SUPERELEVATION TABLE

P.I. STA 612+94.43 | Dc=0°48'00"

REMARKS	PROFILE GRADE			CROWN POINT					OUTSIDE LANE					REMARKS
	STATION	OFFSET FROM ℄	PROFILE GRADE	OFFSET FROM ℄	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	PAVEMENT ELEVATION	OFFSET FROM ℄	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	PAVEMENT ELEVATION	
	606+25.00	30.00	998.42	42.00	-0.0300	-0.36		998.06	66.00	-0.0300	-0.72		997.34	
	606+50.00	30.00	999.16	42.00	-0.0300	-0.36		998.80	66.00	-0.0300	-0.72		998.08	
	606+75.00	30.00	999.90	42.00	-0.0300	-0.36		999.54	66.00	-0.0300	-0.72		998.82	
	607+00.00	30.00	1000.63	42.00	-0.0300	-0.36		1000.27	66.00	-0.0300	-0.72		999.55	
	607+25.00	30.00	1001.37	42.00	-0.0300	-0.36		1001.01	66.00	-0.0300	-0.72		1000.29	
	607+50.00	30.00	1002.11	42.00	-0.0300	-0.36		1001.75	66.00	-0.0300	-0.72		1001.03	
	607+75.00	30.00	1002.85	42.00	-0.0300	-0.36		1002.49	66.00	-0.0300	-0.72		1001.77	
	608+00.00	30.00	1003.58	42.00	-0.0300	-0.36		1003.22	66.00	-0.0300	-0.72		1002.50	
	608+25.00	30.00	1004.32	42.00	-0.0300	-0.36		1003.96	66.00	-0.0300	-0.72		1003.24	
	608+50.00	30.00	1005.06	42.00	-0.0300	-0.36		1004.70	66.00	-0.0300	-0.72		1003.98	
	608+75.00	30.00	1005.80	42.00	-0.0300	-0.36		1005.44	66.00	-0.0300	-0.72		1004.72	
	609+00.00	30.00	1006.53	42.00	-0.0300	-0.36		1006.17	66.00	-0.0300	-0.72		1005.45	
	609+25.00	30.00	1007.27	42.00	-0.0300	-0.36		1006.91	66.00	-0.0300	-0.72		1006.19	
	609+50.00	30.00	1008.01	42.00	-0.0300	-0.36		1007.65	66.00	-0.0300	-0.72		1006.93	
	609+75.00	30.00	1008.75	42.00	-0.0300	-0.36		1008.39	66.00	-0.0300	-0.72		1007.67	
	610+00.00	30.00	1009.48	42.00	-0.0300	-0.36		1009.12	66.00	-0.0300	-0.72		1008.40	
	610+25.00	30.00	1010.22	42.00	-0.0300	-0.36		1009.86	66.00	-0.0300	-0.72		1009.14	
	610+50.00	30.00	1010.96	42.00	-0.0300	-0.36		1010.60	66.00	-0.0300	-0.72		1009.88	
	610+75.00	30.00	1011.70	42.00	-0.0300	-0.36		1011.34	66.00	-0.0300	-0.72		1010.62	
	611+00.00	30.00	1012.43	42.00	-0.0300	-0.36		1012.07	66.00	-0.0300	-0.72		1011.35	
	611+25.00	30.00	1013.17	42.00	-0.0300	-0.36		1012.81	66.00	-0.0300	-0.72		1012.09	
	611+50.00	30.00	1013.91	42.00	-0.0300	-0.36		1013.55	66.00	-0.0300	-0.72		1012.83	
	611+75.00	30.00	1014.65	42.00	-0.0300	-0.36		1014.29	66.00	-0.0300	-0.72		1013.57	
	612+00.00	30.00	1015.38	42.00	-0.0300	-0.36		1015.02	66.00	-0.0300	-0.72		1014.30	
	612+25.00	30.00	1016.12	42.00	-0.0300	-0.36		1015.76	66.00	-0.0300	-0.72		1015.04	
	612+50.00	30.00	1016.86	42.00	-0.0300	-0.36		1016.50	66.00	-0.0300	-0.72		1015.78	
	612+75.00	30.00	1017.60	42.00	-0.0300	-0.36		1017.24	66.00	-0.0300	-0.72		1016.52	
	613+00.00	30.00	1018.33	42.00	-0.0300	-0.36		1017.97	66.00	-0.0300	-0.72		1017.25	
	613+25.00	30.00	1019.07	42.00	-0.0300	-0.36		1018.71	66.00	-0.0300	-0.72		1017.99	
	613+50.00	30.00	1019.81	42.00	-0.0300	-0.36		1019.45	66.00	-0.0300	-0.72		1018.73	
	613+75.00	30.00	1020.55	42.00	-0.0300	-0.36		1020.19	66.00	-0.0300	-0.72		1019.47	
	614+00.00	30.00	1021.28	42.00	-0.0300	-0.36		1020.92	66.00	-0.0300	-0.72		1020.20	
	614+25.00	30.00	1022.02	42.00	-0.0300	-0.36		1021.66	66.00	-0.0300	-0.72		1020.94	
	614+50.00	30.00	1022.76	42.00	-0.0300	-0.36		1022.40	66.00	-0.0300	-0.72		1021.68	
	614+75.00	30.00	1023.50	42.00	-0.0300	-0.36		1023.14	66.00	-0.0300	-0.72		1022.42	
	615+00.00	30.00	1024.23	42.00	-0.0300	-0.36		1023.87	66.00	-0.0300	-0.72		1023.15	
	615+25.00	30.00	1024.95	42.00	-0.0300	-0.36		1024.59	66.00	-0.0300	-0.72		1023.87	
	615+50.00	30.00	1025.66	42.00	-0.0300	-0.36		1025.30	66.00	-0.0300	-0.72		1024.58	
	615+75.00	30.00	1026.37	42.00	-0.0300	-0.36		1026.01	66.00	-0.0300	-0.72		1025.29	
	616+00.00	30.00	1027.06	42.00	-0.0300	-0.36		1026.70	66.00	-0.0300	-0.72		1025.98	
	616+25.00	30.00	1027.75	42.00	-0.0300	-0.36		1027.39	66.00	-0.0300	-0.72		1026.67	
	616+50.00	30.00	1028.42	42.00	-0.0300	-0.36		1028.06	66.00	-0.0300	-0.72		1027.34	
	616+75.00	30.00	1029.08	42.00	-0.0300	-0.36		1028.72	66.00	-0.0300	-0.72		1028.00	
	617+00.00	30.00	1029.73	42.00	-0.0300	-0.36		1029.37	66.00	-0.0300	-0.72		1028.65	
	617+25.00	30.00	1030.37	42.00	-0.0300	-0.36		1030.01	66.00	-0.0300	-0.72		1029.29	
	617+50.00	30.00	1031.00	42.00	-0.0300	-0.36		1030.64	66.00	-0.0300	-0.72		1029.92	
	617+75.00	30.00	1031.62	42.00	-0.0300	-0.36		1031.26	66.00	-0.0300	-0.72		1030.54	
	618+00.00	30.00	1032.23	42.00	-0.0300	-0.36		1031.87	66.00	-0.0300	-0.72		1031.15	
	618+25.00	30.00	1032.83	42.00	-0.0300	-0.36		1032.47	66.00	-0.0300	-0.72		1031.75	
	618+50.00	30.00	1033.42	42.00	-0.0300	-0.36		1033.06	66.00	-0.0300	-0.72		1032.34	
	618+75.00	30.00	1034.00	42.00	-0.0300	-0.36		1033.64	66.00	-0.0300	-0.72		1032.92	
	619+00.00	30.00	1034.56	42.00	-0.0300	-0.36		1034.20	66.00	-0.0300	-0.72		1033.48	
	619+25.00	30.00	1035.12	42.00	-0.0300	-0.36		1034.76	66.00	-0.0300	-0.72		1034.04	
	619+50.00	30.00	1035.67	42.00	-0.0300	-0.36		1035.31	66.00	-0.0300	-0.72		1034.59	
	619+75.00	30.00	1036.20	42.00	-0.0300	-0.36		1035.84	66.00	-0.0300	-0.72		1035.12	

CALCULATED PRS
CHECKED AJP

SUPERELEVATION TABLE (EB)

MAH-80-0.97

801
1100

6/16/05 2:46:54 PM
s:\projects\37700\sheets\ge001EB.dgn

SUPERELEVATION TABLE

P.I. STA 612+94.43 | Dc=0°48'00"

REMARKS	PROFILE GRADE			CROWN POINT					OUTSIDE LANE					REMARKS
	STATION	OFFSET FROM ℄	PROFILE GRADE	OFFSET FROM ℄	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	PAVEMENT ELEVATION	OFFSET FROM ℄	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	PAVEMENT ELEVATION	
	620+00.00	30.00	1036.73	42.00	-0.0300	-0.36		1036.37	66.00	-0.0300	-0.72		1035.65	
	620+25.00	30.00	1037.25	42.00	-0.0300	-0.36		1036.89	66.00	-0.0300	-0.72		1036.17	
	620+50.00	30.00	1037.75	42.00	-0.0300	-0.36		1037.39	66.00	-0.0300	-0.72		1036.67	
	620+75.00	30.00	1038.25	42.00	-0.0300	-0.36		1037.89	66.00	-0.0300	-0.72		1037.17	
	621+00.00	30.00	1038.73	42.00	-0.0300	-0.36		1038.37	66.00	-0.0300	-0.72		1037.65	
	621+25.00	30.00	1039.20	42.00	-0.0300	-0.36		1038.84	66.00	-0.0300	-0.72		1038.12	
	621+50.00	30.00	1039.67	42.00	-0.0300	-0.36		1039.31	66.00	-0.0300	-0.72		1038.59	
	621+75.00	30.00	1040.12	42.00	-0.0300	-0.36		1039.76	66.00	-0.0300	-0.72		1039.04	
	622+00.00	30.00	1040.56	42.00	-0.0300	-0.36		1040.20	66.00	-0.0300	-0.72		1039.48	
	622+25.00	30.00	1041.00	42.00	-0.0300	-0.36		1040.64	66.00	-0.0300	-0.72		1039.92	
	622+50.00	30.00	1041.42	42.00	-0.0300	-0.36		1041.06	66.00	-0.0300	-0.72		1040.34	
	622+75.00	30.00	1041.83	42.00	-0.0300	-0.36		1041.47	66.00	-0.0300	-0.72		1040.75	
	623+00.00	30.00	1042.23	42.00	-0.0300	-0.36		1041.87	66.00	-0.0300	-0.72		1041.15	
	623+25.00	30.00	1042.62	42.00	-0.0300	-0.36		1042.26	66.00	-0.0300	-0.72		1041.54	
	623+50.00	30.00	1043.00	42.00	-0.0300	-0.36		1042.64	66.00	-0.0300	-0.72		1041.92	
	623+75.00	30.00	1043.37	42.00	-0.0300	-0.36		1043.01	66.00	-0.0300	-0.72		1042.29	
	624+00.00	30.00	1043.73	42.00	-0.0300	-0.36		1043.37	66.00	-0.0300	-0.72		1042.65	
	624+25.00	30.00	1044.08	42.00	-0.0300	-0.36		1043.72	66.00	-0.0300	-0.72		1043.00	
	624+50.00	30.00	1044.42	42.00	-0.0300	-0.36		1044.06	66.00	-0.0300	-0.72		1043.34	
	624+75.00	30.00	1044.75	42.00	-0.0300	-0.36		1044.39	66.00	-0.0300	-0.72		1043.67	
	625+00.00	30.00	1045.06	42.00	-0.0300	-0.36		1044.70	66.00	-0.0300	-0.72		1043.98	
	625+25.00	30.00	1045.37	42.78	-0.0300	-0.38		1044.99	66.00	-0.0300	-0.70		1044.29	
	625+50.00	30.00	1045.67	43.55	-0.0300	-0.41		1045.26	66.00	-0.0300	-0.67		1044.59	
	625+75.00	30.00	1045.95	44.33	-0.0300	-0.43		1045.52	66.00	-0.0300	-0.65		1044.87	
	626+00.00	30.00	1046.23	45.10	-0.0300	-0.45		1045.78	66.00	-0.0300	-0.63		1045.15	
	626+25.00	30.00	1046.49	45.88	-0.0300	-0.48		1046.01	66.00	-0.0300	-0.60		1045.41	
	626+50.00	30.00	1046.75	46.65	-0.0300	-0.50		1046.25	66.00	-0.0300	-0.58		1045.67	
	626+75.00	30.00	1046.99	47.43	-0.0300	-0.52		1046.47	66.00	-0.0300	-0.56		1045.91	
	627+00.00	30.00	1047.23	48.20	-0.0300	-0.55		1046.68	66.00	-0.0300	-0.53		1046.15	
	627+25.00	30.00	1047.45	48.98	-0.0300	-0.57		1046.88	66.00	-0.0300	-0.51		1046.37	
	627+50.00	30.00	1047.67	49.75	-0.0300	-0.59		1047.08	66.00	-0.0300	-0.49		1046.59	
	627+75.00	30.00	1047.87	50.53	-0.0300	-0.62		1047.25	66.00	-0.0300	-0.46		1046.79	
	628+00.00	30.00	1048.06	51.30	-0.0300	-0.64		1047.42	66.00	-0.0300	-0.44		1046.98	
	628+25.00	30.00	1048.24	52.08	-0.0300	-0.66		1047.58	66.00	-0.0300	-0.42		1047.16	
	628+50.00	30.00	1048.42	52.85	-0.0300	-0.69		1047.73	66.00	-0.0300	-0.39		1047.34	
	628+75.00	30.00	1048.58	53.63	-0.0300	-0.71		1047.87	66.00	-0.0300	-0.37		1047.50	
EFSE	628+87.00	30.00	1048.65	54.00	-0.0300	-0.72		1047.93	66.00	-0.0300	-0.36		1047.57	EFSE
	629+00.00	30.00	1048.73	54.00	-0.0286	-0.69	1:250	1048.04	66.00	-0.0286	-0.34	1:250	1047.70	
	629+25.00	30.00	1048.87	54.00	-0.0258	-0.62	1:250	1048.25	66.00	-0.0258	-0.31	1:250	1047.94	
	629+50.00	30.00	1049.00	54.00	-0.0230	-0.55	1:250	1048.45	66.00	-0.0230	-0.28	1:250	1048.17	
	629+75.00	30.00	1049.12	54.00	-0.0202	-0.49	1:250	1048.63	66.00	-0.0202	-0.24	1:250	1048.39	
PT	629+76.95	30.00	1049.13	54.00	-0.0200	-0.48	1:250	1048.65	66.00	-0.0200	-0.24	1:250	1048.41	PT
	630+00.00	30.00	1049.23	54.00	-0.0174	-0.42	1:250	1048.81	66.00	-0.0174	-0.21	1:250	1048.60	
RC	630+16.60	30.00	1049.30	54.00	-0.0156	-0.37	1:250	1048.93	66.00	-0.0156	-0.19		1048.74	RC
	630+25.00	30.00	1049.33	54.00	-0.0142	-0.34	1:250	1048.99	66.00	-0.0156	-0.19		1048.80	
	630+50.00	30.00	1049.42	54.00	-0.0100	-0.24	1:250	1049.18	66.00	-0.0156	-0.19		1048.99	
	630+75.00	30.00	1049.49	54.00	-0.0059	-0.14	1:250	1049.35	66.00	-0.0156	-0.19		1049.16	
	631+00.00	30.00	1049.56	54.00	-0.0017	-0.04	1:250	1049.52	66.00	-0.0156	-0.19		1049.33	
HF	631+10.20	30.00	1049.59	54.00	0.0000	0.00	1:250	1049.59	66.00	-0.0156	-0.19		1049.40	HF
	631+25.00	30.00	1049.62	54.00	0.0025	0.06	1:250	1049.68	66.00	-0.0156	-0.19		1049.49	
	631+50.00	30.00	1049.67	54.00	0.0066	0.16	1:250	1049.83	66.00	-0.0156	-0.19		1049.64	
	631+75.00	30.00	1049.70	54.00	0.0108	0.26	1:250	1049.96	66.00	-0.0156	-0.19		1049.77	
	632+00.00	30.00	1049.73	54.00	0.0150	0.36	1:250	1050.09	66.00	-0.0156	-0.19		1049.90	
NC	632+03.80	30.00	1049.73	54.00	0.0156	0.37		1050.10	66.00	-0.0156	-0.19		1049.91	NC
	632+25.00	30.00	1049.74	54.00	0.0156	0.37		1050.11	66.00	-0.0156	-0.19		1049.92	

CALCULATED PRS | CHECKED AJP

SUPERELEVATION TABLE (EB)

MAH-80-0.97

802
1100

6/16/05 2:56:46 PM
s:\projects\37100\sheets\pe001EB.dgn

SUPERELEVATION TABLE

P.I. STA 513+24.99 | Dc = 1°28'00"

REMARKS	OUTSIDE LANE					CROWN POINT					PROFILE GRADE			REMARKS
	PAVEMENT ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	OFFSET FROM ℄	PAVEMENT ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	OFFSET FROM ℄	STATION	OFFSET FROM ℄	PROFILE GRADE	
	937.87		-0.19	-0.0156	66.00	938.06		0.37	0.0156	54.00	503+75.00	30.00	937.69	
NC	937.73		-0.19	-0.0156	66.00	937.92		0.37	0.0156	54.00	503+83.20	30.00	937.55	NC
	937.40	1:250	-0.19	-0.0156	66.00	937.59		0.31	0.0128	54.00	504+00.00	30.00	937.28	
	936.90	1:250	-0.19	-0.0156	66.00	937.09		0.21	0.0086	54.00	504+25.00	30.00	936.88	
	936.39	1:250	-0.19	-0.0156	66.00	936.58		0.11	0.0045	54.00	504+50.00	30.00	936.47	
	935.88	1:250	-0.19	-0.0156	66.00	936.07		0.01	0.0003	54.00	504+75.00	30.00	936.06	
HF	935.84	1:250	-0.19	-0.0156	66.00	936.03		0.00	0.0000	54.00	504+76.80	30.00	936.03	HF
	935.38	1:250	-0.19	-0.0156	66.00	935.57		-0.09	-0.0039	54.00	505+00.00	30.00	935.66	
	934.87	1:250	-0.19	-0.0156	66.00	935.06		-0.19	-0.0080	54.00	505+25.00	30.00	935.25	
	934.37	1:250	-0.19	-0.0156	66.00	934.56		-0.29	-0.0122	54.00	505+50.00	30.00	934.85	
RC	933.95	1:250	-0.19	-0.0156	66.00	934.14		-0.37	-0.0156	54.00	505+70.40	30.00	934.51	RC
	933.86	1:250	-0.19	-0.0161	66.00	934.05	1:250	-0.39	-0.0161	54.00	505+75.00	30.00	934.44	
	933.35	1:250	-0.23	-0.0189	66.00	933.58	1:250	-0.45	-0.0189	54.00	506+00.00	30.00	934.03	
	932.85	1:250	-0.26	-0.0217	66.00	933.11	1:250	-0.52	-0.0217	54.00	506+25.00	30.00	933.63	
	932.34	1:250	-0.29	-0.0244	66.00	932.63	1:250	-0.59	-0.0244	54.00	506+50.00	30.00	933.22	
	931.84	1:250	-0.33	-0.0272	66.00	932.17	1:250	-0.65	-0.0272	54.00	506+75.00	30.00	932.82	
	931.33	1:250	-0.36	-0.0300	66.00	931.69	1:250	-0.72	-0.0300	54.00	507+00.00	30.00	932.41	
	930.82	1:250	-0.39	-0.0328	66.00	931.21	1:250	-0.79	-0.0328	54.00	507+25.00	30.00	932.00	
PC	930.60	1:250	-0.41	-0.0340	66.00	931.01	1:250	-0.82	-0.0340	54.00	507+35.90	30.00	931.83	PC
	930.32	1:250	-0.43	-0.0356	66.00	930.75	1:250	-0.85	-0.0356	54.00	507+50.00	30.00	931.60	
	929.81	1:250	-0.46	-0.0383	66.00	930.27	1:250	-0.92	-0.0383	54.00	507+75.00	30.00	931.19	
	929.31	1:250	-0.49	-0.0411	66.00	929.80	1:250	-0.99	-0.0411	54.00	508+00.00	30.00	930.79	
	928.80	1:250	-0.53	-0.0439	66.00	929.33	1:250	-1.05	-0.0439	54.00	508+25.00	30.00	930.38	
	928.29	1:250	-0.56	-0.0467	66.00	928.85	1:250	-1.12	-0.0467	54.00	508+50.00	30.00	929.97	
	927.79	1:250	-0.59	-0.0494	66.00	928.38	1:250	-1.19	-0.0494	54.00	508+75.00	30.00	929.57	
BFSE	927.51		-0.61	-0.0510	66.00	928.12		-1.22	-0.0510	54.00	508+89.00	30.00	929.34	BFSE
	927.33		-0.61	-0.0510	66.00	927.94		-1.22	-0.0510	54.00	509+00.00	30.00	929.16	
	926.93		-0.61	-0.0510	66.00	927.54		-1.22	-0.0510	54.00	509+25.00	30.00	928.76	
	926.52		-0.61	-0.0510	66.00	927.13		-1.22	-0.0510	54.00	509+50.00	30.00	928.35	
	926.12		-0.61	-0.0510	66.00	926.73		-1.22	-0.0510	54.00	509+75.00	30.00	927.95	
	925.71		-0.61	-0.0510	66.00	926.32		-1.22	-0.0510	54.00	510+00.00	30.00	927.54	
	925.30		-0.61	-0.0510	66.00	925.91		-1.22	-0.0510	54.00	510+25.00	30.00	927.13	
	924.90		-0.61	-0.0510	66.00	925.51		-1.22	-0.0510	54.00	510+50.00	30.00	926.73	
	924.49		-0.61	-0.0510	66.00	925.10		-1.22	-0.0510	54.00	510+75.00	30.00	926.32	
	924.09		-0.61	-0.0510	66.00	924.70		-1.22	-0.0510	54.00	511+00.00	30.00	925.92	
	923.68		-0.61	-0.0510	66.00	924.29		-1.22	-0.0510	54.00	511+25.00	30.00	925.51	
	923.27		-0.61	-0.0510	66.00	923.88		-1.22	-0.0510	54.00	511+50.00	30.00	925.10	
	922.87		-0.61	-0.0510	66.00	923.48		-1.22	-0.0510	54.00	511+75.00	30.00	924.70	
	922.46		-0.61	-0.0510	66.00	923.07		-1.22	-0.0510	54.00	512+00.00	30.00	924.29	
	922.06		-0.61	-0.0510	66.00	922.67		-1.22	-0.0510	54.00	512+25.00	30.00	923.89	
	921.65		-0.61	-0.0510	66.00	922.26		-1.22	-0.0510	54.00	512+50.00	30.00	923.48	
	921.24		-0.61	-0.0510	66.00	921.85		-1.22	-0.0510	54.00	512+75.00	30.00	923.07	
	920.85		-0.61	-0.0510	66.00	921.46		-1.22	-0.0510	54.00	513+00.00	30.00	922.68	
	920.48		-0.61	-0.0510	66.00	921.09		-1.22	-0.0510	54.00	513+25.00	30.00	922.31	
	920.15		-0.61	-0.0510	66.00	920.76		-1.22	-0.0510	54.00	513+50.00	30.00	921.98	
	919.83		-0.61	-0.0510	66.00	920.44		-1.22	-0.0510	54.00	513+75.00	30.00	921.66	
	919.55		-0.61	-0.0510	66.00	920.16		-1.22	-0.0510	54.00	514+00.00	30.00	921.38	
	919.28		-0.66	-0.0510	66.00	919.94		-1.18	-0.0510	53.15	514+25.00	30.00	921.12	
	919.04		-0.70	-0.0510	66.00	919.74		-1.14	-0.0510	52.30	514+50.00	30.00	920.88	
	918.85		-0.74	-0.0510	66.00	919.59		-1.09	-0.0510	51.44	514+75.00	30.00	920.68	
	918.66		-0.79	-0.0510	66.00	919.45		-1.05	-0.0510	50.59	515+00.00	30.00	920.50	
	918.50		-0.83	-0.0510	66.00	919.33		-1.01	-0.0510	49.74	515+25.00	30.00	920.34	

CALCULATED PRS | CHECKED AJP

SUPERELEVATION TABLE (WB)

MAH-80-0.97

803
1100

6/16/05 2:55:51 PM
s:\projects\37700\sheets\ge002WB.dgn

SUPERELEVATION TABLE

P.I. STA 513+24.99 | Dc = 1°28′00″

REMARKS	OUTSIDE LANE					CROWN POINT					PROFILE GRADE			REMARKS
	PAVEMENT ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	OFFSET FROM ℄	PAVEMENT ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	OFFSET FROM ℄	STATION	OFFSET FROM ℄	PROFILE GRADE	
	918.38		-0.87	-0.0510	66.00	919.25		-0.96	-0.0510	48.89	515+50.00	30.00	920.21	
	918.27		-0.92	-0.0510	66.00	919.19		-0.92	-0.0510	48.03	515+75.00	30.00	920.11	
	918.20		-0.96	-0.0510	66.00	919.16		-0.88	-0.0510	47.18	516+00.00	30.00	920.04	
	918.16		-1.00	-0.0510	66.00	919.16		-0.83	-0.0510	46.33	516+25.00	30.00	919.99	
	918.13		-1.05	-0.0510	66.00	919.18		-0.79	-0.0510	45.48	516+50.00	30.00	919.97	
	918.14		-1.09	-0.0510	66.00	919.23		-0.75	-0.0510	44.63	516+75.00	30.00	919.98	
	918.18		-1.13	-0.0510	66.00	919.31		-0.70	-0.0510	43.77	517+00.00	30.00	920.01	
	918.23		-1.18	-0.0510	66.00	919.41		-0.66	-0.0510	42.92	517+25.00	30.00	920.07	
	918.31		-1.22	-0.0510	66.00	919.53		-0.62	-0.0510	42.07	517+50.00	30.00	920.15	
EFSE	918.33		-1.22	-0.0510	66.00	919.55		-0.61	-0.0510	42.00	517+52.00	30.00	920.16	EFSE
	918.52	1:250	-1.16	-0.0484	66.00	919.68	1:250	-0.58	-0.0484	42.00	517+75.00	30.00	920.26	
	918.74	1:250	-1.10	-0.0457	66.00	919.84	1:250	-0.55	-0.0457	42.00	518+00.00	30.00	920.39	
	918.97	1:250	-1.03	-0.0429	66.00	920.00	1:250	-0.51	-0.0429	42.00	518+25.00	30.00	920.51	
	919.20	1:250	-0.96	-0.0401	66.00	920.16	1:250	-0.48	-0.0401	42.00	518+50.00	30.00	920.64	
	919.41	1:250	-0.90	-0.0373	66.00	920.31	1:250	-0.45	-0.0373	42.00	518+75.00	30.00	920.76	
	919.65	1:250	-0.83	-0.0346	66.00	920.48	1:250	-0.41	-0.0346	42.00	519+00.00	30.00	920.89	
PT	919.69	1:250	-0.82	-0.0340	66.00	920.51	1:250	-0.41	-0.0340	42.00	519+05.27	30.00	920.92	PT
	919.87	1:250	-0.76	-0.0318	66.00	920.63	1:250	-0.38	-0.0318	42.00	519+25.00	30.00	921.01	
	920.09	1:250	-0.70	-0.0290	66.00	920.79	1:250	-0.35	-0.0290	42.00	519+50.00	30.00	921.14	
	920.32	1:250	-0.63	-0.0262	66.00	920.95	1:250	-0.31	-0.0262	42.00	519+75.00	30.00	921.26	
	920.55	1:250	-0.56	-0.0234	66.00	921.11	1:250	-0.28	-0.0234	42.00	520+00.00	30.00	921.39	
	920.76	1:250	-0.50	-0.0207	66.00	921.26	1:250	-0.25	-0.0207	42.00	520+25.00	30.00	921.51	
	921.00	1:250	-0.43	-0.0179	66.00	921.43	1:250	-0.21	-0.0179	42.00	520+50.00	30.00	921.64	
RC	921.18	1:250	-0.37	-0.0156	66.00	921.55		-0.19	-0.0156	42.00	520+70.60	30.00	921.74	RC
	921.22	1:250	-0.37	-0.0156	66.00	921.59		-0.17	-0.0141	42.00	520+75.00	30.00	921.76	
	921.45	1:250	-0.37	-0.0156	66.00	921.82		-0.07	-0.0058	42.00	521+00.00	30.00	921.89	
HF	921.61	1:250	-0.37	-0.0156	66.00	921.98		0.00	0.0000	42.00	521+17.40	30.00	921.98	HF
	921.67	1:250	-0.37	-0.0156	66.00	922.04		0.03	0.0025	42.00	521+25.00	30.00	922.01	
	921.90	1:250	-0.37	-0.0156	66.00	922.27		0.13	0.0109	42.00	521+50.00	30.00	922.14	
NC	922.03		-0.37	-0.0156	66.00	922.40		0.19	0.0156	42.00	521+64.20	30.00	922.21	NC
	922.08		-0.37	-0.0156	66.00	922.45		0.19	0.0156	42.00	521+75.00	30.00	922.26	

CALCULATED PRS
CHECKED AJP

SUPERELEVATION TABLE (WB)

MAH-80-0.97

804
1100

6/15/05 2:16:15 PM
s:\projects\37701\sheets\ge002WB.dgn

SUPERELEVATION TABLE

P.I. STA 555+85.98 | Dc=0°30'00"

REMARKS	OUTSIDE LANE					CROWN POINT					PROFILE GRADE			REMARKS
	PAVEMENT ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	OFFSET FROM ℄	PAVEMENT ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	OFFSET FROM ℄	STATION	OFFSET FROM ℄	PROFILE GRADE	
	919.49		-0.37	-0.0156	66.00	919.86		0.19	0.0156	42.00	551+00.00	30.00	919.67	
NC	919.49		-0.37	-0.0156	66.00	919.86		0.19	0.0156	42.00	551+00.80	30.00	919.67	NC
	919.31		-0.37	-0.0156	66.00	919.68	1:250	0.09	0.0075	42.00	551+25.00	30.00	919.59	
HF	919.14		-0.37	-0.0156	66.00	919.51	1:250	0.00	0.0000	42.00	551+47.60	30.00	919.51	HF
	919.12		-0.37	-0.0156	66.00	919.49	1:250	-0.01	-0.0008	42.00	551+50.00	30.00	919.50	
	918.94		-0.37	-0.0156	66.00	919.31	1:250	-0.11	-0.0091	42.00	551+75.00	30.00	919.42	
RC	918.79		-0.37	-0.0156	66.00	919.16	1:250	-0.19	-0.0156	42.00	551+94.40	30.00	919.35	RC
PC	918.78	1:250	-0.38	-0.0157	66.00	919.16	1:250	-0.19	-0.0157	42.00	551+95.00	30.00	919.35	PC
	918.74	1:250	-0.39	-0.0162	66.00	919.13	1:250	-0.19	-0.0162	42.00	552+00.00	30.00	919.32	
BFSE	918.55		-0.46	-0.0190	66.00	919.01		-0.23	-0.0190	42.00	552+25.00	30.00	919.24	BFSE
	918.46		-0.46	-0.0190	66.00	918.92		-0.23	-0.0190	42.00	552+50.00	30.00	919.15	
	918.38		-0.46	-0.0190	66.00	918.84		-0.23	-0.0190	42.00	552+75.00	30.00	919.07	
	918.28		-0.46	-0.0190	66.00	918.74		-0.23	-0.0190	42.00	553+00.00	30.00	918.97	
	918.20		-0.46	-0.0190	66.00	918.66		-0.23	-0.0190	42.00	553+25.00	30.00	918.89	
	918.11		-0.46	-0.0190	66.00	918.57		-0.23	-0.0190	42.00	553+50.00	30.00	918.80	
	918.02		-0.46	-0.0190	66.00	918.48		-0.23	-0.0190	42.00	553+75.00	30.00	918.71	
	917.93		-0.46	-0.0190	66.00	918.39		-0.23	-0.0190	42.00	554+00.00	30.00	918.62	
	917.85		-0.46	-0.0190	66.00	918.31		-0.23	-0.0190	42.00	554+25.00	30.00	918.54	
	917.76		-0.46	-0.0190	66.00	918.22		-0.23	-0.0190	42.00	554+50.00	30.00	918.45	
	917.67		-0.46	-0.0190	66.00	918.13		-0.23	-0.0190	42.00	554+75.00	30.00	918.36	
	917.58		-0.46	-0.0190	66.00	918.04		-0.23	-0.0190	42.00	555+00.00	30.00	918.27	
	917.50		-0.46	-0.0190	66.00	917.96		-0.23	-0.0190	42.00	555+25.00	30.00	918.19	
	917.42		-0.46	-0.0190	66.00	917.88		-0.23	-0.0190	42.00	555+50.00	30.00	918.11	
	917.35		-0.46	-0.0190	66.00	917.81		-0.23	-0.0190	42.00	555+75.00	30.00	918.04	
	917.28		-0.46	-0.0190	66.00	917.74		-0.23	-0.0190	42.00	556+00.00	30.00	917.97	
	917.23		-0.46	-0.0190	66.00	917.69		-0.23	-0.0190	42.00	556+25.00	30.00	917.92	
	917.17		-0.46	-0.0190	66.00	917.63		-0.23	-0.0190	42.00	556+50.00	30.00	917.86	
	917.13		-0.46	-0.0190	66.00	917.59		-0.23	-0.0190	42.00	556+75.00	30.00	917.82	
	917.09		-0.46	-0.0190	66.00	917.55		-0.23	-0.0190	42.00	557+00.00	30.00	917.78	
	917.06		-0.46	-0.0190	66.00	917.52		-0.23	-0.0190	42.00	557+25.00	30.00	917.75	
	917.03		-0.46	-0.0190	66.00	917.49		-0.23	-0.0190	42.00	557+50.00	30.00	917.72	
	917.02		-0.46	-0.0190	66.00	917.48		-0.23	-0.0190	42.00	557+75.00	30.00	917.71	
	917.00		-0.46	-0.0190	66.00	917.46		-0.23	-0.0190	42.00	558+00.00	30.00	917.69	
	917.00		-0.46	-0.0190	66.00	917.46		-0.23	-0.0190	42.00	558+25.00	30.00	917.69	
	917.00		-0.46	-0.0190	66.00	917.46		-0.23	-0.0190	42.00	558+50.00	30.00	917.69	
	917.01		-0.46	-0.0190	66.00	917.47		-0.23	-0.0190	42.00	558+75.00	30.00	917.70	
	917.02		-0.46	-0.0190	66.00	917.48		-0.23	-0.0190	42.00	559+00.00	30.00	917.71	
	917.04		-0.46	-0.0190	66.00	917.50		-0.23	-0.0190	42.00	559+25.00	30.00	917.73	
EFSE	917.06		-0.46	-0.0190	66.00	917.52		-0.23	-0.0190	42.00	559+47.00	30.00	917.75	EFSE
	917.09	1:250	-0.45	-0.0187	66.00	917.54	1:250	-0.22	-0.0187	42.00	559+50.00	30.00	917.76	
	917.22	1:250	-0.38	-0.0159	66.00	917.60	1:250	-0.19	-0.0159	42.00	559+75.00	30.00	917.79	
PT	917.22	1:250	-0.38	-0.0157	66.00	917.60	1:250	-0.19	-0.0157	42.00	559+76.66	30.00	917.79	PT
	EQUATION: ℄ STA 559+76.66 BK = ℄ STA 559+80.76 AHD													
RC	917.23		-0.37	-0.0156	66.00	917.60	1:250	-0.19	-0.0156	42.00	559+81.70	30.00	917.79	RC
	917.34		-0.37	-0.0156	66.00	917.71	1:250	-0.11	-0.0094	42.00	560+00.00	30.00	917.82	
	917.49		-0.37	-0.0156	66.00	917.86	1:250	-0.01	-0.0011	42.00	560+25.00	30.00	917.87	
HF	917.51		-0.37	-0.0156	66.00	917.88	1:250	0.00	0.0000	42.00	560+28.50	30.00	917.88	HF
	917.64		-0.37	-0.0156	66.00	918.01	1:250	0.09	0.0073	42.00	560+50.00	30.00	917.92	
	917.80		-0.37	-0.0156	66.00	918.17		0.19	0.0156	42.00	560+75.00	30.00	917.98	
NC	917.80		-0.37	-0.0156	66.00	918.17		0.19	0.0156	42.00	560+75.30	30.00	917.98	NC
	917.87		-0.37	-0.0156	66.00	918.24		0.19	0.0156	42.00	561+00.00	30.00	918.05	

CALCULATED PRS | CHECKED AJP

SUPERELEVATION TABLE (WB)

MAH-80-0.97

805/1100

6/16/05 2:16:40 PM
s:\projects\37700\sheets\ge002WB.dgn

SUPERELEVATION TABLE

P.I. STA 612+94.43 | Dc=0°48'00"

REMARKS	OUTSIDE LANE					CROWN POINT					PROFILE GRADE			RIGHT EDGE OF PAVEMENT					REMARKS
	PAVEMENT ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	OFFSET FROM ℄	PAVEMENT ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	OFFSET FROM ℄	STATION	OFFSET FROM ℄	PROFILE GRADE	OFFSET FROM ℄	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	PAVEMENT ELEVATION	
	963.51		-0.37	-0.0156	66.00	963.88		0.19	0.0156	42.00	593+00.00	30.00	963.69						
NC	963.82		-0.37	-0.0156	66.00	964.19		0.19	0.0156	42.00	593+18.20	30.00	964.00						NC
	963.96	1:250	-0.35	-0.0145	66.00	964.31		0.19	0.0156	42.00	593+25.00	30.00	964.12						
	964.50	1:250	-0.25	-0.0103	66.00	964.75		0.19	0.0156	42.00	593+50.00	30.00	964.56						
	965.04	1:250	-0.15	-0.0061	66.00	965.19		0.19	0.0156	42.00	593+75.00	30.00	965.00						
	965.58	1:250	-0.05	-0.0020	66.00	965.63		0.19	0.0156	42.00	594+00.00	30.00	965.44						
HF	965.83	1:250	0.00	0.0000	66.00	965.83		0.19	0.0156	42.00	594+11.80	30.00	965.64						HF
	966.11	1:250	0.05	0.0022	66.00	966.06		0.19	0.0156	42.00	594+25.00	30.00	965.87						
	966.65	1:250	0.15	0.0064	66.00	966.50		0.19	0.0156	42.00	594+50.00	30.00	966.31						
	967.19	1:250	0.25	0.0105	66.00	966.94		0.19	0.0156	42.00	594+75.00	30.00	966.75						
	967.75	1:250	0.35	0.0147	66.00	967.40		0.19	0.0156	42.00	595+00.00	30.00	967.21						
RC	967.87	1:250	0.37	0.0156	66.00	967.50		0.19	0.0156	42.00	595+05.40	30.00	967.31						RC
	968.32	1:250	0.43	0.0178	66.00	967.89	1:250	0.21	0.0178	42.00	595+25.00	30.00	967.68						
PC	968.79	1:250	0.48	0.0200	66.00	968.31	1:250	0.24	0.0200	42.00	595+44.68	30.00	968.07						PC
	968.92	1:250	0.49	0.0206	66.00	968.43	1:250	0.25	0.0206	42.00	595+50.00	30.00	968.18						
	969.53	1:250	0.56	0.0233	66.00	968.97	1:250	0.28	0.0233	42.00	595+75.00	30.00	968.69						
	970.16	1:250	0.63	0.0261	66.00	969.53	1:250	0.31	0.0261	42.00	596+00.00	30.00	969.22						
	970.81	1:250	0.69	0.0289	66.00	970.12	1:250	0.35	0.0289	42.00	596+25.00	30.00	969.77						
BFSE	971.07		0.72	0.0300	66.00	970.35		0.36	0.0300	42.00	596+35.00	30.00	969.99						BFSE
	971.39		0.72	0.0300	66.00	970.67		0.33	0.0300	42.00	596+50.00	31.00	970.34						
	972.00		0.72	0.0300	66.00	971.28		0.36	0.0300	42.00	596+75.00	30.00	970.92						
	972.61		0.72	0.0300	66.00	971.89		0.36	0.0300	42.00	597+00.00	30.00	971.53						
	973.23		0.72	0.0300	66.00	972.51		0.36	0.0300	42.00	597+25.00	30.00	972.15						
	973.88		0.72	0.0300	66.00	973.16		0.36	0.0300	42.00	597+50.00	30.00	972.80						
	974.54		0.72	0.0300	66.00	973.82		0.36	0.0300	42.00	597+75.00	30.00	973.46						
	975.22		0.72	0.0300	66.00	974.50		0.36	0.0300	42.00	598+00.00	30.00	974.14						
	975.92		0.72	0.0300	66.00	975.20		0.36	0.0300	42.00	598+25.00	30.00	974.84						
	976.64		0.72	0.0300	66.00	975.92		0.36	0.0300	42.00	598+50.00	30.00	975.56						
	977.37		0.72	0.0300	66.00	976.65		0.36	0.0300	42.00	598+75.00	30.00	976.29						
	978.11		0.72	0.0300	66.00	977.39		0.36	0.0300	42.00	599+00.00	30.00	977.03						
	978.85		0.72	0.0300	66.00	978.13		0.36	0.0300	42.00	599+25.00	30.00	977.77						
	979.59		0.72	0.0300	66.00	978.87		0.36	0.0300	42.00	599+50.00	30.00	978.51						
	980.32		0.72	0.0300	66.00	979.60		0.36	0.0300	42.00	599+75.00	30.00	979.24						
	981.06		0.72	0.0300	66.00	980.34		0.36	0.0300	42.00	600+00.00	30.00	979.98						
	981.80		0.72	0.0300	66.00	981.08		0.36	0.0300	42.00	600+25.00	30.00	980.72						
	982.54		0.72	0.0300	66.00	981.82		0.36	0.0300	42.00	600+50.00	30.00	981.46						
	983.27		0.72	0.0300	66.00	982.55		0.36	0.0300	42.00	600+75.00	30.00	982.19						
	984.01		0.72	0.0300	66.00	983.29		0.36	0.0300	42.00	601+00.00	30.00	982.93						
	984.75		0.72	0.0300	66.00	984.03		0.36	0.0300	42.00	601+25.00	30.00	983.67						
	985.49		0.72	0.0300	66.00	984.77		0.36	0.0300	42.00	601+50.00	30.00	984.41						
	986.22		0.72	0.0300	66.00	985.50		0.36	0.0300	42.00	601+75.00	30.00	985.14						
	986.96		0.72	0.0300	66.00	986.24		0.36	0.0300	42.00	602+00.00	30.00	985.88						
	987.70		0.72	0.0300	66.00	986.98		0.36	0.0300	42.00	602+25.00	30.00	986.62						
	988.44		0.72	0.0300	66.00	987.72		0.36	0.0300	42.00	602+50.00	30.00	987.36						
	989.17		0.72	0.0300	66.00	988.45		0.36	0.0300	42.00	602+75.00	30.00	988.09						
	989.91		0.72	0.0300	66.00	989.19		0.36	0.0300	42.00	603+00.00	30.00	988.83						
	990.65		0.72	0.0300	66.00	989.93		0.36	0.0300	42.00	603+25.00	30.00	989.57						
	991.39		0.72	0.0300	66.00	990.67		0.36	0.0300	42.00	603+50.00	30.00	990.31						
	992.12		0.72	0.0300	66.00	991.40		0.36	0.0300	42.00	603+75.00	30.00	991.04						
	992.86		0.72	0.0300	66.00	992.14		0.36	0.0300	42.00	604+00.00	30.00	991.78						
	993.60		0.72	0.0300	66.00	992.88		0.36	0.0300	42.00	604+25.00	30.00	992.52						
	994.34		0.72	0.0300	66.00	993.62		0.36	0.0300	42.00	604+50.00	30.00	993.26						

CALCULATED PRS | CHECKED AJP

SUPERELEVATION TABLE (WB)

MAH-80-0.97

806
1100

6/16/05 2:17:00 PM
s:\projects\37700\sheets\geo002wb.dgn

SUPERELEVATION TABLE

P.I. STA 612+94.43 | Dc=0°48'00"

REMARKS	OUTSIDE LANE					CROWN POINT					PROFILE GRADE			RIGHT EDGE OF PAVEMENT					REMARKS
	PAVEMENT ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	OFFSET FROM ℄	PAVEMENT ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	OFFSET FROM ℄	STATION	OFFSET FROM ℄	PROFILE GRADE	OFFSET FROM ℄	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	PAVEMENT ELEVATION	
	995.07		0.72	0.0300	66.00	994.35		0.36	0.0300	42.00	604+75.00	30.00	993.99						
	995.81		0.72	0.0300	66.00	995.09		0.36	0.0300	42.00	605+00.00	30.00	994.73	30.00	-0.0300	0.00		994.73	
	996.55		0.72	0.0300	66.00	995.83		0.36	0.0300	42.00	605+25.00	30.00	995.47	29.64	-0.0300	-0.01		995.46	
	997.29		0.72	0.0300	66.00	996.57		0.36	0.0300	42.00	605+50.00	30.00	996.21	29.29	-0.0300	-0.02		996.19	
	998.02		0.72	0.0300	66.00	997.30		0.36	0.0300	42.00	605+75.00	30.00	996.94	28.93	-0.0300	-0.03		996.91	
	998.76		0.72	0.0300	66.00	998.04		0.36	0.0300	42.00	606+00.00	30.00	997.68	28.57	-0.0300	-0.04		997.64	
	999.50		0.72	0.0300	66.00	998.78		0.36	0.0300	42.00	606+25.00	30.00	998.42	28.21	-0.0300	-0.05		998.37	
	1000.24		0.72	0.0300	66.00	999.52		0.36	0.0300	42.00	606+50.00	30.00	999.16	27.86	-0.0300	-0.06		999.10	
	1000.97		0.72	0.0300	66.00	1000.25		0.36	0.0300	42.00	606+75.00	30.00	999.89	27.50	-0.0300	-0.08		999.81	
	1001.71		0.72	0.0300	66.00	1000.99		0.36	0.0300	42.00	607+00.00	30.00	1000.63	27.14	-0.0300	-0.09		1000.54	
	1002.45		0.72	0.0300	66.00	1001.73		0.36	0.0300	42.00	607+25.00	30.00	1001.37	26.79	-0.0300	-0.10		1001.27	
	1003.18		0.72	0.0300	66.00	1002.46		0.36	0.0300	42.00	607+50.00	30.00	1002.10	26.43	-0.0300	-0.11		1001.99	
	1003.92		0.72	0.0300	66.00	1003.20		0.36	0.0300	42.00	607+75.00	30.00	1002.84	26.07	-0.0300	-0.12		1002.72	
	1004.66		0.72	0.0300	66.00	1003.94		0.36	0.0300	42.00	608+00.00	30.00	1003.58	25.71	-0.0300	-0.13		1003.45	
	1005.40		0.72	0.0300	66.00	1004.68		0.36	0.0300	42.00	608+25.00	30.00	1004.32	25.36	-0.0300	-0.14		1004.18	
	1006.13		0.72	0.0300	66.00	1005.41		0.36	0.0300	42.00	608+50.00	30.00	1005.05	25.00	-0.0300	-0.15		1004.90	
	1006.87		0.72	0.0300	66.00	1006.15		0.36	0.0300	42.00	608+75.00	30.00	1005.79	24.64	-0.0300	-0.16		1005.63	
	1007.61		0.72	0.0300	66.00	1006.89		0.36	0.0300	42.00	609+00.00	30.00	1006.53	24.29	-0.0300	-0.17		1006.36	
	1008.35		0.72	0.0300	66.00	1007.63		0.36	0.0300	42.00	609+25.00	30.00	1007.27	23.93	-0.0300	-0.18		1007.09	
	1009.08		0.72	0.0300	66.00	1008.36		0.36	0.0300	42.00	609+50.00	30.00	1008.00	23.57	-0.0300	-0.19		1007.81	
	1009.82		0.72	0.0300	66.00	1009.10		0.36	0.0300	42.00	609+75.00	30.00	1008.74	23.21	-0.0300	-0.20		1008.54	
	1010.56		0.72	0.0300	66.00	1009.84		0.36	0.0300	42.00	610+00.00	30.00	1009.48	22.86	-0.0300	-0.21		1009.27	
	1011.30		0.72	0.0300	66.00	1010.58		0.36	0.0300	42.00	610+25.00	30.00	1010.22	22.50	-0.0300	-0.23		1009.99	
	1012.03		0.72	0.0300	66.00	1011.31		0.36	0.0300	42.00	610+50.00	30.00	1010.95	22.14	-0.0300	-0.24		1010.71	
	1012.77		0.72	0.0300	66.00	1012.05		0.36	0.0300	42.00	610+75.00	30.00	1011.69	21.79	-0.0300	-0.25		1011.44	
	1013.51		0.72	0.0300	66.00	1012.79		0.36	0.0300	42.00	611+00.00	30.00	1012.43	21.43	-0.0300	-0.26		1012.17	
	1014.25		0.72	0.0300	66.00	1013.53		0.36	0.0300	42.00	611+25.00	30.00	1013.17	21.07	-0.0300	-0.27		1012.90	
	1014.98		0.72	0.0300	66.00	1014.26		0.36	0.0300	42.00	611+50.00	30.00	1013.90	20.71	-0.0300	-0.28		1013.62	
	1015.72		0.72	0.0300	66.00	1015.00		0.36	0.0300	42.00	611+75.00	30.00	1014.64	20.36	-0.0300	-0.29		1014.35	
	1016.46		0.72	0.0300	66.00	1015.74		0.36	0.0300	42.00	612+00.00	30.00	1015.38	20.00	-0.0300	-0.30		1015.08	
	1017.20		0.72	0.0300	66.00	1016.48		0.36	0.0300	42.00	612+25.00	30.00	1016.12	19.64	-0.0300	-0.31		1015.81	
	1017.93		0.72	0.0300	66.00	1017.21		0.36	0.0300	42.00	612+50.00	30.00	1016.85	19.29	-0.0300	-0.32		1016.53	
	1018.67		0.72	0.0300	66.00	1017.95		0.36	0.0300	42.00	612+75.00	30.00	1017.59	18.93	-0.0300	-0.33		1017.26	
	1019.41		0.72	0.0300	66.00	1018.69		0.36	0.0300	42.00	613+00.00	30.00	1018.33	18.57	-0.0300	-0.34		1017.99	
	1020.15		0.72	0.0300	66.00	1019.43		0.36	0.0300	42.00	613+25.00	30.00	1019.07	18.21	-0.0300	-0.35		1018.72	
	1020.88		0.72	0.0300	66.00	1020.16		0.36	0.0300	42.00	613+50.00	30.00	1019.80	18.00	-0.0300	-0.36		1019.44	
	1021.62		0.72	0.0300	66.00	1020.90		0.36	0.0300	42.00	613+75.00	30.00	1020.54	18.00	-0.0300	-0.36		1020.18	
	1022.36		0.72	0.0300	66.00	1021.64		0.36	0.0300	42.00	614+00.00	30.00	1021.28	18.00	-0.0300	-0.36		1020.92	
	1023.10		0.72	0.0300	66.00	1022.38		0.36	0.0300	42.00	614+25.00	30.00	1022.02	18.00	-0.0300	-0.36		1021.66	
	1023.83		0.72	0.0300	66.00	1023.11		0.36	0.0300	42.00	614+50.00	30.00	1022.75	18.00	-0.0300	-0.36		1022.39	
	1024.57		0.72	0.0300	66.00	1023.85		0.36	0.0300	42.00	614+75.00	30.00	1023.49	18.00	-0.0300	-0.36		1023.13	
	1025.31		0.72	0.0300	66.00	1024.59		0.36	0.0300	42.00	615+00.00	30.00	1024.23	18.00	-0.0300	-0.36		1023.87	
	1026.05		0.72	0.0300	66.00	1025.33		0.36	0.0300	42.00	615+25.00	30.00	1024.97	18.00	-0.0300	-0.36		1024.61	
	1026.78		0.72	0.0300	66.00	1026.06		0.36	0.0300	42.00	615+50.00	30.00	1025.70	18.00	-0.0300	-0.36		1025.34	
	1027.52		0.72	0.0300	66.00	1026.80		0.36	0.0300	42.00	615+75.00	30.00	1026.44	18.00	-0.0300	-0.36		1026.08	
	1028.26		0.72	0.0300	66.00	1027.54		0.36	0.0300	42.00	616+00.00	30.00	1027.18	18.00	-0.0300	-0.36		1026.82	
	1029.00		0.72	0.0300	66.00	1028.28		0.36	0.0300	42.00	616+25.00	30.00	1027.92	18.00	-0.0300	-0.36		1027.56	
	1029.73		0.72	0.0300	66.00	1029.01		0.36	0.0300	42.00	616+50.00	30.00	1028.65	18.00	-0.0300	-0.36		1028.29	
	1030.47		0.72	0.0300	66.00	1029.75		0.36	0.0300	42.00	616+75.00	30.00	1029.39	18.00	-0.0300	-0.36		1029.03	
	1031.21		0.72	0.0300	66.00	1030.49		0.36	0.0300	42.00	617+00.00	30.00	1030.13	18.00	-0.0300	-0.36		1029.77	
	1031.93		0.72	0.0300	66.00	1031.21		0.36	0.0300	42.00	617+25.00	30.00	1030.85	18.00	-0.0300	-0.36		1030.49	
	1032.63		0.72	0.0300	66.00	1031.91		0.36	0.0300	42.00	617+50.00	30.00	1031.55	18.00	-0.0300	-0.36		1031.19	

CALCULATED PRS
CHECKED AJP

SUPERELEVATION TABLE (WB)

MAH-80-0.97

807
1100

6/16/05 2:17:20 PM
s:\projects\37100\sheets\ga002WB.dgn

SUPERELEVATION TABLE

P.I. STA 612+94.43 | Dc = 0°48'00"

REMARKS	OUTSIDE LANE					CROWN POINT					PROFILE GRADE			RIGHT EDGE OF PAVEMENT					REMARKS
	PAVEMENT ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	OFFSET FROM ℄	PAVEMENT ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	OFFSET FROM ℄	STATION	OFFSET FROM ℄	PROFILE GRADE	OFFSET FROM ℄	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	PAVEMENT ELEVATION	
	1033.33		0.72	0.0300	66.00	1032.61		0.36	0.0300	42.00	617+75.00	30.00	1032.25	18.00	-0.0300	-0.36		1031.89	
	1034.01		0.72	0.0300	66.00	1033.29		0.36	0.0300	42.00	618+00.00	30.00	1032.93	18.00	-0.0300	-0.36		1032.57	
	1034.67		0.72	0.0300	66.00	1033.95		0.36	0.0300	42.00	618+25.00	30.00	1033.59	18.00	-0.0300	-0.36		1033.23	
	1035.33		0.72	0.0300	66.00	1034.61		0.36	0.0300	42.00	618+50.00	30.00	1034.25	18.00	-0.0300	-0.36		1033.89	
	1035.97		0.72	0.0300	66.00	1035.25		0.36	0.0300	42.00	618+75.00	30.00	1034.89	18.00	-0.0300	-0.36		1034.53	
	1036.60		0.72	0.0300	66.00	1035.88		0.36	0.0300	42.00	619+00.00	30.00	1035.52	18.00	-0.0300	-0.36		1035.16	
	1037.21		0.72	0.0300	66.00	1036.49		0.36	0.0300	42.00	619+25.00	30.00	1036.13	18.00	-0.0300	-0.36		1035.77	
	1037.81		0.72	0.0300	66.00	1037.09		0.36	0.0300	42.00	619+50.00	30.00	1036.73	18.00	-0.0300	-0.36		1036.37	
	1038.40		0.72	0.0300	66.00	1037.68		0.36	0.0300	42.00	619+75.00	30.00	1037.32	18.00	-0.0300	-0.36		1036.96	
	1038.98		0.72	0.0300	66.00	1038.26		0.36	0.0300	42.00	620+00.00	30.00	1037.90	18.00	-0.0300	-0.36		1037.54	
	1039.54		0.72	0.0300	66.00	1038.82		0.36	0.0300	42.00	620+25.00	30.00	1038.46	18.00	-0.0300	-0.36		1038.10	
	1040.09		0.72	0.0300	66.00	1039.37		0.36	0.0300	42.00	620+50.00	30.00	1039.01	18.00	-0.0300	-0.36		1038.65	
	1040.62		0.72	0.0300	66.00	1039.90		0.36	0.0300	42.00	620+75.00	30.00	1039.54	18.00	-0.0300	-0.36		1039.18	
	1041.15		0.72	0.0300	66.00	1040.43		0.36	0.0300	42.00	621+00.00	30.00	1040.07	18.00	-0.0300	-0.36		1039.71	
	1041.65		0.72	0.0300	66.00	1040.93		0.36	0.0300	42.00	621+25.00	30.00	1040.57	18.00	-0.0300	-0.36		1040.21	
	1042.15		0.72	0.0300	66.00	1041.43		0.36	0.0300	42.00	621+50.00	30.00	1041.07	18.00	-0.0300	-0.36		1040.71	
	1042.63		0.72	0.0300	66.00	1041.91		0.36	0.0300	42.00	621+75.00	30.00	1041.55	18.00	-0.0300	-0.36		1041.19	
	1043.10		0.72	0.0300	66.00	1042.38		0.36	0.0300	42.00	622+00.00	30.00	1042.02	18.00	-0.0300	-0.36		1041.66	
	1043.56		0.72	0.0300	66.00	1042.84		0.36	0.0300	42.00	622+25.00	30.00	1042.48	18.00	-0.0300	-0.36		1042.12	
	1044.00		0.72	0.0300	66.00	1043.28		0.36	0.0300	42.00	622+50.00	30.00	1042.92	18.00	-0.0300	-0.36		1042.56	
	1044.43		0.72	0.0300	66.00	1043.71		0.36	0.0300	42.00	622+75.00	30.00	1043.35	18.00	-0.0300	-0.36		1042.99	
	1044.85		0.72	0.0300	66.00	1044.13		0.36	0.0300	42.00	623+00.00	30.00	1043.77	18.00	-0.0300	-0.36		1043.41	
	1045.25		0.72	0.0300	66.00	1044.53		0.36	0.0300	42.00	623+25.00	30.00	1044.17	18.00	-0.0300	-0.36		1043.81	
	1045.64		0.72	0.0300	66.00	1044.92		0.36	0.0300	42.00	623+50.00	30.00	1044.56	18.00	-0.0300	-0.36		1044.20	
	1046.02		0.72	0.0300	66.00	1045.30		0.36	0.0300	42.00	623+75.00	30.00	1044.94	18.00	-0.0300	-0.36		1044.58	
	1046.38		0.72	0.0300	66.00	1045.66		0.36	0.0300	42.00	624+00.00	30.00	1045.30	18.00	-0.0300	-0.36		1044.94	
	1046.73		0.72	0.0300	66.00	1046.01		0.36	0.0300	42.00	624+25.00	30.00	1045.65	18.00	-0.0300	-0.36		1045.29	
	1047.07		0.72	0.0300	66.00	1046.35		0.36	0.0300	42.00	624+50.00	30.00	1045.99	18.00	-0.0300	-0.36		1045.63	
	1047.39		0.72	0.0300	66.00	1046.67		0.36	0.0300	42.00	624+75.00	30.00	1046.31	18.00	-0.0300	-0.36		1045.95	
	1047.71		0.72	0.0300	66.00	1046.99		0.36	0.0300	42.00	625+00.00	30.00	1046.63	18.00	-0.0300	-0.36		1046.27	
	1048.00		0.72	0.0300	66.00	1047.28		0.36	0.0300	42.00	625+25.00	30.00	1046.92	18.00	-0.0300	-0.36		1046.56	
	1048.29		0.72	0.0300	66.00	1047.57		0.36	0.0300	42.00	625+50.00	30.00	1047.21	18.00	-0.0300	-0.36		1046.85	
	1048.56		0.72	0.0300	66.00	1047.84		0.36	0.0300	42.00	625+75.00	30.00	1047.48	18.00	-0.0300	-0.36		1047.12	
	1048.82		0.72	0.0300	66.00	1048.10		0.36	0.0300	42.00	626+00.00	30.00	1047.74	18.00	-0.0300	-0.36		1047.38	
	1049.06		0.72	0.0300	66.00	1048.34		0.36	0.0300	42.00	626+25.00	30.00	1047.98	18.00	-0.0300	-0.36		1047.62	
	1049.29		0.72	0.0300	66.00	1048.57		0.36	0.0300	42.00	626+50.00	30.00	1048.21	18.00	-0.0300	-0.36		1047.85	
	1049.51		0.72	0.0300	66.00	1048.79		0.36	0.0300	42.00	626+75.00	30.00	1048.43	18.00	-0.0300	-0.36		1048.07	
	1049.72		0.72	0.0300	66.00	1049.00		0.36	0.0300	42.00	627+00.00	30.00	1048.64	18.00	-0.0300	-0.36		1048.28	
	1049.91		0.72	0.0300	66.00	1049.19		0.36	0.0300	42.00	627+25.00	30.00	1048.83	18.00	-0.0300	-0.36		1048.47	
	1050.09		0.72	0.0300	66.00	1049.37		0.36	0.0300	42.00	627+50.00	30.00	1049.01	18.00	-0.0300	-0.36		1048.65	
	1050.25		0.72	0.0300	66.00	1049.53		0.36	0.0300	42.00	627+75.00	30.00	1049.17	18.00	-0.0300	-0.36		1048.81	
	1050.41		0.72	0.0300	66.00	1049.69		0.36	0.0300	42.00	628+00.00	30.00	1049.33	18.00	-0.0300	-0.36		1048.97	
	1050.54		0.72	0.0300	66.00	1049.82		0.36	0.0300	42.00	628+25.00	30.00	1049.46	18.00	-0.0300	-0.36		1049.10	
	1050.68		0.73	0.0300	66.22	1049.95		0.36	0.0300	42.00	628+50.00	30.00	1049.59	18.00	-0.0300	-0.36		1049.23	
	1050.80		0.74	0.0300	66.74	1050.06		0.36	0.0300	42.00	628+75.00	30.00	1049.70	18.00	-0.0300	-0.36		1049.34	
EFSE	1050.86		0.75	0.0300	66.99	1050.11		0.36	0.0300	42.00	628+87.00	30.00	1049.75	18.00	-0.0300	-0.36		1049.39	EFSE
	1050.86	1:250	0.72	0.0286	67.26	1050.14	1:250	0.34	0.0286	42.00	629+00.00	30.00	1049.80	18.00	-0.0286	-0.34	1:250	1049.46	
	1050.86	1:250	0.66	0.0258	67.78	1050.20	1:250	0.31	0.0258	42.00	629+25.00	30.00	1049.89	18.00	-0.0258	-0.31	1:250	1049.58	
	1050.84	1:250	0.60	0.0230	68.30	1050.24	1:250	0.28	0.0230	42.00	629+50.00	30.00	1049.96	18.00	-0.0230	-0.28	1:250	1049.68	
	1050.80	1:250	0.54	0.0202	68.82	1050.26	1:250	0.24	0.0202	42.00	629+75.00	30.00	1050.02	18.00	-0.0202	-0.24	1:250	1049.78	
PT	1050.81	1:250	0.54	0.0200	68.86	1050.27	1:250	0.24	0.0200	42.00	629+76.95	30.00	1050.03	18.00	-0.0200	-0.24	1:250	1049.79	PT
	1050.76	1:250	0.48	0.0174	69.34	1050.28	1:250	0.21	0.0174	42.00	630+00.00	30.00	1050.07	18.00	-0.0174	-0.21	1:250	1049.86	

CALCULATED PRS | CHECKED AJP

SUPERELEVATION TABLE (WB)

MAH-80-0.97

808
1100

6/16/05 2:17:39 PM
s:\projects\37100\sheets\qk002WB.dgn

SUPERELEVATION TABLE

P.I. STA 612+94.43	Dc=0°48'00"

REMARKS	OUTSIDE LANE					CROWN POINT					PROFILE GRADE			RIGHT EDGE OF PAVEMENT					REMARKS
	PAVEMENT ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	OFFSET FROM ℄	PAVEMENT ELEVATION	TRANSITION RATE	ELEVATION CORRECTION	CROSS SLOPE	OFFSET FROM ℄	STATION	OFFSET FROM ℄	PROFILE GRADE	OFFSET FROM ℄	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	PAVEMENT ELEVATION	
RC	1050.71	1:250	0.43	0.0156	69.69	1050.28		0.19	0.0156	42.00	630+16.60	30.00	1050.09	18.00	-0.0156	-0.19		1049.90	RC
	1050.69	1:250	0.40	0.0142	69.86	1050.29		0.19	0.0156	42.00	630+25.00	30.00	1050.10	18.00	-0.0156	-0.19		1049.91	
	1050.59	1:250	0.28	0.0100	70.38	1050.31		0.19	0.0156	42.00	630+50.00	30.00	1050.12	18.00	-0.0156	-0.19		1049.93	
	1050.49	1:250	0.17	0.0059	70.90	1050.32		0.19	0.0156	42.00	630+75.00	30.00	1050.13	18.00	-0.0156	-0.19		1049.94	
	1050.36	1:250	0.05	0.0017	71.43	1050.31		0.19	0.0156	42.00	631+00.00	30.00	1050.12	18.00	-0.0156	-0.19		1049.93	
HF	1050.31	1:250	0.00	0.0000	71.64	1050.31		0.19	0.0156	42.00	631+10.20	30.00	1050.12	18.00	-0.0156	-0.19		1049.93	HF
	1050.22	1:250	-0.07	-0.0025	71.95	1050.29		0.19	0.0156	42.00	631+25.00	30.00	1050.10	18.00	-0.0156	-0.19		1049.91	
	1050.06	1:250	-0.20	-0.0066	72.47	1050.26		0.19	0.0156	42.00	631+50.00	30.00	1050.07	18.00	-0.0156	-0.19		1049.88	
	1049.89	1:250	-0.33	-0.0108	72.99	1050.22		0.19	0.0156	42.00	631+75.00	30.00	1050.03	18.00	-0.0156	-0.19		1049.84	
	1049.69	1:250	-0.47	-0.0150	73.51	1050.16		0.19	0.0156	42.00	632+00.00	30.00	1049.97	18.00	-0.0156	-0.19		1049.78	
NC	1049.66		-0.49	-0.0156	73.59	1050.15		0.19	0.0156	42.00	632+03.80	30.00	1049.96	18.00	-0.0156	-0.19		1049.77	NC
	1049.58		-0.50	-0.0156	74.03	1050.08		0.19	0.0156	42.00	632+25.00	30.00	1049.89	18.00	-0.0156	-0.19		1049.70	

CALCULATED PRS | CHECKED AJP

SUPERELEVATION TABLE (WB)

MAH-80-0.97

809 / 1100

6/16/05 2:17:59 PM
d:\projects\37700\streets\ge002WB.dgn

SUPERELEVATION TABLE

P.I. STA 681+78.57 | Dc = 1°00'00"

REMARKS	PROFILE GRADE			CROWN POINT					OUTSIDE LANE					REMARKS
	STATION	OFFSET FROM ℄	PROFILE GRADE	OFFSET FROM ℄	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	PAVEMENT ELEVATION	OFFSET FROM ℄	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	PAVEMENT ELEVATION	
	672+25.00	0.00	1048.57	24.00	0.0156	0.37		1048.94	48.00	-0.0156	-0.37		1048.57	
NC	672+38.00	0.00	1048.71	24.00	0.0156	0.37		1049.08	48.00	-0.0156	-0.37		1048.71	NC
	672+50.00	0.00	1048.84	24.00	0.0156	0.37		1049.21	48.00	-0.0136	-0.33	1:250	1048.88	
	672+75.00	0.00	1049.10	24.00	0.0156	0.37		1049.47	48.00	-0.0094	-0.23	1:250	1049.24	
	673+00.00	0.00	1049.37	24.00	0.0156	0.37		1049.74	48.00	-0.0053	-0.13	1:250	1049.61	
	673+25.00	0.00	1049.64	24.00	0.0156	0.37		1050.01	48.00	-0.0011	-0.03	1:250	1049.98	
HF	673+31.60	0.00	1049.71	24.00	0.0156	0.37		1050.08	48.00	0.0000	0.00	1:250	1050.08	HF
	673+50.00	0.00	1049.91	24.00	0.0156	0.37		1050.28	48.00	0.0031	0.07	1:250	1050.35	
	673+75.00	0.00	1050.17	24.00	0.0156	0.37		1050.54	48.00	0.0072	0.17	1:250	1050.71	
	674+00.00	0.00	1050.44	24.00	0.0156	0.37		1050.81	48.00	0.0114	0.27	1:250	1051.08	
	674+25.00	0.00	1050.71	24.00	0.0156	0.37		1051.08	48.00	0.0156	0.37	1:250	1051.45	
RC	674+25.20	0.00	1050.71	24.00	0.0156	0.37		1051.08	48.00	0.0156	0.37	1:250	1051.45	RC
	674+50.00	0.00	1050.97	24.00	0.0177	0.42	1:250	1051.39	48.00	0.0177	0.42	1:250	1051.81	
	674+75.00	0.00	1051.24	24.00	0.0198	0.47	1:250	1051.71	48.00	0.0198	0.47	1:250	1052.18	
	675+00.00	0.00	1051.51	24.00	0.0218	0.52	1:250	1052.03	48.00	0.0218	0.52	1:250	1052.55	
	675+25.00	0.00	1051.78	24.00	0.0239	0.57	1:250	1052.35	48.00	0.0239	0.57	1:250	1052.92	
PC	675+25.77	0.00	1051.79	24.00	0.0240	0.58	1:250	1052.37	48.00	0.0240	0.58	1:250	1052.95	PC
	675+50.00	0.00	1052.05	24.00	0.0260	0.62	1:250	1052.67	48.00	0.0260	0.62	1:250	1053.29	
	675+75.00	0.00	1052.31	24.00	0.0281	0.67	1:250	1052.98	48.00	0.0281	0.67	1:250	1053.65	
	676+00.00	0.00	1052.58	24.00	0.0302	0.72	1:250	1053.30	48.00	0.0302	0.72	1:250	1054.02	
	676+25.00	0.00	1052.85	24.00	0.0323	0.77	1:250	1053.62	48.00	0.0323	0.77	1:250	1054.39	
	676+50.00	0.00	1053.12	24.00	0.0343	0.82	1:250	1053.94	48.00	0.0343	0.82	1:250	1054.76	
BFSE	676+70.00	0.00	1053.33	24.00	0.0360	0.86		1054.19	48.00	0.0360	0.86		1055.05	BFSE
	676+75.00	0.00	1053.38	24.00	0.0360	0.86		1054.24	48.00	0.0360	0.86		1055.10	
	677+00.00	0.00	1053.65	24.00	0.0360	0.86		1054.51	48.00	0.0360	0.86		1055.37	
	677+25.00	0.00	1053.92	24.00	0.0360	0.86		1054.78	48.00	0.0360	0.86		1055.64	
	677+50.00	0.00	1054.18	24.00	0.0360	0.86		1055.04	48.00	0.0360	0.86		1055.90	
	677+75.00	0.00	1054.45	24.00	0.0360	0.86		1055.31	48.00	0.0360	0.86		1056.17	
	678+00.00	0.00	1054.72	24.00	0.0360	0.86		1055.58	48.00	0.0360	0.86		1056.44	
	678+25.00	0.00	1054.99	24.00	0.0360	0.86		1055.85	48.00	0.0360	0.86		1056.71	
	678+50.00	0.00	1055.26	24.00	0.0360	0.86		1056.12	48.00	0.0360	0.86		1056.98	
	678+75.00	0.00	1055.52	24.00	0.0360	0.86		1056.38	48.00	0.0360	0.86		1057.24	
	679+00.00	0.00	1055.79	24.00	0.0360	0.86		1056.65	48.00	0.0360	0.86		1057.51	
	679+25.00	0.00	1056.06	24.00	0.0360	0.86		1056.92	48.00	0.0360	0.86		1057.78	
	679+50.00	0.00	1056.33	24.00	0.0360	0.86		1057.19	48.00	0.0360	0.86		1058.05	
	679+75.00	0.00	1056.59	24.00	0.0360	0.86		1057.45	48.00	0.0360	0.86		1058.31	
	680+00.00	0.00	1056.86	24.00	0.0360	0.86		1057.72	48.00	0.0360	0.86		1058.58	
	680+25.00	0.00	1057.13	24.00	0.0360	0.86		1057.99	48.00	0.0360	0.86		1058.85	
	680+50.00	0.00	1057.40	24.00	0.0360	0.86		1058.26	48.00	0.0360	0.86		1059.12	
	680+75.00	0.00	1057.66	24.00	0.0360	0.86		1058.52	48.00	0.0360	0.86		1059.38	
	681+00.00	0.00	1057.93	24.00	0.0360	0.86		1058.79	48.00	0.0360	0.86		1059.65	
	681+25.00	0.00	1058.20	24.00	0.0360	0.86		1059.06	48.00	0.0360	0.86		1059.92	
	681+50.00	0.00	1058.47	24.00	0.0360	0.86		1059.33	48.00	0.0360	0.86		1060.19	
	681+75.00	0.00	1058.73	24.00	0.0360	0.86		1059.59	48.00	0.0360	0.86		1060.45	
	682+00.00	0.00	1059.00	24.00	0.0360	0.86		1059.86	48.00	0.0360	0.86		1060.72	
	682+25.00	0.00	1059.27	24.00	0.0360	0.86		1060.13	48.00	0.0360	0.86		1060.99	
	682+50.00	0.00	1059.54	24.00	0.0360	0.86		1060.40	48.00	0.0360	0.86		1061.26	
	682+75.00	0.00	1059.80	24.00	0.0360	0.86		1060.66	48.00	0.0360	0.86		1061.52	
	683+00.00	0.00	1060.07	24.00	0.0360	0.86		1060.93	48.00	0.0360	0.86		1061.79	
	683+25.00	0.00	1060.34	24.00	0.0360	0.86		1061.20	48.00	0.0360	0.86		1062.06	
	683+50.00	0.00	1060.61	24.00	0.0360	0.86		1061.47	48.00	0.0360	0.86		1062.33	
	683+75.00	0.00	1060.87	24.00	0.0360	0.86		1061.73	48.00	0.0360	0.86		1062.59	

CALCULATED PRS
CHECKED AJP

SUPERELEVATION TABLE (WB)

MAH-80-0.97

810
1100

6/16/05 2:48:17 PM
s:\projects\37700\sheets\ge002WB.dgn

SUPERELEVATION TABLE

P.I. STA 681+78.57	Dc = 1°00′00″	P.I. STA 702+73.26	Dc = 1°05′00″

REMARKS	PROFILE GRADE			CROWN POINT					OUTSIDE LANE					REMARKS
	STATION	OFFSET FROM ℄	PROFILE GRADE	OFFSET FROM ℄	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	PAVEMENT ELEVATION	OFFSET FROM ℄	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	PAVEMENT ELEVATION	
	684+00.00	0.00	1061.14	24.00	0.0360	0.86		1062.00	48.00	0.0360	0.86		1062.86	
	684+25.00	0.00	1061.41	24.00	0.0360	0.86		1062.27	48.00	0.0360	0.86		1063.13	
	684+50.00	0.00	1061.68	24.00	0.0360	0.86		1062.54	48.00	0.0360	0.86		1063.40	
	684+75.00	0.00	1061.94	24.00	0.0360	0.86		1062.80	48.18	0.0360	0.87		1063.67	
	685+00.00	0.00	1062.21	24.00	0.0360	0.86		1063.07	48.70	0.0360	0.89		1063.96	
	685+25.00	0.00	1062.48	24.00	0.0360	0.86		1063.34	49.22	0.0360	0.91		1064.25	
	685+50.00	0.00	1062.75	24.00	0.0360	0.86		1063.61	49.74	0.0360	0.93		1064.54	
	685+75.00	0.00	1063.01	24.00	0.0360	0.86		1063.87	50.26	0.0360	0.95		1064.82	
	686+00.00	0.00	1063.28	24.00	0.0360	0.86		1064.14	50.78	0.0360	0.96		1065.10	
	686+25.00	0.00	1063.55	24.00	0.0360	0.86		1064.41	51.30	0.0360	0.98		1065.39	
	686+50.00	0.00	1063.82	24.00	0.0360	0.86		1064.68	51.82	0.0360	1.00		1065.68	
	686+75.00	0.00	1064.08	24.00	0.0360	0.86		1064.94	52.35	0.0360	1.02		1065.96	
	687+00.00	0.00	1064.32	24.00	0.0360	0.86		1065.18	52.87	0.0360	1.04		1066.22	
	687+25.00	0.00	1064.55	24.00	0.0360	0.86		1065.41	53.39	0.0360	1.06		1066.47	
	687+50.00	0.00	1064.77	24.00	0.0360	0.86		1065.63	53.91	0.0360	1.08		1066.71	
	687+75.00	0.00	1064.98	24.00	0.0360	0.86		1065.84	54.43	0.0360	1.10		1066.94	
	688+00.00	0.00	1065.17	24.00	0.0360	0.86		1066.03	54.95	0.0360	1.11		1067.14	
EFSE	688+12.00	0.00	1065.55	24.00	0.0360	0.86		1066.41	55.20	0.0360	1.12		1067.53	EFSE
	688+25.00	0.00	1065.34	24.00	0.0374	0.90	1:250	1066.24	55.47	0.0374	1.18	1:250	1067.42	
PCC	688+25.77	0.00	1065.35	24.00	0.0375	0.90	1:250	1066.25	55.49	0.0375	1.18	1:250	1067.43	PCC
BFSE	688+39.00	0.00	1065.84	24.00	0.0390	0.94		1066.78	55.76	0.0390	1.24		1068.02	BFSE
	688+50.00	0.00	1065.51	24.00	0.0390	0.94		1066.45	55.99	0.0390	1.25		1067.70	
	688+75.00	0.00	1065.65	24.00	0.0390	0.94		1066.59	56.51	0.0390	1.27		1067.86	
	689+00.00	0.00	1065.79	24.00	0.0390	0.94		1066.73	57.03	0.0390	1.29		1068.02	
	689+25.00	0.00	1065.91	24.00	0.0390	0.94		1066.85	57.55	0.0390	1.31		1068.16	
	689+50.00	0.00	1066.01	24.00	0.0390	0.94		1066.95	58.07	0.0390	1.33		1068.28	
	689+75.00	0.00	1066.11	24.00	0.0390	0.94		1067.05	58.60	0.0390	1.35		1068.40	
	690+00.00	0.00	1066.18	24.00	0.0390	0.94		1067.12	59.12	0.0390	1.37		1068.49	
	690+25.00	0.00	1066.25	24.00	0.0390	0.94		1067.19	59.64	0.0390	1.39		1068.58	
	690+50.00	0.00	1066.30	24.00	0.0390	0.94		1067.24	60.16	0.0390	1.41		1068.65	
	690+75.00	0.00	1066.33	24.00	0.0390	0.94		1067.27	60.68	0.0390	1.43		1068.70	
	691+00.00	0.00	1066.36	24.00	0.0390	0.94		1067.30	36.00	0.0390	0.47		1067.77	
	691+25.00	0.00	1066.36	24.00	0.0390	0.94		1067.30	36.00	0.0390	0.47		1067.77	
	691+50.00	0.00	1066.36	24.00	0.0390	0.94		1067.30	36.00	0.0390	0.47		1067.77	
	691+75.00	0.00	1066.34	24.00	0.0390	0.94		1067.28	36.00	0.0390	0.47		1067.75	
	692+00.00	0.00	1066.30	24.00	0.0390	0.94		1067.24	36.01	0.0390	0.47		1067.71	
	692+25.00	0.00	1066.26	24.00	0.0390	0.94		1067.20	36.53	0.0390	0.49		1067.69	
	692+50.00	0.00	1066.19	24.00	0.0390	0.94		1067.13	37.05	0.0390	0.51		1067.64	
	692+75.00	0.00	1066.12	12.00	0.0390	0.47		1066.59	37.57	0.0390	1.00		1067.59	
	693+00.00	0.00	1066.03	12.00	0.0390	0.47		1066.50	38.09	0.0390	1.02		1067.52	
	693+25.00	0.00	1065.92	12.00	0.0390	0.47		1066.39	38.62	0.0390	1.04		1067.43	
	693+50.00	0.00	1065.80	12.00	0.0390	0.47		1066.27	39.14	0.0390	1.06		1067.33	
	693+75.00	0.00	1065.67	12.00	0.0390	0.47		1066.14	39.66	0.0390	1.08		1067.22	
	694+00.00	0.00	1065.52	12.00	0.0390	0.47		1065.99	40.18	0.0390	1.10		1067.09	
	694+25.00	0.00	1065.36	12.00	0.0390	0.47		1065.83	40.70	0.0390	1.12		1066.95	
	694+50.00	0.00	1065.19	12.00	0.0390	0.47		1065.66	41.22	0.0390	1.14		1066.80	
	694+75.00	0.00	1065.00	12.00	0.0390	0.47		1065.47	41.74	0.0390	1.16		1066.63	
	695+00.00	0.00	1064.80	12.00	0.0390	0.47		1065.27	42.26	0.0390	1.18		1066.45	
	695+25.00	0.00	1064.58	12.00	0.0390	0.47		1065.05	42.78	0.0390	1.20		1066.25	
	695+50.00	0.00	1064.35	12.00	0.0390	0.47		1064.82	43.30	0.0390	1.22		1066.04	
	695+75.00	0.00	1064.11	12.00	0.0390	0.47		1064.58	43.82	0.0390	1.24		1065.82	
	696+00.00	0.00	1063.85	12.00	0.0390	0.47		1064.32	44.34	0.0390	1.26		1065.58	

CALCULATED PRS
CHECKED AJP

SUPERELEVATION TABLE (WB)

MAH-80-0.97

6/16/05 2:18:35 PM
s:\projects\37700\sheets\gs002WB.dgn

SUPERELEVATION TABLE

P.I. STA 702+73.26	Dc = 1°05′00″

REMARKS	PROFILE GRADE			CROWN POINT					OUTSIDE LANE					REMARKS
	STATION	OFFSET FROM ℄	PROFILE GRADE	OFFSET FROM ℄	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	PAVEMENT ELEVATION	OFFSET FROM ℄	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	PAVEMENT ELEVATION	
	696+25.00	0.00	1063.57	12.00	0.0390	0.47		1064.04	44.87	0.0390	1.28		1065.32	
	696+50.00	0.00	1063.29	12.00	0.0390	0.47		1063.76	45.39	0.0390	1.30		1065.06	
	696+75.00	0.00	1062.99	12.00	0.0390	0.47		1063.46	45.91	0.0390	1.32		1064.78	
	697+00.00	0.00	1062.67	12.00	0.0390	0.47		1063.14	46.43	0.0390	1.34		1064.48	
	697+25.00	0.00	1062.34	12.00	0.0390	0.47		1062.81	46.95	0.0390	1.36		1064.17	
	697+50.00	0.00	1062.00	12.00	0.0390	0.47		1062.47	47.47	0.0390	1.38		1063.85	
	697+75.00	0.00	1061.65	12.00	0.0390	0.47		1062.12	47.99	0.0390	1.40		1063.52	
	698+00.00	0.00	1061.30	12.00	0.0390	0.47		1061.77	48.51	0.0390	1.42		1063.19	
	698+25.00	0.00	1060.95	12.00	0.0390	0.47		1061.42	24.00	0.0390	0.47		1061.89	
	698+50.00	0.00	1060.60	12.00	0.0390	0.47		1061.07	24.00	0.0390	0.47		1061.54	
	698+75.00	0.00	1060.25	12.00	0.0390	0.47		1060.72	24.00	0.0390	0.47		1061.19	
	699+00.00	0.00	1059.90	12.00	0.0390	0.47		1060.37	24.00	0.0390	0.47		1060.84	
	699+25.00	0.00	1059.55	12.00	0.0390	0.47		1060.02	24.00	0.0390	0.47		1060.49	
	699+50.00	0.00	1059.20	12.00	0.0390	0.47		1059.67	24.00	0.0390	0.47		1060.14	
	699+75.00	0.00	1058.85	12.00	0.0390	0.47		1059.32	24.00	0.0390	0.47		1059.79	
	700+00.00	0.00	1058.50	12.00	0.0390	0.47		1058.97	24.00	0.0390	0.47		1059.44	
	700+25.00	0.00	1058.15	12.00	0.0390	0.47		1058.62	24.00	0.0390	0.47		1059.09	
	700+50.00	0.00	1057.80	12.00	0.0390	0.47		1058.27	24.00	0.0390	0.47		1058.74	
	700+75.00	0.00	1057.45	12.00	0.0390	0.47		1057.92	24.00	0.0390	0.47		1058.39	
	701+00.00	0.00	1057.10	12.00	0.0390	0.47		1057.57	24.00	0.0390	0.47		1058.04	
	701+25.00	0.00	1056.75	12.00	0.0390	0.47		1057.22	24.00	0.0390	0.47		1057.69	
	701+50.00	0.00	1056.40	12.00	0.0390	0.47		1056.87	24.00	0.0390	0.47		1057.34	
	701+75.00	0.00	1056.07	12.00	0.0390	0.47		1056.54	24.00	0.0390	0.47		1057.01	
	702+00.00	0.00	1055.77	12.00	0.0390	0.47		1056.24	24.00	0.0390	0.47		1056.71	
	702+25.00	0.00	1055.50	12.00	0.0390	0.47		1055.97	24.00	0.0390	0.47		1056.44	
	702+50.00	0.00	1055.27	12.00	0.0390	0.47		1055.74	24.00	0.0390	0.47		1056.21	
	702+75.00	0.00	1055.07	12.00	0.0390	0.47		1055.54	24.00	0.0390	0.47		1056.01	
	703+00.00	0.00	1054.90	12.00	0.0390	0.47		1055.37	24.00	0.0390	0.47		1055.84	
	703+25.00	0.00	1054.77	12.00	0.0390	0.47		1055.24	24.00	0.0390	0.47		1055.71	
	703+50.00	0.00	1054.67	12.00	0.0390	0.47		1055.14	24.00	0.0390	0.47		1055.61	
	703+75.00	0.00	1054.61	12.00	0.0390	0.47		1055.08	24.00	0.0390	0.47		1055.55	
	704+00.00	0.00	1054.58	12.00	0.0390	0.47		1055.05	24.00	0.0390	0.47		1055.52	
	704+25.00	0.00	1054.58	12.00	0.0390	0.47		1055.05	24.00	0.0390	0.47		1055.52	
	704+50.00	0.00	1054.61	12.00	0.0390	0.47		1055.08	24.00	0.0390	0.47		1055.55	
	704+75.00	0.00	1054.68	12.00	0.0390	0.47		1055.15	24.00	0.0390	0.47		1055.62	
	705+00.00	0.00	1054.78	12.00	0.0390	0.47		1055.25	24.00	0.0390	0.47		1055.72	
	705+25.00	0.00	1054.92	12.00	0.0390	0.47		1055.39	24.00	0.0390	0.47		1055.86	
	705+50.00	0.00	1055.09	12.00	0.0390	0.47		1055.56	24.00	0.0390	0.47		1056.03	
	705+75.00	0.00	1055.29	12.00	0.0390	0.47		1055.76	24.00	0.0390	0.47		1056.23	
	706+00.00	0.00	1055.53	12.00	0.0390	0.47		1056.00	24.00	0.0390	0.47		1056.47	
	706+25.00	0.00	1055.80	12.00	0.0390	0.47		1056.27	24.00	0.0390	0.47		1056.74	
	706+50.00	0.00	1056.10	12.00	0.0390	0.47		1056.57	24.00	0.0390	0.47		1057.04	
	706+75.00	0.00	1056.41	12.00	0.0390	0.47		1056.88	24.00	0.0390	0.47		1057.35	
	707+00.00	0.00	1056.71	12.00	0.0390	0.47		1057.18	24.00	0.0390	0.47		1057.65	
	707+25.00	0.00	1057.00	12.00	0.0390	0.47		1057.47	24.00	0.0390	0.47		1057.94	
	707+50.00	0.00	1057.27	12.00	0.0390	0.47		1057.74	24.00	0.0390	0.47		1058.21	
	707+75.00	0.00	1057.52	12.00	0.0390	0.47		1057.99	24.00	0.0390	0.47		1058.46	
	708+00.00	0.00	1057.76	12.00	0.0390	0.47		1058.23	24.00	0.0390	0.47		1058.70	
	708+25.00	0.00	1057.99	12.00	0.0390	0.47		1058.46	24.00	0.0390	0.47		1058.93	
	708+50.00	0.00	1058.20	12.00	0.0390	0.47		1058.67	24.00	0.0390	0.47		1059.14	
	708+75.00	0.00	1058.40	12.00	0.0390	0.47		1058.87	24.00	0.0390	0.47		1059.34	
	709+00.00	0.00	1058.58	12.00	0.0390	0.47		1059.05	24.00	0.0390	0.47		1059.52	

CALCULATED PRS
CHECKED AJP

SUPERELEVATION TABLE (WB)

MAH-80-0.97

SUPERELEVATION TABLE

P.I. STA 702+73.26 | Dc = 1°05'00"

REMARKS	PROFILE GRADE			CROWN POINT					OUTSIDE LANE					REMARKS
	STATION	OFFSET FROM ℄	PROFILE GRADE	OFFSET FROM ℄	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	PAVEMENT ELEVATION	OFFSET FROM ℄	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	PAVEMENT ELEVATION	
	709+25.00	0.00	1058.75	12.00	0.0390	0.47		1059.22	24.00	0.0390	0.47		1059.69	
	709+50.00	0.00	1058.91	12.00	0.0390	0.47		1059.38	24.00	0.0390	0.47		1059.85	
	709+75.00	0.00	1059.05	12.00	0.0390	0.47		1059.52	24.00	0.0390	0.47		1059.99	
	710+00.00	0.00	1059.17	12.00	0.0390	0.47		1059.64	24.00	0.0390	0.47		1060.11	
	710+25.00	0.00	1059.28	12.00	0.0390	0.47		1059.75	24.00	0.0390	0.47		1060.22	
	710+50.00	0.00	1059.38	12.00	0.0390	0.47		1059.85	24.00	0.0390	0.47		1060.32	
	710+75.00	0.00	1059.46	12.00	0.0390	0.47		1059.93	24.00	0.0390	0.47		1060.40	
	711+00.00	0.00	1059.53	12.00	0.0390	0.47		1060.00	24.00	0.0390	0.47		1060.47	
	711+25.00	0.00	1059.59	12.00	0.0390	0.47		1060.06	24.00	0.0390	0.47		1060.53	
	711+50.00	0.00	1059.63	12.00	0.0390	0.47		1060.10	24.00	0.0390	0.47		1060.57	
	711+75.00	0.00	1059.65	12.00	0.0390	0.47		1060.12	24.00	0.0390	0.47		1060.59	
	712+00.00	0.00	1059.66	12.00	0.0390	0.47		1060.13	24.00	0.0390	0.47		1060.60	
	712+25.00	0.00	1059.66	12.00	0.0390	0.47		1060.13	24.00	0.0390	0.47		1060.60	
	712+50.00	0.00	1059.64	12.00	0.0390	0.47		1060.11	24.00	0.0390	0.47		1060.58	
	712+75.00	0.00	1059.61	12.00	0.0390	0.47		1060.08	24.00	0.0390	0.47		1060.55	
	713+00.00	0.00	1059.56	12.00	0.0390	0.47		1060.03	24.00	0.0390	0.47		1060.50	
	713+25.00	0.00	1059.50	12.00	0.0390	0.47		1059.97	24.00	0.0390	0.47		1060.44	
	713+50.00	0.00	1059.43	12.00	0.0390	0.47		1059.90	24.00	0.0390	0.47		1060.37	
	713+75.00	0.00	1059.34	12.00	0.0390	0.47		1059.81	24.00	0.0390	0.47		1060.28	
	714+00.00	0.00	1059.23	12.00	0.0390	0.47		1059.70	24.00	0.0390	0.47		1060.17	
	714+25.00	0.00	1059.11	12.00	0.0390	0.47		1059.58	24.00	0.0390	0.47		1060.05	
	714+50.00	0.00	1058.98	12.00	0.0390	0.47		1059.45	24.00	0.0390	0.47		1059.92	
	714+75.00	0.00	1058.84	12.00	0.0390	0.47		1059.31	24.00	0.0390	0.47		1059.78	
	715+00.00	0.00	1058.67	12.00	0.0390	0.47		1059.14	24.00	0.0390	0.47		1059.61	
	715+25.00	0.00	1058.50	12.00	0.0390	0.47		1058.97	24.00	0.0390	0.47		1059.44	
	715+50.00	0.00	1058.31	12.00	0.0390	0.47		1058.78	24.00	0.0390	0.47		1059.25	
EFSE	715+73.00	0.00	1058.12	12.00	0.0390	0.47		1058.59	24.00	0.0390	0.47		1059.06	EFSE
	715+75.00	0.00	1058.10	12.00	0.0387	0.46	1:250	1058.56	24.00	0.0387	0.46	1:250	1059.02	
	716+00.00	0.00	1057.88	12.00	0.0345	0.41	1:250	1058.29	24.00	0.0345	0.41	1:250	1058.70	
	716+25.00	0.00	1057.65	12.00	0.0303	0.36	1:250	1058.01	24.00	0.0303	0.36	1:250	1058.37	
	716+50.00	0.00	1057.40	12.00	0.0262	0.31	1:250	1057.71	24.00	0.0262	0.31	1:250	1058.02	
PT	716+51.56	0.00	1057.39	12.00	0.0259	0.31	1:250	1057.70	24.00	0.0259	0.31	1:250	1058.01	PT
	716+75.00	0.00	1057.14	12.00	0.0220	0.26	1:250	1057.40	24.00	0.0220	0.26	1:250	1057.66	
	717+00.00	0.00	1056.87	12.00	0.0178	0.21	1:250	1057.08	24.00	0.0178	0.21	1:250	1057.29	
RC	717+13.40	0.00	1056.71	12.00	0.0156	0.19		1056.90	24.00	0.0156	0.19	1:250	1057.09	RC
	717+25.00	0.00	1056.57	12.00	0.0156	0.19		1056.76	24.00	0.0117	0.14	1:250	1056.90	
	717+50.00	0.00	1056.27	12.00	0.0156	0.19		1056.46	24.00	0.0034	0.04	1:250	1056.50	
HF	717+60.20	0.00	1056.14	12.00	0.0156	0.19		1056.33	24.00	0.0000	0.00	1:250	1056.33	HF
	717+75.00	0.00	1055.96	12.00	0.0156	0.19		1056.15	24.00	-0.0049	-0.06	1:250	1056.09	
	718+00.00	0.00	1055.64	12.00	0.0156	0.19		1055.83	24.00	-0.0133	-0.16	1:250	1055.67	
NC	718+07.00	0.00	1055.56	12.00	0.0156	0.19		1055.75	24.00	-0.0156	-0.19		1055.56	NC
	718+25.00	0.00	1055.33	12.00	0.0156	0.19		1055.52	24.00	-0.0156	-0.19		1055.33	

CALCULATED PRS | CHECKED AJP

SUPERELEVATION TABLE (WB)

MAH-80-0.97

813
1100

6/16/05 2:19:18 PM
s:\pr\projects\37700\sheets\qa0028WB.dgn

SUPERELEVATION TABLE

P.I. STA 725+68.80 | Dc = 1° 15′ 00″

REMARKS	PROFILE GRADE			CROWN POINT					OUTSIDE LANE					RAMP LANE					REMARKS
	STATION	OFFSET FROM ℄	PROFILE GRADE	OFFSET FROM ℄	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	PAVEMENT ELEVATION	OFFSET FROM ℄	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	PAVEMENT ELEVATION	OFFSET FROM ℄	CROSS SLOPE	ELEVATION CORRECTION	TRANSITION RATE	PAVEMENT ELEVATION	
	719+50.00	0.00	1053.77	12.00	0.0156	0.19		1053.96	24.00	-0.0156	-0.19		1053.77						
NC	719+66.00	0.00	1053.57	12.00	0.0156	0.19		1053.76	24.00	-0.0156	-0.19		1053.57						NC
	719+75.00	0.00	1053.46	12.00	0.0126	0.15	1:250	1053.61	24.00	-0.0156	-0.19		1053.42	36.00	-0.041	-0.49		1052.93	
	720+00.00	0.00	1053.15	12.00	0.0043	0.05	1:250	1053.20	24.00	-0.0156	-0.19		1053.01	36.00	-0.041	-0.49		1052.52	
HF	720+12.80	0.00	1052.99	12.00	0.0000	0.00	1:250	1052.99	24.00	-0.0156	-0.19		1052.80	36.00	-0.041	-0.49		1052.31	HF
	720+25.00	0.00	1052.83	12.00	-0.0041	-0.05	1:250	1052.78	24.00	-0.0156	-0.19		1052.59	36.00	-0.041	-0.49		1052.10	
	720+50.00	0.00	1052.52	12.00	-0.0124	-0.15	1:250	1052.37	24.00	-0.0156	-0.19		1052.18	36.00	-0.041	-0.49		1051.69	
RC	720+59.60	0.00	1052.40	12.00	-0.0156	-0.19	1:250	1052.21	24.00	-0.0156	-0.19		1052.02	36.00	-0.041	-0.49		1051.53	RC
	720+75.00	0.00	1052.21	12.00	-0.0182	-0.22	1:250	1051.99	24.00	-0.0182	-0.22	1:250	1051.77	36.00	-0.041	-0.49		1051.28	
	721+00.00	0.00	1051.90	12.00	-0.0223	-0.27	1:250	1051.63	24.00	-0.0223	-0.27	1:250	1051.36	36.00	-0.041	-0.49		1050.87	
	721+25.00	0.00	1051.58	12.00	-0.0265	-0.32	1:250	1051.26	24.00	-0.0265	-0.32	1:250	1050.94	36.00	-0.041	-0.49		1050.45	
PC	721+25.62	0.00	1051.58	12.00	-0.0266	-0.32	1:250	1051.26	24.00	-0.0266	-0.32	1:250	1050.94	36.00	-0.041	-0.49		1050.45	PC
	721+50.00	0.00	1051.27	12.00	-0.0307	-0.37	1:250	1050.90	24.00	-0.0307	-0.37	1:250	1050.53	36.00	-0.041	-0.49		1050.04	
	721+75.00	0.00	1050.96	12.00	-0.0348	-0.42	1:250	1050.54	24.00	-0.0348	-0.42	1:250	1050.12	36.00	-0.041	-0.49		1049.63	
	722+00.00	0.00	1050.65	12.00	-0.0390	-0.47	1:250	1050.18	24.00	-0.0390	-0.47	1:250	1049.71	36.00	-0.041	-0.49		1049.22	
BFSE	722+06.00	0.00	1050.57	12.00	-0.0400	-0.48		1050.09	24.00	-0.0400	-0.48		1049.61	36.00	-0.041	-0.49		1049.12	BFSE
	722+25.00	0.00	1050.34	12.00	-0.0400	-0.48		1049.86	24.00	-0.0400	-0.48		1049.38	36.00	-0.041	-0.49		1048.89	
	722+50.00	0.00	1050.02	12.00	-0.0400	-0.48		1049.54	24.00	-0.0400	-0.48		1049.06	33.75	-0.041	-0.40		1048.66	
	722+75.00	0.00	1049.71	12.00	-0.0400	-0.48		1049.23	24.00	-0.0400	-0.48		1048.75	30.75	-0.041	-0.28		1048.47	
	723+00.00	0.00	1049.40	12.00	-0.0400	-0.48		1048.92	24.00	-0.0400	-0.48		1048.44	27.75	-0.041	-0.15		1048.29	
	723+25.00	0.00	1049.09	12.00	-0.0400	-0.48		1048.61	24.00	-0.0400	-0.48		1048.13	24.75	-0.041	-0.03		1048.10	
	723+50.00	0.00	1048.77	12.00	-0.0400	-0.48		1048.29	24.00	-0.0400	-0.48		1047.81						
	723+75.00	0.00	1048.46	12.00	-0.0400	-0.48		1047.98	24.00	-0.0400	-0.48		1047.50						
	723+87.12	0.00	1048.31	12.00	-0.0400	-0.48		1047.83	24.00	-0.0400	-0.48		1047.35						

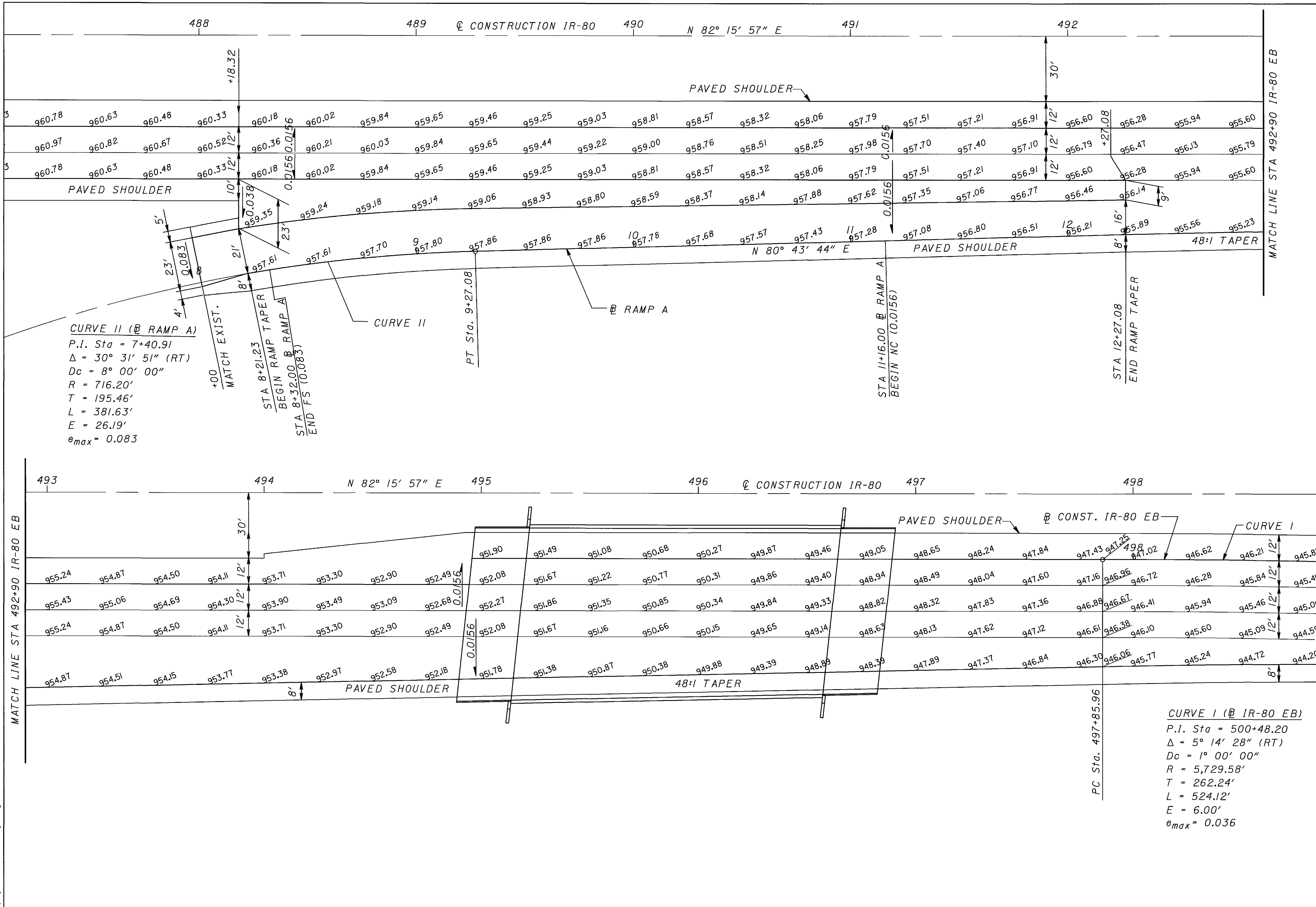
CALCULATED PRS
CHECKED AJP

SUPERELEVATION TABLE (WB)

MAH-80-0.97

814
1100

6/16/05 2:19:40 PM
s:\projects\37700\sheets\ge002WB.dgn



℄ CONSTRUCTION IR-80
N 82° 15′ 57″ E
488
489
490
491
492
PAVED SHOULDER
MATCH LINE STA 492+90 IR-80 EB
+18.32
30′
+27.08
48:1 TAPER
N 80° 43′ 44″ E
PAVED SHOULDER
℞ RAMP A
CURVE II
PT Sta. 9+27.08
STA 11+16.00 ℞ RAMP A
BEGIN NC (0.0156)
STA 12+27.08
END RAMP TAPER
+00
MATCH EXIST.
STA 8+21.23
BEGIN RAMP TAPER
STA 8+32.00 ℞ RAMP A
END FS (0.083)
CURVE II (℞ RAMP A)
P.I. Sta = 7+40.91
Δ = 30° 31′ 51″ (RT)
Dc = 8° 00′ 00″
R = 716.20′
T = 195.46′
L = 381.63′
E = 26.19′
e max = 0.083
493
494
495
496
497
498
N 82° 15′ 57″ E
℄ CONSTRUCTION IR-80
PAVED SHOULDER
℞ CONST. IR-80 EB
CURVE I
MATCH LINE STA 492+90 IR-80 EB
PAVED SHOULDER
48:1 TAPER
PC Sta. 497+85.96
CURVE I (℞ IR-80 EB)
P.I. Sta = 500+48.20
Δ = 5° 14′ 28″ (RT)
Dc = 1° 00′ 00″
R = 5,729.58′
T = 262.24′
L = 524.12′
E = 6.00′
e max = 0.036

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED AJP

CHECKED PRS

RAMP PAVEMENT DETAILS RAMP A

MAH-80-0.97

6/16/05 2:20:25 PM s:\projects\37700\sheets\pa001.dgn

PAVED SHOULDER

48:1 TAPER

0.0156

MATCH LINE STA 640+20 IR-80 WB

PAVED SHOULDER

N 88° 39′ 54″ E

℄ CONSTRUCTION IR-80

SPIRAL 12 (℄RAMP 46-A)
P.I. STA = 45+58.00
Ls = 299.20′
θs = 6° 12′ 54″
LT = 200.59′
ST = 100.75′

℄ CONST RAMP 46-A

STA 42+95.91
END NC (0.0156)

TS Sta. 43+57

SPIRAL 12

END SHOULDER TAPER

MATCH EXIST

PAVED SHOULDER

MATCH LINE STA 640+20 IR-80 WB

N 87° 27′ 28″ E

PAVED SHOULDER

N 88° 39′ 54″ E

℄ CONSTRUCTION IR-80

RAMP PAVEMENT DETAILS
RAMP 46-A

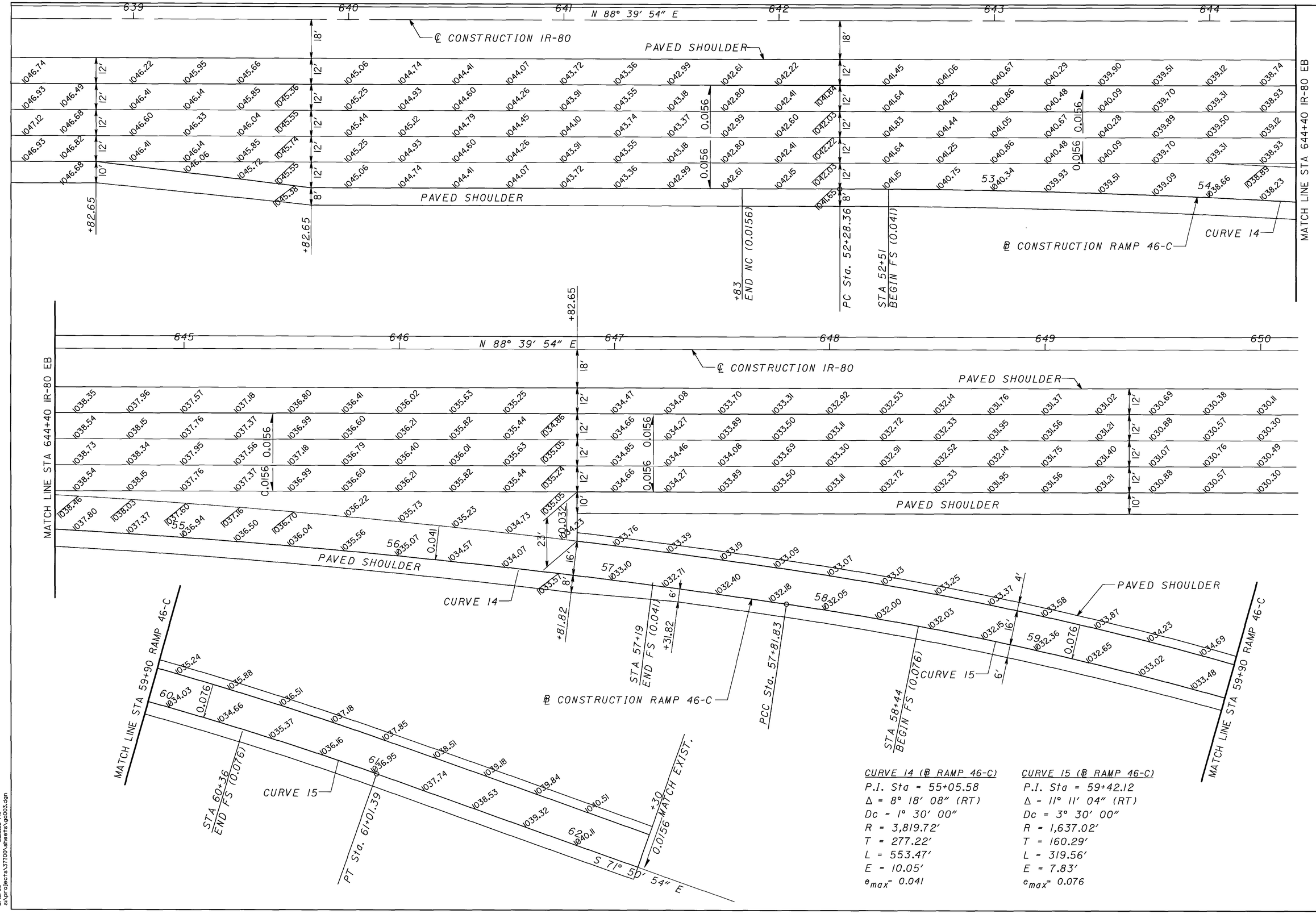
MAH-80-0.97

816
1100

CALCULATED AJP
CHECKED PRS

HORIZONTAL SCALE IN FEET
0 10 20 40

6/16/05
24243 PM
d:\projects\37700\sheets\pd002.dgn



CURVE 14 (℄ RAMP 46-C)
P.I. Sta = 55+05.58
Δ = 8° 18′ 08″ (RT)
Dc = 1° 30′ 00″
R = 3,819.72′
T = 277.22′
L = 553.47′
E = 10.05′
e_{max}= 0.041

CURVE 15 (℄ RAMP 46-C)
P.I. Sta = 59+42.12
Δ = 11° 11′ 04″ (RT)
Dc = 3° 30′ 00″
R = 1,637.02′
T = 160.29′
L = 319.56′
E = 7.83′
e_{max}= 0.076

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED AJP
CHECKED PRS

PAVEMENT DETAILS RAMP 46-C

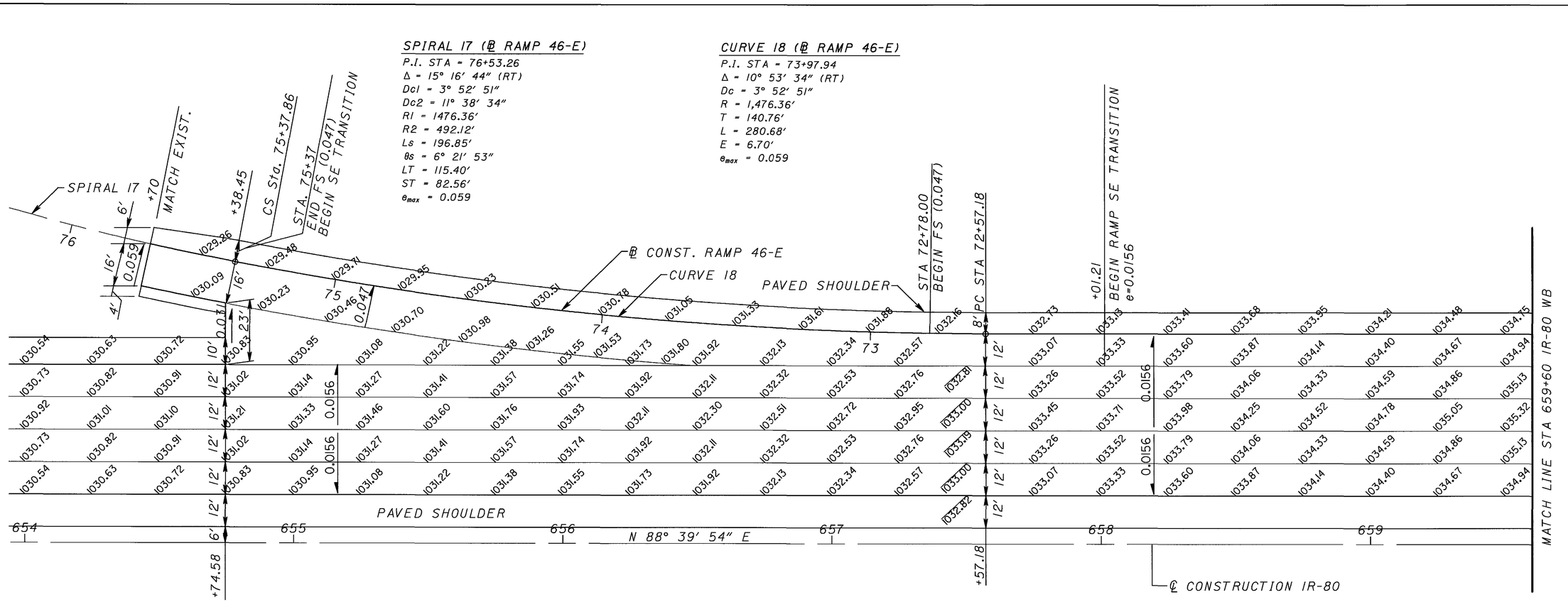
MAH-80-0.97

817
1100

6/16/05 2:22:22 PM
s:\projects\37100\sheets\gd003.dgn

SPIRAL 17 (℄ RAMP 46-E)
P.I. STA = 76+53.26
Δ = 15° 16′ 44″ (RT)
Dc1 = 3° 52′ 51″
Dc2 = 11° 38′ 34″
R1 = 1476.36′
R2 = 492.12′
Ls = 196.85′
θs = 6° 21′ 53″
LT = 115.40′
ST = 82.56′
θ_{max} = 0.059

CURVE 18 (℄ RAMP 46-E)
P.I. STA = 73+97.94
Δ = 10° 53′ 34″ (RT)
Dc = 3° 52′ 51″
R = 1,476.36′
T = 140.76′
L = 280.68′
E = 6.70′
θ_{max} = 0.059



HORIZONTAL SCALE IN FEET
0 10 20 40

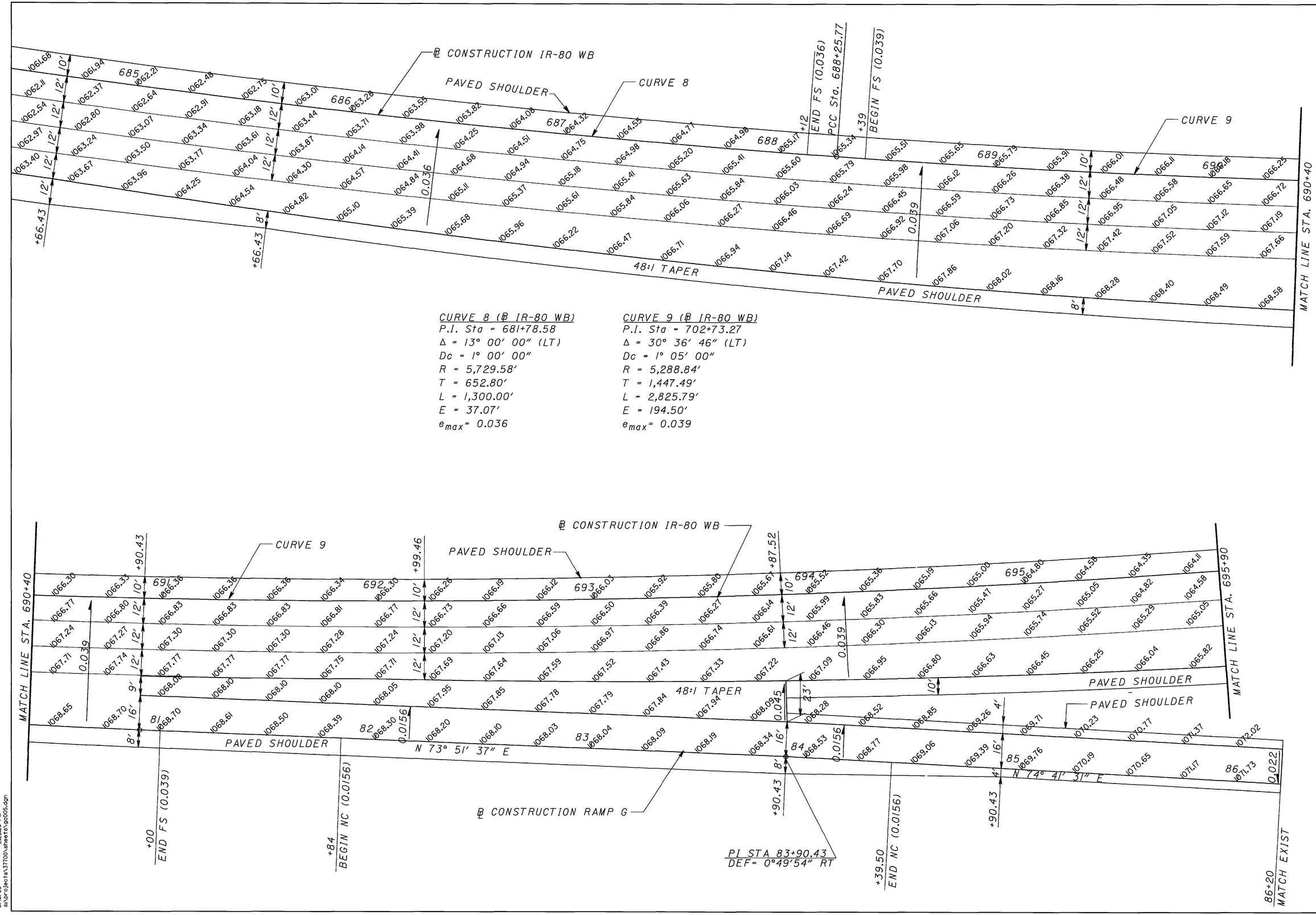
CALCULATED AJP
CHECKED PRS

RAMP PAVEMENT DETAILS RAMP 46-E

MAH-80-0.97

818
1100

6/16/05 2:22:53 PM
s:\projects\37700\sheets\pd004.dgn



CURVE 8 (℄ IR-80 WB)
P.I. Sta = 681+78.58
Δ = 13° 00′ 00″ (LT)
Dc = 1° 00′ 00″
R = 5,729.58′
T = 652.80′
L = 1,300.00′
E = 37.07′
e_{max} = 0.036

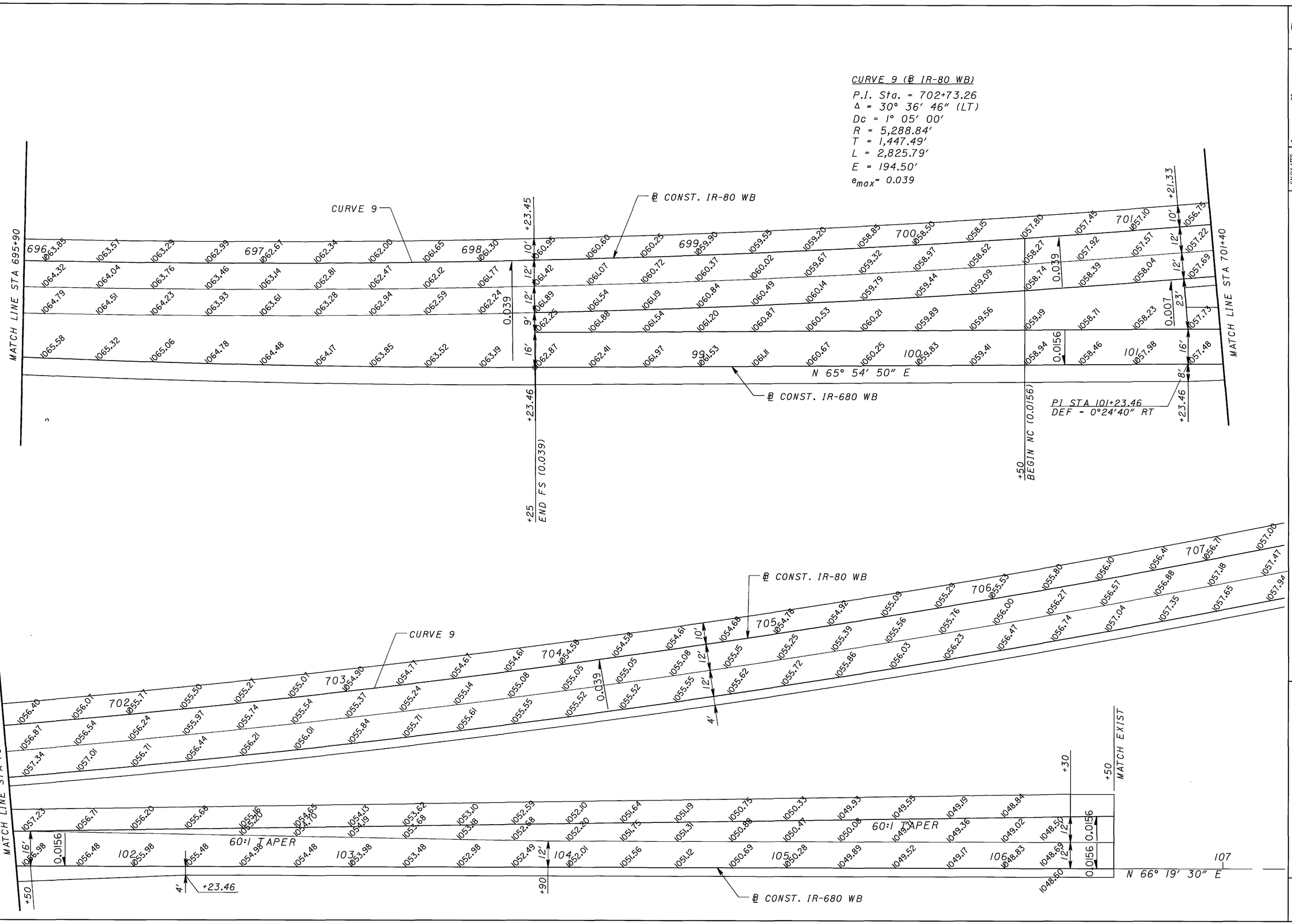
CURVE 9 (℄ IR-80 WB)
P.I. Sta = 702+73.27
Δ = 30° 36′ 46″ (LT)
Dc = 1° 05′ 00″
R = 5,288.84′
T = 1,447.49′
L = 2,825.79′
E = 194.50′
e_{max} = 0.039

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED AJP
CHECKED PRS

PAVEMENT DETAILS
RAMP G
MAH-80-0.97

819
100

6/16/05 2:23:20 PM
s:\projects\37100\sheets\gd005.dgn



CALCULATED AJP
CHECKED PRS

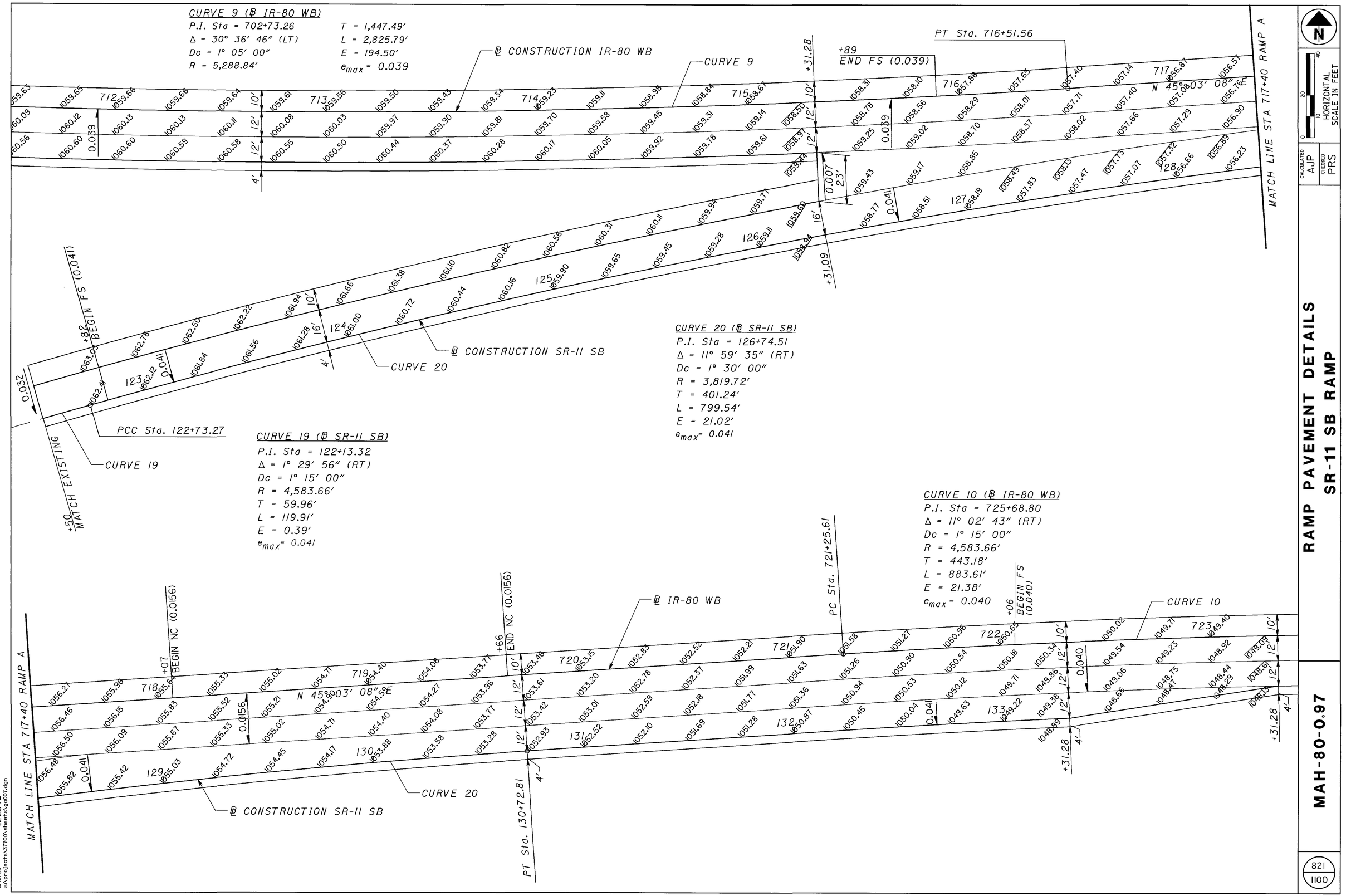
HORIZONTAL SCALE IN FEET
0 10 20 40

RAMP PAVEMENT DETAILS
IR-680 WB RAMP

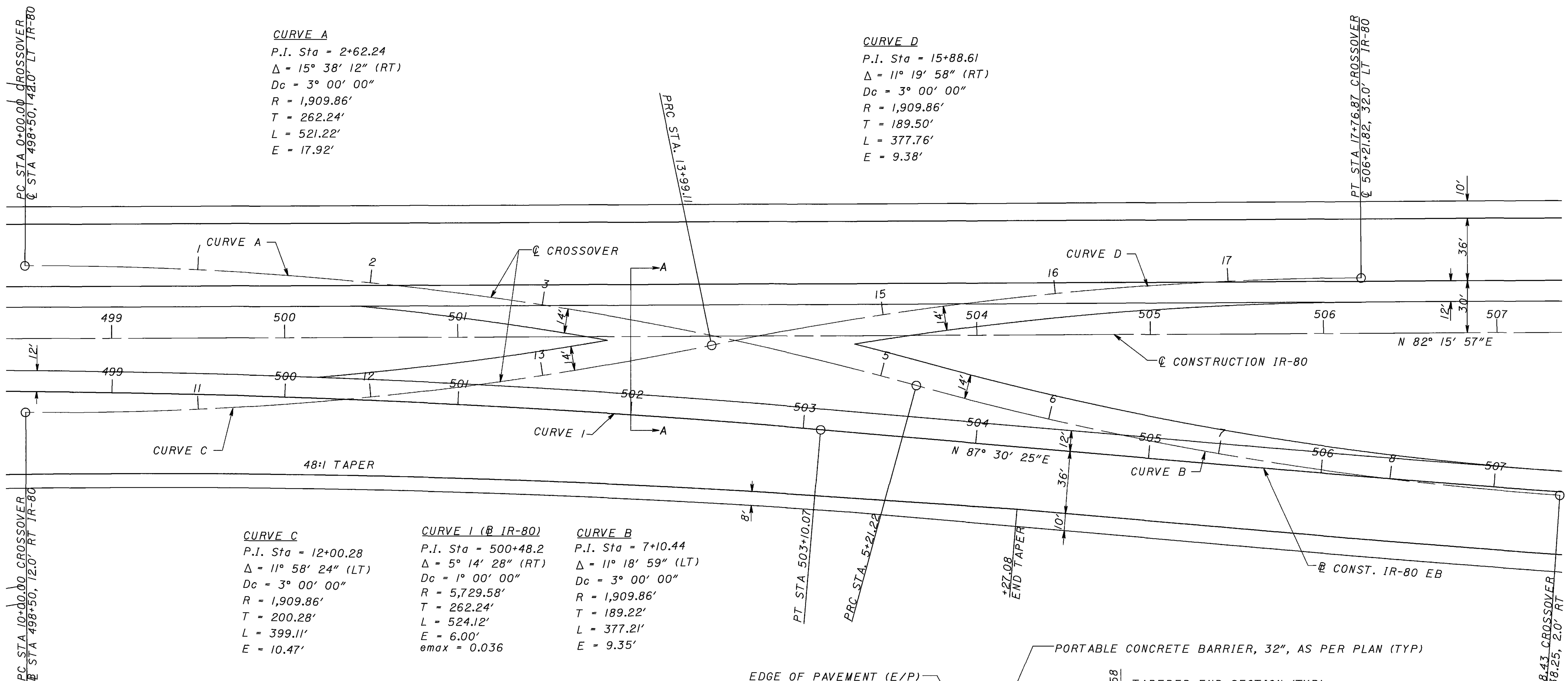
MAH-80-0.97

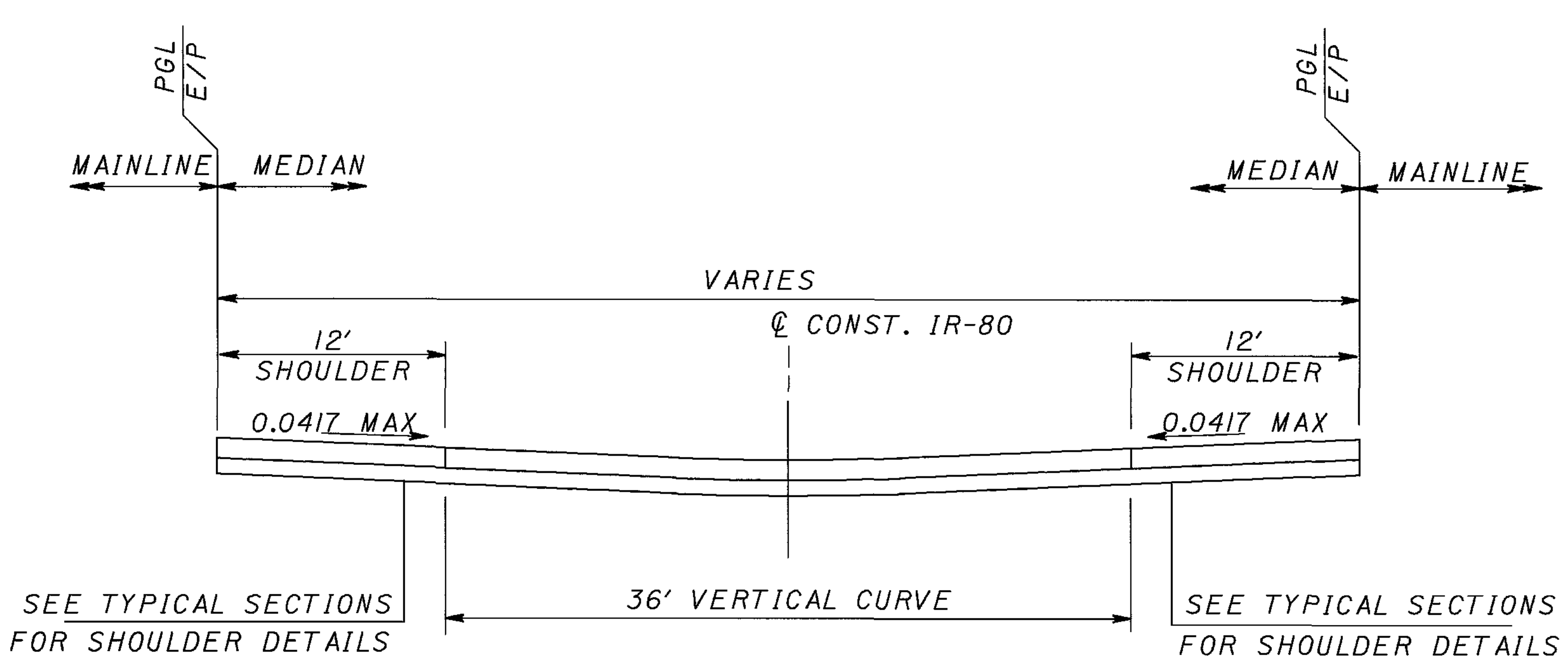
820
1100

6/6/05 2:23:46 PM
a:\projects\37700\sheets\gp006.dgn

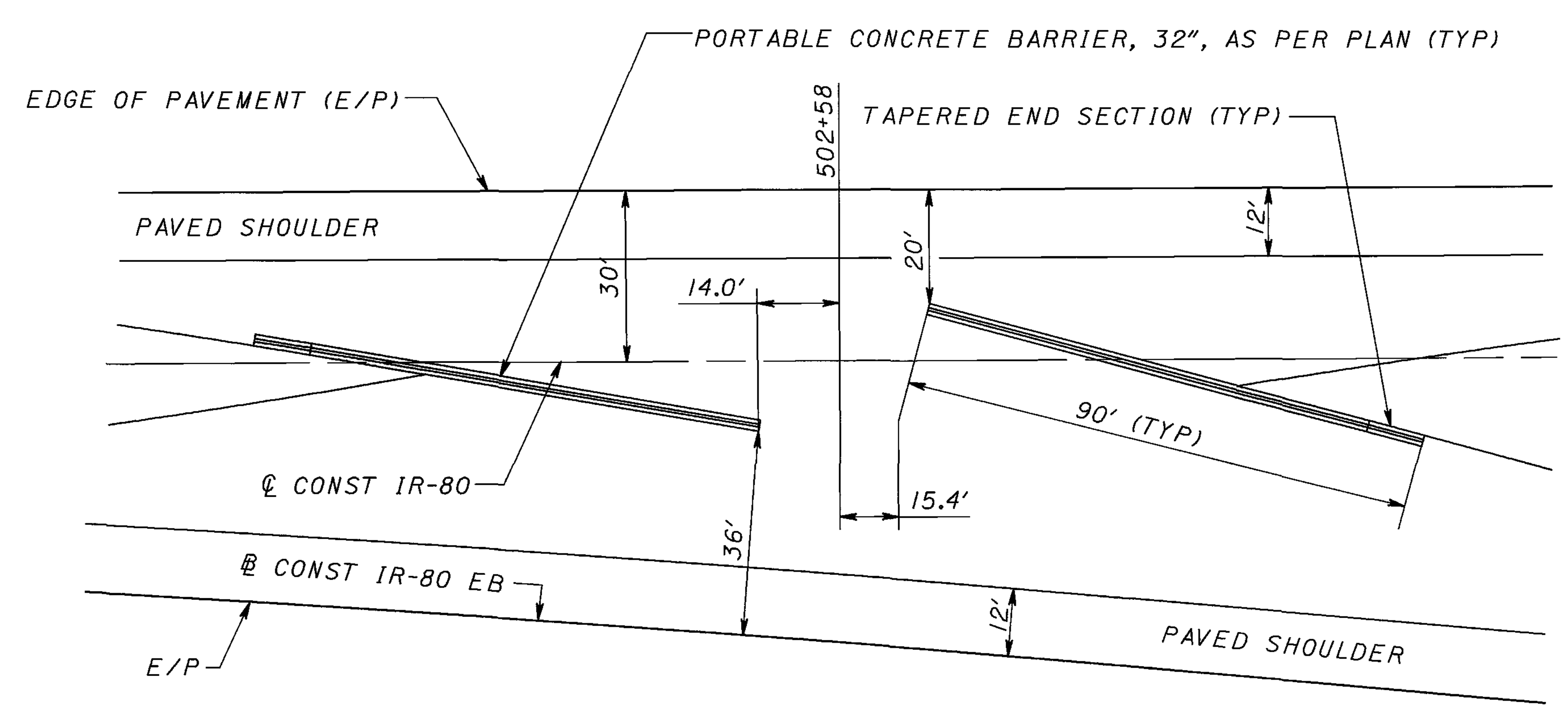

CURVE 9 (℄ IR-80 WB)
P.I. Sta = 702+73.26
Δ = 30° 36′ 46″ (LT)
Dc = 1° 05′ 00″
R = 5,288.84′
T = 1,447.49′
L = 2,825.79′
E = 194.50′
emax = 0.039
℄ CONSTRUCTION IR-80 WB
CURVE 9
+31.28
+89
END FS (0.039)
PT Sta. 716+51.56
MATCH LINE STA 717+40 RAMP A
N 45° 08′ 03″ E
0.039
0.007
0.041
+31.09
+82
BEGIN FS (0.041)
0.032
+50
MATCH EXISTING
PCC Sta. 122+73.27
CURVE 19
CURVE 19 (℄ SR-11 SB)
P.I. Sta = 122+13.32
Δ = 1° 29′ 56″ (RT)
Dc = 1° 15′ 00″
R = 4,583.66′
T = 59.96′
L = 119.91′
E = 0.39′
emax = 0.041
℄ CONSTRUCTION SR-11 SB
CURVE 20
CURVE 20 (℄ SR-11 SB)
P.I. Sta = 126+74.51
Δ = 11° 59′ 35″ (RT)
Dc = 1° 30′ 00″
R = 3,819.72′
T = 401.24′
L = 799.54′
E = 21.02′
emax = 0.041
CURVE 10 (℄ IR-80 WB)
P.I. Sta = 725+68.80
Δ = 11° 02′ 43″ (RT)
Dc = 1° 15′ 00″
R = 4,583.66′
T = 443.18′
L = 883.61′
E = 21.38′
emax = 0.040
PC Sta. 721+25.61
+06
BEGIN FS (0.040)
CURVE 10
+66
END NC (0.0156)
+07
BEGIN NC (0.0156)
0.0156
0.0040
PT Sta. 130+72.81
MATCH LINE STA 717+40 RAMP A
℄ IR-80 WB
℄ CONSTRUCTION SR-11 SB
HORIZONTAL SCALE IN FEET
CALCULATED AJP
CHECKED PRS
RAMP PAVEMENT DETAILS
SR-11 SB RAMP
MAH-80-0.97
821
1100
6/6/05
22439 PM
s:\projects\37700\sheets\gc001.dgn

PAVEMENT DETAILS
STA 498+50 TO STA 507+38.25





SECTION A-A



PORTABLE CONCRETE BARRIER PLACEMENT
N.T.S.

FOR PAVEMENT CROSSOVER TYPICAL SECTION, SEE SHEET 21

FOR IR-80 DETAILS, SEE SHEETS 190 AND 192

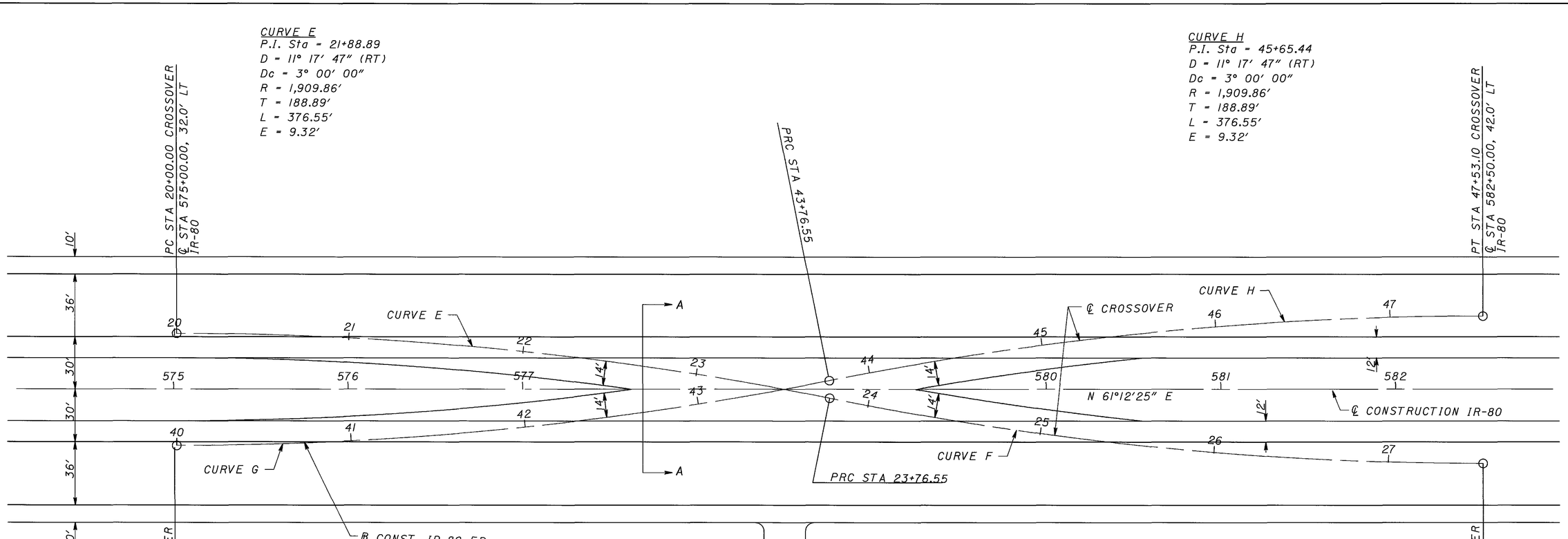
FOR PAVEMENT ELEVATION DETAILS, SEE SHEET 824

HORIZONTAL SCALE IN FEET (0 15 30 60)

CALCULATED PRS | CHECKED AJP

MAH-80-0.97

6/16/05 2:25:06 PM s:\projects\37700\sheets\GA008.dgn



FOR PAVEMENT CROSSOVER TYPICAL SECTION, SEE SHEET 21

FOR IR-80 DETAILS, SEE SHEETS 204 AND 206

FOR PAVEMENT ELEVATION DETAILS, SEE SHEET 824

6/16/05 2:25:30 PM
s:\projects\37700\sheets\04009.dgn

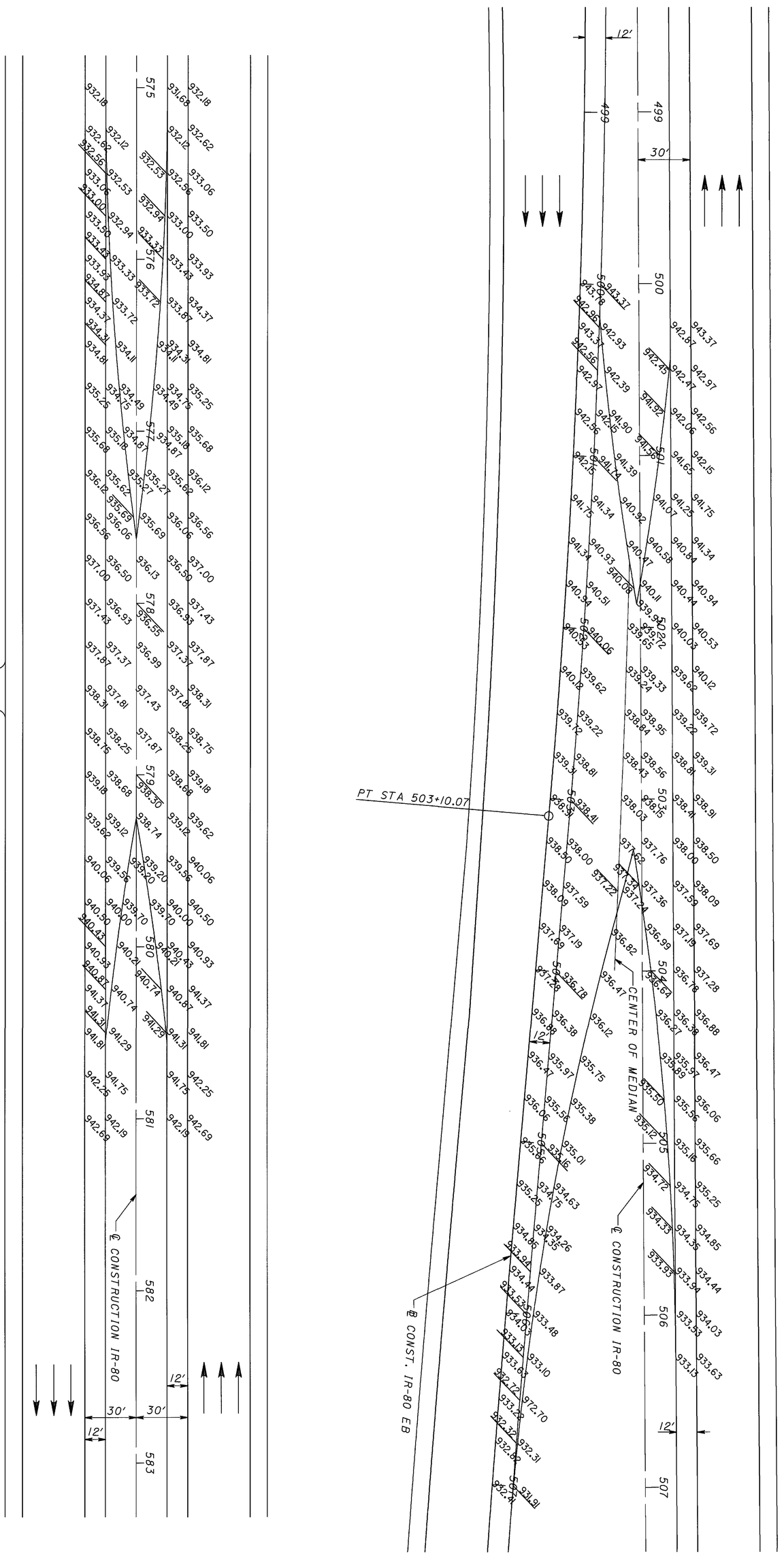
HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED PRS
CHECKED AJP

PAVEMENT DETAILS
STA 575+00 TO STA 582+50

MAH-80-0.97

6/16/05 2:28:42 PM
s:\projects\37700\sheets\GA0I0.dgn



FOR CROSSOVER GEOMETRY, SEE SHEETS 822 AND 823

824
1100

MAH-80-0.97

PAVEMENT DETAILS
PERMANENT CROSSOVERS

CALCULATED PRS
CHECKED AJP

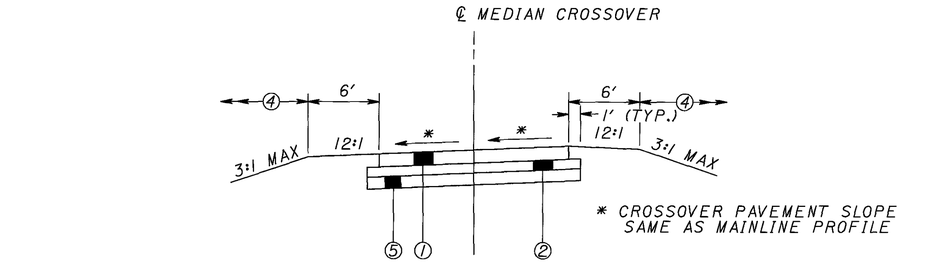
0 30
15 60
HORIZONTAL SCALE IN FEET

CALCULATED EKA
CHECKED PRS

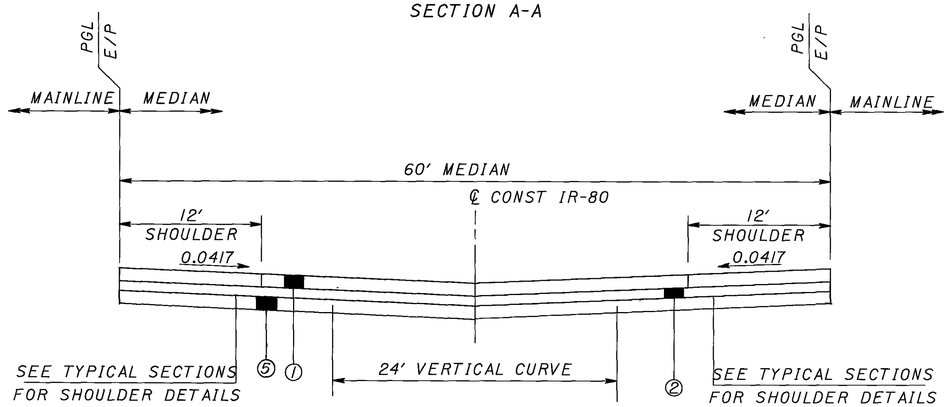
PAVEMENT DETAILS
MEDIAN CROSSOVER STA 610+00

LEGEND

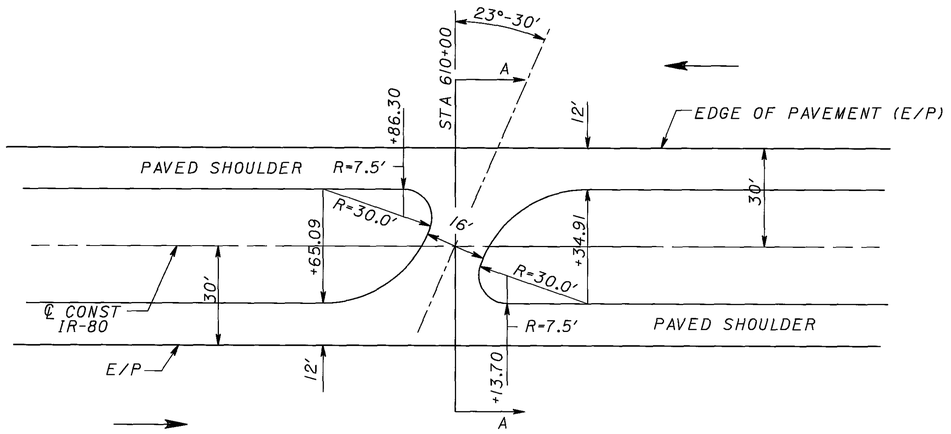
- (1) ITEM 452 - 13" NON-REINFORCED CONCRETE PAVEMENT
- (2) ITEM 304 - 10" AGGREGATE BASE
- (3) NOT USED
- (4) ITEM 659 - SEEDING AND MULCHING
- (5) ITEM 206 - CEMENT STABILIZED SUBGRADE, 12 INCHES DEEP
- (D) TRANSVERSE JOINT (WITH DOWELS), AS PER STANDARD CONSTRUCTION DRAWING BP-2.2
- (E) EXPANSION JOINT (WITHOUT DOWELS), AS PER STANDARD CONSTRUCTION DRAWING BP-2.2
- (T) LONGITUDINAL JOINT (TIED), AS PER STANDARD DRAWING BP-2.1
- (L) LONGITUDINAL JOINT (WITHOUT TIE-BARS), AS PER STANDARD DRAWING BP-2.1



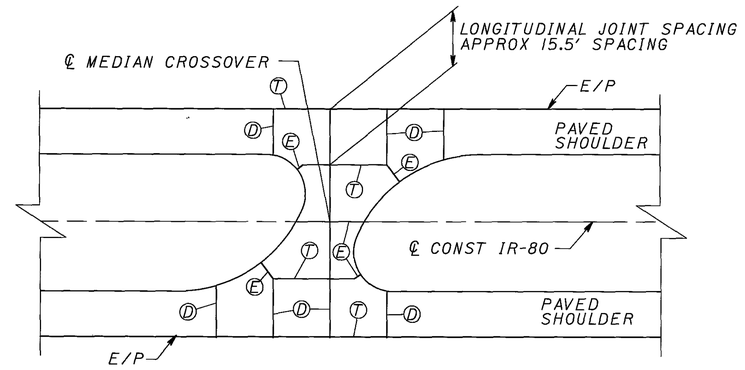
SECTION A-A



SECTION A-A



℄ STA 610+00.00 IR-80



MEDIAN CROSSOVER JOINT DETAIL

NOTE: THE ABOVE IS A SUGGESTED JOINT DIAGRAM. THE CONTRACTOR MAY SUBMIT AN ALTERNATE JOINT DIAGRAM TO THE ENGINEER FOR APPROVAL.

