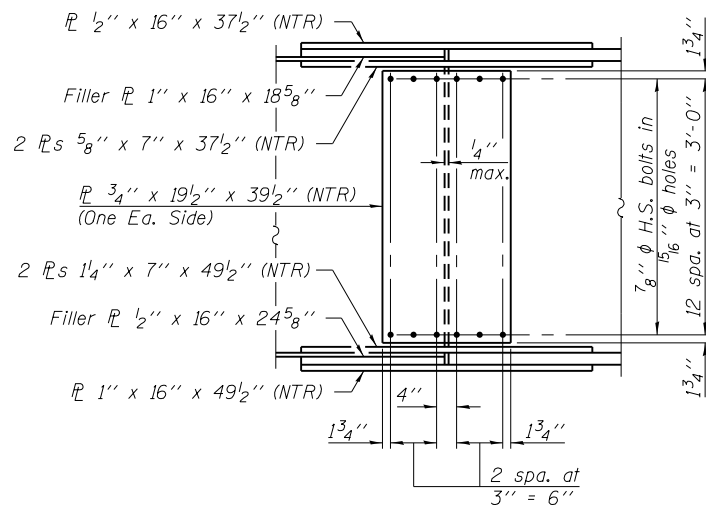
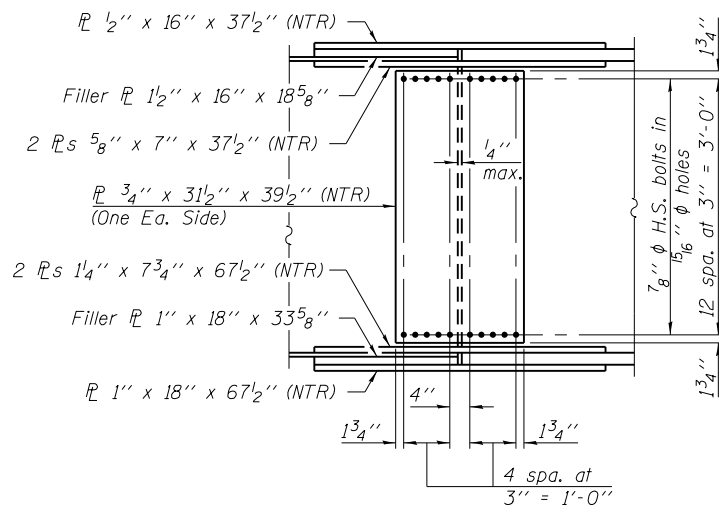
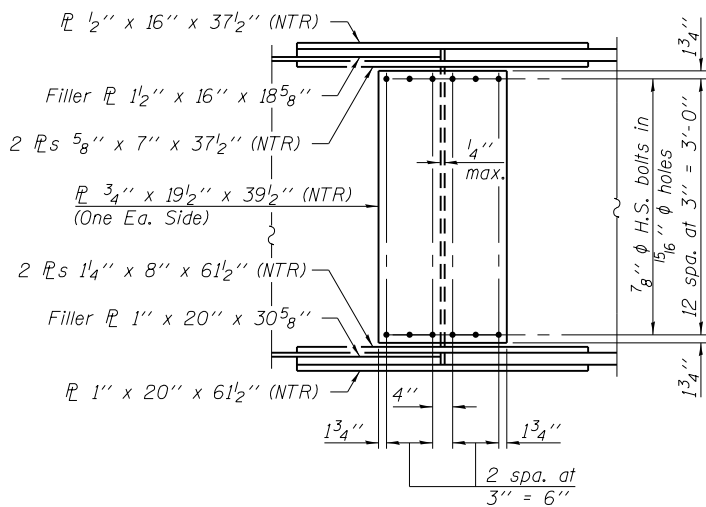
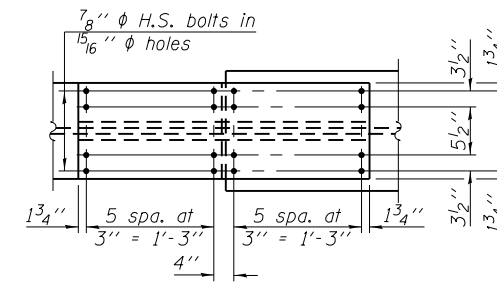
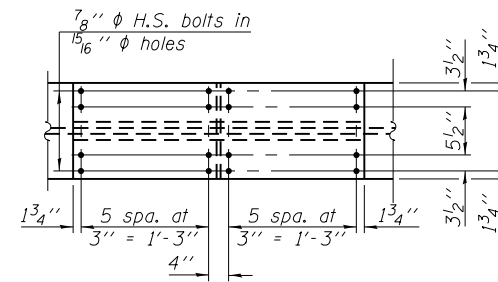
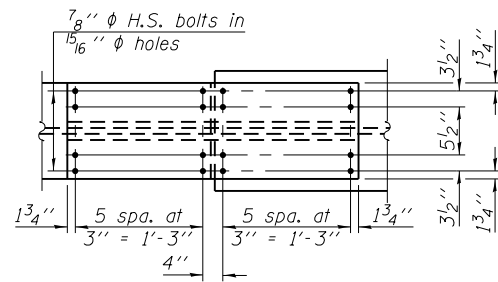
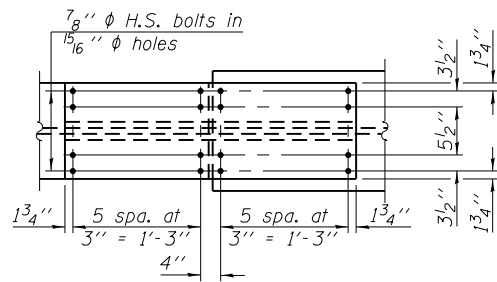


**FIELD SPLICES 1, 7, 8, AND 9 DETAIL**  
(24 Required)



**SECTION AT PIER**      **SECTION AT ABUTMENT**

Notes:  
Load carrying components designated "NTR" shall conform to the Impact Testing Requirement, Zone 2.  
All bolts in cross frames shall be 1" φ in 1 1/16" φ holes.

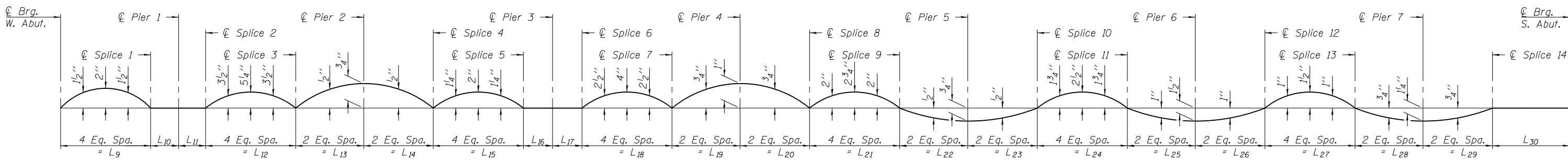


**FIELD SPLICES 2 AND 3 DETAIL**  
(12 Required)

**FIELD SPLICE 4 DETAIL**  
(6 Required)

**FIELD SPLICE 5 DETAIL**  
(6 Required)

**FIELD SPLICE 6 DETAIL**  
(6 Required)



**CAMBER DIAGRAM**

Note:  
For Table of "L" Dimensions, see sheet 48 of 97.

FILE NAME = X:\1309400-MLK\Cad\5\08203\9-76009.dgn  
 USER NAME = elagemann  
 PLOT SCALE =  
 PLOT DATE = 8/7/2014

DESIGNED - E.M. Lagemann  
 CHECKED - T.S. Friederich  
 DRAWN - C.A. Buettner  
 CHECKED - T.S. Friederich

REVISED  
 REVISED  
 REVISED  
 REVISED

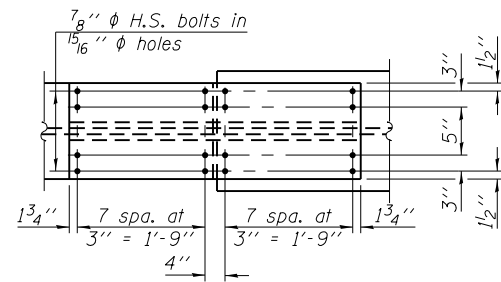
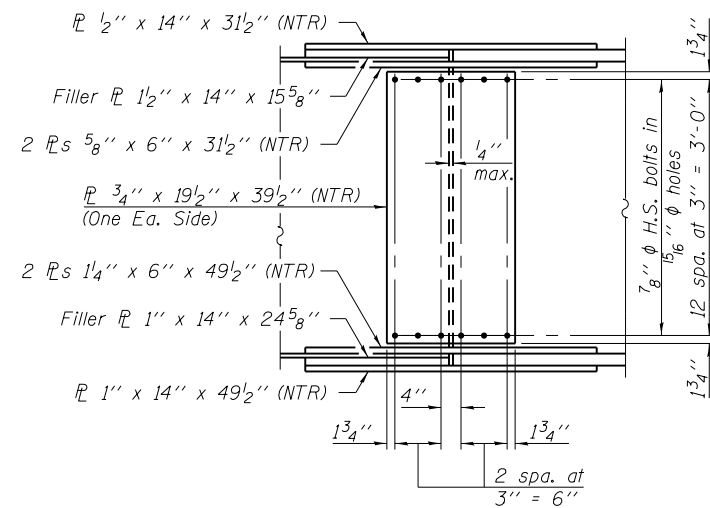
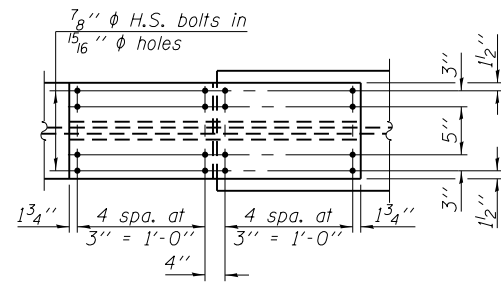
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**STRUCTURAL STEEL DETAILS**  
**STRUCTURE NO. 082-0349**

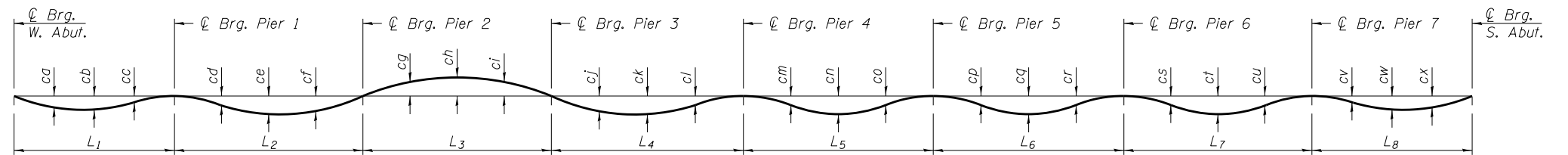
SHEET NO. 52 OF 97 SHEETS

F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1141B-1	ST. CLAIR	406	147
CONTRACT NO. 76G09				

ILLINOIS FED. AID PROJECT



**FIELD SPLICES 10 THRU 14 DETAIL**  
(30 Required)



**DEAD LOAD DEFLECTION DIAGRAM**  
(Includes weight of steel only.)

**TABLE OF "ca" THRU "cx" DIMENSIONS**

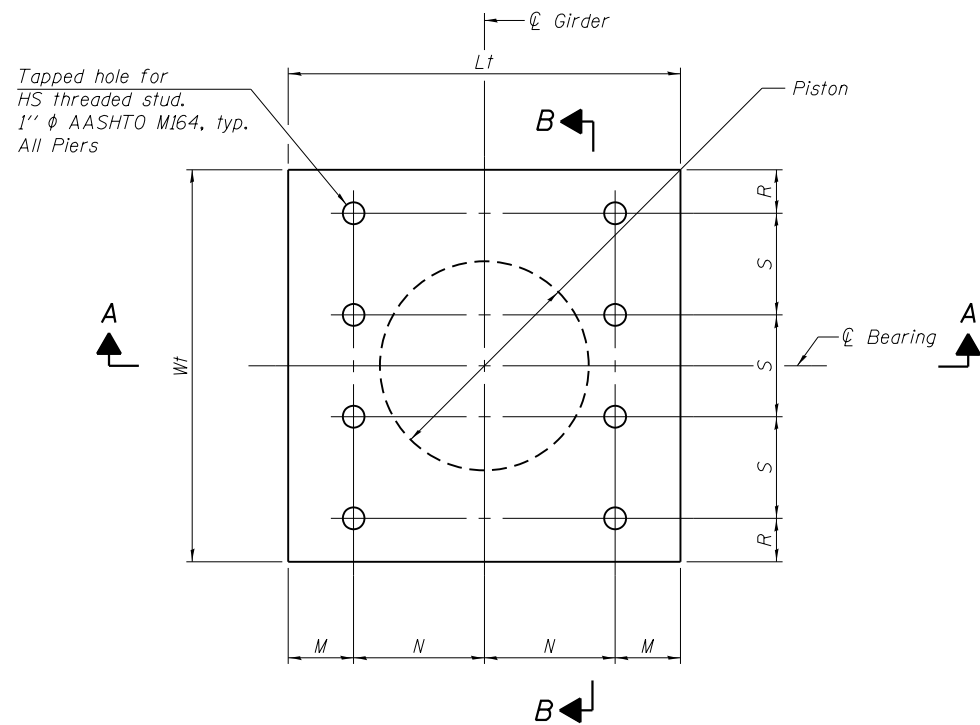
Girder No.	ca	cb	cc	cd	ce	cf	cg	ch	ci	cj	ck	cl	cm	cn	co	cp	cq	cr	cs	ct	cu	cv	cw	cx
1	7/16"	7/16"	8/16"	9/16"	11/16"	11/16"	3/16"	1/4"	8/16"	7/16"	9/16"	5/16"	1/16"	3/16"	1/8"	3/16"	5/16"	3/16"	1/8"	1/4"	1/8"	3/16"	3/8"	5/16"
2	7/16"	7/16"	7/16"	2"	15/16"	5/8"	3/16"	3/16"	8/16"	3/8"	1/2"	1/4"	1/8"	3/16"	1/8"	3/16"	5/16"	3/16"	1/8"	1/4"	1/8"	1/8"	5/16"	1/4"
3	7/16"	1/2"	3/16"	7/16"	13/16"	9/16"	8/16"	8/16"	8/16"	5/16"	7/16"	1/4"	1/8"	3/16"	1/8"	3/16"	5/16"	3/16"	1/8"	1/4"	1/8"	1/8"	5/16"	1/4"
4	2"	2"	3/16"	3/8"	3/4"	2"	8/16"	8/16"	1/16"	5/16"	1/16"	1/4"	1/8"	3/16"	1/8"	3/16"	1/4"	1/8"	1/8"	1/4"	1/8"	1/8"	5/16"	1/4"
5	1/2"	9/16"	1/4"	5/16"	5/8"	1/6"	1/16"	1/16"	1/16"	1/4"	3/8"	3/16"	1/8"	3/16"	1/8"	1/8"	1/4"	1/8"	1/8"	1/4"	1/8"	1/8"	1/4"	3/16"
6	2"	9/16"	1/4"	1/4"	9/16"	3/8"	1/16"	1/16"	1/16"	3/16"	5/16"	3/16"	1/8"	3/16"	1/8"	1/8"	1/4"	1/8"	1/8"	1/4"	1/8"	1/8"	3/16"	3/16"

**Notes:**

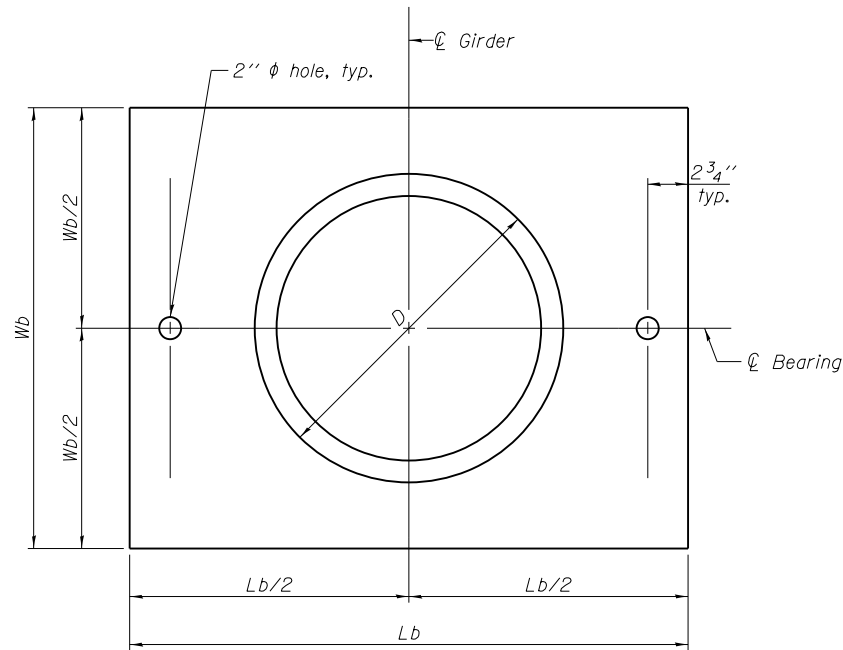
The calculated deflections of the primary girders/beams under steel self-weight shall be used to detail the diaphragm, cross frame and lateral bracing connections, and to erect the structural steel such that the girders/beams will be plumb within a tolerance of  $\pm 1/8$  in. per vertical ft. throughout when supporting their own weight.

For Table of "L" Dimensions, see sheet 48 of 97.

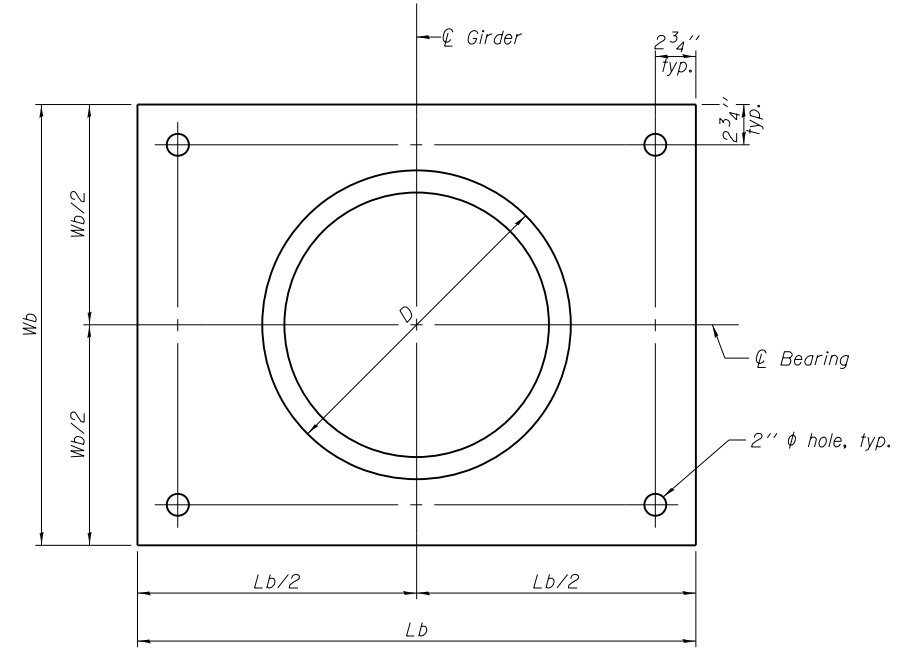




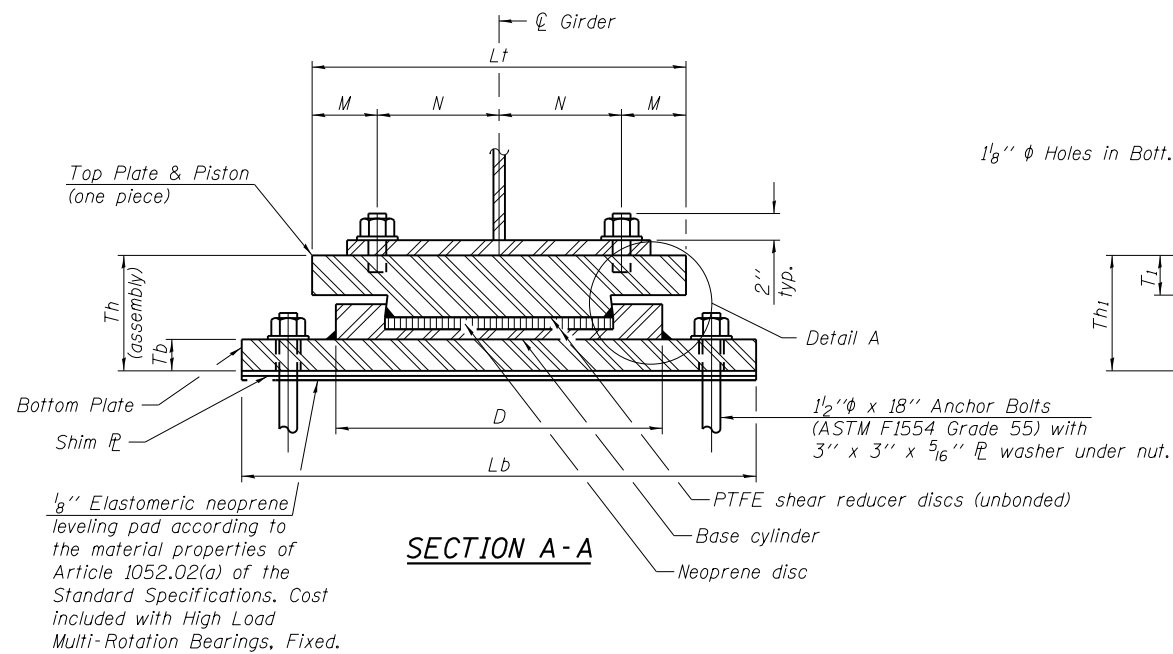
**TOP BEARING PLATE AND PISTON PLAN**



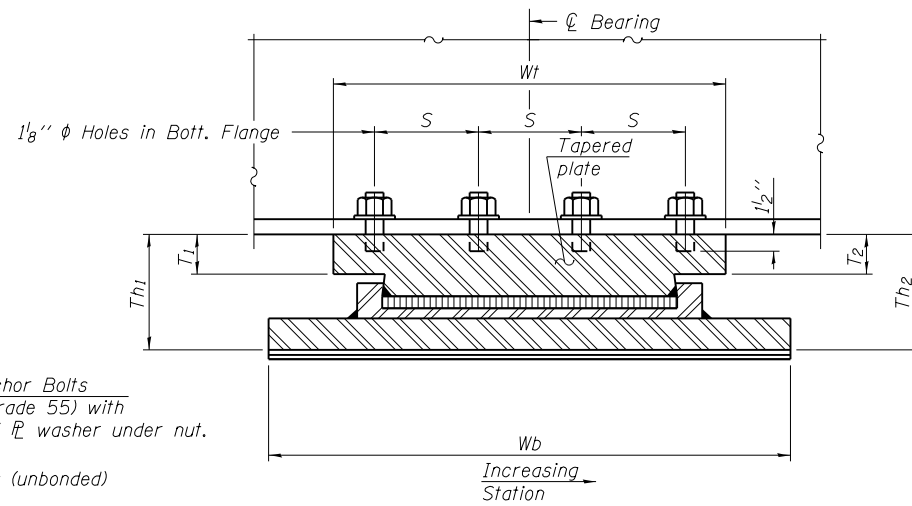
**BOTTOM BEARING PLATE AND BASE CYLINDER PLAN**  
(Piers 1 & 3)



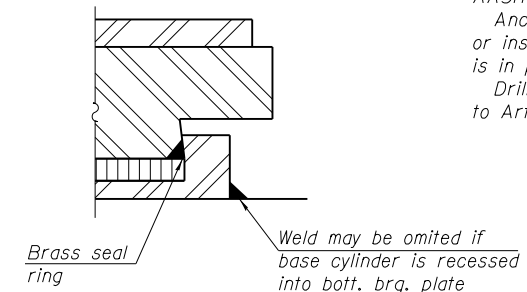
**BOTTOM BEARING PLATE AND BASE CYLINDER PLAN**  
(Piers 2, 4-7)



**SECTION A-A**



**SECTION B-B**



**DETAIL A**

**Notes:**  
 The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50.  
 Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.  
 Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.  
 Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.  
 Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

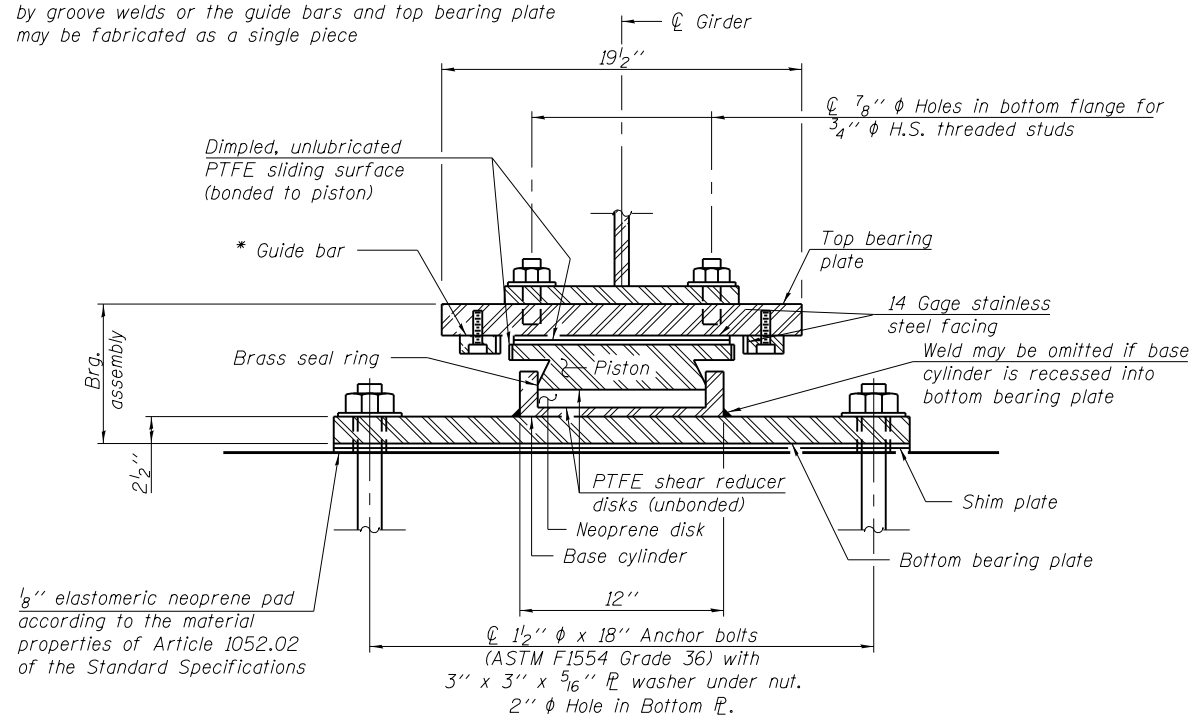
**FIXED BEARING DIMENSION TABLE**

Brg. Location	Vertical Design Load (kips)	Lateral Design Load (kips)	Design Rotation (Radians)	Bottom Bearing Plate			Top Bearing Plate							Th	Th <sub>1</sub>	Th <sub>2</sub>	D	
				T <sub>b</sub>	L <sub>b</sub>	W <sub>b</sub>	T <sub>1</sub>	T <sub>2</sub>	L <sub>t</sub>	W <sub>t</sub>	M	N	R					S
Pier 1	535	78.8	0.0040	3"	35"	21"	2 1/16"	2 15/16"	24"	24"	6"	6"	3"	6"	13"	12 9/16"	13 7/16"	20"
Pier 2	414	49.8	0.0035	2 1/2"	31"	20"	2 3/4"	2 3/4"	20"	20"	4"	6"	2 1/2"	5"	12"	12"	12"	18 1/2"
Pier 3	355	94.3	0.0032	2 1/2"	27"	19"	2 5/8"	2 3/8"	16"	19"	2"	6"	2"	5"	12"	12 1/8"	11 7/8"	17 1/2"
Pier 4	442	119.5	0.0035	2 1/2"	31"	20"	3 3/16"	2 5/16"	20"	20"	4"	6"	2 1/2"	5"	12"	12 1/16"	11 9/16"	18 1/2"
Pier 5	427	64.8	0.0036	2 1/2"	31"	20"	3 3/8"	2 1/8"	20"	20"	4"	6"	2 1/2"	5"	12"	12 5/8"	11 5/8"	18 1/2"
Pier 6	422	69.1	0.0037	2 1/2"	31"	20"	3 5/16"	2 3/16"	20"	20"	4"	6"	2 1/2"	5"	12"	12 9/16"	11 1/16"	18 1/2"
Pier 7	423	53.4	0.0034	2 1/2"	31"	20"	3 1/16"	2 1/16"	20"	20"	4"	6"	2 1/2"	5"	12"	12 5/16"	11 1/16"	18 1/2"

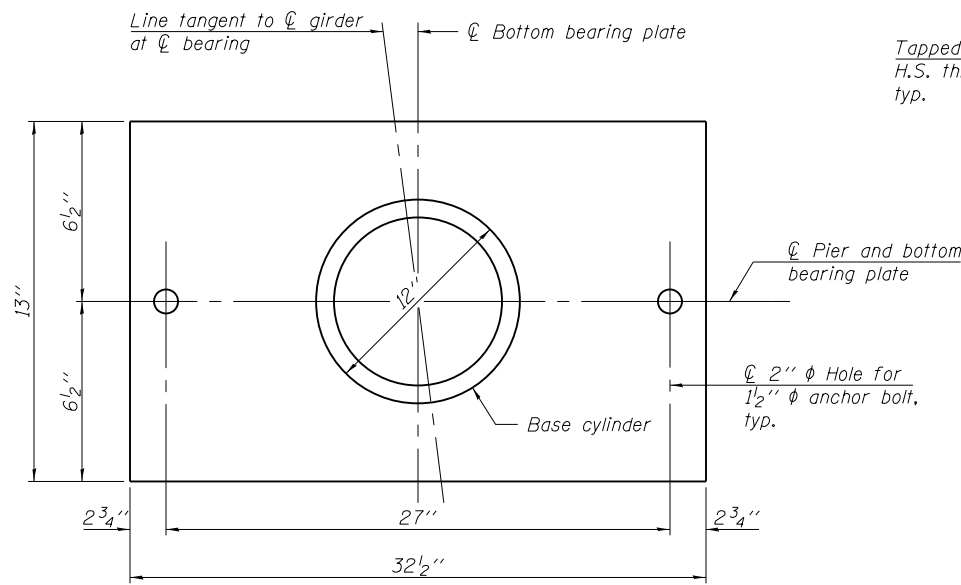
**BILL OF MATERIAL**

Item	Unit	Total
High Load Multi-Rotation Bearings, Fixed 400K	Each	6
High Load Multi-Rotation Bearings, Fixed 450k	Each	30
High Load Multi-Rotation Bearings, Fixed 550k	Each	6
Anchor Bolts, 1 1/2"	Each	144

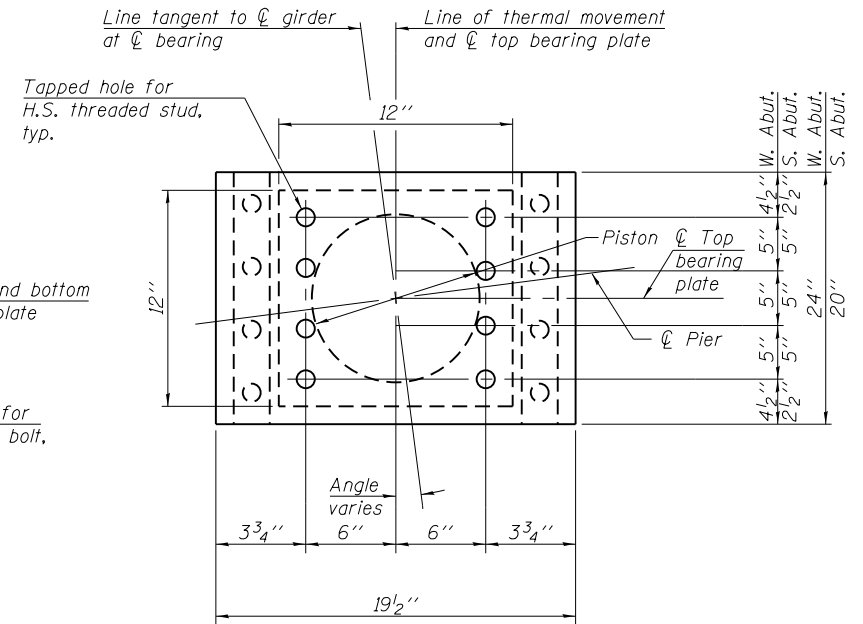
\* As alternates to the bolted connection shown, the guide bars may be connected to the top bearing plate by groove welds or the guide bars and top bearing plate may be fabricated as a single piece



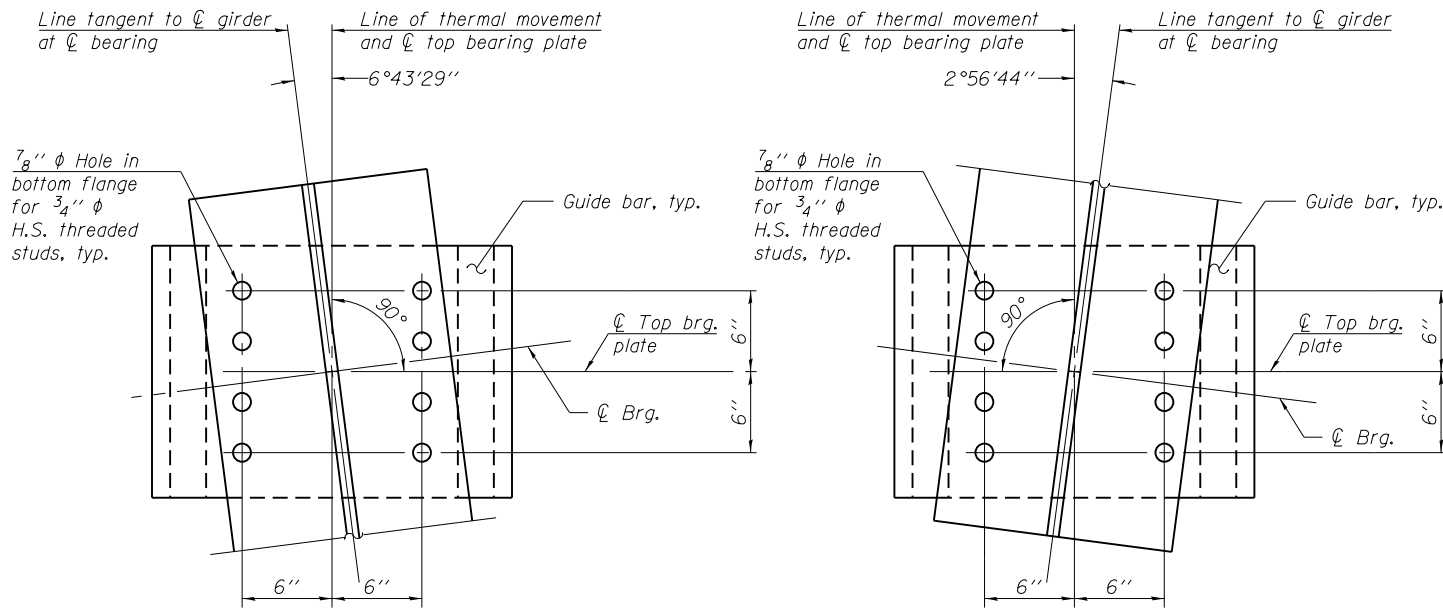
**GUIDED EXPANSION BEARING**  
W. Abut. & S. Abut.



**BOTTOM BEARING PLATE AND BASE CYLINDER PLAN**



**TOP BEARING PLATE AND PISTON PLAN**

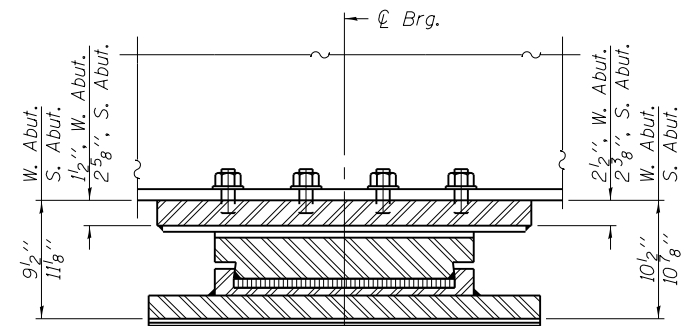


**W. ABUT. BEARING ALIGNMENT**

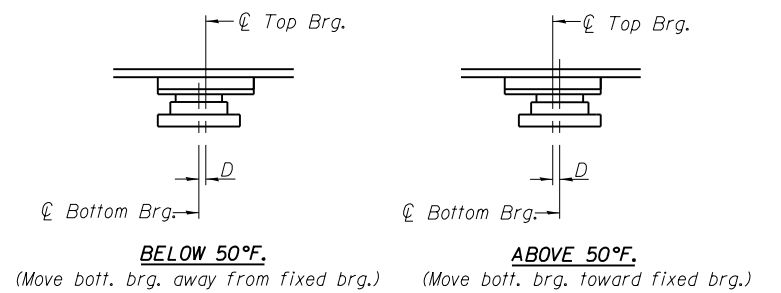
**S. ABUT. BEARING ALIGNMENT**

**HLMR BEARING SUMMARY TABLE**

Location	W. Abut.	S. Abut.
Type	Exp.	Exp.
DL + LL	181.8 kips	174.2 kips
Total Required Movement	6 1/2"	4 1/16"
Required Rotation	0.0042 Rad	0.0032 Rad



**TOP PLATE TAPER DETAIL**



**SETTING ANCHOR BOLTS AT EXP. BRG.**

D = 1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

**Notes:**

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

Anchor bolts for HLMR bearings shall be placed in holes drilled in the concrete through holes in the bottom bearing plate after members are in place.