ALIGN TRANSVERSE JOINTS IN MEDIAN CROSSOVER AND PROPOSED PAVEMENT. TRANSVERSE JOINT SPACING PER SCD BP-2.2

MEDIAN

MAH-80-0.97

825
1100

9/14/2005 12:53:51 PM
s:\projects\37700\streets\gm00.dgn

℄ STA 578+50 IR-80 =
℄ CONNECTOR DRIVE

12′

576 577 578 579 580 581

N 61°12′25″ E

30′

12′

℄ CONSTRUCTION IR-80

36′

10′

24′

R=5′ TYP

166′

℄ STA 8+50 SERVICE ROAD =
℄ CONNECTOR DRIVE

TURF ACCESS ROAD

10′

R=25′

+00
11′ RT

R=35′

2′ SHLD

6 7 8 9 10 11

0.0156

11′

11′

2′ SHLD

0.0156

0.0156

0.0156

0.0156

+31.59
11′ LT

N 61°12′25″ E

0.0156

℄ CONSTRUCTION SERVICE ROAD

CROWN POINT PGL

R=100′

+43.86
63′ RT

STA 8+00.00, 39′ RT
Δ = 118°41′07″
R = 50′

CENTER OF CURVE
STA 9+31.59, 111′ RT
Δ = 61°18′53″
R = 100′

CROWN POINT
CENTER OF CURVE
STA 9+31.59, 261′ RT
Δ = 32°26′26″
R = 250′

HORIZONTAL SCALE IN FEET
0 10 20 40

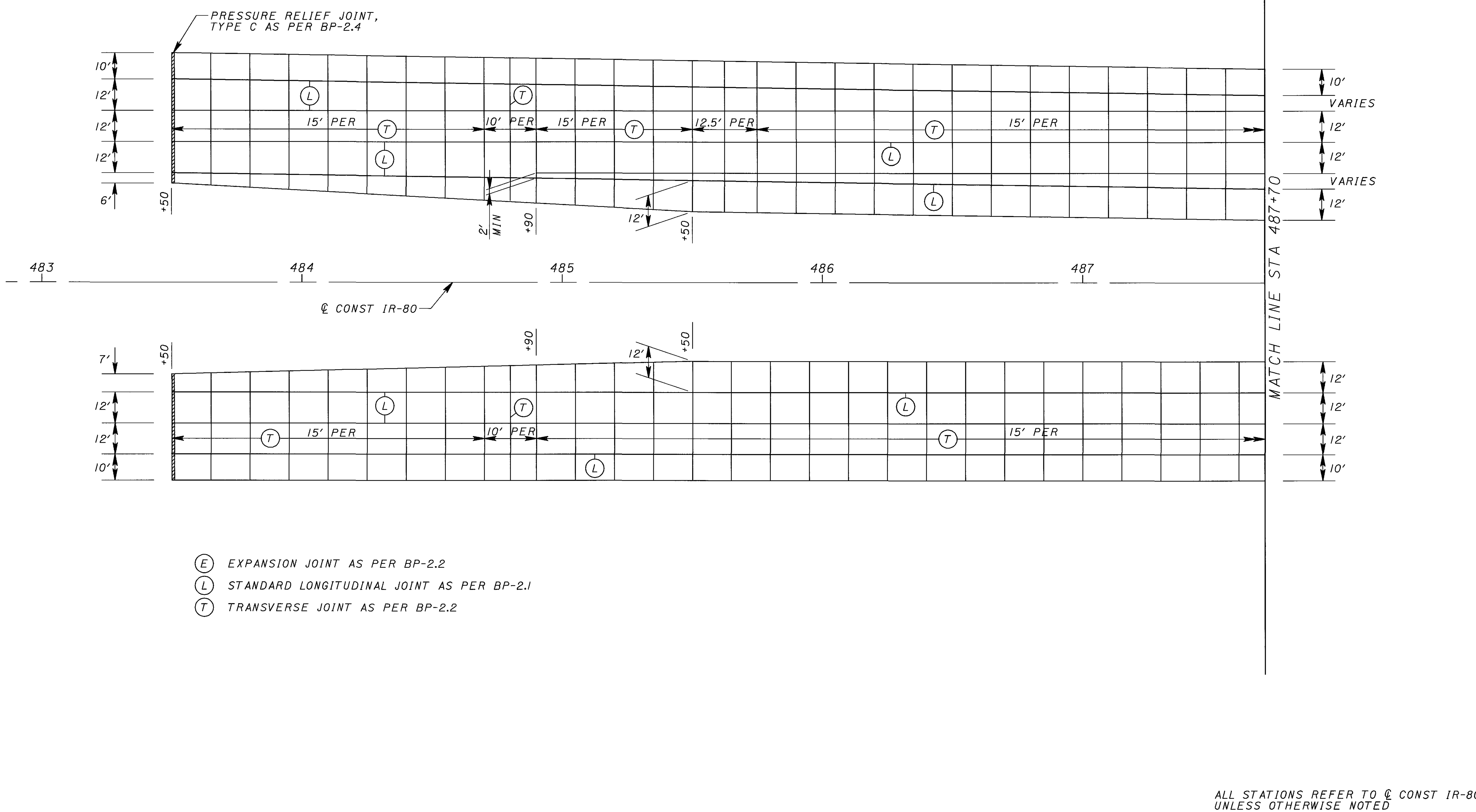
CALCULATED AJP
CHECKED PRS

PAVEMENT DETAILS SERVICE ROAD

MAH-80-09.97

826
1100

7/20/05 3:35:59 PM
s:\projects\37700\sheets\gm00ser01.dgn


PRESSURE RELIEF JOINT, TYPE C AS PER BP-2.4
10'
12'
12'
12'
6'
+50
15' PER
10' PER
15' PER
12.5' PER
15' PER
2' MIN
+90
12'
+50
10'
VARIES
12'
12'
VARIES
12'
483
484
485
486
487
℄ CONST IR-80
MATCH LINE STA 487+70
7'
+50
+90
12'
+50
12'
12'
10'
15' PER
10' PER
15' PER
12'
12'
12'
10'
E EXPANSION JOINT AS PER BP-2.2
L STANDARD LONGITUDINAL JOINT AS PER BP-2.1
T TRANSVERSE JOINT AS PER BP-2.2
ALL STATIONS REFER TO ℄ CONST IR-80 UNLESS OTHERWISE NOTED

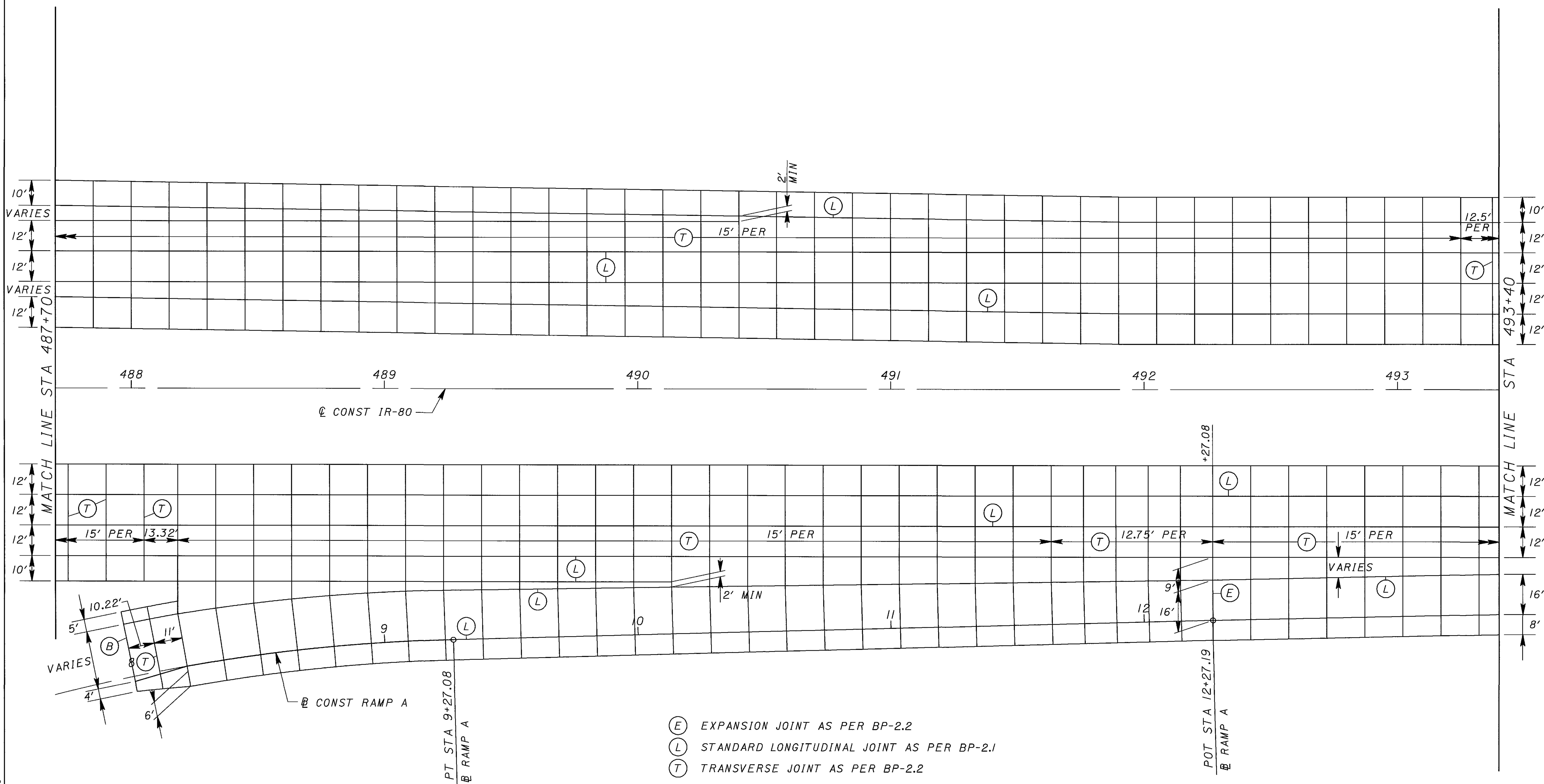
JOINT DETAILS
STA 483+50 TO STA 487+70

MAH-80-0.97

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED AJP
CHECKED PRS

6/16/05 2:30:06 PM
s:\projects\37700\sheets\gm10jnt.dgn



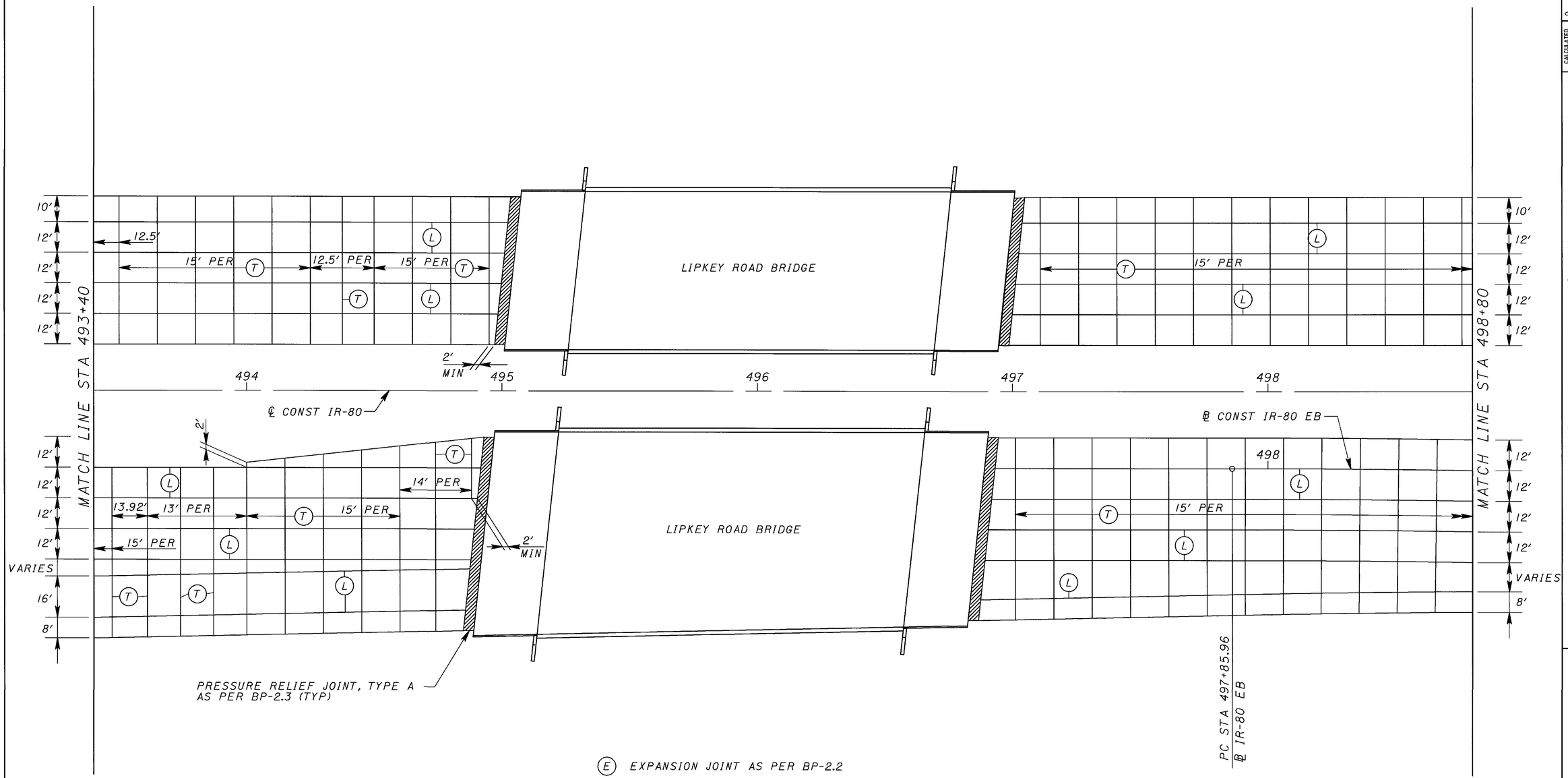
HORIZONTAL SCALE IN FEET

CALCULATED AJP CHECKED PRS

JOINT DETAILS STA 487+70 TO STA 493+40

MAH-80-0.97

6/16/05 2:30:31 PM s:\projects\37700\sheets\pm102jnt.dgn



HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED AJP
CHECKED PRS

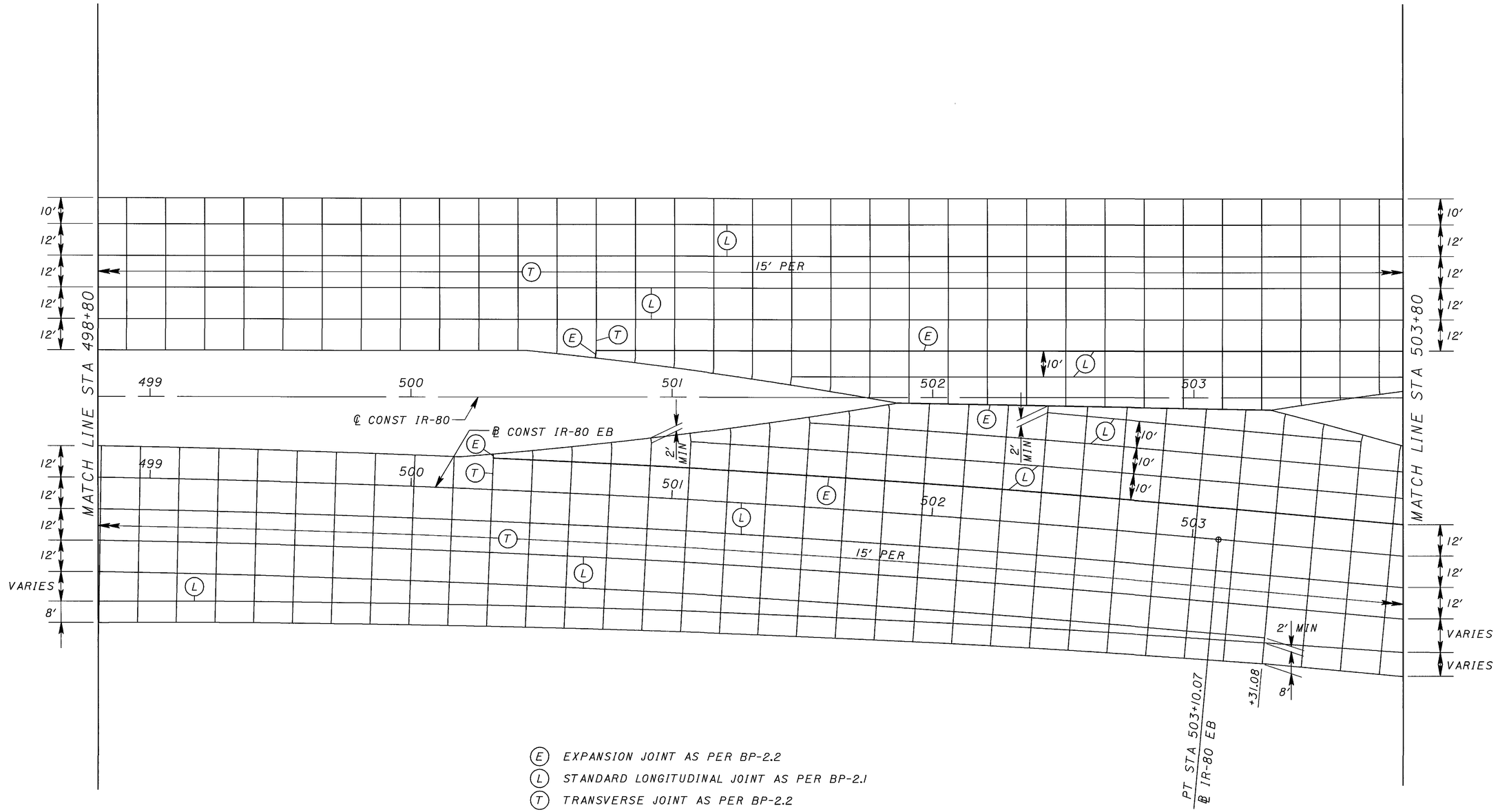
JOINT DETAILS
STA 493+40 TO STA 498+80

MAH-80-0.97

829
1100

6/16/05 2:30:57 PM
e:\projects\33700\sheets\rpm03jnt.dgn

JOINT DETAILS
STA 498+80 TO STA 503+80



(E) EXPANSION JOINT AS PER BP-2.2

(L) STANDARD LONGITUDINAL JOINT AS PER BP-2.1

(T) TRANSVERSE JOINT AS PER BP-2.2

ALL STATIONS REFER TO ℄ CONST IR-80 UNLESS OTHERWISE NOTED

HORIZONTAL SCALE IN FEET
0 10 20 40

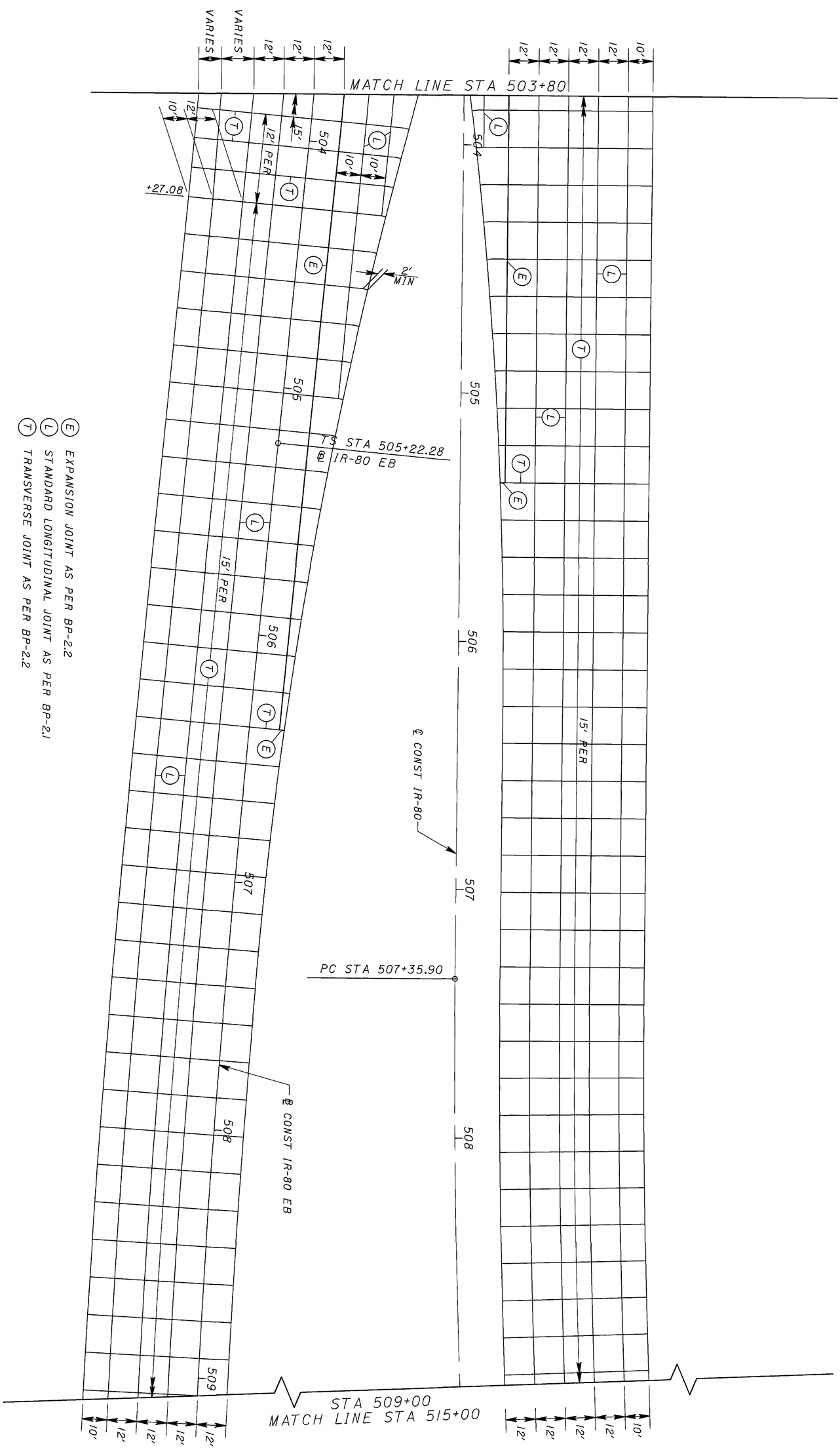
CALCULATED AJP
CHECKED PRS

MAH-80-0.97

830
1100

7/19/2005 11:04:39 AM
s:\projects\37700\sheets\gm04jnt.dgn

7/19/2005 11:01:04 AM
s:\projects\37700\sheets\gm105jnt.dgn



831 / 1100	MAH-80-0.97	JOINT DETAILS STA 503+80 TO STA 509+00	CALCULATED AJP CHECKED PRS	0 20 10 40 HORIZONTAL SCALE IN FEET

Ⓔ EXPANSION JOINT AS PER BP-2.2

Ⓛ STANDARD LONGITUDINAL JOINT AS PER BP-2.1

Ⓣ TRANSVERSE JOINT AS PER BP-2.2

ALL STATIONS REFER TO ℄ CONST IR-80 UNLESS OTHERWISE NOTED

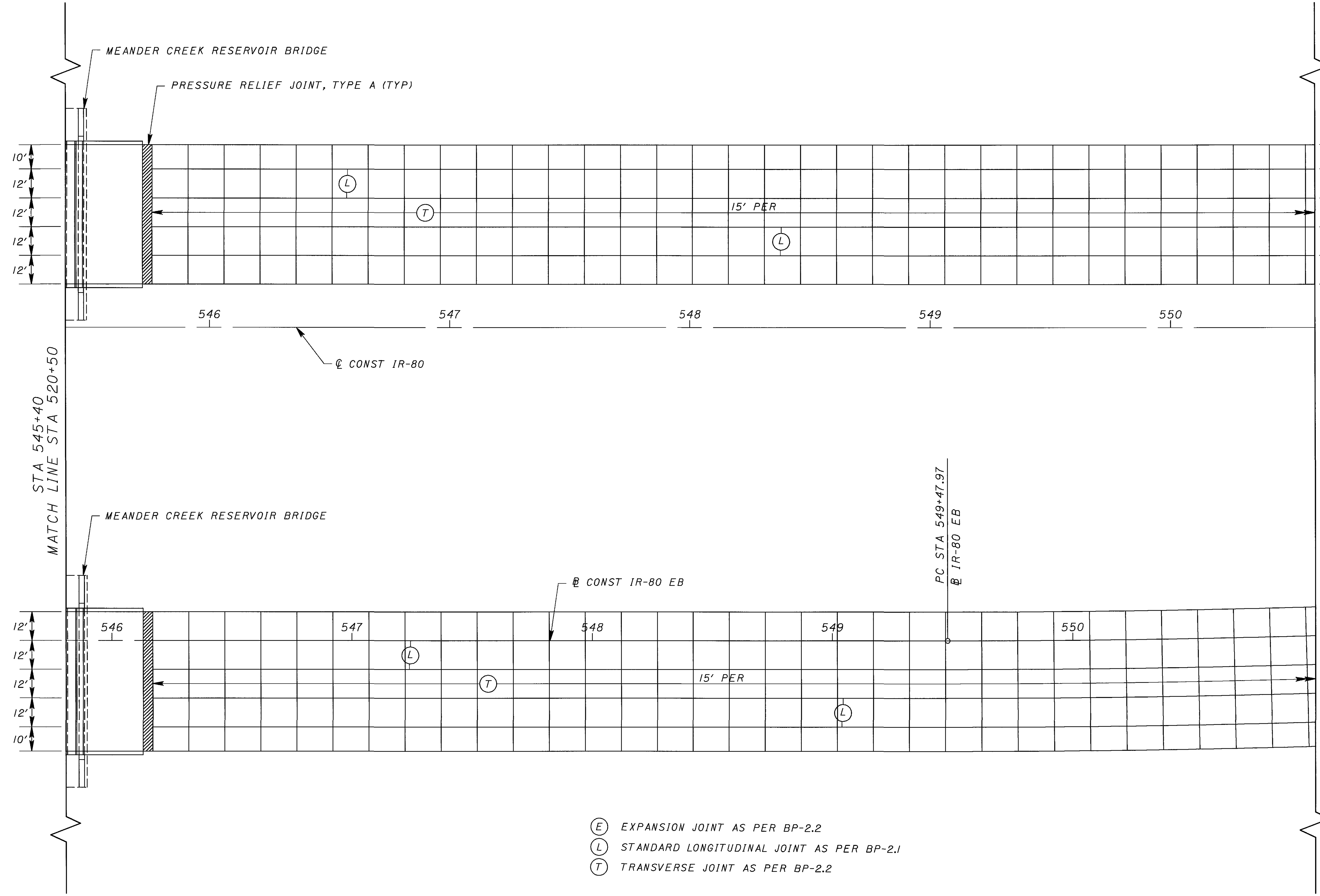
CALCULATED AJP

CHECKED PRS

JOINT DETAILS
STA 515+00 TO STA 520+50

MAH-80-0.97

6/16/05 2:31:23 PM
s:\projects\37700\sheets\gm107jnt.dgn



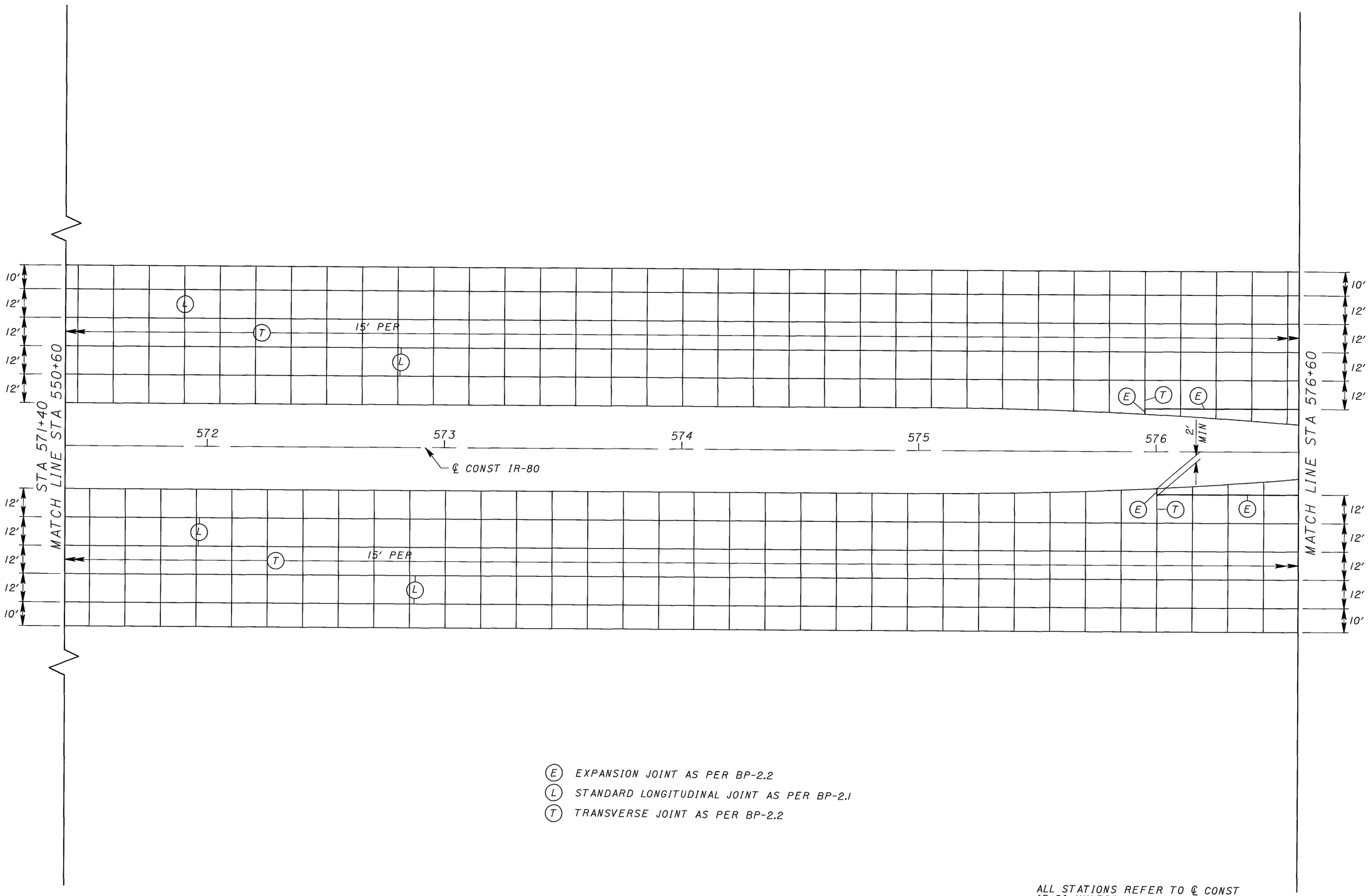
6/16/05 2:31:53 PM
s:\projects\37700\sheets\gm83jnt.dgn

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED AJP
CHECKED PRS

JOINT DETAILS
STA 545+40 TO STA 550+60

MAH-80-0.97



(E) EXPANSION JOINT AS PER BP-2.2

(L) STANDARD LONGITUDINAL JOINT AS PER BP-2.1

(T) TRANSVERSE JOINT AS PER BP-2.2

ALL STATIONS REFER TO ℄ CONST IR-80 UNLESS OTHERWISE NOTED

7/19/2005 11:00:22 AM
s:\projects\37700\sheets\gmi80jnt.dgn

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED AJP
CHECKED PRS

JOINT DETAILS
STA 571+40 TO STA 576+60

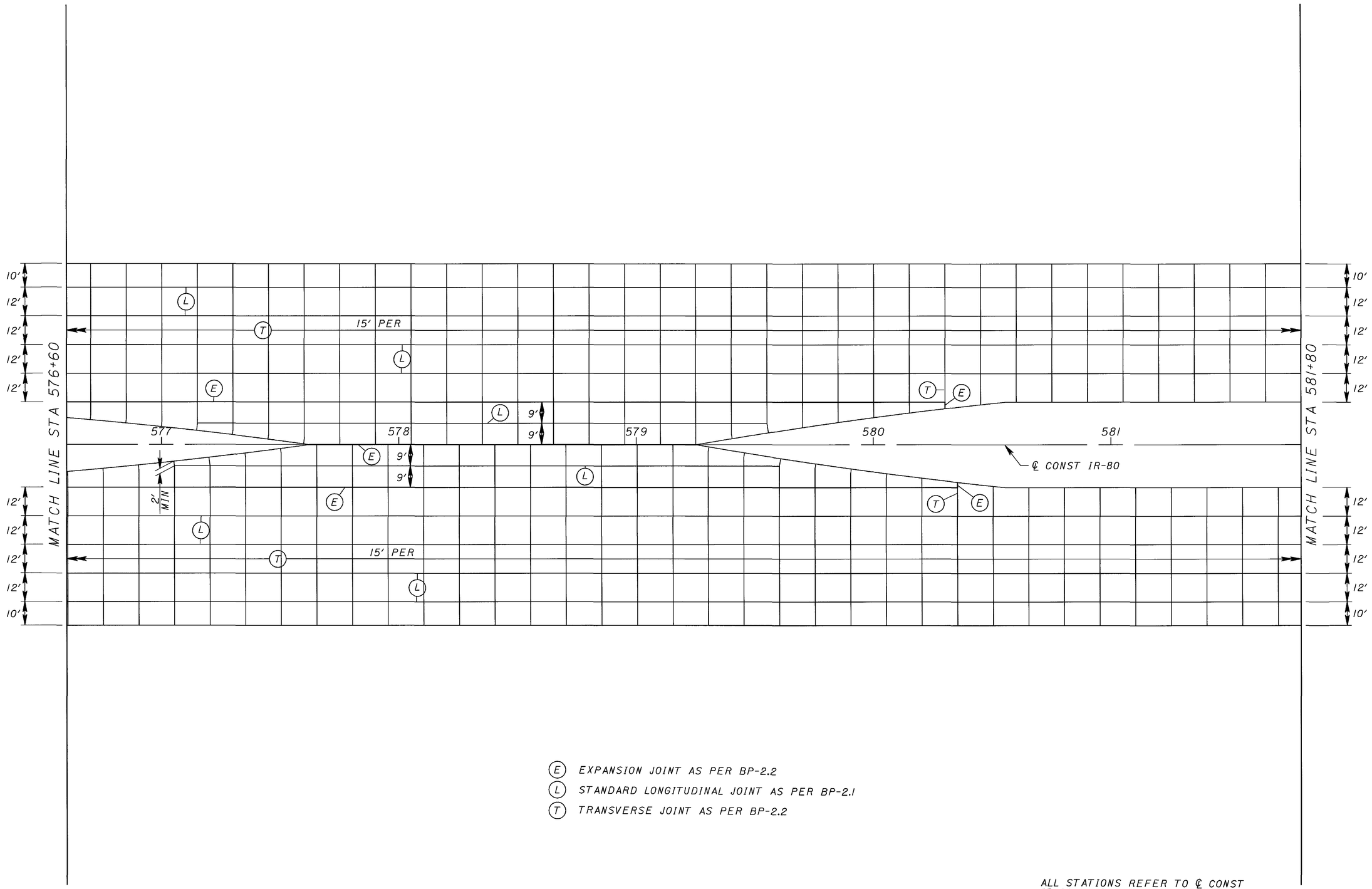
MAH-80-0.97

833A
1100

JOINT DETAILS
STA 576+60 TO STA 581+80

CALCULATED AJP
CHECKED PRS

HORIZONTAL SCALE IN FEET
0 10 20 40

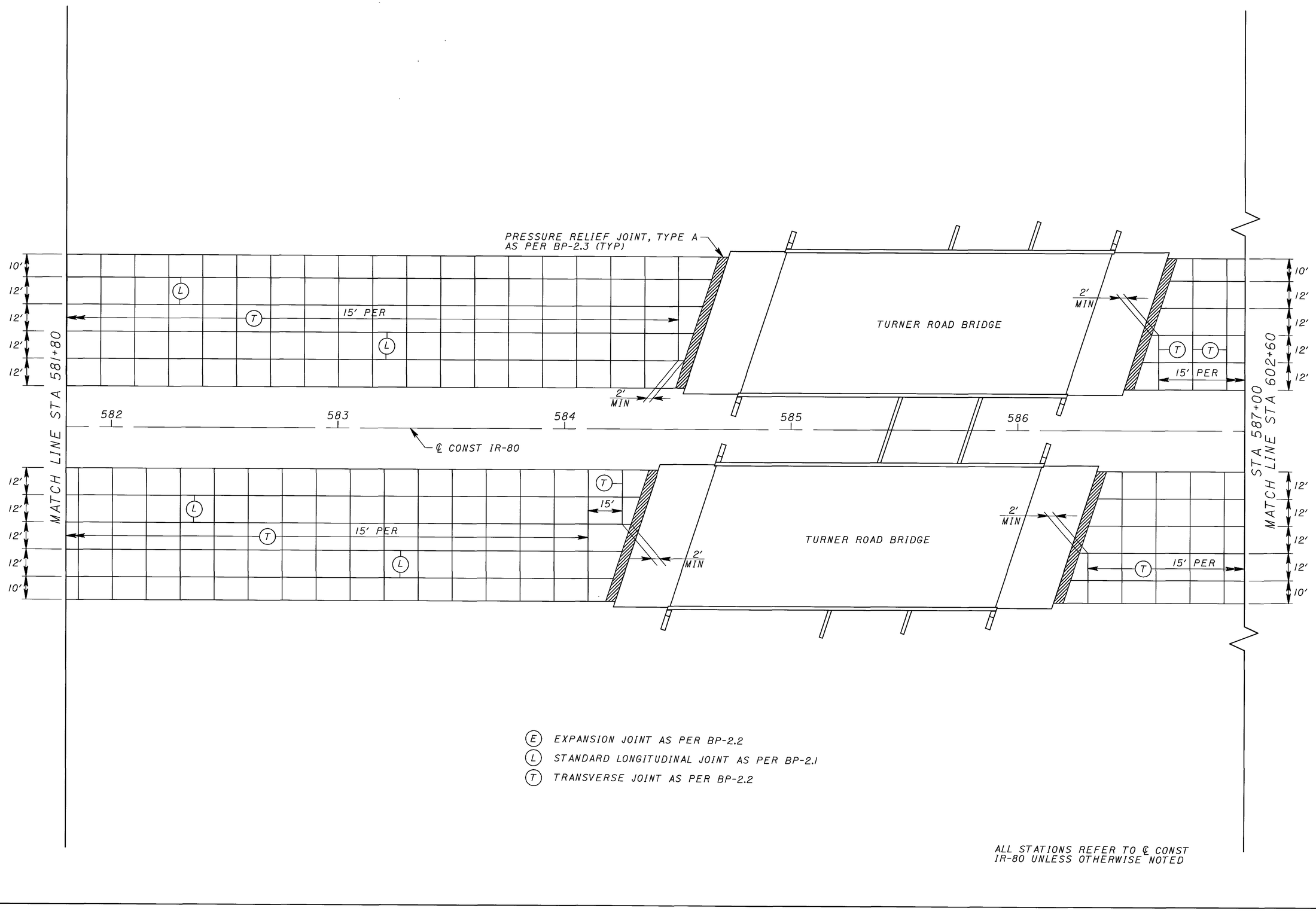


ALL STATIONS REFER TO ℄ CONST IR-80 UNLESS OTHERWISE NOTED

MAH-80-0.97

833B
1100

7/19/2005 10:59:43 AM
es\projects\37700\sheets\gmi83jnt.dgn



(E) EXPANSION JOINT AS PER BP-2.2
(L) STANDARD LONGITUDINAL JOINT AS PER BP-2.1
(T) TRANSVERSE JOINT AS PER BP-2.2

ALL STATIONS REFER TO ℄ CONST IR-80 UNLESS OTHERWISE NOTED

HORIZONTAL SCALE IN FEET
0 10 20 40

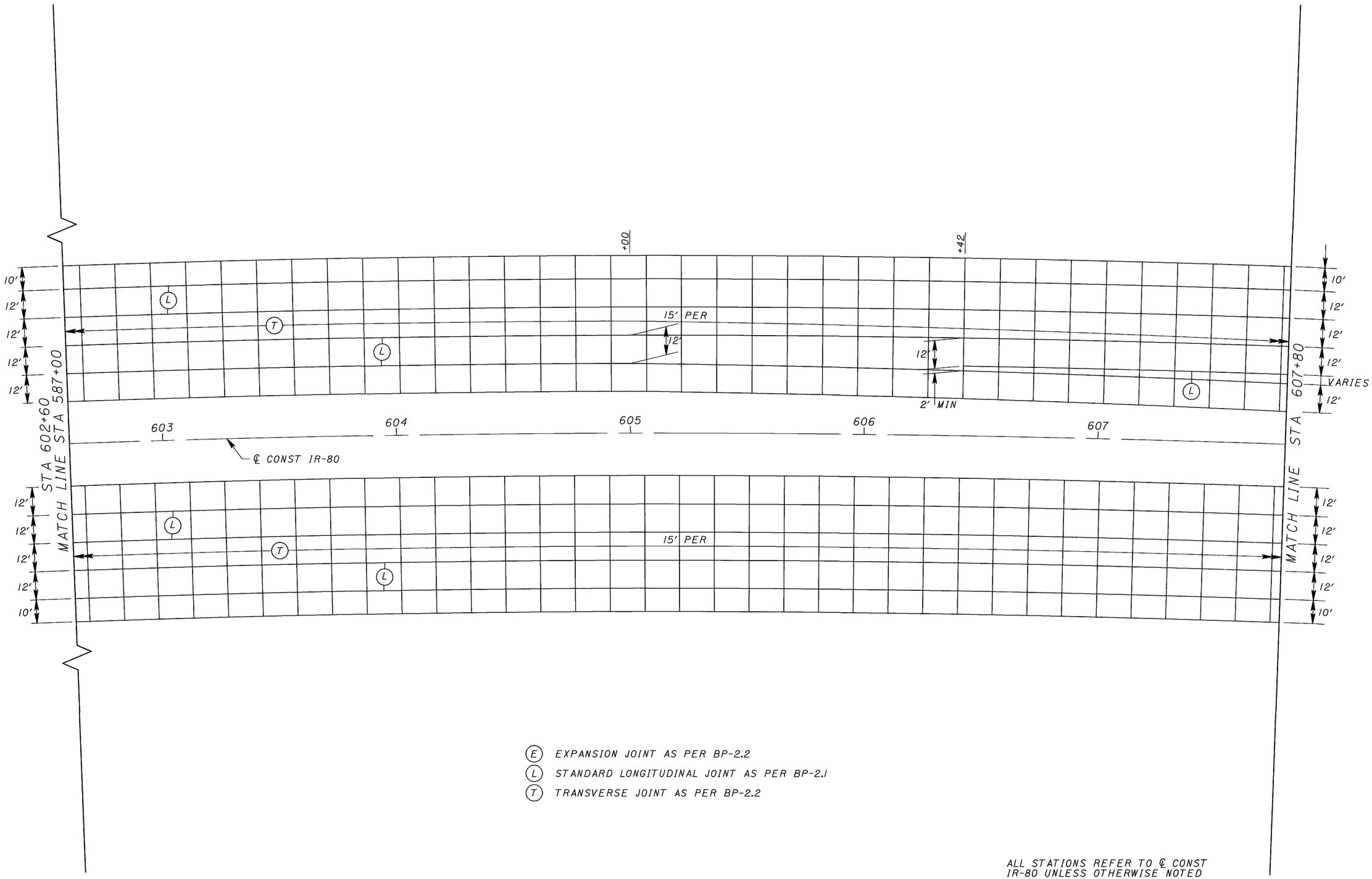
CALCULATED AJP
CHECKED PRS

JOINT DETAILS
STA 581+80 TO STA 587+00

MAH-80-0.97

834
1100

7/9/2005 10:59:10 AM
s:\projects\37700\sheets\gm820jnt.dgn



(E) EXPANSION JOINT AS PER BP-2.2

(L) STANDARD LONGITUDINAL JOINT AS PER BP-2.1

(T) TRANSVERSE JOINT AS PER BP-2.2

ALL STATIONS REFER TO ℄ CONST IR-80 UNLESS OTHERWISE NOTED

6/16/05 2:32:21 PM
s:\projects\37700\sheets\gm024jnt.dgn

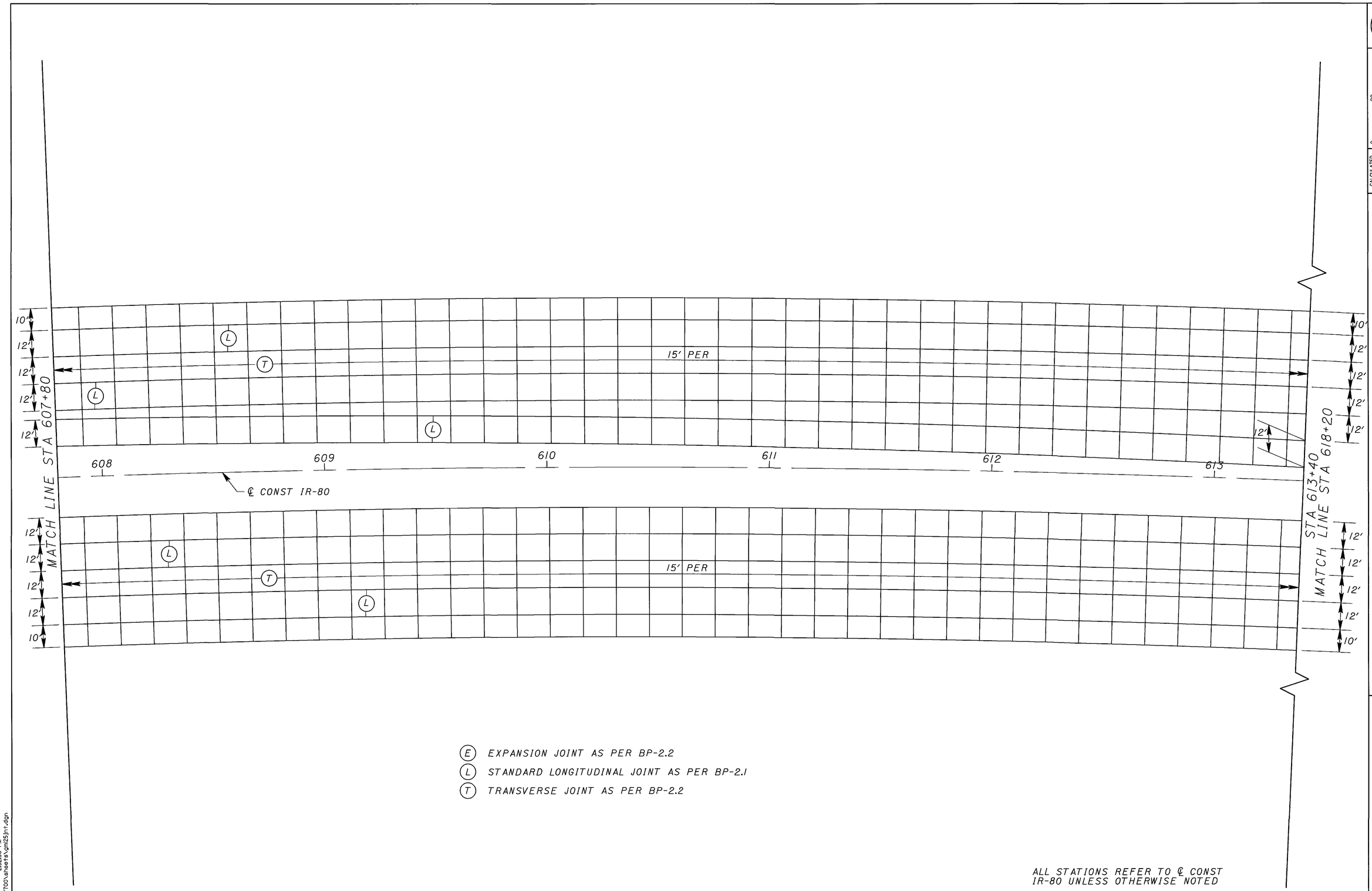
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED AJP
CHECKED PRS

JOINT DETAILS
STA 602+60 TO STA 607+80

MAH-80-0.97

835
1100



(E) EXPANSION JOINT AS PER BP-2.2

ALL STATIONS REFER TO ℄ CONST IR-80 UNLESS OTHERWISE NOTED

HORIZONTAL SCALE IN FEET
0 10 20 40

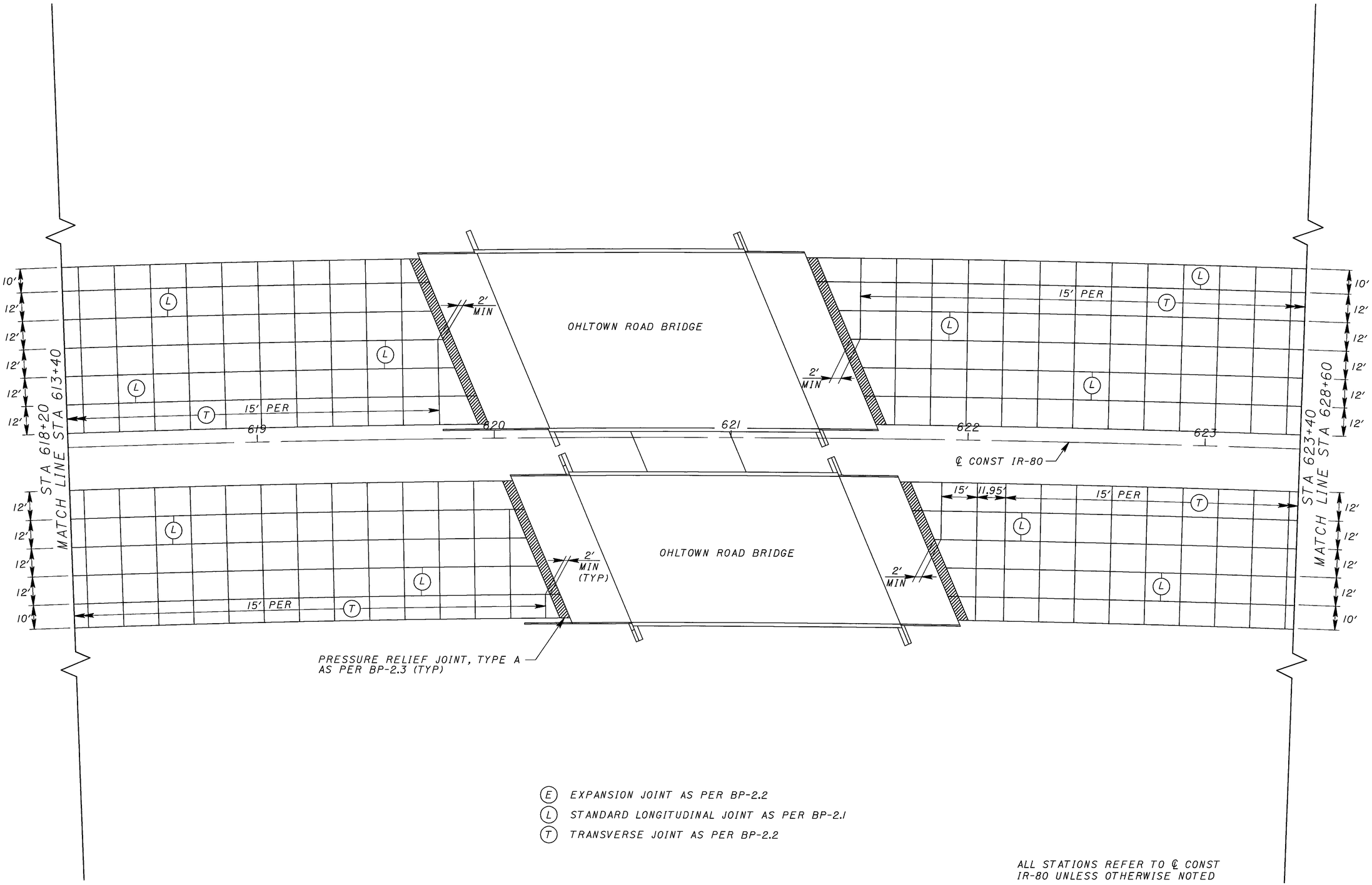
CALCULATED AJP
CHECKED PRS

JOINT DETAILS
STA 607+80 TO STA 613+40

MAH-80-0.97

836
1100

5/16/05 2:32:50 PM
s:\projects\37700\structs\gm125jnt.dgn



HORIZONTAL SCALE IN FEET
0 10 20 40

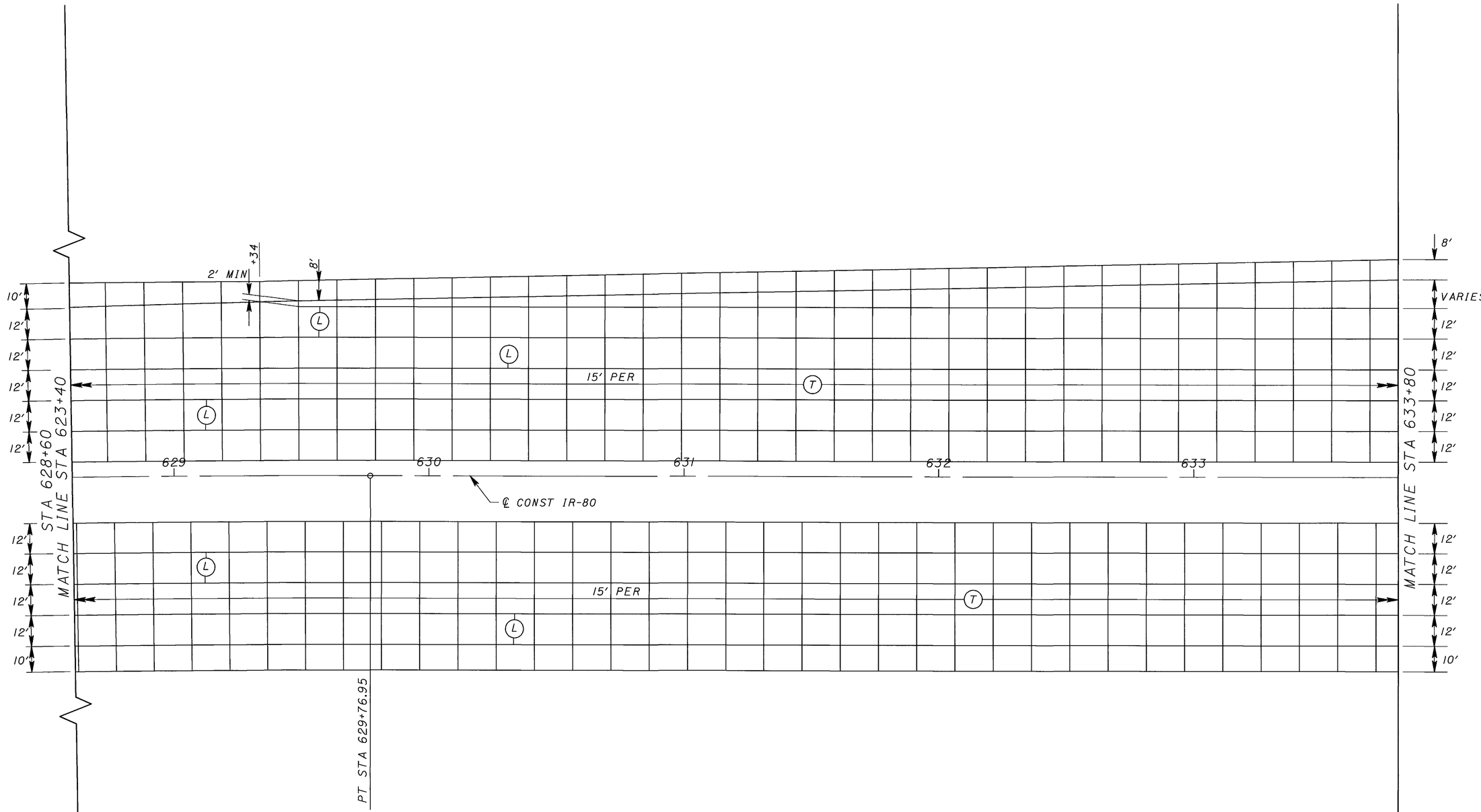
CALCULATED AJP
CHECKED PRS

JOINT DETAILS
STA 618+20 TO STA 623+40

MAH-80-0.97

837
1100

6/16/05
2:33:46 PM
s:\projects\37700\sheets\gm627jnt.dgn



JOINT DETAILS
STA 628+60 TO STA 633+80

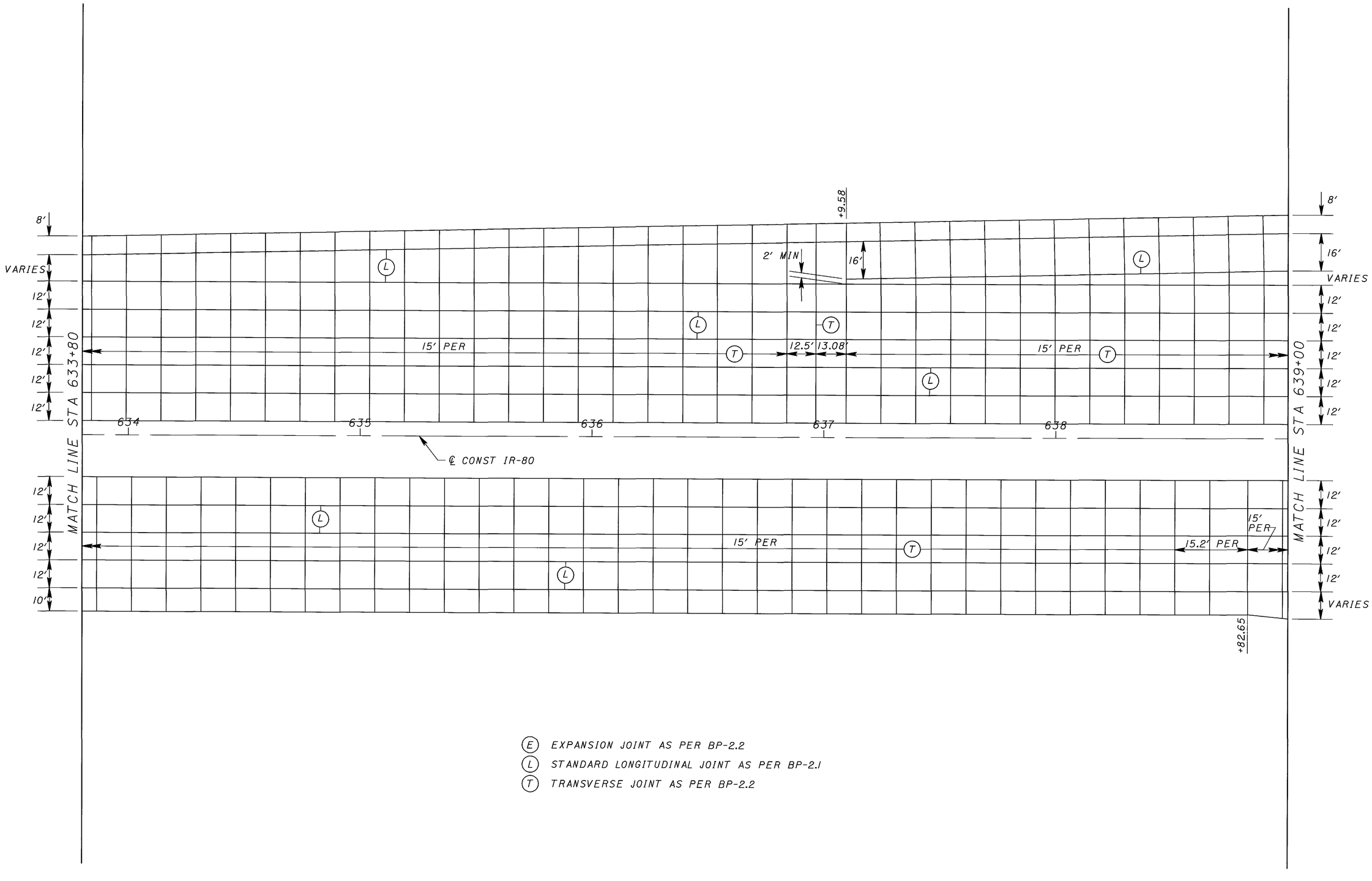
CALCULATED AJP
CHECKED PRS

HORIZONTAL SCALE IN FEET
0 10 20 40

MAH-80-0.97

838
1100

6/16/05 2:33:54 PM
d:\projects\37700\sheets\gm839jnt.dgn



N

0 10 20 40
HORIZONTAL SCALE IN FEET

CALCULATED AJP
CHECKED PRS

JOINT DETAILS
STA 633+80 TO STA 639+00

MAH-80-0.97

839
1100

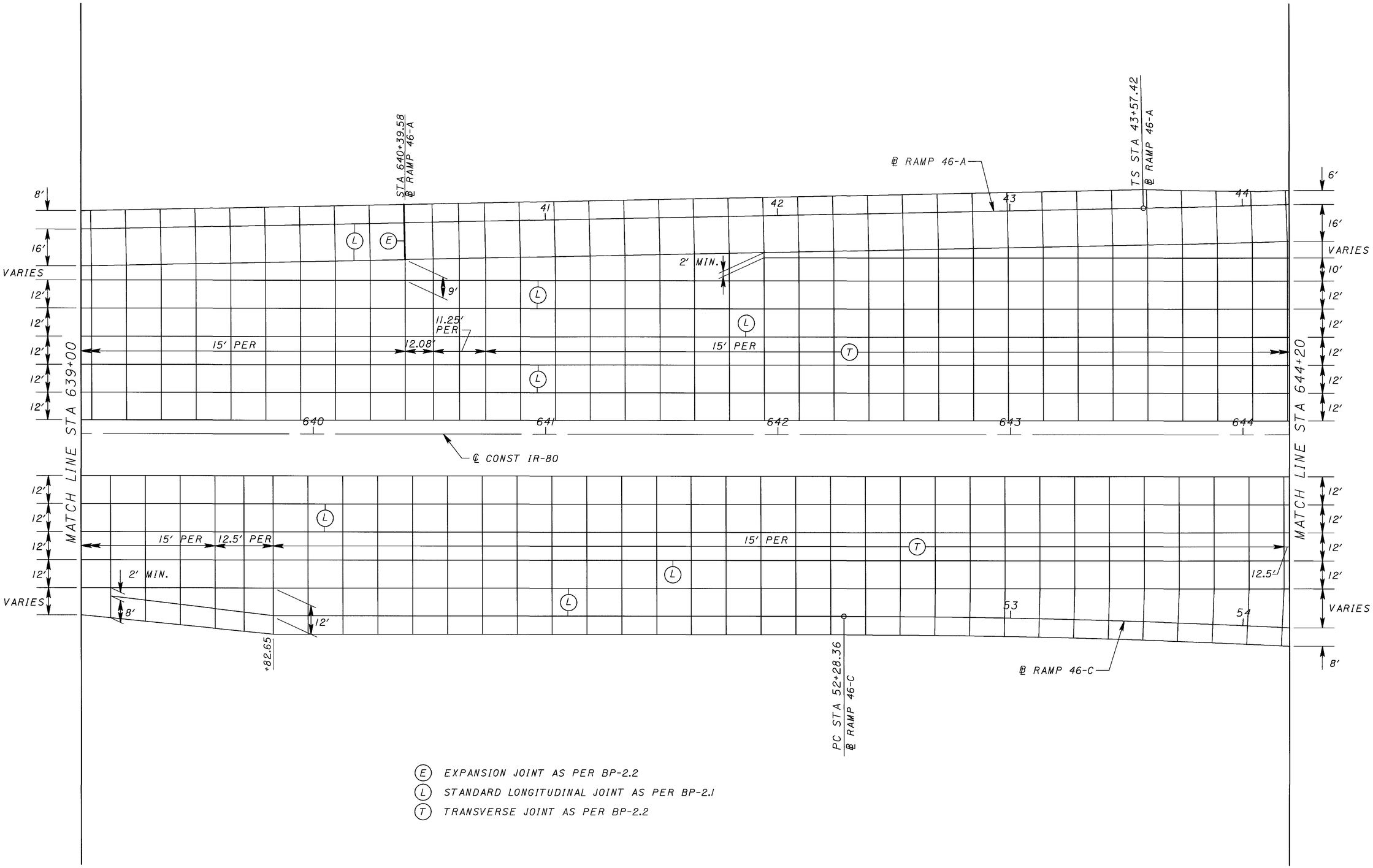
6/16/05 2:35:26 PM
s:\projects\37700\sheets\vgm30jnt.dgn

JOINT DETAILS
STA 639+00 TO STA 644+20

CALCULATED AJP
CHECKED PRS

HORIZONTAL SCALE IN FEET
0 10 20 40

N



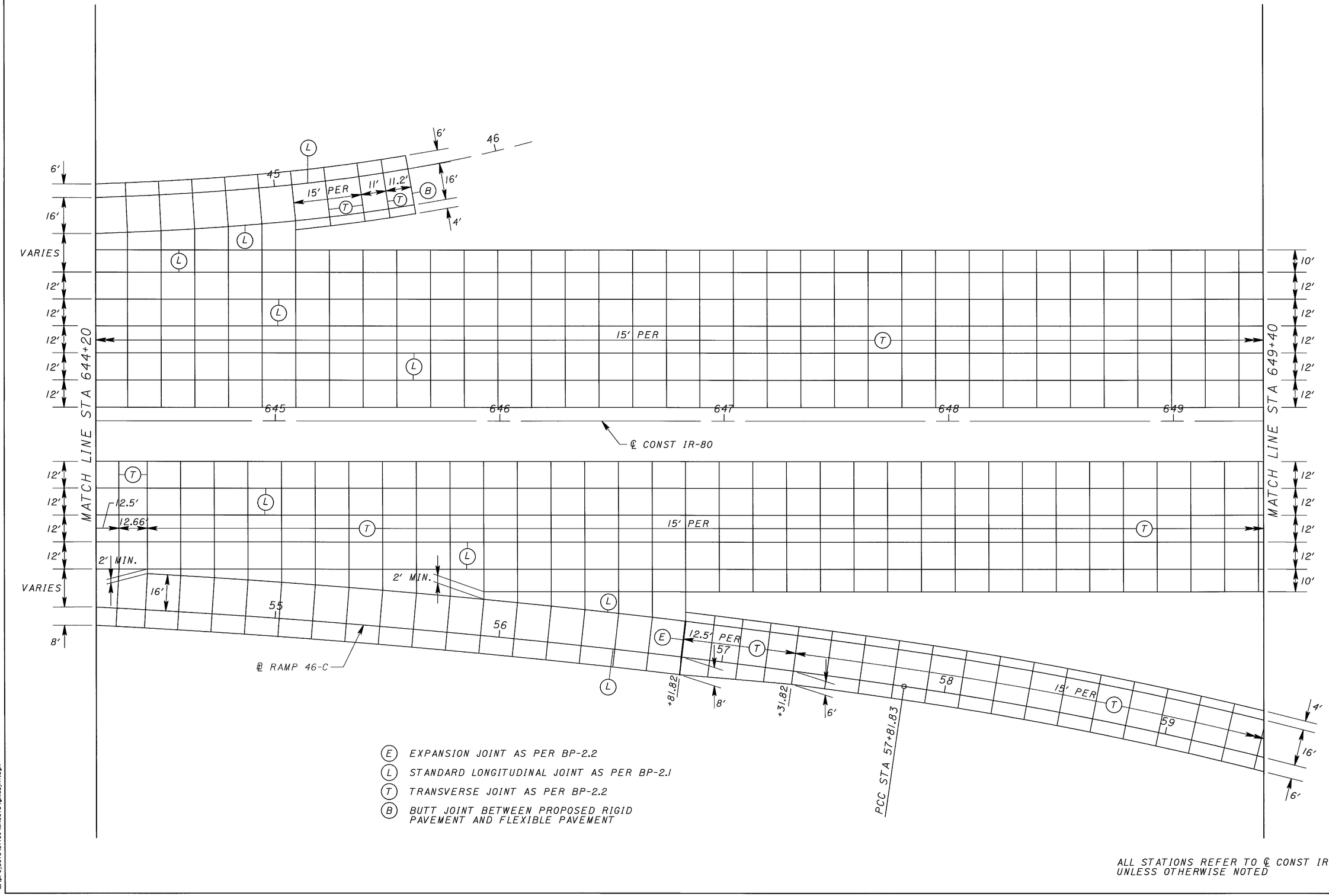
(E) EXPANSION JOINT AS PER BP-2.2
(L) STANDARD LONGITUDINAL JOINT AS PER BP-2.1
(T) TRANSVERSE JOINT AS PER BP-2.2

ALL STATIONS REFER TO ℄ CONST IR-80
UNLESS OTHERWISE NOTED

MAH-80-0.97

840
1100

5/16/05 2:35:50 PM
s:\projects\37700\sheets\vgm13jnt.dgn



(E) EXPANSION JOINT AS PER BP-2.2

(L) STANDARD LONGITUDINAL JOINT AS PER BP-2.1

(T) TRANSVERSE JOINT AS PER BP-2.2

(B) BUTT JOINT BETWEEN PROPOSED RIGID PAVEMENT AND FLEXIBLE PAVEMENT

ALL STATIONS REFER TO ℄ CONST IR-80 UNLESS OTHERWISE NOTED

N

0 10 20 40 HORIZONTAL SCALE IN FEET

CALCULATED AUP

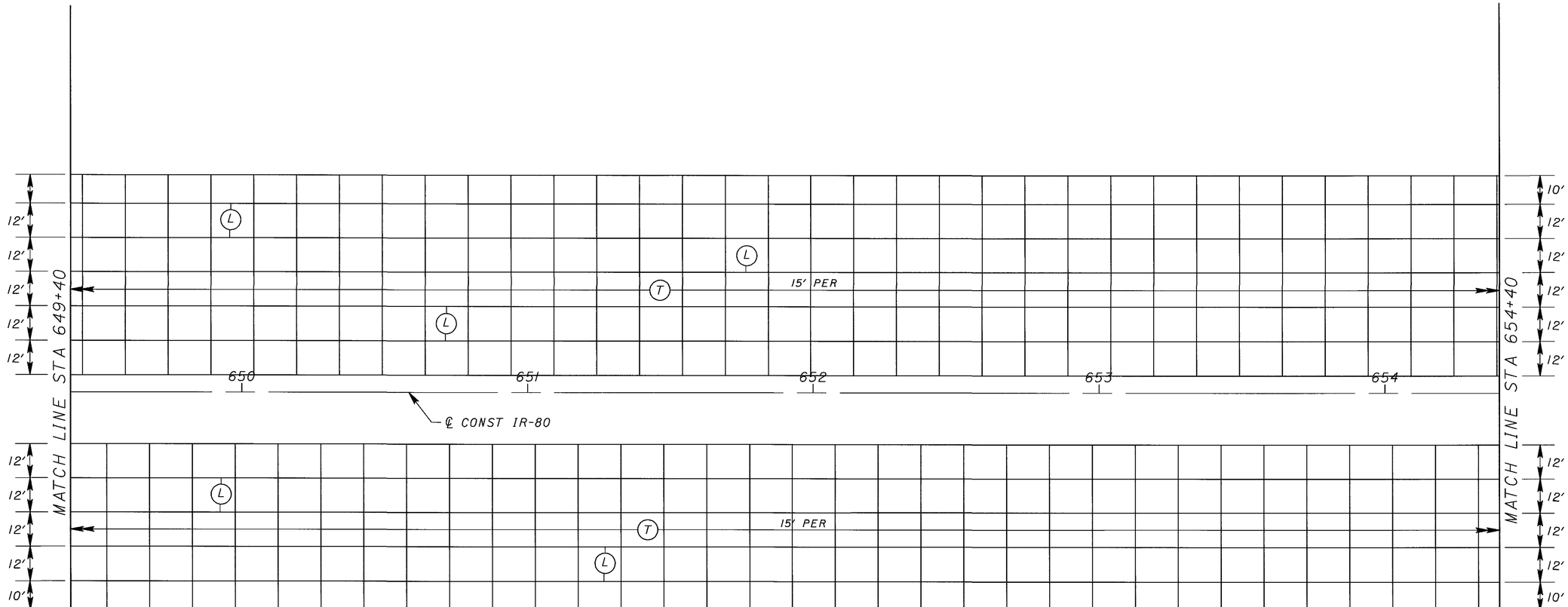
CHECKED PRS

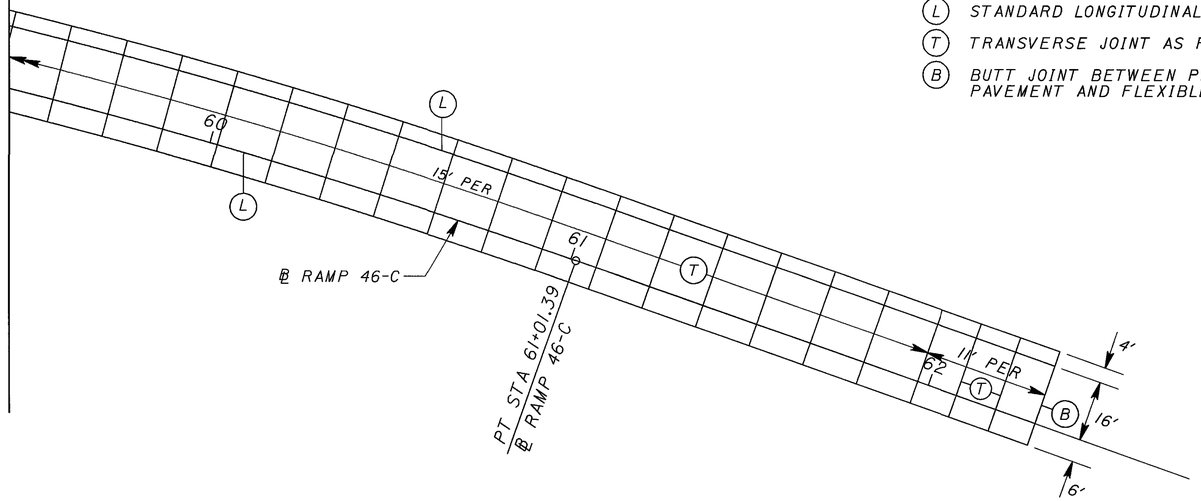
JOINT DETAILS STA 644+20 TO STA 649+40

MAH-80-0.97

841
1100

6/16/05 2:36:25 PM
s:\projects\33700\sheets\gm832int.dgn





(E) EXPANSION JOINT AS PER BP-2.2
(L) STANDARD LONGITUDINAL JOINT AS PER BP-2.1
(T) TRANSVERSE JOINT AS PER BP-2.2
(B) BUTT JOINT BETWEEN PROPOSED RIGID PAVEMENT AND FLEXIBLE PAVEMENT

ALL STATIONS REFER TO ℄ CONST IR-80 UNLESS OTHERWISE NOTED

N

0 10 20 40 HORIZONTAL SCALE IN FEET

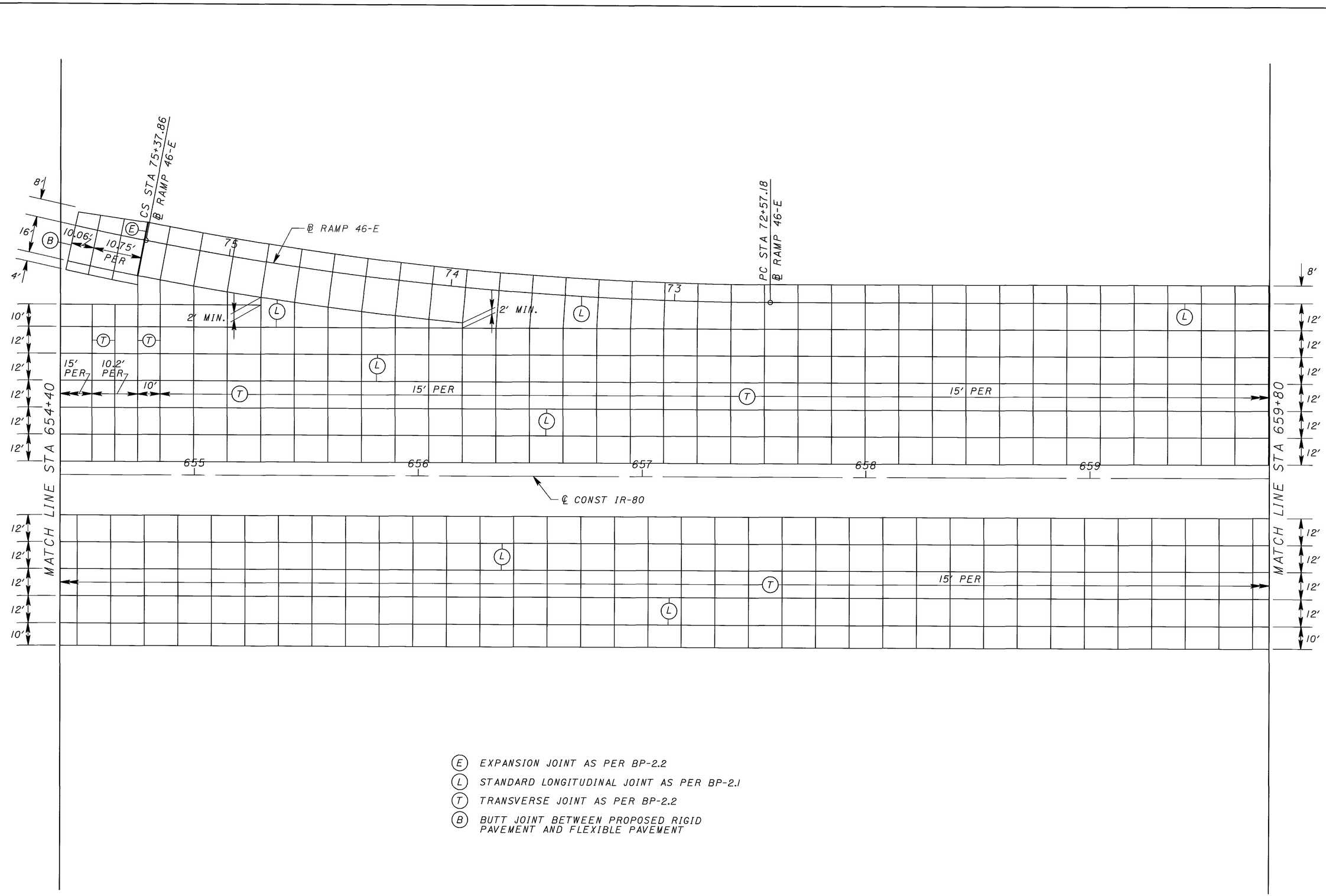
CALCULATED AJP
CHECKED PRS

JOINT DETAILS
STA 649+40 TO STA 654+40

MAH-80-0.97

842
1100

7/9/2005 11:38 AM
s:\projects\37700\sheets\pm83jnt.dgn



(E) EXPANSION JOINT AS PER BP-2.2

(L) STANDARD LONGITUDINAL JOINT AS PER BP-2.1

(T) TRANSVERSE JOINT AS PER BP-2.2

(B) BUTT JOINT BETWEEN PROPOSED RIGID PAVEMENT AND FLEXIBLE PAVEMENT

ALL STATIONS REFER TO ℄ CONST IR-80 UNLESS OTHERWISE NOTED

HORIZONTAL SCALE IN FEET
0 10 20 40

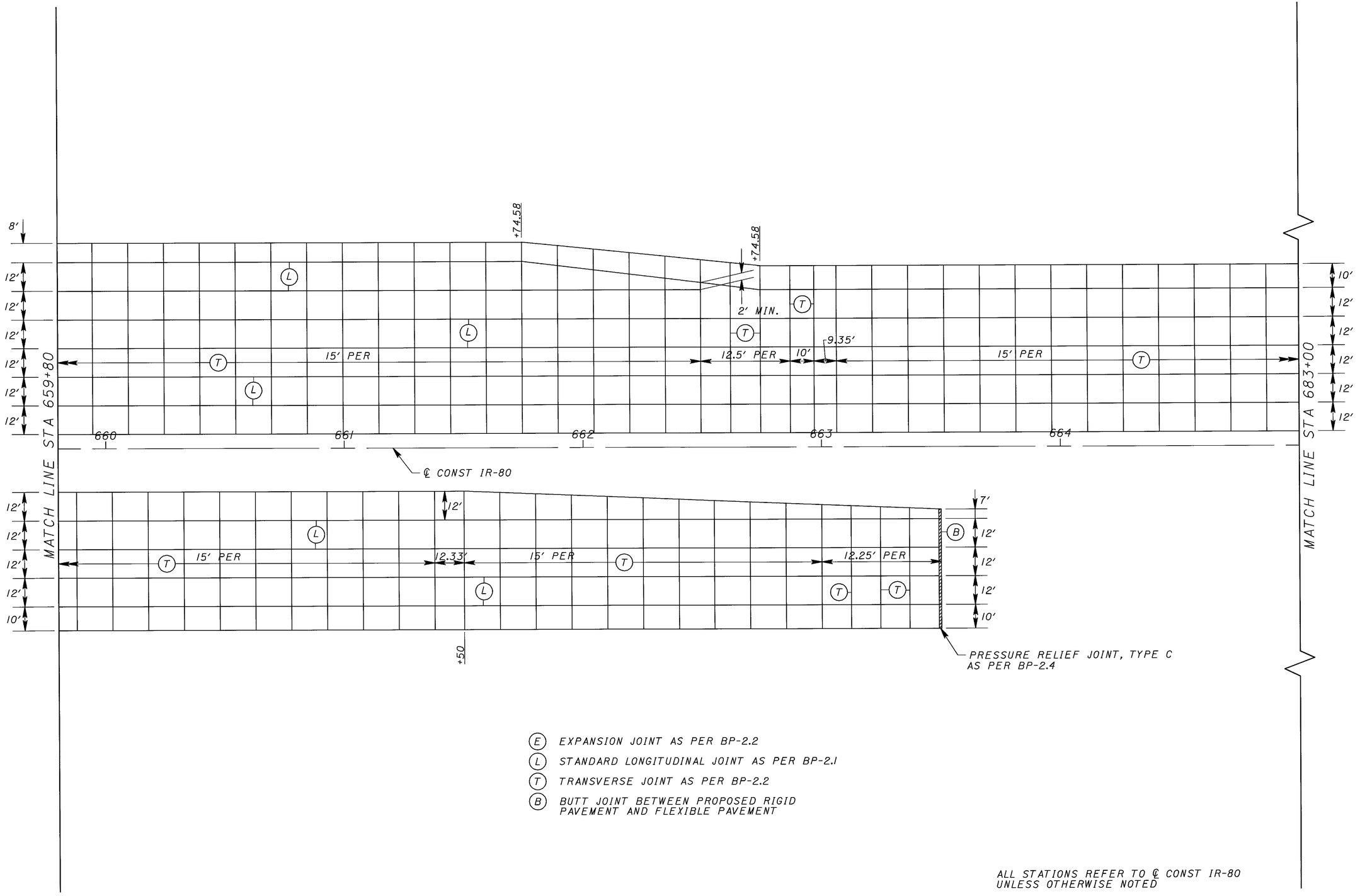
CALCULATED AJP
CHECKED PRS

JOINT DETAILS
STA 654+40 TO STA 659+80

MAH-80-0.97

843
1100

6/16/05 2:36:51 PM
a:\projects\37700\sheets\gm34jnt.dgn



(E) EXPANSION JOINT AS PER BP-2.2

(L) STANDARD LONGITUDINAL JOINT AS PER BP-2.1

(T) TRANSVERSE JOINT AS PER BP-2.2

(B) BUTT JOINT BETWEEN PROPOSED RIGID PAVEMENT AND FLEXIBLE PAVEMENT

ALL STATIONS REFER TO ℄ CONST IR-80 UNLESS OTHERWISE NOTED

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED AUP
CHECKED PRS

JOINT DETAILS
STA 659+80 TO STA 683+00

MAH-80-0.97

844
1100

6/16/05 2:37:15 PM
s:\projects\37700\sheets\pm185jnt.dgn

(E) EXPANSION JOINT AS PER BP-2.2
(L) STANDARD LONGITUDINAL JOINT AS PER BP-2.1
(T) TRANSVERSE JOINT AS PER BP-2.2

ALL STATIONS REFER TO ℄ CONST IR-80 UNLESS OTHERWISE NOTED

6/16/05 2:39:01 PM
s:\projects\37700\sheets\qm859jnt.dgn

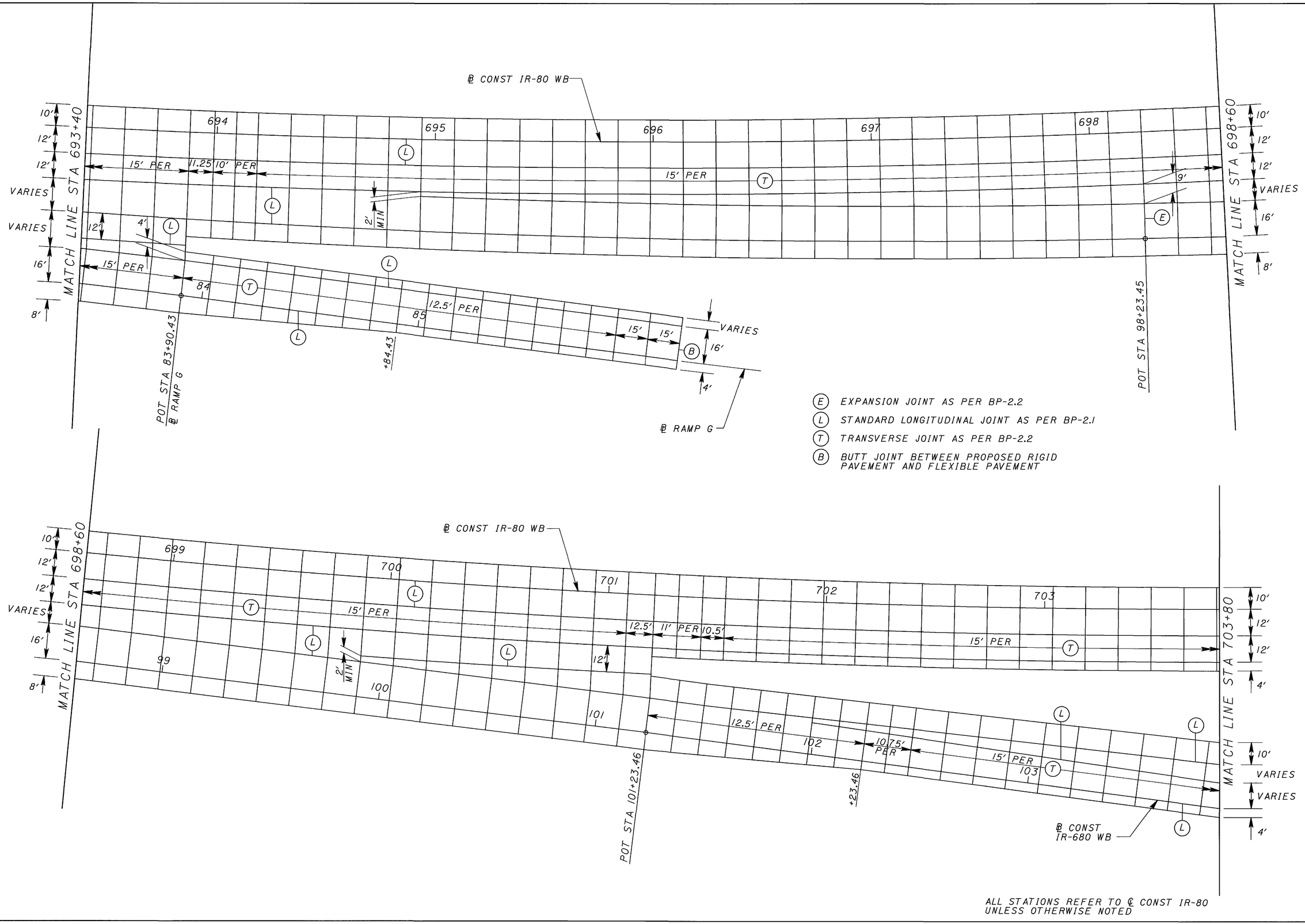
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED AJP
CHECKED PRS

JOINT DETAILS
STA 683+00 TO STA 693+40

MAH-80-0.97

845
1100



6/16/05 2:38:29 PM
s:\projects\37701\sheets\gm4jnt.dgn

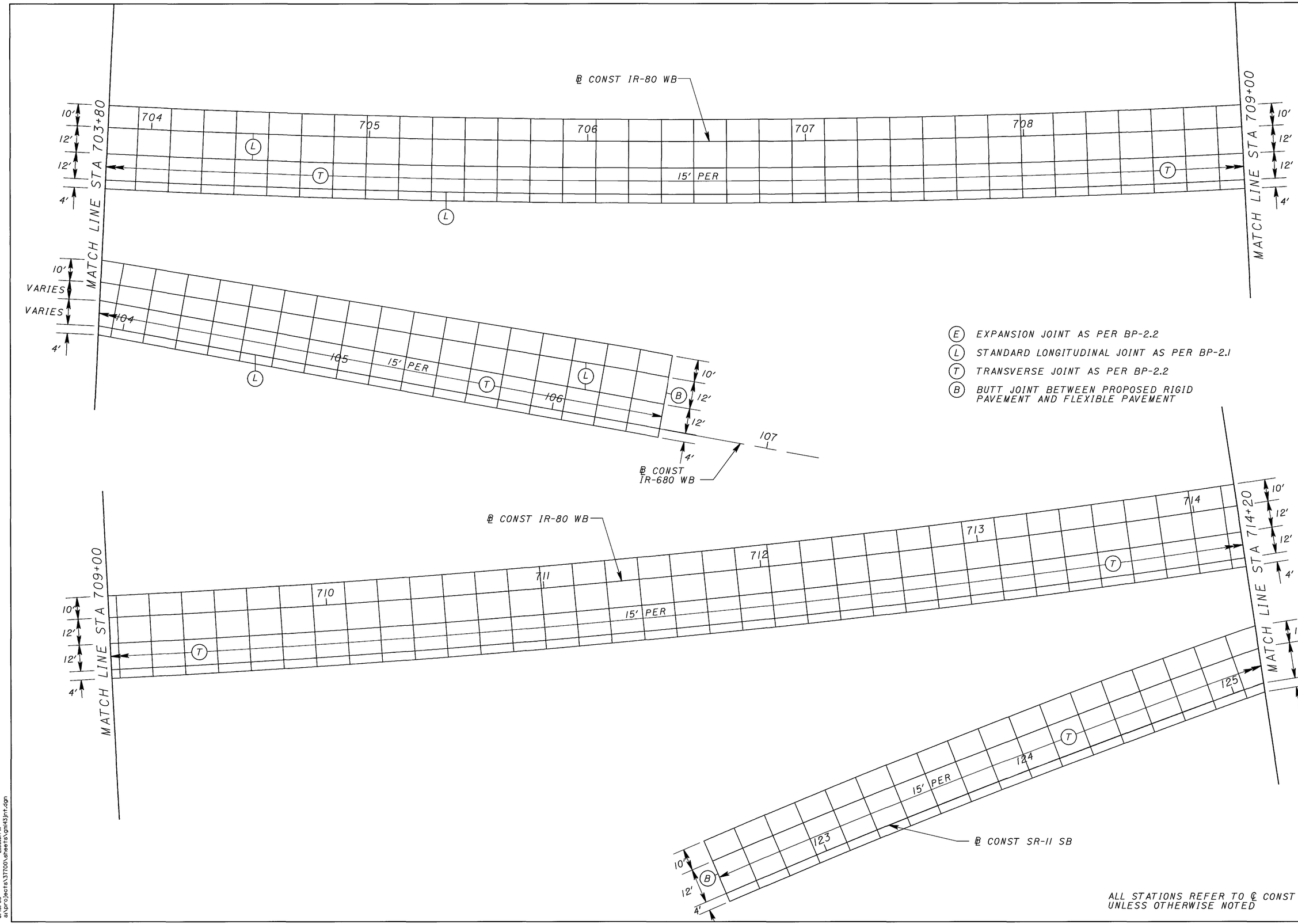
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED AJP
CHECKED PRS

JOINT DETAILS
STA 693+40 TO STA 703+80

MAH-80-0.97

846
1100



HORIZONTAL SCALE IN FEET
0 10 20 40

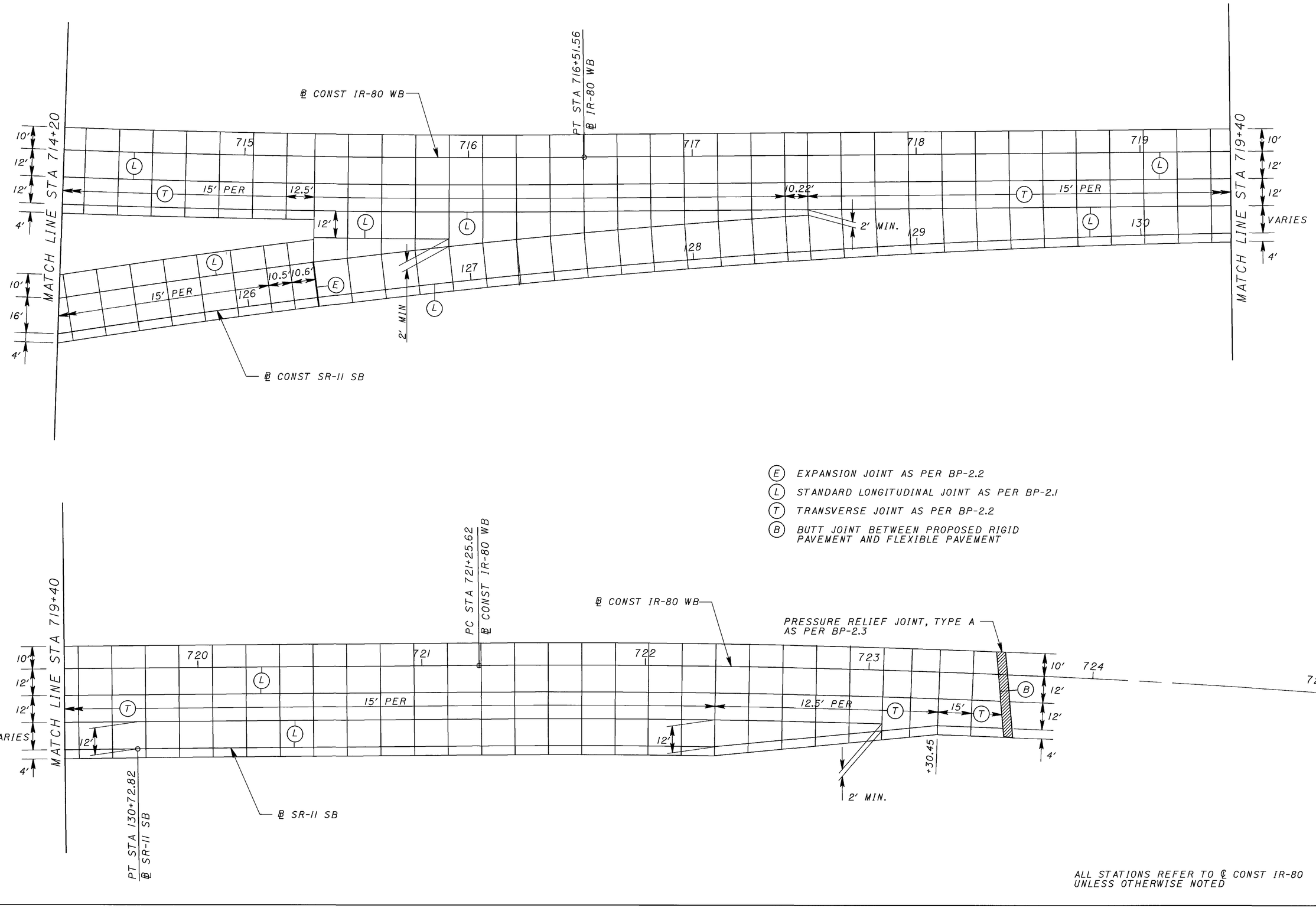
CALCULATED AJP
CHECKED PRS

JOINT DETAILS
STA 703+80 TO STA 714+20

MAH-80-0.97

847
1100

6/16/05
2:38:51 PM
s:\projects\37700\sheets\gm143jnt.dgn



HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED AJP
CHECKED PRS

JOINT DETAILS
STA 714+20 TO STA 724+00

MAH-80-0.97

848
1100

6/16/05 2:39:09 PM
s:\projects\37700\structs\gm45jnt.dgn

QUANTITIES FOR WEST BASIN DETAIL SHEET

203	EXCAVATION (1)	55338 CY
203	EMBANKMENT (2)	89 CY
304	AGGREGATE BASE	11 CY
601	ROCK CHANNEL PROTECTION, TYPE A WITH FILTER	100 CY
601	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	2 CY
602	CONCRETE MASONRY	1 CY
602	CONCRETE MASONRY, AS PER PLAN "A" *	153 CY
638	SPECIAL - 24" DUCTILE IRON PIPE AND FITTINGS (DAYTON 901)	140 LF
659	SEEDING AND MULCHING	13112 SY
659	SEEDING AND MULCHING, AS PER PLAN	8215 SY
670	DITCH EROSION PROTECTION	2432 SY
836	SEEDING AND EROSION CONTROL WITH TURF REINFORCEMENT MAT, TYPE 2	113 SY
TOTALS CARRIED TO GENERAL SUMMARY		

(1) INCLUDES EXCAVATION FOR IMPERVIOUS LINER.
(2) EMBANKMENT FOR "SWITCHBACK" DITCH BERMS NOT INCLUDED. SEE IMPERVIOUS LINER QUANTITIES.

QUANTITIES FOR EAST BASIN DETAIL SHEET

203	EXCAVATION (1)	15542 CY
203	EMBANKMENT (2)	5298 CY
304	AGGREGATE BASE	61 CY
601	ROCK CHANNEL PROTECTION, TYPE A WITH FILTER	283 CY
601	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	12 CY
602	CONCRETE MASONRY	1 CY
602	CONCRETE MASONRY, AS PER PLAN "A" *	111 CY
638	SPECIAL - 24" DUCTILE IRON PIPE AND FITTINGS (DAYTON 901)	160 LF
659	SEEDING AND MULCHING	6184 SY
659	SEEDING AND MULCHING, AS PER PLAN	8455 SY
670	DITCH EROSION PROTECTION	1807 SY
836	SEEDING AND EROSION CONTROL WITH TURF REINFORCEMENT MAT, TYPE 2	175 SY
TOTALS CARRIED TO GENERAL SUMMARY		

(1) INCLUDES EXCAVATION FOR IMPERVIOUS LINER.
(2) EMBANKMENT FOR "SWITCHBACK" DITCH BERMS NOT INCLUDED. SEE IMPERVIOUS LINER QUANTITIES.

* GENERAL NOTES FOR SPILL CONTAINMENT BASIN DETAIL SHEETS

THE BASIN DETAILS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ODOT STANDARD SPECIFICATIONS FOR CONCRETE MASONRY AND CONCRETE MASONRY, AS PER PLAN. INCLUDED IN THE "AS PER PLAN "A" " QUANTITIES PER CUBIC YARD ARE CONCRETE AND OTHER INCIDENTAL CONSTRUCTION AS FOLLOWS: DOWEL BARS, BENT DOWEL BARS, BOND BREAKER, CONSTRUCTION JOINTS, JOINT SEALANT, RIBBED WATERSTOP, WELDED WIRE FABRIC, GEOTEXTILE, WEEP HOLES, AND STAINLESS STEEL WIRE MESH, AS WELL AS OTHER ITEMS AS REQUIRED TO COMPLETE THE CONCRETE SPILLWAYS.

QUANTITIES FOR IMPERVIOUS LINER DETAIL SHEET

203 EMBANKMENT
203 98000 ROADWAY, MISC.: ENGINEERED SOIL IMPERVIOUS LINER
203 02000 SPECIAL ENGINEERED FILL

LOCATION		TYPE	203 EMBANKMENT	203 ROADWAY, MISC.: ENGINEERED SOIL IMPERVIOUS LINER	SPECIAL ENGINEERED FILL
STA. 496+77 TO STA. 520+15	WB	MEDIAN SWALE	---	1684 CY	1684 CY
STA. 496+71 TO STA. 520+52	EB	SIDE DITCH RT	---	1861 CY	1861 CY
STA. 496+91 TO STA. 519+70	WB	SIDE DITCH LT	---	1723 CY	1723 CY
STA. 510+00 TO STA. 516+40	WB	WEST BASIN	2670 CY	2217 CY	2217 CY
BRIDGE					
STA. 545+61 TO STA. 584+80	WB	SIDE DITCH LT	---	2968 CY	2968 CY
STA. 545+71 TO STA. 584+63	WB	MEDIAN SWALE	---	2856 CY	2856 CY
STA. 546+06 TO STA. 584+31	EB	SIDE DITCH RT	---	2897 CY	2897 CY
STA. 557+10 TO STA. 560+20	EB	EAST BASIN	2720 CY	2050 CY	2050 CY
TOTALS CARRIED TO GENERAL SUMMARY			5390 CY	18256 CY	18256 CY

QUANTITIES FOR EARTH DIKE DETAIL SHEET

203	EMBANKMENT	30 CY
601	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	27 CY
660	SODDING REINFORCED	162 SY
TOTALS CARRIED TO GENERAL SUMMARY		

QUANTITIES FOR EARTH MOUND DETAIL SHEET

203	EMBANKMENT	340 CY
660	SODDING REINFORCED	407 SY
TOTALS CARRIED TO GENERAL SUMMARY		

QUANTITIES FOR CONTROL CHAMBER DETAIL SHEET

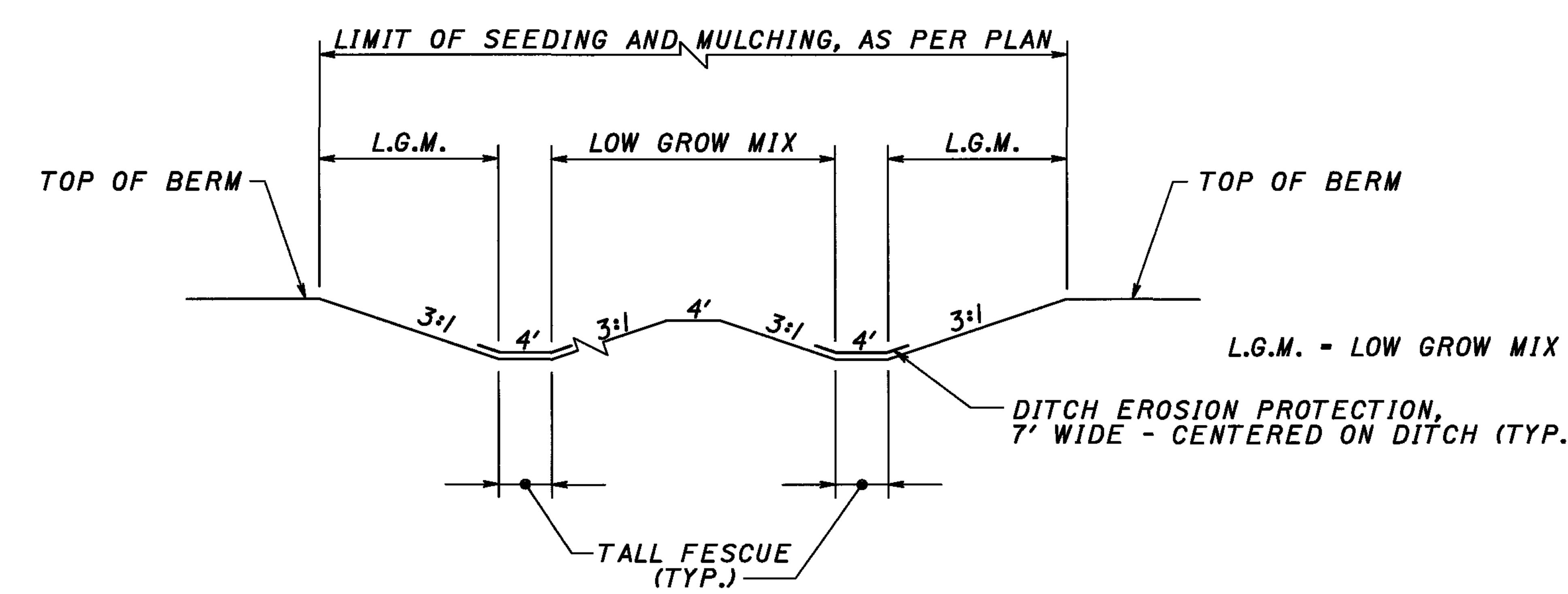
604 98200	DRAINAGE STRUCTURE, MISC.: SHUT-OFF VALVE CONTROL CHAMBER	
	WEST BASIN	LUMP SUM
	EAST BASIN	LUMP SUM
TOTALS CARRIED TO GENERAL SUMMARY		

ITEM 659 - SEEDING AND MULCHING, AS PER PLAN - FOR USE IN SWITCHBACK DITCHES IN SPILL CONTAINMENT BASINS

PLANT THE BOTTOM OF THE DITCHES WITH TALL FESCUE (FESTUCA ARUNDINACEA VAR. KY 31) AT A RATE OF 2 TO 5 LB/1000 SQ FT. PLANT THE SIDES OF THE SLOPES AND TOPS OF THE DITCH BERMS WITHIN THE BASINS WITH A LOW GROWING SLOPE MIXTURE CONSISTING OF HARD FESCUE (FESTUCA LONGIFOLIA) AT A RATE OF 1.3 LB/1000 SQ FT AND CREEPING RED FESCUE (FESTUCARUBRA) AT A RATE OF 0.8 LB/1000 SQ FT. EACH OF THE MIXTURES MUST HAVE A NURSE CROP OF ANNUAL RYEGRASS (LOLIUM MULTIFLORUM) SOWED AT A RATE OF 0.23 LB/1000 SQ FT.

PROVIDE A 7-FT WIDE STRIP OF ITEM 670-DITCH EROSION PROTECTION CENTERED ON THE DITCH BOTTOM TO PROMOTE VEGETATION. THE LINING WILL BE PAID SEPARATELY UNDER ITEM 670-DITCH EROSION PROTECTION.

REFER TO THE CMS 2005 EDITION FOR FERTILIZING AND MULCHING REQUIREMENTS AND TABLE 659.09-1 FOR ADDITIONAL INFORMATION ON SEEDING.



PARTIAL TYPICAL SECTION THROUGH BASIN - SEEDING AND MULCHING, AS PER PLAN

CALCULATED PPS
CHECKED JDC

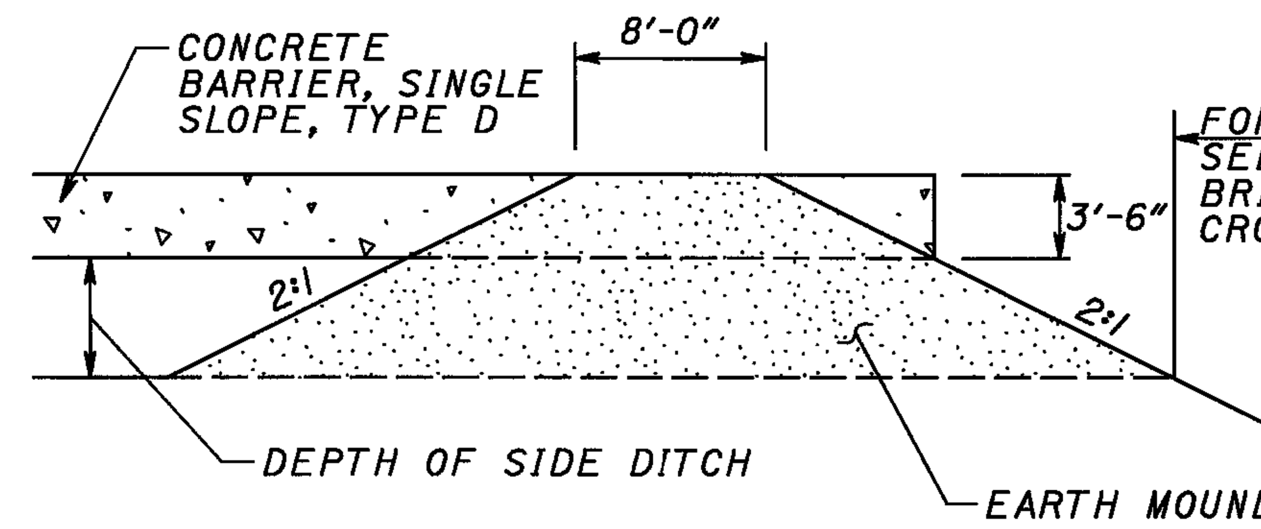
SPILL CONTAINMENT - GENERAL NOTES AND QUANTITIES

MAH-80-0.97

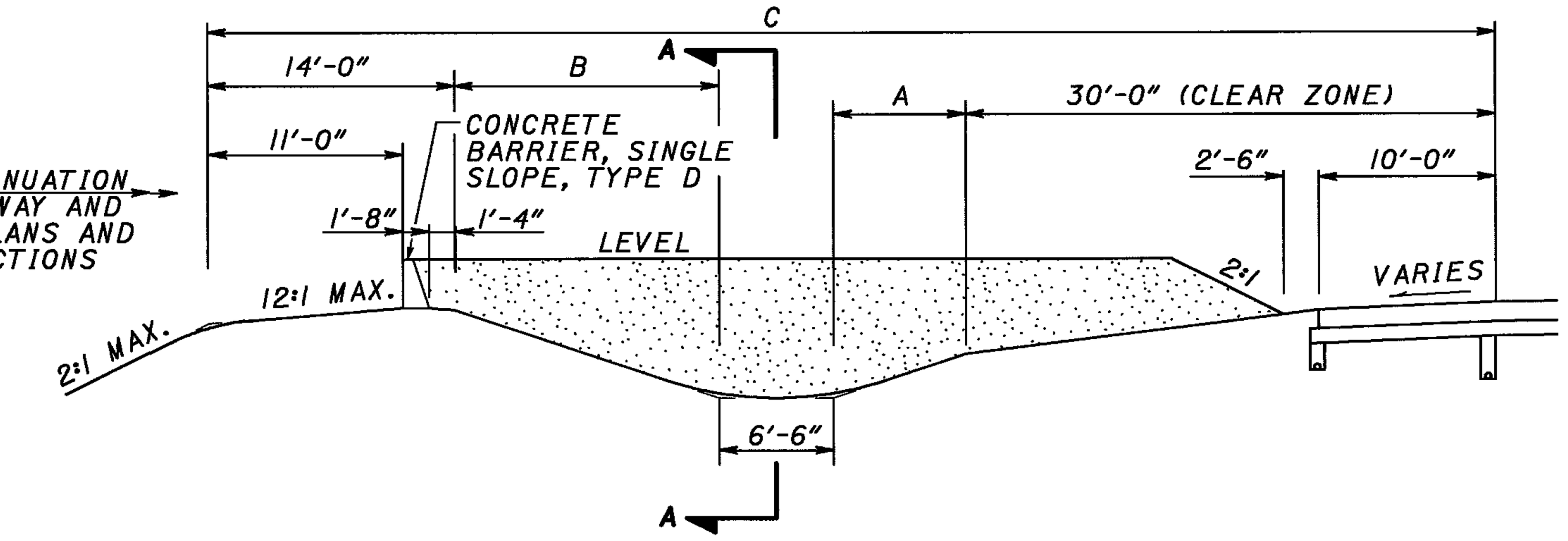
7/23/2005 s:\projects\37700\spill\mahde108.dgn

SIDE DITCH TABLE				
DEPTH (1)	LOCATION	A	B	C
5'	STA. 496+71 TO STA. 513+50 EB (RIGHT SIDE)	7.5	15	73
VARIES 5' TO 6'	STA. 513+50 TO STA. 520+52 EB (RIGHT SIDE)	-	-	-
6'	STA. 496+91 TO STA. 517+00 WB (LEFT SIDE)	10.5	18	79
VARIES 5' TO 6'	STA. 517+00 TO STA. 519+70 WB (LEFT SIDE)	-	-	-
	BRIDGE			
5'	STA. 545+61 TO STA. 553+00 WB (LEFT SIDE)	7.5	15	73
VARIES 5' TO 6'	STA. 553+00 TO STA. 560+00 WB (LEFT SIDE)	-	-	-
5'	STA. 560+00 TO STA. 584+80 WB (LEFT SIDE)	7.5	15	73
6.5'	STA. 546+06 TO STA. 558+00 EB (RIGHT SIDE)	12	19.5	82
VARIES 7' TO 6.25'	STA. 558+00 TO STA. 567+00 EB (RIGHT SIDE)	-	-	-
6.25'	STA. 567+00 TO STA. 577+00 EB (RIGHT SIDE)	11.25	18.75	80.5
VARIES 6.25' TO 5'	STA. 577+00 TO STA. 578+00 EB (RIGHT SIDE)	-	-	-
5'	STA. 578+00 TO STA. 584+31 EB (RIGHT SIDE)	7.5	15	73

NOTE: (1) VARIABLE DEPTH CONTROLLED BY DITCH PROFILES. REFER TO CROSS SECTIONS.



SECTION A-A



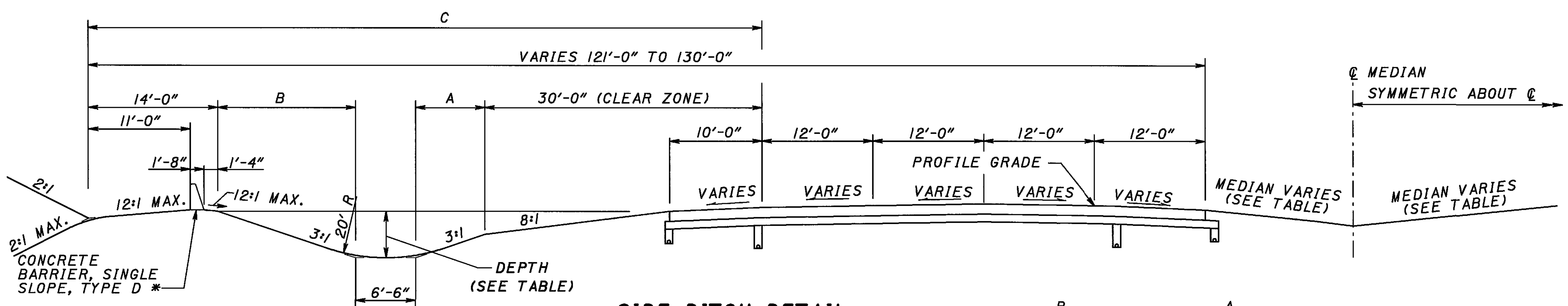
TYPICAL SECTION

SIDE DITCH EARTH MOUND DETAILS

NOT TO SCALE

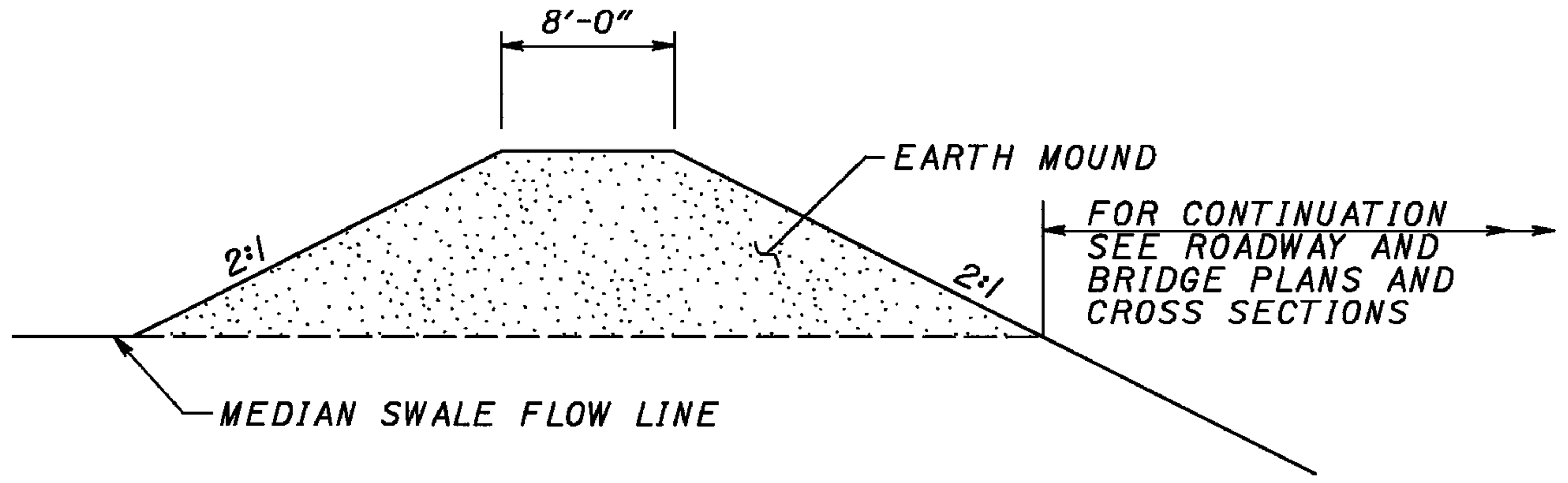
MEDIAN SWALE TABLE	
LOCATION (1)	SLOPE (2)
STA. 496+77 TO STA. 501+00	10:1
STA. 501+00 TO STA. 508+00 (3)	15:1
STA. 508+00 TO STA. 509+00	VARIES
STA. 509+00 TO STA. 513+00	10:1
STA. 513+00 TO STA. 520+15	VARIES
BRIDGE	
STA. 545+71 TO STA. 562+00	VARIES
STA. 562+00 TO STA. 577+00	8:1
STA. 577+00 TO STA. 580+00 (3)	VARIES
STA. 580+00 TO STA. 584+63	8:1

NOTES: (1) ALL STATIONING IS LOCATED ALONG THE ℄ OF IR-80
(2) MEDIAN SLOPES CONTROLLED BY SWALE PROFILE. REFER TO CROSS SECTIONS.
(3) PART OF THIS AREA IS A PAVED MEDIAN CROSS OVER, SLOPES DO NOT APPLY

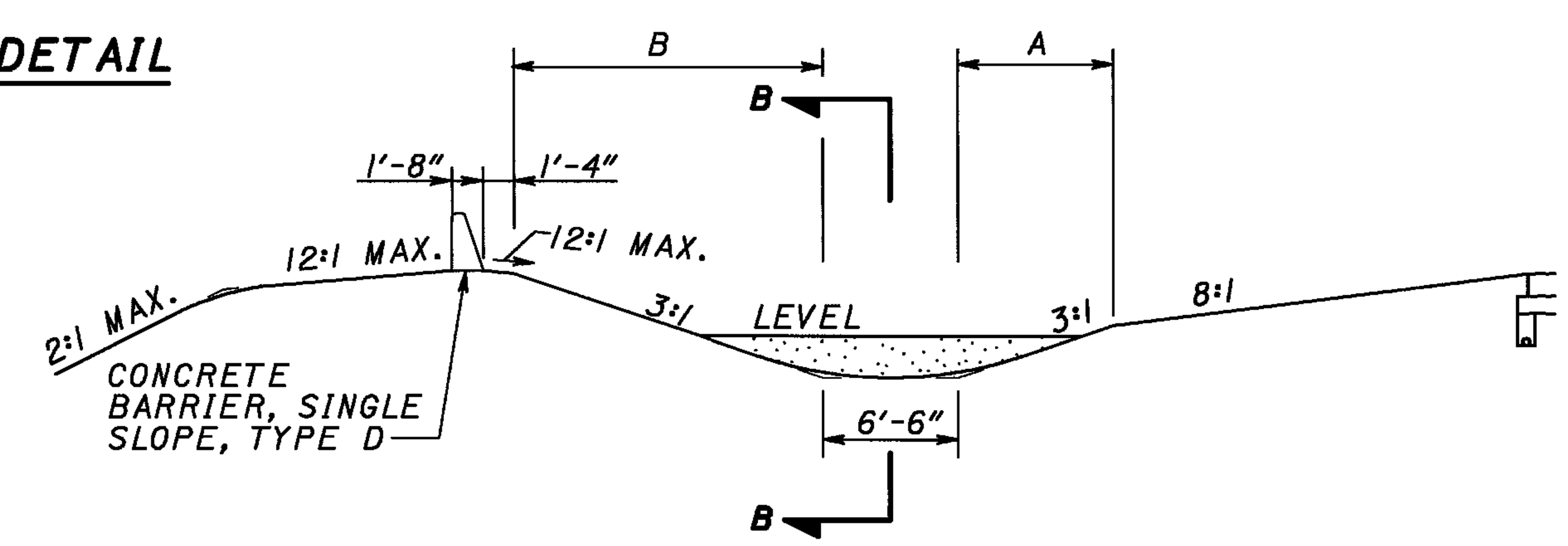


SIDE DITCH DETAIL

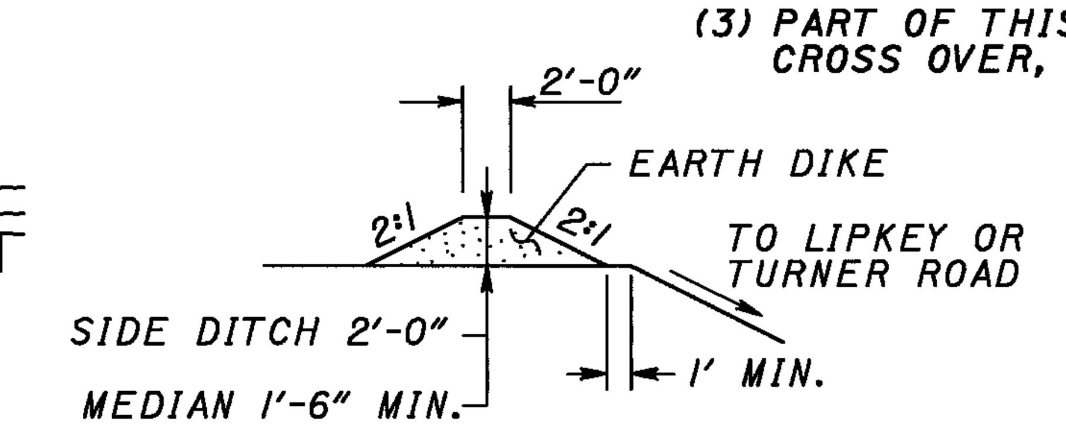
* FOR LIMITS OF CONCRETE BARRIER, SINGLE SLOPE, TYPE D SEE SHEET 22



SECTION C-C



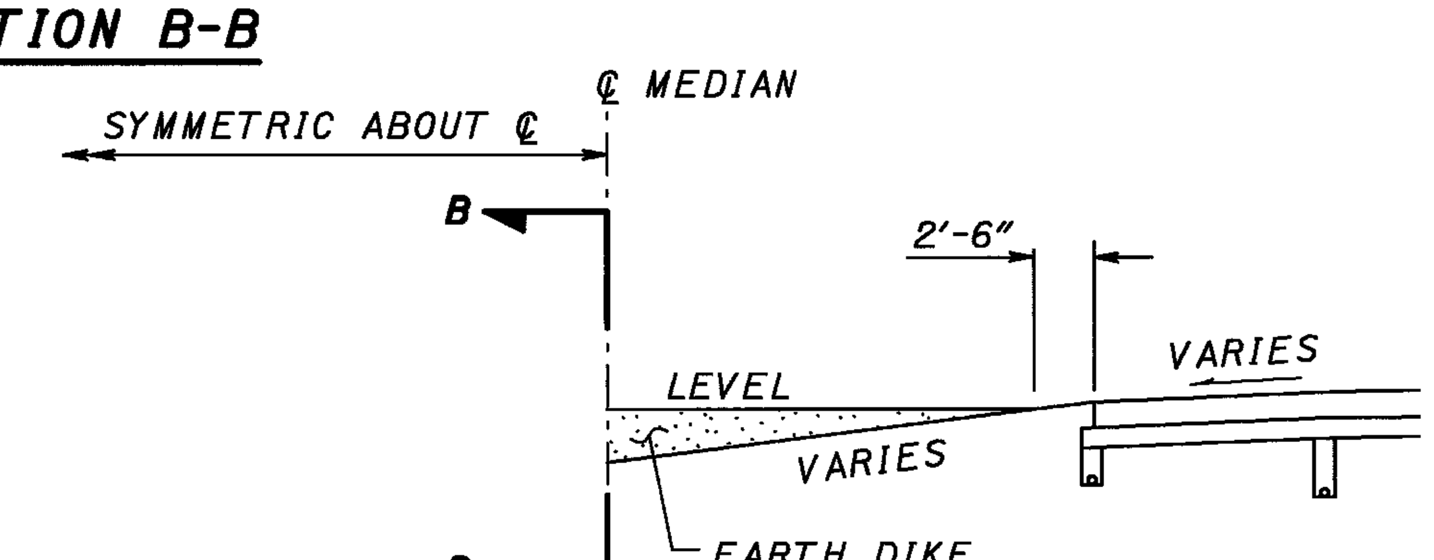
SIDE DITCH TYPICAL SECTION



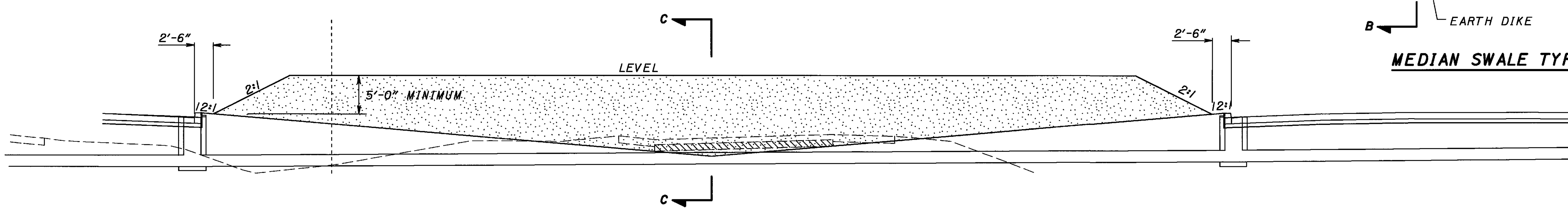
SECTION B-B

EARTH DIKE DETAILS

NOT TO SCALE



MEDIAN SWALE TYPICAL SECTION



TYPICAL SECTION

MEDIAN SWALE EARTH MOUND DETAILS

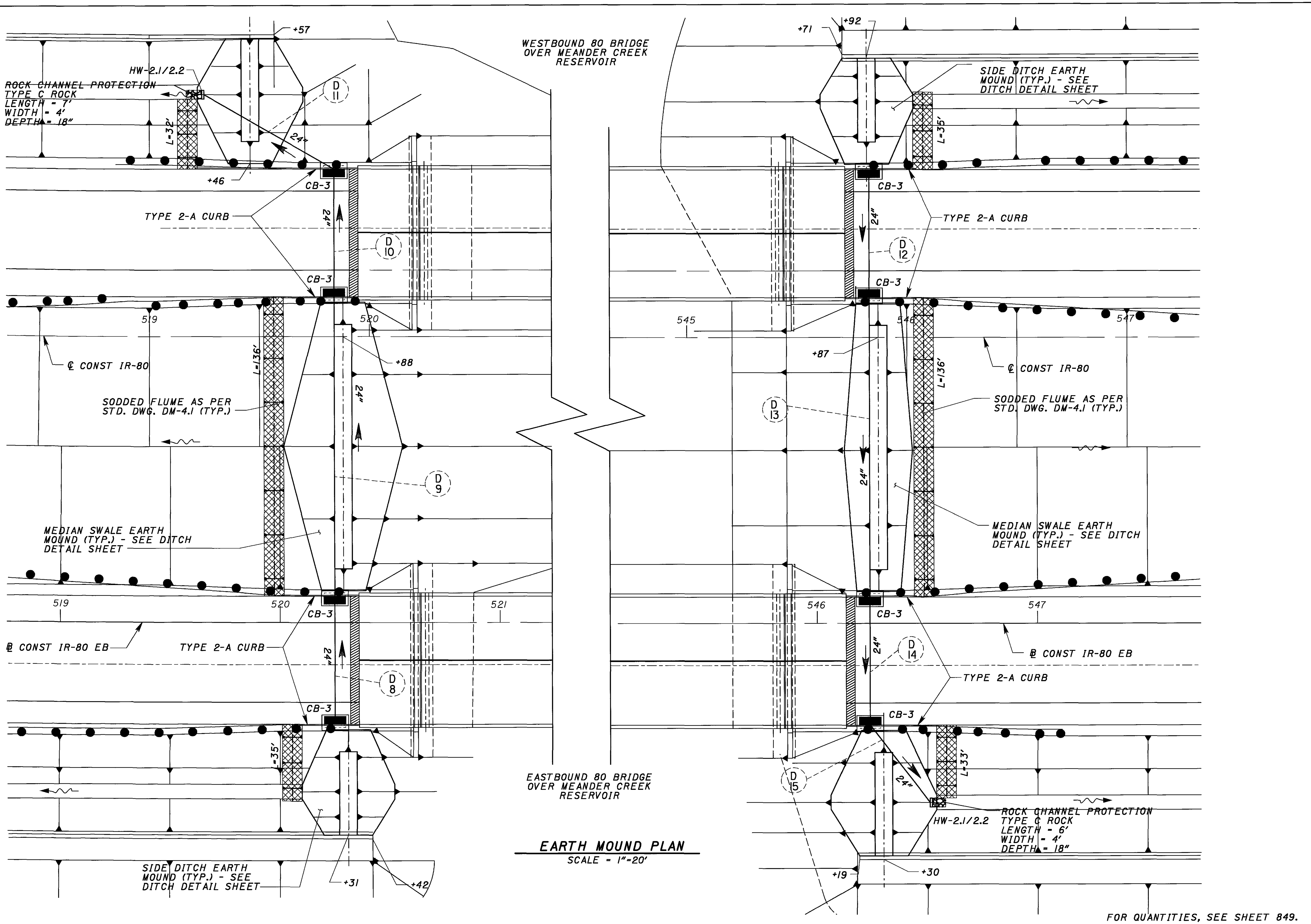
NOT TO SCALE

FOR QUANTITIES, SEE SHEET 849.
FOR EARTH MOUND PLAN, SEE SHEET 851.
FOR EARTH DIKE PLAN, SEE SHEET 852.

CALCULATED WTG
CHECKED JDC

SPILL CONTAINMENT DITCH DETAILS

MAH-80-0.97



WESTBOUND 80 BRIDGE OVER MEANDER CREEK RESERVOIR
EASTBOUND 80 BRIDGE OVER MEANDER CREEK RESERVOIR
ROCK CHANNEL PROTECTION TYPE C ROCK LENGTH - 7' WIDTH - 4' DEPTH - 18"
ROCK CHANNEL PROTECTION TYPE C ROCK LENGTH - 6' WIDTH - 4' DEPTH - 18"
HW-2.1/2.2
SIDE DITCH EARTH MOUND (TYP.) - SEE DITCH DETAIL SHEET
MEDIAN SWALE EARTH MOUND (TYP.) - SEE DITCH DETAIL SHEET
SODDED FLUME AS PER STD. DWG. DM-4.1 (TYP.)
TYPE 2-A CURB
CB-3
℄ CONST IR-80
℄ CONST IR-80 EB
L-32'
L-136'
L-35'
L-33'
24"
+57
+46
+88
+31
+42
+71
+92
+87
+19
+30
519
520
521
545
546
547
D 8
D 9
D 10
D 11
D 12
D 13
D 14
D 15

EARTH MOUND PLAN

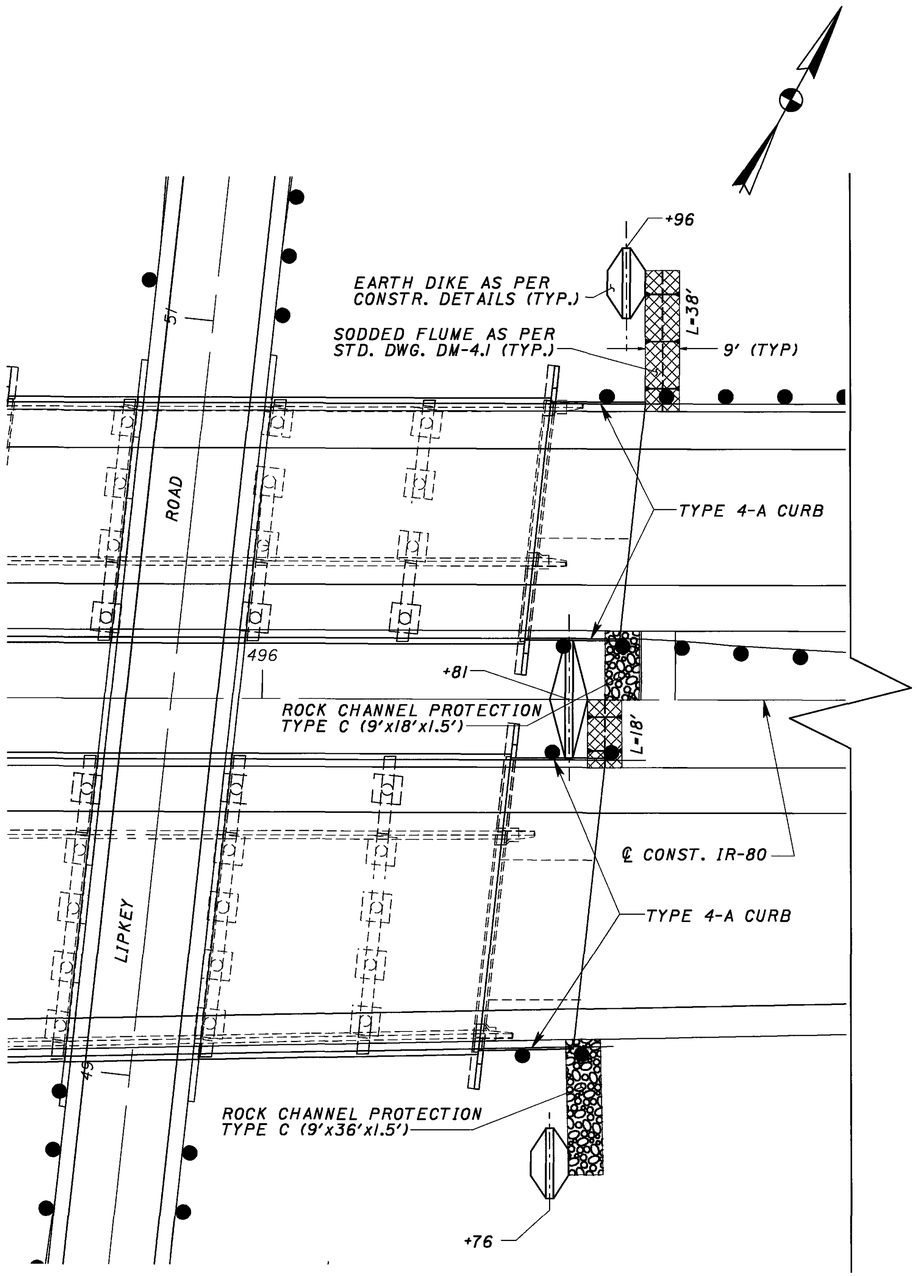
SCALE - 1"=20'

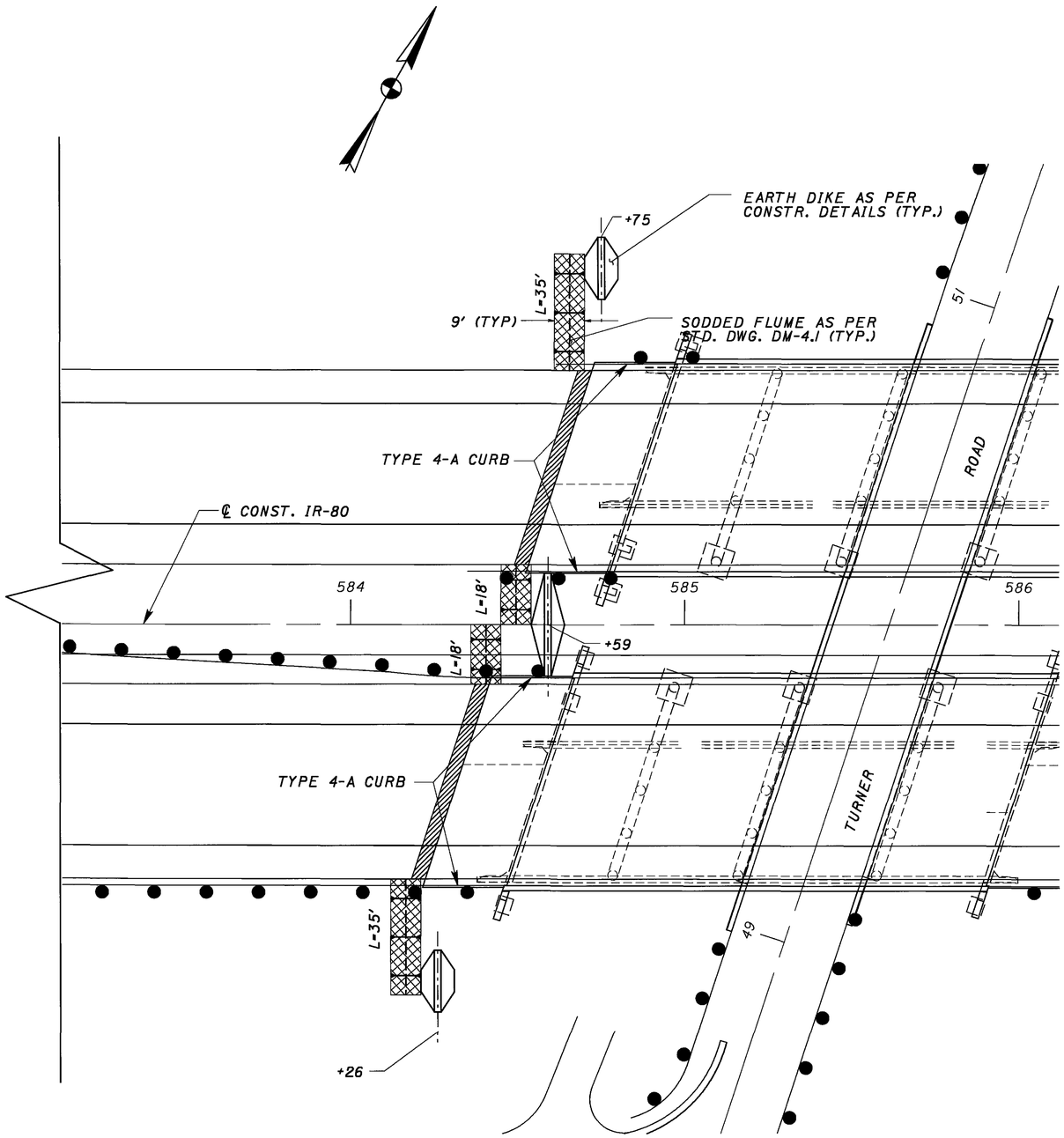
FOR QUANTITIES, SEE SHEET 849.

CALCULATED WTG
CHECKED JDC

SPILL CONTAINMENT - EARTH MOUND PLAN

MAH-80-0.97





EARTH DIKE PLAN

SCALE = 1"=20'

FOR QUANTITIES, SEE SHEET 849.

CALCULATED WTG
CHECKED JDC

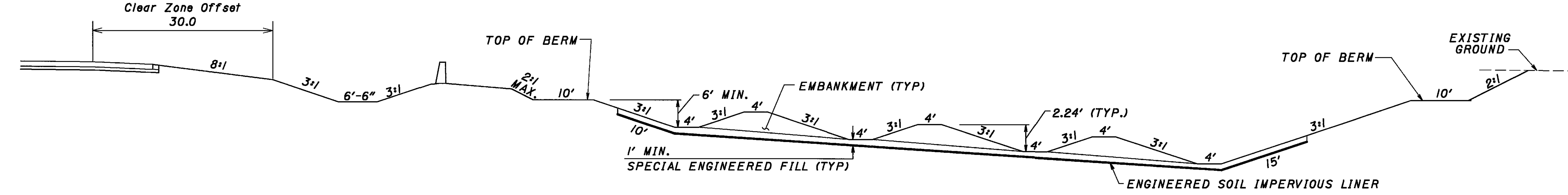
CONTAINMENT - EARTH DIKE PLAN

SPILL CONTROL

MAH-80-0.97

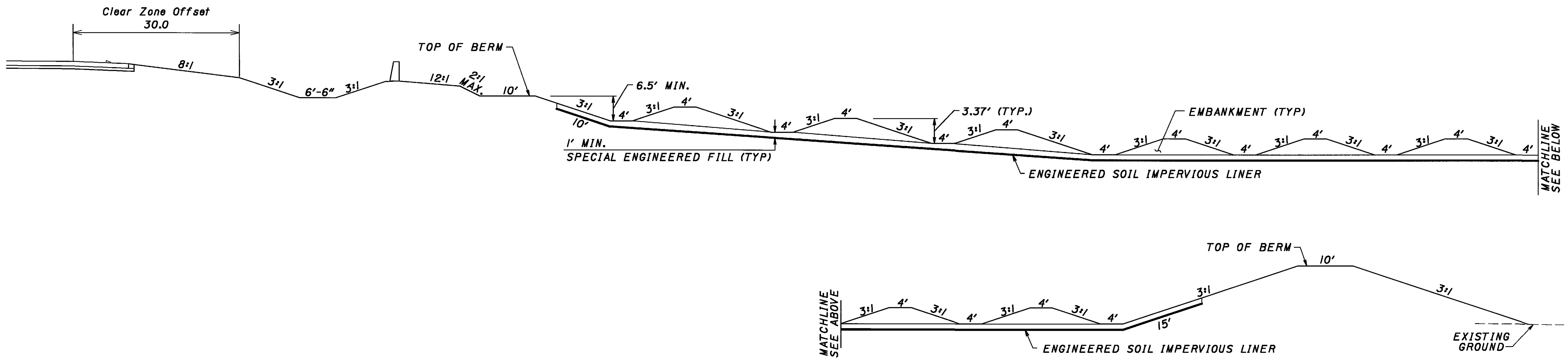
6/20/05 8:55:55 AM
s:\projects\37700\spill\mishdr107.dgn

SHEET 2



TYPICAL SECTION THROUGH WEST BASIN

(LOOKING STATIONS BACK)

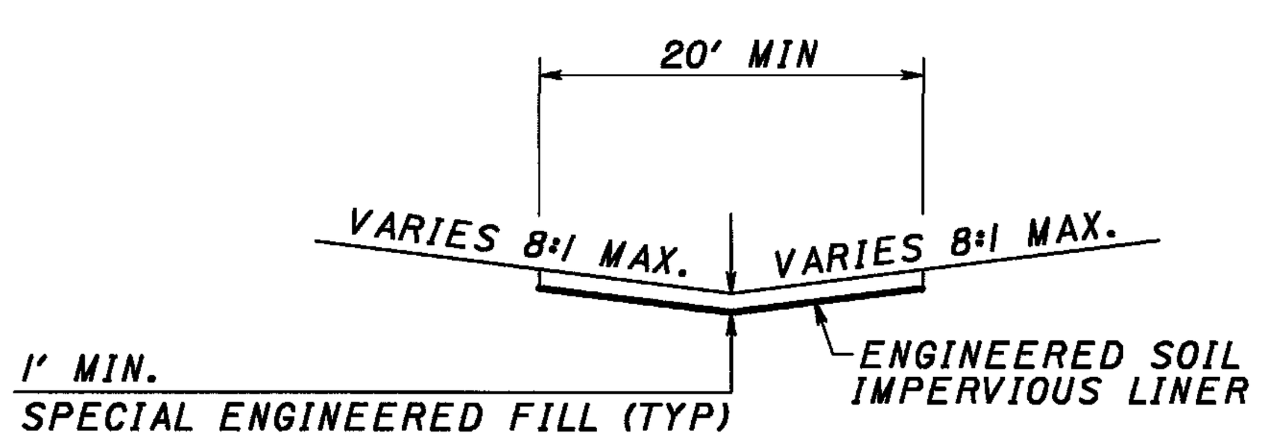


TYPICAL SECTION THROUGH EAST BASIN

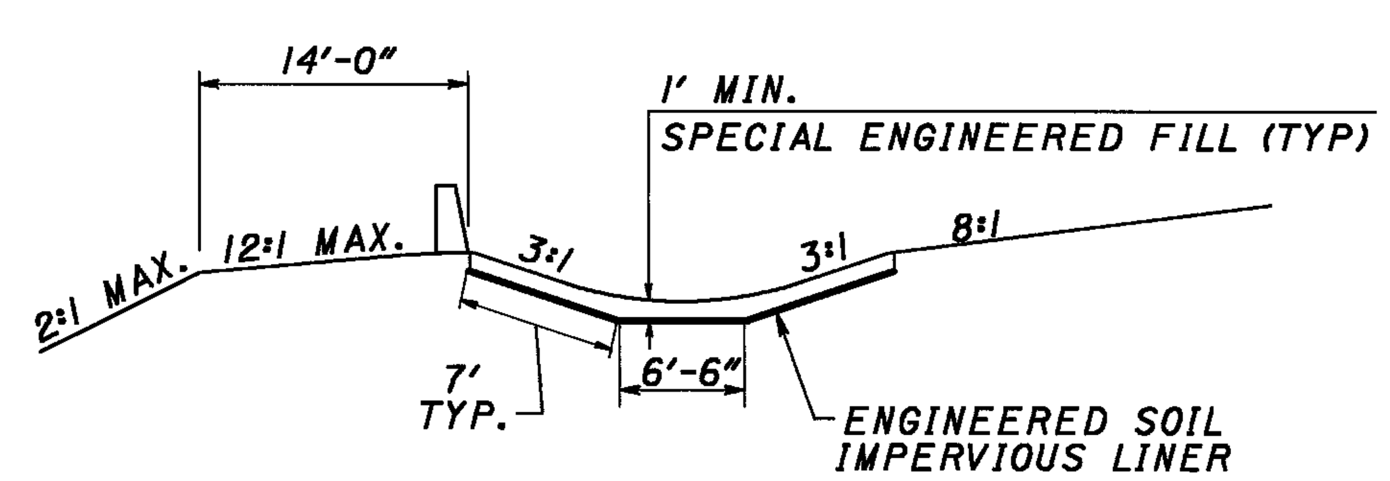
(LOOKING STATIONS AHEAD)

GENERAL NOTES

FOR THE ENGINEERED SOIL IMPERVIOUS LINER, USE 1 FOOT OF COVER SOIL OVER A 1-FOOT THICK SOIL LINER. THE ENGINEERED SOIL IMPERVIOUS LINER SHALL CONSIST OF BORROW MATERIAL WITH AN AASHTO SOIL CLASSIFICATION OF A-6 OR A-7 MEETING THE MINIMUM REQUIREMENTS OF 35% FINES PASSING A NO. 200 SIEVE, 95% COMPACTION AT OPTIMUM MOISTURE CONTENT, ϕ= 28 DEGREES, AND c' = 30 PSF. THE COVER SOIL SHALL CONSIST OF A SPECIAL ENGINEERED FILL MEETING THE REQUIREMENTS OF ODOT STANDARD SPECIFICATION SECTION 703.16B AND 100% PASSING A 3" SIEVE (INCLUDES AASHTO SOIL CLASSIFICATIONS A-1-a, A-1-b, A-2-4, A-2-6, A-2-7, A-3 AND A-3a)



MEDIAN SWALE TYPICAL SECTION



SIDE DITCH TYPICAL SECTION

ENGINEERED SOIL IMPERVIOUS LINER DETAILS

FOR QUANTITIES, SEE SHEET 849.

CALCULATED WTG CHECKED JDC

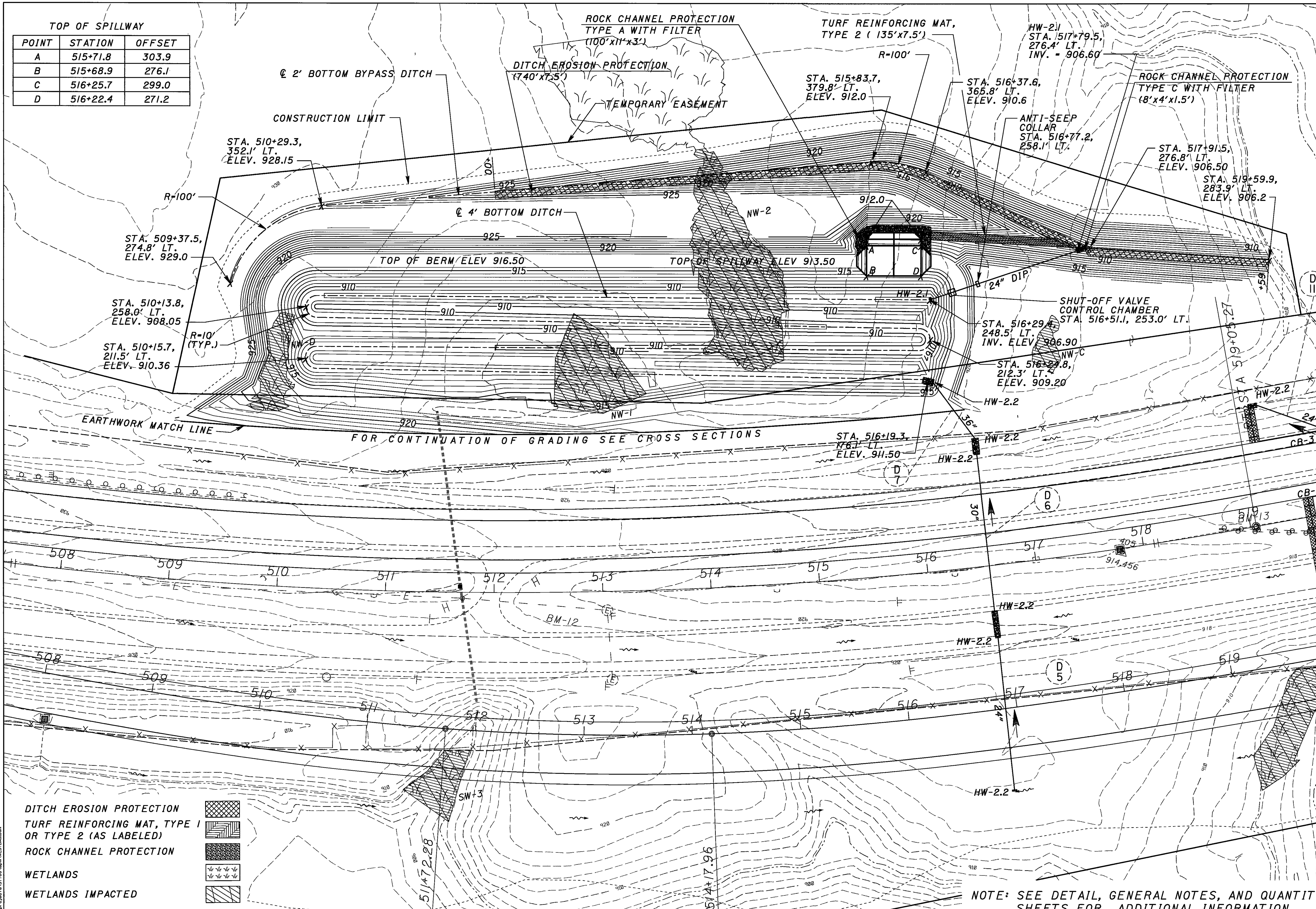
SPILL CONTAINMENT - IMPERVIOUS LINER DETAILS

MAH-80-0.97

6/20/05 8:52:33 AM s:\projects\37700\spill\mahdet05.dgn

TOP OF SPILLWAY

POINT	STATION	OFFSET
A	515+71.8	303.9
B	515+68.9	276.1
C	516+25.7	299.0
D	516+22.4	271.2



ROCK CHANNEL PROTECTION
TYPE A WITH FILTER
(100'x11'x3')
DITCH EROSION PROTECTION
(740'x7.5')
TEMPORARY EASEMENT
℄ 2' BOTTOM BYPASS DITCH
CONSTRUCTION LIMIT
TURF REINFORCING MAT,
TYPE 2 (135'x7.5')
R=100'
HW-2.1
STA. 517+79.5,
276.4' LT.
INV. = 906.60
ROCK CHANNEL PROTECTION
TYPE C WITH FILTER
(8'x4'x1.5')
STA. 515+83.7,
379.8' LT.
ELEV. 912.0
STA. 516+37.6,
365.8' LT.
ELEV. 910.6
ANTI-SEEP
COLLAR
STA. 516+77.2,
258.1' LT.
STA. 517+91.5,
276.8' LT.
ELEV. 906.50
STA. 519+59.9,
283.9' LT.
ELEV. 906.2
STA. 510+29.3,
352.1' LT.
ELEV. 928.15
R=100'
STA. 509+37.5,
274.8' LT.
ELEV. 929.0
℄ 4' BOTTOM DITCH
NW-2
TOP OF BERM ELEV 916.50
TOP OF SPILLWAY ELEV 913.50
24" DIP
SHUT-OFF VALVE
CONTROL CHAMBER
STA. 516+51.1, 253.0' LT.
STA. 510+13.8,
258.0' LT.
ELEV. 908.05
R=10'
(TYP.)
NW-D
STA. 510+15.7,
211.5' LT.
ELEV. 910.36
STA. 516+29.4,
248.5' LT.
INV. ELEV. 906.90
NW-C
STA. 516+24.8,
212.3' LT.
ELEV. 909.20
NW-1
HW-2.2
EARTHWORK MATCH LINE
FOR CONTINUATION OF GRADING SEE CROSS SECTIONS
STA. 516+19.3,
176.1' LT.
ELEV. 911.50
36"
30"
24"
CB-3
BM-13
BM-12
SW-3
STA. 519+05.27
511+72.28
514+17.96
508
509
510
511
512
513
514
515
516
517
518
519

DITCH EROSION PROTECTION

TURF REINFORCING MAT, TYPE 1 OR TYPE 2 (AS LABELED)

ROCK CHANNEL PROTECTION

WETLANDS

WETLANDS IMPACTED

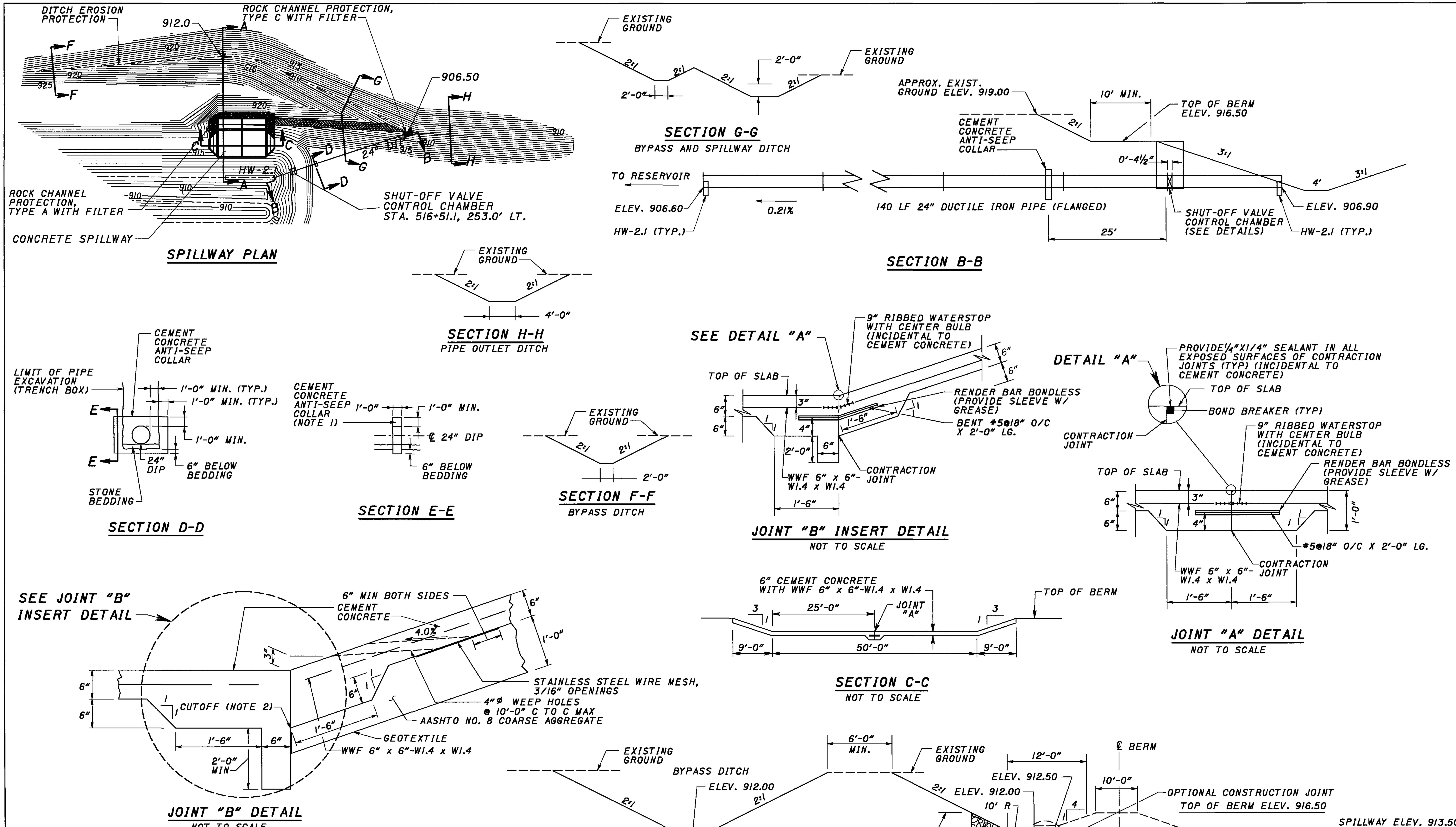
NOTE: SEE DETAIL, GENERAL NOTES, AND QUANTITY SHEETS FOR ADDITIONAL INFORMATION.

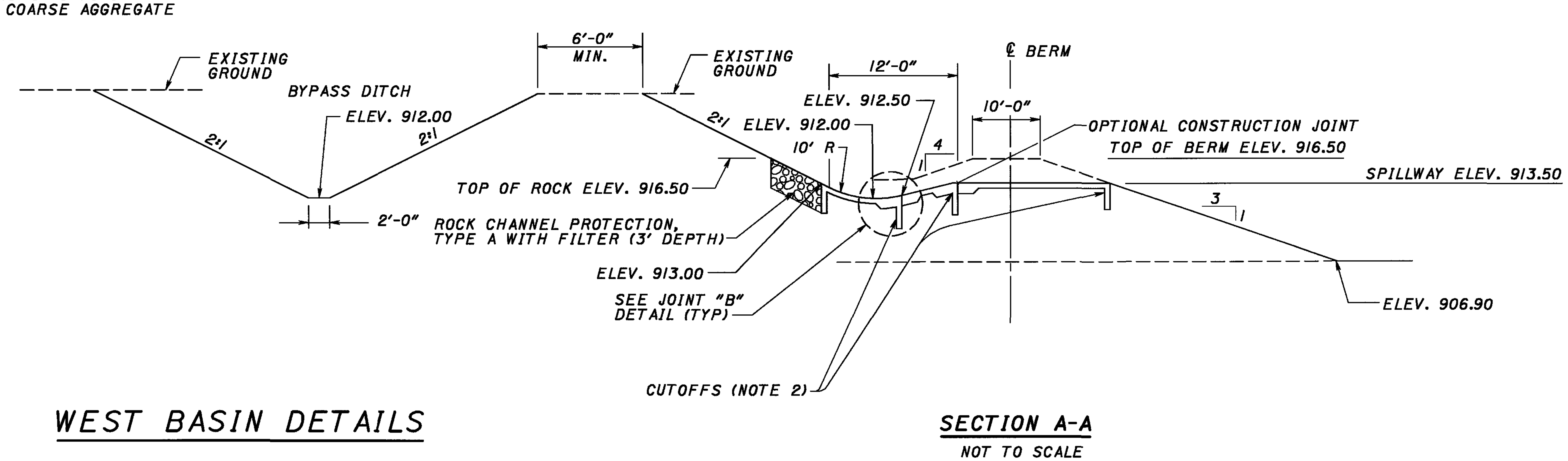
HORIZONTAL SCALE IN FEET 0 20 40 80

CALCULATED ARO CHECKED JDC

SPILL CONTAINMENT WEST BASIN DETAIL PLAN

MAH-80-0.97





NOTES

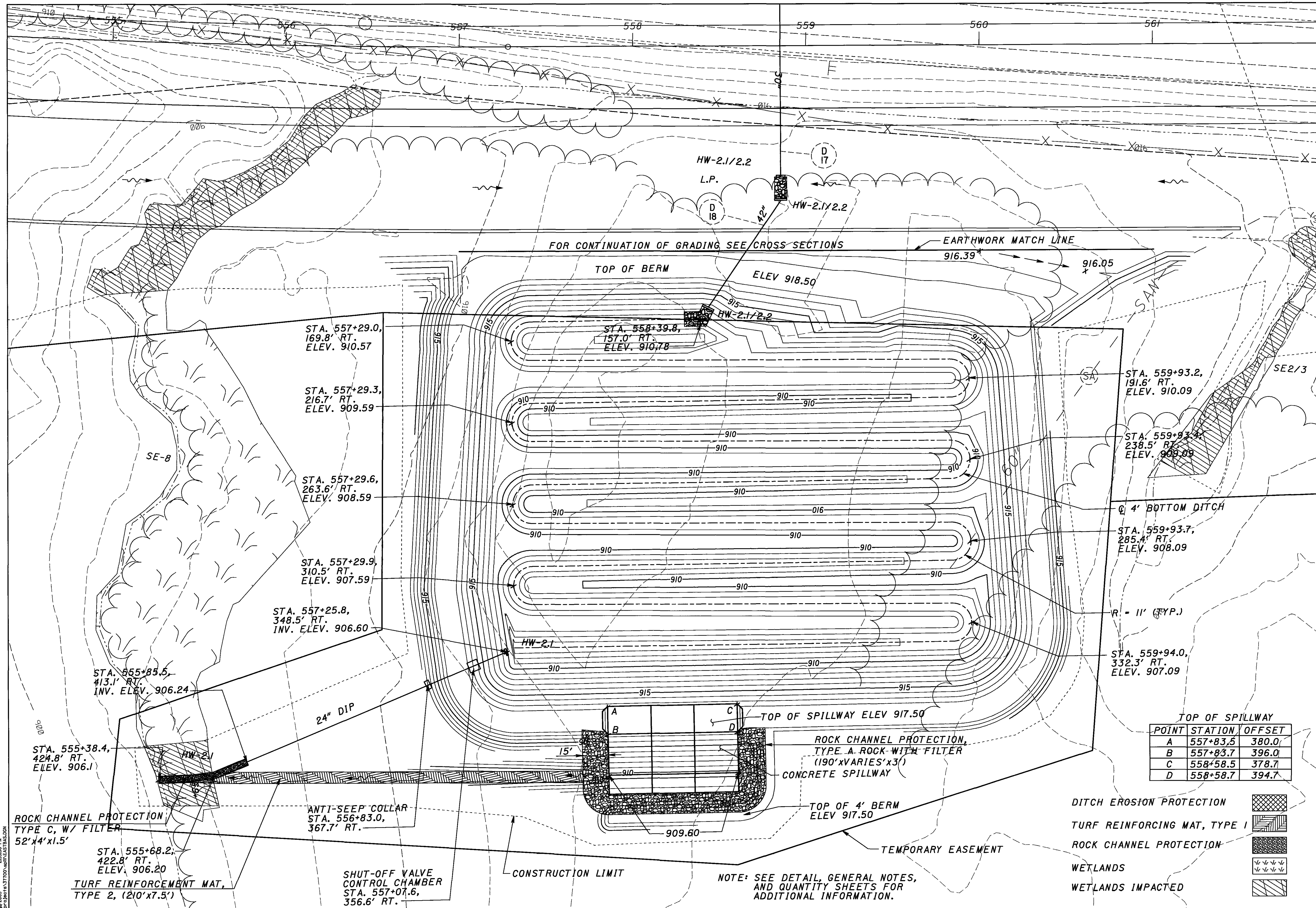
1. USE STEEL REINFORCEMENT MEETING ASTM AND ODOT STANDARDS.
2. CONSTRUCT CUTOFFS TO A MINIMUM OF 2'-0" BELOW THE BOTTOM OF SLAB. EXTEND CUTOFFS THE FULL WIDTH OF THE SPILLWAY UNDER SIDESLOPES.
3. USE FLANGE GASKETS FOR WATERTIGHT JOINTS, MEETING ASTM C 443 SPECIFICATIONS.
4. SEED EMBANKMENT AND ALL OTHER DISTURBED AREAS WITH SEEDING IN ACCORDANCE WITH ODOT STANDARD SPECIFICATIONS.
5. FOR QUANTITIES, SEE SHEET 849.

WEST BASIN DETAILS

CALCULATED WTG CHECKED JDC

SPILL CONTAINMENT - WEST BASIN DETAILS

MAH-80-0.97



FOR CONTINUATION OF GRADING SEE CROSS SECTIONS
EARTHWORK MATCH LINE
916.39
916.05
TOP OF BERM
ELEV 918.50
HW-2.1/2.2
L.P.
42"
30"
STA. 557+29.0, 169.8' RT. ELEV. 910.57
STA. 558+39.8, 157.0' RT. ELEV. 910.78
STA. 557+29.3, 216.7' RT. ELEV. 909.59
STA. 557+29.6, 263.6' RT. ELEV. 908.59
STA. 557+29.9, 310.5' RT. ELEV. 907.59
STA. 557+25.8, 348.5' RT. INV. ELEV. 906.60
HW-2.1
STA. 559+93.2, 191.6' RT. ELEV. 910.09
STA. 559+93.4, 238.5' RT. ELEV. 909.09
℄ 4' BOTTOM DITCH
STA. 559+93.7, 285.4' RT. ELEV. 908.09
R = 11' (TYP.)
STA. 559+94.0, 332.3' RT. ELEV. 907.09
SE-8
SE2/3
STA. 555+85.5, 413.1' RT. INV. ELEV. 906.24
24" DIP
STA. 555+38.4, 424.8' RT. ELEV. 906.1
TOP OF SPILLWAY ELEV 917.50
ROCK CHANNEL PROTECTION, TYPE A ROCK WITH FILTER (190'xVARIES'x3')
CONCRETE SPILLWAY
15'
TOP OF 4' BERM ELEV 917.50
909.60
ROCK CHANNEL PROTECTION TYPE C, W/ FILTER 52'x4'x1.5'
ANTI-SEEP COLLAR STA. 556+83.0, 367.7' RT.
STA. 555+68.2, 422.8' RT. ELEV. 906.20
TURF REINFORCEMENT MAT, TYPE 2, (210'x7.5')
SHUT-OFF VALVE CONTROL CHAMBER STA. 557+07.6, 356.6' RT.
CONSTRUCTION LIMIT
TEMPORARY EASEMENT
NOTE: SEE DETAIL, GENERAL NOTES, AND QUANTITY SHEETS FOR ADDITIONAL INFORMATION.

TOP OF SPILLWAY

POINT	STATION	OFFSET
A	557+83.5	380.0
B	557+83.7	396.0
C	558+58.5	378.7
D	558+58.7	394.7

DITCH EROSION PROTECTION

TURF REINFORCING MAT, TYPE I

ROCK CHANNEL PROTECTION

WETLANDS

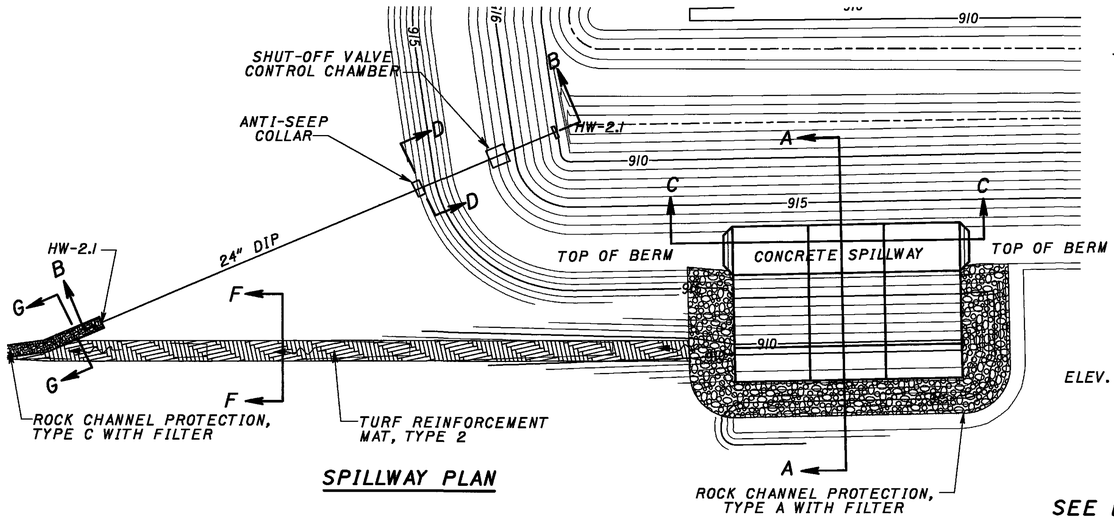
WETLANDS IMPACTED

HORIZONTAL SCALE IN FEET 0 25 50

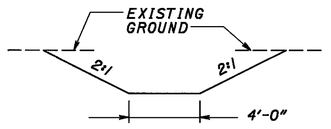
CALCULATED KLP
CHECKED JDC

SPILL CONTAINMENT EAST BASIN DETAIL PLAN

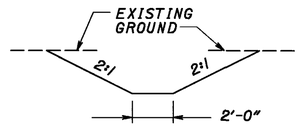
MAH-80-0.97



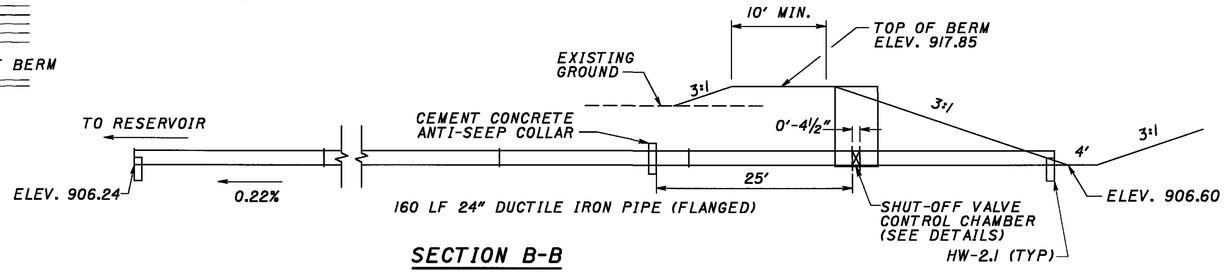
SPILLWAY PLAN



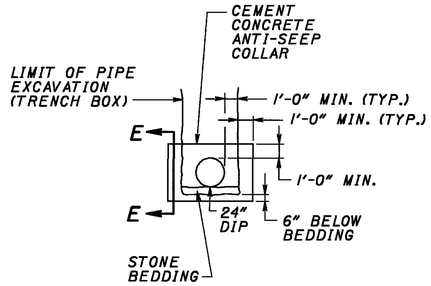
SECTION F-F
SPILLWAY DITCH



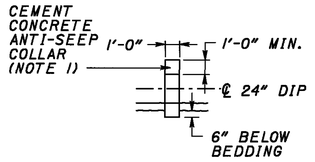
SECTION G-G
PIPE OUTLET DITCH



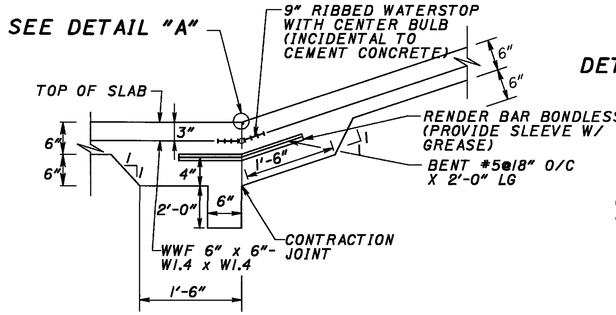
SECTION B-B



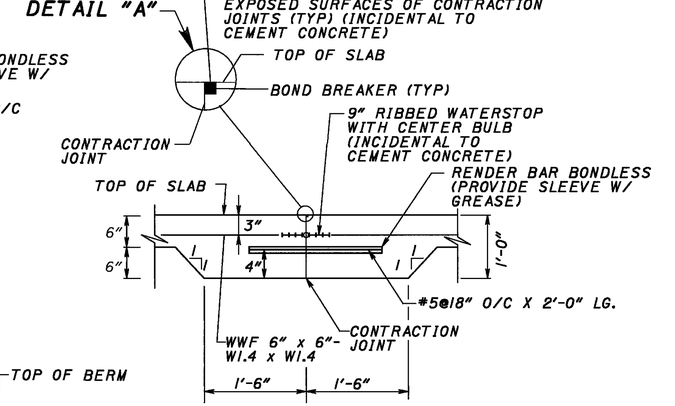
SECTION D-D



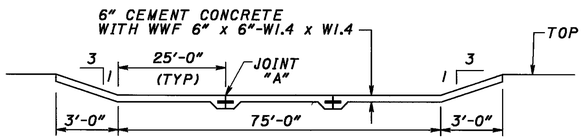
SECTION E-E



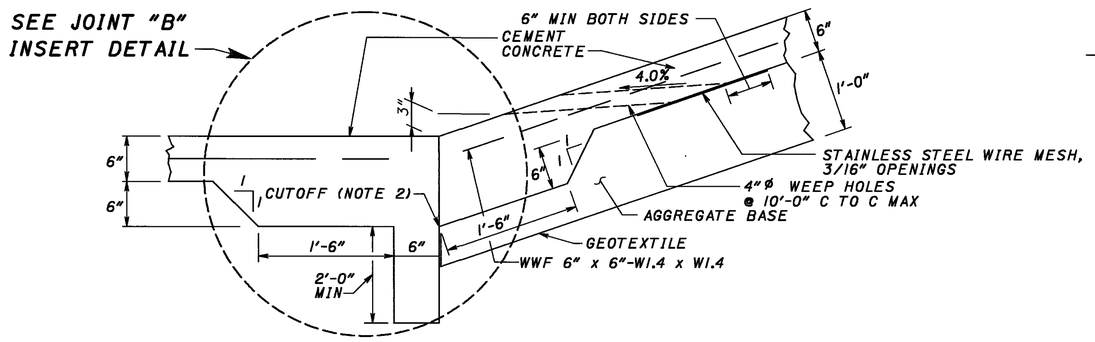
JOINT "B" INSERT DETAIL
NOT TO SCALE



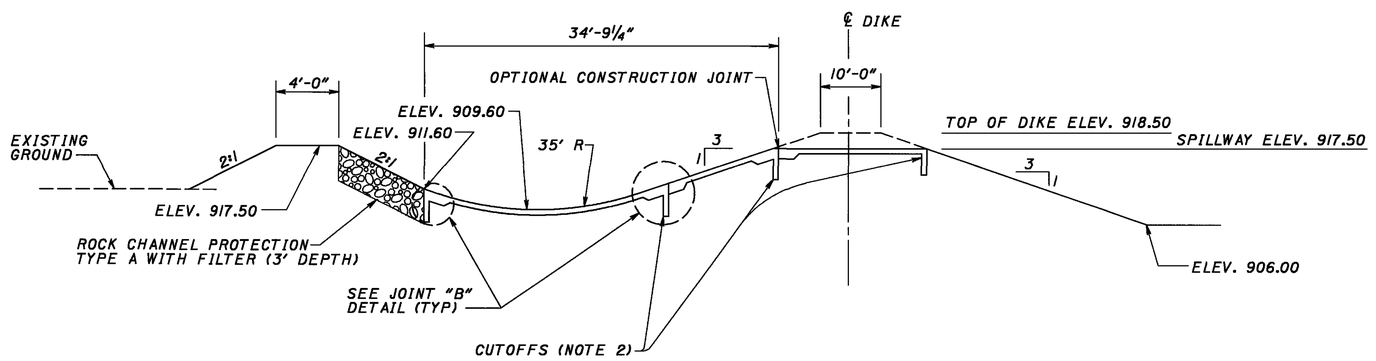
JOINT "A" DETAIL
NOT TO SCALE



SECTION C-C
NOT TO SCALE



JOINT "B" DETAIL
NOT TO SCALE



SECTION A-A
NOT TO SCALE

NOTES

1. USE STEEL REINFORCEMENT MEETING ASTM AND ODOT STANDARDS.
2. CONSTRUCT CUTOFFS TO A MINIMUM OF 2'-0" BELOW THE BOTTOM OF SLAB. EXTEND CUTOFFS THE FULL WIDTH OF THE SPILLWAY UNDER SIDESLOPES.
3. USE FLANGE GASKETS FOR WATERTIGHT JOINTS, MEETING ASTM C 443 SPECIFICATIONS.
4. SEED EMBANKMENT AND ALL OTHER DISTURBED AREAS WITH SEEDING IN ACCORDANCE WITH ODOT STANDARD SPECIFICATIONS.
5. FOR QUANTITIES, SEE SHEET 849.

EAST BASIN DETAILS

6/20/05 8:55:42 AM
s:\pr-Objects\37100\spill\mah80k104.dgn

SHEET 2

CALCULATED WTG | CHECKED JDC

SPILL CONTAINMENT EAST BASIN DETAILS

MAH-80-0.97

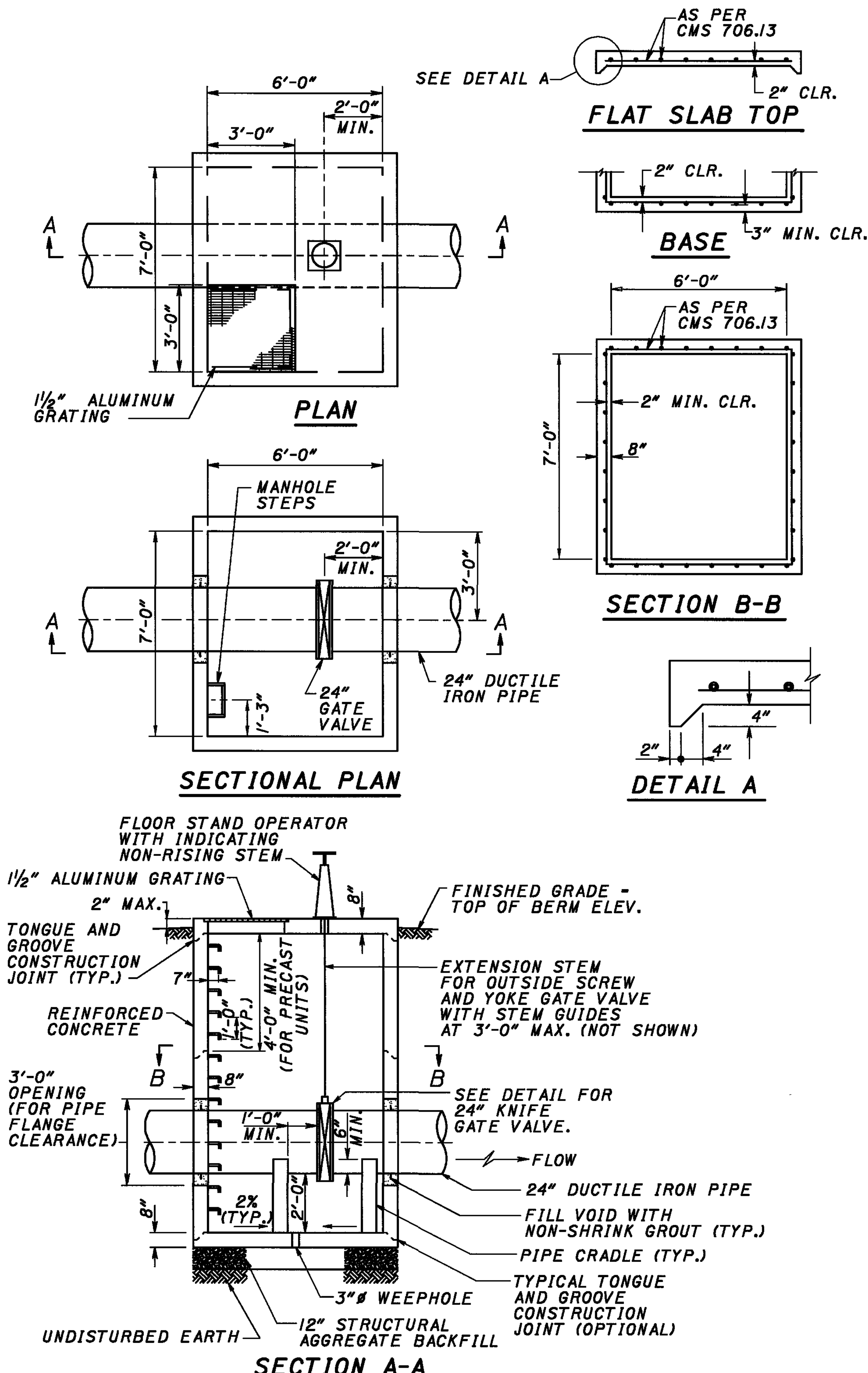
857
1100

GENERAL NOTES FOR ITEM 604 982000
DRAINAGE STRUCTURE MISCELLANEOUS: SHUT-OFF VALVE CONTROL CHAMBER

THIS ITEM SHALL BE PAID AS A LUMP SUM AND ALL MATERIALS, EQUIPMENT, AND LABOR SHALL BE CONSIDERED INCIDENTAL TO THE LUMP SUM COST OF THE ITEM. INCLUDED FOR EACH OF THE CONTROL CHAMBERS ARE: A CONCRETE VAULT-TYPE ENCLOSURE WITH LADDER STEPS AND A SURFACE ACCESS GRATING, A 24-INCH KNIFE GATE VALVE WITH EXTENSION STEM, STEM GUIDES, FLOOR STAND AND OTHER ACCESSORIES AS REQUIRED BY THE MANUFACTURER FOR PROPER INSTALLATION AND OPERATION.