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

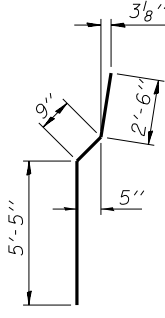
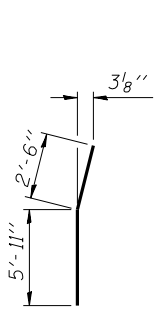
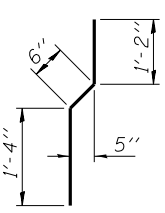
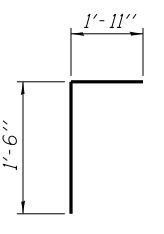
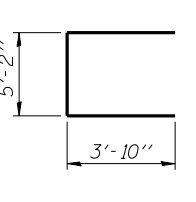
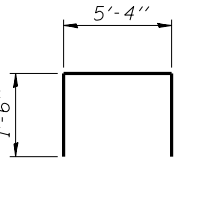
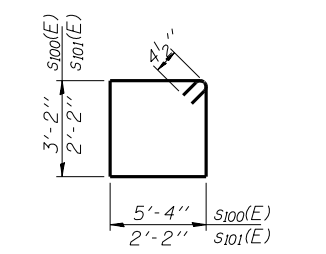
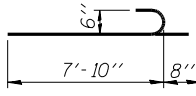
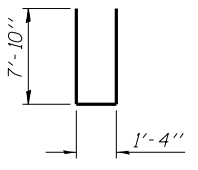
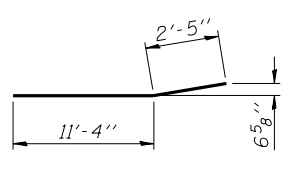
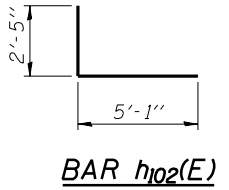
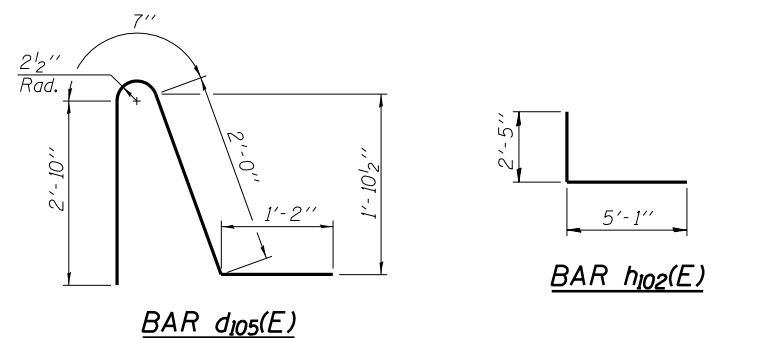
The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50.

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

3/4" φ Threaded studs shall conform to AASHTO M164, Type 3.

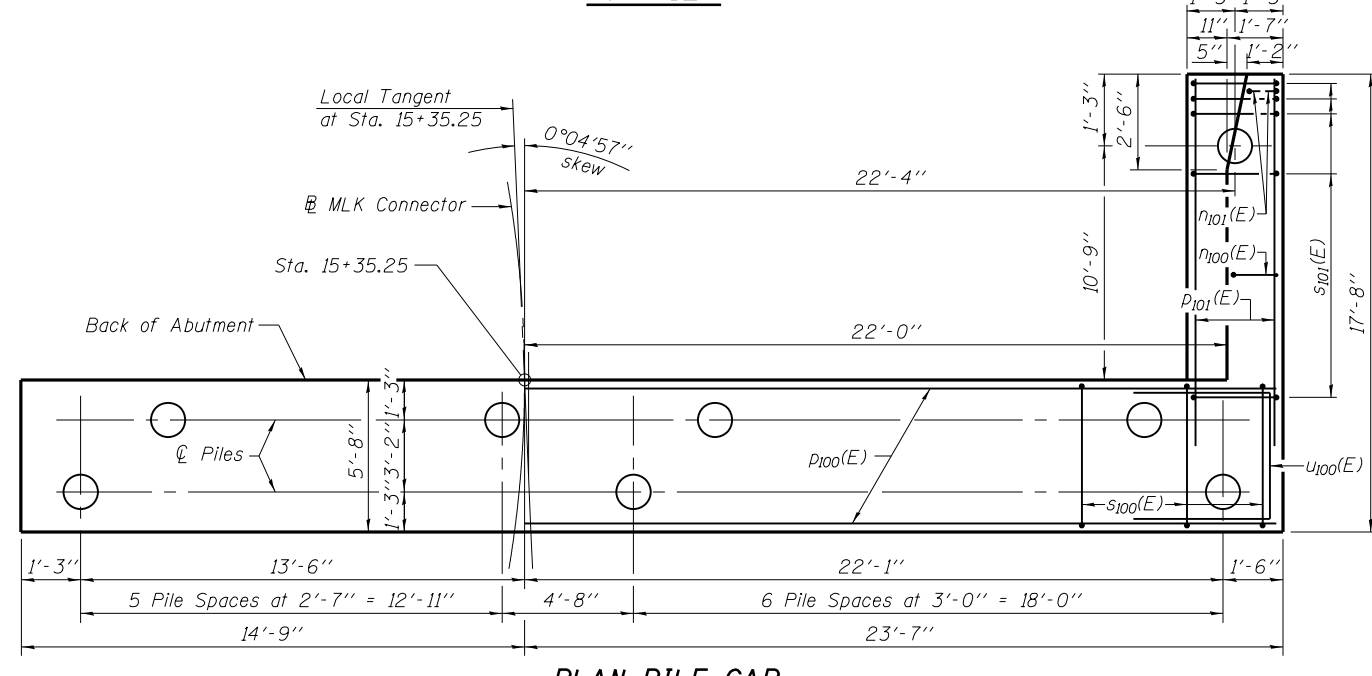
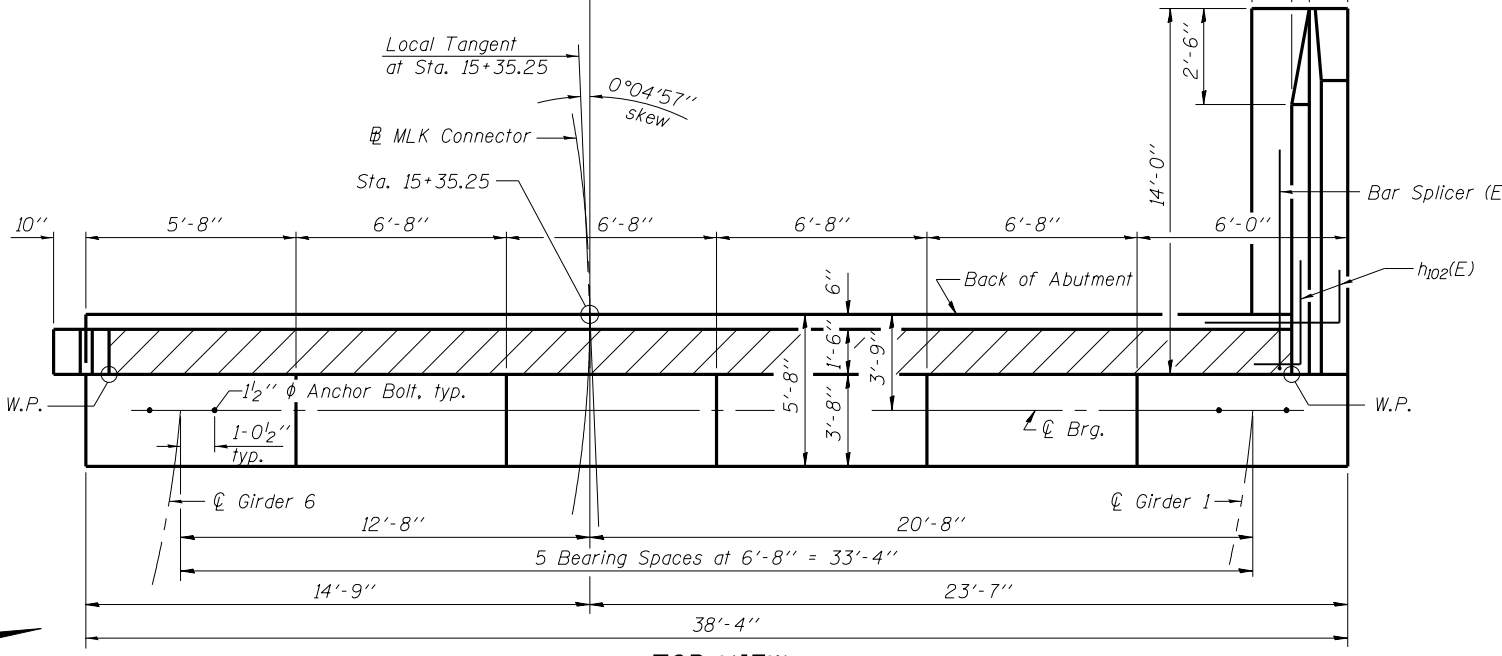
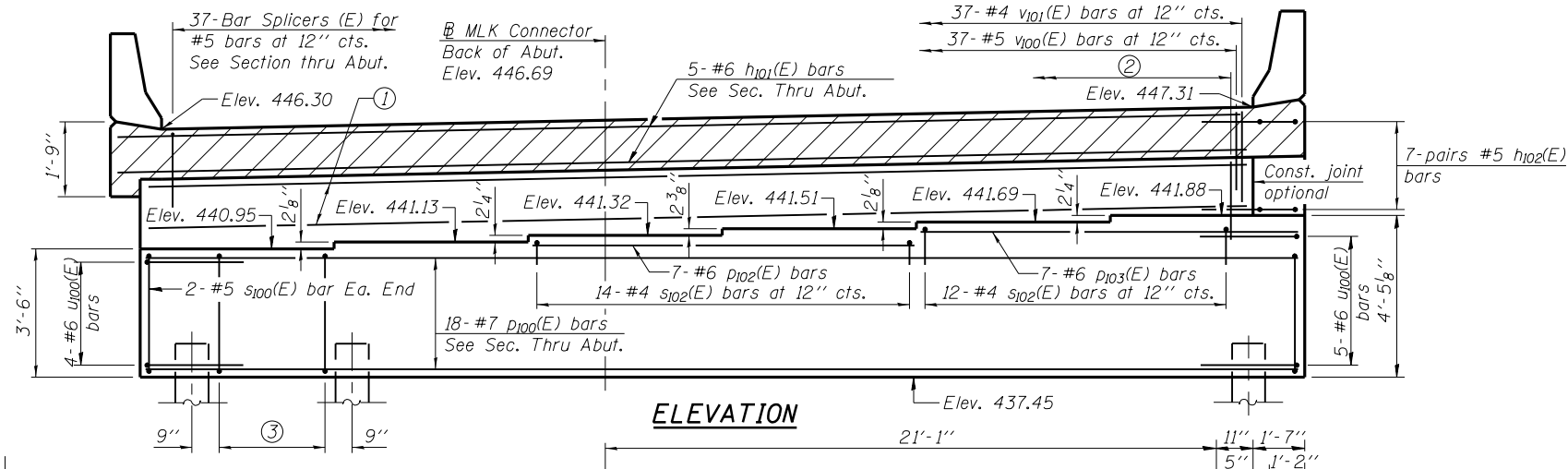
**BILL OF MATERIAL**

Item	Unit	Total
High Load Multi-Rotational Bearings, Guided Expansion, 200k	Each	12
Anchor Bolts, 1 1/2"	Each	24



**PILE DATA**

Type: Metal Shell - 14"  $\phi$  x 0.250" wall  
 Nominal Required Bearing: 369 kips  
 Factored Resistance Available: 221 kips  
 Est. Length: 91 ft.  
 No. Production Piles: 13  
 No. Test Piles: 1



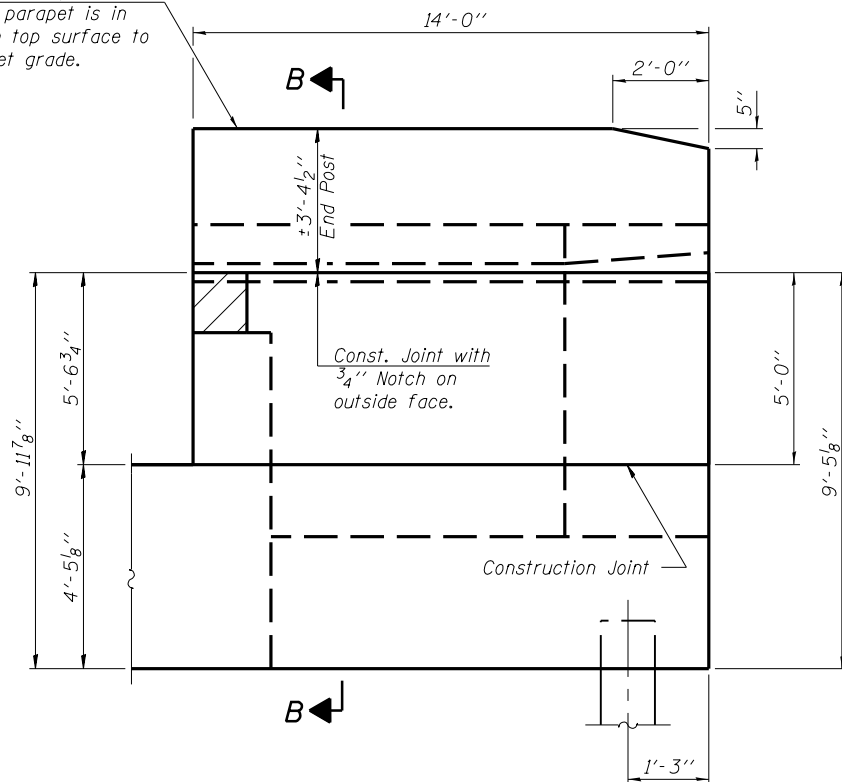
- ① 5- #5 h100(E) bars, Each Face
- ② 37- #5 v106(E) bars at 12" cts., B.F.  
37- #5 v105(E) bars at 12" cts., F.F.
- ③ For 2'-7" pile spacing:  
3- #5 s100(E) bars at 6 1/2" cts.  
  
For 4'-8" pile spacing:  
6- #5 s100(E) bars at  $\pm 7 1/2$ " cts.  
  
For 3'-0" pile spacing:  
3- #5 s100(E) bars at 9" cts.

**BILL OF MATERIAL**

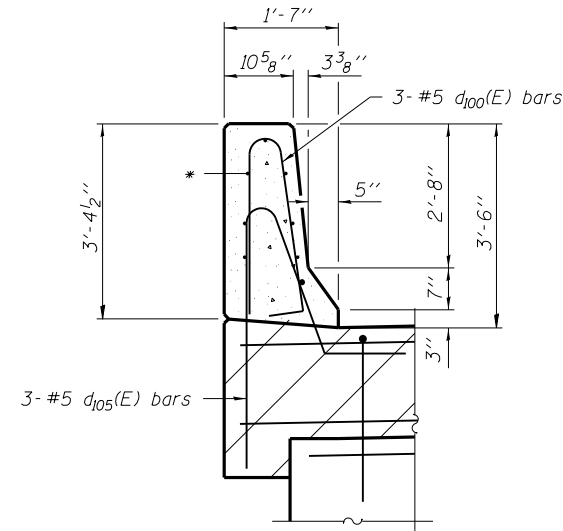
Bar	No.	Size	Length	Shape
d100(E)	3	#5	6'-10"	U
d105(E)	3	#5	6'-7"	L
h100(E)	10	#5	36'-6"	—
h101(E)	5	#6	37'-4"	—
h102(E)	14	#5	7'-6"	L
h103(E)	14	#7	13'-9"	—
h104(E)	10	#7	13'-9"	—
n100(E)	12	#6	17'-0"	U
n101(E)	6	#6	8'-6"	U
p100(E)	18	#7	38'-1"	—
p101(E)	6	#8	16'-4"	—
p102(E)	7	#6	13'-1"	—
p103(E)	7	#6	12'-5"	—
s100(E)	43	#5	17'-9"	U
s101(E)	15	#4	9'-5"	U
s102(E)	26	#4	8'-4"	U
u100(E)	9	#6	12'-10"	U
v100(E)	37	#5	3'-5"	L
v101(E)	37	#4	3'-0"	L
v102(E)	15	#6	7'-10"	—
v103(E)	3	#6	8'-5"	—
v104(E)	12	#6	8'-8"	—
v105(E)	37	#5	8'-7"	—
v106(E)	37	#5	7'-7"	—
Concrete Structures	Cu. Yd.		51.0	
Reinforcement Bars, Epoxy Coated	Pound		6,210	
Bar Splicers	Each		37	
Furnishing Metal Shell Piles, 14" x 0.250"	Foot		1,183	
Driving Piles	Foot		1,183	
Test Pile Metal Shells	Each		1	
Concrete Sealer	Sq. Ft.		407	

For details of Bar Splicers, see sheet 75 of 97.  
 For details of metal shell piles, see sheet 74 of 97.  
 For Section thru Abut., see sheet 57 of 97.  
 For MSE wall details, see S.N. 082-W314 plans.

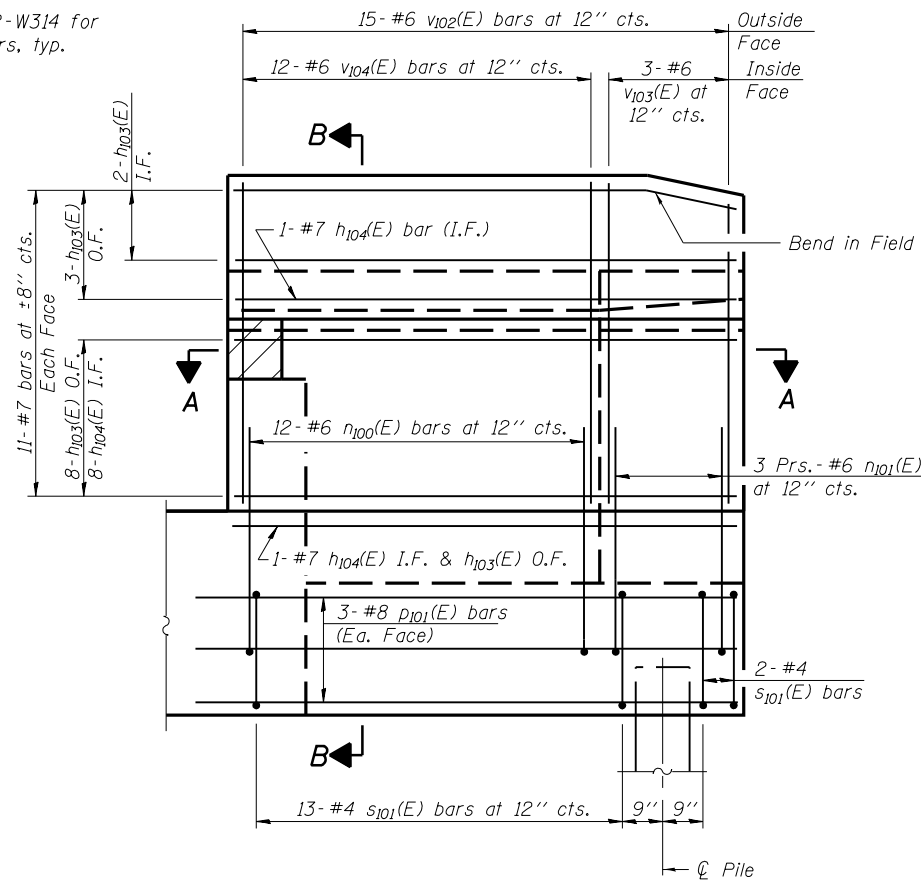
End Post shall be poured after bridge parapet is in place. Form top surface to match parapet grade.



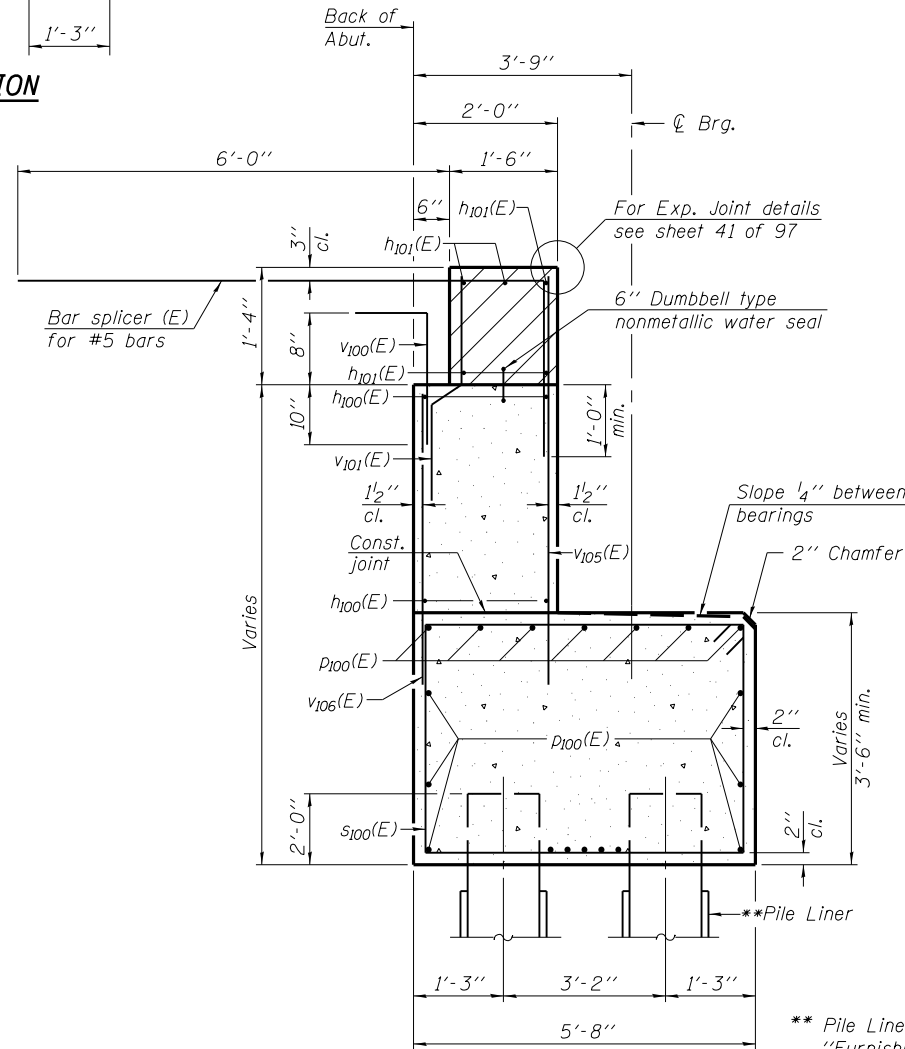
**NORTH WING WALL ELEVATION**  
Showing Dimensions



**SOUTH END POST DETAIL**

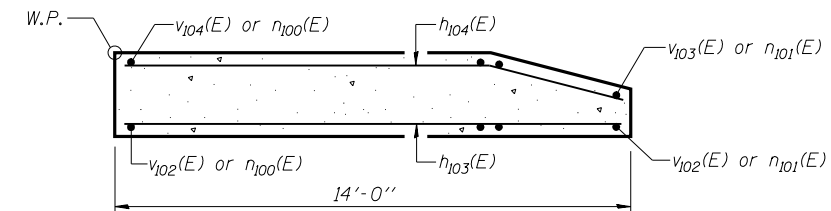


**NORTH WING WALL ELEVATION**  
Showing Reinforcement

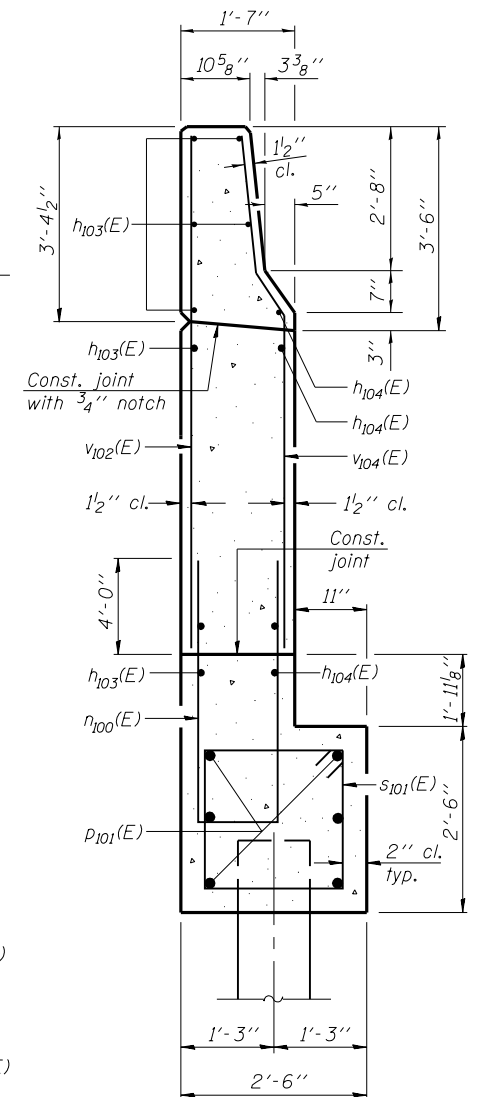


**SEC. THRU ABUT.**

\*\* Pile Liner shall be included in the cost of "Furnishing Metal Shell Piles 14". Do not fill annulus between pile and pile liner. Provide filter fabric around top of pile liner.



**SECTION A-A**



**SECTION B-B**

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. Quantity of concrete in end post included with Concrete Superstructure on sheet 29 of 97. For metal shell pile details, see sheet 74 of 97. Concrete Sealer shall be applied to the backwall, bridge seat, and front face of abutment. For Bar Splicer details, see sheet 75 of 97. For MSE wall details, see S.N. 082-W314 plans. For abutment soil reinforcement details, see sheet 3 of 97. For d100(E) bending diagram, see sheet 29 of 97. For d105(E) bending diagram, see sheet 56 of 97.

FILE NAME = X:\1309400-MLK\Cad\15\082034-76009.dgn	DESIGNED - M.A. Chorkey	REVISED
USER NAME = elagemann	CHECKED - J.J. Derner	REVISED
PLOT SCALE =	DRAWN - C.A. Buettner	REVISED
PLOT DATE = 9/16/2014	CHECKED - E.M. Lagemann	REVISED

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

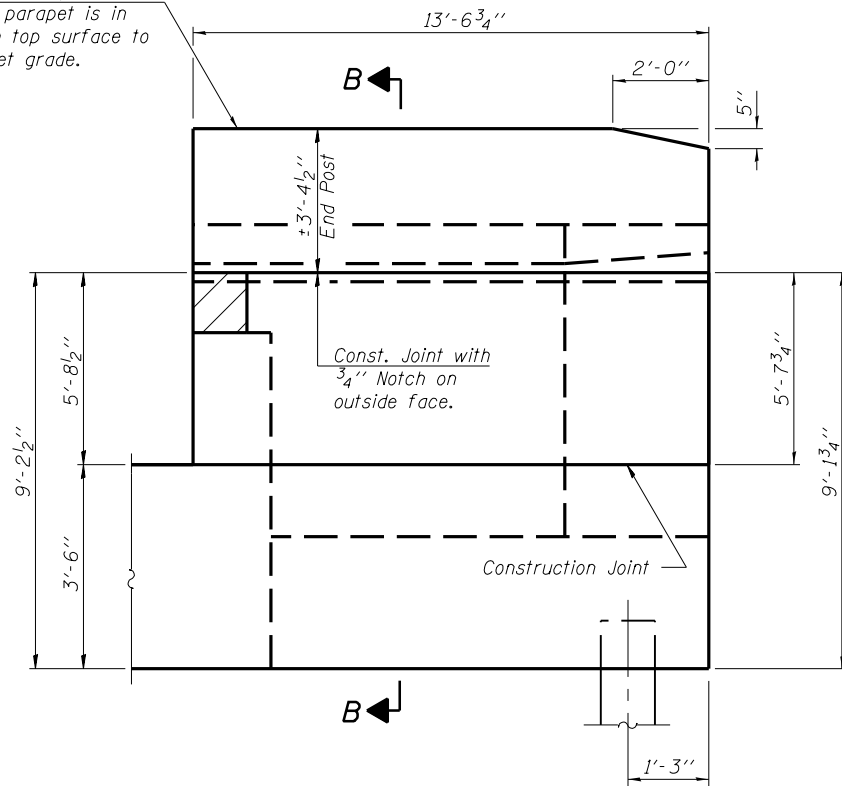
WEST ABUTMENT DETAILS  
STRUCTURE NO. 082-0349

SHEET NO. 57 OF 97 SHEETS

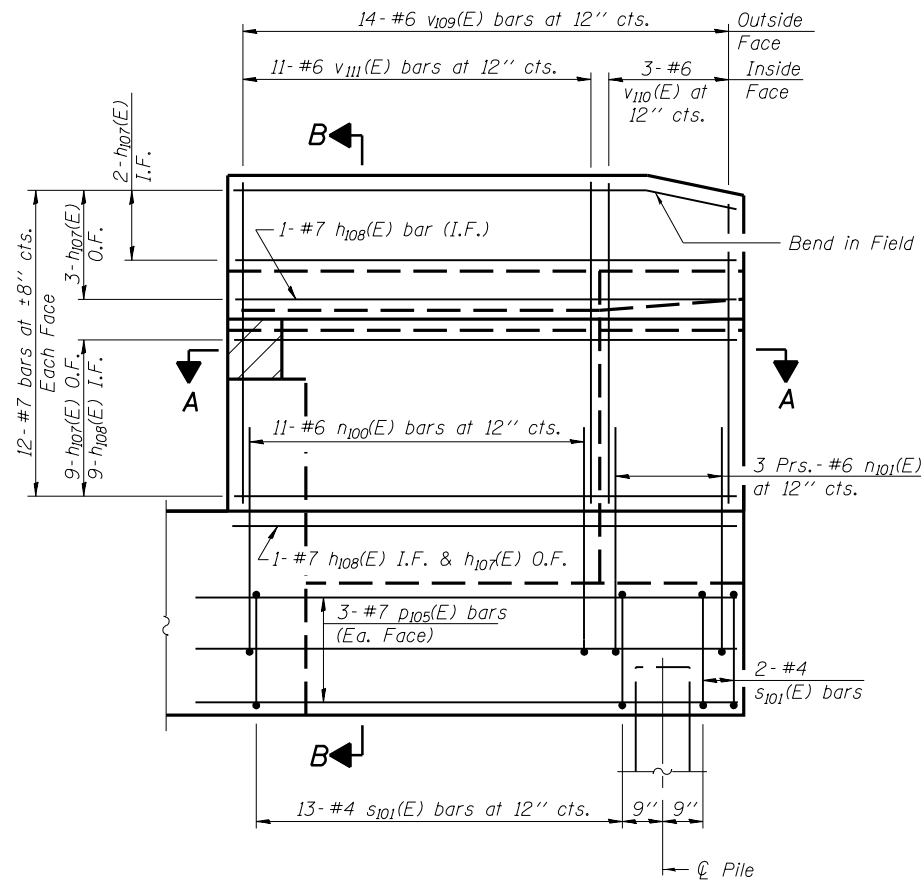
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1,41B-1	ST. CLAIR	406	152
				CONTRACT NO. 76G09
ILLINOIS FED. AID PROJECT				



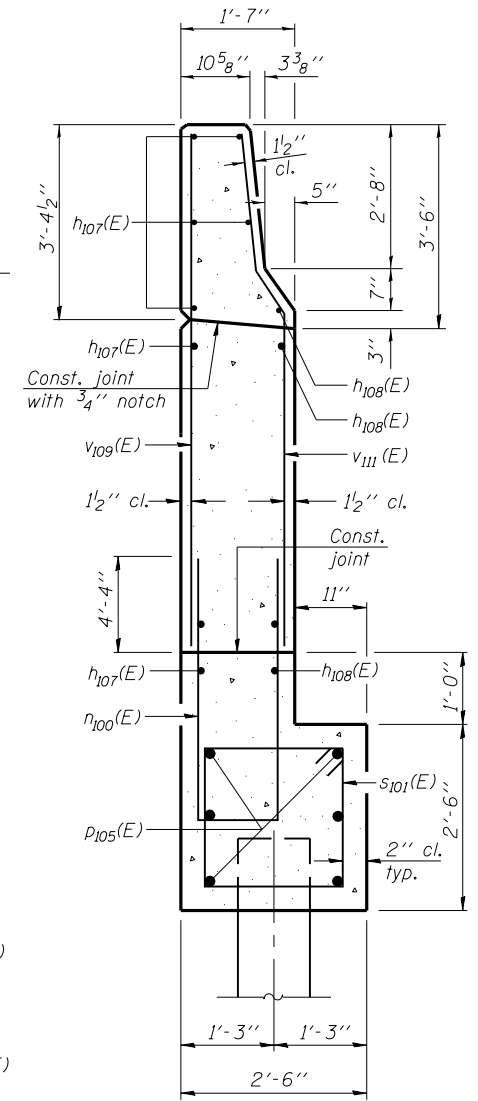
End Post shall be poured after bridge parapet is in place. Form top surface to match parapet grade.



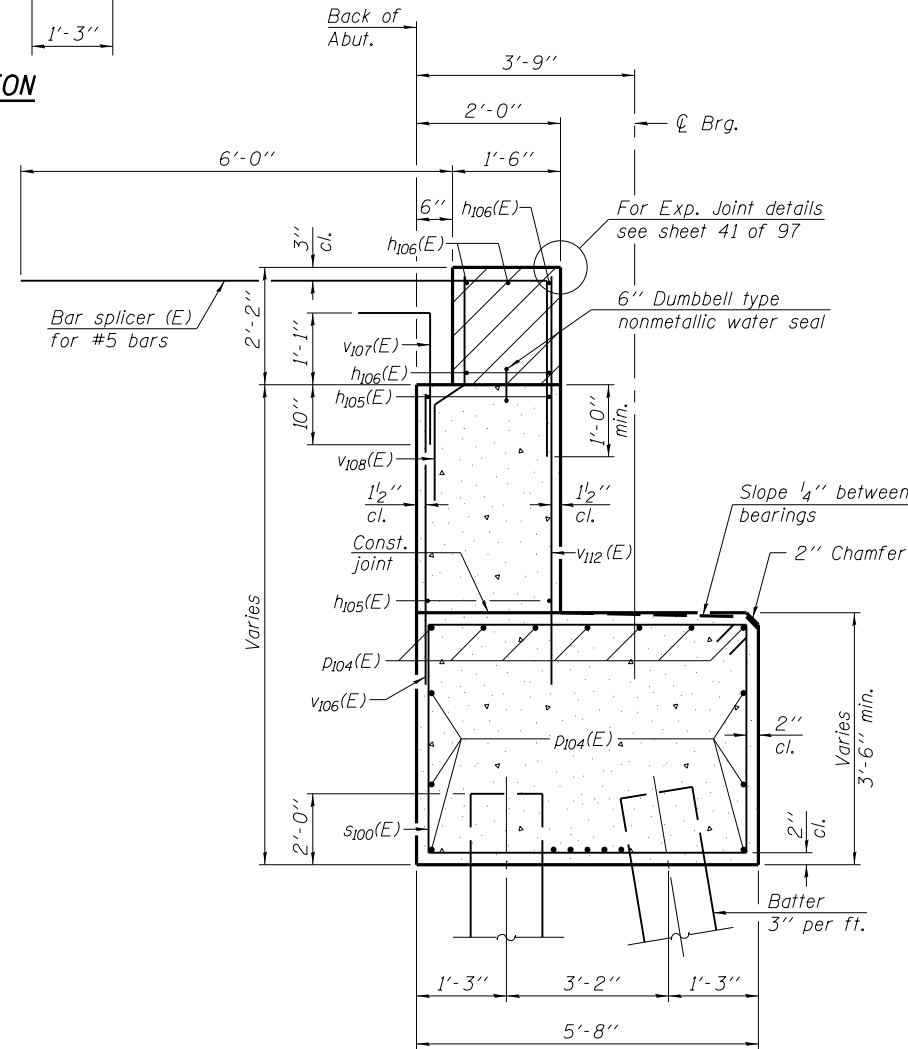
**WEST WING WALL ELEVATION**  
Showing Dimensions



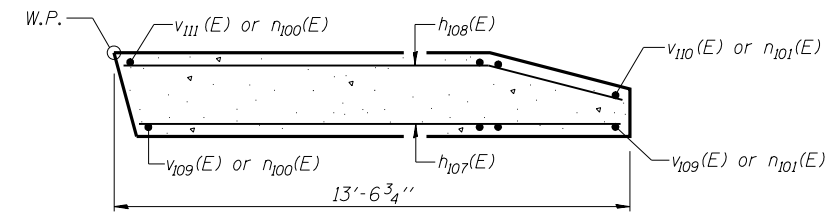
**WEST WING WALL ELEVATION**  
Showing Reinforcement



**SECTION B-B**



**SEC. THRU ABUT.**



**SECTION A-A**

**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.
- Quantity of concrete in end post included with Concrete Superstructure on sheet 29 of 97.
- For metal shell pile details, see sheet 74 of 97.
- Concrete Sealer shall be applied to the backwall, bridge seat, and front face of abutment.
- For Bar Splicer details, see sheet 75 of 97.

FILE NAME = X:\1309400-MLK\Cad\15\082034-76009.dgn	DESIGNED - M.A. Chorkey	REVISED
USER NAME = elagemann	CHECKED - J.J. Derner	REVISED
PLOT SCALE =	DRAWN - C.A. Buettner	REVISED
PLOT DATE = 9/16/2014	CHECKED - E.M. Lagemann	REVISED

DESIGNED - M.A. Chorkey	REVISED
CHECKED - J.J. Derner	REVISED
DRAWN - C.A. Buettner	REVISED
CHECKED - E.M. Lagemann	REVISED

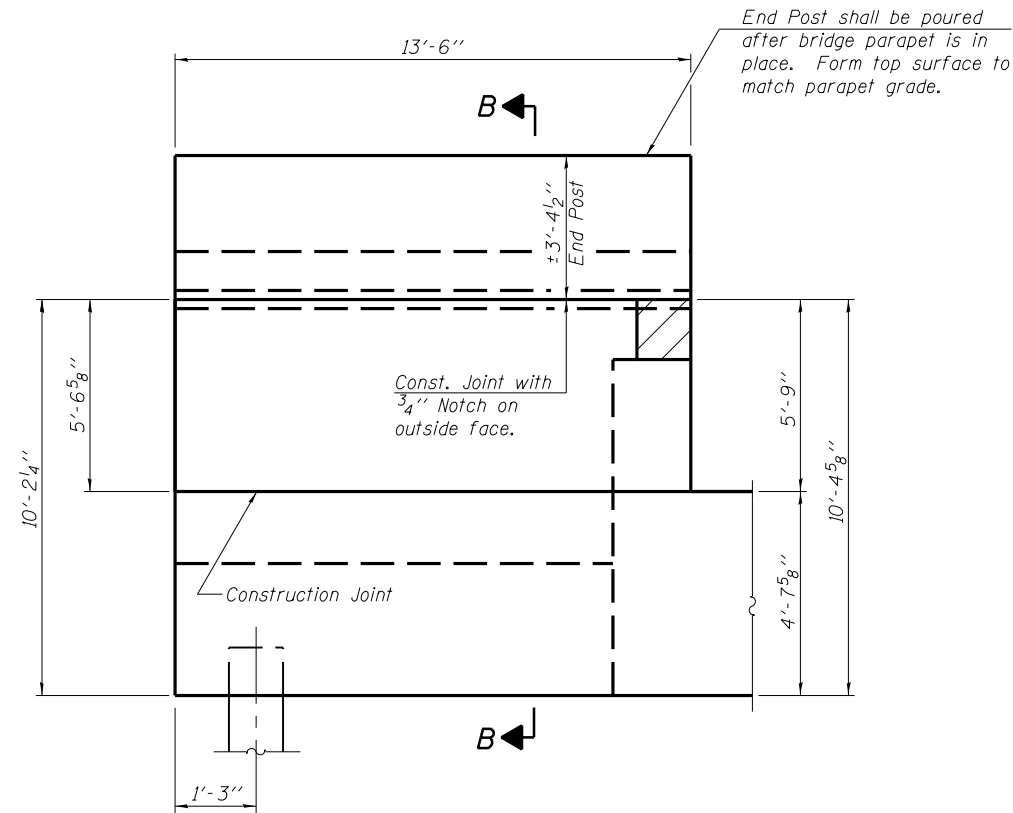
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**SOUTH ABUTMENT DETAILS I**  
**STRUCTURE NO. 082-0349**

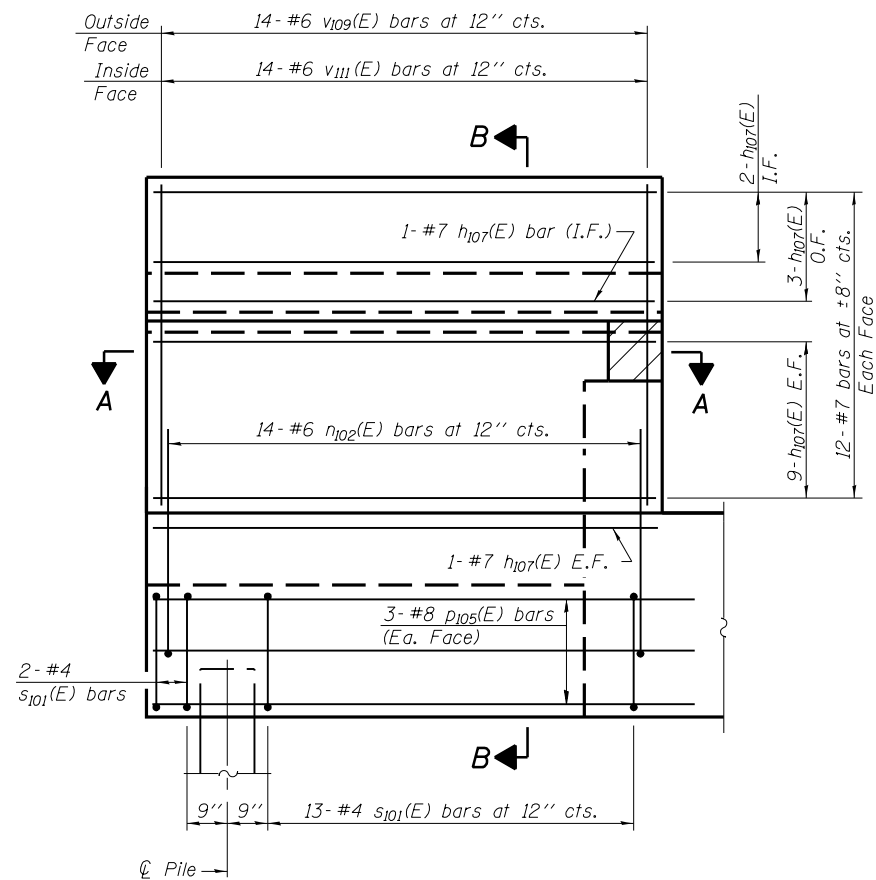
SHEET NO. 59 OF 97 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1,41B-1	ST. CLAIR	406	154
CONTRACT NO. 76G09				

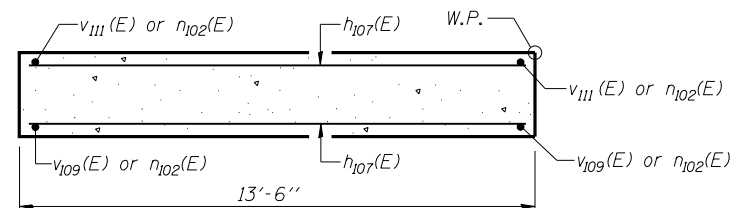
ILLINOIS FED. AID PROJECT



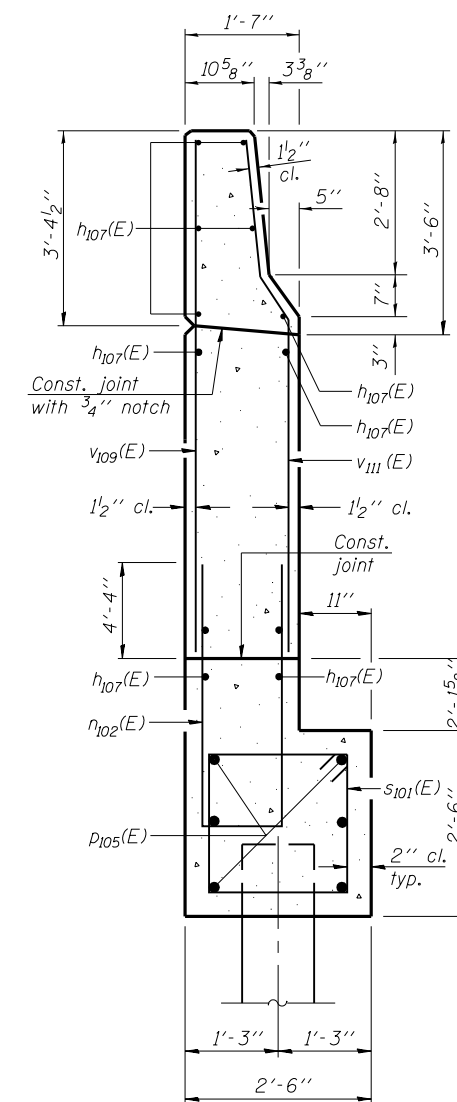
**EAST WING WALL ELEVATION**  
Showing Dimensions



**EAST WING WALL ELEVATION**  
Showing Reinforcement



**SECTION A-A**



**SECTION B-B**

FILE NAME = X:\1309400-MLK\Cad\15\082034-76009.dgn	DESIGNED - M.A. Chorkey	REVISED
USER NAME = elagemann	CHECKED - J.J. Derner	REVISED
PLOT SCALE =	DRAWN - C.A. Buettner	REVISED
PLOT DATE = 9/16/2014	CHECKED - E.M. Lagemann	REVISED

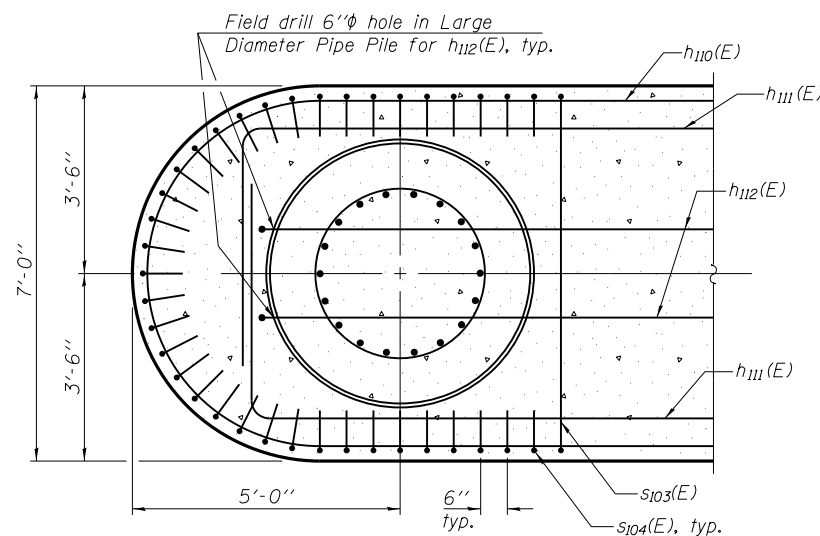
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT DETAILS II  
STRUCTURE NO. 082-0349

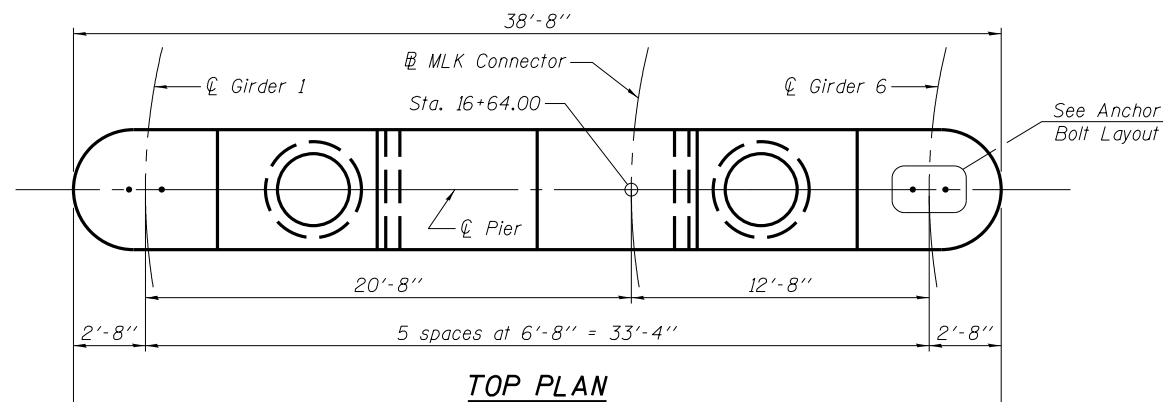
SHEET NO. 60 OF 97 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1,41B-1	ST. CLAIR	406	155
CONTRACT NO. 76G09				

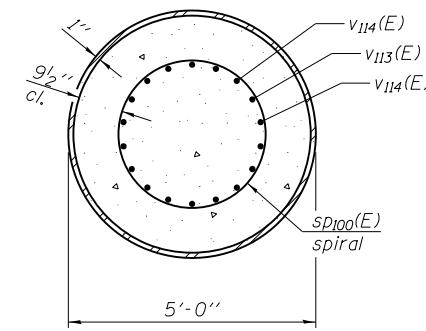
ILLINOIS FED. AID PROJECT



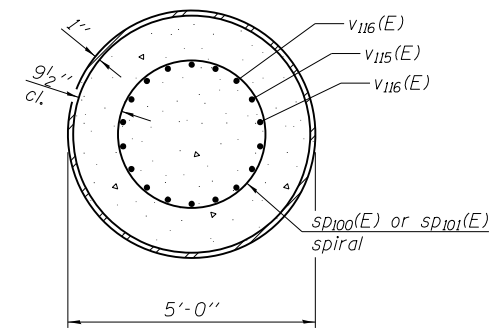
**SECTION A-A**



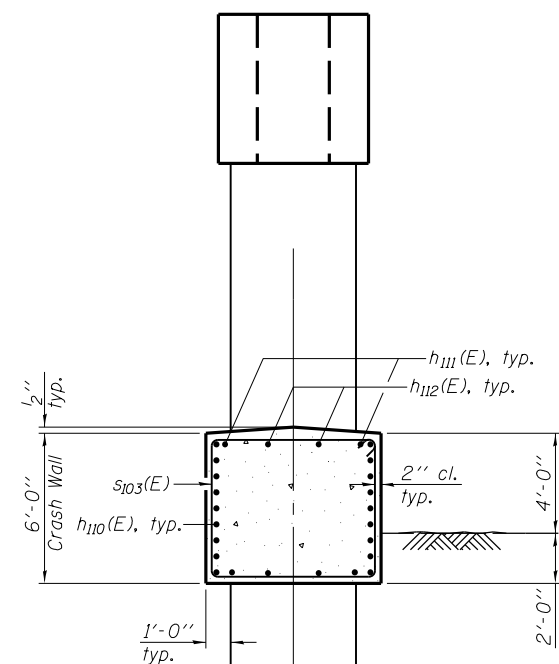
**TOP PLAN**



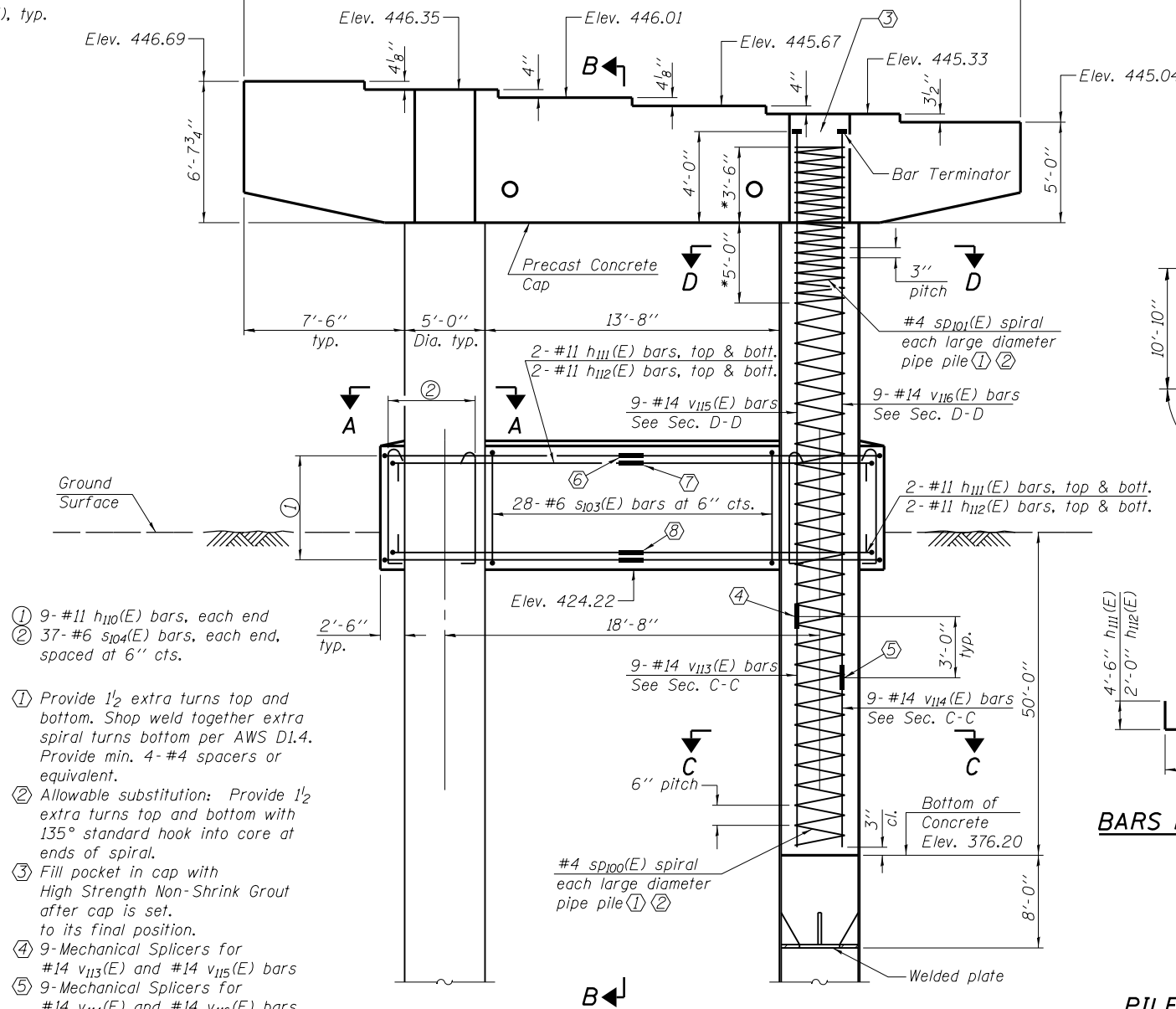
**SECTION C-C**



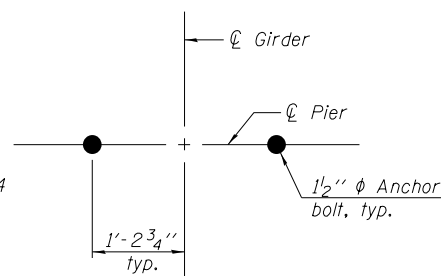
**SECTION D-D**



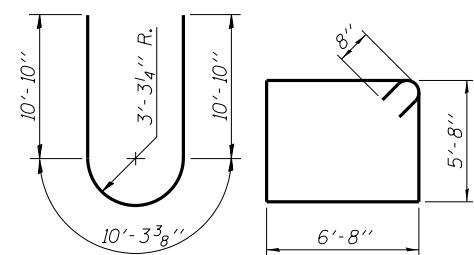
**SECTION B-B**



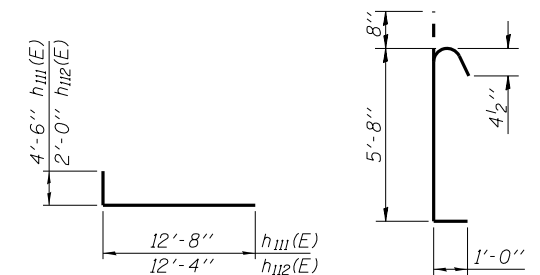
**ELEVATION**  
(Looking Upstation)



**ANCHOR BOLT LAYOUT**



**BAR h110(E) BAR s103(E)**



**BARS h111(E) & h112(E) BAR s104(E)**

**PILE DATA**

Type: Large Diameter Pipe Pile 60" x 1.00"  
 Nominal Required Bearing: 4,496 kips  
 Factored Resistance Available: 2,922 kips  
 Est. Length: 138 ft.  
 No. Production Piles: 2  
 No. Test Piles: 0

Notes:  
 Piles shall be driven through 6'-0" diameter precored holes extending to elevation 416.00 according to Article 512.09(c) of the Standard Specifications.  
 For Precast Concrete Cap details, see sheet 68 of 97.  
 For Large Diameter Pipe Pile details, see sheet 73 of 97.

**BILL OF MATERIAL**

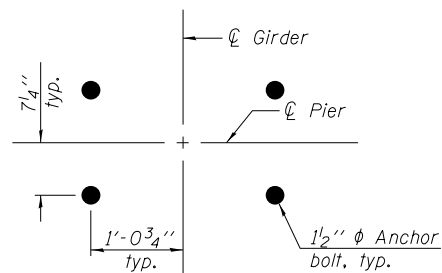
Bar	No.	Size	Length	Shape
h110(E)	18	#11	31'-11"	[Symbol]
h111(E)	8	#11	17'-2"	[Symbol]
h112(E)	8	#11	14'-4"	[Symbol]
s103(E)	28	#6	26'-0"	[Symbol]
s104(E)	74	#6	7'-4"	[Symbol]
sD100(E)	2	#4	58'-6"	[Symbol]
sD101(E)	2	#4	8'-6"	[Symbol]
v113(E)	18	#14	40'-0"	[Symbol]
v114(E)	18	#14	37'-0"	[Symbol]
v115(E)	18	#14	27'-7"	[Symbol]
v116(E)	18	#14	30'-7"	[Symbol]
Structure Excavation			Cu. Yd.	27
Concrete Structures			Cu. Yd.	120.3
Precast Concrete Caps			Each	1
Reinforcement Bars, Epoxy Coated			Pound	27,060
Mechanical Splicers			Each	62
Furnishing Metal Large Diameter Pipe Piles, 60" x 1.00"			Foot	276
Driving Large Diameter Pipe Piles			Foot	276
Pile Shoes, Large Diameter Pipe			Each	2
Bar Terminator			Each	36
High Strength Non-Shrink Grout			Cu. Ft.	147

\*\*Length is height of spiral.

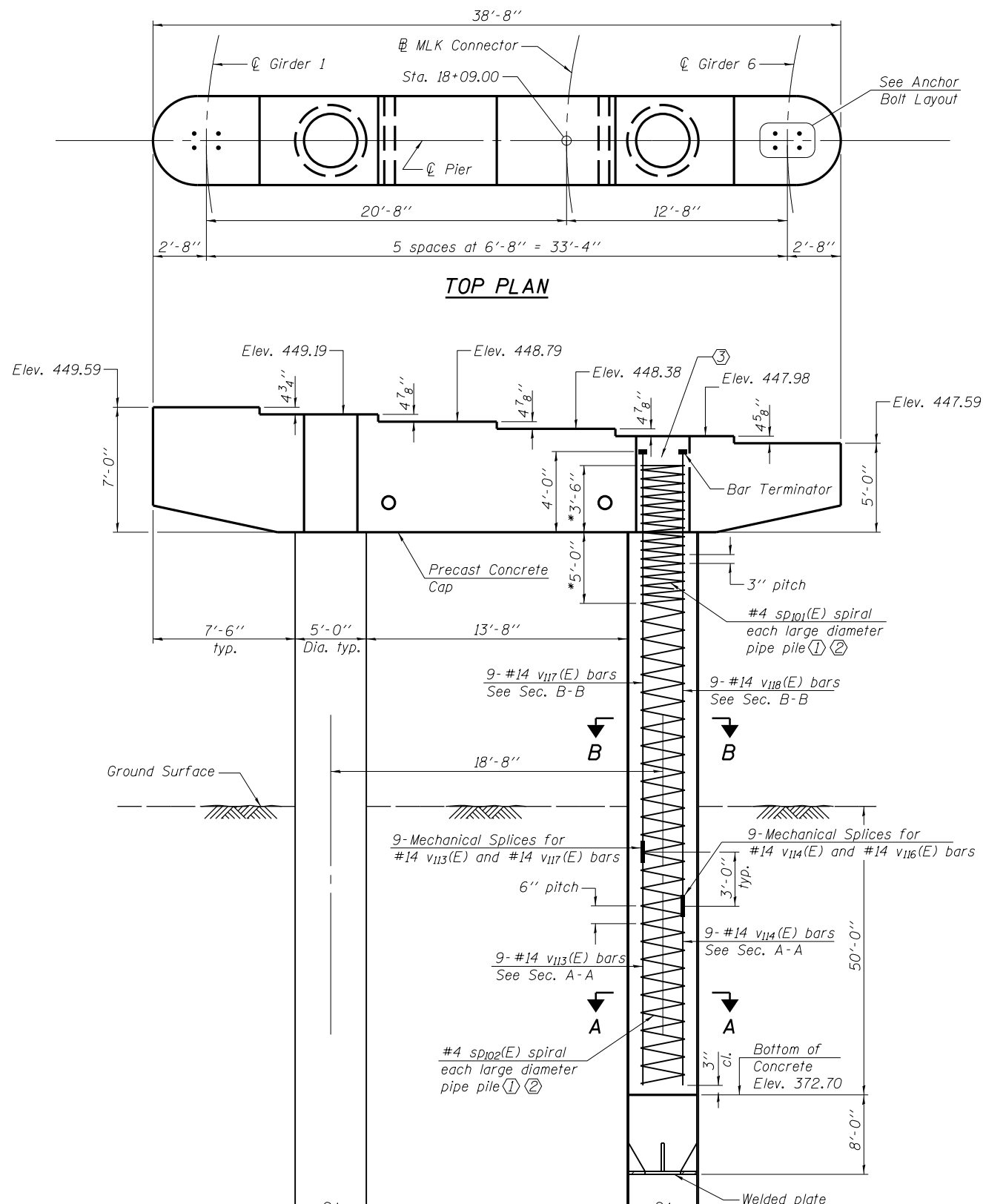
- ① 9- #11 h110(E) bars, each end
- ② 37- #6 s104(E) bars, each end, spaced at 6" cts.
- ③ Provide 1/2 extra turns top and bottom. Shop weld together extra spiral turns bottom per AWS D1.4. Provide min. 4- #4 spacers or equivalent.
- ④ Allowable substitution: Provide 1/2 extra turns top and bottom with 135° standard hook into core at ends of spiral.
- ⑤ Fill pocket in cap with High Strength Non-Shrink Grout after cap is set to its final position.
- ⑥ 9- Mechanical Splicers for #14 v113(E) and #14 v115(E) bars
- ⑦ 9- Mechanical Splicers for #14 v114(E) and #14 v116(E) bars
- ⑧ 18- Mechanical Splicers for #11 h110(E) bars
- ⑨ 2- Mechanical Splicers for #11 h111(E) bars, top & bottom
- ⑩ 2- Mechanical Splicers for #11 h112(E) bars, top & bottom

\* Splicing of reinforcement will not be allowed in this region.





**ANCHOR BOLT LAYOUT**

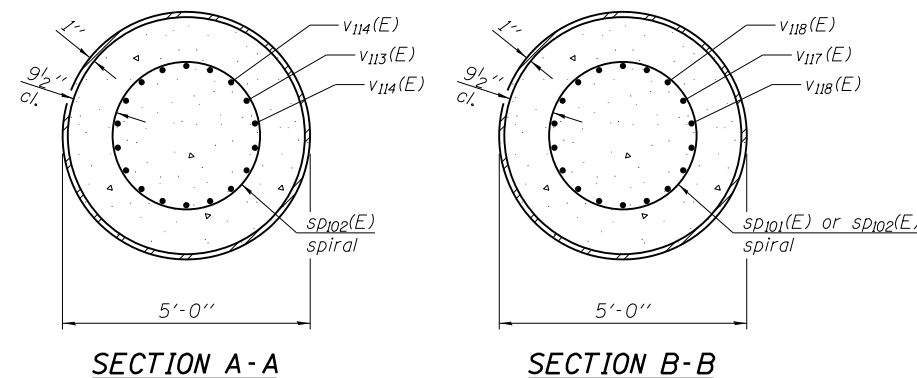


**ELEVATION**  
(Looking Upstation)

\* Splicing of reinforcement will not be allowed in this region.

**PILE DATA**

Type: Large Diameter Pipe Pile 60" x 1.00"  
 Nominal Required Bearing: 3,243 kips  
 Factored Resistance Available: 2,108 kips  
 Est. Length: 112 ft.  
 No. Production Piles: 1  
 No. Test Piles: 1



**BILL OF MATERIAL**

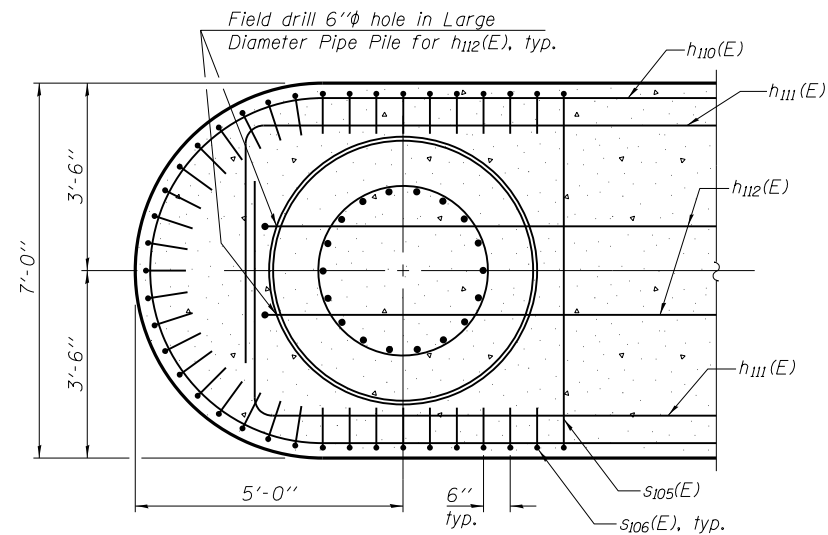
Bar	No.	Size	Length	Shape
** SP101(E)	2	#4	8'-6"	⌘
** SP102(E)	2	#4	64'-8"	⌘
v113(E)	18	#14	40'-0"	—
v114(E)	18	#14	37'-0"	—
v117(E)	18	#14	33'-8"	—
v118(E)	18	#14	36'-8"	—
Concrete Structures		Cu. Yd.	95.0	
Precast Concrete Caps		Each	1	
Reinforcement Bars, Epoxy Coated		Pound	22,600	
Mechanical Splicers		Each	36	
Furnishing Metal Large Diameter Pipe Piles, 60" x 1.00"		Foot	112	
Driving Large Diameter Pipe Piles		Foot	112	
Test Pile Large Diameter Pipe		Each	1	
Pile Shoes, Large Diameter Pipe		Each	2	
Bar Terminator		Each	36	
High Strength Non-Shrink Grout		Cu. Ft.	152	

\*\* Length is height of spiral.

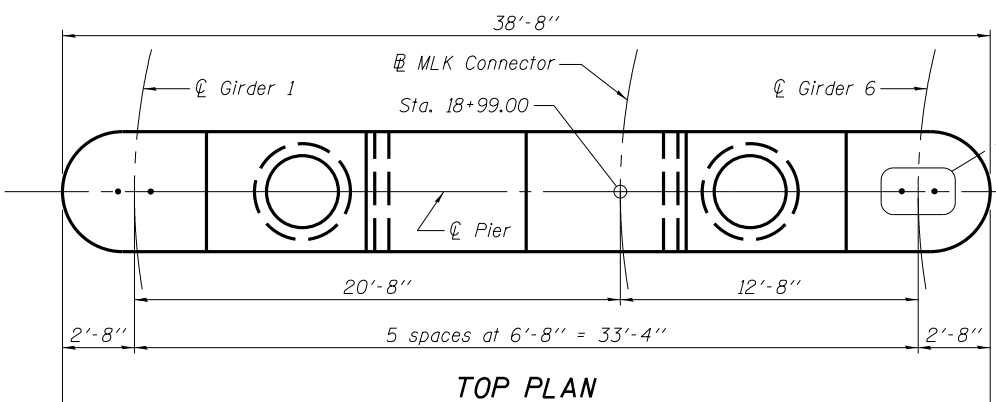
**Notes:**

Piles shall be driven through 6'-0" diameter precored holes extending to elevation 400.00 according to Article 512.09(c) of the Standard Specifications.  
 For Precast Concrete Cap details, see sheet 68 of 97.  
 For Large Diameter Pipe Pile details, see sheet 73 of 97.

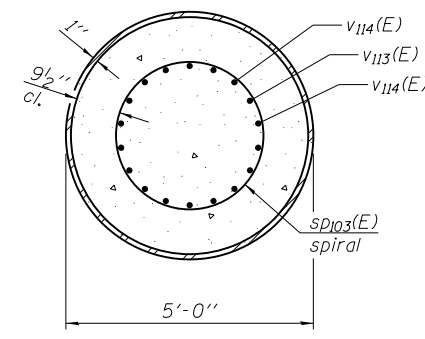
- ① Provide 1/2 extra turns top and bottom. Shop weld together extra spiral turns bottom per AWS D1.4. Provide min. 4-#4 spacers or equivalent.
- ② Allowable substitution: Provide 1/2 extra turns top and bottom with 135° standard hook into core at ends of spiral.
- ③ Fill pocket in cap with High Strength Non-Shrink Grout after cap is set to its final position.



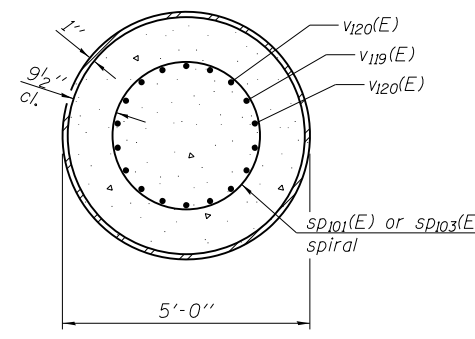
**SECTION A-A**



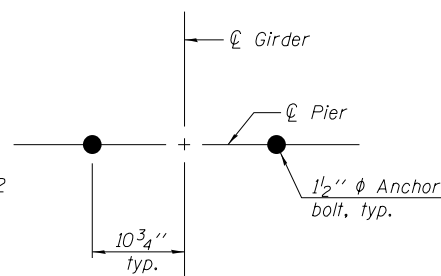
**TOP PLAN**



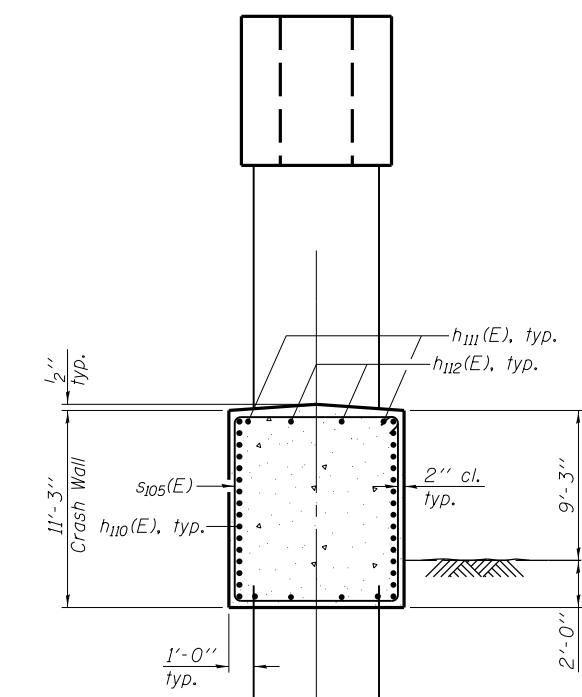
**SECTION C-C**



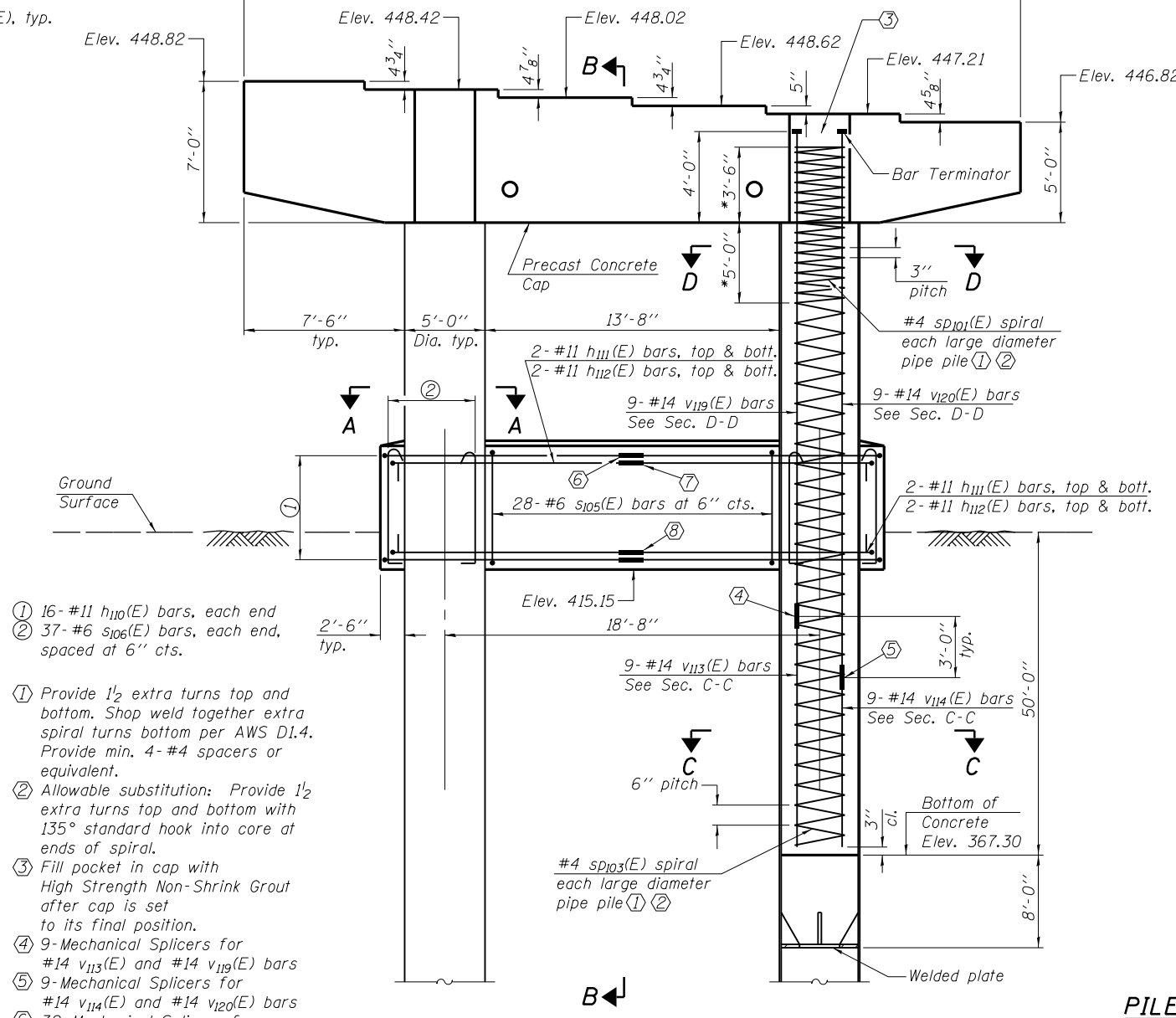
**SECTION D-D**



**ANCHOR BOLT LAYOUT**



**SECTION B-B**



**ELEVATION**  
(Looking Upstation)

- ① 16- #11 h<sub>110</sub>(E) bars, each end
- ② 37- #6 s<sub>106</sub>(E) bars, each end, spaced at 6" cts.
- ③ Provide 1/2 extra turns top and bottom. Shop weld together extra spiral turns bottom per AWS D1.4. Provide min. 4- #4 spacers or equivalent.
- ④ Allowable substitution: Provide 1/2 extra turns top and bottom with 135° standard hook into core at ends of spiral.
- ⑤ Fill pocket in cap with High Strength Non-Shrink Grout after cap is set to its final position.
- ⑥ 9- Mechanical Splicers for #14 v<sub>113</sub>(E) and #14 v<sub>119</sub>(E) bars
- ⑦ 9- Mechanical Splicers for #14 v<sub>114</sub>(E) and #14 v<sub>120</sub>(E) bars
- ⑧ 32- Mechanical Splicers for #11 h<sub>110</sub>(E) bars
- ⑨ 2- Mechanical Splicers for #11 h<sub>111</sub>(E) bars, top & bottom
- ⑩ 2- Mechanical Splicers for #11 h<sub>112</sub>(E) bars, top & bottom

\* Splicing of reinforcement will not be allowed in this region.