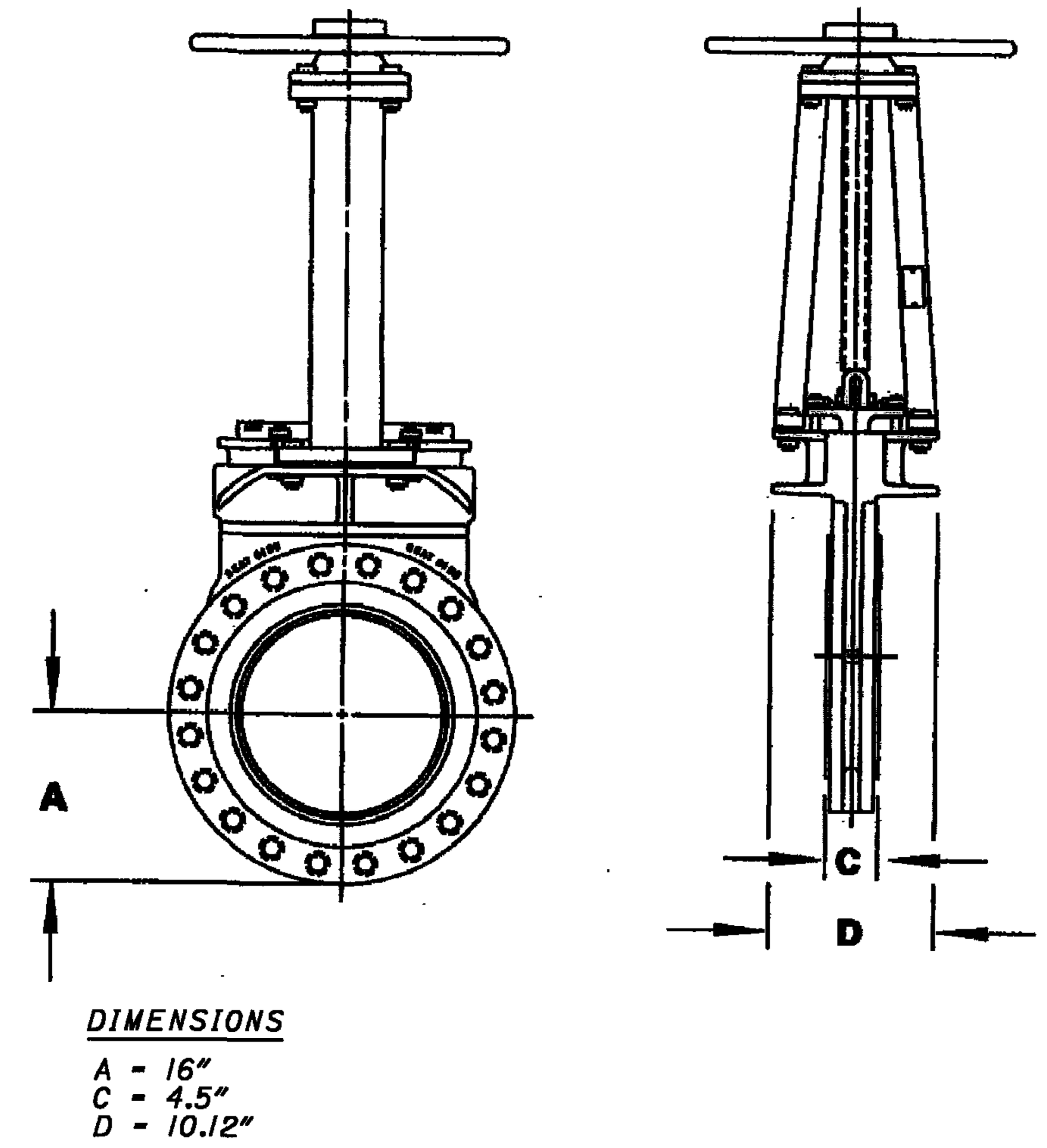
THE VALVE SHALL BE A 24-INCH KNIFE GATE VALVE WITH BEVELED GEAR AND MANUFACTURED AS FOLLOWS:
SERIES G RESILIANT SEATED KNIFE GATE VALVE FROM THE RED VALVE CO., INC. OF CARNEGIE, PA 15106 WEBSITE: REDVALVE.COM OR
SERIES KGL KNIFE GATE VALVE WITH RESILIENT SEAT FROM THE DEZURIK COMPANY OF SARTELL, MN 56377 WEBSITE: DEZURIK.COM OR
APPROVED EQUAL.

THE CONCRETE VAULT ENCLOSURE SHALL BE CONSTRUCTED IN ACCORDANCE WITH ODOT STANDARD SPECIFICATIONS AND STANDARD CONSTRUCTION DRAWING MH-1.2, AS APPLICABLE.

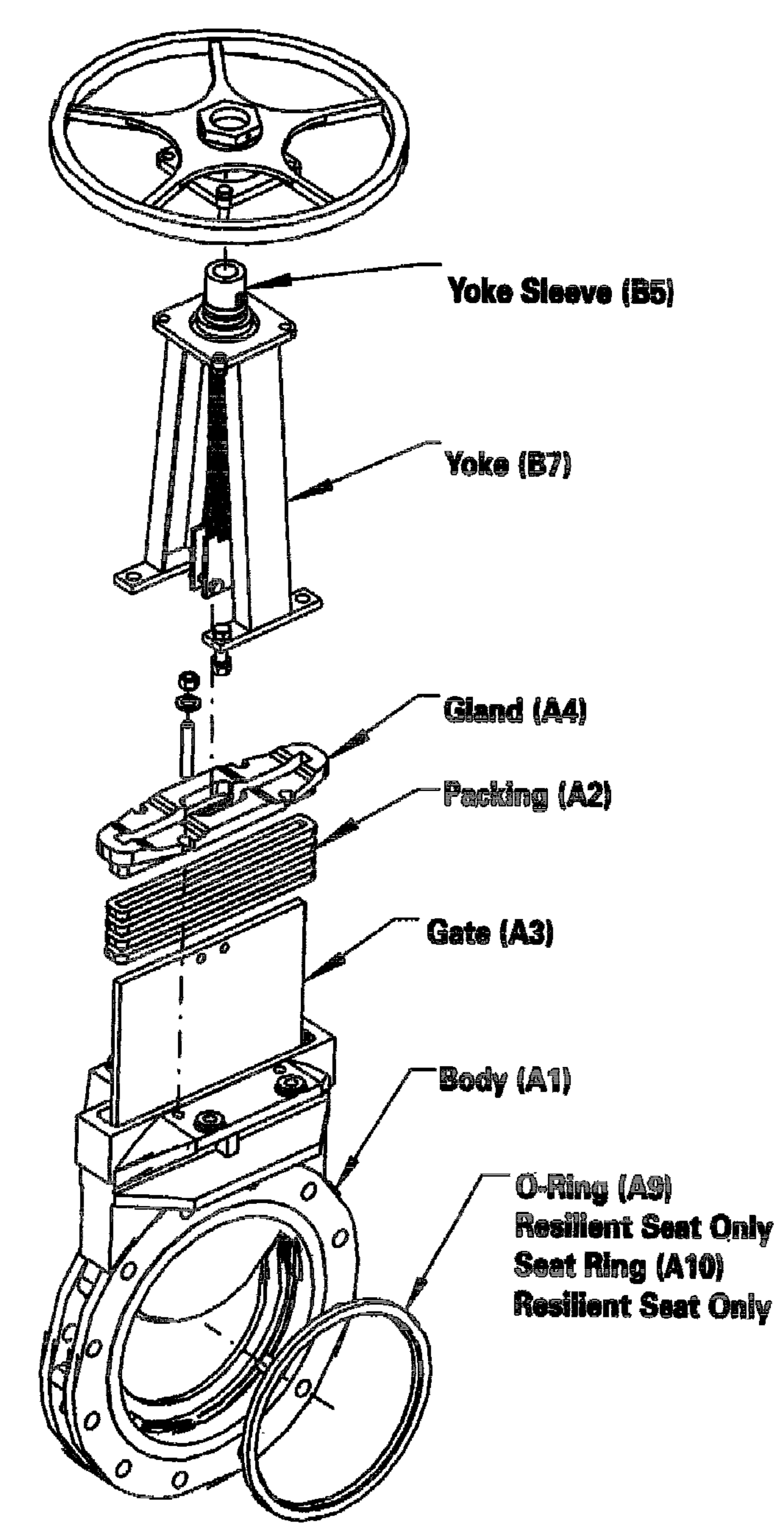


SHUT-OFF VALVE CONTROL CHAMBER

NO SCALE



SECTIONAL VIEWS



24" KNIFE GATE VALVE WITH RESILIANT SEAT

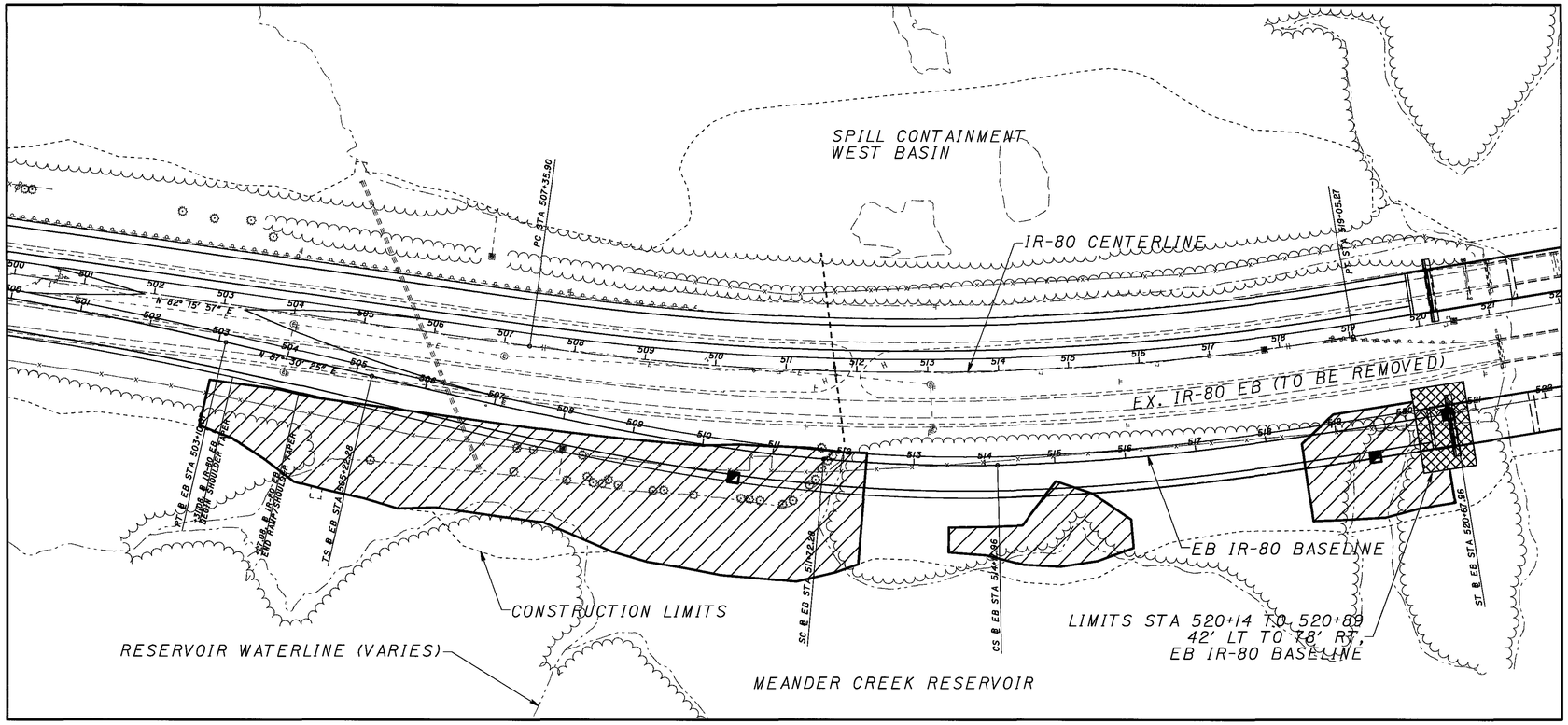
MATERIALS OF CONSTRUCTION

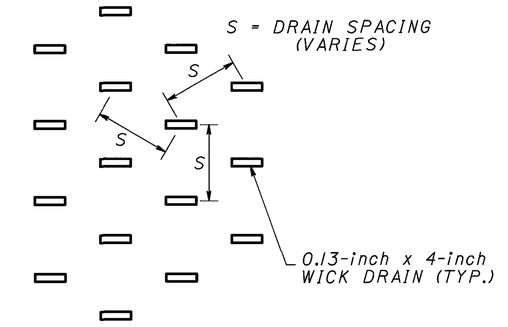
ITEM	DESCRIPTION	CHARACTERISTIC / MATERIAL
A1	BODY 24" (600 mm)	CAST IRON ASTM A 126, CLASS B WITH LINER OF 304 STAINLESS STEEL, ASTM A240, TYPE 304
		CAST IRON ASTM A 126, CLASS B WITH LINER OF 316 STAINLESS STEEL, ASTM A240, TYPE 316
		CAST IRON ASTM A 126, CLASS B WITH LINER OF 317 STAINLESS STEEL, ASTM A240, TYPE 317L
A2	PACKING	C, SQUARE BRAIDED PTFE IMPREGNATED SYNTHETIC FIBER
		D, SQUARE BRAIDED CARBON YARN
		CW, SQUARE BRAIDED PTFE IMPREGNATED SYNTHETIC FIBER WITH ONE RING OF COPPER WIRE BRAIDED SCRAPER
		DW, SQUARE BRAIDED CARBON YARN WITH ONE RING OF COPPER WIRE BRAIDED SCRAPER
		ZJ, SQUARE BRAIDED PTFE IMPREGNATED SYNTHETIC FIBER WITH ONE RING OF PTFE CORD
A3	GATE	304 STAINLESS STEEL, ASTM A240, TYPE 304.
		316 STAINLESS STEEL, ASTM A240, TYPE 316
		317 STAINLESS STEEL, ASTM A240, TYPE 317L
A4	PACKING GLAND 24" (600 mm)	CARBON STEEL, ASTM A36 WITH P006 PLASTIC COATING
A9	O-RING 24" (600 mm)	SAME AS RESILIENT SEAT MATERIAL
A10	SEAT RING - RESILIENT SEATED 24" (600 mm)	316 STAINLESS STEEL, ASTM A240 WITH RESILIENT SEAT MATERIAL
	RESILIENT SEAT MATERIAL	CR, CHLOROPRENE
		NBR, ACRYLONITRILE-BUTADIENE
		CSM, CHLORO-SULFONYL-POLYETHYLENE
		EPDM, TERPOLYMER OF ETHYLENE, PROPYLENE AND A DIENE
		FKM, FLUORO RUBBER
		CRW, CHLOROPRENE, OFF WHITE
A10	SEAT RING - METAL SEATED 24" (600 mm)	304 STAINLESS STEEL, ASTM A 743, CF-8
		316 STAINLESS STEEL, ASTM A 743, CF-8M
		317 STAINLESS STEEL, ASTM A 743, CG-8M
B5	YOKE SLEEVE 24" (600 mm)	DUCTILE IRON, ASTM A 536, ELECTROLESS NICKEL COATED
B7	YOKE (SUPERSTRUCTURE)	CARBON STEEL, ASTM A 36

CALCULATED WTG
CHECKED JDC

SPILL CONTAINMENT - CONTROL CHAMBER DETAILS

MAH-80-0.97



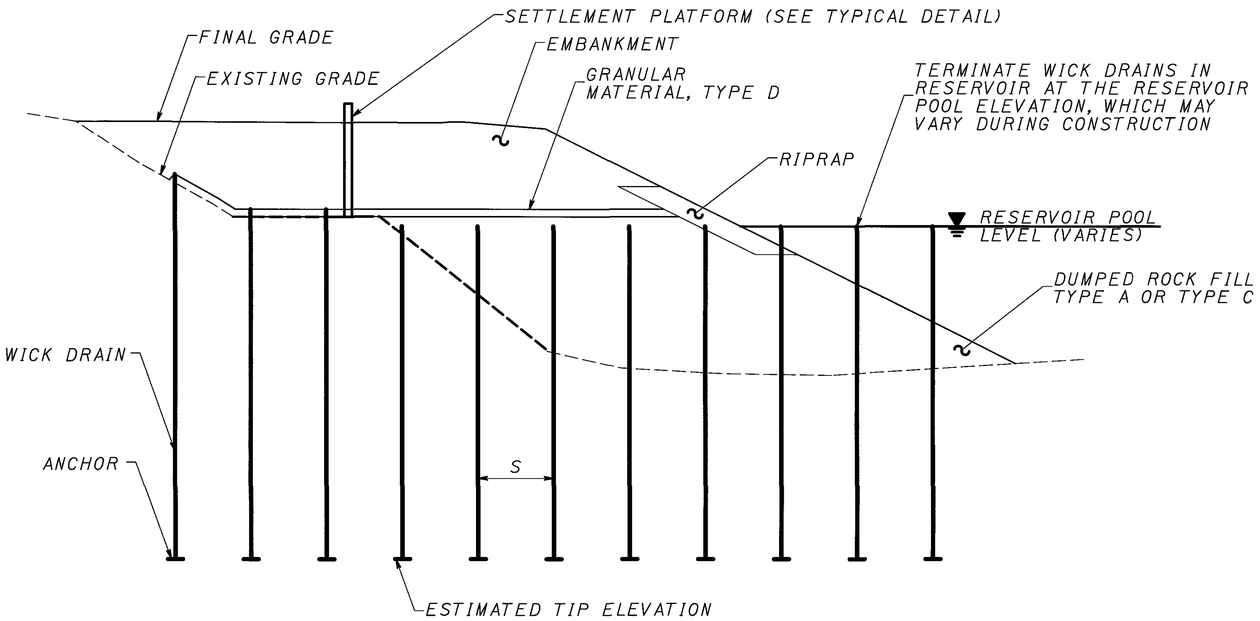


WICK DRAIN PLAN (TYPICAL)
NOT TO SCALE

AREA OF WICK DRAINS WITH 5 FOOT SPACING S = 5 FT

AREA OF WICK DRAINS WITH 10 FOOT SPACING S = 10 FT.

SETTLEMENT PLATFORM



WICK SECTION
NOT TO SCALE

HORIZONTAL SCALE IN FEET
0 50 100 200

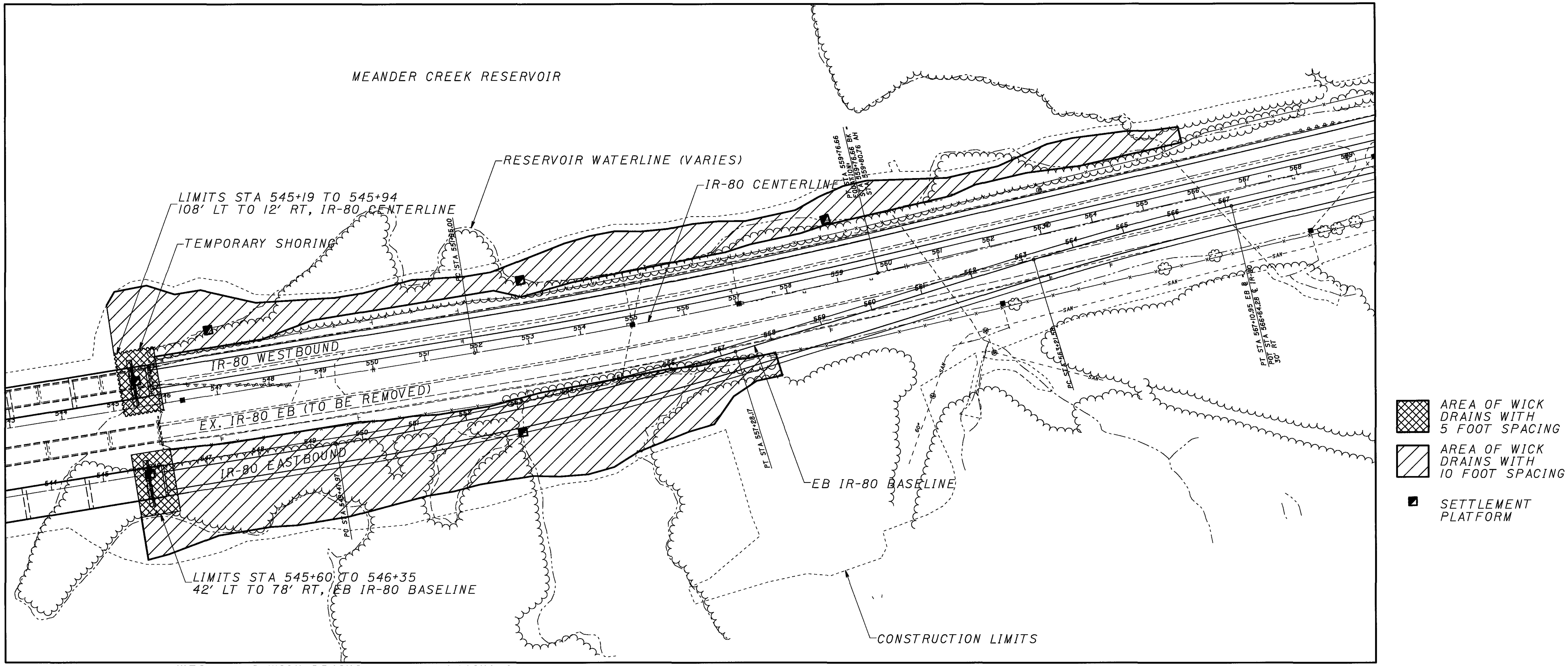
CALCULATED SS
CHECKED MWW

WICK DRAIN PLAN AND DETAILS
STA 503+00 TO STA 521+00

MAH-80-0.97

859
1100

7/20/05 3:37:13 PM
s:\projects\37700\sheets\gmi10.dgn



WESTBOUND WICK DRAINS - DRAIN SPACING S=10 FT.

STATION TO STATION ℄ WB IR-80	ESTIMATED DRAIN TIP ELEVATION (FT.)	ESTIMATED AVERAGE DRAIN LENGTH (FT.)	ESTIMATED NUMBER OF DRAINS	ESTIMATED TOTAL DRAIN LENGTH (FT.)
545+19 to 559+50	825	85	1,065	90,525
559+50 to 561+00	830	80	98	7,840
561+00 to 562+50	835	75	55	4,125
562+50 to 563+50	840	70	42	2,940
563+50 to 565+00	845	65	88	5,720
565+00 to 566+00	850	60	42	2,520
				TOTAL = 113,670 FT

EASTBOUND WICK DRAINS - DRAIN SPACING S=10 FT.

STATION TO STATION BL EB IR-80	ESTIMATED DRAIN TIP ELEVATION (FT.)	ESTIMATED AVERAGE DRAIN LENGTH (FT.)	ESTIMATED NUMBER OF DRAINS	ESTIMATED TOTAL DRAIN LENGTH (FT.)
503+00 to 506+00	890	20	398	7,960
506+00 to 507+50	885	25	221	5,525
507+50 to 509+00	880	30	249	7,470
509+00 to 510+50	875	35	309	10,815
510+50 to 512+30	870	40	393	15,720
513+50 to 514+50	855	55	52	2,860
514+50 to 516+00	850	60	158	9,480
518+50 to 519+50	835	75	165	12,375
519+50 to 520+89	830	80	133	10,640
545+60 to 548+00	830	80	402	32,160
548+00 to 550+50	835	75	502	37,650
550+50 to 558+00	840	70	1,165	81,550
				TOTAL = 234,205 FT

ITEM SPECIAL - WICK DRAIN = 113,670 + 234,205 + 104,860 = 452,735 FT

ITEM SPECIAL - SETTLEMENT PLATFORM = 9 EA

QUANTITIES CARRIED TO GENERAL SUMMARY

WICK DRAINS - DRAIN SPACING S=5 FT.

APPROXIMATE LOCATION	ESTIMATED DRAIN TIP ELEVATION (FT.)	ESTIMATED AVERAGE DRAIN LENGTH (FT.)	ESTIMATED NUMBER OF DRAINS	ESTIMATED TOTAL DRAIN LENGTH (FT.)
520+50 BL EB IR-80	830	80	428	34,240
546+00 BL EB IR-80	830	80	428	34,240
545+50 ℄ WB IR-80	825	85	428	36,380
				TOTAL = 104,860 FT

SETTLEMENT MONITORING LOCATIONS

PLATFORM NUMBER	STATION	OFFSET	APPROXIMATE PLATFORM ELEVATION (FT.)
SP-1	510+50	40'RT, BL EB IR-80	911.5
SP-2	519+50	45'RT, BL EB IR-80	904.0
SP-3	520+60	0', BL EB IR-80	906.0
SP-4	545+90	0', BL EB IR-80	910.0
SP-5	553+00	45'RT, BL EB IR-80	905.0
SP-6	545+50	50'LT, ℄ IR-80	904.5
SP-7	547+00	130'LT, ℄ IR-80	905.0
SP-8	553+00	130'LT, ℄ IR-80	905.0
SP-9	559+00	125'LT, ℄ IR-80	904.5

NOTES

1. SETTLEMENT PLATFORMS SHALL BE PLACED ON THE BOTTOM OF THE EXCAVATION PRIOR TO PLACEMENT OF ANY FILL.

2. SETTLEMENT PLATFORM READINGS SHALL BE TAKEN DAILY DURING PLACEMENT OF THE EMBANKMENT, AND THEN ONCE PER WEEK UNTIL SETTLEMENT HAS COMPLETED.

3. ESTIMATED WAITING PERIODS:
4 WEEKS WITH 5-FT DRAIN SPACING
24 WEEKS WITH 10-FT DRAIN SPACING

0 50 100 200
HORIZONTAL SCALE IN FEET

CALCULATED SS
CHECKED MWW

WICK DRAIN PLAN AND DETAILS STA 545+00 TO STA 566+00

MAH-80-0.97

860 / 1100

7/20/05 3:38:16 PM a:\projects\37700\sheets\gnlll.dgn

LATERAL LIMITS OF WICK DRAIN INSTALLATION

STATION 503+00 TO 512+30, BL IR-80 EB	
STATION	LATERAL LIMITS
STA 503+00	57' RT to 115' RT
STA 503+50	53' RT to 118' RT
STA 504+00	48' RT to 138' RT
STA 504+50	49' RT to 159' RT
STA 505+00	45' RT to 160' RT
STA 505+50	40' RT to 160' RT
STA 506+00	35' RT to 165' RT
STA 506+50	30' RT to 160' RT
STA 507+00	26' RT to 151' RT
STA 507+50	23' RT to 148' RT
STA 508+00	19' RT to 144' RT
STA 508+50	15' RT to 145' RT
STA 509+00	10' RT to 155' RT
STA 509+50	6' RT to 161' RT
STA 510+00	2' RT to 162' RT
STA 510+50	7' LT to 163' RT
STA 511+00	11' LT to 164' RT
STA 511+50	15' LT to 161' RT
STA 512+00	12' LT to 153' RT
STA 512+30	13' LT to 137' RT

STATION 513+50 TO 516+00, BL IR-80 EB	
STATION	LATERAL LIMITS
STA 513+50	87' RT to 122' RT
STA 514+00	87' RT to 127' RT
STA 514+50	86' RT to 141' RT
STA 515+00	25' RT to 145' RT
STA 515+50	46' RT to 141' RT
STA 516+00	87' RT to 127' RT

STATION 518+50 TO 520+89, BL IR-80 EB	
STATION	LATERAL LIMITS
STA 518+50	10' RT to 120' RT
STA 519+00	25' LT to 125' RT
STA 519+50	25' LT to 130' RT
STA 520+00	25' LT to 125' RT
STA 520+14	42' LT to 125' RT
STA 520+50	42' LT to 125' RT
STA 520+89	42' LT to 78' RT

STATION 545+60 TO 558+00, BL IR-80 EB	
STATION	LATERAL LIMITS
STA 545+60	42' LT to 158' RT
STA 546+00	42' LT to 158' RT
STA 546+35	42' LT to 153' RT
STA 546+50	41' LT to 149' RT
STA 547+00	38' LT to 142' RT
STA 547+50	35' LT to 135' RT
STA 548+00	35' LT to 135' RT
STA 548+50	35' LT to 140' RT
STA 549+00	35' LT to 140' RT
STA 549+50	35' LT to 140' RT
STA 550+00	35' LT to 135' RT
STA 550+50	29' LT to 126' RT
STA 551+00	28' LT to 127' RT
STA 551+50	21' LT to 129' RT
STA 552+00	19' LT to 126' RT
STA 552+50	17' LT to 128' RT
STA 553+00	19' LT to 131' RT
STA 553+50	21' LT to 144' RT
STA 554+00	18' LT to 152' RT
STA 554+50	15' LT to 150' RT
STA 555+00	11' LT to 139' RT
STA 555+50	7' LT to 128' RT
STA 556+00	3' LT to 122' RT
STA 556+50	6' RT to 121' RT
STA 557+00	10' RT to 75' RT
STA 557+50	20' RT to 65' RT
STA 558+00	25' RT to 60' RT

STATION 545+19 TO 566+00, ℄ IR-80	
STATION	LATERAL LIMITS
STA 545+19	200' LT to 12' RT
STA 545+50	225' LT to 12' RT
STA 545+94	225' LT to 12' RT
STA 546+00	225' LT to 90' LT
STA 546+50	200' LT to 90' LT
STA 547+00	200' LT to 90' LT
STA 547+50	180' LT to 90' LT
STA 548+00	160' LT to 90' LT
STA 548+50	155' LT to 100' LT
STA 549+00	150' LT to 110' LT
STA 549+50	145' LT to 115' LT
STA 550+00	145' LT to 115' LT
STA 550+50	150' LT to 110' LT
STA 551+00	155' LT to 110' LT
STA 551+50	150' LT to 110' LT
STA 552+00	145' LT to 115' LT
STA 552+50	145' LT to 115' LT
STA 553+00	155' LT to 90' LT
STA 553+50	165' LT to 95' LT
STA 554+00	175' LT to 100' LT
STA 554+50	180' LT to 100' LT
STA 555+00	180' LT to 100' LT
STA 555+50	170' LT to 100' LT
STA 556+00	165' LT to 100' LT
STA 556+50	165' LT to 100' LT
STA 557+00	160' LT to 100' LT
STA 557+50	150' LT to 105' LT
STA 558+00	150' LT to 105' LT
STA 558+50	150' LT to 105' LT
STA 559+00	165' LT to 110' LT
STA 559+50	175' LT to 110' LT
STA 560+00	175' LT to 110' LT
STA 560+50	165' LT to 110' LT
STA 561+00	155' LT to 110' LT
STA 561+50	145' LT to 110' LT
STA 562+00	145' LT to 120' LT
STA 562+50	145' LT to 120' LT
STA 563+00	155' LT to 120' LT
STA 563+50	165' LT to 115' LT
STA 564+00	165' LT to 110' LT
STA 564+50	160' LT to 110' LT
STA 565+00	155' LT to 110' LT
STA 565+50	145' LT to 110' LT
STA 566+00	140' LT to 110' LT

CALCULATED SS
CHECKED MWW

WICK DRAIN DETAILS

MAH-80-0.97

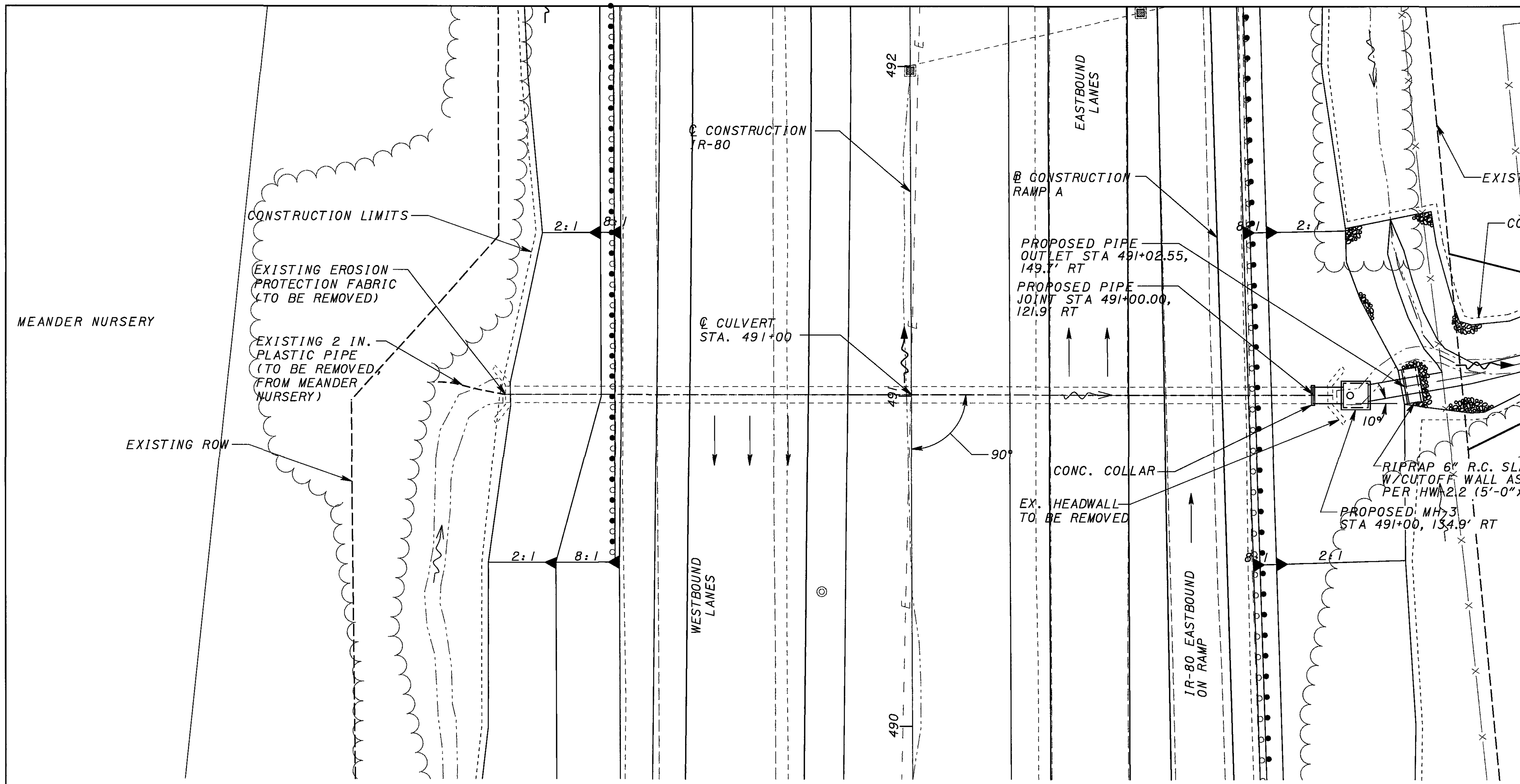
6/20/05 8:55:55 AM
s:\projects\37700\sheets\gnl1.dgn

CULVERT QUANTITIES

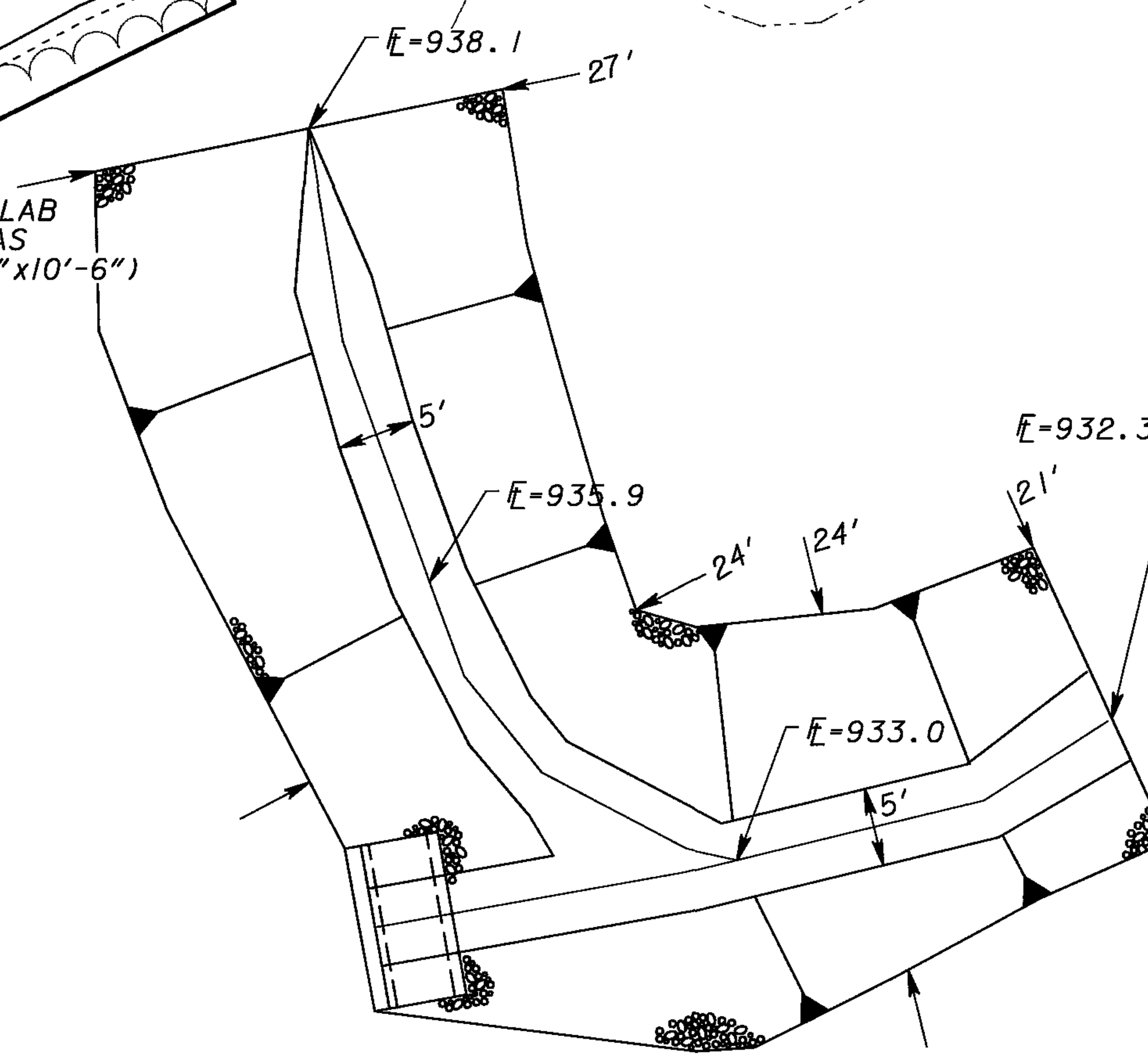
SHEET NO.	STATION	202 HEADWALL REMOVED (EACH)	202 PIPE REMOVED, 24" AND UNDER (FT)	202 PIPE REMOVED, OVER 24" (FT)	202 SPECIAL - FILL AND PLUG EXISTING CONDUIT (FT)	202 REMOVAL MISC.: EROSION PROTECTION FABRIC (SQ FT)	203 EXCAVATION (CU YD)	601 RIPRAP USING 6" REINFORCED CONCRETE SLAB (SQ YD)	601 ROCK CHANNEL PROTECTION, TYPE A WITH FILTER (CU YD)	601 ROCK CHANNEL PROTECTION, TYPE B WITH FILTER (CU YD)	601 ROCK CHANNEL PROTECTION, TYPE C WITH FILTER (CU YD)	602 CONCRETE MASONRY (CU YD)	602 CONCRETE MASONRY, AS PER PLAN "B" (CU YD)	603 48" CONDUIT, TYPE A, 706.02 (FT)	603 54" CONDUIT, TYPE A, 706.02 (FT)	603 60" CONDUIT, TYPE A, 706.02 (FT)		603 66" CONDUIT, TYPE A, 706.02 (FT)	603 CONDUIT, BORED OR JACKED: 48", TYPE A, 706.02 (FT)	603 CONDUIT, BORED OR JACKED: 66", TYPE A, 706.02 (FT)	604 MANHOLE, NO. 3 (EACH)
863	491+00.00	1	100	6		25	328	5.9	229.2			1.9				28					1
864	504+65.00	1		10	436		70	13.2		18.5	13.1	4.8						107		321	
865	560+96.00			125	177		254	10.3		12	242.4	2.6			380						
866	566+20.00			316			276	11.7		14.6	246.3	3.9				400					
867	580+86.00	2	108		317		13	12.5		13.4		10.2		229					225		
868	597+63.00												1.4								
869	634+20.00	1		8			9	4.5		8.9		1.1		16							
SUBTOTAL		5	208	465	930	25	950	58.1	229.2	67.4	501.8	24.5	1.4	245	380	428		107	225	321	1
TOTALS CARRIED TO GENERAL SUMMARY		5	208	465	930	25	950	59	230	68	502	24.5	1.4	245	380	428		107	225	321	1

CALCULATED SSC
CHECKED DEK

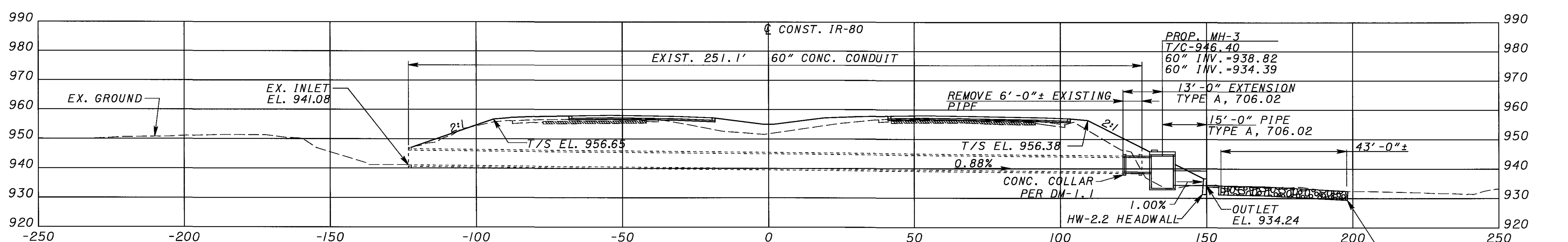
MAH-80-0.97



PLAN



EROSION PROTECTION AT OUTLET



PROFILE
STA. 491+00 - IR-80

ROCK CHANNEL PROTECTION TYPE A, 3'-0" THICK, WITH FILTER (TYP.)

HYDRAULIC DESIGN DATA	
CULVERT DATA	TOTAL
DRAINAGE AREA	= 216.0 ACRES
FLOW (Q50)	= 182.1 FT.^{3}/S
VELOCITY (V50)	= 14.8 FT./S
HEAD WATER ELEV. (HW50)	= 947.9 FT.
JUST FULL CAPACITY (50 YR)	= 303.5 FT.^{3}/S

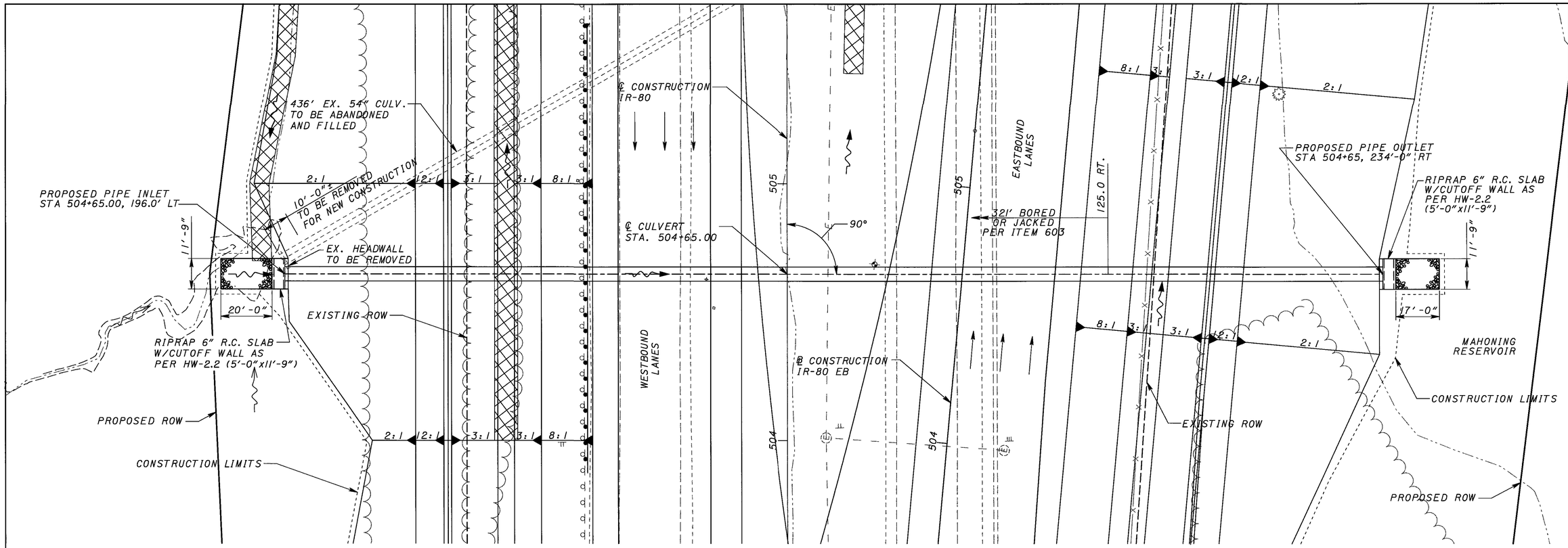
FOR CULVERT QUANTITIES, SEE SHEET 862

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED AJP CHECKED DEK

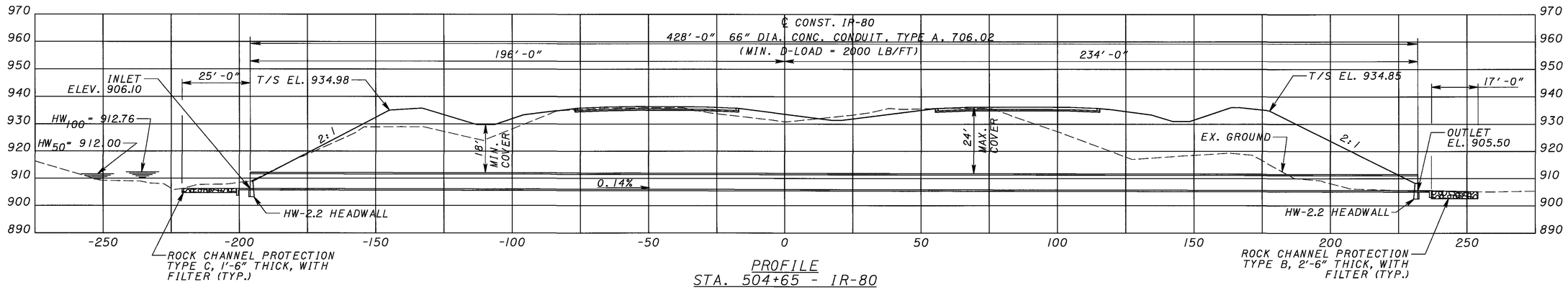
CULVERT DETAILS STA. 491+00

MAH-80-0.97



PLAN

NOTE: ALL MEASUREMENTS ARE TAKEN FROM THE ℄ OF CONSTRUCTION OF IR-80 UNLESS OTHERWISE NOTED.



PROFILE
STA. 504+65 - IR-80

HYDRAULIC DESIGN DATA	
CULVERT DATA	TOTAL
DRAINAGE AREA	= 136.5 ACRES
FLOW (Q50)	= 160.0 FT.^{3}/S
VELOCITY (V50)	= 9.9 FT./S
HEAD WATER ELEV. (HW50)	= 912.0 FT.
FLOW (Q100)	= 189.0 FT.^{3}/S
VELOCITY (V100)	= 10.6 FT./S
HEAD WATER ELEV. (HW100)	= 912.8 FT.

FOR CULVERT QUANTITIES, SEE SHEET 862

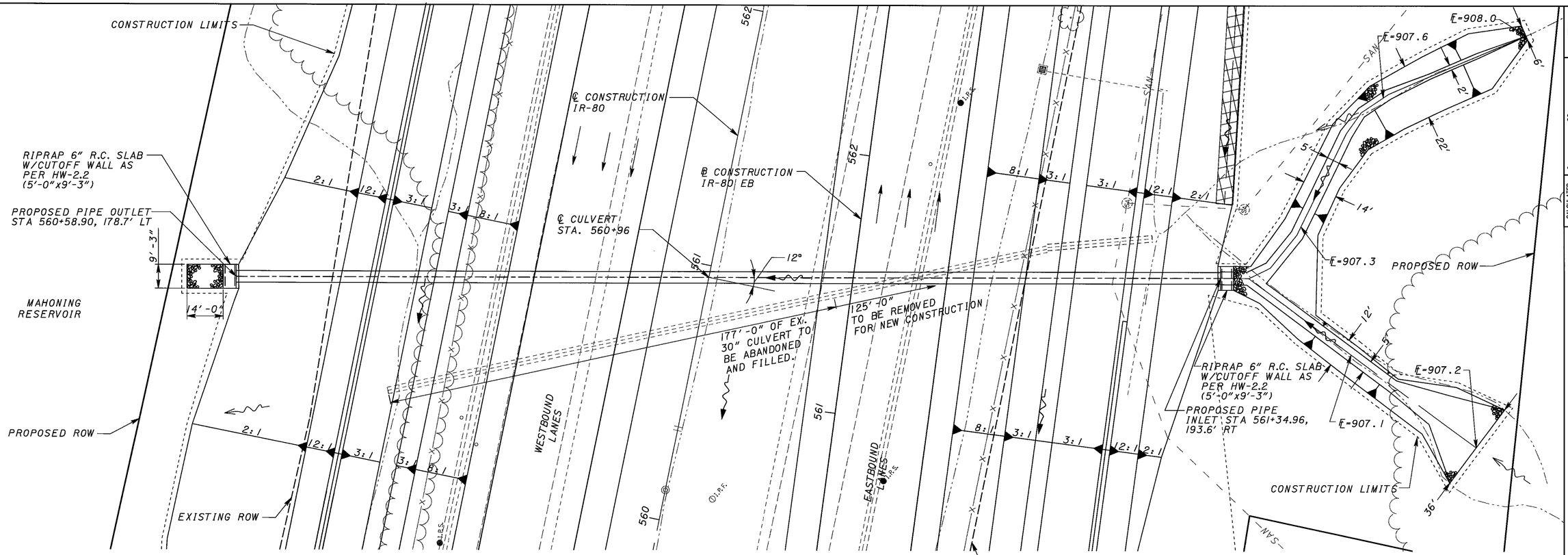
CALCULATED AJP
CHECKED DEK

HORIZONTAL SCALE IN FEET
0 10 20 40

CULVERT DETAILS STA. 504+65

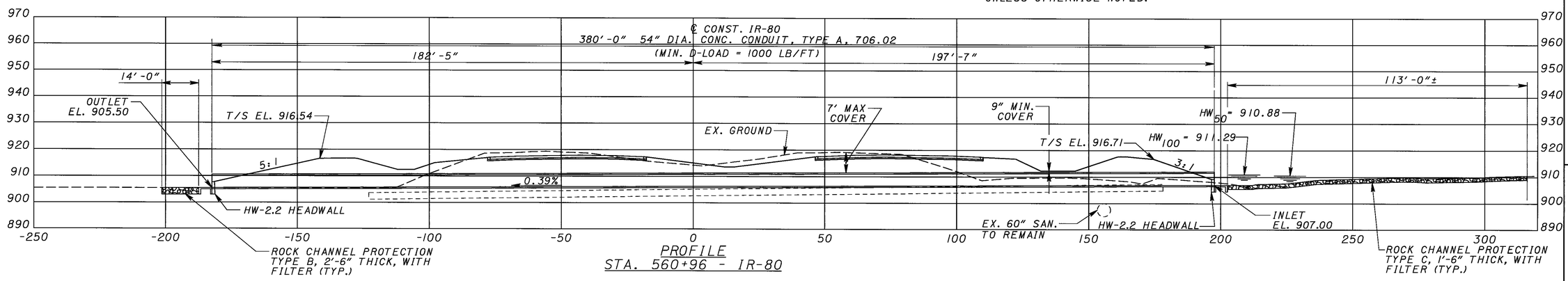
MAH-80-0.97

7/21/2005 11:04:12 AM
s:\projects\37700\sheets\cd504_65.dgn



PLAN

NOTE: ALL MEASUREMENTS ARE TAKEN FROM THE ℄ OF CONSTRUCTION OF IR-80 UNLESS OTHERWISE NOTED.



PROFILE
STA. 560+96 - IR-80

HYDRAULIC DESIGN DATA	
CULVERT DATA	TOTAL
DRAINAGE AREA	= 33.8 ACRES
FLOW (Q50)	= 69.0 FT. /S
VELOCITY (V50)	= 8.0 FT./S
HEAD WATER ELEV. (HW50)	= 910.9 FT.
FLOW (Q100)	= 82.0 FT. /S
VELOCITY (V100)	= 8.4 FT./S
HEAD WATER ELEV. (HW100)	= 911.3 FT.

FOR CULVERT QUANTITIES, SEE SHEET 862

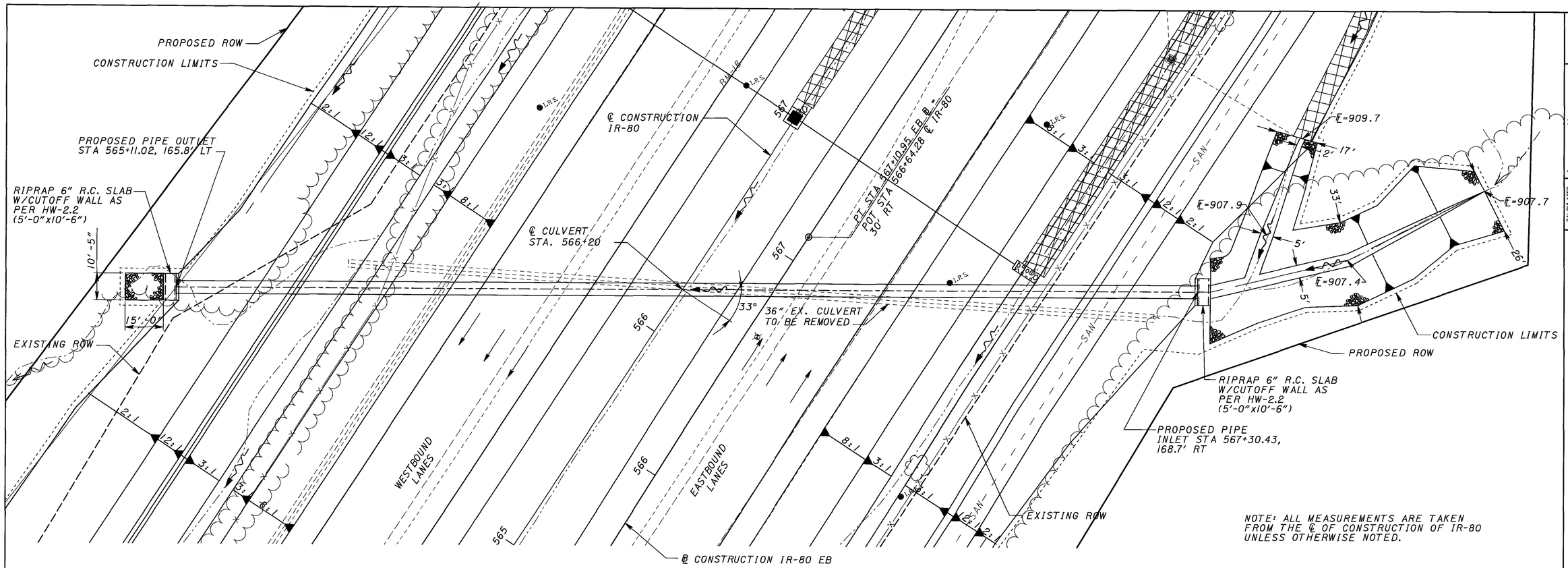
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED AJP
CHECKED DEK

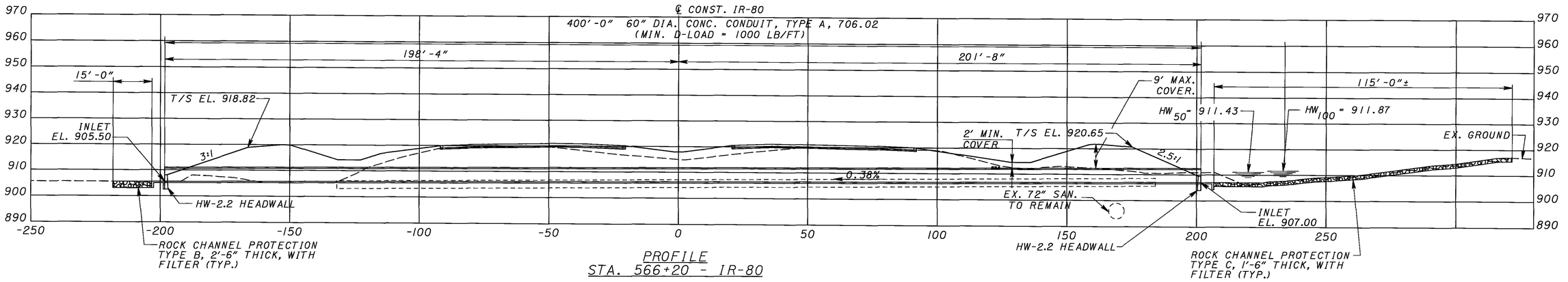
CULVERT DETAILS STA. 560+96

MAH-80-0.97

7/29/2005 10:04:27 AM
e:\pr\projects\37700\sheets\D560_96.DGN



PLAN



PROFILE
STA. 566+20 - IR-80

HYDRAULIC DESIGN DATA	
CULVERT DATA	TOTAL
DRAINAGE AREA	= 59.5 ACRES
FLOW (Q50)	= 94.0 FT.^{3}/S
VELOCITY (V50)	= 8.5 FT./S
HEAD WATER ELEV. (HW50)	= 911.4 FT.
FLOW (Q100)	= 111.0 FT.^{3}/S
VELOCITY (V100)	= 9.0 FT./S
HEAD WATER ELEV. (HW100)	= 911.9 FT.

FOR CULVERT QUANTITIES, SEE SHEET 862

HORIZONTAL SCALE IN FEET
0 10 20 40

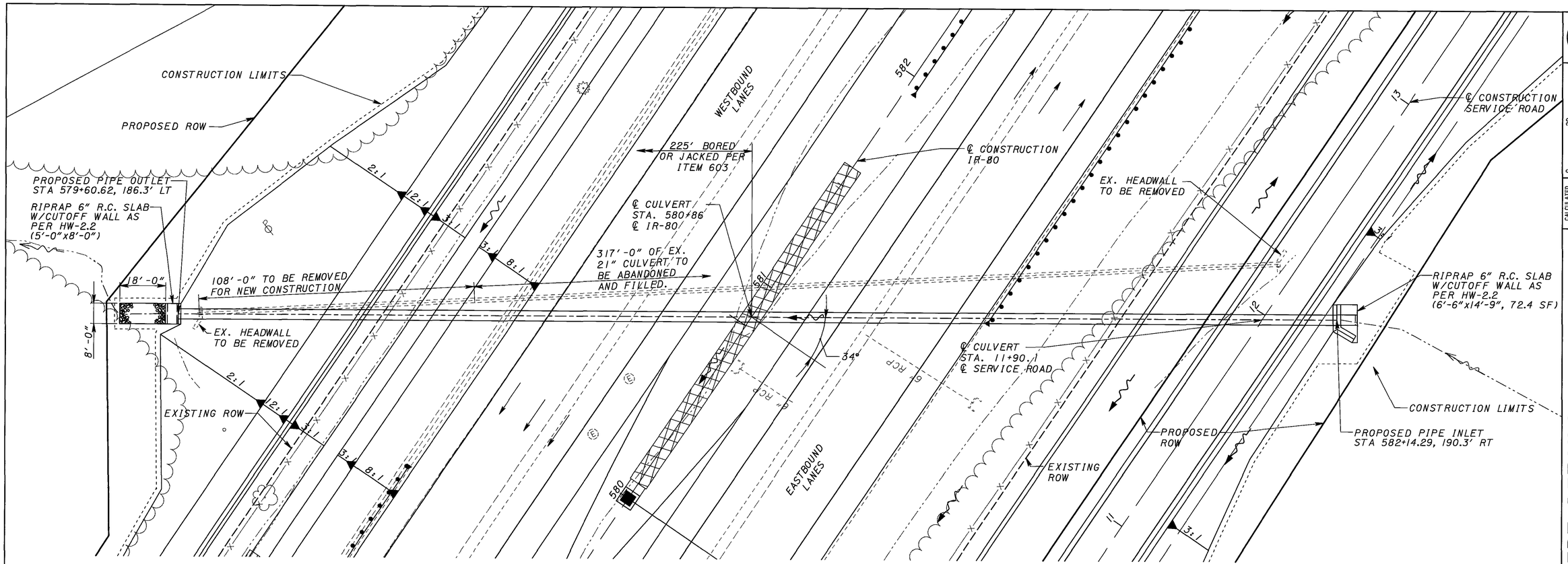
CALCULATED AJP
CHECKED DEK

CULVERT DETAILS STA. 566+20

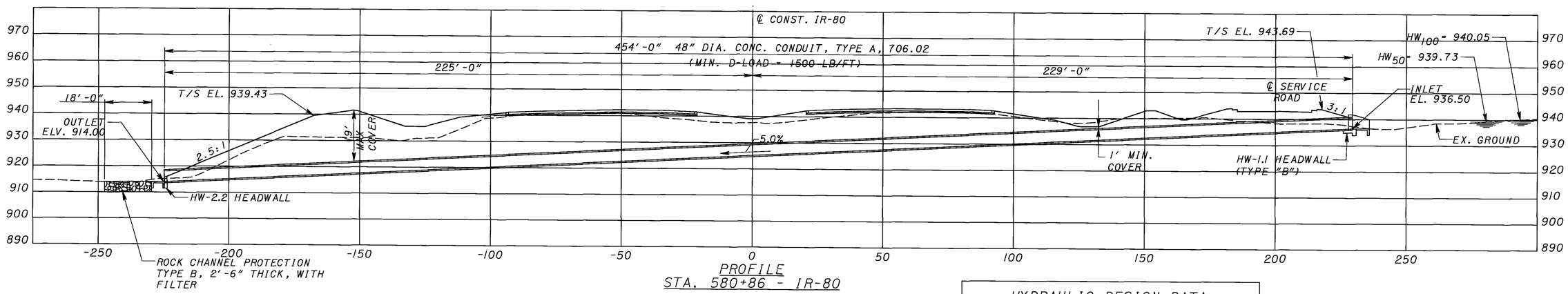
MAH-80-0.97

866
1100

7/21/2005 10:49:49 AM
s:\projects\37700\sheets\00566_20.DGN



PLAN



PROFILE
STA. 580+86 - IR-80

HYDRAULIC DESIGN DATA

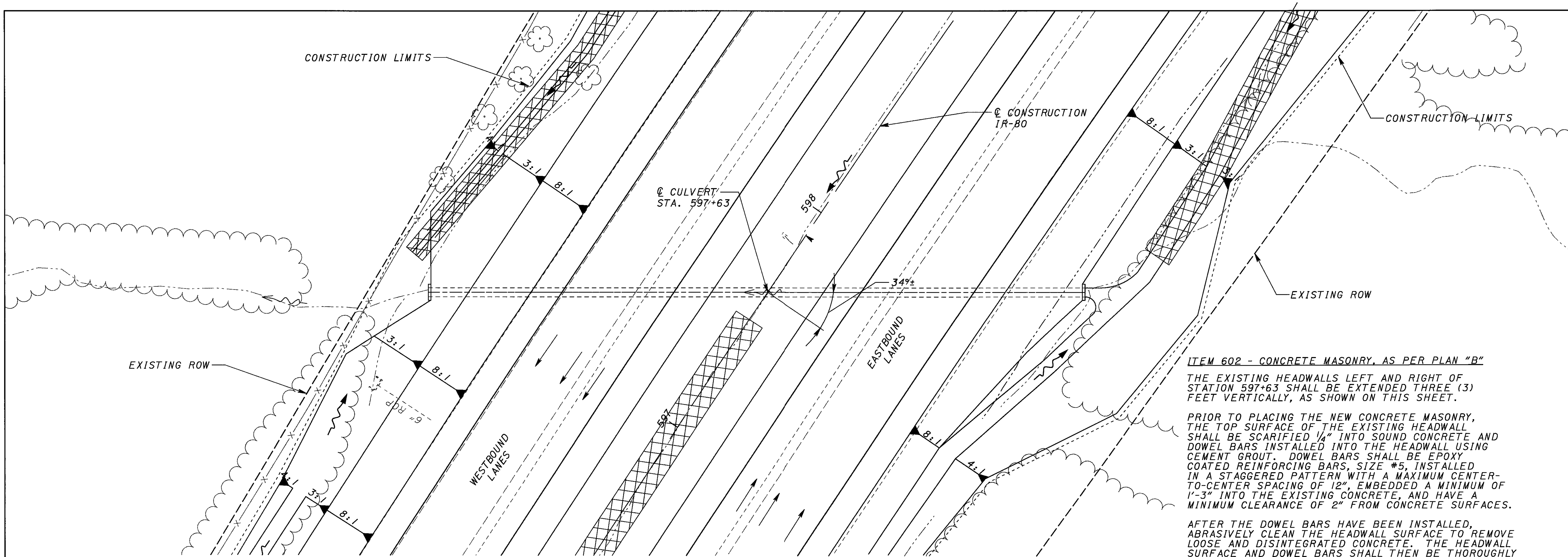
CULVERT DATA	TOTAL
DRAINAGE AREA	= 26.3 ACRES
FLOW (Q50)	= 46.0 FT.^{3}/S
VELOCITY (V50)	= 19.1 FT./S
HEAD WATER ELEV. (HW50)	= 939.7 FT.
FLOW (Q100)	= 54.0 FT.^{3}/S
VELOCITY (V100)	= 20.1 FT./S
HEAD WATER ELEV. (HW100)	= 940.1 FT.

FOR CULVERT QUANTITIES, SEE SHEET 862

CULVERT DETAILS STA. 580+86

MAH-80-0.97

7/21/2005 11:04:57 AM
s:\projects\37700\sheets\UD580_86.DGN



PLAN

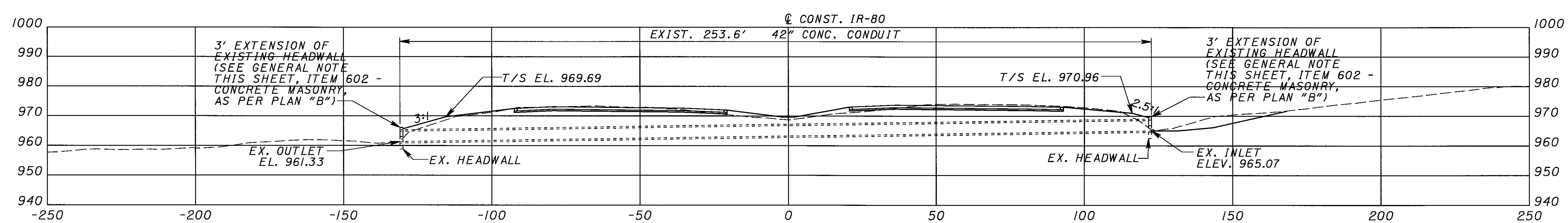
ITEM 602 - CONCRETE MASONRY, AS PER PLAN "B"

THE EXISTING HEADWALLS LEFT AND RIGHT OF STATION 597+63 SHALL BE EXTENDED THREE (3) FEET VERTICALLY, AS SHOWN ON THIS SHEET.

PRIOR TO PLACING THE NEW CONCRETE MASONRY, THE TOP SURFACE OF THE EXISTING HEADWALL SHALL BE SCARIFIED 1/4" INTO SOUND CONCRETE AND DOWEL BARS INSTALLED INTO THE HEADWALL USING CEMENT GROUT. DOWEL BARS SHALL BE EPOXY COATED REINFORCING BARS, SIZE #5, INSTALLED IN A STAGGERED PATTERN WITH A MAXIMUM CENTER-TO-CENTER SPACING OF 12", EMBEDDED A MINIMUM OF 1'-3" INTO THE EXISTING CONCRETE, AND HAVE A MINIMUM CLEARANCE OF 2" FROM CONCRETE SURFACES.

AFTER THE DOWEL BARS HAVE BEEN INSTALLED, ABRASIVELY CLEAN THE HEADWALL SURFACE TO REMOVE LOOSE AND DISINTEGRATED CONCRETE. THE HEADWALL SURFACE AND DOWEL BARS SHALL THEN BE THOROUGHLY CLEANED OF ALL DIRT, DUST AND OTHER FOREIGN MATERIALS BY USING WATER, HIGH PRESSURE AIR, OR OTHER METHODS THAT PRODUCES RESULTS SATISFACTORY TO THE ENGINEER. THE CONCRETE BONDING SURFACE SHALL BE WET WITHOUT FREESTANDING WATER AS CONCRETE MASONRY IS PLACED.

ALL MASONRY WORK SHALL CONFORM TO ITEM 602 OF THE CMS. INSTALLATION OF THE DOWELS SHALL CONFORM TO ITEM 510 OF THE CMS. ALL COSTS FOR LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK SHALL BE INCLUDED FOR PAYMENT WITH ITEM 602 - CONCRETE MASONRY, AS PER PLAN.



PROFILE
STA. 597+63 - IR-80

EXISTING HYDRAULIC DATA	
CULVERT DATA	TOTAL
DRAINAGE AREA	= 110.4 ACRES
FLOW (Q50)	= 78.0 FT.^{3}/S
VELOCITY (V50)	= 14.1 FT./S
HEAD WATER ELEV. (HW50)	= 970.0 FT.

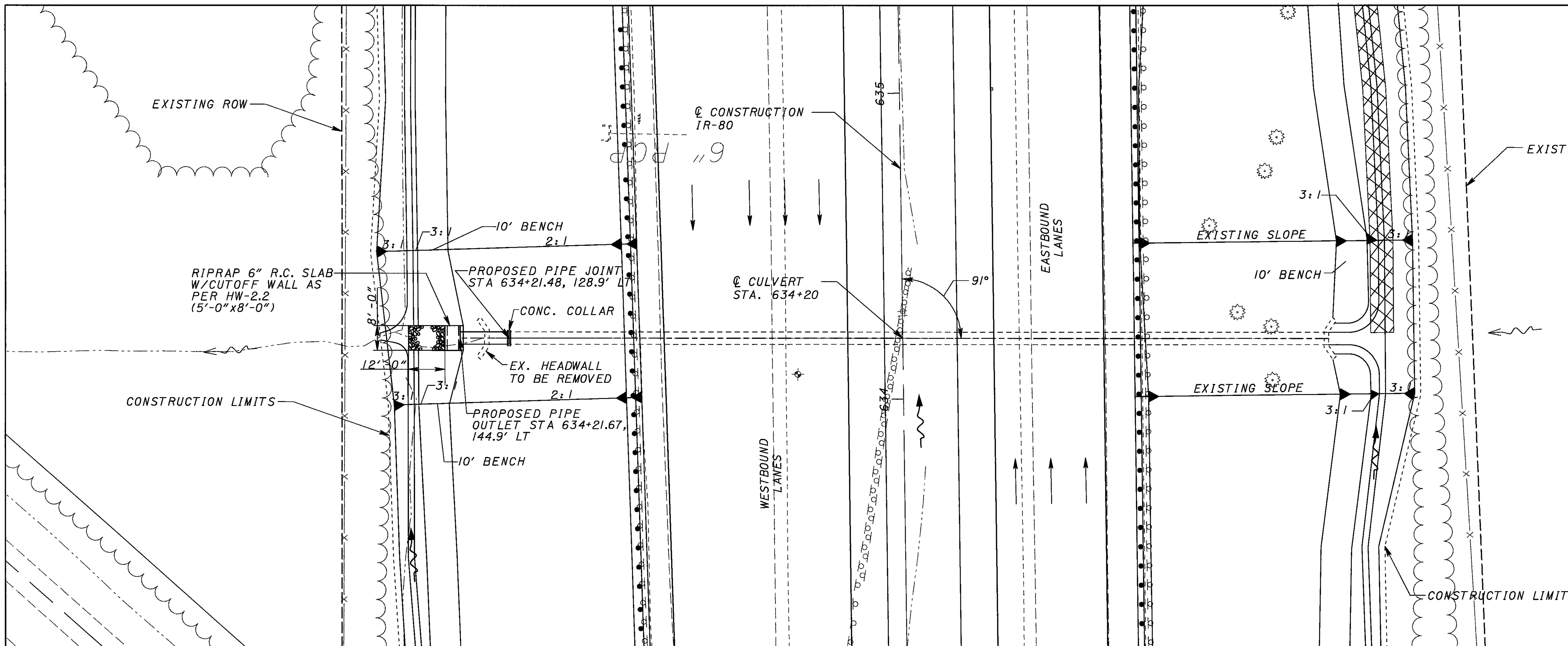
FOR CULVERT QUANTITIES, SEE SHEET 862

CALCULATED AJP
CHECKED DEK

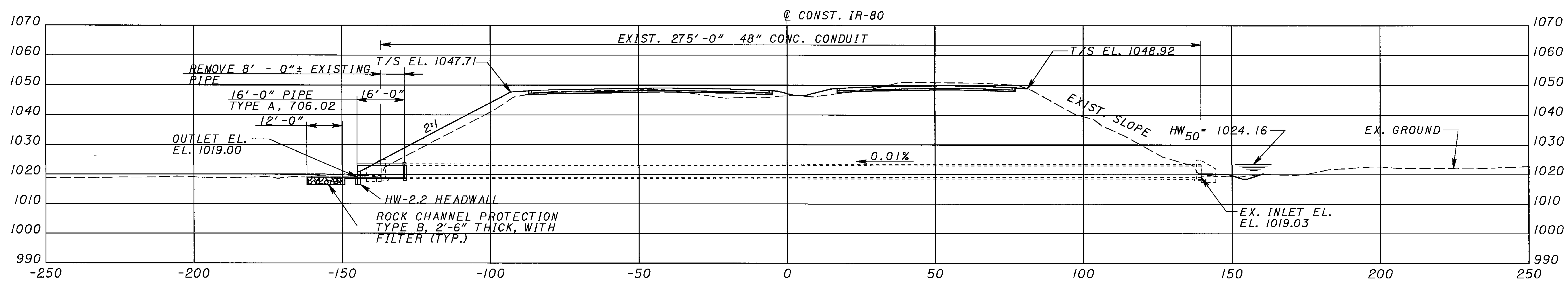
CULVERT DETAILS
STA. 597+63

MAH-80-0.97

7/21/2005 11:05:15 AM
ds\projects\37700\sheets\dd597_63.dgn



PLAN



PROFILE
STA. 634+20 - IR-80

HYDRAULIC DESIGN DATA

CULVERT DATA	TOTAL
DRAINAGE AREA	= 111.4 ACRES
FLOW (Q50)	= 83.5 FT.^{3}/S
VELOCITY (V50)	= 9.0 FT./S
HEAD WATER ELEV. (HW50)	= 1024.2 FT.

FOR CULVERT QUANTITIES, SEE SHEET 862

7/21/2005 11:05:39 AM
s:\projects\37700\sheets\D0634_20.DGN

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED AJP
CHECKED DEK

CULVERT DETAILS STA. 634+20

MAH-80-0.97

W-Beam Transition Cable Guardrail Detail

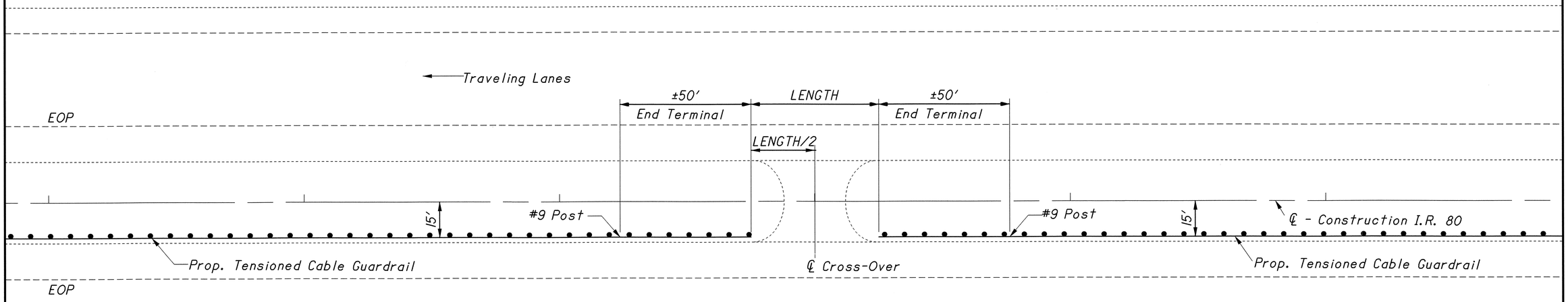
HORIZONTAL SCALE IN FEET
0 20 40 80

DRAWN GLM
CHECKED MDC

MAH-80-0.97

869A
1100

W:\DAN\6080\6080GA002.DGN 13-JAN-2006 10:38AM DDEPTO



Cross-Over Detail Applies:

STATION	SIDE	LENGTH
578+57.00	LT./RT.	170'
610+00.00	LT./LT.	20'

See Typical Sections for proposed Tensioned Cable Guardrail begin and end stations at cross-overs.

HORIZONTAL SCALE IN FEET
0 5 10 20

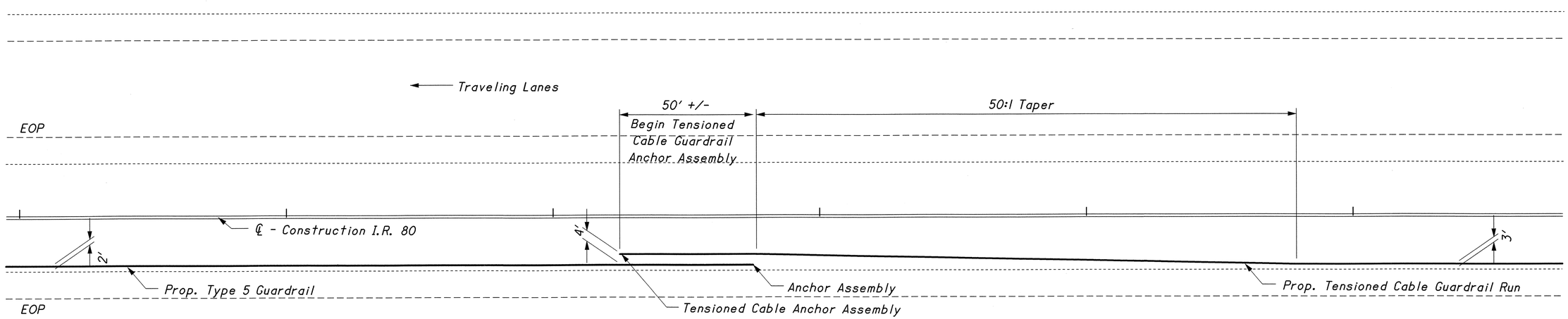
DRAWN TKB
CHECKED MDC

Median Crossover Cable Guardrail Detail

MAH-80-0.97

869B
1100

W:\EDANE\60800\E60800GA001.dgn 13-JAN-2006 10:37AM ddepto



See Typical Sections for proposed Tensioned Cable Guardrail
begin and end stations at overlapping sections

HORIZONTAL SCALE IN FEET
0 5 10 20

DRAWN CLM
CHECKED MDC

I.R. 80
Cable Guardrail Detail

MAH-80-0.97

8690
1100

W:\DAN\6080\6080GA003.DGN 13-JAN-2006 10:40AM DDEPTO

TRAFFIC CONTROL GENERAL NOTES

REMOVAL OF LOGO SIGNS

LOGO SIGNS (WHICH INCLUDE ESTABLISHMENTS FOR GAS, FOOD, LODGING, CAMPING AND ATTRACTIONS) ARE THE PROPERTY OF OHIO LOGOS, INC. AND ARE NOT TO BE REMOVED OR REPLACED BY ODOT STAFF OR BY CONTRACTORS WORKING FOR ODOT. THE CONTRACTOR SHALL NOTIFY OHIO LOGOS (TOLL-FREE 1-800-860-LOGO) AT LEAST SIXTY DAYS PRIOR TO THE DATE OF DESIRED REMOVAL. FAILURE BY OHIO LOGOS TO RESPOND IN REASONABLE TIME MAY NECESSITATE REMOVAL BY ODOT STAFF.

ITEM 630 MAINLINE REFERENCE MARKERS

REFERENCE MARKERS SHALL BE LOCATED AND INSTALLED AS INDICATED ON THESE PLANS. THE DEFAULT INSTALLATION SHALL BE AT 2/10THS OF A MILE INCREMENTS (0, 2, 4, 6, 8).

THE CONTRACTOR SHALL LAYOUT ALL REFERENCE MARKER LOCATIONS TO ASSURE PROPER PLACEMENT. THE LAYOUT SHALL BE APPROVED BY THE ENGINEER BEFORE INSTALLATIONS ARE STARTED.

THE WHOLE DIGIT REFERENCE MARKERS, E.G. 16.0, SHALL BE PLACED AT THE SAME STATION AS THE MILE MARKER.

MAINLINE REFERENCE MARKERS SHALL BE INSTALLED IN THE MEDIAN AS SHOWN IN THE PLANS. ON RAMPS, THE REFERENCE MARKERS SHALL BE INSTALLED ON THE RIGHT SIDE. FOR DIRECTIONAL MAINLINE SEGMENTS, THE MARKER SHALL BE PLACED ON THE LEFT SIDE.

THE HEIGHT OF THE REFERENCE MARKERS SHALL BE SUCH THAT A UNIFORM APPEARANCE IS PRESENTED TO THE MOTORIST.

WHEN A REFERENCE MARKER IS OBSTRUCTED BY A SIGN TRUSS, BRIDGE, PIER OR THE LIKE, THE REFERENCE MARKER SHALL BE RELOCATED 50 FEET FROM THE LAYOUT LOCATION OR NOT INSTALLED WITH THE APPROVAL OF THE ENGINEER.

IF ANY MILE MARKERS ARE MISSING, A PRECISE LOCATION WILL BE PROVIDED BY THE DEPARTMENT. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 30 DAYS IN ADVANCE OF THE PLANNED REFERENCE MARKER INSTALLATION. THE ENGINEER WILL CONTACT THE OFFICE OF TECHNICAL SERVICES WHICH WILL LOCATE THE LONGITUDINAL POSITION OF MISSING MILE MARKERS BY MEANS OF A POINT MARK ON THE PAVEMENT EDGE.

PAYMENT SHALL BE MADE AT THE UNIT BID PRICE PER EACH FOR 630 MAINLINE REFERENCE MARKER AND SHALL INCLUDE ALL LABOR AND MATERIAL FOR INSTALLATION. THE SUMMARY TOTAL IS FOR ESTIMATING ONLY.

PAYMENT WILL BE FOR THE ACTUAL NUMBER INSTALLED.

MILE MARKER LOCATION

THE LOCATION OF MILE MARKERS ON THE PLANS ARE APPROXIMATE AND A MORE PRECISE LOCATION WILL BE PROVIDED BY THE DEPARTMENT. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 30 DAYS IN ADVANCE OF PLANNED DATE OF MARKER INSTALLATION. THE ENGINEER WILL CONTACT THE OFFICE OF TECHNICAL SERVICES WHICH WILL LOCATE THE LONGITUDINAL POSITION OF MILE MARKERS BY MEANS OF A PAINT MARK ON THE PAVEMENT EDGE. ALTERNATE MARKS WILL NOT BE PROVIDED ON DIVIDED HIGHWAYS AND THE CONTRACTOR SHALL SET MARKERS FOR THE OPPOSITE ROADWAY ACROSS FROM THE PROVIDED MARK. DELINEATORS WHOSE NORMAL POSITION FALLS WITHIN 50 FEET OF A MILE MARKER SHALL BE OMITTED.

ITEM 202 - REMOVAL, MISC: AUTOMATIC TRAFFIC RECORDER

THIS WORK SHALL CONSIST OF REMOVAL AND DISPOSAL OF THE EXISTING AUTOMATIC TRAFFIC RECORDER INSTALLATION (ATR NO. 530) THAT INCLUDES THE CONTROLLER CABINET, PEDESTAL, FOUNDATION, SOLAR PANEL, CONDUITS AND FOUR (4) PULLBOXES. EXISTING PHONE DROP LOCATION SHALL BE MAINTAINED FOR THE NEW AUTOMATIC TRAFFIC RECORDER INSTALLATION.

PAYMENT SHALL INCLUDE ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO PERFORM THE WORK AND SHALL BE PAID FOR AT THE LUMP SUM BID FOR ITEM 202 - REMOVAL, MISC: AUTOMATIC TRAFFIC RECORDER.

ITEM 202 - RAISED PAVEMENT MARKER REMOVED

THE EXISTING RAISED PAVEMENT MARKERS SHALL BE REMOVED. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE SUB-SUMMARY.

ITEM 202 - RAISED PAVEMENT MARKER REMOVED 425 EACH

REF NO.	SHEET NO.	STATION FROM		STATION TO		SIDE	621 RPM (1-WAY, WHITE) EACH	621 RPM (2-WAY, WHITE/RED) EACH	621 RPM (2-WAY, YELLOW/RED) EACH	621 RPM REFLECTOR EACH	646 EDGE LINE (YELLOW) MILE	646 EDGE LINE (WHITE) MILE	646 LANE LINE (WHITE) MILE	646 CHANNELIZING LINE (WHITE) FT	646 TRANSVERSE/DIAGONAL LINE FT	646 DOTTED LINE FT	642 EDGE LINE, TYPE I (WHITE) MILE	642 CENTER LINE, TYPE I MILE	642 LANE LINE, TYPE I MILE
EL1	872-873	CL	465+50	CL	475+40	LT						0.19							
EL2	872-877	CL	465+50	CL	539+00	LT					1.4								
EL3	873-877	CL	475+40	CL	539+00	LT						1.21							
EL4	873-877	CL	476+00	BL	539+50	RT					1.21								
EL5	873-874	CL	476+00	CL	488+00	RT						0.23							
EL6	873-877	A	4+70	BL	539+50	RT						1.04							
EL7	879-884	CL	539+00	CL	617+04	LT					1.48	1.48							
EL8	879-884	BL	539+00	CL	617+04	RT					1.48	1.48							
EL9	886-888	CL	617+04	46A	49+00	LT						0.61							
EL10	886-892	CL	617+04	WB	695+00	LT					1.48								
EL11	886-891	CL	617+04	CL	671+00	RT					1.03								
EL12	886-888	CL	617+04	46C	65+00	RT					0.67								
EL13	888	CL	645+10	CL	654+75	LT						0.19							
EL14	888	46C	56+83	46C	65+00	RT			12	24	0.16								
EL15	888-891	CL	646+83	CL	671+00	RT						0.46							
EL16	888-892	46E	79+00	WB	695+00	LT						0.84							
EL17	892-893	680	83+90	680	86+20	LT			3	6		0.03							
EL18	893-896	WB	695+00	WB	883+00	LT/RT						0.78							
EL19	893-894	WB	701+21	WB	715+31	LT					0.27								
EL20	893-894	680	101+21	680	113+50	LT			17	34		0.24							
EL21	892-894	WB	693+90	680	113+50	RT					0.38								
EL22	894	11	122+50	11	126+31	LT			6	12		0.08							
EL23	894-896	11	122+50	WB	883+00	RT					0.47								
EL24	873-874	A	4+70	A	8+00	LT			6	12	0.07								
EL25	888	46A	45+10	46A	49+00	RT			6	12	0.08								
EL26	888	46E	75+25	46E	79+00	LT			6	12	0.08								
LL1	872-877	CL	465+50	CL	539+00	LT	63			63			1.4						
LL2	875-877	CL	510+00	CL	539+00	LT	26			26			0.55						
LL3	873-877	CL	476+00	BL	539+50	RT	54			54			1.21						
LL4	875-877	CL	505+50	BL	539+50	RT	30			30			0.65						
LL5	879-884	CL	539+00	CL	617+04	LT	132			132			2.96						
LL6	879-884	BL	539+00	CL	617+04	RT	132			132			2.96						
LL7	884	CL	613+50	CL	617+04	LT	132			132			2.96						
LL8	886-892	CL	617+04	WB	695+00	LT	131			131			2.96						
LL9	886-892	CL	617+04	WB	690+50	LT	63			63			1.4						
LL10	886-891	CL	617+04	CL	671+00	RT	91			91			2.05						
LL11	887	CL	636+35	CL	639+00	LT	4			4			0.06						
LL12	887-888	CL	641+57	CL	643+66	RT	3			3			0.04						
LL13	889	CL	656+50	CL	659+66	LT	4			4			0.06						
LL14	893-896	WB	695+00	WB	883+00	RT	36			36			0.78						
LL15	893	WB	695+00	WB	698+24	RT	4			4			0.07						
LL16	894	WB	718+00	WB	720+08	RT	3			3			0.04						
LL17	893-894	680	106+50	680	113+50	LT	7			7			0.14						
CL1	873	CL	475+40	CL	479+75	LT		23		46				870					
CL2	873	CL	479+75	CL	485+00	LT	5			5				435					
CL3	887-888	CL	639+00	CL	645+10	LT		16		32				1220					
CL4	888	CL	644+00	CL	646+83	RT		16		32				566					
CL5	888-889	CL	654+75	CL	656+47	LT								344					
CL6	891	WB	690+91	WB	693+88	RT								594					
CL7	893	WB	698+24	WB	701+21	RT		8		16				594					
CL8	894	WB	715+31	WB	718+00	RT		15		30				538					
CL9	874	CL	488+00	CL	492+25	RT		12		24				850					
DL1	873-875	CL	485+00	CL	510+00	LT	22			22						2500			
TL1	873	CL	475+40	CL	476+50	LT									135				
LM1	874	LK	46+00	LK	53+00	LT/RT											0.27	0.14	0.14
BM1	887	MB	48+29	MB	51+71	LT/RT											0.13		
SUBTOTAL							942	90	56	1234	10.26	8.86	20.29	6011	135	2500	0.40	0.14	0.14
TOTALS CARRIED TO SUBSUMMARY, SHEET 871							942	90	56	1234	10.26	8.86	20.29	6011	135	2500	0.40	0.14	0.14

CALCULATED ATR CHECKED JFM

TRAFFIC CONTROL GENERAL NOTES & PAVEMENT MARKINGS QUANTITIES

MAH-80-0.97

SHEET NUMBER						ITEM	TOTAL	UNIT	DESCRIPTION
878	885	890	897	870	913				
				425		202	425	EACH	RAISED PAVEMENT MARKER REMOVED
5	2	4	5			202	16	EACH	DISCONNECT EXISTING CIRCUIT, AS PER PLAN
		LUMP				202	LUMP		REMOVAL MISC.: AUTOMATIC TRAFFIC RECORDER
					80	603	80	FT	4" CONDUIT, TYPE E
				1088		621	1088	EACH	RPM
				1234		621	1234	EACH	RPM REFLECTOR
					1	625	1	EACH	LIGHT POLE, DESIGN ATON15
					1	625	1	EACH	LIGHT POLE FOUNDATION, 24" X 6' DEEP
					80	625	80	FT	CONDUIT, 1", 725.04, AS PER PLAN
					170	625	170	FT	CONDUIT, 3", 725.05, AS PER PLAN
					170	625	170	FT	CONDUIT, JACKED OR DRILLED UNDER PAVEMENT
					90	625	90	FT	TRENCH
					3	625	3	EACH	PULL BOX, 725.08, 18"
					1	625	1	EACH	PULL BOX, 725.08, 24"
2	3	6	3		1	625	15	EACH	GROUND ROD
110	121	66	11			630	308	FT	GROUND MOUNTED SUPPORT, NO. 2 POST
226	238	42	56			630	562	FT	GROUND MOUNTED SUPPORT, NO. 3 POST
28	84					630	112	FT	GROUND MOUNTED SUPPORT, NO. 4 POST
		84				630	84	FT	GROUND MOUNTED SUPPORT, NO. 6 POST
		79	17			630	96	FT	GROUND MOUNTED SUPPORT, W6X9 BEAM
94	46					630	140	FT	GROUND MOUNTED SUPPORT, W8X18 BEAM
	77		42			630	119	FT	GROUND MOUNTED SUPPORT, W10X12 BEAM
	59					630	59	FT	GROUND MOUNTED SUPPORT, W12X30 BEAM
	1	4	1			630	6	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 6
1	2	2	2			630	7	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-7.65, DESIGN 8
200	289	144	39			630	672	SQ FT	SIGN, FLAT SHEET
			16			630	16	SQ FT	SIGN, PERMANENT OVERLAY
1394	723	1181	941			630	4239	SQ FT	SIGN, OVERHEAD EXTRUSHEET
233	398	80	106			630	817	SQ FT	SIGN, GROUND MOUNTED EXTRUSHEET
4	8	4	4			630	20	EACH	BREAKAWAY BEAM CONNECTION
12			4			630	16	EACH	SIGN ATTACHMENT ASSEMBLY
4	8	4	4			630	20	EACH	GROUND MOUNTED BEAM SUPPORT FOUNDATION
4	5	8	5			630	22	EACH	RIGID OVERHEAD SIGN SUPPORT FOUNDATION
27	33	10	4			630	74	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL
6	14	10	7			630	37	EACH	REMOVAL OF GROUND MOUNTED SIGN AND STORAGE
6	14	10	7			630	37	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION
2	5	4	6			630	17	EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND DISPOSAL
36	41	12	6			630	95	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL
3	7	5	6			630	21	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND STORAGE
3	7	5	6			630	21	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND REERECTION
6	12	6	7			630	31	EACH	REMOVAL OF GROUND MOUNTED BEAM SUPPORT AND DISPOSAL
8	3	12	14			630	37	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL
		2	1			630	3	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-12.30
2	2	2	4			630	10	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-7.65
12	1	13	20			631	46	EACH	REMOVAL OF LUMINAIRE AND DISPOSAL
3		4	5			631	12	EACH	REMOVAL OF DISCONNECT SWITCH AND DISPOSAL
12		13	20			631	45	EACH	REMOVAL OF BALLAST AND DISPOSAL
6		7	9			631	22	EACH	REMOVAL OF SIGN WIRING AND DISPOSAL
7	2	4	5			631	18	EACH	REMOVAL OF SIGN SERVICE AND DISPOSAL
8	8					631	16	EACH	REMOVAL MISC.: FLASHING WARNING LIGHT
					12	632	12	EACH	DETECTOR LOOP, AS PER PLAN
					1062	632	1062	FT	LOOP DETECTOR LEAD-IN CABLE
					6	632	6	EACH	SIGNALIZATION, MISC.: PIEZOCABLE AXLE SENSOR CLASS I (11' IN LENGTH TYPICAL)
					1	633	1	EACH	CABINET WITHOUT CONTROLLER, AS PER PLAN
					1	633	1	EACH	CONTROLLER WORK PAD
					1	633	1	EACH	TELEPHONE SERVICE
					1	633	1	EACH	CONTROLLER ITEM, MISC.: SOLAR PANEL
				0.4		642	0.4	MILE	EDGE LINE, TYPE I
				0.14		642	0.14	MILE	LANE LINE, TYPE I
				0.14		642	0.14	MILE	CENTER LINE, TYPE I
				20.29					
				19.12		646	19.12	MILE	EDGE LINE
						646	20.29	MILE	LANE LINE
				6011		646	6011	FT	CHANNELIZING LINE
				135		646	135	FT	TRANSVERSE/DIAGONAL LINE
				2500		646	2500	FT	DOTTED LINE

CALCULATED EFD
CHECKED JFM

SIGNING AND PAVEMENT MARKINGS SUBSUMMARY (REVISED 12/7/05)

MAH-80-0.97

871
1100

12/7/2005 1:43:36 PM
q:\37700\Prelim\Signing\Qty.dgn

LEGEND

(WL) EDGE LINE, WHITE

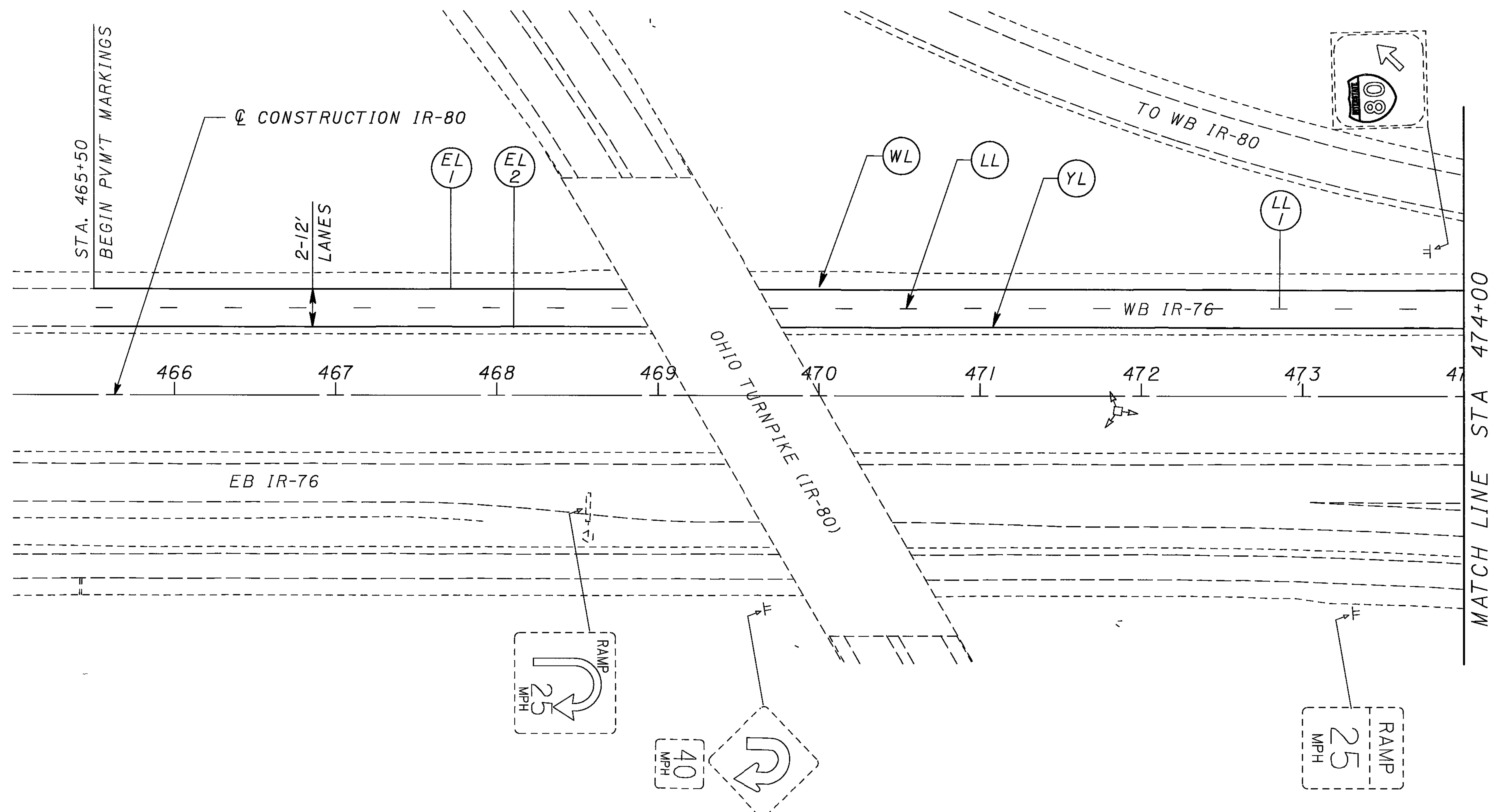
(LL) LANE LINE

(YL) EDGE LINE, YELLOW

EXISTING SIGN, TO BE REMOVED

EXISTING SIGN, TO REMAIN

NEW SIGN



FOR SIGNING QUANTITIES, SEE SHEET 878.
FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 870.

0 25 50 100
HORIZONTAL SCALE IN FEET

CALCULATED ATR
CHECKED JFM

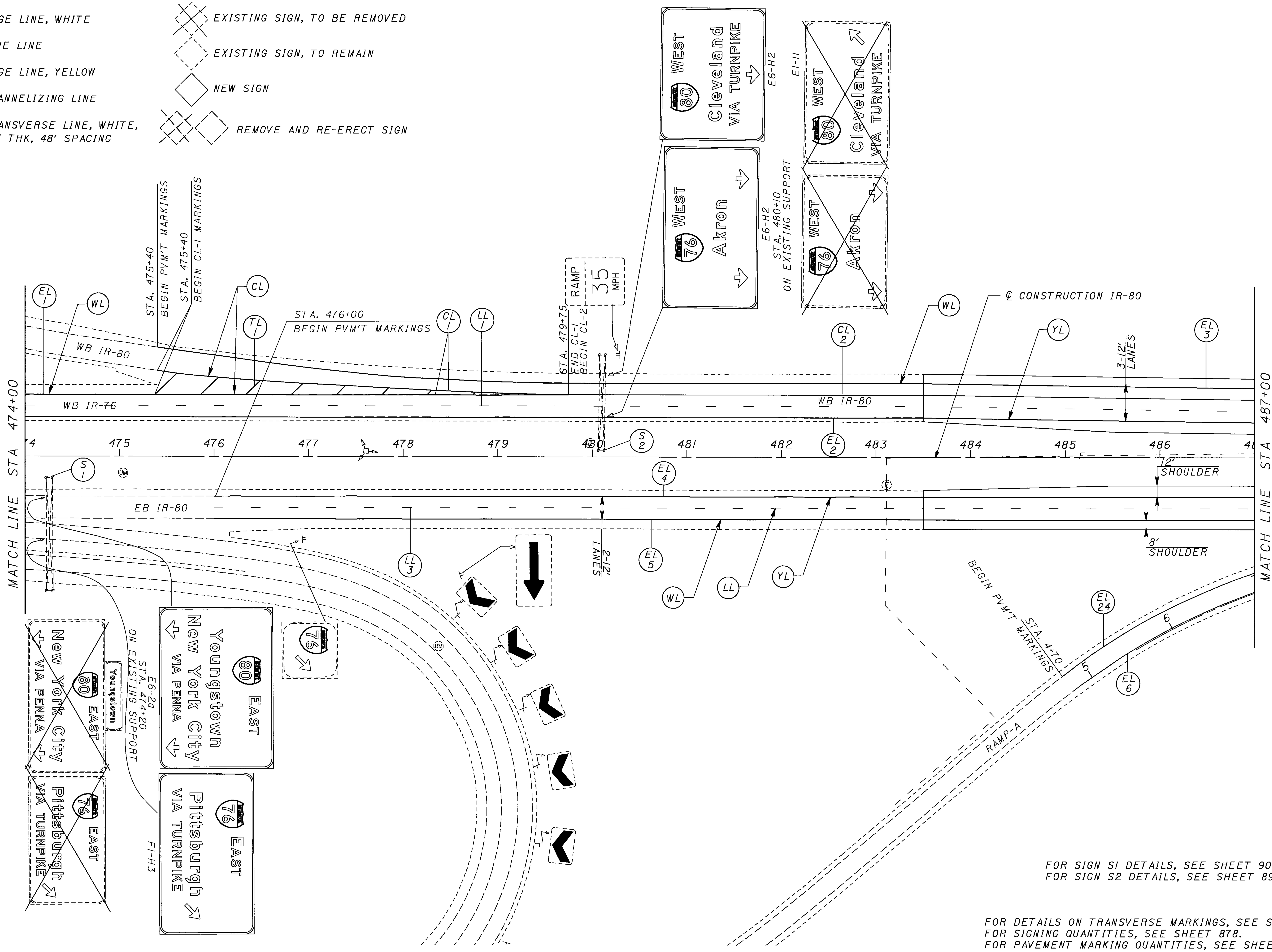
SIGNING AND PAVEMENT MARKING PLAN STA 465+00 TO STA 474+00

MAH-80-0.97

7/20/2005 9:40:32 AM
s:\projects\37700\traffic\ 1esmpl00.dgn

LEGEND

- (WL) EDGE LINE, WHITE
- (LL) LANE LINE
- (YL) EDGE LINE, YELLOW
- (CL) CHANNELIZING LINE
- (TL) TRANSVERSE LINE, WHITE, 24" THK, 48' SPACING
- EXISTING SIGN, TO BE REMOVED
- EXISTING SIGN, TO REMAIN
- NEW SIGN
- REMOVE AND RE-ERECT SIGN



FOR SIGN S1 DETAILS, SEE SHEET 909
FOR SIGN S2 DETAILS, SEE SHEET 898

FOR DETAILS ON TRANSVERSE MARKINGS, SEE SCD TC-72.20.
FOR SIGNING QUANTITIES, SEE SHEET 878.
FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 870.

HORIZONTAL SCALE IN FEET: 0 25 50 100

CALCULATED ATR
CHECKED JFM

SIGNING AND PAVEMENT MARKING PLAN STA 474+00 TO STA 487+00

MAH-80-0.97

7/20/2005 9:41:16 AM
s:\projects\37700\traffic\testmp10.dgn

LEGEND

- (WL) EDGE LINE, WHITE
- (LL) LANE LINE
- (YL) EDGE LINE, YELLOW
- (CL) CHANNELIZING LINE
- (DL) DOTTED LINE, 8" THK 3' LONG, 9' GAPS
- (LM) LIPKEY ROAD MARKINGS

- EXISTING SIGN, TO BE REMOVED
- EXISTING SIGN, TO REMAIN
- NEW SIGN
- REMOVE AND RE-ERECT SIGN
- ************ EXISTING ELECTRICAL CABLE TO BE REMOVED

MEET EXISTING PAVEMENT MARKINGS

WEST 80 Cleveland VIA TURNPIKE (S6)

WEST 80 Cleveland VIA TURNPIKE

WEST 76 Akron

WEST 76 Akron

E4-HI STA. 494+50 ON NEW SUPPORT

MILE 220

OM-3R-12 STA.496+77

D10-3 STA. 497+20

D10-3 STA. 497+00

D10-3 STA. 497+00

℄ CONSTRUCTION IR-80

+00 END CL-2 BEGIN DL-1

10' SHOULDER

WB IR-80

12' SHOULDER

EB IR-80

SHOULDER VARIES 24'-12'

8' SHOULDER

3-12' LANES

2-12' LANES

MATCH LINE STA 487+00

MATCH LINE STA 500+00

RAMP-A

PT STA 6+27.808

W4-3-48 STA. 487+75

STA. 488+00, ℄ RAMP A STA. 8+00
END EL-5, EL-24
BEGIN CL-9

OM-3R-12 STA.495+12

D-12-H5148 STA 494+10

TARGET ENFORCEMENT AREA

FOLLOWING TOO CLOSELY

TARGET ENFORCEMENT AREA

UE/UT

U.G. ELEC.

6" GAS

10" GAS

EDGE LINE, WHITE

ONE DIRECTION, NO-PASSING MARKING, YELLOW

MEET EXISTING PAVEMENT MARKINGS

FOR SIGN S6 DETAILS, SEE SHEET 899

FOR SIGNING QUANTITIES, SEE SHEET 878.
FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 870.

1/20/2005 9:41:38 AM
s:\projects\37100\traffic\testmp102.dgn

HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED ATR CHECKED JFM

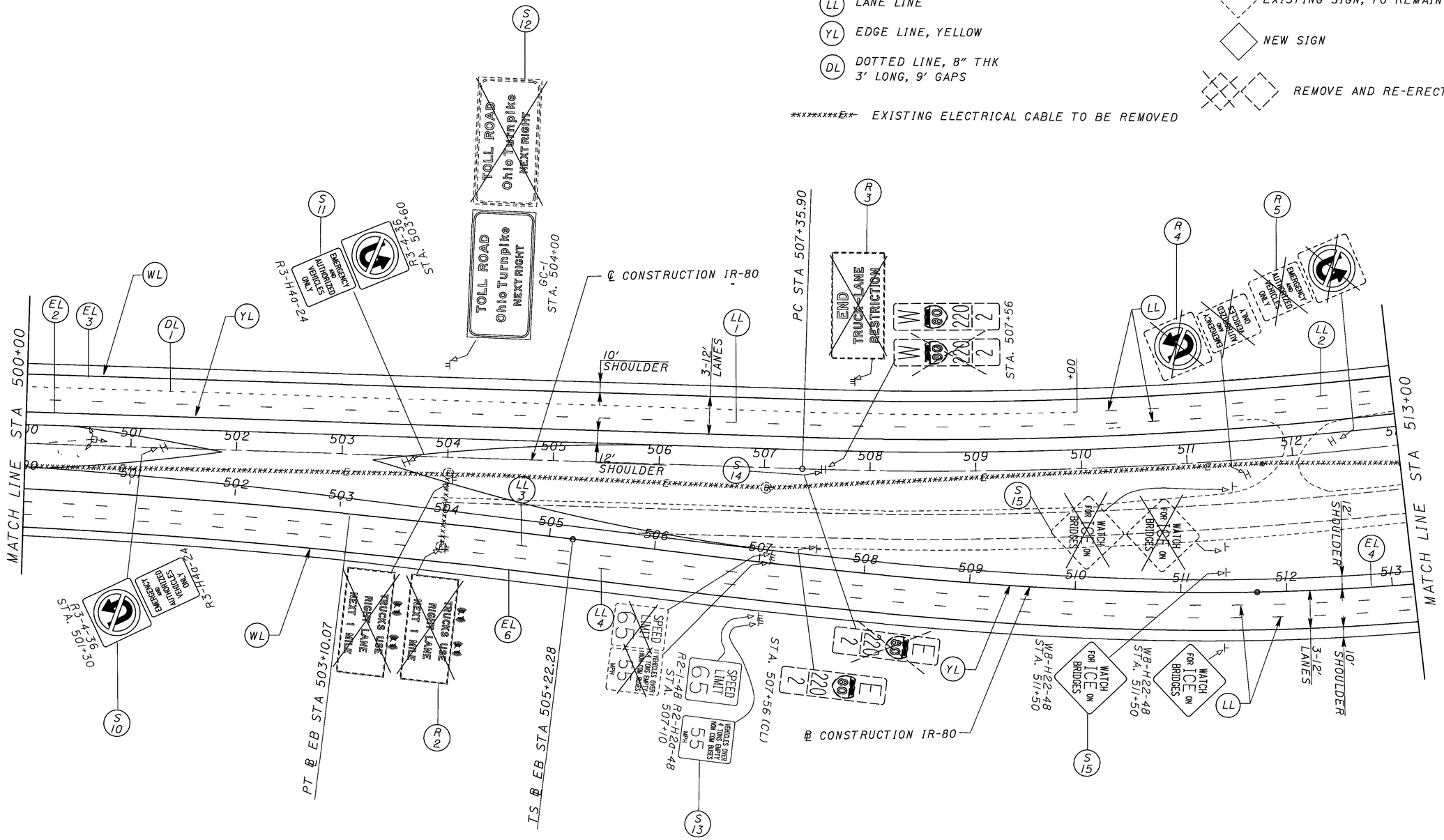
SIGNING AND PAVEMENT MARKING PLAN STA 487+00 TO STA 500+00

MAH-80-0.97

874 1100

LEGEND

- (WL) EDGE LINE, WHITE
- (LL) LANE LINE
- (YL) EDGE LINE, YELLOW
- (DL) DOTTED LINE, 8" THK 3' LONG, 9' GAPS
- ********** EXISTING ELECTRICAL CABLE TO BE REMOVED
- EXISTING SIGN, TO BE REMOVED
- EXISTING SIGN, TO REMAIN
- NEW SIGN
- REMOVE AND RE-ERECT SIGN



FOR SIGN S12 DETAILS, SEE SHEET 900

FOR SIGNING QUANTITIES, SEE SHEET 878.
FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 870.

HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED ATR CHECKED JFM

SIGNING AND PAVEMENT MARKING PLAN STA 500+00 TO STA 513+00

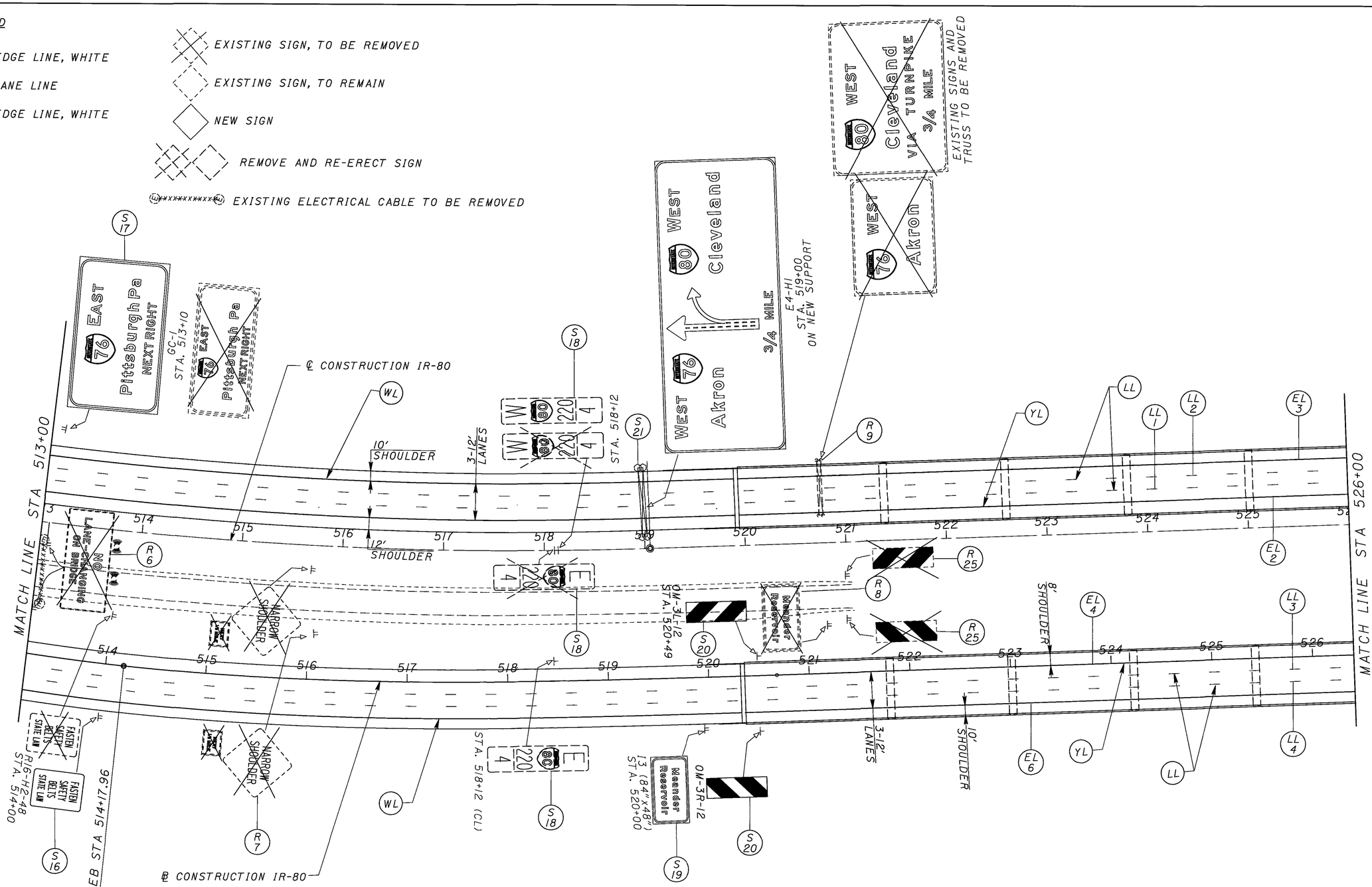
MAH-80-0.97

875 / 1100

7/20/2005 9:41:57 AM
e:\projects\37700\traffic\testmp103.dgn

LEGEND

- (WL) EDGE LINE, WHITE
- (LL) LANE LINE
- (YL) EDGE LINE, WHITE
- EXISTING SIGN, TO BE REMOVED
- EXISTING SIGN, TO REMAIN
- NEW SIGN
- REMOVE AND RE-ERECT SIGN
- (EL) EXISTING ELECTRICAL CABLE TO BE REMOVED



FOR SIGN S17 DETAILS, SEE SHEET 900
FOR SIGN S21 DETAILS, SEE SHEET 901

FOR SIGNING QUANTITIES, SEE SHEET 878.
FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 870.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED ATR
CHECKED JFM

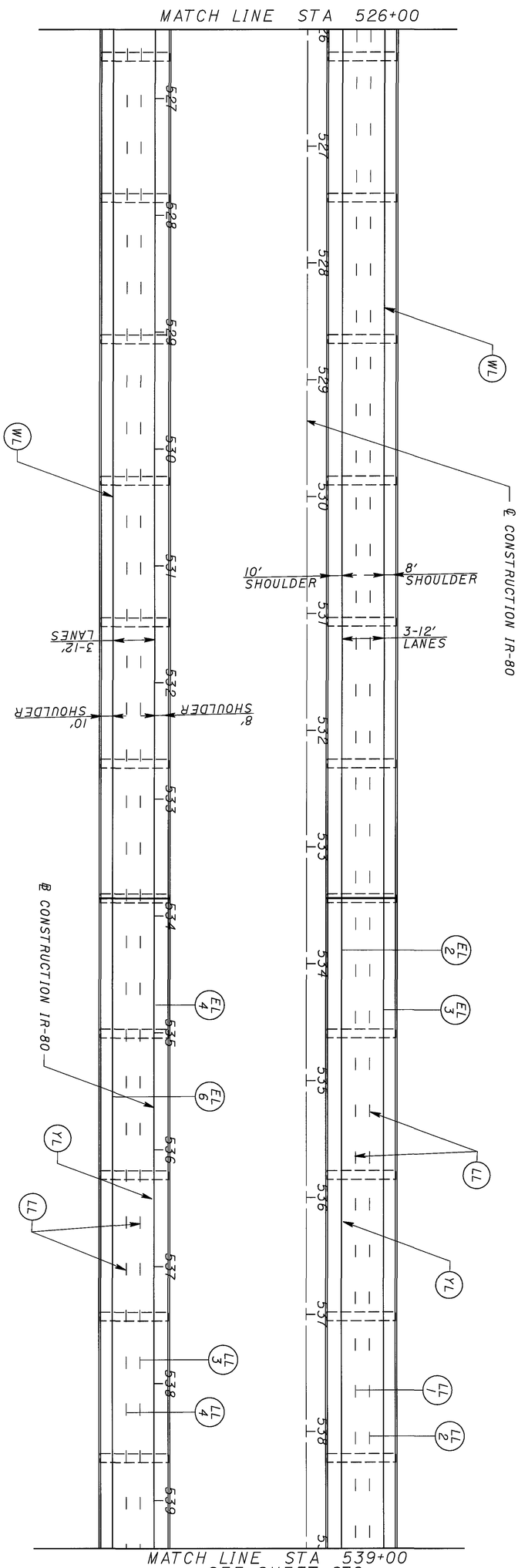
SIGNING AND PAVEMENT MARKING PLAN STA 513+00 TO STA 526+00

MAH-80-0.97

876
1100

7/20/2005 9:46:28 AM
s:\projects\37700\traffic\tesmpl04.dgn

7/20/2005 9:46:44 AM
s:\projects\37700\traffic\testmpl05.dgn



LEGEND

WL EDGE LINE, WHITE

LL LANE LINE

YL EDGE LINE, YELLOW

FOR SIGNING QUANTITIES, SEE SHEET 878.
FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 870.

1100 / 877	MAH-80-0.97	SIGNING AND PAVEMENT MARKING PLAN STA 526+00 TO STA 539+00	CALCULATED ATR / CHECKED JFM	0 50 25 100 HORIZONTAL SCALE IN FEET

LEGEND
⬭ QUANTITIES IN COLUMN REVISED
▭ NEW ITEM/COLUMN

REF NO.	SHEET NO.	STATION FROM		STATION TO		SIDE	625 GROUND ROD EACH	630 GROUND MOUNTED SUPPORT, NO. 2 POST FT	630 GROUND MOUNTED SUPPORT, NO. 3 POST FT	630 GROUND MOUNTED SUPPORT, NO. 4 POST FT	630 GROUND MOUNTED SUPPORT, W8X18 BEAM FT	630 OVERHEAD SIGN SUPPORT, TYPE TC-7.65, DESIGN B EACH	(630) SIGN, FLAT SHEET SQ FT	630 GROUND MOUNTED BEAM SUPPORT FOUNDATION EACH	630 RIGID OVERHEAD SIGN SUPPORT FOUNDATION EACH	630 REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL EACH	630 REMOVAL OF GROUND MOUNTED SIGN AND STORAGE EACH	630 REMOVAL OF GROUND MOUNTED SIGN AND REERECTION EACH	630 REMOVAL OF GROUND MOUNTED MAJOR SIGN AND DISPOSAL EACH	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL EACH	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND STORAGE EACH	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND REERECTION EACH	630 REMOVAL OF GROUND MOUNTED BEAM SUPPORT AND DISPOSAL EACH	630 REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL EACH	630 REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-7.65 EACH	(630) SIGN, OVERHEAD EXTRUSHEET SQ FT	202 DISCONNECT EXISTING CIRCUIT, AS PER PLAN EACH	631 REMOVAL OF LUMINAIRE AND DISPOSAL EACH	631 REMOVAL OF DISCONNECT SWITCH AND DISPOSAL EACH	631 REMOVAL OF BALLAST AND DISPOSAL EACH	631 REMOVAL OF SIGN WIRING AND DISPOSAL EACH	631 REMOVAL OF SIGN SERVICE AND DISPOSAL EACH	631 REMOVAL MISC.: FLASHING WARNING LIGHT EACH	(630) SIGN, GROUND MOUNTED EXTRUSHEET SQ FT	630 SIGN ATTACHMENT ASSEMBLY EACH	(630) BREAKAWAY BEAM CONNECTION EACH
S1	873	CL	474+20	CL	474+20	RT							~~374~~										2		374	1	5	1	5	2	1			6	
S2	873	CL	480+10	CL	480+10	LT							~~324~~										2		324	1	4	1	4	2	1			6	
S3	873	CL	487+75	CL	487+75	RT			28				16																						
S4	874	CL	495+12	CL	495+12	RT		22					6																						
S5	874	CL	494+10	CL	494+10	RT			28				18			2					2														
S6	874	CL	494+50	CL	494+50	LT	1					1	~~319~~		2								2	1	319	1	3	1	3	2	1				
S7	874	CL	497+00	CL	497+00	RT		11					4			1					1														
S8	874	CL	497+00	CL	497+00	LT/RT											2	2				1	1												
S9	874	CL	497+20	CL	497+20	LT		11					4			1					1														
S10	875	CL	501+30	CL	501+30	LT			15				14																						
S11	875	CL	503+60	CL	503+60	RT			15				14																						
S12	875	CL	504+00	CL	504+00	LT					45.2		~~98~~	2						1			2										98		2
S13	875	BL	507+10	BL	507+10	RT			56				40			2					4														
S14	875	CL	507+56	CL	507+56	LT/RT		11									2	2				1	1												
S15	875	BL	511+50	BL	511+50	LT/RT			56				32			2					2														
S16	876	BL	514+00	BL	514+00	RT			28				12			1					2														
S17	876	CL	513+10	CL	513+10	LT					48.3		~~135~~	2						1			2										135		2
S18	876	CL	518+12	CL	518+12	LT/RT		11									2	2				1	1												
S19	876	BL	520+00	BL	520+00	RT				28			28																						
S20	876	BL	520+49	BL	520+49	RT		22					6																						
S21	876	CL	519+00	CL	519+00	LT	1						~~377~~		2										377										
S82	874	CL	496+77	CL	496+77	LT		22					6																						
R1	874	CL	487+75	CL	487+75	RT										1					2														
R2	875	CL	504+00	CL	504+00	LT/RT										2					6								1				2	4	
R3	875	CL	507+84	CL	507+84	LT										1					3														
R4	875	CL	511+56	CL	511+56	RT										2					1														
R5	875	CL	512+38	CL	512+38	LT										2					1														
R6	876	CL	513+07	CL	513+07	RT										2					4								1				2	4	
R7	876	BL	516+06	BL	516+06	LT										4					4														
R8	876	BL	521+20	BL	521+20	LT										1					0			2											
R9	876	CL	520+77	CL	520+77	LT																			2	1									
R24	874	CL	488+80	CL	488+80	RT										1					1														
R25	876	CL	521+00	CL	521+00	LT										2					2														
SUBTOTAL							2	110	226	28	93.5	1	200	4	4	27	6	6	2	36	3	3	6	8	2	1394	5	12	3	12	6	7	8	233	12	4
TOTALS CARRIED TO SUBSUMMARY, SHEET 871							2	110	226	28	94	1	200	4	4	27	6	6	2	36	3	3	6	8	2	1394	5	12	3	12	6	7	8	233	12	4

CALCULATED ATR
CHECKED JFM

SIGNING QUANTITIES (REVISED 12/7/05)
STA 465+00 TO 539+00

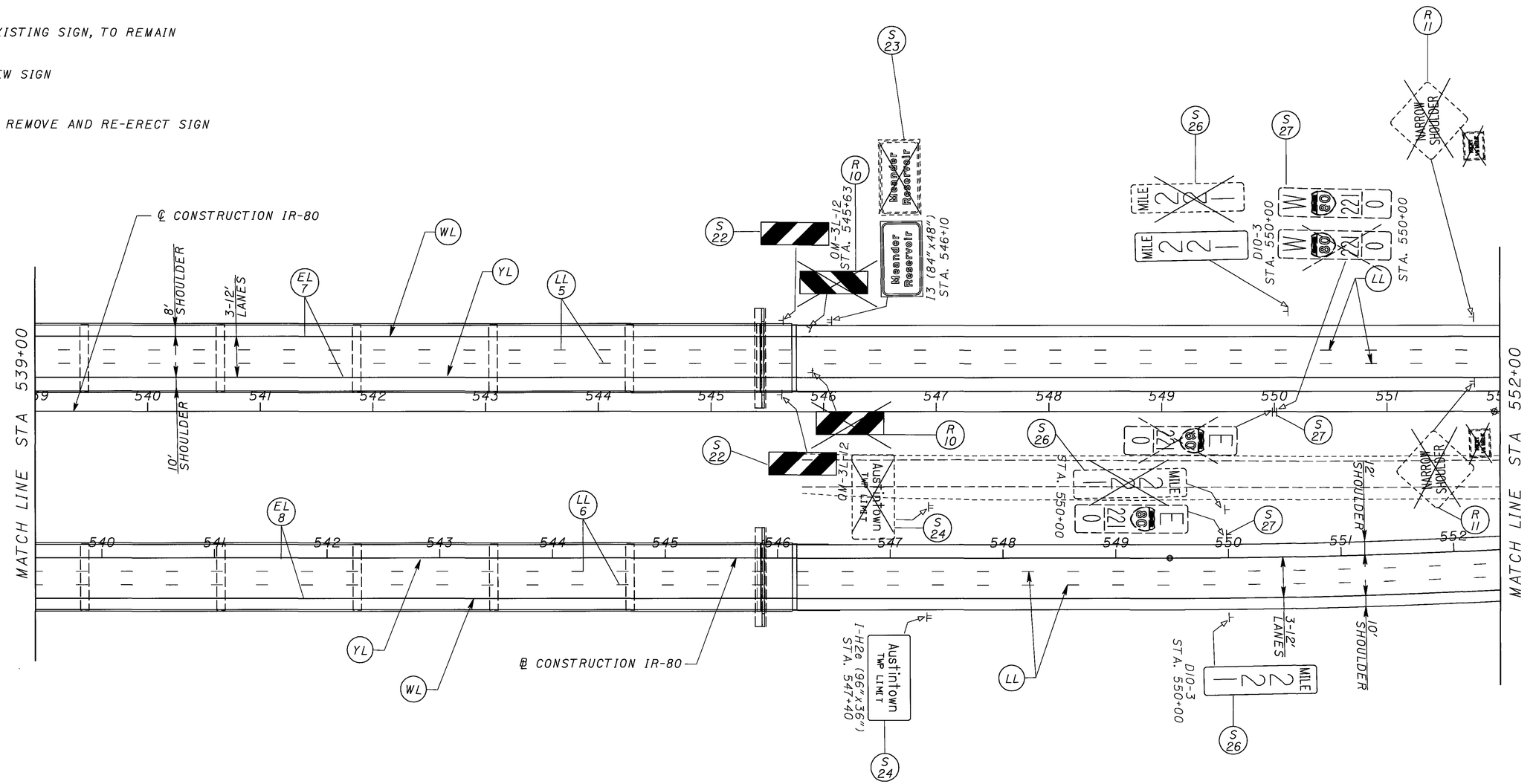
MAH-80-0.97

878
1100

12/7/2005 10:53:53 PM
g:\37100\Pre-bid\Signing\qty.dgn

LEGEND

- (WL) EDGE LINE, WHITE
- (LL) LANE LINE
- (YL) EDGE LINE, YELLOW
- EXISTING SIGN, TO BE REMOVED
- EXISTING SIGN, TO REMAIN
- NEW SIGN
- REMOVE AND RE-ERECT SIGN



FOR SIGNING QUANTITIES, SEE SHEET 885
FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 870.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED ATR
CHECKED JFM

SIGNING AND PAVEMENT MARKING PLAN STA 539+00 TO STA 552+00

MAH-80-0.97

879
1100

7/20/2005 9:47:8 AM
s:\projects\37700\traffic\testmp106.dgn

LEGEND

(WL) EDGE LINE, WHITE

(LL) LANE LINE

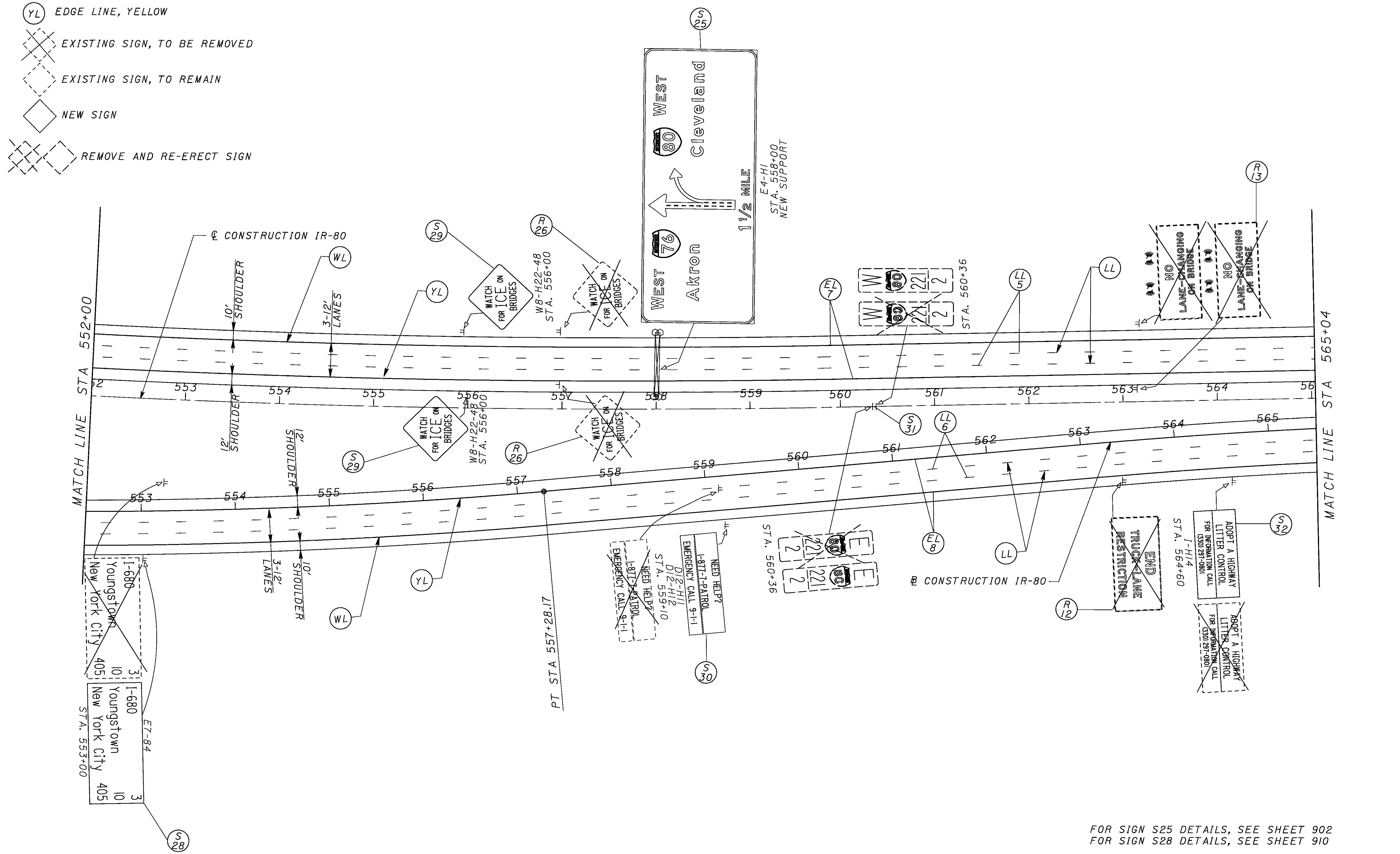
(YL) EDGE LINE, YELLOW

EXISTING SIGN, TO BE REMOVED

EXISTING SIGN, TO REMAIN

NEW SIGN

REMOVE AND RE-ERECT SIGN



FOR SIGN S25 DETAILS, SEE SHEET 902
FOR SIGN S28 DETAILS, SEE SHEET 910

FOR SIGNING QUANTITIES, SEE SHEET 885.
FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 870.

HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED ATR
CHECKED JFM

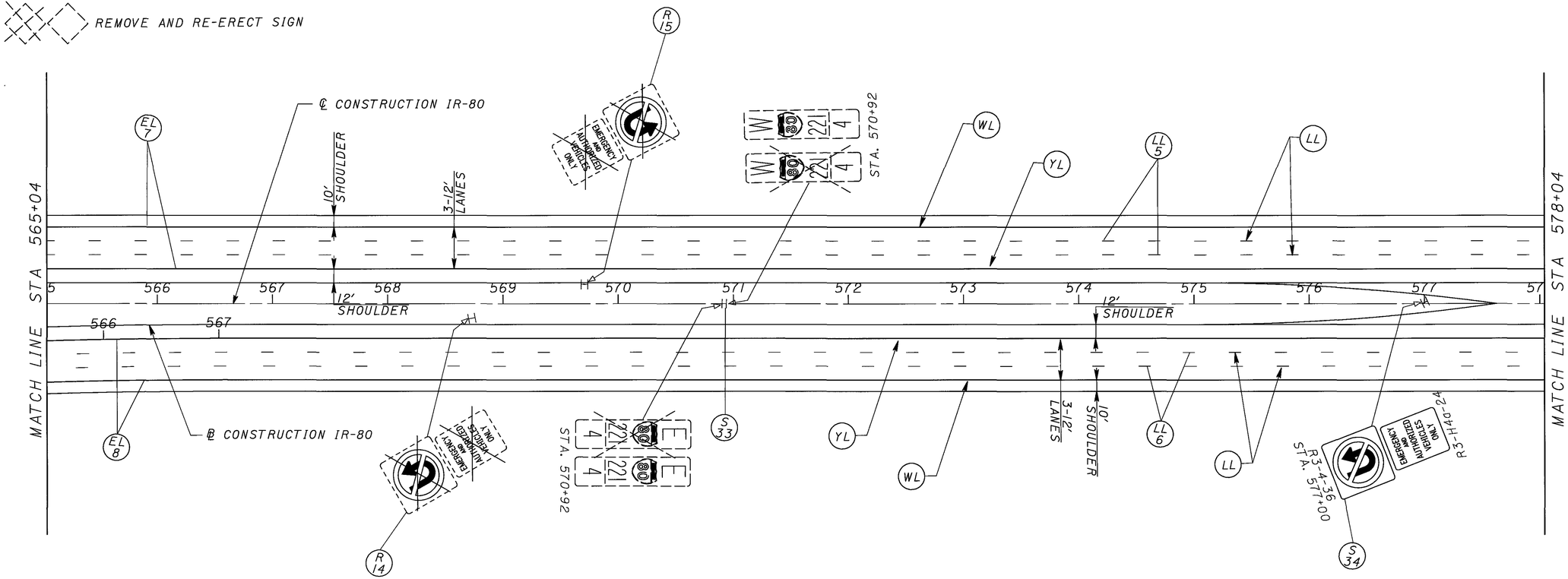
SIGNING AND PAVEMENT MARKING PLAN STA 552+00 TO STA 565+04

MAH-80-0.97

7/20/2005 9:47:31 AM s:\projects\37700\traffic\tesmp07.dgn

LEGEND

- (WL) EDGE LINE, WHITE
- (LL) LANE LINE
- (YL) EDGE LINE, YELLOW
- EXISTING SIGN, TO BE REMOVED
- EXISTING SIGN, TO REMAIN
- NEW SIGN
- REMOVE AND RE-ERECT SIGN



FOR SIGNING QUANTITIES, SEE SHEET 885.
FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 870.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED ATR
CHECKED JFM

SIGNING AND PAVEMENT MARKING PLAN STA 565+04 TO STA 578+04

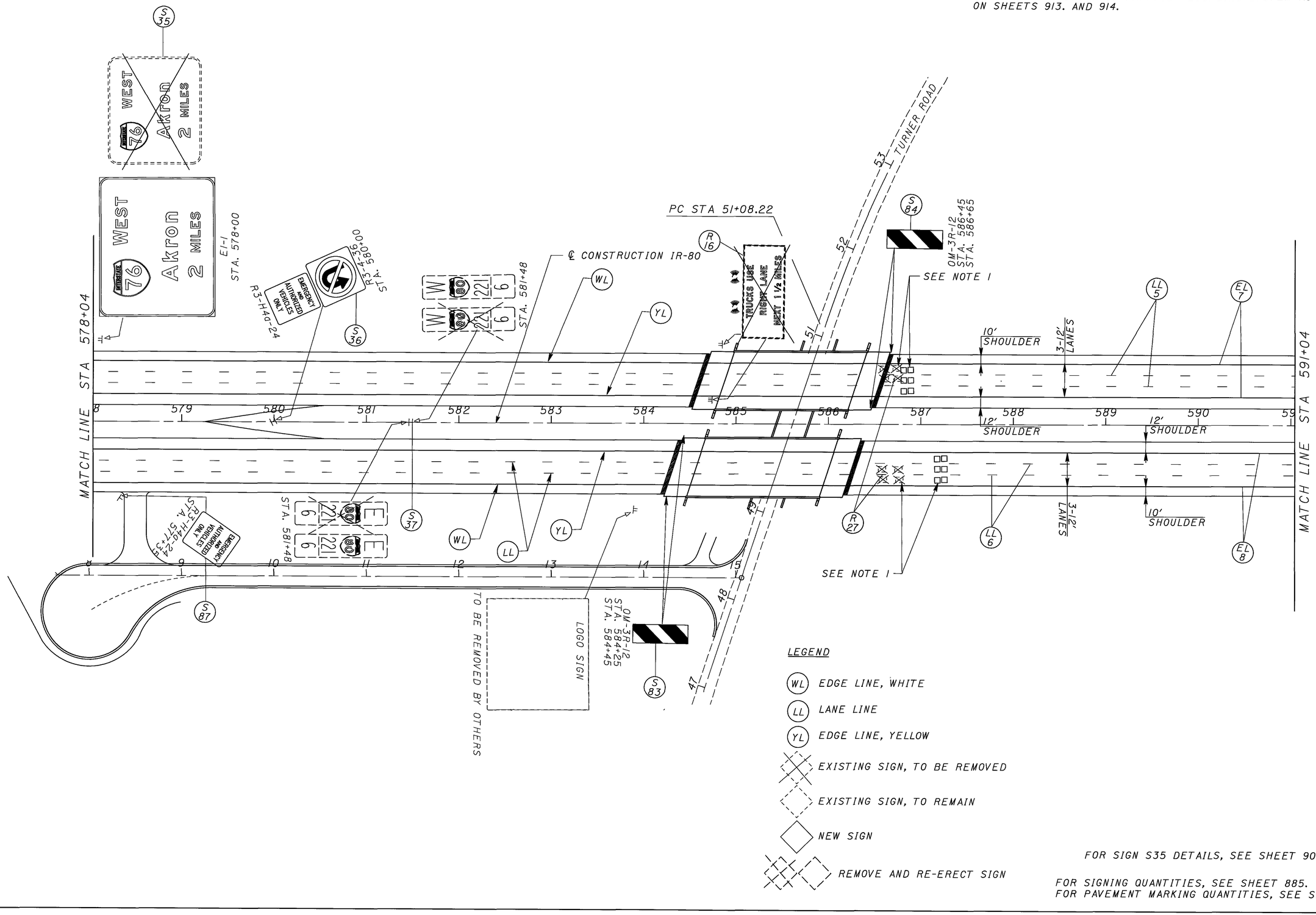
MAH-80-0.97

881
1100

7/20/2005 9:47:59 AM
es\projects\37700\traffic*estmp108.dgn

NOTE 1:

1. REMOVE EXISTING AUTOMATIC TRAFFIC RECORDER INSTALLATION.
2. INSTALL NEW AUTOMATIC TRAFFIC RECORDING SYSTEM AS SHOWN ON SHEETS 913. AND 914.



LEGEND

- (WL) EDGE LINE, WHITE
- (LL) LANE LINE
- (YL) EDGE LINE, YELLOW
- EXISTING SIGN, TO BE REMOVED
- EXISTING SIGN, TO REMAIN
- NEW SIGN
- REMOVE AND RE-ERECT SIGN

FOR SIGN S35 DETAILS, SEE SHEET 902

FOR SIGNING QUANTITIES, SEE SHEET 885.
FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 870.

HORIZONTAL SCALE IN FEET
0 25 50 100

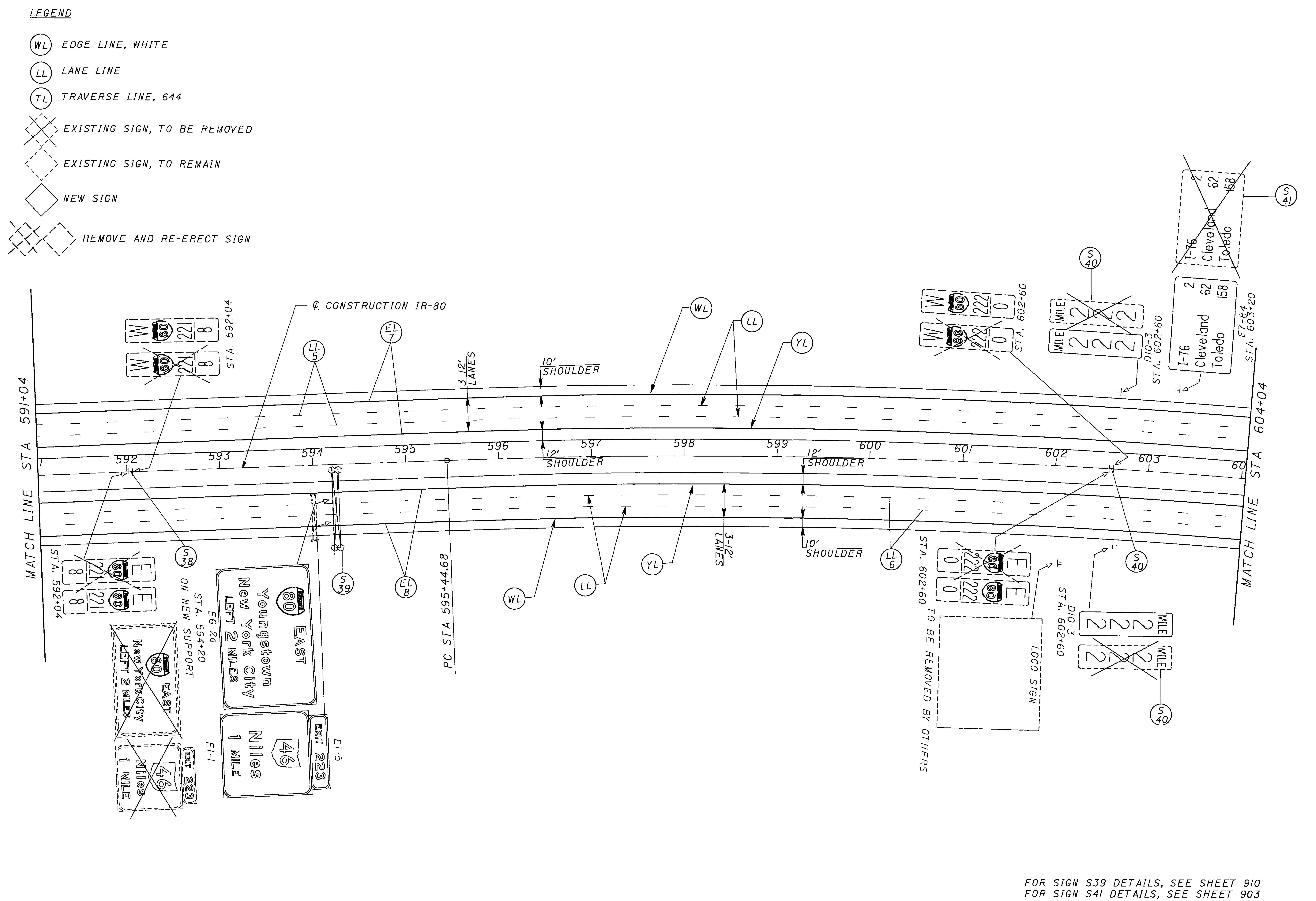
CALCULATED ATR
CHECKED JFM

SIGNING AND PAVEMENT MARKING PLAN STA 578+04 TO STA 591+04

MAH-80-0.97

882
1100

7/26/2005 11:53:08 AM
s:\projects\37700\traffic\testmpl03.dgn



FOR SIGNING QUANTITIES, SEE SHEET 885.
FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 870.

HORIZONTAL SCALE IN FEET

CALCULATED ATR
CHECKED JFM

SIGNING AND PAVEMENT MARKING PLAN STA 591+04 TO STA 604+04

MAH-80-0.97

7/20/2005 9:48:27 AM
e:\projects\37700\traffic\testmp10.dgn

LEGEND

(WL) EDGE LINE, WHITE

(LL) LANE LINE

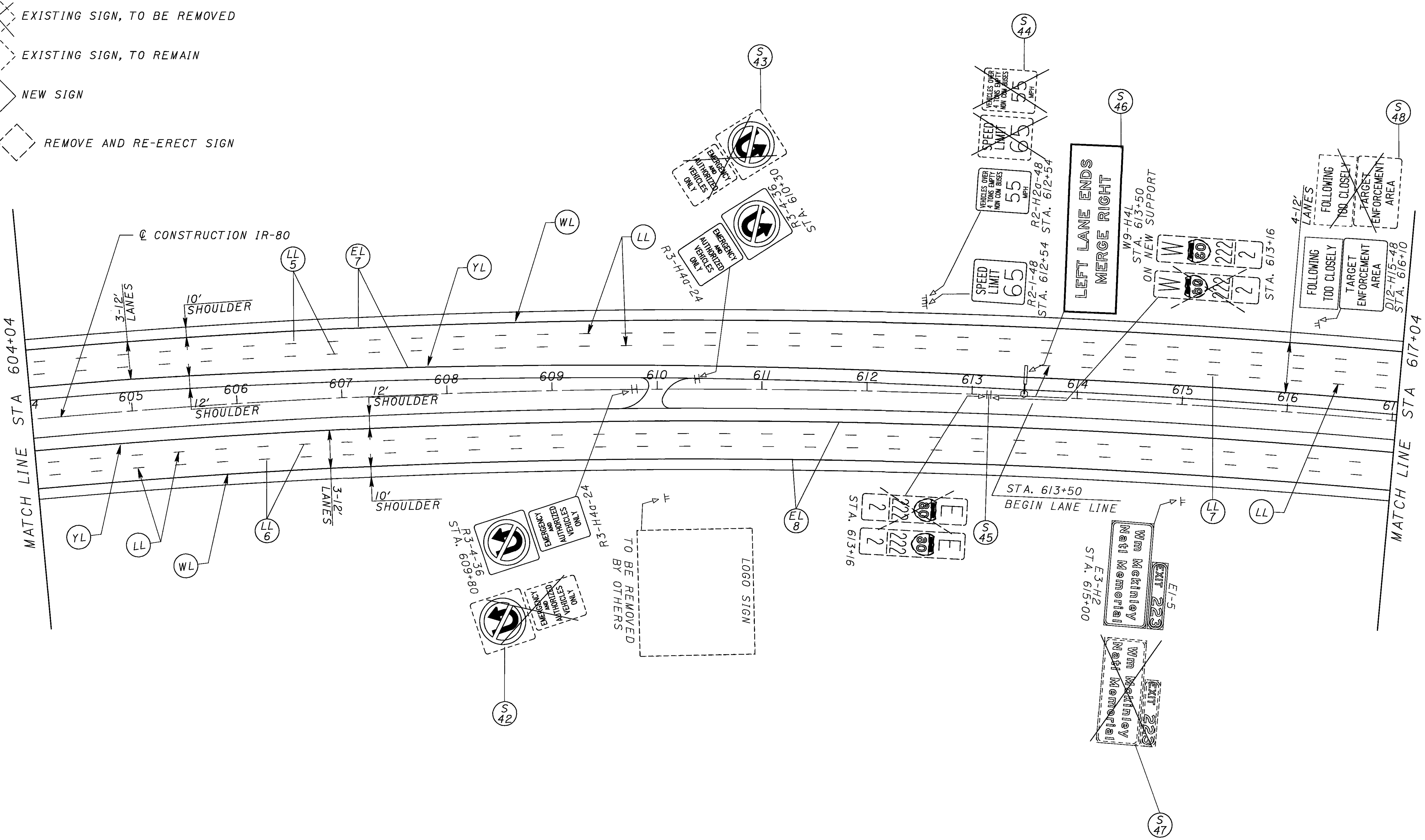
(YL) EDGE LINE, YELLOW

EXISTING SIGN, TO BE REMOVED

EXISTING SIGN, TO REMAIN

NEW SIGN

REMOVE AND RE-ERECT SIGN



FOR SIGN S46 DETAILS, SEE SHEET 903
FOR SIGN S47 DETAILS, SEE SHEET 911

FOR SIGNING QUANTITIES, SEE SHEET 885.
FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 870.

HORIZONTAL SCALE IN FEET: 0 25 50 100

CALCULATED ATR
CHECKED JFM

SIGNING AND PAVEMENT MARKING PLAN STA 604+04 TO STA 617+04

MAH-80-0.97

7/20/2005 9:48:50 AM
s:\projects\37700\traffic\tesfmpll.dgn

LEGEND
⬭ QUANTITIES IN COLUMN REVISED
▭ NEW ITEM/COLUMN

REF NO.	SHEET NO.	STATION FROM		STATION TO		SIDE	625 GROUND ROD EACH	630 GROUND MOUNTED SUPPORT, NO. 2 POST FT	630 GROUND MOUNTED SUPPORT, NO. 3 POST FT	630 GROUND MOUNTED SUPPORT, NO. 4 POST FT	630 GROUND MOUNTED SUPPORT, W8X18 BEAM FT	630 GROUND MOUNTED SUPPORT, W10X12 BEAM FT	630 GROUND MOUNTED SUPPORT, W12X30 BEAM FT	630 OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 6 EACH	630 OVERHEAD SIGN SUPPORT, TYPE TC-7.65, DESIGN 8 EACH	(630) SIGN, FLAT SHEET SQ FT	630 GROUND MOUNTED BEAM SUPPORT FOUNDATION EACH	630 RIGID OVERHEAD SIGN SUPPORT FOUNDATION EACH	630 REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL EACH	630 REMOVAL OF GROUND MOUNTED SIGN AND STORAGE EACH	630 REMOVAL OF GROUND MOUNTED SIGN AND REERECTION EACH	630 REMOVAL OF GROUND MOUNTED MAJOR SIGN AND DISPOSAL EACH	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL EACH	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND STORAGE EACH	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND REERECTION EACH	630 REMOVAL OF GROUND MOUNTED BEAM SUPPORT AND DISPOSAL EACH	630 REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL EACH	630 REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-7.65 EACH	[630] SIGN, OVERHEAD EXTRUSHEET SQ FT	202 DISCONNECT EXISTING CIRCUIT, AS PER PLAN EACH	631 REMOVAL OF LUMINAIRE AND DISPOSAL EACH	[630] SIGN, GROUND MOUNTED EXTRUSHEET SQ FT	[630] BREAKAWAY BEAM CONNECTION EACH	631 REMOVAL OF SIGN SERVICE AND DISPOSAL EACH	631 REMOVAL MISC.: FLASHING WARNING LIGHT EACH
S22	879	CL	545+63	CL	545+63	LT		22								6																		
S23	879	CL	546+10	CL	546+10	LT				28						28				1					2									
S24	879	BL	547+40	BL	547+40	LT				28						24				1				2										
S25	880	CL	558+00	CL	558+00	LT	1								1	~~377~~		2											377					
S26	879	BL	550+00	BL	550+00	LT/RT		22								8				2				2										
S27	879	BL	550+00	CL	550+00	LT/RT		11													2	2			1	1								
S28	880	BL	553+00	BL	553+00	RT						39.1				~~65~~	2						1		2					65	2			
S29	880	CL	556+00	CL	556+00	LT			56							32																		
S30	880	BL	559+10	BL	559+10	RT				28						40				1				2										
S31	880	CL	560+36	CL	560+36	LT/RT															2	2			1	1								
S32	880	BL	564+60	BL	564+60	RT			28							12				1				2										
S33	881	CL	570+92	CL	570+92	LT/RT															2	2			1	1								
S34	881	CL	577+00	CL	577+00	LT/RT			14							14																		
S35	882	CL	578+00	CL	578+00	LT							58.6		·	~~168~~	2						1		2					168	2			
S36	882	CL	580+00	CL	580+00	LT/RT			14							14																		
S37	882	CL	581+48	CL	581+48	LT/RT															2	2			1	1								
S38	883	CL	592+04	CL	592+04	LT/RT															2	2			1	1								
S39	883	CL	594+20	CL	594+20	RT	1								1	~~266~~		2									3	2	266		1				
S40	883	CL	602+60	CL	602+60	LT/RT		22								8				2	2	2		2	1	1								
S41	883	CL	603+20	CL	603+20	LT					45.8					~~105~~	2						1		2					105	2			
S42	884	CL	609+80	CL	609+80	LT/RT			14							14				2				1										
S43	884	CL	610+30	CL	610+30	LT			14							14				2				1										
S44	884	CL	612+54	CL	612+54	LT			56							40				2				4										
S45	884	CL	613+16	CL	613+16	LT/RT															2	2			1	1								
S46	884	CL	613+50	CL	613+50	LT	1							1		~~80~~		1											80					
S47	884	CL	615+00	CL	615+00	RT						37.7				~~60~~	2						2		2					60	2			
S48	884	CL	616+10	CL	616+10	LT			28							18				2				2										
S83	882	CL	584+25	CL	584+45	RT		22								6																		
S84	882	CL	586+45	CL	586+65	LT		22								6																		
S87	882	CL	577+35	CL	577+35	RT			14							5																		
R10	879	CL	545+90	CL	545+90	LT														2				2										
R11	880	CL	551+78	CL	551+78	LT														4				4										
R12	880	BL	563+42	BL	563+42	RT														1							2							
R13	880	CL	563+15	CL	563+15	LT														2				4					1			1	4	
R14	881	CL	568+73	CL	568+73	RT														2				1										
R15	881	CL	569+71	CL	569+71	LT														2				1										
R16	882	CL	584+80	CL	584+80	LT														2				8					1			1	4	
R26	880	CL	559+90	CL	556+90	LT														2				3										
SUBTOTAL							3	121	238	84	45.8	76.8	58.6	1	2	289	8	5	33	14	14	5	41	7	7	12	3	2	723	2	1	398	8	2	8
TOTALS CARRIED TO SUBSUMMARY, SHEET 871							3	121	238	84	46	77	59	1	2	289	8	5	33	14	14	5	41	7	7	12	3	2	723	2	1	398	8	2	8

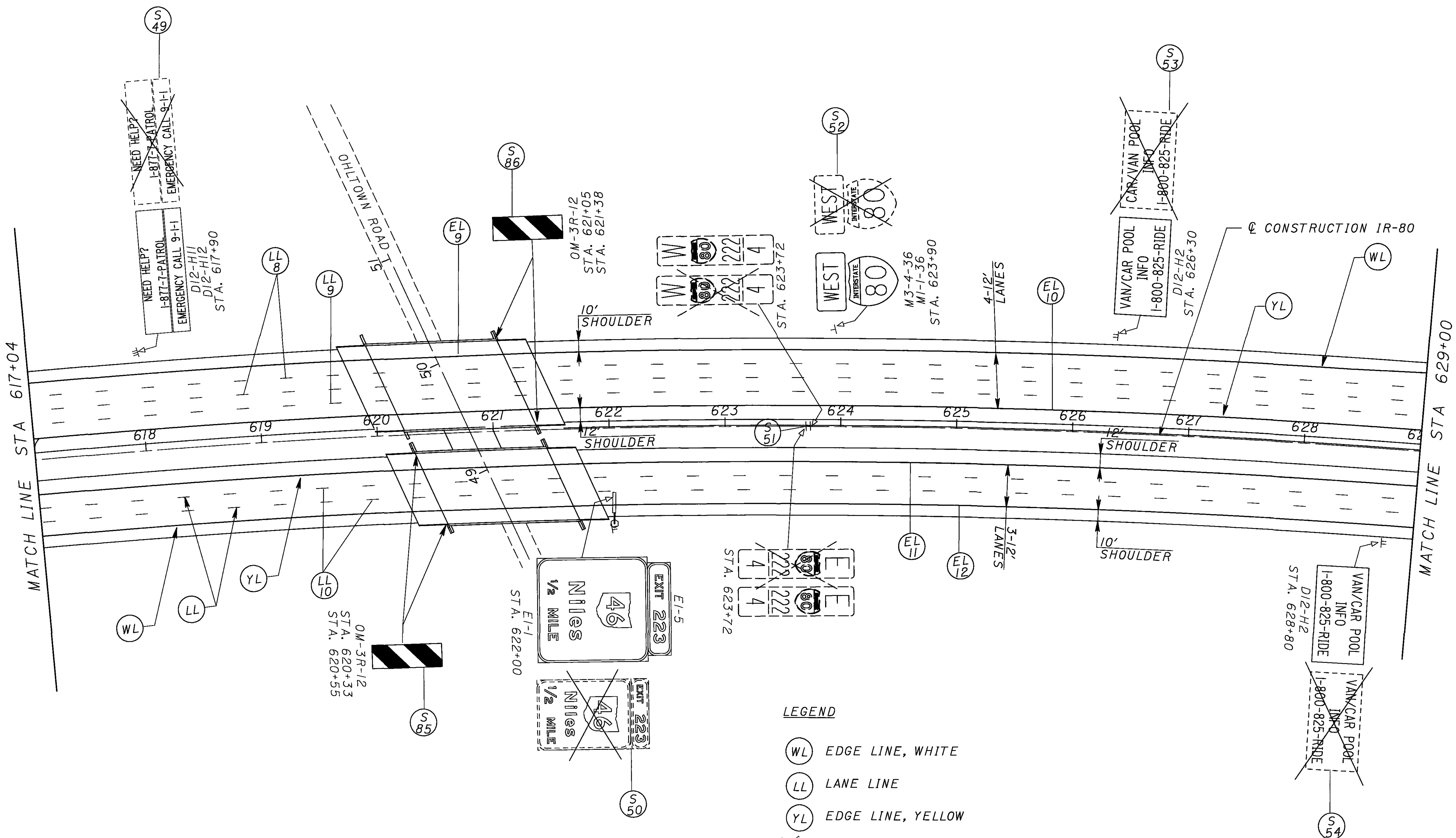
SIGNING QUANTITIES (REVISED 12/7/05)
STA 539+00 TO 617+04

CALCULATED ATR
CHECKED JFM

MAH-80-0.97

885
1100

12/1/2005 10:35:17 PM
gi:\37100\Pre-bid\Signing\Qty.dgn



LEGEND

- WL EDGE LINE, WHITE
- LL LANE LINE
- YL EDGE LINE, YELLOW
- EXISTING SIGN, TO BE REMOVED
- EXISTING SIGN, TO REMAIN
- NEW SIGN
- REMOVE AND RE-ERECT SIGN

FOR SIGN S50 DETAILS, SEE SHEET 911

FOR SIGNING QUANTITIES, SEE SHEET 890
FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 870.

SIGNING AND PAVEMENT MARKING PLAN STA 617+04 TO STA 629+00

MAH-80-0.97

HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED ATR
CHECKED JFM

7/20/2005 9:49:24 AM
s:\projects\37700\traffic\festmpl12.dgn

SIGNING AND PAVEMENT MARKING PLAN
STA 629+00 TO STA 643+04

CALCULATED ATR
CHECKED JFM

HORIZONTAL SCALE IN FEET
0 25 50 100

N

MAH-80-0.97

887
1100

MATCH LINE STA 629+00

PT STA 629+76.95

STA. 48+29
BEGIN PVM'T MARKINGS

10' LANE

STA. 51+71
END PVM'T MARKINGS

52 53 54
METROPARKS BIKEWAY

STA. 634+28

℄ CONSTRUCTION IR-80

16' SHOULDER

3-12' LANES

10' SHOULDER

LEFT LANE ENDS
1/2 MILE
W9-H5L
STA. 640+00
ON NEW SUPPORT

16' RAMP
8' SHOULDER
4-12' LANES

STA. 641+57
BEGIN LANE LINE

E I-H3
STA. 638+80

E I-5

Niles 46 EXIT 223

MATCH LINE STA 643+04

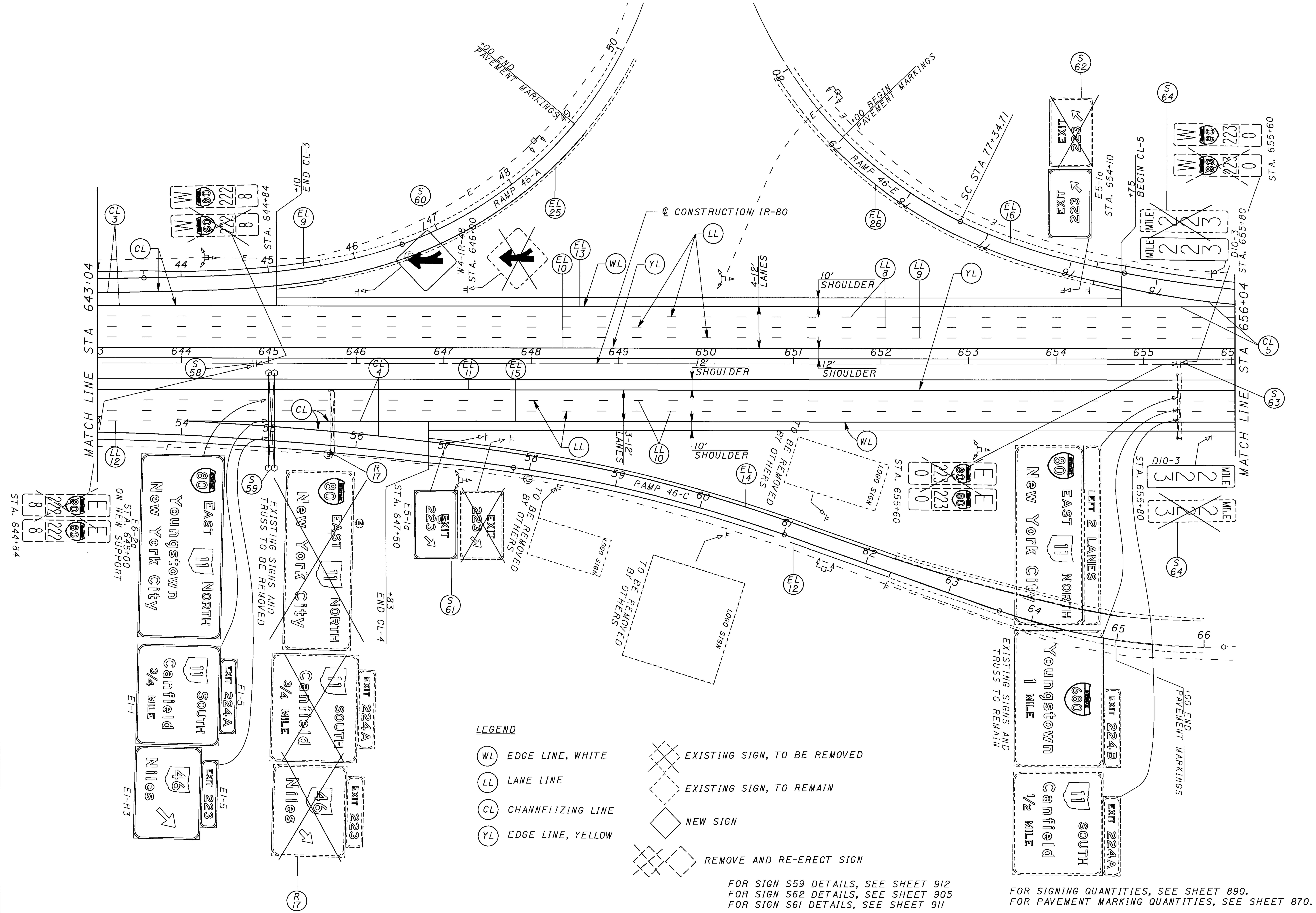
LEGEND

- (CL) CHANNELIZING LINE
- (WL) EDGE LINE, WHITE
- (LL) LANE LINE
- (YL) EDGE LINE, YELLOW
- (BM) METROPARKS BIKEWAY MARKINGS EDGE LINE, WHITE
- EXISTING SIGN, TO BE REMOVED
- EXISTING SIGN, TO REMAIN
- NEW SIGN
- REMOVE AND RE-ERECT SIGN

FOR SIGN S56 DETAILS, SEE SHEET 911
FOR SIGN S57 DETAILS, SEE SHEET 903

FOR SIGNING QUANTITIES, SEE SHEET 890
FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 870.

7/20/2005 9:49:42 AM
e:\projects\37100\traffic\east\mpl3.dgn



MATCH LINE STA 643+04
MATCH LINE STA 656+04
RAMP 46-A
RAMP 46-E
RAMP 46-C
℄ CONSTRUCTION IR-80
+00 END PAVEMENT MARKINGS
+00 BEGIN PAVEMENT MARKINGS
SC STA 77+34.71
+10 END CL-3
+75 BEGIN CL-5
+83 END CL-4
4-12' LANES
3-12' LANES
10' SHOULDER
12' SHOULDER
TO BE REMOVED BY OTHERS
LOGO SIGN
EXISTING SIGNS AND TRUSS TO BE REMOVED
EXISTING SIGNS AND TRUSS TO REMAIN
W4-IR-48 STA. 646+00
E5-1a STA. 647+50
E5-1a STA. 654+10
E6-2a STA. 645+00 ON NEW SUPPORT
STA. 644+84
STA. 655+60
STA. 655+80
D10-3
80 EAST 11 NORTH Youngstown New York City
11 SOUTH Canfield 3/4 MILE
EXIT 224A
46 Niles
EXIT 223
LEFT 2 LANES
680 Youngstown 1 MILE
EXIT 224B
11 SOUTH Canfield 1/2 MILE

LEGEND

- (WL) EDGE LINE, WHITE
- (LL) LANE LINE
- (CL) CHANNELIZING LINE
- (YL) EDGE LINE, YELLOW
- EXISTING SIGN, TO BE REMOVED
- EXISTING SIGN, TO REMAIN
- NEW SIGN
- REMOVE AND RE-ERECT SIGN

FOR SIGN S59 DETAILS, SEE SHEET 912
FOR SIGN S62 DETAILS, SEE SHEET 905
FOR SIGN S61 DETAILS, SEE SHEET 911

FOR SIGNING QUANTITIES, SEE SHEET 890.
FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 870.

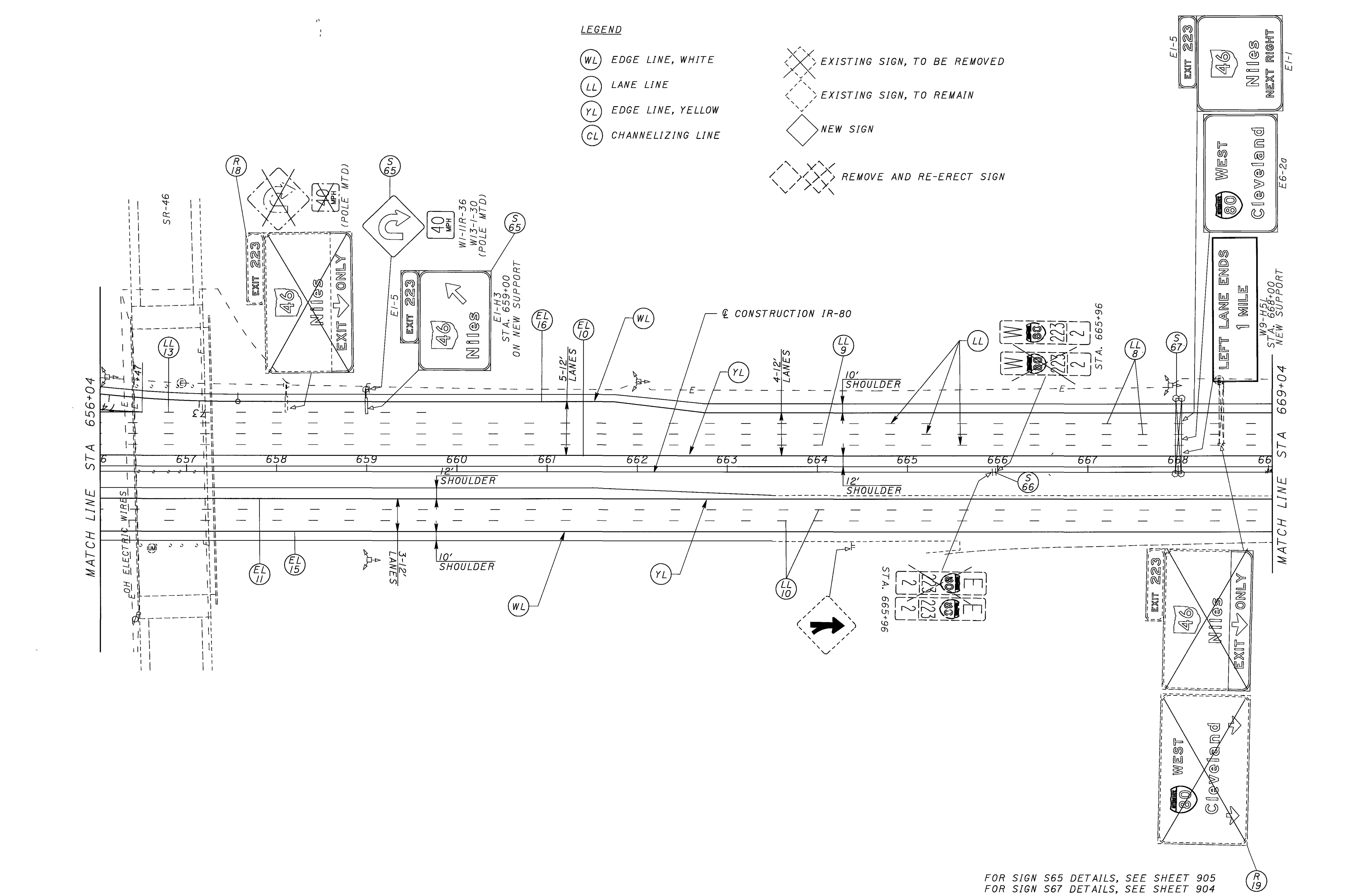
HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED ATR
CHECKED JFM

SIGNING AND PAVEMENT MARKING PLAN STA 643+04 TO STA 656+04

MAH-80-0.97

7/20/2005 9:50:05 AM s:\projects\37700\traffic\tesmpl4.dgn



FOR SIGN S65 DETAILS, SEE SHEET 905
FOR SIGN S67 DETAILS, SEE SHEET 904

FOR SIGNING QUANTITIES, SEE SHEET 890
FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 870.

0 25 50 100
HORIZONTAL SCALE IN FEET

CALCULATED ATR
CHECKED JFM

SIGNING AND PAVEMENT MARKING PLAN STA 656+04 TO STA 669+04

MAH-80-0.97

7/20/2005 9:50:22 AM
s:\projects\37700\traffic\festmpl15.dgn

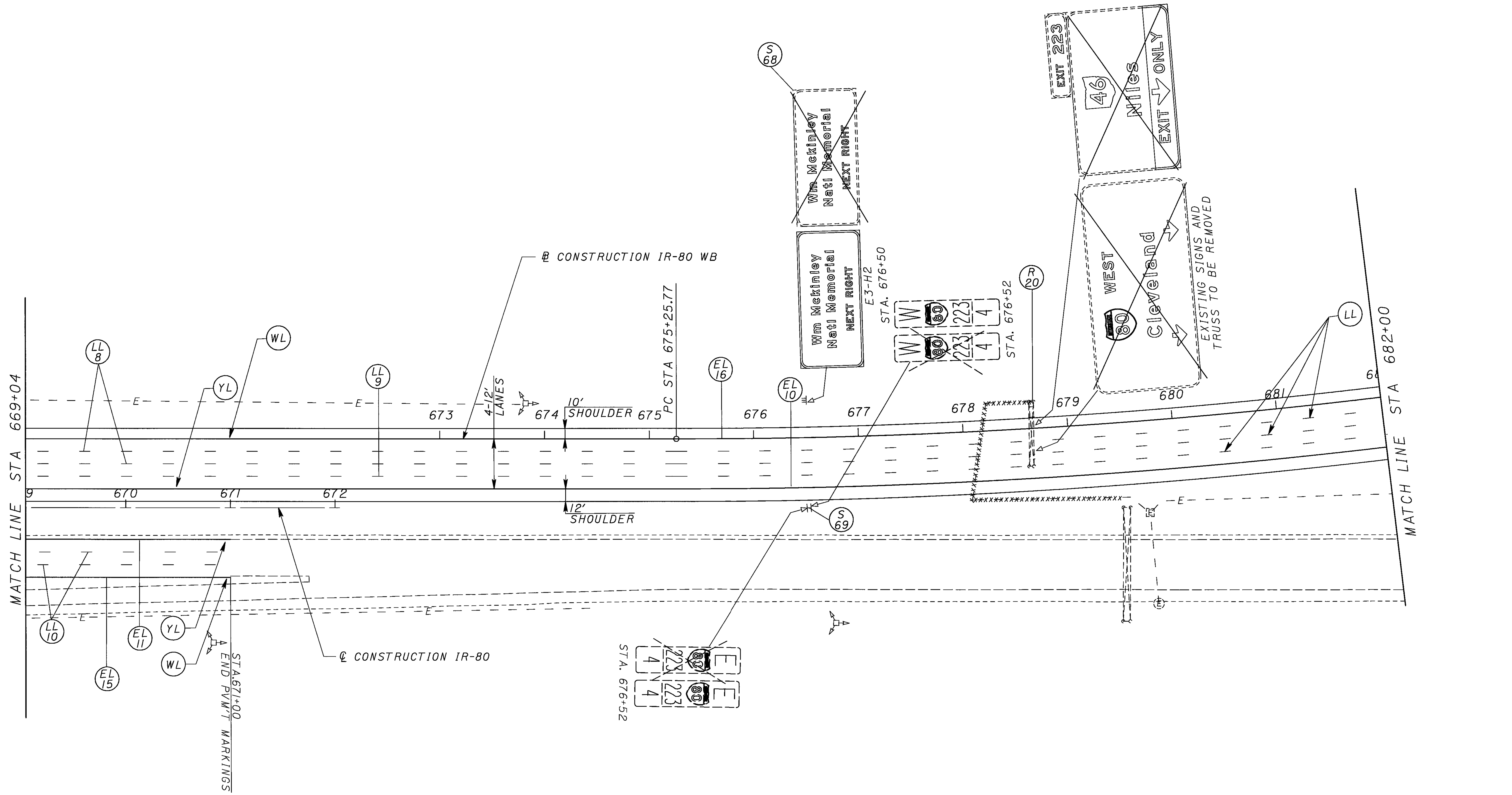
LEGEND
QUANTITIES IN COLUMN REVISED
NEW ITEM/COLUMN

REF NO.	SHEET NO.	STATION FROM		STATION TO		SIDE	202 REMOVAL, MISC: AUTOMATIC TRAFFIC RECORDER	630 SIGN, OVERHEAD EXTRUSHEET	625 GROUND ROD	630 GROUND MOUNTED SUPPORT, NO. 2 POST	630 GROUND MOUNTED SUPPORT, NO. 3 POST	630 GROUND MOUNTED SUPPORT, NO. 6 POST	630 GROUND MOUNTED SUPPORT, W6X9 BEAM	630 OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 6	630 OVERHEAD SIGN SUPPORT, TYPE TC-7.65, DESIGN 8	630 SIGN, FLAT SHEET	630 GROUND MOUNTED BEAM SUPPORT FOUNDATION	630 RIGID OVERHEAD SIGN SUPPORT FOUNDATION	630 REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	630 REMOVAL OF GROUND MOUNTED SIGN AND STORAGE	630 REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	630 REMOVAL OF GROUND MOUNTED MAJOR SIGN AND DISPOSAL	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND REERECTION	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND STORAGE	630 REMOVAL OF GROUND MOUNTED BEAM SUPPORT AND DISPOSAL	630 REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL	630 REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-12.30	630 REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-7.65	202 DISCONNECT EXISTING CIRCUIT, AS PER PLAN	631 REMOVAL OF LUMINAIRE AND DISPOSAL	631 REMOVAL OF DISCONNECT SWITCH AND DISPOSAL	631 REMOVAL OF BALLAST AND DISPOSAL	631 REMOVAL OF SIGN WIRING AND DISPOSAL	631 REMOVAL OF SIGN SERVICE AND DISPOSAL	630 SIGN, GROUND MOUNTED EXTRUSHEET	630 BREAKAWAY BEAM CONNECTION
							LUMP	SQ FT	EACH	FT	FT	FT	FT	EACH	EACH	SQ FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	SQ FT	EACH
S49	886	CL	617+90	CL	617+90	LT						28				40			1				3													
S50	886	CL	622+00	CL	622+00	RT		106	1					1		~~106~~		1			2					2										
S51	886	CL	623+72	CL	623+72	LT/RT														2	2			1	1										
S52	886	CL	623+90	CL	623+90	LT					14					13.5			2				1												
S53	886	CL	626+30	CL	626+30	LT						28				27			1				2												
S54	886	CL	628+80	CL	628+80	RT						28				27			1				2												
S55	887	CL	634+28	CL	634+28	LT/RT														2	2			1	1										
S56	887	CL	638+80	CL	638+80	RT		104	1					1		~~104~~		1								2	1		1	1	1	1	1	1		
S57	887	CL	640+00	CL	640+00	LT		80	1					1		~~80~~		1																	
S58	888	CL	644+84	CL	644+84	LT/RT														2	2			1	1										
S59	888	CL	645+00	CL	645+00	RT		462	1						1	~~462~~		2																	
S60	888	CL	646+00	CL	646+00	LT					28					16			1				2												
S61	888	CL	647+50	CL	647+50	RT							38.9			~~40~~	2					1				2								40	2
S62	888	CL	654+10	CL	654+10	LT							39.3			~~40~~	2					1				2								40	2
S63	888	CL	655+60	CL	655+60	LT/RT														2	2			1	1										
S64	888	CL	655+80	CL	655+80	LT/RT				22						8			2				2												
S65	889	CL	659+00	CL	659+00	LT		119.3	1					1		~~119.3~~		1																	
S66	889	CL	665+96	CL	665+96	LT/RT														2	2			1	1										
S67	889	CL	668+00	CL	668+00	LT		310	1						1	~~310~~		2																	
S85	886	CL	620+33	CL	620+55	RT				22						6																			
S86	886	CL	621+05	CL	621+38	LT				22						6																			
R17	888	CL	645+75	CL	645+75	RT																				5		1	1	7	1	7	3	1		
R18	889	CL	658+12	CL	658+12	LT													2							2	1		1	1	1	1	1	1		
R19	889	CL	668+50	CL	668+50	LT																				3		1	1	4	1	4	2	1		
R27	882	CL	586+78	CL	587+28	LT/RT	1																													
SUBTOTAL							1	1181	6	66	42	84	78.2	4	2	143.5	4	8	10	10	10	4	12	5	5	6	12	2	2	4	13	4	13	7	4	80	4
TOTALS CARRIED TO SUBSUMMARY, SHEET 871							1	1181	6	66	42	84	79	4	2	144	4	8	10	10	10	4	12	5	5	6	12	2	2	4	13	4	13	7	4	80	4

SIGNING QUANTITIES (REVISED 12/7/05)
STA 617+04 TO 695+00

CALCULATED ATR
CHECKED JFM

MAH-80-0.97



LEGEND

(WL) EDGE LINE, WHITE

(LL) LANE LINE

(YL) EDGE LINE, YELLOW

(CL) CHANNELIZING LINE

EXISTING SIGN, TO BE REMOVED

EXISTING SIGN, TO REMAIN

NEW SIGN

REMOVE AND RE-ERECT SIGN

EXISTING ELECTRICAL CABLE TO BE REMOVED

FOR SIGN S68 DETAILS, SEE SHEET 905

FOR SIGNING QUANTITIES, SEE SHEET 897.
FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 870.

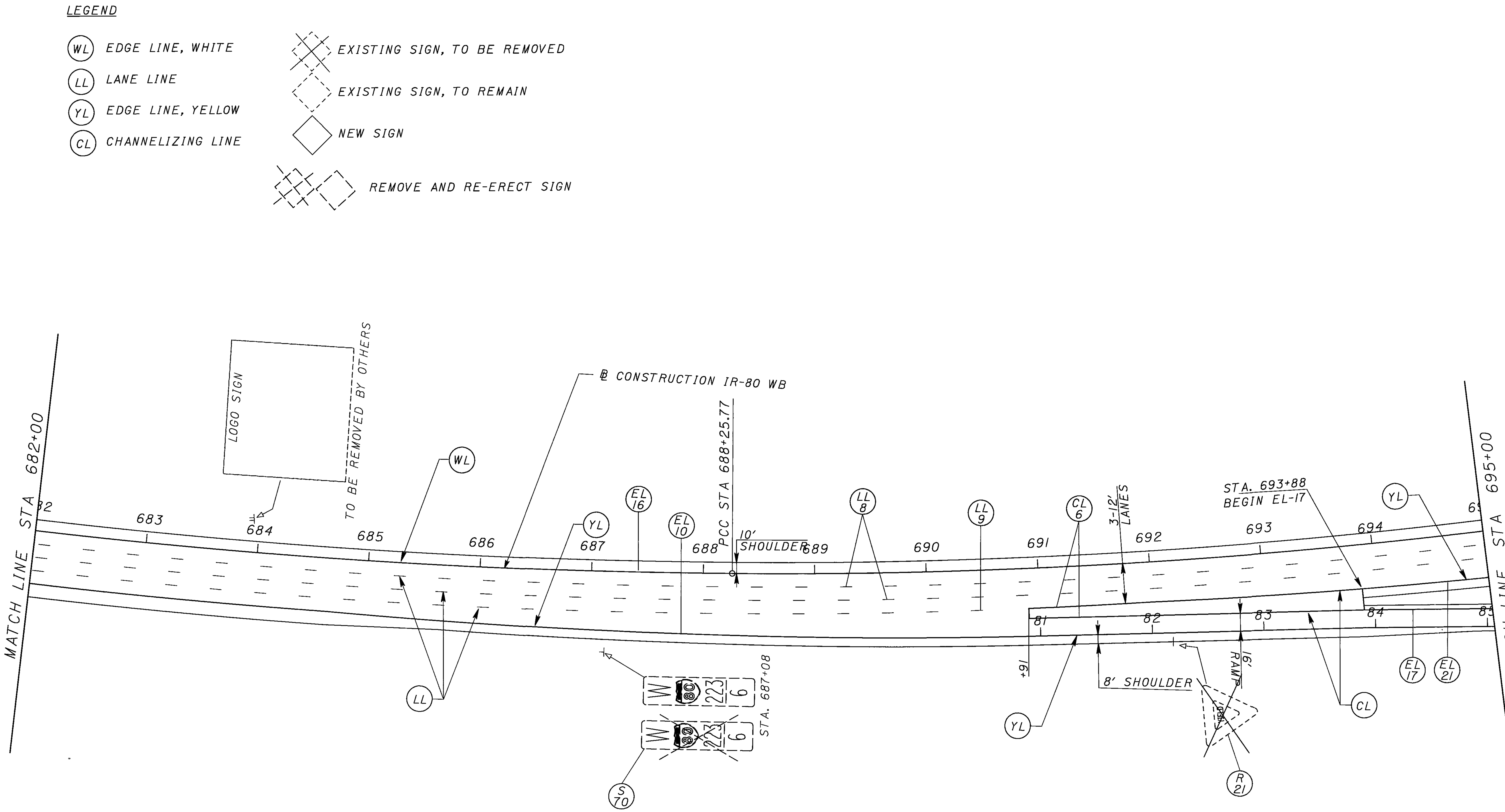
HORIZONTAL SCALE IN FEET (0, 25, 50, 100)

CALCULATED ATR
CHECKED JFM

SIGNING AND PAVEMENT MARKING PLAN STA 669+04 TO STA 682+00

MAH-80-0.97

7/20/2005 9:50:44 AM
s:\projects\37700\traffic\tsstmpl16.dgn



FOR SIGNING QUANTITIES, SEE SHEET 897.
FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 870.

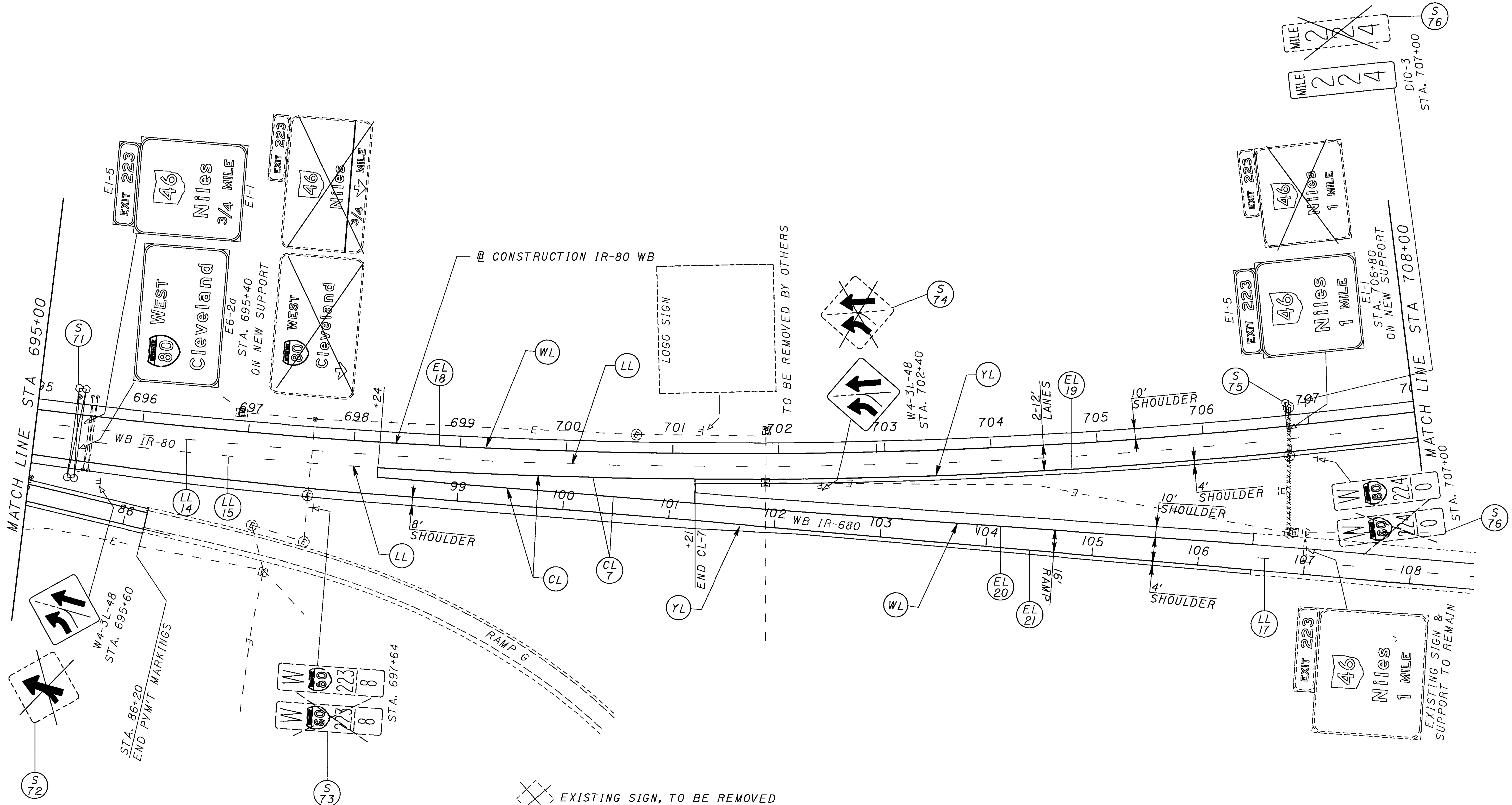
HORIZONTAL SCALE IN FEET

CALCULATED ATR CHECKED JFM

SIGNING AND PAVEMENT MARKING PLAN STA 682+00 TO STA 695+00

MAH-80-0.97

7/20/2005 9:50:59 AM s:\projects\37700\traffic\tesmp817.dgn



LEGEND

WL	EDGE LINE, WHITE
LL	LANE LINE
YL	EDGE LINE, YELLOW
CL	CHANNELIZING LINE

EXISTING SIGN, TO BE REMOVED

EXISTING SIGN, TO REMAIN

NEW SIGN

REMOVE AND RE-ERECT SIGN

EXISTING ELECTRICAL CABLE TO BE REMOVED

FOR SIGN S71 DETAILS, SEE SHEET 906
FOR SIGN S75 DETAILS, SEE SHEET 907

FOR SIGNING QUANTITIES, SEE SHEET 897.
FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 870.

HORIZONTAL SCALE IN FEET

CALCULATED ATR
CHECKED JFM

SIGNING AND PAVEMENT MARKING PLAN STA 695+00 TO STA 708+00

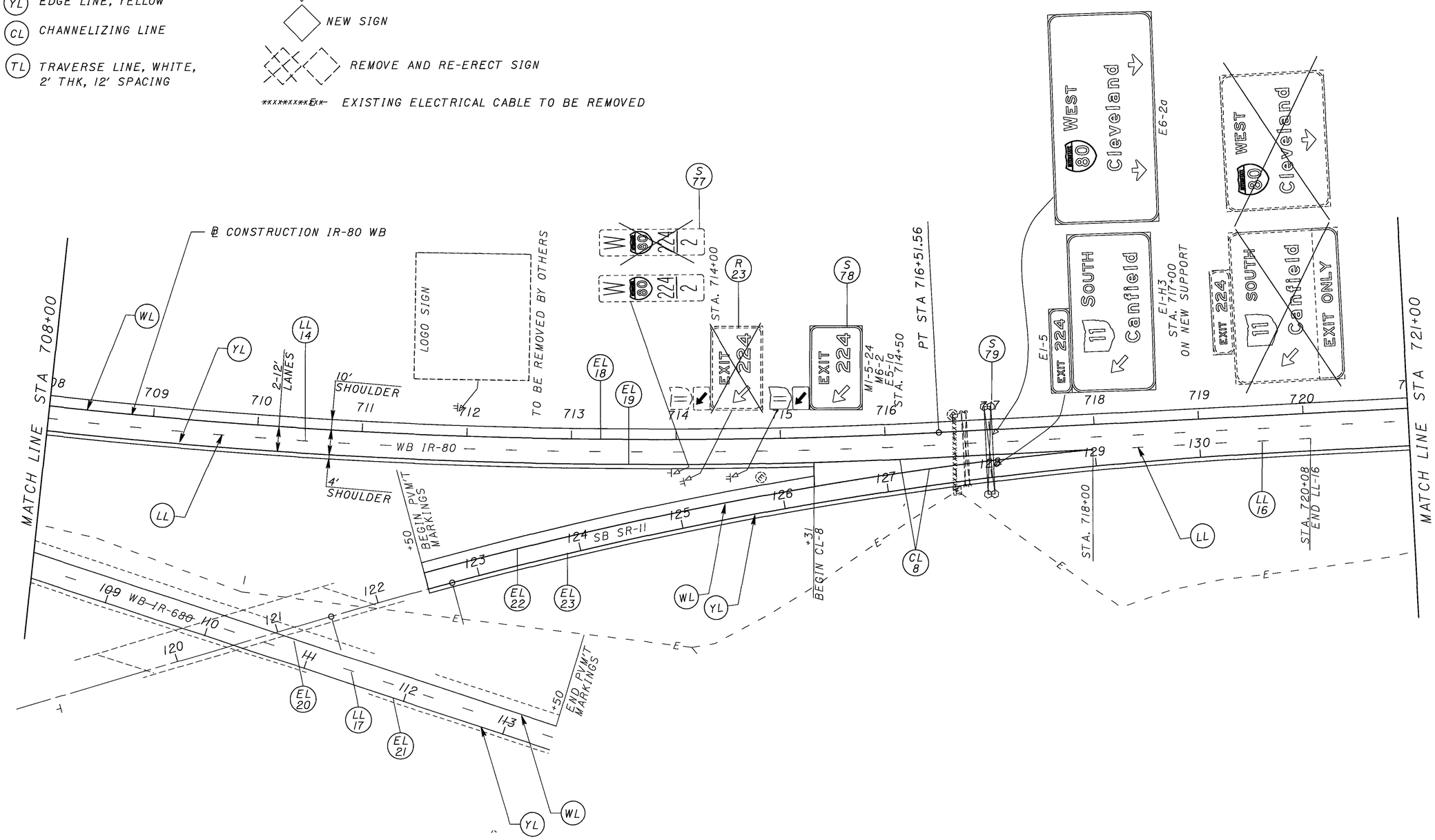
MAH-80-0.97

7/20/2005 9:51:15 AM s:\projects\37700\traffic\tsstmp18.dgn

LEGEND

- (WL) EDGE LINE, WHITE
- (LL) LANE LINE
- (YL) EDGE LINE, YELLOW
- (CL) CHANNELIZING LINE
- (TL) TRAVERSE LINE, WHITE, 2' THK, 12' SPACING

- EXISTING SIGN, TO BE REMOVED
- EXISTING SIGN, TO REMAIN
- NEW SIGN
- REMOVE AND RE-ERECT SIGN
- ********Ex*** EXISTING ELECTRICAL CABLE TO BE REMOVED



FOR SIGN S78 DETAILS, SEE SHEET 907
FOR SIGN S79 DETAILS, SEE SHEET 908

FOR SIGNING QUANTITIES, SEE SHEET 897.
FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 870.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED ATR
CHECKED JFM

SIGNING AND PAVEMENT MARKING PLAN
STA 708+00 TO STA 721+00

MAH-80-0.97

894
1100

7/20/2005 9:51:41 AM
s:\projects\37701\traffic\testmpl19.dgn

LEGEND

(WL) EDGE LINE, WHITE

(LL) LANE LINE

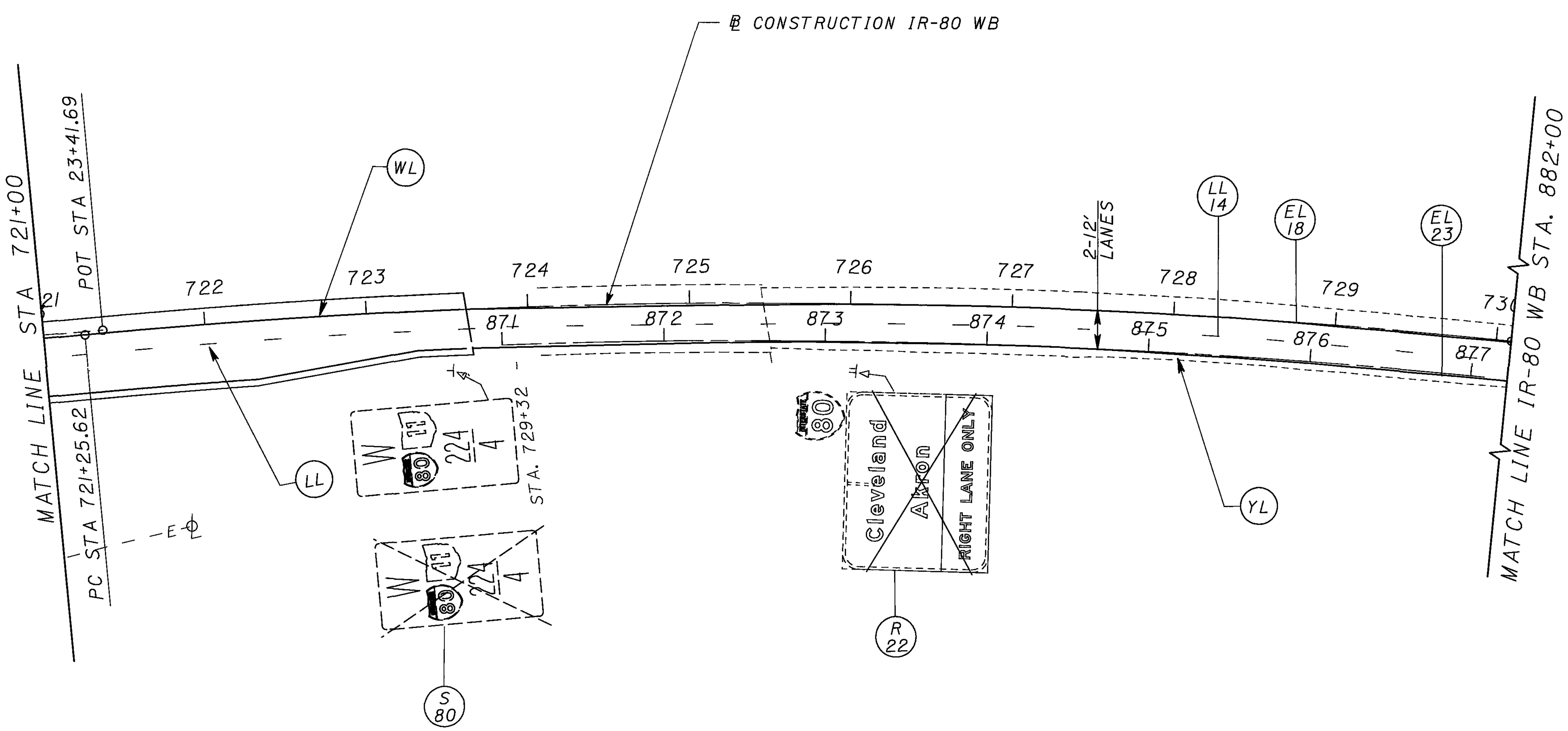
(YL) EDGE LINE, YELLOW

EXISTING SIGN, TO BE REMOVED

EXISTING SIGN, TO REMAIN

NEW SIGN

REMOVE AND RE-ERECT SIGN



FOR SIGNING QUANTITIES, SEE SHEET 897.
FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 870.

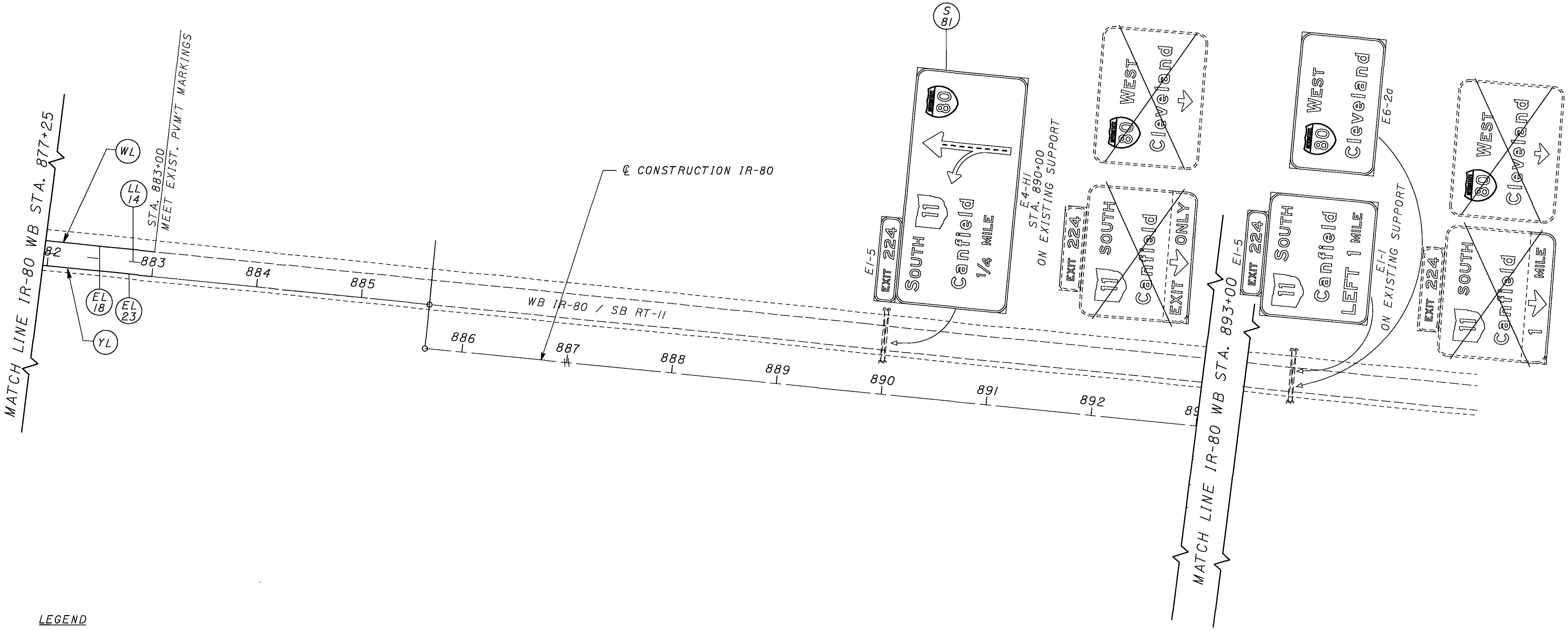
0 25 50 100 HORIZONTAL SCALE IN FEET

CALCULATED ATR CHECKED JFM

SIGNING AND PAVEMENT MARKING PLAN STA 721+00 TO STA 882+00

MAH-80-0.97

7/20/2005 9:52:05 AM
s:\projects\37700\traffic\festmp120.dgn



LEGEND

(WL) EDGE LINE, WHITE

(LL) LANE LINE

(YL) EDGE LINE, YELLOW

EXISTING SIGN, TO BE REMOVED

EXISTING SIGN, TO REMAIN

NEW SIGN

REMOVE AND RE-ERECT SIGN

FOR SIGN S81 DETAILS, SEE SHEET 907

FOR SIGNING QUANTITIES, SEE SHEET 897.
FOR PAVEMENT MARKING QUANTITIES, SEE SHEET 870.

7/20/2005 9:52:27 AM
s:\projects\37700\traffic\tes1mp12.dgn

0 25 50 100
HORIZONTAL SCALE IN FEET

CALCULATED ATR
CHECKED JFM

SIGNING AND PAVEMENT MARKING PLAN
STA 887+25 TO STA 893+00

MAH-80-0.97

LEGEND
QUANTITIES IN COLUMN REVISED
NEW ITEM/COLUMN

REF NO.	SHEET NO.	STATION FROM	STATION TO	SIDE	625 GROUND ROD EACH	630 GROUND MOUNTED SUPPORT, NO. 2 POST FT	630 GROUND MOUNTED SUPPORT, NO. 3 POST FT	630 GROUND MOUNTED SUPPORT, W6X9 BEAM FT	630 GROUND MOUNTED SUPPORT, W10X12 BEAM FT	630 OVERHEAD SIGN SUPPORT, TYPE TC-12.30, DESIGN 6 EACH	630 OVERHEAD SIGN SUPPORT, TYPE TC-7.65, DESIGN 8 EACH	630 SIGN, FLAT SHEET SQ FT	630 SIGN, PERMANENT OVERLAY SQ FT	630 GROUND MOUNTED BEAM SUPPORT FOUNDATION EACH	630 RIGID OVERHEAD SIGN SUPPORT FOUNDATION EACH	630 REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL EACH	630 REMOVAL OF GROUND MOUNTED SIGN AND STORAGE EACH	630 REMOVAL OF GROUND MOUNTED SIGN AND REERECTION EACH	630 REMOVAL OF GROUND MOUNTED MAJOR SIGN AND DISPOSAL EACH	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL EACH	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND STORAGE EACH	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND REERECTION EACH	630 REMOVAL OF GROUND MOUNTED BEAM SUPPORT AND DISPOSAL EACH	630 REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL EACH	630 REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-12.30 EACH	630 REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-7.65 EACH	202 DISCONNECT EXISTING CIRCUIT, AS PER PLAN EACH	631 REMOVAL OF LUMINAIRE AND DISPOSAL EACH	631 REMOVAL OF DISCONNECT SWITCH AND DISPOSAL EACH	631 REMOVAL OF BALLAST AND DISPOSAL EACH	631 REMOVAL OF SIGN WIRING AND DISPOSAL EACH	631 REMOVAL OF SIGN SERVICE AND DISPOSAL EACH	630 SIGN, OVERHEAD EXTRUSHEET SQ FT	630 SIGN, GROUND MOUNTED EXTRUSHEET SQ FT	630 BREAKAWAY BEAM CONNECTION EACH	630 SIGN ATTACHMENT ASSEMBLY EACH
S68	891	676+50	676+50	LT					42			~~66~~		2						1			2											66	2	
S69	891	676+52	676+52	RT												2	2				1	1															
S70	892	687+08	687+08	RT												1	1				1	1															
S71	893	695+40	695+40	LT/RT	1						1	~~220~~			2										3		2	1	4	1	4	2	1	220			
S72	893	695+60	695+60	RT			28					16				1				2																
S73	893	697+64	697+64	RT												1	1				1	1															
S74	893	702+40	702+40	RT			28					16				1				2																
S75	893	706+80	706+80	LT	1					1		~~116~~			1										2	1		1	2	1	2	1	1	116			
S76	893	707+00	707+00	RT		11										1	1	1		1	1	1														
S77	894	714+00	714+00	RT													1	1			1	1														
S78	894	714+50	714+50	RT				16.1				~~47~~ 7		2																				40	2	
S79	894	717+00	717+00	LT/RT	1						1	~~336~~			2										3		1	1	4	1	4	2	1	336			
S80	895	729+32	729+32	RT												1	1				1	1														
S81	896	890+00	890+00	LT								~~269~~													3			1	4	1	4	2	1	269			4
S82	896	SEE SHEET											16																							
R20	891	678+75	678+50	LT/RT																					3		1	1	6	1	6	2	1				
R21	892	692+13	692+13	RT												1				1																
R22	895	726+00	726+00	RT																2				2												
R23	894	714+00	714+00	RT																3				3												
ALL STATIONS REFER TO BASELINE IR-80 WB																																					
SUBTOTAL					3	11	56	16.1	42	1	2	39	16	4	5	4	7	7	6	6	6	6	7	14	1	4	5	20	5	20	9	5	941	106	4	4
TOTALS CARRIED TO SUBSUMMARY, SHEET 871					3	11	56	17	42	1	2	39	16	4	5	4	7	7	6	6	6	6	7	14	1	4	5	20	5	20	9	5	941	106	4	4

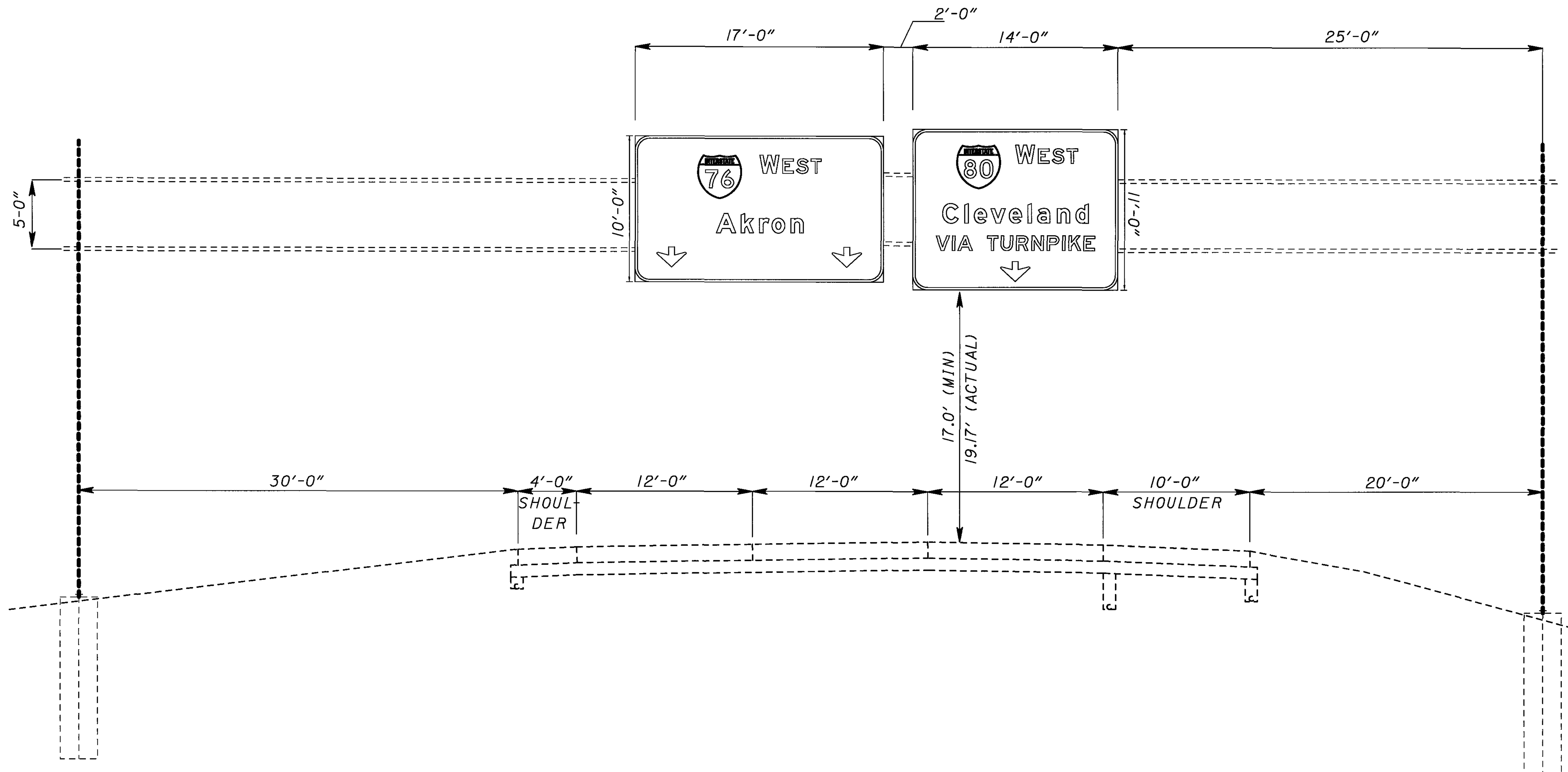
SIGNING QUANTITIES (REVISED 12/7/05)
STA 695+00 TO STA 893+00

CALCULATED ATR
CHECKED JFM

MAH-80-0.97

897
1100

12/7/2005 10:40:6 PM
q:\37100\Pre-bid\Signing01y.dgn



S 2 I-80 WESTBOUND STATION: 480+10

NEW SIGNS ON EXISTING BOX TRUSS

CALCULATED ATR CHECKED JFM

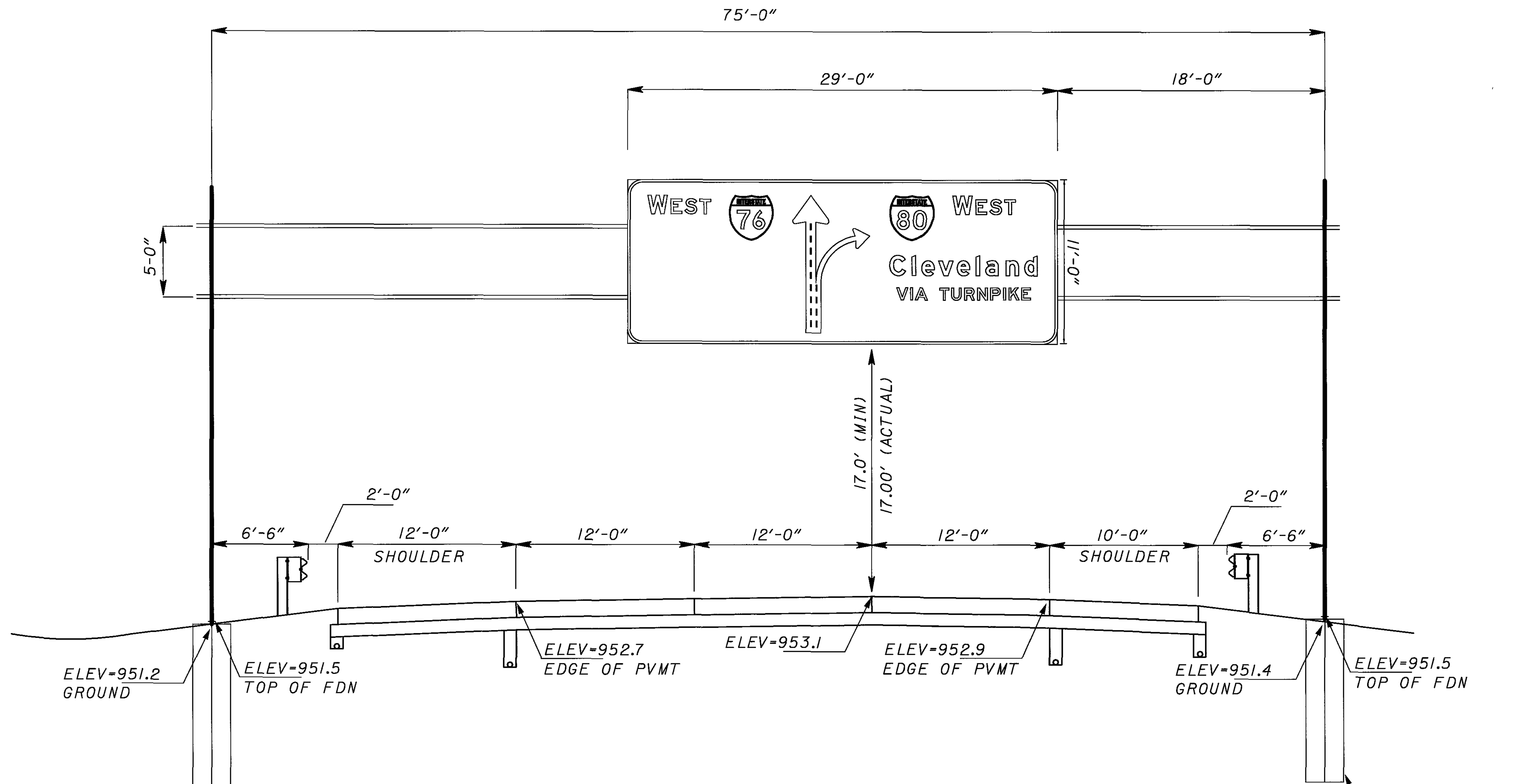
HORIZONTAL SCALE IN FEET 0 5 10

SIGN ELEVATIONS

MAH-80-0.97

898 / 1100

7/20/2005 9:54:07 AM
s:\projects\37100\traffic\Elevation.dgn



(S 6) *I-80 WESTBOUND STATION: 494+50*

OVERHEAD SIGN SUPPORT TC 7.65, DESIGN 8, 75ft SPAN

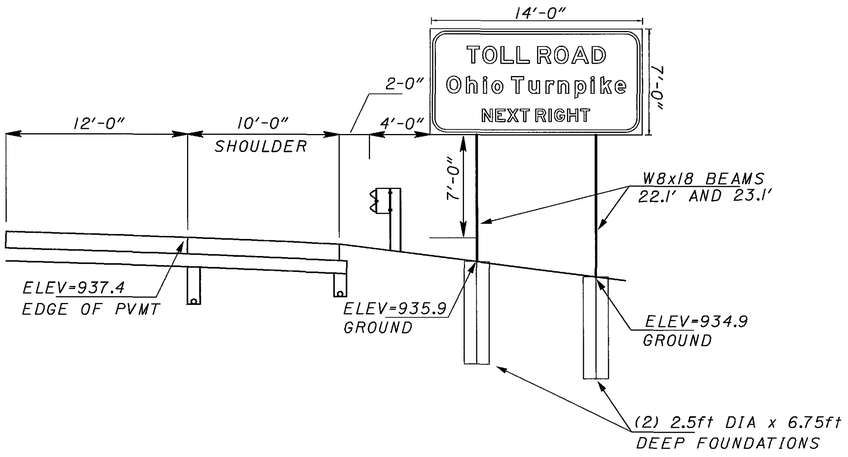
CALCULATED ATR
CHECKED JFM

0 5 10
HORIZONTAL SCALE IN FEET

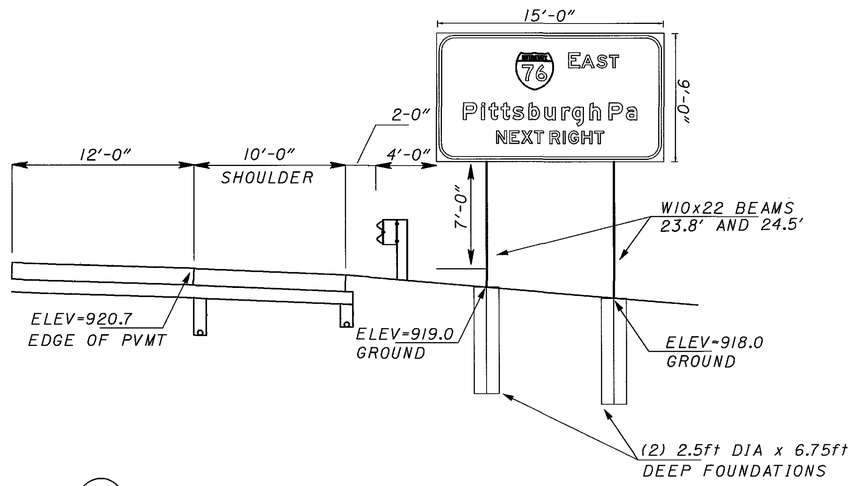
SIGN ELEVATIONS

MAH-80-0.97

7/20/2005 9:54:20 AM
s:\projects\37700\traffic\Elevation.dgn



S 12 WESTBOUND STATION: 504+00 RT



S 17 WESTBOUND STATION: 513+10 RT

CALCULATED ATR
CHECKED JFM

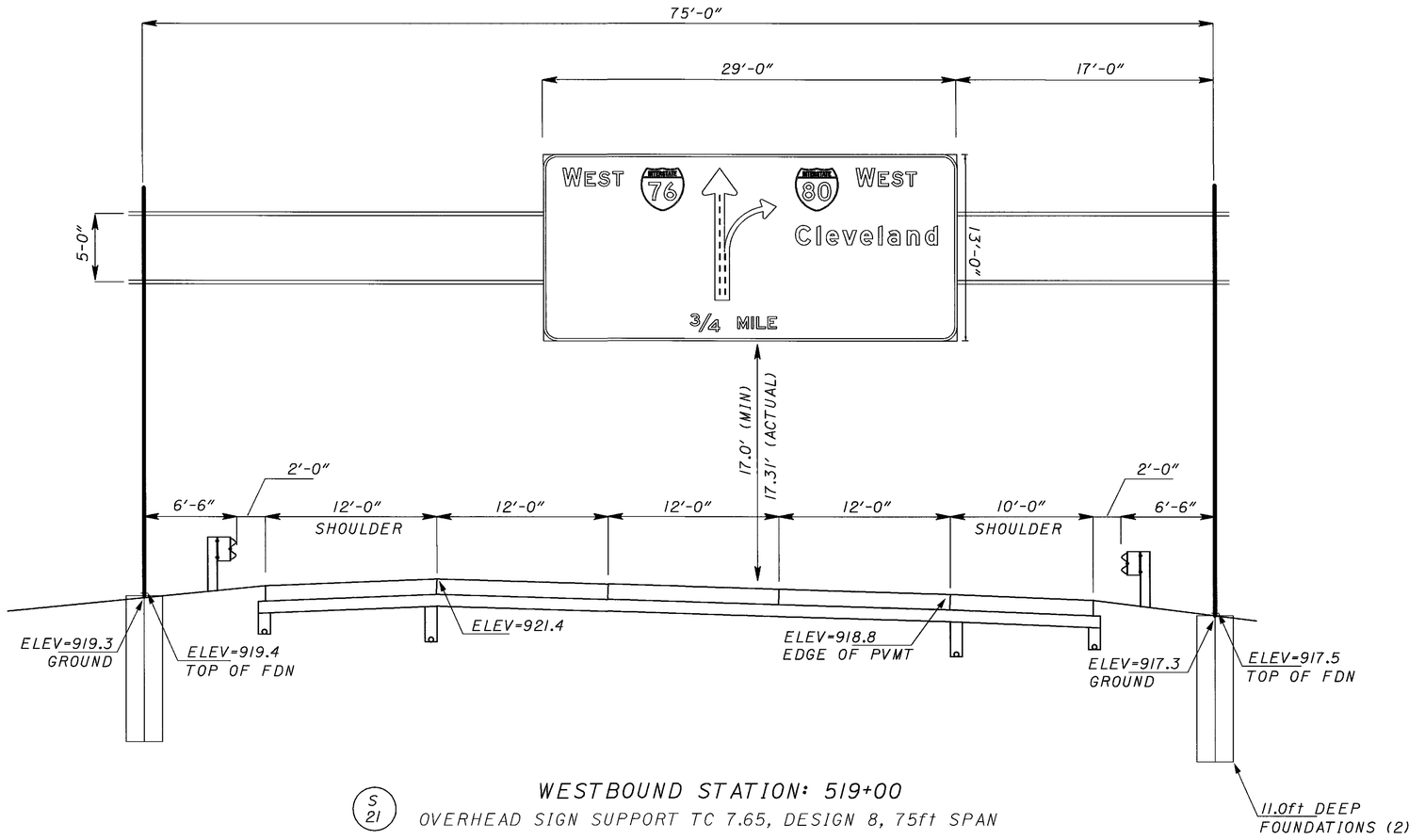
0 5 10
HORIZONTAL SCALE IN FEET

SIGN ELEVATIONS

MAH-80-0.97

900
1100

7/20/2005 9:54:30 AM
s:\projects\37700\traffic\Elevation.dgn



S 21

WESTBOUND STATION: 519+00

OVERHEAD SIGN SUPPORT TC 7.65, DESIGN 8, 75ft SPAN

CALCULATED ATR
CHECKED JFM

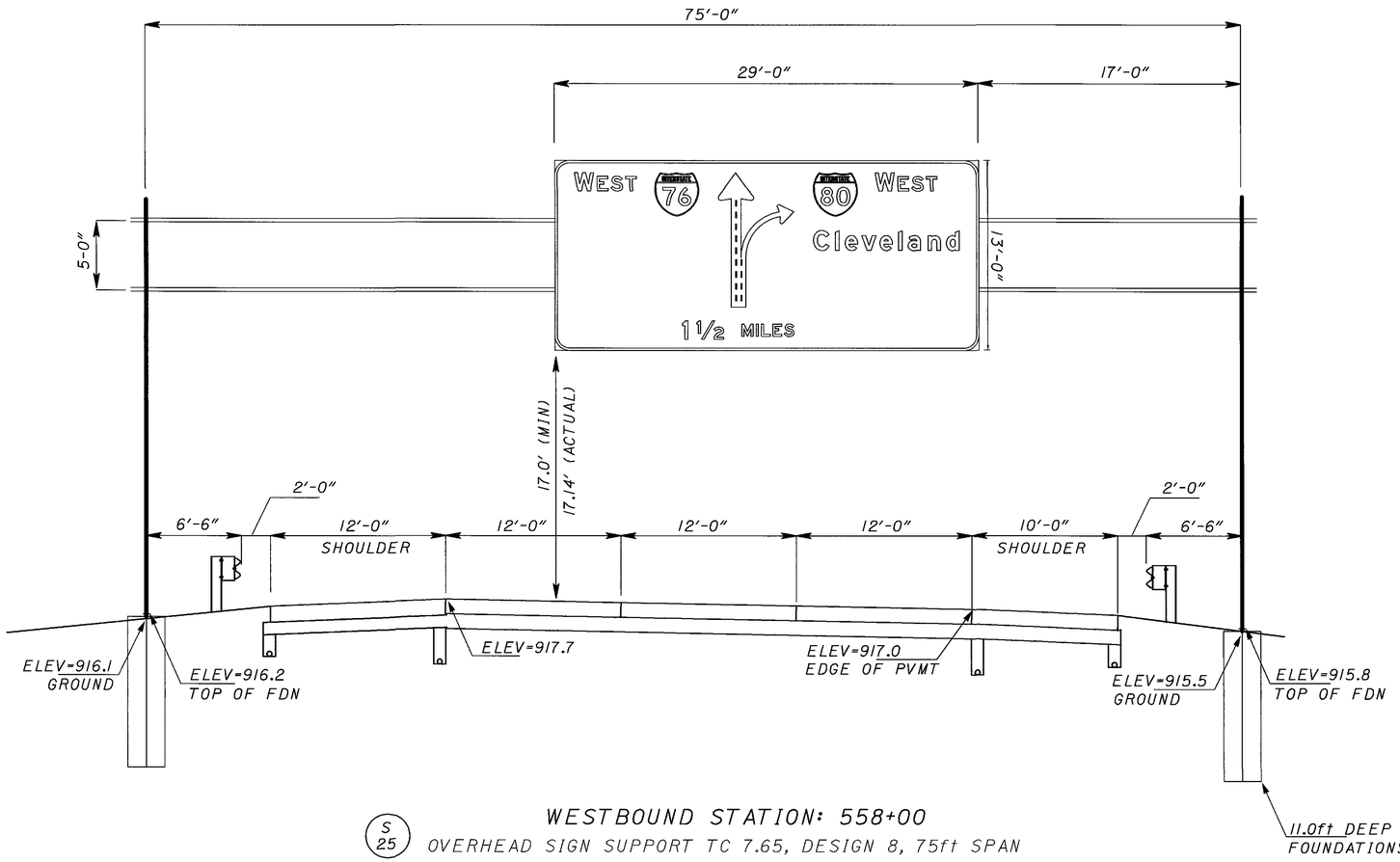
0 5 10
HORIZONTAL SCALE IN FEET

SIGN ELEVATIONS

MAH-80-0.97

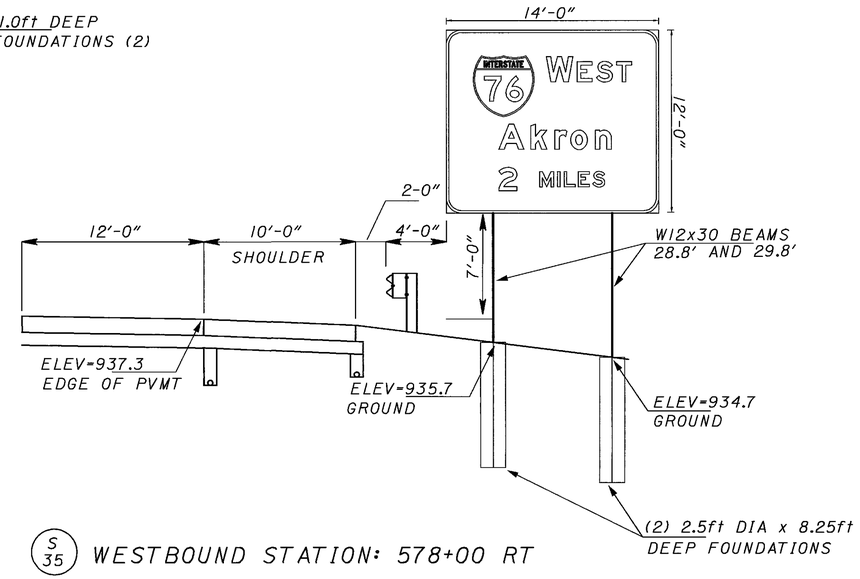
901
1100

7/20/2005 9:54:42 AM
s:\projects\37700\traffic\Elevation.dgn



S 25 WESTBOUND STATION: 558+00

OVERHEAD SIGN SUPPORT TC 7.65, DESIGN 8, 75ft SPAN



S 35 WESTBOUND STATION: 578+00 RT

CALCULATED ATR
CHECKED JFM

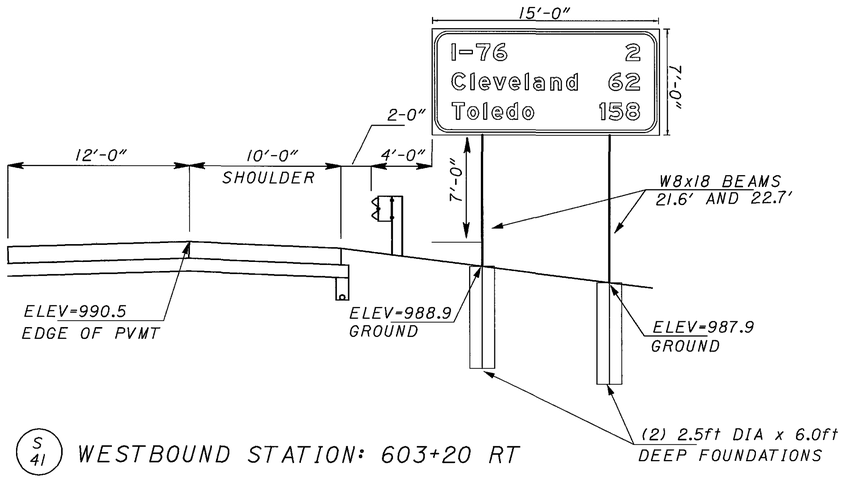
0 5 10 HORIZONTAL SCALE IN FEET

SIGN ELEVATIONS

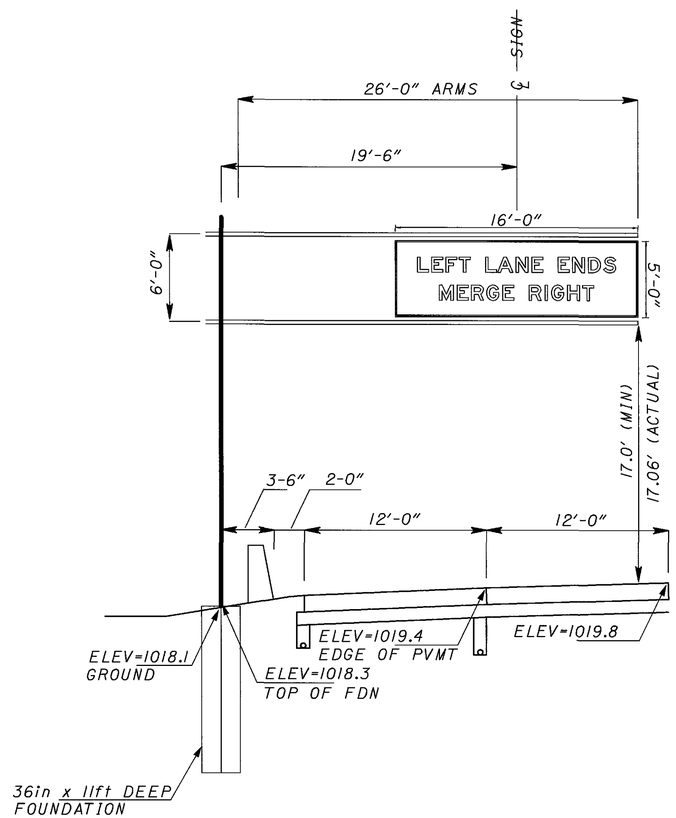
MAH-80-0.97

902
1100

7/20/2005 9:54:50 AM
e:\projects\37700\traffic\elevation.dgn



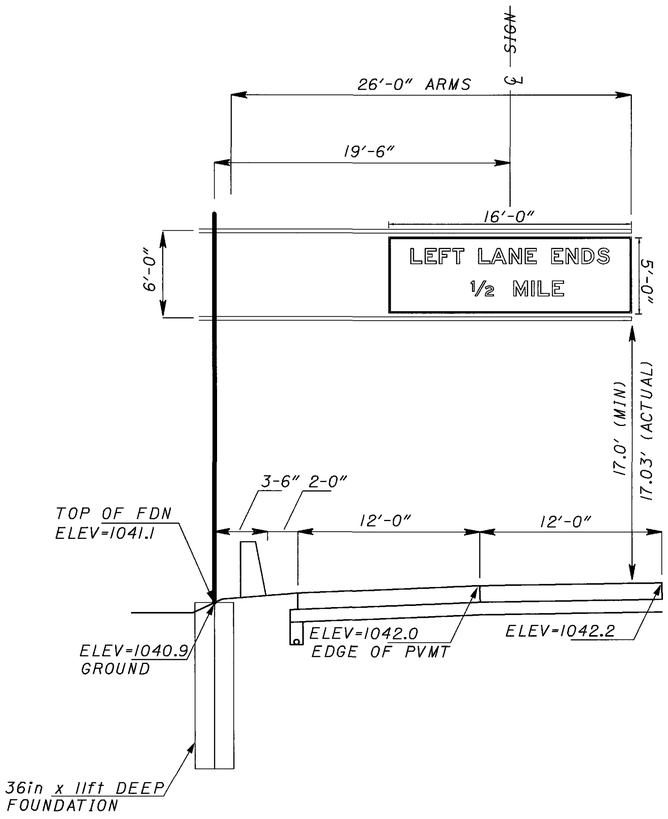
S 41 WESTBOUND STATION: 603+20 RT



WESTBOUND STATION: 613+50 LT

OVERHEAD SIGN SUPPORT TC 12.30, DESIGN 6, 26ft ARMS
ATTACHMENT POINT SPACING = 5ft
SIGN BRACKET LENGTH = 6ft

S 46



WESTBOUND STATION: 640+00 LT

OVERHEAD SIGN SUPPORT TC 12.30, DESIGN 6, 26ft ARMS
ATTACHMENT POINT SPACING = 5ft
SIGN BRACKET LENGTH = 6ft

S 57

CALCULATED ATR
CHECKED JFM

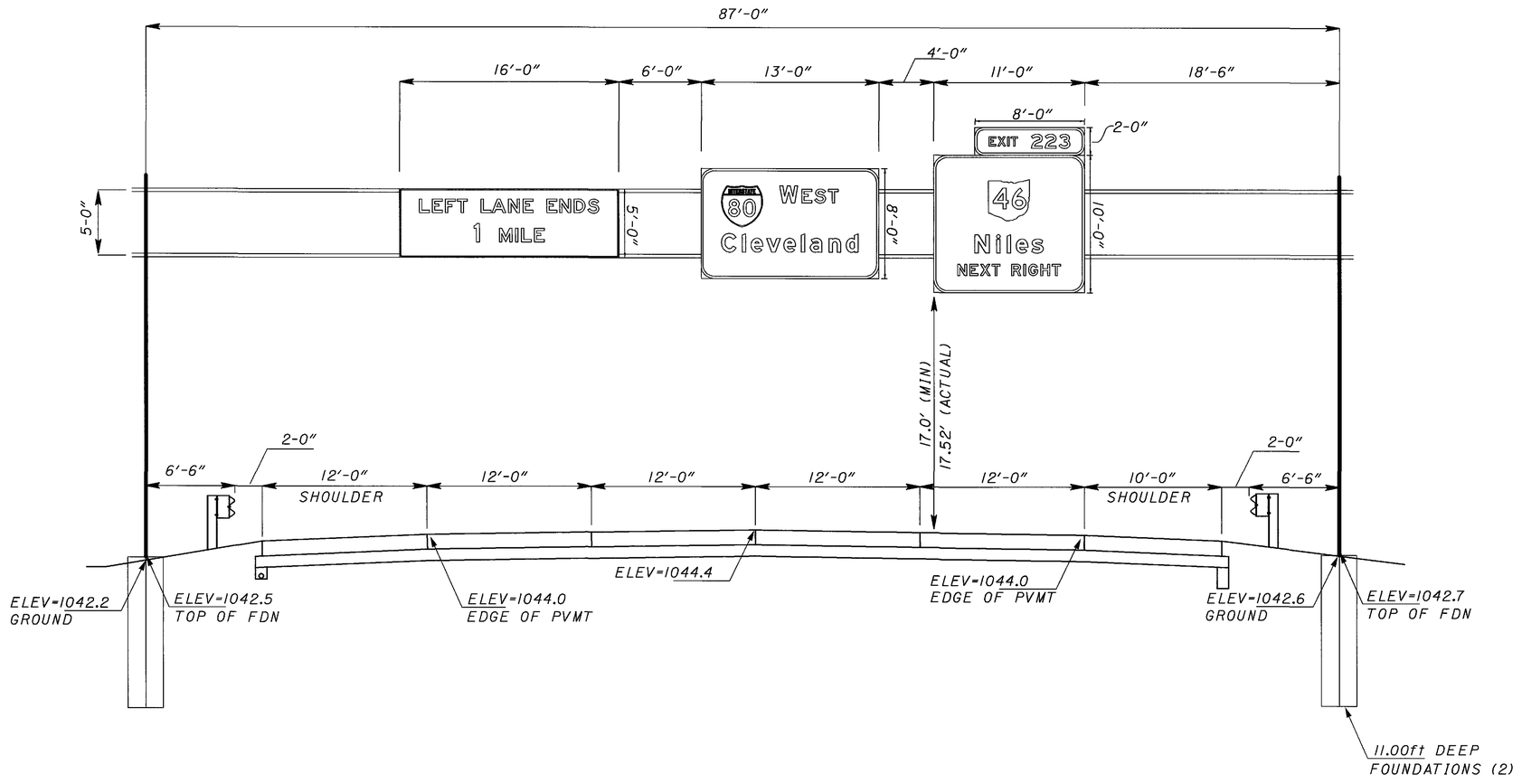
0 5 10
HORIZONTAL SCALE IN FEET

SIGN ELEVATIONS

MAH-80-0.97

903
1100

7/20/2005 9:55:00 AM
s:\projects\37700\traffic\Elevation.dgn



S 67 WESTBOUND STATION: 668+00

OVERHEAD SIGN SUPPORT TC 7.65, DESIGN 8, 87ft SPAN

CALCULATED ATR
CHECKED JFM

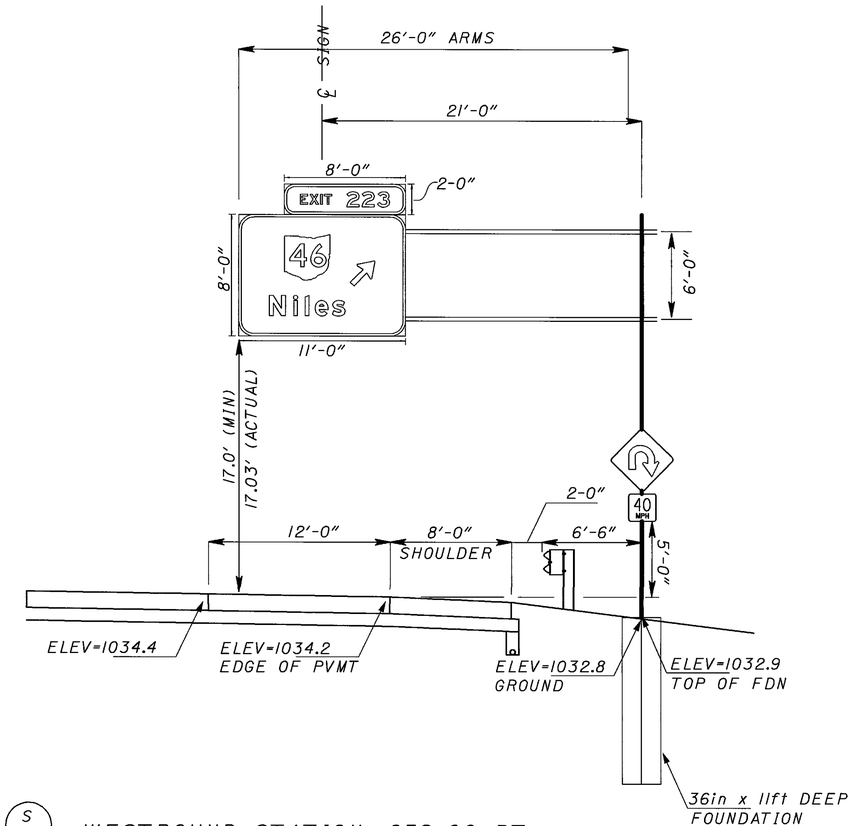
0 5 10
HORIZONTAL SCALE IN FEET

SIGN ELEVATIONS

MAH-80-0.97

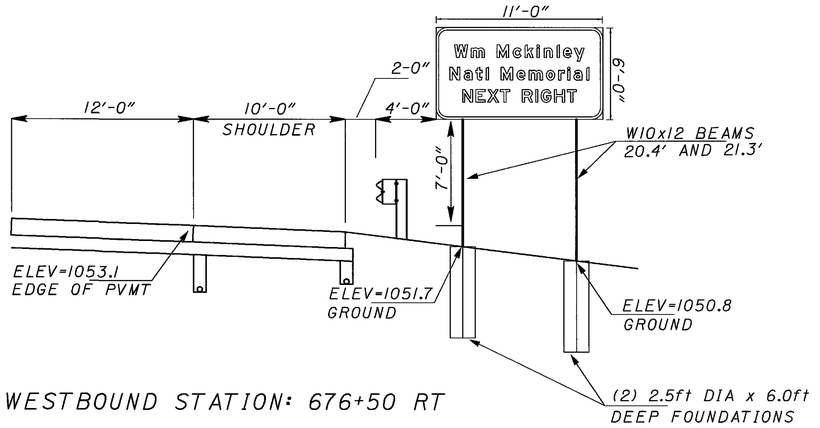
904
1100

7/20/2005 9:55:21 AM
e:\pr_objects\317100\traffic\Elevation.dgn

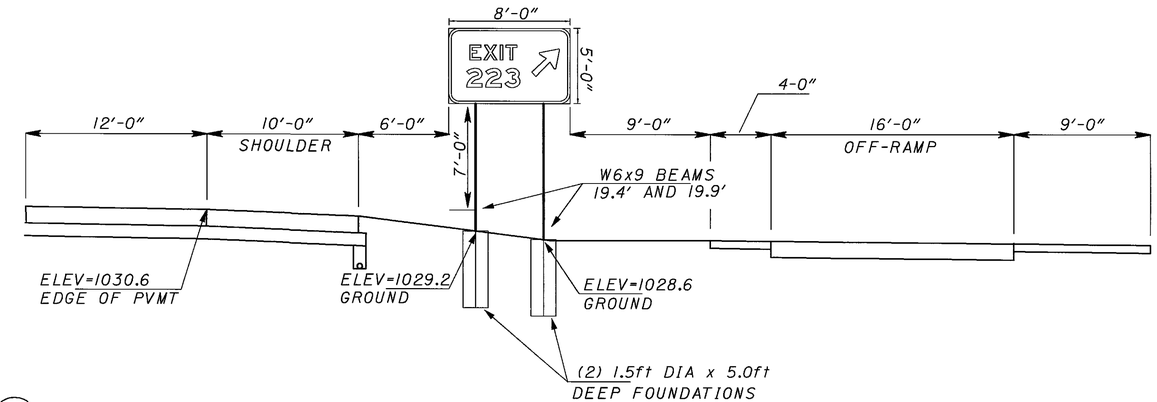


S 65 WESTBOUND STATION: 659+00 RT

OVERHEAD SIGN SUPPORT TC 12.30, DESIGN 6, 26ft ARMS



S 68 WESTBOUND STATION: 676+50 RT



S 62 WESTBOUND STATION: 654+10

CALCULATED ATR
CHECKED JFM

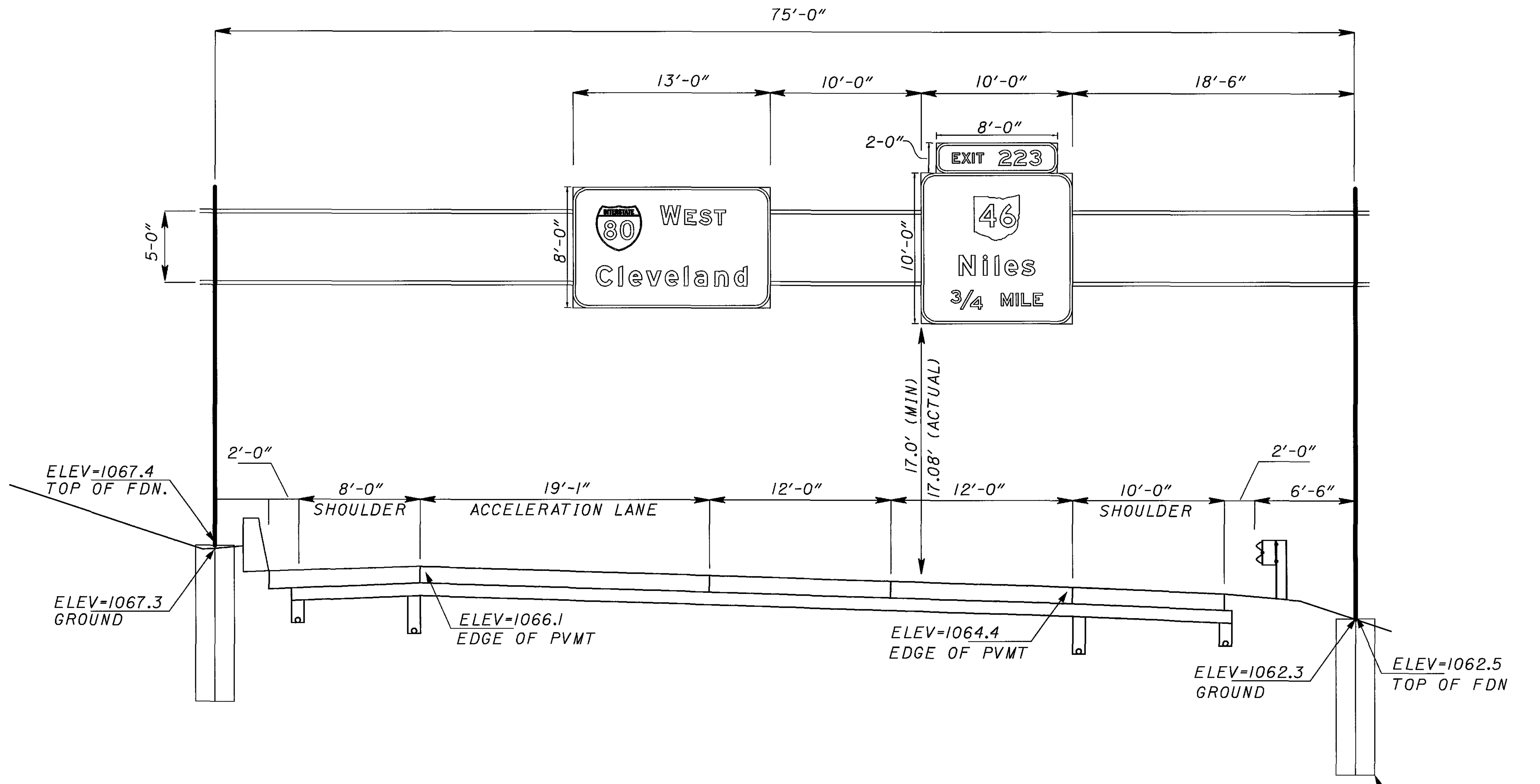
0 5 10 HORIZONTAL SCALE IN FEET

SIGN ELEVATIONS

MAH-80-0.97

905
1100

7/20/2005 9:55:30 AM
s:\projects\37700\traffic\Elevation.dgn



S
71

WESTBOUND STATION: 695+40

OVERHEAD SIGN SUPPORT TC 7.65, DESIGN 8, 75ft SPAN

CALCULATED ATR
CHECKED JFM

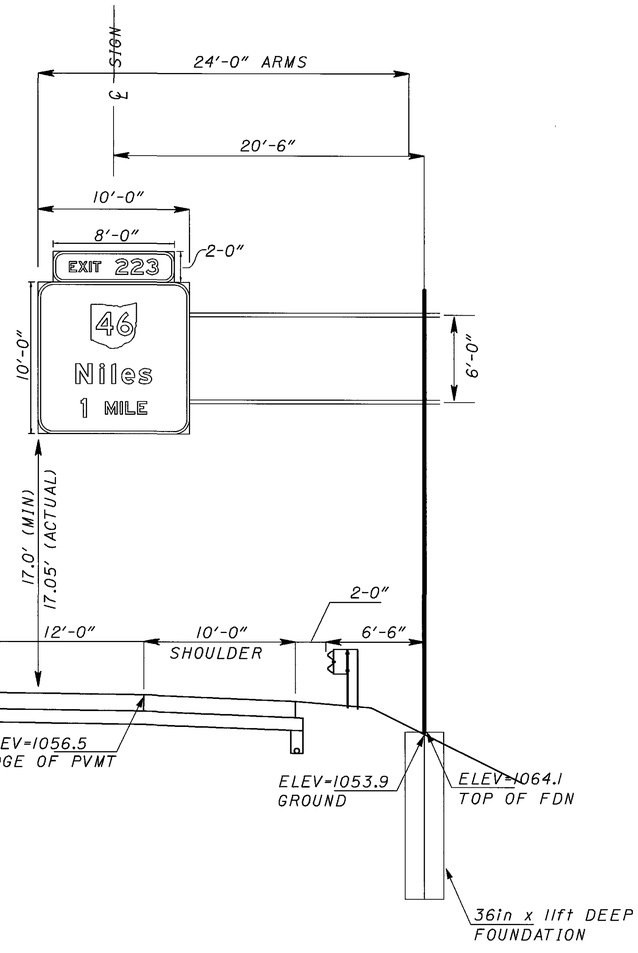
0 5 10
HORIZONTAL
SCALE IN FEET

SIGN ELEVATIONS

MAH-80-0.97

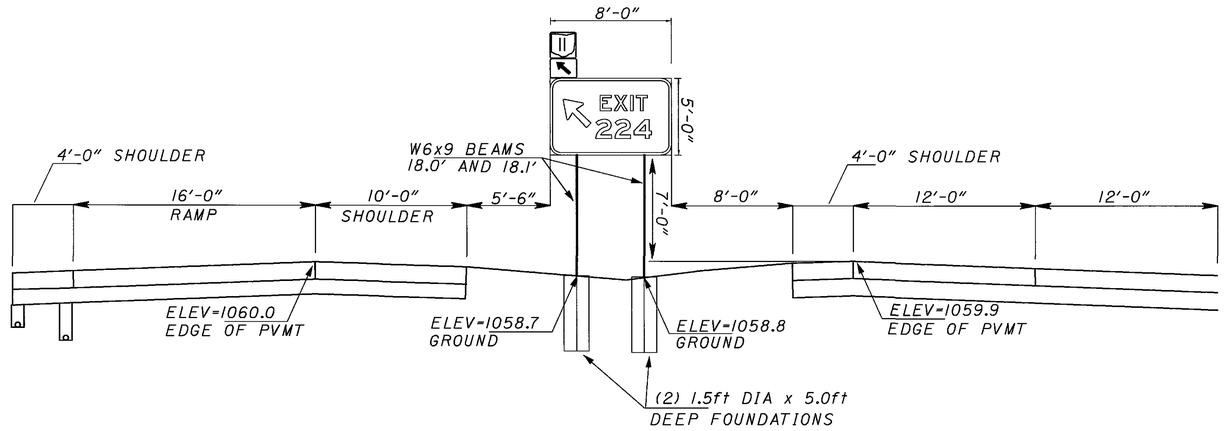
906
1100

7/20/2005 9:55:40 AM
s:\projects\37700\traffic\Elevation.dgn

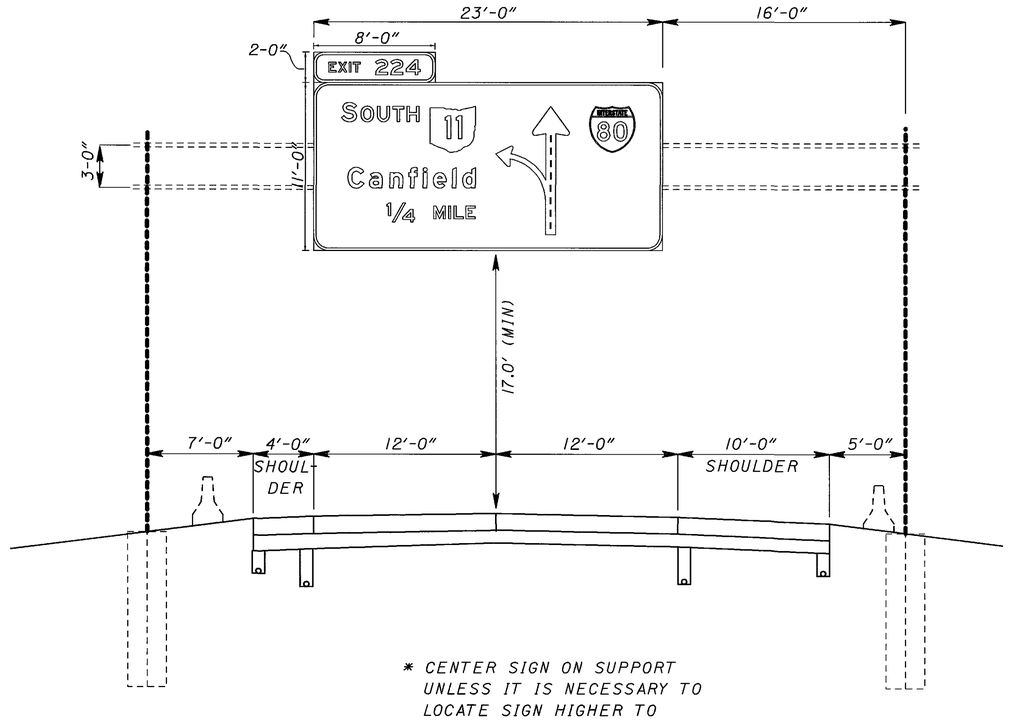


WESTBOUND STATION: 706+80 RT

S 75 OVERHEAD SIGN SUPPORT TC 12.30, DESIGN 6, 24ft ARMS



S 78 WESTBOUND STATION: 714+50



* CENTER SIGN ON SUPPORT UNLESS IT IS NECESSARY TO LOCATE SIGN HIGHER TO OBTAIN 17FT CLEARANCE.

S 81 IR-80 WB STATION: 890+00
NEW SIGN ON EXISTING BOX TRUSS

CALCULATED ATR
CHECKED JFM

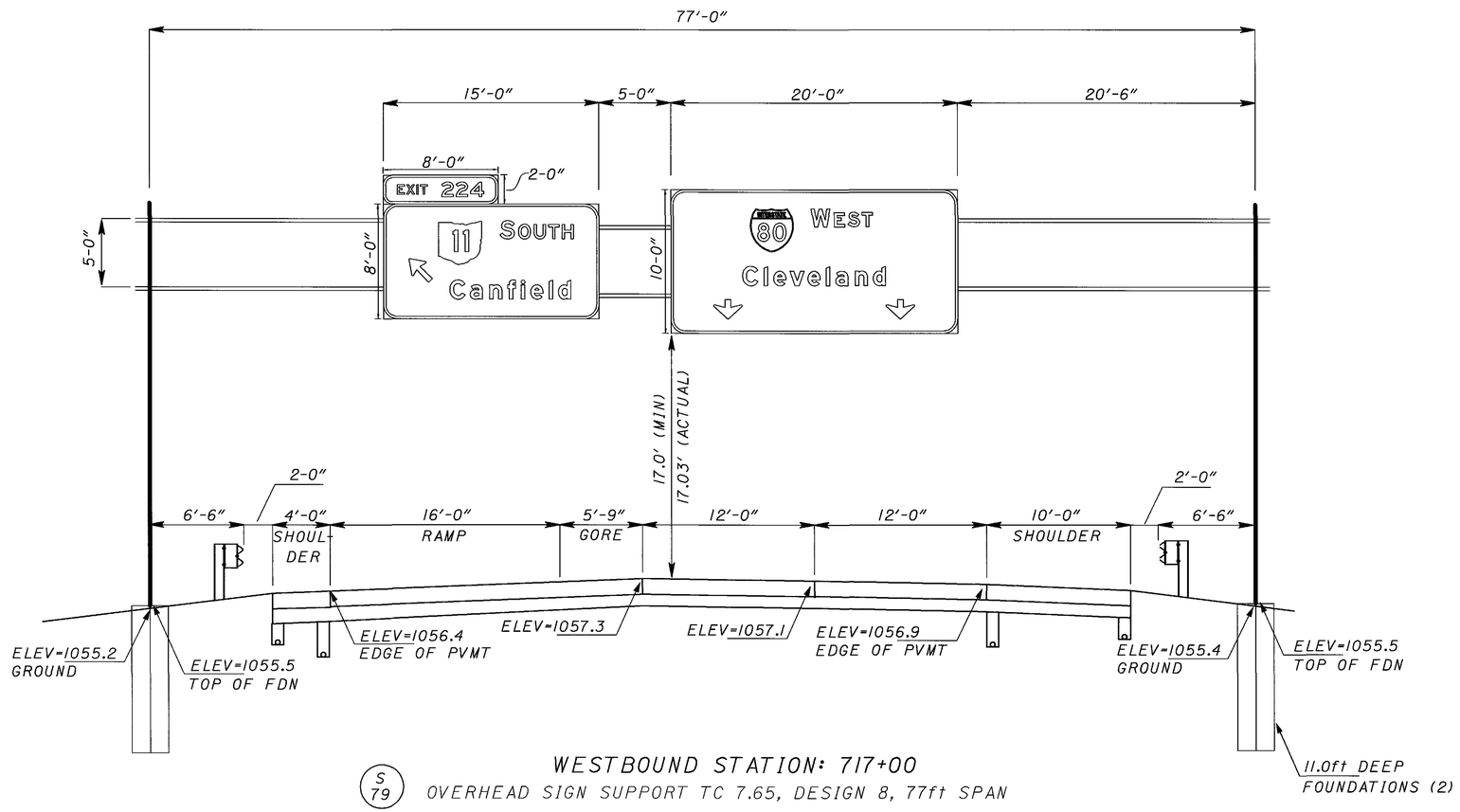
HORIZONTAL SCALE IN FEET
0 5 10

SIGN ELEVATIONS

MAH-80-0.97

907
1100

7/20/2005 9:55:50 AM
e:\projects\37700\traffic\Elevation.dgn



S 79 WESTBOUND STATION: 717+00

OVERHEAD SIGN SUPPORT TC 7.65, DESIGN 8, 77ft SPAN

CALCULATED ATR
CHECKED JFM

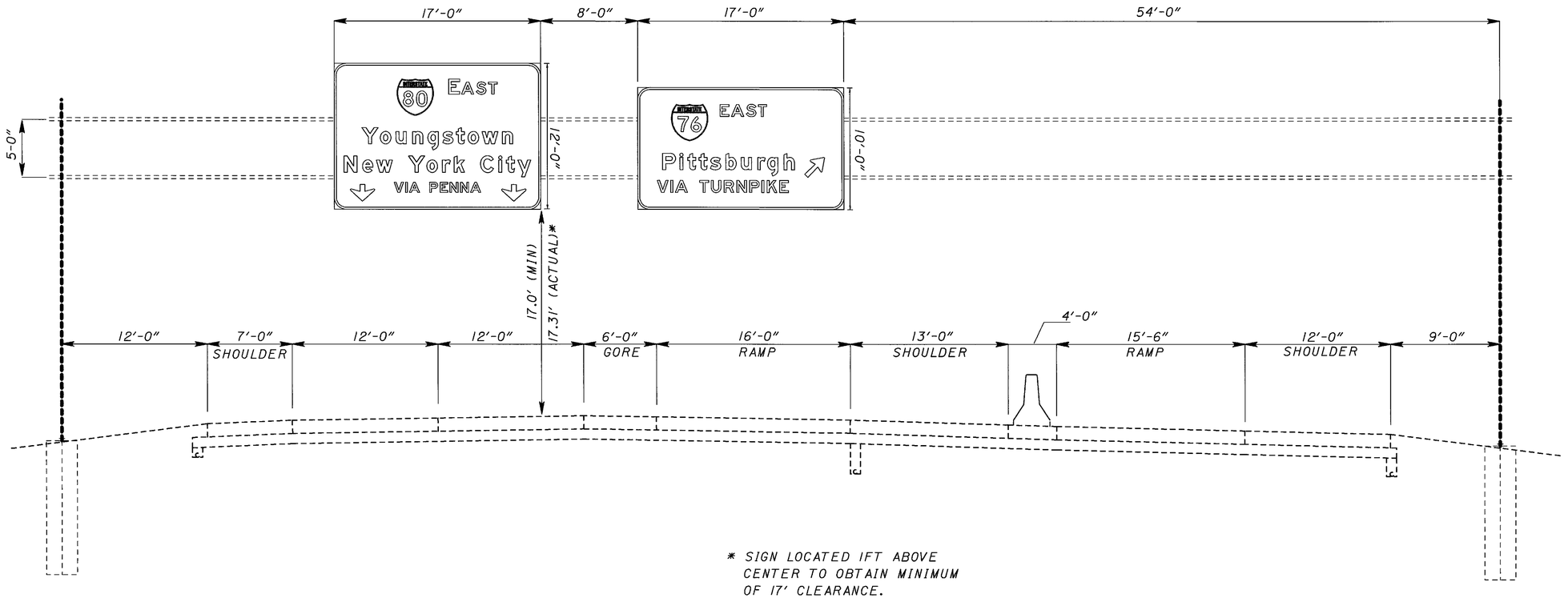
0 5 10
HORIZONTAL SCALE IN FEET

SIGN ELEVATIONS

MAH-80-0.97

908
1100

7/20/2005 9:55:53 AM
e:\projects\37700\traffic\elevation.dgn



* SIGN LOCATED 1FT ABOVE CENTER TO OBTAIN MINIMUM OF 17' CLEARANCE.

S1

I-80 EASTBOUND STATION: 474+20

NEW SIGNS ON EXISTING BOX TRUSS

CALCULATED ATR
CHECKED JFM

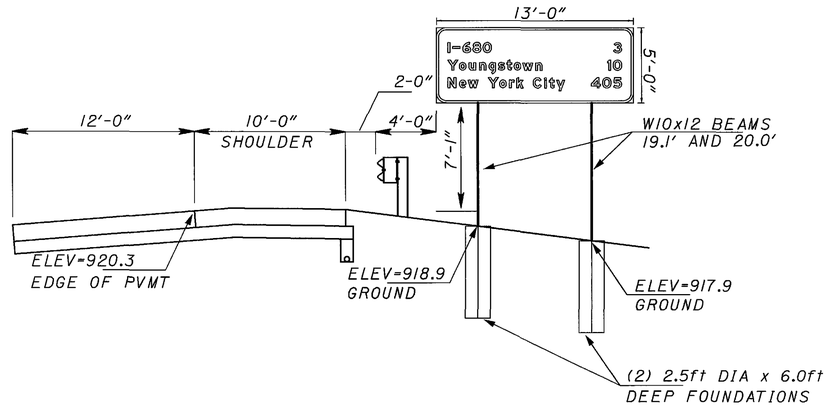
HORIZONTAL SCALE IN FEET
0 5 10

SIGN ELEVATIONS

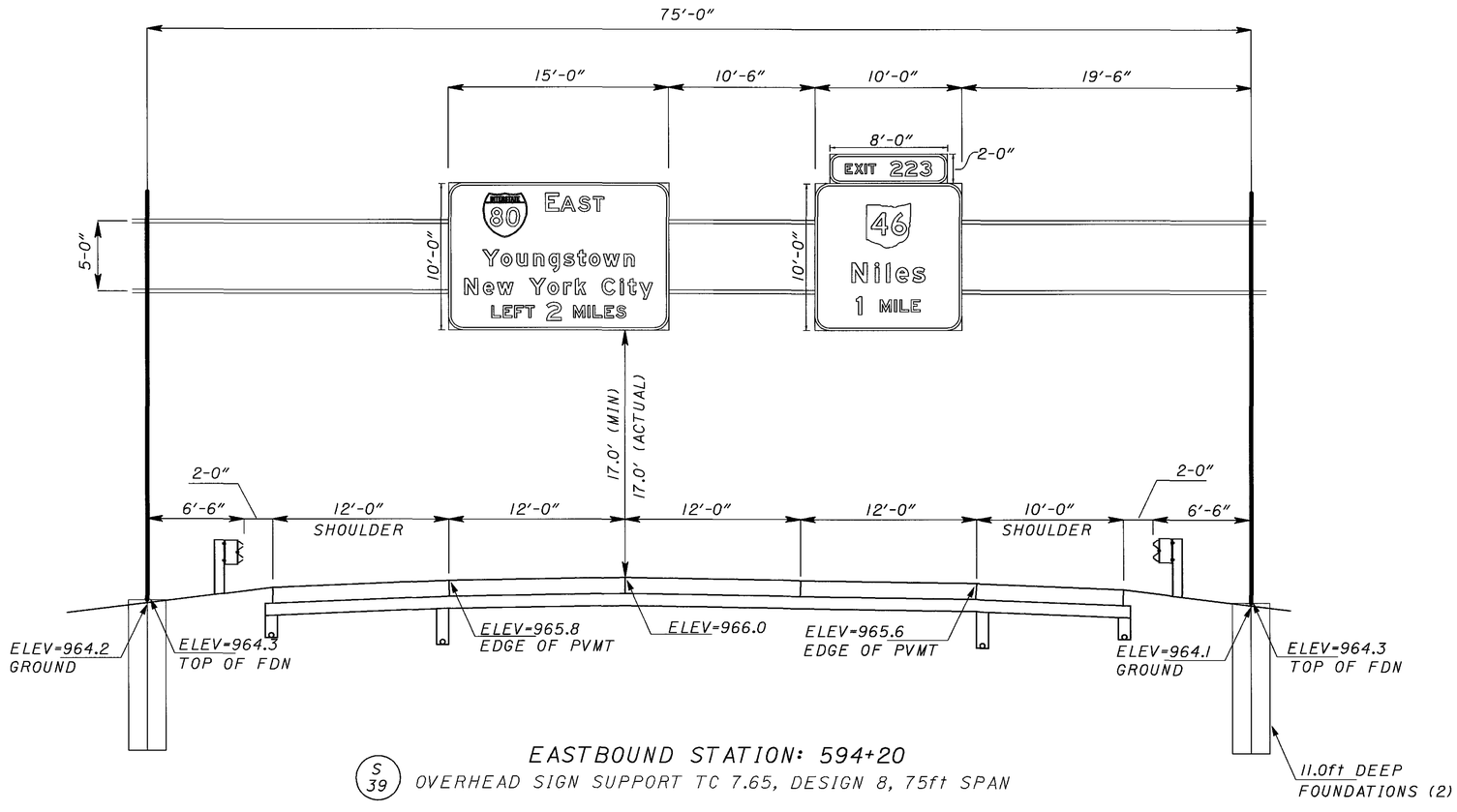
MAH-80-0.97

909
1100

7/20/2005 9:56:17 AM
s:\projects\37700\traffic\Elevation.dgn



S 28 EASTBOUND STATION: 553+00 RT



S 39 EASTBOUND STATION: 594+20
OVERHEAD SIGN SUPPORT TC 7.65, DESIGN 8, 75ft SPAN

CALCULATED ATR
CHECKED JFM

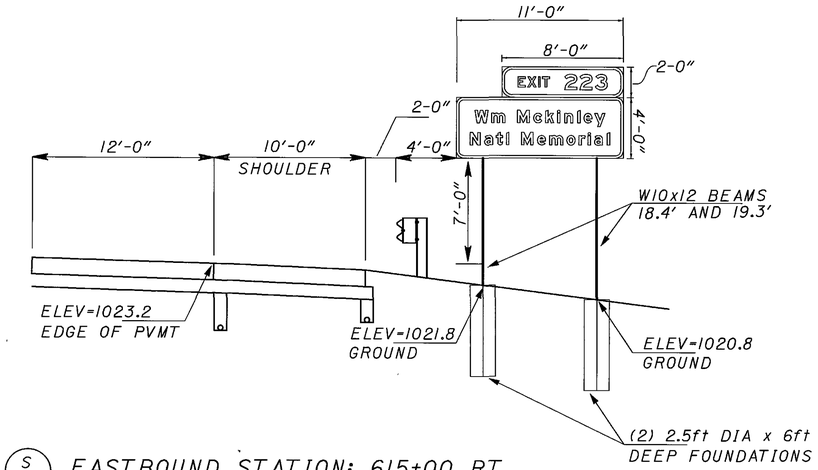
0 5 10
HORIZONTAL SCALE IN FEET

SIGN ELEVATIONS

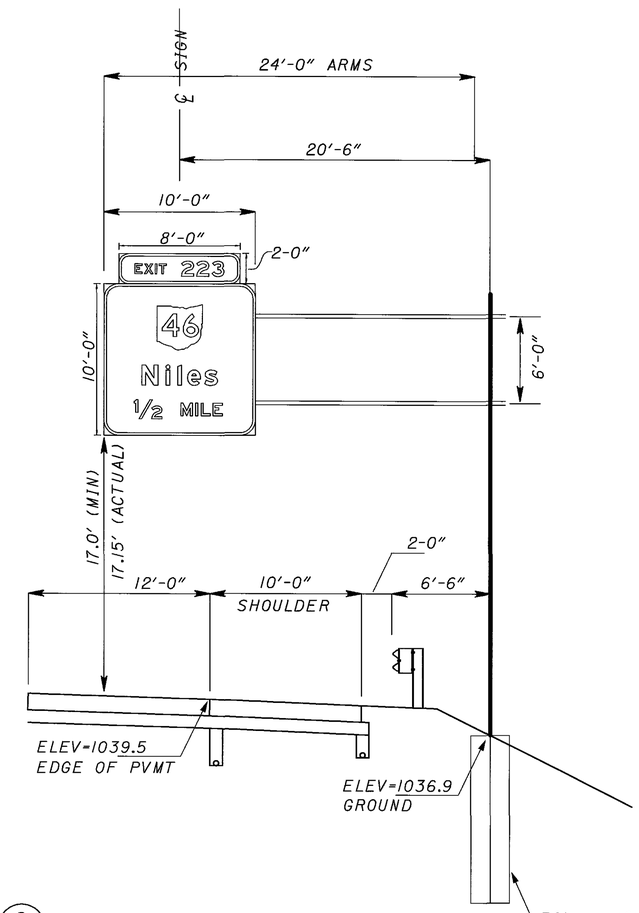
MAH-80-0.97

910
1100

7/20/2005 9:56:33 AM
e:\projects\37700\traffic\Elevation.dgn

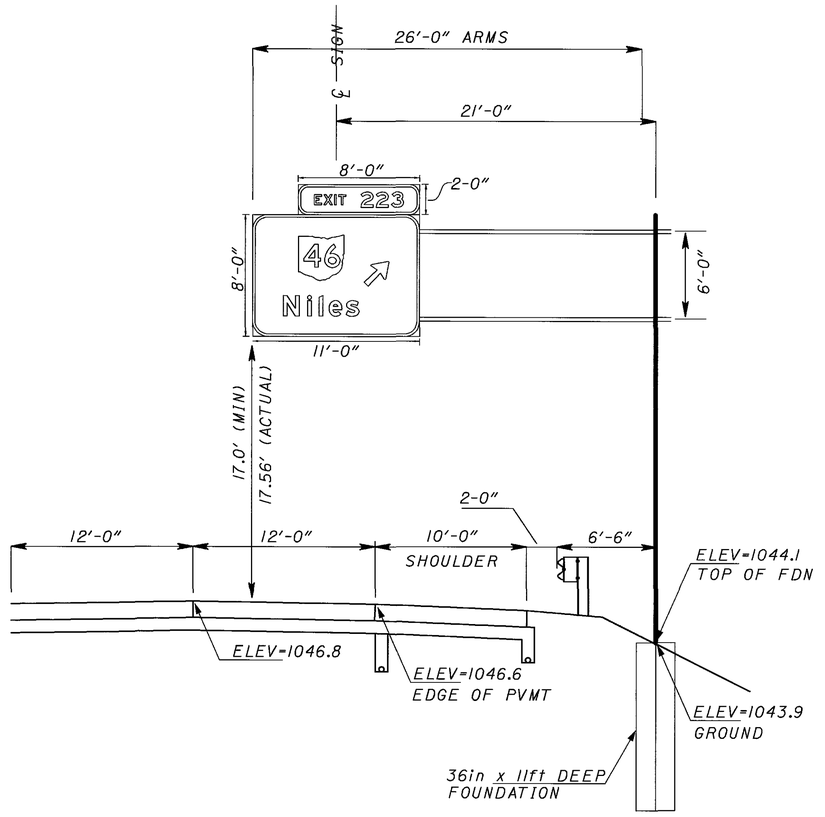


S 47 EASTBOUND STATION: 615+00 RT



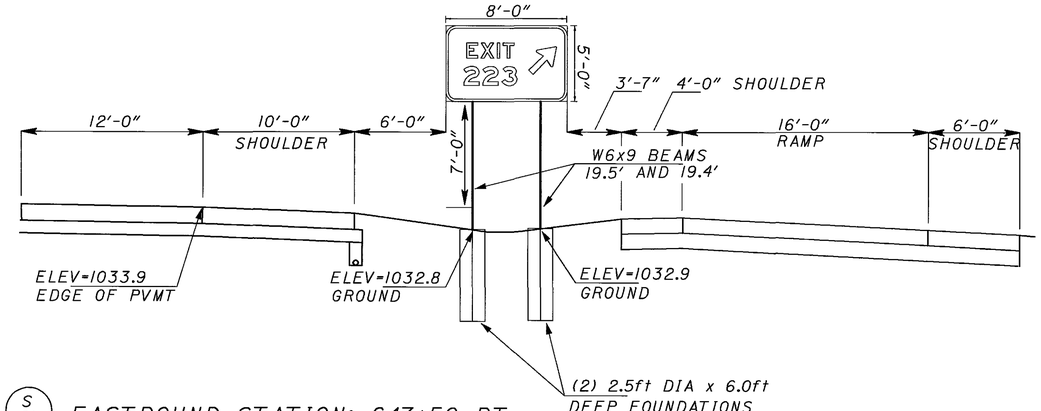
S 50 EASTBOUND STATION: 622+00 RT

OVERHEAD SIGN SUPPORT TC 12.30, DESIGN 6, 24ft ARMS



EASTBOUND STATION: 638+80 RT

S 56 OVERHEAD SIGN SUPPORT TC 12.30, DESIGN 6, 28ft ARMS



S 61 EASTBOUND STATION: 647+50 RT

CALCULATED ATR
CHECKED JFM

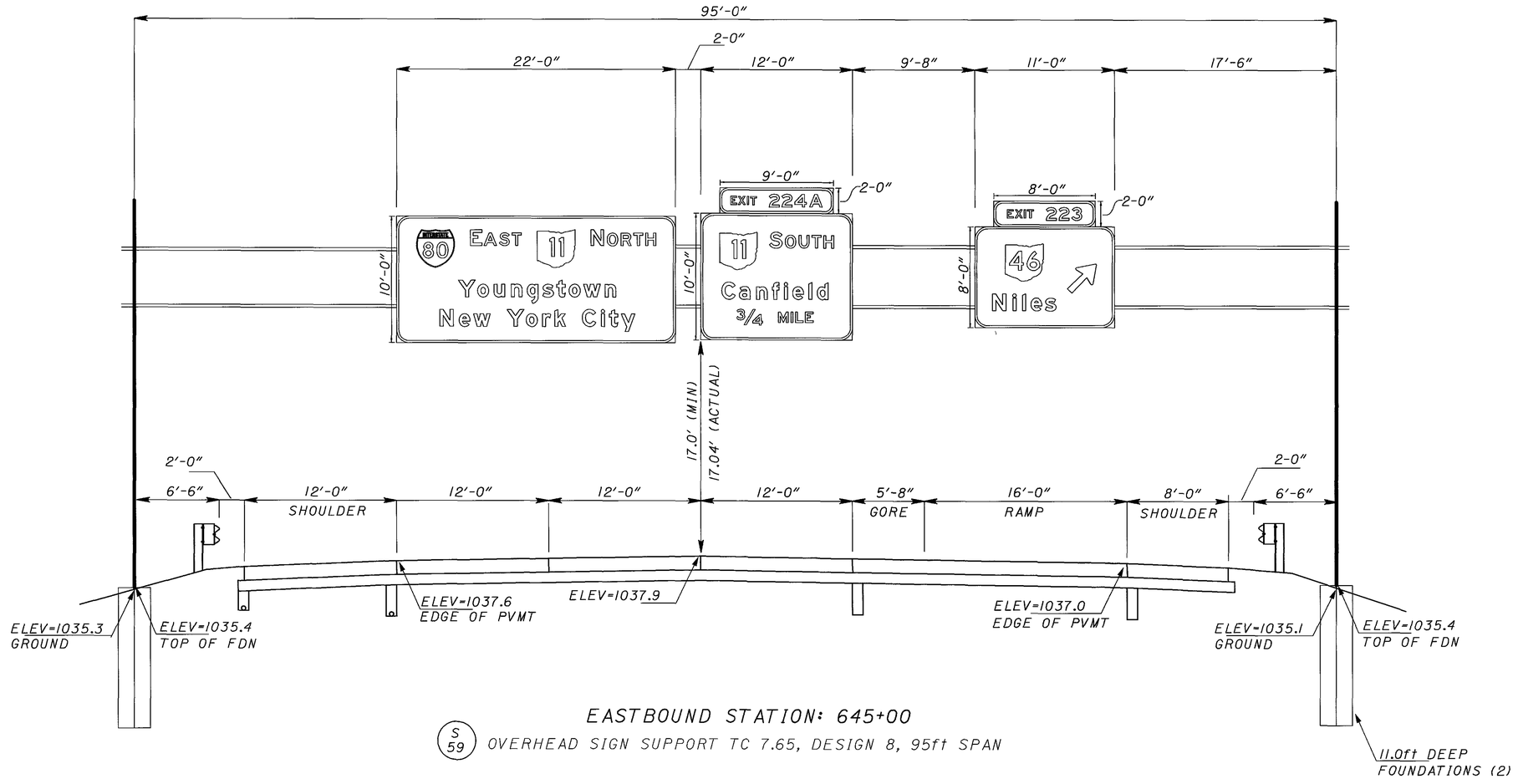
0 5 10
HORIZONTAL SCALE IN FEET

SIGN ELEVATION

MAH-80-0.97

911
1100

7/20/2005 9:56:49 AM
s:\projects\37700\traffic\Elevation.dgn



EASTBOUND STATION: 645+00

S 59 OVERHEAD SIGN SUPPORT TC 7.65, DESIGN 8, 95ft SPAN

CALCULATED ATR
CHECKED JFM

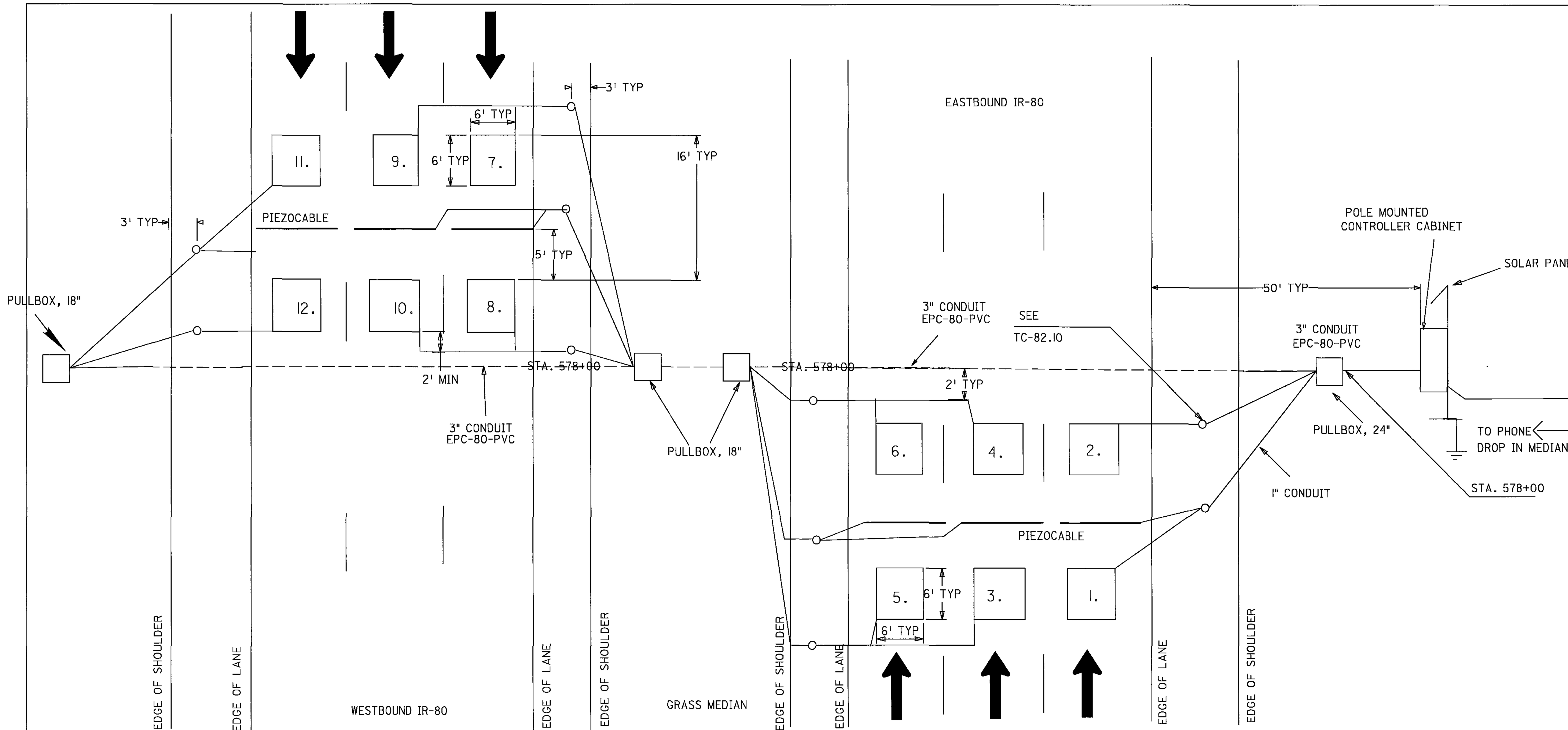
0 5 10
HORIZONTAL SCALE IN FEET

SIGN ELEVATIONS

MAH-80-0.97

912
1100

7/20/2005 9:57:03 AM
s:\projects\37700\traffic\Elevation.dgn



AUTOMATIC TRAFFIC RECORDER INSTALLATION
6 LANE CLASS SECTION
GRASS MEDIAN

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION
603	00400	80	FT.	4" CONDUIT, TYPE E
625	02890	1	EACH	LIGHT POLE, DESIGN ATON15
625	25101	80	FT.	CONDUIT, 1", 725.04, AS PER PLAN
625	25503	170	FT.	CONDUIT, 3", 725.05, AS PER PLAN
625	25900	170	FT.	CONDUIT, JACKED OR DRILLED UNDER PAVEMENT, 3"
625	29000	90	FT.	TRENCH
625	30700	3	EACH	PULL BOX, 725.08, 18"
625	30706	1	EACH	PULL BOX, 725.08, 24"
625	32000	1	EACH	GROUND ROD
632	26501	12	EACH	DETECTOR LOOP, AS PER PLAN
633	68500	1	EACH	TELEPHONE SERVICE
625	14000	1	EACH	LIGHT POLE FOUNDATION, 24" x 6' DEEP
632	65200	1062	FT.	LOOP DETECTOR LEAD-IN CABLE
632	90400	6	EACH	SIGNALIZATION, MISC.: PIEZOCABLE AXLE SENSOR CLASS I (11' IN LENGTH TYPICAL)
633	67200	1	EACH	CONTROLLER WORK PAD
633	65001	1	EACH	CABINET WITHOUT CONTROLLER, AS PER PLAN
633	99000	1	EACH	CONTROLLER ITEM, MISC.: SOLAR PANEL

NOTES

1. THE CONTRACTOR SHALL CONTACT THE OFFICE OF TECH. SERVICES AT 614-466-3727 FIVE (5) WORKING DAYS PRIOR TO THE SCHEDULED SITE INSTALLATION.

2. ALL SENSORS ARE TO BE TESTED BY TECHNICAL SERVICES PERSONNEL AFTER THE INSTALLATION IS COMPLETE TO VERIFY THAT THE STATION IS OPERATING PROPERLY. IF THE ELECTRONIC EQUIPMENT DOES NOT PERFORM PROPERLY BECAUSE OF AN IMPROPERLY FUNCTIONING SENSOR, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF THE FAULTY SENSOR(S), AS SOON AS POSSIBLE AT THEIR OWN COST.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND TESTING THE PHONE DROP INSIDE OF THE CONTROLLER CABINET. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CHARGES INCURRED PRIOR TO THE TRANSFER OF THE TELEPHONE ACCOUNT. THE CONTRACTOR SHALL COORDINATE WITH ODOT, TELECOMMUNICATIONS, MR. MIKE WIGGINS (614-466-4452) TO TRANSFER THE TELEPHONE ACCOUNT AND THE BILLING CONTRACT UNIT PRICE PER EACH ITEM 633 TELEPHONE SERVICE AND SHALL INCLUDE ALL MATERIAL, LABOR, TOOLS, EQUIPMENT, INCIDENTALS AND PAYMENT OF ALL PHONE COMPANY FEES NECESSARY FOR EACH INSTALLATION, IN PLACE COMPLETE AND ACCEPTED.

4. ALL LOOPS SHALL BE 6' x 6'. LOOPS SHALL BE SPACED 16' FROM LEADING EDGE TO LEADING EDGE. INSTALLATION OF LOOPS SHALL CONFORM TO TC-82.10 EXCEPT THAT LOOPS SHALL BE INSTALLED WITH FOUR (4) TURNS, AND HAVE A MINIMUM EPOXY OR SEALANT COVER OF 3 INCHES FOR ASPHALT OR -3/4 INCH FOR CONCRETE.

5. LOOPS AND PIEZOCABLES SHALL BE CUT I THE SURFACE ASPHALT COURSE. THEY SHALL BE INSTALLED BETWEEN THE INTERMEDIATE AND SURFACE COURSES, UNLESS APPROVED BY THE PROJECT ENGINEER.

6. LOOP INDUCTANCE READING SHALL BE BETWEEN 70 AND 300 MICROHENRIES. THE LOOP INDUCTANCE BETWEEN TWO LOOPS IN THE SAME LANE SHALL BE WITHIN 20 MICROHENRIES OF EACH OTHER.

7. THE PIEZOCABLE SENSOR SHALL BE MADE BY MEASUREMENT SPECIALTIES INC. AND BE A ROADTRAX BRASS LINGUINI (BL) CLASS I AXLE SENSOR OR EQUIVALENT. THE SENSOR WITH A LENGTH 1' SHORTER THAN THE ONSITE LANE WIDTH SHALL BE CENTERED IN THE LANE. PAYMENT WILL BE AT THE CONTRACT UNIT PRICE PER EACH ITEM SIGNALIZATION, MISC.: PIEZOCABLE AXLE SENSOR, CLASS I AND SHALL INCLUDE ALL MATERIAL, LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY FOR EACH INSTALLATION, IN PLACE COMPLETE AND ACCEPTED.

   PIEZOCABLES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS AND SHALL MEET THE VOLTAGE REQUIREMENTS SHOWN IN THE INSTRUCTIONS. THE VENDOR SHALL ENSURE THAT THE COMPLETE CURING OF EPOXY OR SEALANT TAKES PLACE PRIOR TO OPENING THE LANE TO TRAFFIC. USE IRD AS475 ACRYLIC GROUT.

   AFTER THE INSTALLATION IS COMPLETE, THE MINIMUM OUTPUT VOLTAGES OF EACH PIEZOCABLE, WITH A 200 FOOT LEAD-IN, SHALL MEET THE FOLLOWING: 1.5 VOLTS (PEAK) FOR A 10,000 POUND AXLE, AND 200 MILLIVOLTS (PEAK) FOR A CAR AXLE.

   THE PIEZOCABLE LEAD-IN CABLE IS ORDERED IN DIFFERENT LENGTHS AS PART OF SENSOR AND SHALL NOT BE SPLICED. INCLUDED WITH THIS ITEM SHALL BE PAVEMENT CUTTING OF SLOTS, PLACEMENT OF LEAD-IN WIRE, AND THE APPLICATION OF EPOXY OR SEALANT AS RECOMMENDED BY SENSOR MANUFACTURER. CONDUIT, DRILLING, TRENCHING, BACKFILLING, AND SURFACE RESTORATION FROM THE EDGE OF THE PAVEMENT TO THE PULLBOX SHALL ALSO BE INCLUDED.

8. CABLE AND WIRE SHALL BE IDENTIFIED IN ACCORDANCE WITH 632.04. IDENTIFICATION SHALL INCLUDE THE DIRECTION OF TRAVEL (i.e., NB, EB) AND THE LOOP NUMBER AS SHOWN. NORTH AND EAST ARE THE PREVAILING DIRECTION OF TRAVEL. EACH LOOP AND PIEZO CABLE SHALL HAVE A SEPARATE LEAD-IN CABLE ROUTED TO THE CONTROLLER CABINET TERMINAL BLOCK AND TAGGED. THREE FEET OF THE EXTRA CABLE SHALL REMAIN IN THE CABINET AFTER THE CONNECTION, WITH NO OBSTRUCTION TO THE TERMINAL BLOCK CONNECTIONS.

9. THE NEMA ALUMINUM CABINET SHALL BE POLE MOUNTED AS SHOWN ON THE PLAN SHEET. THE PREFERRED LOCATION SHALL BE 50' FROM THE CLOSEST LANE. ALLOWANCES SHALL BE MADE FOR A VIEW OF ALL LANES IF POSSIBLE. AS A MINIMUM, THE CABINET SHALL BE AT LEAST 30' AWAY FROM THE CLOSEST LANE. IF PLACED BEHIND A GUARDRAIL, THE CABINET TO GUARDRAIL CLEARANCE MUST BE AT LEAST 5'. THE CABINET SHALL NOT BE PLACED IN A DITCH OR ANY AREA SUBJECT TO FLOODING. SEE SHEET 914 FOR ADDITIONAL DETAILS AND NOTES ON THE CABINET.

10. THE CABINET WORK PAD SHALL BE 3 FOOT BY 4 FOOT BY 4 INCHES DEEP AND SHALL BE LEVEL. THE WORK PAD SHALL BE POURED SIMULTANEOUSLY WITH THE CABINET FOUNDATION SO THEY WILL FORM ONE UNIT.

11. REFERENCE IS MADE TO STANDARD DRAWING HL-30.11 FOR DETAILS OF DRAINING PULLBOXES. UNDERDRAINS FOR PULLBOXES SHALL BE USED AS DIRECTED BY THE ENGINEER AND SHALL BE PROVIDED WHERE THE LENGTH REQUIRED FOR A SATISFACTORY OUTLET DOES NOT EXCEED APPROXIMATELY 20'.

12. ALL ITEMS SHALL CONFORM TO C & M SPECIFICATIONS 625, 725, 632, 732, 633 AND 733, UNLESS OTHERWISE SPECIFIED.

13. THE SOLAR PANEL SHALL BE INSTALLED ON THE POLE. THE SOLAR PANEL OUTPUT CABLE SHALL BE SECURED AND ROUTED TO THE INSIDE OF THE CABINET FOR CONNECTION TO THE TERMINAL BLOCK. THE SOLAR PANEL SHALL BE MOUNT AT A 45 ANGLE MIN. FACING SOUTH AND UNIMPEDED BY ANY OBSTACLES.

14. THE SOLAR PANEL SHALL BE A MINIMUM OF 50 WATT - 12 VOLT SYSTEM WITH STAINLESS STEEL MOUNTING HARDWARE, APPROPRIATE REGULATOR (ASC PREFERRED) AND CABLE. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR, TOLLS, EQUIPMENT, AND INCIDENTALS NECESSARY FOR EACH INSTALLATION, IN PLACE COMPLETE AND ACCEPTED.

15. IF APPROPRIATE, THE PULL BOX COVERS IN THE ASPHALT SHOULDER SHALL BE A HEAVY DUTY FRAME AND LID (NEENAH R-6686 OR APPROVED EQUAL). THIS ITEM SHALL INCLUDE ALL COSTS OF LABOR, MATERIALS AND EQUIPMENT NECESSARY TO INSTALL EACH ITEM 625 - PULL BOX, 713.08, 18 & 24 IN. AS PER PLAN.

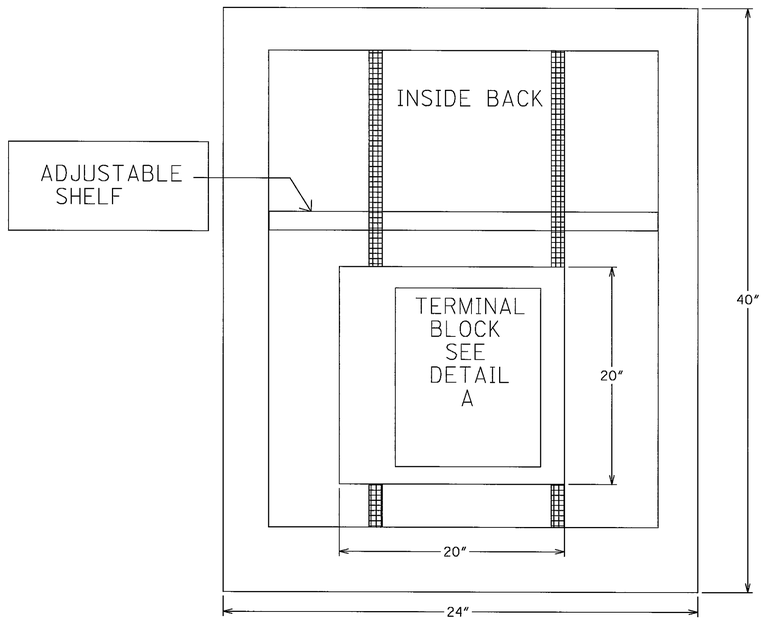
CALCULATED ATR
CHECKED JFM

6 LANE CLASS PLAN INSERT SHEET

MAH-80-0.97

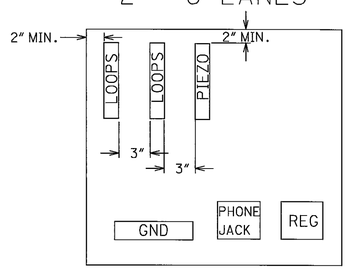
7/25/2005 2:42:05 PM
s:\projects\37700\traffic\6lanexicls.dgn

CABINET FRONT VIEW

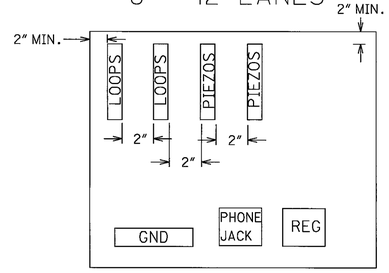


DETAIL A
DIFFERENT TERMINAL BLOCKS FOR CLASSIFICATION INSTALLATIONS

2 - 6 LANES



8 - 12 LANES



TERMINAL BLOCK DETAILS

2 LNS - 4 LOOPS - BEAU TYPE 78008 TERMINAL STRIP OR EQIVALENT
2 LNS - 4 LOOPS & 4 PIEZOS - BEAU TYPE 78008 TERMINAL STRIP OR EQIVALENT x 2

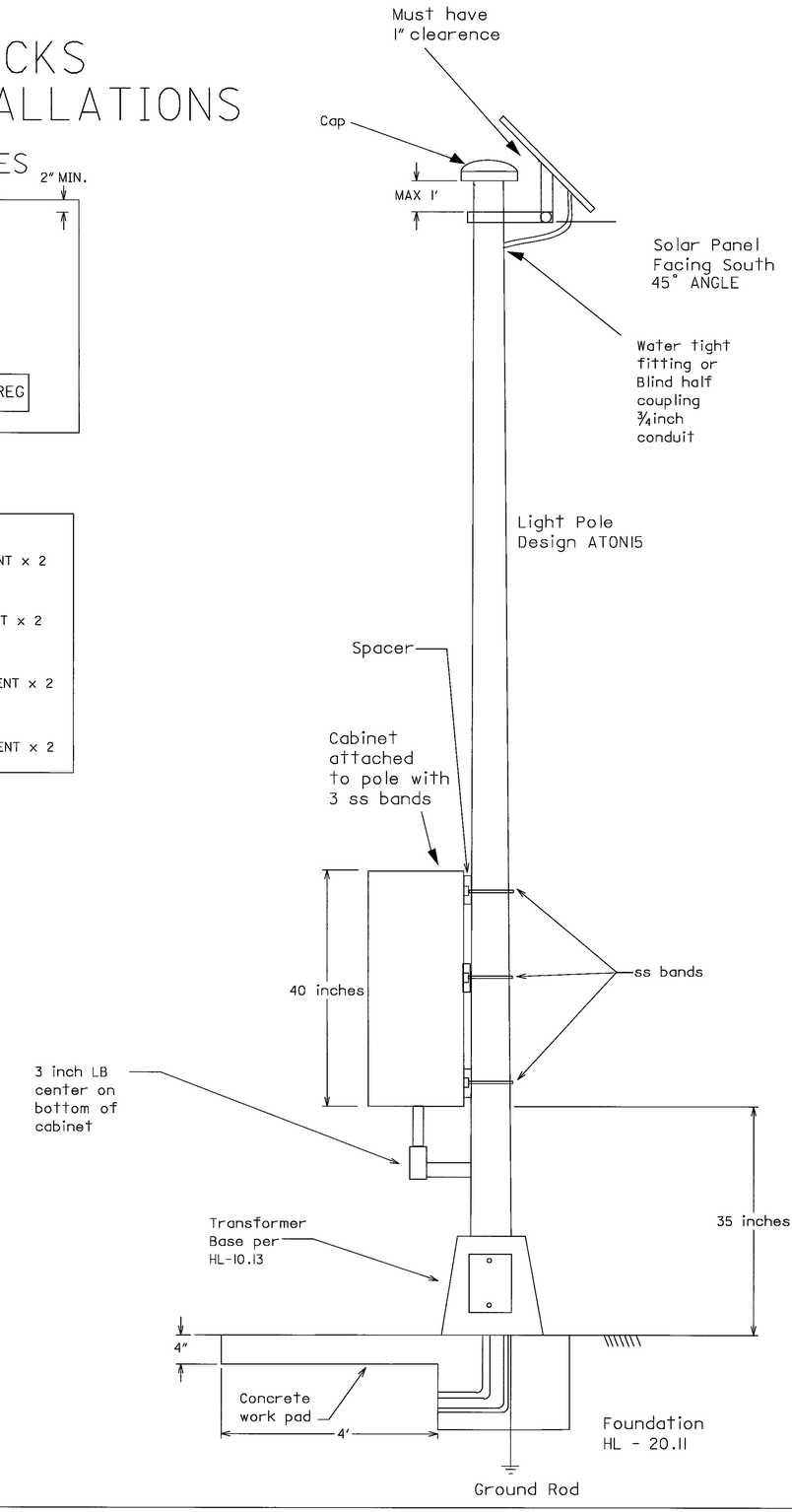
4 LNS - 8 LOOPS - BEAU TYPE 78016 TERMINAL STRIP OR EQIVALENT
4 LNS - 8 LOOPS & 8 PIEZOS - BEAU TYPE 78016 TERMINAL STRIP OR EQIVALENT x 2

6 LNS - 12 LOOPS - BEAU TYPE 78024 TERMINAL STRIP OR EQIVALENT
6 LNS - 12 LOOPS & 12 PIEZOS - BEAU TYPE 78024 TERMINAL STRIP OR EQIVALENT x 2

8 LNS - 16 LOOPS - BEAU TYPE 78024 TERMINAL STRIP OR EQIVALENT x 2
8 LNS - 16 LOOPS & 16 PIEZOS - BEAU TYPE 78024 TERMINAL STRIP OR EQIVALENT x 2

NOTES

1. THE ALUMINUM CABINET SHALL BE A SIZE 3 AS SHOWN IN TABLE 7.3-1 OF THE NEMA STANDARD PUBLICATION No TS 2-1992. THE NOMINAL DIMENSIONS ARE: 24 INCHES WIDE BY 40 INCHES HIGH BY 15 INCHES DEEP. IT SHALL BE SHEET ALUMINUM AS DETAILED IN SECTION 7.2.2.1 OR CAST ALUMINUM DETAILED IN SECTION 7.2.2.2. IT SHALL ALSO CONFORM TO SECTIONS: 7.4, 7.5 EXCEPT FOR 7.5.7, 7.6 WITH ONE SHELF, 7.7.3, 7.8.3 SIZE 5, 7.8.4.
   - A. IT SHALL BE EQUIPPED WITH TWO ADJUSTABLE "C" CHANNELS MOUNTED ON EACH OF THE THREE INTERIOR SIDES FOR THE PURPOSE OF MOUNTING TERMINAL STRIP PANELS AND SHELVING. FURNISH THE CABINETS WITH ONE ADJUSTABLE SHELF WHICH WILL NOT SAG WHEN LOADED WITH THE WIM ELECTRONICS. DESIGN THE SHELVING TO ALLOW FOR THE PASSAGE OF AIR. PLACE NO EQUIPMENT ON THE BOTTOM OF THE CABINET.
   - B. MOUNT A GROUNDING STRIP TO THE TERMINAL STRIP PANEL ON THE CABINET WALL FOR CONNECTION OF ALL COMMON CONDUCTORS WITH THE STRIP GROUNDING TO THE GROUND ROD.
   - C. INSTALL THE HOUSING CABINET AS TO ALLOW ALL EQUIPMENT TO STAND IN AN UPRIGHT POSITION WITH ALL EQUIPMENT AND DEVICES CAPABLE OF BEING REMOVED BY PULLING STRAIGHT OUT AND NOT TURNING SIDEWAYS AND WITHOUT RELOCATING OR DISCONNECTING ONE DEVICE TO REMOVE ANOTHER DEVICE.
   - D. THE CONTRACTOR SHALL COMPLETELY WIRE UP ALL CONNECTIONS TO THE TERMINAL BLOCKS OF THE BACK PANNEL USING SOLDERED SPADE TYPE CONNECTORS. PROVIDE THAT ALL HOUSING CABINET WIRING AND TERMINALS ARE CLEARLY MARKED AND LABELED AS SHOWN ON DETAIL A. PROVIDE THAT WIRING IS LACED OR BOUND TOGETHER WITH SELF-LOCKING NYLON TIE-WRAPS. MAKE A LOOP NUMBERING DIAGRAM WITH CORRESPONDING TERMINAL NUMBERS FOR EACH SITE AND STORE IN A PLASTIC WEATHER PROOF ENVELOP IN THE ENCLOSURE. PROVIDE A DUPLICATE DIAGRAM TO THE ODOT PROJECT INSPECTOR.
   - E. INSTALL ALL HOUSING CABINETS SO AS TO WITHSTAND ALL WEATHER CONDITIONS AND PREVENT THE INTRUSION OF REPTILES, RODENTS, AND INSECTS.
   - F. THE CABINET SHALL INCLUDE A VENT, BUT NO FAN.
   - G. MOUNTING FACILITIES SHALL INCLUDE ONE SURGE PROTECTED BACK PANEL.
   - H. TERMINAL STRIPS MOUNTED VERTICALLY ON BACK PANEL 2" FROM TOP AND SIDES EQUIDISTANTLY SPACED FOR 2 LANE APPLICATIONS. SOLAR PANEL AND GROUND BAR TO BE MOUNTED 2" FROM BOTTOM AND LEFT OF BACK PANEL FOR ALL APPLICATIONS. 4-6 LANE APPLICATIONS TO HAVE ONE ROW OF TWO TERMINAL STRIPS MOUNTED HORIZONTALLY 2" FROM TOP AND SIDES OF BACK PLATE AND ONE ROW OF TWO TERMINAL STRIPS MOUNTED 8" FROM TOP 2" FROM AND SIDES BACK PLATE EQUIDISTANTLY SPACED. 8 LANE APPLICATIONS TO HAVE TWO ROWS OF THREE TERMINAL BLOCKS W/ IST ROW 2" FROM TOP AND SIDES OF BACK PLATE AND SECOND ROW 8" FROM TOP AND 2" FROM SIDES OF BACK PLATE EQUIDISTANTLY SPACED.
   - I. LOCKS KEYED TO STATE MASTER #2.
2. THE CABINET SHALL BE ORIENTED SO THAT THE DOOR OPENS AWAY FROM THE ROADWAY, SO THAT THE FIELD TECHNICIAN CAN OBSERVE TRAFFIC WHILE WORKING ON THE SYSTEM.
3. ANY MODIFICATIONS TO POLE (HOLES DRILLED OR FITTINGS WELDED AFER FACTORY GALVANIZING) NEED TO BE COLD GALVANIZED OR ZINC COATED TO PREVENT CORROSION
4. APPLY ANTI-SEIZE TO ALL THREADED FASTENERS ASSOCIATED WITH THE POLE OR CABINET IF THEY ARE NOT STAINLESS STEEL



DATE 5/21/03

POLE AND CABINET DETAILS

MAH-80-0.97

914
1100

7/25/2005 2:42:52 PM
es:\projects\377001\traffic\Poleandcabinet.dgn

LIGHTING GENERAL NOTES

ITEM 202 - DISCONNECT EXISTING CIRCUIT, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF THE DISCONNECTION OF AN EXISTING LIGHT CIRCUIT AT A PULL BOX OR TRANSFORMER BASE.

DISCONNECTION AT A PULL BOX SHALL INVOLVE CUTTING THE EXISTING CIRCUIT AND REMOVING ALL SPLICE KITS. ANY CABLE THAT IS TO BE ABANDONED SHALL BE TERMINATED FROM THE PULL BOX SO THAT NO CABLE IS LEFT IN THE BOX.

DISCONNECTION AT A TRANSFORMER BASE SHALL INVOLVE CUTTING THE EXISTING CIRCUIT AND REMOVING ALL CONNECTOR KITS. ALL DUCT-CABLE NOT TO BE REUSED SHALL BE REMOVED FROM THE TRANSFORMER BASE AND THE EXISTING CONDUIT IN THE FOUNDATION SHALL BE CLEANED OF ALL CABLE AND DEBRIS SO THAT THE NEW DUCT-CABLE CAN BE INSTALLED. ALL EXISTING CABLE TO REMAIN ACTIVE SHALL BE CUT IN A MANNER SO THAT THERE IS SUFFICIENT CABLE LEFT FOR RE-CONNECTION.

THOSE WIRES THAT ARE TO REMAIN ON ACTIVE CIRCUITS SHALL HAVE A WATER-RESISTANT SEAL AT THE CUT END. THE WATER-RESISTANT SEAL SHALL BE ACCOMPLISHED BY PLUGGING THE DEACTIVATED PORT OF AN EXISTING CONNECTOR KIT OR BY INSTALLING A CABLE SPLICE KIT ON THE CUT END OF THE CABLE.

PAYMENT SHALL BE MADE AT THE UNIT BID PRICE UNDER CMS ITEM 202, "DISCONNECT EXISTING CIRCUIT, AS PER PLAN" AT EACH LOCATION WHERE DISCONNECTION IS REQUIRED WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM SPECIAL, MAINTAIN EXISTING LIGHTING

EXISTING ROADWAYS WHICH ARE TO REMAIN OPEN TO TRAFFIC DURING CONSTRUCTION OF THIS PROJECT AND ARE LIGHTED SHALL HAVE THE LIGHTING MAINTAINED AS DESCRIBED HEREIN.

BEFORE ANY WORK IS STARTED IN THE IMMEDIATE VICINITY OF ANY EXISTING LIGHTING CIRCUITS, REPRESENTATIVES OF THE STATE, THE MAINTAINING AGENCY, AND THE CONTRACTOR SHALL MAKE A VISUAL INSPECTION OF THE OF THE EXISTING ROADWAY LIGHTING CIRCUITS TO BE MAINTAINED. DURING THIS INSPECTION A WRITTEN RECORD OF THE CONDITION OF THE EXITING LIGHTING SHALL BE MADE BY THE STATE'S REPRESENTATIVE. THIS WRITTEN REPORT SHALL NOTE INDIVIDUAL LUMINAIRES WHICH ARE NOT STANDING, AND INDIVIDUAL CIRCUITS WHICH ARE NOT IN WORKING ORDER. THE COMPLETED REPORT SHALL BE SIGNED BY THE REPRESENTATIVES OF THE STATE, THE MAINTAINING AGENCY, AND THE CONTRACTOR. IF, AS A RESULT OF THIS INSPECTION, IT IS DETERMINED THAT THE CONDITION OF THE EXISTING SYSTEM IS BELOW THAT REQUIRED FOR THE SAFETY OF THE TRAVELING PUBLIC, THEN THE MAINTAINING AGENCY SHALL MAKE REPAIRS NECESSARY TO RETURN THE SYSTEM TO AN ACCEPTABLE CONDITION. FOLLOWING THESE REPAIRS, THE SYSTEM SHALL AGAIN BE INSPECTED AND A REPORT MADE AND SIGNED AS OUTLINED HEREIN.

WHEN THE EXISTING SYSTEM IS IN AN ACCEPTABLE CONDITION, IT SHALL BE TURNED OVER TO THE CONTRACTOR WHO SHALL THEN BE REQUIRED TO MAINTAIN THE EXISTING LIGHTING TO THE CONDITION OUTLINED IN THIS REPORT WITH THE EXCEPTION OF KNOCKDOWNS DUE TO TRAFFIC ACCIDENTS. REPLACEMENTS OF KNOCKED DOWN UNITS SHALL BE DONE ONLY WHEN THE ENGINEER HAS DETERMINED THAT THE REPLACEMENT OF THE KNOCKED DOWN UNIT IS NECESSARY AND SHALL BE PAID SEPARATELY ON A PER UNIT BASIS. BETTERMENTS SHALL BE COVERED IN ITEMS OF WORK PERTAINING TO THE CONSTRUCTION OF PERMANENT IMPROVEMENTS. THE STATE SHALL GIVE THE CONTRACTOR ONE COPY OF THE EXISTING LIGHTING CIRCUITRY LAYOUT. WHEN THE CONTRACTOR HAS TAKEN OVER THE MAINTENANCE OF THE EXISTING SYSTEM, HE SHALL PROVIDE ALL REQUIRED LAYOUT AND LOCATING OF EXISTING LIGHTING CIRCUITS WITHIN THE PROJECT.

SHOULD THE CONTRACTOR DESIRE THE REMOVAL OF THE EXISTING LIGHTING BEFORE THE NEW LIGHTING IS OPERATIONAL, THE CONTRACTOR SHALL THEN BE RESPONSIBLE FOR ADEQUATE TEMPORARY LIGHTING OF THAT PORTION OF THE EXISTING ROADWAY AFFECTED BY THE REMOVAL OF THE EXISTING LIGHTING. TWO (2) WEEKS PRIOR TO INSTALLING SUCH LIGHTING, THE CONTRACTOR SHALL PREPARE AND SUBMIT FOUR (4) SETS OF THE TEMPORARY LIGHTING PLANS TO THE ENGINEER FOR REVIEW AND APPROVAL. THIS PLAN SHALL SHOW LOCATION OF POLES, LENGTH OF BRACKET ARMS, STYLE OF LUMINAIRES, MOUNTING HEIGHT, WIRING METHODS, AND OTHER PERTINENT INFORMATION. THE TEMPORARY LIGHTING SHALL PROVIDE AN AVERAGE INITIAL INTENSITY OF 1.2 FOOTCANDLES WITH AN AVERAGE TO MINIMUM UNIFORMITY RATIO NOT TO EXCEED 4:1. MOUNTING HEIGHT FOR TEMPORARY LUMINAIRES SHALL NOT BE LESS THAN 27 FEET AND MINIMUM OVERHEAD CONDUCTOR CLEARANCE SHALL BE 20 FEET. TEMPORARY OVERHEAD CONSTRUCTION SHALL NOT BE LESS THAN GRADE "A" FOR STRENGTH REQUIREMENTS AS DEFINED BY THE NATIONAL ELECTRIC SAFETY CODE.

WOOD POLES WITH OVERHEAD WIRING MAY BE USED. HOWEVER, TEMPORARY LIGHTING SHALL MEET FEDERAL AND STATE SAFETY CRITERIA. IF BREAKAWAY POLES ARE USED TO MEET THIS CRITERIA, THEN UNDERGROUND WIRING WILL BE USED. RECONDITIONED OR USED MATERIALS MAY BE FURNISHED FOR TEMPORARY LIGHTING. ALL MATERIALS NECESSARY TO COMPLETE THE TEMPORARY LIGHTING SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. A SEPARATE POWER SERVICE WILL BE PROVIDED BY THE CONTRACTOR FOR THE TEMPORARY LIGHTING SYSTEM. THE TEMPORARY LIGHTING SHALL NOT BE SPLICED INTO EXISTING LIGHTING CIRCUITS. THE CONTRACTOR SHALL PAY ALL HOOK-UP FEES AND ELECTRICAL COSTS FOR THE TEMPORARY SYSTEM. THESE COSTS SHALL BE PAID FOR UNDER THE LUMP SUM ITEM SPECIAL MAINTAIN EXISTING LIGHTING. WHEN NO LONGER NEEDED THE TEMPORARY LIGHTING INSTALLATION SHALL BE REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR.

THE LUMP SUM BID FOR ITEM SPECIAL - MAINTAIN EXISTING LIGHTING, SHALL INCLUDE PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS, INCIDENTALS, AND TEMPORARY POWER SERVICES NECESSARY TO MAINTAIN THE EXISTING LIGHTING AS SPECIFIED HEREIN. THE UNIT BID PRICE FOR EACH ITEM SPECIAL - REPLACEMENT OF EXISTING LIGHTING UNIT, SHALL BE FULL PAYMENT FOR THE REPLACEMENT OF AN EXISTING UNIT WHICH HAS BEEN KNOCKED DOWN AFTER THE AFOREMENTIONED INSPECTION AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO PROVIDE A REPLACEMENT FOR SUCH UNIT. THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

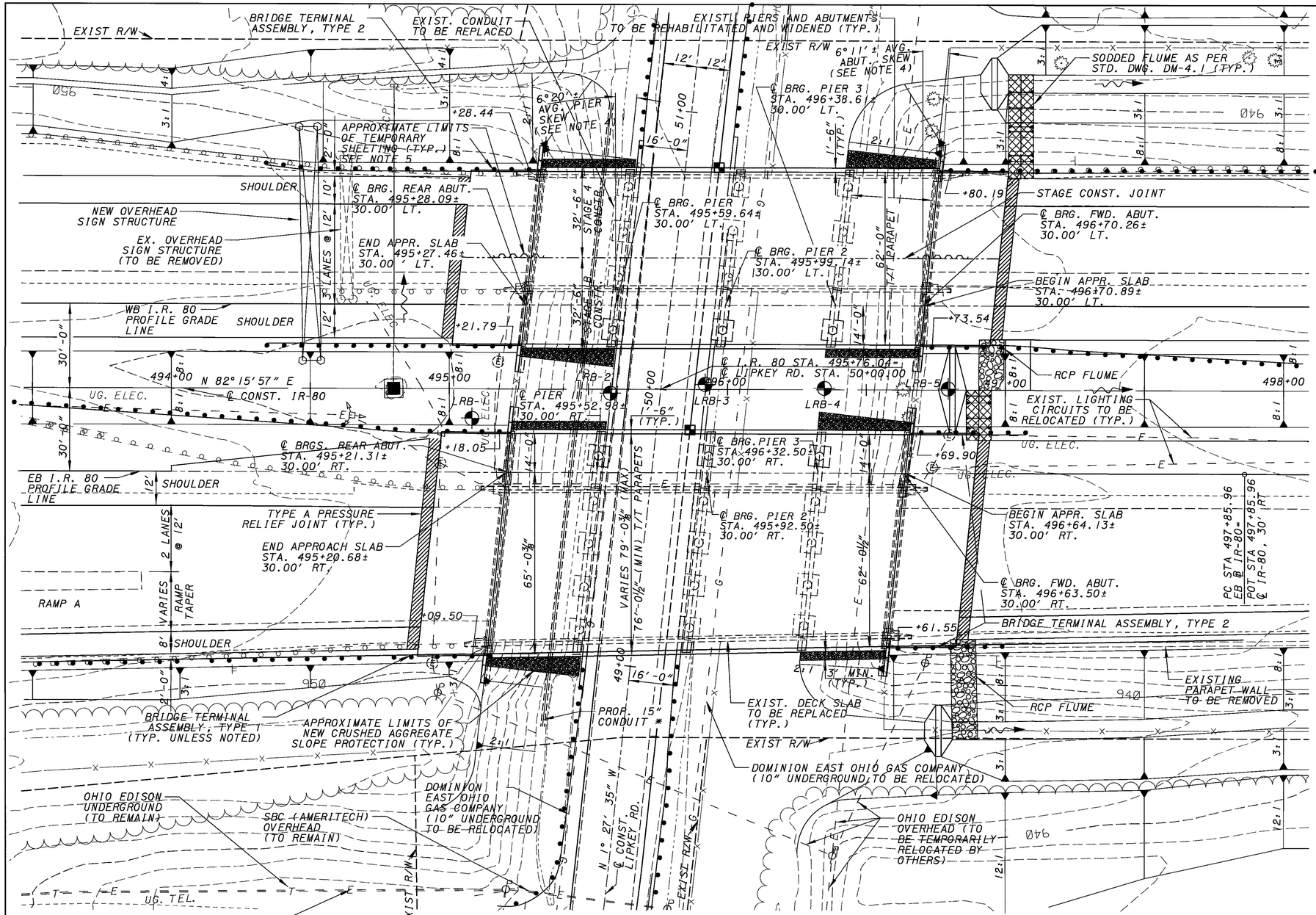
ITEM SPECIAL - REPLACEMENT OF EXISTING LIGHTING UNIT 20 EACH

ITEM SPECIAL - MAINTAIN EXISTING LIGHTING LUMP

CALCULATED ATR
CHECKED JFM

LIGHTING NOTES

MAH-80-0.97



PLAN

NOTES:

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE; ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. EXISTING STRUCTURE ELEVATIONS ARE ±0.81 FEET LOWER THAN THOSE SHOWN ON THE ORIGINAL CONSTRUCTION PLANS DATED 1965.
3. FOR SUPERELEVATION TRANSITION DATA, SEE ROADWAY SHEET 794
4. FOR ABUT. AND PIER SKEWS SEE DETAIL SHEETS.
5. MINIMUM SECTION MODULUS FOR SHEETPILE = 6.4 CU. IN., WITH MINIMUM STEEL YIELD STRENGTH = 60,000 PSI.
   REAR ABUT. SHEET PILE TOP ELEV. = 950.90
   REAR ABUT. MINIMUM SHEETPILE BOTTOM ELEV. = 929.40
   FWD. ABUT. SHEETPILE TOP ELEV. = 948.60
   FWD. ABUT. MINIMUM SHEETPILE BOTTOM ELEV. = 927.10

*6. SEE SHEET 780 OF 1100 FOR DETAILS OF PROPOSED 15" CONDUIT.

CURVE DATA ℄ EASTBOUND IR-80

P.I. Sta = 500+48.20
Δ = 5° 14' 28" (RT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 262.24'
L = 524.12'
E = 6.00'

LEGEND

■ - POINT OF MINIMUM VERTICAL CLEARANCE
⊕ - SOIL BORING LOCATION

TRAFFIC DATA (I.R. 80)

CURRENT ADT (2006) = 55110
DESIGN YEAR ADT (2026) = 75010
DESIGN YEAR ADTT = 22503

BENCHMARK DATA

BENCHMARK "10"
CONCRETE MONUMENT WITH PIN
STA. 497+00, 0' OFFSET
EL. 946.66

BENCHMARK "9"
RRS ON EAST SIDE OF UTILITY POLE, WEST SIDE OF LIPKEY ROAD
STA. 495+20, 179' RT.
EL. 934.90

EXISTING STRUCTURE

TYPE: CONTINUOUS REINFORCED CONCRETE SLAB WITH REINFORCED CONCRETE SUBSTRUCTURES

SPANS: LT - 31'-6½"±, 39'-6"±, 39'-5½"±, 31'-8"±
RT - 31'-8"±, 39'-6"±, 40'-0"±, 31'-0"±
CENTER TO CENTER BEARINGS

ROADWAY: LT - 39'-0"± TOE TO TOE SAFETY CURBS
RT - VARIES

ORIGINAL DESIGN LOADING: CF-2000 (1957)

ALIGNMENT: TANGENT

SKEW: ABUTMENT - 6°11'± LEFT FORWARD
PIER - 6°20'± LEFT FORWARD

WEARING SURFACE: 3"± ASPHALT ON 2"± SDC OVERLAY

APPROACH SLABS: AS-1-54 (25'-0"± LONG)

YEAR CONSTRUCTED: 1969

STRUCTURE FILE NO.: 5002192 LT & 5002222 RT

PROPOSED STRUCTURE

PROPOSED WORK: NEW REINFORCED CONCRETE SLAB ON WIDENED SUBSTRUCTURES

TYPE: CONTINUOUS REINFORCED CONCRETE SLAB WITH REINFORCED CONCRETE SUBSTRUCTURES

SPANS: LT - 31'-6½"±, 39'-6"±, 39'-5½"±, 31'-8"±
RT - 31'-8"±, 39'-6"±, 40'-0"±, 31'-0"±
CENTER TO CENTER BEARINGS

ROADWAY: LT - 62'-0" TOE TO TOE PARAPETS
RT - VARIES 79'-0⅜" TO 76'-0½"
TOE TO TOE PARAPETS

LOADING: HS25 & ALTERNATE MILITARY LOADING FOR SUPERSTRUCTURES AND NEW SUBSTRUCTURES
60 PSF FUTURE WEARING SURFACE

ALIGNMENT: TANGENT

SKEW: ABUTMENT - 6°11'± LEFT FORWARD
PIER - 6°20'± LEFT FORWARD

WEARING SURFACE: 1" MONOLITHIC CONCRETE

APPROACH SLABS: AS-1-81 (25'-0" LONG)

CROWN/SUPERELEVATION: VARIES -0.0156 TO +0.0079

LATITUDE: N41°06'42" LONGITUDE: W80°49'24"

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4181 EXECUTIVE PARKWAY, SUITE 350 WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
DEK/LMS	DEK/LMS	JEK	8/04

CHECKED	REVISED	STRUCTURE FILE NUMBER
MTO		5002192 (L) 5002222 (R)

MAHONING COUNTY
495+27.46± TO 496+70.89± (L)
495+20.68± TO 496+64.13± (R)

SITE PLAN
BRIDGE NO. MAH-80-0076 L/R
I.R. 80 OVER LIPKEY ROAD

MAH-80-0.97
PID 6080

1 / 22

916
1100

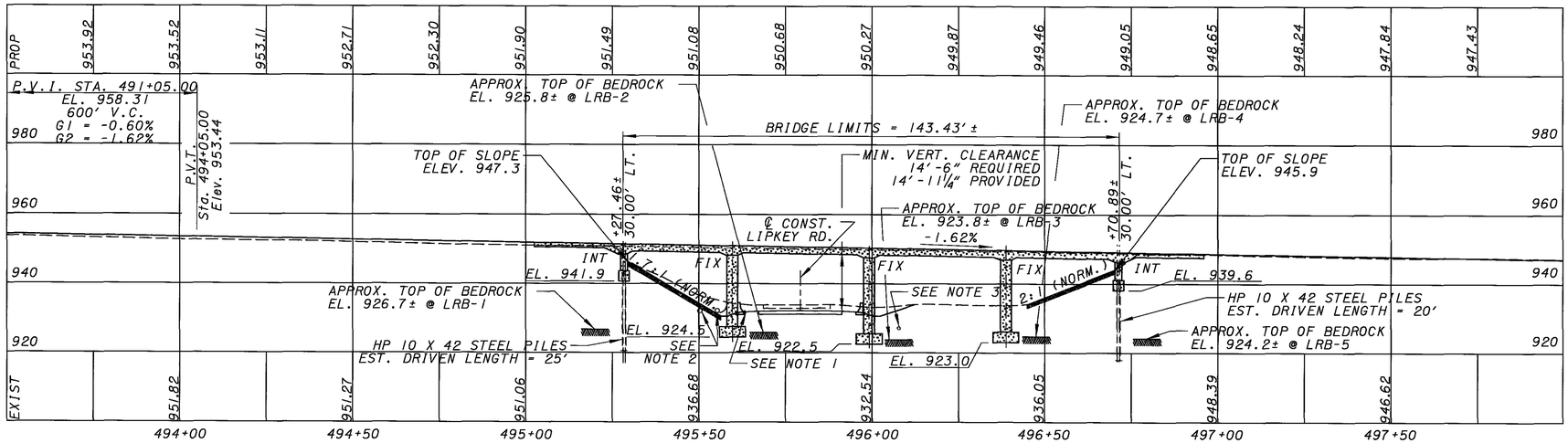
8/15/05 2:00:51 PM
s:\projects\37700\bridge-lipkey\MH080SPLA.dgn

PROPOSED BRIDGE WORK:

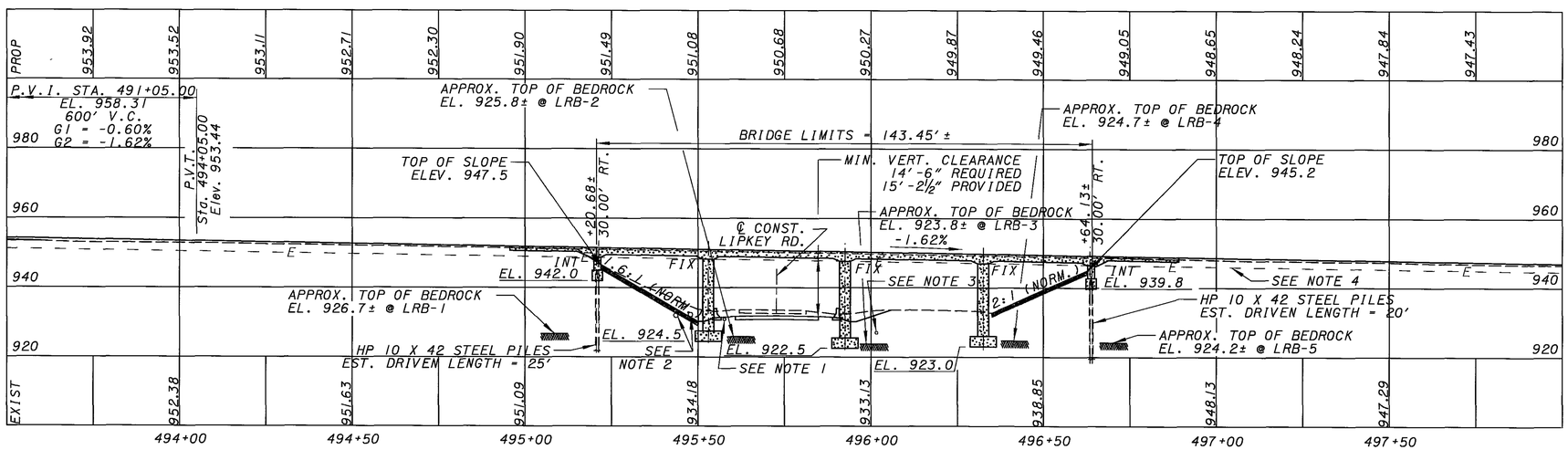
1. REMOVE THE EXISTING CONCRETE DECK SLAB AND ABUTMENT STEM TO A MINIMUM OF ONE FOOT BELOW TOP OF ABUTMENT SEAT, AND REMOVE EXISTING TURNBACK WINGWALLS.
2. PATCH THE REINFORCED CONCRETE SUBSTRUCTURES AS SHOWN ON THE PLANS.
3. WIDEN THE EXISTING CONCRETE ABUTMENTS AND PIERS.
4. INSTALL NEW POROUS BACKFILL WITH FILTER FABRIC AND A PIPE TO COLLECT AND DISCHARGE THE DRAINAGE BEHIND THE ABUTMENTS.
5. CONSTRUCT A NEW WIDENED REINFORCED CONCRETE DECK SLAB WITH 42" SBR-1-99 CONCRETE PARAPETS.
6. SEAL THE CONCRETE SURFACES WITH EPOXY-URETHANE CONCRETE SEALER.
7. CONSTRUCT NEW FULL-WIDTH APPROACH SLABS.
8. CONSTRUCT NEW CONCRETE BARRIER PROTECTION ALONG PIER COLUMNS.
9. REPAIR AND/OR REPLACE THE EXISTING SLOPE PROTECTION, TO TOP OF SLOPE ELEVATIONS SHOWN.
10. DETOUR TRAFFIC ON LIPKEY RD. AND LOWER ROADWAY TO PROFILE SHOWN ON ROADWAY PLANS.

NOTES:

1. EXISTING 10" DOMINION EAST OHIO GAS COMPANY DISTRIBUTION LINE TO BE RELOCATED BY OTHERS.
2. EXISTING 15" CONDUIT TO BE REPLACED. SEE SHEET 780 FOR DETAILS.
3. EXISTING 10" DOMINION EAST OHIO GAS COMPANY TRANSMISSION LINE TO BE RELOCATED BY OTHERS.
4. EXISTING OHIO EDISON ELECTRIC TO BE RELOCATED BY OTHERS.