**PILE DATA**

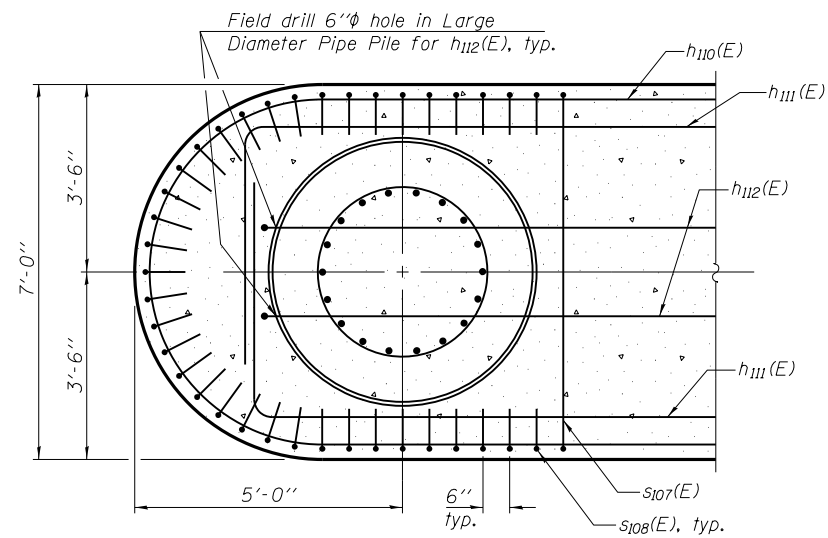
Type: Large Diameter Pipe Pile 60" x 1.00"  
 Nominal Required Bearing: 3,999 kips  
 Factored Resistance Available: 2,600 kips  
 Est. Length: 133 ft.  
 No. Production Piles: 2  
 No. Test Piles: 0

**BILL OF MATERIAL**

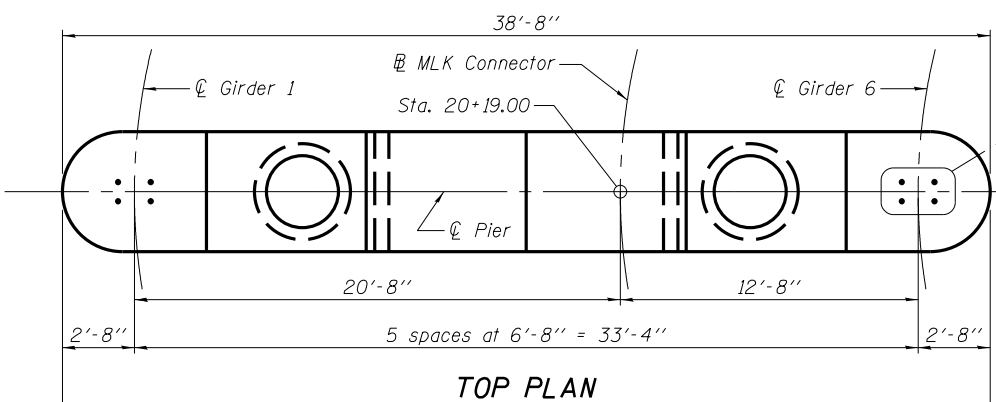
Bar	No.	Size	Length	Shape
h <sub>110</sub> (E)	32	#11	31'-11"	U
h <sub>111</sub> (E)	8	#11	17'-2"	L
h <sub>112</sub> (E)	8	#11	14'-4"	L
s <sub>105</sub> (E)	28	#6	36'-6"	U
s <sub>106</sub> (E)	74	#6	12'-8"	L
sD <sub>101</sub> (E)	2	#4	8'-6"	W
sD <sub>103</sub> (E)	2	#4	69'-3"	W
v <sub>113</sub> (E)	18	#14	40'-0"	—
v <sub>114</sub> (E)	18	#14	37'-0"	—
v <sub>119</sub> (E)	18	#14	38'-3"	—
v <sub>120</sub> (E)	18	#14	41'-3"	—
Structure Excavation			Cu. Yd.	27
Concrete Structures			Cu. Yd.	164.1
Precast Concrete Caps			Each	1
Reinforcement Bars, Epoxy Coated			Pound	33,700
Mechanical Splicers			Each	76
Furnishing Metal				
Large Diameter Pipe Piles, 60" x 1.00"			Foot	266
Driving Large Diameter Pipe Piles			Foot	266
Pile Shoes, Large Diameter Pipe			Each	2
Bar Terminator			Each	36
High Strength Non-Shrink Grout			Cu. Ft.	152

\*\* Length is height of spiral.

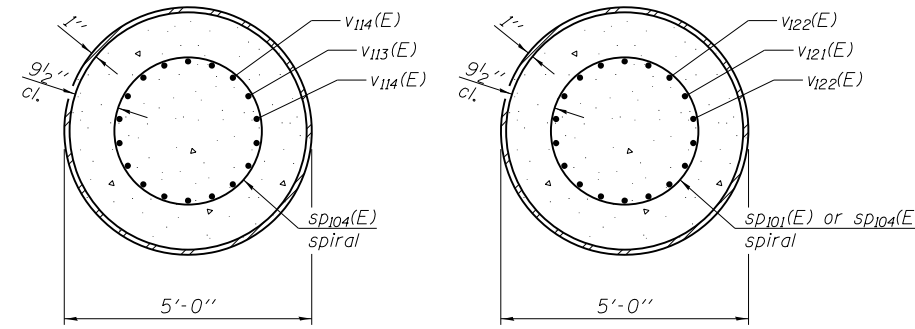
Notes:  
 Piles shall be driven through 6'-0" diameter precored holes extending to elevation 387.00 according to Article 512.09(c) of the Standard Specifications.  
 For Precast Concrete Cap details, see sheet 68 of 97.  
 For Large Diameter Pipe Pile details, see sheet 73 of 97.  
 For h<sub>110</sub>(E), h<sub>111</sub>(E), h<sub>112</sub>(E), bending diagram, see sheet 61 of 97.



**SECTION A-A**

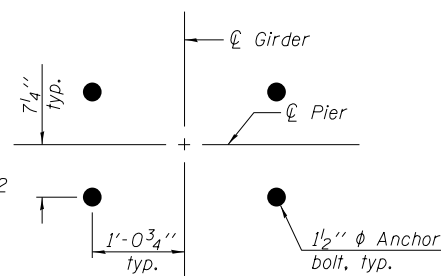


**TOP PLAN**

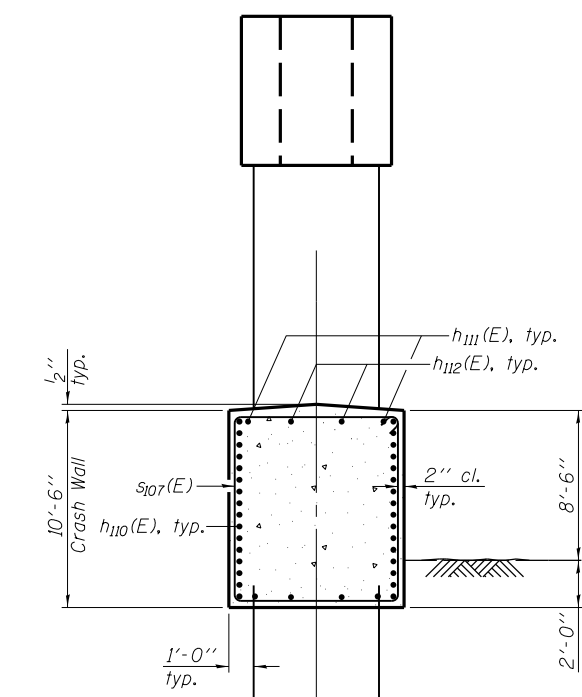


**SECTION C-C**

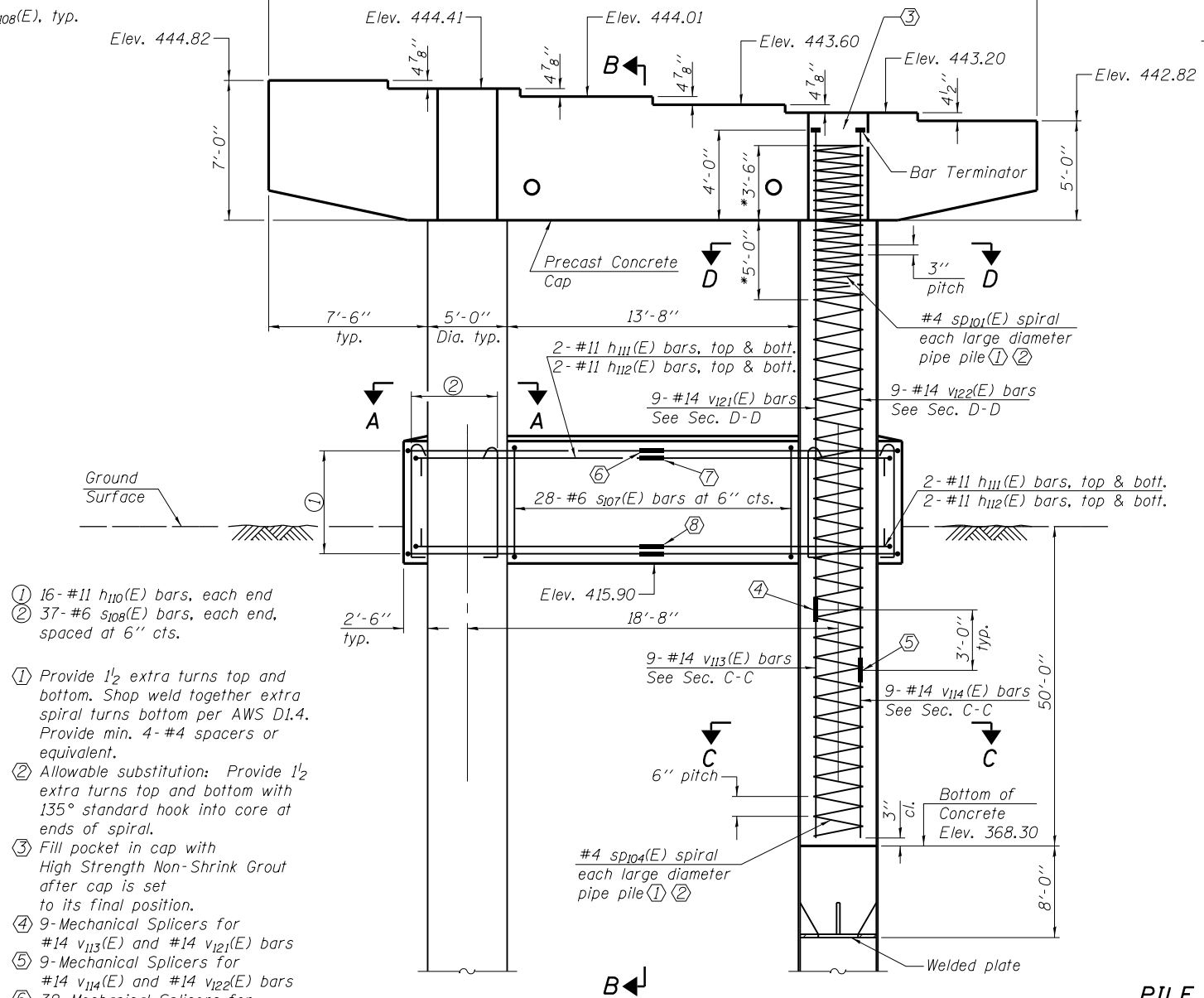
**SECTION D-D**



**ANCHOR BOLT LAYOUT**



**SECTION B-B**



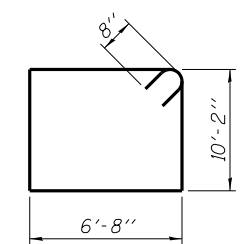
**ELEVATION**  
(Looking Upstation)

- ① 16- #11 h110(E) bars, each end
- ② 37- #6 s108(E) bars, each end, spaced at 6" cts.
- ③ Provide 1 1/2 extra turns top and bottom. Shop weld together extra spiral turns bottom per AWS D1.4. Provide min. 4- #4 spacers or equivalent.
- ④ Allowable substitution: Provide 1 1/2 extra turns top and bottom with 135° standard hook into core at ends of spiral.
- ⑤ Fill pocket in cap with High Strength Non-Shrink Grout after cap is set to its final position.
- ⑥ 9-Mechanical Splicers for #14 v113(E) and #14 v121(E) bars
- ⑦ 9-Mechanical Splicers for #14 v114(E) and #14 v122(E) bars
- ⑧ 32-Mechanical Splicers for #11 h110(E) bars
- ⑨ 2-Mechanical Splicers for #11 h111(E) bars, top & bottom
- ⑩ 2-Mechanical Splicers for #11 h112(E) bars, top & bottom

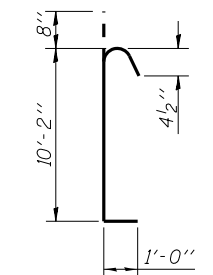
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h110(E)	32	#11	31'-11"	U
h111(E)	8	#11	17'-2"	U
h112(E)	8	#11	14'-4"	U
s107(E)	28	#6	35'-0"	U
s108(E)	74	#6	11'-10"	U
** sD101(E)	2	#4	8'-6"	W
** sD104(E)	2	#4	64'-3"	W
v113(E)	18	#14	40'-0"	—
v114(E)	18	#14	37'-0"	—
v121(E)	18	#14	33'-3"	—
v122(E)	18	#14	36'-3"	—
Structure Excavation		Cu. Yd.	27	
Concrete Structures		Cu. Yd.	153.2	
Precast Concrete Caps		Each	1	
Reinforcement Bars, Epoxy Coated		Pound	32,030	
Mechanical Splicers		Each	76	
Furnishing Metal Large Diameter Pipe Piles, 60" x 1.00"		Foot	276	
Driving Large Diameter Pipe Piles		Foot	276	
Pile Shoes, Large Diameter Pipe		Each	2	
Bar Terminator		Each	36	
High Strength Non-Shrink Grout		Cu. Ft.	151	

\*\* Length is height of spiral.



**BAR s107(E)**



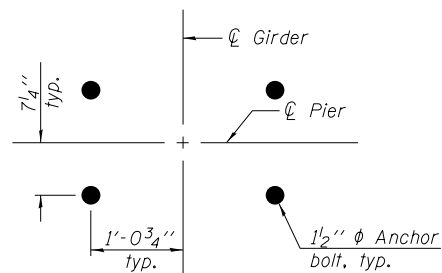
**BAR s108(E)**

**PILE DATA**

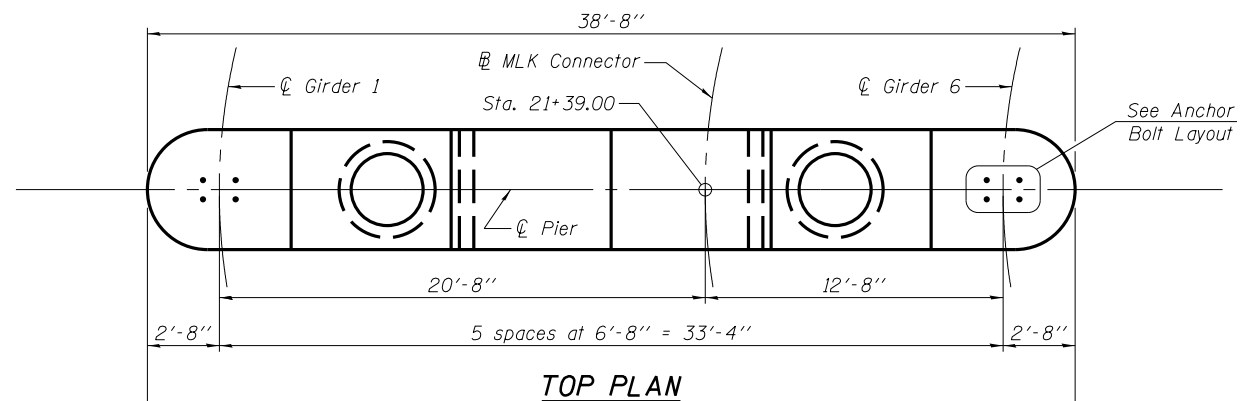
Type: Large Diameter Pipe Pile 60" x 1.00"  
 Nominal Required Bearing: 4,258 kips  
 Factored Resistance Available: 2,768 kips  
 Est. Length: 138 ft.  
 No. Production Piles: 2  
 No. Test Piles: 0

Notes:  
 Piles shall be driven through 6'-0" diameter precored holes extending to elevation 408.00 according to Article 512.09(c) of the Standard Specifications.  
 For Precast Concrete Cap details, see sheet 68 of 97.  
 For Large Diameter Pipe Pile details, see sheet 73 of 97.  
 For h110(E), h111(E), h112(E), bending diagram, see sheet 61 of 97.

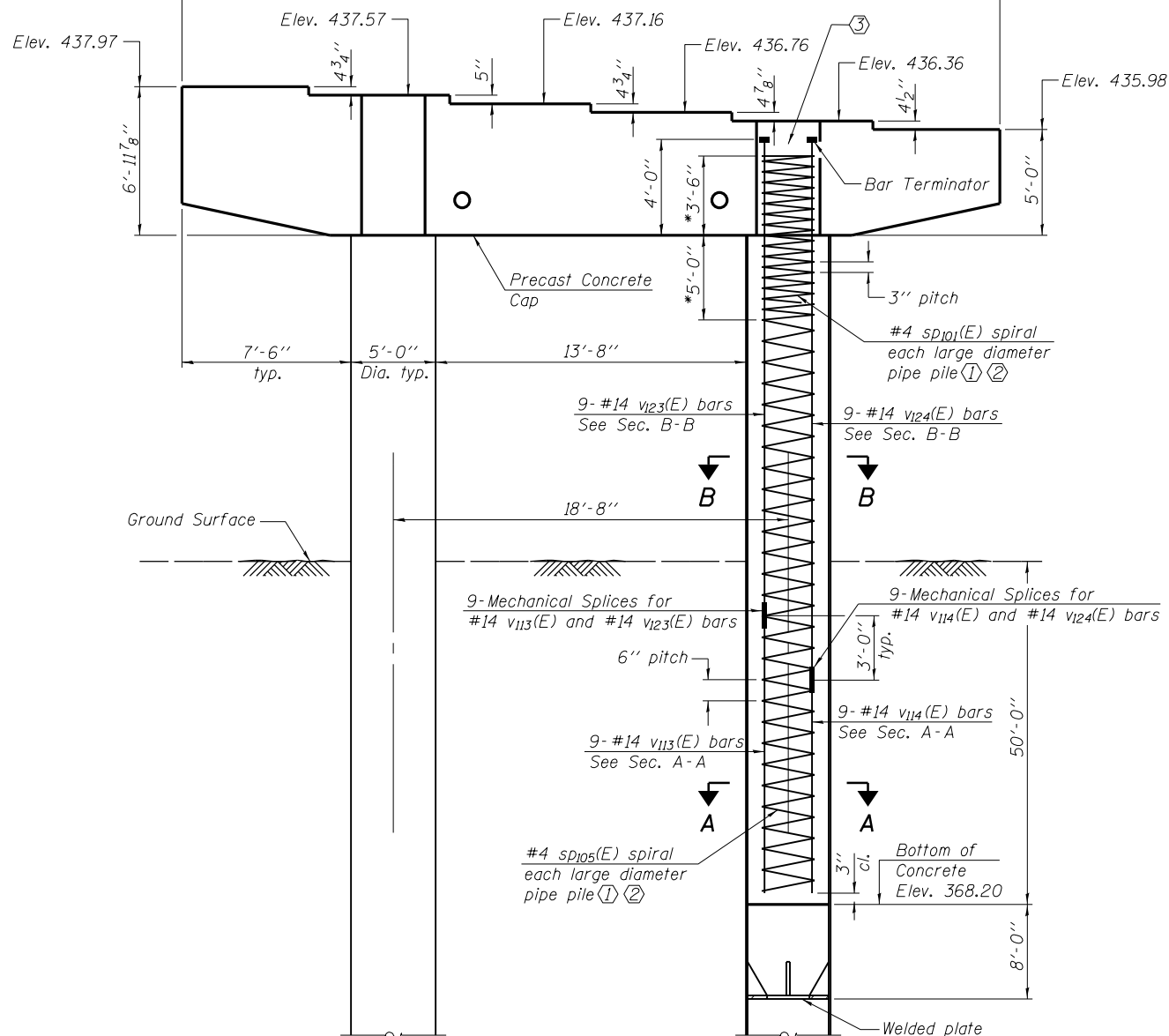
\* Splicing of reinforcement will not be allowed in this region.



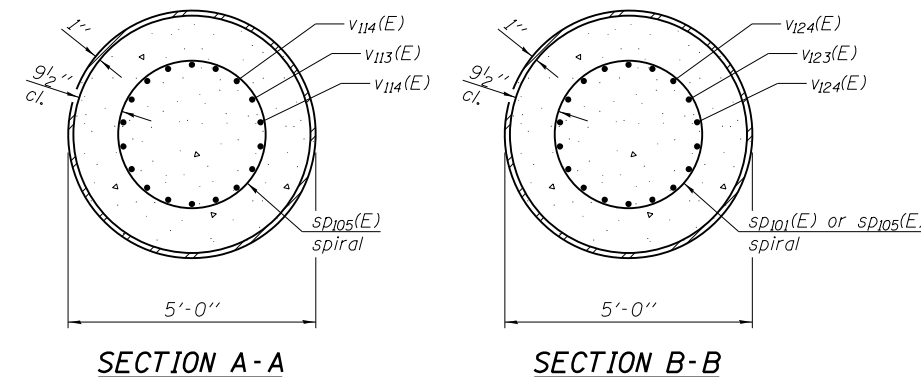
**ANCHOR BOLT LAYOUT**



**TOP PLAN**



**ELEVATION**  
(Looking Upstation)



**SECTION A-A**

**SECTION B-B**

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
** SP101(E)	2	#4	8'-6"	~
** SP105(E)	2	#4	57'-6"	~
v113(E)	18	#14	40'-0"	—
v114(E)	18	#14	37'-0"	—
v123(E)	18	#14	26'-6"	—
v124(E)	18	#14	29'-6"	—
Concrete Structures		Cu. Yd.	85.3	
Precast Concrete Caps		Each	1	
Reinforcement Bars, Epoxy Coated		Pound	20,430	
Mechanical Splicers		Each	36	
Furnishing Metal Large Diameter Pipe Piles, 60" x 1.00"		Foot	105	
Driving Large Diameter Pipe Piles		Foot	105	
Test Pile Large Diameter Pipe		Each	1	
Pile Shoes, Large Diameter Pipe		Each	2	
Bar Terminator		Each	36	
High Strength Non-Shrink Grout		Cu. Ft.	151	

\*\* Length is height of spiral.

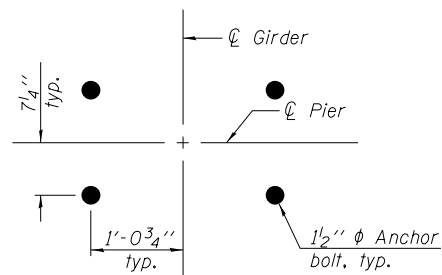
**PILE DATA**

Type: Large Diameter Pipe Pile 60" x 1.00"  
 Nominal Required Bearing: 3,301 kips  
 Factored Resistance Available: 2,146 kips  
 Est. Length: 105 ft.  
 No. Production Piles: 1  
 No. Test Piles: 1

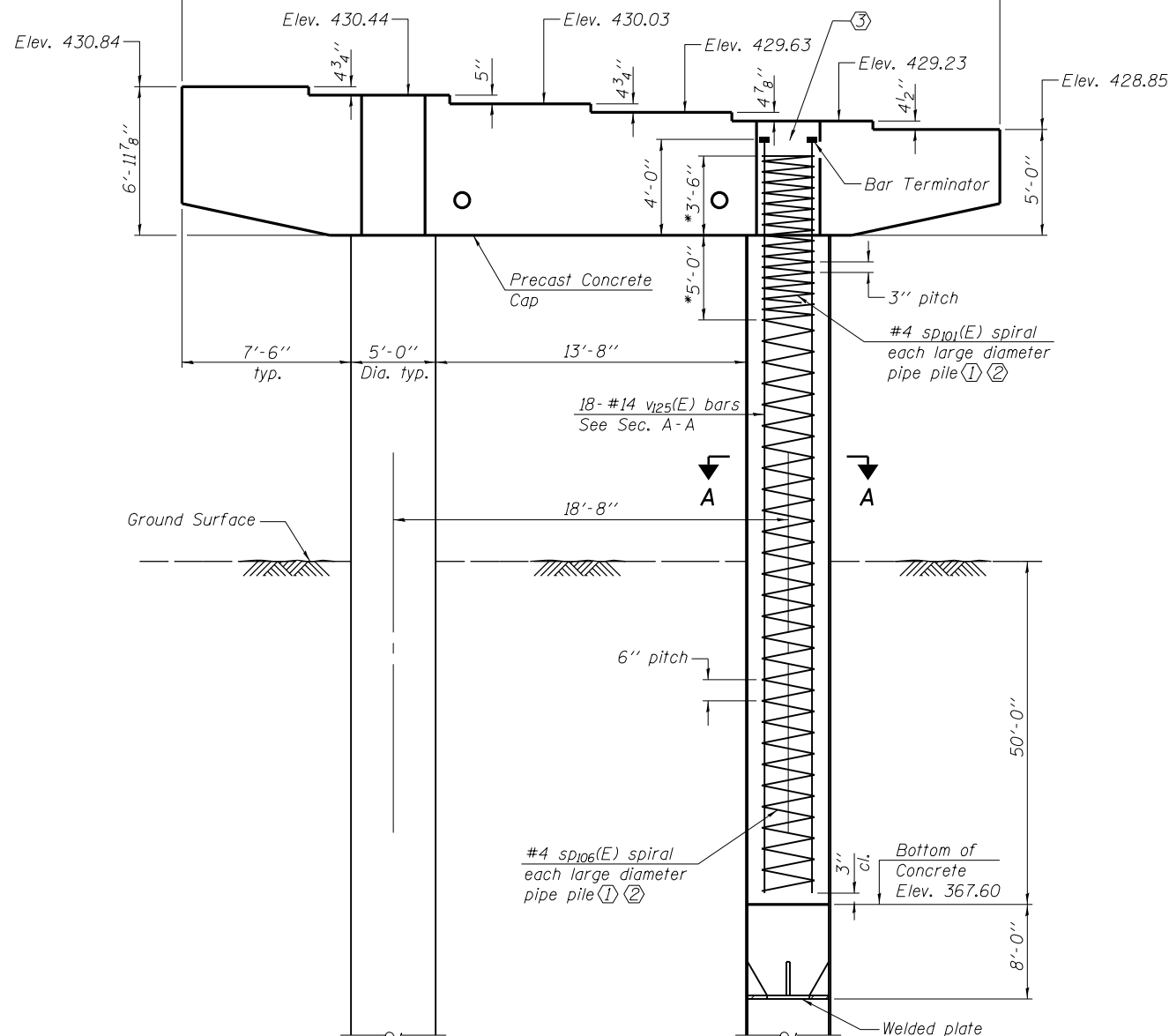
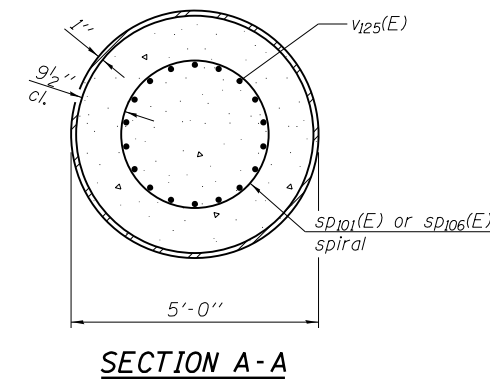
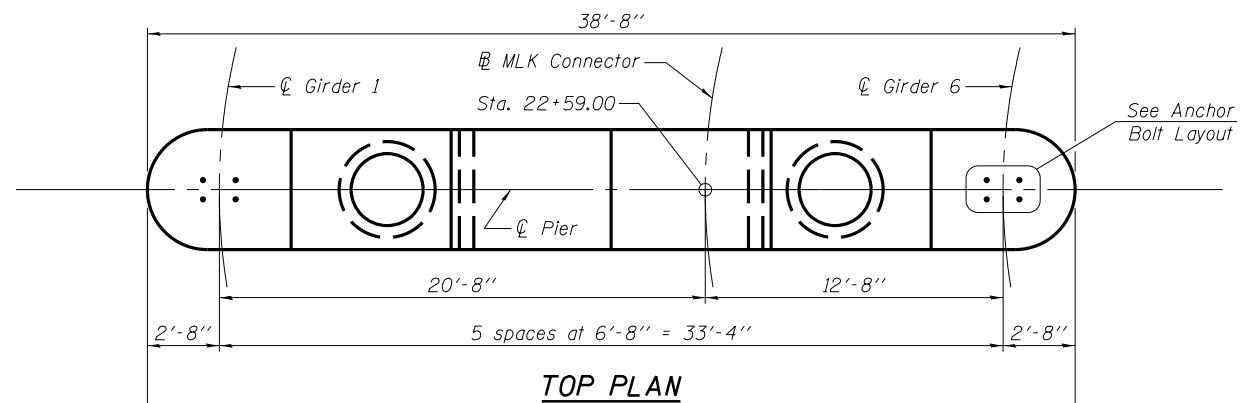
\* Splicing of reinforcement will not be allowed in this region.

Notes:  
 Piles shall be driven through 6'-0" diameter precored holes extending to elevation 408.00 according to Article 512.09(c) of the Standard Specifications.  
 For Precast Concrete Cap details, see sheet 68 of 97.  
 For Large Diameter Pipe Pile details, see sheet 73 of 97.

- ① Provide 1/2 extra turns top and bottom. Shop weld together extra spiral turns bottom per AWS D1.4. Provide min. 4-#4 spacers or equivalent.
- ② Allowable substitution: Provide 1/2 extra turns top and bottom with 135° standard hook into core at ends of spiral.
- ③ Fill pocket in cap with High Strength Non-Shrink Grout after cap is set to its final position.



**ANCHOR BOLT LAYOUT**



**ELEVATION**  
(Looking Upstation)

**PILE DATA**

Type: Large Diameter Pipe Pile 60" x 1.00"  
 Nominal Required Bearing: 3,257 kips  
 Factored Resistance Available: 2,117 kips  
 Est. Length: 98 ft.  
 No. Production Piles: 2  
 No. Test Piles: 0

\* Splicing of reinforcement will not be allowed in this region.

**BILL OF MATERIAL**

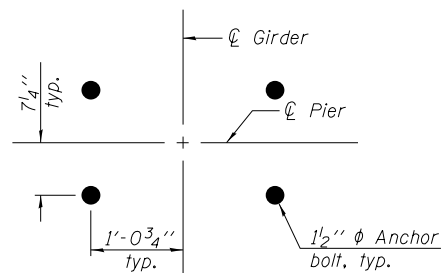
Bar	No.	Size	Length	Shape
** SD101(E)	2	#4	8'-6"	~
** SD106(E)	2	#4	51'-0"	~
V125(E)	36	#14	60'-0"	—
Concrete Structures			Cu. Yd.	76.4
Precast Concrete Caps			Each	1
Reinforcement Bars, Epoxy Coated			Pound	18,460
Furnishing Metal Large Diameter Pipe Piles, 60" x 1.00"			Foot	196
Driving Large Diameter Pipe Piles			Foot	196
Pile Shoes, Large Diameter Pipe			Each	2
Bar Terminator			Each	36
High Strength Non-Shrink Grout			Cu. Ft.	151

\*\* Length is height of spiral.

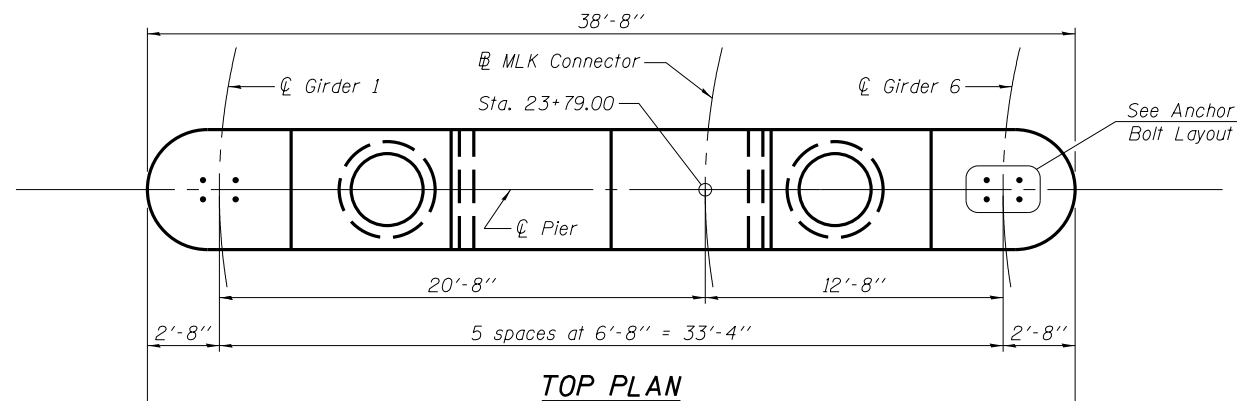
**Notes:**

Piles shall be driven through 6'-0" diameter precored holes extending to elevation 407.00 according to Article 512.09(c) of the Standard Specifications.  
 For Precast Concrete Cap details, see sheet 68 of 97.  
 For Large Diameter Pipe Pile details, see sheet 73 of 97.

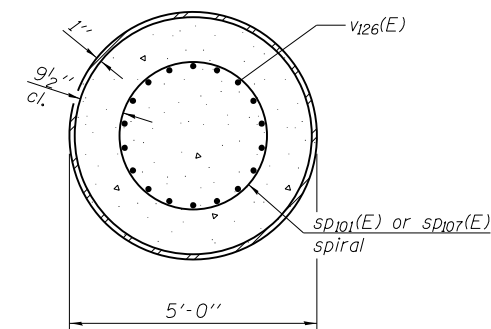
- ① Provide 1 1/2 extra turns top and bottom. Shop weld together extra spiral turns bottom per AWS D1.4. Provide min. 4-#4 spacers or equivalent.
- ② Allowable substitution: Provide 1 1/2 extra turns top and bottom with 135° standard hook into core at ends of spiral.
- ③ Fill pocket in cap with High Strength Non-Shrink Grout after cap is set to its final position.