PROFILE ALONG PROFILE GRADE LINE - LEFT BRIDGE



PROFILE ALONG PROFILE GRADE LINE - RIGHT BRIDGE

8/15/05 2:01:35 PM
s:\projects\37700\bridge-lipkey\MH080SPLB.dgn

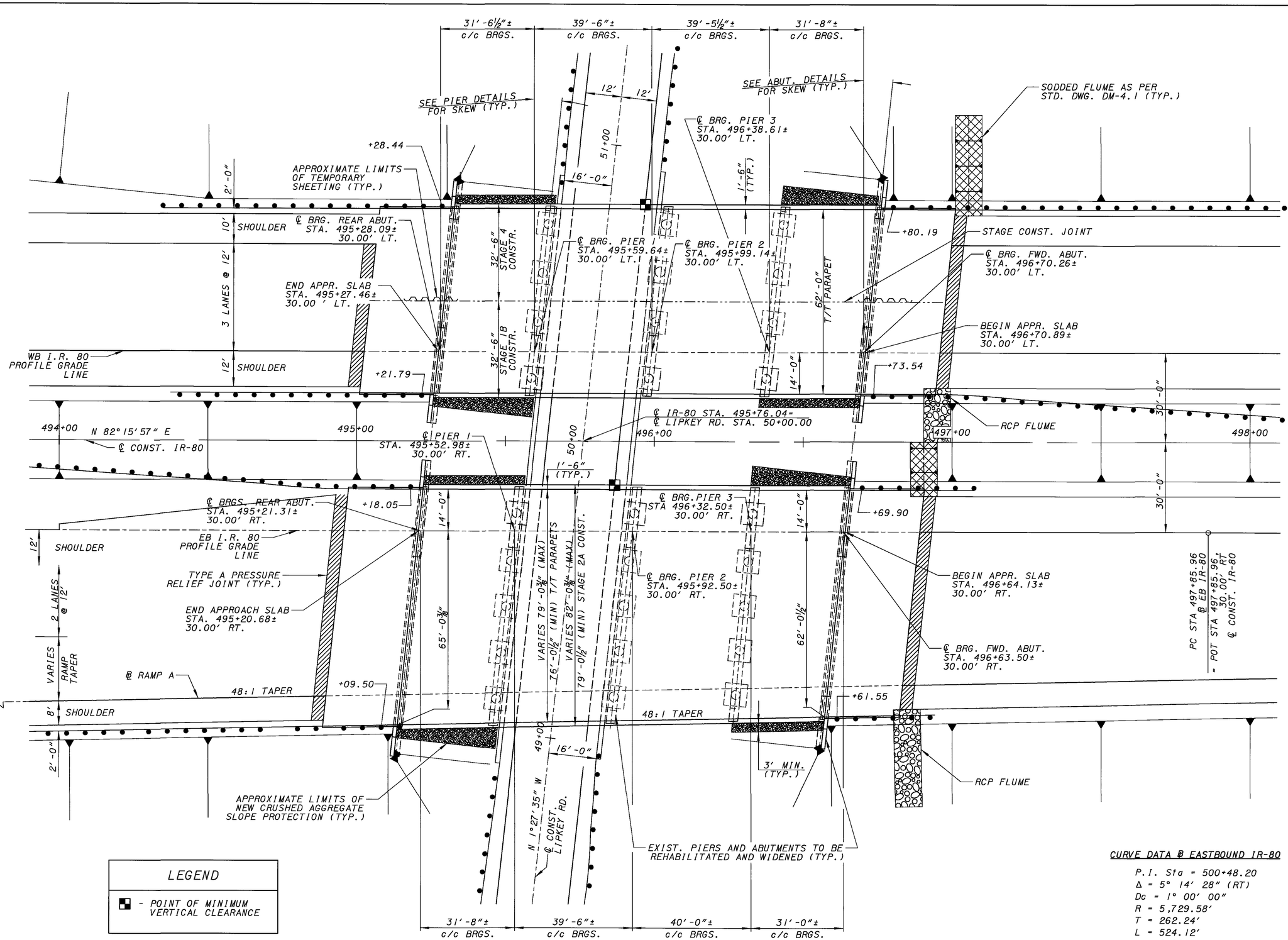
DESIGN AGENCY
GANNETT FLEMING
ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
DEK/LMS	DEK/LMS	JEK	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MTO		5002192 (L) 5002222 (R)	

MAHONING COUNTY
495-27.46± TO 496+70.89± (L)
495+20.68± TO 496+64.13± (R)

PROFILE - LEFT & RIGHT BRIDGES
BRIDGE NO. MAH-80-0076 L/R
I.R. 80 OVER LIPKEY ROAD

MAH-80-0.97
PID 6080



CURVE DATA ℄ EASTBOUND IR-80

P.I. Sta = 500+48.20
Δ = 5° 14' 28" (RT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 262.24'
L = 524.12'
E = 6.00'

GENERAL PLAN

8/15/05 2:12:24 PM
s:\projects\37700\bridge-lipkey\MH080GPlA.dgn

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350 WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
MTO	MTO	JEK	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PLC		5002192 (L) 5002222 (R)	

GENERAL PLAN
BRIDGE NO. MAH-80-0076 L/R
I.R. 80 OVER LIPKEY ROAD

MAH-80-0.97
PID 6080

3 / 22

918
1100

BRIDGE GENERAL NOTES

REFER TO THE FOLLOWING STANDARD DRAWINGS:

A-1-69	REVISED 07-19-02
AS-1-81	REVISED 07-19-02
CPA-5-94	REVISED 07-19-02
CS-1-03	DATED 04-18-03
PCB-91	REVISED 07-19-02
SBR-1-99	REVISED 07-19-02
DM-1.1	REVISED 01-21-05
HL-30.32	DATED 01-21-05

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

843	DATED 04-18-03
892	DATED 04-15-05
898	DATED 07-16-04

DESIGN SPECIFICATIONS:

NEW PORTIONS OF THIS STRUCTURE CONFORM TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002, AND THE 2004 ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING:

HS25 AND THE ALTERNATE MILITARY LOADING
FUTURE WEARING SURFACE OF 60 P.S.F.

DESIGN DATA:

QC/QA CONCRETE CLASS QSC2 - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)
QC/QA CONCRETE CLASS QSC1 - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615 OR A996, GRADE 60, MINIMUM YIELD STRENGTH 60,000 PSI

SPIRAL REINFORCEMENT MAY BE PLAIN BARS, ASTM A82 OR A615

DECK PROTECTION METHOD:

EPOXY COATED REINFORCING STEEL
2½" CONCRETE COVER
SEALING OF CONCRETE SURFACES

MONOLITHIC WEARING SURFACE:

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

EXISTING STRUCTURE VERIFICATION:

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05 AND 105.02.

BASE CONTRACT BID PRICES UPON RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

UTILITY LINES:

THE UTILITIES SHALL BEAR ALL EXPENSE INVOLVED IN RELOCATING THE AFFECTED UTILITY LINES. THE CONTRACTOR AND UTILITIES ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20' SPAN, AS PER PLAN:

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES THAT ARE NOT SEPARATELY LISTED FOR PAYMENT. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION (WEARING COURSE, CONCRETE DECK, CURBS, PARAPET, RAILING, SUBSTRUCTURE CONCRETE, ETC.) AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE, OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

CONCRETE DECK REMOVAL:

THIS WORK CONSISTS OF THE REMOVAL OF CONCRETE DECKS INCLUDING SIDEWALKS, PARAPETS, SCUPPERS AND OTHER APPURTENANCES, AND CLEANING UP ALL DEBRIS FROM THE DECK REMOVAL OPERATIONS. THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS MODIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING DECK REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. IN THIS RESPECT,THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED. THE CONTRACTOR MAY USE A HAMMER HEAVIER THAN 35 POUNDS BUT NOT TO EXCEED 90 POUNDS UNLESS APPROVED BY THE ENGINEER.

PROTECTION OF TRAFFIC:

PRIOR TO DEMOLITION OF ANY PORTIONS OF THE EXISTING STRUCTURE, SUBMIT PLANS FOR THE PROTECTION OF TRAFFIC (VEHICULAR, PEDESTRIAN, ETC.), ADJACENT TO AND/OR UNDER THE STRUCTURE, TO THE DIRECTOR AT LEAST 30 DAYS BEFORE CONSTRUCTION BEGINS. THESE PLANS SHALL INCLUDE PROVISIONS FOR ANY DEVICES AND STRUCTURES THAT MAY BE NECESSARY TO ENSURE SUCH PROTECTION. MAINTAIN THE TEMPORARY (EXISTING) VERTICAL CLEARANCES SPECIFIED ON THE PLANS OR IN THE PROPOSAL AT ALL TIMES EXCEPT AS OTHERWISE APPROVED BY THE DIRECTOR.

LOADING LIMITATIONS:

NO PART OF THE STRUCTURE SHALL BE SUBJECTED TO UNIT STRESSES THAT EXCEED 136.5% OF ALLOWABLE UNIT STRESSES AS DEFINED IN THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES DUE EITHER TO DEMOLITION, ERECTION OR CONSTRUCTION METHODS, OR TO THE USE OR MOVEMENT OF DEMOLITION OR ERECTION EQUIPMENT ON OR ACROSS THE STRUCTURE. SUBMIT STRUCTURAL ANALYSIS COMPUTATIONS, BY AN OHIO REGISTERED PROFESSIONAL ENGINEER, SHOWING THE ALLOWABLE STRESSES AND THE MAXIMUM STRESSES PRODUCED BY THE REMOVAL METHODS OR EQUIPMENT TO THE DIRECTOR AT LEAST 20 DAYS BEFORE CONSTRUCTION BEGINS.

CUT LINE CONSTRUCTION JOINT PREPARATION:

SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. IF REQUIRED IN THE PLANS, LEAVE THE EXISTING REINFORCING STEEL IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT, ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST, OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH, BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

SUBSTRUCTURE CONCRETE REMOVAL:

REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18-INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

MEASUREMENT AND PAYMENT:

THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20' SPAN, AS PER PLAN.

ITEM 503 - COFFERDAMS, CRIBS AND SHEETING, AS PER PLAN:

TEMPORARY SHORING SHALL BE USED TO ACCOMPLISH THE PROPOSED CONSTRUCTION IN STAGES. THE MINIMUM SECTION MODULUS, THE TOP AND MIMIMUM BOTTOM ELEVATION OF THE SHORING, THE LIMITS OF SHORING, AND THE SEQUENCE OF INSTALLATION SHALL BE AS SHOWN IN THE PLANS. PAYMENT SHALL BE AT THE LUMP SUM PRICE BID FOR ITEM 503 - COFFERDAMS, CRIBS, AND SHEETING, AS PER PLAN.

AT THE OPTION OF THE CONTRACTOR, AN ALTERNATE METHOD OF TEMPORARY SHORING MAY BE USED. PLANS FOR SUCH SHORING SHALL BE DESIGNED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER AND CONFORM WITH 501.05. THE PLANS AND DESIGN COMPUTATIONS SHALL BE SUBMITTED FOR APPROVAL IN ACCORDANCE WITH 501.05. CONSTRUCTION OF THE SHORING SHALL NOT BEGIN UNTIL AFTER WRITTEN APPROVAL HAS BEEN RECEIVED FROM THE OFFICE OF STRUCTURAL ENGINEERING. PORTIONS OF THE TEMPORARY SHORING COMPOSED OF THE STEEL OR CONCRETE MAY BE LEFT IN PLACE AT THE DISCRETION OF THE ENGINEER. PORTIONS COMPOSED OF OTHER MATERIALS SHALL BE REMOVED PRIOR TO COMPLETION OF THE WORK.

ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN:

THE BACKFILL MATERIAL BEHIND THE ABUTMENTS SHALL BE TYPE B GRANULAR MATERIAL, 703.16.C, PLACED AND COMPACTED IN 6 INCH LIFTS.

ITEM 509 - REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN:

REPLACE ALL EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION. A CONTINGENCY QUANTITY OF 500 POUNDS OF REINFORCING STEEL IS INCLUDED WITH THIS ITEM TO BE USED AS DIRECTED BY THE ENGINEER FOR REPLACEMENT OF CORRODED REINFORCING. THE DEPARTMENT WILL MEASURE THE REPLACEMENT REINFORCING STEEL BY THE NUMBER OF POUNDS ACCEPTED IN PLACE.

REPLACE ALL EXISTING REINFORCING STEEL BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK, AND ARE DEEMED BY THE ENGINEER TO BE MADE UNUSABLE DUE TO CONCRETE REMOVAL OPERATIONS, WITH NEW EPOXY COATED REINFORCING STEEL OF THE SAME SIZE, AT NO COST TO THE DEPARTMENT.

ITEM 509 - EPOXY COATED REINFORCING STEEL, AS PER PLAN:

IN ADDITION TO THE PROVISIONS OF ITEM 509, FIELD BEND AND/OR FIELD CUT THE NEW REINFORCING STEEL DESIGNATED IN THE PLANS, AS NECESSARY, IN ORDER TO MAINTAIN THE REQUIRED CLEARANCES AND BAR SPACINGS. REPAIR ALL DAMAGE TO THE EPOXY COATING AS A RESULT OF THIS WORK ACCORDING TO 709.00.

PILE DRIVING CONSTRAINTS:

PRIOR TO DRIVING PILES, CONSTRUCT THE SPILL THROUGH SLOPES AND THE BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENTS UP TO THE LEVEL OF THE SUBGRADE ELEVATION FOR A MINIMUM DISTANCE OF 200' BEHIND EACH ABUTMENT. DO NOT BEGIN THE EXCAVATION FOR THE ABUTMENT FOOTINGS AND THE INSTALLATION OF THE ABUTMENT PILES UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED.

PILES TO BEDROCK:

DRIVE PILES TO REFUSAL ON BEDROCK. THE DEPARTMENT WILL CONSIDER REFUSAL TO BE OBTAINED BY PENETRATING SOFT BEDROCK FOR SEVERAL INCHES TO A MINIMUM RESISTANCE OF 20 BLOWS PER INCH OR BY CONTACTING HARD BEDROCK AND THE PILE RECEIVING AT LEAST 20 BLOWS. SELECT THE HAMMER SIZE TO ACHIEVE THE REQUIRED DEPTH TO BEDROCK AND REFUSAL.THE ULTIMATE BEARING VALUE IS 47 TONS PER PILE FOR THE REAR AND FORWARD ABUTMENT PILES.

REAR ABUTMENT PILES:
14 - HP 10X42 STEEL PILES, 25 FEET LONG, ORDER LENGTH

FORWARD ABUTMENT PILES:
14 - HP 10X42 STEEL PILES, 20 FEET LONG, ORDER LENGTH

ITEM 507 - STEEL POINTS, OR SHOES, AS PER PLAN:

USE STEEL PILE POINTS TO PROTECT THE TIPS OF THE PROPOSED STEEL "H" PILING. FURNISH STEEL POINTS FROM THE FOLLOWING MANUFACTURES/SUPPLIERS:

ASSOCIATED PILE AND FITTING CORPORATION, 262 RUTHERFORD BLVD., CLIFTON, NEW JERSEY 07014;

INTERNATIONAL CONSTRUCTION EQUIPMENT, INC., 301 WAREHOUSE DRIVE, MATTHEWS, NORTH CAROLINA 28015;

DOUGHERTY FOUNDATION PRODUCTS, INC., P.O. BOX 688, FRANKLIN LAKES, NEW JERSEY 07417;

VERSA STEEL INC., 1618 N.E. FIRST AVE., PORTLAND, OREGON 97232;

PILING ACCESSORIES, INC., 3467 GRIBBLE ROAD, MATHEWS, NORTH CAROLINA 28105;

OR BY A MANUFACTURER THAT CAN FURNISH A STEEL POINT THAT IS ACCEPTABLE TO DIRECTOR. THE MATERIAL USED FOR THE MANUFACTURING OF PILE POINTS SHALL CONFORM TO ASTM A27/A27M 65/35 - CLASS 2 - HEAT TREATED OR AASHTO M103/M103M 65/35 - HEAT TREATED. WELD THE PILE POINTS TO THE PILE IN ACCORDANCE WITH AWS D1.5 OR THE MANUFACTURER'S WRITTEN WELDING PROCEDURE SUPPLIED TO THE ENGINEER BEFORE THE WELDING IS PERFORMED. SUBMIT A NOTARIZED COPY OF THE MILL TEST REPORT TO THE ENGINEER.

FOUNDATION BEARING PRESSURE:

PIER FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM BEARING PRESSURE OF 6.0 TONS PER SQUARE FOOT. THE ALLOWABLE BEARING PRESSURE IS 6.0 TONS PER SQUARE FOOT.

FOOTINGS:

PIER FOOTINGS SHALL EXTEND A MINIMUM OF 3 INCHES INTO BEDROCK OR TO THE ELEVATION SHOWN, WHICHEVER IS LOWER.

ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN (TYPE A)

CONCRETE FOR TYPE A APPROACH SLABS SHALL BE CLASS QSC2, SUPP. SPEC 898.

ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN (TYPE B)

CONCRETE FOR TYPE B APPROACH SLABS SHALL BE CLASS QSC2, SUPP. SPEC 898. SEE SHEETS 19-20/22 FOR DETAILS OF VARIABLE WIDTH APPROACH SLABS FOR THE RIGHT BRIDGE.

NON-USE OF ASBESTOS CONTAINING MATERIALS:

THE CONTRACTOR SHALL AT NO TIME INCORPORATE ANY MATERIALS WHICH ARE COMPOSED OF OR CONTAIN ANY AMOUNTS OF ASBESTOS. THE SUBSTITUTION OF MATERIALS WHICH CONTAIN ANY AMOUNTS OF ASBESTOS WILL IN NO CIRCUMSTANCES BE ACCEPTABLE. PRIOR TO FINAL ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT OF CERTIFICATION ASSERTING THAT NO ASBESTOS CONTAINING MATERIALS WERE USED IN ANY PORTION OF THE CONSTRUCTION.

ABBREVIATIONS:

ABUT.	-	ABUTMENT	JT.	-	JOINT
AHD.	-	AHEAD	LT.	-	LEFT
BOT.	-	BOTTOM	MAX.	-	MAXIMUM
BRG.	-	BEARING	MIN.	-	MINIMUM
BTW.	-	BETWEEN	NF	-	NEAR FACE
CONST.	-	CONSTRUCTION	P.E.J.F.	-	PREFORMED EXPANSION JOINT FILLER
C.P.P.	-	CORRUGATED POLYETHYLENE PIPE			
EL./ELEV.	-	ELEVATION	RT.	-	RIGHT
EMBED.	-	EMBEDMENT	SER.	-	SERIES
EXIST.	-	EXISTING	SS	-	SUPERSTRUCTURE
FF	-	FAR FACE	TYP.	-	TYPICAL
FTG.	-	FOOTING	UG	-	UNDERGROUND
FWD.	-	FORWARD	W.P.	-	WORK POINT

DESIGN AGENCY
GANNETT FLEMING
ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
DEK	DEK	JEK	8/04

CHECKED MTO
REVISED
STRUCTURE FILE NUMBER 5002192 (L) 5002222 (R)

BRIDGE GENERAL NOTES
BRIDGE NO. MAH-80-0076 L/R
I.R. 80 OVER LIPKEY ROAD

MAH-80-0.97
PID 6080

4 / 22

919
1100

8/15/05 2:50 PM
s:\projects\37700\bridge-lipkey\MH080GNA.dgn

ESTIMATED BRIDGE QUANTITIES

ITEM	ITEM EXT.	TOTAL LEFT BRIDGE	TOTAL RIGHT BRIDGE	UNIT	DESCRIPTION	FUNDING L. BRIDGE		FUNDING R. BRIDGE		LEFT BRIDGE				RIGHT BRIDGE				AS PER PLAN SHEET NO.
						IM	NHS	IM	NHS	ABUT.	PIERS	SUPER	GEN.	ABUT.	PIERS	SUPER	GEN.	
202	11203	LUMP	LUMP		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	LUMP		LUMP					LUMP				LUMP	4 & 5 OF 22
202	22900	134	223	SQ YD	APPROACH SLAB REMOVED	134		223					134				223	
503	11101	LUMP	LUMP		COFFERDAMS, CRIBS AND SHEETING, AS PER PLAN	LUMP		LUMP					LUMP				LUMP	4 OF 22
503	21101	171	170	CU YD	UNCLASSIFIED EXCAVATION, AS PER PLAN	114	57	113	57	89	82			92	78			4 OF 22
503	31100	9	9	CU YD	ROCK EXCAVATION		9		9		9				9			
505	11100	LUMP	LUMP		PILE DRIVING EQUIPMENT MOBILIZATION		LUMP		LUMP				LUMP				LUMP	
507	00100	315	315	FT	STEEL PILES HP10X42, FURNISHED		315		315	315				315				
507	00150	315	315	FT	STEEL PILES HP10X42, DRIVEN		315		315	315				315				
507	93301	14	14	EACH	STEEL POINTS, OR SHOES, AS PER PLAN		14		14	14				14				4 OF 22
509	10001	188194	220922	POUND	EPOXY COATED REINFORCING STEEL, AS PER PLAN	125463	62731	147281	73641	9098	29430	149666		10768	26111	184043		4 OF 22
509	20001	500	500	POUND	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN	333	167	333	167				500				500	4 OF 22
510	10000	48	202	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	48		202		48				64	138			
512	10100	784	878	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	523	261	585	293	51	372	361		53	464	361		
512	10300	32		SQ YD	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN	32						32						
512	33000	32	41	SQ YD	TYPE 2 WATERPROOFING	21	11	27	14	32				41				
518	21200	83	98	CU YD	POROUS BACKFILL WITH FILTER FABRIC	55	28	65	33	83				98				
518	40001	160	188	FT	6" PERFORATED CORRUGATED PLASTIC PIPE, AS PER PLAN	107	53	125	63	160				188				11 OF 22
518	40011	60	60	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN	40	20	40	20	60				60				7-10 OF 22
526	25001	350		SQ YD	REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN (TYPE A)	233	117						350					4 OF 22
526	25001		436	SQ YD	REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN (TYPE B)			291	145								436	4,19-20 OF 22
601	20000	567	680	SQ YD	CRUSHED AGGREGATE SLOPE PROTECTION		567		680	567				680				
625	25400		287	FT	CONDUIT, 2", 725.04			143	144							287		
843	50000		5	SQ FT	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR			5							5			
892	10200	632	785	CU YD	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (DECK) WITH WARRANTY	421	211	523	262			632				785		
898	11000	46	46	CU YD	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (PARAPET)	31	15	31	15			46				46		
898	20100	77	65	CU YD	QC/QA CONCRETE, CLASS QSCI, SUBSTRUCTURE (PIER ABOVE FOOTING)	51	26	43	22		77				65			
898	20150	55	56	CU YD	QC/QA CONCRETE, CLASS QSCI, SUBSTRUCTURE (ABUTMENT)	37	18	37	19	55				56				
898	20300	19	19	CU YD	QC/QA CONCRETE, CLASS QSCI, SUBSTRUCTURE (FOOTING)		19		19		19				19			

ASBESTOS NOTIFICATION:

AN ASBESTOS SURVEY OF THE MAH-80-0076 L/R BRIDGES (STRUCTURE FILE NUMBERS 5002222/5002192) OVER LIPKEY ROAD, SCHEDULED FOR REHABILITATION/WIDENING, WAS CONDUCTED BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST. THE SURVEY DETERMINED THAT NO ASBESTOS IS PRESENT ON THE BRIDGES.

A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORM, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER, WILL BE PROVIDED TO THE SUCCESSFUL BIDDER. AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF THE DEMOLITION OF THE BRIDGES, THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO:

MR. ROBERT RAMHOFF, DIRECTOR
MAHONING-TRUMBULL AIR POLLUTION CONTROL AGENCY
OAK HILL / RENAISSANCE PLACE
SECOND FLOOR, ROOM 25
345 OAK HILL AVENUE
YOUNGSTOWN, OHIO 44502
TEL: (330) 743-3333 (EXT. 280)
FAX: (330) 744-1928

THE CONTRACTOR SHALL PROVIDE ONE (1) COPY OF THE COMPLETED FORM TO THE ENGINEER. INFORMATION REQUIRED ON THE FORM WILL INCLUDE: 1) THE CONTRACTOR'S NAME AND ADDRESS; 2) THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REHABILITATION/REMOVAL; AND 3) A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED. A COPY OF THE OEPA FORM IS AVAILABLE FOR INSPECTION AT THE ODOT DISTRICT 4 OFFICE, 2088 SOUTH ARLINGTON ROAD, AKRON, OHIO 44306.

BASIS FOR PAYMENT:

THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

DESIGN AGENCY
GANNETT FLEMING
ENGINEERS & ARCHITECTS, P.C.
4181 EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

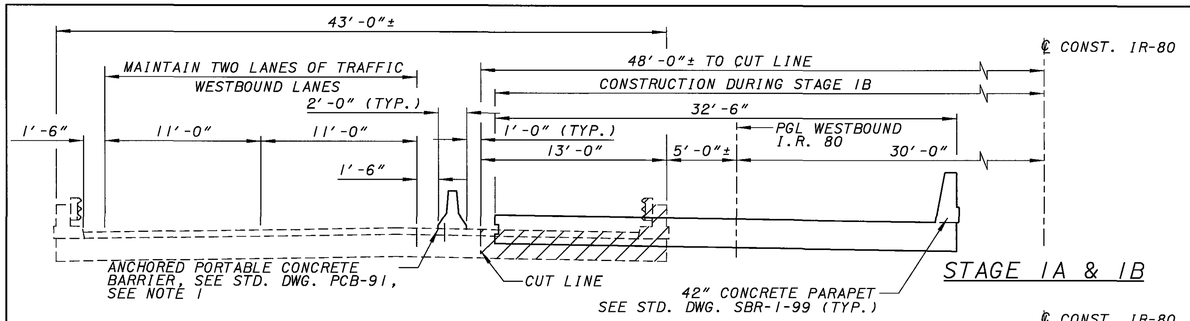
DATE 8/04
REVIEWED JEK
STRUCTURE FILE NUMBER 5002192 (L) 5002222 (R)
DRAWN SK
REVISED
DESIGNED SK
CHECKED DEK

ESTIMATED BRIDGE QUANTITIES
BRIDGE NO. MAH-80-0076 L/R
I.R. 80 OVER LIPKEY ROAD

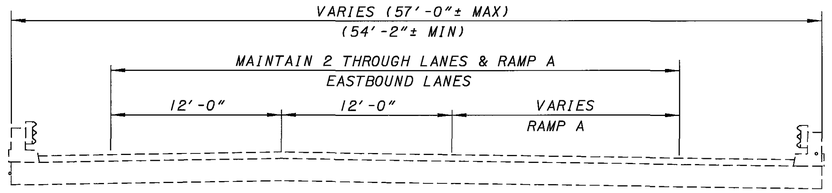
MAH-80-0.97
PID 6080

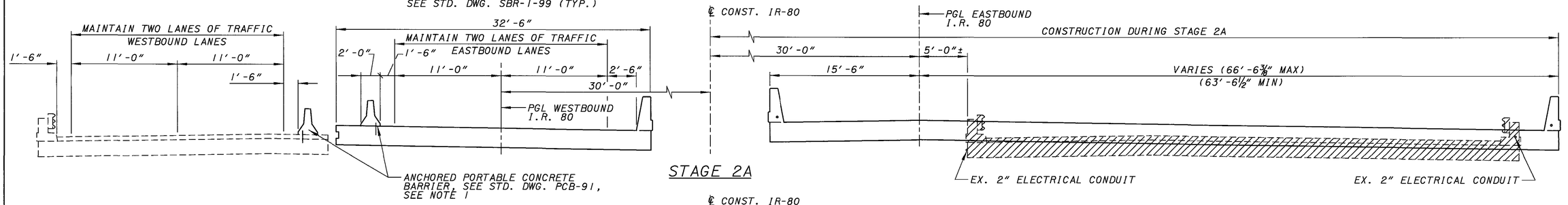
920
1100

10/9/05 1:53:59 PM
s:\projects\37700\bridge-lipkey\MH080E01B.dgn

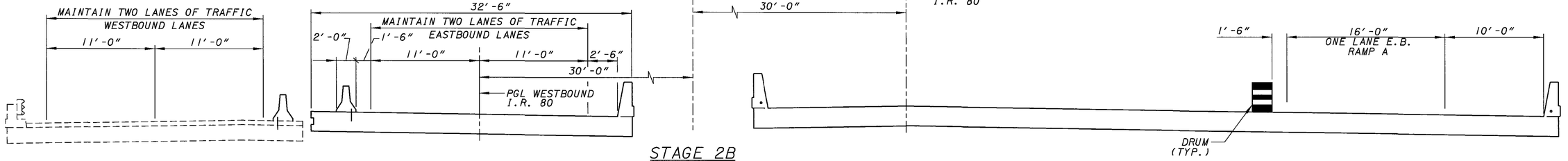


STAGE 1A & 1B

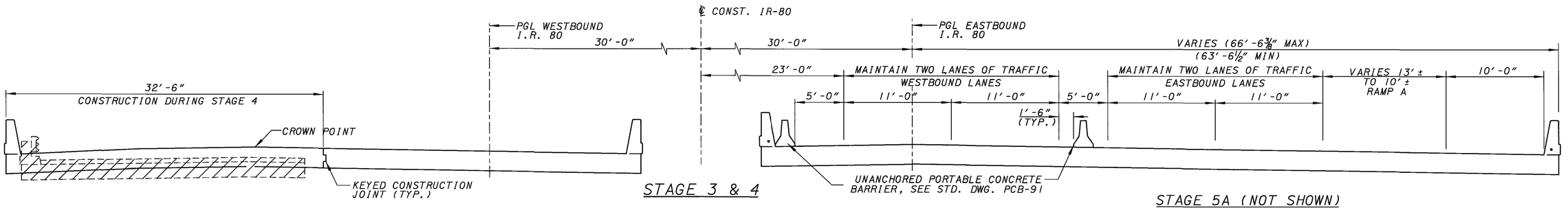




STAGE 2A



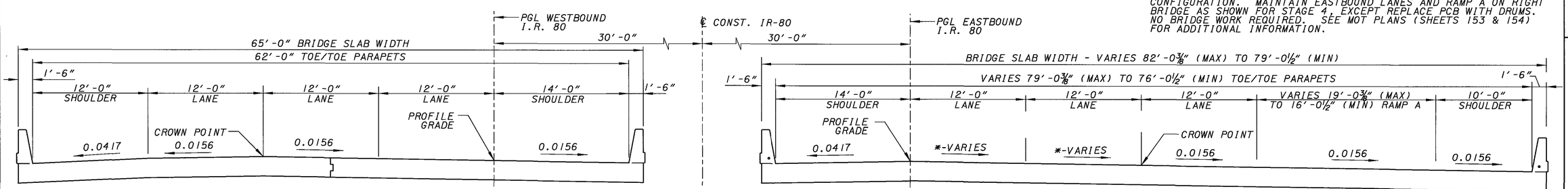
STAGE 2B



STAGE 3 & 4

STAGE 5A (NOT SHOWN)

MAINTAIN WESTBOUND LANES ON LEFT BRIDGE USING THE FINAL LANE CONFIGURATION. MAINTAIN EASTBOUND LANES AND RAMP A ON RIGHT BRIDGE AS SHOWN FOR STAGE 4, EXCEPT REPLACE PCB WITH DRUMS. NO BRIDGE WORK REQUIRED. SEE MOT PLANS (SHEETS 153 & 154) FOR ADDITIONAL INFORMATION.



FINAL DECK SECTION

NOTES:

1. A MINIMUM OF THREE ANCHORS SHALL BE PROVIDED ON TRAFFIC SIDE FOR EACH PORTABLE CONCRETE BARRIER WITH THE ANCHOR PATTERN SYMMETRICAL ABOUT THE CENTER OF EACH SEGMENT. USE ONLY PARTIAL DEPTH ANCHORS IN THE NEW CONCRETE SLAB; THRU BOLTS WILL NOT BE ALLOWED.
2. FURNISHING, INSTALLING, MAINTAINING, AND REMOVING PORTABLE CONCRETE BARRIER, INCLUDING THE COMPLETE OR PARTIAL REMOVAL OF ANCHOR HARDWARE, SHALL BE INCLUDED IN ITEM 622 (ROADWAY PLANS) FOR PAYMENT.

* SUPERELEVATION TRANSITION CROSS SLOPE VARIES

LEGEND:

PORTIONS TO BE REMOVED, AS PART OF ITEM 202.

DESIGN AGENCY
GANNETT FLEMING
ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
DEK	DEK	JEK	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MTO		5002192 (L) 5002222 (R)	

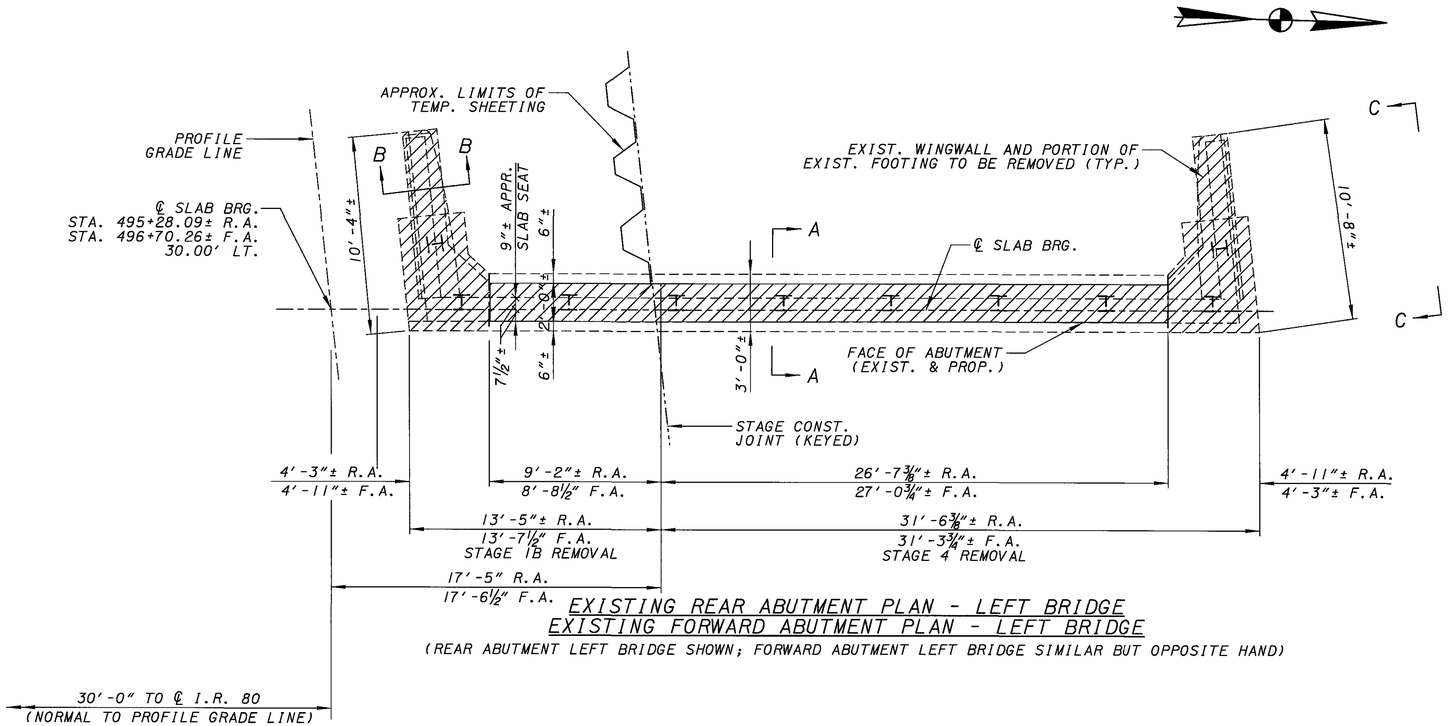
STAGE CONSTRUCTION DETAILS
BRIDGE NO. MAH-80-0076 L/R
I.R. 80 OVER LIPKEY ROAD

MAH-80-0.97
PID 6080

6 / 22

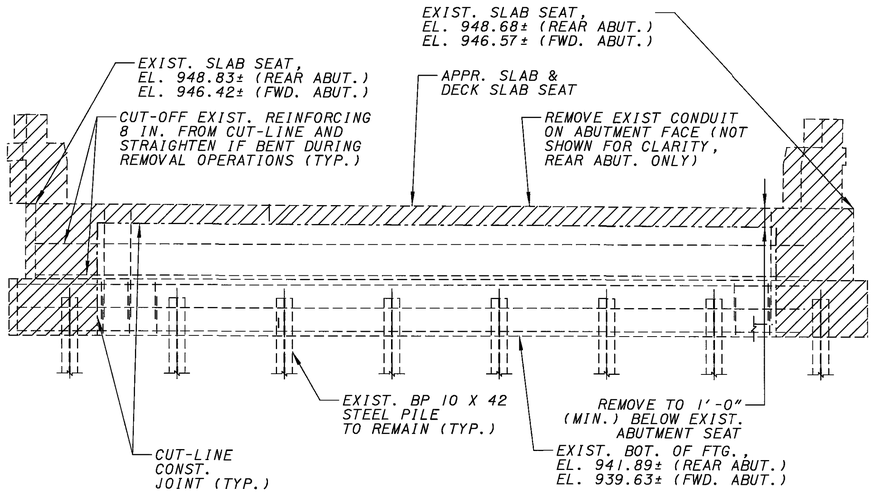
921
1100

8/15/05 2:13:40 PM
s:\projects\37700\bridge-lipkey\MH080PCIA.dgn



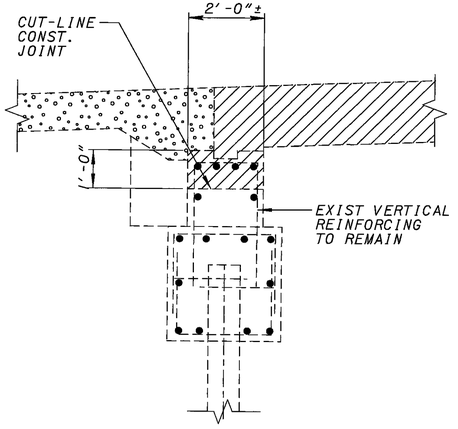
EXISTING REAR ABUTMENT PLAN - LEFT BRIDGE
EXISTING FORWARD ABUTMENT PLAN - LEFT BRIDGE

(REAR ABUTMENT LEFT BRIDGE SHOWN; FORWARD ABUTMENT LEFT BRIDGE SIMILAR BUT OPPOSITE HAND)

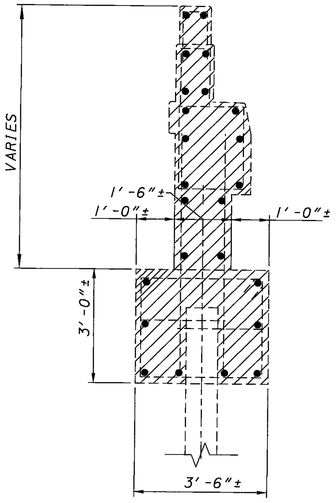


EXISTING REAR ABUTMENT ELEVATION - LEFT BRIDGE
EXISTING FORWARD ABUTMENT ELEVATION - LEFT BRIDGE

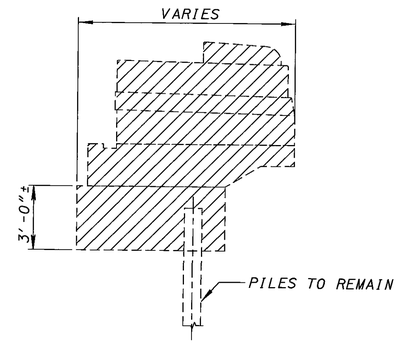
(REAR ABUTMENT LEFT BRIDGE SHOWN; FORWARD ABUTMENT LEFT BRIDGE SIMILAR BUT OPPOSITE HAND)



SECTION A-A



SECTION B-B



ELEVATION C-C

ALL WINGS SIMILAR ON PILE ABUTMENTS

LEGEND:

- ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN
- ITEM 202 - APPROACH SLAB REMOVED (ROADWAY QUANTITY)

R.A. = REAR ABUTMENT
F.A. = FORWARD ABUTMENT

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350 WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
DEK	DEK	PLC	2/05
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MTO		5002192 (L) 5002222 (R)	

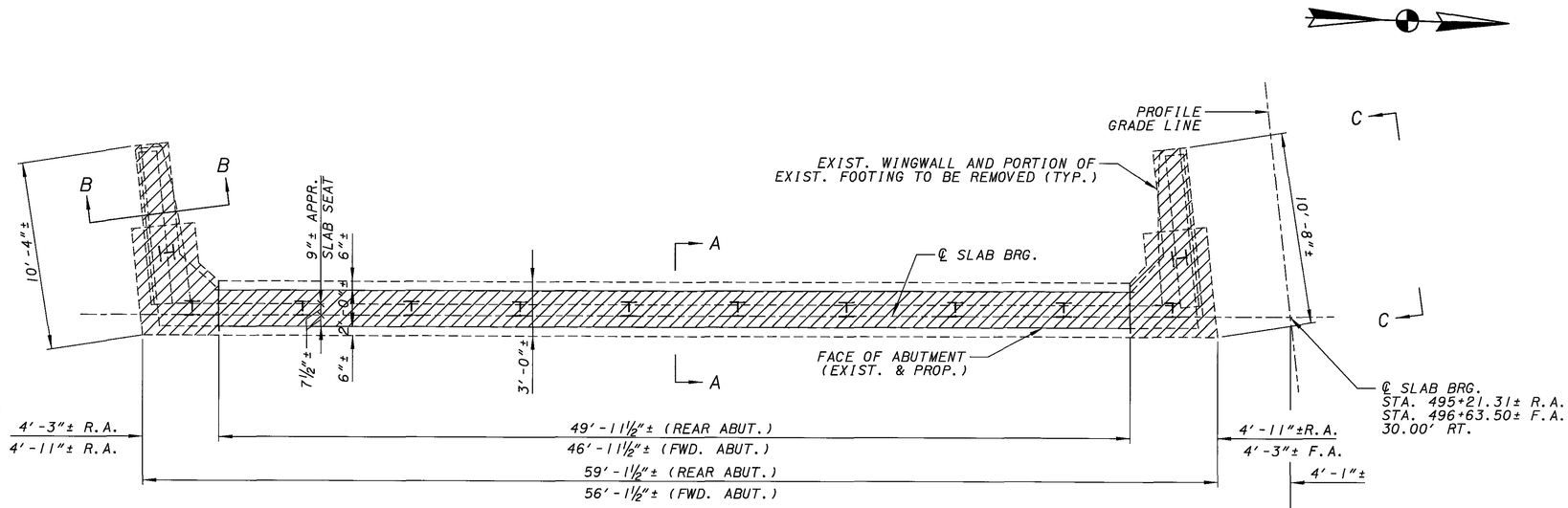
ABUTMENT REMOVAL DETAILS - LEFT BRIDGE
BRIDGE NO. MAH-80-0076 L/R
I.R. 80 OVER LIPKEY ROAD

MAH-80-0.97
PID 6080

6A / 22

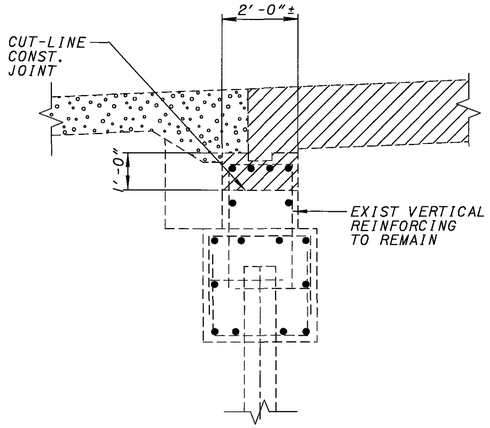
921A
1100

8/15/05 2:14:20 PM
s:\projects\37700\bridge\lipkey\MH080ABIF.dgn

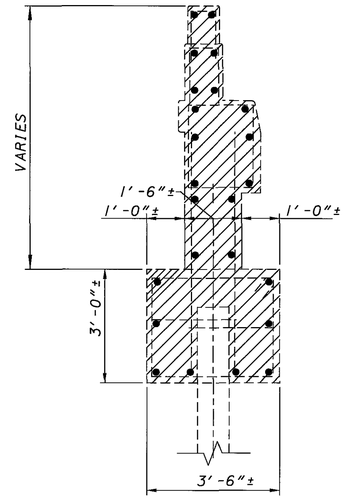


EXISTING REAR ABUTMENT PLAN - RIGHT BRIDGE
EXISTING FORWARD ABUTMENT PLAN - RIGHT BRIDGE

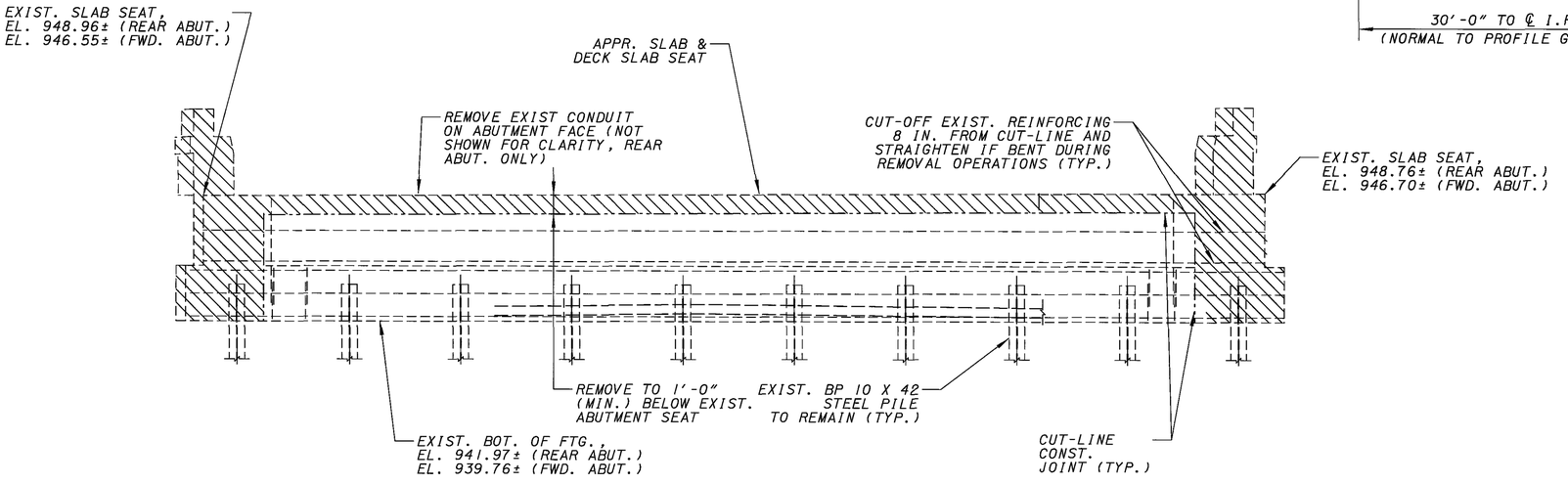
(REAR ABUTMENT RIGHT BRIDGE SHOWN; FORWARD ABUTMENT RIGHT BRIDGE SIMILAR BUT OPPOSITE HAND)



SECTION A-A

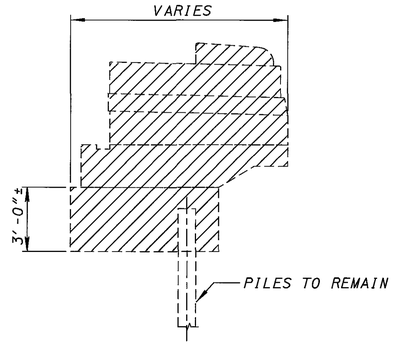


SECTION B-B



EXISTING REAR ABUTMENT ELEVATION - RIGHT BRIDGE
EXISTING FORWARD ABUTMENT ELEVATION - RIGHT BRIDGE

(REAR ABUTMENT RIGHT BRIDGE SHOWN; FORWARD ABUTMENT RIGHT BRIDGE SIMILAR BUT OPPOSITE HAND)



ELEVATION C-C

ALL WINGS SIMILAR ON PILE ABUTMENTS

LEGEND:

- ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN
- ITEM 202 - APPROACH SLAB REMOVED (ROADWAY QUANTITY)

R.A. = REAR ABUTMENT
F.A. = FORWARD ABUTMENT

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350 WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
DEK	DEK	PLC	2/05
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MTO		5002192 (L) 5002222 (R)	

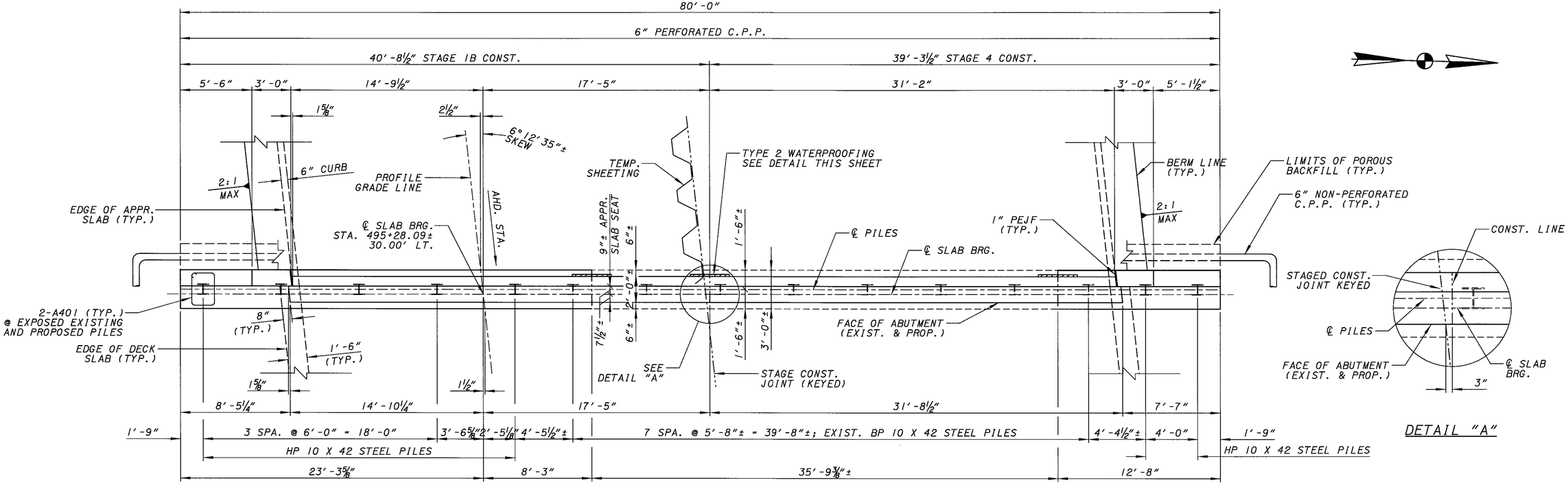
ABUTMENT REMOVAL DETAILS - RIGHT BRIDGE
BRIDGE NO. MAH-80-0076 L/R
I.R. 80 OVER LIPKEY ROAD

MAH-80-0.97
PID 6080

6B / 22

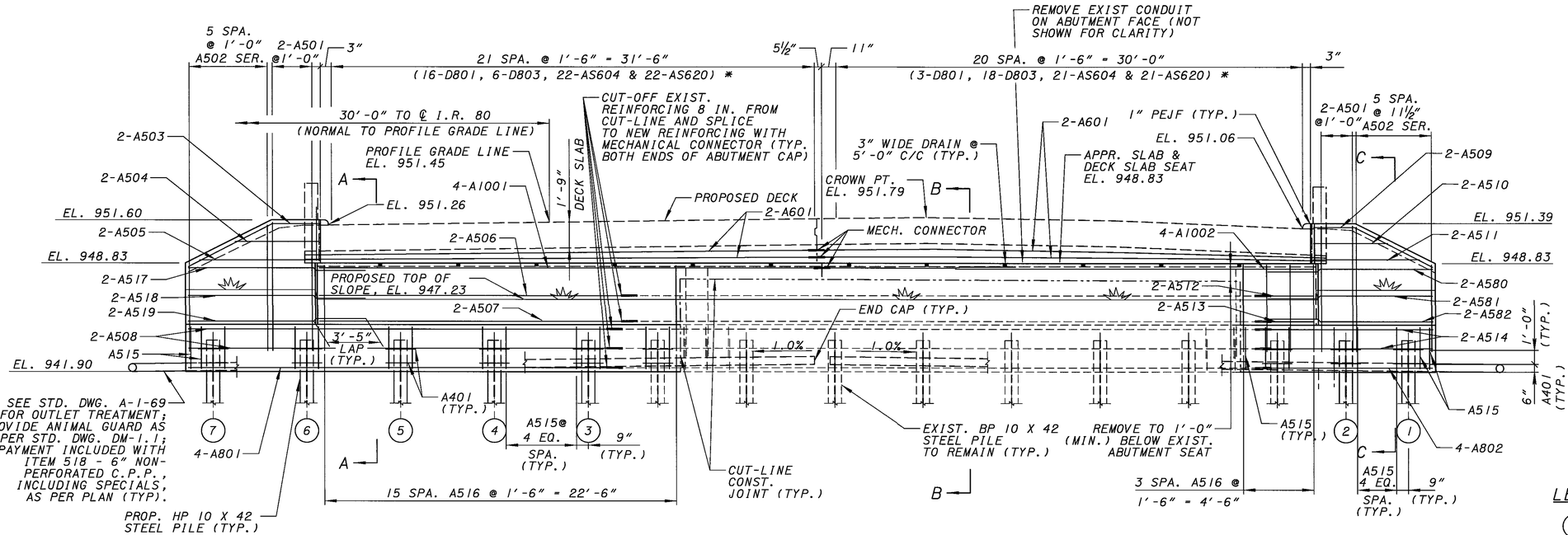
9218
1100

8/15/05 2:44:4 PM
s:\projects\37700\bridge-lipkey\MH080ABIH.dgn

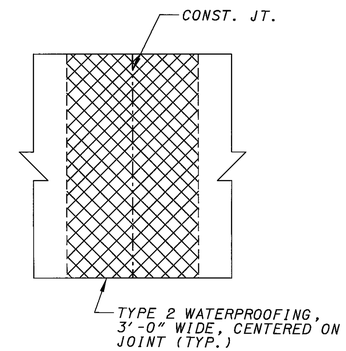


REAR ABUTMENT PLAN - LEFT BRIDGE

DETAIL "A"



REAR ABUTMENT ELEVATION - LEFT BRIDGE



TYPE 2 WATERPROOFING

LEGEND:

(1) - PILE NUMBER

* PLACE PARALLEL TO ℄ CONST.

R.F. = REAR FACE
F.F. = FRONT FACE

NOTES:

1. FOR GENERAL NOTES SEE SHEET 4/22.
2. FOR REINFORCING SCHEDULE SEE SHEETS 21-22/22.
3. FOR ABUTMENT REINFORCING LAP LENGTHS SEE SHEET 11/22.

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY SUITE 350 WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
SK	SK	JEK	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DEK		50021192 (L) 50022222 (R)	

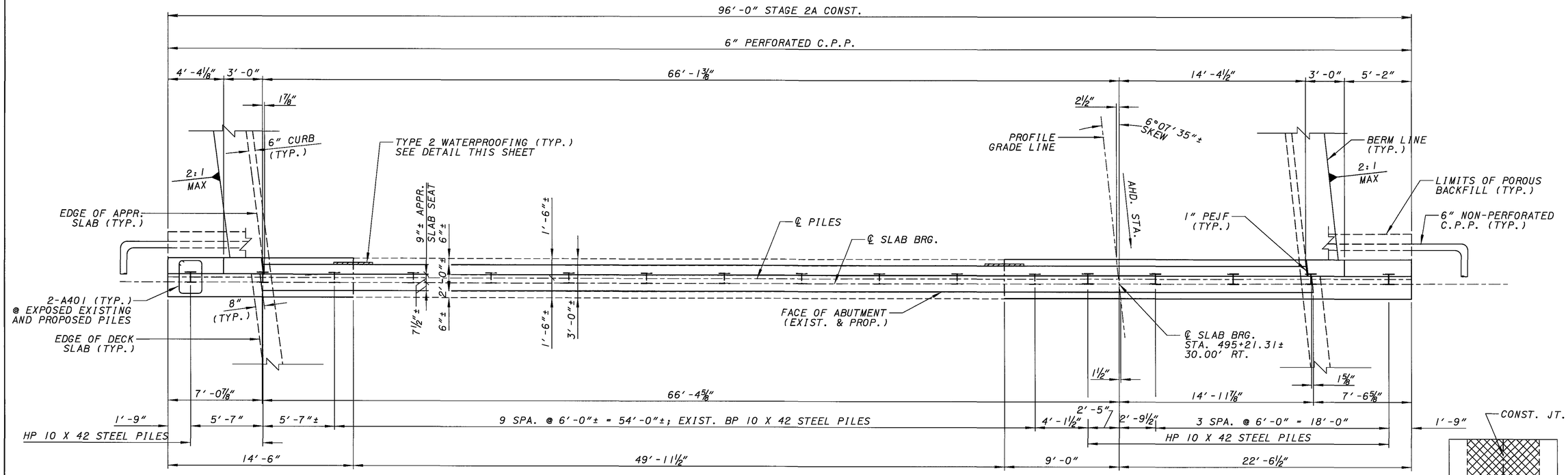
REAR ABUTMENT DETAILS - LEFT BRIDGE
BRIDGE NO. MAH-80-0076 L/R
I.R. 80 OVER LIPKEY ROAD

MAH-80-0.97
PID 6080

7 / 22

922 / 1100

8/5/05 2:17:31 PM
s:\projects\37700\bridge-lipkey\MH080ABIA.dgn

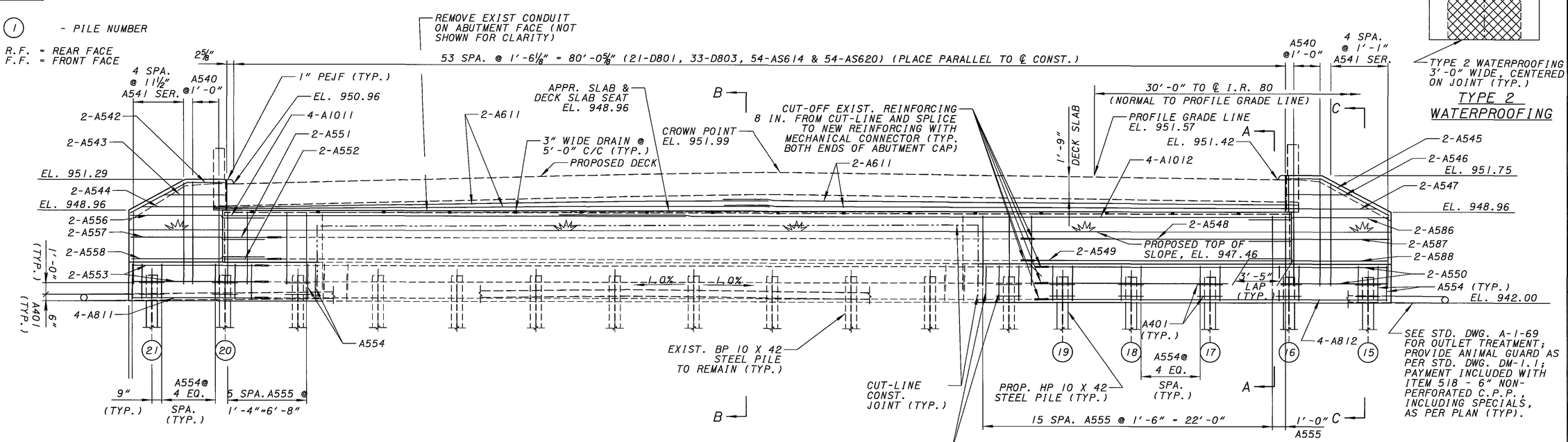


REAR ABUTMENT PLAN - RIGHT BRIDGE

LEGEND:

(1) - PILE NUMBER

R.F. = REAR FACE
F.F. = FRONT FACE



REAR ABUTMENT ELEVATION - RIGHT BRIDGE

NOTES:

1. FOR GENERAL NOTES SEE SHEET 4/22.
2. FOR REINFORCING SCHEDULE SEE SHEETS 21-22/22.
3. FOR ABUTMENT REINFORCING LAP LENGTHS SEE SHEET 11/22.

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350 WESTERVILLE, OHIO 43081

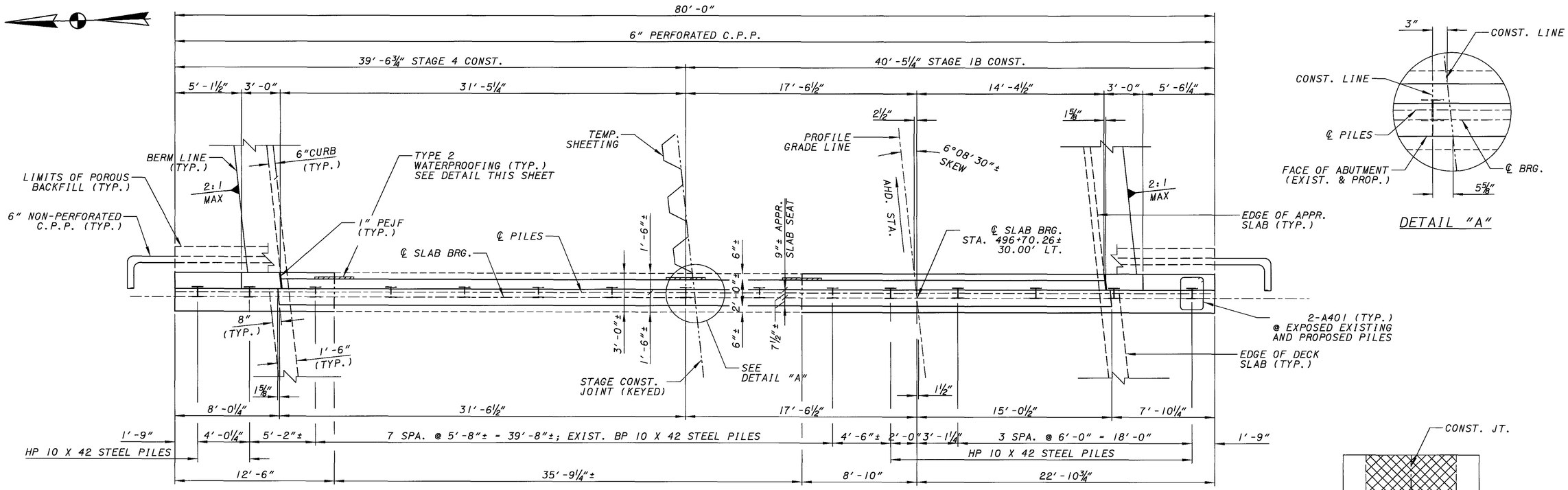
DESIGNED	DRAWN	REVIEWED	DATE
SK	SK	JEK	8/04

CHECKED	REVISED	STRUCTURE FILE NUMBER
DEK		5002192 (L) 5002222 (R)

REAR ABUTMENT DETAILS - RIGHT BRIDGE
BRIDGE NO. MAH-80-0076 L/R
I.R. 80 OVER LIPKEY ROAD

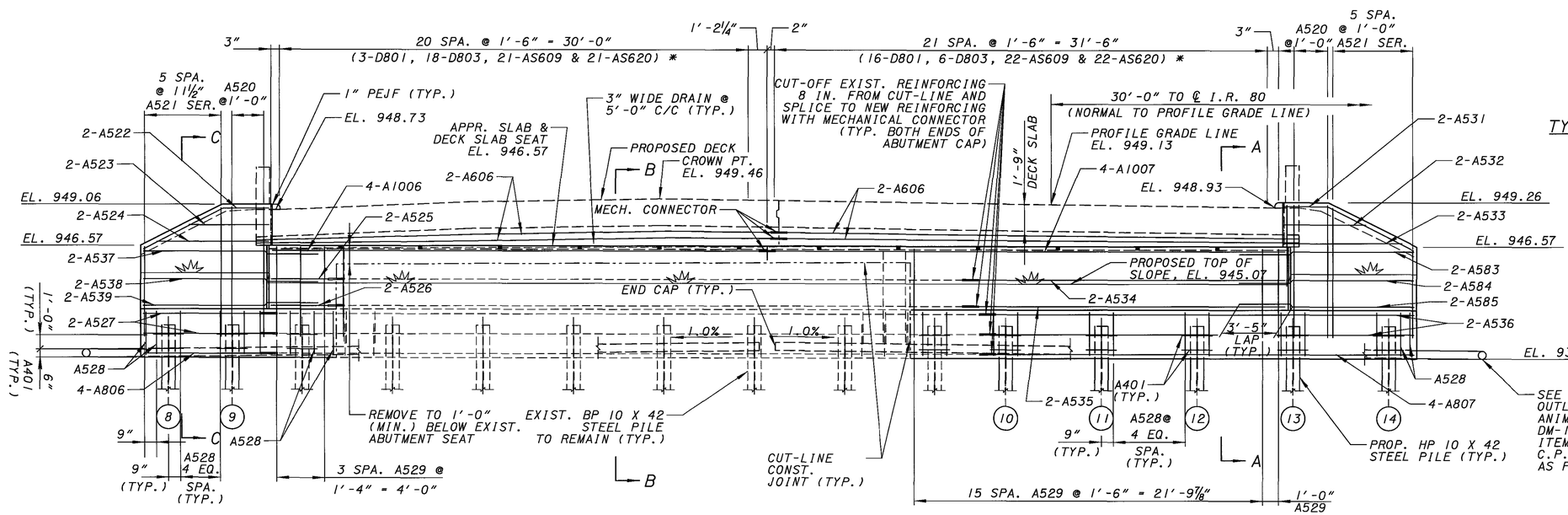
MAH-80-0.97
PID 6080

8/15/05 2:18:00 PM
s:\projects\37700\bridge-1\pkey\MH080ABIC.dgn



FORWARD ABUTMENT PLAN - LEFT BRIDGE

DETAIL "A"



FORWARD ABUTMENT ELEVATION - LEFT BRIDGE

TYPE 2 WATERPROOFING

NOTES:

1. FOR GENERAL NOTES SEE SHEET 4/22.
2. FOR REINFORCING SCHEDULE SEE SHEETS 21-22/22.
3. FOR ABUTMENT REINFORCING LAP LENGTHS SEE SHEET 11/22.

LEGEND:

(1) - PILE NUMBER

* PLACE PARALLEL TO ℄ CONST.

R.F. = REAR FACE
F.F. = FRONT FACE

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4181 EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
SK	SK	JEK	8/04

CHECKED	REVISED	STRUCTURE FILE NUMBER
DEK		5002192 (L) 5002222 (R)

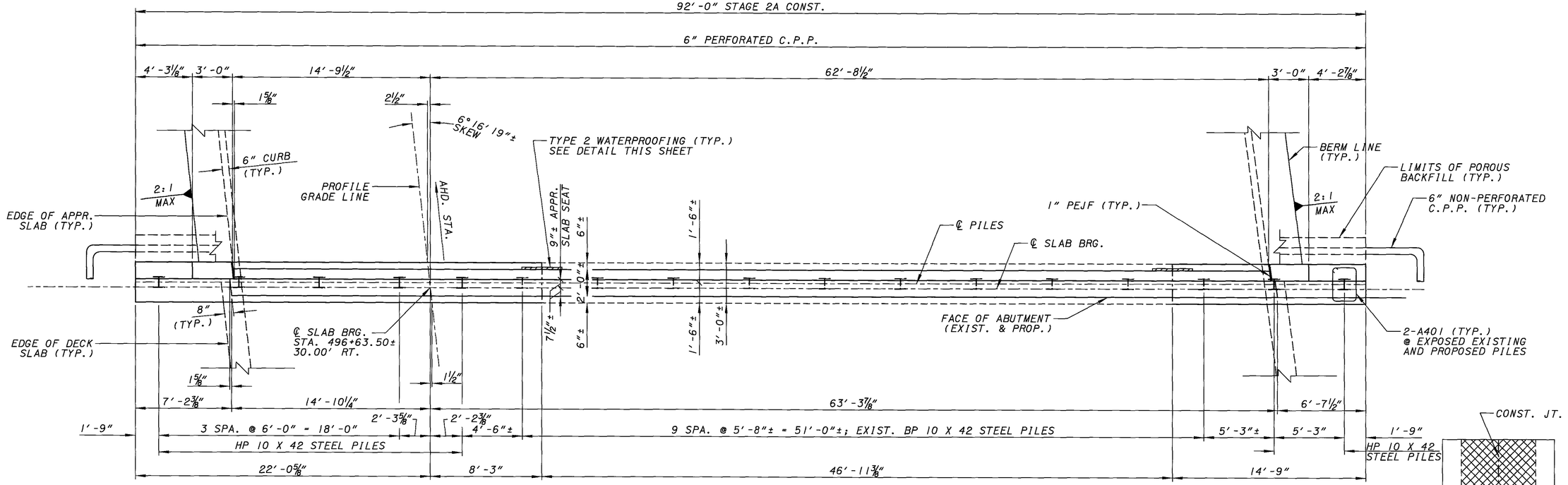
FORWARD ABUTMENT DETAILS - LEFT BRIDGE
BRIDGE NO. MAH-80-0076 L/R
I.R. 80 OVER LIPKEY ROAD

MAH-80-0.97
PID 6080

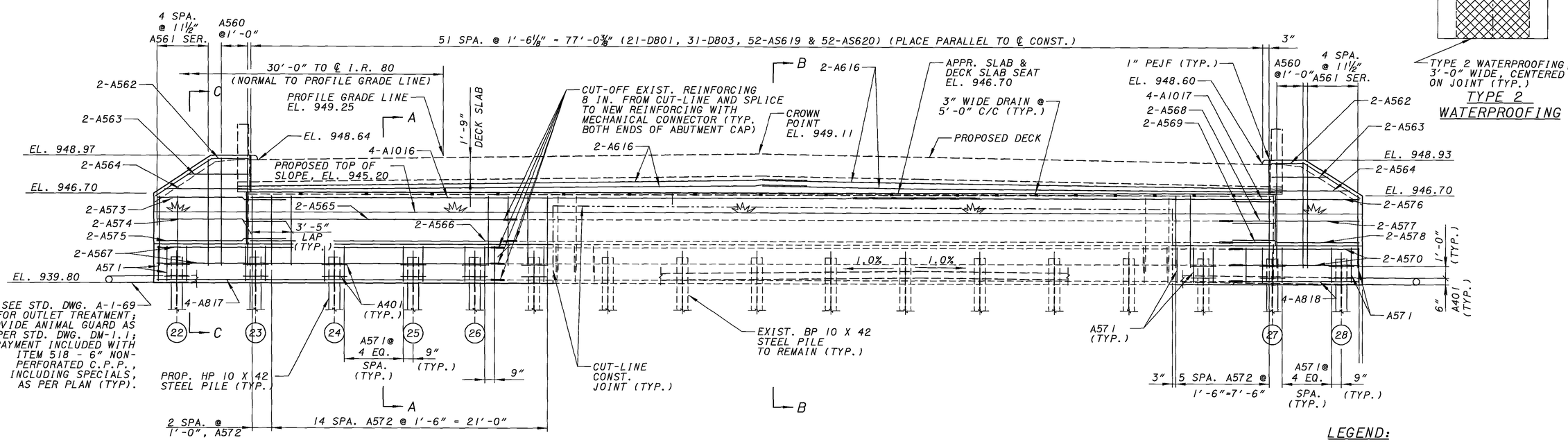
9 / 22

924 / 1100

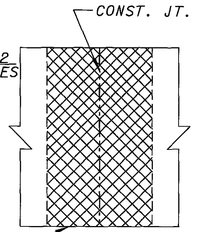
8/5/05 2:18:23 PM
s:\projects\37700\bridge-lipkey\MH080ABIB.dgn



FORWARD ABUTMENT PLAN - RIGHT BRIDGE



FORWARD ABUTMENT ELEVATION - RIGHT BRIDGE



TYPE 2 WATERPROOFING

LEGEND:

(1) - PILE NUMBER

R.F. = REAR FACE
F.F. = FRONT FACE

NOTES:

1. FOR GENERAL NOTES SEE SHEET 4/22.
2. FOR REINFORCING SCHEDULE SEE SHEETS 21-22/22.
3. FOR ABUTMENT REINFORCING LAP LENGTHS SEE SHEET 11/22.

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4191 TRINDLE ROAD, SUITE 350
CAMP HILL, PA 17011

DESIGNED	DRAWN	REVISED	DATE
SK	SK	JEK	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DEK		50021192 (L) 50021222 (R)	

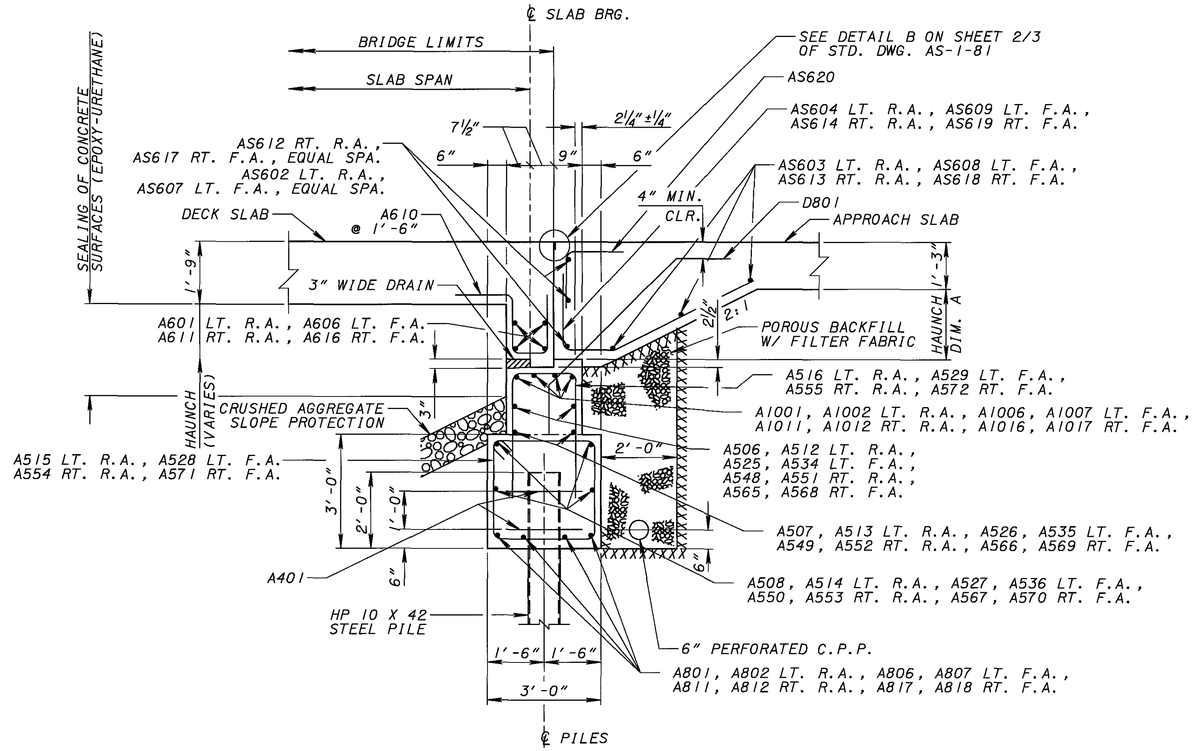
FORWARD ABUTMENT DETAILS - RIGHT BRIDGE
BRIDGE NO. MAH-80-0076 L/R
I.R. 80 OVER LIPKEY ROAD

MAH-80-0.97
PID 6080

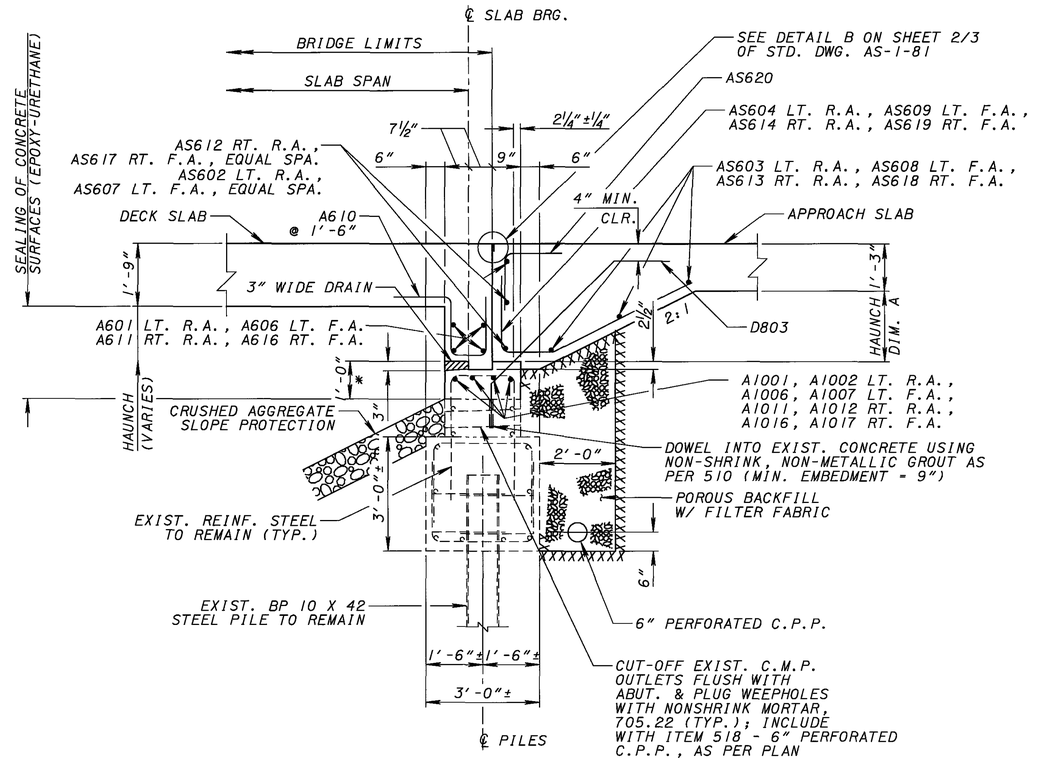
10 / 22

925
1100

8/5/05 2:18:49 PM
s:\projects\37700\bridge-lipkey\MH080ABID.dgn

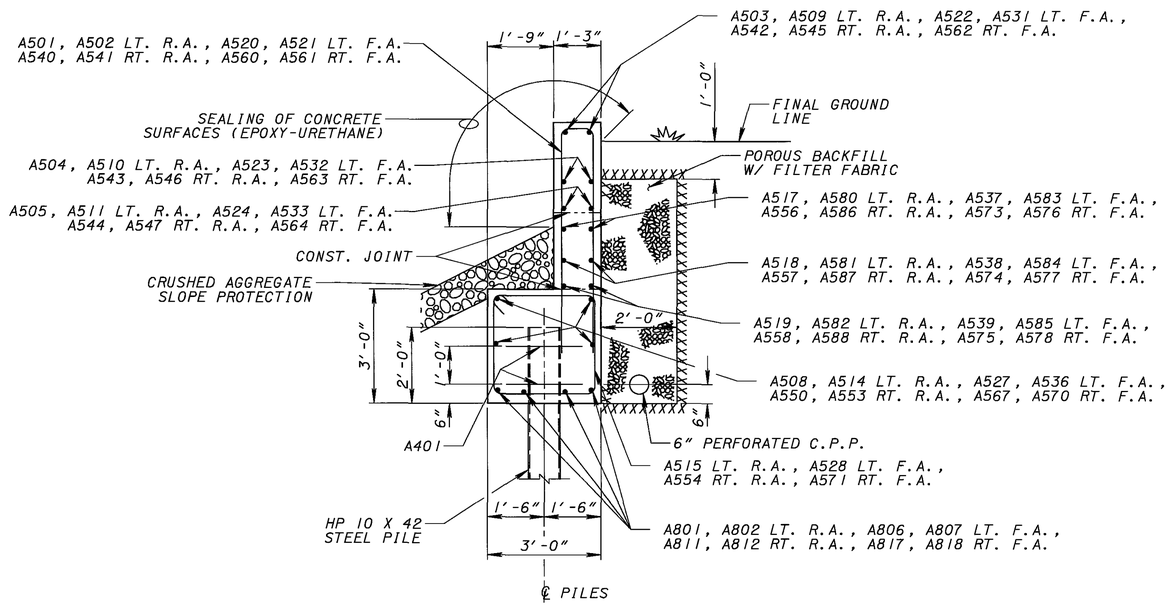


SECTION A-A



SECTION B-B

* NOTE: EXIST. ABUTMENT SEAT CONCRETE TO BE REMOVED AND REPLACED.



SECTION C-C

HAUNCH DIM. A		
ABUTMENT	MINIMUM	MAXIMUM
LEFT REAR	0.98'	1.71'
RIGHT REAR	0.75'	1.78'
LEFT FWD.	0.91'	1.64'
RIGHT FWD.	0.65'	1.30'

LEGEND:

R.A. - REAR ABUTMENT
F.A. - FORWARD ABUTMENT
C.P.P. - CORRUGATED PLASTIC PIPE

MINIMUM ABUTMENT LAP LENGTHS:

#5 BARS = 3'-5"
#6 BARS = 4'-1"
#10 BARS = 11'-7"

NOTES:

1. POROUS BACKFILL WITH FILTER FABRIC, 2 FEET THICK, SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, TO 1 FOOT BELOW THE EMBANKMENT SURFACE, AND LATERALLY TO THE ENDS OF THE WINGWALLS.
2. PLACE A601, A606, A610, A611, AND A616 BARS IN THE DECK SLAB HAUNCH.
3. FOR GENERAL NOTES SEE SHEET 4/22.
4. FOR REINFORCING SCHEDULE SEE SHEETS 21-22/22.

8/15/05 2:19:09 PM
s:\projects\37700\bridge-ilpkey\MH080ABIE.dgn

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY SUITE 350 WESTERVILLE, OHIO 43081

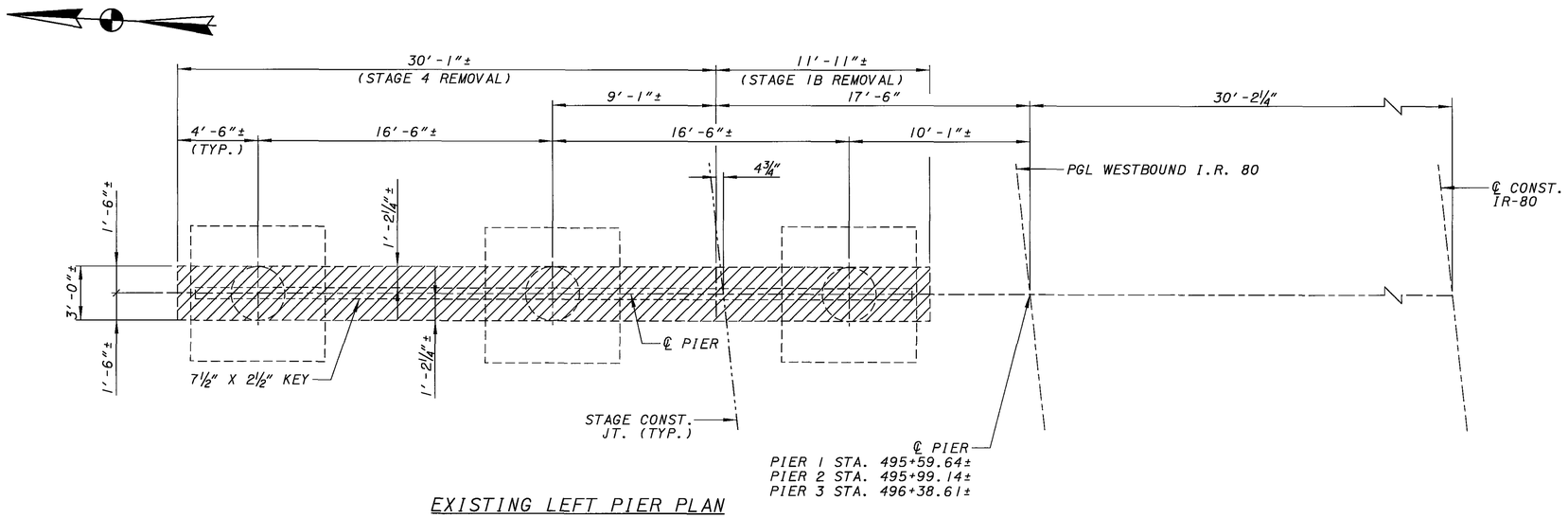
DESIGNED	DRAWN	REVIEWED	DATE
SK	SK	JEK	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MTO		5002192 (L) 5002222 (R)	

CAPPED-PILE ABUTMENT DETAILS
BRIDGE NO. MAH-80-0076 L/R
I.R. 80 OVER LIPKEY ROAD

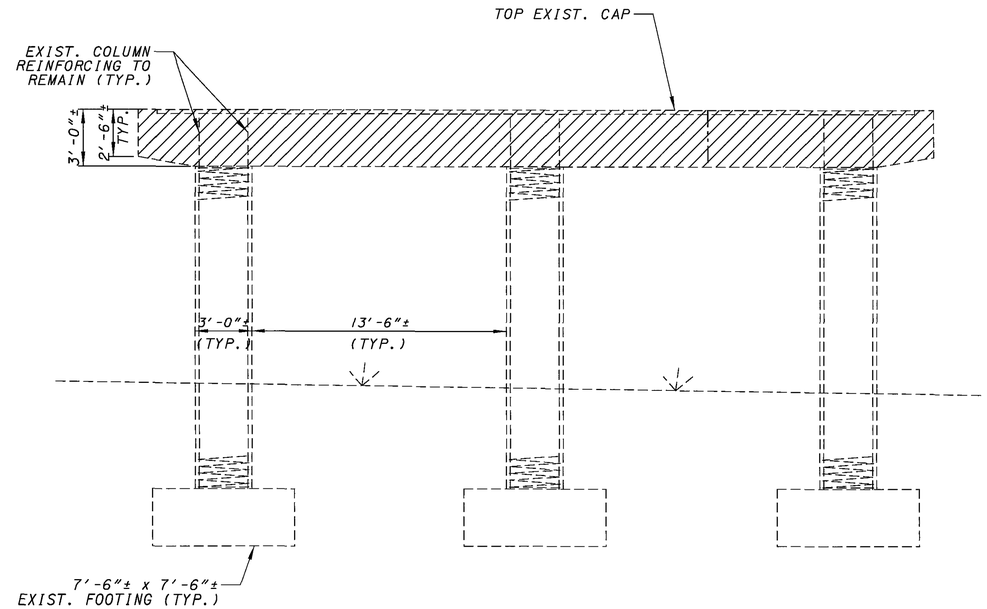
MAH-80-0.97
PID 6080

11/22

926
1100



EXISTING LEFT PIER PLAN



EXISTING LEFT PIER ELEVATION

NOTES:

1. FOR GENERAL NOTES SEE SHEET 4/22.
2. CONTRACTOR TO PROVIDE TEMPORARY SUPPORT FOR EXISTING CAP TO REMAIN IN PLACE DURING STAGE 1B CONSTRUCTION.

LEGEND:

- ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

8/15/05 2:19:48 PM
s:\projects\37700\bridge-lipkey\MH080PIIC.dgn

DESIGN AGENCY
GANNETT FLEMING
ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

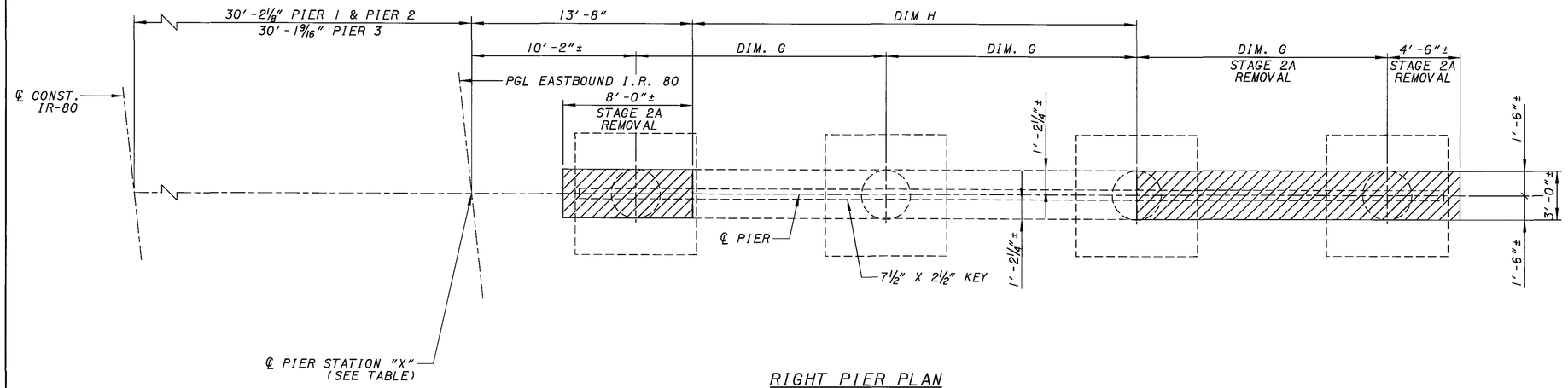
DESIGNED	DRAWN	REVIEWED	DATE
DEK	DEK	PLC	2/05
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MTO		5002192 (L) 5002222 (R)	

PIER REMOVAL DETAILS - LEFT BRIDGE
BRIDGE NO. MAH-80-0076 L/R
I.R. 80 OVER LIPKEY ROAD

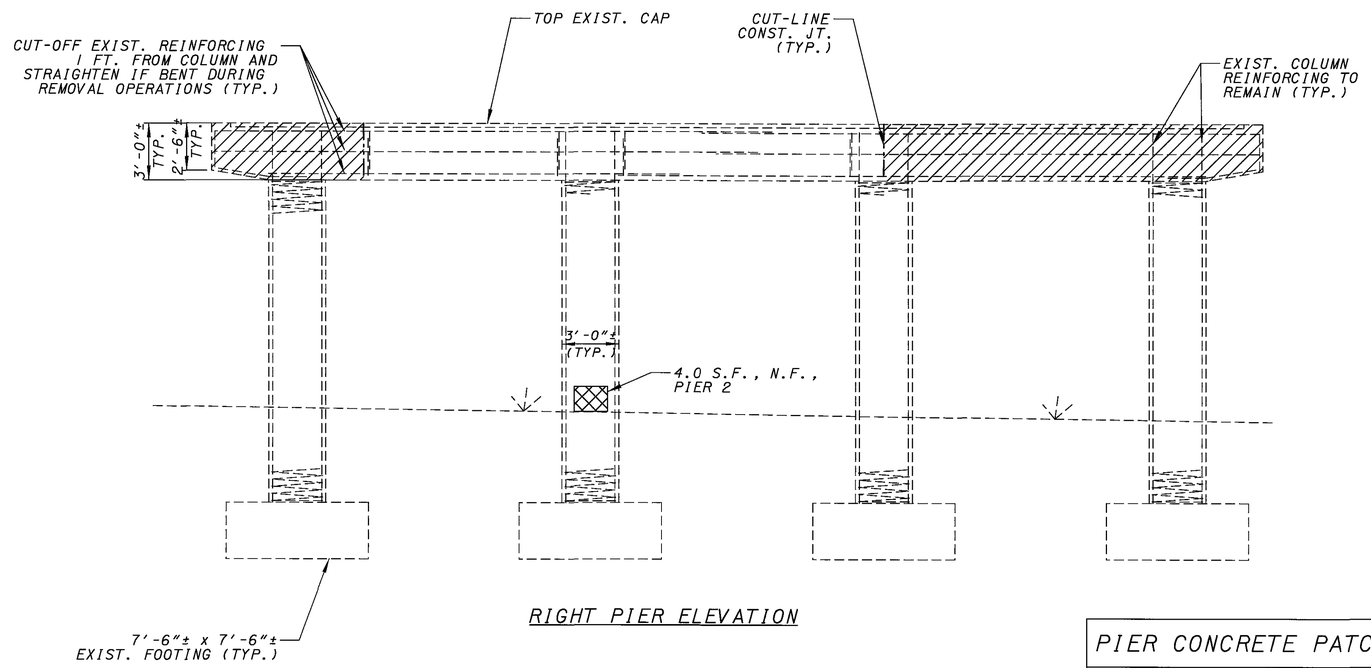
MAH-80-0.97
PID 6080

11A/22

926A
1100



RIGHT PIER PLAN
(SEE PIER DATA TABLE FOR DIMENSIONS G & H)



RIGHT PIER ELEVATION

PIER CONCRETE PATCHING - SUMMARY TABLE (SQ. FT.)

	MEASURED QUANTITY	CONTINGENCY FACTOR	TOTAL QUANTITY
RIGHT BRIDGE PIERS	4.0	1.25	5.00

RIGHT PIER DATA

PIER NO.	STATION "X"	DIM. G	DIM. H
PIER 1	495+52.98±	15'-6"±	27'-6"±
PIER 2	495+92.50±	15'-3"±	27'-0"±
PIER 3	496+32.50±	14'-11"±	26'-4"±

NOTES:

1. FOR GENERAL NOTES SEE SHEET 4/22.

LEGEND:

- ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN
- PORTIONS TO BE PATCHED WITH ITEM 843.

N.F. = NEAR FACE
F.F. = FAR FACE
S.F. = SQUARE FEET

8/5/05 2:20:10 PM
s:\projects\37700\bridge-lipkey\MH080PIID.dgn

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350 WESTERVILLE, OHIO 43081

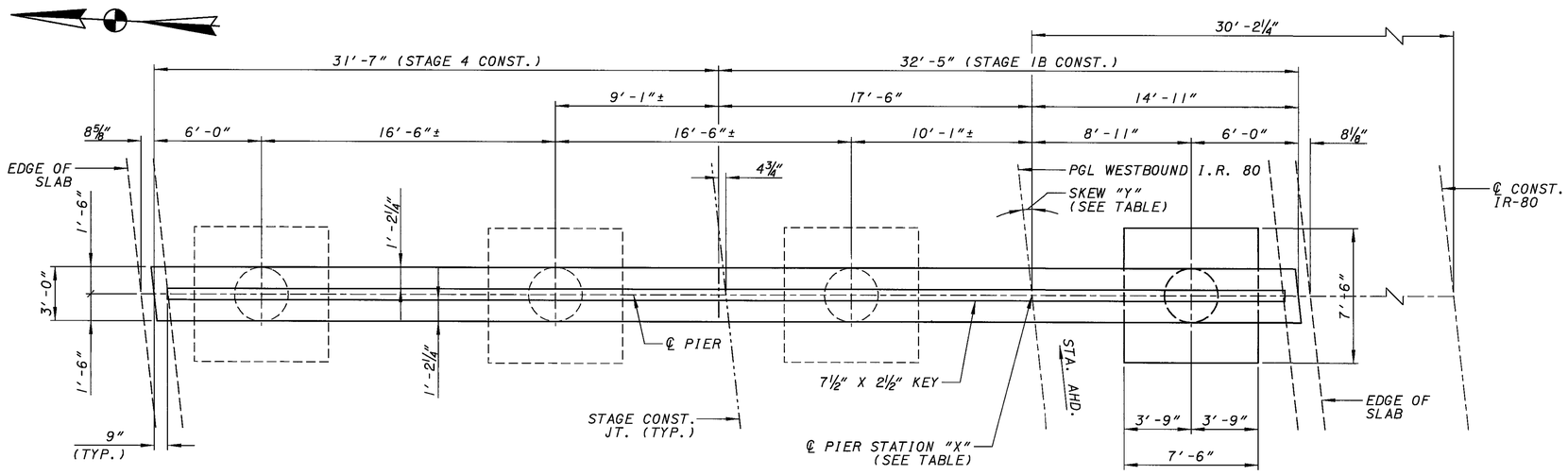
DESIGNED	DRAWN	REVIEWED	DATE
DEK	DEK	PLC	2/05
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MTO		5002192 (L) 5002222 (R)	

PIER REMOVAL DETAILS - RIGHT BRIDGE
BRIDGE NO. MAH-80-0076 L/R
I.R. 80 OVER LIPKEY ROAD

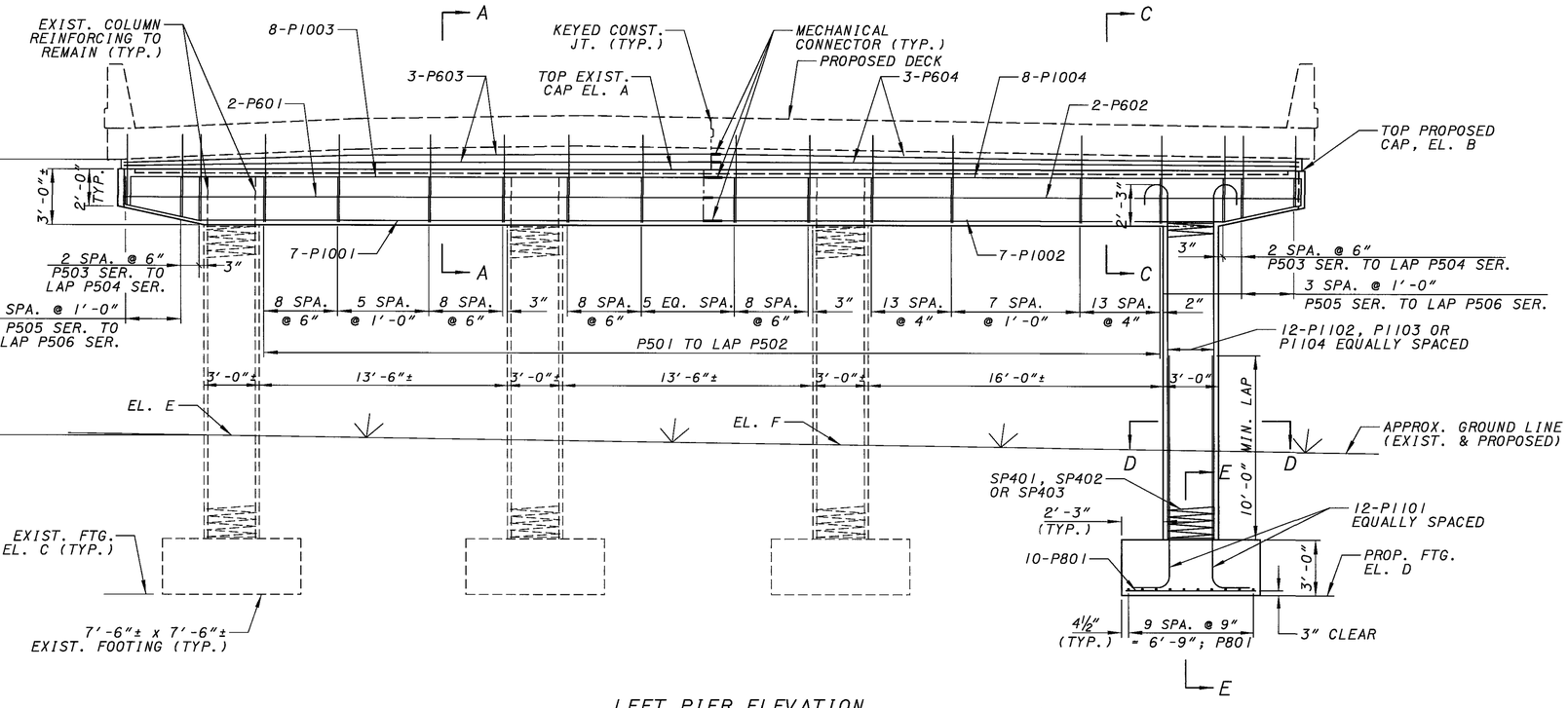
MAH-80-0.97
PID 6080

11B/22

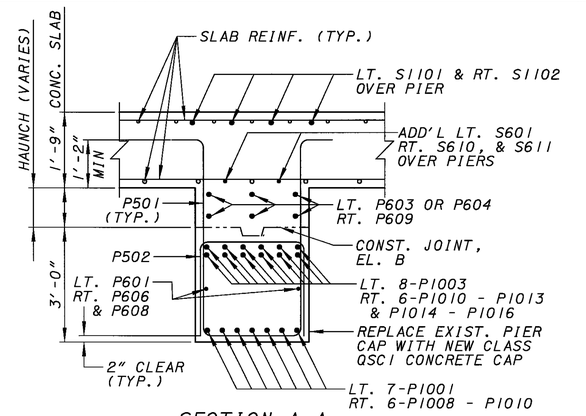
926B
1100



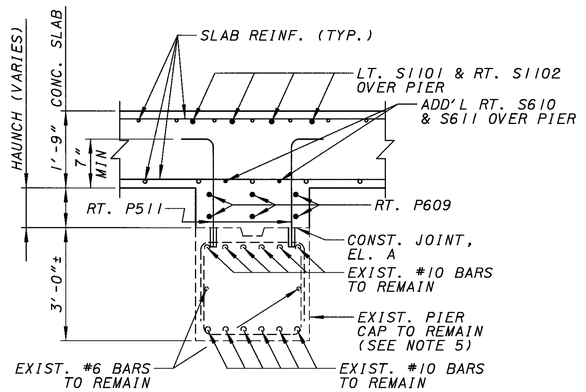
LEFT PIER PLAN



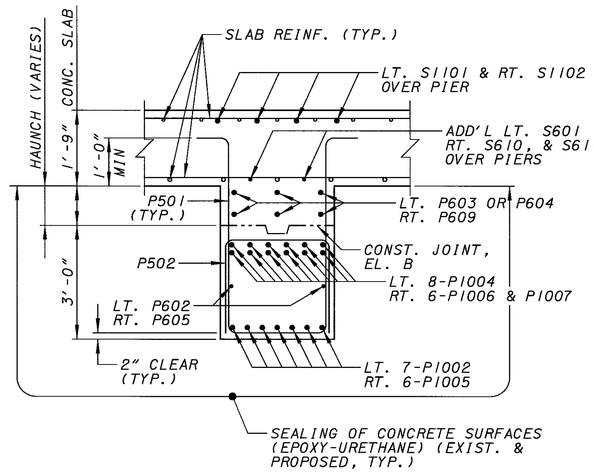
LEFT PIER ELEVATION



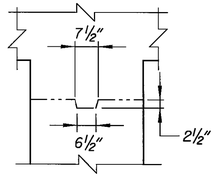
SECTION A-A



SECTION B-B
(RIGHT BRIDGE ONLY)



SECTION C-C



KEY DETAIL

NOTES:

1. FOR SECTIONS D-D AND E-E, SEE SHEET 13/22.
2. CONTRACTOR TO PROVIDE TEMPORARY SUPPORT FOR EXISTING CAP TO REMAIN IN PLACE DURING STAGE 1B CONSTRUCTION.
3. FOR GENERAL NOTES SEE SHEET 4/22.
4. FOR REINFORCING SCHEDULE AND LAP LENGTHS SEE SHEETS 21-22/22.
5. PREPARE THE TOP SURFACE OF THE EXISTING PIER CAP AS PER THE REQUIREMENTS OF THE "CUT LINE CONSTRUCTION JOINT PREPARATION" NOTE ON SHEET 4/22.

LEFT PIER DATA

PIER NO.	STATION "X"	SKEW "Y"	EL. A	EL. B	EL. C	EL. D	EL. E	EL. F
PIER 1	495+59.64±	6°12'45"	948.16±	948.16	925.2±	924.50	933.95±	933.30±
PIER 2	495+99.14±	6°31'29"	947.54±	947.54	924.2±	922.50	932.90±	932.40±
PIER 3	496+38.61±	6°20'15"	946.91±	946.91	924.2±	923.00	933.40±	933.25±

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350 WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
MTO	MTO/SK	JEK	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DEK		5002192 (L) 5002222 (R)	

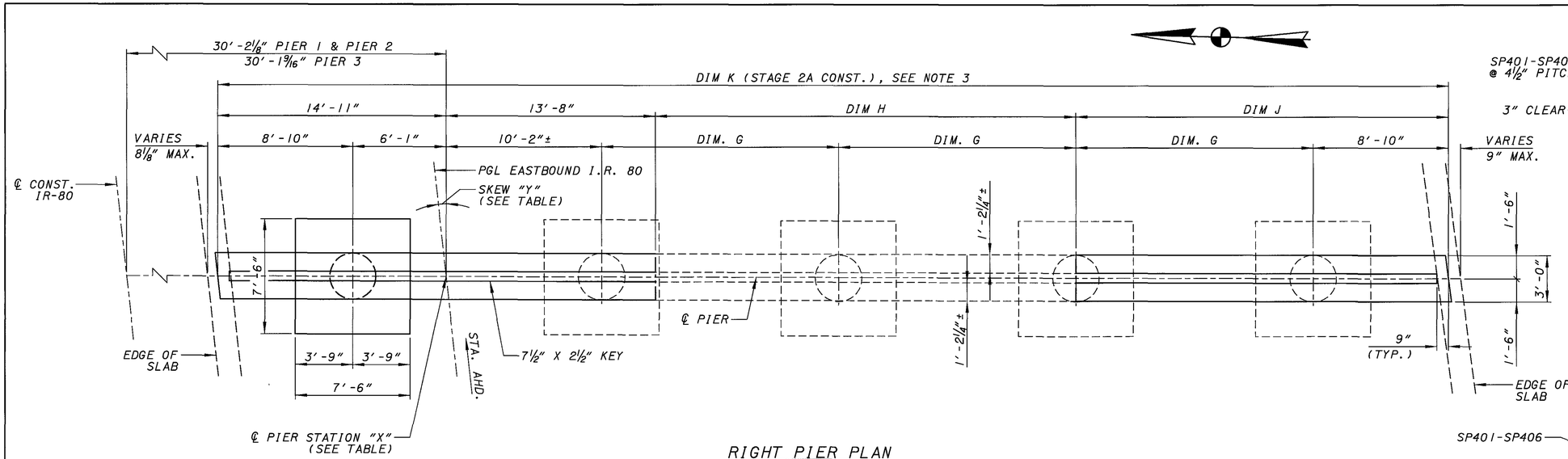
PIER DETAILS - LEFT BRIDGE
BRIDGE NO. MAH-80-0076 L/R
I.R. 80 OVER LIPKEY ROAD

MAH-80-0.97
PID 6080

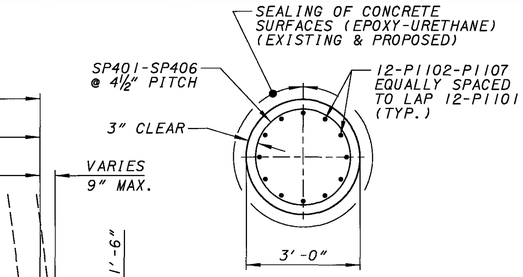
12/22

927
1100

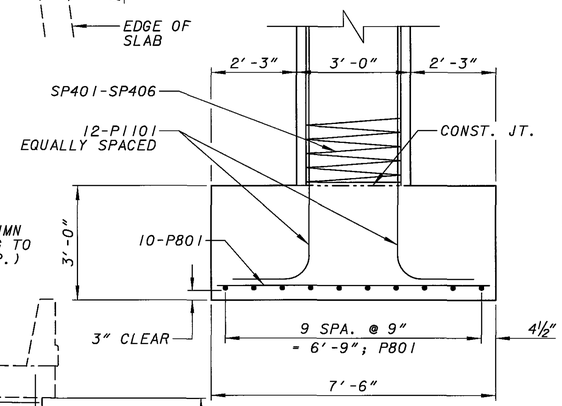
8/15/05 2:20:33 PM s:\projects\37700\bridge-lipkey\MH080PIIA.dgn



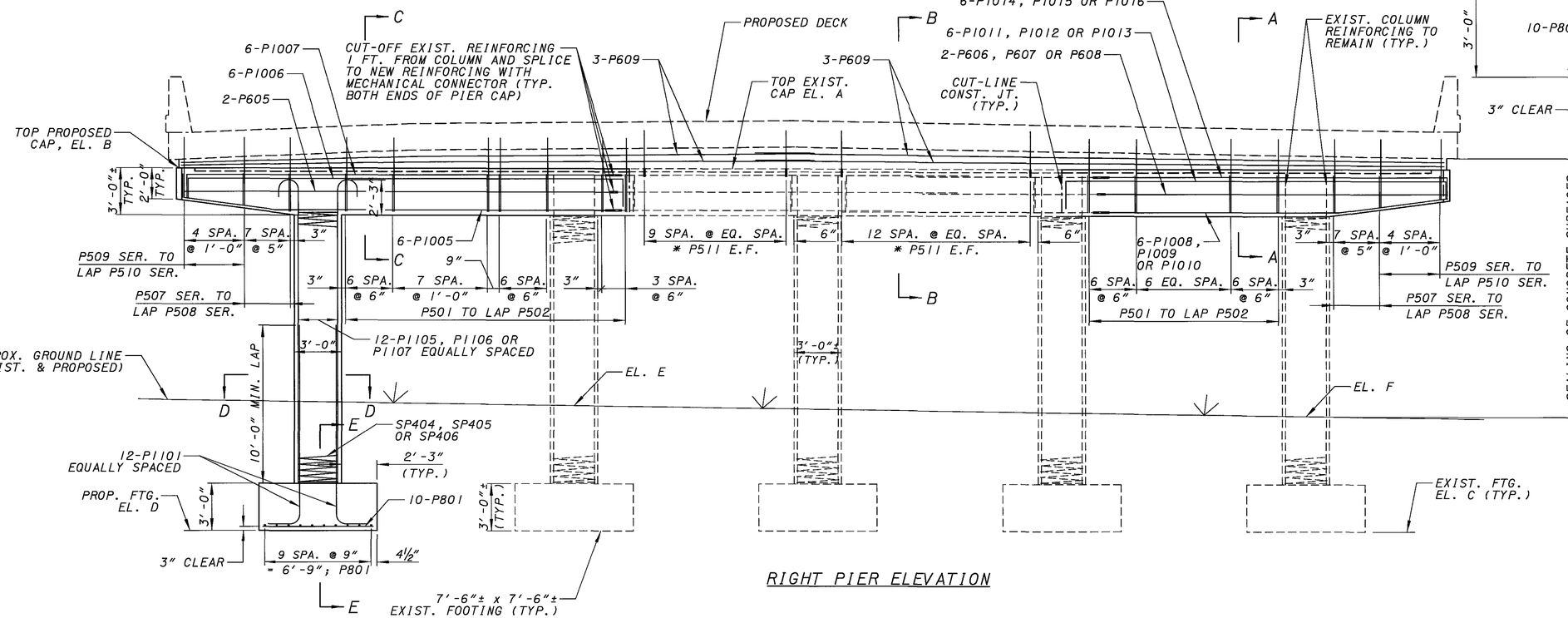
RIGHT PIER PLAN
(SEE PIER DATA TABLE FOR DIMENSIONS G-K)



SECTION D-D



SECTION E-E



RIGHT PIER ELEVATION

NOTES:

* 1. DOWEL P511 BARS 6" MIN. INTO EXIST. CONCRETE USING NONSHRINK, NONMETALLIC GROUT AS PER ITEM 510.
2. FOR SECTIONS A-A, B-B, C-C AND KEY DETAIL, SEE SHEET 12/22.
3. CONSTRUCT THE NEW FOOTINGS AND COLUMNS DURING STAGE 1B.
4. FOR GENERAL NOTES SEE SHEET 4/22.
5. FOR REINFORCING SCHEDULE AND LAP LENGTHS SEE SHEETS 21-22/22.

LEGEND:

N.F. = NEAR FACE
F.F. = FAR FACE
S.F. = SQUARE FEET

RIGHT PIER DATA

PIER NO.	STATION "X"	SKEW "Y"	EL. A	EL. B	EL. C	EL. D	EL. E	EL. F	DIM. G	DIM. H	DIM. J	DIM. K
PIER 1	495+52.98±	6°14'42"±	948.25±	948.25	925.2±	924.5	932.95±	932.75±	15'-6"±	27'-6"±	24'-4"	80'-5"
PIER 2	495+92.50±	6°20'16"±	947.63±	947.63	924.2±	922.5	932.10±	931.80±	15'-3"±	27'-0"±	24'-1"	79'-8"
PIER 3	496+32.50±	5°17'12"±	947.02±	947.02	924.2±	923.0	932.60±	933.20±	14'-11"±	26'-4"±	23'-9"	78'-8"

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EASTERN AVENUE, SUITE 350
WESTERVILLE, OHIO 43081

DESIGNED MTO | CHECKED DEK
DRAWN MTO/SK | REVISED
REVIEWED JEK | DATE 8/04
STRUCTURE FILE NUMBER 5002192 (L) 5002222 (R)

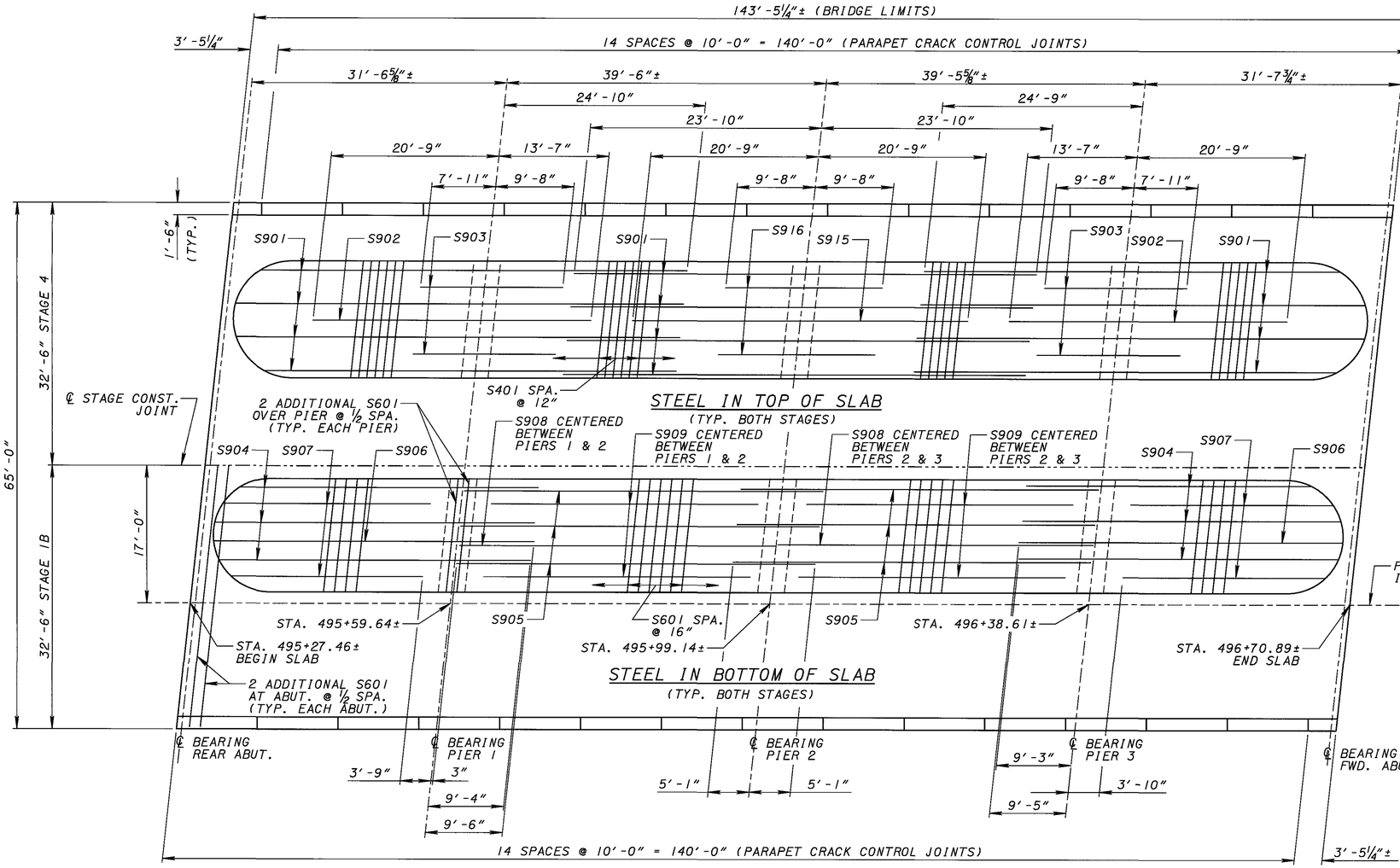
PIER DETAILS - RIGHT BRIDGE
BRIDGE NO. MAH-80-0076 L/R
I.R. 80 OVER LIPKEY ROAD

MAH-80-0.97
PID 6080

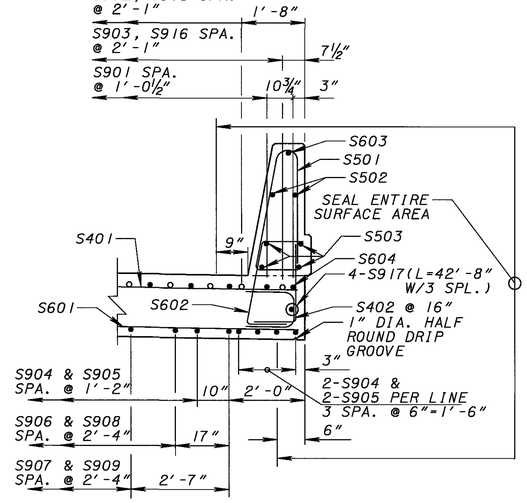
13/22

928
1100

8/5/05 2:20:52 PM
s:\projects\37700\bridge-lipkey\MH080PIIB.dgn



DECK REINFORCING PLAN - LEFT BRIDGE



SECTION B-B
(TYP. BOTH SIDES)

NOTES:

1. FOR GENERAL NOTES SEE SHEET 4/22.
2. FOR REINFORCING SCHEDULE AND LAP LENGTHS SEE SHEETS 21-22/22.
3. FOR ADDITIONAL SLAB DETAILS AND NOTES SEE STD. DWG. CS-1-03.

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350 WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
SK/MTO	SK	JEK	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DEK		5002192 (L) 5002222 (R)	

DECK REINFORCING PLAN - LEFT BRIDGE
BRIDGE NO. MAH-80-0076 L/R
I.R. 80 OVER LIPKEY ROAD

MAH-80-0.97
PID 6080

14 / 22

929
1100

8/15/05 2:2H4 PM
s:\projects\37700\bridge-lipkey\MH080SDIA.dgn

143'-5¾"± (BRIDGE LIMITS)

3'-5¾"±

14 SPACES @ 10'-0" = 140'-0" (PARAPET CRACK CONTROL JOINTS)

31'-8"± | 39'-6¼"± | 40'-0"± | 31'-0"±

24'-9" | 25'-5"

23'-11" | 23'-11"

20'-10" | 13'-6" | 20'-10" | 20'-10" | 14'-2" | 20'-2"

7'-11" | 9'-8" | 9'-8" | 9'-8" | 9'-8" | 7'-11"

1'-6" (TYP.)

15'-6"

82'-0¾"

66'-6¾"

STA. 495+20.68± BEGIN SLAB

STA. 495+52.98±

STA. 495+92.50±

STA. 496+32.50±

STA. 496+64.13± END SLAB

PGL EASTBOUND I.R. 80

S410 | S920 | S921 | S922 | S920 | S936 | S935 | S922 | S921 | S920 | S411

S410 SPA. @ 12" BETWEEN REAR ABUT. & PIER 2

S410

S411 SPA. @ 12" BETWEEN PIER 2 & FWD. ABUT.

STEEL IN TOP OF SLAB

S923 | S926 | S925 | S924 | S927 CENTERED BETWEEN PIERS 1 & 2 | S928 CENTERED BETWEEN PIERS 1 & 2 | S924 | S927 CENTERED BETWEEN PIERS 2 & 3 | S928 CENTERED BETWEEN PIERS 2 & 3 | S923 | S926 | S925 | S611

S611

2 ADDITIONAL S610 OVER PIER 1 @ ½ SPA.

S610 SPA. @ 16" BETWEEN REAR ABUT. & ℄ PIER 2

1 ADDITIONAL S610 @ ½ SPA.

1 ADDITIONAL S611 @ ½ SPA.

S611 SPA. @ 16" BETWEEN ℄ PIER 2 & FWD. ABUT.

2 ADDITIONAL S611 OVER PIER 3 @ ½ SPA.

2 ADDITIONAL S611 FWD. ABUT. @ ½ SPA.

STEEL IN BOTTOM OF SLAB

2 ADDITIONAL S610 REAR ABUT. @ ½ SPA.

℄ BEARING REAR ABUT.

5-S923 (TOP & BOT.)

℄ BEARING PIER 1

3-ADD'L S924 (TOP & BOT.)

℄ BEARING PIER 2

2-ADD'L S924 (TOP & BOT.)

℄ BEARING PIER 3

℄ BEARING FWD. ABUT.

3'-10½" | 3" | 9'-3" | 9'-6½" | 4'-7" | 5'-0¾" | 9'-11" | 3" | 3'-2½" | 10'-2½"

14 SPACES @ 10'-0" = 140'-0" (PARAPET CRACK CONTROL JOINTS)

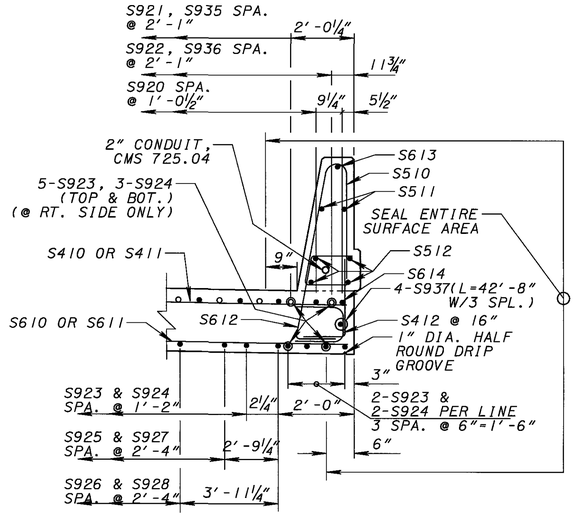
3'-5¾"

15'-6"

63'-6½"

79'-0½"

DECK REINFORCING PLAN - RIGHT BRIDGE



SECTION B-B
(TYP. BOTH SIDES)

NOTES:

1. FOR GENERAL NOTES SEE SHEET 4/22.
2. FOR REINFORCING SCHEDULE AND LAP LENGTHS SEE SHEETS 21-22/22.
3. FOR ADDITIONAL SLAB DETAILS AND NOTES SEE STD. DWG. CS-1-03.

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
SK/MTO	SK	JEK	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DEK		5002192 (L) 5002222 (R)	

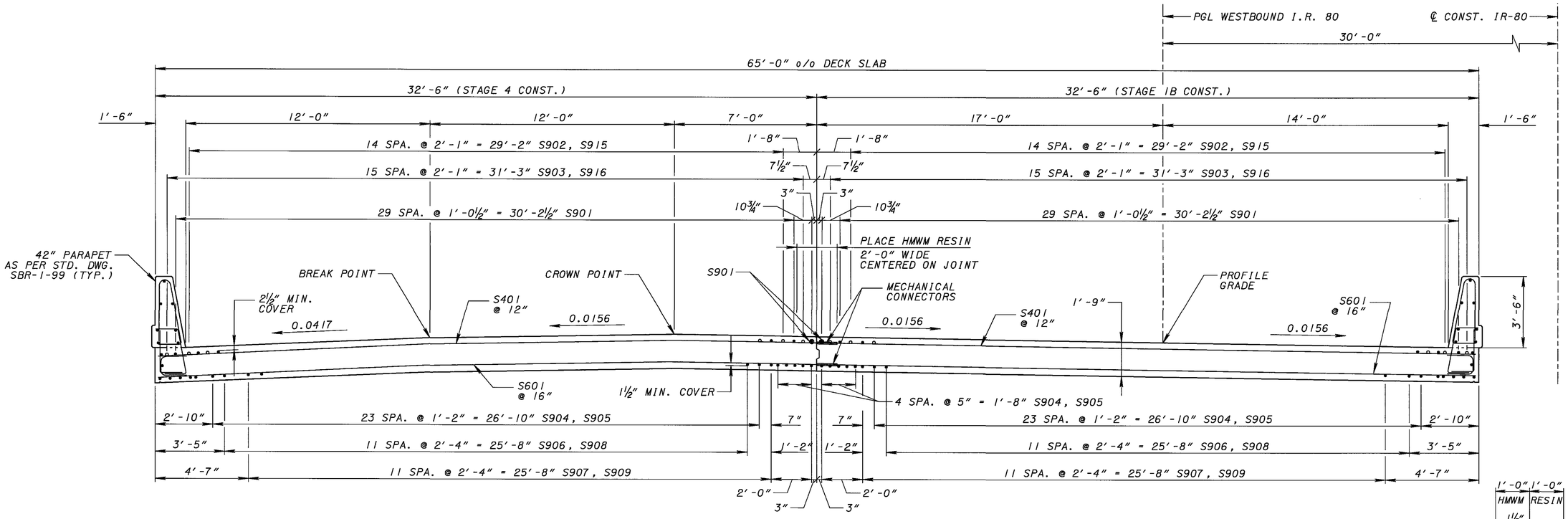
DECK REINFORCING PLAN - RIGHT BRIDGE
BRIDGE NO. MAH-80-0076 L/R
I.R. 80 OVER LIPKEY ROAD

MAH-80-0.97
PID 6080

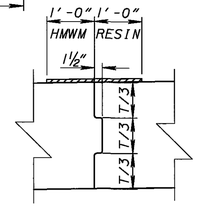
15/22

930/1100

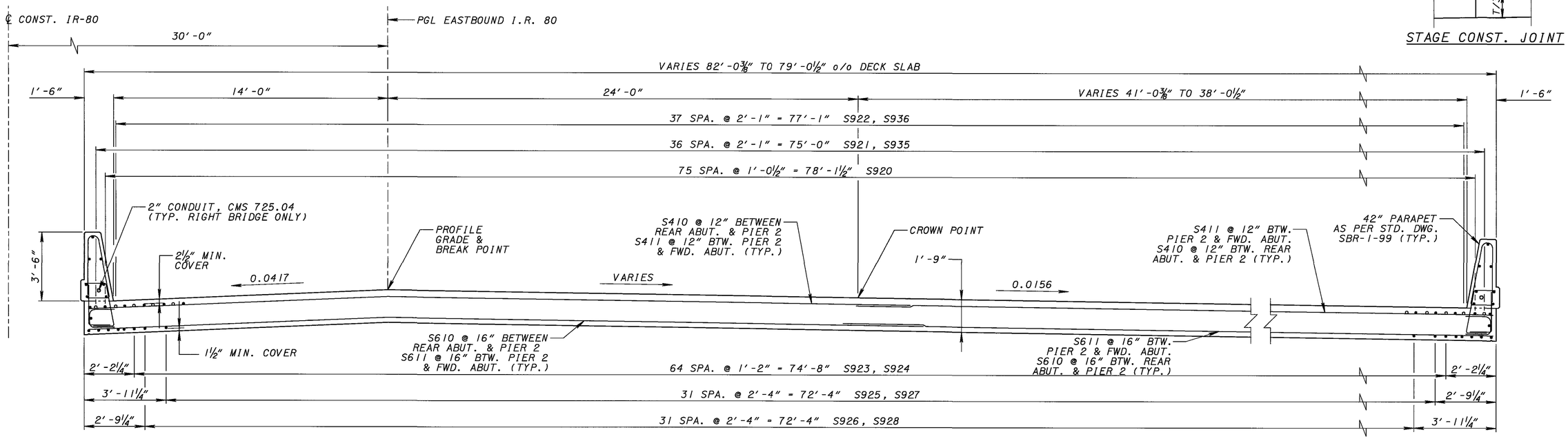
8/15/05 2:21:36 PM
e:\projects\37700\bridge-lipkey\MH080SDIB.dgn



TRANSVERSE SECTION - LEFT BRIDGE



STAGE CONST. JOINT



TRANSVERSE SECTION - RIGHT BRIDGE

(SECTION SHOWN AT FORWARD END OF DECK SLAB)

NOTES:

1. FOR GENERAL NOTES SEE SHEET 4/22.
2. FOR REINFORCING SCHEDULE AND LAP LENGTHS SEE SHEETS 21-22/22.
3. FOR ADDITIONAL SLAB DETAILS AND NOTES SEE STD. DWG. CS-1-03.

DESIGN AGENCY
GANNETT FLEMING
ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
SK/MTO	SK/MTO	JEK	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DEK		5002192 (L) 5002222 (R)	

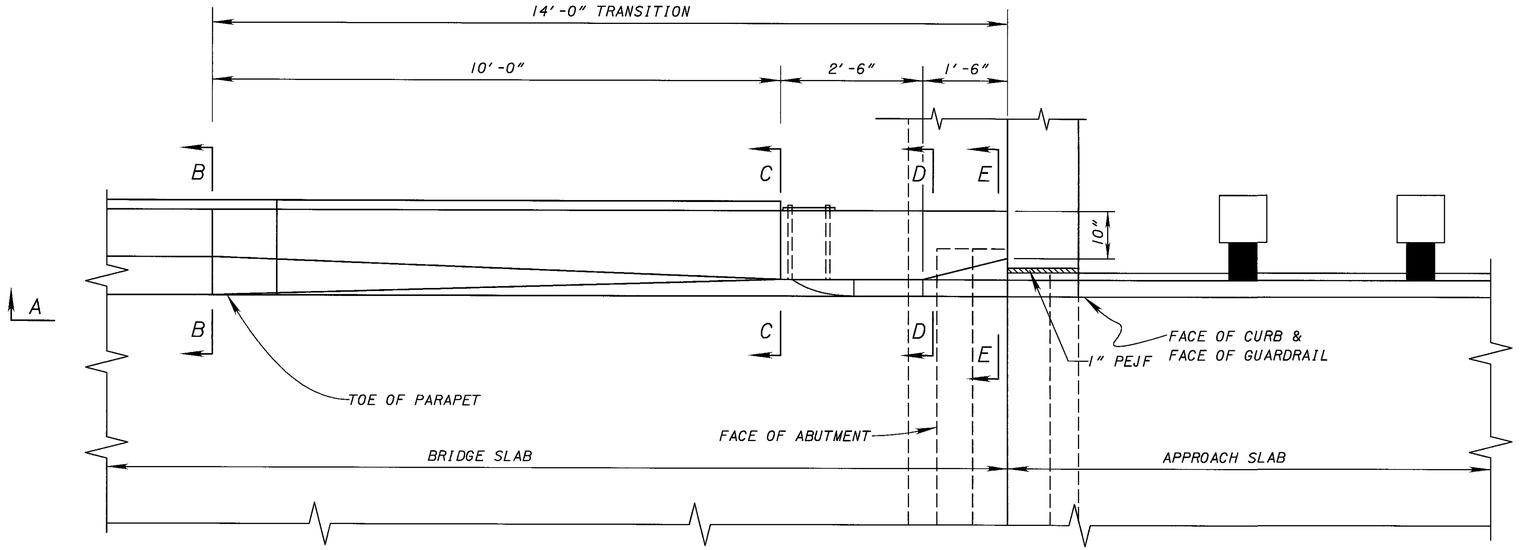
TRANSVERSE SECTIONS - LEFT AND RIGHT BRIDGES
BRIDGE NO. MAH-80-0076 L/R
I.R. 80 OVER LIPKEY ROAD

MAH-80-0.97
PID 6080

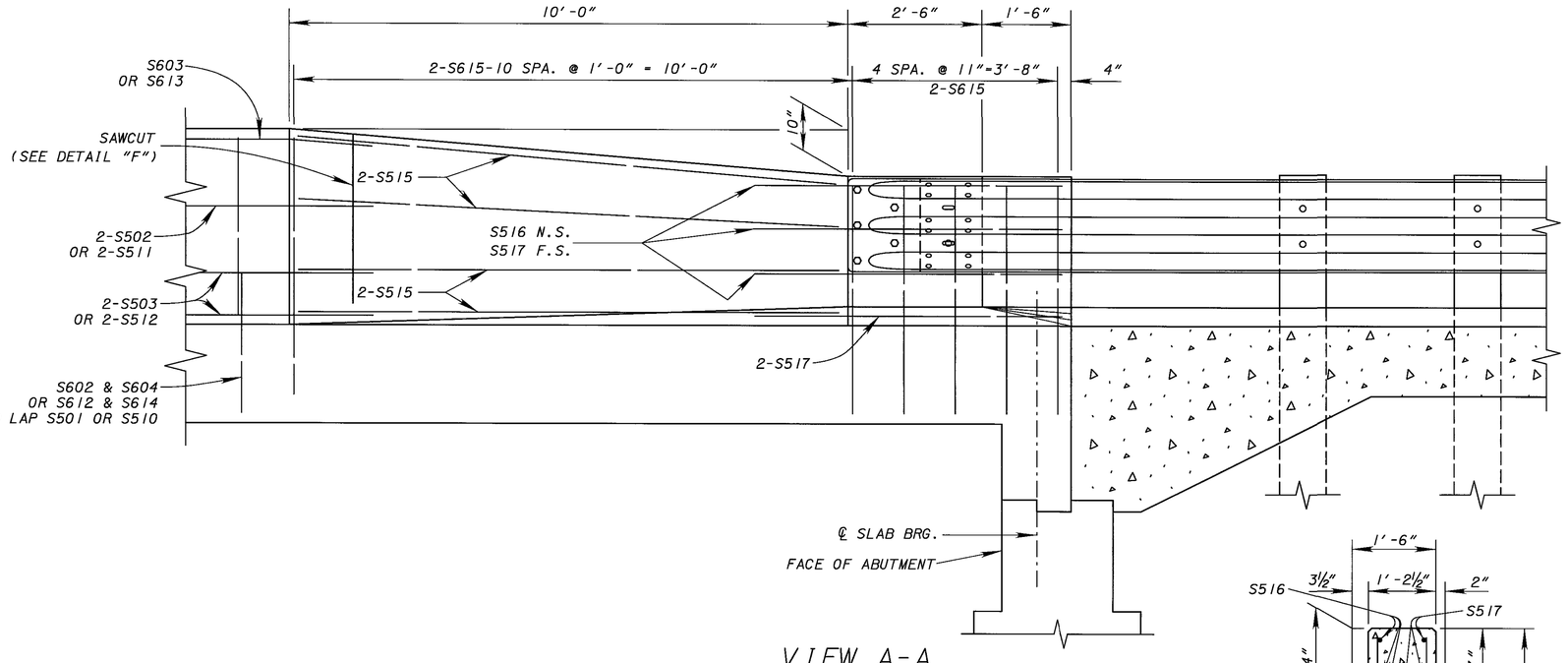
16 / 22

931
1100

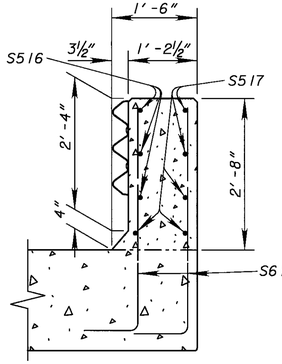
8/5/05 2:21:58 PM
s:\projects\37700\bridge-lipkey\MH080TSIA.dgn



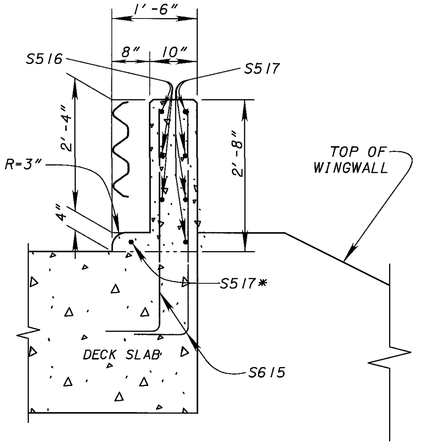
PART PLAN AT ABUTMENT



VIEW A-A

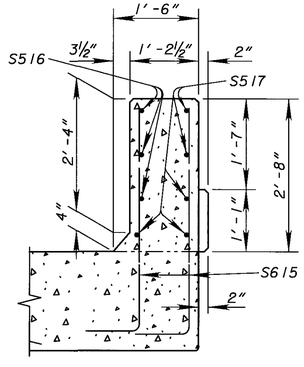


SECTION D-D

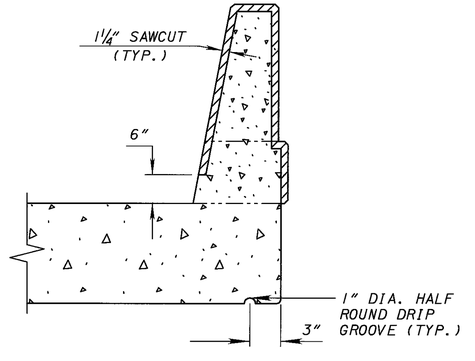


SECTION E-E

* FIELD BEND IF NECESSARY



SECTION C-C



DETAIL F

NOTES:

1. FOR PARAPET DETAILS AND NOTES NOT SHOWN, SEE STD. DWG. SBR-1-99.
2. FOR SECTION B-B AND PARAPET REINFORCING DETAILS, SEE SHEETS 14 & 15 OF 22.
3. FOR GENERAL NOTES SEE SHEET 4/22.
4. FOR REINFORCING SCHEDULE AND LAP LENGTHS SEE SHEETS 21-22/22.
5. FOR DETAILS AND PAYMENT OF BRIDGE TERMINAL ASSEMBLY, SEE SHEET 190/1100.

LEGEND:

N.S. = NEAR SIDE
F.S. = FAR SIDE

DESIGN AGENCY
GANNETT FLEMING
ENGINEERS & ARCHITECTS, P.C.
4151 EASTERN PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
EFD	EFD	JEK	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SK		5002192 (L) 5002222 (R)	

PARAPET TRANSITION DETAILS

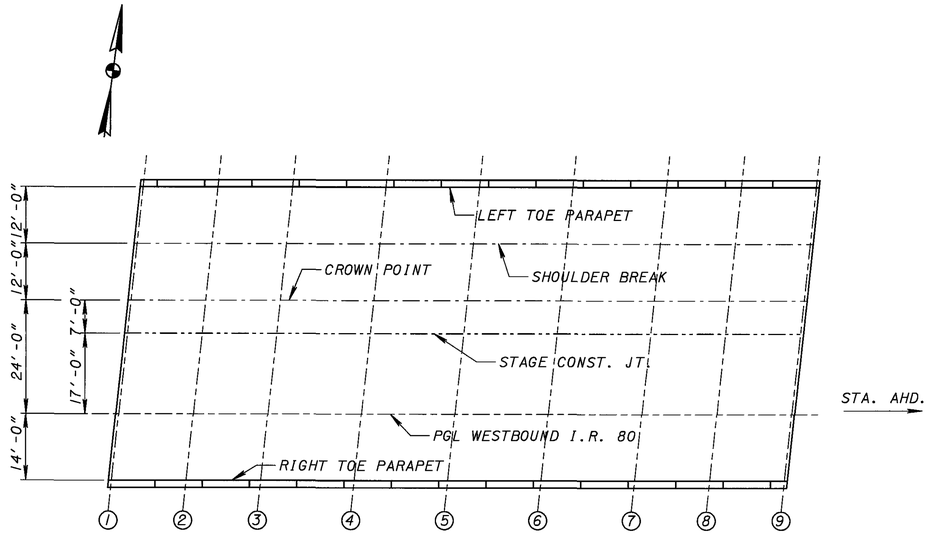
BRIDGE NO. MAH-80-0076 L/R
I.R. 80 OVER LIPKEY ROAD

MAH-80-0.97
PID 6080

17 / 22

932
1100

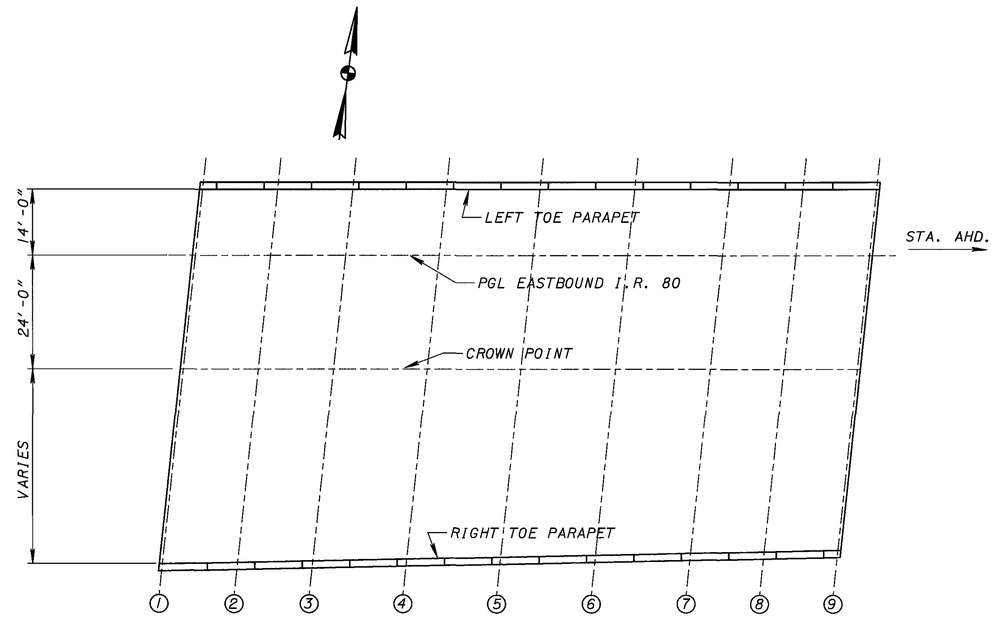
8/15/05 2:22:22 PM
s:\projects\37700\bridge-lipkey\MH080SDIC.dgn



LEFT BRIDGE

FINAL DECK ELEVATION TABLE

		℄ BRG. REAR ABUT.	MID-SPAN	℄ PIER 1	MID-SPAN	℄ PIER 2	MID-SPAN	℄ PIER 3	MID-SPAN	℄ BRG. FWD. ABUT.
LOCATION		1	2	3	4	5	6	7	8	9
LEFT TOE OF PARAPET	STATION	495+33.29	495+49.07	495+64.87	495+84.75	496+04.63	496+24.37	496+43.94	496+59.70	496+75.43
	DECK ELEV.	951.05	950.79	950.54	950.22	949.89	949.57	949.26	949.00	948.75
SHOULDER BREAK	STATION	495+31.99	495+47.77	495+63.56	495+83.41	496+03.26	496+22.94	496+42.61	496+58.39	496+74.13
	DECK ELEV.	951.57	951.32	951.06	950.74	950.42	950.10	949.78	949.52	949.27
CROWN POINT	STATION	495+30.69	495+46.47	495+62.25	495+82.00	496+01.88	496+21.62	496+41.28	496+57.11	496+72.86
	DECK ELEV.	951.78	951.52	951.27	950.95	950.63	950.31	949.99	949.73	949.48
STAGE CONST. JOINT	STATION	495+29.93	495+45.71	495+61.49	495+81.24	496+01.08	496+20.82	496+40.50	496+56.33	496+72.10
	DECK ELEV.	951.68	951.43	951.17	950.85	950.53	950.21	949.89	949.63	949.38
PROFILE GRADE LINE	STATION	495+28.09	495+43.87	495+59.64	495+79.39	495+99.14	496+18.88	496+38.61	496+54.44	496+70.26
	DECK ELEV.	951.45	951.19	950.94	950.62	950.30	949.98	949.66	949.40	949.14
RIGHT TOE OF PARAPET	STATION	495+26.57	495+42.35	495+58.12	495+77.83	495+97.54	496+17.30	496+37.06	496+52.89	496+68.74
	DECK ELEV.	951.25	951.00	950.74	950.42	950.10	949.78	949.46	949.21	948.95



RIGHT BRIDGE

FINAL DECK ELEVATION TABLE

		℄ BRG. REAR ABUT.	MID-SPAN	℄ PIER 1	MID-SPAN	℄ PIER 2	MID-SPAN	℄ PIER 3	MID-SPAN	℄ BRG. FWD. ABUT.
LOCATION		1	2	3	4	5	6	7	8	9
LEFT TOE OF PARAPET	STATION	495+22.81	495+38.66	495+54.52	495+74.29	495+94.06	496+13.93	496+33.79	496+49.42	496+65.04
	DECK ELEV.	950.95	950.70	950.44	950.12	949.80	949.48	949.15	948.90	948.65
PROFILE GRADE LINE	STATION	495+21.31	495+37.14	495+52.98	495+72.74	495+92.50	496+12.50	496+32.50	496+48.00	496+63.50
	DECK ELEV.	951.56	951.30	951.05	950.73	950.41	950.08	949.76	949.51	949.26
CROWN POINT	STATION	495+18.73	495+34.54	495+50.36	495+70.10	495+89.84	496+10.06	496+30.28	496+45.57	496+60.86
	DECK ELEV.	951.98	951.68	951.36	950.96	950.56	950.15	949.74	949.43	949.12
RIGHT TOE OF PARAPET	STATION	495+14.33	495+30.13	495+45.94	495+65.69	495+85.45	496+06.07	496+26.70	496+41.69	496+56.68
	DECK ELEV.	951.41	951.13	950.82	950.42	950.00	949.62	949.19	948.91	948.59

NOTES:

1. SEE SHEETS 14 & 16 OF 22 FOR ADDITIONAL DECK INFORMATION.

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
SK	SK	JEK	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PLC		5002192 (L) 5002222 (R)	

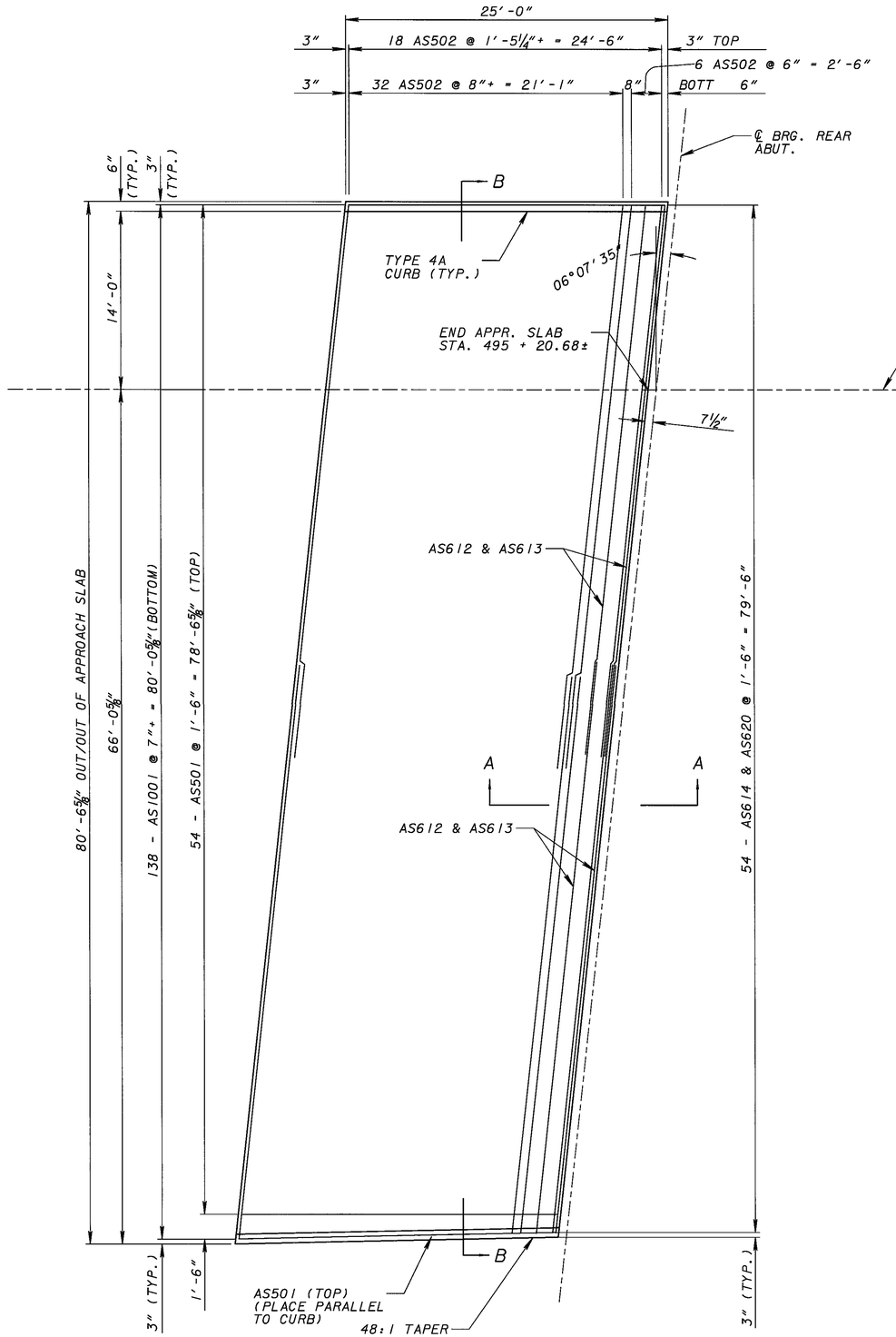
FINAL DECK ELEVATIONS - LEFT AND RIGHT BRIDGES
BRIDGE NO. MAH-80-0076 L/R
I.R. 80 OVER LIPKEY ROAD

MAH-80-0.97
PID 6080

18 / 22

933
1100

8/15/05 2:22:42 PM
s:\projects\37700\bridge-lipkey\MH080SDID.dgn



APPROACH SLAB PLAN - RIGHT BRIDGE

NOTES:

1. SEE SHT. 20 / 22 FOR SECTIONS B-B & C-C.
2. SEE SHT. 11 / 22 FOR SECTION A-A.
3. FOR GENERAL NOTES SEE SHEET 4/22.
4. FOR REINFORCING SCHEDULE AND LAP LENGTHS SEE SHEETS 21-22/22.

8/15/05 2:23:05 PM
s:\projects\37700\bridge-lipkey\WH080ASIA.dgn

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4181 EXECUTIVE PARKWAY SUITE 350
WESTERVILLE, OHIO 43081

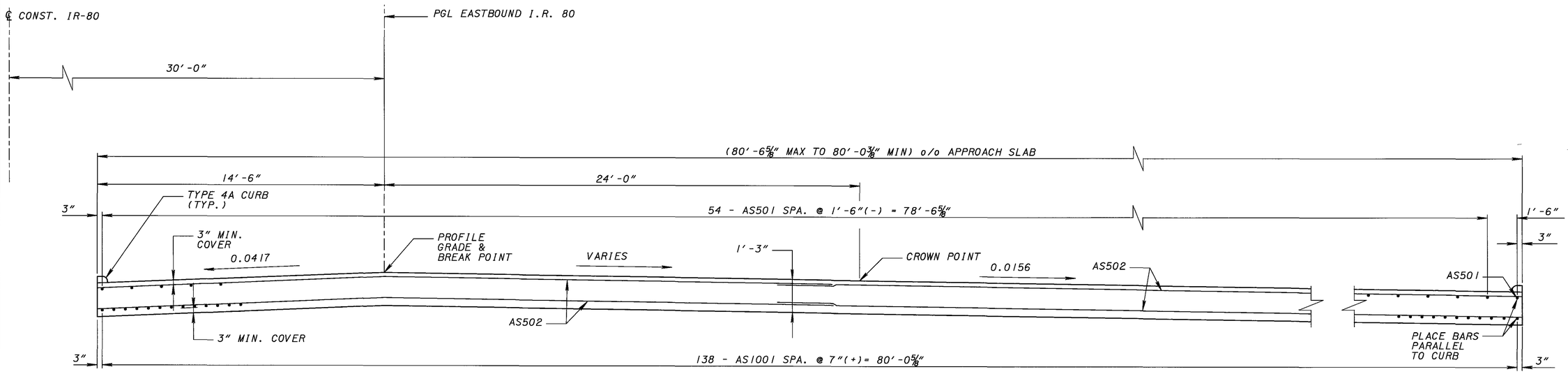
DESIGNED	DRAWN	REVIEWED	DATE
SK	SK	JEK	07/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PLC		5002192 (L) 5002222 (R)	

APPROACH SLAB PLAN - RIGHT BRIDGE
BRIDGE NO. MAH-80-0076 L/R
I.R. 80 OVER LIPKEY ROAD

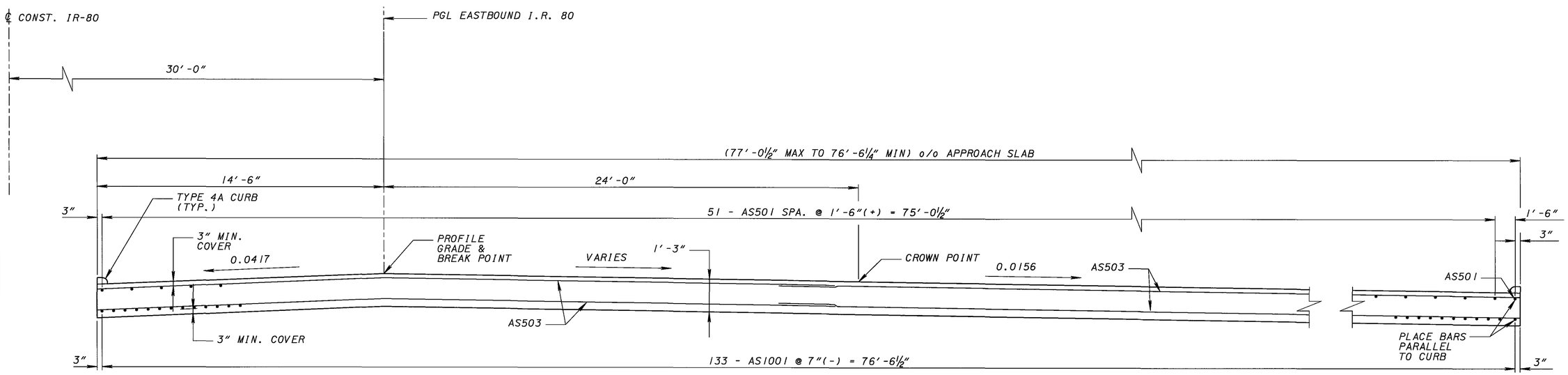
MAH-80-0.97
PID 6080

19 / 22

934
1100



SECTION B-B



SECTION C-C

NOTES:

1. SEE SHT. 19 / 22 FOR LOCATION OF SECTIONS B-B & C-C.
2. FOR GENERAL NOTES SEE SHEET 4/22.
3. FOR REINFORCING SCHEDULE AND LAP LENGTHS SEE SHEETS 21-22/22.

8/15/05 2:23:26 PM
s:\projects\37700\bridge-11plrkey\MH080ASIB.dgn

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EASTERN PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
SK	SK	JEK	08/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
PLC		5002192 (L) 5002222 (R)	

APPROACH SLAB SECTION - RIGHT BRIDGE
BRIDGE NO. MAH-80-0076 L/R
I.R. 80 OVER LIPKEY ROAD

MAH-80-0.97
PID 6080

20 / 22

935
1100

REINFORCING STEEL LIST

	MARK	LEFT BRIDGE	RIGHT BRIDGE	LENGTH	TYPE	A	B	C	D	R	INCR.	WEIGHT LEFT	WEIGHT RIGHT
					DECK								
*	S401	288		32'-5"	STR							6236	
	S402	216		3'-6"	1	1'-3"	1'-2"	1'-3"				505	
	S410		144	42'-6"	STR								4088
	S411		144	41'-9"	STR								4016
	S412		216	3'-6"	1	1'-3"	1'-2"	1'-3"					505
*	S601	236		32'-5"	STR							11491	
	S610		118	43'-2"	STR								7651
	S611		118	42'-5"	STR								7518
	S901	192		56'-10"	STR							37101	
	S902	60		34'-4"	STR							7004	
	S903	64		17'-7"	STR							3826	
	S904	136		42'-7"	7	41'-4"						19691	
	S905	136		44'-4"	STR							20500	
	S906	48		42'-9"	7	41'-6"						6977	
	S907	48		29'-6"	7	28'-3"						4814	
	S908	48		39''-0"	STR							6365	
	S909	48		33'-0"	STR							5386	
	S915	30		41'-6"	STR							4233	
	S916	32		19'-4"	STR							2103	
	S917	8		42'-8"	STR							1161	
	S920		234	56'-10"	STR								45217
	S921		74	34'-4"	STR								8638
	S922		76	17'-7"	STR								4544
	S923		160	42'-7"	7	41'-4"							23165
	S924		160	44'-4"	STR								24117
	S925		64	42'-11"	7	41'-8"							9339
	S926		64	29'-6"	7	28'-3"							6419
	S927		64	39'-0"	STR								8486
	S928		64	33'-0"	STR								7181
	S935		37	41'-8"	STR								5242
	S936		38	19'-4"	STR								2498
	S937		8	42'-8"	STR								1161
*	S1101	24		32'-5"	STR							4134	
	S1102		24	48'-0"	STR								6121
					PARAPET								
	S501	232		7'-5"	2							1795	
	S502	16		33'-8"	STR							562	
	S503	32		33'-8"	STR							1124	
	S510		232	7'-5"	2								1795
	S511		16	33'-8"	STR								562
	S512		32	33'-8"	STR								1124
	S602	232		4'-3"	3							1481	
	S603	10		33'-8"	STR							506	
	S604	232		3'-2"	4	1'-1"	2'-3"					1103	
	S612		232	4'-3"	3								1481
	S613		10	33'-8"	STR								506
	S614		232	3'-2"	4	1'-1"	2'-3"						1103
	S515	32	32	10'-0"	STR							334	334
	S516	12	12	5'-6"	12							69	69
	S517	20	20	5'-6"	STR							115	115
	S615	120	120	4'-9"	4	1'-1"	3'-10"					1051	1051
											TOTAL	149666	184043

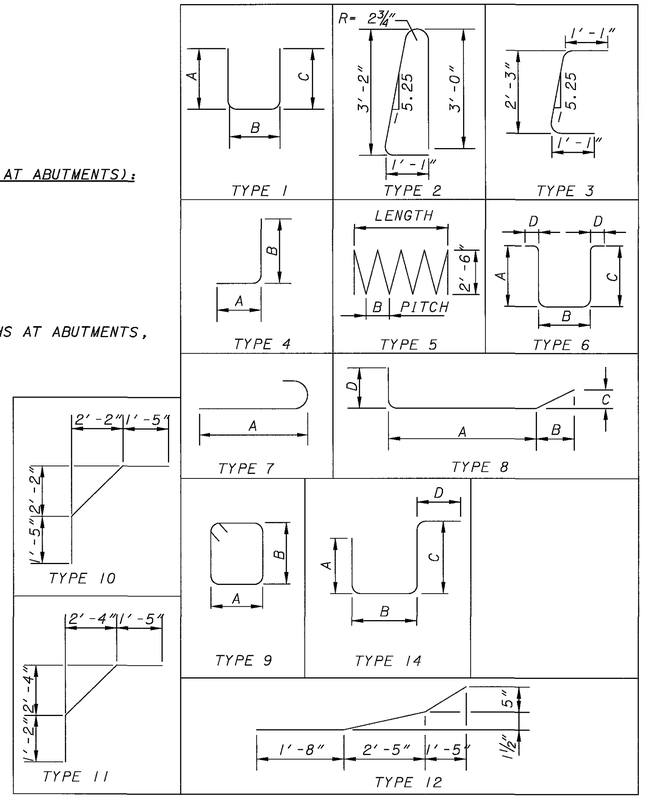
* WITH MECHANICAL CONNECTOR (SEE NOTE 7)

MINIMUM LAP LENGTHS
(FOR ALL REBAR EXCEPT AT ABUTMENTS):

#4 BARS L = 2'-0"
#5 BARS L = 2'-6"
#6 BARS L = 3'-1"
#7 BARS L = 5'-6"
#8 BARS L = 5'-10"
#9 BARS L = 9'-2"
#10 BARS L = 11'-7"
#11 BARS L = 14'-3"

FOR MINIMUM LAP LENGTHS AT ABUTMENTS, SEE SHEET 11/22.

BENDING DIAGRAMS



NOTES:

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, S501 IS A NO. 5 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE NOTED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED.

2. ALL REINFORCING STEEL SHALL BE EPOXY COATED.

3. "STR" IN THE TYPE COLUMN INDICATES STRAIGHT BARS.

4. S.O. DENOTES "SERIES OF".

5. REFER TO C.M.S. SECTION 509.05 FOR STANDARD BEND DIMENSIONS.

6. ALL REINFORCING STEEL CLEARANCES ARE 2" UNLESS OTHERWISE NOTED.

7. MECHANICAL CONNECTORS: AN APPROVED TYPE OF MECHANICAL CONNECTOR FOR REINFORCING BARS SHALL BE PROVIDED. INSTALLATION OF CONNECTORS SHALL CONFORM WITH MANUFACTURER RECOMMENDED PROCEDURES. IF A DOWEL BAR SPLICE TYPE OF CONNECTOR IS FURNISHED, THE MINIMUM DOWEL BAR LENGTH TO BE INCLUDED WITH THE CONNECTOR SHALL BE AS GIVEN BY THE DIMENSION "L" SHOWN BELOW.

#4 BARS L = 2'-9"
#5 BARS L = 3'-5"
#6 BARS L = 4'-1"
#8 BARS L = 7'-3"
#9 BARS L = 9'-2"
#10 BARS L = 11'-7"
#11 BARS L = 14'-3"

CONNECTORS AND DOWEL BARS USED WITH EPOXY COATED BARS SHALL BE EPOXY COATED. COATING FOR BOTH CONNECTORS AND BARS SHALL CONFORM TO THE SAME SPECIFICATIONS. COATINGS THAT HAVE BEEN DAMAGED OR THAT OTHERWISE DO NOT MEET SPECIFICATIONS WITH RESPECT TO COLOR, CONTINUITY AND UNIFORMITY, MAY BE REPAIRED AS DIRECTED BY THE ENGINEER, OR THEY SHALL BE REPLACED WITH MATERIAL WHICH MEETS THE SPECIFICATIONS.

FOR BARS UTILIZING A MECHANICAL CONNECTOR, THE BAR LENGTH FOR PAYMENT IS MEASURED TO THE CONSTRUCTION JOINT. EXTRA BAR LENGTH AND/OR BAR END PREPARATION MAY BE NECESSARY DEPENDING UPON THE TYPE OF MECHANICAL CONNECTOR FURNISHED. BAR END PREPARATION MAY BE REQUIRED ON EXISTING REINFORCING THAT IS TO BE SPLICED TO NEW REINFORCING WITH MECHANICAL CONNECTORS. ALL COSTS FOR EXTRA BAR LENGTH AND BAR END PREPARATION SHALL BE INCLUDED IN THE BID PRICE FOR ITEM 509. CONNECTORS AND DOWEL BAR EXTENSIONS SHALL CONFORM TO AND BE INCLUDED IN THE BID PRICE FOR ITEM 509.

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
SK	SK	JEK	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MTO		5002192 (L) 5002222 (R)	

REINFORCING STEEL LIST
BRIDGE NO. MAH-80-0076 L/R
I.R. 80 OVER LIPKEY ROAD

MAH-80-0.97
PID 6080

21 / 22

936
1100

8/5/05 2:24:03 PM
s:\projects\37700\bridge-lipkey\MH080RLIA.dgn

REINFORCING STEEL LIST

ABUTMENT

	MARK	LEFT BRIDGE REAR	LEFT BRIDGE FORWARD	RIGHT BRIDGE REAR	RIGHT BRIDGE FORWARD	LENGTH	TYPE	A	B	C	D	R	INCR.	WEIGHT LEFT	WEIGHT RIGHT
	A401	18	18	18	18	9'-0"	9	1'-9"	2'-6"					216	216
	A501	4				17'-0"	1	8'-2"	11"	8'-2"				71	
	A502	2 S.O. 6				16'-10" TO 11'-10"	1	8'-1" TO 5'-7"	11"	8'-1" TO 5'-7"			6"	179	
	A503	2				8'-9"	8	2'-10"	5'-4"	2'-8"				18	
	A504	2				5'-4"	STR							11	
	A505	2				7'-8"	STR							16	
*	A506	2				22'-6"	STR							47	
*	A507	2				22'-6"	STR							47	
*	A508	4				30'-11"	STR							129	
	A509	2				8'-4"	8	2'-10"	4'-11"	2'-6"				17	
	A510	2				5'-0"	STR							10	
	A511	2				7'-4"	STR							15	
*	A512	2				4'-3"	STR							9	
*	A513	2				4'-3"	STR							9	
*	A514	4				11'-10"	STR							53	
	A515	42				11'-0"	9	2'-8"	2'-7"					482	
	A516	20				11'-11"	1	5'-3"	1'-8"	5'-3"				249	
	A517	2				11'-11"	STR							25	
	A518	2				11'-11"	STR							25	
	A519	2				11'-11"	STR							25	
	A520		4			17'-0"	1	8'-2"	11"	8'-2"				71	
	A521		2 S.O. 6			16'-8" TO 11'-8"	1	8'-0" TO 5'-6"	11"	8'-0" TO 5'-6"			6"	177	
	A522		2			8'-4"	8	2'-10"	4'-11"	2'-5"				19	
	A523		2			5'-1"	STR							11	
	A524		2			7'-3"	STR							15	
*	A525		2			3'-8"	STR							8	
*	A526		2			3'-8"	STR							8	
*	A527		4			11'-8"	STR							49	
	A528		43			11'-0"	9	2'-8"	2'-7"					493	
	A529		21			11'-11"	1	5'-3"	1'-8"	5'-3"				261	
	A531		2			8'-9"	8	2'-10"	5'-4"	2'-7"				18	
	A532		2			5'-3"	STR							11	
	A533		2			7'-8"	STR							16	
*	A534		2			23'-2"	STR							48	
*	A535		2			23'-2"	STR							48	
*	A536		4			31'-1"	STR							130	
	A537		2			11'-5"	STR							24	
	A538		2			11'-5"	STR							24	
	A539		2			11'-5"	STR							24	
	A540			4		17'-2"	1	8'-3"	11"	8'-3"					72
	A541			2 S.O. 5		16'-8" TO 12'-0"	1	8'-0" TO 5'-8"	11"	8'-0" TO 5'-8"			7"		149
	A542			2		7'-7"	8	2'-10"	4'-2"	2'-3"					16
	A543			2		4'-8"	STR								10
	A544			2		6'-6"	STR								14
	A545			2		8'-6"	8	2'-10"	5'-0"	2'-9"					18
	A546			2		5'-1"	STR								11
	A547			2		7'-4"	STR								15
*	A548			2		23'-2"	STR								48
*	A549			2		23'-2"	STR								48
*	A550			4		30'-8"	STR								128
*	A551			2		6'-7"	STR								14
*	A552			2		6'-7"	STR								14
*	A553			4		13'-8"	STR								57
*	A554			43		11'-0"	9	2'-8"	2'-7"						493
	A555			23		11'-11"	1	5'-3"	1'-8"	5'-3"					286
	A556			2		10'-7"	STR								22
	A557			2		10'-7"	STR								22
	A558			2		10'-7"	STR								22
	A560				4	16'-0"	1	7'-8"	11"	7'-8"					67
	A561				2 S.O. 5	15'-10" TO 11'-10"	1	7'-7" TO 5'-7"	11"	7'-7" TO 5'-7"			6"		144
	A562				4	7'-5"	8	2'-10"	4'-1"	2'-2"					31
	A563				4	4'-7"	STR								19
	A564				4	6'-5"	STR								27

* WITH MECHANICAL CONNECTOR (SEE NOTE 7 ON SHEET 21/22)

NOTES:

1. SEE SHEET 21/22 FOR REINFORCEMENT NOTES.

ABUTMENT

	MARK	LEFT BRIDGE REAR	LEFT BRIDGE FORWARD	RIGHT BRIDGE REAR	RIGHT BRIDGE FORWARD	LENGTH	TYPE	A	B	C	D	R	INCR.	WEIGHT LEFT	WEIGHT RIGHT
*	A565				2	22'-9"	STR								47
*	A566				2	22'-9"	STR								47
*	A567				4	29'-11"	STR								125
*	A568				2	7'-3"	STR								15
*	A569				2	7'-3"	STR								15
*	A570				4	13'-11"	STR								58
	A571				43	11'-0"	9	2'-8"	2'-7"						493
	A572				23	11'-11"	1	5'-3"	1'-8"	5'-3"					286
	A573				2	10'-8"	STR								22
	A574				2	10'-8"	STR								22
	A575				2	10'-8"	STR								22
	A576				2	10'-6"	STR								22
	A577				2	10'-6"	STR								22
	A578				2	10'-6"	STR								22
	A580	2				11'-4"	STR							24	
	A581	2				11'-4"	STR							24	
	A582	2				11'-4"	STR							24	
	A583		2			11'-9"	STR							25	
	A584		2			11'-9"	STR							25	
	A585		2			11'-9"	STR							25	
	A586			2		11'-5"	STR								24
	A587			2		11'-5"	STR								24
	A588			2		11'-5"	STR								24
*	A601	8				31'-9"	STR							382	
*	A606		8			31'-9"	STR							382	
	A610	43	43	54	52	4'-11"	14	1'-6"	0'-11"	1'-6"	1'-6"			635	783
	A611			8		42'-8"	STR								513
	A616				8	41'-0"	STR								493
*	A801	4				30'-11"	STR							330	
*	A802	4				11'-10"	STR							126	
*	A806		4			11'-8"	STR							125	
*	A807		4			31'-1"	STR							332	
*	A811			4		13'-8"	STR								146
*	A812			4		30'-8"	STR								328
*	A817				4	29'-11"	STR								320
*	A818				4	13'-11"	STR								149
	D801	19	19	21	21	5'-10"	10							592	654
	D803	24	24	33	31	5'-10"	11							748	997
*	A1001	4				32'-1"	STR							552	
*	A1002	4				31'-6"	STR							542	
*	A1006		4			31'-4"	STR							539	
*	A1007		4			32'-5"	STR							558	
	A1011			4		46'-4"	STR								797
	A1012			4		46'-4"	STR								797
	A1016				4	44'-8"	STR								769
	A1017				4	44'-8"	STR								769
													TOTAL	9098	10768

APPROACH SLABS

	MARK	LEFT BRIDGE REAR	LEFT BRIDGE FORWARD	RIGHT BRIDGE REAR	RIGHT BRIDGE FORWARD	LENGTH	TYPE	A	B	C	D	R	INCR.	WEIGHT LEFT	WEIGHT RIGHT
	AS501			55	52	24'-6"	STR								2734
	AS502			112		41'-10"	STR								4887
	AS503				112	40'-1"	STR								4682
*	AS602	6				31'-6"	STR							284	
*	AS603	6				31'-6"	STR							284	
	AS604	43				6'-8"	8	1'-5"	3'-4"	1'-8"	1'-8"			431	
*	AS607		6			31'-6"	STR							284	
*	AS608		6			31'-6"	STR							284	
	AS609		43			6'-4"	8	1'-5"	3'-2"	1'-7"	1'-7"			409	
	AS612			6		42'-3"	STR								381
	AS613			6		42'-3"	STR								381
	AS614			54		6'-1"	8	1'-5"	3'-0"	1'-6"	1'-6"				493
	AS617				6	40'-9"	STR								367
	AS618				6	40'-9"	STR								367
	AS619				52	5'-4"	8	1'-5"	2'-6"	1'-3"	1'-3"				417
	AS620	43	43	54	52	2'-10"	4	1'-6"	1'-6"					366	451
	AS1001			138	133	25'-11"	7	24'-6"							30222
													TOTAL	**	**

** WEIGHTS PROVIDED FOR INFORMATION ONLY. APPROACH SLAB REINFORCING STEEL INCLUDED WITH ITEM 526 FOR PAYMENT.

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4181 EXECUTIVE PARKWAY SUITE 350 WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
SK	SK	JEK	8/04

CHECKED MTO
REVISED
STRUCTURE FILE NUMBER 5002192 (L) 5002222 (R)

REINFORCING STEEL LIST
BRIDGE NO. MAH-80-0076 L/R
I.R. 80 OVER LIPKEY ROAD

MAH-80-0.97
PID 6080

21A / 22

936A / 1100

8/6/05 8:37:30 AM
s:\projects\37700\bridge-lipkey\MH80RLIA.dgn

REINFORCING STEEL LIST

PIERS

	MARK	LEFT BRIDGE			RIGHT BRIDGE			LENGTH	TYPE	A	B	C	D	R	INCR.	WEIGHT	
		PIER 1	PIER 2	PIER 3	PIER 1	PIER 2	PIER 3									LEFT	RIGHT
	SP401	1						17'-10"	5		4 1/2"					261	
	SP402		1					19'-3"	5		4 1/2"					280	
	SP403			1				18'-1"	5		4 1/2"					264	
	SP404				1			17'-11"	5		4 1/2"						262
	SP405					1		19'-4"	5		4 1/2"						281
	SP406						1	18'-2"	5		4 1/2"						265
	P501	78	78	78	44	44	44	13'-6"	6	4'-10"	2'-8"	4'-10"	10"			3295	1859
	P502	78	78	78	44	44	44	7'-1"	1	2'-4"	2'-8"	2'-4"				1729	975
	P503	2 S.O. 2	2 S.O. 2	2 S.O. 2				13'-2" TO 12'-10"	6	4'-8" TO 4'-6"	2'-8"	4'-8" TO 4'-6"	10"		2"	163	
	P504	2 S.O. 2	2 S.O. 2	2 S.O. 2				7'-1" TO 6'-9"	1	2'-4" TO 2'-2"	2'-8"	2'-4" TO 2'-2"			2"	87	
	P505	2 S.O. 4	2 S.O. 4	2 S.O. 4				12'-8" TO 11'-2"	6	4'-5" TO 3'-8"	2'-8"	4'-5" TO 3'-8"	10"		3"	298	
	P506	2 S.O. 4	2 S.O. 4	2 S.O. 4				6'-7" TO 5'-1"	1	2'-1" TO 1'-4"	2'-8"	2'-1" TO 1'-4"			3"	146	
	P507				2 S.O. 7	2 S.O. 7	2 S.O. 7	12'-10" TO 12'-0"	6	4'-6" TO 4'-1"	2'-8"	4'-6" TO 4'-1"	10"		3/4"		544
	P508				2 S.O. 7	2 S.O. 7	2 S.O. 7	7'-1" TO 6'-3"	1	2'-4" TO 1'-11"	2'-8"	2'-4" TO 1'-11"			3/4"		292
	P509				2 S.O. 5	2 S.O. 5	2 S.O. 5	12'-0" TO 11'-0"	6	4'-1" TO 3'-7"	2'-8"	4'-1" TO 3'-7"	10"		1 1/2"		360
	P510				2 S.O. 5	2 S.O. 5	2 S.O. 5	6'-3" TO 5'-3"	1	1'-11" TO 1'-5"	2'-8"	1'-11" TO 1'-5"			1 1/2"		180
	P511				46	46	46	3'-5"	4	10"	2'-8"						612
*	P601	2	2	2				31'-4"	STR							282	
*	P602	2	2	2				32'-2"	STR							290	
*	P603	6	6	6				31'-9"	STR							858	
*	P604	6	6	6				31'-10"	STR							861	
*	P605				2	2	2	27'-4"	STR								246
*	P606				2			21'-7"	STR								65
*	P607					2		21'-4"	STR								64
*	P608						2	21'-0"	STR								63
	P609				12	12	12	42'-0"	STR								2271
	P801	20	20	20	20	20	20	7'-0"	STR							1121	1121
*	P1001	7	7	7				31'-5"	8	27'-1"	4'-3"	1'-0"				2839	
*	P1002	7	7	7				32'-3"	8	27'-11"	4'-3"	1'-0"				2914	
*	P1003	8	8	8				32'-5"	4	1'-6"	31'-3"					3348	
*	P1004	8	8	8				33'-3"	4	1'-6"	32'-1"					3434	
*	P1005				6	6	6	27'-5"	8	20'-3"	7'-1"	1'-0"					2124
	P1006				6	6	6	30'-4"	1	1'-6"	28'-0"	1'-6"					2349
*	P1007				6	6	6	28'-5"	4	1'-6"	27'-3"						2201
*	P1008				6			21'-8"	8	14'-6"	7'-1"	1'-0"					559
*	P1009					6		21'-5"	8	14'-3"	7'-1"	1'-0"					553
*	P1010						6	21'-1"	8	13'-11"	7'-1"	1'-0"					544
	P1011				6			26'-2"	1	1'-6"	23'-10"	1'-6"					676
	P1012					6		25'-11"	1	1'-6"	23'-7"	1'-6"					669
	P1013						6	25'-7"	1	1'-6"	23'-3"	1'-6"					
	P1014				6			22'-8"	4	1'-6"	21'-6"						
	P1015					6		22'-5"	4	1'-6"	21'-3"						
	P1016						6	22'-1"	4	1'-6"	20'-11"						
	P1101	12	12	12	12	12	12	14'-4"	4	2'-0"	12'-8"					2742	2742
	P1102	12						21'-6"	7	19'-11"						1371	
	P1103		12					22'-11"	7	21'-4"						1461	
	P1104			12				21'-9"	7	20'-2"						1387	
	P1105				12			21'-7"	7	20'-0"							1376
	P1106					12		23'-0"	7	21'-5"							1466
	P1107						12	21'-10"	7	20'-3"							1392
															TOTAL	29430	26111

* WITH MECHANICAL CONNECTOR (SEE NOTE 7 ON SHEET 21/22)

NOTES:

1. SEE SHEET 21/22 FOR REINFORCEMENT NOTES.

8/16/05 8:36:39 AM
s:\projects\37700\bridge-lipkey\MH080RLIA.dgn

DESIGN AGENCY
GANNETT FLEMING
ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

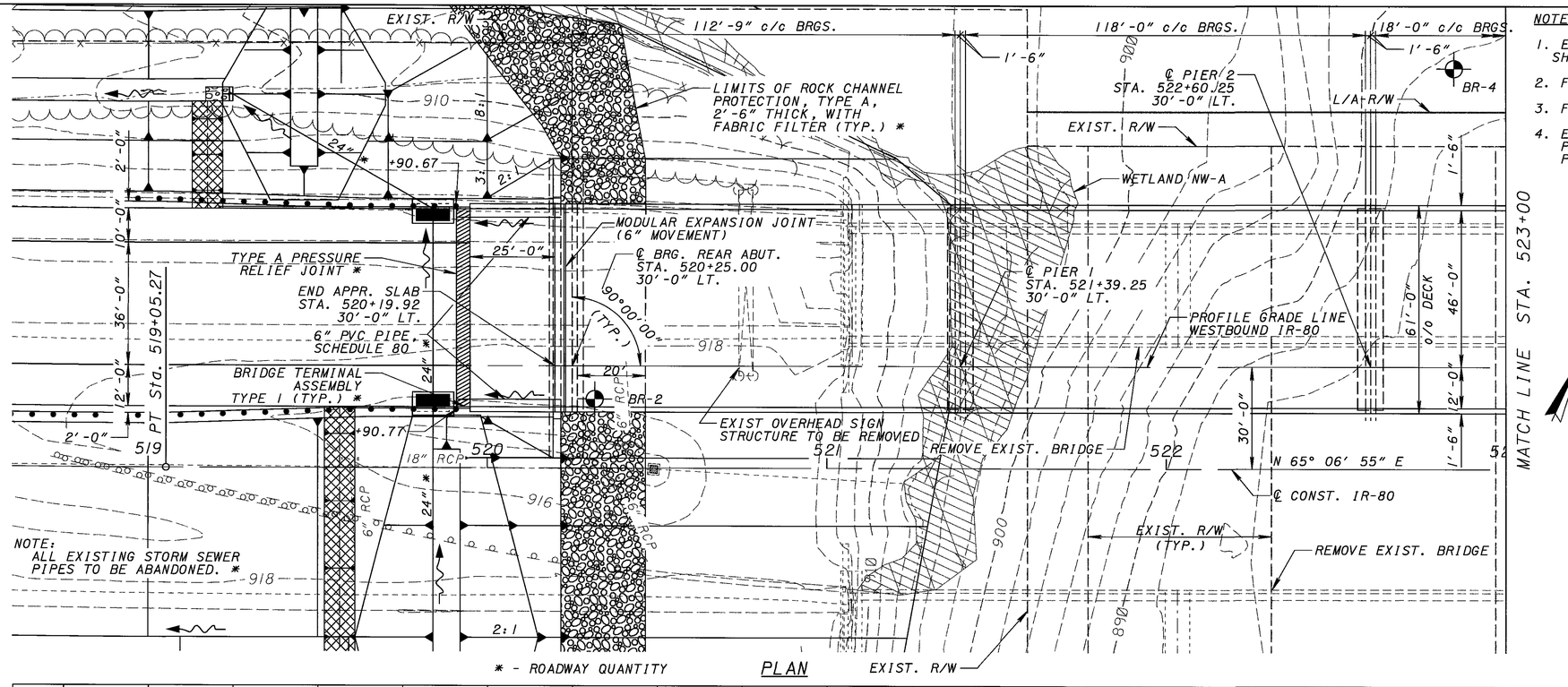
DESIGNED	DRAWN	REVIEWED	DATE
SK	SK	JEK	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MTO		5002192 (L) 5002222 (R)	

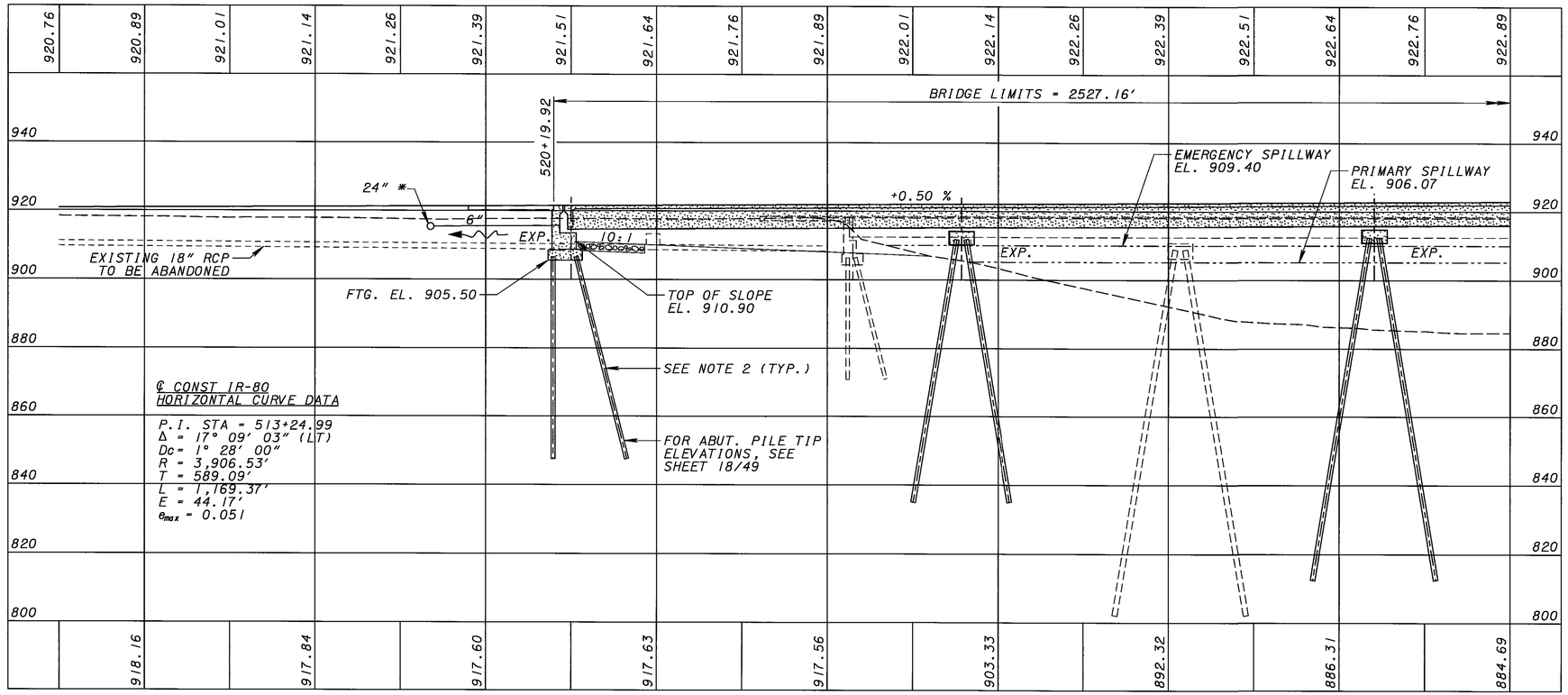
REINFORCING STEEL LIST
BRIDGE NO. MAH-80-0076 L/R
I.R. 80 OVER LIPKEY ROAD

MAH-80-0.97
PID 6080

22 / 22

937
1100





PROFILE ALONG PROFILE GRADE LINE WESTBOUND IR-80

NOTES

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE; ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. FOR PILE DATA, SEE SHEETS 24, 25 & 26 OF 49.
3. FOR SUPERELEVATION DATA, SEE SHEET 13/49.
4. EXISTING STRUCTURE ELEVATIONS DETERMINED FROM EXISTING PLANS ARE BASED ON THE ELEVATION SHOWN ON THE EXISTING PLANS, DATED 1969, MINUS A CORRECTION OF 0.6 FT.

LEGEND

- ⊕ - SOIL BORING LOCATION
- ▨ - IMPACTED JURISDICTIONAL WETLAND

TRAFFIC DATA (IR-80)

CURRENT ADT (2006) = 55,110
DESIGN YEAR ADT (2026) = 75,010
DESIGN YEAR ADTT = 22,503

BENCHMARK DATA

BENCHMARK 13
CONCRETE MONUMENT WITH IRON PIN
STA. 519+05, ℄
EL. 917.83

BENCHMARK 14
CONCRETE MONUMENT WITH IRON PIN
STA. 545+99, ℄
EL. 917.21

RESERVOIR HYDRAULIC DATA

DRAINAGE AREA = 84.7 SQ. MILES
Q_{100} = 6,700 CFS
Q_{PMF} = 70,000 CFS (PROBABLE MAXIMUM FLOOD)

HW_{100} EL. 908.4 HW_{PMF} EL. 918.0
V_{100} = 0.1 FPS V_{PMF} = 0.8 FPS

PROPOSED LEFT STRUCTURE CLEARS THE 100 YEAR RESERVOIR POOL ELEVATION BY 4.9 FEET.

PROPOSED RIGHT STRUCTURE CLEARS THE 100 YEAR RESERVOIR POOL ELEVATION BY 5.6 FEET.

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL GIRDERS (A36) WITH CONCRETE DECK ON STUB ABUTMENTS AND CAPPED-PILE PIERS

SPANS: 96'-0"±, 19 @ 120'-0"±, 96'-0"± c/c BEARINGS

ROADWAY: 30'-0"± t/t SAFETY CURBS

ORIGINAL DESIGN LOADING: CF-2000 (1957)

ALIGNMENT: TANGENT

SKEW: NONE

WEARING SURFACE: 2½"± ASPHALT ON 2"± SDC OVERLAY

APPROACH SLABS: AS-1-54 (25'-0"± LONG)

YEAR CONSTRUCTED: 1969

STRUCTURE FILE NO.: 5002257 (L) & 5002281 (R)

PROPOSED STRUCTURE

TYPE: PRESTRESSED CONCRETE GIRDERS, CONTINUOUS FOR LIVE LOAD, COMPOSITE WITH REINFORCED CONCRETE DECK ON STUB ABUTMENTS AND CAPPED-PILE BENT PIERS

SPANS: 112'-9", 9 @ 118'-0", 2 @ 112'-9", 8 @ 118'-0", 112'-9" c/c BEARINGS

ROADWAY: 58'-0" t/t PARAPETS

LOADING: HS25 & ALTERNATE MILITARY LOADING 60 PSF FUTURE WEARING SURFACE

ALIGNMENT: TANGENT

SKEW: NONE

WEARING SURFACE: 1" MONOLITHIC CONCRETE

APPROACH SLABS: AS-1-81 (25'-0" LONG)

SUPERELEVATION/CROWN: VARIES +0.0212 TO -0.0156

LATITUDE: N 41°06'44" LONGITUDE: W 80°48'53"

DESIGN AGENCY
GANNETT FLEMING
ENGINEERS & ARCHITECTS, P.C.
4151 EASTSIDE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
MTO	MTO	WMG	08/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MES		5002265L & 5002303R	

MAHONING COUNTY
STA. 520+19.92
TO STA. 545+47.08

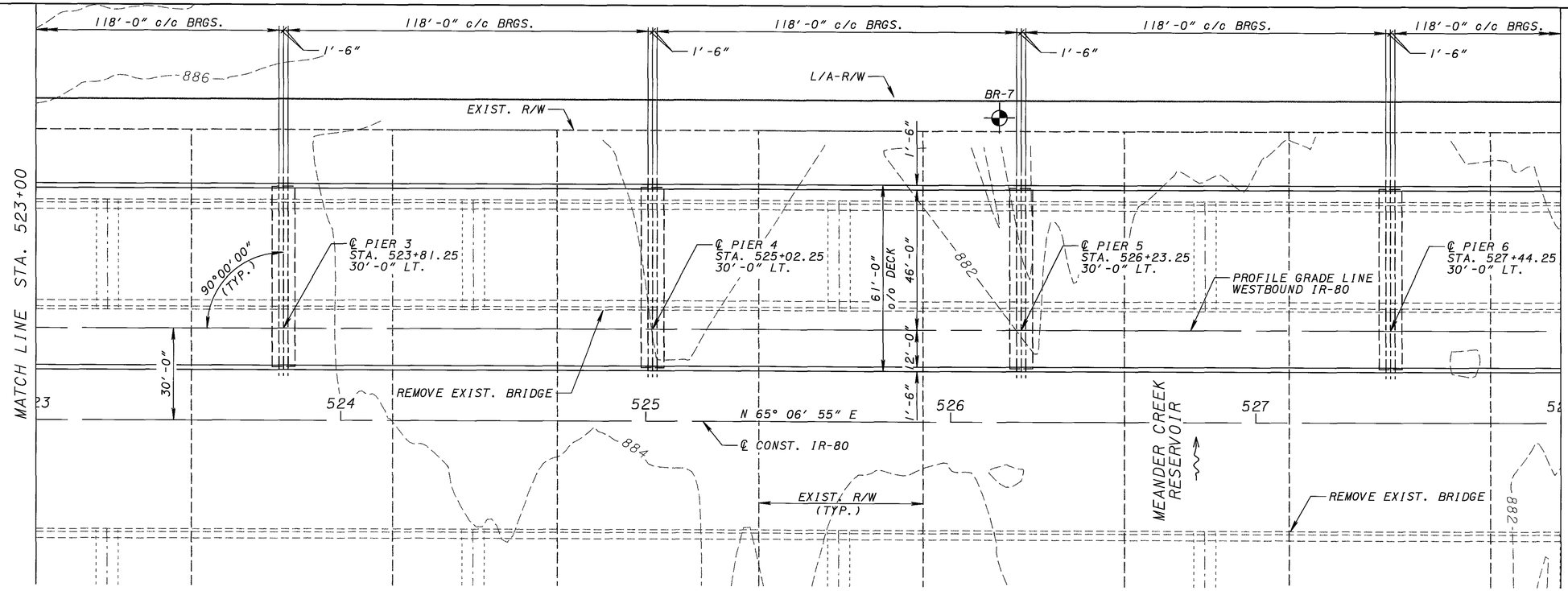
SITE PLAN - LEFT BRIDGE
BRIDGE NO. MAH-80-0.123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080

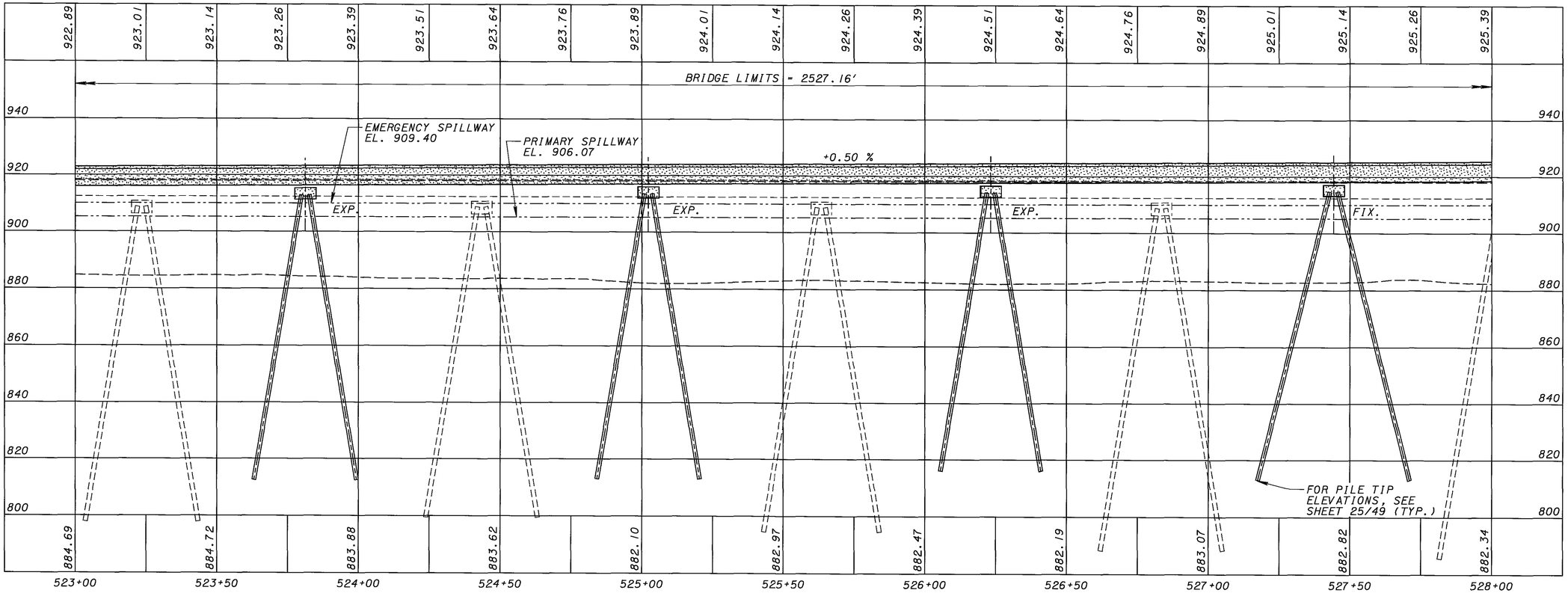
1 / 49

938
1100

8/12/05 9:20:34 AM
s:\projects\37700\bridge reservoir\Final Tracings\MH080SP2A.dgn



PLAN



PROFILE ALONG PROFILE GRADE LINE WESTBOUND IR-80

DESIGN AGENCY
GANNETT FLEMING
ENGINEERS & ARCHITECTS, P.C.
4151 EASTERN AVENUE, SUITE 350
WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
MTO	MTO	WMG	08/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MES		5002265L & 5002303R	

MAHONING COUNTY
STA. 520+19.92
TO STA. 545+47.08

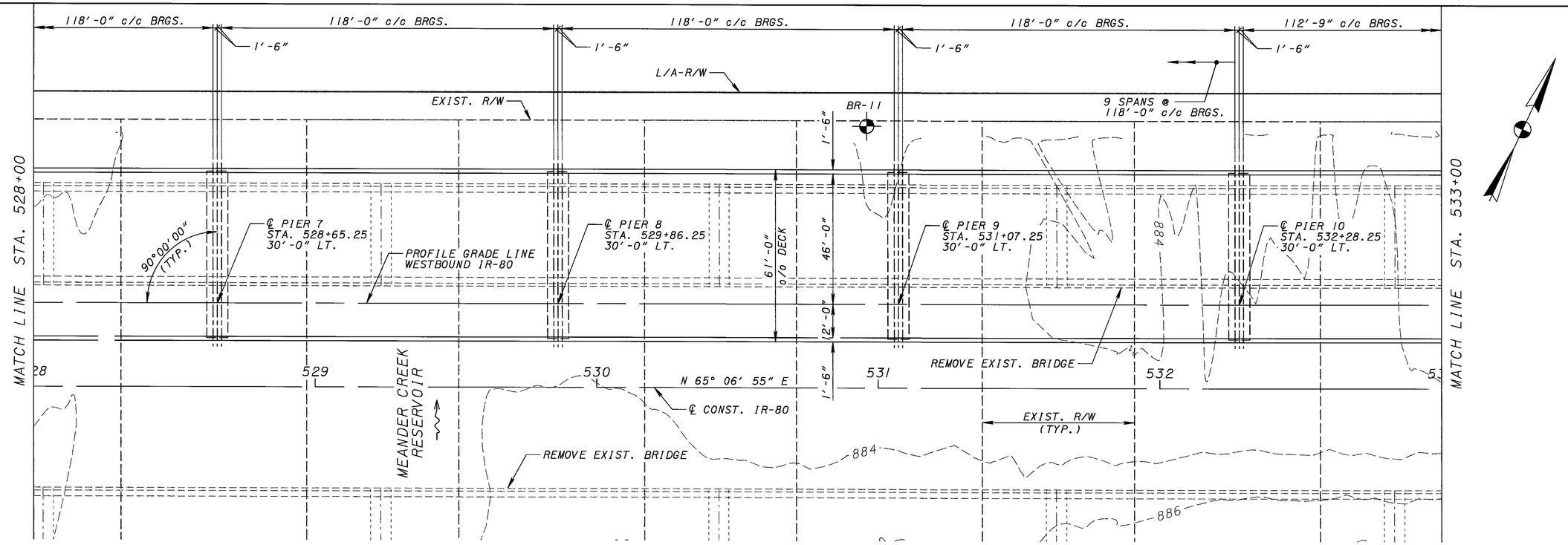
SITE PLAN - LEFT BRIDGE
BRIDGE NO. MAH-80-0.23 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080

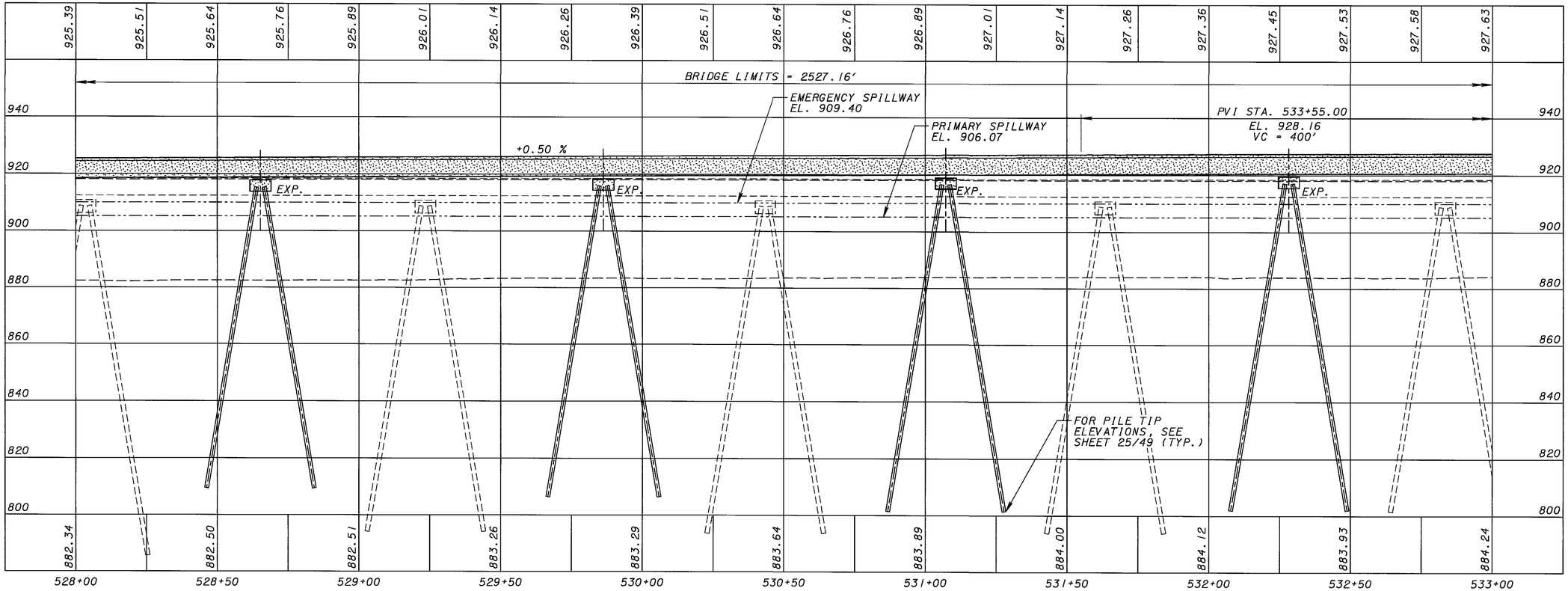
2 / 49

939
1100

8/12/05 9:21:23 AM
s:\projects\37709\bridge\Reservoir\Final Tracings\MH080SP2B.dgn



PLAN



PROFILE ALONG PROFILE GRADE LINE WESTBOUND IR-80

8/12/05 9:22:08 AM
s:\projects\37700\bridge-Reservoir\Final Tracings\MH080SP2c.dgn

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350 WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
MTO	MTO	WMG	08/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MES		5002265L & 5002303R	

MAHONING COUNTY
STA. 520+19.92
TO STA. 545+47.08

SITE PLAN - LEFT BRIDGE
BRIDGE NO. MAH-80-0123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080

3 / 49

940
1100

112′-9″ c/c BRGS. | 112′-9″ c/c BRGS. | 118′-0″ c/c BRGS. | 118′-0″ c/c BRGS. | 118′-0″ c/c BRGS.

1′-6″ | 1′-6″ | 1′-6″ | 1′-6″

℄ MODULAR EXPANSION JOINT (9″ MOVEMENT)

8 SPANS @ 118′-0″ c/c BRGS.

L/A-R/W

EXIST. R/W

BR-15

MATCH LINE STA. 533+00

MATCH LINE STA. 538+00

884

890

896

90°00′00″ (TYP.)

℄ PIER 11 STA. 533+44.00 30′-0″ LT.

℄ PIER 12 STA. 534+59.75 30′-0″ LT.

℄ PIER 13 STA. 535+80.75 30′-0″ LT.

℄ PIER 14 STA. 537+01.75 30′-0″ LT.

PROFILE GRADE LINE WESTBOUND IR-80

61′-0″ o/o DECK

46′-0″

12′-0″

1′-6″

30′-0″

MEANDER CREEK RESERVOIR

533 | 534 | 535 | 536 | 537 | 538

N 65° 06′ 55″ E

℄ CONST. IR-80

REMOVE EXIST. BRIDGE

EXIST. R/W (TYP.)

REMOVE EXIST. BRIDGE

1319′-0″ UNIT 1 | 1198′-0″ UNIT 2

PLAN

927.63 | 927.65 | 927.66 | 927.66 | 927.64 | 927.60 | 927.55 | 927.48 | 927.40 | 927.30 | 927.19 | 927.06 | 926.94 | 926.81 | 926.69 | 926.56 | 926.44 | 926.31 | 926.19 | 926.06 | 925.94

BRIDGE LIMITS - 2527.16′

940 | 920 | 900 | 880 | 860 | 840 | 820 | 800

PVI STA. 533+55.00
EL. 928.16
VC = 400′

+0.50% | -0.50%

EMERGENCY SPILLWAY EL. 909.40

PRIMARY SPILLWAY EL. 906.07

-0.50%

EXP. | EXP. | EXP. | EXP. | EXP.

FOR PILE TIP ELEVATIONS, SEE SHEET 25/49 (TYP.)

884.24 | 883.64 | 883.54 | 883.60 | 888.57 | 893.73 | 896.42 | 894.18 | 890.98 | 895.47 | 888.67

533+00 | 533+50 | 534+00 | 534+50 | 535+00 | 535+50 | 536+00 | 536+50 | 537+00 | 537+50 | 538+00

PROFILE ALONG PROFILE GRADE LINE WESTBOUND IR-80

8/12/05 9:22:37 AM
s:\projects\37700\bridge-Reservoir\Final Tracings\MH080SP20.dgn

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350 WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
MTO	MTO	WMG	08/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MES		5002265L & 5002303R	

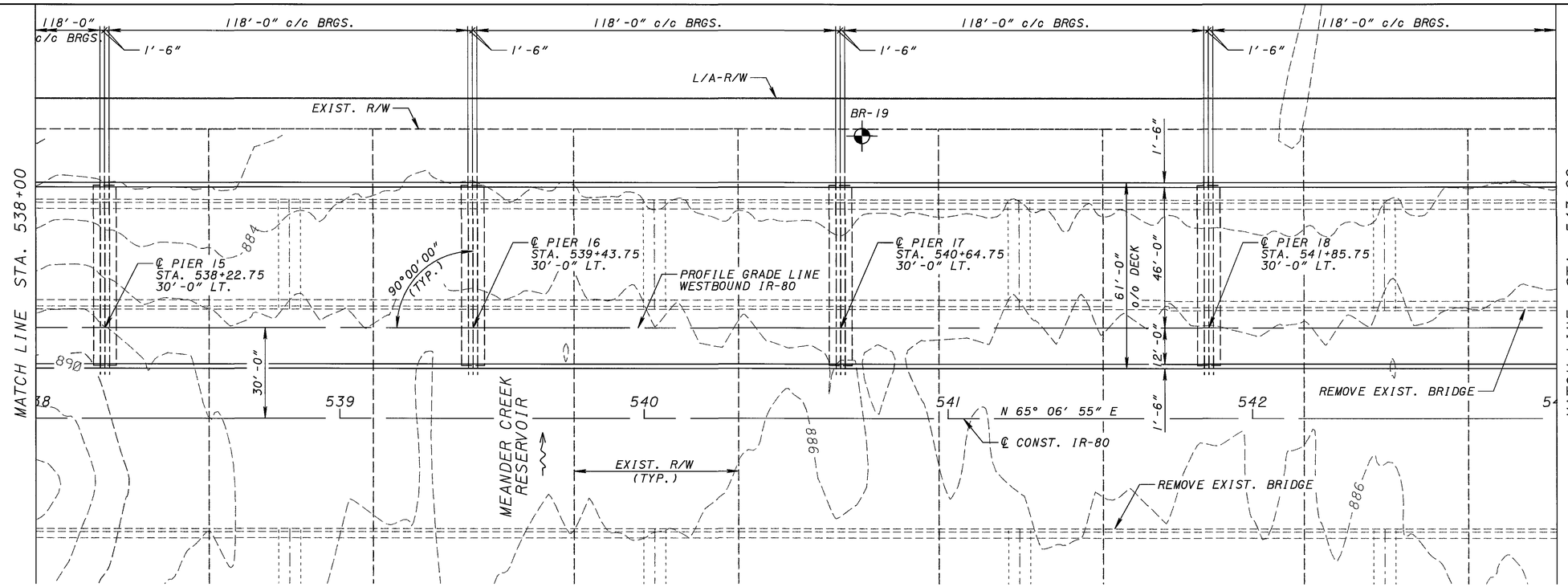
MAHONING COUNTY
STA. 520+19.92
TO STA. 545+47.08

SITE PLAN - LEFT BRIDGE
BRIDGE NO. MAH-80-0123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

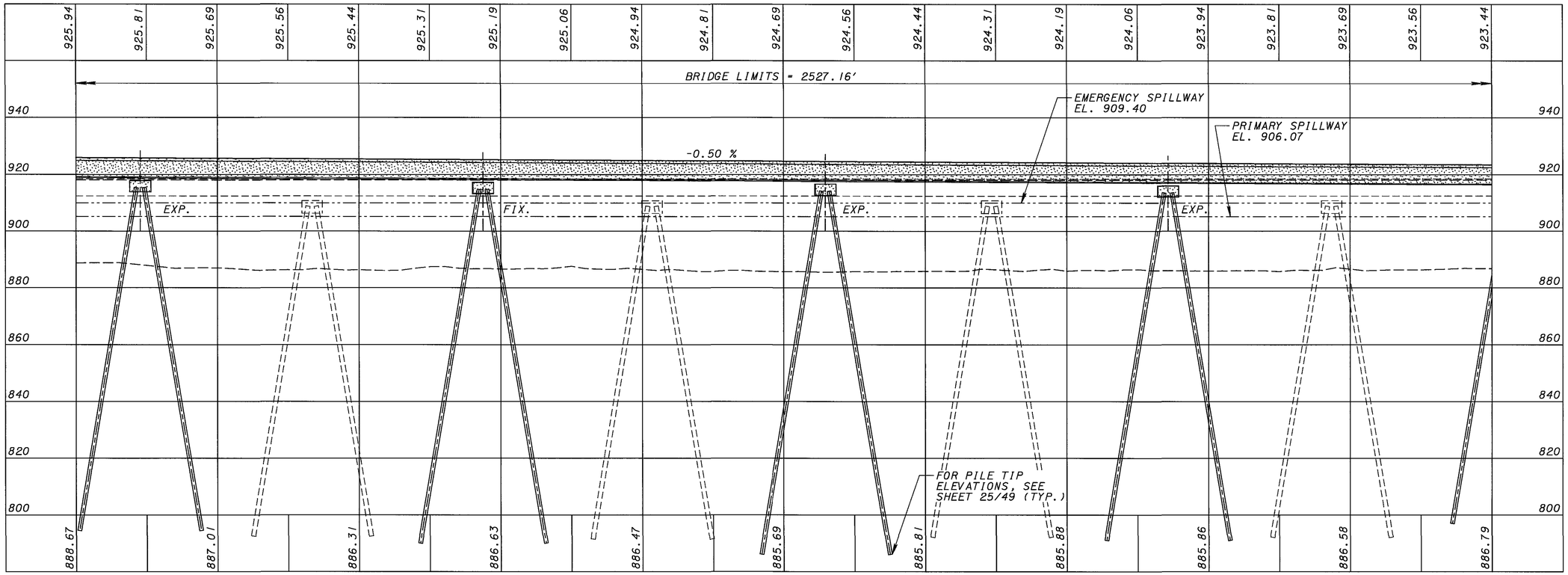
MAH-80-0.97
PID 6080

4 / 49

941
1100



PLAN



PROFILE ALONG PROFILE GRADE LINE WESTBOUND IR-80

8/12/05 9:23:15 AM
s:\projects\37700\bridge-Reservoir\Final Tracings\MH080SP2E.dgn

DESIGN AGENCY
GANNETT FLEMING
ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

DRAWN	REVIEWED	DATE
MTO	WMG	08/04
DESIGNED	CHECKED	STRUCTURE FILE NUMBER
MTO	MES	5002265L & 5002303R
	REVISED	

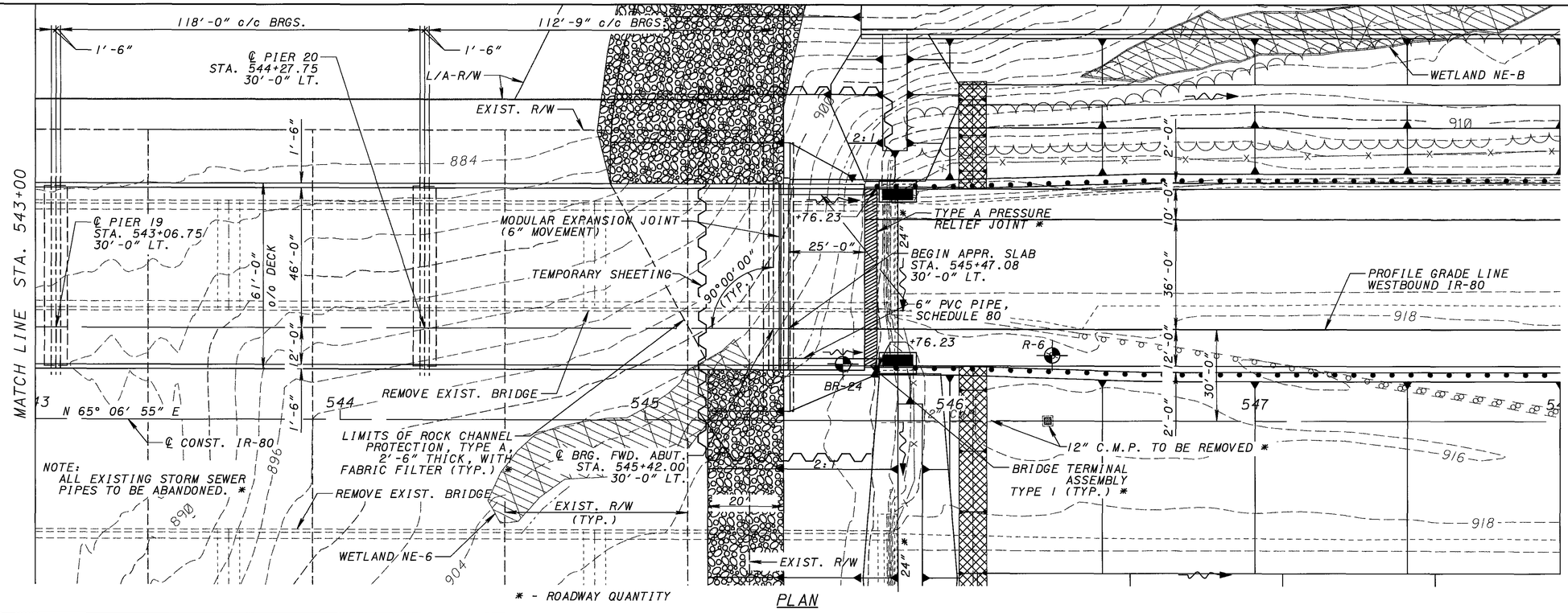
MAHONING COUNTY
STA. 520+19.92
TO STA. 545+47.08

SITE PLAN - LEFT BRIDGE
BRIDGE NO. MAH-80-0123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080

5 / 49

942
1100



DESIGN AGENCY
GANNETT FLEMING
ENGINEERS & ARCHITECTS, P.C.
4151 EASTERN AVENUE SUITE 350
WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
MTO	MTO	WMG	08/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MES		5002265L & 5002303R	

MAHONING COUNTY
STA. 520+19.92
TO STA. 545+47.08

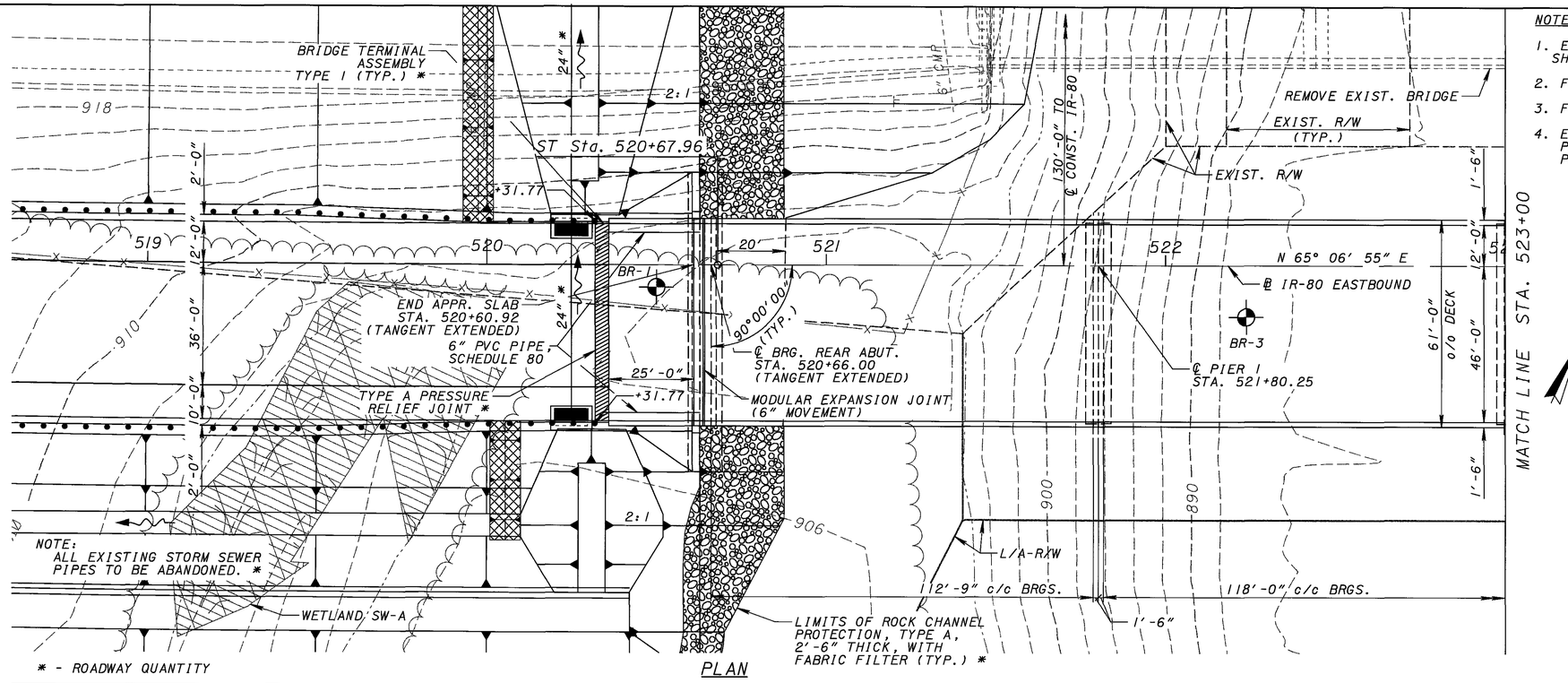
SITE PLAN - LEFT BRIDGE
BRIDGE NO. MAH-80-0123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080

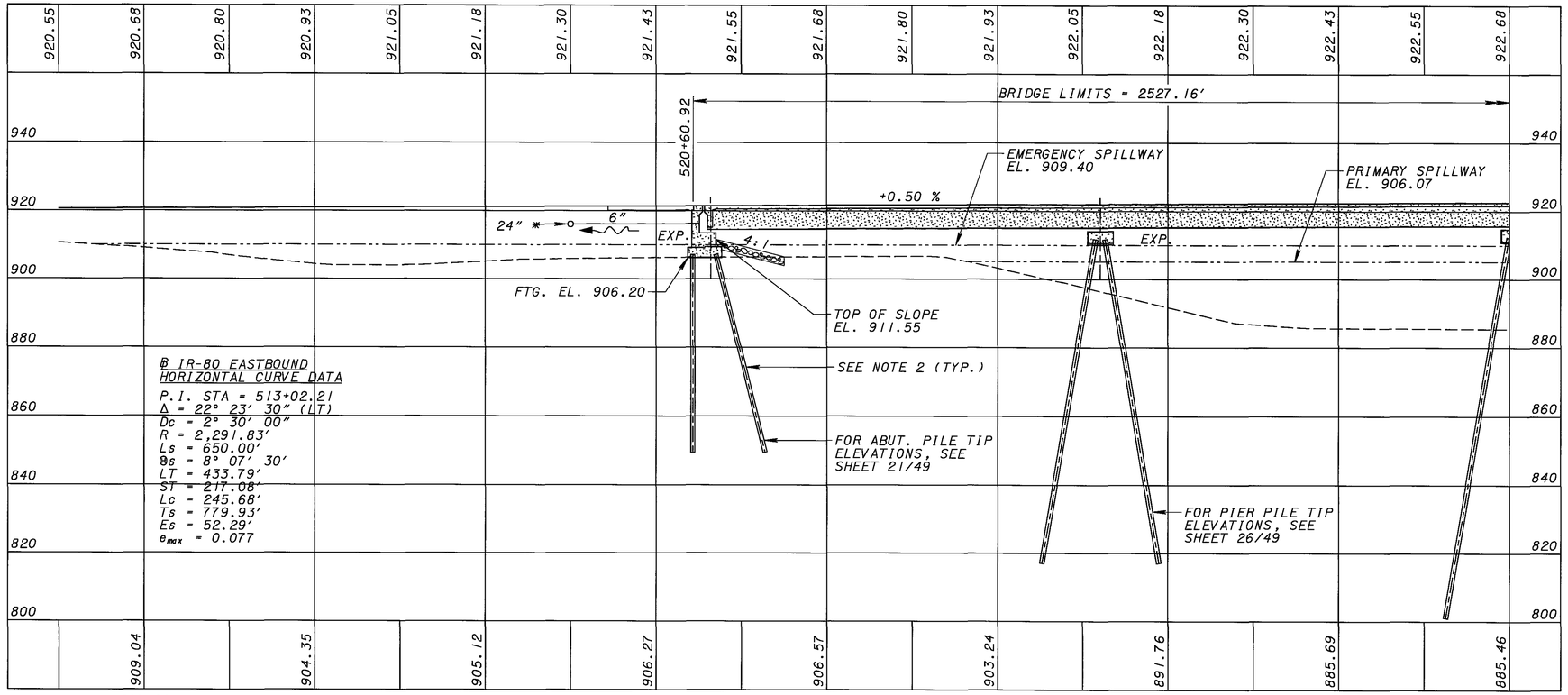
6 / 49

943
1100

8/12/05
9:23:44 AM
s:\projects\37700\bridge-Reservoir-1\FinalTracings\MH080SP2F.dgn



PLAN



PROFILE ALONG BASELINE EASTBOUND IR-80

NOTES

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE; ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. FOR PILE DATA SEE SHEETS 24, 25, & 26 OF 49.
3. FOR SUPERELEVATION DATA, SEE SHEET 13/49.
4. EXISTING STRUCTURE ELEVATIONS DETERMINED FROM EXISTING PLANS ARE BASED ON THE ELEVATION SHOWN ON THE EXISTING PLANS, DATED 1969, MINUS A CORRECTION OF 0.6 FT.

LEGEND

- ⊕ = SOIL BORING LOCATION
- = IMPACTED JURISDICTIONAL WETLAND

TRAFFIC DATA (IR-80)

CURRENT ADT (2006) = 55,110
DESIGN YEAR ADT (2026) = 75,010
DESIGN YEAR ADTT = 22,503

BENCHMARK DATA

BENCHMARK 13
CONCRETE MONUMENT WITH IRON PIN
STA. 519+05, ℄
EL. 917.83

BENCHMARK 14
CONCRETE MONUMENT WITH IRON PIN
STA. 545+99, ℄
EL. 917.21

RESERVOIR HYDRAULIC DATA

DRAINAGE AREA = 84.7 SQ. MILES
Q_{100} = 6,700 CFS
Q_{PMF} = 70,000 CFS (PROBABLE MAXIMUM FLOOD)

HW_{100} EL. 908.4 HW_{PMF} EL. 918.0
V_{100} = 0.1 FPS V_{PMF} = 0.8 FPS

PROPOSED LEFT STRUCTURE CLEARS THE 100 YEAR RESERVOIR POOL ELEVATION BY 4.9 FEET.

PROPOSED RIGHT STRUCTURE CLEARS THE 100 YEAR RESERVOIR POOL ELEVATION BY 5.6 FEET.

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL GIRDERS (A36) WITH CONCRETE DECK ON STUB ABUTMENTS AND CAPPED-PILE PIERS

SPANS: 96'-0"±, 19 @ 120'-0"±, 96'-0"± c/c BEARINGS

ROADWAY: 30'-0"± t/t SAFETY CURBS

ORIGINAL DESIGN LOADING: CF-2000 (1957)

ALIGNMENT: TANGENT

SKEW: NONE

WEARING SURFACE: 2½"± ASPHALT ON 2"± SDC OVERLAY

APPROACH SLABS: AS-1-54 (25'-0"± LONG)

YEAR CONSTRUCTED: 1969

STRUCTURE FILE NO.: 5002257 (L) & 5002281 (R)

PROPOSED STRUCTURE

TYPE: PRESTRESSED CONCRETE GIRDERS, CONTINUOUS FOR LIVE LOAD, COMPOSITE WITH REINFORCED CONCRETE DECK ON STUB ABUTMENTS AND CAPPED-PILE BENT PIERS

SPANS: 112'-9", 9 @ 118'-0", 2 @ 112'-9", 8 @ 118'-0", 112'-9" c/c BEARINGS

ROADWAY: 58'-0" t/t PARAPETS

LOADING: HS25 & ALTERNATE MILITARY LOADING 60 PSF FUTURE WEARING SURFACE

ALIGNMENT: TANGENT

SKEW: NONE

WEARING SURFACE: 1" MONOLITHIC CONCRETE

APPROACH SLABS: AS-1-81 (25'-0" LONG)

SUPERELEVATION/CROWN: VARIES +0.0005 TO -0.0156

LATITUDE: N 41°06'44" LONGITUDE: W 80°48'53"

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4181 EXECUTIVE PARKWAY, SUITE 350 WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
MTO	MTO	WMG	08/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MES		5002265L & 5002303R	

MAHONING COUNTY
STA. 520+60.92
TO STA. 545+88.08

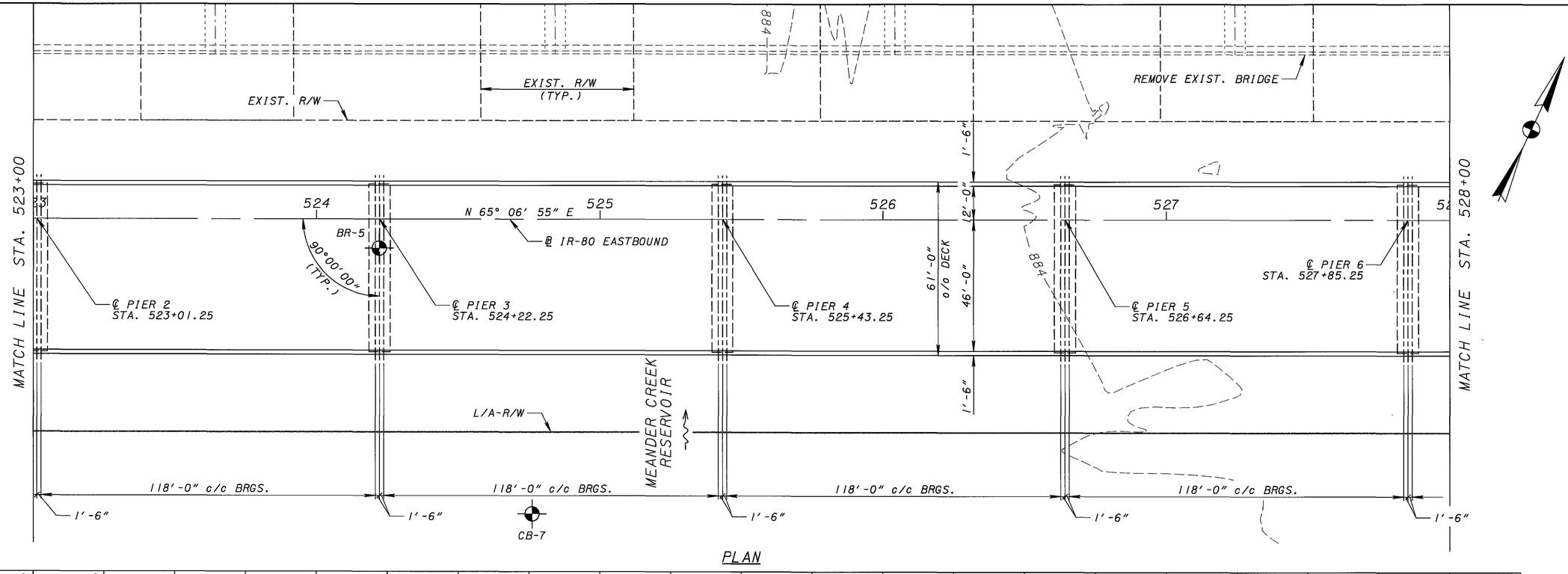
SITE PLAN - RIGHT BRIDGE
BRIDGE NO. MAH-80-0123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080

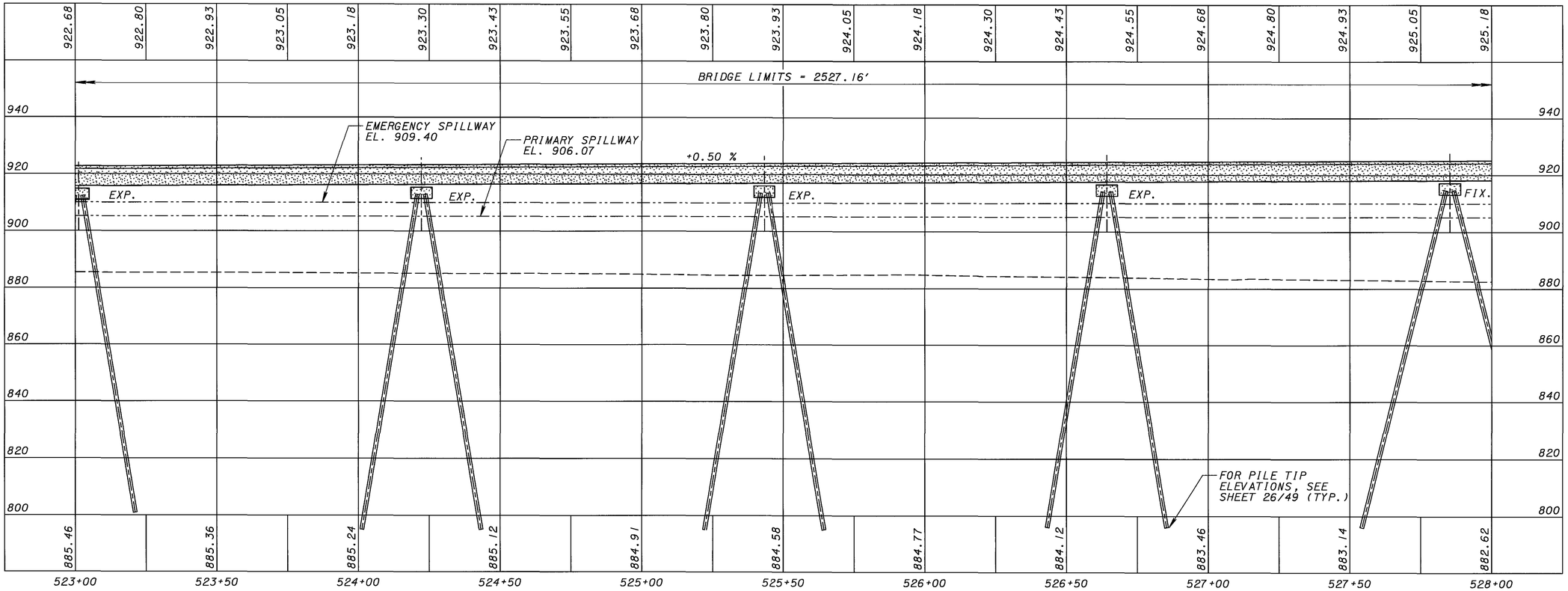
7 / 49

944
1100

8/12/05
9:24:17 AM
s:\projects\37700\bridge Reservoir\Final Tracings\MH080SP26.dgn



PLAN



PROFILE ALONG BASELINE EASTBOUND IR-80

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350 WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
MTO	MTO	WMG	08/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MES		5002265L & 5002303R	

MAHONING COUNTY
STA. 520+60.92
TO STA. 545+88.08

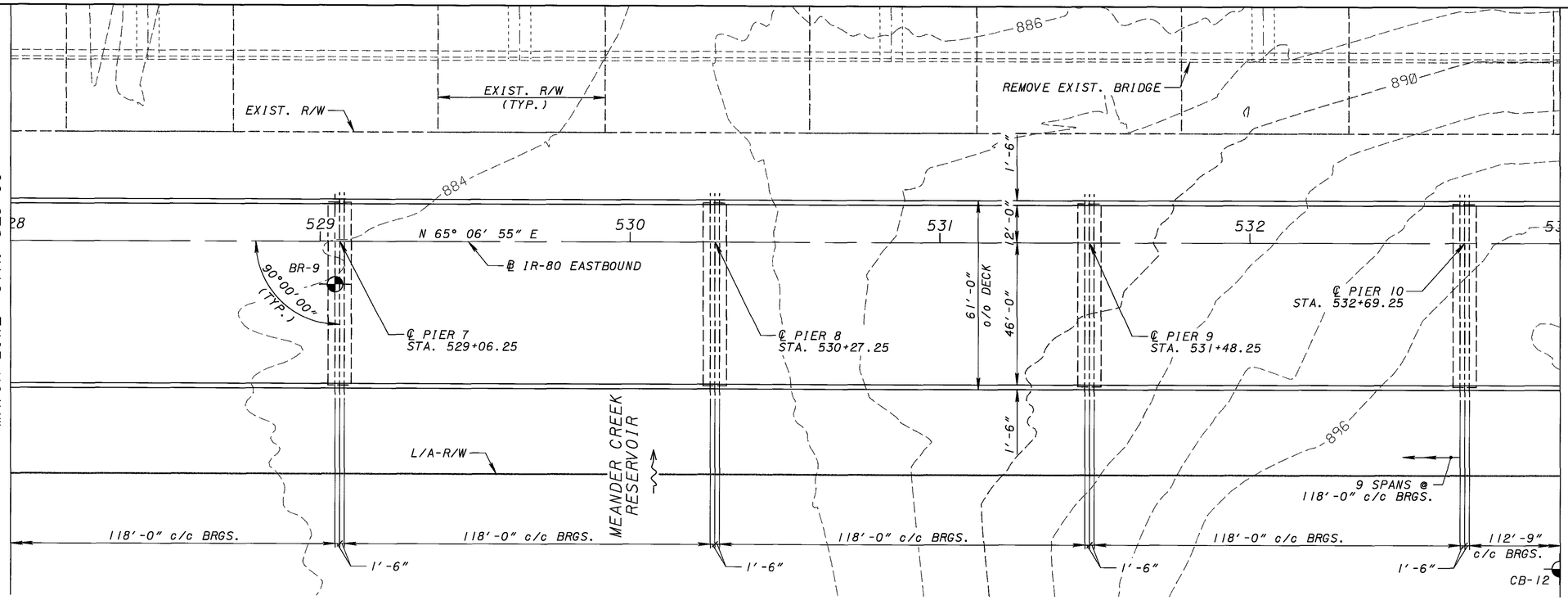
SITE PLAN - RIGHT BRIDGE
BRIDGE NO. MAH-80-0123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080

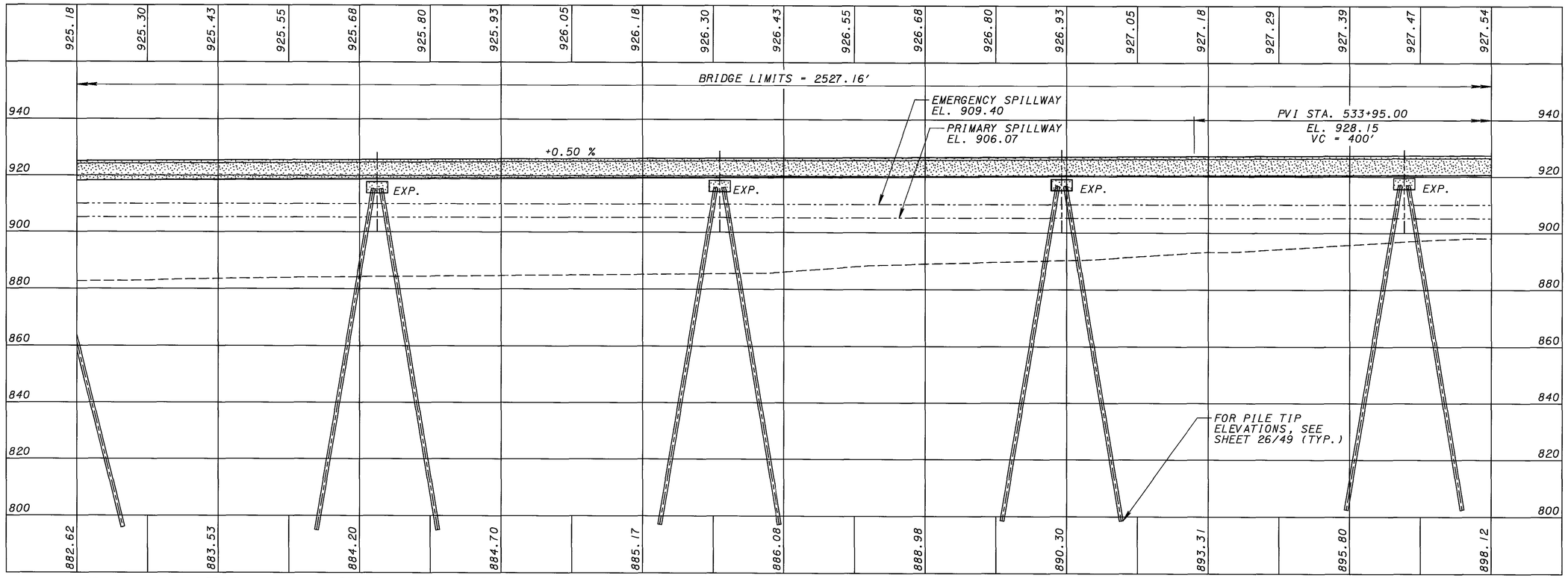
8 / 49

945
1100

8/12/05 9:24:44 AM
s:\projects\37700\bridge Reservoir\Final Tracings\MH080SP2H.dgn



PLAN



PROFILE ALONG BASELINE EASTBOUND IR-80

8/12/05 9:25:13 AM
s:\projects\37700\bridge Reservoir\Final Tracings\MH080SP21.dgn

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350 WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
MTO	MTO	WMG	08/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MES		5002265L & 5002303R	

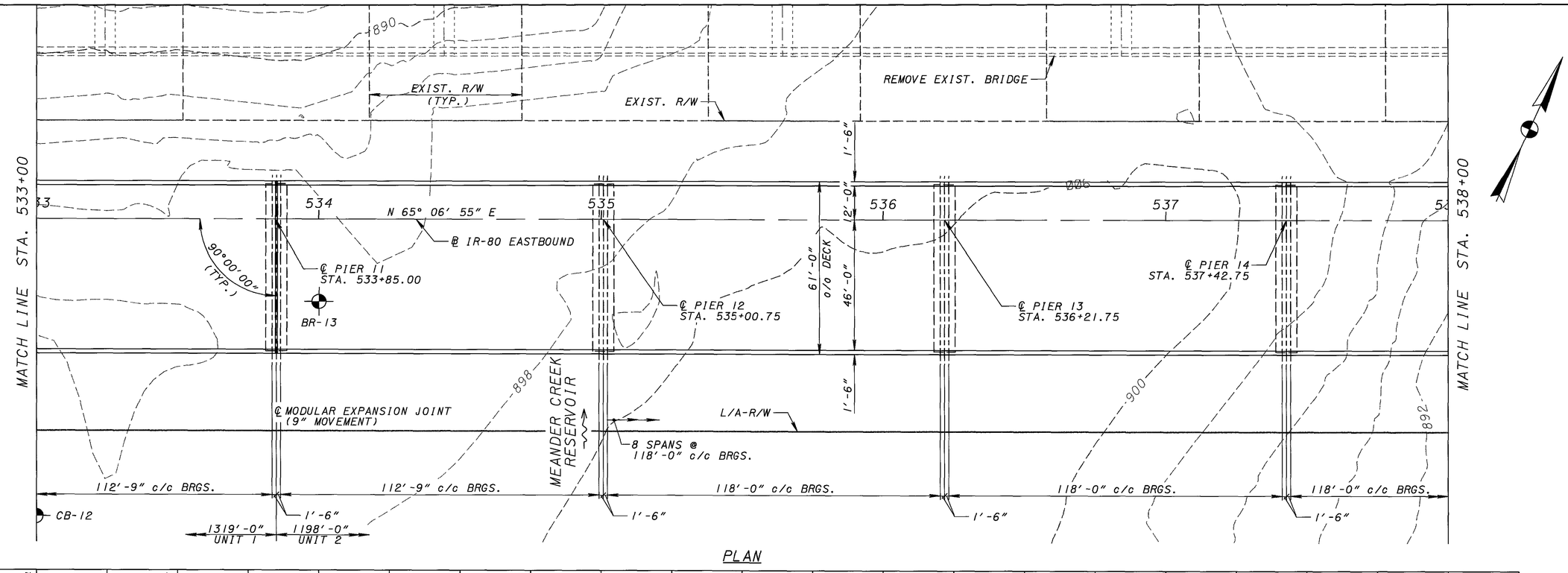
MAHONING COUNTY
STA. 520+60.92
TO STA. 545+88.08

SITE PLAN - RIGHT BRIDGE
BRIDGE NO. MAH-80-0123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

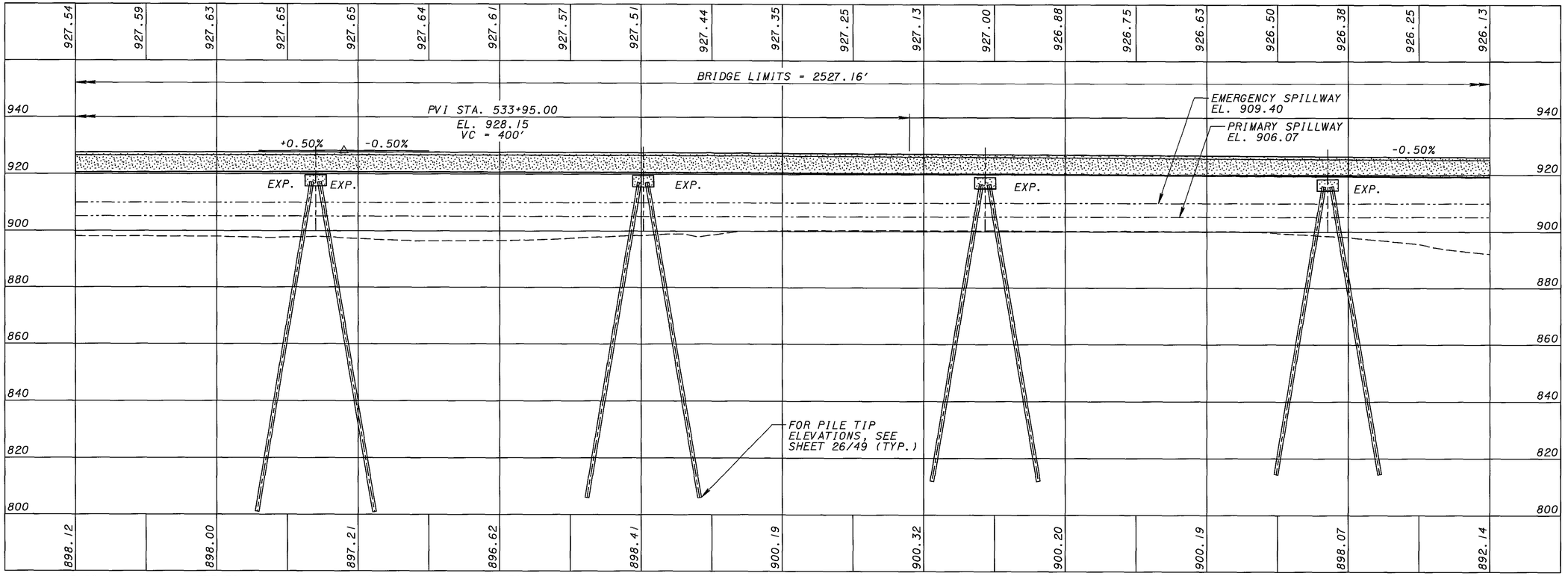
MAH-80-0.97
PID 6080

9 / 49

946
1100



PLAN



PROFILE ALONG BASELINE EASTBOUND IR-80

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4181 EASTON-NAZARETH HIGHWAY, SUITE 350
WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVISED	DATE
MTO	MTO	WMG	08/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MES		5002265L & 5002303R	

MAHONING COUNTY
STA. 520+60.92
TO STA. 545+88.08

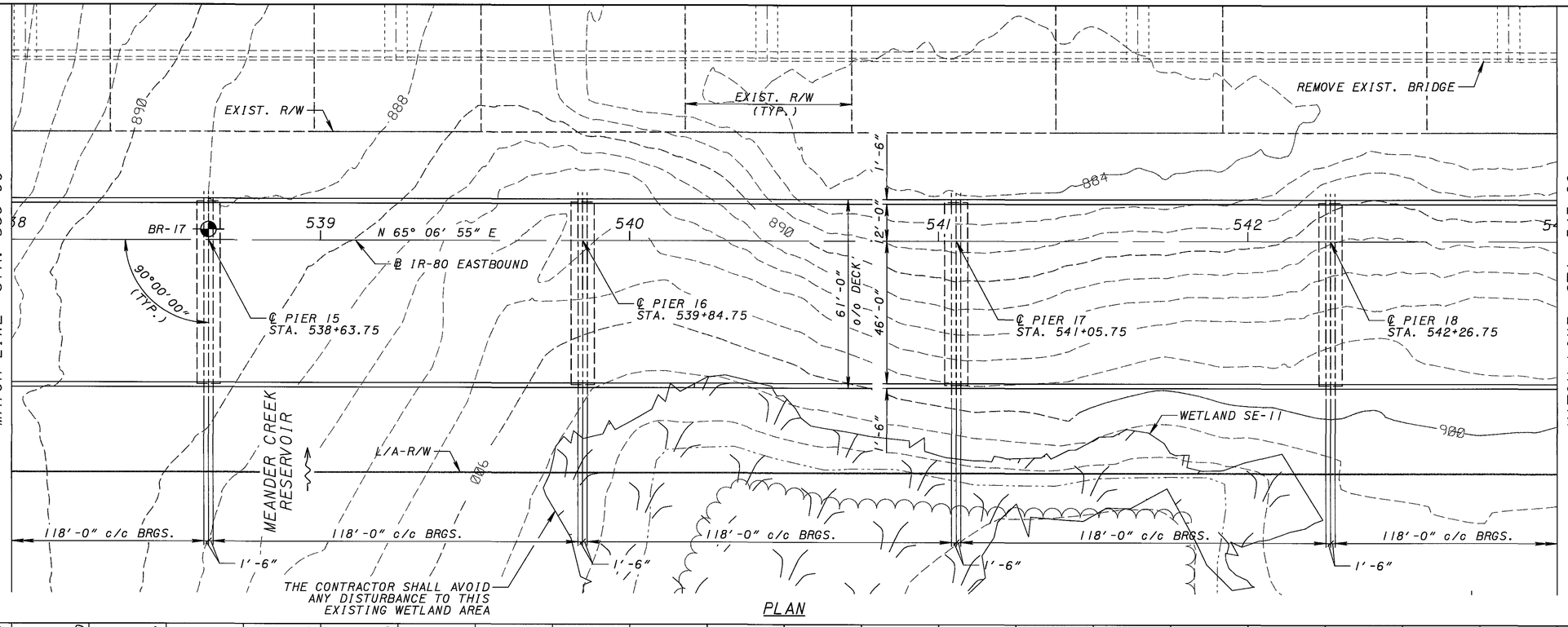
SITE PLAN - RIGHT BRIDGE
BRIDGE NO. MAH-80-0123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080

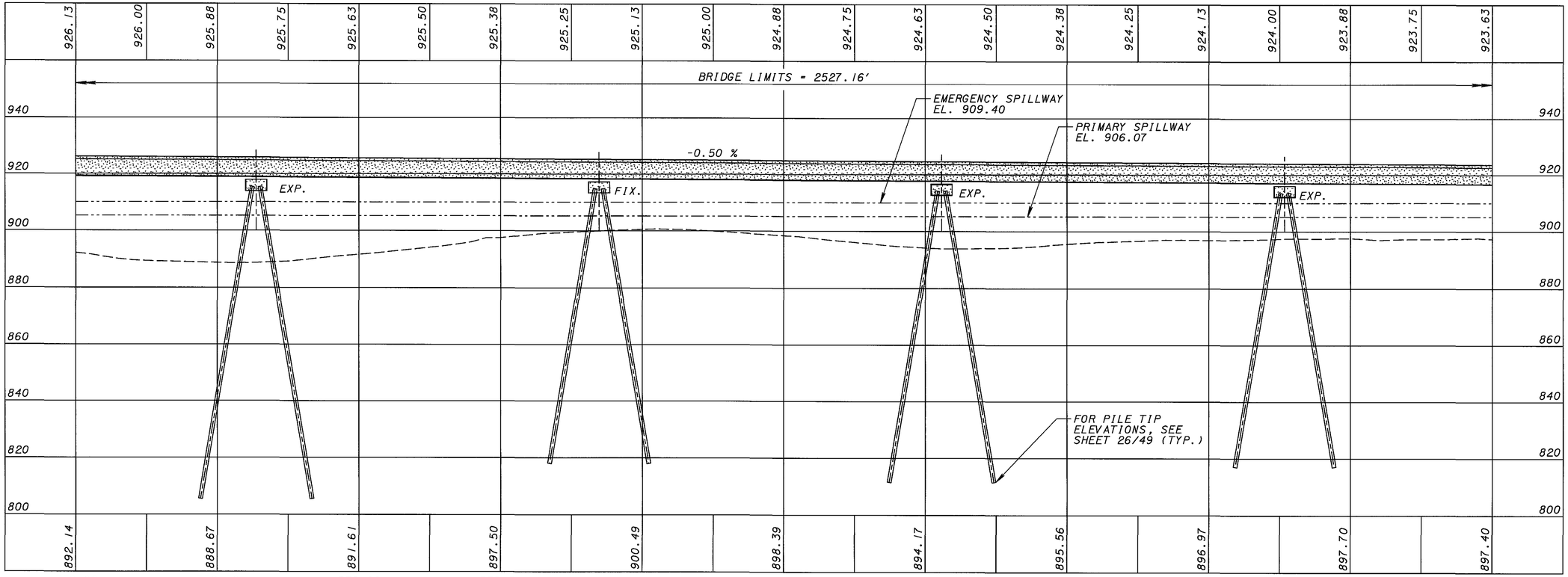
10 / 49

947
1100

8/12/05 9:25:39 AM
s:\projects\37700\bridge-Reservoir\Final Tracings\MH080SP2J.dgn



PLAN



PROFILE ALONG BASELINE EASTBOUND IR-80

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350 WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
MTO	MTO	WMG	08/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MES		5002265L & 5002303R	

MAHONING COUNTY
STA. 520+60.92
TO STA. 545+88.08

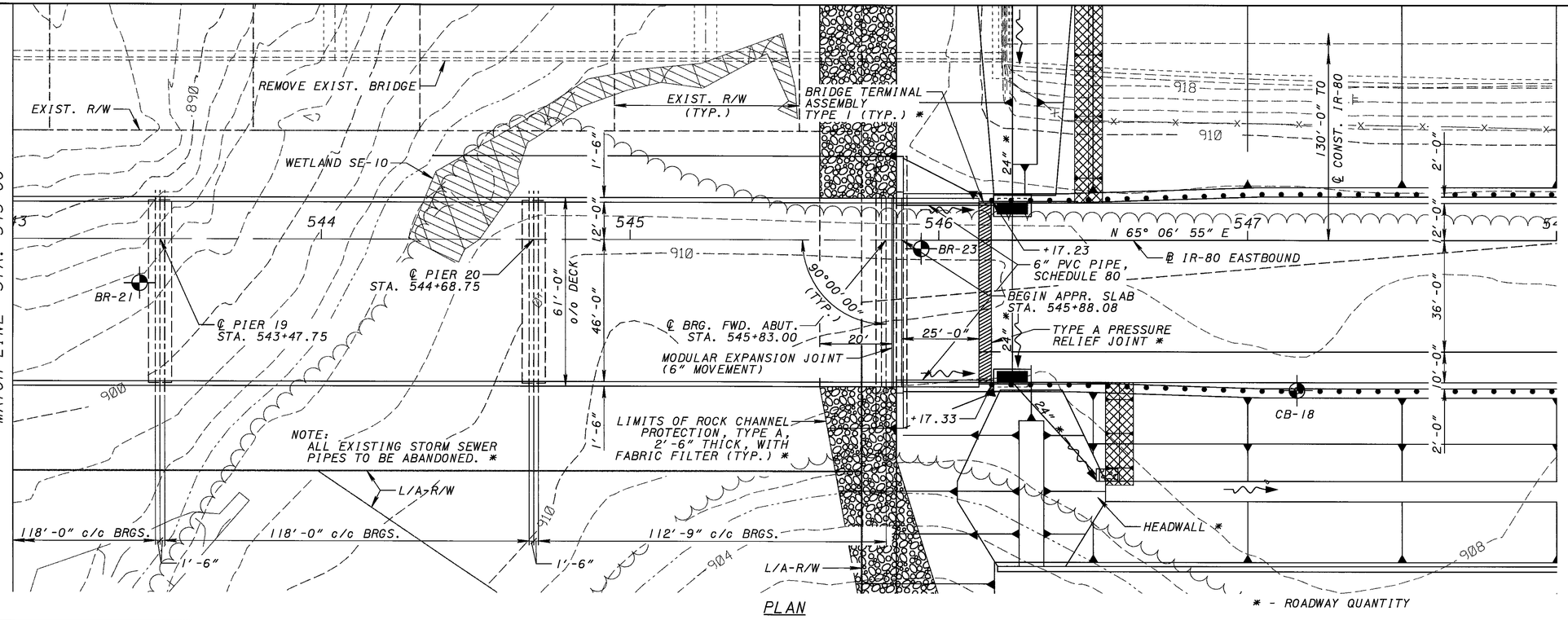
SITE PLAN - RIGHT BRIDGE
BRIDGE NO. MAH-80-0123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080

11 / 49

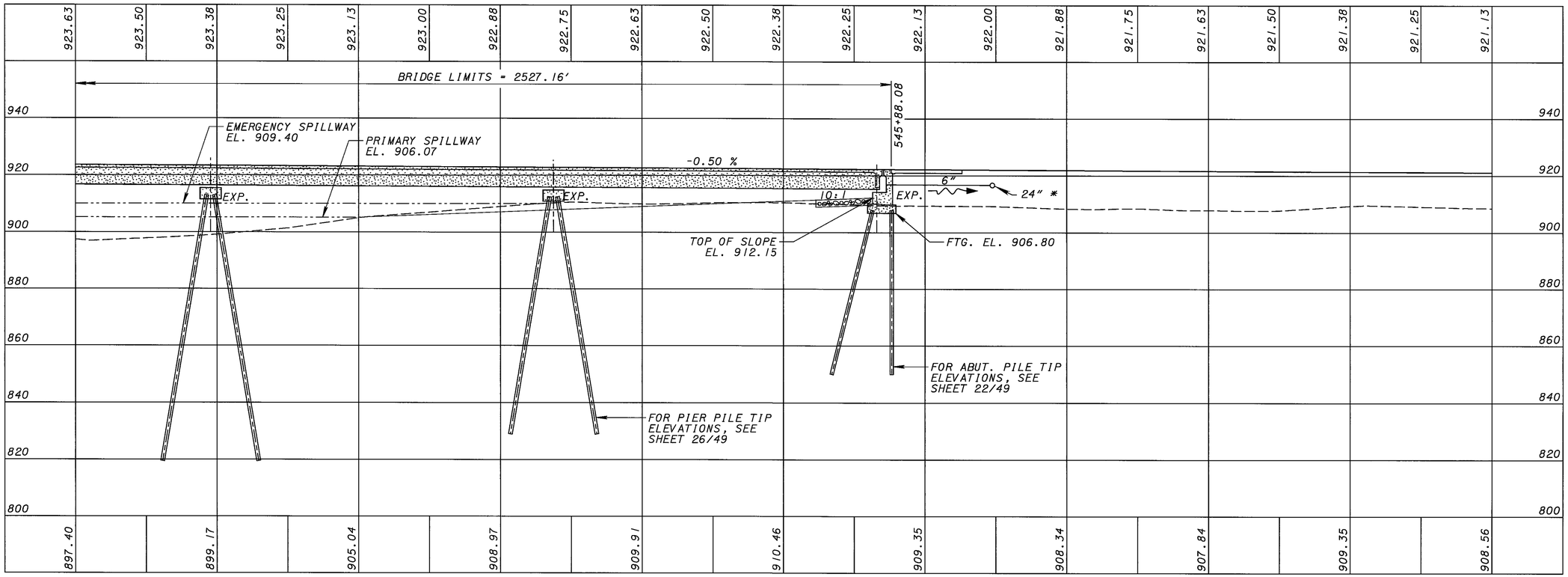
948
1100

8/12/05 9:26:08 AM
s:\projects\37700\bridge-Reservoir\Final Tracings\MH080SP2K.dgn



PLAN

* - ROADWAY QUANTITY



PROFILE ALONG BASELINE EASTBOUND IR-80

8/12/05 9:26:39 AM
s:\projects\37700\bridge Reservoir\Final Tracings\MH080SP2L.dgn

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4181 EXECUTIVE PARKWAY, SUITE 350 WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
MTO	MTO	WMG	08/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MES		5002265L & 5002303R	

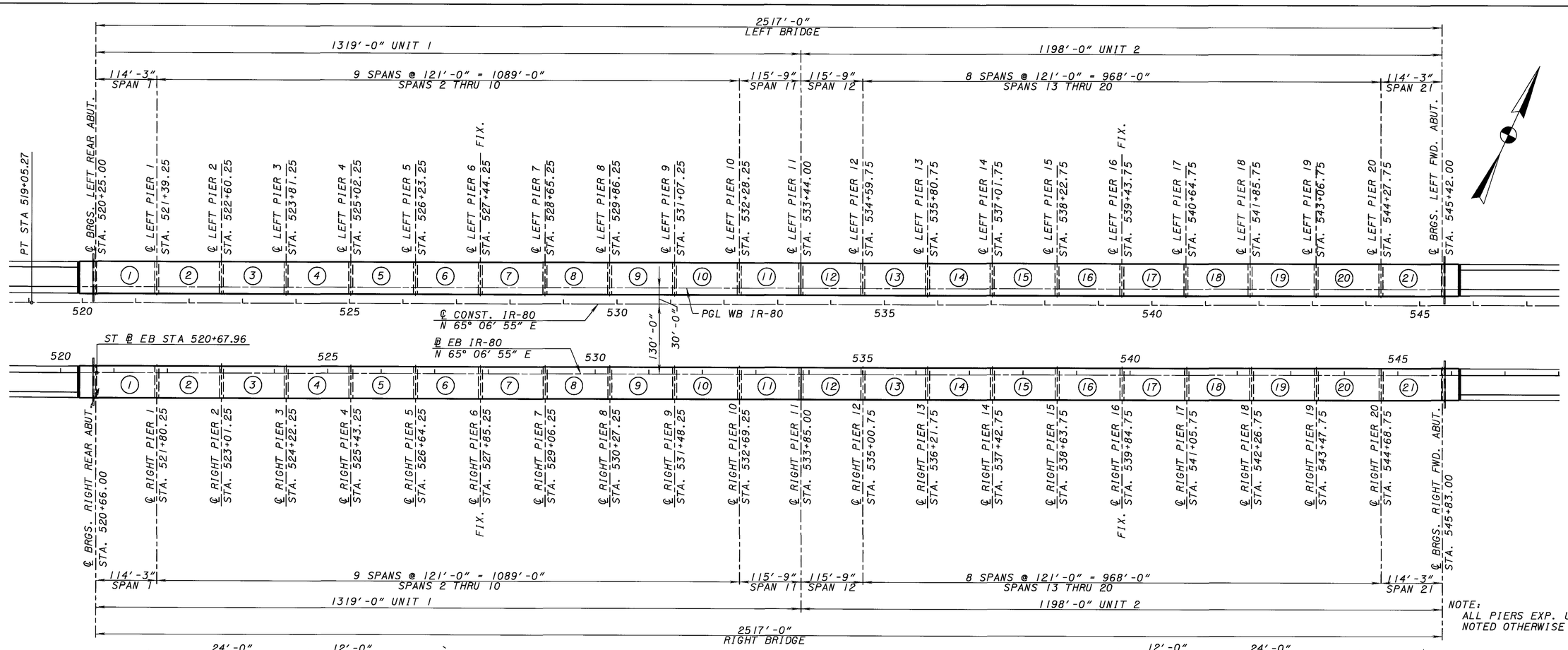
MAHONING COUNTY
STA. 520+60.92
TO STA. 545+88.08

SITE PLAN - RIGHT BRIDGE
BRIDGE NO. MAH-80-0123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080

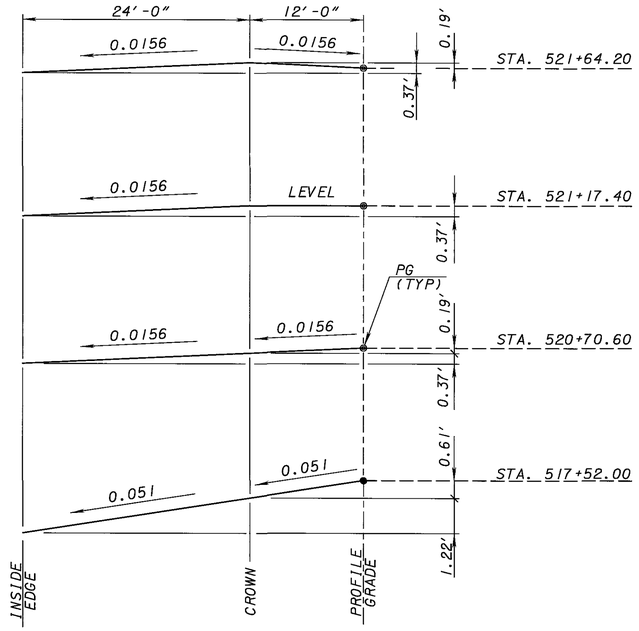
12 / 49

949
1100

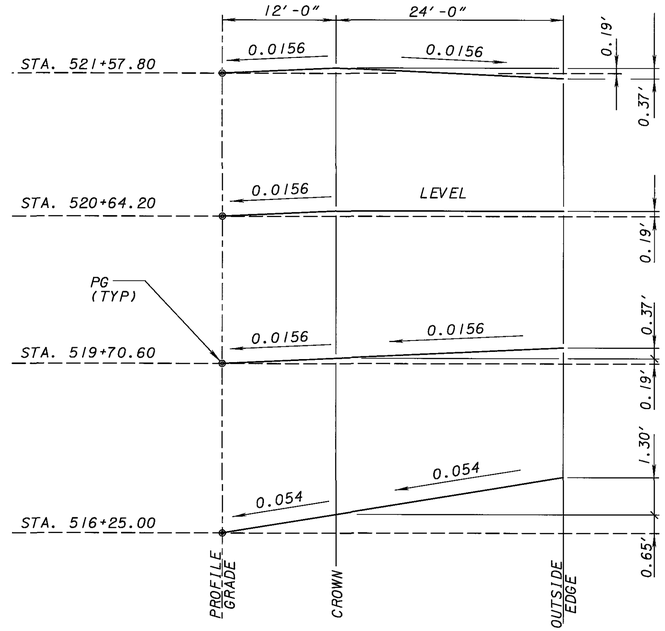


NOTE:
ALL PIERS EXP. UNLESS NOTED OTHERWISE

BRIDGE LAYOUT PLAN



PAVEMENT TRANSITION DETAIL
(LEFT BRIDGE)



PAVEMENT TRANSITION DETAIL
(RIGHT BRIDGE)

DESIGN AGENCY
GANNETT FLEMING
ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
MTO	WHM	WMG	08/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MES		5002265L & 5002303R	

BRIDGE LAYOUT PLAN
BRIDGE NO. MAH-80-0123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080

13 / 49

950
1100

8/12/05 9:27:20 AM
s:\projects\37700\bridge-Reservoir\FinalTracings\MH0806P2A.dgn

REFER TO THE FOLLOWING STANDARD DRAWINGS:

A-1-69	REVISED 07-19-02
AS-1-81	REVISED 07-19-02
PCB-91	REVISED 07-19-02
PSID-1-99	REVISED 07-18-03
SBR-1-99	REVISED 07-19-02
HL-20.14	DATED 01-21-05
HL-50.21	DATED 01-21-05

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

892	DATED 04-15-05
898	DATED 07-16-04

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002, AND THE 2004 ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING:

HS25 AND THE ALTERNATE MILITARY LOADING
FUTURE WEARING SURFACE (FWS) OF 60 P.S.F.

DESIGN DATA:

QC/QA CONCRETE CLASS QSC2 - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)
QC/QA CONCRETE CLASS QSC1 - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615 OR A996, GRADE 60, MINIMUM YIELD STRENGTH 60,000 PSI. SPIRAL REINFORCEMENT MAY BE PLAIN BARS, ASTM A82 OR A615.

STRUCTURAL STEEL FOR DIAPHRAGMS- ASTM A709, GRADE 50 - YIELD STRENGTH 50,000 PSI

CONCRETE FOR PRESTRESSED BEAMS:
COMPRESSIVE STRENGTH (FINAL) - 7000 PSI
COMPRESSIVE STRENGTH (RELEASE) - 6000 PSI

PRESTRESSING STRAND:
AREA = 0.167 SQ. IN.
ULTIMATE STRENGTH = 270 KSI
INITIAL STRESS = 202.5 KSI (LOW RELAXATION STRANDS)

DECK PROTECTION METHOD:

EPOXY COATED REINFORCING STEEL
2½" CONCRETE COVER

MONOLITHIC WEARING SURFACE:

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

ITEM 202 - STRUCTURE REMOVED, OVER 20' SPAN, AS PER PLAN:

REMOVE ABUTMENTS TO BOTTOM OF FOOTING. REMOVE PIER PILES TO ELEVATION 896, OR LOWER IF REQUIRED TO CLEAR CONTRACTOR EQUIPMENT.

PILE DRIVING CONSTRAINTS:

PRIOR TO DRIVING PILES, CONSTRUCT THE SPILL THROUGH SLOPES AND THE BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENTS UP TO THE LEVEL OF THE SUBGRADE ELEVATION FOR A MINIMUM DISTANCE OF 250 FEET BEHIND EACH ABUTMENT. FOR LEFT FORWARD ABUTMENT, DO NOT PLACE DUMPED ROCK FILL WITHIN SHEETING INDICATED ON SITE PLAN 6 OF 49. AT ALL OTHER ABUTMENTS, DO NOT PLACE DUMPED ROCK FILL WITHIN 5 FEET OF ABUTMENT FOOTING LIMITS.

DO NOT BEGIN THE EXCAVATION FOR THE ABUTMENT FOOTINGS AND THE INSTALLATION OF THE ABUTMENT PILES UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED.

ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN:

THE BACKFILL MATERIAL BEHIND THE ABUTMENTS SHALL BE TYPE B GRANULAR MATERIAL, 703.16.C, PLACED AND COMPACTED IN 6 INCH LIFTS.

ITEM 506 - STATIC LOAD TEST:

PERFORM DYNAMIC TESTING ON THE FIRST TWO VERTICAL PRODUCTION PILES TO DETERMINE THE REQUIRED BLOW COUNT FOR THE SPECIFIED ULTIMATE BEARING VALUE. PERFORM THE STATIC LOAD TEST ON EITHER PILE. DO NOT OVER-DRIVE THE SELECTED PILE. DRIVE THE THIRD AND FOURTH VERTICAL PRODUCTION PILES TO 75% AND 85% OF THE DETERMINED BLOW COUNT RESPECTIVELY. THE TEST PILES AND THE REDUCED CAPACITY PILES SHALL NOT BE BATTERED. AFTER INSTALLATION OF THE FIRST FOUR VERTICAL PRODUCTION PILES, CEASE ALL DRIVING OPERATIONS ON PILING REPRESENTED BY THE STATIC LOAD TESTING FOR A MINIMUM OF 7 DAYS. AFTER THE WAITING PERIOD, PERFORM PILE RESTRIKES ON THE STATIC LOAD TEST PILE AND EACH REDUCED CAPACITY PILE. THE ENGINEER WILL REVIEW THE RESULTS OF THE PILE RESTRIKES AND ESTABLISH THE DRIVING CRITERIA FOR THE REMAINING PILING REPRESENTED BY THE TESTING.

FOR SUBSEQUENT STATIC LOAD TESTS, UPON COMPLETION OF A 10,000-FOOT INCREMENT OF DRIVEN LENGTH, REPEAT THE ABOVE PROCEDURE FOR THE INITIAL STATIC LOAD TEST. IF NECESSARY, THE ENGINEER WILL REVISE THE DRIVING CRITERIA FOR THE REMAINING PILING ACCORDINGLY.

WHEN PERFORMING THE RESTRIKE, IF THE PILE HAS NOT REACHED THE BLOW COUNT DETERMINED FOR THE PLAN SPECIFIED ULTIMATE BEARING VALUE, CONTINUE DRIVING THE PILE UNTIL THIS CAPACITY IS ACHIEVED.

BRIDGE GENERAL NOTES

BATTERED PILES:

THE BLOW COUNT FOR BATTERED PILES SHALL BE THE BLOW COUNT DETERMINED FOR VERTICAL PILES OF THE SAME ULTIMATE BEARING VALUE DIVIDED BY AN EFFICIENCY FACTOR (D). COMPUTE THE EFFICIENCY FACTOR (D) AS FOLLOWS:

$$D = \frac{\sqrt{1-UG}}{(1+G^2)}$$

U = COEFFICIENT OF FRICTION, WHICH IS ESTIMATED AT 0.05 FOR DOUBLE-ACTING AIR OPERATED OR DIESEL HAMMERS; 0.1 FOR SINGLE-ACTING AIR OR DIESEL OPERATED HAMMERS; AND 0.2 FOR DROP HAMMERS.

G = RATE OF BATTER (1/3, 1/4, ETC.)

PILE DESIGN LOADS (ULTIMATE BEARING VALUE):

SEE SHEETS 24 THRU 26 OF 49 FOR PILE DATA.

ITEM 507 - STEEL POINTS, OR SHOES, AS PER PLAN:

USE CONICAL STEEL PILE POINTS TO PROTECT THE TIPS OF THE PROPOSED PILING. FURNISH CONICAL STEEL POINTS FROM THE FOLLOWING MANUFACTURERS/SUPPLIERS:

ASSOCIATED PILE AND FITTING CORPORATION, 262 RUTHERFORD BLVD., CLIFTON NEW JERSEY 07014;
DOUGHERTY FOUNDATION PRODUCTS, INC., P.O. BOX 688, FRANKLIN LAKES, NEW JERSEY, 07417;
VERSA STEEL INC., 1618 N.E. FIRST AVE., PORTLAND, OREGON 97232;
PILING ACCESSORIES, INC., 3467 GRIBBLE ROAD, MATTHEWS, NORTH CAROLINA 28015;

OR BY A MANUFACTURER THAT CAN FURNISH A STEEL POINT THAT IS ACCEPTABLE TO THE DIRECTOR. THE MATERIAL USED FOR THE MANUFACTURING OF PILE POINTS SHALL CONFORM TO ASTM A27/A27M 65/35 [450/240] - CLASS 2 - HEAT TREATED OR AASHTO M103/M103M 65/35 [450/240] - HEAT TREATED. WELD THE PILE POINTS TO THE PILE IN ACCORDANCE WITH AWS D1.5 OR THE MANUFACTURER'S WRITTEN PROCEDURE SUPPLIED TO THE ENGINEER BEFORE THE WELDING IS PERFORMED. SUBMIT A NOTARIZED COPY OF THE MILL TEST REPORT TO THE ENGINEER.

ITEM 509 - EPOXY COATED REINFORCING STEEL, AS PER PLAN:

IN ADDITION TO THE PROVISIONS OF ITEM 509, FIELD BEND AND/OR FIELD CUT THE NEW REINFORCING STEEL DESIGNATED IN THE PLANS, AS NECESSARY, IN ORDER TO MAINTAIN THE REQUIRED CLEARANCES AND BAR SPACINGS. REPAIR ALL DAMAGE TO THE EPOXY COATING AS A RESULT OF THIS WORK ACCORDING TO 709.00.

NON-USE OF ASBESTOS CONTAINING MATERIALS:

THE CONTRACTOR SHALL AT NO TIME INCORPORATE ANY MATERIALS WHICH ARE COMPOSED OF OR CONTAIN ANY AMOUNTS OF ASBESTOS. THE SUBSTITUTION OF MATERIALS WHICH CONTAIN ANY AMOUNTS OF ASBESTOS WILL IN NO CIRCUMSTANCES BE ACCEPTABLE. PRIOR TO FINAL ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT OF CERTIFICATION ASSERTING THAT NO ASBESTOS CONTAINING MATERIALS WERE USED IN ANY PORTION OF THE CONSTRUCTION.

ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN (TYPE D)

CONCRETE FOR TYPE D APPROACH SLABS SHALL BE CLASS QSC2, SUPP. SPEC. 898. SEE SHEET 47 OF 49 FOR DETAILS OF APPROACH SLABS WITH INTEGRAL PARAPETS.

ASBESTOS NOTIFICATION:

AN ASBESTOS SURVEY OF THE MAH-80-0123 L/R BRIDGES (STRUCTURE FILE NUMBERS 5002281/5002257) OVER THE MEANDER CREEK RESERVOIR, SCHEDULED FOR REPLACEMENT, WAS CONDUCTED BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST. THE SURVEY DETERMINED THAT NO ASBESTOS IS PRESENT ON THE BRIDGES.

A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORM, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER, WILL BE PROVIDED TO THE SUCCESSFUL BIDDER. AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF THE DEMOLITION OF THE BRIDGES, THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO:

MR. ROBERT RAMHOFF, DIRECTOR
MAHONING-TRUMBULL AIR POLLUTION CONTROL AGENCY
OAK HILL / RENAISSANCE PLACE
SECOND FLOOR, ROOM 25
345 OAK HILL AVENUE
YOUNGSTOWN, OHIO 44502
TEL: (330) 743-3333 (EXT. 280)
FAX: (330) 744-1928

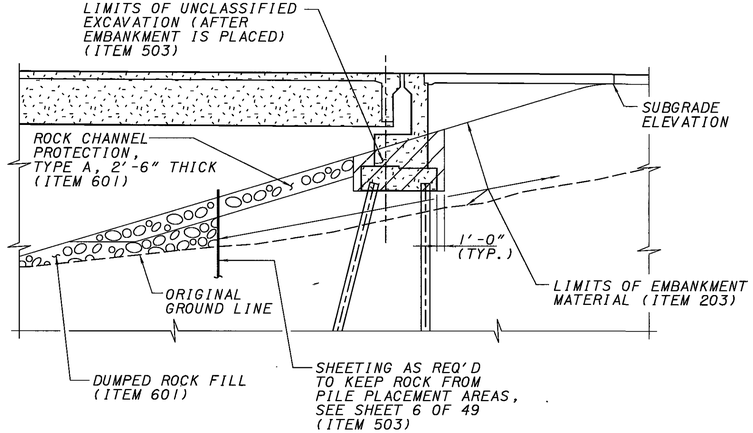
THE CONTRACTOR SHALL PROVIDE ONE (1) COPY OF THE COMPLETED FORM TO THE ENGINEER. INFORMATION REQUIRED ON THE FORM WILL INCLUDE: 1) THE CONTRACTOR'S NAME AND ADDRESS; 2) THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REHABILITATION/REMOVAL; AND 3) A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED. A COPY OF THE OEPA FORM IS AVAILABLE FOR INSPECTION AT THE ODOT DISTRICT 4 OFFICE, 2088 SOUTH ARLINGTON ROAD, AKRON, OHIO 44306.

BASIS FOR PAYMENT:

THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN ITEM 202 - STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

ABBREVIATIONS:

ABUT(S).	ABUTMENT(S)	MAX.	MAXIMUM
AHD.	AHEAD	MIN.	MINIMUM
APPR.	APPROACH	MOD.	MODIFIED
APPROX.	APPROXIMATELY	MOT	MAINTENANCE OF TRAFFIC
℄	BASELINE	NO.	NUMBER
BOT.	BOTTOM	NPCPP	NON-PERFORATED CORRUGATED PLASTIC PIPE
BRG(S).	BEARING(S)		
BTWN	BETWEEN	O/O	OUT TO OUT
C/C	CENTER TO CENTER	PCPP	PERFORATED CORRUGATED PLASTIC PIPE
℄	CENTERLINE		
C.I.P.	CAST-IN-PLACE	PL	PLATE
CJ	CONSTRUCTION JOINT	PC	PRESTRESSED CONCRETE
CLR.	CLEAR	PG	PROFILE GRADE
CONST.	CONSTRUCTION	PGL	PROFILE GRADE LINE
CU.	CUBIC	P.S.F.	POUNDS PER SQUARE FOOT
DIA.	DIAMETER	PT	POINT OF TANGENT
DIM.	DIMENSION	PVI	POINT OF VERTICAL INTERSECTION
DWLS.	DOWELS		
EB	EASTBOUND	RA	REAR ABUTMENT
EF	EACH FACE	REINF.	REINFORCEMENT
EL.	ELEVATION	REQ'D	REQUIRED
EQ.	EQUAL	RT.	RIGHT
EXIST.	EXISTING	R/W	RIGHT OF WAY
EXP.	EXPANSION	SPA.	SPACING(S)
FA	FORWARD ABUTMENT	SQ.	SQUARE
FIX.	FIXED	S.S.	STAINLESS STEEL
FT	FOOT/FEET	ST	SPIRAL TO TANGENT
FTG.	FOOTING	STA	STATION
FWD.	FORWARD	STD DWG	STANDARD DRAWING
FWS	FUTURE WEARING SURFACE	SYM.	SYMETRICAL
IN(S).	INCH(ES)	T/T	TOE TO TOE
INV.	INVERSE	TYP.	TYPICAL
JT.	JOINT	U.N.O.	UNLESS NOTED OTHERWISE
LB(S)	POUND(S)	VC	VERTICAL CURVE
LF	LINEAR FEET	WB	WESTBOUND
LT.	LEFT	YD(S).	YARD(S)



EMBANKMENT AND EXCAVATION LIMITS

DESIGN AGENCY
GANNETT FLEMING
ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
WMG	BKH	PLC	08/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MTO		5002265L & 5002303R	

BRIDGE GENERAL NOTES
BRIDGE NO. MAH-80-0123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080

9/13/2005 9:9:05 AM
s:\projects\37700\bridge-Reservoir\Final Tracings\MH0806GN2A.dgn

ESTIMATED BRIDGE QUANTITIES

ITEM	ITEM EXTENSION	TOTAL LT. BRIDGE	TOTAL RT. BRIDGE	UNIT	DESCRIPTION	FUNDING LEFT		FUNDING RIGHT		LEFT BRIDGE				RIGHT BRIDGE				AS PER PLAN SHEET NO.
						IM	NHS	IM	NHS	ABUTMENTS	PIERS	SUPER	GENERAL	ABUTMENTS	PIERS	SUPER	GENERAL	
202	11003	LUMP	LUMP		STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	LUMP		LUMP					LUMP				LUMP	14 OF 49
202	22900	134	134	SQ YD	APPROACH SLAB REMOVED	134		134					134				134	
503	11100	LUMP	LUMP		COFFERDAMS, CRIBS AND SHEETING	LUMP		LUMP					LUMP				LUMP	
503	21101	598	636	CU YD	UNCLASSIFIED EXCAVATION, AS PER PLAN	399	199	424	212	598				636				14 OF 49
505	11100	LUMP	LUMP		PILE DRIVING EQUIPMENT MOBILIZATION	LUMP		LUMP					LUMP				LUMP	
⚠ 506	11100	0	LUMP		STATIC LOAD TEST	0		LUMP			0				LUMP			
⚠ 506	12200	0	0	EACH	SUBSEQUENT STATIC LOAD TEST	0	0	0	0		0				0			
507	00600	3,780	3,360	FT	14" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	2,520	1,260	2,240	1,120	3,780				3,360				
507	00650	4,060	3,640	FT	14" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	2,707	1,353	2,427	1,213	4,060				3,640				
507	00800	36,480	35,840	FT	18" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	24,320	12,160	23,893	11,947		36,480				35,840			
507	00850	38,080	37,440	FT	18" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	25,387	12,693	24,960	12,480		38,080				37,440			
⚠ 507	93301	20	20	EACH	STEEL POINTS, OR SHOES, AS PER PLAN (14" PILE)	13	7	13	7	20				20				14 OF 49
⚠ 507	93301	32	32	EACH	STEEL POINTS, OR SHOES, AS PER PLAN (18" PILE)	21	11	21	11		32				32			14 OF 49
509	10001	1,845,730	1,845,730	POUND	EPOXY COATED REINFORCING STEEL, AS PER PLAN	1,230,487	615,243	1,230,487	615,243	38,110	112,850	1,694,770		38,110	112,850	1,694,770		14 OF 49
512	10100	14,880	14,880	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	9,920	4,960	9,920	4,960	230	2,160	12,490		230	2,160	12,490		
515	15050	12	12	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE 4 MOD. (72") (MARK A)	8	4	8	4			12				12		
515	15050	102	102	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE 4 MOD. (72") (MARK B)	68	34	68	34			102				102		
515	15050	12	12	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE 4 MOD. (72") (MARK C)	8	4	8	4			12				12		
515	20000	315	315	EACH	INTERMEDIATE DIAPHRAGMS	210	105	210	105			315				315		
SPECIAL	51612400	122	122	FT	MODULAR EXPANSION JOINT (6" MOVEMENT) (SEE SPECIAL PROVISIONS)	81	41	81	41			122				122		46 OF 49
SPECIAL	51612400	61	61	FT	MODULAR EXPANSION JOINT (9" MOVEMENT) (SEE SPECIAL PROVISIONS)	41	20	41	20			61				61		46 OF 49
516	44201	24	24	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (3.75"x13.5"x15" BEARING WITH 1.75"x16"x25.5" LOAD PLATE)	16	8	16	8			24				24		28 OF 49
516	44401	204	204	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (5.875"x15"x15" BEARING WITH 1.75"x16"x25.5" LOAD PLATE)	136	68	136	68			204				204		28 OF 49
516	44401	24	24	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (6.25"x15"x15" BEARING WITH 1.75"x16"x25.5" LOAD PLATE)	16	8	16	8			24				24		28 OF 49
518	21200	155	155	CU YD	POROUS BACKFILL WITH FILTER FABRIC	103	52	103	52	155				155				
518	40000	176	176	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	117	59	117	59	176				176				
518	40010	60	60	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	40	20	40	20	60				60				
518	60011	122	122	FT	TROUGH HORIZONTAL CONDUCTOR, AS PER PLAN (NEOPRENE, INCLUDING SPECIALS)	81	41	81	41	122				122				45 OF 49
518	60031	150	150	FT	PIPE HORIZONTAL CONDUCTOR, AS PER PLAN (INCLUDING SPECIALS)	100	50	100	50	150				150				45 OF 49
⚠ 523	20000	7	7	EACH	DYNAMIC LOAD TESTING	5	2	5	2	2	5			2	5			
⚠ 523	20500	14	15	EACH	RESTRIKING	10	4	10	5	4	10			4	11			
526	25001	339	339	SQ YD	REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN (TYPE D)	226	113	226	113				339				339	14, 47 OF 49
625	25400	5,180	5,180	FT	CONDUIT, 2", 725.04	3,453	1,727	3,453	1,727			5,180				5,180		
625	25600	2,590	2,590	FT	CONDUIT, 4", 725.04	1,727	863	1,727	863			2,590				2,590		
625	29920	14	21	EACH	STRUCTURE JUNCTION BOX	9	5	14	7			14				21		
625	30706	4	6	EACH	PULL BOX, 725.08, 24"	3	1	4	2	4				6				
625	33000	1	1	EACH	STRUCTURE GROUNDING SYSTEM	1			1				1				1	
892	10200	5,320	5,320	CU YD	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (DECK) WITH WARRANTY	3,547	1,773	3,547	1,773			5,320				5,320		
898	11000	812	812	CU YD	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (PARAPET)	541	271	541	271			812				812		
898	20100	1,400	1,387	CU YD	QC/QA CONCRETE, CLASS QSC1, SUBSTRUCTURE (PIER ABOVE FOOTING)	933	467	925	462		1,400				1,387			
898	20150	289	284	CU YD	QC/QA CONCRETE, CLASS QSC1, SUBSTRUCTURE (ABUTMENT)	193	96	189	95	289				284				
898	20300	202	202	CU YD	QC/QA CONCRETE, CLASS QSC1, SUBSTRUCTURE (FOOTING)	135	67	135	67	202				202				

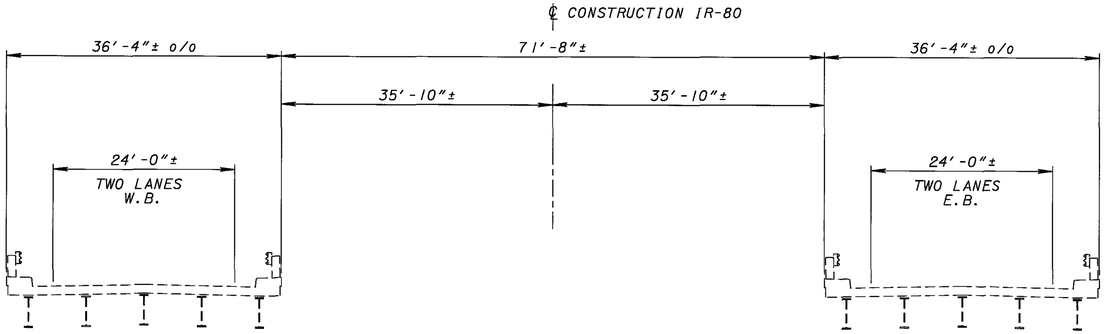
⚠ - QUANTITIES REVISED 1/26/06

DESIGN AGENCY
GANNETT FLEMING
ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

DESIGNED WMG | DRAWN BKH | REVIEWED MTO | DATE 08/04
CHECKED JAR | REVISED | STRUCTURE FILE NUMBER 5002265L & 5002303R

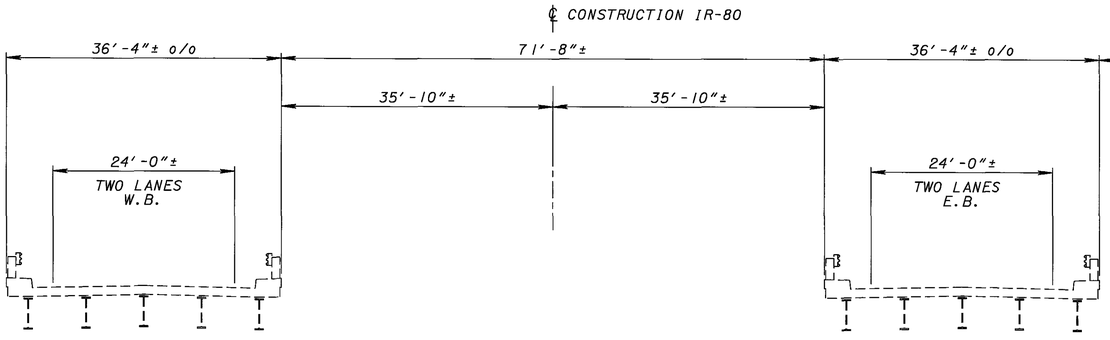
ESTIMATED BRIDGE QUANTITIES
BRIDGE NO. MAH-80-0123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080



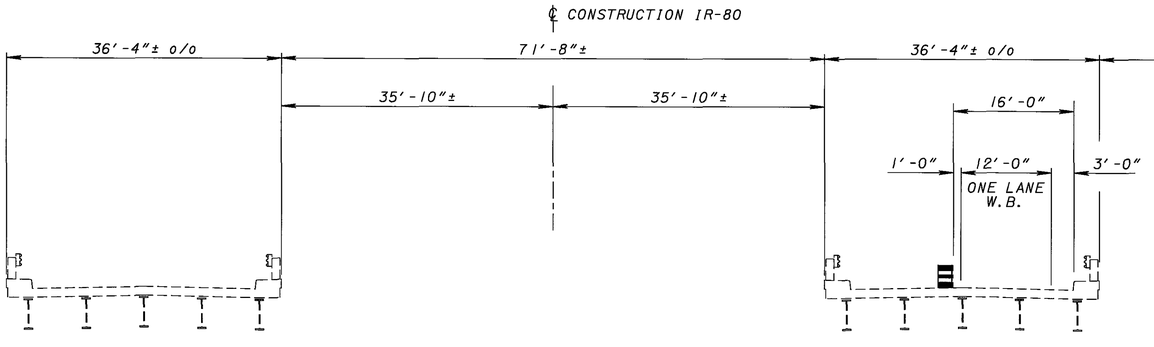
STAGE 1

1. MAINTAIN EXIST. TRAFFIC
2. CONSTRUCT NEW RIGHT BRIDGE



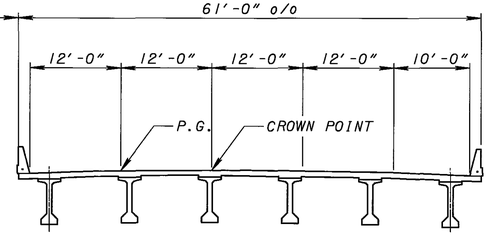
STAGE 2

1. MAINTAIN EXIST. TRAFFIC
2. CONSTRUCT NEW RIGHT BRIDGE

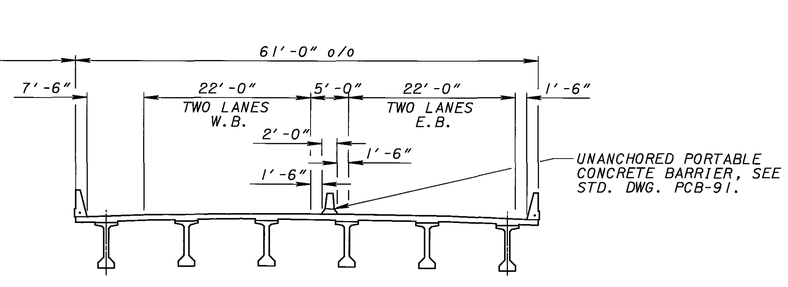


STAGE 3

1. MAINTAIN TRAFFIC ON NEW AND EXISTING RIGHT BRIDGES AS SHOWN.



PROPOSED RIGHT BRIDGE



PROPOSED RIGHT BRIDGE

NOTES:

1. CONSTRUCTION STAGE NUMBERS CORRESPOND TO ROADWAY MOT STAGES. STAGE 1 IS CONSTRUCTION OF THE PARTIAL W.B. WIDENING.
2. SEE MOT PLAN SHEETS 64, 86, 117, AND 137 OF 1100 FOR ADDITIONAL DETAILS.

▨ - STRUCTURE TO BE REMOVED UNDER ITEM 202

DESIGN AGENCY
GANNETT FLEMING
ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
PLC/PRS	EFD	MTO	08/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DEK		5002265L & 5002303R	

STAGED CONSTRUCTION DETAILS

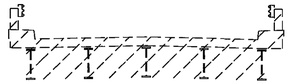
BRIDGE NO. MAH-80-0123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

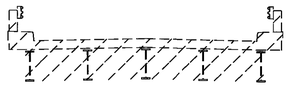
MAH-80-0.97
PID 6080

16 / 49

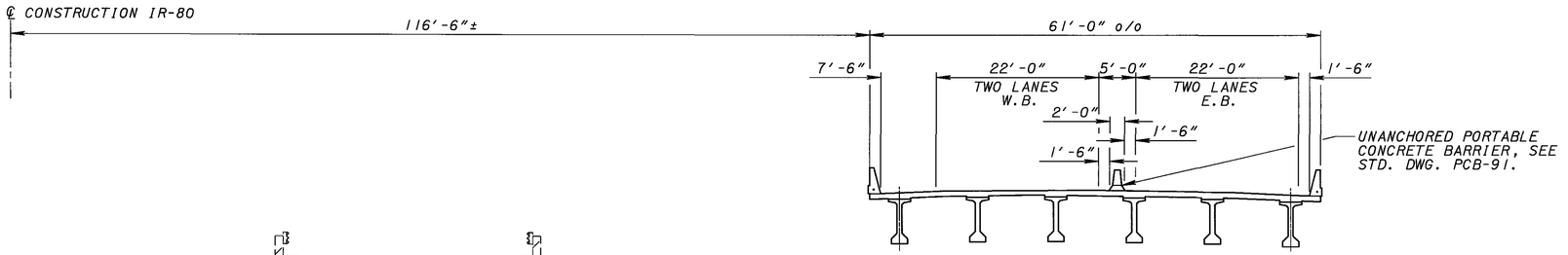
953
1100

8/12/05 9:28:53 AM
s:\projects\37700\bridge-Reservoir\Final Traolngs\WH080PC2A.dgn





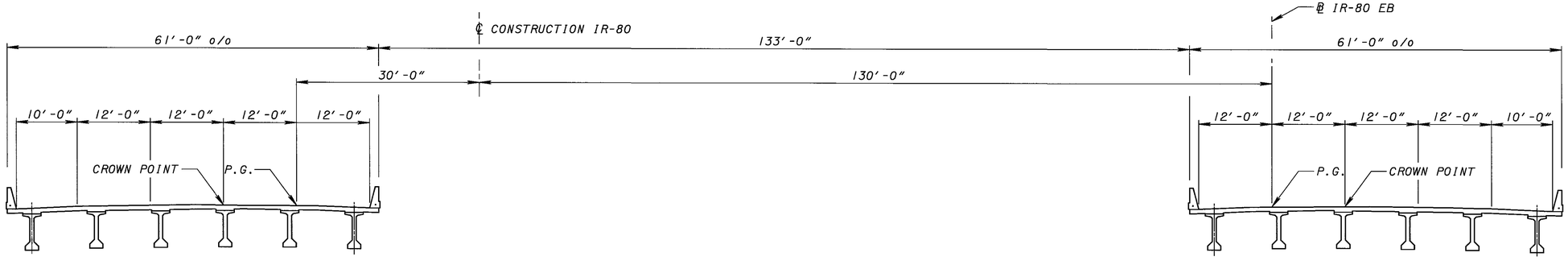
STAGE 4



PROPOSED RIGHT BRIDGE

1. MAINTAIN ALL TRAFFIC ON NEW RIGHT BRIDGE
2. REMOVE EXISTING RIGHT & LEFT BRIDGES
3. CONSTRUCT NEW LEFT BRIDGE

STAGE 5 AND FINAL



PROPOSED LEFT BRIDGE

PROPOSED RIGHT BRIDGE

NOTES:

1. CONSTRUCTION STAGE NUMBERS CORRESPOND TO ROADWAY MOT STAGES. STAGE 1 IS CONSTRUCTION OF THE PARTIAL W.B. WIDENING.

DESIGN AGENCY
GANNETT FLEMING
ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
PLC/PRS	EFD	MTO	08/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DEK		5002265L & 5002303R	

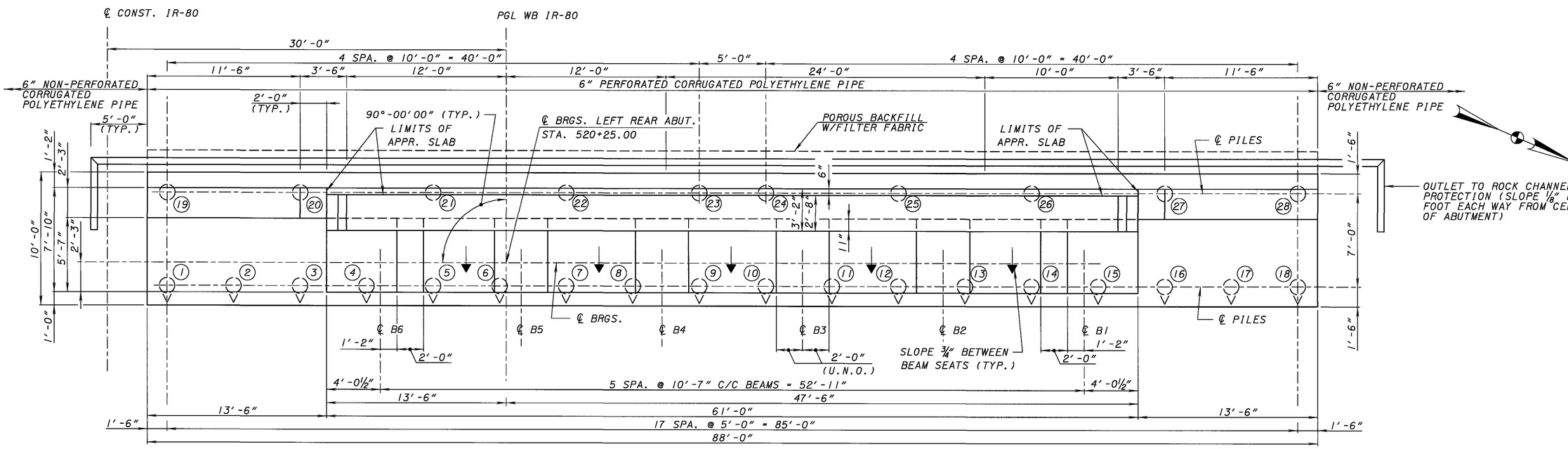
STAGED CONSTRUCTION DETAILS
BRIDGE NO. MAH-80-0123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080

17 / 49

954
1100

8/12/05 9:29:29 AM
s:\projects\37700\bridge-Reservoir\Final Tracings\MH080PC2B.dgn



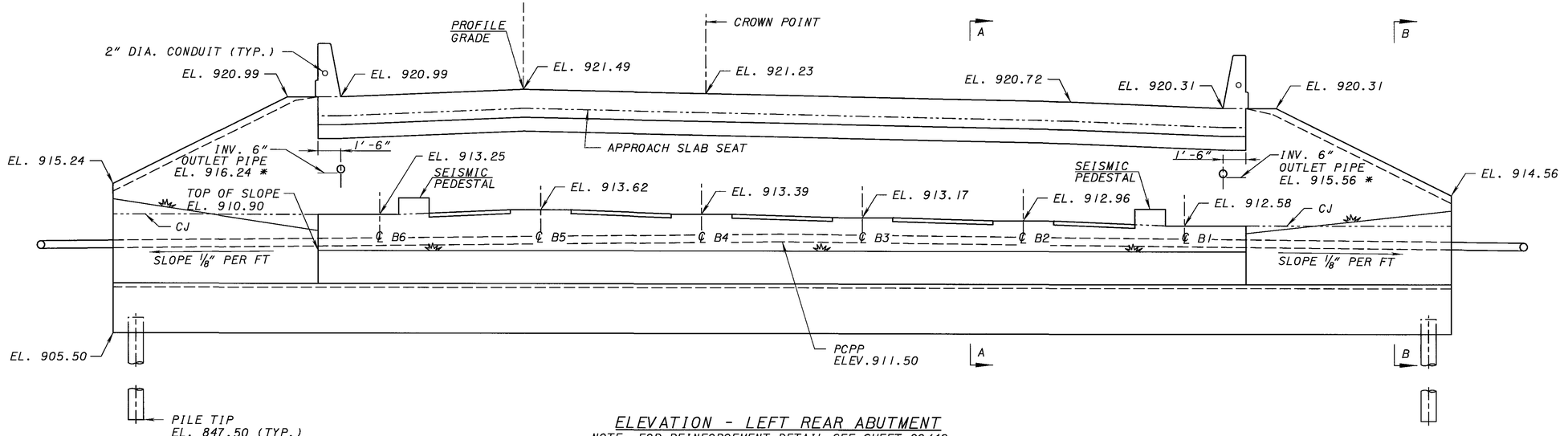
PLAN - LEFT REAR ABUTMENT

LEGEND

(XX) PILE NUMBERS

14″ DIA. CONCRETE PILES VERTICAL

14″ DIA. CONCRETE PILES BATTERED 3:12



ELEVATION - LEFT REAR ABUTMENT

NOTE: FOR REINFORCEMENT DETAIL SEE SHEET 20/49 .

NOTES:

1. FOR PILE TESTING AND QUANTITIES, NOTES AND ABUTMENT SECTIONS SEE SHEET 24/49.
2. BRIDGE SEAT ELEVATIONS ARE GIVEN AT THE ℄ BRGS., BACKWALL ELEVATIONS ARE GIVEN AT BRIDGE LIMITS AND WING ELEVATIONS ARE GIVEN ALONG THE FRONT FACE OF WALL.
3. FOR ABUTMENT DIAPHRAGM DETAILS SEE SHEET 40/49.
4. FOR ELASTOMERIC BEARING DETAILS SEE SHEET 28/49.

* 5. FOR DRAINAGE TROUGH AND OUTLET PIPE DETAILS SEE SHEET 45/49.

6. FOR MODULAR EXPANSION JOINT DETAILS SEE SHEET 46/49.
7. BRIDGE SEAT ELEVATIONS HAVE BEEN ADJUSTED UPWARD 0.25 INCHES TO COMPENSATE FOR THE VERTICAL DEFORMATION OF THE BEARINGS.
8. PRIOR TO PLACING CONCRETE ABOVE THE FOOTING, ADJUST BEAM SEAT ELEVATIONS AS DIRECTED BY THE ENGINEER TO ACCOUNT FOR ACTUAL BEAM CAMBERS IN EXCESS OF THE ANTICIPATED CAMBERS AT THE TIME OF ERECTION TABULATED ON SHEET 41 OF 49.

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350 WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
JAR	RLB	WMG	08/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RAH		5002265L & 5002303R	

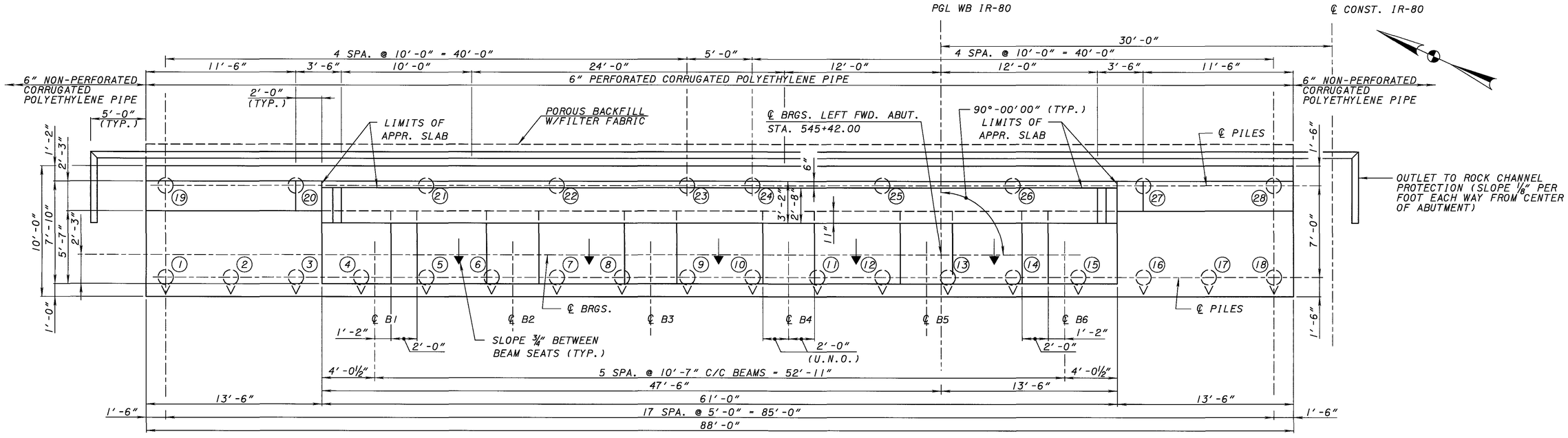
LEFT REAR ABUTMENT PLAN AND ELEVATION
BRIDGE NO. MAH-80-0.123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080

18 / 49

955
1100

8/12/05 9:30:06 AM
s:\projects\37700\bridge-Reservoir\Final Tracings\MH080A02A.dgn



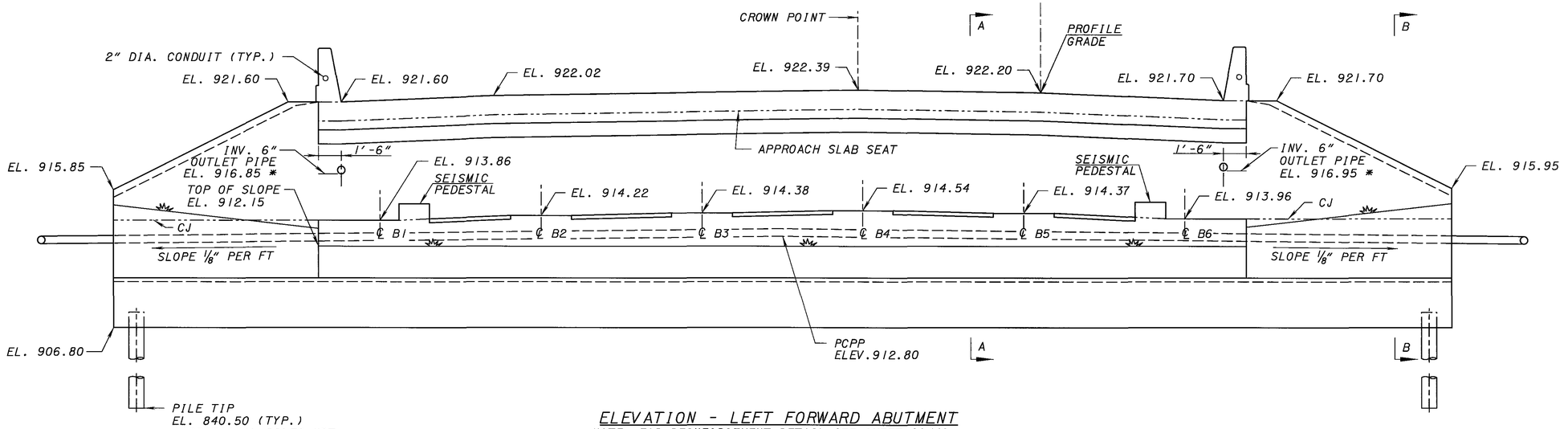
PLAN - LEFT FORWARD ABUTMENT

LEGEND

(XX) PILE NUMBERS

14" DIA. CONCRETE PILES VERTICAL

14" DIA. CONCRETE PILES BATTERED 3:12



ELEVATION - LEFT FORWARD ABUTMENT

NOTE: FOR REINFORCEMENT DETAIL SEE SHEET 20/49 .

NOTES:

1. FOR PILE TESTING AND QUANTITIES, NOTES AND ABUTMENT SECTIONS SEE SHEET 24/49.
2. BRIDGE SEAT ELEVATIONS ARE GIVEN AT THE ℄ BRGS., BACKWALL ELEVATIONS ARE GIVEN AT BRIDGE LIMITS AND WING ELEVATIONS ARE GIVEN ALONG THE FRONT FACE OF WALL.
3. FOR ABUTMENT DIAPHRAGM DETAILS SEE SHEET 40/49.
4. FOR ELASTOMERIC BEARING DETAILS SEE SHEET 28/49.
* 5. FOR DRAINAGE TROUGH AND OUTLET PIPE DETAILS SEE SHEET 45/49.
6. FOR MODULAR EXPANSION JOINT DETAILS SEE SHEET 46/49.
7. BRIDGE SEAT ELEVATIONS HAVE BEEN ADJUSTED UPWARD 0.25 INCHES TO COMPENSATE FOR THE VERTICAL DEFORMATION OF THE BEARINGS.
8. PRIOR TO PLACING CONCRETE ABOVE THE FOOTING, ADJUST BEAM SEAT ELEVATIONS AS DIRECTED BY THE ENGINEER TO ACCOUNT FOR ACTUAL BEAM CAMBERS IN EXCESS OF THE ANTICIPATED CAMBERS AT THE TIME OF ERECTION TABULATED ON SHEET 41 OF 49.

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
JAR	RLB	WMG	08/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RAH		5002265L & 5002303R	

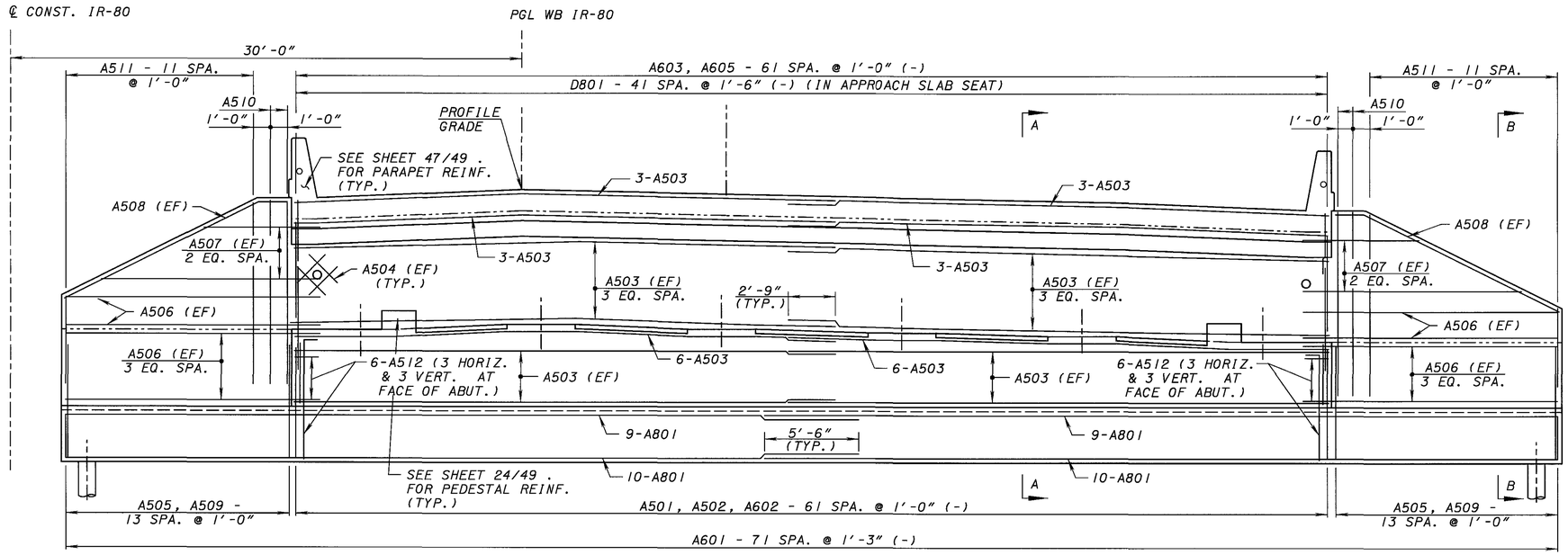
LEFT FORWARD ABUTMENT PLAN AND ELEVATION
BRIDGE NO. MAH-80-0123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080

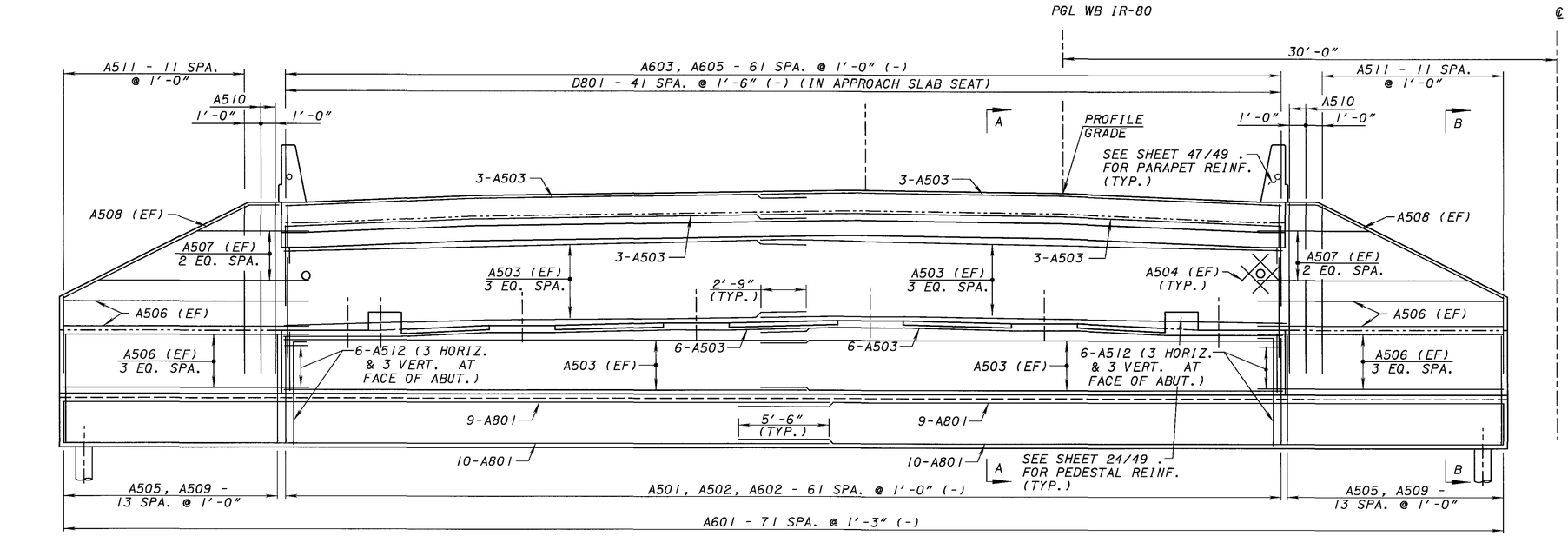
19 / 49

956
1100

8/12/05 9:31:00 AM
s:\projects\37700\bridge-Reservoir\Final Tracings\MH080A028.dgn



REINFORCEMENT DETAIL - LEFT REAR ABUTMENT



REINFORCEMENT DETAIL - LEFT FORWARD ABUTMENT

NOTES:

1. FOR NOTES AND ABUTMENT SECTIONS SEE SHEET 24/49 .

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350 WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
JAR	RLB	WMG	08/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RAH		5002265L & 5002303R	

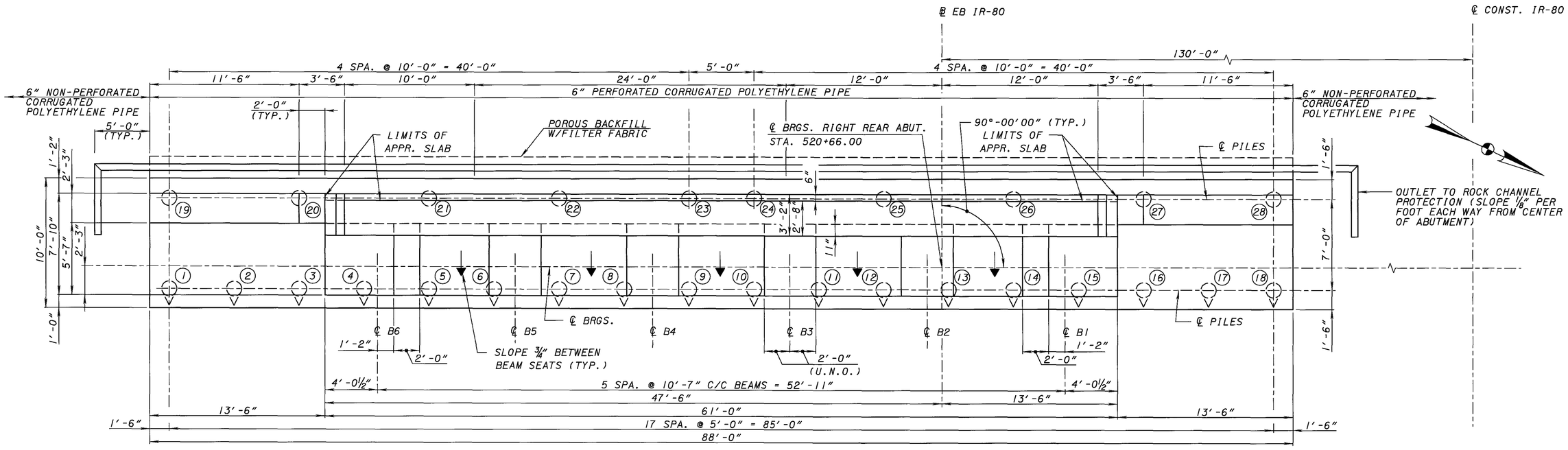
LEFT ABUTMENT REINFORCEMENT DETAILS
BRIDGE NO. MAH-80-0/23 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080

20 / 49

957
1100

8/12/05 9:31:31 AM
s:\projects\37700\bridge-Reservoir\FinalTracings\MH080A02C.dgn



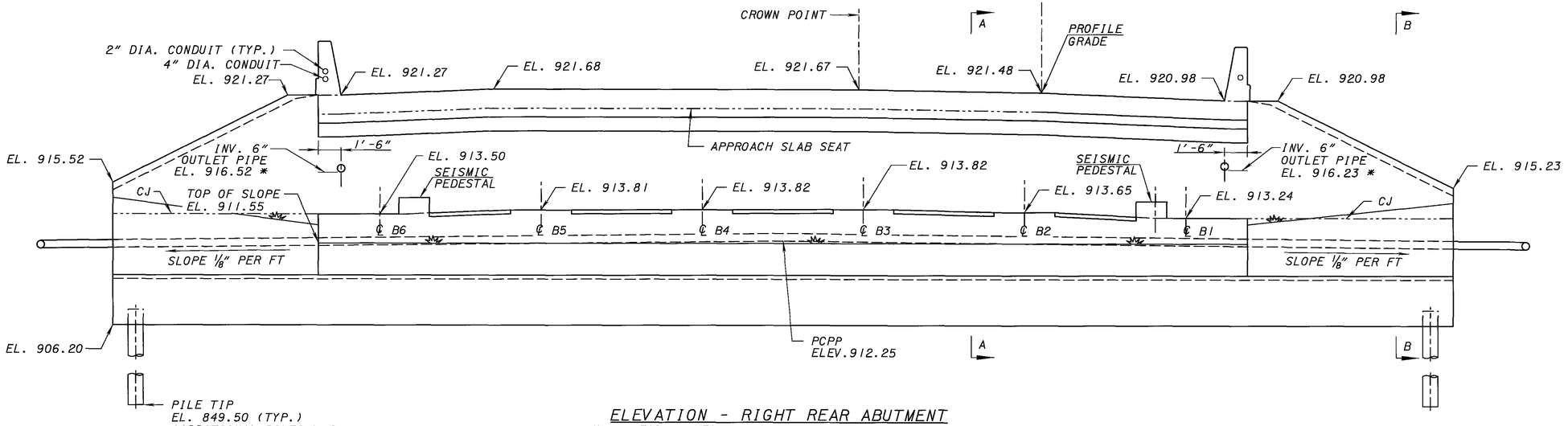
PLAN - RIGHT REAR ABUTMENT

LEGEND

(XX) PILE NUMBERS

14" DIA. CONCRETE PILES VERTICAL

14" DIA. CONCRETE PILES BATTERED 3:12



ELEVATION - RIGHT REAR ABUTMENT

NOTE: FOR REINFORCEMENT DETAIL SEE SHEET 23/49 .

NOTES:

1. FOR PILE TESTING AND QUANTITIES, NOTES AND ABUTMENT SECTIONS SEE SHEET 24/49.
2. BRIDGE SEAT ELEVATIONS ARE GIVEN AT THE ℄ BRGS., BACKWALL ELEVATIONS ARE GIVEN AT BRIDGE LIMITS AND WING ELEVATIONS ARE GIVEN ALONG THE FRONT FACE OF WALL.
3. FOR ABUTMENT DIAPHRAGM DETAILS SEE SHEET 40/49.
4. FOR ELASTOMERIC BEARING DETAILS SEE SHEET 28/49.
* 5. FOR DRAINAGE TROUGH AND OUTLET PIPE DETAILS SEE SHEET 45/49.
6. FOR MODULAR EXPANSION JOINT DETAILS SEE SHEET 46/49.
7. BRIDGE SEAT ELEVATIONS HAVE BEEN ADJUSTED UPWARD 0.25 INCHES TO COMPENSATE FOR THE VERTICAL DEFORMATION OF THE BEARINGS.
8. PRIOR TO PLACING CONCRETE ABOVE THE FOOTING, ADJUST BEAM SEAT ELEVATIONS AS DIRECTED BY THE ENGINEER TO ACCOUNT FOR ACTUAL BEAM CAMBERS IN EXCESS OF THE ANTICIPATED CAMBERS AT THE TIME OF ERECTION TABULATED ON SHEET 41 OF 49.

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4181 EASTSIDE PARKWAY, SUITE 350
HARRISBURG, PA. 17111

DESIGNED	DRAWN	REVISED	CHECKED
JAR	RLB		RAH

DATE	REVISED	STRUCTURE FILE NUMBER
08/04	WMG	50022651 & 50023031R

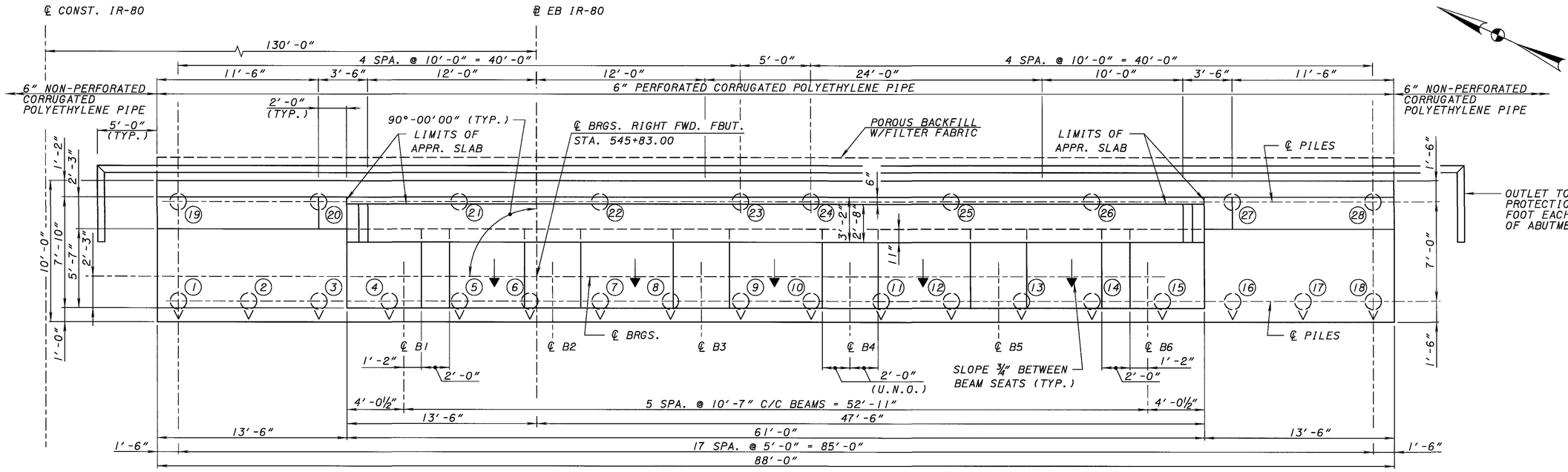
RIGHT REAR ABUTMENT PLAN AND ELEVATION
BRIDGE NO. MAH-80-0123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080

21 / 49

958
1100

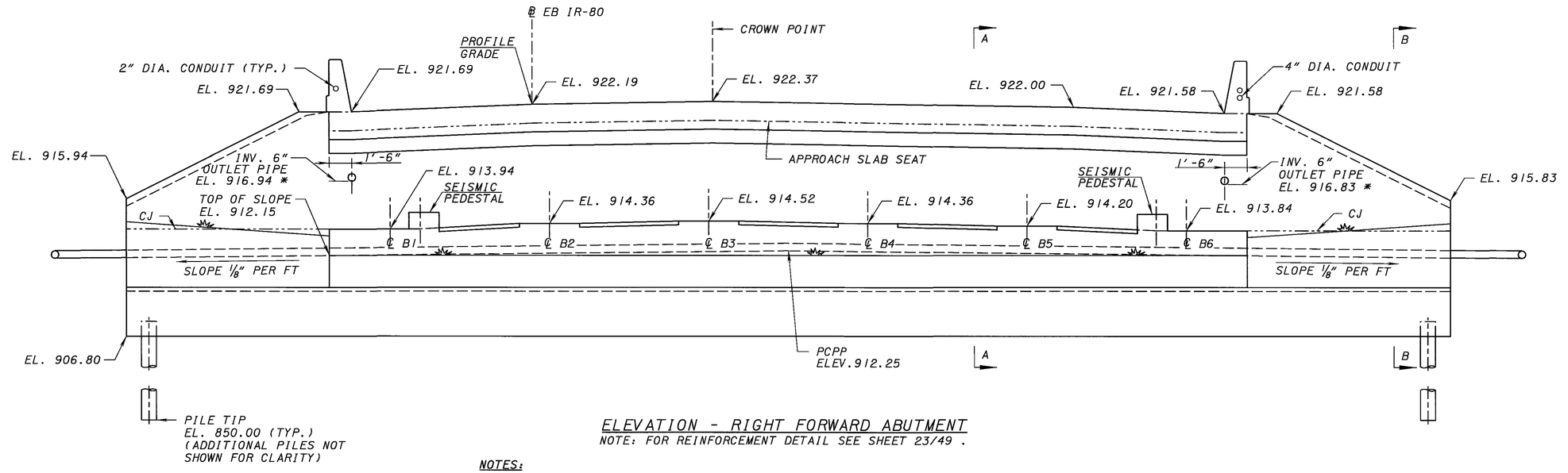
8/12/05 9:32:04 AM
s:\projects\37700\bridge-Reservoir\Final Tracings\MH080AD2D.dgn



PLAN - RIGHT FORWARD ABUTMENT

LEGEND

- (XX) PILE NUMBERS
- ◯ 14" DIA. CONCRETE PILES VERTICAL
- ◯ 14" DIA. CONCRETE PILES BATTERED 3:12



ELEVATION - RIGHT FORWARD ABUTMENT

NOTE: FOR REINFORCEMENT DETAIL SEE SHEET 23/49 .

NOTES:

1. FOR PILE TESTING AND QUANTITIES, NOTES AND ABUTMENT SECTIONS SEE SHEET 24/49.
2. BRIDGE SEAT ELEVATIONS ARE GIVEN AT THE ℄ BRGS., BACKWALL ELEVATIONS ARE GIVEN AT BRIDGE LIMITS AND WING ELEVATIONS ARE GIVEN ALONG THE FRONT FACE OF WALL.
3. FOR ABUTMENT DIAPHRAGM DETAILS SEE SHEET 40/49.
4. FOR ELASTOMERIC BEARING DETAILS SEE SHEET 28/49.
* 5. FOR DRAINAGE TROUGH AND OUTLET PIPE DETAILS SEE SHEET 45/49.
6. FOR MODULAR EXPANSION JOINT DETAILS SEE SHEET 46/49.
7. BRIDGE SEAT ELEVATIONS HAVE BEEN ADJUSTED UPWARD 0.25 INCHES TO COMPENSATE FOR THE VERTICAL DEFORMATION OF THE BEARINGS.
8. PRIOR TO PLACING CONCRETE ABOVE THE FOOTING, ADJUST BEAM SEAT ELEVATIONS AS DIRECTED BY THE ENGINEER TO ACCOUNT FOR ACTUAL BEAM CAMBERS IN EXCESS OF THE ANTICIPATED CAMBERS AT THE TIME OF ERECTION TABULATED ON SHEET 41 OF 49.

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
JAR	RLB	WMG	08/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RAH		5002265L & 5002303R	

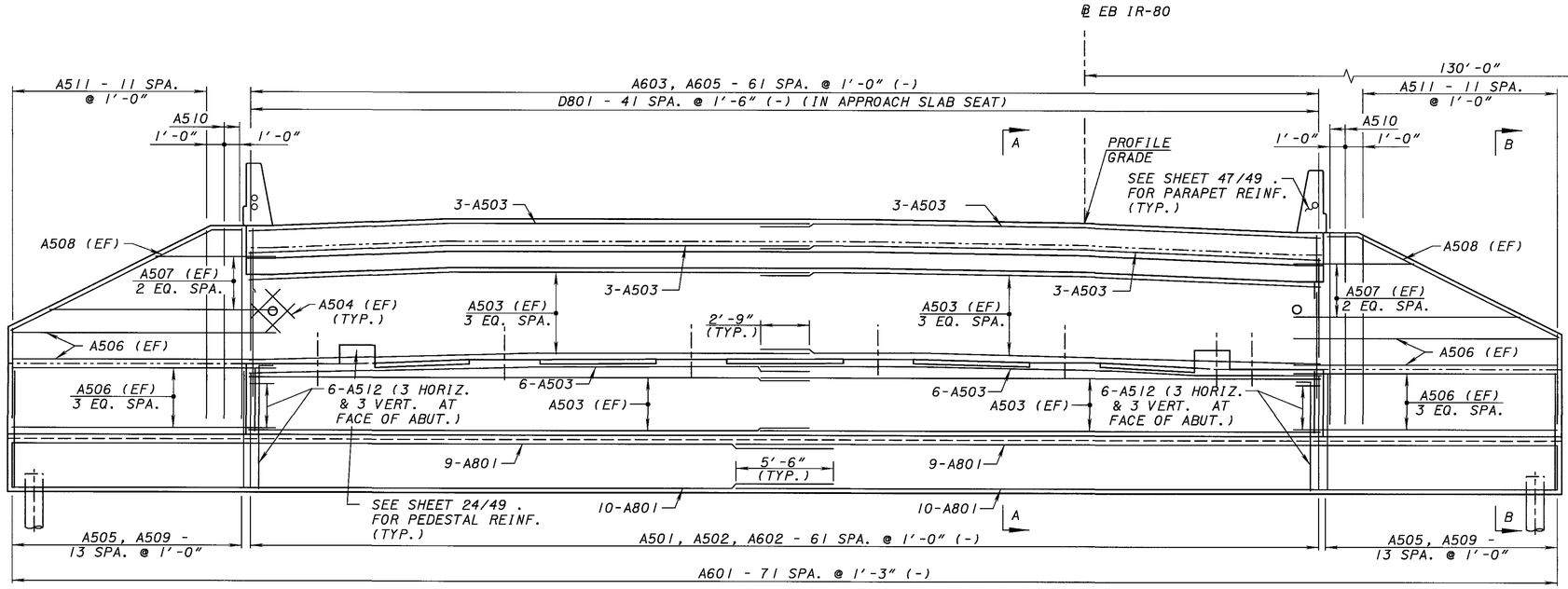
RIGHT FORWARD ABUTMENT PLAN AND ELEVATION
BRIDGE NO. MAH-80-0123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080

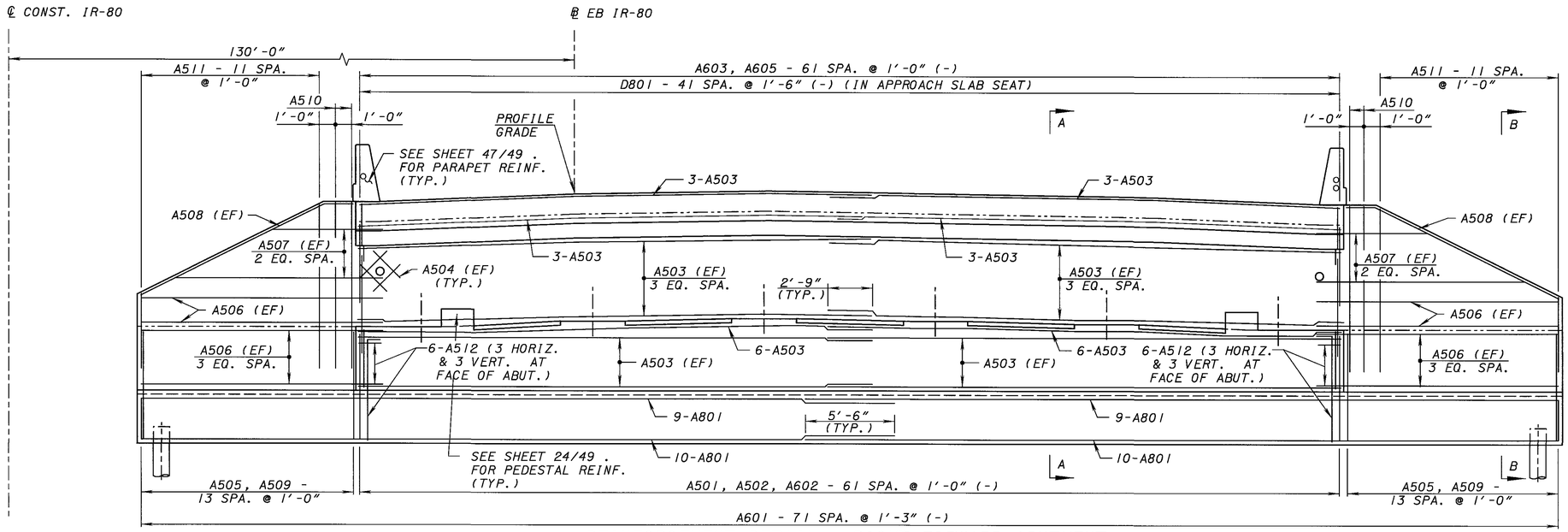
22 / 49

959
1100

8/12/05 9:32:32 AM
s:\projects\37700\bridge\Reservoir\Final Tracings\MH080A02E.dgn



REINFORCEMENT DETAIL - RIGHT REAR ABUTMENT



REINFORCEMENT DETAIL - RIGHT FORWARD ABUTMENT

NOTES:

1. FOR NOTES AND ABUTMENT SECTIONS SEE SHEET 24/49 .

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350 WESTERVILLE, OHIO 43081

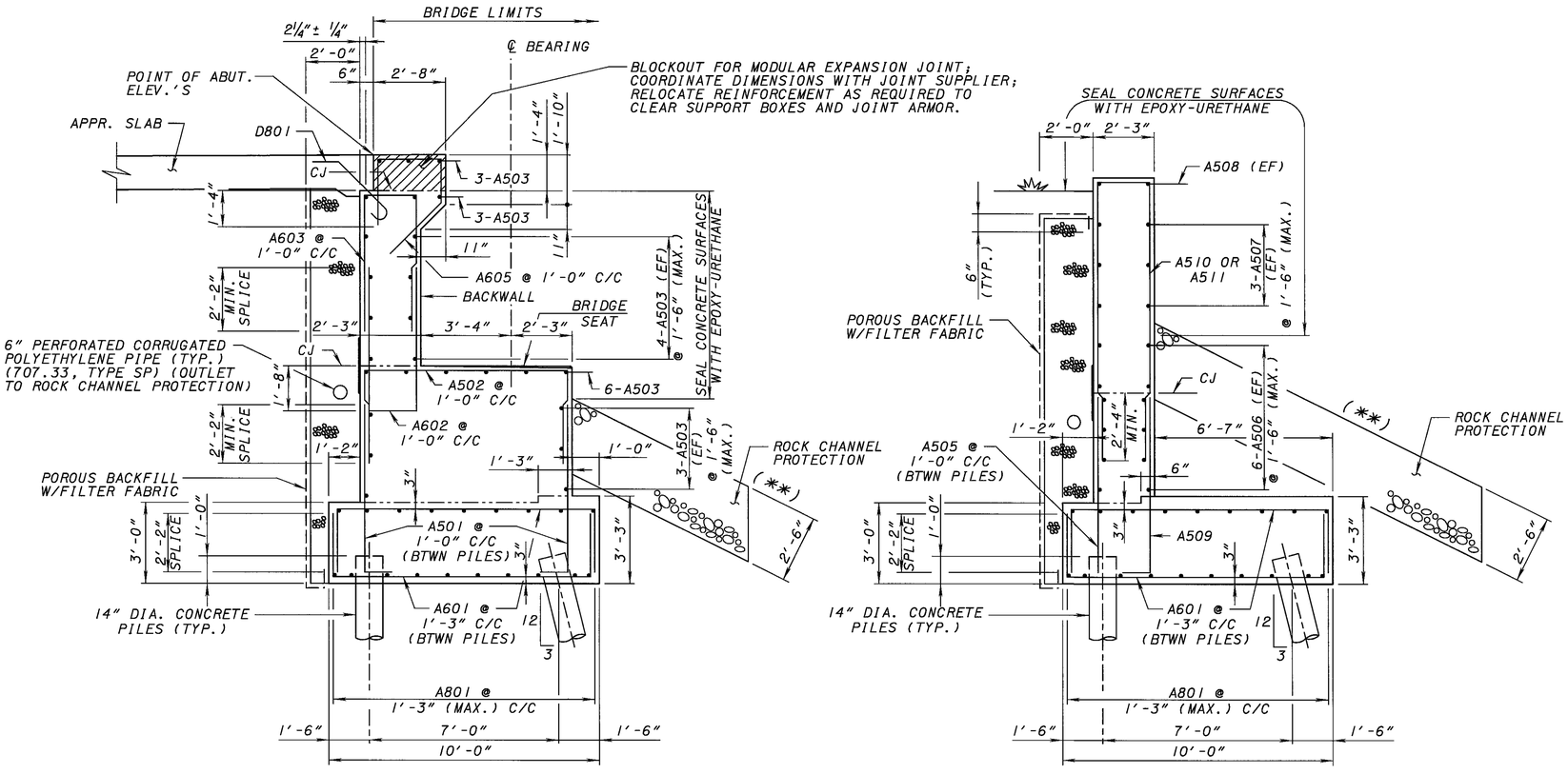
DESIGNED	DRAWN	REVIEWED	DATE
JAR	RLB	WMG	08/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RAH		5002265L & 5002303R	

RIGHT ABUTMENT REINFORCEMENT DETAILS

BRIDGE NO. MAH-80-0123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

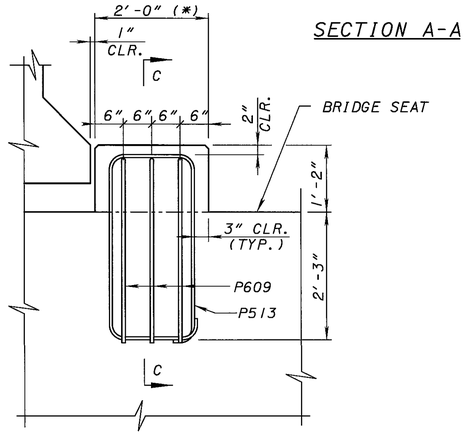
MAH-80-0.97
PID 6080

8/12/05 9:33:02 AM
s:\projects\37700\bridge-Reservoir\Final Tracings\MH080A02F.dgn

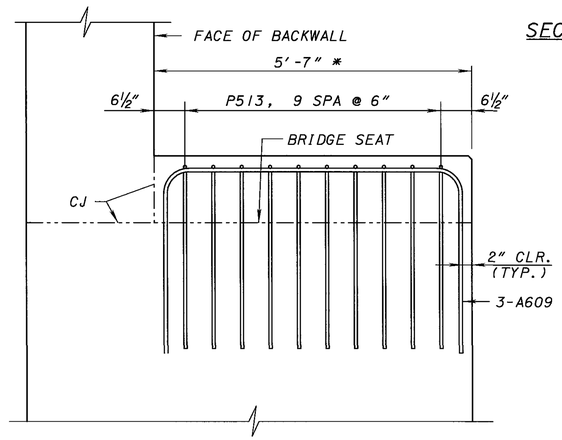


SECTION A-A

SECTION B-B



FRONT VIEW OF SEISMIC PEDESTAL



SECTION C-C

PILE TESTING AND QUANTITIES

ABUTMENT	PILE TIP ELEVATION	NUMBER OF PILES			ULTIMATE BRG VALUE (TONS)	ESTIMATED LENGTH (LF)	ORDER LENGTH (LF)	DYNAMIC TESTING
		VERTICAL	BATTERED	TOTAL				
LEFT REAR	847.50	10	18	28	138	65.00	70.00	1
LEFT FORWARD	840.50	10	18	28	138	70.00	75.00	
RIGHT REAR	849.50	10	18	28	138	60.00	65.00	1
RIGHT FORWARD	850.00	10	18	28	138	60.00	65.00	
TOTAL				112			7700	2

NOTES:

1. POROUS BACKFILL WITH FILTER FABRIC SHALL EXTEND UPWARD TO THE PLANE OF THE SUBGRADE, TO 1'-0" BELOW THE EMBANKMENT SURFACE AND LATERALLY TO THE ENDS OF THE WINGWALLS. FILTER FABRIC IS INCLUDED WITH POROUS BACKFILL FOR PAYMENT.
2. IN ADDITION TO THE PROVISIONS OF SS 898, BACKWALL CONCRETE ABOVE THE CONSTRUCTION JOINT AT THE APPROACH SLAB SEAT SHALL NOT BE PLACED UNTIL AFTER THE DECK CONCRETE IN THE SPAN ADJACENT TO THE ABUTMENT HAS BEEN PLACED AND THE MODULAR EXPANSION JOINT INSTALLED AND ALIGNED.
3. ALL REINFORCING STEEL CLEARANCE SHALL BE 2" TYPICAL UNO.