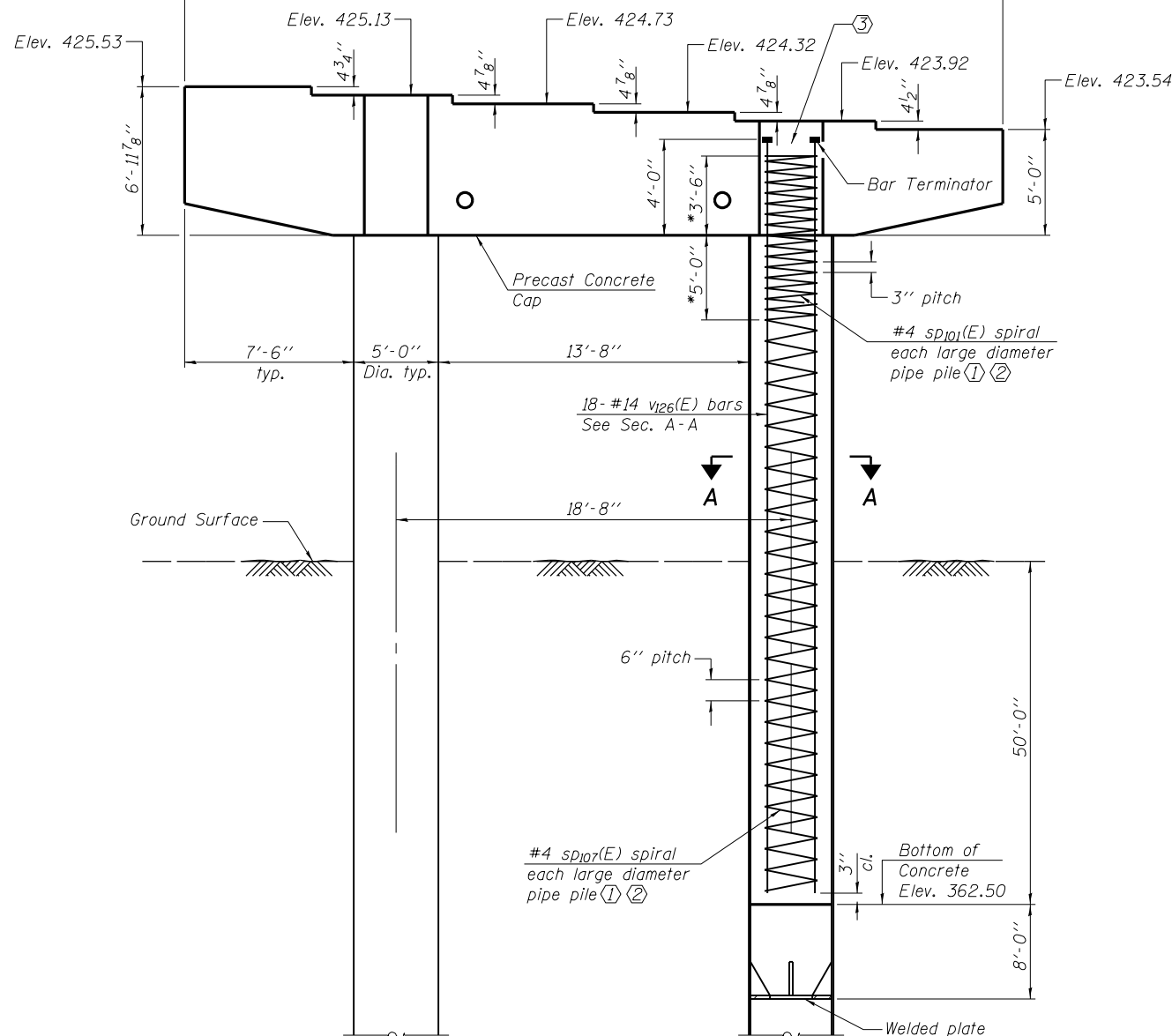
**ANCHOR BOLT LAYOUT**



**TOP PLAN**



**SECTION A-A**



**ELEVATION**  
(Looking Upstation)

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
** SP101(E)	2	#4	8'-6"	⌘
** SP107(E)	2	#4	50'-9"	⌘
1/2(E)	36	#14	59'-9"	—
Concrete Structures			Cu. Yd.	76.2
Precast Concrete Caps			Each	1
Reinforcement Bars, Epoxy Coated			Pound	18,390
Furnishing Metal Large Diameter Pipe Piles, 60" x 1.00"			Foot	196
Driving Large Diameter Pipe Piles			Foot	196
Pile Shoes, Large Diameter Pipe			Each	2
Bar Terminator			Each	36
High Strength Non-Shrink Grout			Cu. Ft.	144

\*\*Length is height of spiral.

**Notes:**

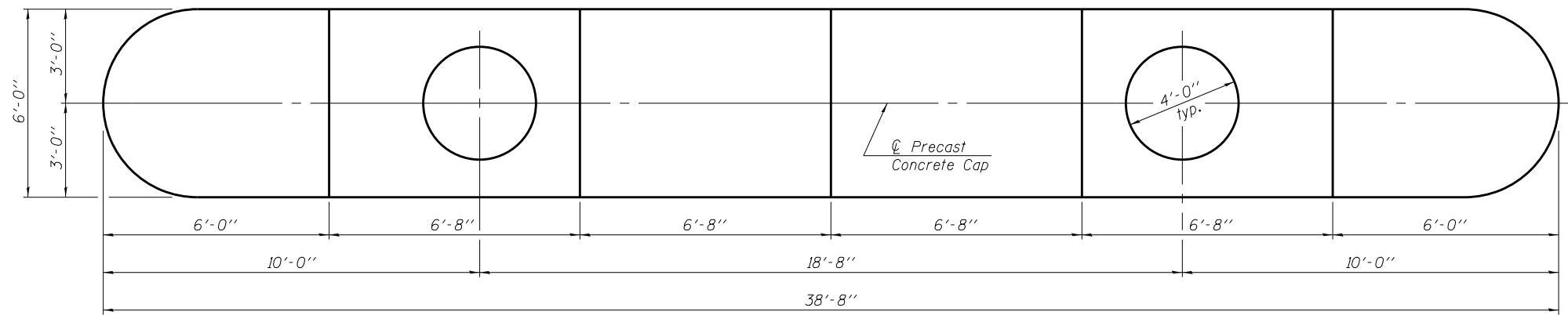
- Piles shall be driven through 6'-0" diameter precored holes extending to elevation 402.00 according to Article 512.09(c) of the Standard Specifications.
- For Precast Concrete Cap details, see sheet 68 of 97.
- For Large Diameter Pipe Pile details, see sheet 73 of 97.

- ① Provide 1/2 extra turns top and bottom. Shop weld together extra spiral turns bottom per AWS D1.4. Provide min. 4-#4 spacers or equivalent.
- ② Allowable substitution: Provide 1/2 extra turns top and bottom with 135° standard hook into core at ends of spiral.
- ③ Fill pocket in cap with High Strength Non-Shrink Grout after cap is set to its final position.

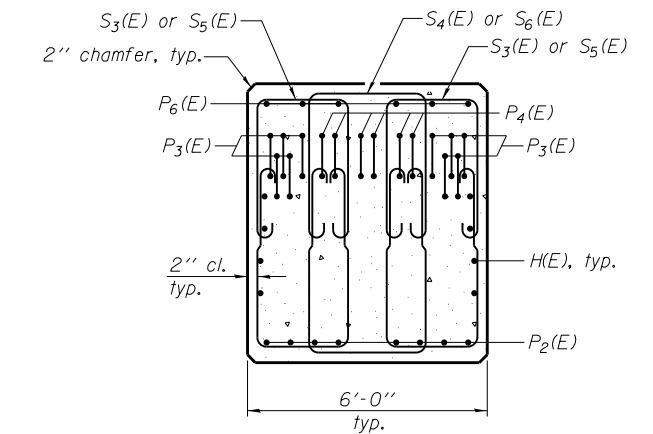
\* Splicing of reinforcement will not be allowed in this region.

**PILE DATA**

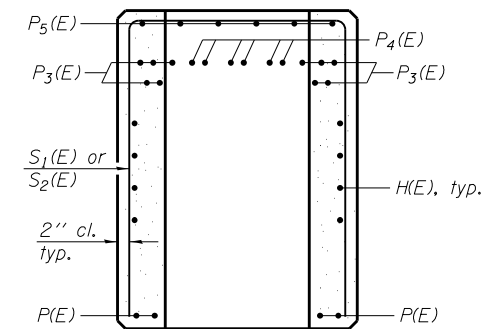
Type: Large Diameter Pipe Pile 60" x 1.00"  
 Nominal Required Bearing: 3,217 kips  
 Factored Resistance Available: 2,091 kips  
 Est. Length: 98 ft.  
 No. Production Piles: 2  
 No. Test Piles: 0



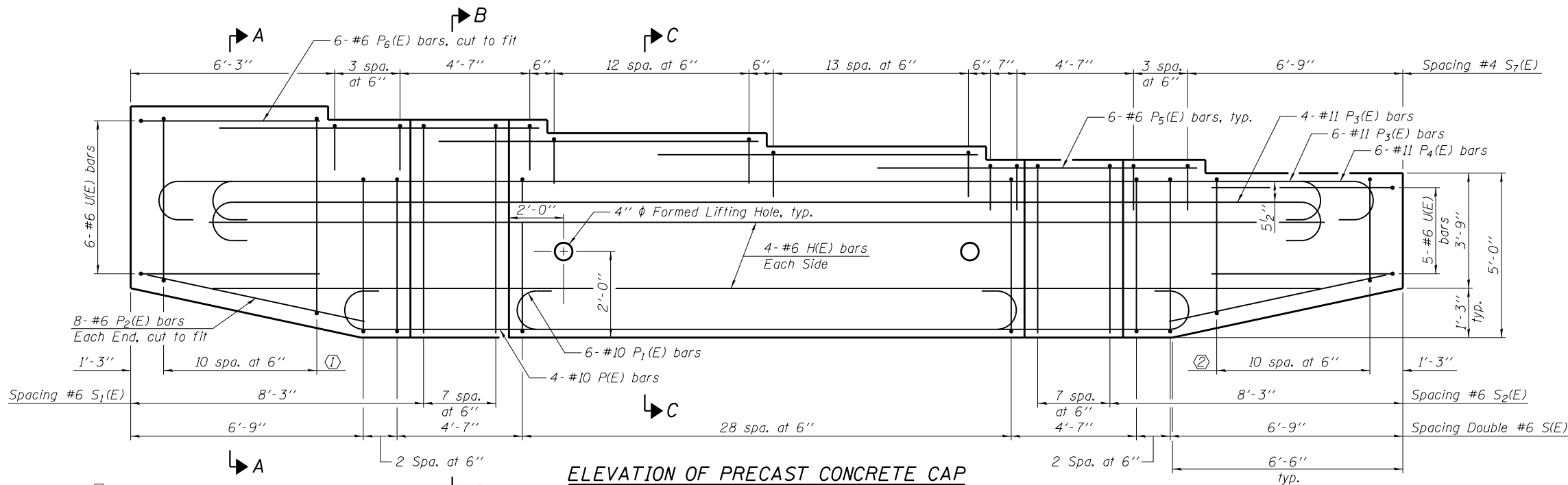
TOP PLAN OF PRECAST CONCRETE CAP



SECTION A-A

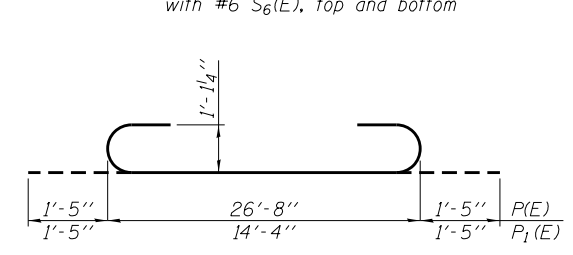


SECTION B-B

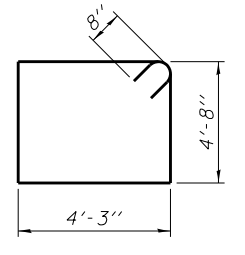


ELEVATION OF PRECAST CONCRETE CAP

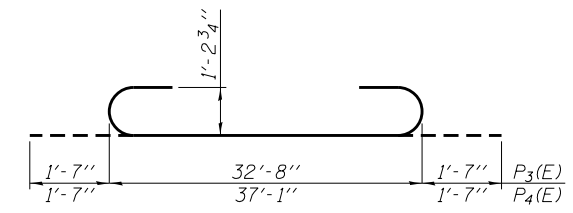
- ① Spacing double #6 S3(E) spaced with #6 S4(E), top and bottom
- ② Spacing double #6 S5(E) spaced with #6 S6(E), top and bottom



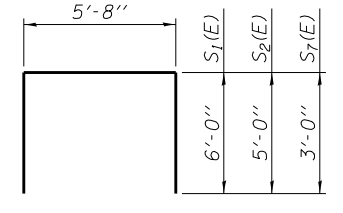
BARS P(E) & P1(E)



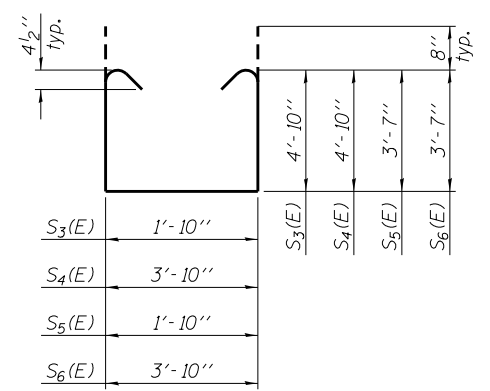
BAR S(E)



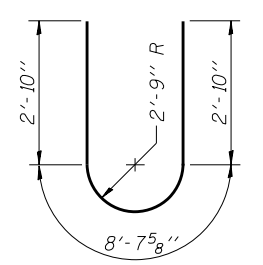
BARS P3(E) & P4(E)



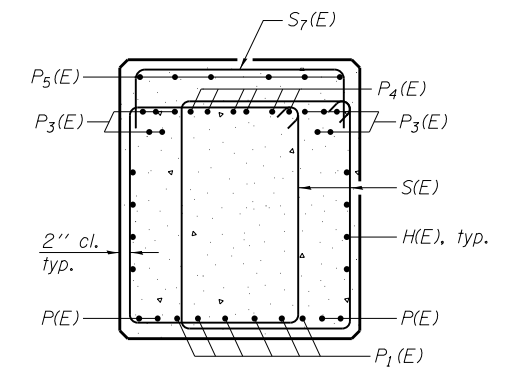
BARS S1(E), S2(E) & S7(E)



BAR S3(E) THRU S6(E)



BAR U(E)



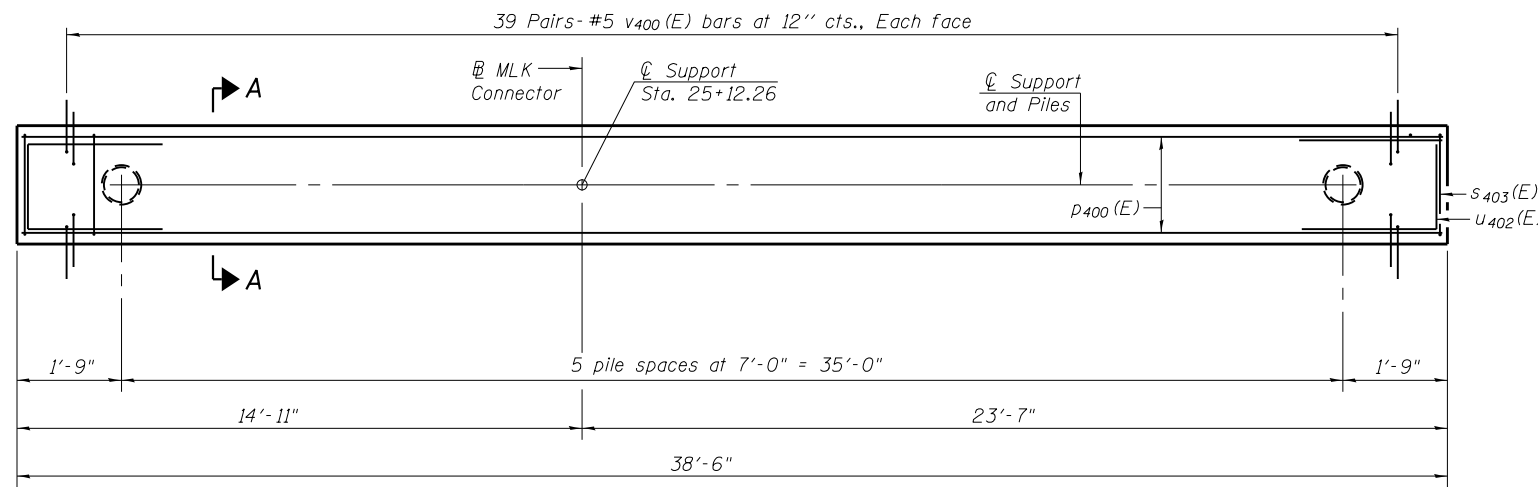
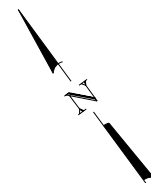
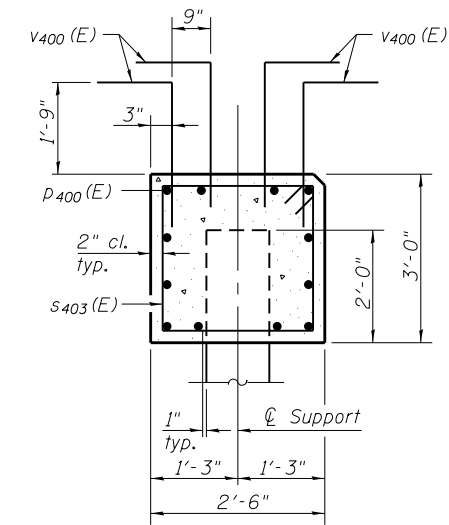
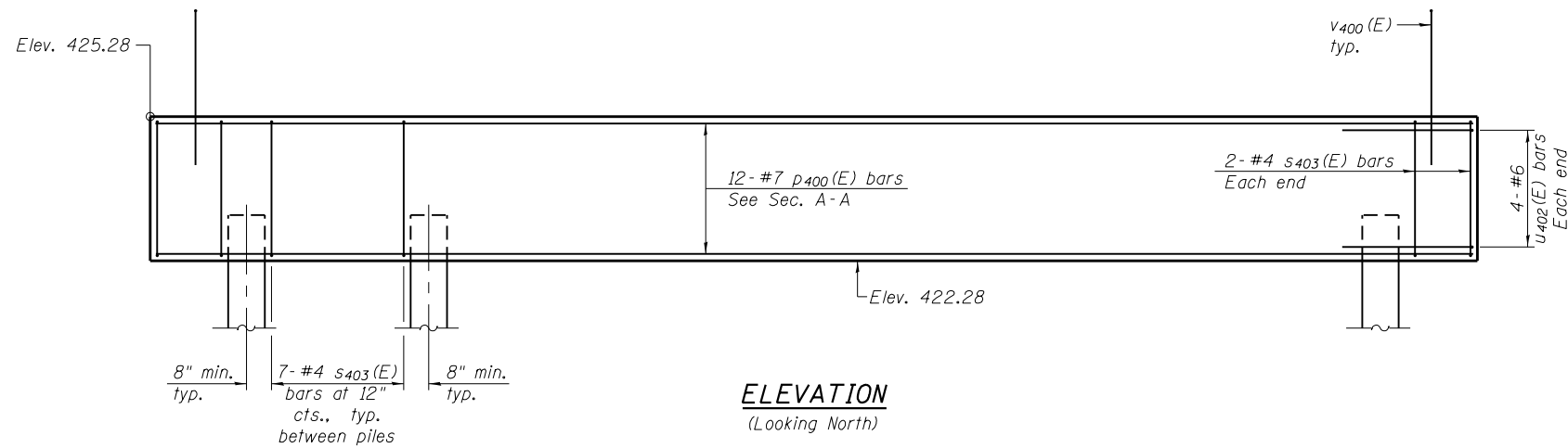
SECTION C-C

Notes:  
 For Anchor Bolt Layouts, see sheets 61 thru 67 of 97.  
 For step heights and beamseat elevations, see sheets 61 thru 67 of 97.  
 Cast steps monolithically with cap.  
 Space cap reinforcement to miss anchor bolts.  
 4"  $\phi$  formed lifting hole shall be filled with High Strength Non-Shrink Grout after cap is set in proper position.

\*\*\* BAR LIST  
 ONE CAP ONLY

Bar	No.	Size	Length	Shape
H(E)	8	#6	32'-8"	—
P(E)	4	#10	29'-6"	U
P1(E)	6	#10	17'-2"	U
P2(E)	16	#6	6'-8"	—
P3(E)	10	#11	35'-10"	U
P4(E)	6	#11	40'-3"	U
P5(E)	24	#6	11'-0"	—
P6(E)	6	#6	5'-8"	—
S(E)	70	#6	19'-2"	□
S1(E)	8	#6	17'-8"	□
S2(E)	8	#6	15'-8"	□
S3(E)	44	#6	12'-10"	□
S4(E)	22	#6	14'-10"	□
S5(E)	44	#6	10'-4"	□
S6(E)	22	#6	12'-4"	□
S7(E)	38	#4	11'-8"	□
U(E)	11	#6	14'-4"	U

\*\*\* For information only.



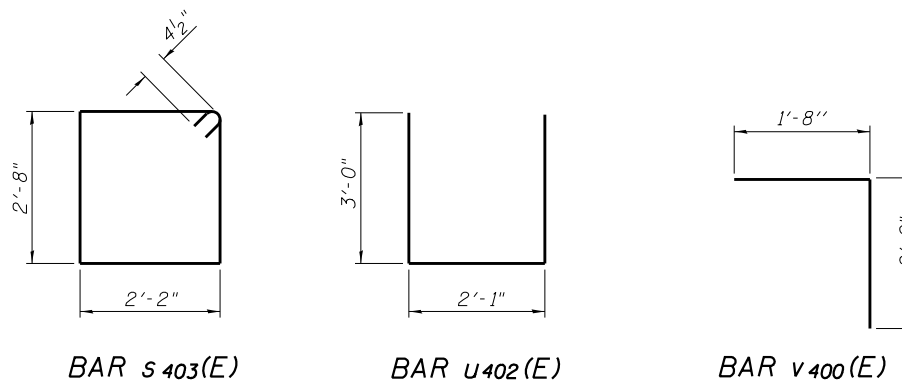
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
P400(E)	12	#7	38'-2"	—
S403(E)	39	#4	10'-5"	□
U402(E)	8	#6	8'-1"	⊔
V400(E)	156	#5	4'-5"	└
Structure Excavation		Cu. Yd.	30.7	
Concrete Structures		Cu. Yd.	10.7	
Reinforcement Bars, Epoxy Coated		Pound	2,030	
Furnishing Metal Shell Piles 14" x 0.250"		Foot	258	
Driving Piles		Foot	258	
Pile Shoes		Each	6	

See sheet 74 of 97 for details of piles.

**PILE DATA**

Type: Metal Shell Piles 14" x 0.250"  
 Nominal Required Bearing: 322 Kips  
 Factored Resistance Available: 193 Kips  
 Est. Length: 43'-0"  
 No. Production Piles: 6  
 No. Test Piles: 0



FILE NAME: S:\Pro\Jobs\12-0024-025\_MLK\_Connector\Bridges\0820349-7609-069-Approach\_Support1\_Details.dgn



USER NAME = bbovee	DESIGNED - BB	REVISED
Illinois Design Firm Number 184,001670	CHECKED - JD	REVISED
PLOT SCALE =	DRAWN - WS	REVISED
PLOT DATE = 8/7/2014	CHECKED - CJF	REVISED

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

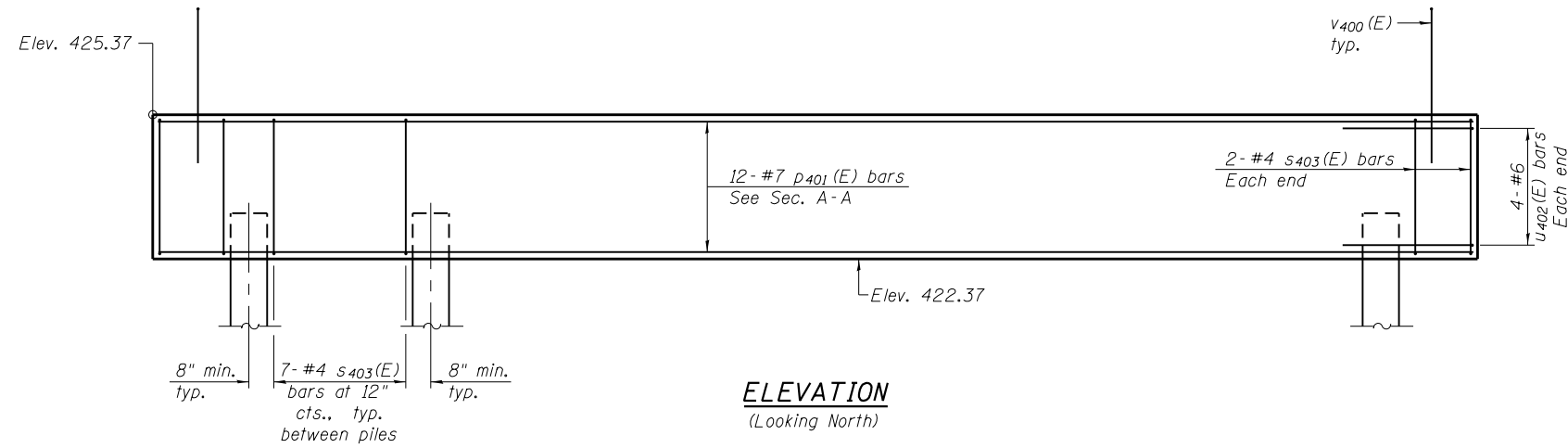
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**STRUCTURE NO. 082-0349**

SHEET NO. 69 OF 97 SHEETS

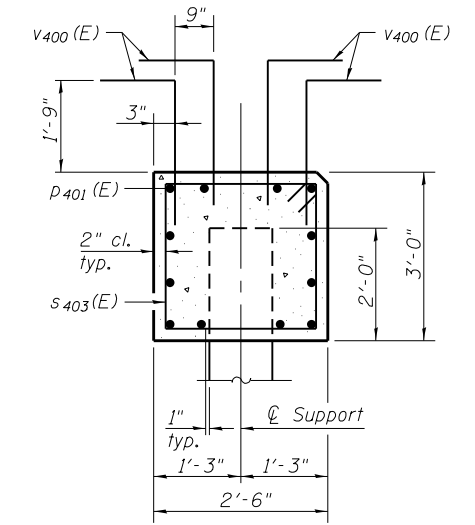
F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1,41B-1	ST. CLAIR	406	164
CONTRACT NO. 76G09				

ILLINOIS FED. AID PROJECT

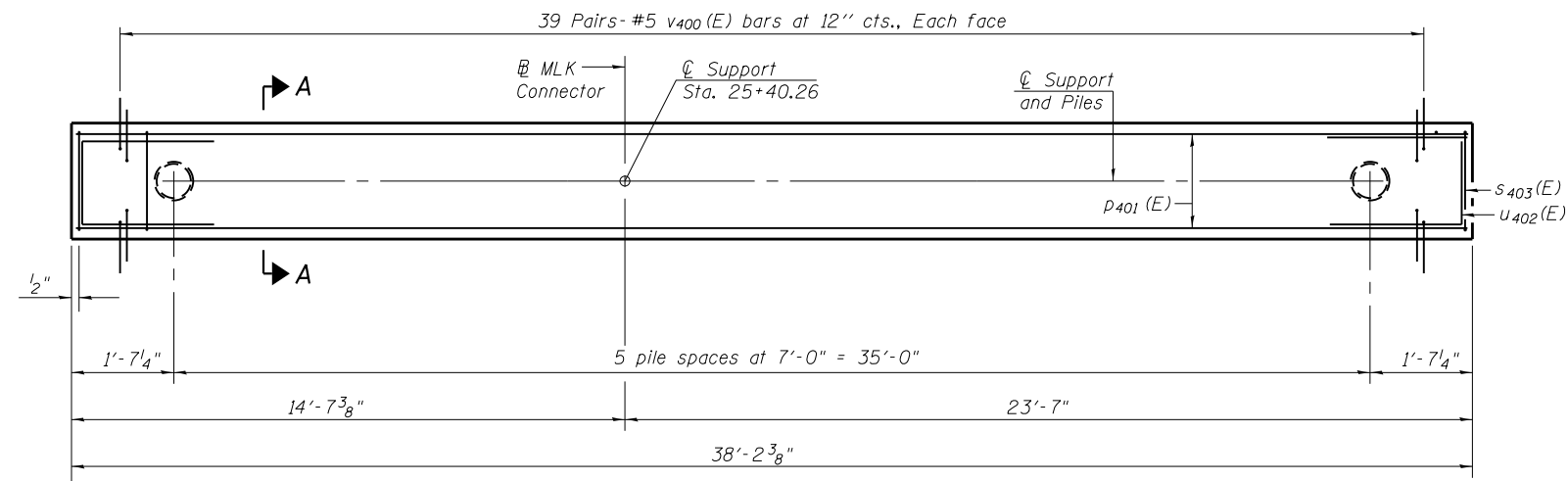




**ELEVATION**  
(Looking North)



**SECTION A-A**



**PLAN**

**PILE DATA**

Type: Metal Shell Piles 14" x 0.250"  
 Nominal Required Bearing: 322 Kips  
 Factored Resistance Available: 193 Kips  
 Est. Length: 43'-0"  
 No. Production Piles: 6  
 No. Test Piles: 0

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
P401 (E)	12	#7	37'-10"	—
S403 (E)	39	#4	10'-5"	□
U402 (E)	8	#6	8'-1"	U
V400 (E)	156	#5	4'-5"	L
Structure Excavation			Cu. Yd.	30.5
Concrete Structures			Cu. Yd.	10.6
Reinforcement Bars, Epoxy Coated			Pound	2,020
Furnishing Metal Shell Piles 14" x 0.250"			Foot	258
Driving Piles			Foot	258
Pile Shoes			Each	6

See sheet 74 of 97 for details of piles,  
 See sheet 69 of 97 for Bar Bend Details.

FILE NAME: S:\Pro\Jobs\412-0024-025 MLK Connector\Bridges\Sign\0820349-7609-070-Approach Support 2 Details.dgn



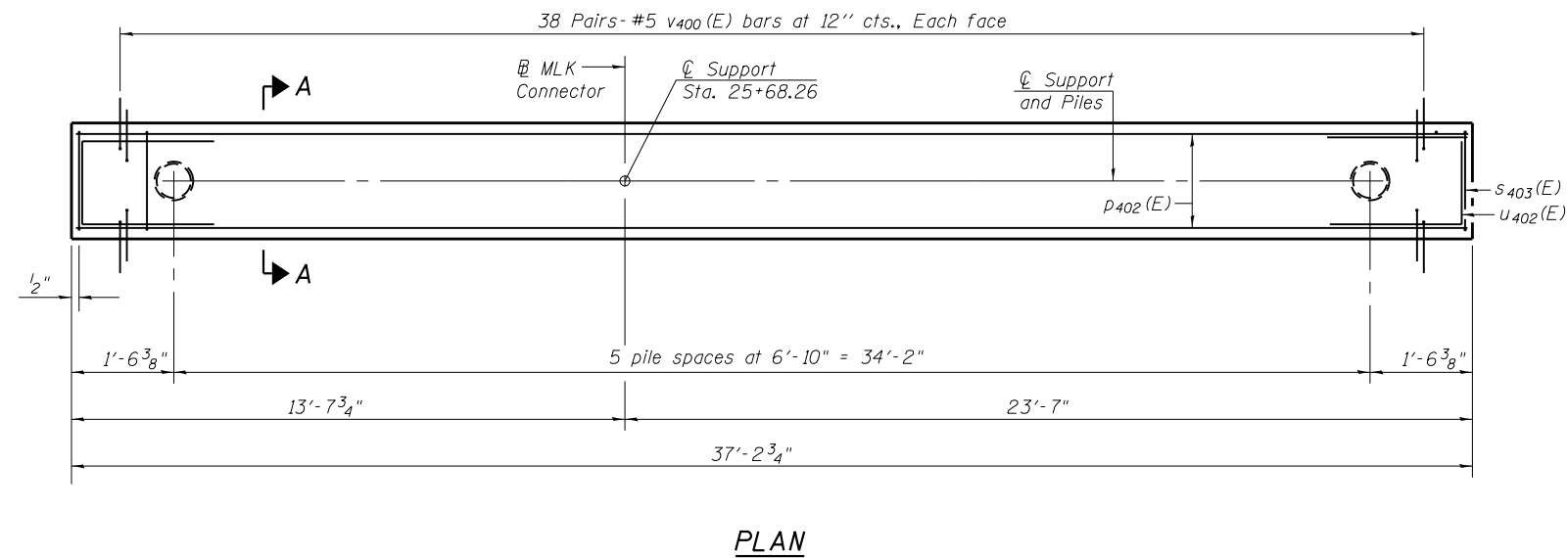
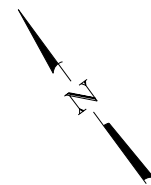
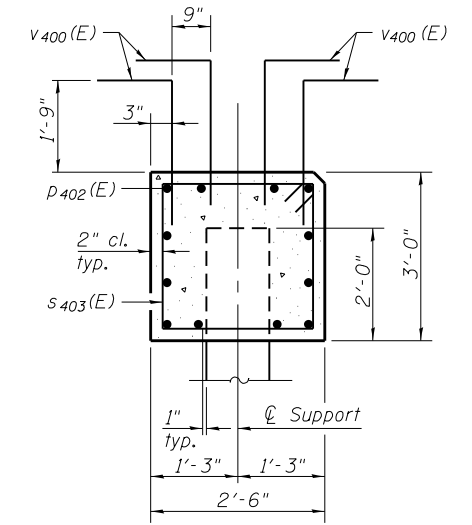
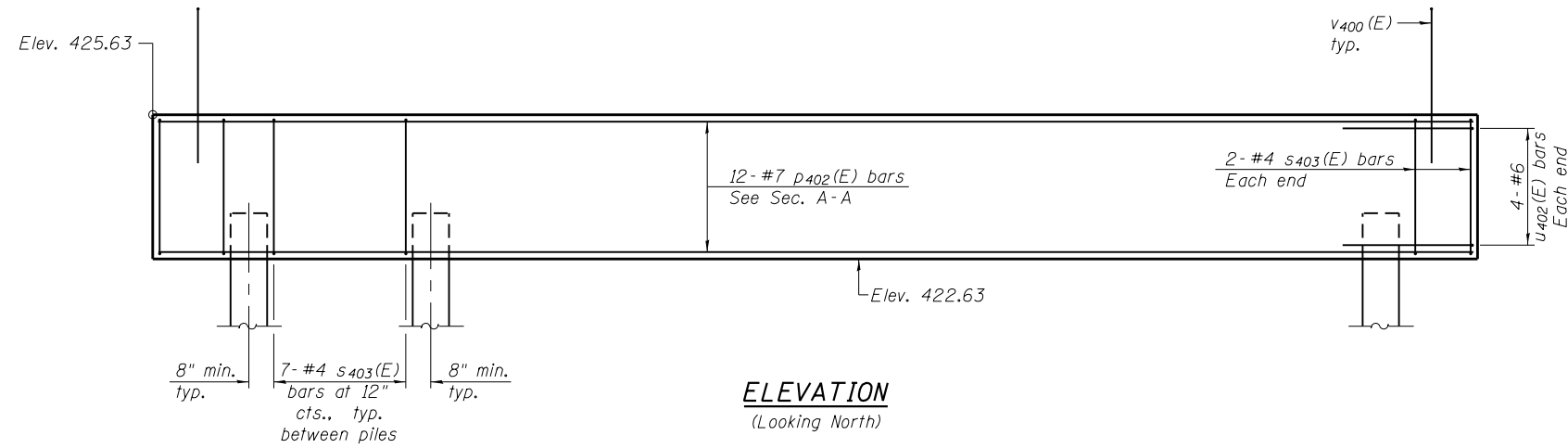
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Illinois Design Firm Number 184.001670	CHECKED - JD	REVISED
PLOT SCALE =	DRAWN - WS	REVISED
PLOT DATE = 8/7/2014	CHECKED - CJF	REVISED

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**APPROACH SUPPORT 2 DETAILS**  
**STRUCTURE NO. 082-0349**

SHEET NO. 70 OF 97 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1,41B-1	ST. CLAIR	406	165
CONTRACT NO. 76G09			ILLINOIS FED. AID PROJECT	



**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
P402(E)	12	#7	36'-10"	—
S403(E)	39	#4	10'-5"	□
U402(E)	8	#6	8'-1"	U
V400(E)	152	#5	4'-5"	└
Structure Excavation		Cu. Yd.	29.8	
Concrete Structures		Cu. Yd.	10.3	
Reinforcement Bars, Epoxy Coated		Pound	1,980	
Furnishing Metal Shell Piles 14" x 0.250"		Foot	261	
Driving Piles		Foot	261	
Pile Shoes		Each	6	

See sheet 74 of 97 for details of piles,  
See sheet 69 of 97 for Bar Bend Details.

**PILE DATA**

Type: Metal Shell Piles 14" x 0.250"  
Nominal Required Bearing: 322 Kips  
Factored Resistance Available: 193 Kips  
Est. Length: 43'-6"  
No. Production Piles: 6  
No. Test Piles: 0

FILE NAME: S:\Pro\Jobs\412-0024-025 MLK Connector\Bridges\0820349-7609-07-Approach Support 3 Details.dgn



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Illinois Design Firm Number 184,001670  
PLOT SCALE =  
PLOT DATE = 8/7/2014

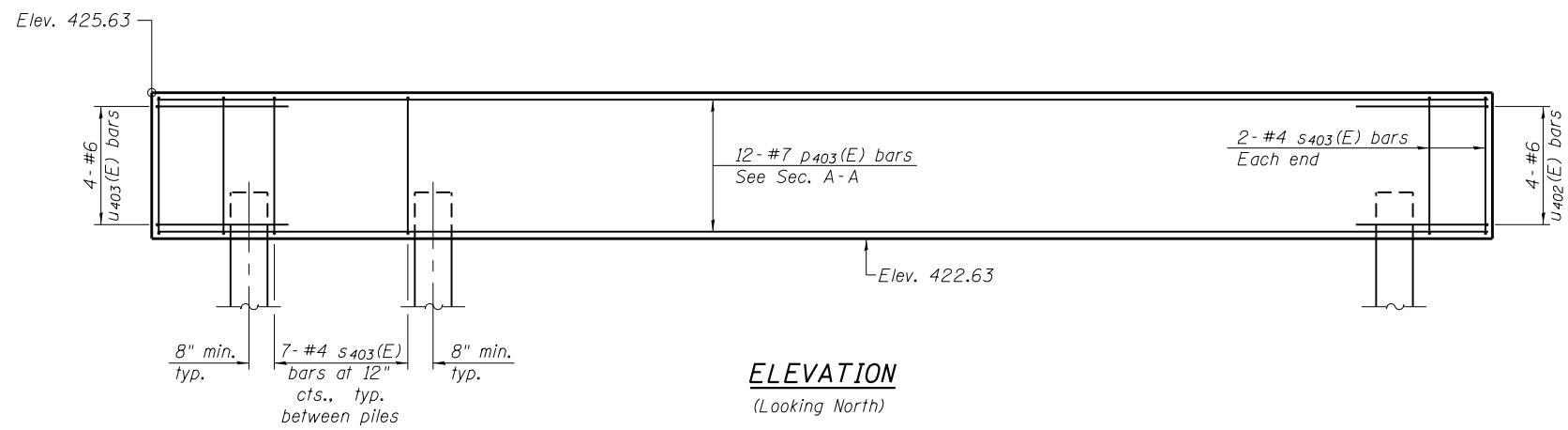
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CHECKED - JD  
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REVISED  
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REVISED  
REVISED

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

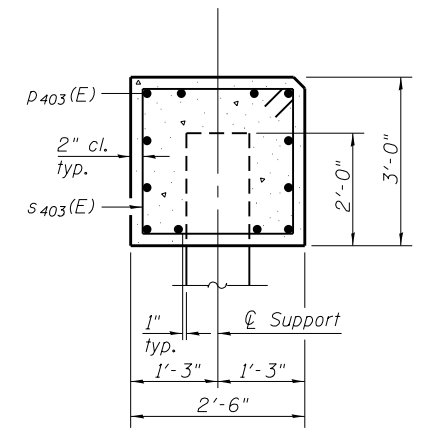
APPROACH SUPPORT 3 DETAILS  
STRUCTURE NO. 082-0349

SHEET NO. 71 OF 97 SHEETS

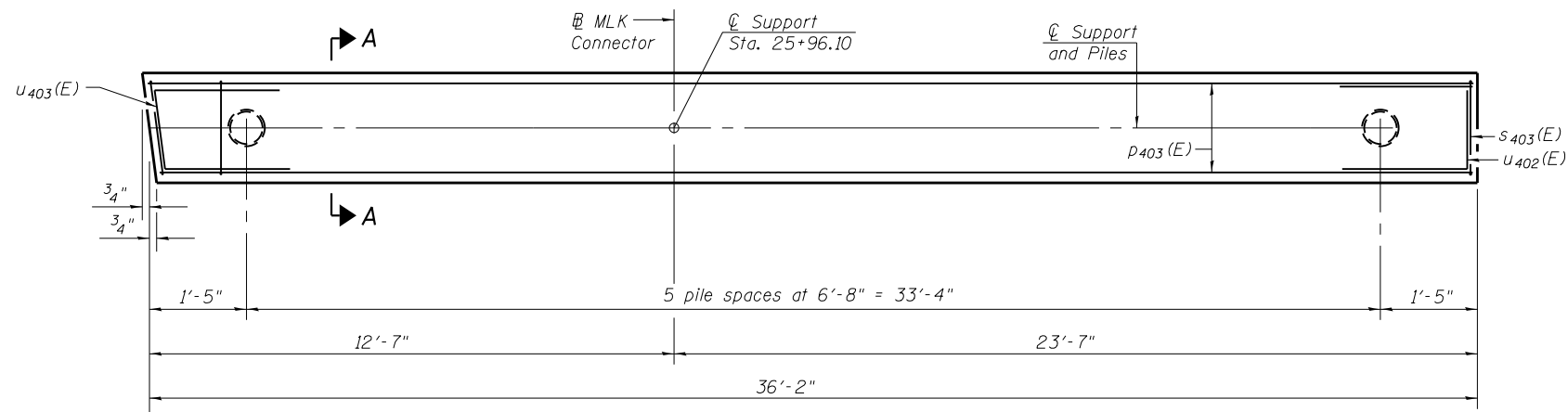
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1,41B-1	ST. CLAIR	406	166
CONTRACT NO. 76G09			ILLINOIS FED. AID PROJECT	



**ELEVATION**  
(Looking North)



**SECTION A-A**



**PLAN**

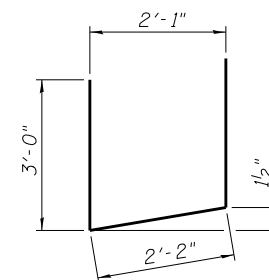
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
P403(E)	12	#7	35'-10"	—
S403(E)	39	#4	10'-5"	□
U402(E)	4	#6	8'-1"	⊂
U403(E)	4	#6	8'-2"	⊂
Structure Excavation		Cu. Yd.	29.1	
Concrete Structures		Cu. Yd.	10.1	
Reinforcement Bars, Epoxy Coated		Pound	1,250	
Furnishing Metal Shell Piles 14" x 0.250"		Foot	261	
Driving Piles		Foot	261	
Pile Shoes		Each	6	

See sheet 74 of 97 for details of piles.  
See sheet 69 of 97 for Add'l. Bar Bend Details.

**PILE DATA**

Type: Metal Shell Piles 14" x 0.250"  
Nominal Required Bearing: 322 Kips  
Factored Resistance Available: 193 Kips  
Est. Length: 43'-6"  
No. Production Piles: 6  
No. Test Piles: 0



**BAR U403(E)**

FILE NAME: S:\Pro\Jobs\412-0024-025 MLK Connector\Bridges\0820349-7609-07E-Approach Support 4 Details.dgn



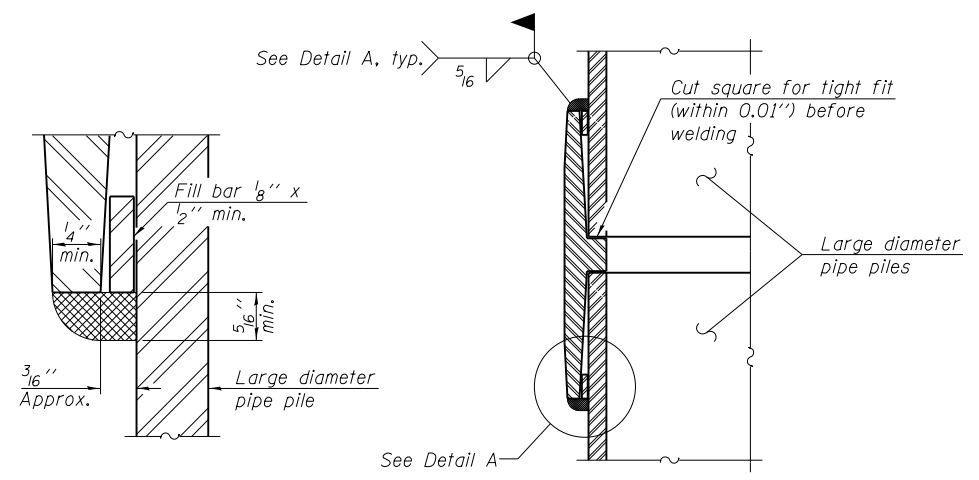
USER NAME = bbovee	DESIGNED - BB	REVISED
Illinois Design Firm Number 184.001670	CHECKED - JD	REVISED
PLOT SCALE =	DRAWN - WS	REVISED
PLOT DATE = 8/7/2014	CHECKED - CJF	REVISED

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**APPROACH SUPPORT 4 DETAILS  
STRUCTURE NO. 082-0349**

SHEET NO. 72 OF 97 SHEETS

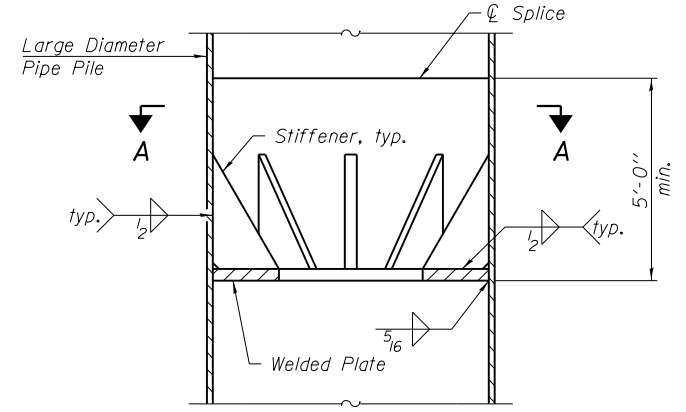
F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-1,41B-1	ST. CLAIR	406	167
CONTRACT NO. 76G09				
ILLINOIS FED. AID PROJECT				



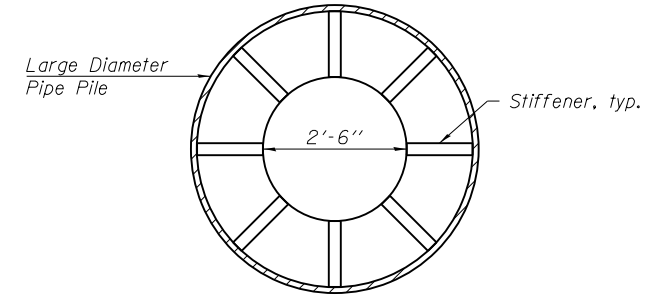
**DETAIL A**

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.

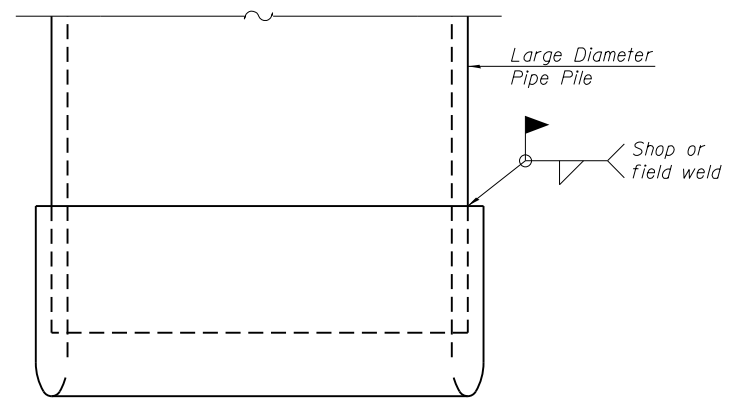
**WELDED COMMERCIAL SPLICE**



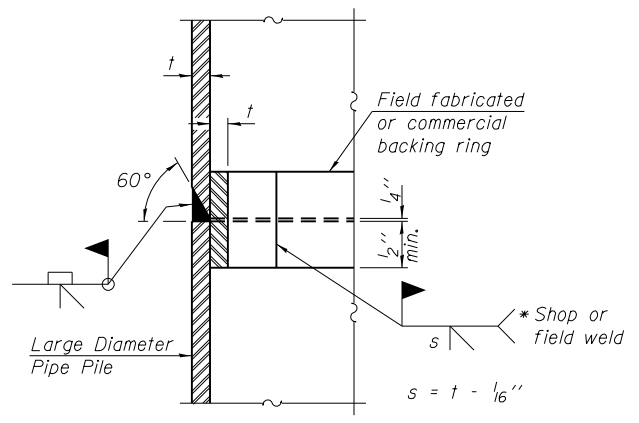
**SECTION THRU LARGE DIAMETER PIPE PILE AT WELDED PLATE**



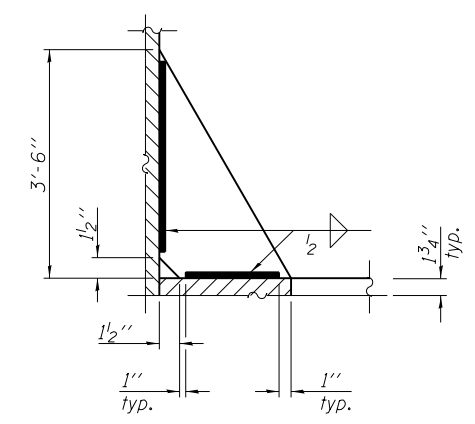
**SECTION A-A**



**LARGE DIAMETER PIPE PILE SHOE ATTACHMENT**  
 (See Note A)



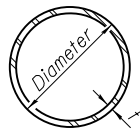
**COMPLETE PENETRATION WELD SPLICE**  
 \* Field fabricated backing ring may be made from pipe pile by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.



**STIFFENER DETAIL**

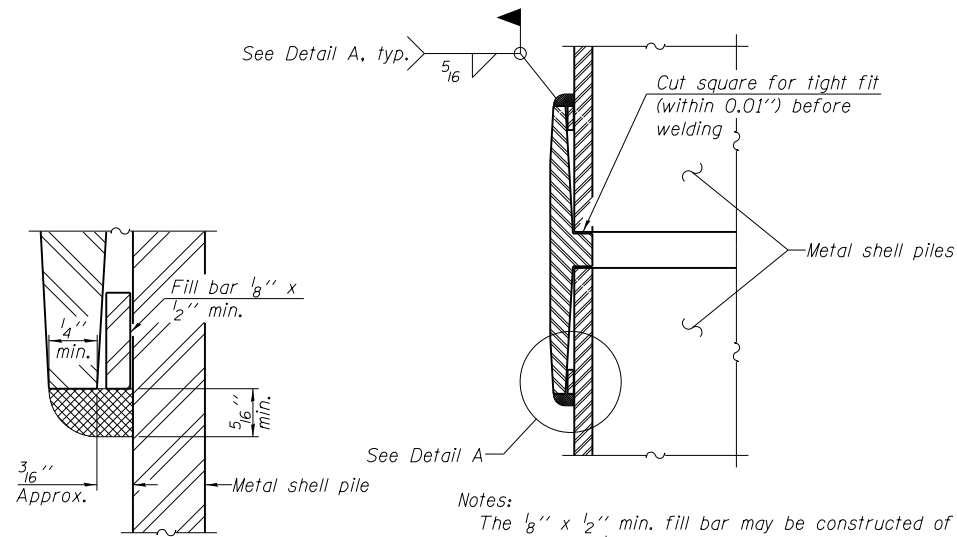
Note A:  
 When called for on the plans, the Contractor shall furnish large diameter pipe pile shoes consisting of a single piece open ended cutting shoe as shown. The pile shoes shall be cast in one piece steel according to either ASTM A 148 Grade 90-60 or AASHTO M 103 Grade 65-35 and shall provide full bearing over the full circumference of the large diameter pipe 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.

Notes:  
 The large diameter pipe piles shall be according to ASTM A252 Grade 3.  
 Steel for welded plate and stiffeners shall be according to AASHTO M270 Grade 50.



**METAL SHELL PILE TABLE**

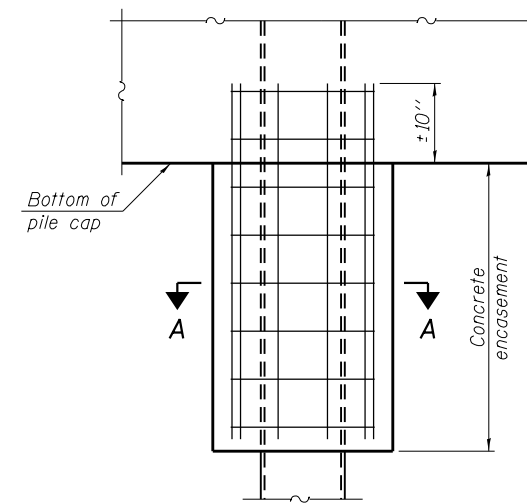
Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd. <sup>3</sup> /ft.)
PP12	0.179"	22.60	0.0274
PP12	0.250"	31.37	0.0267
PP14	0.250"	36.71	0.0368
PP14	0.312"	45.61	0.0361



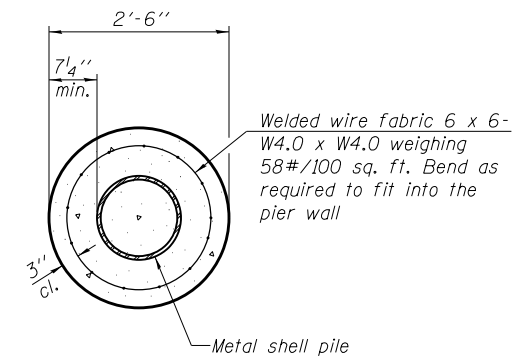
**DETAIL A**

**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.

**WELDED COMMERCIAL SPLICE**



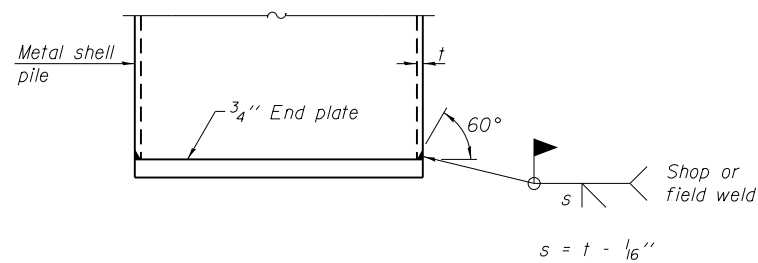
**ELEVATION**



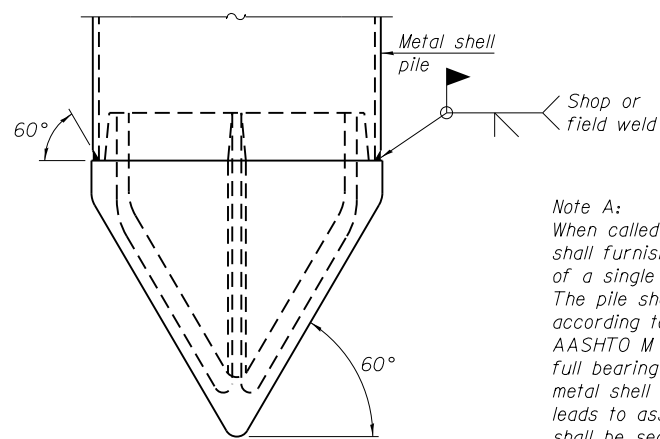
**SECTION A-A**

**Note:**  
 Forms for encasement may be omitted when soil conditions permit.

**CONCRETE ENCASEMENT AT PIERS**



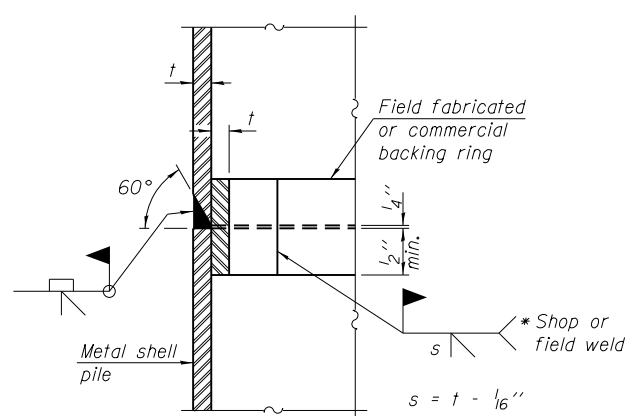
**END PLATE ATTACHMENT**



**METAL SHELL PILE SHOE ATTACHMENT**

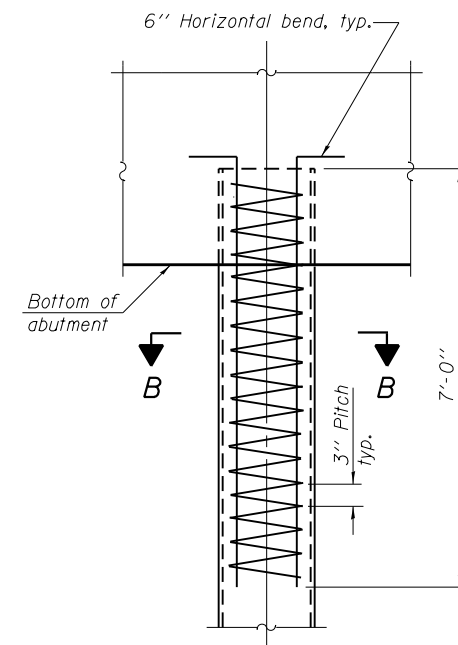
(See Note A)

**Note A:**  
 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 90-60 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.



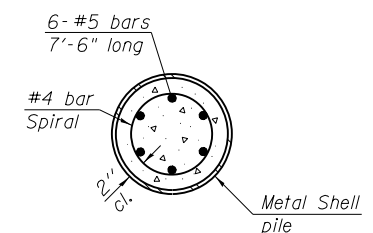
**COMPLETE PENETRATION WELD SPLICE**

\* 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**

**METAL SHELL REINFORCEMENT AT ABUTMENTS**



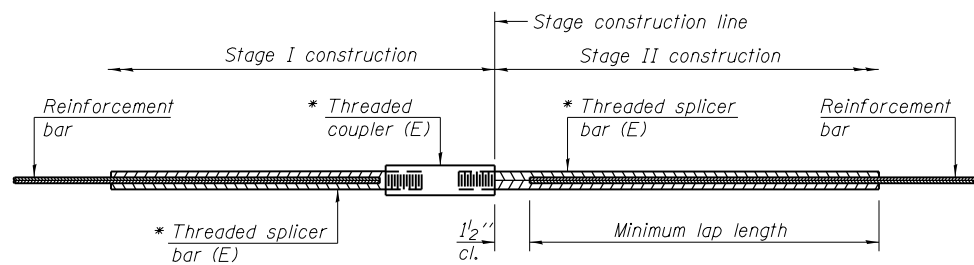
**SECTION B-B**

**Note:**  
 The metal shell piles shall be according to ASTM A 252 Grade 3.

F-MS 1-27-12

FILE NAME = X:\1309400-MLK\Cad\5\082034-76009.dgn	DESIGNED - E.M. Lagemann	REVISED	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>METAL SHELL PILE DETAILS</b> <b>STRUCTURE NO. 082-0349</b>	F.A.I. RE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
USER NAME = elagemann	CHECKED - T.S. Friederich	REVISED			64	82-1,41B-1	ST. CLAIR	406	169
PLOT SCALE =	DRAWN - C.A. Buettner	REVISED			CONTRACT NO. 76G09				
PLOT DATE = 8/7/2014	CHECKED - K.L. Hayes	REVISED			ILLINOIS FED. AID PROJECT				





**STANDARD BAR SPLICER ASSEMBLY**

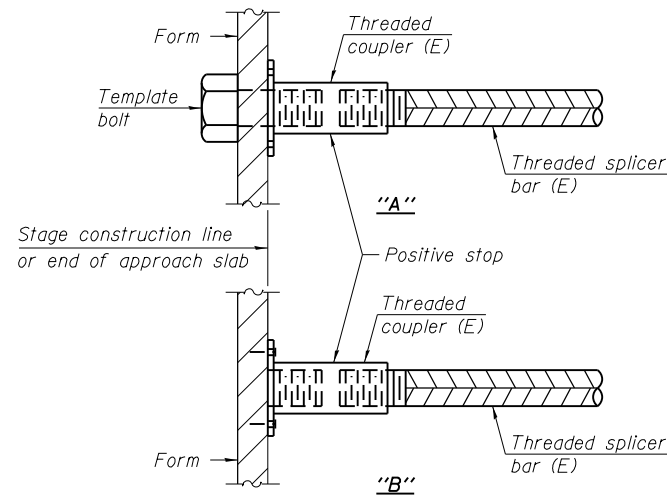
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"	6'-5"	6'-10"	7'-9"	8'-7"	9'-8"

- Table 1: Black bar, 0.8 Class C
- Table 2: Black bar, Top bar lap, 0.8 Class C
- Table 3: Epoxy bar, 0.8 Class C
- Table 4: Epoxy bar, Top bar lap, 0.8 Class C
- Table 5: Epoxy bar, Class C
- Table 6: Epoxy bar, Top bar top, Class C

Threaded splicer bar length = min. lap length + 1/2" + thread length

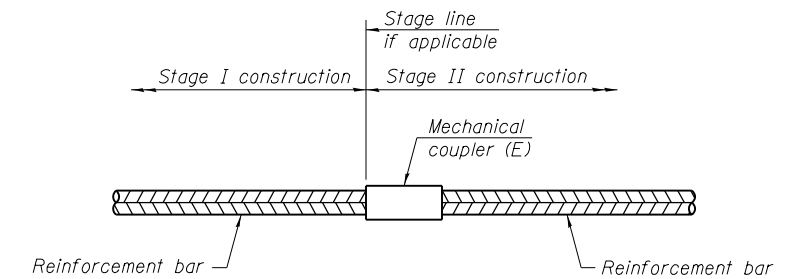
\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length



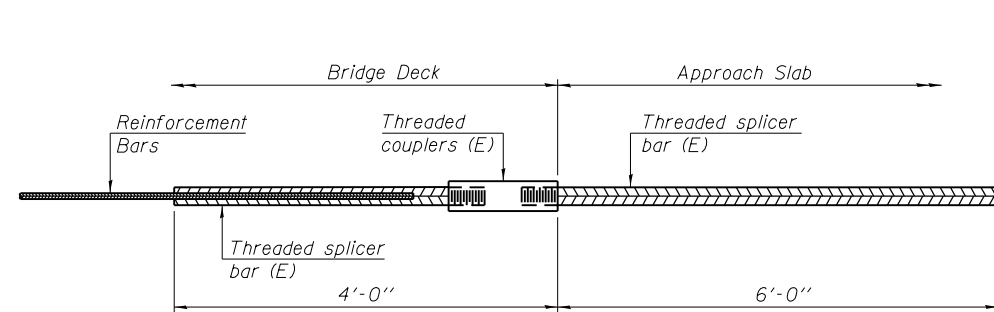
**INSTALLATION AND SETTING METHODS**

"A" : Set bar splicer assembly by means of a template bolt.  
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.  
 (E) : Indicates epoxy coating.



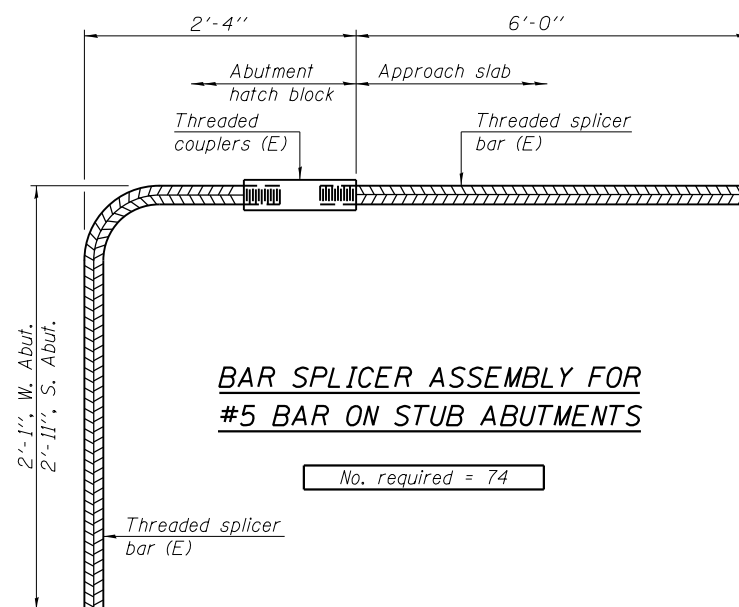
**STANDARD MECHANICAL SPLICER**

Location	Bar size	No. assemblies required
Pier 1	#11	26
Pier 1	#14	36
Pier 2	#14	36
Pier 3	#11	40
Pier 3	#14	36
Pier 4	#11	40
Pier 4	#14	36
Pier 5	#14	36



**BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS**

No. required =



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

No. required = 74

**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.

BSD-1 1-27-12



Illinois Department of Transportation

Division of Highways  
SCI Engineering, Inc.

SOIL BORING LOG

Date 8/29-9/2/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (CNC/JS)

SECTION 82-(1,4)B-1 LOCATION Proposed West Abutment, SEC. 14, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD Mobile B57 with HSA HAMMER TYPE Automatic

Table with columns for STRUCT. NO., BORING NO., Station, Offset, Ground Surface Elev., and soil properties (DEPTH, BULGE, UCS, MOISTURE).

Main soil log table with columns for depth (ft), soil description, and soil properties (DEPTH, BULGE, UCS, MOISTURE).

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



Illinois Department of Transportation

Division of Highways  
SCI Engineering, Inc.

SOIL BORING LOG

Date 8/29-9/2/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (CNC/JS)

SECTION 82-(1,4)B-1 LOCATION Proposed West Abutment, SEC. 14, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD Mobile B57 with HSA HAMMER TYPE Automatic

Table with columns for STRUCT. NO., BORING NO., Station, Offset, Ground Surface Elev., and soil properties (DEPTH, BULGE, UCS, MOISTURE).

Main soil log table with columns for depth (ft), soil description, and soil properties (DEPTH, BULGE, UCS, MOISTURE).

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



**Illinois Department of Transportation**  
Division of Highways  
SCI Engineering, Inc.

# SOIL BORING LOG

Date 8/29-9/2/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SC1 (CNC/JS)

SECTION 82-(1,4)B-1 LOCATION Proposed West Abutment, SEC. 14, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD Mobile B57 with HSA HAMMER TYPE Automatic

STRUCT. NO. 082-0349 D E P T H S Qu T Surface Water Elev. -- ft D E P T H S Qu T  
 Station 20+09.00 Stream Bed Elev. -- ft  
 BORING NO. BB-1 Groundwater Elev.: First Encounter 396.0 ft ▼  
 Station 15+47.87 Upon Completion N/A ft  
 Offset 25 ft RT After N/A Hrs. N/A ft  
 Ground Surface Elev. 416.0 ft (ft) (1/6") (tsf) (%) (ft) (1/6") (tsf) (%)

A-1-b	SAND: Gray, fine to coarse, trace gravel, A-1 (continued)				311.5	37	NC
	6						
With gravel	GRAVEL: With fine to coarse sand, A-1				-105	36	NC
	6						
Trace gravel	SAND: Gray, fine to coarse, trace gravel, A-1				-110	31	NC
	20						
SAND: Gray, fine, A-3	Rough drilling observed from 108.5 to 118.3 ft.				-115	28	NC
	25						
LIMESTONE	With rock fragments				-120	50/3"	NC
	40						
	SAND: Gray, fine, A-3				-120	50/0"	
18							
	LIMESTONE				-120	50/0"	
20							
	SAND: Gray, fine, A-3				-120	50/0"	
27							
	LIMESTONE				-120	50/0"	
31							
	SAND: Gray, fine, A-3				-120	50/0"	
35							
	LIMESTONE				-120	50/0"	
30							

Boring terminated at 120.0 ft.  
Boring grouted to 120 ft.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



**Illinois Department of Transportation**  
Division of Highways  
SCI Engineering, Inc.

# SOIL BORING LOG

Date 09/02/13

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SC1 (CNC/JS)

SECTION 82-(1,4)B-1 LOCATION Proposed West Abutment, SEC. 14, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD Mobile B57 with HSA, Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 082-0349 D E P T H S Qu T Surface Water Elev. -- ft D E P T H S Qu T  
 Station 20+09.00 Stream Bed Elev. -- ft  
 BORING NO. BB-1A Groundwater Elev.: First Encounter None ft  
 Station 15+47 Upon Completion None ft  
 Offset 25 ft RT After N/A Hrs. N/A ft  
 Ground Surface Elev. 416.0 ft (ft) (1/6") (tsf) (%) (ft) (1/6") (tsf) (%)

No soil sampling performed 0-10 ft.	FILL: Brown and gray, sandy clay loam, with cinders, A-4				-10	ST	0.4	25
CLAY: Gray, A-7	UU Compression test w/10psi conf. pressure				-15			42
Boring terminated at 12.0 ft. Boring grouted to 12 ft.	CLAY: Gray, A-7				-20			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)





Illinois Department of Transportation

Division of Highways  
SCI Engineering, Inc.

SOIL BORING LOG

Date 9/4-5/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 14, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD Mobile B57 with HSA, Mud Rotary HAMMER TYPE Automatic

Table with columns for STRUCT. NO., BORING NO., Station, Offset, Ground Surface Elev., and soil properties (DEPTH, BLOW COUNT, UCS, etc.)

Main soil log table with columns for soil description, depth, blow count, UCS, and moisture content. Includes entries like 'CLAY: Gray, A-7', 'SANDY LOAM: Gray, A-2', etc.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



Illinois Department of Transportation

Division of Highways  
SCI Engineering, Inc.

SOIL BORING LOG

Date 9/4-5/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 14, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD Mobile B57 with HSA, Mud Rotary HAMMER TYPE Automatic

Table with columns for STRUCT. NO., BORING NO., Station, Offset, Ground Surface Elev., and soil properties (DEPTH, BLOW COUNT, UCS, etc.)

Main soil log table with columns for soil description, depth, blow count, UCS, and moisture content. Includes entries like 'SAND: Gray, fine, A-2', 'SANDY LOAM: Gray, A-2', etc.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)







Illinois Department of Transportation

Division of Highways  
SCI Engineering, Inc.

SOIL BORING LOG

Date 9/12-16/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (CLM/CNC)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD Mobile B57 with HSA, Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 082-0349 Station 20+09.00 BORING NO. BB-3 Station 17+90.82 Offset 16 ft RT Ground Surface Elev. 419.6 ft

Table with columns for Depth (ft), Blows (blows/ft), UCS (tsf), Moisture (%), and Soil Description. Includes data for SAND: Gray, fine, trace gravel, A-3 and SAND: Gray, fine to coarse, trace gravel, A-1.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



Illinois Department of Transportation

Division of Highways  
SCI Engineering, Inc.

SOIL BORING LOG

Date 9/12-16/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (CLM/CNC)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD Mobile B57 with HSA, Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 082-0349 Station 20+09.00 BORING NO. BB-3 Station 17+90.82 Offset 16 ft RT Ground Surface Elev. 419.6 ft

Table with columns for Depth (ft), Blows (blows/ft), UCS (tsf), Moisture (%), and Soil Description. Includes data for SAND: Gray, fine to coarse, trace gravel, A-1 and Trace coal, with coarse gravel.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)





Illinois Department of Transportation

Division of Highways  
SCI Engineering, Inc.

SOIL BORING LOG

Date 9/6-9/11/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (CLM/ART)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD Mobile B57 with HSA, Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 082-0349 Station 20+09.00 BORING NO. BB-3.5 Station 19+04.08 Offset 25 ft RT Ground Surface Elev. 417.2 ft

Table with columns for Depth (ft), Blows (blows/ft), UCS (tsf), Moisture (%), and Soil Description. Includes entries for CRUSHED ROCK, Trace crushed rock, FILL: Brownish gray, silty loam, FILL: Brown, clay, trace gravel, FILL: Brown, sand, trace clay, FILL: Black and gray, cinders, slag, trace crushed rock, With clay layers, Broken concrete, and FILL: Brown and gray, silty clay loam.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



Illinois Department of Transportation

Division of Highways  
SCI Engineering, Inc.

SOIL BORING LOG

Date 9/6-9/11/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (CLM/ART)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD Mobile B57 with HSA, Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 082-0349 Station 20+09.00 BORING NO. BB-3.5 Station 19+04.08 Offset 25 ft RT Ground Surface Elev. 417.2 ft

Table with columns for Depth (ft), Blows (blows/ft), UCS (tsf), Moisture (%), and Soil Description. Includes entries for SAND: Gray, fine to coarse, trace gravel, A-3, SAND: Gray, fine, A-3, SAND: Gray, fine to coarse, trace gravel, A-1-b, SAND: Gray, fine to coarse, trace gravel, A-1, and SAND: Gray, fine to coarse, trace gravel, A-1.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)





**Illinois Department of Transportation**  
Division of Highways  
SCI Engineering, Inc.

# ROCK CORE LOG

Date 9/6-9/11/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (CLM/ART)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair CORING METHOD Solid Rods with Double Barrel

STRUCT. NO. 082-0349 CORING BARREL TYPE & SIZE NX  
Station 20+09.00

BORING NO. BB-3.5 Core Diameter 2 in  
Station 19+04.08 Top of Rock Elev. 296.2 ft  
Offset 25 ft RT Begin Core Elev. 295.7 ft  
Ground Surface Elev. 417.2 ft

Description	DEPTH (ft)	CORRE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)	MOISTURE (%)
LIMESTONE: Light gray, hard, slightly weathered, medium to thickly bedded Occasional chert nodules	295.7	1	100	95	6.3		
6 inch near vertical joint - open No chert nodules 1/2 inch argillaceous layer 6 inch near vertical joint - resealed	-125					734.0	
8 inch near vertical joint - open Becomes thickly bedded Occasional clay stringers	-135	2	98	96	5		
4 inch near vertical joint - resealed	-140						

Cores will be stored for examination until \_\_\_\_\_ Color pictures of the cores  Yes  
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)  
BBS, form 138 (Rev. 11-2013)



**Illinois Department of Transportation**  
Division of Highways  
SCI Engineering, Inc.

# ROCK CORE LOG

Date 9/6-9/11/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (CLM/ART)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair CORING METHOD Solid Rods with Double Barrel

STRUCT. NO. 082-0349 CORING BARREL TYPE & SIZE NX  
Station 20+09.00

BORING NO. BB-3.5 Core Diameter 2 in  
Station 19+04.08 Top of Rock Elev. 296.2 ft  
Offset 25 ft RT Begin Core Elev. 295.7 ft  
Ground Surface Elev. 417.2 ft

Description	DEPTH (ft)	CORRE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)	MOISTURE (%)
Boring terminated at 141.9 ft. Boring grouted to 141.9 ft.	275.3						
	-145						
	-150						
	-155						
	-160						

Cores will be stored for examination until \_\_\_\_\_ Color pictures of the cores  Yes  
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)  
BBS, form 138 (Rev. 11-2013)





Illinois Department of Transportation

Division of Highways  
SCI Engineering, Inc.