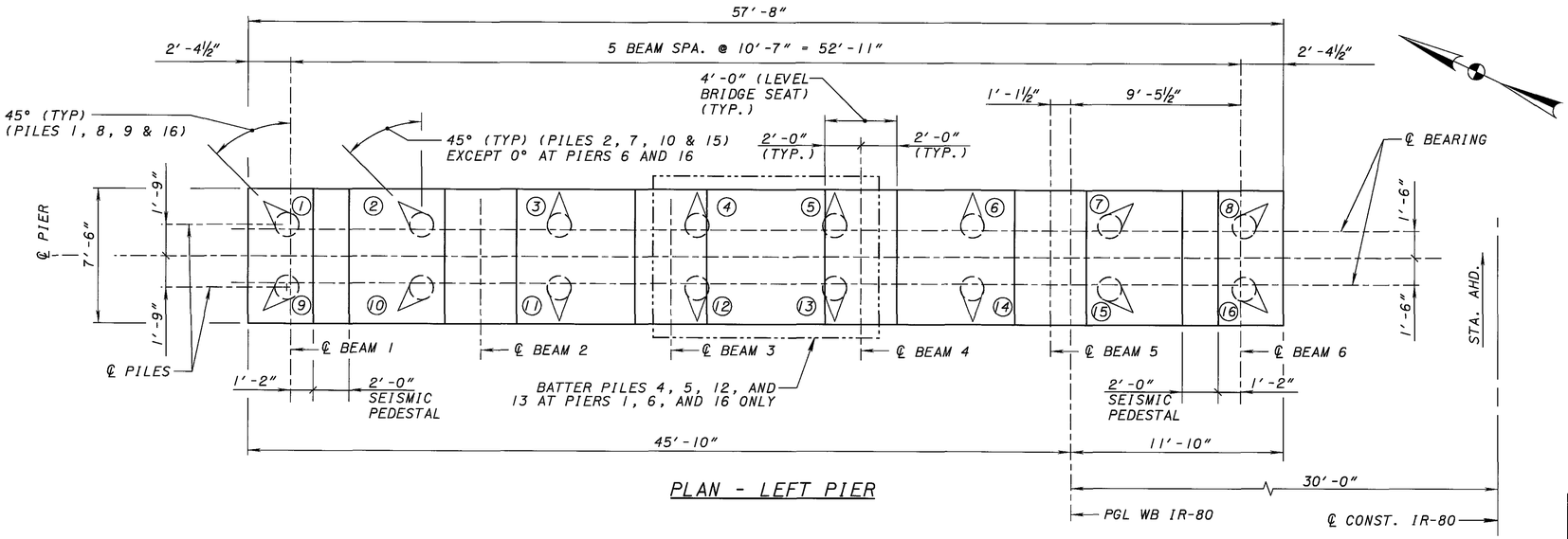
   LAP SPLICES
   LAP NO. 5 BARS 1'-8" MINIMUM.
   LAP NO. 6 BARS 2'-2" MINIUMM.
   LAP NO. 8 BARS 2'-7" MINIMUM.
4. ABUTMENT DIAPHRAGM NOT SHOWN. FOR ABUTMENT DIAPHRAGM DETAILS SEE SHEET 40/49 .
5. SEE ABUTMENT PLAN VIEW FOR NUMBER OF PILES AND SPACING.
6. (*) - THE SURFACE OF THE BEAM SEAT IN THIS AREA SHALL BE FINISHED WITH A SERRATED TROWEL, THE SERRATIONS SHALL BE ¼" DEEP MINIMUM.
7. (**) - 2:1 MAX., SEE SITE PLANS FOR ACTUAL SLOPES
8. IF THE BEAM SEATS ARE SEALED WITH THE EPOXY URETHANE SEALER PRIOR TO SETTING THE BEARINGS, DO NOT APPLY SEALER TO THE CONCRETE SURFACES UNDER THE PROPOSED BEARING LOCATIONS. IF THESE LOCATIONS ARE SEALED, REMOVE THE SEALER TO THE SATISFACATION OF THE ENGINEER PRIOR TO SETTING THE BEARINGS. THE DEPARTMENT WILL NOT PAY FOR THIS REMOVAL.
9. FOR DRAINAGE TROUGH AND OUTLET PIPE DETAILS SEE SHEET 45/49.
10. FOR MODULAR EXPANSION JOINT DETAILS SEE SHEET 46/49.

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350 WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
JAR	RLB	WMG	08/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RAH		5002265L & 5002303R	

ABUTMENT DETAILS
BRIDGE NO. MAH-80-0123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080



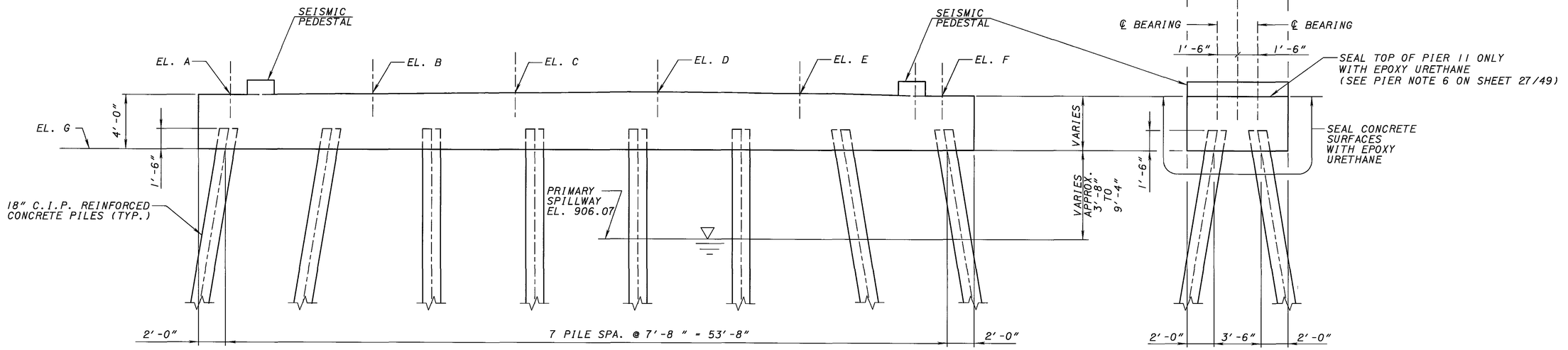
PLAN - LEFT PIER

LEGEND:

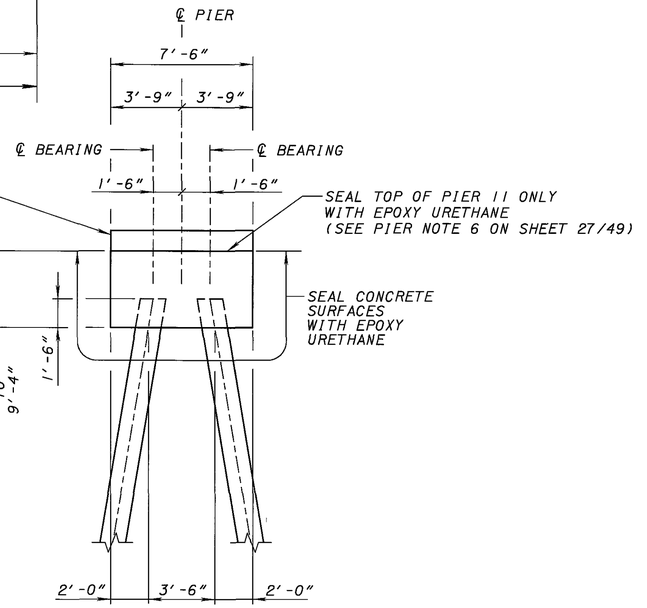
- BATTERED PILE AND DIRECTION OF BATTER (ALL PILES BATTERED 2:12, EXCEPT PIER 6 PILES BATTERED 3:12)
- (XX) - PILE NUMBER

NOTES:

1. DIFFERENCE IN ELEVATIONS BETWEEN FORWARD AND REAR BEARINGS AT EACH PIER WILL BE TAKEN IN THE DECK HAUNCH.
2. BRIDGE SEAT ELEVATIONS HAVE BEEN ADJUSTED UPWARD 0.25 INCHES TO COMPENSATE FOR THE VERTICAL DEFORMATION OF THE BEARINGS.
3. FOR PIER NOTES, TYPICAL PIER REINFORCEMENT, SEISMIC PEDESTAL DETAIL AND C.I.P. REINFORCED CONCRETE PILE DETAIL, SEE SHEET 27/49
4. PRIOR TO PLACING CONCRETE FOR THE PIER CAP, ADJUST BEAM SEAT ELEVATIONS AS DIRECTED BY THE ENGINEER TO ACCOUNT FOR ACTUAL BEAM CAMBERS IN EXCESS OF THE ANTICIPATED CAMBERS AT THE TIME OF ERECTION TABULATED ON SHEET 41/49.



ELEVATION - LEFT PIER



END VIEW

LEFT PIER ELEVATION TABLE AND PILE DATA

PIER	℄ STATION	TYPE	BATTER	PILE TIP ELEVATIONS	ELEVATION A	ELEVATION B	ELEVATION C	ELEVATION D	ELEVATION E	ELEVATION F	ELEVATION G	ULTIMATE BRG. VALUE (TONS)	NO. PILES	ESTIMATED LENGTH (FT)	ORDER LENGTH (FT)	FURNISHED LENGTH (FT)	STATIC LOAD TEST	DYNAMIC LOAD TEST	RESTRIKING
1	521+39.25	EXP.	2:12	835.0	913.66	914.02	914.19	914.34	914.27	913.86	909.66	205.0	16	80.0	85.0	1360			
2	522+60.25	EXP.	2:12	812.5	914.38	914.74	914.90	915.06	914.89	914.48	910.38	205.0	16	105.0	110.0	1760			
3	523+81.25	EXP.	2:12	812.5	914.98	915.34	915.51	915.66	915.50	915.08	910.98	205.0	16	105.0	110.0	1760			
4	525+02.25	EXP.	2:12	813.0	915.59	915.95	916.11	916.27	916.10	915.69	911.59	205.0	16	105.0	110.0	1760	1	1	3
5	526+23.25	EXP.	2:12	816.0	916.19	916.55	916.72	916.87	916.71	916.29	912.19	205.0	16	100.0	105.0	1680			
6	527+44.25	FIXED	3:12	813.0	917.00	917.36	917.53	917.69	917.52	917.11	913.00	205.0	16	105.0	110.0	1760			
7	528+65.25	EXP.	2:12	809.5	917.40	917.76	917.93	918.08	917.92	917.50	913.40	205.0	16	110.0	115.0	1840			
8	529+86.25	EXP.	2:12	806.5	918.01	918.37	918.53	918.69	918.52	918.11	914.01	205.0	16	115.0	120.0	1920			
9	531+07.25	EXP.	2:12	801.5	918.61	918.97	919.14	919.29	919.13	918.71	914.61	205.0	16	120.0	125.0	2000			
10	532+28.25	EXP.	2:12	802.0	919.14	919.50	919.66	919.82	919.65	919.24	915.14	205.0	16	120.0	125.0	2000			
11	533+44.00	EXP. - EXP.	2:12	801.0	919.30	919.66	919.82	919.98	919.82	919.40	915.30	205.0	16	120.0	125.0	2000	1	1	3
12	534+59.75	EXP.	2:12	801.0	919.20	919.56	919.73	919.88	919.72	919.31	915.20	205.0	16	120.0	125.0	2000			
13	535+80.75	EXP.	2:12	807.5	918.72	919.08	919.25	919.40	919.24	918.82	914.72	205.0	16	115.0	120.0	1920			
14	537+01.75	EXP.	2:12	802.0	918.12	918.48	918.64	918.80	918.63	918.22	914.12	205.0	16	120.0	125.0	2000			
15	538+22.75	EXP.	2:12	794.5	917.51	917.87	918.04	918.19	918.03	917.61	913.51	205.0	16	125.0	130.0	2080			
16	539+43.75	FIXED	2:12	790.0	917.11	917.47	917.64	917.80	917.63	917.22	913.11	205.0	16	130.0	135.0	2160			
17	540+64.75	EXP.	2:12	786.0	916.30	916.66	916.83	916.98	916.82	916.40	912.30	205.0	16	130.0	135.0	2160			
18	541+85.75	EXP.	2:12	791.0	915.70	916.06	916.22	916.38	916.21	915.80	911.70	205.0	16	125.0	130.0	2080	1	1	3
19	543+06.75	EXP.	2:12	797.0	915.09	915.45	915.62	915.77	915.61	915.19	911.09	205.0	16	120.0	125.0	2000			
20	544+27.75	EXP.	2:12	805.0	914.48	914.84	915.00	915.16	914.99	914.58	910.48	205.0	16	110.0	115.0	1840			
															TOTAL	38080	3	3	9

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EASTON EXECUTIVE, PARKWAY, SUITE 350 WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
JDR	FLM	WMG	08/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JAR		5002265L & 5002303R	

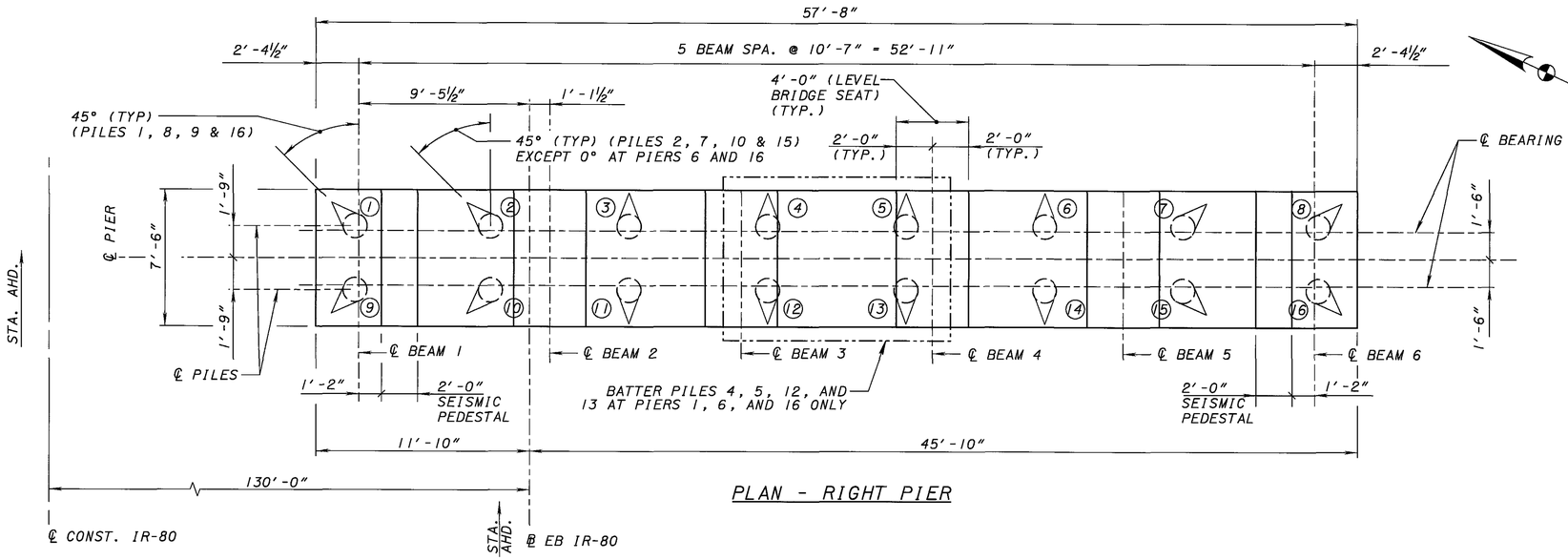
LEFT PIER PLAN AND ELEVATION
BRIDGE NO. MAH-80-0123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080

25 / 49

962
1100

8/12/05 9:34:47 AM
s:\projects\37700\bridge-Reservoir-\Final Tracings\MH080P12A.dgn



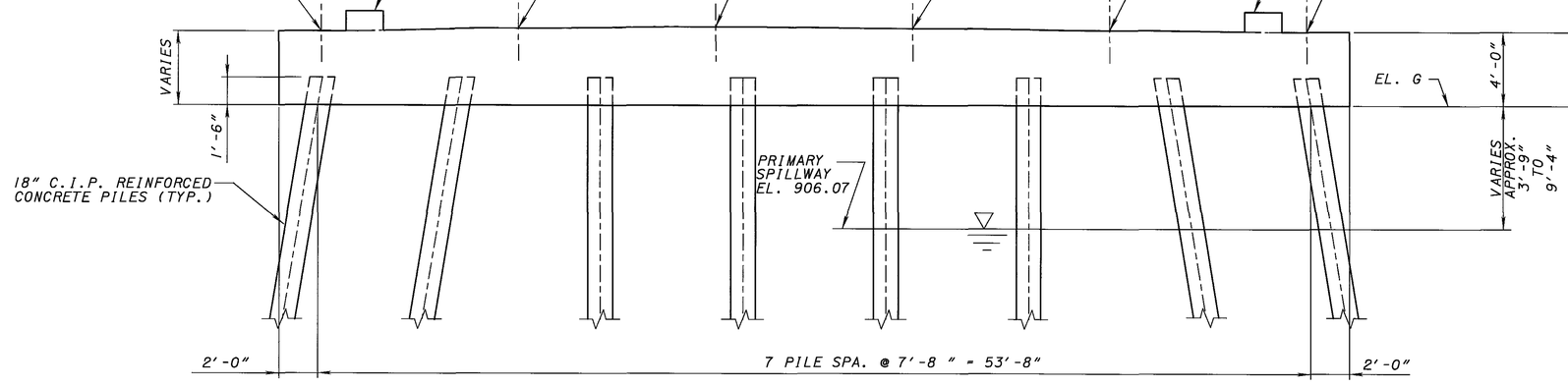
PLAN - RIGHT PIER

LEGEND:

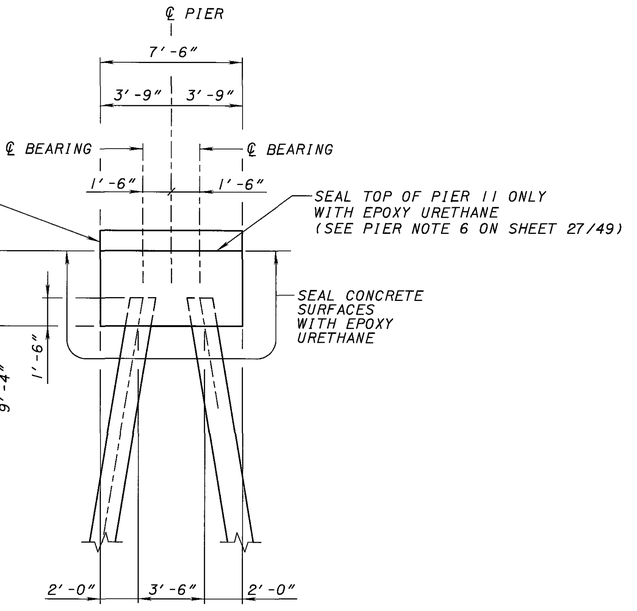
- BATTERED PILE AND DIRECTION OF BATTER (ALL PILES BATTERED 2:12, EXCEPT PIER 6 PILES BATTERED 3:12)
- (XX) - PILE NUMBER

NOTES:

1. DIFFERENCE IN ELEVATIONS BETWEEN FORWARD AND REAR BEARINGS AT EACH PIER WILL BE TAKEN IN THE DECK HAUNCH.
2. BRIDGE SEAT ELEVATIONS HAVE BEEN ADJUSTED UPWARD 0.25 INCHES TO COMPENSATE FOR THE VERTICAL DEFORMATION OF THE BEARINGS.
3. FOR PIER NOTES, TYPICAL PIER REINFORCEMENT, SEISMIC PEDESTAL DETAIL AND C.I.P. REINFORCED CONCRETE PILE DETAIL, SEE SHEET 27/49
4. PRIOR TO PLACING CONCRETE FOR THE PIER CAP, ADJUST BEAM SEAT ELEVATIONS AS DIRECTED BY THE ENGINEER TO ACCOUNT FOR ACTUAL BEAM CAMBERS IN EXCESS OF THE ANTICIPATED CAMBERS AT THE TIME OF ERECTION TABULATED ON SHEET 41/49.



ELEVATION - RIGHT PIER



END VIEW

RIGHT PIER ELEVATION TABLE AND PILE DATA

PIER	℄ STATION	TYPE.	BATTER	PILE TIP ELEVATIONS	ELEVATION A	ELEVATION B	ELEVATION C	ELEVATION D	ELEVATION E	ELEVATION F	ELEVATION G	ULTIMATE BRG. VALUE (TONS)	NO. PILES	ESTIMATED LENGTH (FT)	ORDER LENGTH (FT)	FURNISHED LENGTH (FT)	STATIC LOAD TEST	DYNAMIC LOAD TEST	RESTRIKING
1	521+80.25	EXP.	2:12	817.0	913.86	914.27	914.43	914.28	914.11	913.75	909.75	205.0	16	100.0	105.0	1680			
2	523+01.25	EXP.	2:12	801.0	914.47	914.88	915.05	914.89	914.73	914.37	910.37	205.0	16	115.0	120.0	1920			
3	524+22.25	EXP.	2:12	795.0	915.08	915.49	915.65	915.50	915.33	914.97	910.97	205.0	16	120.0	125.0	2000			
4	525+43.25	EXP.	2:12	795.0	915.68	916.09	916.26	916.10	915.94	915.58	911.58	205.0	16	120.0	125.0	2000	1	1	3
5	526+64.25	EXP.	2:12	796.0	916.29	916.70	916.86	916.71	916.54	916.18	912.18	205.0	16	120.0	125.0	2000			
6	527+85.25	FIXED	3:12	796.0	917.10	917.51	917.68	917.52	917.36	917.00	913.00	205.0	16	125.0	130.0	2080			
7	529+06.25	EXP.	2:12	795.0	917.50	917.91	918.07	917.92	917.75	917.39	913.39	205.0	16	125.0	130.0	2080			
8	530+27.25	EXP.	2:12	797.0	918.10	918.51	918.68	918.52	918.36	918.00	914.00	205.0	16	125.0	130.0	2080			
9	531+48.25	EXP.	2:12	798.5	918.71	919.12	919.28	919.13	918.96	918.60	914.60	205.0	16	120.0	125.0	2000			
10	532+69.25	EXP.	2:12	802.5	919.23	919.65	919.81	919.65	919.49	919.13	915.13	205.0	16	120.0	125.0	2000	1	1	3
11	533+85.00	EXP. - EXP.	2:12	801.0	919.39	919.80	919.97	919.81	919.65	919.29	915.29	205.0	16	120.0	125.0	2000			
12	535+00.75	EXP.	2:12	806.0	919.29	919.70	919.87	919.71	919.55	919.19	915.19	205.0	16	115.0	120.0	1920			
13	536+21.75	EXP.	2:12	812.0	918.81	919.22	919.38	919.23	919.06	918.70	914.70	205.0	16	110.0	115.0	1840			
14	537+42.75	EXP.	2:12	814.5	918.20	918.61	918.78	918.62	918.46	918.10	914.10	205.0	16	105.0	110.0	1760			
15	538+63.75	EXP.	2:12	805.5	917.60	918.01	918.17	918.02	917.85	917.49	913.49	205.0	16	115.0	120.0	1920			
16	539+84.75	FIXED	2:12	818.0	917.20	917.61	917.78	917.62	917.46	917.10	913.10	205.0	16	100.0	105.0	1680			
17	541+05.75	EXP.	2:12	811.5	916.39	916.80	916.96	916.81	916.64	916.28	912.28	205.0	16	105.0	110.0	1760	1	1	3
18	542+26.75	EXP.	2:12	817.0	915.78	916.19	916.36	916.20	916.04	915.68	911.68	205.0	16	100.0	105.0	1680			
19	543+47.75	EXP.	2:12	819.5	915.18	915.59	915.75	915.60	915.43	915.07	911.07	205.0	16	95.0	100.0	1600			
20	544+68.75	EXP.	2:12	829.0	914.56	914.97	915.14	914.98	914.82	914.46	910.46	205.0	16	85.0	90.0	1440			
															TOTAL	37440	3	3	9

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
JDR	FLM	WMG	08/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JAR		5002265L & 5002303R	

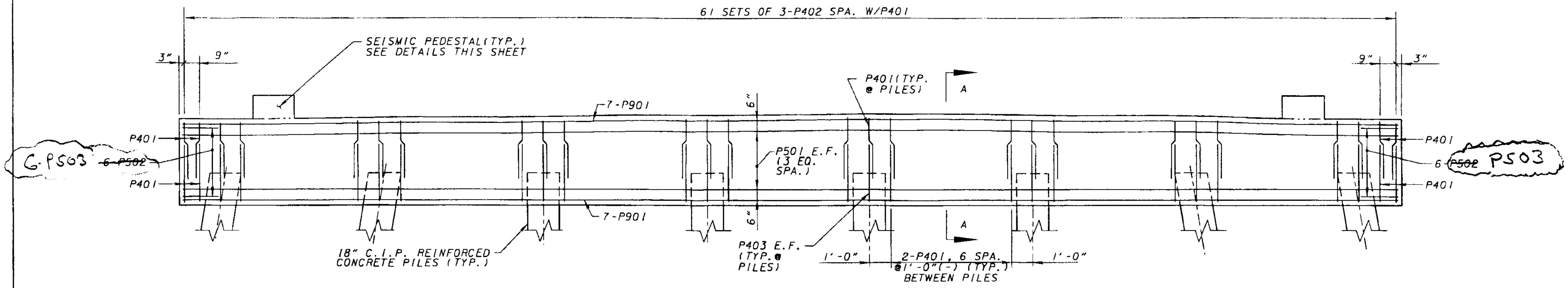
RIGHT PIER PLAN AND ELEVATION
BRIDGE NO. MAH-80-0123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080

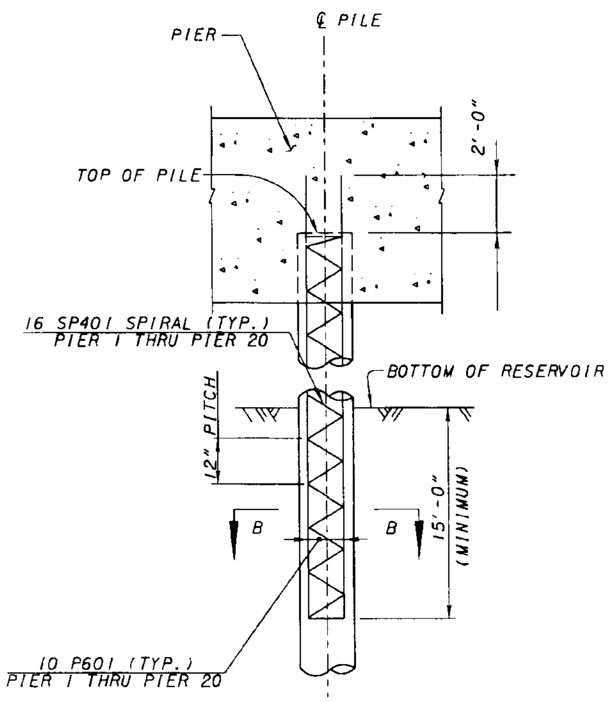
26 / 49

963
1100

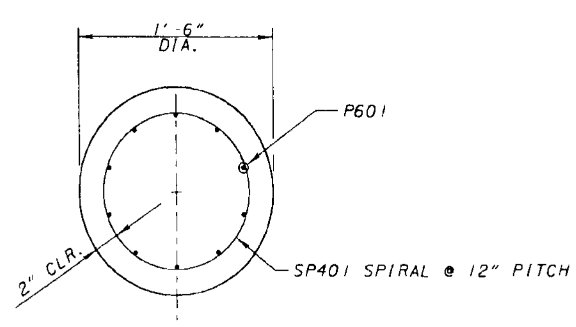
8/12/05 9:34:48 AM
s:\projects\37700\bridge-Reservoir\FinalTracings\MH080PI28.dgn



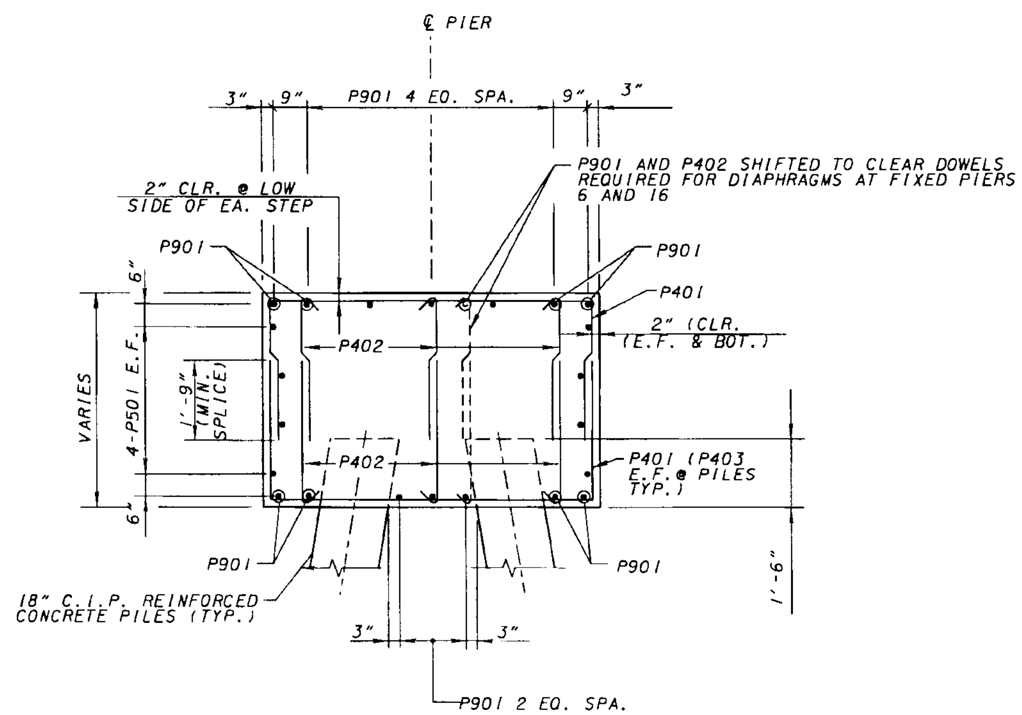
TYPICAL PIER REINFORCEMENT
(LEFT PIER SHOWN, RIGHT PIER OPPOSITE HAND)



C.I.P. CONCRETE PILE DETAIL



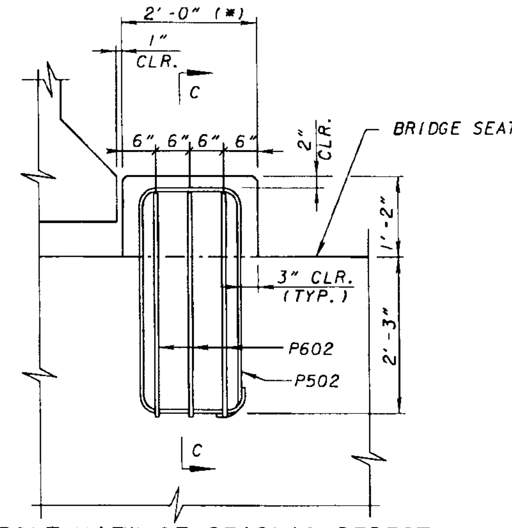
SECTION B-B



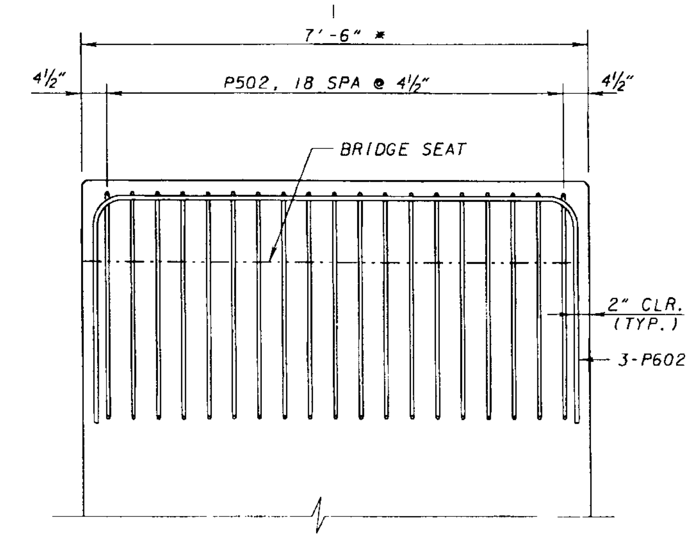
SECTION A-A

PIER NOTES:

1. ALL REINFORCING STEEL CLEARANCE SHALL BE 2" TYPICAL UNO.
2. PIER DIAPHRAGM NOT SHOWN. FOR DIAPHRAGM DETAILS SEE SHEET 40/49.
3. SEE PIER PLAN VIEW FOR NUMBER OF PILES AND SPACING, SHEETS 25/49 & 26/49.
4. FOR REINFORCING STEEL LIST, SEE 48/49.
5. (*) - THE SURFACE OF THE BEAM SEAT IN THIS AREA SHALL BE FINISHED WITH A SERRATED TROWEL. THE SERRATIONS SHALL BE 1/4" DEEP MINIMUM.
6. IF THE BEAM SEATS ARE SEALED WITH THE EPOXY URETHANE SEALER PRIOR TO SETTING THE BEARINGS, DO NOT APPLY SEALER TO THE CONCRETE SURFACES UNDER THE PROPOSED BEARING LOCATIONS. IF THESE LOCATIONS ARE SEALED, REMOVE THE SEALER TO THE SATISFACATION OF THE ENGINEER PRIOR TO SETTING THE BEARINGS. THE DEPARTMENT WILL NOT PAY FOR THIS REMOVAL.



FRONT VIEW OF SEISMIC PEDESTAL
(REQUIRED ALL PIERS EXCEPT PIERS 6 & 16)



SECTION C-C

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.

DESIGNED	DRAWN	REVIEWED	DATE
JRD	FLM	WMG	08/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JAR		5002265L & 5002303R	

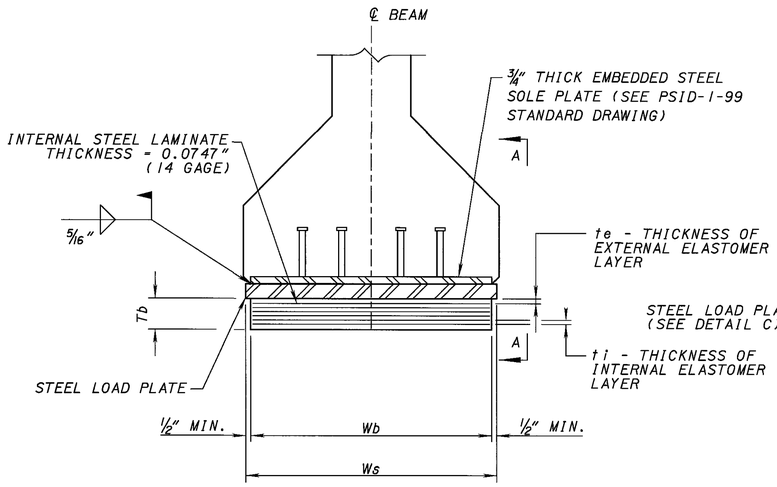
PIER REINFORCEMENT AND DETAILS
BRIDGE NO. MAH-80-0123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080

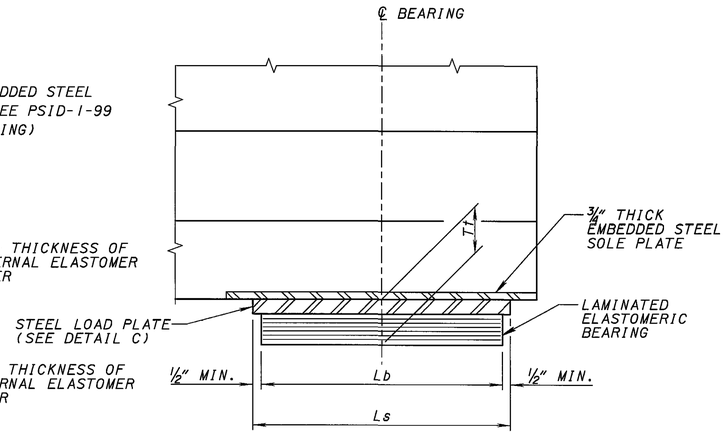
27/49

964/1100

8/0/05 3:40:46 PM
s:\projects\37TOO\bridge-Reservoir\Final Tracings\MH080PI2C.dgn



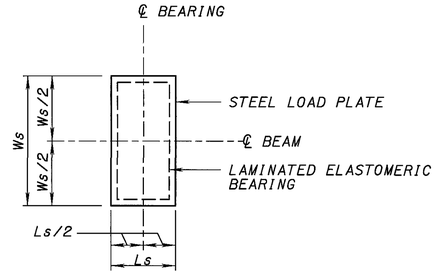
END VIEW



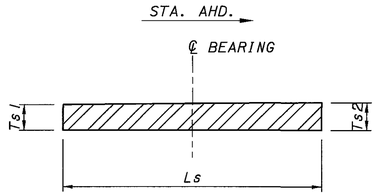
SECTION A-A

NOTES:

1. ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED UNDER DIVISION I, SECTION 14.6.5 (METHOD B) OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES. BEARINGS SHALL COMPLY WITH ITEM 516 AND AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES, SECTION 18, BEARINGS, DIVISION II CONSTRUCTION. TESTING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE BEARINGS, EACH.
2. THE STEEL LOAD PLATE SHALL BE ASTM A709, GRADE 36 STEEL AND GALVANIZED IN ACCORDANCE WITH CMS 711.02. BOND THE LOAD PLATE BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS. CONTROL WELDING SO THAT THE LOAD PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 300° F AS DETERMINED BY THE USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.
3. BEARING REPOSITIONING: IF THE BEAMS ARE ERECTED AT AN AMBIENT TEMPERATURE HIGHER THAN 80° F OR LOWER THAN 40° F, AND THE BEARING SHEAR DEFLECTION EXCEEDS 1/6 OF THE BEARING HEIGHT AT 60° F (±10° F), RAISE THE BEAMS TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE AT 60° F (±10° F).
4. COATING REPAIR: REPAIR THE GALVANIZED COATING ON THE LOAD PLATE AS PER 516.03 AFTER WELDING. CONTROL HEATING OF THE LOAD PLATE AS REQUIRED IN NOTE 2 ABOVE. IF THE LOAD PLATE TEMPERATURE CANNOT BE CONTROLLED AS SPECIFIED, REPAIR THE COATING USING AN ALTERNATE METHOD LISTED IN ASTM A 780, AS DIRECTED BY THE ENGINEER.
5. THE TOTAL DESIGN LOAD FOR A BEARING EQUALS THE SUM OF THE DEAD LOAD AND LIVE LOAD TABULATED IN THE BEARING TABLE.
6. BASIS OF PAYMENT: INCLUDE IN THE UNIT PRICE BID ALL MATERIALS (INCLUDING THE STEEL LOAD PLATE AND COATING), LABOR, TESTING, DOWEL HOLES, ANCHOR RODS, AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL THE LAMINATED ELASTOMERIC BEARINGS. PAYMENT WILL BE MADE AT THE CONTRACT UNIT PRICE BID FOR ITEM 516, EACH, "ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN." SAMPLE BEARINGS SHALL NOT BE MEASURED FOR PAYMENT, BUT SHALL BE CONSIDERED INCIDENTAL TO THE ITEM.



BEARING ORIENTATION PLAN



DETAIL C
STEEL LOAD PLATE

* - SEE, VARIABLE STEEL LOAD PLATE DIMENSIONS

BEARING SCHEDULE (PER BRIDGE, SAME EACH BRIDGE U.N.O.)

BEARING LOCATION	BEARING TYPE	NO. REQ'D.	DEAD LOAD (kips)	LIVE LOAD (kips)	TOTAL LOAD (DL+LL) (kips)	BEARING Lb	BEARING Wb	ti	NO. OF ti's	te (2 EA.)	NUMBER OF INTERNAL LAMINATES (14 GAGE)	Tb	STEEL LOAD PLATE Ls	STEEL LOAD PLATE Ws	STEEL LOAD PLATE Ts1	STEEL LOAD PLATE Ts2	FILLET WELD SIZE	Tt
REAR ABUT.	EXPANSION	6	149.4	77.8	227.2	15"	15"	0.406"	14	0.28"	15	7.37"	16"	25½"	1½"	*	5/16"	*
PIER NO. 1 (NEAR)	EXPANSION	6	151.1	70.8	222.2	15"	15"	0.409"	13	0.28"	14	6.92"	16"	25½"	1⅝"	1½"	5/16"	8.48"
PIER NO. 1 (FAR)	EXPANSION	6	151.1	70.8	222.2	15"	15"	0.409"	13	0.28"	14	6.92"	16"	25½"	1½"	1¾"	5/16"	8.55"
PIERS NO. 2 THRU 5 (NEAR)	EXPANSION	24	153.7	70.7	224.4	15"	15"	0.409"	13	0.28"	14	6.92"	16"	25½"	1⅝"	1½"	5/16"	8.48"
PIERS NO. 2 THRU 5 (FAR)	EXPANSION	24	153.7	70.7	224.4	15"	15"	0.409"	13	0.28"	14	6.92"	16"	25½"	1½"	1¾"	5/16"	8.55"
PIER NO. 6 (NEAR)	FIXED	6	153.7	70.7	224.4	13½"	15"	0.406"	8	0.25"	9	4.42"	16"	25½"	1⅝"	1½"	5/16"	5.98"
PIER NO. 6 (FAR)	FIXED	6	153.7	70.7	224.4	13½"	15"	0.406"	8	0.25"	9	4.42"	16"	25½"	1½"	1¾"	5/16"	6.05"
PIERS NO. 7 THRU 9 (NEAR)	EXPANSION	18	153.7	71.0	224.7	15"	15"	0.409"	13	0.28"	14	6.92"	16"	25½"	1⅝"	1½"	5/16"	8.48"
PIERS NO. 7 THRU 9 (FAR)	EXPANSION	18	153.7	71.0	224.7	15"	15"	0.409"	13	0.28"	14	6.92"	16"	25½"	1½"	1¾"	5/16"	8.55"
PIER NO. 10 (NEAR)	EXPANSION	6	153.7	71.0	224.7	15"	15"	0.409"	13	0.28"	14	6.92"	16"	25½"	1⅝"	1½"	5/16"	8.48"
PIER NO. 10 (FAR)	EXPANSION	6	153.7	71.0	224.7	15"	15"	0.409"	13	0.28"	14	6.92"	16"	25½"	1½"	1¾"	5/16"	8.55"
PIER NO. 11 (NEAR)	EXPANSION	6	149.6	77.8	227.4	15"	15"	0.406"	14	0.28"	15	7.37"	16"	25½"	1⅝"	1½"	5/16"	8.93"
PIER NO. 11 (FAR)	EXPANSION	6	149.6	77.8	227.4	15"	15"	0.406"	14	0.28"	15	7.37"	16"	25½"	1½"	1⅝"	5/16"	8.93"
PIER NO. 12 (NEAR)	EXPANSION	6	152.2	71.0	223.2	15"	15"	0.409"	13	0.28"	14	6.92"	16"	25½"	1¾"	1½"	5/16"	8.55"
PIER NO. 12 (FAR)	EXPANSION	6	152.2	71.0	223.2	15"	15"	0.409"	13	0.28"	14	6.92"	16"	25½"	1½"	1⅝"	5/16"	8.48"
PIER NO. 13 (NEAR)	EXPANSION	6	154.2	69.7	223.9	15"	15"	0.409"	13	0.28"	14	6.92"	16"	25½"	1¾"	1½"	5/16"	8.55"
PIER NO. 13 (FAR)	EXPANSION	6	154.2	69.7	223.9	15"	15"	0.409"	13	0.28"	14	6.92"	16"	25½"	1½"	1⅝"	5/16"	8.48"
PIERS NO. 14 AND 15 (NEAR)	EXPANSION	12	153.7	70.8	224.5	15"	15"	0.409"	13	0.28"	14	6.92"	16"	25½"	1¾"	1½"	5/16"	8.55"
PIERS NO. 14 AND 15 (FAR)	EXPANSION	12	153.7	70.8	224.5	15"	15"	0.409"	13	0.28"	14	6.92"	16"	25½"	1½"	1⅝"	5/16"	8.48"
PIER NO. 16 (NEAR)	FIXED	6	153.7	70.7	224.4	13½"	15"	0.406"	8	0.25"	9	4.42"	16"	25½"	1¾"	1½"	5/16"	6.05"
PIER NO. 16 (FAR)	FIXED	6	153.7	70.7	224.4	13½"	15"	0.406"	8	0.25"	9	4.42"	16"	25½"	1½"	1⅝"	5/16"	5.98"
PIERS NO. 17 THRU 19 (NEAR)	EXPANSION	18	153.7	70.7	224.4	15"	15"	0.409"	13	0.28"	14	6.92"	16"	25½"	1¾"	1½"	5/16"	8.55"
PIERS NO. 17 THRU 19 (FAR)	EXPANSION	18	153.7	70.7	224.4	15"	15"	0.409"	13	0.28"	14	6.92"	16"	25½"	1½"	1⅝"	5/16"	8.48"
PIER NO. 20 (NEAR)	EXPANSION	6	151.4	70.8	222.2	15"	15"	0.409"	13	0.28"	14	6.92"	16"	25½"	1¾"	1½"	5/16"	8.55"
PIER NO. 20 (FAR)	EXPANSION	6	151.4	70.8	222.2	15"	15"	0.409"	13	0.28"	14	6.92"	16"	25½"	1½"	1⅝"	5/16"	8.48"
FORWARD ABUTMENT	EXPANSION	6	149.4	77.8	227.2	15"	15"	0.406"	14	0.28"	15	7.37"	16"	25½"	1¾"	1½"	5/16"	9.00"

VARIABLE STEEL LOAD PLATE DIMENSIONS

BEARING LOCATION	Ts2	Tt
LEFT REAR ABUT. BEAMS B1 THRU B4	1⅞"	9.06"
LEFT REAR ABUT. BEAMS B5 AND B6	1¾"	9.00"
RIGHT REAR ABUT. ALL BEAMS	1¾"	9.00"

DESIGNED AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350 WESTERVILLE, OHIO 43081

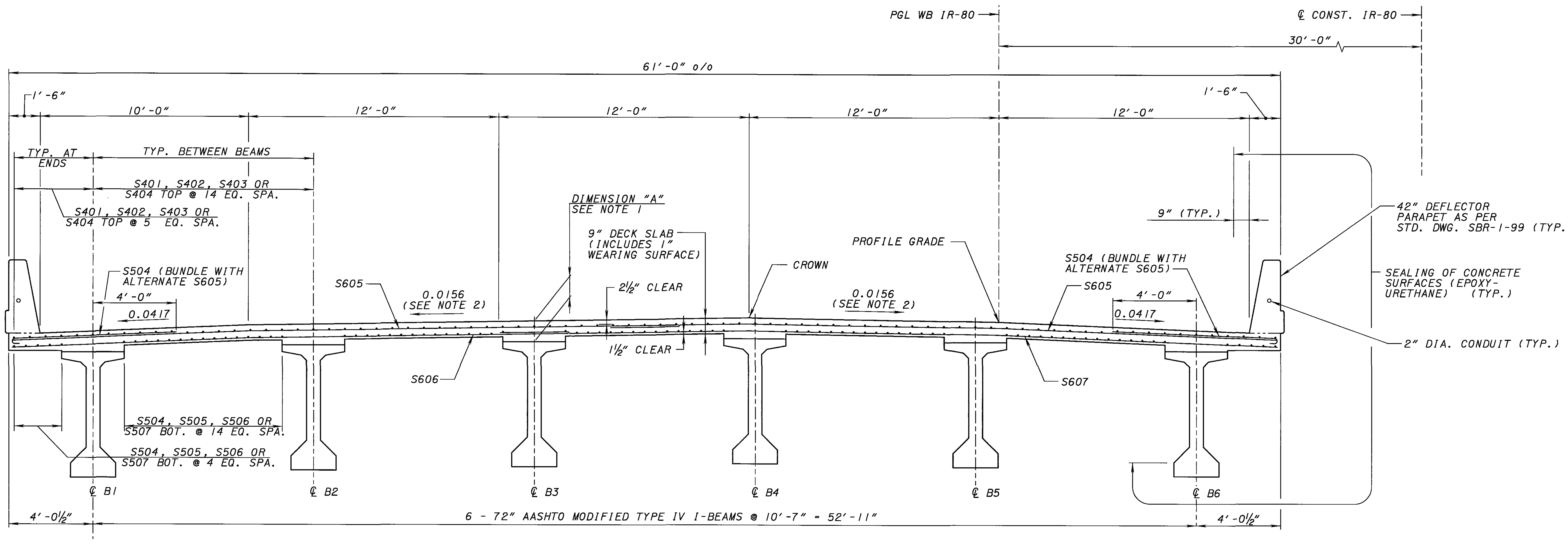
DESIGNED	DRAWN	REVIEWED	DATE
MTO	WHM	WMG	08/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JAR		5002265L & 5002303R	

LAMINATED ELASTOMERIC BEARING DETAILS
BRIDGE NO. MAH-80-0/23 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

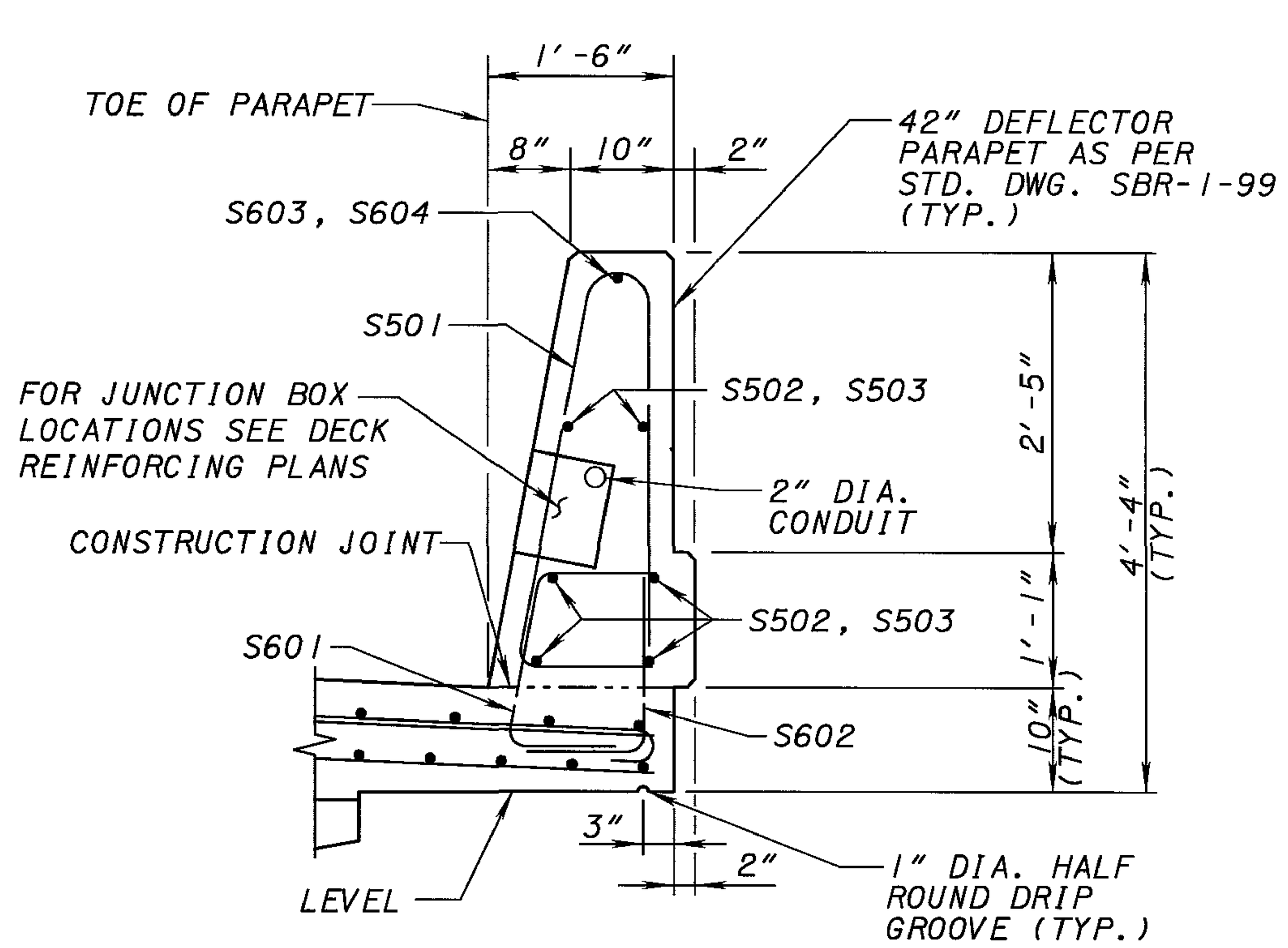
MAH-80-0.97
PID 6080

965/1100

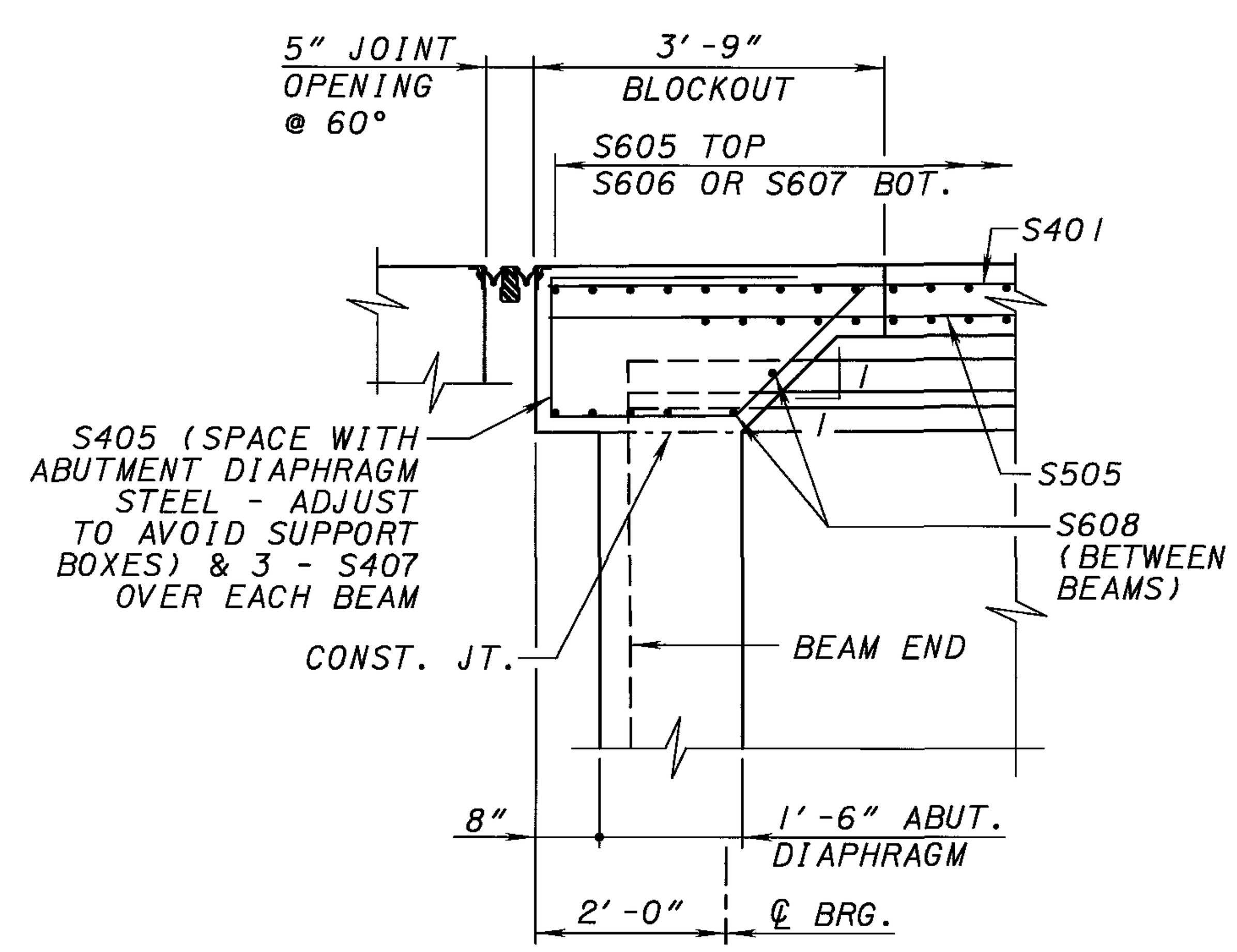
8/12/05 9:35:53 AM
s:\projects\37700\bridge-Reservoir\Final Tracings\MH080BR2A.dgn



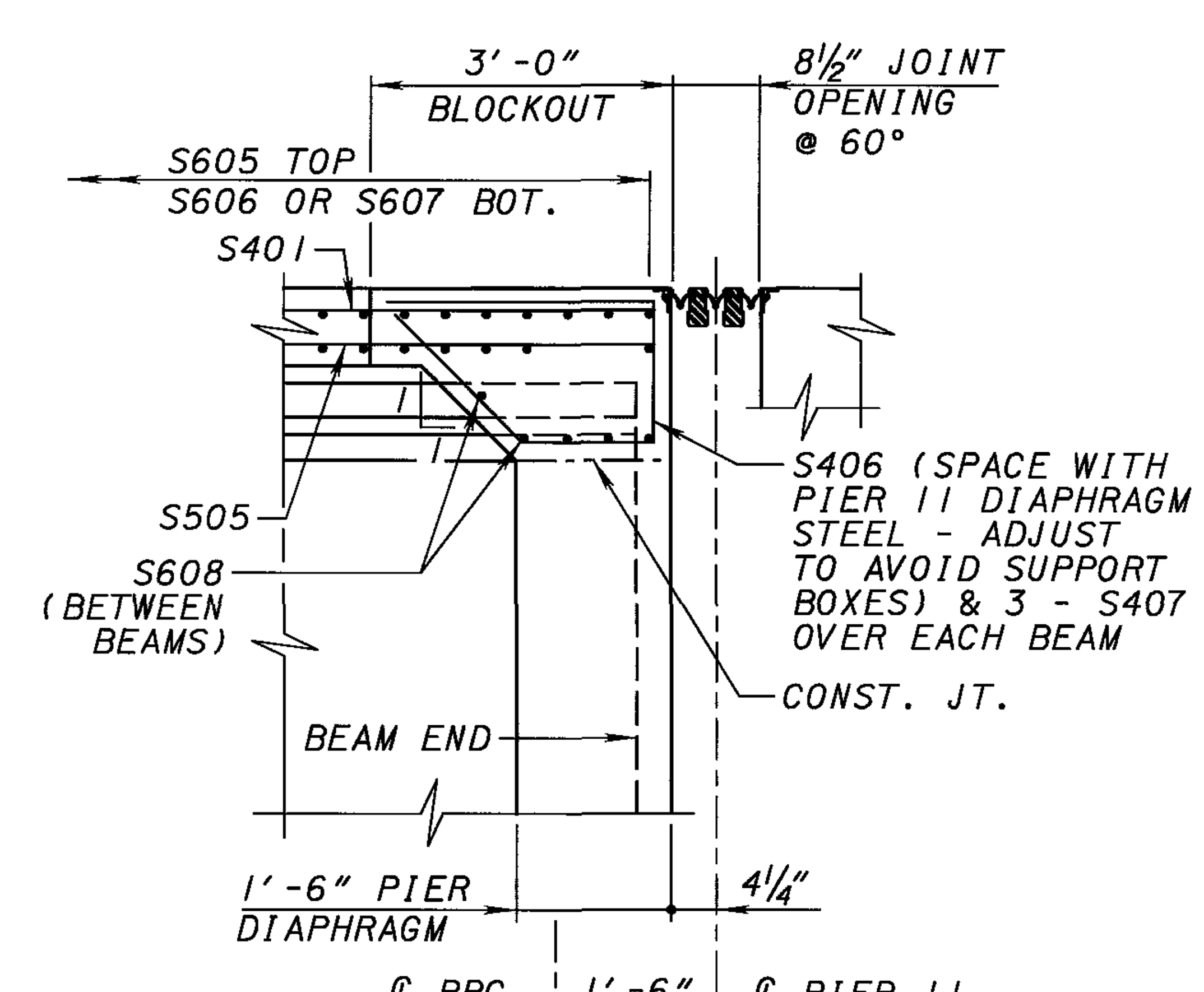
TRANSVERSE SECTION - LEFT BRIDGE
POSITIVE MOMENT REINFORCEMENT SHOWN
SEE TRANSVERSE SECTION - RIGHT BRIDGE FOR
NEGATIVE MOMENT REINFORCEMENT (OVER PIERS)



TYPICAL PARAPET DETAIL



SECTION A-A



SECTION B-B

SLAB NOTES

1. SEE SHEETS 41/49 AND 42/49 FOR DIMENSION "A" AND DECK THICKNESS DIAGRAMS.
2. THE CROSS SLOPE VARIES UP TO STA. 521+64.20 (LEFT BRIDGE) AND UP TO STA. 521+57.80 (RIGHT BRIDGE). SEE ROADWAY PLANS AND BRIDGE LAY-OUT PLAN SHEET 13/49 FOR TRANSITION DETAILS.
3. MINIMUM LAP LENGTHS

   LAP NO. 4 BARS 2'-7"
   LAP NO. 5 BARS 3'-3"
   LAP S605, S606, AND S607 BARS 3'-1"
   LAP ALL OTHER NO. 6 BARS 3'-10"
4. FOR DECK REINFORCING PLANS, PARAPET REINFORCING DETAILS, AND BAR STAGGER DIAGRAM OVER PIERS SEE SHEETS 31/49 THRU 34/49.
5. FOR DIAPHRAGM DETAILS, SEE SHEET 40/49.
6. FOR LOCATION OF SECTIONS A-A & B-B, SEE DECK REINFORCING PLAN UNIT 1 AND UNIT 2.
7. ALL BARS EPOXY COATED.
8. FOR REINFORCING STEEL LIST, SEE SHEET 48/49.
9. FOR EXPANSION JOINT DETAILS, SEE SHEET 46/49.

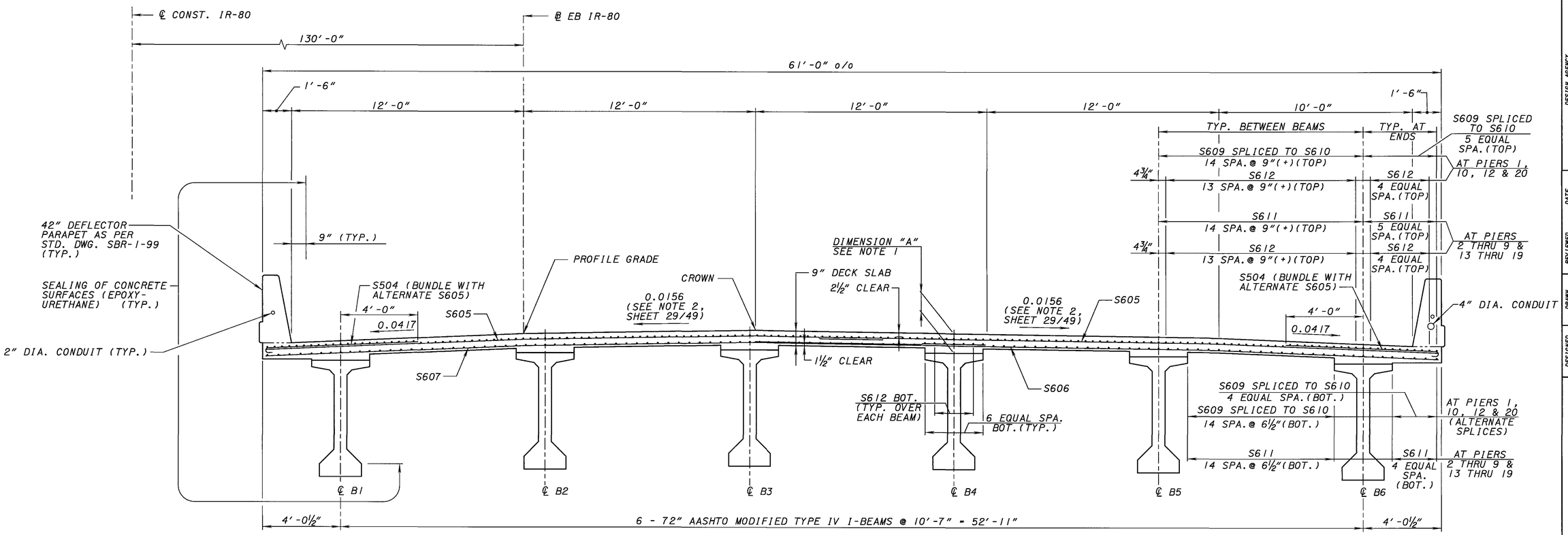
DESIGN AGENCY
GANNETT FLEMING
ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

DESIGNED JAR	DRAWN RJC	REVIEWED WMG	DATE 08/04
CHECKED RAH	REVISED	STRUCTURE FILE NUMBER 5002265L & 5002303R	

TRANSVERSE SECTION - LEFT BRIDGE
BRIDGE NO. MAH-80-0123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080

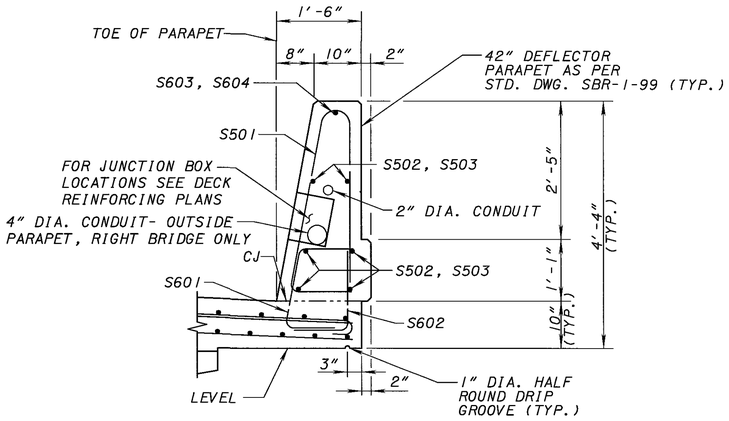
8/12/05 9:49:59 AM
s:\projects\37700\bridge-Reservoir\Final Tracings\MAH080TS2A.dgn



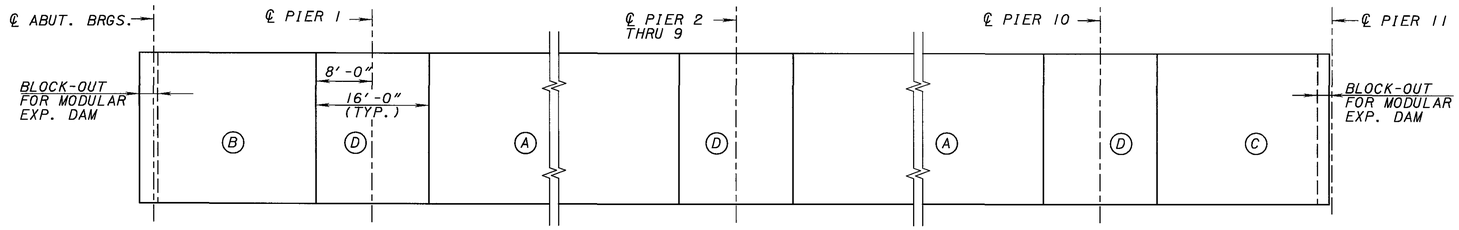
TRANSVERSE SECTION - RIGHT BRIDGE

NEGATIVE MOMENT REINFORCEMENT SHOWN (OVER PIERS)
SEE TRANSVERSE SECTION - LEFT BRIDGE, SHEET 29 OF 49
FOR POSITIVE MOMENT REINFORCEMENT

FOR SLAB NOTES, SEE SHEET 29/49.



TYPICAL PARAPET DETAIL



SLAB POUR SEQUENCE
UNIT 1 SHOWN, UNIT 2 SIMILAR

SLAB POUR NOTES

1. CONCRETE DIAPHRAGMS AT MOVABLE DECK JOINTS SHALL BE COMPLETED AT LEAST 48 HOURS BEFORE DECK PLACEMENT BEGINS.
2. DIAPHRAGMS AT PIERS 1 THRU 10 AND 12 THRU 20 SHALL NOT BE PLACED UNTIL AFTER DECK SEGMENTS (A), (B)&(C) HAVE BEEN PLACED.
3. AREAS (A), (B)&(C) MAY BE PLACED IN ANY ORDER OR SIMULTANEOUSLY.
4. AREAS (A), (B)&(C) SHALL BE PLACED BEFORE AREAS (D).
5. AREAS (D) SHALL BE PLACED SYMMETRICALLY ABOUT THE FIXED PIERS (I.E. PLACE SLAB AT PIER 6 FIRST, THEN AT PIERS 5 & 7, THEN AT PIERS 4 & 8, ETC.).
6. THE PIER DIAPHRAGMS CONCRETE AT AREAS (D) SHALL BE PLACED MONOLITHICALLY WITH THE DECK SLABS IN AREAS D.
7. CONTRACTOR HAS THE OPTION TO POUR THE ENTIRE DECK INCLUDING DIAPHRAGMS IN ONE CONTINUOUS POUR WITH NO CONSTRUCTION JOINT BETWEEN DECK AND PIER DIAPHRAGMS. THE CONTINUOUS POUR WITH NO CONSTRUCTION JOINT WILL BE APPROVED, IF THE PLACEMENT SUBMITTAL CAN ASSURE THAT THE DECK CONCRETE IN THE ADJACENT SPAN WILL BE PLACED BEFORE PIER DIAPHRAGM CONCRETE HAS REACHED ITS INITIAL SET.
8. REFER TO STANDARD DRAWING PSID-1-99, SHEET 8/8 FOR ADDITIONAL REQUIREMENTS.

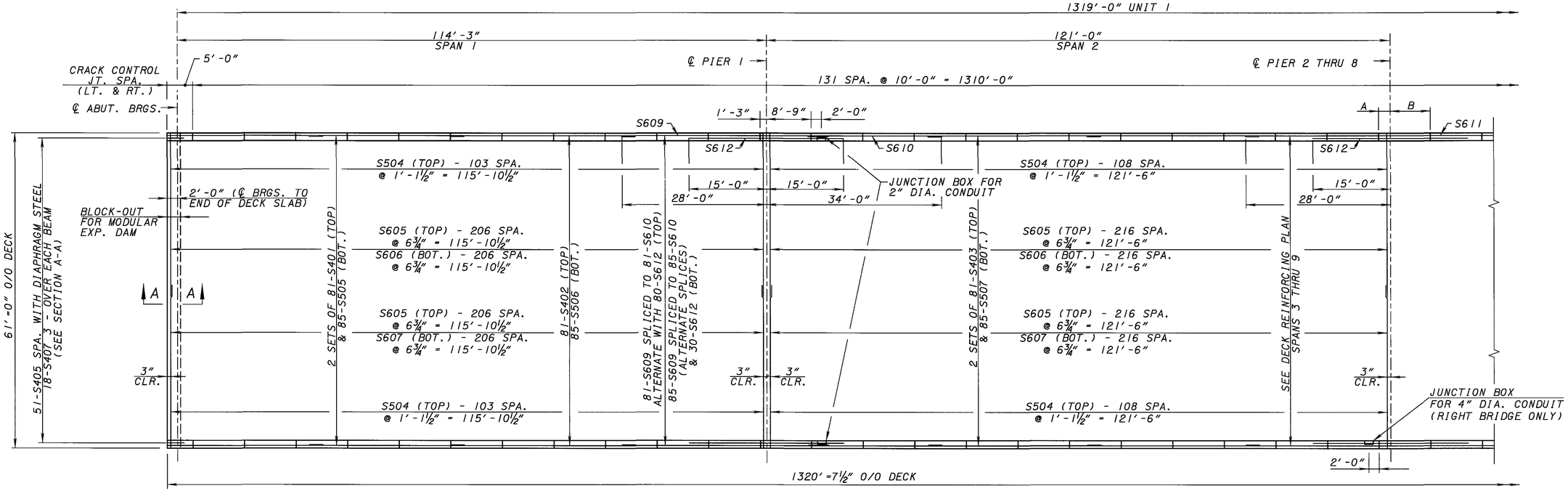
DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EASTWIND LANDING • SUITE 350 WESTERVILLE, OHIO

DESIGNED	DRAWN	REVISED	CHECKED
JAR	RJC	WMG	RAH

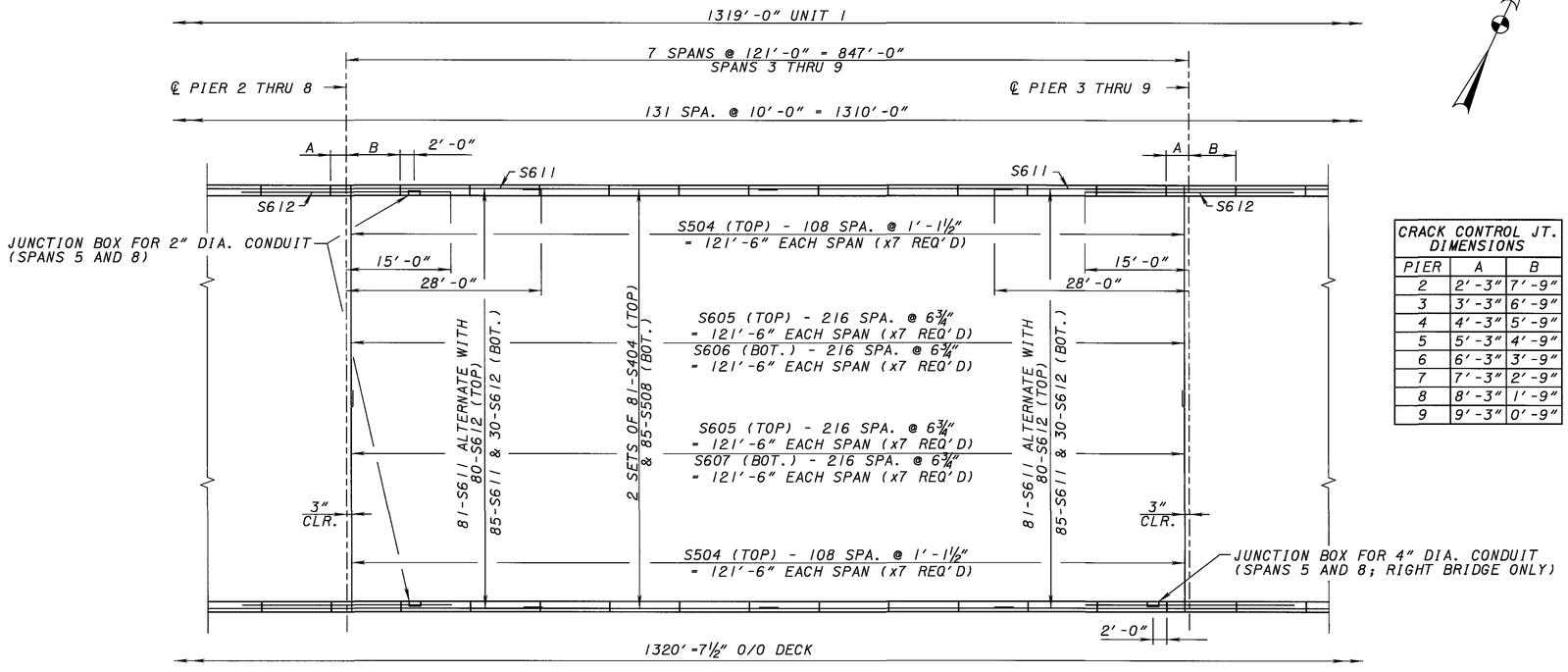
DATE 08/04
STRUCTURE FILE NUMBER 5002265L & 5002303R

TRANSVERSE SECTION - RIGHT BRIDGE
BRIDGE NO. MAH-80-0123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080



DECK REINFORCING PLAN - SPANS 1 AND 2
UNIT 1



DECK REINFORCING PLAN SPANS 3 THRU 9
UNIT 1

CRACK CONTROL JT. DIMENSIONS		
PIER	A	B
2	2'-3"	7'-9"
3	3'-3"	6'-9"
4	4'-3"	5'-9"
5	5'-3"	4'-9"
6	6'-3"	3'-9"
7	7'-3"	2'-9"
8	8'-3"	1'-9"
9	9'-3"	0'-9"

NOTES

1. FOR SUBSTRUCTURE STATIONS, SEE BRIDGE LAYOUT PLANS, SHEET 13/49.
2. FOR DECK REINFORCING PLAN UNIT 1 - SPANS 10 AND 11 SEE SHEET 32/49.
3. FOR TRANSVERSE SECTIONS, SECTION A-A AND NOTES SEE SHEET 29/49 AND 30/49.
4. FOR PARAPET REINFORCEMENT SEE PARAPET REINFORCING DETAIL SHEET 35/49.
5. FOR REINFORCING STEEL LIST, SEE SHEET 48/49.
6. ALL BARS TO BE EPOXY COATED.

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

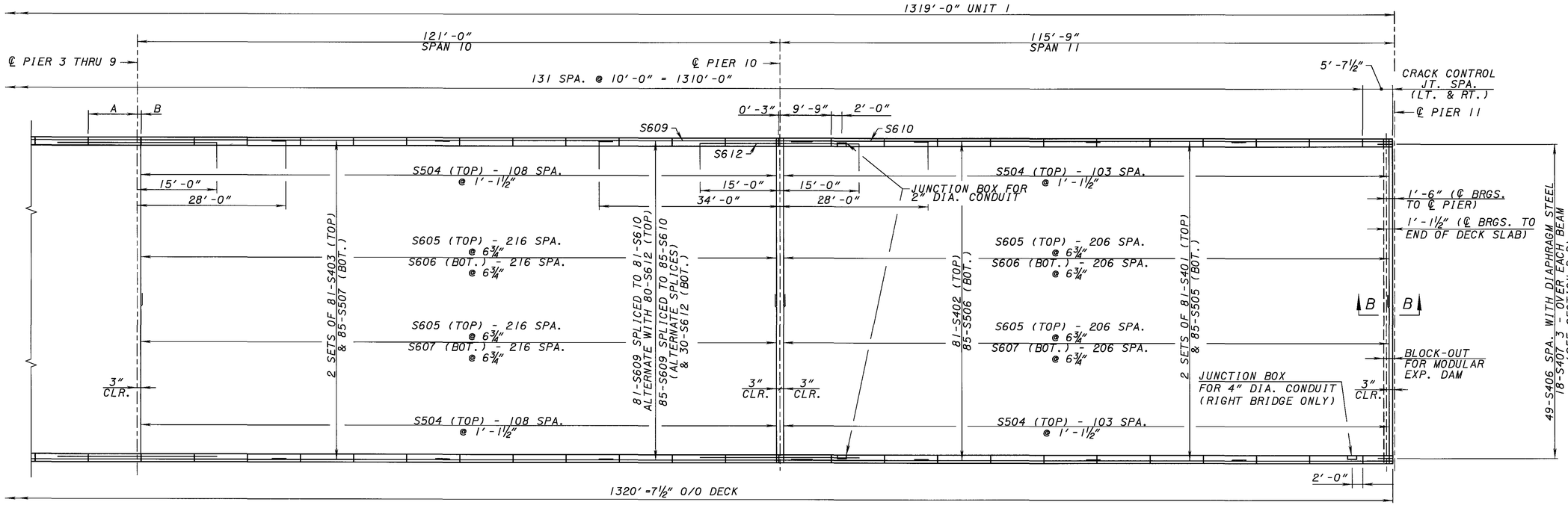
DESIGNED	DRAWN	REVIEWED	DATE
JAR	RJC	WMG	08/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RAH		5002265L & 5002303R	

DECK REINFORCING PLAN - UNIT 1 (SHEET 1 OF 2)
BRIDGE NO. MAH-80-0123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080

968/1100

8/12/05 2:15:14 PM
s:\projects\37700\bridge-Reservoir\Final Tracings\MH080S02A.dgn



DECK REINFORCING PLAN - SPANS 10 AND 11
UNIT 1

NOTES

1. FOR SUBSTRUCTURE STATIONS, SEE BRIDGE LAYOUT PLANS, SHEET 13/49.
2. FOR DECK REINFORCING PLAN UNIT 1 - SPANS 1 THRU 9 SEE SHEET 31/49.
3. FOR TRANSVERSE SECTIONS, SECTION B-B AND NOTES SEE SHEET 29/49 AND 30/49.
4. FOR PARAPET REINFORCEMENT SEE PARAPET REINFORCING DETAIL SHEET 35/49.
5. FOR REINFORCING STEEL LIST, SEE SHEET 48/49.
6. ALL BARS TO BE EPOXY COATED.

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350 WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
JAR	RJC	WMG	08/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RAH		5002265L & 5002303R	

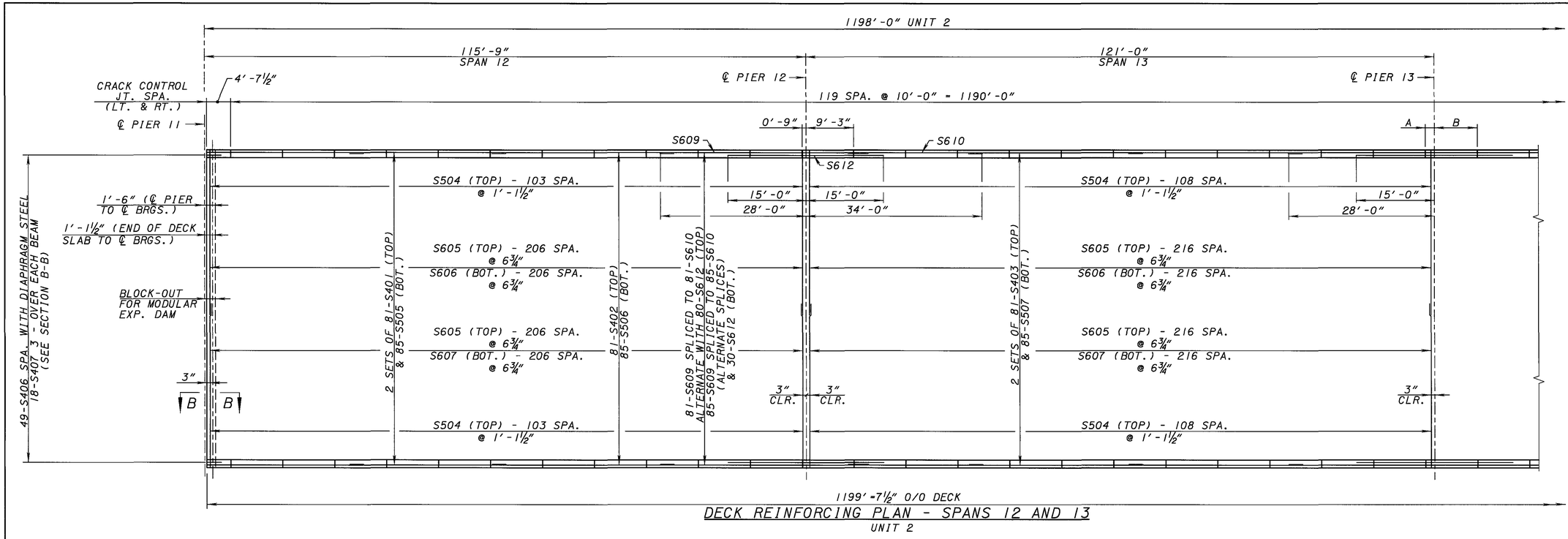
DECK REINFORCING PLAN - UNIT 1 (SHEET 2 OF 2)
BRIDGE NO. MAH-80-0.123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080

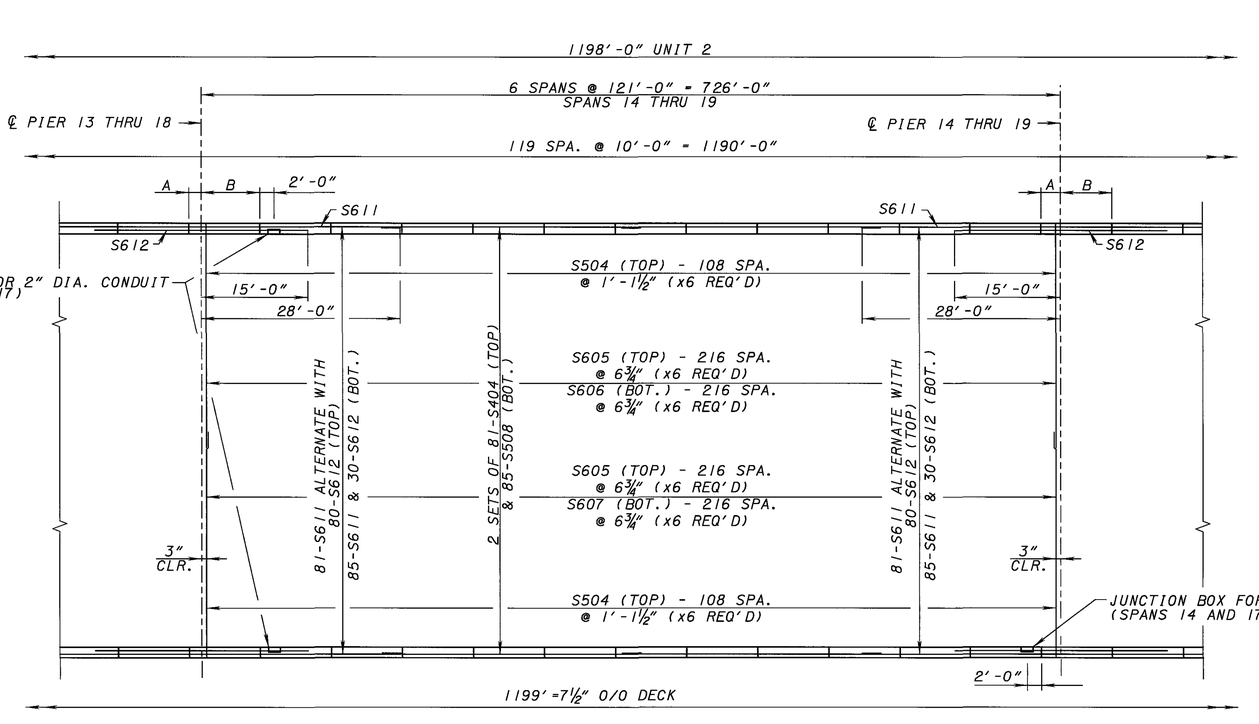
32 / 49

969
1100

8/12/05 9:56:34 AM
s:\projects\37700\bridge-Reservoir-Final Tracings\MH080S02B.dgn



DECK REINFORCING PLAN - SPANS 12 AND 13
UNIT 2



DECK REINFORCING PLAN SPANS 14 THRU 19
UNIT 2

CRACK CONTROL JT. DIMENSIONS		
PIER	A	B
13	1'-9"	8'-3"
14	2'-9"	7'-3"
15	3'-9"	6'-3"
16	4'-9"	5'-3"
17	5'-9"	4'-3"
18	6'-9"	3'-3"
19	7'-9"	2'-3"

NOTES

1. FOR SUBSTRUCTURE STATIONS, SEE BRIDGE LAYOUT PLANS, SHEET 13/49.
2. FOR DECK REINFORCING PLAN UNIT 2 - SPANS 20 THRU 21 SEE SHEET 34/49.
3. FOR TRANSVERSE SECTIONS, SECTION B-B AND NOTES SEE SHEET 29/49 AND 30/49.
4. FOR PARAPET REINFORCEMENT SEE PARAPET REINFORCING DETAIL SHEET 35/49.
5. FOR REINFORCING STEEL LIST, SEE SHEET 48/49.
6. ALL BARS TO BE EPOXY COATED.

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

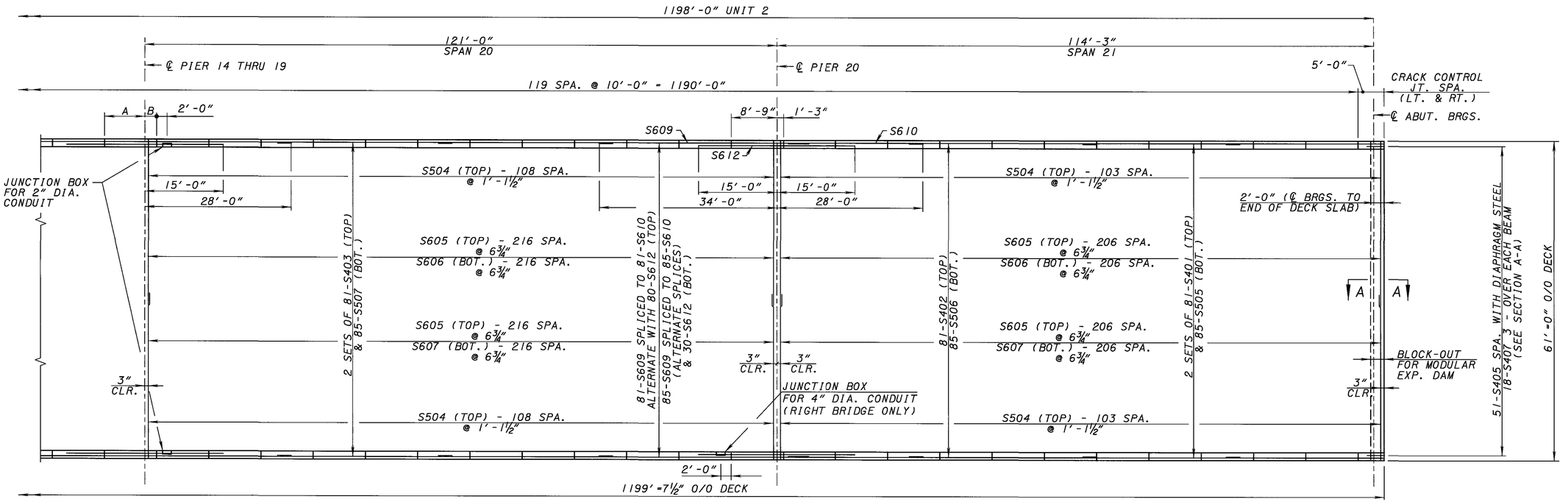
DESIGNED	DRAWN	REVIEWED	DATE
JAR	RJC	WMG	08/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RAH		5002265L & 5002303R	

DECK REINFORCING PLAN - UNIT 2 (SHEET 1 OF 2)
BRIDGE NO. MAH-80-0.123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080

970
1100

8/2/05 9:57:30 AM
s:\projects\37700\bridge-Reservoir\Final Tracings\MH080SD2C.dgn



DECK REINFORCING PLAN - SPANS 20 AND 21
UNIT 2

NOTES

1. FOR SUBSTRUCTURE STATIONS, SEE BRIDGE LAYOUT PLANS, SHEET 13/49.
2. FOR DECK REINFORCING PLAN UNIT 2 - SPANS 12 THRU 19 SEE SHEET 33/49.
3. FOR TRANSVERSE SECTIONS, SECTION B-B AND NOTES SEE SHEET 29/49 AND 30/49.
4. FOR PARAPET REINFORCEMENT SEE PARAPET REINFORCING DETAIL SHEET 35/49.
5. FOR REINFORCING STEEL LIST, SEE SHEET 48/49.
6. ALL BARS TO BE EPOXY COATED.

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY SUITE 350 WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
JAR	RJC	WMG	08/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RAH		5002265L & 5002303R	

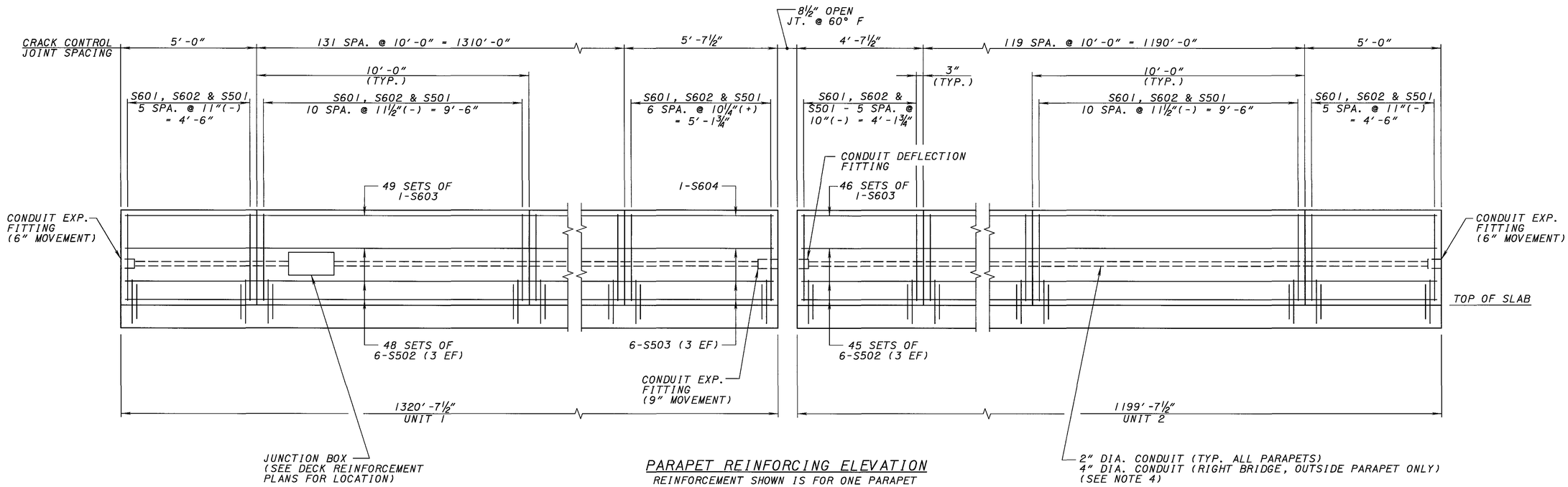
DECK REINFORCING PLAN - UNIT 2 (SHEET 2 OF 2)
BRIDGE NO. MAH-80-0.23 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080

34 / 49

971
1100

8/12/05 9:57:53 AM
s:\projects\37700\bridge-Reservoir\Final Tracings\MH080S02D.dgn



PARAPET REINFORCING ELEVATION

REINFORCEMENT SHOWN IS FOR ONE PARAPET

NOTES

1. FOR CRACK CONTROL JOINT DETAILS SEE STD. DWG. BR-1.
2. FOR TRANSVERSE SECTIONS SEE SHEETS 29/49 AND 30/49.
3. SPACE CONDUIT AND FITTINGS TO CLEAR MODULAR EXPANSION JOINT.
4. MAINTAIN 2" MINIMUM CONCRETE BETWEEN FITTINGS WHERE MULTIPLE CONDUITS ARE IN SAME PARAPET.
5. EXPANSION AND DEFLECTION FITTINGS INCLUDED IN CONDUIT ITEM.
6. EXPANSION AND DEFLECTION FITTINGS SHALL BE BY OZ/GEDNEY 7770 N. FRONTAGE ROAD, SKOKIE ILLINOIS, 60077, SPRING CITY ELECTRICAL MFG. CO., SPRING CITY, PA, 19475, OR APPROVED EQUAL.
7. FOR ADDITIONAL JUNCTION BOX AND CONDUIT DETAILS AND NOTES, SEE STD. DWG. HL-20.14.

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350 WESTERVILLE, OHIO 43081

REVIEWED	DATE
WMG	08/04

STRUCTURE FILE NUMBER
5002265L & 5002303R

DRAWN	REVISED
RJC	

DESIGNED	CHECKED
JAR	RAH

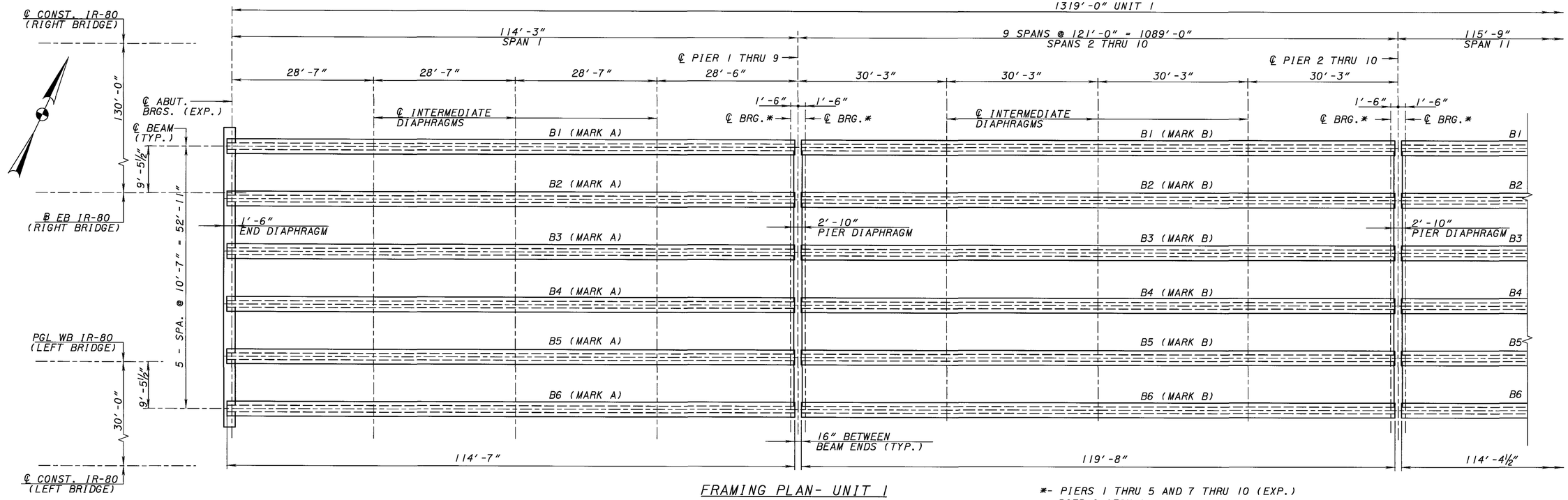
PARAPET REINFORCEING DETAIL
BRIDGE NO. MAH-80-0123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080

35 / 49

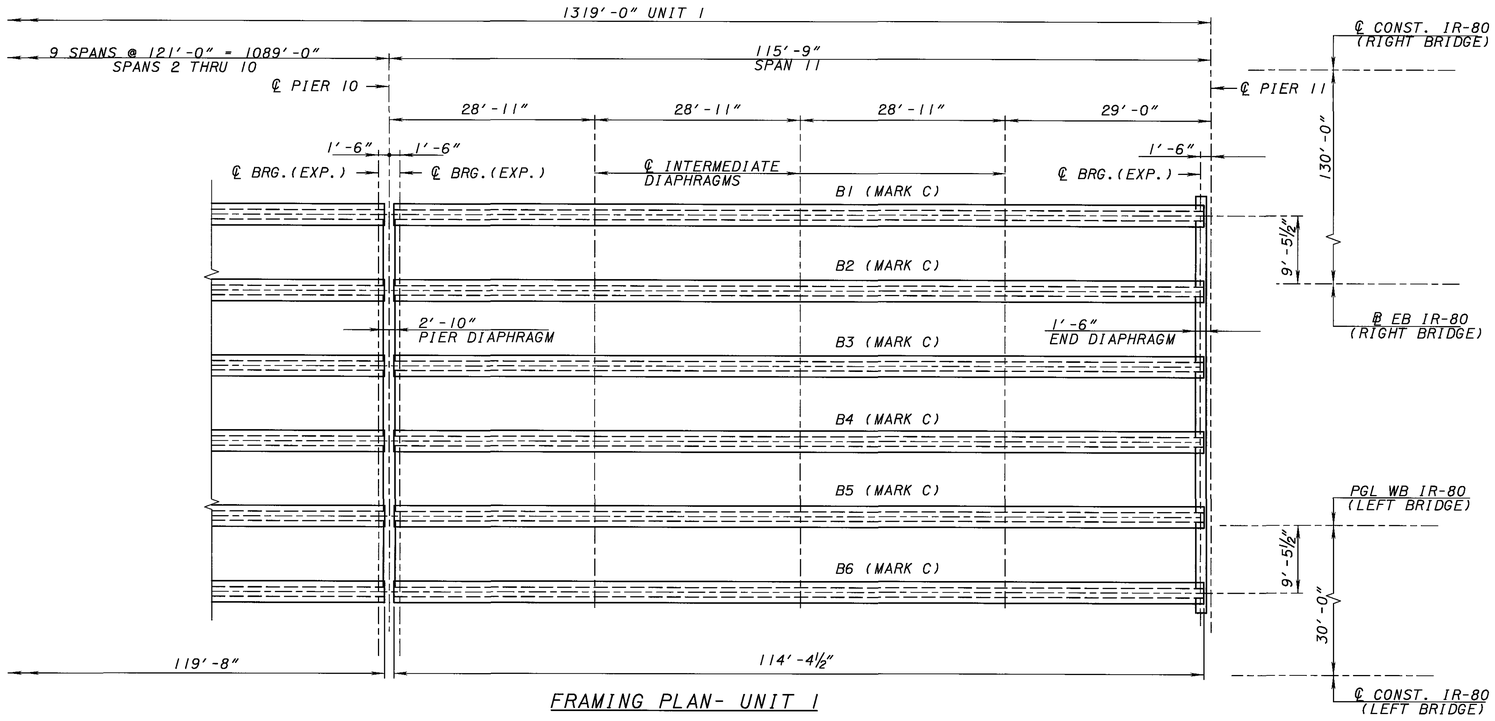
972
1100

8/2/05 9:58:25 AM
s:\projects\37700\bridge Reservoir\Final Traolngs\MH080S02E.dgn



FRAMING PLAN- UNIT 1

*- PIERS 1 THRU 5 AND 7 THRU 10 (EXP.)
PIER 6 (FIX.)



FRAMING PLAN- UNIT 1

LEGEND

B1 - BEAM NUMBER

MARK A - TYPE OF BEAM

NOTES

1. FOR SECTION PROPERTIES AND BEAM DETAILS SEE SHEETS 38/49 & 39/49.
2. FOR DIAPHRAGM DETAILS, SEE SHEET 40/49.

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY SUITE 350 WESTERVILLE, OHIO 43081

DESIGNED ACC | DRAWN WHM | REVIEWED WMG | DATE 08/04
CHECKED JRS | REVISED | STRUCTURE FILE NUMBER 5002265L & 5002303R

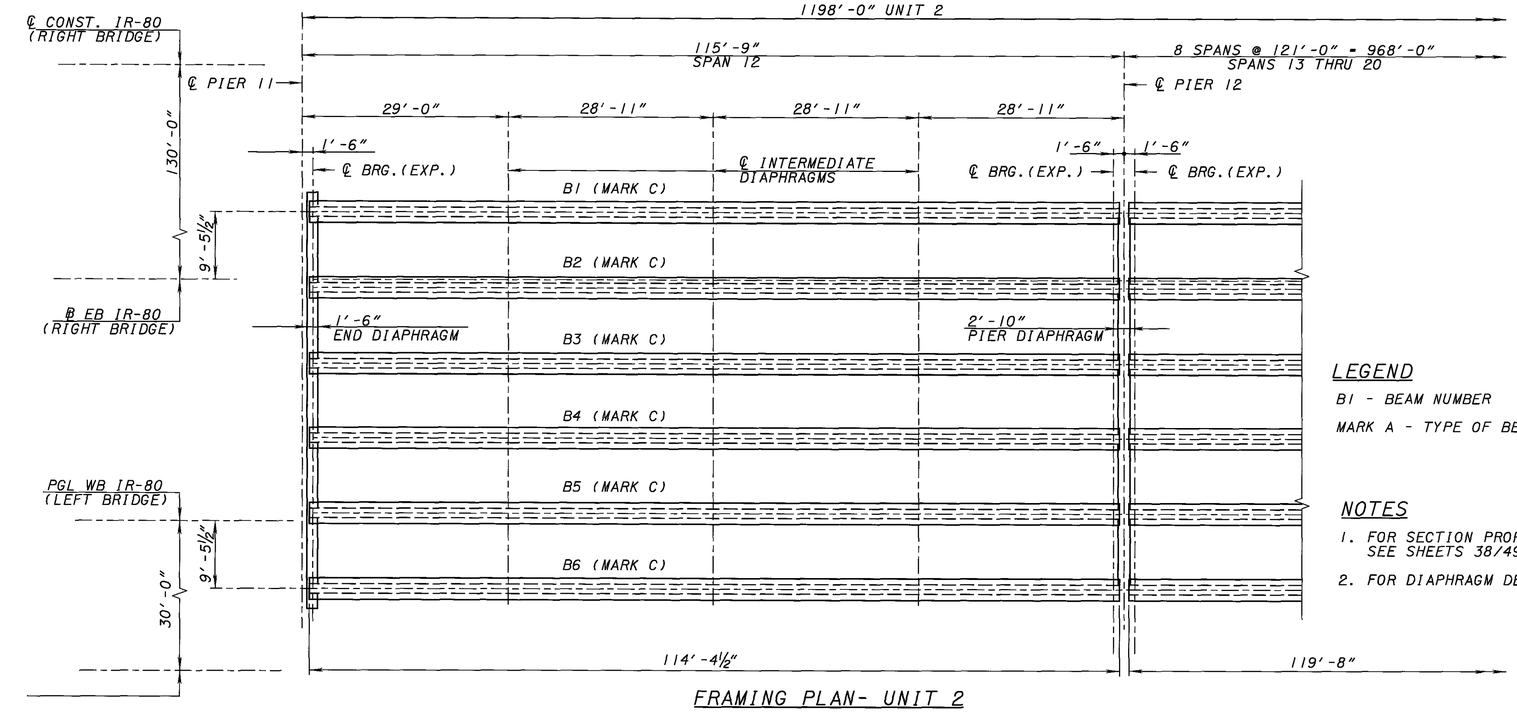
FRAMING PLAN- UNIT 1
BRIDGE NO. MAH-80-0123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080

36/49

973/1100

8/12/05 10:0h52 AM
s:\projects\37700\bridge-Reservoir\FinalTracings\MH080S02F.dgn



FRAMING PLAN- UNIT 2

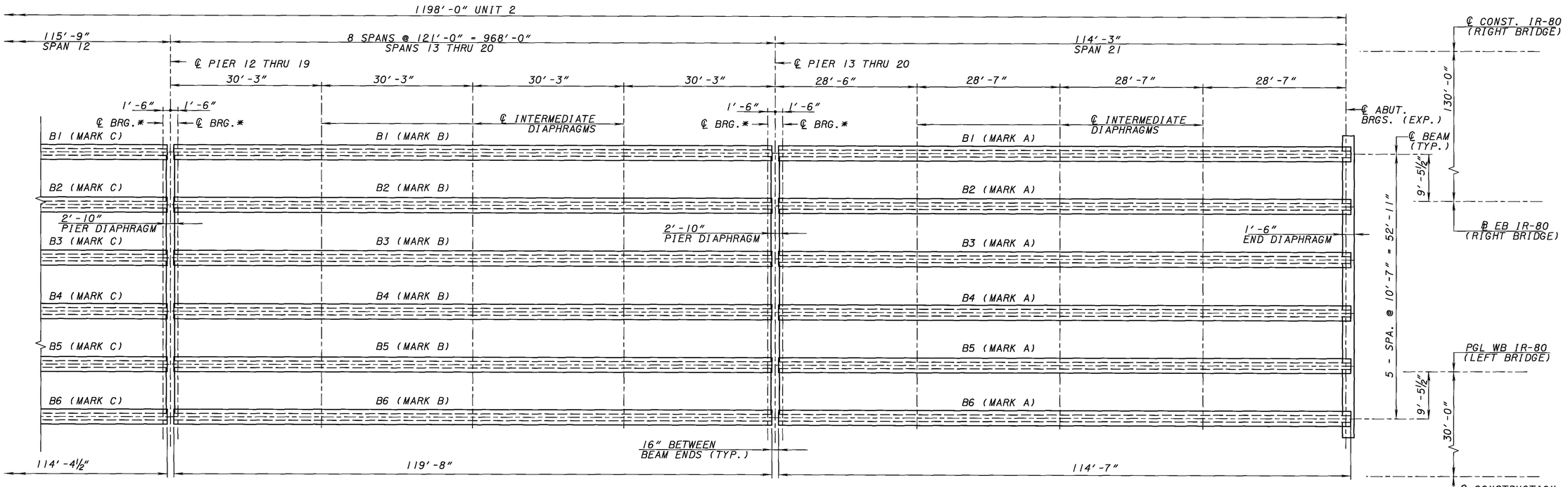
LEGEND

B1 - BEAM NUMBER

MARK A - TYPE OF BEAM

NOTES

1. FOR SECTION PROPERTIES AND BEAM DETAILS SEE SHEETS 38/49 & 39/49.
2. FOR DIAPHRAGM DETAILS, SEE SHEET 40/49.



FRAMING PLAN- UNIT 2

*- PIERS 12 THRU 15 AND 17 THRU 20 (EXP.)
PIER 16 (FIX.)

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4181 EDISON LAKES PARKWAY, SUITE 350
MISHAWAKA, IN 46545

DESIGNED	DRAWN	REVISED	DATE
ACC	WHM	WMG	08/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JRS		50022651 & 50023031R	

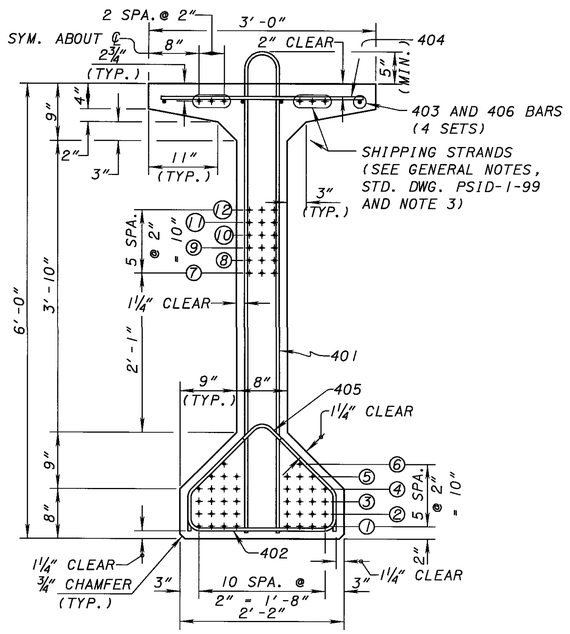
FRAMING PLAN- UNIT 2
BRIDGE NO. MAH-80-0123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

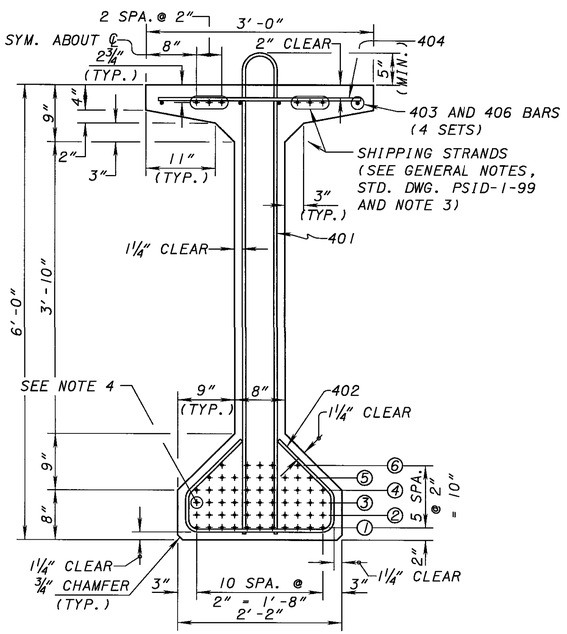
MAH-80-0.97
PID 6080

37 / 49

974
1100

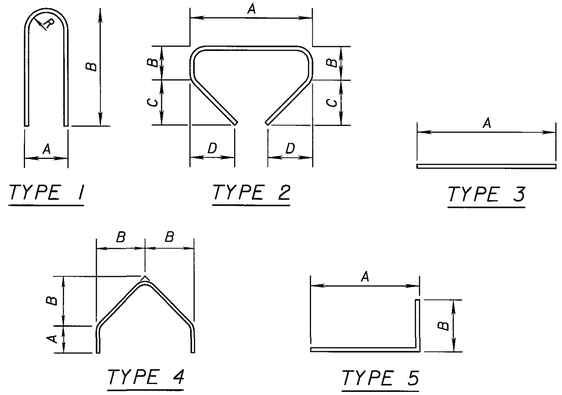
8/12/05 10:02:24 AM
s:\projects\37700\bridge-Reservoir-Final Tracings\MH080SD2G.dgn





PJACKING = 1961 KIPS

PRESTRESSED CONCRETE BEAM SECTIONS



BENDING DIAGRAMS

(ALL DIMENSIONS ARE OUT-TO-OUT)

MARK	TYPE	DIMENSIONS				
		A	B	C	D	R
401	1	5½"	6'-4"	-	-	2¼"
402	2	1'-11½"	6¼"	8½"	8½"	-
403	3	31'-6"	-	-	-	-
404	3	2'-8"	-	-	-	-
405	4	6¼"	11¾"	-	-	-
406	3	30'-6"	-	-	-	-
601	3	5'-8"	-	-	-	-
602	3	4'-11"	-	-	-	-
801	5	6'-2"	1'-4"	-	-	-

NOTES:
1. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
2. FOR ADDITIONAL PC BEAM DETAILS AND NOTES SEE SHEET 39/49.
3. IF SHIPPING STRANDS ARE USED, FABRICATOR SHALL INCLUDE CALCULATION OF STRESSES AT THE END OF THE BEAM.
4. STRANDS SHALL BE ½" DIAMETER (CROSS SECTIONAL AREA 0.167 SQ. IN.) GRADE 270 LOW RELAXATION, UNCOATED SEVEN WIRE STRANDS.
5. FOR CAMBER TABLE, SEE SHEET 41/49.

SECTION PROPERTIES

SECTION	AREA (in^2)	WEIGHT (lb/ft)	Yb (in)	Yt (in)	I (in^4)	Sb (in^3)	St (in^3)	Vol/Sur (in)
MODIFIED AASHTO TYPE 4 (72")	956	996	34.43	37.57	616,018	17,893	16,396	4.080

BEAM MARK	NUMBER OF STRANDS PER ROW																						TOTAL STRANDS	CONCRETE STRENGTHS		401 BARS REQ'D	402 BARS REQ'D	403 BARS REQ'D	404 BARS REQ'D	405 BARS REQ'D	406 BARS REQ'D	601 BARS REQ'D	801 BARS REQ'D	BEAM LENGTH
	END SECTION ROW NUMBER												MID SECTION ROW NUMBER																					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)		f'ci	f'c								
A	8	8	8	8	6	2	3	3	3	3	3	3	11	11	11	11	9	5	0	0	0	0	0	0	58	6000	7000	138	144	0	136	12	16	12	10	114'-7"
B	8	8	8	8	6	2	3	3	3	3	3	3	11	11	11	11	9	5	0	0	0	0	0	0	58	6000	7000	143	149	16	143	12	0	16	16*	119'-8"
C	8	8	8	8	6	2	3	3	3	3	3	3	11	11	11	11	9	5	0	0	0	0	0	0	58	6000	7000	138	144	0	136	12	16	12	10	114'-4½"

* 2-801 ADDITIONAL BARS REQ'D @ PIERS 1, 10, 12 AND 20.

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350 WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
ACC	BKH	WMG	08/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JRS		5002265L & 5002303R	

PRESTRESSED CONCRETE BEAM DETAILS
BRIDGE NO. MAH-80-0.123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080

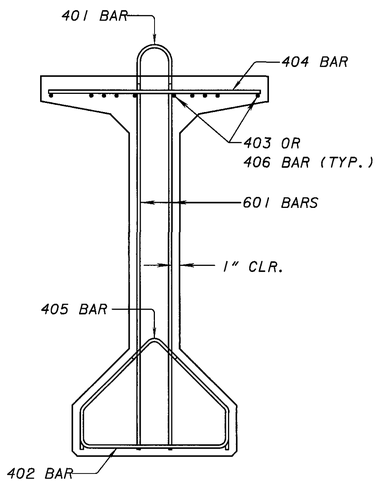
38 / 49

975 / 1100

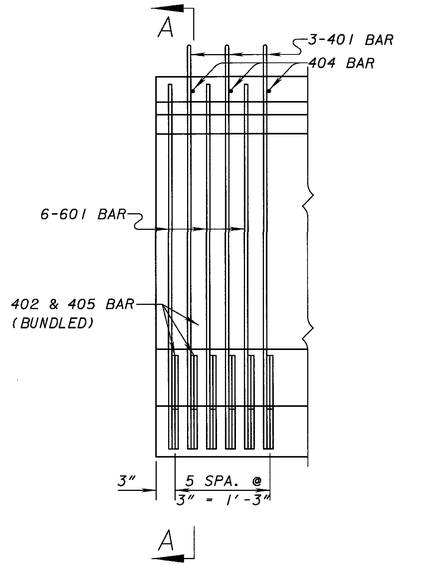
8/12/05 10:02:46 AM
s:\projects\37700\bridge-reservoir\Final Tracings\MH080S02H.dgn

NOTES:

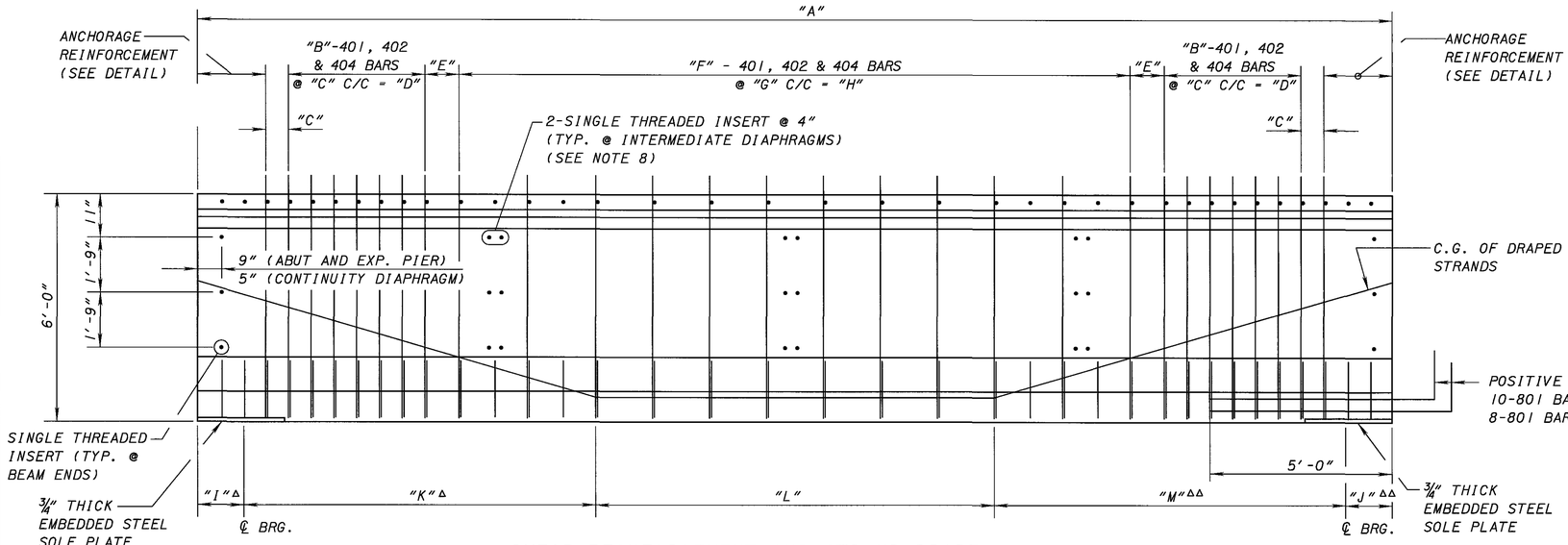
1. SURFACE FINISH OF TOP FLANGE OF PC BEAMS TO BE INCORPROATED INTO DECK CONCRETE SHALL BE INTENTIONALLY ROUGHENED TO AN AMPLITUDE OF APPROXIMATELY 1/4" BEFORE THE CONCRETE HAS REACHED ITS INITIAL SET. ALL LATIENCE SHALL BE REMOVED.
2. CONCRETE OR STEEL INTERMEDIATE DIAPHRAGMS ARE ALLOWED.
3. DEPTH LIMITATION: THE DEPTH OF PC BEAMS IS LIMITED TO 72 INCHES. ODOT WILL NOT ACCEPT ANY ALTERNATE DESIGN USING PC BEAMS GREATER THAN 72 INCHES DEEP.
4. FOR ADDITIONAL NOTES, SEE STANDARD DRAWING PSID-1-99.
5. FOR FRAMING PLANS, SEE SHEETS 36 AND 37 OF 49.
6. FOR DIAPHRAGM DETAILS, SEE SHEET 40 OF 49.
7. GALVANIZE INSERTS FOR DIAPHRAGM BARS PER CMS 711.02.
8. FOR CROSS FRAME DIAPHRAGMS, CAST 1 1/4" DIAMETER HOLES IN WEB WITH PIPE SLEEVE.
9. NO POSITIVE MOMENT REINFORCEMENT IS REQUIRED AT ABUTMENTS AND PIER 11.
10. PLACE CONTINUITY DIAPHRAGMS NO LESS THAN 60 DAYS AFTER BEAMS ARE CAST.
11. FOR CAMBER TABLE, SEE SHEET 41/49.



SECTION A-A



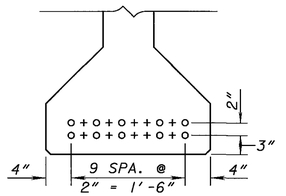
ANCHORAGE REINFORCEMENT DETAIL



SHEAR REINFORCEMENT AND STRAND DRAPE PATTERN

△ DIM. AT ABUTMENT END OF BEAM MARK "A", SPANS 1 AND 21

△△ DIM. AT PIER 11 END OF BEAM MARK "C", SPANS 11 AND 12



POSITIVE MOMENT REINFORCEMENT LOCATION

o DENOTES LOCATION OF POSITIVE MOMENT REINFORCEMENT AT ONE END OF THE BEAM.

\+ DENOTES LOCATION OF POSITIVE MOMENT REINFORCEMENT AT OTHER END OF THE BEAM.

BEAM DIMENSIONS

BEAM MARK	LT. BRIDGE NO. REQ'D	RT. BRIDGE NO. REQ'D	DIMENSIONS A	B	C	D	E	F	G	H	I	J	K	L	M	APPROXIMATE WEIGHT (LBS)
A	12	12	114'-7"	21	6"	10'-0"	9 1/2"	90	12"	89'-0"	1'-0"	10"	37'-3"	38'-1"	37'-5"	114,125
B	102	102	119'-8"	21	6"	10'-0"	10"	95	12"	94'-0"	10"	10"	39'-1"	39'-10"	39'-1"	119,188
C	12	12	114'-4 1/2"	21	6"	10'-0"	8 1/4"	90	12"	89'-0"	10"	9 1/2"	37'-4"	38'-1"	37'-4"	113,918

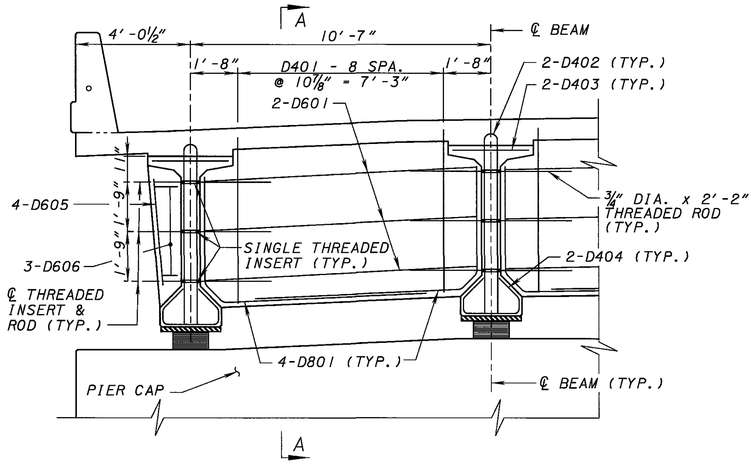
DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
ACC	BKH	WMG	08/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JAS		5002265L & 5002303R	

PRESTRESSED CONCRETE BEAM DETAILS
BRIDGE NO. MAH-80-0123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

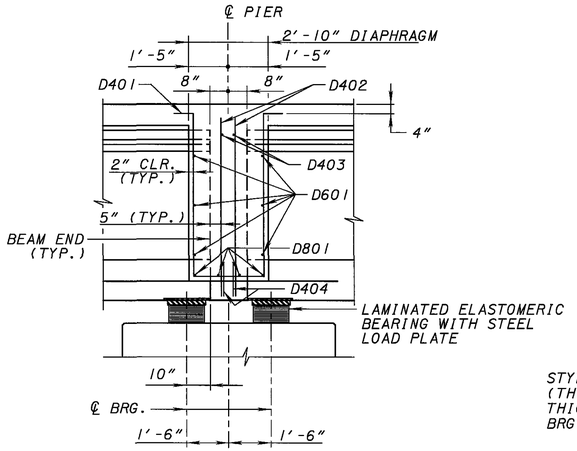
MAH-80-0.97
PID 6080

8/12/05 10:03:07 AM
s:\projects\37700\bridge-Reservoir\Final Tracings\MH080SD21.dgn

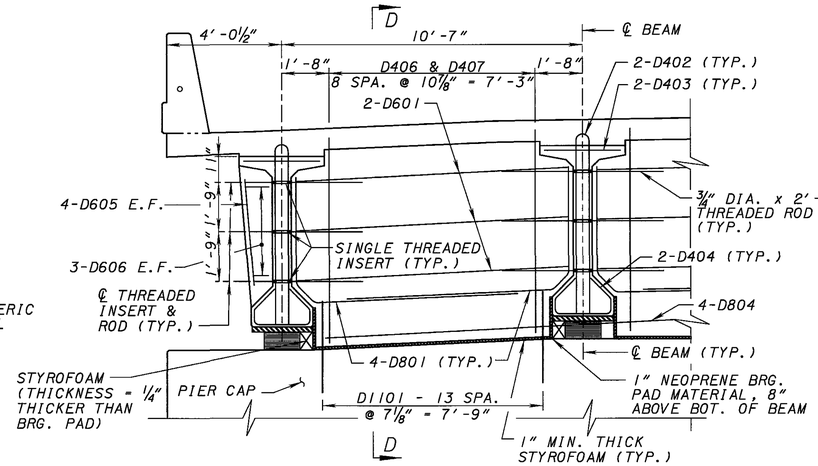


PIER DIAPHRAGM ELEVATION - EXPANSION BEARINGS

(PIERS 1 THRU 20 - EXCEPT PIERS 6, 11 & 16)

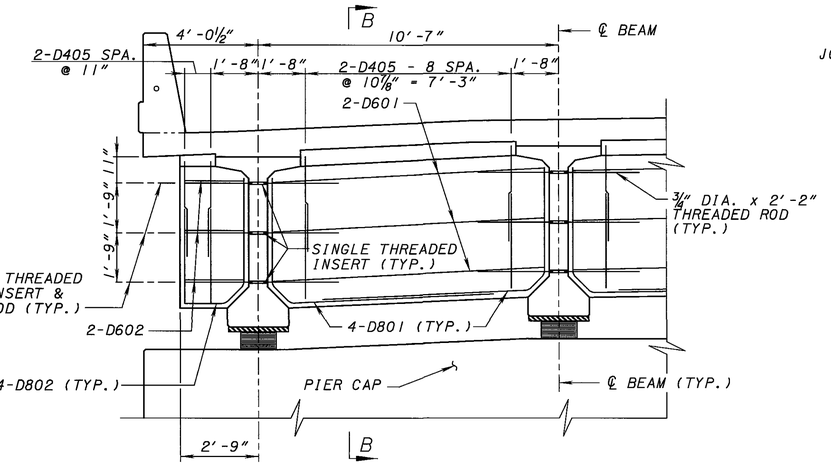


SECTION A-A



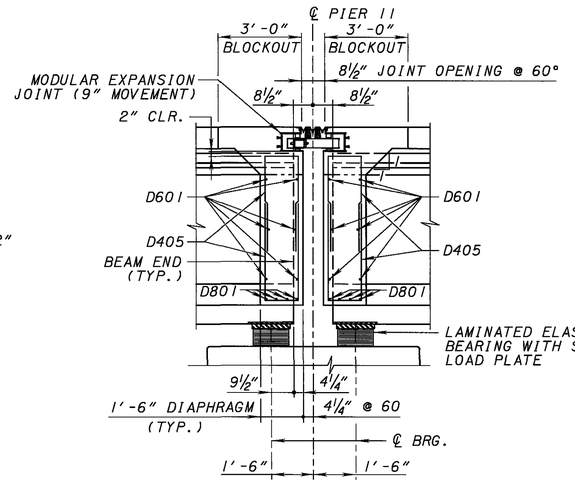
PIER DIAPHRAGM ELEVATION - FIXED BEARINGS

(PIERS 6 & 16)

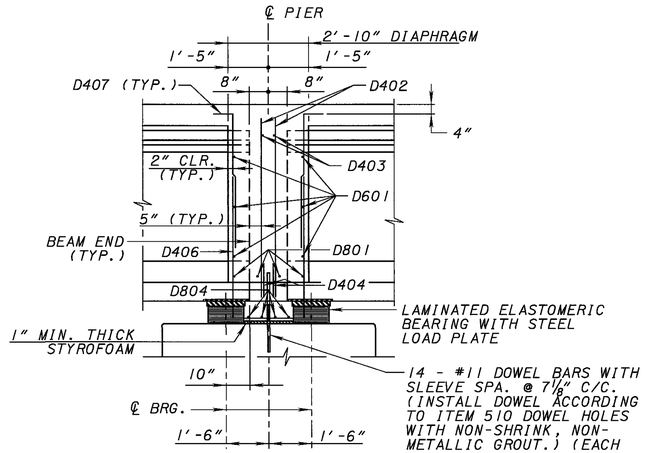


PIER DIAPHRAGM ELEVATION - CENTER EXPANSION JOINT

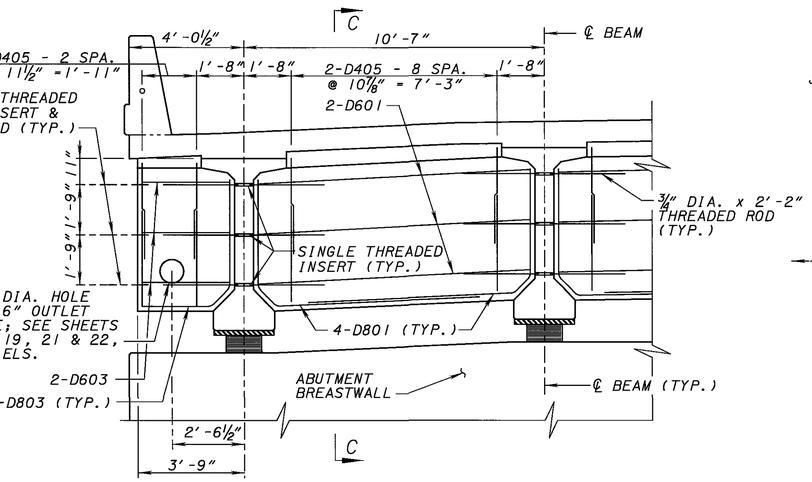
(PIER 11)



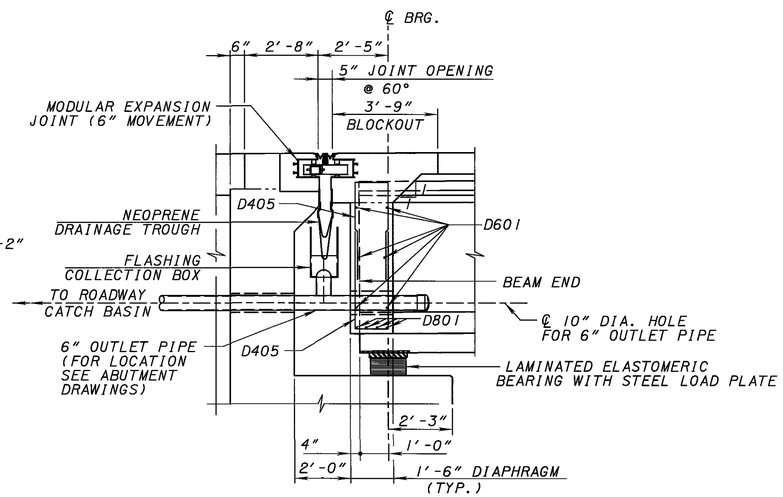
SECTION B-B



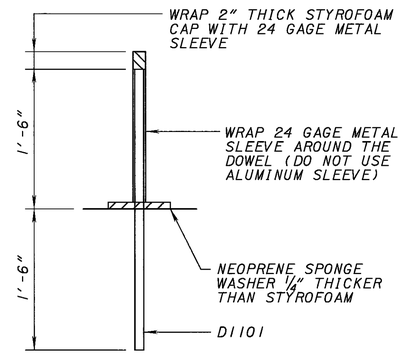
SECTION D-D



ABUTMENT DIAPHRAGM ELEVATION



SECTION C-C



DOWEL DETAIL

NOTES:

1. SEE FRAMING PLAN SHEETS 36 AND 37 OF 49.
2. DIAPHRAGMS SHOWN ARE TYPICAL FOR LEFT AND RIGHT BRIDGE.
3. DIAPHRAGM CONCRETE SHALL BE QC/QA CONCRETE CLASS QSC2, SUPERSTRUCTURE (DECK).

DESIGN AGENCY
GANNETT FLEMING
ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
ACC	RJC	WMG	08/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JRS		5002265L & 5002303R	

PRESTRESSED CONCRETE BEAM DIAPHRAGM DETAILS

BRIDGE NO. MAH-80-0123 L/R

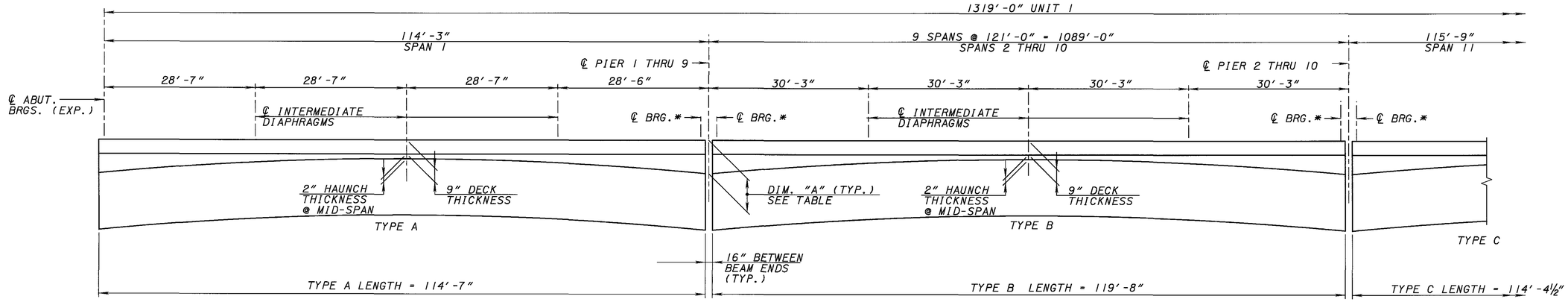
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97

PID 6080

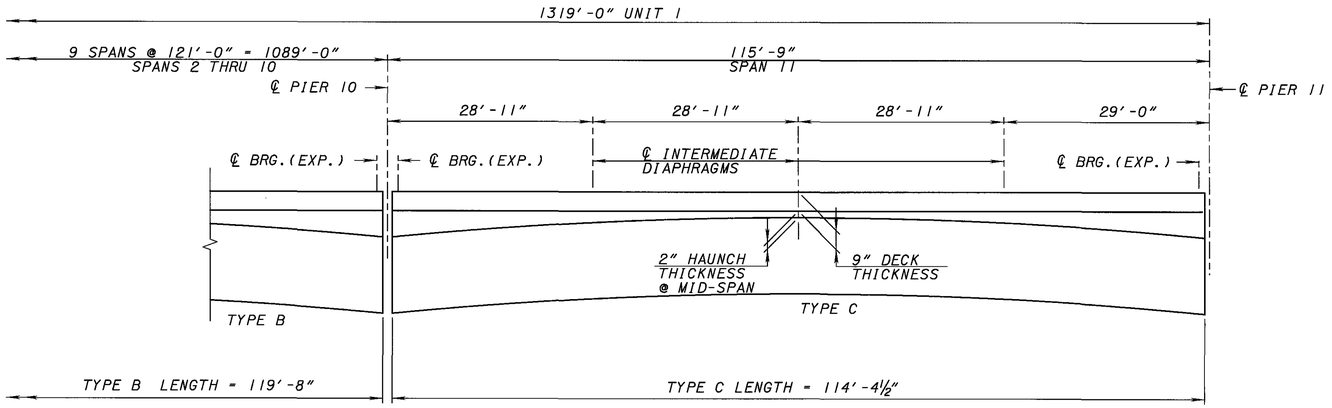
977/1100

8/12/05 10:03:43 AM
s:\projects\37700\bridge-Reservoir\Final Tracings\MH0805P2J.dgn



APPROXIMATE DECK THICKNESS - UNIT 1

*- PIERS 1 THRU 5 AND 7 THRU 10 (EXP.)
PIER 6 (FIX.)



APPROXIMATE DECK THICKNESS - UNIT 1

UNIT 1 DIMENSION "A"

LOCATION	SLAB DEPTH OVER BEAMS DIM. "A"
℄ BRG. RA	1'-1¾"
℄ PIER 1	1'-1¾"
℄ PIER 2	1'-1⅝"
℄ PIER 3	1'-1⅝"
℄ PIER 4	1'-1⅝"
℄ PIER 5	1'-1⅝"
℄ PIER 6	1'-1⅝"
℄ PIER 7	1'-1⅝"
℄ PIER 8	1'-1⅝"
℄ PIER 9	1'-1⅝"
℄ PIER 10	1'-1¾"
℄ PIER 11	1'-1¾"

CAMBER NOTES

A = ANTICIPATED TOTAL MIDSPAN CAMBER DUE TO DESIGN PRESTRESSING FORCE AT THE TIME OF RELEASE

B = DEFLECTION AT MIDSPAN DUE TO THE SELF WEIGHT OF THE BEAM

C = A-B = CAMBER AT THE TIME OF RELEASE

D = 1.80A-1.85B = CAMBER AT THE TIME OF ERECTION

E = 2.45A-2.40B = LONG TERM CAMBER

F = DEFLECTION AT MIDSPAN DUE TO ALL LOAD EXCEPT BEAM WEIGHT AND FUTURE WEARING SURFACE

BEAM CAMBERS (INCHES)

	BEAMS A & C		BEAM B	
	INTERIOR	FASCIA	INTERIOR	FASCIA
A	3.73	3.73	4.09	4.09
B	1.32	1.32	1.58	1.58
C	2.41	2.41	2.51	2.51
D	4.27	4.27	4.44	4.44
E	5.97	5.97	6.23	6.23
F	1.82	1.51	2.17	1.78

NOTE:

THE TOPPING THICKNESSES SHOWN FROM THE TOP OF THE DECK SLAB TO THE TOP OF THE TOP FLANGE ALONG THE CENTERLINE OF THE I-BEAM ARE THEORETICAL DIMENSIONS. THE HAUNCH DEPTH IS THE TOPPING THICKNESS MINUS THE DESIGN SLAB THICKNESS. THE DEPARTMENT WILL PAY FOR SUPERSTRUCTURE CONCRETE BASED ON THE DESIGN SLAB THICKNESS AND THE AVERAGE OF THE THEORETICAL HAUNCH DEPTHS AT MID-SPAN AND AT EACH BEAM BEARING EVEN THOUGH DEVIATION FROM THE DIMENSIONS SHOWN MAY BE NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE. ONCE ALL BEAMS ARE SET IN THEIR FINAL POSITION, THE ACTUAL CAMBER FOR EACH MEMBER WILL BE THE TOP OF BEAM ELEVATION AT MID-SPAN MINUS THE AVERAGE TOP OF BEAM ELEVATION AT EACH BEARING. THE ACTUAL TOPPING THICKNESS AT MID-SPAN WILL BE THE THEORETICAL DIMENSION PLUS OR MINUS THE DIFFERENCE BETWEEN THE ACTUAL AND ANTICIPATED CAMBER.

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

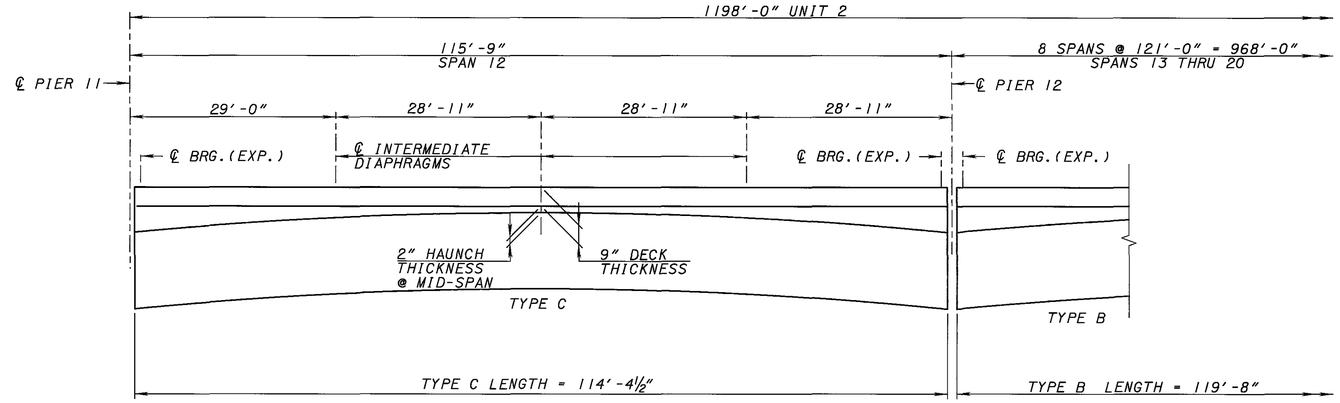
DESIGNED	DRAWN	REVIEWED	DATE
ACC	WHM	WMG	08/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JAR		5002265L & 5002303R	

ANTICIPATED SLAB THICHNESS - UNIT 1
BRIDGE NO. MAH-80-0123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080

978
1100

8/12/05 10:04:04 AM
s:\projects\37700\bridge-Reservoir\Final Tracings\MH080S92K.dgn



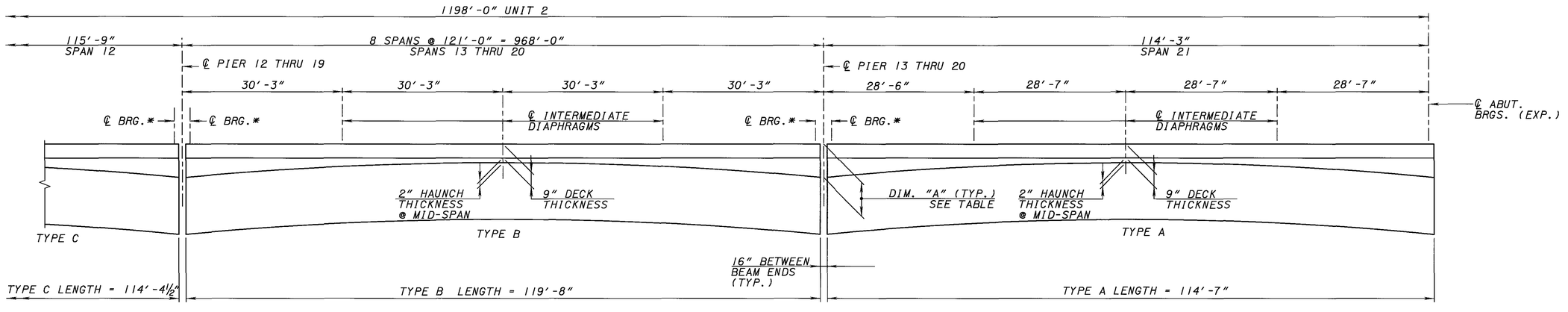
APPROXIMATE DECK THICKNESS - UNIT 2

UNIT 2
DIMENSION "A"

LOCATION	SLAB DEPTH OVER BEAMS DIM. "A"
℄ PIER 11	1'-1¾"
℄ PIER 12	1'-1¾"
℄ PIER 13	1'-1⅝"
℄ PIER 14	1'-1⅝"
℄ PIER 15	1'-1⅝"
℄ PIER 16	1'-1⅝"
℄ PIER 17	1'-1⅝"
℄ PIER 18	1'-1⅝"
℄ PIER 19	1'-1⅝"
℄ PIER 20	1'-1¾"
℄ BRG. FA	1'-1¾"

NOTE:

THE TOPPING THICKNESSES SHOWN FROM THE TOP OF THE DECK SLAB TO THE TOP OF THE TOP FLANGE ALONG THE CENTERLINE OF THE I-BEAM ARE THEORETICAL DIMENSIONS. THE HAUNCH DEPTH IS THE TOPPING THICKNESS MINUS THE DESIGN SLAB THICKNESS. THE DEPARTMENT WILL PAY FOR SUPERSTRUCTURE CONCRETE BASED ON THE DESIGN SLAB THICKNESS AND THE AVERAGE OF THE THEORETICAL HAUNCH DEPTHS AT MID-SPAN AND AT EACH BEAM BEARING EVEN THOUGH DEVIATION FROM THE DIMENSIONS SHOWN MAY BE NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE. ONCE ALL BEAMS ARE SET IN THEIR FINAL POSITION, THE ACTUAL CAMBER FOR EACH MEMBER WILL BE THE TOP OF BEAM ELEVATION AT MID-SPAN MINUS THE AVERAGE TOP OF BEAM ELEVATION AT EACH BEARING. THE ACTUAL TOPPING THICKNESS AT MID-SPAN WILL BE THE THEORETICAL DIMENSION PLUS OR MINUS THE DIFFERENCE BETWEEN THE ACTUAL AND ANTICIPATED CAMBER.



APPROXIMATE DECK THICKNESS - UNIT 2

*- PIERS 12 THRU 15 AND 17 THRU 20 (EXP.)
PIER 16 (FIX.)

NOTE: SEE SHEET 41/49 FOR BEAM CAMBERS

8/12/05 10:04:25 AM
s:\projects\37700\bridge-reservoir\Final Tracings\MH080502L.dgn

DESIGN AGENCY
GANNETT FLEMING
ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

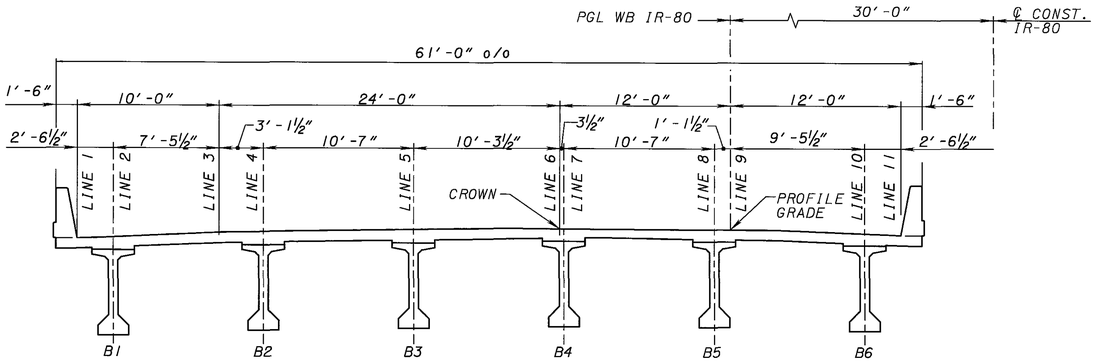
DESIGNED	DRAWN	REVIEWED	DATE
ACC	WHM	WMG	08/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JAR		5002265L & 5002303R	

ANTICIPATED SLAB THICHNESS - UNIT 2
BRIDGE NO. MAH-80-0123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080

42/49

979
1100



SCREED LINE LOCATIONS - LEFT BRIDGE

SCREED ELEVATION TABLE - LEFT BRIDGE

SPAN NO.	LOCATION	STATION	LINE 1	LINE 2	LINE 3	LINE 4	LINE 5	LINE 6	LINE 7	LINE 8	LINE 9	LINE 10	LINE 11
SPAN NO.1	℄ BRG. RA	520+25.00	920.35	920.46	920.77	920.84	921.05	921.27	921.27	921.49	921.51	921.12	921.01
	0.25 L	520+53.56	920.87	920.98	921.29	921.34	921.53	921.71	921.71	921.90	921.92	921.52	921.42
	0.50 L	520+82.13	921.22	921.33	921.64	921.69	921.85	922.02	922.02	922.14	922.16	921.76	921.66
	0.75 L	521+10.69	921.39	921.49	921.80	921.85	922.02	922.18	922.18	922.20	922.20	921.81	921.70
SPAN NO.2	℄ PIER 1	521+39.25	921.38	921.49	921.80	921.85	922.01	922.17	922.17	922.09	922.09	921.69	921.59
	0.25 L	521+69.50	921.91	922.01	922.32	922.37	922.54	922.70	922.69	922.53	922.51	922.12	922.01
	0.50 L	521+99.75	922.15	922.26	922.57	922.62	922.78	922.95	922.94	922.78	922.76	922.36	922.26
	0.75 L	522+30.00	922.21	922.31	922.63	922.67	922.84	923.00	923.00	922.83	922.81	922.42	922.31
SPAN NO.3	℄ PIER 2	522+60.25	922.09	922.19	922.50	922.55	922.72	922.88	922.87	922.71	922.69	922.30	922.19
	0.25 L	522+90.50	922.51	922.62	922.93	922.98	923.14	923.30	923.30	923.13	923.11	922.72	922.61
	0.50 L	523+20.75	922.76	922.87	923.18	923.22	923.39	923.55	923.55	923.38	923.36	922.97	922.86
	0.75 L	523+51.00	922.81	922.92	923.23	923.28	923.44	923.60	923.60	923.44	923.42	923.02	922.92
SPAN NO.4	℄ PIER 3	523+81.25	922.69	922.80	923.11	923.16	923.32	923.48	923.48	923.31	923.30	922.90	922.80
	0.25 L	524+11.50	923.12	923.22	923.53	923.58	923.75	923.91	923.90	923.74	923.72	923.33	923.22
	0.50 L	524+41.75	923.36	923.47	923.78	923.83	923.99	924.16	924.15	923.99	923.97	923.57	923.47
	0.75 L	524+72.00	923.42	923.52	923.84	923.88	924.05	924.21	924.21	924.04	924.02	923.63	923.52
SPAN NO.5	℄ PIER 4	525+02.25	923.30	923.40	923.71	923.76	923.93	924.09	924.08	923.92	923.90	923.51	923.40
	0.25 L	525+32.50	923.72	923.83	924.14	924.19	924.35	924.51	924.51	924.34	924.33	923.93	923.82
	0.50 L	525+62.75	923.97	924.08	924.39	924.43	924.60	924.76	924.76	924.59	924.57	924.18	924.07
	0.75 L	525+93.00	924.02	924.13	924.44	924.49	924.65	924.81	924.81	924.65	924.63	924.23	924.13
SPAN NO.6	℄ PIER 5	526+23.25	923.90	924.01	924.32	924.37	924.53	924.69	924.69	924.52	924.51	924.11	924.01
	0.25 L	526+53.50	924.33	924.43	924.74	924.79	924.96	925.12	925.11	924.95	924.93	924.54	924.43
	0.50 L	526+83.75	924.57	924.68	924.99	925.04	925.20	925.37	925.36	925.20	925.18	924.78	924.68
	0.75 L	527+14.00	924.63	924.73	925.05	925.09	925.26	925.42	925.42	925.25	925.23	924.84	924.73
SPAN NO.7	℄ PIER 6	527+44.25	924.51	924.61	924.92	924.97	925.14	925.30	925.29	925.13	925.11	924.72	924.61
	0.25 L	527+74.50	924.93	925.04	925.35	925.40	925.56	925.72	925.72	925.55	925.53	925.14	925.03
	0.50 L	528+04.75	925.18	925.29	925.60	925.64	925.81	925.97	925.97	925.80	925.78	925.39	925.28
	0.75 L	528+35.00	925.23	925.34	925.65	925.70	925.86	926.02	926.02	925.86	925.84	925.44	925.34
SPAN NO.8	℄ PIER 7	528+65.25	925.11	925.22	925.53	925.58	925.74	925.90	925.90	925.73	925.72	925.32	925.22
	0.25 L	528+95.50	925.54	925.64	925.95	926.00	926.17	926.33	926.32	926.16	926.14	925.75	925.64
	0.50 L	529+25.75	925.78	925.89	926.20	926.25	926.41	926.58	926.57	926.41	926.39	925.99	925.89
	0.75 L	529+56.00	925.84	925.94	926.26	926.30	926.47	926.63	926.63	926.46	926.44	926.05	925.94
SPAN NO.9	℄ PIER 8	529+86.25	925.72	925.82	926.13	926.18	926.35	926.51	926.50	926.34	926.32	925.93	925.82
	0.25 L	530+16.50	926.14	926.25	926.56	926.61	926.77	926.93	926.93	926.76	926.74	926.35	926.24
	0.50 L	530+46.75	926.39	926.50	926.81	926.85	927.02	927.18	927.18	927.01	926.99	926.60	926.49
	0.75 L	530+77.00	926.44	926.55	926.86	926.91	927.07	927.23	927.23	927.07	927.05	926.65	926.55

SCREED ELEVATION TABLE - LEFT BRIDGE

SPAN NO.	LOCATION	STATION	LINE 1	LINE 2	LINE 3	LINE 4	LINE 5	LINE 6	LINE 7	LINE 8	LINE 9	LINE 10	LINE 11
SPAN NO.10	℄ PIER 9	531+07.25	926.32	926.43	926.74	926.79	926.95	927.11	927.11	926.94	926.93	926.53	926.43
	0.25 L	531+37.50	926.75	926.85	927.16	927.21	927.38	927.54	927.53	927.37	927.35	926.96	926.85
	0.50 L	531+67.75	926.99	927.10	927.41	927.46	927.62	927.78	927.78	927.61	927.60	927.20	927.10
	0.75 L	531+98.00	927.03	927.13	927.44	927.49	927.66	927.82	927.81	927.65	927.63	927.23	927.13
SPAN NO.11	℄ PIER 10	532+28.25	926.86	926.97	927.28	927.33	927.49	927.65	927.65	927.48	927.46	927.07	926.96
	0.25 L	532+57.19	927.20	927.31	927.62	927.67	927.83	927.99	927.99	927.82	927.81	927.41	927.31
	0.50 L	532+86.13	927.36	927.46	927.77	927.82	927.99	928.15	928.14	927.98	927.96	927.57	927.46
	0.75 L	533+15.06	927.30	927.41	927.72	927.77	927.93	928.09	928.09	927.92	927.91	927.51	927.41
SPAN NO.12	℄ PIER 11	533+44.00	927.06	927.16	927.48	927.52	927.69	927.85	927.85	927.68	927.66	927.27	927.16
	0.25 L	533+72.94	927.32	927.42	927.73	927.78	927.95	928.11	928.10	927.94	927.92	927.53	927.42
	0.50 L	534+01.88	927.39	927.49	927.81	927.85	928.02	928.18	928.18	928.01	927.99	927.60	927.49
	0.75 L	534+30.81	927.25	927.36	927.67	927.72	927.88	928.04	928.04	927.87	927.85	927.46	927.35
SPAN NO.13	℄ PIER 12	534+59.75	926.92	927.03	927.34	927.39	927.55	927.71	927.71	927.54	927.53	927.13	927.03
	0.25 L	534+90.00	927.11	927.21	927.52	927.57	927.74	927.90	927.89	927.73	927.71	927.32	927.21
	0.50 L	535+20.25	927.09	927.19	927.51	927.55	927.72	927.88	927.88	927.71	927.69	927.30	927.19
	0.75 L	535+50.50	926.86	926.96	927.27	927.32	927.49	927.65	927.64	927.48	927.46	927.07	926.96
SPAN NO.14	℄ PIER 13	535+80.75	926.43	926.54	926.85	926.90	927.06	927.22	927.22	927.05	927.04	926.64	926.54
	0.25 L	536+11.00	926.55	926.66	926.97	927.02	927.18	927.34	927.34	927.18	927.16	926.76	926.66
	0.50 L	536+41.25	926.50	926.61	926.92	926.96	927.13	927.29	927.29	927.12	927.10	926.71	926.60
	0.75 L	536+71.50	926.25	926.36	926.67	926.72	926.88	927.04	927.04	926.87	926.85	926.46	926.35
SPAN NO.15	℄ PIER 14	537+01.75	925.83	925.93	926.24	926.29	926.46	926.62	926.61	926.45	926.43	926.04	925.93
	0.25 L	537+32.00	925.95	926.05	926.37	926.41	926.58	926.74	926.74	926.57	926.55	926.16	926.05
	0.50 L	537+62.25	925.89	926.00	926.31	926.36	926.52	926.69	926.68	926.52	926.50	926.10	926.00
	0.75 L	537+92.50	925.65	925.75	926.06	926.11	926.28	926.44	926.43	926.27	926.25	925.86	925.75
SPAN NO.16	℄ PIER 15	538+22.75	925.22	925.33	925.64	925.69	925.85	926.01	926.01	925.84	925.83	925.43	925.33
	0.25 L	538+53.00	925.34	925.45	925.76	925.81	925.97	926.13	926.13	925.97	925.95	925.55	925.45
	0.50 L	538+83.25	925.29	925.40	925.71	925.75	925.92	926.08	926.08	925.91	925.89	925.50	925.39
	0.75 L	539+13.50	925.04	925.15	925.46	925.51	925.67	925.83	925.83	925.66	925.65	925.25	925.14
SPAN NO.17	℄ PIER 16	539+43.75	924.62	924.72	925.03	925.08	925.25	925.41	925.40	925.24	925.22	924.83	924.72
	0.25 L	539+74.00	924.74	924.84	925.16	925.20	925.37	925.53	925.53	925.36	925.34	924.95	924.84
	0.50 L	540+04.25	924.68	924.79	925.10	925.15	925.31	925.48	925.47	925.31	925.29	924.89	924.79
	0.75 L	540+34.50	924.44	924.54	924.85	924.90	925.07	925.23	925.22	925.06	925.04	924.65	924.54
SPAN NO.18	℄ PIER 17	540+64.75	924.01	924.12	924.43	924.48	924.64	924.80	924.80	924.63	924.62	924.22	924.12
	0.25 L	540+95.00	924.13	924.24	924.55	924.60	924.76	924.92	924.92	924.76	924.74	924.34	924.24
	0.50 L	541+25.25	924.08	924.19	924.50	924.54	924.71	924.87	924.87	924.70	924.68	924.29	924.18
	0.75 L	541+55.50	923.83	923.94	924.25	924.30	924.46	924.62	924.62	924.45	924.43	924.04	923.93
SPAN NO.19	℄ PIER 18	541+85.75	923.41	923.51	923.82	923.87	924.04	924.20	924.19	924.03	924.01	923.62	923.51
	0.25 L	542+16.00	923.53	923.63	923.95	923.99	924.16	924.32	924.32	924.15	924.13	923.74	923.63
	0.50 L	542+46.25	923.47	923.58	923.89	923.94	924.10	924.27	924.26	924.10	924.08	923.68	923.58
	0.75 L	542+76.50	923.23	923.33	923.64	923.69	923.86	924.02	924.01	923.85	923.83	923.44	923.33
SPAN NO.20	℄ PIER 19	543+06.75	922.80	922.91	923.22	923.27	923.43	923.59	923.59	923.42	923.41	923.01	922.91
	0.25 L	543+37.00	922.92	923.03	923.34	923.39	923.55	923.71	923.71	923.55	923.53	923.13	923.03
	0.50 L	543+67.25	922.87	922.98	923.29	923.33	923.50	923.66	923.66	923.49	923.47	923.08	922.97
	0.75 L	543+97.50	922.62	922.73	923.04	923.09	923.25	923.41	923.41	923.24	923.22	922.83	922.72
SPAN NO.21	℄ PIER 20	544+27.75	922.20	922.30	922.61	922.66	922.83	922.99	922.98	922.82	922.80	922.41	922.30
	0.25 L	544+56.31	922.31	922.42	922.73	922.78	922.95	923.11	923.10	922.94	922.92	922.52	922.42
	0.50 L	544+84.88	922.27	922.37	922.68	922.73	922.90	923.06	923.05	922.89	922.87	922.48	922.37
	0.75 L	545+13.44	922.03	922.14	922.45	922.49	922.66	922.82	922.82	922.65	922.63	922.24	922.13
	℄ BRG. FA	545+42.00	921.63	921.73	922.04	922.09	922.26	922.42	922.41	922.25	922.23	921.84	921.73

NOTE:
SCREED ELEVATIONS ARE FOR THE DECK SLAB SURFACE PRIOR TO CONCRETE PLACEMENT. ALLOWANCE HAS BEEN MADE FOR THE ANTICIPATED CALCULATED DEAD LOAD DEFLECTIONS.