SOIL BORING LOG

Date 9/17-18/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (CNC)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD Mobile B57 with HSA, Mud Rotary HAMMER TYPE Automatic

Table with columns for STRUCT. NO., BORING NO., Station, Offset, Ground Surface Elev., and soil properties (DEPTH, BULK, UCS, MOIST).

Main soil log table with columns for description, depth, bulk, UCS, and moisture. Includes entries for CRUSHED ROCK, FILL, WOOD, SILTY CLAY LOAM, SILTY LOAM, and SAND.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



Illinois Department of Transportation

Division of Highways  
SCI Engineering, Inc.

SOIL BORING LOG

Date 9/17-18/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (CNC)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD Mobile B57 with HSA, Mud Rotary HAMMER TYPE Automatic

Table with columns for STRUCT. NO., BORING NO., Station, Offset, Ground Surface Elev., and soil properties (DEPTH, BULK, UCS, MOIST).

Main soil log table with columns for description, depth, bulk, UCS, and moisture. Includes entries for SAND, No gravel, CLAY, and SAND.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



# SOIL BORING LOG

Date 9/17-18/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (CNC)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD Mobile B57 with HSA, Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 082-0349 D E P T H S Qu T Surface Water Elev. -- ft  
 Station 20+09.00 B L O W S Qu T Stream Bed Elev. -- ft  
 BORING NO. BB-4 GROUNDWATER Elev.:  
 Station 20+23.87 First Encounter 394.6 ft ▼  
 Offset 2 ft LT Upon Completion N/A ft  
 Ground Surface Elev. 418.6 ft After N/A Hrs. N/A ft

DEPTH (ft)	BLWS (in)	UCS (tsf)	MOST (%)	DESCRIPTION	DEPTH (ft)	BLWS (in)	UCS (tsf)	MOST (%)
				SAND: Gray, fine, A-3 (continued)				
				SAND: Gray, fine to coarse, trace gravel and organics, A-1				
10		NC		With gravel	18		NC	
11					21			
15					30			
				GRAVEL: A-1				
17		NC			50/4"		NC	
16								
19								
				With coarse gravel, no organics				
26		NC		With fine to coarse sand A-1-a	36		NC	
18					30			
14					32			
				Trace gravel				
21		NC			47		NC	
17					41			
18					46			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



# SOIL BORING LOG

Date 9/17-18/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (CNC)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD Mobile B57 with HSA, Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 082-0349 D E P T H S Qu T Surface Water Elev. -- ft  
 Station 20+09.00 B L O W S Qu T Stream Bed Elev. -- ft  
 BORING NO. BB-4 GROUNDWATER Elev.:  
 Station 20+23.87 First Encounter 394.6 ft ▼  
 Offset 2 ft LT Upon Completion N/A ft  
 Ground Surface Elev. 418.6 ft After N/A Hrs. N/A ft

DEPTH (ft)	BLWS (in)	UCS (tsf)	MOST (%)	DESCRIPTION	DEPTH (ft)	BLWS (in)	UCS (tsf)	MOST (%)
				GRAVEL: A-1 (continued)				
				LIMESTONE				
				Borehole continued with rock coring.				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



Illinois Department of Transportation

Division of Highways  
SCI Engineering, Inc.

ROCK CORE LOG

Date 9/17-18/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (CNC)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair CORING METHOD Solid Rods with Double Barrel

STRUCT. NO. 082-0349 CORING BARREL TYPE & SIZE NX  
Station 20+09.00

BORING NO. BB-4  
Station 20+23.87  
Offset 2 ft LT  
Ground Surface Elev. 418.6 ft

Table with columns: DEPTH (ft), CORE (#), RECOVERY (%), R.Q.D. (%)(min/ft), CORE TIME (tsf), STRENGTH (tsf), MOISTURE (%). Includes data for two core sections.

LIMESTONE: Light to medium gray, hard, moderately to slightly weathered, medium to thickly bedded, with chert nodules, occasional styollites  
6 inch core loss  
11 inch near vertical joint - open  
No chert nodules  
5 inch near vertical joint - closed  
5 inch sandy layer  
Becomes medium to massively bedded, rare styollites

Boring terminated at 142.0 ft.  
Boring grouted to 142 ft.  
Cores will be stored for examination until \_\_\_\_\_ Color pictures of the cores Yes  
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938) BBS, form 138 (Rev. 11-2013)



Illinois Department of Transportation

Division of Highways  
SCI Engineering, Inc.

SOIL BORING LOG

Date 12/2-4/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (HHF)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD Mobile B57 with CFA, Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 082-0349  
Station 20+09.00  
BORING NO. BB-4.5  
Station 21+34  
Offset 13 ft LT  
Ground Surface Elev. 418.0 ft

Table with columns: DEPTH (ft), BLOW COUNT (blows/ft), UCS (tsf), MOISTURE (%), and soil descriptions. Includes groundwater elevation data.

FILL: Brown, silty loam, A-4  
FILL: Cinders and slag, A-2  
With fine sand and gravel, trace silt  
SANDY LOAM: Brown, A-2  
SILTY LOAM: Brown, trace iron stains, A-4  
CLAY: Brown and gray, trace organics and iron stains, A-7  
SILTY CLAY LOAM: Brown and gray, A-6  
SILTY LOAM: Brown and gray, A-4  
CLAY: Brown and gray, A-7-6  
SANDY LOAM: Brown, trace iron stains, A-2

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)





**Illinois Department of Transportation**  
Division of Highways  
SCI Engineering, Inc.

# ROCK CORE LOG

Date 12/2-4/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (HHF)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair CORING METHOD Solid Rods with Double Barrel

STRUCT. NO. 082-0349 CORING BARREL TYPE & SIZE NX  
Station 20+09.00

BORING NO. BB-4.5 Core Diameter 2 in  
Station 21+34 Top of Rock Elev. 299.8 ft  
Offset 13 ft LT Begin Core Elev. 298.0 ft  
Ground Surface Elev. 418.0 ft

DEPTH (ft)	CORRE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)	MOISTURE (%)
298.0	1	100	100	4.6		
LIMESTONE: Light gray and gray, hard, slightly weathered, medium to thickly bedded, with chert nodules, rare fossils						
-125					1128.0	
No chert nodules						
-130						
6 inch sandy layer						
-135	2	93	43	14.3		
Becomes thinly to thickly bedded 4 inch near vertical joint - open						
5 inch near vertical joint - open 17 inch near vertical joint - open						
-140	3	86	50	6.9		
278.0						

Boring terminated at 140.0 ft.  
Boring grouted to 140 ft.  
Cores will be stored for examination until \_\_\_\_\_ Color pictures of the cores Yes  
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938) **BBS, form 138 (Rev. 11-2013)**



**Illinois Department of Transportation**  
Division of Highways  
SCI Engineering, Inc.

# SOIL BORING LOG

Date 9/19-23/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (CNC)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD Mobile B57 with HSA, Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 082-0349  
Station 20+09.00

BORING NO. BB-5  
Station 22+92.28  
Offset 32 ft LT  
Ground Surface Elev. 414.2 ft

DEPTH (ft)	BULGE (in)	UCS (tsf)	MOISTURE (%)	Surface Water Elev. (ft)	Stream Bed Elev. (ft)	GROUNDWATER ELEV.: First Encounter (ft)	UPON COMPLETION After (Hrs)	DEPTH (ft)	BULGE (in)	UCS (tsf)	MOISTURE (%)
FILL: Cinders and brick, A-2											
Grab sample taken											
		NC	8					6			
								10		NC	
								10			
411.2											
FILL: Brick, silt, and fine sand, A-2											
	3										
	2	NC	5					4			
	2							7		NC	
	-5							-25			
408.7											
FILL: Brown and gray, clay, A-7											
	2										
	4	2.7	31					5			
	5	S/20						8		NC	
								10			
405.7											
FILL: Brown and gray, clay loam, A-6											
	2										
	2	1.8	19					4			
	4	P						9		NC	
	-10							-30			
404.2											
SILTY LOAM: Gray, with iron stains, A-4											
	2										
	2	0.3	28								
	2										
	1										
	3	0.8	25					3			
	4	P						5		NC	
	-15							-35			
399.5											
SANDY LOAM: Brown, A-2											
	4										
	6	NC									
	7										
398.7											
SAND: Brown, fine, A-2											
	4										
	6										
	7										
396.2											
SAND: Brown, fine, A-3											
	3										
	5	NC						11			
	5							15		NC	22
	-20							18			
374.2								-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
AASHTO Classifications are based on visual classifications unless otherwise noted **BBS, form 137 (Rev. 8-99)**



Illinois Department of Transportation

Division of Highways  
SCI Engineering, Inc.

SOIL BORING LOG

Date 9/19-23/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (CNC)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD Mobile B57 with HSA, Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 082-0349 Station 20+09.00 BORING NO. BB-5 Station 22+92.28 Offset 32 ft LT Ground Surface Elev. 414.2 ft

Table with columns for Depth (ft), Soil Description, and UCS/Blow Count data. Includes soil types like SAND: Gray, fine, A-3 and SAND: Brown, fine to coarse, trace gravel, A-1.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



Illinois Department of Transportation

Division of Highways  
SCI Engineering, Inc.

SOIL BORING LOG

Date 9/19-23/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (CNC)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD Mobile B57 with HSA, Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 082-0349 Station 20+09.00 BORING NO. BB-5 Station 22+92.28 Offset 32 ft LT Ground Surface Elev. 414.2 ft

Table with columns for Depth (ft), Soil Description, and UCS/Blow Count data. Includes soil types like SAND: Gray, fine to coarse, with gravel, A-1 and GRAVEL: With fine to coarse sand, A-1.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



Illinois Department of Transportation

Division of Highways  
SCI Engineering, Inc.

ROCK CORE LOG

Date 9/19-23/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (CNC)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair CORING METHOD Solid Rods with Double Barrel

STRUCT. NO. 082-0349 CORING BARREL TYPE & SIZE NX  
Station 20+09.00  
Core Diameter 2 in  
BORING NO. BB-5 Top of Rock Elev. 297.2 ft  
Station 22+92.28 Begin Core Elev. 296.2 ft  
Offset 32 ft LT  
Ground Surface Elev. 414.2 ft

Table with columns: DEPTH (ft), CORE (#), RECOVERY (%), R.Q.D. (%)(min/ft), CORE TIME (tsf), STRENGTH (tsf), MOISTURE (%). Includes geological descriptions like 'LIMESTONE: Light to medium gray, hard, slightly weathered...' and '8 inch near vertical joint - closed'.

Boring terminated at 138.0 ft. Boring grouted to 138 ft. Cores will be stored for examination until... Color pictures of the cores Yes. The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938) BBS, form 138 (Rev. 11-2013)



Illinois Department of Transportation

Division of Highways  
SCI Engineering, Inc.

SOIL BORING LOG

Date 9/24-25/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (CNC)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD Mobile B57 with HSA, Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 082-0349  
Station 20+09.00  
BORING NO. BB-6  
Station 23+90.12  
Offset 27 ft RT  
Ground Surface Elev. 414.4 ft

Table with columns: DEPTH (ft), BLOW COUNT (blows/6"), UCS (tsf), MOISTURE (%), and soil descriptions like 'FILL: Dark brown, silt, with brick and concrete fragments, A-4' and 'SAND: Brown, fine, with iron stains, A-3'.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



**Illinois Department of Transportation**  
Division of Highways  
SCI Engineering, Inc.

# SOIL BORING LOG

Date 9/24-25/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (CNC)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD Mobile B57 with HSA, Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 082-0349 DEPT H S Qu T Surface Water Elev. -- ft DEPT H S Qu T  
 Station 20+09.00 Stream Bed Elev. -- ft  
 BORING NO. BB-6 GROUNDWATER ELEV.: DEPT H S Qu T  
 Station 23+90.12 First Encounter 399.4 ft  
 Offset 27 ft RT Upon Completion N/A ft  
 Ground Surface Elev. 414.4 ft After N/A Hrs. N/A ft

DEPTH (ft)	DIAGNOSTIC	TESTS	REMARKS	DEPTH (ft)	DIAGNOSTIC	TESTS	REMARKS
0			SAND: Brown, fine to coarse, A-1 (continued)	0			SAND: Brown, fine to coarse, trace gravel, A-1-b (continued)
372.4			SAND: Gray, fine, trace coarse gravel, A-3	372.4			Becomes gray
12		NC		15		NC	
14				17			
45				65			
367.4			SAND: Brown, fine to coarse, trace gravel, A-1-b	347.4			SAND: Gray, fine, A-3
8		NC		15		NC	
6				21			
50				70			
342.4			SAND: Gray, fine to coarse, trace gravel and organics, A-1	342.4			
7		NC		9		NC	
11				7			
55				12			
12		NC		10		NC	
15				9			
60				10			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



**Illinois Department of Transportation**  
Division of Highways  
SCI Engineering, Inc.

# SOIL BORING LOG

Date 9/24-25/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (CNC)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD Mobile B57 with HSA, Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 082-0349 DEPT H S Qu T Surface Water Elev. -- ft DEPT H S Qu T  
 Station 20+09.00 Stream Bed Elev. -- ft  
 BORING NO. BB-6 GROUNDWATER ELEV.: DEPT H S Qu T  
 Station 23+90.12 First Encounter 399.4 ft  
 Offset 27 ft RT Upon Completion N/A ft  
 Ground Surface Elev. 414.4 ft After N/A Hrs. N/A ft

DEPTH (ft)	DIAGNOSTIC	TESTS	REMARKS	DEPTH (ft)	DIAGNOSTIC	TESTS	REMARKS
0			SAND: Gray, fine to coarse, trace gravel and organics, A-1 (continued)	0			SAND: Gray, fine to coarse, with coarse gravel, A-1 (continued)
9		NC		27		NC	
22			Possible cobble or boulder, rough drilling observed	33			
85				105			Rough drilling observed from 105 to 116.8 ft.
11		NC	With gravel, no organics	50/1"		NC	With coarse gravel and cobbles
12				110			
90				115			
20		NC	With coarse gravel	20		NC	
29				29			
95				34			
297.6			LIMESTONE	297.6			
296.9			Borehole continued with rock coring.	296.9			
17		NC		17		NC	
23				23			
100				120			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)  
 AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)





**Illinois Department of Transportation**  
Division of Highways  
SCI Engineering, Inc.

# ROCK CORE LOG

Date 9/24-25/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (CNC)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair CORING METHOD Solid Rods with Double Barrel

STRUCT. NO. 082-0349 CORING BARREL TYPE & SIZE NX  
Station 20+09.00

BORING NO. BB-6 Core Diameter 2 in  
Station 23+90.12 Top of Rock Elev. 297.6 ft  
Offset 27 ft RT Begin Core Elev. 296.9 ft  
Ground Surface Elev. 414.4 ft

DEPTH (ft)	CORRE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)	MOISTURE (%)	DESCRIPTION
296.9	1	98	92	6.2			LIMESTONE: Light gray, hard, slightly weathered, medium to thickly bedded, occasional styollites
							Occasional chert nodules
-120							
					914.0		No chert nodules, no styollites
-125							
							20 inch near vertical joint - open
-130							
	2	100	93	5.1			10 inch near vertical joint - open
-135							
					733.0		Some styollites
-135							
							6 inch near vertical joint - open
276.9							

Boring terminated at 137.5 ft.  
Boring grouted to 137.5 ft.  
Cores will be stored for examination until \_\_\_\_\_ Color pictures of the cores  Yes  
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938) **BBS, form 138 (Rev. 11-2013)**



**Illinois Department of Transportation**  
Division of Highways  
SCI Engineering, Inc.

# ROCK CORE LOG

Date 9/24-25/2013

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (CNC)

SECTION 82-(1,4)B-1 LOCATION Proposed Pier Location, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair CORING METHOD Solid Rods with Double Barrel

STRUCT. NO. 082-0349 CORING BARREL TYPE & SIZE NX  
Station 20+09.00

BORING NO. BB-6 Core Diameter 2 in  
Station 23+90.12 Top of Rock Elev. 297.6 ft  
Offset 27 ft RT Begin Core Elev. 296.9 ft  
Ground Surface Elev. 414.4 ft

DEPTH (ft)	CORRE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)	MOISTURE (%)	DESCRIPTION
-140							
-145							
-150							
-155							

Cores will be stored for examination until \_\_\_\_\_ Color pictures of the cores  No  
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938) **BBS, form 138 (Rev. 11-2013)**



Illinois Department of Transportation

Division of Highways  
SCI Engineering, Inc.

SOIL BORING LOG

Date 09/26/13

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (CNC)

SECTION 82-(1,4)B-1 LOCATION Proposed South Abutment, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD Mobile B57 with HSA, Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 082-0349 Station 20+09.00 BORING NO. BB-7 Station 24+53.97 Offset 9 ft RT Ground Surface Elev. 414.5 ft

Table with columns for Depth (ft), Blows (blows/ft), UCS (tsf), Moisture (%), and Soil Description. Includes data for various soil layers like 'FILL: Brown, silty clay loam...' and 'SAND: Brown, fine, A-3'.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



Illinois Department of Transportation

Division of Highways  
SCI Engineering, Inc.

SOIL BORING LOG

Date 09/26/13

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (CNC)

SECTION 82-(1,4)B-1 LOCATION Proposed South Abutment, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD Mobile B57 with HSA, Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 082-0349 Station 20+09.00 BORING NO. BB-7 Station 24+53.97 Offset 9 ft RT Ground Surface Elev. 414.5 ft

Table with columns for Depth (ft), Blows (blows/ft), UCS (tsf), Moisture (%), and Soil Description. Includes data for various soil layers like 'SAND: Gray, fine, A-3' and 'SAND: Brown, fine to coarse, trace gravel, A-1'.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



Illinois Department of Transportation

Division of Highways  
SCI Engineering, Inc.

SOIL BORING LOG

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (CNC)

SECTION 82-(1,4)B-1 LOCATION Proposed South Abutment, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD Mobile B57 with HSA, Mud Rotary HAMMER TYPE Automatic

Table with columns for STRUCT. NO., BORING NO., and soil properties (D, B, U, M, O, I, S, T). Includes values for Surface Water Elev., Stream Bed Elev., Groundwater Elev., First Encounter, Upon Completion, and After.

Main soil log table with columns for depth (ft), soil description, and soil properties. Includes entries for SAND, Trace organics, Rough drilling observed, With gravel, and Limestone.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



Illinois Department of Transportation

Division of Highways  
SCI Engineering, Inc.

SOIL BORING LOG

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS)

SECTION 82-(1,4)B-1 LOCATION Proposed Land Bridge, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA HAMMER TYPE Automatic

Table with columns for STRUCT. NO., BORING NO., and soil properties (D, B, U, M, O, I, S, T). Includes values for Surface Water Elev., Stream Bed Elev., Groundwater Elev., First Encounter, Upon Completion, and After.

Main soil log table with columns for depth (ft), soil description, and soil properties. Includes entries for SAND, Trace fine gravel, No gravel, Trace gravel, SILTY CLAY, SILTY CLAY LOAM, CLAY, and SAND.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



Illinois Department of Transportation

Division of Highways  
SCI Engineering, Inc.

SOIL BORING LOG

Date 10/01/13

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS)

SECTION 82-(1,4)B-1 LOCATION Proposed Land Bridge, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA HAMMER TYPE Automatic

Table with columns for STRUCT. NO., BORING NO., DPTH, BULGE, UCS, M.O.S.T., and soil descriptions with elevations and groundwater levels.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)



Illinois Department of Transportation

Division of Highways  
SCI Engineering, Inc.

SOIL BORING LOG

Date 10/01/13

ROUTE FAI 64 (I-64) DESCRIPTION Martin Luther King Bridge Connector Ramp - East St. Louis, Illinois LOGGED BY SCI (JS)

SECTION 82-(1,4)B-1 LOCATION Proposed Retaining Wall, SEC. 13, TWP. 2N, RNG. 10W

COUNTY St. Clair DRILLING METHOD CME 550X with HSA HAMMER TYPE Automatic

Table with columns for STRUCT. NO., BORING NO., DPTH, BULGE, UCS, M.O.S.T., and soil descriptions with elevations and groundwater levels.

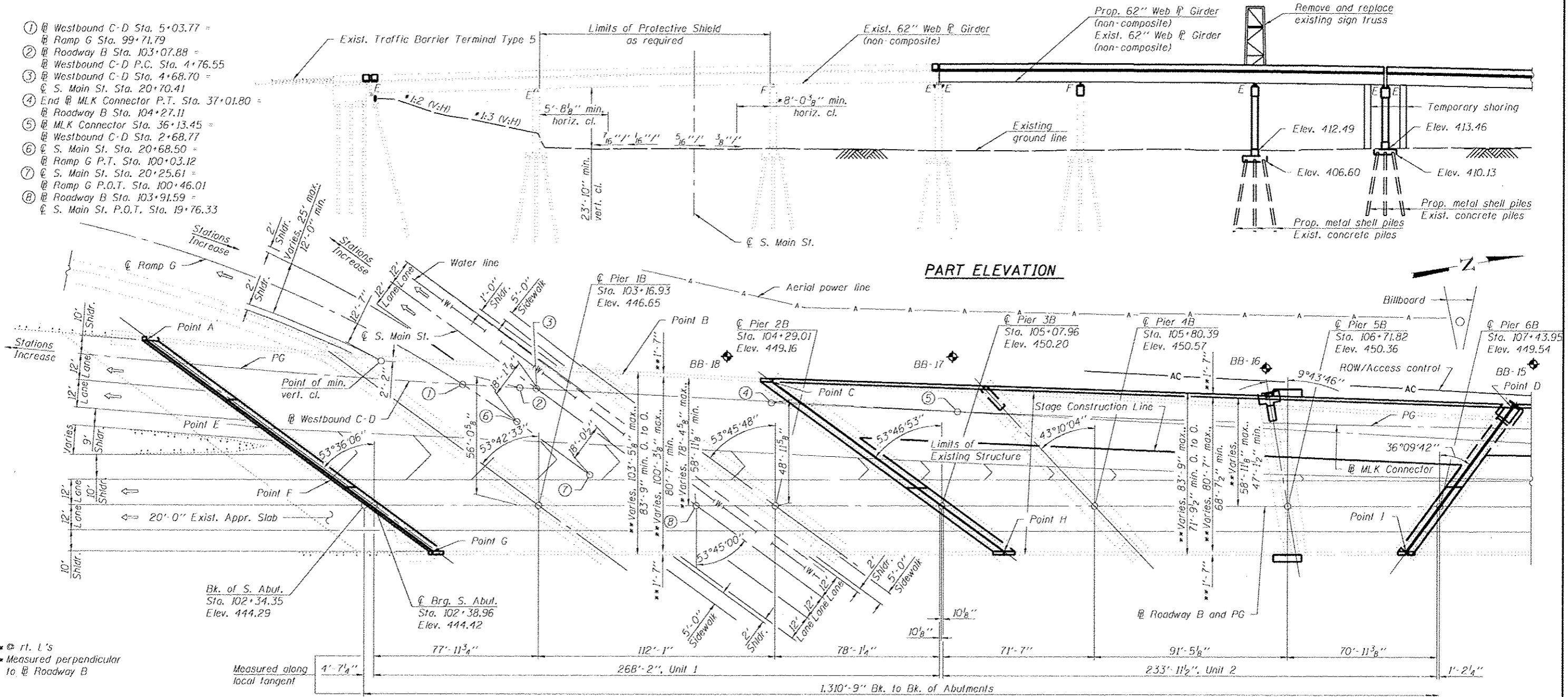
The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) AASHTO Classifications are based on visual classifications unless otherwise noted BBS, form 137 (Rev. 8-99)

Bench Mark: Chiseled "□" on top of concrete base on the northeast side of the second round concrete column from the north end of the pier for the southbound lanes of I-55/64, on the west side of South Main St., Elev. 413.67.

Existing Structure: S.N. 082-0010 was originally built in 1965 as F.A.I. Route 70 in Section 82-4HVB. In 1990, the structure was widened in east and west directions, the deck was replaced and widened, and the substructure was widened. The existing structure is a curved thirteen span structure with non-composite steel girders that is 1,220' 10 1/4" long from centerline to centerline of abutment bearings along Roadway B. The out-to-out deck width varies from approximately 92'-9" at the south end to 59'-2" at the north end. The substructure consists of reinforced concrete multi-column piers with concrete piles and stub-type reinforced concrete abutments with concrete piles. The structure consists of three 12' mainline traffic lanes that carries F.A.I. 55,64,US40WB at the north entrance, and widens at the south exit to include an additional Westbound C-D traffic lane. Stage construction shall be utilized.

No salvage.

- ① Westbound C-D Sta. 5+03.77 =  
Ramp G Sta. 99+71.79
- ② Roadway B Sta. 103+07.88 =  
Westbound C-D P.C. Sta. 4+76.55
- ③ Westbound C-D Sta. 4+68.70 =  
S. Main St. Sta. 20+70.41
- ④ End MLK Connector P.T. Sta. 37+01.80 =  
Roadway B Sta. 104+27.11
- ⑤ MLK Connector Sta. 36+13.45 =  
Westbound C-D Sta. 2+68.77
- ⑥ S. Main St. Sta. 20+68.50 =  
Ramp G P.T. Sta. 100+03.12
- ⑦ S. Main St. Sta. 20+25.61 =  
Ramp G P.O.T. Sta. 100+46.01
- ⑧ Roadway B Sta. 103+91.59 =  
S. Main St. P.O.T. Sta. 19+76.33



**PART ELEVATION**

\* @ rt. L's  
\*\* Measured perpendicular to Roadway B

Notes:  
For table of stations and offsets for points, see sheet 2 of 143.  
The skew angle for Bk. S. Abut. is the same as Brg. S. Abut.

Measured along local tangent

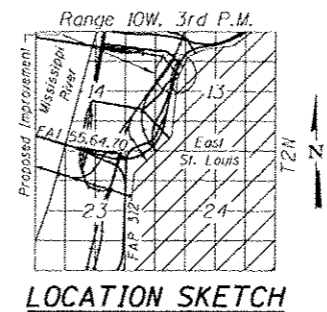


**Eric Lagemann** 8/8/14  
License Expires 11/30/2014  
Sheets 1 thru 30  
Sheets 32 thru 44  
Sheets 56 thru 122  
Sheets 124 thru 143



**Chadwick Justin Fuesting** 08-08-2014  
License Expires 11/30/2014  
Sheets 30 & 31  
Sheets 50 thru 55  
Sheet 123

**PART PLAN**



**LOCATION SKETCH**

**GENERAL PLAN**  
**ROADWAY B OVER RIVERPARK DR.,**  
**METROLINK, AND SOUTH MAIN ST.**  
**F.A.I. 64-SECTION 82-(1.4)B-1**  
**ST. CLAIR COUNTY**  
**STATION 108+48.22**  
**STRUCTURE NO. 082-0010**



USER NAME: elagemann  
PLOT SCALE:  
PLOT DATE: 8/8/2014

DESIGNED - T.S. Friederich  
CHECKED - E.M. Lagemann  
DRAWN - J.N. Bailey  
CHECKED - T.S. Friederich

REVISED  
REVISED  
REVISED  
REVISED

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1.4)B-1	ST. CLAIR	406	193
			CONTRACT NO. 76G09	

**SCOPE OF WORK**

1. Widen existing structure to accommodate MLK Connector Ramp.
2. Remove and replace expansion joints and transverse joints.
3. Partial depth deck repairs.
4. Repair piers and slopewalls.
5. Seismic Retrofit
  - a. Add beamseat extensions at the S. Abut. and Pier 3B.
  - b. Remove and replace beam to bearing bolts with high strength bolts.
  - c. Retrofit anchor bolt connections at piers.
  - d. Apply composite fiber reinforced polymer wrap to top and bottom of columns, and cap.
  - e. Apply footing overlay to Piers 6B, 10B, & 12B.
  - f. Remove and replace columns and cap of Piers 6B and 10B.
6. Install catch beams at hinge.
7. Clean and paint existing structural steel.
8. Perform grading around Piers 11B and 12B.
9. Clean existing floor drains and drainage scuppers.

**LOADING HS20-44 AND ALTERNATE**  
Allow 25#/#sq. ft. for future wearing surface.

**DESIGN SPECIFICATIONS**

2002 AASHTO  
2006 FHWA Seismic Retrofitting Manual for Highway Structures - Part I

**DESIGN STRESSES**

**FIELD UNITS (NEW CONSTRUCTION)**

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

**FIELD UNITS (EXISTING CONSTRUCTION)**

$f'_c = 1,400$  psi  
 $f_s = 20,000$  psi (Reinforcement)  
 $f_y = 20,000$  psi (Structural Steel)

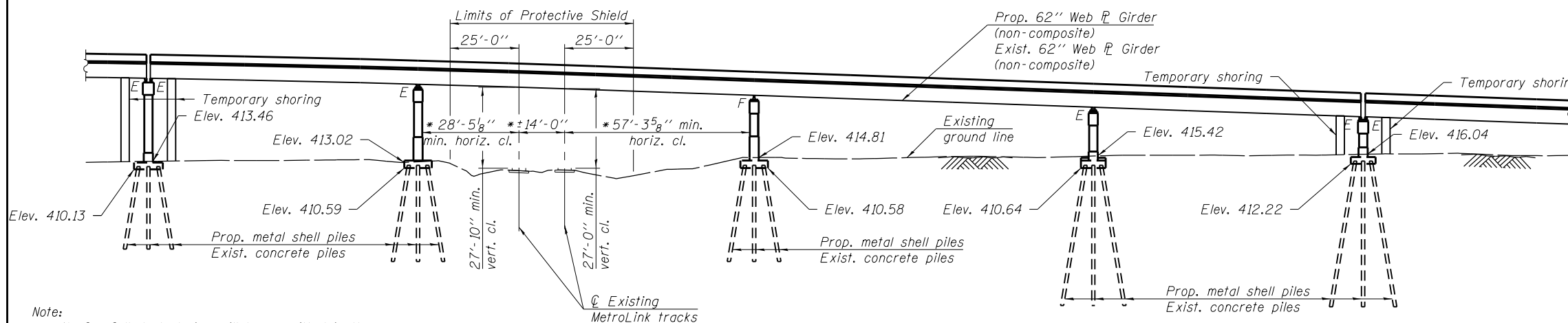
**SEISMIC DATA**

Seismic Performance Category (SPC) = C  
Horizontal Bedrock Acceleration (A) = 0.12g  
Site Coefficient (S) = 1.0

- ① MLK Connector P.R.C. Sta. 33+17.43 =  
Roadway B Sta. 108+10.85
- ② MLK Connector Sta. 32+16.63 =  
MetroLink Sta. 956+09.79
- ③ Roadway B Sta. 107+83.75 =  
End Westbound C-D P.O.T. Sta. 0+00.00
- ④ Roadway B Sta. 108+86.58 =  
MetroLink Sta. 955+66.62

**TABLE OF STATIONS AND OFFSETS FROM I-55/64 ROADWAY B**

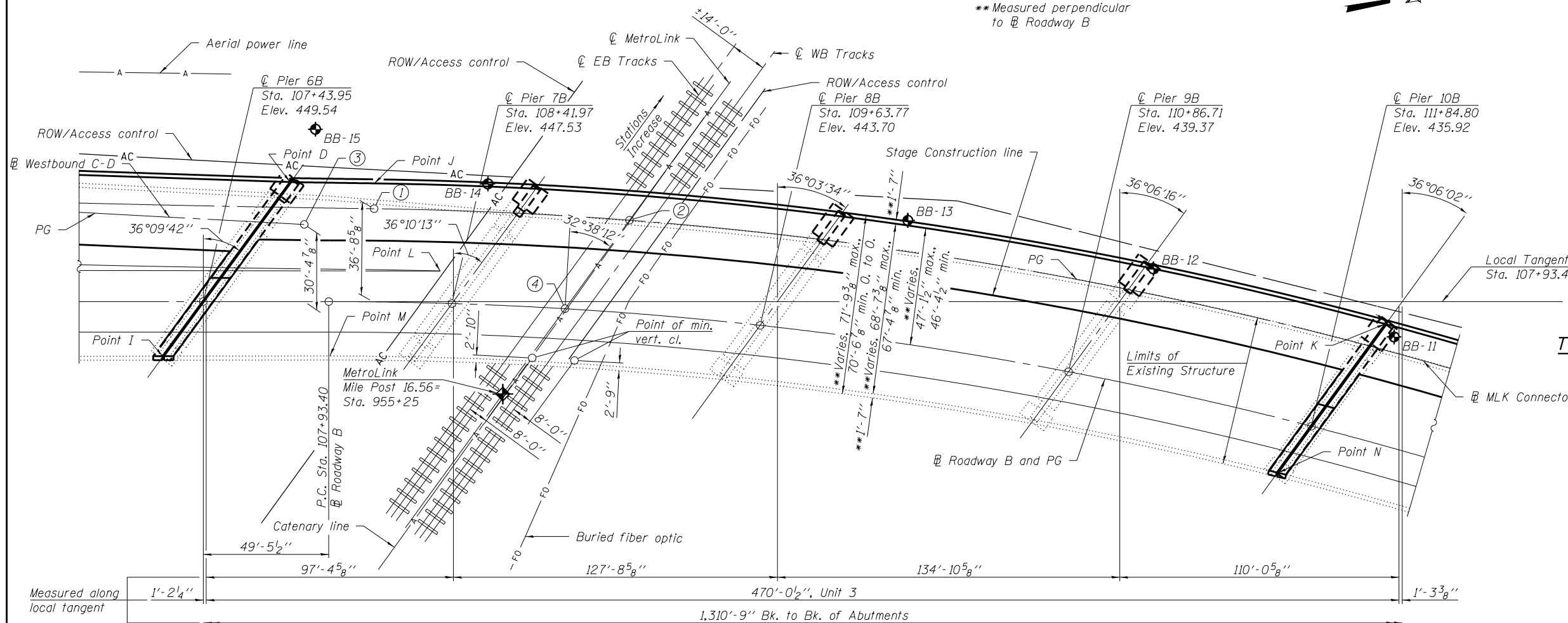
Point	Station	Offset
A	101+30.80	78'-3 $\frac{3}{4}$ "
B	103+56.47	62'-6 $\frac{3}{4}$ "
C	104+27.54	58'-11 $\frac{1}{8}$ "
D	107+78.39	47'-1 $\frac{1}{2}$ "
E	101+85.56	36'-7 $\frac{7}{8}$ "
F	102+18.79	12'-1 $\frac{1}{8}$ "
G	102+66.70	21'-10 $\frac{5}{8}$ "
H	105+37.53	21'-7 $\frac{1}{8}$ "
I	107+28.24	21'-6"
J	108+10.88	46'-8 $\frac{5}{8}$ "
K	112+02.63	46'-4 $\frac{1}{2}$ "
L	108+36.98	12'-7 $\frac{1}{8}$ "
M	107+93.87	21'-5 $\frac{3}{8}$ "
N	111+76.32	21'-0 $\frac{3}{8}$ "
O	112+61.48	46'-5 $\frac{1}{8}$ "
P	114+41.51	59'-8 $\frac{1}{8}$ "
Q	114+73.90	64'-10 $\frac{3}{8}$ "
R	112+61.54	24'-5 $\frac{1}{8}$ "
S	114+69.43	41'-5 $\frac{1}{4}$ "
T	114+66.20	24'-10"
U	114+23.91	20'-9 $\frac{5}{8}$ "
V	114+57.02	20'-8 $\frac{5}{8}$ "



Note:  
No freefall deck drains will be permitted in the span over the tracks or within 10 ft. of cross arms of a railroad pole line.

**PART ELEVATION**

\* @ rt. L's  
\*\* Measured perpendicular to Roadway B



**PART PLAN**

FILE NAME = X:\1309400-MLK\Cad\5\082010-76009.dgn  
USER NAME = elagemann  
PLOT SCALE =  
PLOT DATE = 8/7/2014

DESIGNED - T.S. Friederich  
CHECKED - E.M. Lagemann  
DRAWN - J.N. Bailey  
CHECKED - T.S. Friederich

REVISED  
REVISED  
REVISED  
REVISED

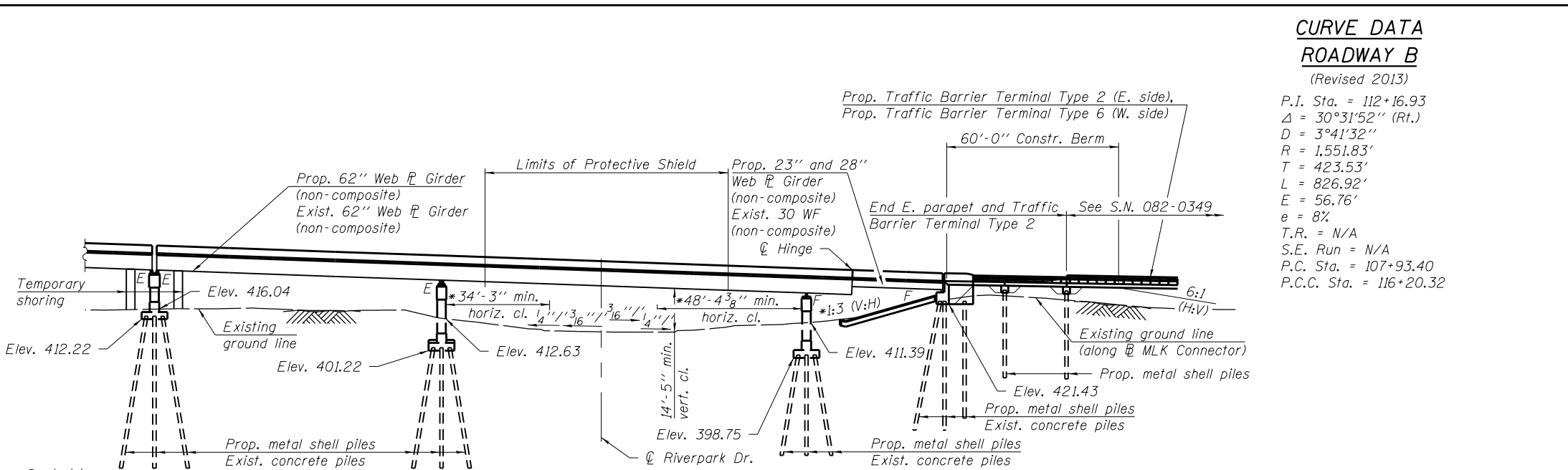
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION  
STRUCTURE NO. 082-0010

SHEET NO. 2 OF 143 SHEETS

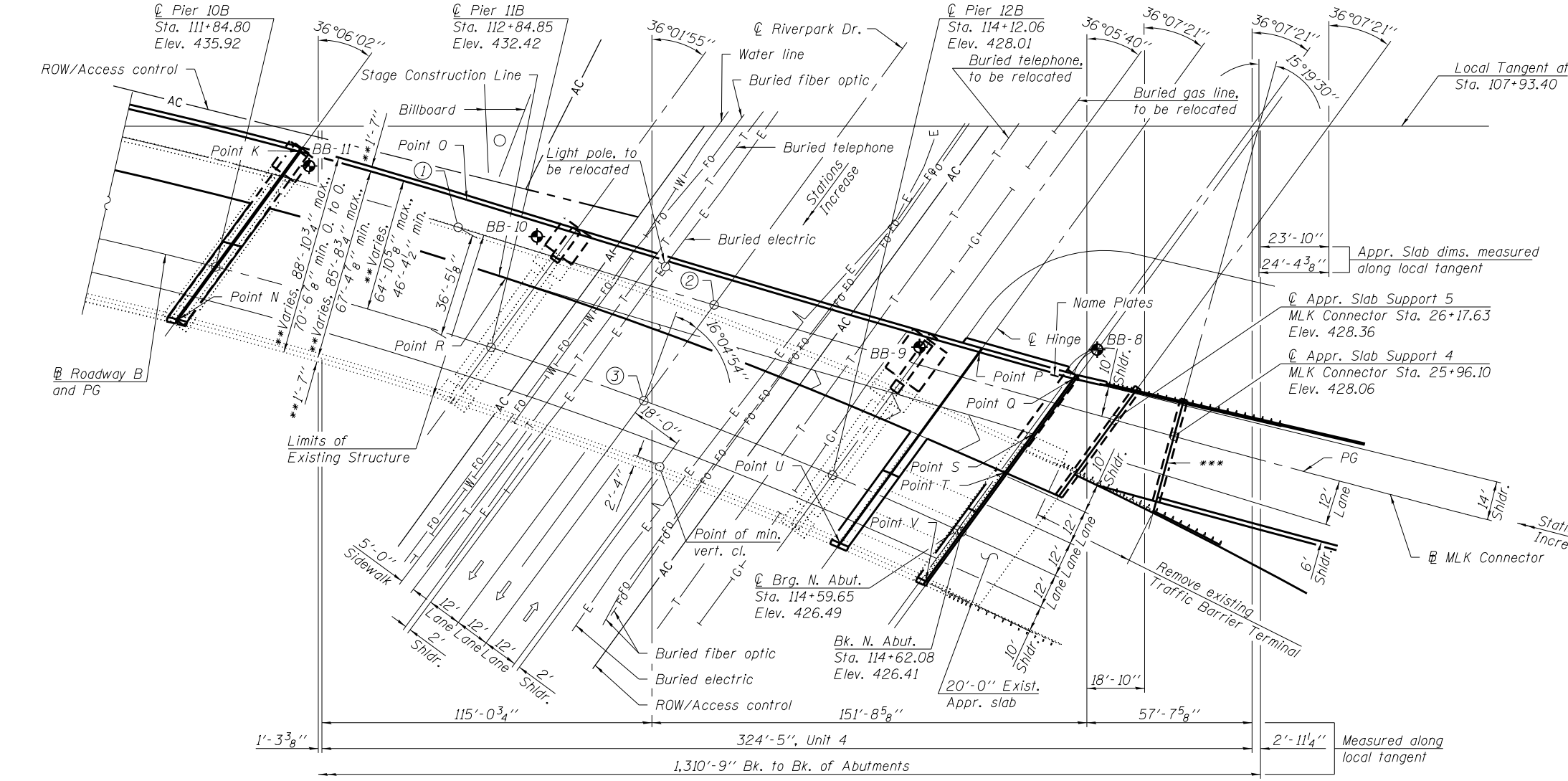
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-(1,4)B-1	ST. CLAIR	406	194

CONTRACT NO. 76G09  
ILLINOIS FED. AID PROJECT



**PART ELEVATION**

\* @ rt. L's  
 \*\* Measured perpendicular to @ Roadway B  
 \*\*\* Provide 4" Preformed Joint Seal Expansion Joint



**PART PLAN**

**CURVE DATA ROADWAY B**  
 (Revised 2013)

P.I. Sta. = 112+16.93
Δ = 30°31'52" (Rt.)
D = 3°41'32"
R = 1,551.83'
T = 423.53'
L = 826.92'
E = 56.76'
e = 8%
T.R. = N/A
S.E. Run = N/A
P.C. Sta. = 107+93.40
P.C.C. Sta. = 116+20.32

**CURVE DATA WESTBOUND C-D**

P.I. Sta. = 6+09.24
Δ = 3°10'48" (Rt.)
D = 1°11'55"
R = 4,780.12'
T = 132.68'
L = 265.30'
E = 1.84'
e = N/A
T.R. = N/A
S.E. Run = N/A
P.C. Sta. = 4+76.55
P.T. Sta. = 7+41.85

**CURVE DATA MLK CONNECTOR CURVE 3**

P.I. Sta. = 26+73.36
Δ = 2°39'46" (Rt.)
D = 0°43'41"
R = 7,870.00'
T = 182.91'
L = 365.75'
E = 2.13'
e = transition
T.R. = N/A
S.E. Run = N/A
P.C.C. Sta. = 24+90.45
P.R.C. Sta. = 28+56.21

**CURVE DATA RAMP G**

P.I. Sta. = 98+31.64
Δ = 36°06'40" (Rt.)
D = 10°09'58"
R = 563.59'
T = 183.73'
L = 355.21'
E = 29.19'
e = N/A
T.R. = N/A
S.E. Run = N/A
P.C. Sta. = 96+47.91
P.T. Sta. = 100+03.12

**CURVE DATA MLK CONNECTOR CURVE 4**

P.I. Sta. = 30+88.41
Δ = 16°26'14" (Lt.)
D = 3°33'50"
R = 1,607.71'
T = 232.21'
L = 461.22'
E = 16.68'
e = 8.00%
T.R. = N/A
S.E. Run = Match existing
P.R.C. Sta. = 28+56.21
P.R.C. Sta. = 33+17.43

**CURVE DATA MLK CONNECTOR CURVE 5**

P.I. Sta. = 35+09.64
Δ = 2°07'09" (Rt.)
D = 0°33'05"
R = 10,392.27'
T = 192.21'
L = 384.38'
E = 1.78'
e = Match existing
T.R. = N/A
S.E. Run = Match existing
P.R.C. Sta. = 33+17.43
P.T. Sta. = 37+01.80

Notes:  
 Curve Data Roadway B revised 2013.  
 For table of stations and offsets for points, see sheet 2 of 143.  
 The skew angle for Bk. of N. Abut. is the same as @ Brg. N. Abut.  
 Design, detailing, and quantities for Appr. Slab Support 4 to be covered under S.N. 082-0349.

- ① @ MLK Connector P.R.C. Sta. 28+56.21 =  
 @ Roadway B Sta. 112+61.49
- ② @ MLK Connector Sta. 27+62.91 =  
 @ Riverpark Dr. Sta. 9+75.11
- ③ @ Roadway B Sta. 113+41.32 =  
 @ Riverpark Dr. P.O.T. Sta. 10+16.51

**GENERAL NOTES**

Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts. Bolts  $\frac{3}{4}$  in.  $\phi$ , holes  $\frac{15}{16}$  in.  $\phi$ , unless otherwise noted.  
 Calculated weight of structural steel = 1,213,200 lbs. AASHTO M 270 Grade 50.  
 No field welding is permitted except as specified in the contract documents.  
 Reinforcement bars designated (E) shall be epoxy coated.

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

As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer.

Any cracks that cannot be removed by grinding  $\frac{1}{4}$  inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.

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

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of  $\frac{1}{8}$  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 designated areas of the South Abutment, Pier 3B, Pier 6B, Pier 10B, and North Abutment.

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

The Organic Zinc Rich Primer / Epoxy / Urethane Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. All new structural steel shall be shop painted with an organic zinc rich primer per AASHTO M300, Type 1. The color of the final finish coat for all steel surfaces be Gray, Munsell No. 5B 7/1.

Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". All existing steel shall be cleaned per Near White Blast Cleaning - SSPC - SP10. All existing steel shall be painted according to the requirements of Paint System 1 - OZ/E/U. The color of the final finish coat for all steel surfaces shall be Gray, Munsell No. 5B 7/1.

The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.

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 parallel to the skew for striking off and screeding the concrete.

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

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Removal	Cu. Yd.	666.1	212.6	878.7
Slope Wall Removal	Sq. Yd.			71
Protective Shield	Sq. Yd.			2,499
Structure Excavation	Cu. Yd.		759	759
Concrete Structures	Cu. Yd.		651.8	651.8
Concrete Superstructure	Cu. Yd.	997.3		997.3
Bridge Deck Grooving	Sq. Yd.	3,019		3,019
Protective Coat	Sq. Yd.	3,488		3,488
Furnishing and Erecting Structural Steel	L Sum	0.35		0.35
Reinforcement Bars, Epoxy Coated	Pound	290,040	99,320	389,360
Bar Splicers	Each	29	43	72
Mechanical Splicers	Each		539	539
Slope Wall 4 Inch	Sq. Yd.			154
Furnishing Metal Shell Piles 14" X 0.250"	Foot		4,421	4,421
Driving Piles	Foot		4,421	4,421
Test Pile Metal Shells	Each		4	4
Name Plates	Each			1
Preformed Joint Strip Seal	Foot	483.0		483.0
Finger Plate Expansion Joint, 4"	Foot	157		157
Fabric Reinforced Elastomeric Trough	Foot	162		162
Elastomeric Bearing Assembly, Type I	Each	10		10
Elastomeric Bearing Assembly, Type II	Each	39		39
Anchor Bolts, 1 1/2"	Each	210		210
Anchor Bolts, 2"	Each	6		6
Expansion Bolts 3/4"	Each		89	89
Concrete Sealer	Sq. Ft.		7,692	7,692
Epoxy Crack Injection	Foot		116	116
Geocomposite Wall Drain	Sq. Yd.		16	16
Controlled Low-Strength Material	Cu. Yd.			8
Cleaning Bridge Scuppers and Downspouts	Each	41		41
Bridge Deck Concrete Crack Sealer	Foot	122		122
Acrylic Coating	Sq. Yd.		897	897
Fiber Wrap	Sq. Ft.		8,079	8,079
High Load Multi-Rotational Bearings, Guided Expansion, 300K	Each	4		4
High Load Multi-Rotational Bearings, Guided Expansion, 350K	Each	4		4
Granular Backfill for Structures	Cu. Yd.		32	32
Temporary Shoring	L Sum		1	1
Structural Steel Removal	Pound	779,690		779,690
Removal of Existing Bearings	Each	51		51
Containment and Disposal of Lead Paint Cleaning Residues No. 1	L Sum	1		1
Cleaning and Painting Steel Bridge No. 1	L Sum	1		1
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.		491	491
Structural Repair of Concrete (Depth Greater Than 5 Inches)	Sq. Ft.		59	59
Deck Slab Repair (Partial)	Sq. Yd.	1.2		1.2
Pipe Underdrains for Structures 4"	Foot		46	46

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20.-29.	Top of North Approach Slab Elevations
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32.-49.	North Bridge Approach Slab Expansion Devices
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56.-63.	Catch Beam Details
64.-83.	Bearing Details
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107.-108.	Pier 8B
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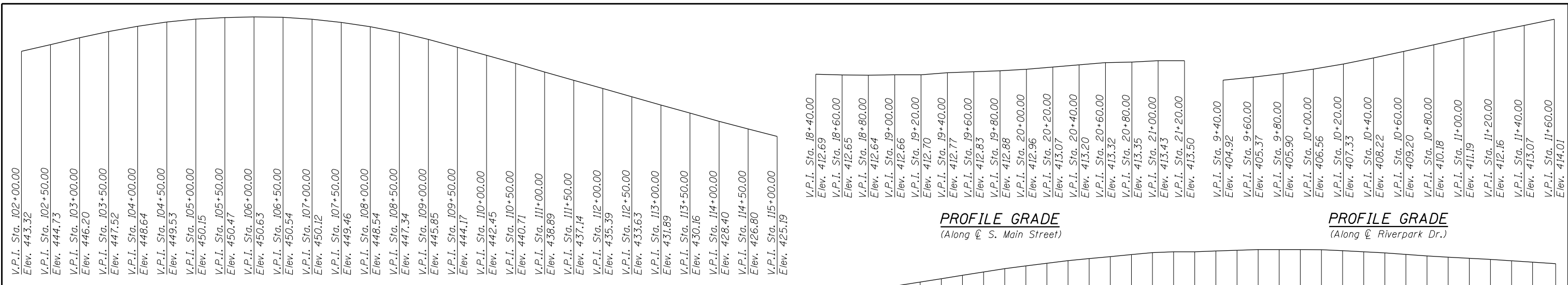
STATION 108+48.22  
 RE-BUILT 201 BY  
 STATE OF ILLINOIS  
 F.A.I. 64 SEC. 82-(1,4)B-1  
 LOADING HS20-44 ALT.  
 STRUCTURE NO. 082-0010

**NAME PLATE DETAIL**  
 See Std. 515001

Existing Name Plates shall be cleaned and relocated next to new Name Plate.  
 Cost included with Name Plates.

FILE NAME = X:\1309400-MLK\Cad\5\0820010-76009.dgn USER NAME = elagemann PLOT SCALE = PLOT DATE = 8/7/2014	DESIGNED - CHECKED - DRAWN - J.N. Bailey CHECKED - E.M. Lagemann	REVISED REVISED REVISED REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL DATA STRUCTURE NO. 082-0010 SHEET NO. 4 OF 143 SHEETS	F.A.I. RTE. 64 SECTION 82-(1,4)B-1	COUNTY ST. CLAIR	TOTAL SHEETS 406 SHEET NO. 196	CONTRACT NO. 76009 ILLINOIS FED. AID PROJECT

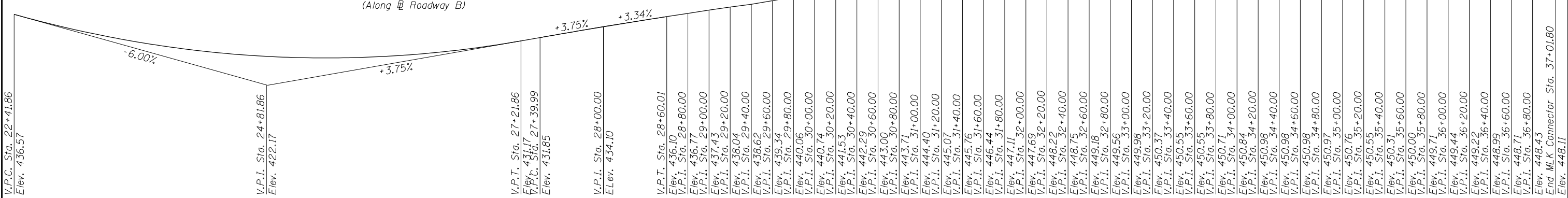




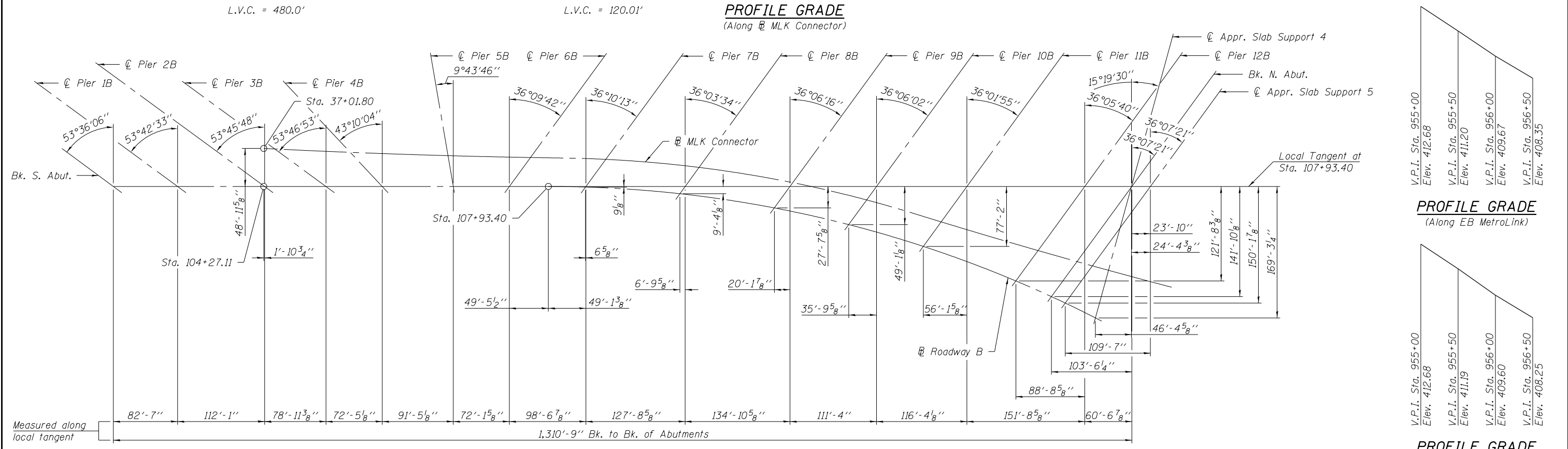
**PROFILE GRADE**  
(Along  $\square$  Roadway B)

**PROFILE GRADE**  
(Along  $\square$  S. Main Street)

**PROFILE GRADE**  
(Along  $\square$  Riverpark Dr.)

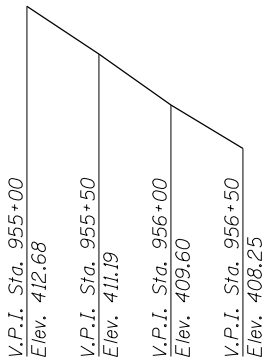


**PROFILE GRADE**  
(Along  $\square$  MLK Connector)



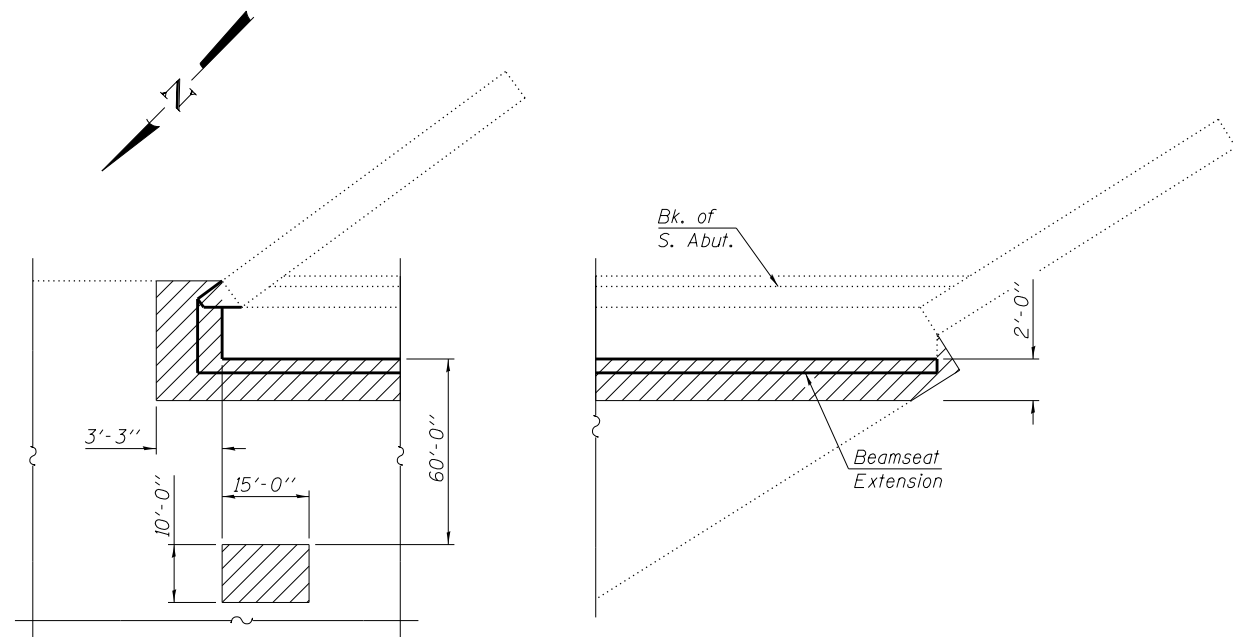
**OFFSET SKETCH**

**PROFILE GRADE**  
(Along EB MetroLink)

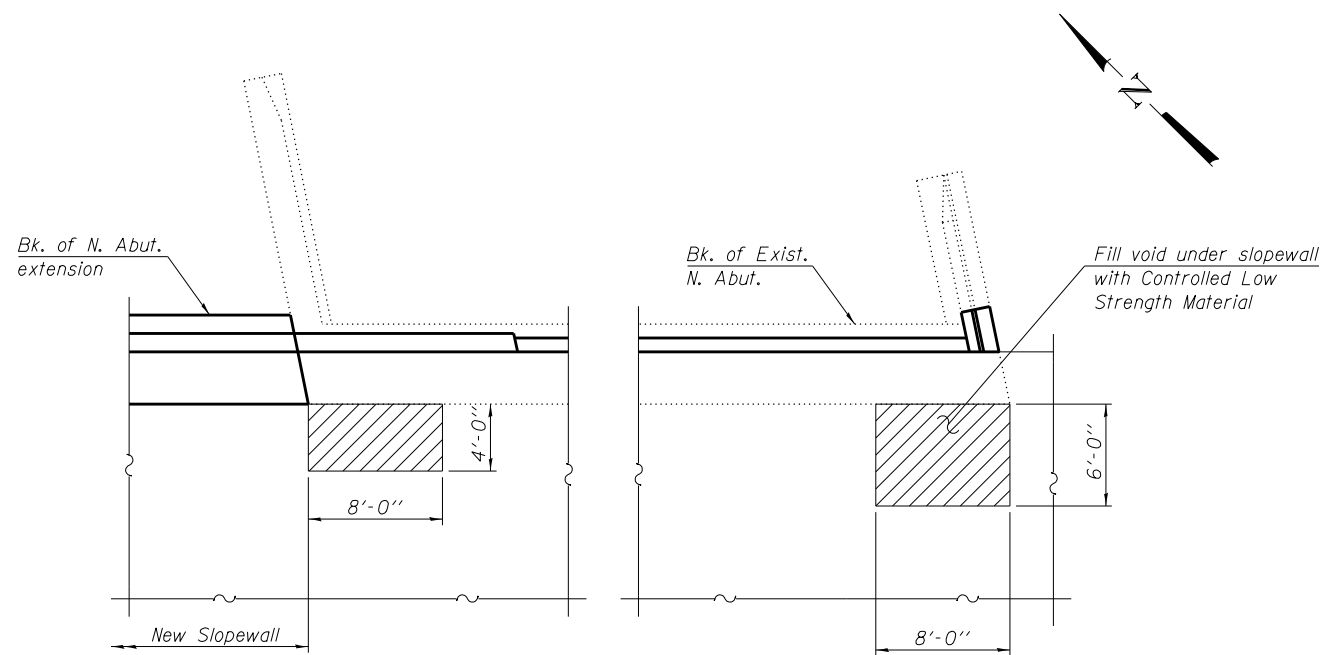


**PROFILE GRADE**  
(Along WB MetroLink)


FILE NAME = X:\1309400-MLK\Cad\5\082010-76009.dgn 	DESIGNED - T.S. Friederich	REVISED	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>GENERAL DATA</b> <b>STRUCTURE NO. 082-0010</b> SHEET NO. 5 OF 143 SHEETS	F.A.I. RTE. = 64	SECTION = 82-(1,4)B-1	COUNTY = ST. CLAIR	TOTAL SHEETS = 406	SHEET NO. = 197
	USER NAME = elagemann	CHECKED - E.M. Lagemann			REVISED	CONTRACT NO. = 76C09			
	PLOT SCALE =	DRAWN - J.N. Bailey			REVISED	ILLINOIS FED. AID PROJECT			
	PLOT DATE = 8/7/2014	CHECKED - T.S. Friederich			REVISED				

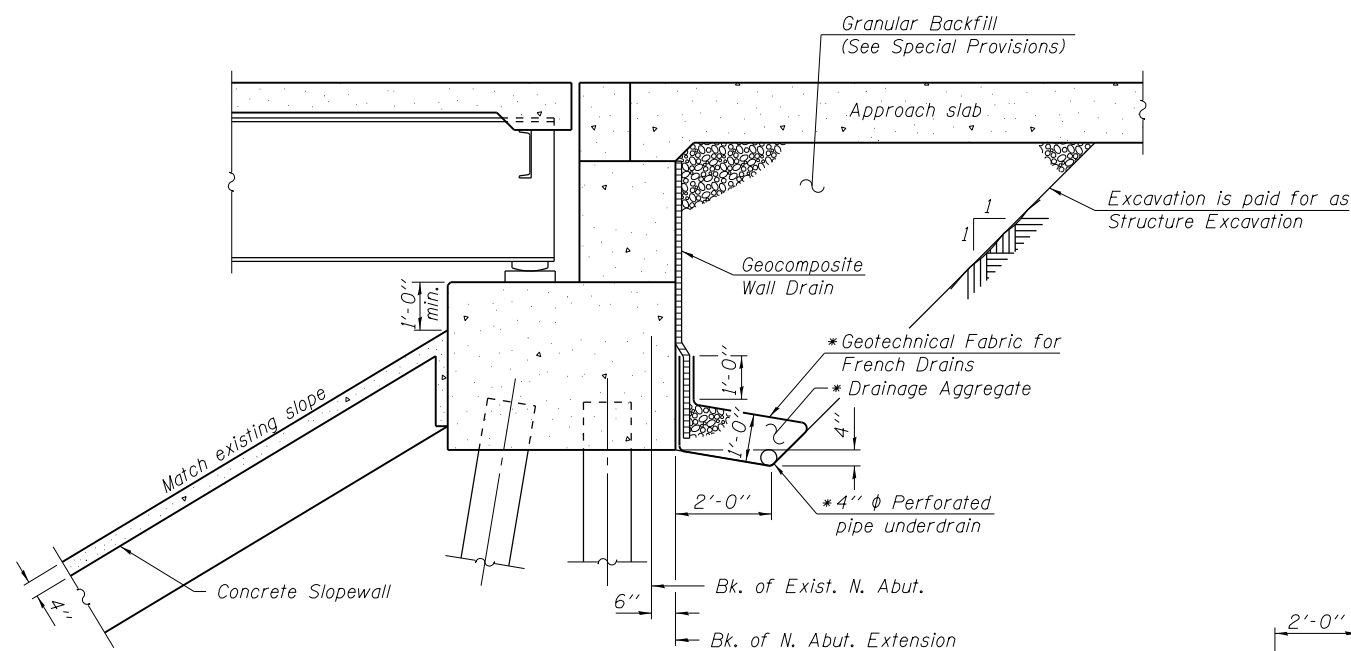


**PART PLAN OF SLOPEWALL REMOVAL AND REPLACEMENT - S. ABUT.**



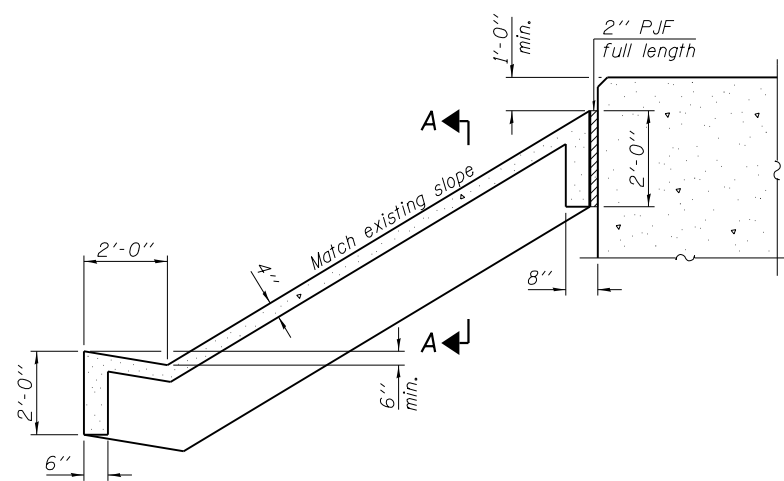
**PART PLAN OF SLOPEWALL REMOVAL AND REPLACEMENT - N. ABUT.**

 Denotes limits of slopewall removal and replacement

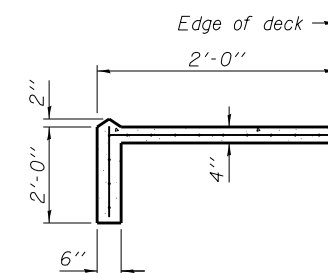


**SECTION THRU PILE SUPPORTED NORTH ABUTMENT EXTENSION**  
(Horiz. dim. at Rt. L's)

\* Included in the cost of Pipe Underdrains for Structures (See Special Provisions)




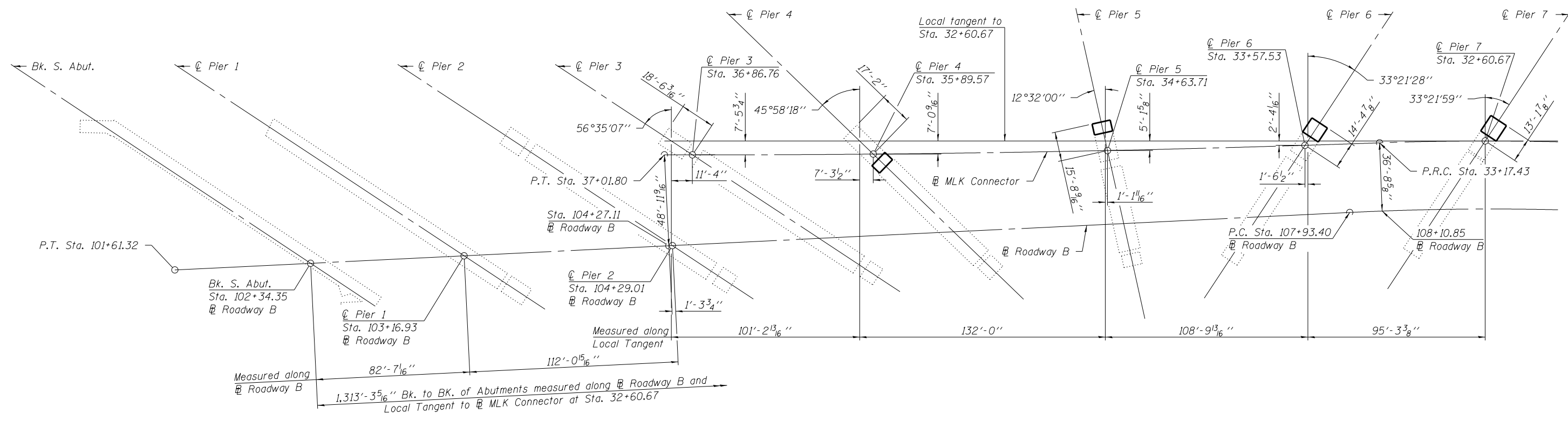
**SLOPEWALL DETAIL**



**SECTION A-A**

Note:  
All drainage system components shall extend parallel to the abutment back wall until they intersect the wingwall or 2'-0" from the end of the wingwalls when the wings are parallel to the abutment. The pipe shall extend under the wingwall, if necessary, until intersecting the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).  
Slopewall shall be reinforced with welded wire fabric, 6 in. x 6 in. - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.

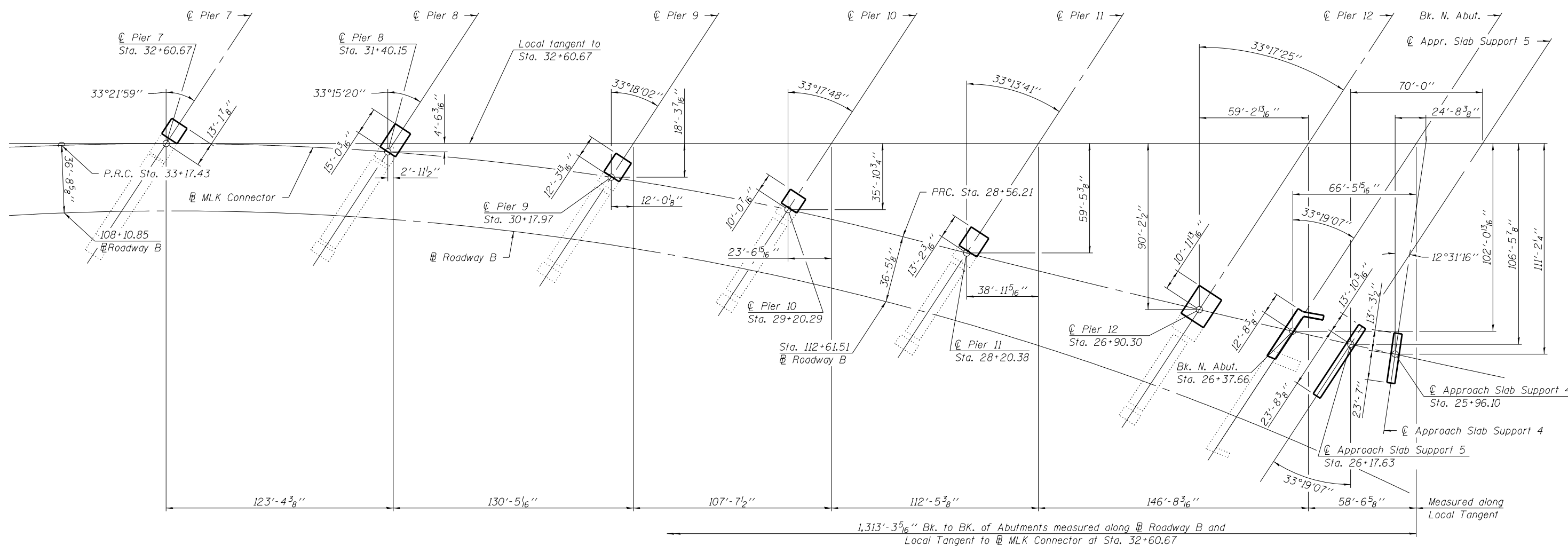
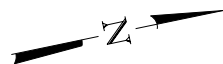
FILE NAME = X:\1309400-MLK\Cad\5\082010-76009.dgn 	DESIGNED - E.M. Lagemann	REVISED	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>GENERAL DATA</b> <b>STRUCTURE NO. 082-0010</b>	F.A.I. R.T.E. = 64	SECTION = 82-(1,4)B-1	COUNTY = ST. CLAIR	TOTAL SHEETS = 406	SHEET NO. = 198
	USER NAME = elagemann	CHECKED - E.M. Lagemann			REVISED	SHEET NO. 6 OF 143 SHEETS	CONTRACT NO. 76G09		ILLINOIS FED. AID PROJECT
PLOT SCALE =	DRAWN - J.N. Bailey	REVISED							
PLOT DATE = 8/7/2014	CHECKED - J.J. Derner	REVISED							



**PART FOOTING LAYOUT**

Notes:  
 For Piers 7 to N. Abut. and Approach Slab supports 4 and 5, see sheet 8 of 143.  
 Measurements from Roadway B to MLK Connector are measured perpendicular to Roadway B.  
 All stations are taken from MLK Connector unless otherwise noted.

FILE NAME = X:\1309400-MLK\Cad\5\082010-76009.dgn 	DESIGNED - J.J. Derner	REVISED	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	<b>FOOTING LAYOUT</b> <b>STRUCTURE NO. 082-0010</b>		F.A.I. RTE. 64	SECTION 82-(1,4)B-1	COUNTY ST. CLAIR	TOTAL SHEETS 406	SHEET NO. 199
	USER NAME = elagemann PLOT SCALE = PLOT DATE = 8/7/2014	CHECKED - E.M. Lagemann DRAWN - J.N. Bailey CHECKED - K.A. Klues		REVISED REVISED REVISED	SHEET NO. 7 OF 143 SHEETS ILLINOIS FED. AID PROJECT	CONTRACT NO. 76009				



**PART FOOTING LAYOUT**

Notes:  
 For S. Abut. to Pier 7, see sheet 8 of 143.  
 Measurements from  $\text{RD Roadway B}$  to  $\text{MLK Connector}$  are measured perpendicular to  $\text{RD Roadway B}$ .  
 All stations are taken from  $\text{MLK Connector}$  unless otherwise noted.

FILE NAME = X:\1309400-MLK\Cad\10-76009.dgn 	DESIGNED - J.J. Derner	REVISED	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>FOOTING LAYOUT</b> <b>STRUCTURE NO. 082-0010</b>	F.A.I. RTE. 64	SECTION 82-(1,4)B-1	COUNTY ST. CLAIR	TOTAL SHEETS 406	SHEET NO. 200
	USER NAME = elagemann PLOT SCALE = PLOT DATE = 8/7/2014	CHECKED - E.M. Lagemann DRAWN - J.N. Bailey CHECKED - K.A. Klues			REVISED REVISED REVISED	SHEET NO. 8 OF 143 SHEETS	CONTRACT NO. 76G09 ILLINOIS FED. AID PROJECT		