L = C/C OF SUBSTRUCTURE

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EASTERN AVENUE, SUITE 350
WESTERVILLE, OHIO 43081

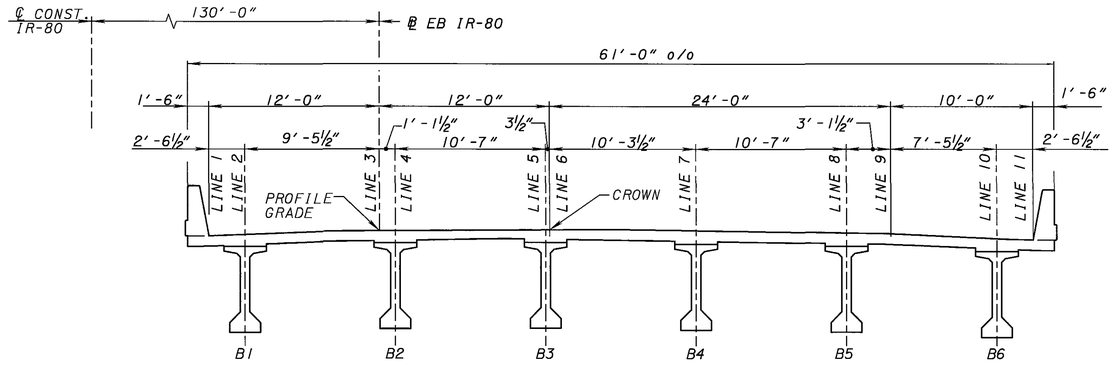
DESIGNED ACC | DRAWN WHM | REVIEWED WMG | DATE 08/04
CHECKED MES | REVISED | STRUCTURE FILE NUMBER 5002265L & 5002303R

SCREED ELEVATION TABLE - LEFT BRIDGE
BRIDGE NO. MAH-80-0123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080

980
1100

8/12/05 10:04:48 AM
s:\projects\37700\bridge-Reservoir\Final Tracings\WH080SD2M.dgn



SCREED LINE LOCATIONS - RIGHT BRIDGE

SCREED ELEVATION TABLE - RIGHT BRIDGE

SPAN NO.	LOCATION	STATION	LINE 1	LINE 2	LINE 3	LINE 4	LINE 5	LINE 6	LINE 7	LINE 8	LINE 9	LINE 10	LINE 11
SPAN NO.1	℄ BRG. RA	520+66.00	921.01	921.11	921.51	921.53	921.69	921.69	921.69	921.69	921.69	921.38	921.27
	0.25 L	520+94.56	921.41	921.52	921.91	921.93	922.09	922.10	922.05	921.99	921.98	921.67	921.56
	0.50 L	521+23.13	921.65	921.75	922.15	922.17	922.33	922.34	922.24	922.13	922.10	921.79	921.68
	0.75 L	521+51.69	921.70	921.80	922.20	922.21	922.38	922.38	922.23	922.08	922.03	921.72	921.62
SPAN NO.2	℄ PIER 1	521+80.25	921.58	921.68	922.08	922.10	922.26	922.27	922.11	921.94	921.89	921.58	921.47
	0.25 L	522+10.50	922.00	922.11	922.50	922.52	922.69	922.69	922.53	922.36	922.32	922.00	921.90
	0.50 L	522+40.75	922.25	922.36	922.75	922.77	922.93	922.94	922.78	922.61	922.56	922.25	922.15
	0.75 L	522+71.00	922.31	922.41	922.81	922.82	922.99	922.99	922.83	922.67	922.62	922.31	922.20
SPAN NO.3	℄ PIER 2	523+01.25	922.18	922.29	922.68	922.70	922.87	922.87	922.71	922.55	922.50	922.19	922.08
	0.25 L	523+31.50	922.61	922.71	923.11	923.13	923.29	923.30	923.13	922.97	922.92	922.61	922.50
	0.50 L	523+61.75	922.86	922.96	923.36	923.37	923.54	923.54	923.38	923.22	923.17	922.86	922.75
	0.75 L	523+92.00	922.91	923.02	923.41	923.43	923.59	923.60	923.44	923.27	923.22	922.91	922.81
SPAN NO.4	℄ PIER 3	524+22.25	922.79	922.89	923.29	923.31	923.47	923.48	923.32	923.15	923.10	922.79	922.68
	0.25 L	524+52.50	923.21	923.32	923.71	923.73	923.90	923.90	923.74	923.57	923.53	923.21	923.11
	0.50 L	524+82.75	923.46	923.57	923.96	923.98	924.14	924.15	923.99	923.82	923.77	923.46	923.36
	0.75 L	525+13.00	923.52	923.62	924.02	924.03	924.20	924.20	924.04	923.88	923.83	923.52	923.41
SPAN NO.5	℄ PIER 4	525+43.25	923.39	923.50	923.89	923.91	924.08	924.08	923.92	923.76	923.71	923.40	923.29
	0.25 L	525+73.50	923.82	923.92	924.32	924.34	924.50	924.51	924.34	924.18	924.13	923.82	923.71
	0.50 L	526+03.75	924.07	924.17	924.57	924.58	924.75	924.75	924.59	924.43	924.38	924.07	923.96
	0.75 L	526+34.00	924.12	924.23	924.62	924.64	924.80	924.81	924.65	924.48	924.43	924.12	924.02
SPAN NO.6	℄ PIER 5	526+64.25	924.00	924.10	924.50	924.52	924.68	924.69	924.53	924.36	924.31	924.00	923.89
	0.25 L	526+94.50	924.42	924.53	924.92	924.94	925.11	925.11	924.95	924.78	924.74	924.42	924.32
	0.50 L	527+24.75	924.67	924.78	925.17	925.19	925.35	925.36	925.20	925.03	924.98	924.67	924.57
	0.75 L	527+55.00	924.73	924.83	925.23	925.24	925.41	925.41	925.25	925.09	925.04	924.73	924.62
SPAN NO.7	℄ PIER 6	527+85.25	924.60	924.71	925.10	925.12	925.29	925.29	925.13	924.97	924.92	924.61	924.50
	0.25 L	528+15.50	925.03	925.13	925.53	925.55	925.71	925.72	925.55	925.39	925.34	925.03	924.92
	0.50 L	528+45.75	925.28	925.38	925.78	925.79	925.96	925.96	925.80	925.64	925.59	925.28	925.17
	0.75 L	528+76.00	925.33	925.44	925.83	925.85	926.01	926.02	925.86	925.69	925.64	925.33	925.23
SPAN NO.8	℄ PIER 7	529+06.25	925.21	925.31	925.71	925.73	925.89	925.90	925.74	925.57	925.52	925.21	925.10
	0.25 L	529+36.50	925.63	925.74	926.13	926.15	926.32	926.32	926.16	925.99	925.95	925.63	925.53
	0.50 L	529+66.75	925.88	925.99	926.38	926.40	926.56	926.57	926.41	926.24	926.19	925.88	925.78
	0.75 L	529+97.00	925.94	926.04	926.44	926.45	926.62	926.62	926.46	926.30	926.25	925.94	925.83
SPAN NO.9	℄ PIER 8	530+27.25	925.81	925.92	926.31	926.33	926.50	926.50	926.34	926.18	926.13	925.82	925.71
	0.25 L	530+57.50	926.24	926.34	926.74	926.76	926.92	926.93	926.76	926.60	926.55	926.24	926.13
	0.50 L	530+87.75	926.49	926.59	926.99	927.00	927.17	927.17	927.01	926.85	926.80	926.49	926.38
	0.75 L	531+18.00	926.54	926.65	927.04	927.06	927.22	927.23	927.07	926.90	926.85	926.54	926.44

SCREED ELEVATION TABLE - RIGHT BRIDGE

SPAN NO.	LOCATION	STATION	LINE 1	LINE 2	LINE 3	LINE 4	LINE 5	LINE 6	LINE 7	LINE 8	LINE 9	LINE 10	LINE 11
SPAN NO.10	℄ PIER 9	531+48.25	926.42	926.52	926.92	926.94	927.10	927.11	926.95	926.78	926.73	926.42	926.31
	0.25 L	531+78.50	926.84	926.95	927.34	927.36	927.53	927.53	927.37	927.20	927.16	926.84	926.74
	0.50 L	532+08.75	927.09	927.19	927.59	927.61	927.77	927.78	927.62	927.45	927.40	927.09	926.98
	0.75 L	532+39.00	927.12	927.23	927.62	927.64	927.80	927.81	927.65	927.48	927.43	927.12	927.02
SPAN NO.11	℄ PIER 10	532+69.25	926.95	927.06	927.45	927.47	927.64	927.64	927.48	927.32	927.27	926.96	926.85
	0.25 L	532+98.19	927.30	927.40	927.80	927.81	927.98	927.98	927.82	927.66	927.61	927.30	927.19
	0.50 L	533+27.13	927.45	927.56	927.95	927.97	928.13	928.14	927.98	927.81	927.76	927.45	927.35
	0.75 L	533+56.06	927.39	927.50	927.89	927.91	928.08	928.08	927.92	927.76	927.71	927.40	927.29
SPAN NO.12	℄ PIER 11	533+85.00	927.15	927.26	927.65	927.67	927.83	927.84	927.68	927.51	927.46	927.15	927.05
	0.25 L	534+13.94	927.41	927.51	927.91	927.93	928.09	928.10	927.94	927.77	927.72	927.41	927.30
	0.50 L	534+42.88	927.48	927.59	927.98	928.00	928.16	928.17	928.01	927.84	927.79	927.48	927.38
	0.75 L	534+71.81	927.34	927.45	927.84	927.86	928.02	928.03	927.87	927.70	927.65	927.34	927.24
SPAN NO.13	℄ PIER 12	535+00.75	927.01	927.12	927.51	927.53	927.70	927.70	927.54	927.37	927.33	927.01	926.91
	0.25 L	535+31.00	927.19	927.30	927.69	927.71	927.88	927.88	927.72	927.56	927.51	927.20	927.09
	0.50 L	535+61.25	927.18	927.28	927.68	927.69	927.86	927.86	927.70	927.54	927.49	927.18	927.07
	0.75 L	535+91.50	926.94	927.05	927.44	927.46	927.63	927.63	927.47	927.30	927.26	926.94	926.84
SPAN NO.14	℄ PIER 13	536+21.75	926.52	926.62	927.02	927.04	927.20	927.21	927.05	926.88	926.83	926.52	926.41
	0.25 L	536+52.00	926.64	926.75	927.14	927.16	927.32	927.33	927.17	927.00	926.95	926.64	926.54
	0.50 L	536+82.25	926.59	926.69	927.09	927.10	927.27	927.27	927.11	926.95	926.90	926.59	926.48
	0.75 L	537+12.50	926.34	926.44	926.84	926.86	927.02	927.03	926.86	926.70	926.65	926.34	926.23
SPAN NO.15	℄ PIER 14	537+42.75	925.91	926.02	926.41	926.43	926.60	926.60	926.44	926.28	926.23	925.92	925.81
	0.25 L	537+73.00	926.04	926.14	926.54	926.55	926.72	926.72	926.56	926.40	926.35	926.04	925.93
	0.50 L	538+03.25	925.98	926.09	926.48	926.50	926.66	926.67	926.51	926.34	926.29	925.98	925.88
	0.75 L	538+33.50	925.73	925.84	926.23	926.25	926.42	926.42	926.26	926.09	926.05	925.73	925.63
SPAN NO.16	℄ PIER 15	538+63.75	925.31	925.41	925.81	925.83	925.99	926.00	925.84	925.67	925.62	925.31	925.20
	0.25 L	538+94.00	925.43	925.54	925.93	925.95	926.11	926.12	925.96	925.79	925.74	925.43	925.33
	0.50 L	539+24.25	925.38	925.48	925.88	925.89	926.06	926.06	925.90	925.74	925.69	925.38	925.27
	0.75 L	539+54.50	925.13	925.23	925.63	925.65	925.81	925.82	925.65	925.49	925.44	925.13	925.02
SPAN NO.17	℄ PIER 16	539+84.75	924.70	924.81	925.20	925.22	925.39	925.39	925.23	925.07	925.02	924.71	924.60
	0.25 L	540+15.00	924.83	924.93	925.33	925.34	925.51	925.51	925.35	925.19	925.14	924.83	924.72
	0.50 L	540+45.25	924.77	924.88	925.27	925.29	925.45	925.46	925.30	925.13	925.08	924.77	924.67
	0.75 L	540+75.50	924.52	924.63	925.02	925.04	925.21	925.21	925.05	924.88	924.84	924.52	924.42
SPAN NO.18	℄ PIER 17	541+05.75	924.10	924.20	924.60	924.62	924.78	924.79	924.63	924.46	924.41	924.10	923.99
	0.25 L	541+36.00	924.22	924.33	924.72	924.74	924.90	924.91	924.75	924.58	924.53	924.22	924.12
	0.50 L	541+66.25	924.17	924.27	924.67	924.68	924.85	924.85	924.69	924.53	924.48	924.17	924.06
	0.75 L	541+96.50	923.92	924.02	924.42	924.44	924.60	924.61	924.44	924.28	924.23	923.92	923.81
SPAN NO.19	℄ PIER 18	542+26.75	923.49	923.60	923.99	924.01	924.18	924.18	924.02	923.86	923.81	923.50	923.39
	0.25 L	542+57.00	923.62	923.72	924.12	924.13	924.30	924.30	924.14	923.98	923.93	923.62	923.51
	0.50 L	542+87.25	923.56	923.67	924.06	924.08	924.24	924.25	924.09	923.92	923.87	923.56	923.46
	0.75 L	543+17.50	923.31	923.42	923.81	923.83	924.00	924.00	923.84	923.67	923.63	923.31	923.21
SPAN NO.20	℄ PIER 19	543+47.75	922.89	922.99	923.39	923.41	923.57	923.58	923.42	923.25	923.20	922.89	922.78
	0.25 L	543+78.00	923.01	923.12	923.51	923.53	923.69	923.70	923.54	923.37	923.32	923.01	922.91
	0.50 L	544+08.25	922.96	923.06	923.46	923.47	923.64	923.64	923.48	923.32	923.27	922.96	922.85
	0.75 L	544+38.50	922.71	922.81	923.21	923.23	923.39	923.40	923.23	923.07	923.02	922.71	922.60
SPAN NO.21	℄ PIER 20	544+68.75	922.28	922.39	922.78	922.80	922.97	922.97	922.81	922.65	922.60	922.29	922.18
	0.25 L	544+97.31	922.40	922.51	922.90	922.92	923.08	923.09	922.93	922.76	922.71	922.40	922.30
	0.50 L	545+25.88	922.35	922.46	922.85	922.87	923.04	923.04	922.88	922.72	922.67	922.36	922.25
	0.75 L	545+54.44	922.12	922.22	922.62	922.63	922.80	922.80	922.64	922.48	922.43	922.12	922.01
	℄ BRG. FA	545+83.00	921.71	921.82	922.21	922.23	922.40	922.40	922.24	922.07	922.03	921.71	921.61

NOTE:

SCREED ELEVATIONS ARE FOR THE DECK SLAB SURFACE PRIOR TO CONCRETE PLACEMENT. ALLOWANCE HAS BEEN MADE FOR THE ANTICIPATED CALCULATED DEAD LOAD DEFLECTIONS.

L = C/C OF SUBSTRUCTURE

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

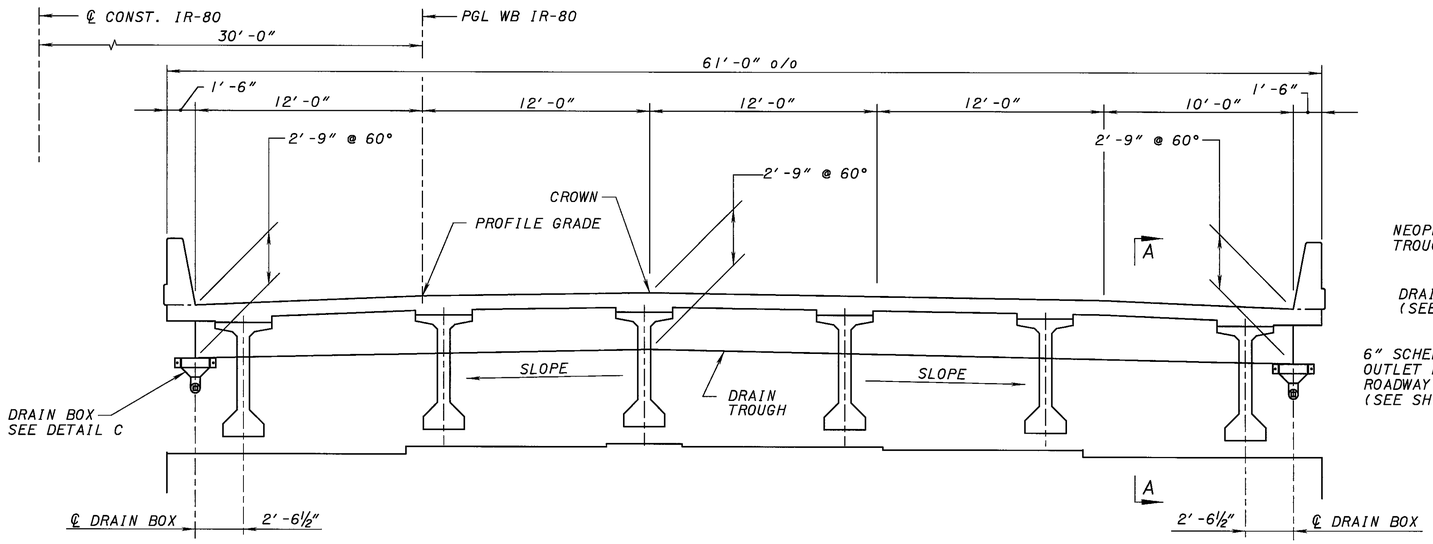
DESIGNED ACC | DRAWN WHM | CHECKED MES | REVIEWED WMG | DATE 08/04 | REVISED | STRUCTURE FILE NUMBER 5002265L & 5002303R

SCREED ELEVATION TABLE - RIGHT BRIDGE
BRIDGE NO. MAH-80-0123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080

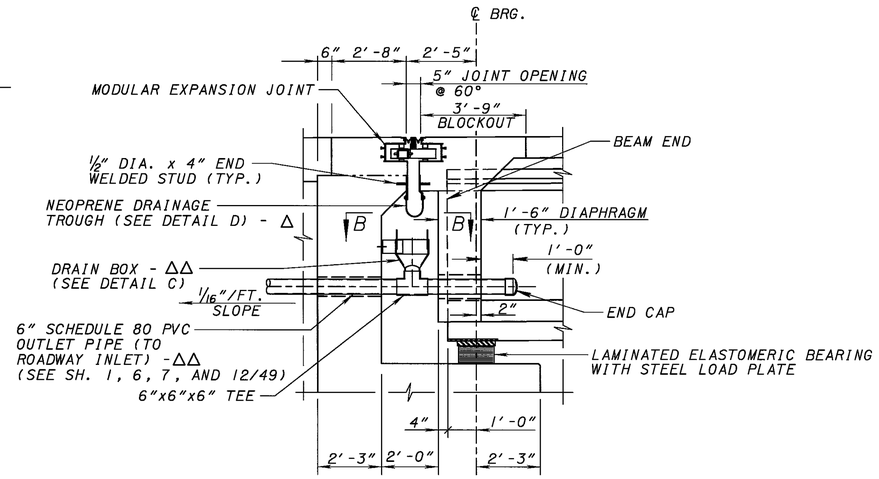
981/1100

8/2/05 10:05:10 AM
s:\projects\37700\bridge-Reservoir\Final Tracings\MH080502N.dgn



ELEVATION - EXPANSION DAM DRAIN TROUGH

(LEFT REAR ABUT. SHOWN ALL OTHERS SIMILAR)



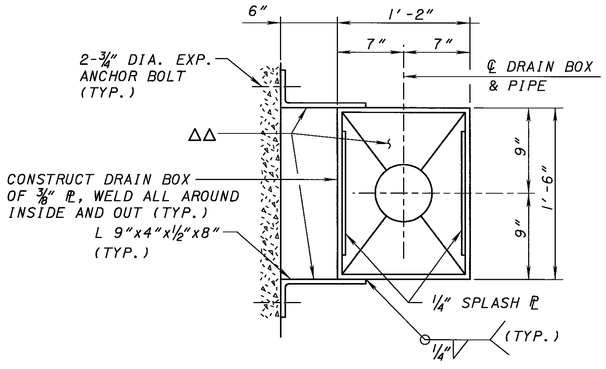
SECTION A-A

NOTES:

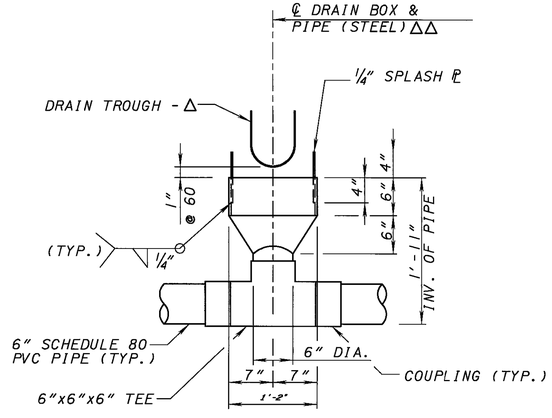
1. ENDS OF TROUGH TO BE CLOSED AND MADE WATERTIGHT.
2. APPLY RUBBERIZED SEALER MATERIAL BETWEEN DRAIN TROUGH AND PLATE PRIOR TO INSTALLATION.

Δ - INCLUDED IN ITEM 518 - TROUGH HORIZONTAL CONDUCTOR, AS PER PLAN (NEOPRENE, INCLUDING SPECIALS)

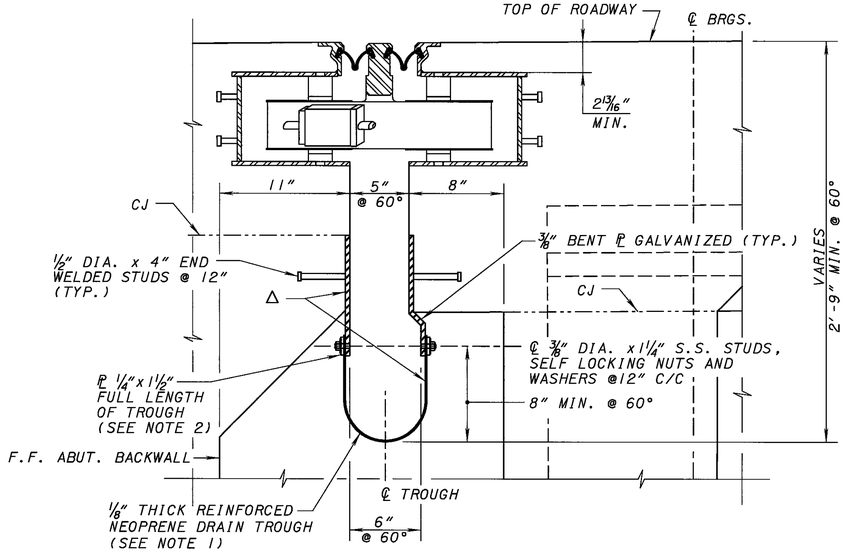
ΔΔ - INCLUDED IN ITEM 518 - PIPE HORIZONTAL CONDUCTOR, AS PER PLAN (INCLUDING SPECIALS)



SECTION B-B



DETAIL C



DETAIL D

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350 WESTERVILLE, OHIO 43081

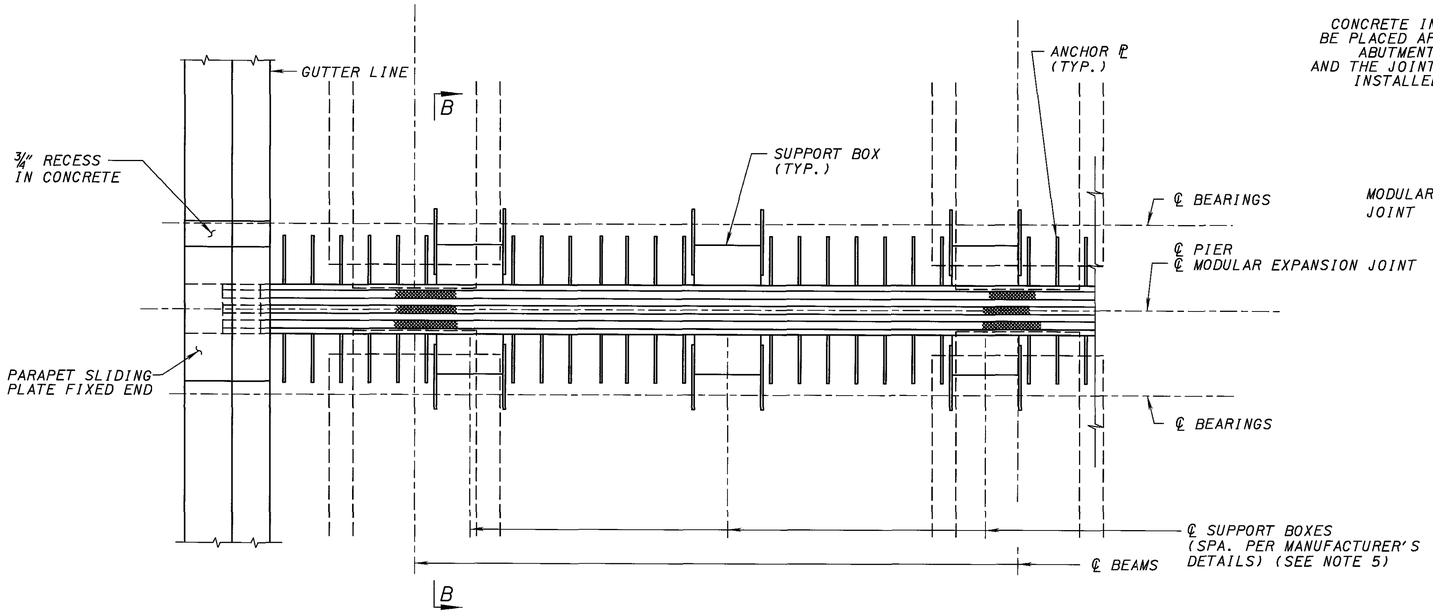
DESIGNED MES | DRAWN MES | REVIEWED WMG | DATE 08/04
CHECKED WHM | REVISED | STRUCTURE FILE NUMBER 5002265L & 5002303R

DRAINAGE TROUGH DETAILS

BRIDGE NO. MAH-80-0123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

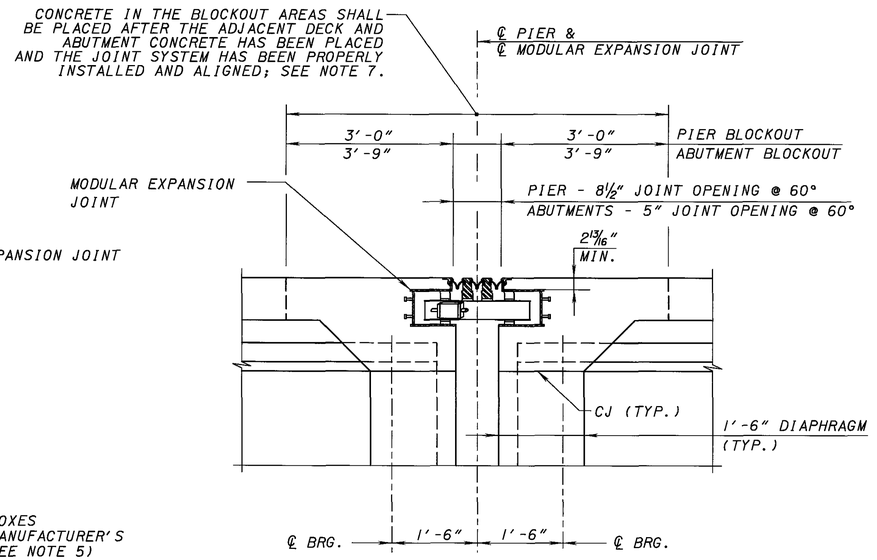
MAH-80-0.97
PID 6080

8/12/05 10:05:36 AM
s:\projects\37700\bridge-Reservoir\Final Tracings\MH080W02A.dgn



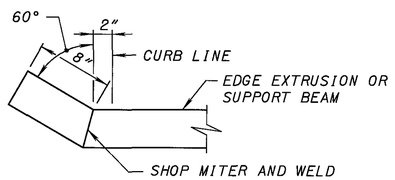
PART PLAN MODULAR EXPANSION JOINT AT PIER II

(PIER II SHOWN, ABUTMENTS SIMILAR)

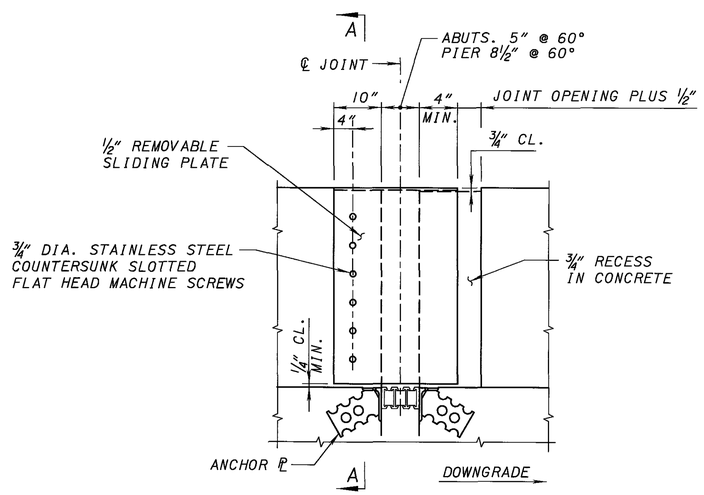


SECTION B-B

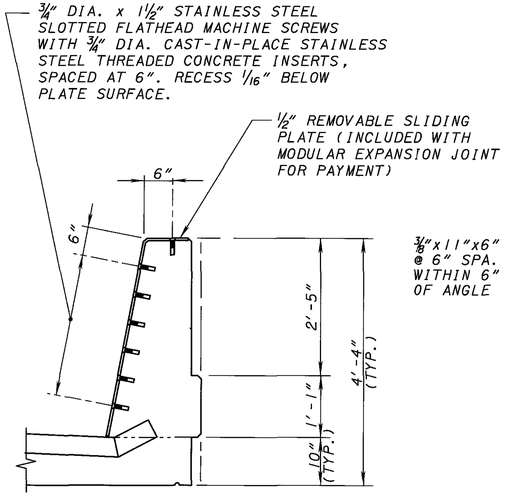
JOINT OPENINGS (INCHES)							
TEMPERATURE (°F)	30	40	50	60	70	80	90
REAR ABUTMENT	6 9/16	6 1/16	5 1/2	5	4 1/2	3 15/16	3 7/16
PIER II	11 1/16	10 1/4	9 3/8	8 1/2	7 5/8	6 3/4	5 15/16
FORWARD ABUTMENT	6 5/16	5 7/8	5 7/16	5	4 9/16	4 1/8	3 11/16



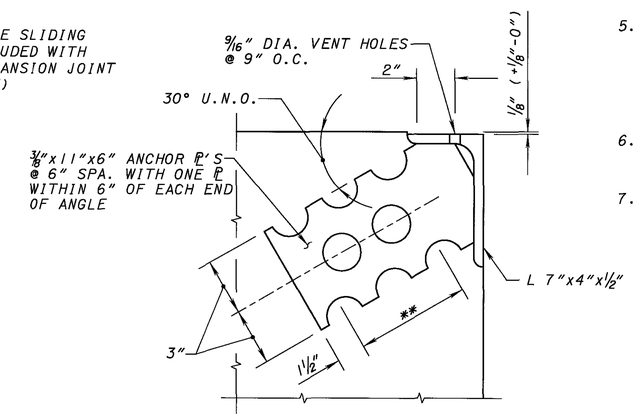
UPTURN DETAIL



PARAPET SLIDING PLATE ELEVATION



SECTION A-A



ANCHOR PLATE DETAIL

** 2" DIA. HOLES, 1½" PITCH

NOTES:

1. MODULAR EXPANSION JOINTS SHALL FULLY COMPLY WITH THE SPECIAL PROVISIONS.
2. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SHOWING:
   A. ALL DECK JOINT MATERIALS
   B. PROPOSED METHOD OF INSTALLATION.
   C. MANUFACTURER AND MODEL NUMBERS.
   D. ASSEMBLY WITH ALL SIZES AND DIMENSIONS SHOWN.
3. THE ELASTOMER SHALL BE SHOP INSTALLED IN ONE CONTINUOUS PIECE AND LIMITED TO A MAXIMUM OF 3 INCHES MOVEMENT PER SEAL.
4. USE OF THIS SHEET IS DEPENDENT UPON JOINT SELECTION BY THE CONTRACTOR AND IS TO BE USED ONLY WITH WATSON BOWMAN ACME MODULAR JOINTS. A COMPARABLE D.S. BROWN COMPANY MODULAR JOINT SYSTEM WITH THE SAME MOVEMENT RANGE OR ANOTHER ALTERNATE MODULAR JOINT SYSTEM AS SPECIFIED IN THE SPECIAL PROVISIONS MAY BE USED IF APPROVED BY THE ENGINEER.
5. 1'-1¾" IS PROVIDED FOR JOINT BETWEEN TOP OF SLAB AND TOP OF BEAM. 1'-10¾" IS PROVIDED ABOVE DIAPHRAGM CONSTRUCTION JOINT. IF INSUFFICIENT SPACE IS PROVIDED ABOVE BEAM FOR SUPPORT BOX, LOCATE SUPPORT BOXES BETWEEN BEAMS. THE CONTRACTOR SHALL COORDINATE MODULAR EXPANSION JOINT BLOCKOUT DIMENSIONS FOR MODULAR ASSEMBLIES USED PRIOR TO POURING OF CONCRETE.
6. REINFORCEMENT BARS SHALL BE RESPACED TO PROVIDE CLEARANCE FOR SUPPORT BOXES. COORDINATE BAR PLACEMENT WITH SHOP DRAWINGS FOR JOINT.
7. INSTALL AND ALIGN THE MODULAR EXPANSION JOINTS IN THEIR PROPER LOCATIONS PRIOR TO PLACING CONCRETE IN THE BLOCKOUT AREAS.

   ALLOW THE ABUTMENT BACKWALL AND DECK CONCRETE ADJACENT TO THE BLOCKOUTS TO CURE FOR 48 HOURS BEFORE MAKING FINAL ADJUSTMENTS TO THE EXPANSION JOINTS. AFTER THE JOINTS ARE ALIGNED IN THEIR FINAL LOCATIONS, HAND PLACE CONCRETE IN THE BLOCKOUT AREAS AND VIBRATE CONCRETE AROUND THE JOINTS TO ACHIEVE COMPLETE CONSOLIDATION. AFTER THE CONCRETE HAS CURED, SEAL ALL CONSTRUCTION JOINTS IN THE CONCRETE AROUND THE EXPANSION JOINTS WITH HMWM RESIN IN ACCORDANCE WITH SS 892 AND CMS 511.22.

   ALL COSTS FOR SEALING WITH HMWM RESIN ARE TO BE INCLUDED FOR PAYMENT WITH ITEM 892.

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350 WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
MTO	MES	WMG	08/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MES		5002265L & 5002303R	

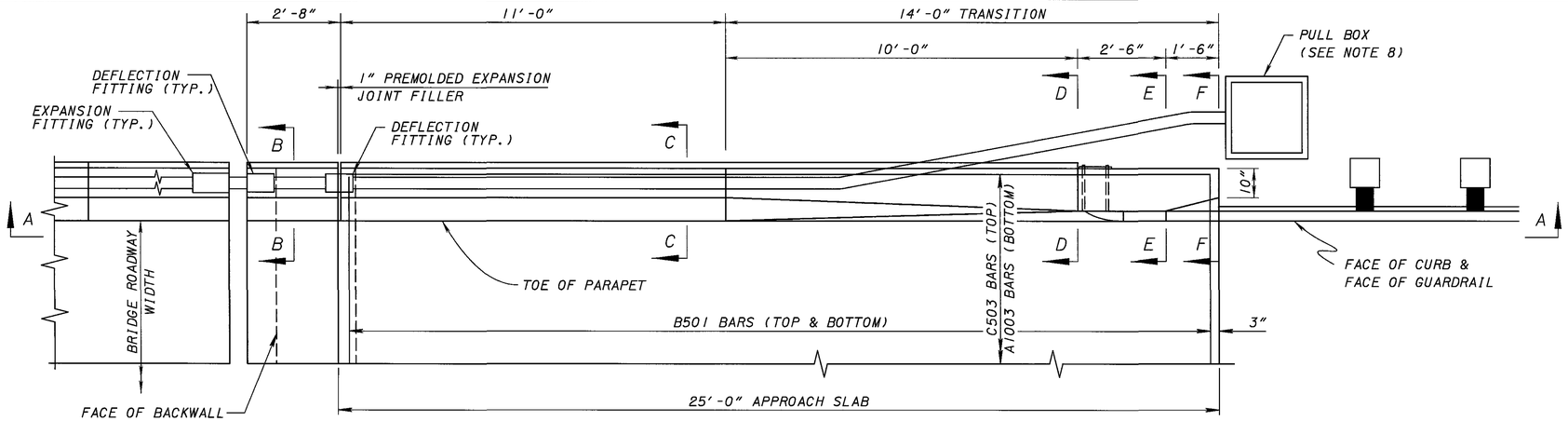
MODULAR EXPANSION JOINT DETAILS
BRIDGE NO. MAH-80-0.123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080

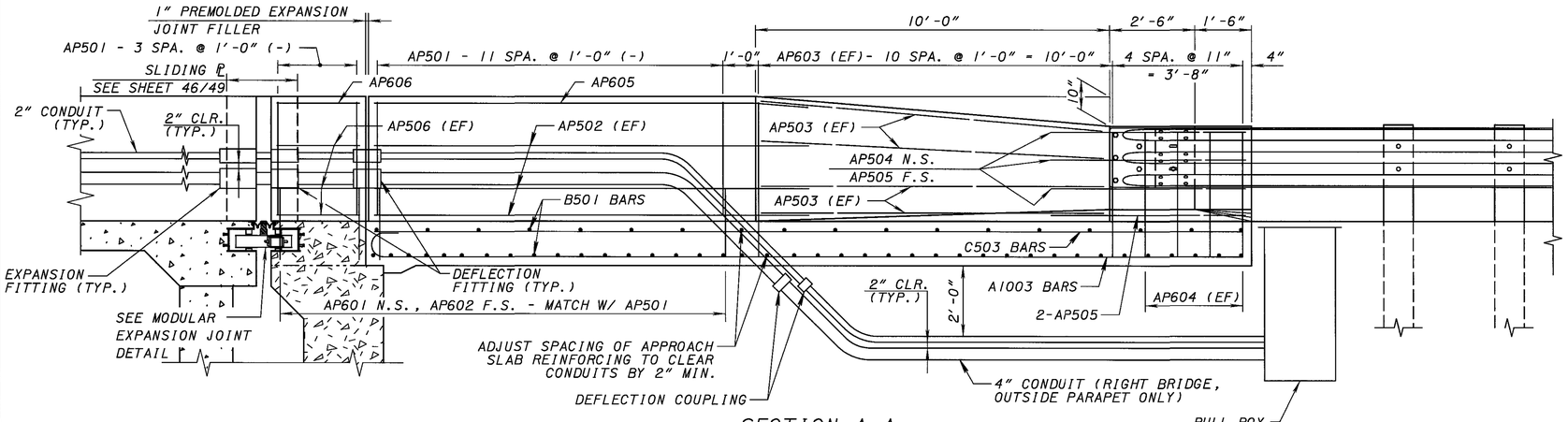
46 / 49

983
1100

8/12/05 10:08:17 AM
s:\projects\37700\bridge-Reservoir\Final Tracings\MH080EX2A.dgn



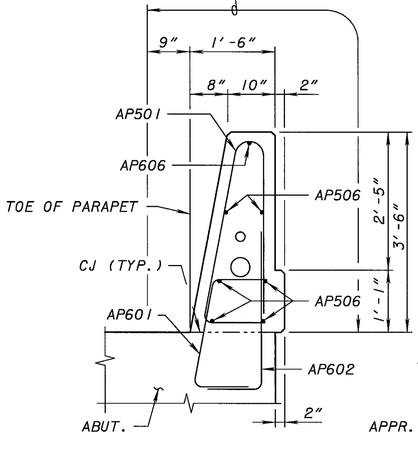
PART PLAN AT ABUTMENT



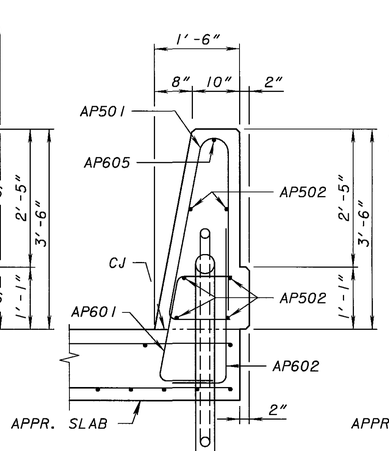
SECTION A-A

FWD. ABUT. LEFT SIDE & REAR ABUT. RIGHT SIDE SHOWN;
FWD. ABUT. RIGHT SIDE & REAR ABUT. LEFT SIDE OPPOSITE HAND & SIMILAR

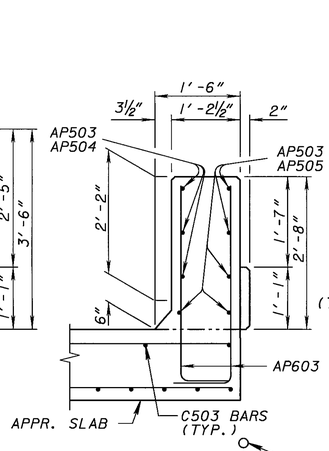
LIMITS OF SEALING
OF CONCRETE SURFACES
(EPOXY-URETHANE)
(TYP. ALL SECTIONS)



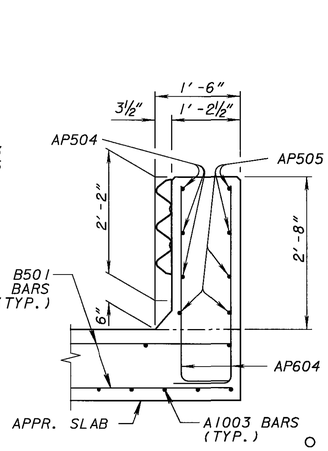
SECTION B-B



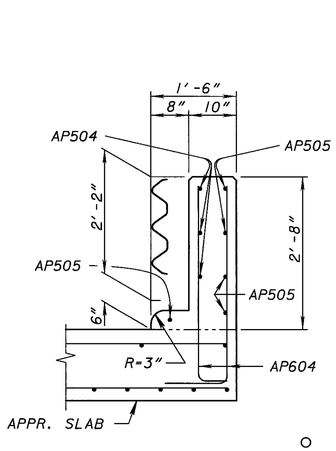
SECTION C-C



SECTION D-D

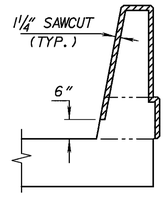


SECTION E-E



SECTION F-F

* FIELD BEND IF NECESSARY



DETAIL A

(SECTION THROUGH SAWCUT)
SAWCUT PERIMETER = 7′-6″

LEGEND
N.S. = NEAR SIDE
F.S. = FAR SIDE
E.F. = EACH FACE

NOTES:

1. SEE STD. DWG. AS-1-81 FOR ADDITIONAL APPROACH SLAB NOTES AND DETAILS.
2. SEE STD. DWG. AS-1-81 FOR DETAILS OF A1003, B501, AND C503 BARS. INCLUDE ALL COSTS FOR A1003, B501, AND C503 BARS WITH ITEM 526 FOR PAYMENT.
3. SEE STD. DWG. SBR-1-99 FOR ADDITIONAL PARAPET NOTES AND DETAILS.
4. INCLUDE ALL COSTS FOR PARAPET CONCRETE WITH ITEM 898 - QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (PARAPET) FOR PAYMENT.
5. MINIMUM BAR LAP LENGTHS:
   #5 BARS 2′-9″
   #6 BARS 3′-4″
6. MODULAR EXPANSION JOINT AT ABUTMENT NOT SHOWN. FOR DETAILS OF MODULAR EXPANSION JOINT AT ABUTMENT SEE SHEET 46/49.
7. FOR BRIDGE TERMINAL ASSEMBLY, SEE STANDARD CONSTRUCTION DRAWING GR-3.1 AND GR-3.2.
8. PROVIDE SEPARATE PULL BOXES FOR EACH CONDUIT AT EACH BRIDGE CORNER.
9. EXPANSION AND DEFLECTION FITTINGS INCLUDED WITH THE APPLICABLE CONDUIT ITEM 625.
10. EXPANSION AND DEFLECTION FITTINGS SHALL BE BY OZ/GEDNEY, 7770 N. FRONTAGE ROAD, SKOKIE, IL 60077; SPRING CITY ELECTRICAL MFG. CO., SPRING CITY, PA 19475; OR APPROVED EQUAL.

DESIGN AGENCY
GANNETT FLEMING
ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY SUITE 350
WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
JAR	RLB	WMG	08/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RAH		5002265L & 5002303R	

APPROACH PARAPET DETAILS

BRIDGE NO. MAH-80-0.97 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080

47 / 49

984
1100

8/12/05 10:08:50 AM
s:\projects\37700\bridge-Reservoir\Final Tracings\MH080M028.dgn

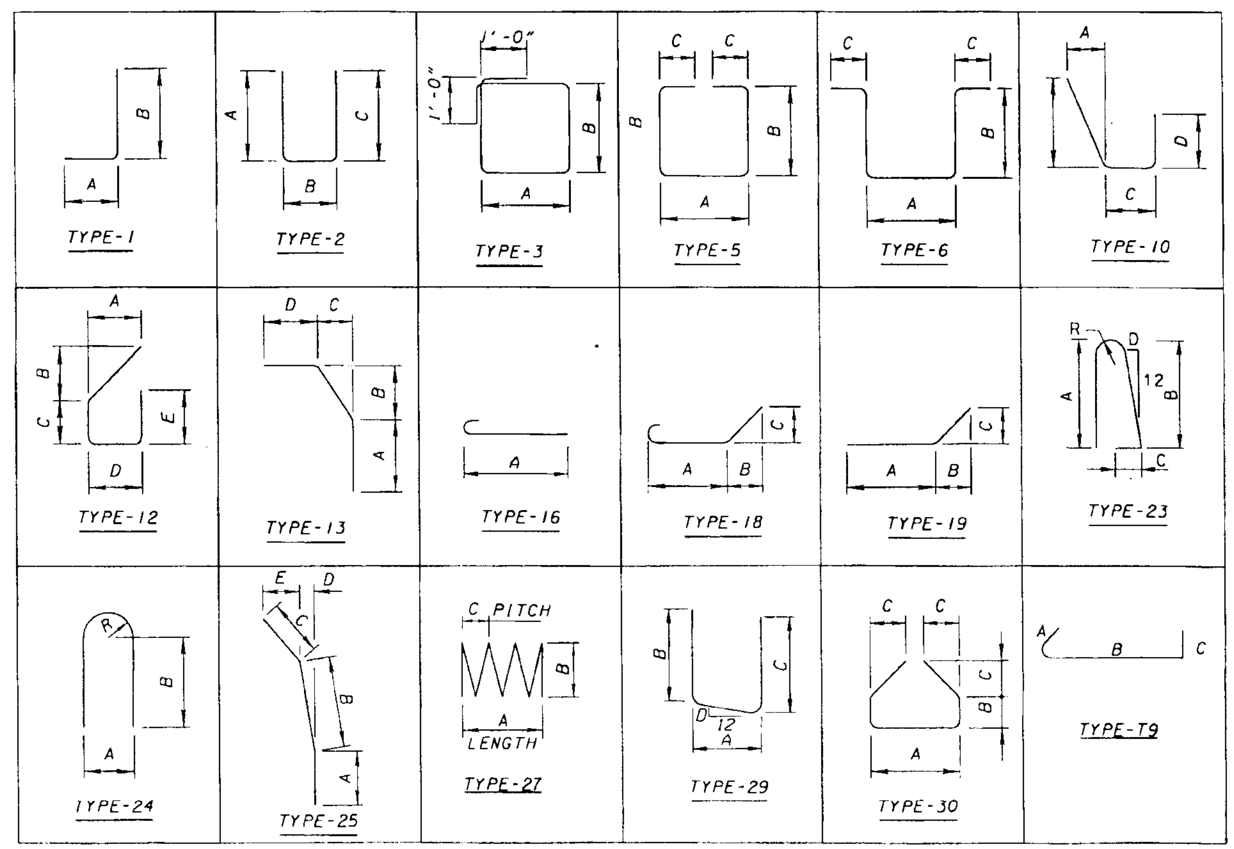
REINFORCING STEEL LIST

MARK	REAR	FWD.	TOTAL	LENGTH	WEIGHT	TYPE	A	B	C	D	E	R	INCR.
ABUTMENT - LEFT BRIDGE													
A501	124	124	248	7'-3"	1,875	1	0'-10"	6'-5"					
A502	62	62	124	14'-5"	1,864	2	3'-6"	7'-5"	3'-6"				
A503	52	52	104	31'-9"	3,444	STR							
A504	16	16	32	2'-4"	78	STR							
A505	28	28	56	6'-9"	394	STR							
A506	24	24	48	15'-2"	759	STR							
A507	4 S.O. 3	4 S.O. 3	8 S.O. 3	6'-10" TO 12'-10"	246	STR							3'-0"
A508	4	4	8	14'-6"	121	19	12'-9"	1'-6"	0'-9"				
A509	28	28	56	7'-7"	443	1	0'-10"	6'-9"					
A510	4	4	8	21'-7"	180	2	9'-10"	1'-11"	9'-10"				
A511	2 S.O. 12	2 S.O. 12	4 S.O. 12	10-1" TO 21'-5"	789	2	4'-1" TO 9'-9"	1'-11"	4'-1" TO 9'-9"				1'-0⅝"
A512	12	12	24	8'-6"	213	1	1'-6"	7'-0"					
A513	20	20	40	11'-6"	480	3	1'-6"	3'-3"					
A601	144	144	288	14'-4"	6,200	2	2'-4"	9'-8"	2'-4"				
A602	62	62	124	13'-11"	2,592	2	6'-0"	1'-11"	6'-0"				
A603	62	62	124	11'-11"	2,220	2	5'-0"	1'-11"	5'-0"				
A605	62	62	124	12'-1"	2,250	12	1'-11"	1'-11"	1'-7"	2'-4"	2'-8"		
A609	6	6	12	12'-1"	218	2	3'-3"	5'-3"	3'-3"				
A801	38	38	76	46'-8"	9,470	STR							
D801	42	42	84	5'-0"	1121	18	2'-8"	1'-0"	1'-0"				
TOTAL FOR LEFT BRIDGE ABUTMENTS - 34,960 POUNDS													

MARK	EA. PIER	TOTAL	LENGTH	WEIGHT	TYPE	A	B	C	D	E	R	INCR.
PIER - LEFT BRIDGE												
P401	114	2280	13'-4"	20,307	2	3'-1"	7'-2"	3'-1"				
P402	366	7320	3'-6"	17,114	T9	0'-4½"	3'-1½"	-				
P403	16	320	4'-0"	855	1	11"	3'-1"					
SP401	16	320	187'-4"	SEE NOTE 4	27	50'-0"	1'-2"	1'-0"		LENGTH DOES NOT INCLUDE SPLICE *		
P501	8	160	57'-4"	9,568	STR							
P502	38 (EXCEPT PIERS 6&16)	684	11'-6"	8,204	3	1'-6"	3'-3"					
P503	12	240	10'-5"	2,608	2	1'-8"	7'-1"					
P601	160	3200	52'-0"	SEE NOTE 4	STR							
P602	6 (EXCEPT PIERS 6&16)	108	13'-8"	2217	2	3'-3"	7'-2"	3'-3"				
P901	14	280	57'-4"	54,581	STR							
TOTAL FOR LEFT BRIDGE PIERS - 112,850 POUNDS												

MARK	REAR	FWD.	TOTAL	LENGTH	WEIGHT	TYPE	A	B	C	D	E	R	INCR.
SUPERSTRUCTURE - LEFT BRIDGE													
S401			648	30'-0"	12,986	STR							
S402			324	35'-9"	7,737	STR							
S403			648	33'-6"	14,501	STR							
S404			2106	36'-6"	51,348	STR							
S405			102	7'-9"	528	12	1'-4¼"	1'-4¼"	1'-11"	1'-4"	2'-7"		
S406			98	6'-10"	447	12	1'-2¾"	1'-2¾"	1'-3"	1'-3"	2'-7"		
S407			72	3'-10"	184	1	1'-3"	2'-7"					
S501			5549	7'-7"	43,887	23	3'-0"	3'-2"	1'-1"	2¼"		2$\frac{3}{16}$"	
S502			1128	30'-0"	35,295	STR							
S503			12	36'-6"	457	STR							
S504			4538	8'-5"	39,839	16	7'-10"						
S505			680	30'-0"	21,277	STR							
S506			340	37'-9"	13,387	STR							
S507			680	34'-5"	24,410	STR							
S508			2210	37'-5"	86,247	STR							
S601			5549	3'-5"	28,479	29	1'-5"	1'-0"	1'-0"	2¼"			
S602			5549	2'-6"	20,836	1	1'-0"	1'-6"					
S603			192	30'-0"	8,652	STR							
S604			2	38'-6"	116	STR							
S605			9034	31'-10"	431,949	STR							
S606			4517	37'-6"	254,420	STR							
S607			4517	26'-3"	178,094	STR							
S608			40	7'-3"	436	STR							
S609			664	40'-0"	39,893	STR							
S610			664	25'-10"	25,764	STR							
S611			2490	56'-0"	209,439	STR							
S612			1870	30'-0"	84,262	STR							
TOTAL FOR LEFT BRIDGE SUPERSTRUCTURE - 1,634,870 POUNDS													

REINFORCEMENT GIVEN IS FOR LEFT BRIDGE.
REINFORCEMENT FOR RIGHT BRIDGE IS SAME AS LEFT BRIDGE.



NOTES

1. THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, A511 IS A NO. 5 BAR. BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE NOTED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED.
2. ALL REINFORCING STEEL SHALL BE EPOXY COATED.
3. REINFORCING BARS IN APPROACH SLAB SHALL BE INCULDED WITH ITEM 526, REINFORCED CONCRETE APPROACH SLABS, AS PER PLAN. REINFORCING BARS FOR APPROACH SLAB PARAPETS DETAILED ON SHEET 47/49 SHALL BE INCLUDED WITH ITEM 509, EPOXY COATED REINFORCING STEEL, AS PER PLAN.
4. 40,044 · 249,932 POUNDS OF REINFORCEMENT FOR PILES INCLUDED IN ITEM 507 - 18" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN.
5. "STR" IN THE TYPE COLUMN INDICATES STRAIGHT BARS.
6. S.O. DENOTES SERIES OF.
7. REFER TO C.M.S. SECTION 509 FOR STANDARD BEND DIMENSIONS.
8. ALL REINFORCING STEEL CLEARANCES ARE 2" UNLESS OTHERWISE NOTED.
9. (**) FOR INFORMATION ONLY.
10. (*) -SPLICES MAY BE LAPPED $40d_b$ OR WELDED

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY SUITE 350 WESTERVILLE, OHIO 43081

DESIGNED JAR	DRAWN RLB	REVIEWED WMG	DATE 08/04
CHECKED RAH	REVISED	STRUCTURE FILE NUMBER 5002265L & 5002303R	

REINFORCING STEEL LIST
BRIDGE NO. MAH-80-0123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080

48/49

985/1100

8/10/05 3:48:51 PM
S:\projects\37700\bridge-Reservoir\Final Tracings\MH080RL2A.dgn

REINFORCING STEEL LIST

MARK	REAR	FWD.	TOTAL	LENGTH	WEIGHT	TYPE	A	B	C	D	E	R	INCR.
APPROACH PARAPET - LEFT BRIDGE													
AP501	32	32	64	7'-5"	506	23	3'-0"	3'-2"	1'-1"	0'-2¼"		0'-2¾"	
AP502	12	12	24	13'-7"	340	STR							
AP503	16	16	32	10'-0"	334	STR							
AP504	6	6	12	5'-6"	69	25	1'-8"	2'-5"	1'-5"	0'-1½"	0'-5"		
AP505	10	10	20	5'-6"	115	STR							
AP506	12	12	24	2'-4"	58	STR							
AP601	32	32	64	4'-1"	392	29	1'-11"	1'-1"	1'-1"	0'-2¼"			
AP602	32	32	64	3'-10"	368	1	1'-1"	2'-9"					
AP603	4 S.O. 11	4 S.O. 11	8 S.O. 11	4'-6" TO 5'-4"	650	1	1'-0"	3'-6" TO 4'-4"					0'-1"
AP604	16	16	32	4'-6"	216	1	1'-0"	3'-6"					
AP605	2	2	4	14'-2"	90	STR							
AP606	2	2	4	2'-4"	14	STR							
TOTAL FOR LEFT BRIDGE APPROACH PARAPETS = 3,150 POUNDS													

MARK	REAR	FWD.	TOTAL	LENGTH	WEIGHT	TYPE	A	B	C	D	E	R	INCR.
PIER DIAPHRAGMS - LEFT BRIDGE (PIERS 1 THRU 20 - EXCEPT PIER 6, 11 & 16)													
D401			765	15'-4"	7835	6	2'-6"	5'-9"	0'-8"				
D402			204	14'-0"	1908	24	0'-5½"	6'-4"				0'-2¼"	
D403			204	2'-8"	363	STR							
D404			204	5'-0"	681	30	1'-11½"	0'-6¼"	0'-8½"				
D601			510	9'-7"	7341	STR							
D605			136	4'-5"	902	STR							
D606			102	3'-8"	562	2	0'-7"	2'-6"	0'-7"				
D801			680	11'-10"	21,484	13	7'-2"	0'-7¾"	0'-7¾"	3'-9"			
PIER DIAPHRAGMS AT CENTER EXPANSION JOINT - LEFT BRIDGE (PIER 11)													
D405			196	9'-2"	1200	2	4'-0"	1'-2"	4'-0"				
D601			60	9'-7"	864	STR							
D602			24	2'-1"	70	STR							
D801			80	11'-10"	2528	13	7'-2"	0'-7¾"	0'-7¾"	3'-9"			
D802			16	6'-1"	263	13	1'-5"	0'-7¾"	0'-7¾"	3'-9"			
PIER DIAPHRAGMS AT FIXED PIERS- LEFT BRIDGE (PIERS 6 & 16)													
D402			24	14'-0"	224	24	0'-5½"	6'-4"				0'-2¼"	
D403			24	2'-8"	43	STR							
D404			24	5'-0"	80	30	1'-11½"	0'-6¼"	0'-8½"				
D406			90	12'-6"	752	2	5'-0"	2'-6"	5'-0"				
D407			180	5'-8"	681	1	0'-8"	5'-0"					
D601			60	9'-7"	864	STR							
D605			16	4'-5"	106	STR							
D606			12	3'-8"	66	2	0'-7"	2'-6"	0'-7"				
D801			80	11'-10"	2527	13	7'-2"	0'-7¾"	0'-7¾"	3'-9"			
D804			16	29'-6"	1260	STR							
D1101			140	3'-0"	2231	△							
ABUTMENT DIAPHRAGMS - LEFT BRIDGE													
D405			204	9'-2"	1249	2	4'-0"	1'-2"	4'-0"				
D601			60	9'-7"	864	STR							
D603			24	3'-1"	111	STR							
D801			80	11'-10"	2528	13	7'-2"	0'-7¾"	0'-7¾"	3'-9"			
D803			16	7'-1"	303	13	2'-5"	0'-7¾"	0'-7¾"	3'-9"			
TOTAL FOR LEFT BRIDGE DIAPHRAGMS = 59,900 POUNDS													

△ SMOOTH ROUND DOWEL.

FOR NOTES, SEE 48/49.

DESIGN AGENCY
GANNETT FLEMING
ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
JAR	RLB		
CHECKED	REVISED	STRUCTURE FILE NUMBER	
		5002265L & 5002303R	

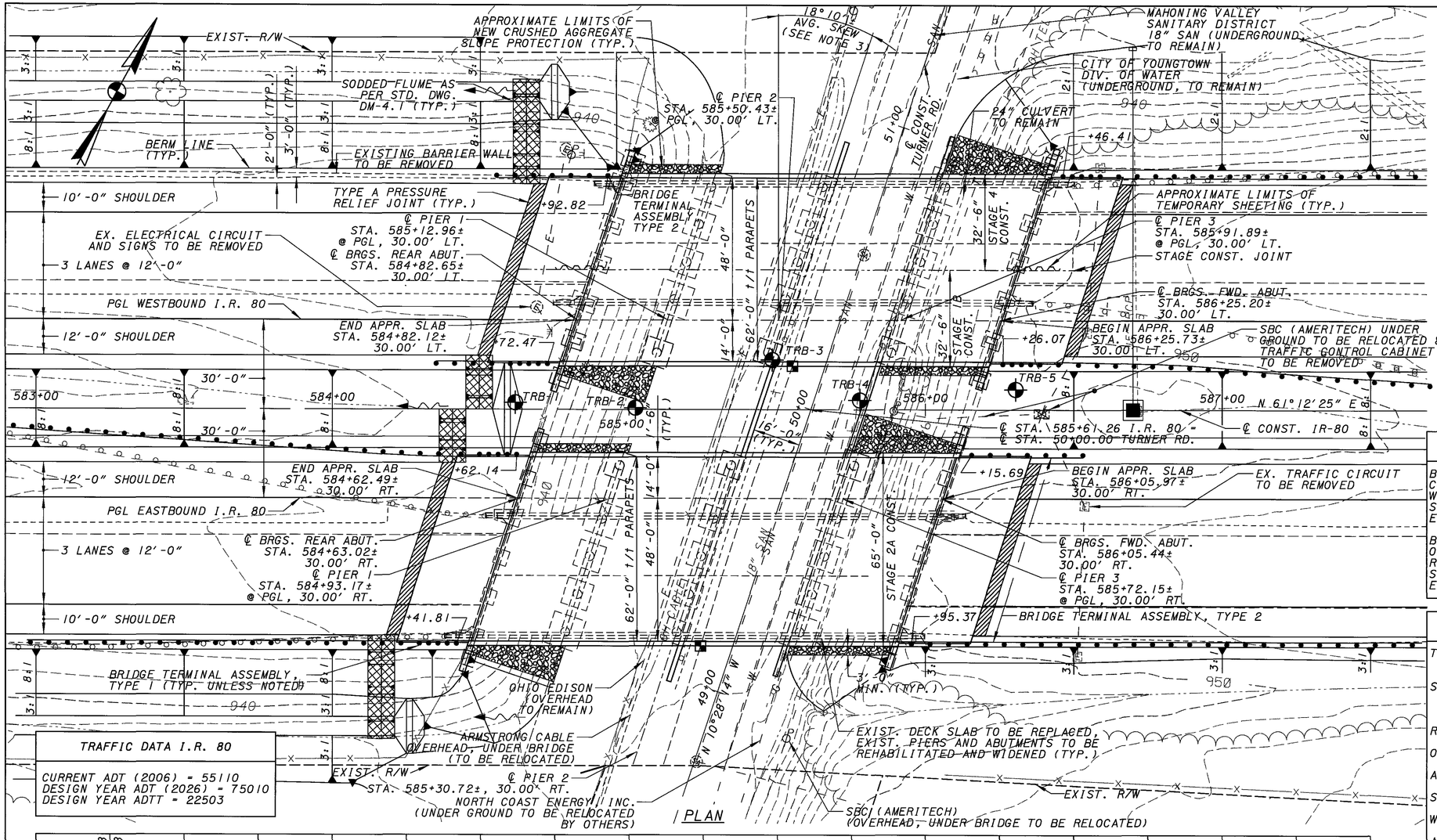
REINFORCING STEEL LIST
BRIDGE NO. MAH-80-0123 L/R
I.R. 80 OVER MEANDER CREEK RESERVOIR

MAH-80-0.97
PID 6080

49 / 49

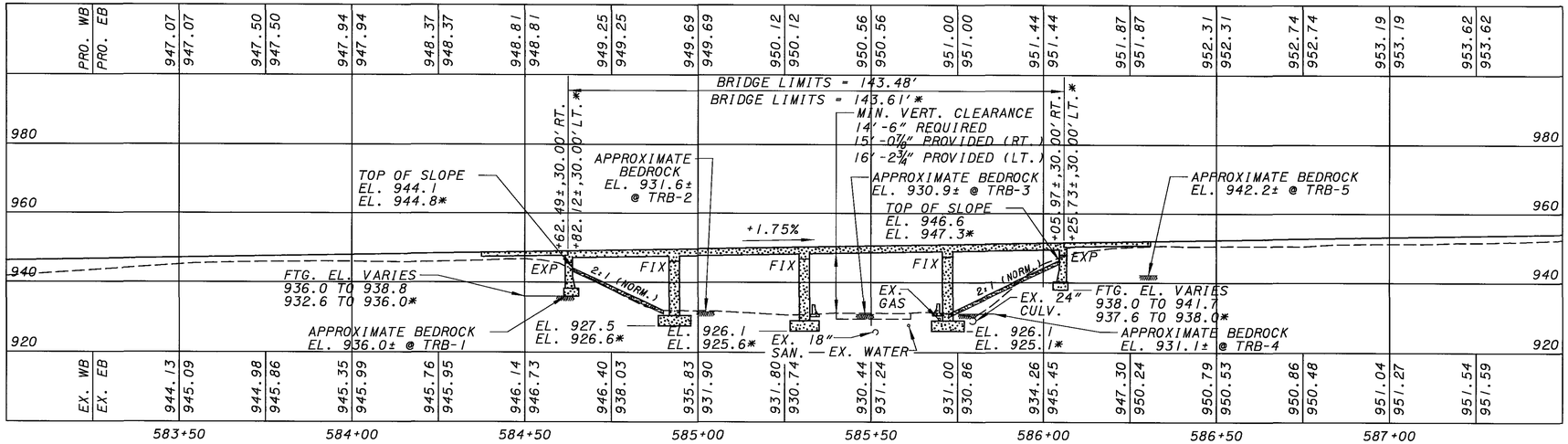
986
1100

8/12/05 10:10:01 AM
s:\projects\31700\bridge Reservoir\Final Tracings\MH080RL28.dgn



PLAN

TRAFFIC DATA I.R. 80
CURRENT ADT (2006) = 55110
DESIGN YEAR ADT (2026) = 75010
DESIGN YEAR ADTT = 22503



PROFILE ALONG PROFILE GRADE LINE

RIGHT BRIDGE SHOWN, LEFT BRIDGE AS NOTED BY *

PROPOSED WORK:

1. REMOVE THE EXISTING CONCRETE DECK SLAB AND ABUTMENT STEM TO A MINIMUM OF ONE FOOT BELOW TOP OF ABUTMENT SEAT, AND REMOVE EXISTING TURNBACK WINGWALLS.
2. PATCH THE REINFORCED CONCRETE SUBSTRUCTURES AS SHOWN ON THE PLANS.
3. WIDEN THE EXISTING CONCRETE ABUTMENTS AND PIERS.
4. INSTALL NEW POROUS BACKFILL WITH FILTER FABRIC AND A PIPE TO COLLECT AND DISCHARGE THE DRAINAGE BEHIND THE ABUTMENTS.
5. CONSTRUCT A NEW, WIDENED REINFORCED CONCRETE DECK SLAB WITH 42" SBR-199 CONCRETE PARAPETS.
6. SEAL THE CONCRETE SURFACES WITH EPOXY-URETHANE CONCRETE SEALER.
7. CONSTRUCT NEW FULL-WIDTH APPROACH SLABS.
8. CONSTRUCT NEW CONCRETE BARRIER PROTECTION ALONG PIER COLUMNS.
9. REPAIR AND/OR REPLACE THE EXISTING SLOPE PROTECTION TO PROPOSED ELEVATIONS SHOWN.

NOTES:

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. EXISTING STRUCTURE ELEVATIONS DETERMINED FROM EXISTING PLANS ARE BASED ON THE ELEVATION SHOWN ON THE EXISTING PLANS, DATED 1965, MINUS A CORRECTION OF 0.40 FT.
3. FOR APPROXIMATE ABUTMENT AND PIER SKEWS SEE DETAIL SHEETS.

BENCHMARK DATA	LEGEND
BENCHMARK "19" CONCRETE MONUMENT WITH PIN STA. 580+99, 0' OFFSET EL. 938.34 BENCHMARK "20" ORANGE-CAPPED REFERENCE PIN SET STA. 587+29, 125' RT. EL. 955.68	■ - POINT OF MINIMUM VERTICAL CLEARANCE ⊕ - BORING LOCATION PGL - PROFILE GRADE LINE

EXISTING STRUCTURE

TYPE: CONTINUOUS REINFORCED CONCRETE SLAB WITH REINFORCED CONCRETE SUBSTRUCTURES

SPANS: LEFT - 30'-1", 37'-6", 41'-6", 33'-1"± RIGHT - 29'-11", 37'-7", 41'-5", 33'-0"± CENTER TO CENTER BEARINGS

ROADWAY: 38'-0"± TOE TO TOE SAFETY CURBS

ORIGINAL DESIGN LOADING: CF-2000 (1957)

ALIGNMENT: TANGENT

SKEW: 18°10'± AVG. LEFT FORWARD

WEARING SURFACE: 3¾"± ASPHALT ON 1¼"± LMC OVERLAY

APPROACH SLABS: AS-1-54 (25'-0"± LONG)

YEAR CONSTRUCTED: 1969

STRUCTURE FILE NO.: 5002311 (L) & 5002346 (R)

PROPOSED STRUCTURE

PROPOSED WORK: NEW REINFORCED CONCRETE SLAB ON WIDENED SUBSTRUCTURES

TYPE: CONTINUOUS REINFORCED CONCRETE SLAB WITH REINFORCED CONCRETE SUBSTRUCTURES

SPANS: LEFT - 30'-4", 37'-6", 41'-6", 33'-4"± RIGHT - 30'-2", 37'-7", 41'-5", 33'-3"± CENTER TO CENTER BEARINGS

ROADWAY: 62'-0" TOE TO TOE PARAPETS

LOADING: HS25 & ALTERNATE MILITARY LOADING FOR SUPERSTRUCTURES AND NEW SUBSTRUCTURES 60 PSF FUTURE WEARING SURFACE

ALIGNMENT: TANGENT

SKEW: 18°10'± AVG. LEFT FORWARD (SEE NOTE 3)

WEARING SURFACE: 1" MONOLITHIC CONCRETE

APPROACH SLABS: AS-1-81 (25'-0" LONG)

CROWN: 0.0156

LATITUDE: N 41°07'12" LONGITUDE: W 80°47'30"

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
461 EXECUTIVE CAMPUS DRIVE, SUITE 350 WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
LMS	LMS	JEK	8/04

CHECKED	REVISED	STRUCTURE FILE NUMBER
MTO		5002311 (L) 5002346 (R)

MAHONING COUNTY
584+82.12± TO 586+25.73± (L)
584+62.49± TO 586+05.97± (R)

SITE PLAN
BRIDGE NO. MAH-80-0245 L/R
I.R. 80 OVER TURNER ROAD

MAH-80-0.97
PID 6080

1 / 18

987
1100

8/15/05
2:39:44 PM
s:\projects\37700\bridge-Turner\MH080SP3A.dgn

BRIDGE GENERAL NOTES

REFER TO THE FOLLOWING STANDARD DRAWINGS:

A-1-69	REVISED 07-19-02
AS-1-81	REVISED 07-19-02
CS-1-03	DATED 04-18-03
PCB-91	REVISED 07-19-02
SBR-1-99	REVISED 07-19-02
DM-1.1	REVISED 01-21-05

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

843	DATED 04-18-03
892	DATED 04-15-05
898	DATED 07-16-04

DESIGN SPECIFICATIONS:

NEW PORTIONS OF THIS STRUCTURE CONFORM TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002, AND THE 2004 ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING:

HS25 AND THE ALTERNATE MILITARY LOADING
FUTURE WEARING SURFACE OF 60 P.S.F.

DESIGN DATA:

QC/QA CONCRETE CLASS QSC2 - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)
QC/QA CONCRETE CLASS QSC1 - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615 OR A996, GRADE 60, MINIMUM YIELD STRENGTH 60,000 PSI
SPIRAL REINFORCEMENT MAY BE PLAIN BARS, ASTM A82 OR A615

DECK PROTECTION METHOD:

EPOXY COATED REINFORCING STEEL
2½" CONCRETE COVER
SEALING OF CONCRETE SURFACES

MONOLITHIC WEARING SURFACE:

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

EXISTING STRUCTURE VERIFICATION:

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02.

BASE CONTRACT BID PRICES UPON RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

UTILITY LINES:

THE UTILITIES SHALL BEAR ALL EXPENSE INVOLVED IN RELOCATING THE AFFECTED UTILITY LINES. THE CONTRACTOR AND UTILITIES ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20' SPAN, AS PER PLAN:

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES THAT ARE NOT SEPARATELY LISTED FOR PAYMENT. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION (WEARING COURSE, CONCRETE DECK, CURBS, PARAPET, RAILING, SUBSTRUCTURE CONCRETE, ETC.) AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE, OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

CONCRETE DECK REMOVAL:

THIS WORK CONSISTS OF THE REMOVAL OF CONCRETE DECKS INCLUDING SIDEWALKS, PARAPETS, SCUPPERS AND OTHER APPURTENANCES, AND CLEANING UP ALL DEBRIS FROM THE DECK REMOVAL OPERATIONS. THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS MODIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING DECK REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. IN THIS RESPECT, THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED. THE CONTRACTOR MAY USE A HAMMER HEAVIER THAN 35 POUNDS BUT NOT TO EXCEED 90 POUNDS UNLESS APPROVED BY THE ENGINEER.

PROTECTION OF TRAFFIC:

PRIOR TO DEMOLITION OF ANY PORTIONS OF THE EXISTING STRUCTURE, SUBMIT PLANS FOR THE PROTECTION OF TRAFFIC (VEHICULAR, PEDESTRIAN, ETC.), ADJACENT TO AND/OR UNDER THE STRUCTURE, TO THE DIRECTOR AT LEAST 30 DAYS BEFORE CONSTRUCTION BEGINS. THESE PLANS SHALL INCLUDE PROVISIONS FOR ANY DEVICES AND STRUCTURES THAT MAY BE NECESSARY TO ENSURE SUCH PROTECTION. MAINTAIN THE TEMPORARY (EXISTING) VERTICAL CLEARANCES SPECIFIED ON THE PLANS OR IN THE PROPOSAL AT ALL TIMES EXCEPT AS OTHERWISE APPROVED BY THE DIRECTOR.

LOADING LIMITATIONS:

NO PART OF THE STRUCTURE SHALL BE SUBJECTED TO UNIT STRESSES THAT EXCEED 136.5% OF ALLOWABLE UNIT STRESSES AS DEFINED IN THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES DUE EITHER TO DEMOLITION, ERECTION OR CONSTRUCTION METHODS, OR TO THE USE OR MOVEMENT OF DEMOLITION OR ERECTION EQUIPMENT ON OR ACROSS THE STRUCTURE. SUBMIT STRUCTURAL ANALYSIS COMPUTATIONS, BY AN OHIO REGISTERED PROFESSIONAL ENGINEER, SHOWING THE ALLOWABLE STRESSES AND THE MAXIMUM STRESSES PRODUCED BY THE REMOVAL METHODS OR EQUIPMENT TO THE DIRECTOR AT LEAST 20 DAYS BEFORE CONSTRUCTION BEGINS.

CUT LINE CONSTRUCTION JOINT PREPARATION:

SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. IF REQUIRED IN THE PLANS, LEAVE THE EXISTING REINFORCING STEEL IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT, ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST, OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH, BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

SUBSTRUCTURE CONCRETE REMOVAL:

REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18-INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

MEASUREMENT AND PAYMENT:

THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20' SPAN, AS PER PLAN.

ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN:

THE BACKFILL MATERIAL BEHIND THE ABUTMENTS SHALL BE TYPE B GRANULAR MATERIAL, 703.16.C, PLACED AND COMPACTED IN 6 INCH LIFTS.

ITEM 509 - REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN:

REPLACE ALL EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION. A CONTINGENCY QUANTITY OF 500 POUNDS OF REINFORCING STEEL IS INCLUDED WITH THIS ITEM TO BE USED AS DIRECTED BY THE ENGINEER FOR REPLACEMENT OF CORRODED REINFORCING. THE DEPARTMENT WILL MEASURE THE REPLACEMENT REINFORCING STEEL BY THE NUMBER OF POUNDS ACCEPTED IN PLACE.

REPLACE ALL EXISTING REINFORCING STEEL BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK, AND ARE DEEMED BY THE ENGINEER TO BE MADE UNUSABLE DUE TO CONCRETE REMOVAL OPERATIONS, WITH NEW EPOXY COATED REINFORCING STEEL OF THE SAME SIZE, AT NO COST TO THE DEPARTMENT.

ITEM 509 - EPOXY COATED REINFORCING STEEL, AS PER PLAN:

IN ADDITION TO THE PROVISIONS OF ITEM 509, FIELD BEND AND/OR FIELD CUT THE NEW REINFORCING STEEL DESIGNATED IN THE PLANS, AS NECESSARY, IN ORDER TO MAINTAIN THE REQUIRED CLEARANCES AND BAR SPACINGS. REPAIR ALL DAMAGE TO THE EPOXY COATING AS A RESULT OF THIS WORK ACCORDING TO 709.00.

CONSTRUCTION CONSTRAINTS:

PRIOR TO CONSTRUCTING THE SPREAD FOOTING FOUNDATIONS, CONSTRUCT THE BRIDGE APPROACH EMBANKMENTS BEHIND THE ABUTMENT UP AT A 1:1 SLOPE FROM THE BOTTOM OF THE HEEL OF THE FOOTING TO THE SUBGRADE ELEVATION AND FOR A MINIMUM DISTANCE OF 250 FEET BEHIND THE ABUTMENTS. AFTER THE ABUTMENT FOOTING AND BREASTWALL ARE COMPLETED AND PRIOR TO SETTING SUPERSTRUCTURE MEMBERS, CONSTRUCT THE EMBANKMENT IMMEDIATELY BEHIND THE ABUTMENT UP TO THE BEAM SEAT ELEVATION AND ON A 1:1 SLOPE UP TO THE SUBGRADE ELEVATION, WITH TYPE B GRANULAR MATERIAL CONFORMING TO 703.16.C.

FOUNDATION BEARING PRESSURE:

ABUTMENT FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM BEARING PRESSURE OF 3.6 TONS PER SQUARE FOOT. THE ALLOWABLE BEARING PRESSURE IS 6.0 TONS PER SQUARE FOOT. PIER FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM BEARING PRESSURE OF 3.1 TONS PER SQUARE FOOT. THE ALLOWABLE BEARING PRESSURE IS 8.0 TONS PER SQUARE FOOT.

FOOTINGS:

ABUTMENT AND PIER FOOTINGS SHALL EXTEND A MINIMUM OF 3 INCHES INTO BEDROCK OR TO THE ELEVATION SHOWN, WHICHEVER IS LOWER.

ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN (TYPE A)

CONCRETE FOR TYPE A APPROACH SLABS SHALL BE CLASS QSC2, SUPP. SPEC. 898

ITEM 516 - NYLON REINFORCED NEOPRENE SHEETING, AS PER PLAN:

INSTALL A 3 FOOT WIDE NEOPRENE SHEET AT LOCATIONS SHOWN IN THE PLANS. SECURE THE NEOPRENE SHEETING TO THE CONCRETE WITH 1¼" X #10 GAGE (LENGTH X SHANK DIAMETER) GALVANIZED BUTTON HEAD SPIKES THROUGH A 1 INCH OUTSIDE DIAMETER, #10 GAGE GALVANIZED WASHER. MAXIMUM FASTENER SPACING IS 9 INCHES. USE OF OTHER SIMILAR GALVANIZED DEVICES, WHICH WILL NOT DAMAGE EITHER THE NEOPRENE OR THE CONCRETE, WILL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

CENTER THE NEOPRENE STRIPS ON ALL JOINTS. FOR HORIZONTAL JOINTS, SECURE THE HORIZONTAL NEOPRENE STRIP BY USING A SINGLE LINE OF FASTENERS, STARTING AT 6 INCHES, +/-, FROM THE TOP OF THE NEOPRENE STRIP. FOR THE VERTICAL JOINTS SECURE THE VERTICAL NEOPRENE STRIP BY USING A SINGLE VERTICAL LINE OF FASTENERS, STARTING AT 6 INCHES, +/-, FROM THE VERTICAL EDGE OF THE NEOPRENE STRIP NEAREST TO THE CENTERLINE OF ROADWAY. FOR VERTICAL JOINTS, INSTALL 2 ADDITIONAL FASTENERS AT 6 INCHES, CENTER TO CENTER, ACROSS THE TOP OF THE NEOPRENE STRIP ON THE SAME SIDE OF THE VERTICAL JOINT AS THE SINGLE VERTICAL ROW OF FASTENERS IS LOCATED.

THE VERTICAL NEOPRENE STRIPS SHALL COMPLETELY OVERLAP THE HORIZONTAL STRIPS. LAP LENGTHS OF THE HORIZONTAL STRIPS THAT ARE NOT VULCANIZED OR ADHESIVE BONDED, SHALL BE AT LEAST 1 FOOT IN LENGTH, OR 6 INCHES IN LENGTH IF THE LAP IS VULCANIZED OR ADHESIVE BONDED. NO LAPS ARE ACCEPTABLE IN VERTICALLY INSTALLED NEOPRENE STRIPS.

THE NEOPRENE SHEETING SHALL BE 3/32" THICK GENERAL PURPOSE, HEAVY-DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT. THE SHEETING SHALL BE "FAIRPRENE NUMBER NN-0003", BY E. I. DUPONT DE NEMOURS AND COMPANY, INC., "WINGPRENE" BY THE GOODYEAR TIRE AND RUBBER COMPANY, OR AN APPROVED ALTERNATE. THE NEOPRENE SHEETING SHALL CONFORM TO THE FOLLOWING:

DESCRIPTION OF TEST	ASTM METHOD	REQUIREMENT
THICKNESS, INCHES	D751	0.094 * 0.01
BREAKING STRENGTH, GRAB, LBS, MINIMUM (LONG. X TRANS.)	D751	700 X 700
ADHESIVE STRIP, 1" WIDE X 2" LONG, LBS MINIMUM	D751	9
BURST STRENGTH, PSI MINIMUM	D751	1400
HEAT AGING, 70 HR, 212 °F, 180° BEND WITHOUT CRACKING	D2136	NO CRACKING OF COATING
LOW TEMP. BRITTLENESS, 1 HR, -40 °F, BEND AROUND ¼" MANDREL	D2136	NO CRACKING OF COATING

METHOD OF MEASUREMENT: THE DEPARTMENT WILL MEASURE THE TOTAL LENGTH OF JOINT TO BE SEALED BY THE NUMBER OF FEET.

BASIS OF PAYMENT: THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516 - NYLON REINFORCED NEOPRENE SHEETING, AS PER PLAN.

NON-USE OF ASBESTOS CONTAINING MATERIALS:

THE CONTRACTOR SHALL AT NO TIME INCORPORATE ANY MATERIALS WHICH ARE COMPOSED OF OR CONTAIN ANY AMOUNTS OF ASBESTOS. THE SUBSTITUTION OF MATERIALS WHICH CONTAIN ANY AMOUNTS OF ASBESTOS WILL IN NO CIRCUMSTANCES BE ACCEPTABLE. PRIOR TO FINAL ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT OF CERTIFICATION ASSERTING THAT NO ASBESTOS CONTAINING MATERIALS WERE USED IN ANY PORTION OF THE CONSTRUCTION.

ABBREVIATIONS:

ABUT.	-	ABUTMENT	JT.	-	JOINT
AHD.	-	AHEAD	LT.	-	LEFT
BOT.	-	BOTTOM	MAX.	-	MAXIMUM
BRG.	-	BEARING	MIN.	-	MINIMUM
BTW.	-	BETWEEN	NF	-	NEAR FACE
CONST.	-	CONSTRUCTION	P.E.J.F.	-	PREFORMED EXPANSION JOINT FILLER
C.P.P.	-	CORRUGATED POLYETHYLENE PIPE			
EL./ELEV.	-	ELEVATION	RT.	-	RIGHT
EMBED.	-	EMBEDMENT	SER.	-	SERIES
EXIST.	-	EXISTING	SS	-	SUPERSTRUCTURE
FF	-	FAR FACE	TYP.	-	TYPICAL
FTG.	-	FOOTING	UG	-	UNDERGROUND
FWD.	-	FORWARD	W.P.	-	WORK POINT

DESIGN AGENCY
GANNETT FLEMING
ENGINEERS & ARCHITECTS, P.C.
4191 EASTERN AVENUE, SUITE 350
BEDFORD, OHIO 44146

DESIGNED	DRAWN	REVIEWED	DATE
DEK	DEK	JEK	8/04

CHECKED	REVISED	STRUCTURE FILE NUMBER
MTO		5002311 (L) 5002346 (R)

BRIDGE GENERAL NOTES
BRIDGE NO. MAH-80-0245 L/R
I.R. 80 OVER TURNER ROAD

MAH-80-0.97
PID 6080

988
1100

9/13/05 2:53:03 PM
s:\projects\37700\bridge-Turner\MH080GN3A.dgn

ESTIMATED BRIDGE QUANTITIES

ITEM	ITEM EXT.	TOTAL LEFT BRIDGE	TOTAL RIGHT BRIDGE	UNIT	DESCRIPTION	FUNDING L. BRIDGE		FUNDING R. BRIDGE		LEFT BRIDGE				RIGHT BRIDGE				AS PER PLAN SHEET NO.
						IM	NHS	IM	NHS	ABUT.	PIERS	SUPER	GEN.	ABUT.	PIERS	SUPER	GEN.	
202	11203	LUMP	LUMP		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	LUMP		LUMP					LUMP				LUMP	2 OF 18
202	22900	134	134	SQ YD	APPROACH SLAB REMOVED	134		134					134				134	
503	11100	LUMP	LUMP		COFFERDAMS, CRIBS AND SHEETING	LUMP		LUMP					LUMP				LUMP	
503	21101	255	230	CU YD	UNCLASSIFIED EXCAVATION, AS PER PLAN	170	85	153	77	255				230				2 OF 18
503	31100	49	42	CU YD	ROCK EXCAVATION		49		42		49				42			
509	10001	195094	192456	POUND	EPOXY COATED REINFORCING STEEL, AS PER PLAN	130063	65031	128304	64152	14617	23788	156689		13154	23556	155746		2 OF 18
509	20001	500	500	POUND	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN	333	167	333	167				500				500	2 OF 18
510	10000	168	168	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	168		168			168				168			
512	10100	890	881	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	593	297	587	294	50	479	361		50	470	361		
512	10300	32		SQ YD	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN	32						32						
512	10600	5		FT	CONCRETE REPAIR BY EPOXY INJECTION	5				5								
512	33000	33	32	SQ YD	TYPE 2 WATERPROOFING	33		32		33				32				
516	13900	26	27	SQ FT	2" PREFORMED EXPANSION JOINT FILLER	26		27		26				27				
516	25001	301	302	SQ FT	NYLON REINFORCED NEOPRENE SHEETING, AS PER PLAN	201	100	201	101	301				302				2 OF 18
516	42600	136	136	FT	ELASTOMERIC BEARING PAD, MISC.: 12" X 1 1/2" ELASTOMERIC BEARING STRIP	91	45	91	45	136				136				
518	21200	92	85	CU YD	POROUS BACKFILL WITH FILTER FABRIC	61	31	57	28	92				85				
518	40001	171	171	FT	6" PERFORATED CORRUGATED PLASTIC PIPE, AS PER PLAN	114	57	114	57	171				171				9 OF 18
518	40011	60	60	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN	40	20	40	20	60				60				5-8 OF 18
526	25001	350	350	SQ YD	REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN (TYPE A)	233	117	233	117				350				350	2 OF 18
601	20000	583	583	SQ YD	CRUSHED AGGREGATE SLOPE PROTECTION		583		583				583				583	
SPECIAL	69071000	LUMP	LUMP		ASBESTOS ABATEMENT	LUMP		LUMP					LUMP				LUMP	3 OF 18
843	50000	112	136	SQ FT	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR	112		136		105	7			117	19			
892	10200	641	641	CU YD	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (DECK) WITH WARRANTY	427	214	427	214			641				641		
898	11000	45	45	CU YD	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (PARAPET)	30	15	30	15			45				45		
898	20100	56	55	CU YD	QC/QA CONCRETE, CLASS QSCI, SUBSTRUCTURE (PIER ABOVE FOOTING)	37	19	37	18		56				55			
898	20150	40	34	CU YD	QC/QA CONCRETE, CLASS QSCI, SUBSTRUCTURE (ABUTMENT)	27	13	23	11	40				34				
898	20300	47	47	CU YD	QC/QA CONCRETE, CLASS QSCI, SUBSTRUCTURE (FOOTING)	31	16	31	16	20	27			20	27			

ITEM SPECIAL - ASBESTOS ABATEMENT:

AN ASBESTOS SURVEY OF THE MAH-80-0245 L/R BRIDGES (STRUCTURE FILE NUMBERS 5002311/5002346) OVER TURNER ROAD, SCHEDULED FOR REHABILITATION/WIDENING, WAS CONDUCTED BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST. THE SURVEY DETERMINED THAT NO ASBESTOS IS PRESENT ON THE BRIDGES. HOWEVER, ORIGINAL CONSTRUCTION PLANS INDICATE THAT APPROXIMATELY 220 SQUARE FEET OF 1/16-INCH SHEET ASBESTOS PACKING IS PRESENT AT THE ABUTMENTS OF THESE BRIDGES (110 SQUARE FEET ON LEFT BRIDGE, 110 SQUARE FEET ON RIGHT BRIDGE). THE ORIGINAL CONSTRUCTION PLANS FOR THE EXISTING STRUCTURES SPECIFY THIS SHEET ASBESTOS PACKING MATERIAL WAS TO BE USED AS A BOND BREAKER PLACED BETWEEN THE ABUTMENT SEATS AND BRIDGE DECK. CONSTRUCTION OF THE NEW STRUCTURES WILL REQUIRE THE REMOVAL AND DISPOSAL OF THIS ASBESTOS CONTAINING MATERIAL. THE CONTRACTOR SHALL ENSURE THAT THE ASBESTOS CONTAINING MATERIAL DOES NOT BECOME FRIABLE (BROKEN-UP OR DISPERSED) AND THAT NO VISIBLE FIBER EMISSIONS OCCUR. THE REMOVAL AND DISPOSAL OF THE ASBESTOS CONTAINING MATERIAL MUST COMPLY WITH CHAPTER 3745-20 OF THE OHIO ADMINISTRATIVE CODE, THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATIVE (OSHA) REGULATIONS (29 CFR 1926.1101) AND THE NATIONAL EMISSION STANDARD FOR HAZARDOUS AIR POLLUTANTS (NESHAP) STANDARD FOR ASBESTOS.

THE CONTRACTOR SHALL PROVIDE AN INDIVIDUAL TRAINED IN THE PROVISIONS OF THE NESHAP ON SITE TO DIRECT THE REMOVAL OF THE ASBESTOS CONTAINING MATERIAL.

A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORM, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER, WILL BE PROVIDED TO THE SUCCESSFUL BIDDER. AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF THE REHABILITATION/WIDENING OF THE BRIDGES, THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO:

MR. ROBERT RAMHOFF, DIRECTOR
MAHONING-TRUMBULL AIR POLLUTION CONTROL AGENCY
OAK HILL / RENAISSANCE PLACE
SECOND FLOOR, ROOM 25
345 OAK HILL AVENUE
YOUNGSTOWN, OHIO 44502
TEL: (330) 743-3333 (EXT. 280)
FAX: (330) 744-1928

THE CONTRACTOR SHALL PROVIDE ONE (1) COPY OF THE COMPLETED FORM TO THE ENGINEER.

INFORMATION REQUIRED ON THE FORM WILL INCLUDE:

- THE CONTRACTOR'S NAME AND ADDRESS.
- THE ASBESTOS REMOVAL SUB-CONTRACTOR'S NAME AND ADDRESS.
- THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REMOVAL OR RENOVATION.
- THE DATES AND HOURS OF OPERATION FOR THE ASBESTOS REMOVAL.
- A DESCRIPTION OF THE PLANNED DEMOLITION OR RENOVATION WORK AND THE METHOD(S) TO BE USED.
- A DESCRIPTION OF WORK PRACTICES AND ENGINEERING CONTROLS TO BE USED TO PREVENT EMISSIONS OF ASBESTOS AT THE SITE.
- THE NAMES AND ADDRESSES OF WASTE TRANSPORTERS TO BE USED ON THE PROJECT.
- THE NAME AND ADDRESS OF THE WASTE DISPOSAL FACILITY TO BE USED.
- A DESCRIPTION OF PROCEDURES TO BE FOLLOWED IN THE EVENT THAT UNEXPECTED ASBESTOS IS FOUND OR PREVIOUSLY NON-FRIABLE ASBESTOS MATERIAL BECOMES CRUMBLED, PULVERIZED OR REDUCED TO POWDER.

A COPY OF THE OEPA FORM IS AVAILABLE FOR INSPECTION AT THE ODOT DISTRICT 4 OFFICE, 2088 SOUTH ARLINGTON ROAD, AKRON, OHIO 44306

BASIS OF PAYMENT:

THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE, SUBMIT AND COMPLY WITH THE OEPA NOTIFICATION FORM AND TO PROPERLY EXPOSE, ENCAPSULATE, REMOVE, HANDLE, TRANSPORT AND DISPOSE OF THE ASBESTOS CONTAINING MATERIAL IN A LANDFILL LICENSED BY THE LOCAL HEALTH DEPARTMENT AND PERMITTED TO ACCEPT ASBESTOS CONTAINING MATERIAL BY THE OHIO ENVIRONMENTAL PROTECTION AGENCY. PAYMENT FOR THIS WORK SHALL BE MADE UNDER THE CONTRACT LUMP SUM PRICE BID FOR ITEM SPECIAL - ASBESTOS ABATEMENT.

DESIGN AGENCY
GANNETT FLEMING
ENGINEERS & ARCHITECTS, P.C.
4181 ESSEN LANE, BATON ROUGE, LOUISIANA 70809 SUITE 350
CINCINNATI, OHIO 45241

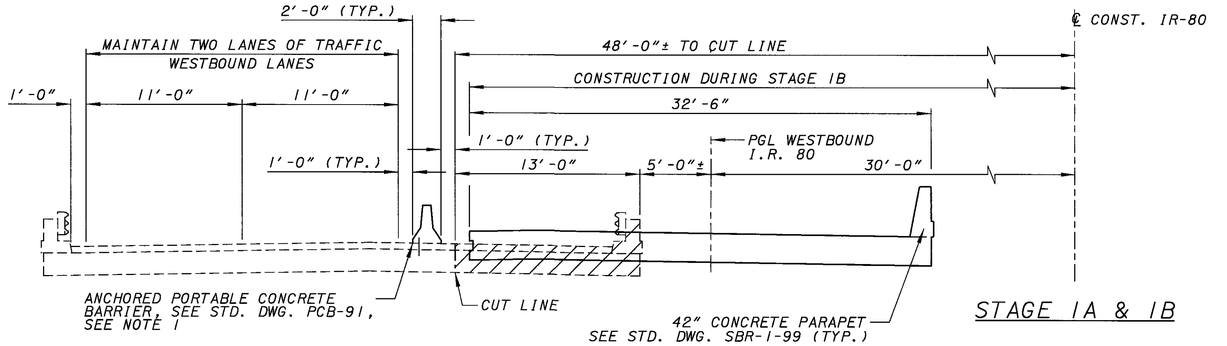
DESIGNED SK | DRAWN SK | REVIEWED JEK | DATE 8/04
CHECKED DEK | REVISED | STRUCTURE FILE NUMBER 5002311 (L) 5002346 (R)

ESTIMATED BRIDGE QUANTITIES
BRIDGE NO. MAH-80-0245 L/R
I.R. 80 OVER TURNER ROAD

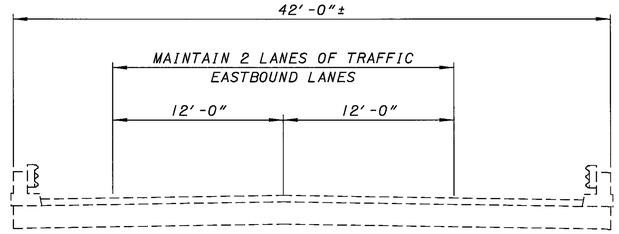
MAH-80-0.97
PID 6080

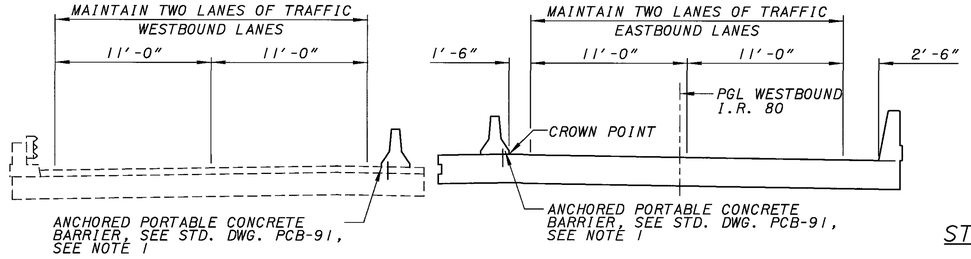
989
1100

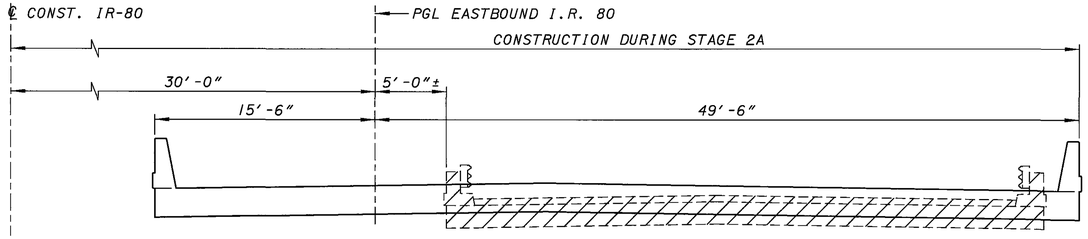
9/30/05 9:37:00 AM
s:\projects\37700\bridge-Turner\MH080E03B.dgn



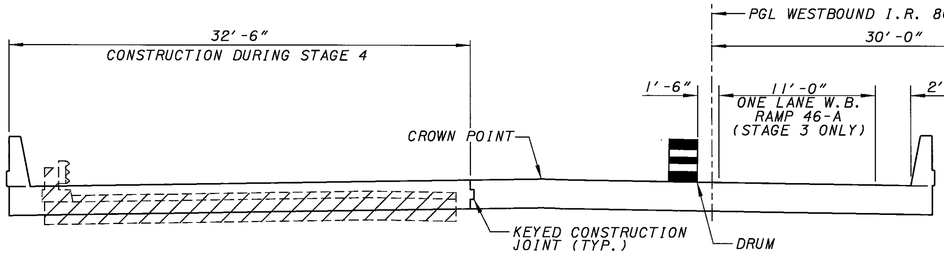
STAGE 1A & 1B

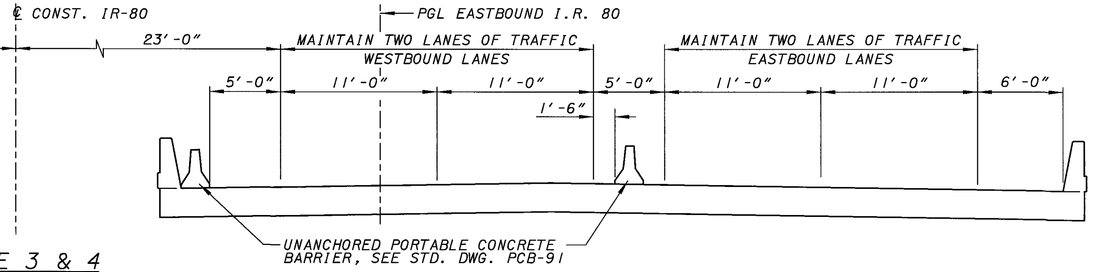






STAGE 2A & 2B

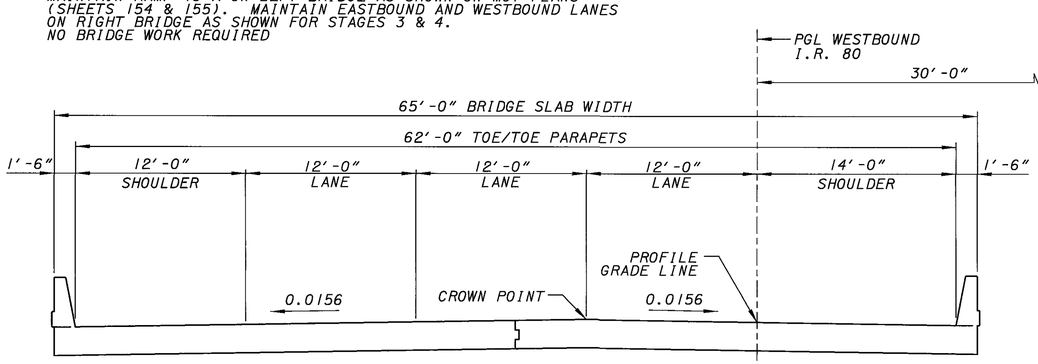


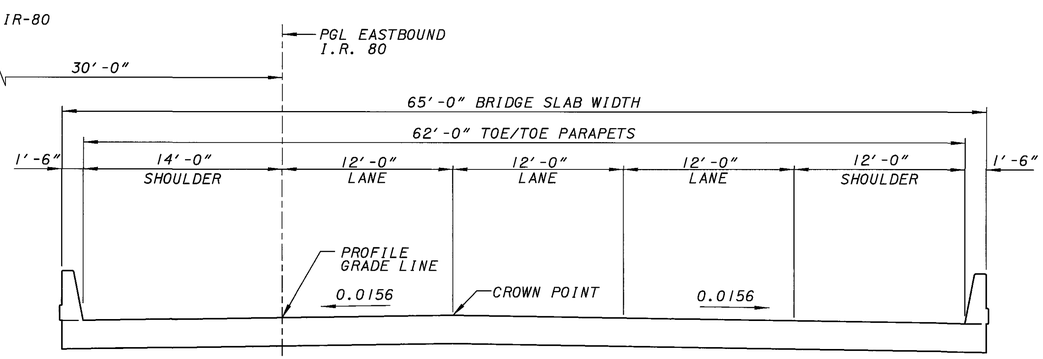


STAGE 3 & 4

STAGE 5A (NOT SHOWN)

MAINTAIN RAMP 46-A ON LEFT BRIDGE AS SHOWN ON MOT PLANS (SHEETS 154 & 155). MAINTAIN EASTBOUND AND WESTBOUND LANES ON RIGHT BRIDGE AS SHOWN FOR STAGES 3 & 4.
NO BRIDGE WORK REQUIRED





FINAL DECK SECTION

NOTES:

1. A MINIMUM OF THREE ANCHORS SHALL BE PROVIDED ON TRAFFIC SIDE FOR EACH PORTABLE CONCRETE BARRIER WITH THE ANCHOR PATTERN SYMMETRICAL ABOUT THE CENTER OF EACH SEGMENT. USE ONLY PARTIAL DEPTH ANCHORS IN THE NEW CONCRETE SLAB; THRU BOLTS WILL NOT BE ALLOWED.
2. FURNISHING, INSTALLING, MAINTAINING, AND REMOVING PORTABLE CONCRETE BARRIER, INCLUDING THE COMPLETE OR PARTIAL REMOVAL OF ANCHOR HARDWARE, SHALL BE INCLUDED IN ITEM 622 (ROADWAY PLANS) FOR PAYMENT.

LEGEND:

PORTIONS TO BE REMOVED, AS PART OF ITEM 202.

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350 WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
LMS	LMS	JEK	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MTO		5002311 (L) 5002346 (R)	

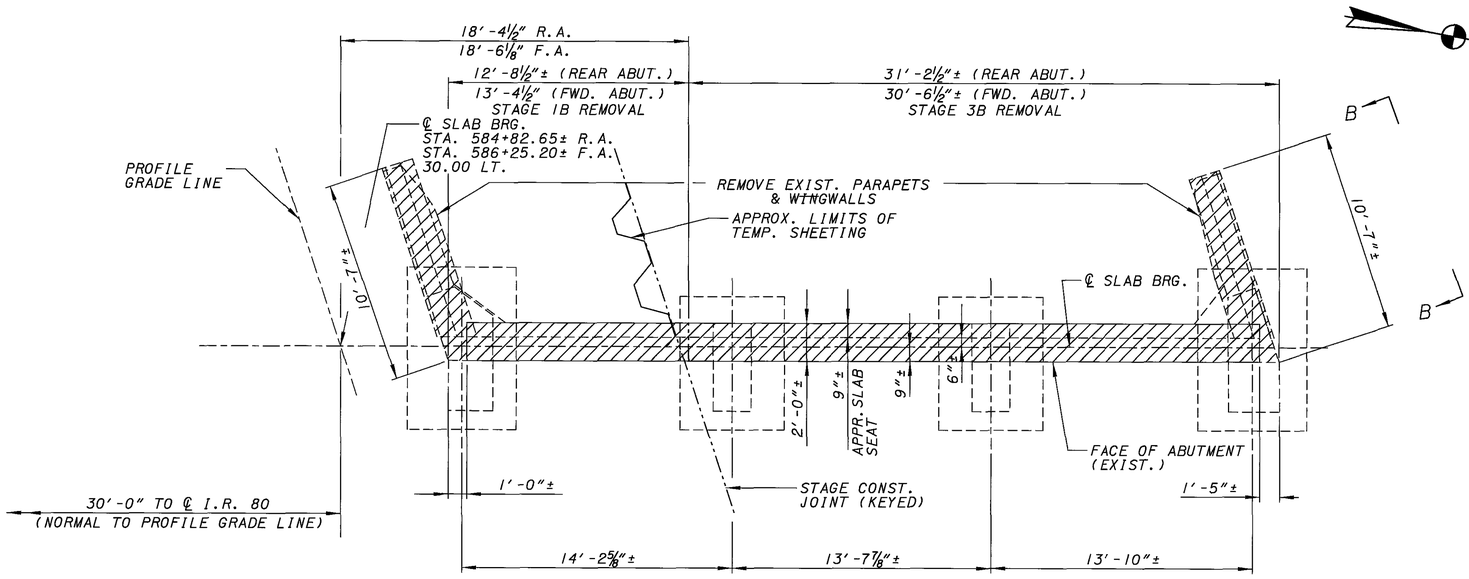
STAGE CONSTRUCTION DETAILS
BRIDGE NO. MAH-80-0245 L/R
I.R. 80 OVER TURNER ROAD

MAH-80-0.97
PID 6080

4 / 18

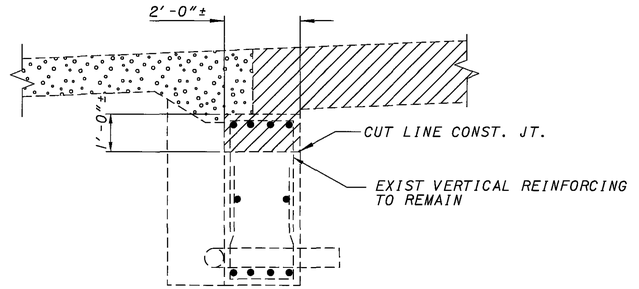
990
1100

8/15/05 2:40:55 PM
s:\projects\37700\bridge-Turner\MH080PC3A.dgn

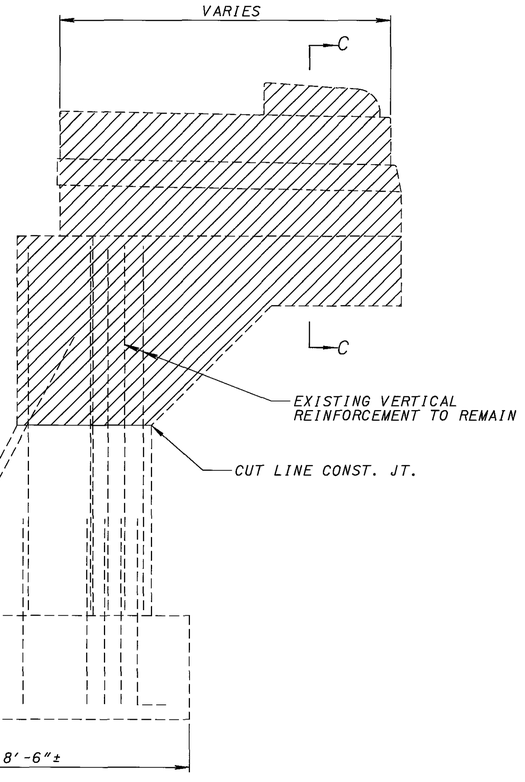


EXISTING REAR ABUTMENT PLAN - LEFT BRIDGE
EXISTING FORWARD ABUTMENT PLAN - LEFT BRIDGE

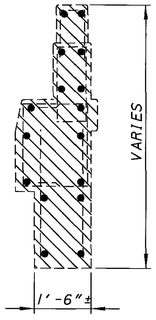
(REAR ABUTMENT LEFT BRIDGE SHOWN; FORWARD ABUTMENT LEFT BRIDGE SIMILAR BUT OPPOSITE HAND)



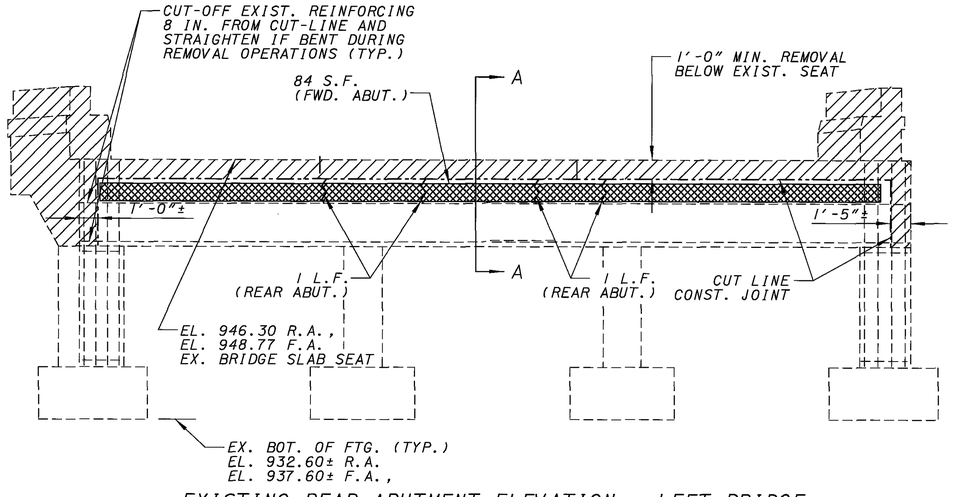
SECTION A-A



ELEVATION B-B



SECTION C-C



EXISTING REAR ABUTMENT ELEVATION - LEFT BRIDGE
EXISTING FORWARD ABUTMENT ELEVATION - LEFT BRIDGE

(REAR ABUTMENT LEFT BRIDGE SHOWN; FORWARD ABUTMENT LEFT BRIDGE SIMILAR BUT OPPOSITE HAND)

LEGEND:

- ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN
- ITEM 202 - APPROACH SLAB REMOVED (ROADWAY QUANTITY)
- PORTIONS TO BE PATCHED WITH ITEM 843 (SEE SHEET 4B/18 FOR PATCHING SUMMARY TABLE)

R.A. = REAR ABUTMENT
F.A. = FORWARD ABUTMENT

ABUTMENT CRACK REPAIR - SUMMARY TABLE (L.F.)

	MEASURED QUANTITY	CONTINGENCY FACTOR	TOTAL QUANTITY
LEFT REAR ABUTMENT	4.0	1.25	5.0

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4181 EXECUTIVE PARKWAY SUITE 350
WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
DEK	DEK	PLC	2/05

CHECKED	REVISED	STRUCTURE FILE NUMBER
MTO		5002311 (L) 5002346 (R)

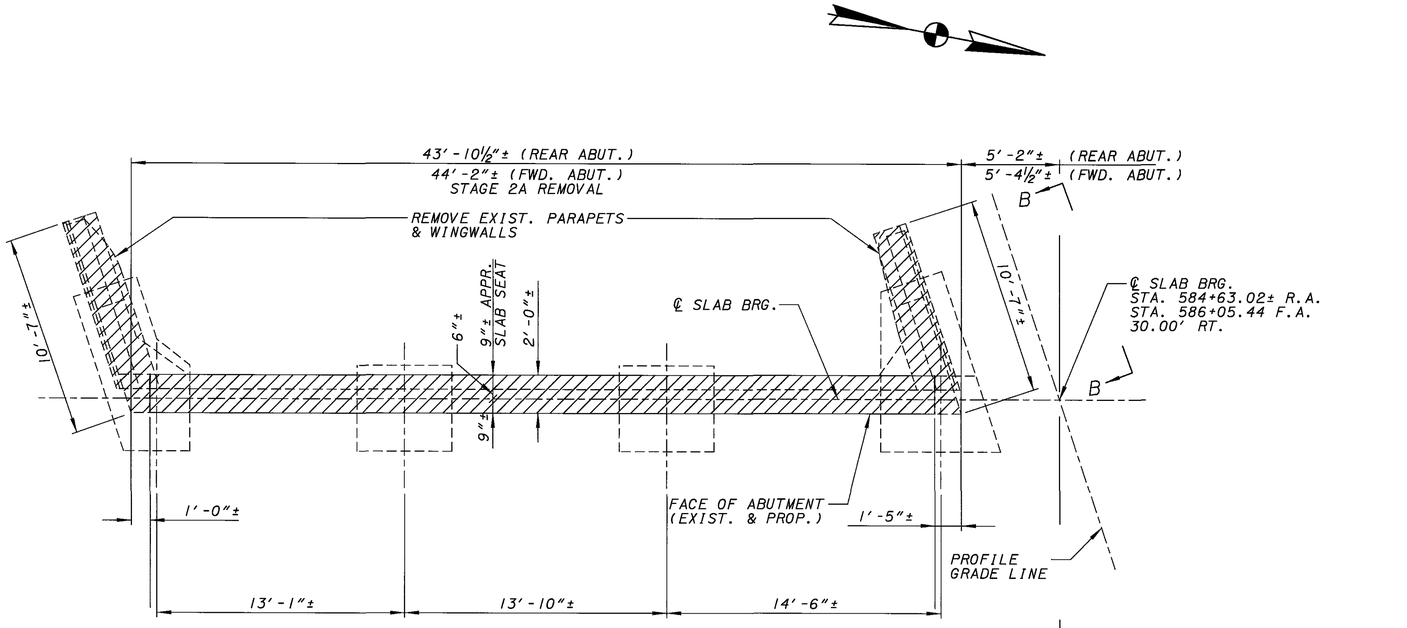
ABUTMENT REMOVAL DETAILS - LEFT BRIDGE
BRIDGE NO. MAH-80-0245 L/R
I.R. 80 OVER TURNER ROAD

MAH-80-0.97
PID 6080

4A/18

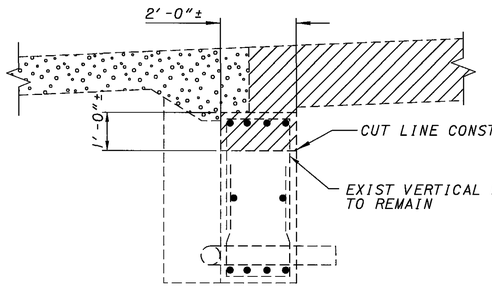
990A
1100

8/15/05 2:41:19 PM
s:\projects\37700\bridge-Turner\MH080AB3F.dgn

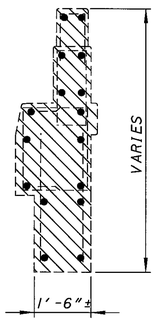


EXISTING REAR ABUTMENT PLAN - RIGHT BRIDGE
EXISTING FORWARD ABUTMENT PLAN - RIGHT BRIDGE

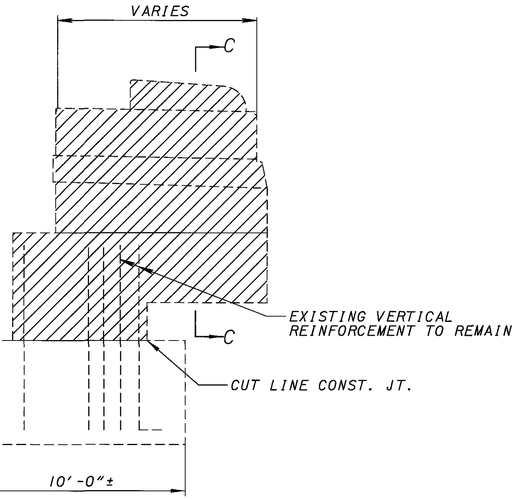
(REAR ABUTMENT RIGHT BRIDGE SHOWN; FORWARD ABUTMENT RIGHT BRIDGE SIMILAR BUT OPPOSITE HAND)



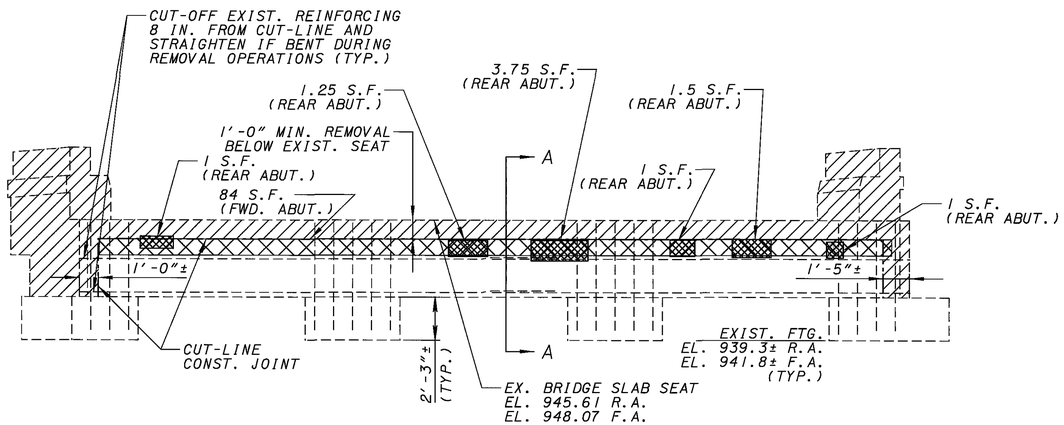
SECTION A-A



SECTION C-C



ELEVATION B-B



EXISTING REAR ABUTMENT PLAN - RIGHT BRIDGE
EXISTING FORWARD ABUTMENT PLAN - RIGHT BRIDGE

(REAR ABUTMENT RIGHT BRIDGE SHOWN; FORWARD ABUTMENT RIGHT BRIDGE SIMILAR BUT OPPOSITE HAND)

LEGEND:

- ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN
- ITEM 202 - APPROACH SLAB REMOVED (ROADWAY QUANTITY)
- PORTIONS TO BE PATCHED WITH ITEM 843 (REAR ABUT.)
- PORTIONS TO BE PATCHED WITH ITEM 843 (FWD. ABUT.)

R.A. = REAR ABUTMENT
F.A. = FORWARD ABUTMENT

ABUTMENT CONC. PATCHING - SUMMARY TABLE (S.F.)

	MEASURED QUANTITY	CONTINGENCY FACTOR	TOTAL QUANTITY
RIGHT REAR ABUTMENT	9.5	1.25	11.9
LEFT REAR ABUTMENT	84.0	1.25	105.0
RIGHT FWD. ABUTMENT	84.0	1.25	105.0

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350 WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
DEK	DEK	PLC	2/05
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MTO		5002311 (L) 5002346 (R)	

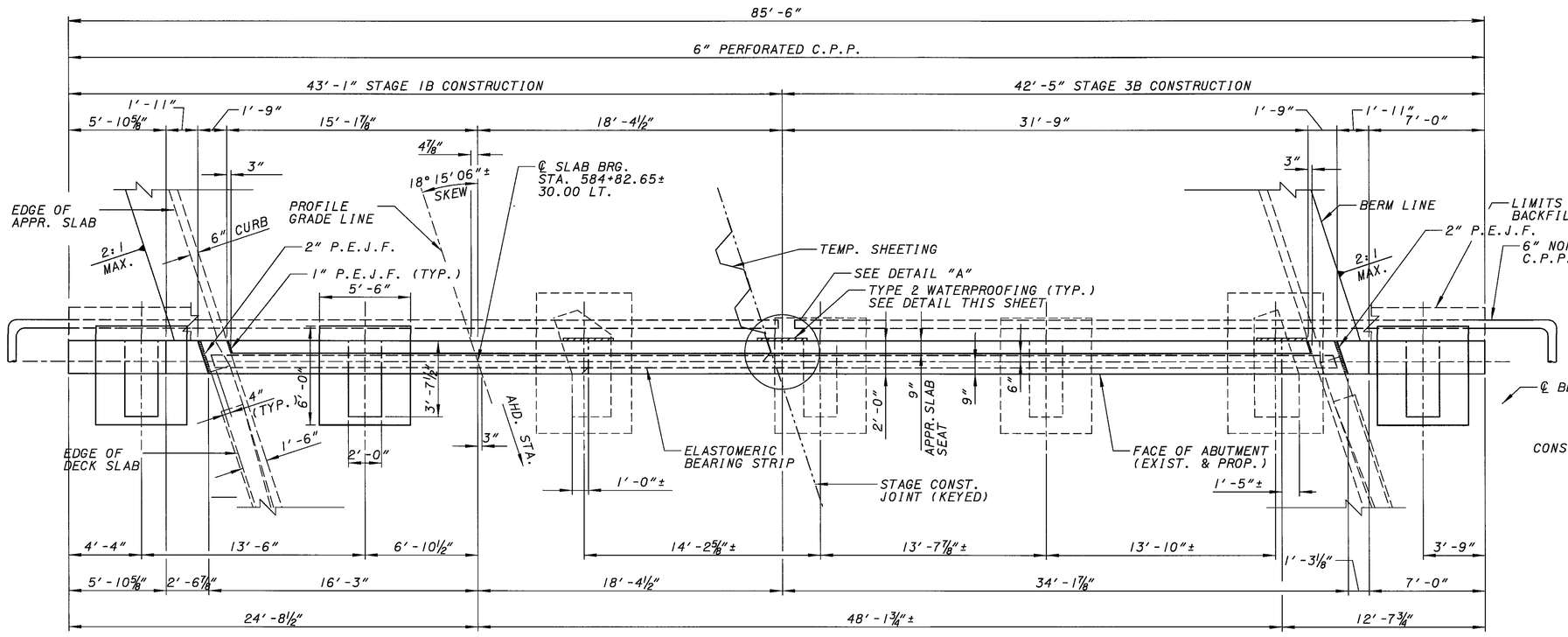
ABUTMENT REMOVAL DETAILS - RIGHT BRIDGE
BRIDGE NO. MAH-80-0245 L/R
I.R. 80 OVER TURNER ROAD

MAH-80-0.97
PID 6080

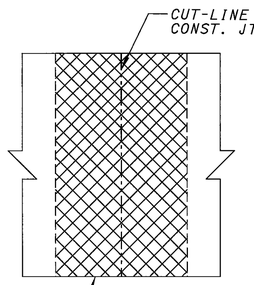
4B / 18

990B
1100

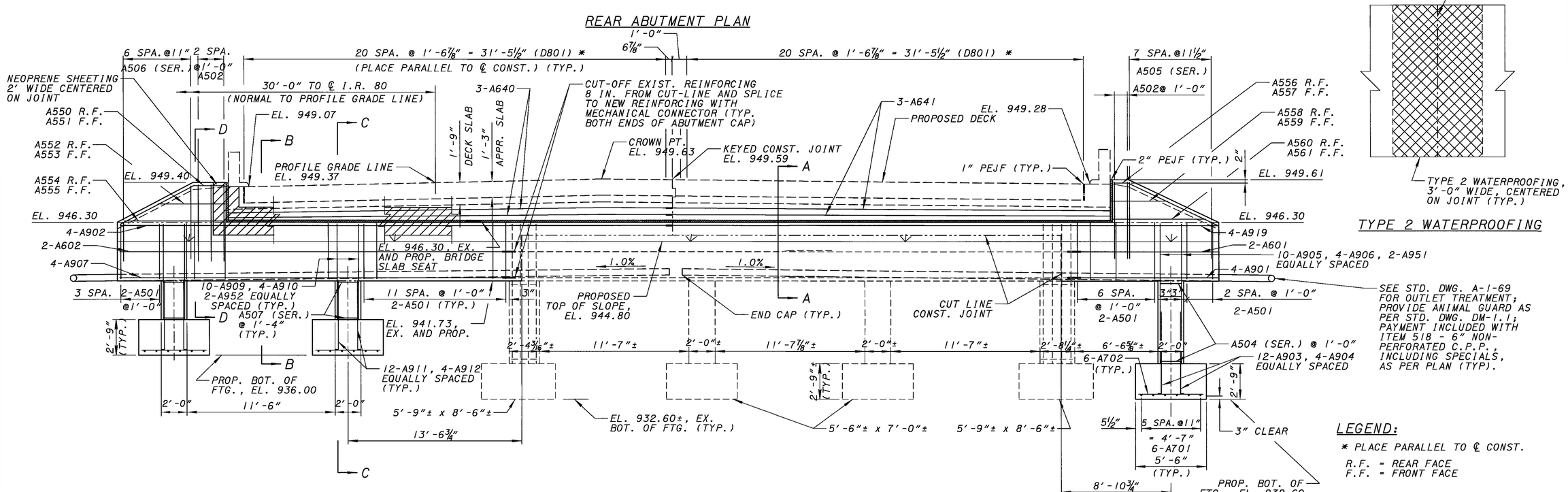
8/5/05 2:41:43 PM
s:\projects\3700\bridge-Turner\MH080AB36.dgn



REAR ABUTMENT PLAN



TYPE 2 WATERPROOFING



REAR ABUTMENT ELEVATION

LEGEND:

* PLACE PARALLEL TO ℄ CONST.

R.F. = REAR FACE
F.F. = FRONT FACE

NOTES:

1. FOR GENERAL NOTES SEE SHEET 2/18.
2. FOR REINFORCING SCHEDULE AND LAP LENGTHS SEE SHEETS 16-18/18.

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
SK	SK	JEK	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DEK		5002311 (L) 5002346 (R)	

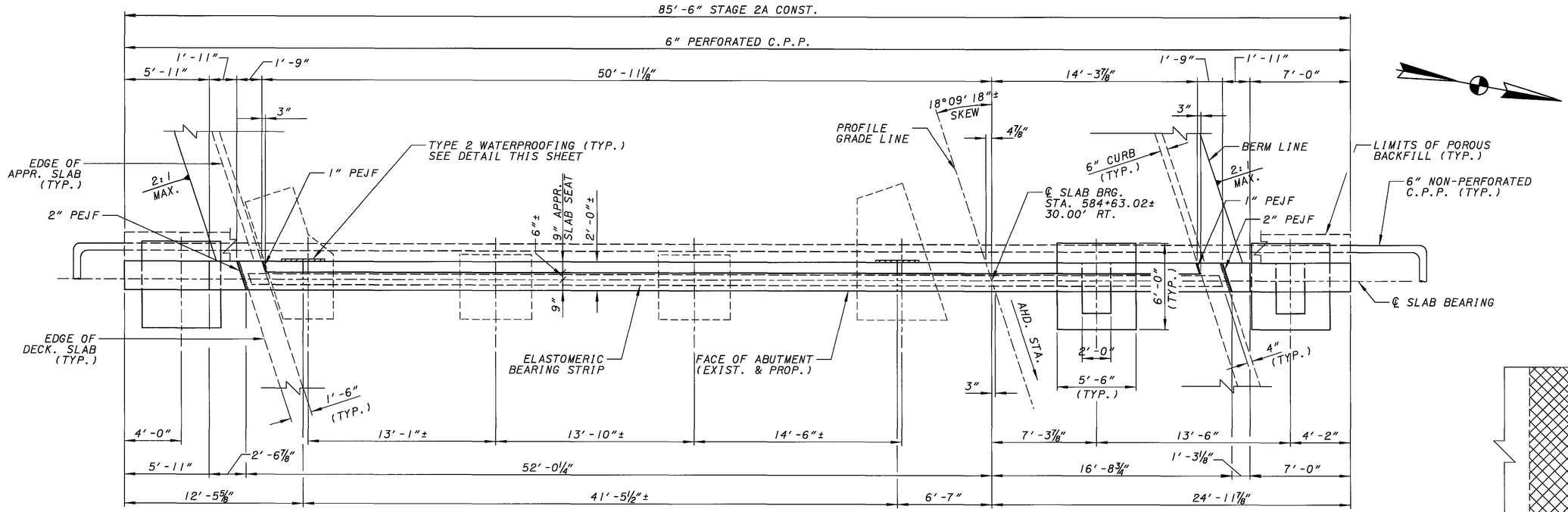
REAR ABUTMENT DETAILS - LEFT BRIDGE
BRIDGE NO. MAH-80-0245 L/R
I.R. 80 OVER TURNER ROAD

MAH-80-0.97
PID 6080

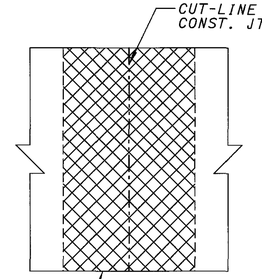
5 / 18

991 / 1100

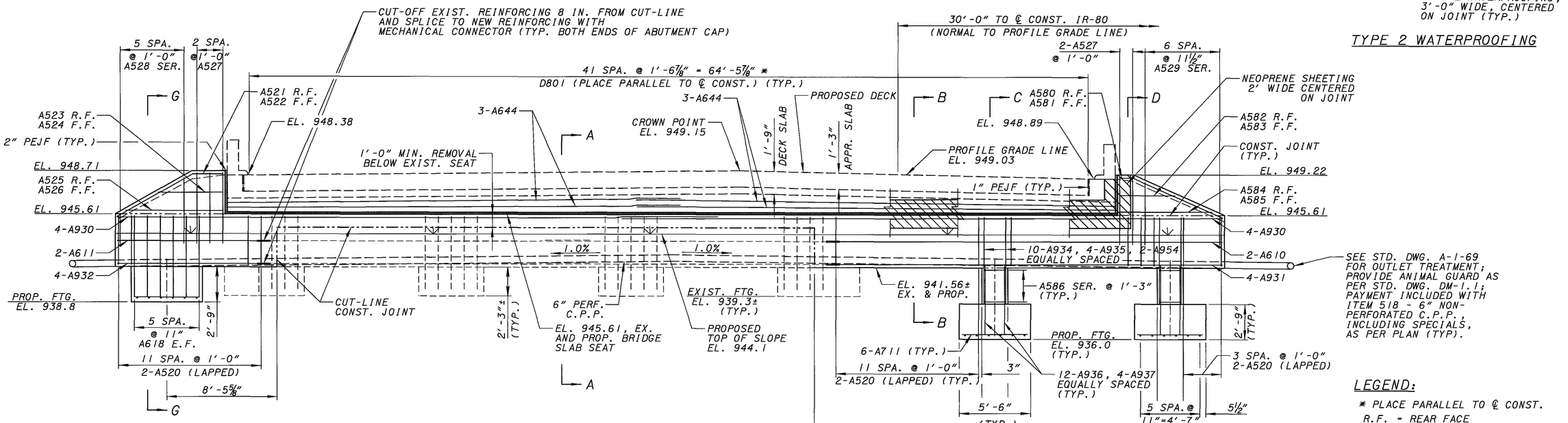
8/5/05 2:42:08 PM
s:\projects\37700\bridge-Turner\MH080AB3A.dgn



REAR ABUTMENT PLAN



TYPE 2 WATERPROOFING



REAR ABUTMENT ELEVATION

LEGEND:

* PLACE PARALLEL TO ℄ CONST.
R.F. = REAR FACE
F.F. = FRONT FACE

NOTES:

1. FOR GENERAL NOTES SEE SHEET 2/18.
2. FOR REINFORCING SCHEDULE AND LAP LENGTHS SEE SHEETS 16-18/18.

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4181 EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
LMS/MTO	SK/MTO	JEK	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DEK		5002311 (L) 5002346 (R)	

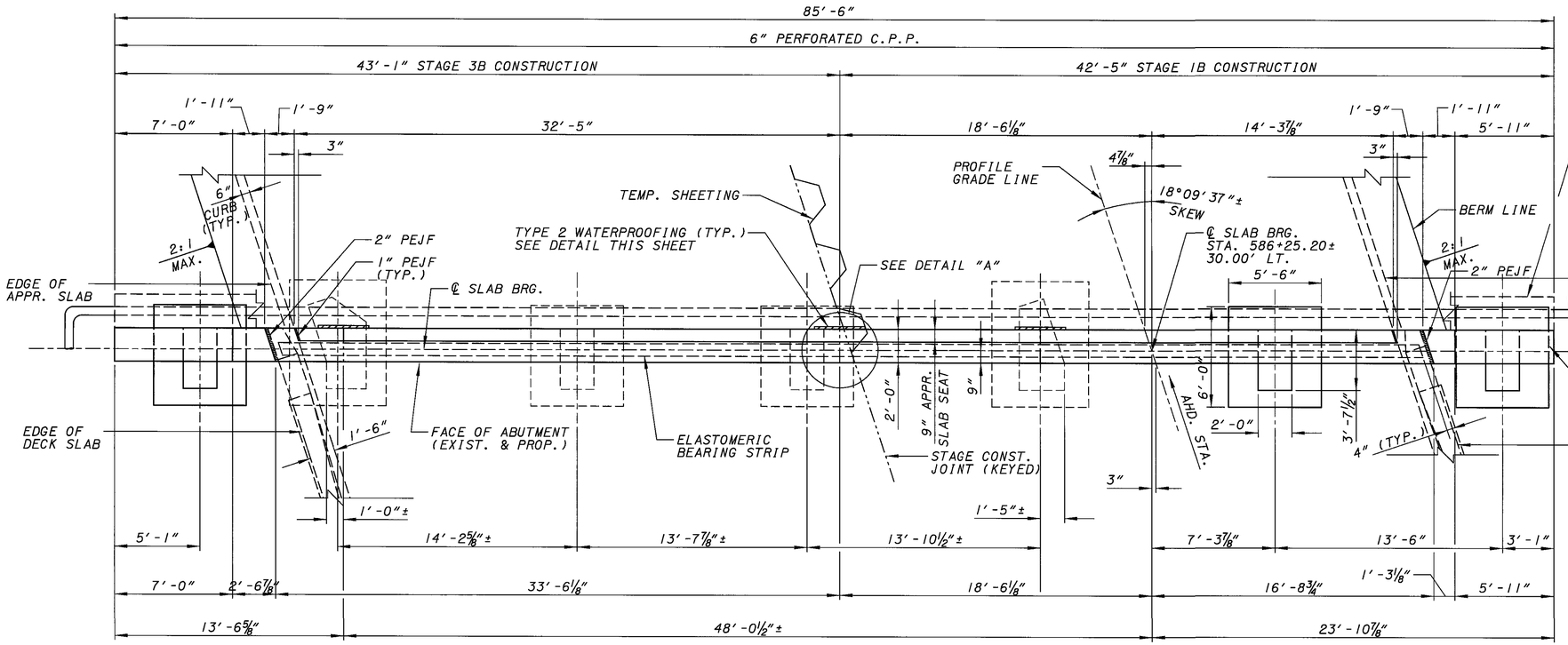
REAR ABUTMENT DETAILS - RIGHT BRIDGE
BRIDGE NO. MAH-80-0245 L/R
I.R. 80 OVER TURNER ROAD

MAH-80-0.97
PID 6080

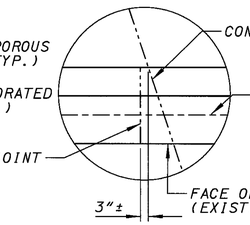
6 / 18

992
1100

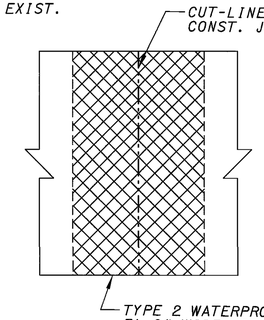
8/15/05 2:42:29 PM
s:\projects\37700\bridge-Turner-\MH080AB3C.dgn



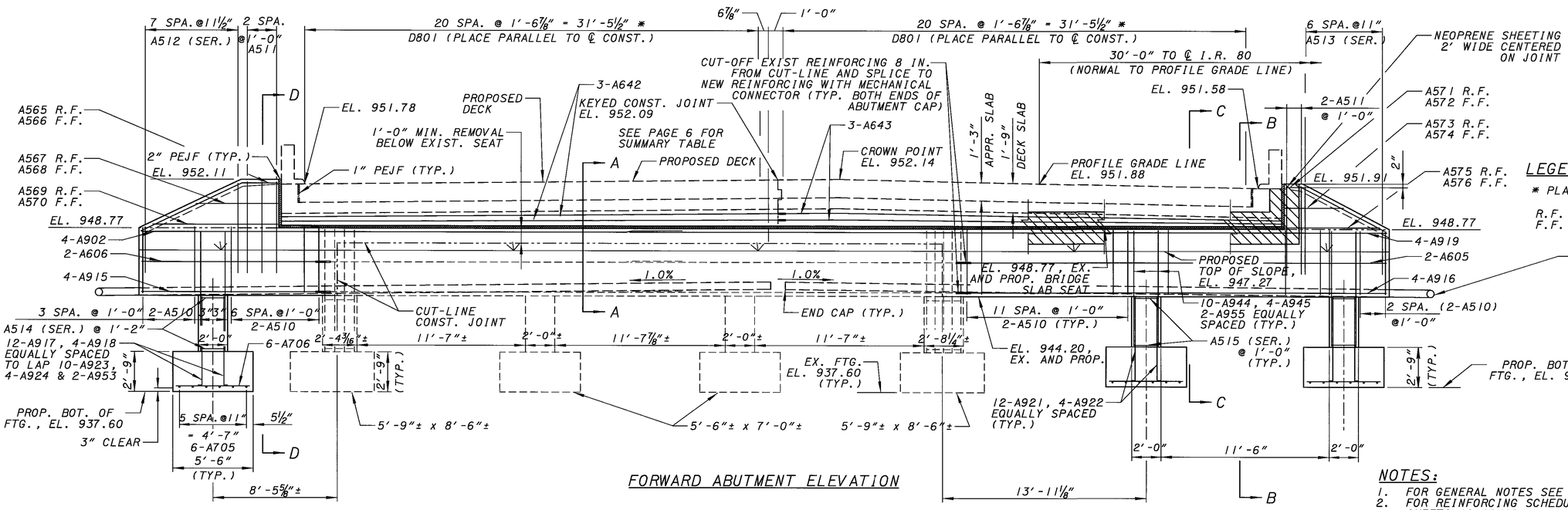
FORWARD ABUTMENT PLAN



DETAIL "A"



TYPE 2 WATERPROOFING



FORWARD ABUTMENT ELEVATION

LEGEND:

* PLACE PARALLEL TO ℄ CONST.

R.F. = REAR FACE
F.F. = FRONT FACE

NOTES:

1. FOR GENERAL NOTES SEE SHEET 2/18.
2. FOR REINFORCING SCHEDULE AND LAP LENGTHS SEE SHEETS 16-18/18.

SEE STD. DWG. A-1-69 FOR OUTLET TREATMENT; PROVIDE ANIMAL GUARD AS PER STD. DWG. DM-1.1; PAYMENT INCLUDED WITH ITEM 518 - 6" NON-PERFORATED C.P.P., INCLUDING SPECIALS, AS PER PLAN (TYP).

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4181 EXECUTIVE PARKWAY, SUITE 350 WESTERVILLE, OHIO 43081

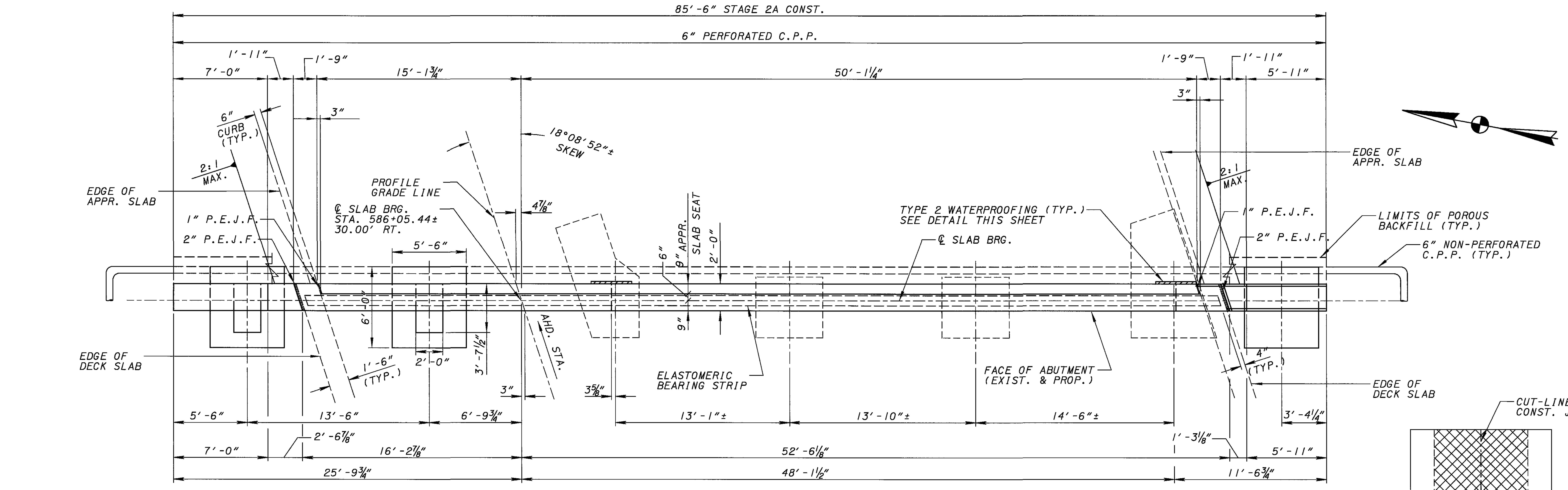
DESIGNED	DRAWN	REVIEWED	DATE
LMS/MTO	SK	JEK	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DEK		5002311 (L) 5002346 (R)	

FORWARD ABUTMENT DETAILS - LEFT BRIDGE

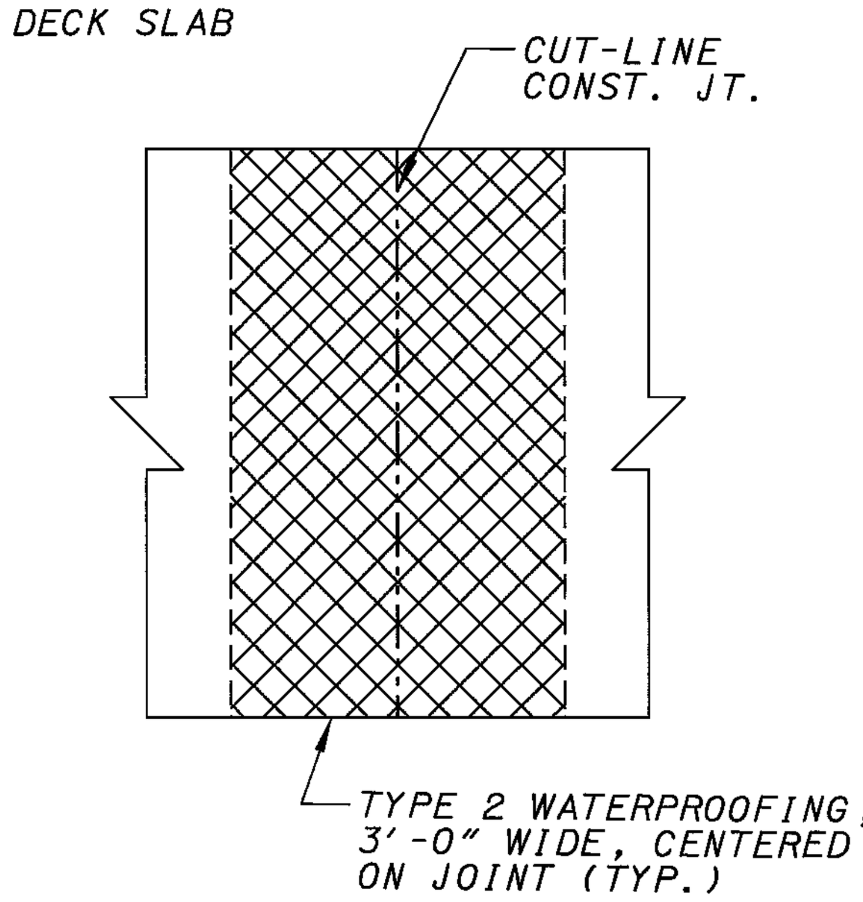
BRIDGE NO. MAH-80-0245 L/R
I.R. 80 OVER TURNER ROAD

MAH-80-0.97
PID 6080

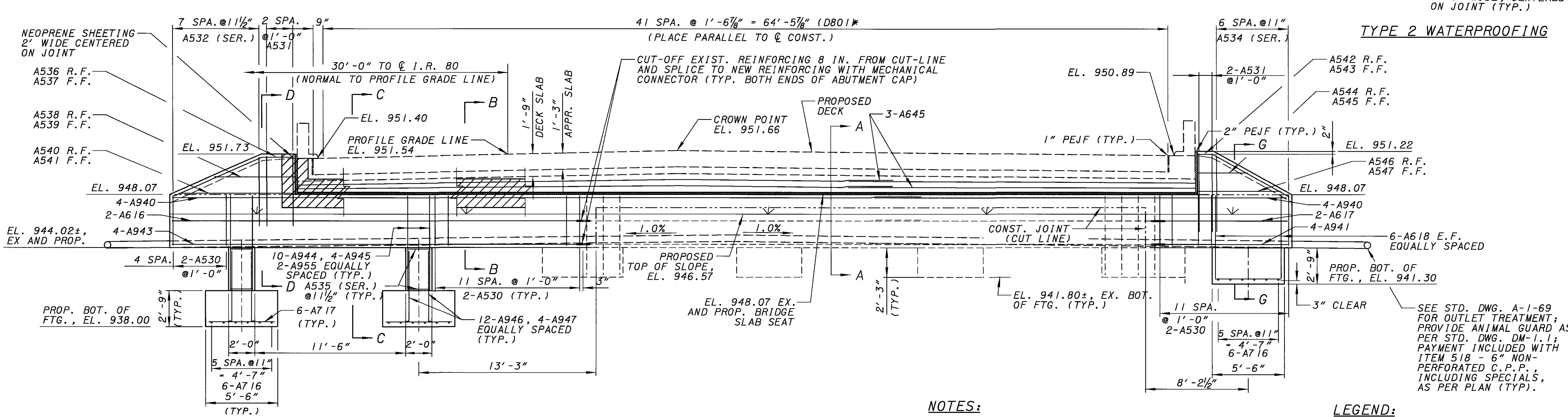
8/15/05 2:42:51 PM
s:\projects\37700\bridge-Turner\MH080A838.dgn



FORWARD ABUTMENT PLAN



TYPE 2 WATERPROOFING



FORWARD ABUTMENT ELEVATION

NOTES:

1. FOR GENERAL NOTES SEE SHEET 2/18.
2. FOR REINFORCING SCHEDULE AND LAP LENGTHS SEE SHEETS 16-18/18.

LEGEND:

* PLACE PARALLEL TO ℄ CONST.
R.F. = REAR FACE
F.F. = FRONT FACE

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY SUITE 350
WESTERVILLE, OHIO 43081

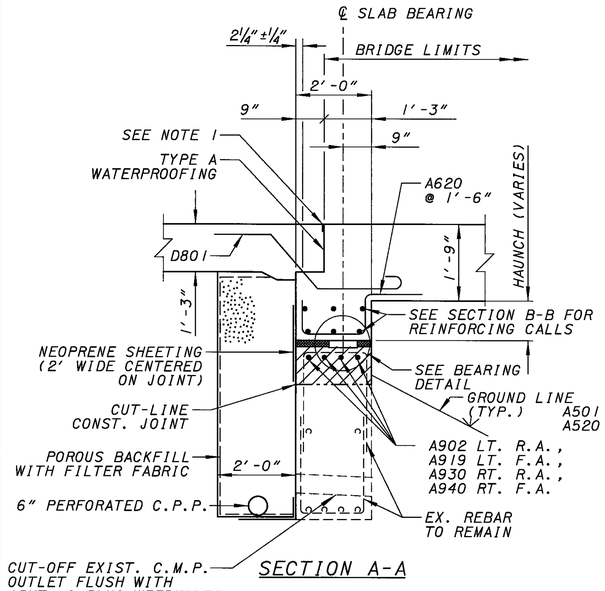
DESIGNED	CHECKED	DRAWN	REVISED	REVIEWED	DATE	STRUCTURE FILE NUMBER
SK	DEK	SK		JEK	8/04	5002311 (L) 5002346 (R)

FORWARD ABUTMENT DETAILS - RIGHT BRIDGE
BRIDGE NO. MAH-80-0245 L/R
I.R. 80 OVER TURNER ROAD

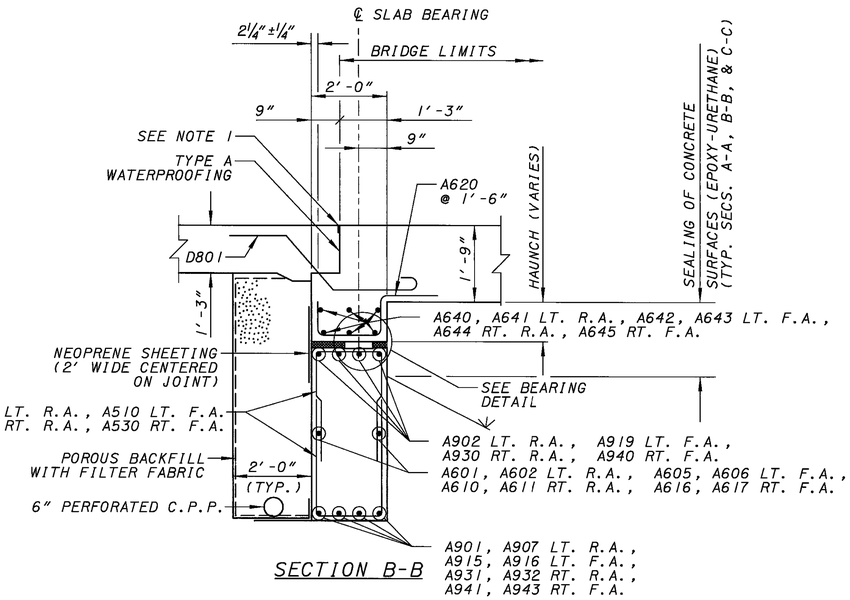
MAH-80-0.97
PID 6080

994 / 1100

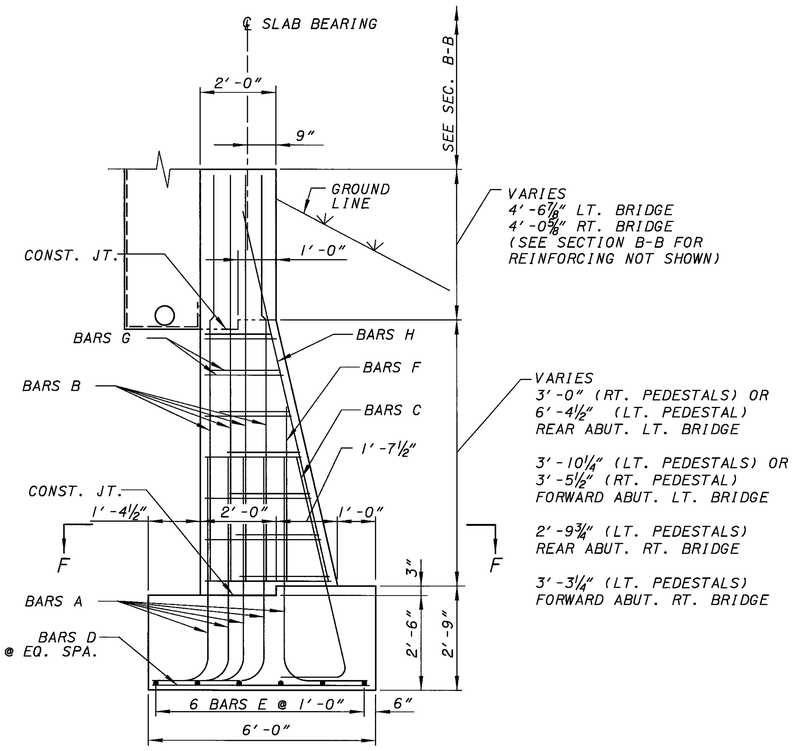
8/5/05 2:43:30 PM
s:\projects\37700\bridge-turner\MH080AB3D.dgn



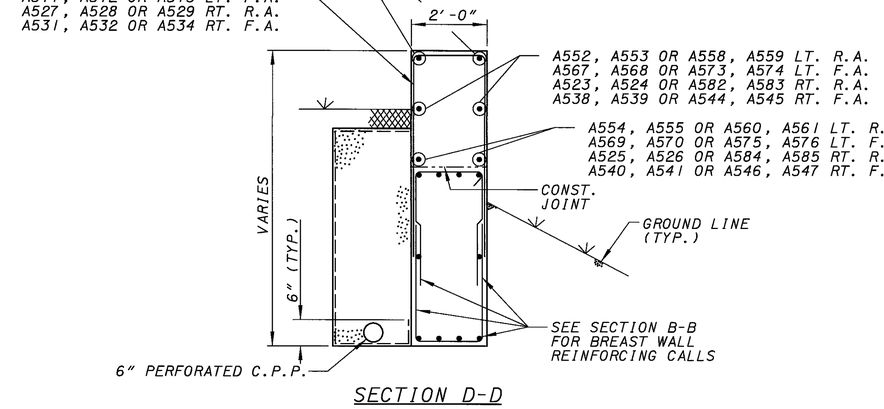
SECTION A-A



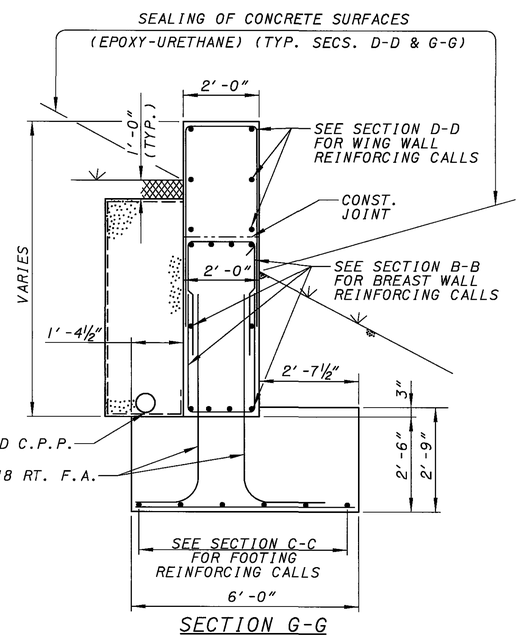
SECTION B-B



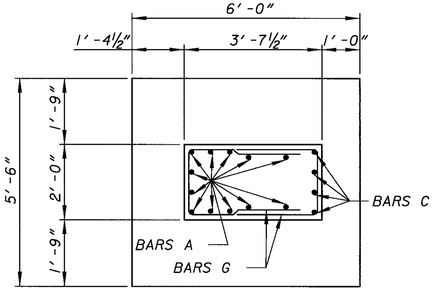
SECTION C-C



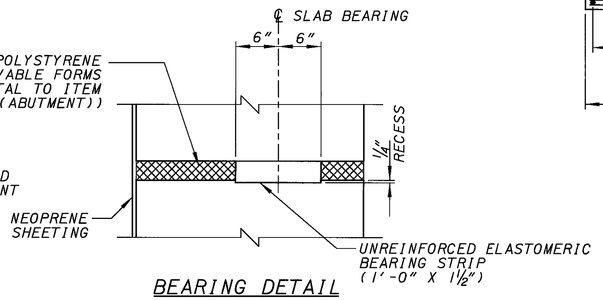
SECTION D-D



SECTION G-G



SECTION F-F



BEARING DETAIL

NOTES:

1. FOR JOINT DETAIL, SEE STD. DWG. AS-1-81, SHEET 2, DETAIL B.
2. POROUS BACKFILL WITH FILTER FABRIC, 2 FEET THICK, SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, TO 1 FOOT BELOW THE EMBANKMENT SURFACE, AND LATERALLY TO THE ENDS OF THE WINGWALLS.
3. PLACE A620 AND A640-A645 BARS IN THE DECK SLAB HAUNCH.
4. FOR GENERAL NOTES SEE SHEET 2/18.
5. FOR REINFORCING SCHEDULE AND LAP LENGTHS SEE SHEETS 16-18/18.

LEGEND:

R.A. - REAR ABUTMENT
F.A. - FORWARD ABUTMENT
C.P.P. - CORRUGATED PLASTIC PIPE

ABUTMENT PEDESTAL REINFORCEMENT TABLE

LOCATION	BAR DESIGNATIONS A	B	C	D	E	F	G	H
LT. BRIDGE R.A. LT. END	A903	A905	A904	A701	A702	A951	A504	A906
LT. BRIDGE R.A. RT. END	A911	A909	A912	A701	A702	A952	A507	A910
LT. BRIDGE F.A. LT. END	A917	A923	A918	A705	A706	A953	A514	A924
LT. BRIDGE F.A. RT. END	A921	A944	A922	A705	A706	A955	A515	A945
RT. BRIDGE R.A. LT. END	A936	A934	A937	A710	A711	A954	A586	A935
RT. BRIDGE F.A. LT. END	A946	A944	A947	A716	A717	A955	A535	A945

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
DEK	DEK	JEK	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MTO		5002311 (L) 5002346 (R)	

ABUTMENT SECTIONS AND DETAILS

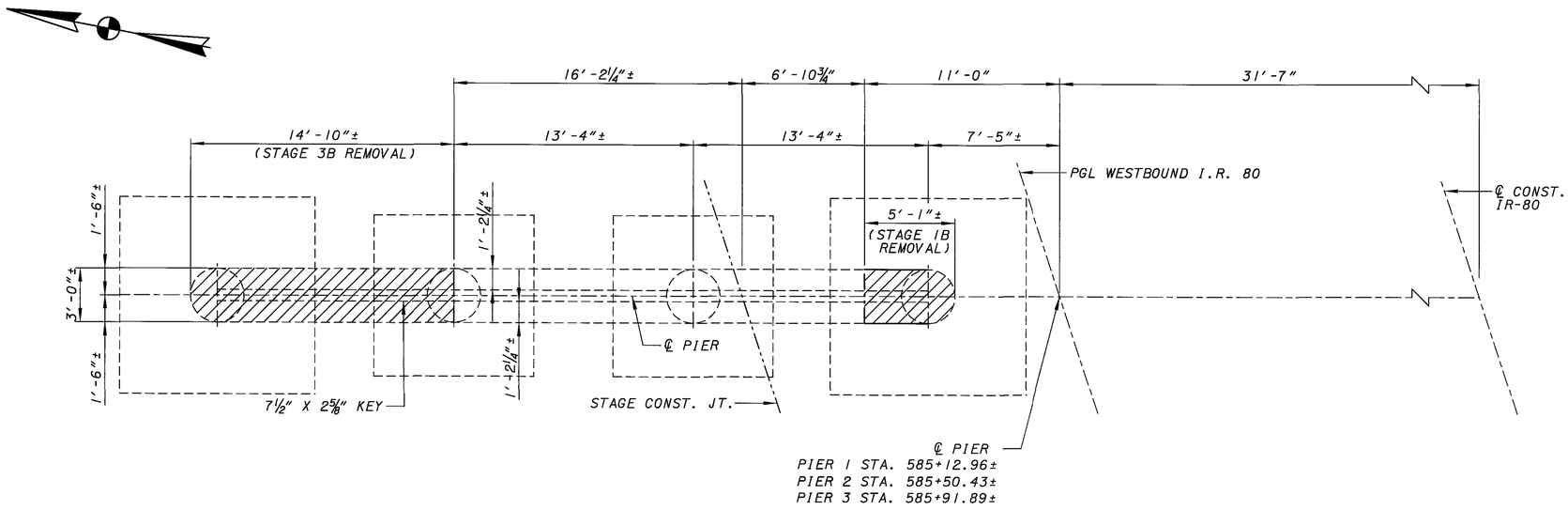
BRIDGE NO. MAH-80-0245 L/R
I.R. 80 OVER TURNER ROAD

MAH-80-0.97
PID 6080

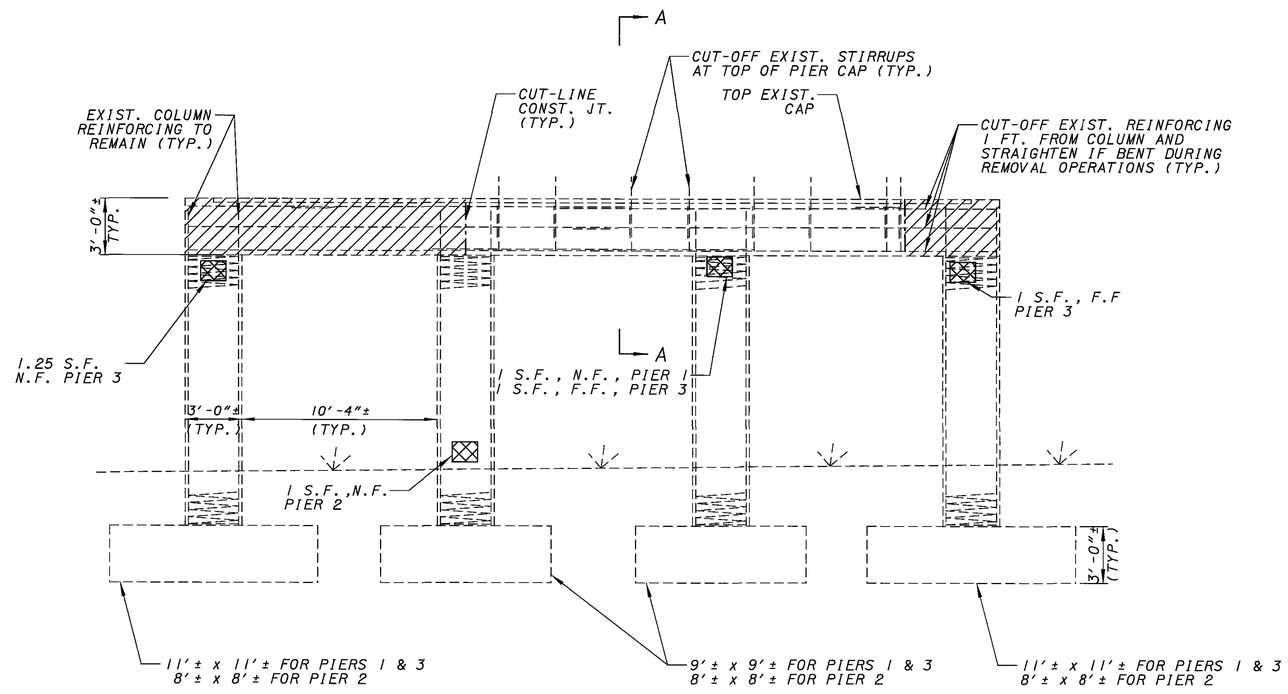
9 / 18

995 / 1100

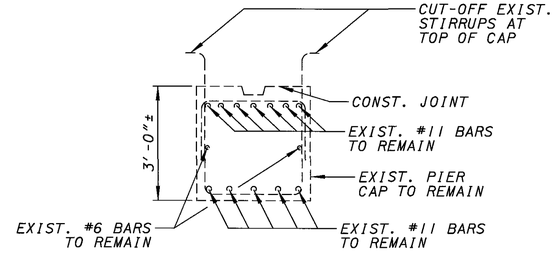
8/15/05 2:43:51 PM
s:\projects\37700\bridge-Turner\MH080AB3E.dgn



EXISTING LEFT PIER PLAN



EXISTING LEFT PIER ELEVATION



SECTION A-A

LEGEND:

- ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN
- PORTIONS TO BE PATCHED WITH ITEM 843.

N.F. = NEAR FACE
F.F. = FAR FACE
S.F. = SQUARE FEET

PIER CONCRETE PATCHING - SUMMARY TABLE (SQ. FT.)

	MEASURED QUANTITY	CONTINGENCY FACTOR	TOTAL QUANTITY
LEFT BRIDGE PIERS	5.25	1.25	6.50

NOTES:

1. FOR GENERAL NOTES SEE SHEET 2/18.

DESIGN AGENCY
GANNETT FLEMING
ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
DEK	DEK	PLC	2/05
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MTO		5002311 (L) 5002346 (R)	

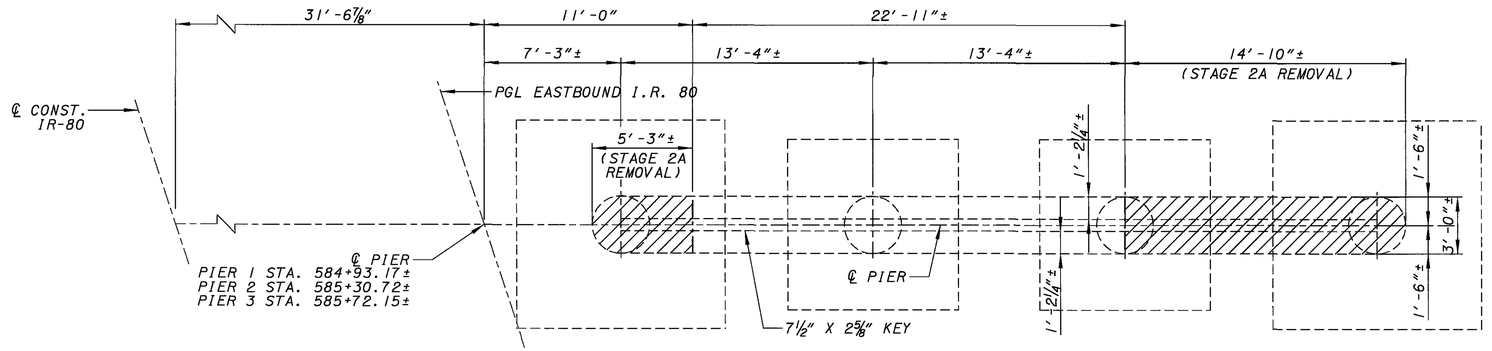
PIER REMOVAL DETAILS - LEFT BRIDGE
BRIDGE NO. MAH-80-0245 L/R
I.R. 80 OVER TURNER ROAD

MAH-80-0.97
PID 6080

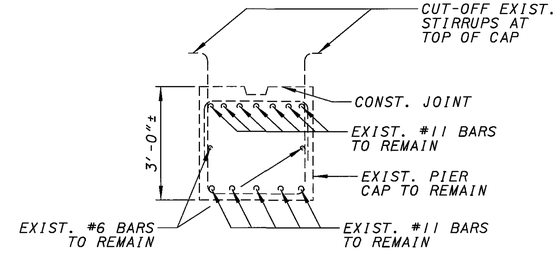
9A / 18

995A
1100

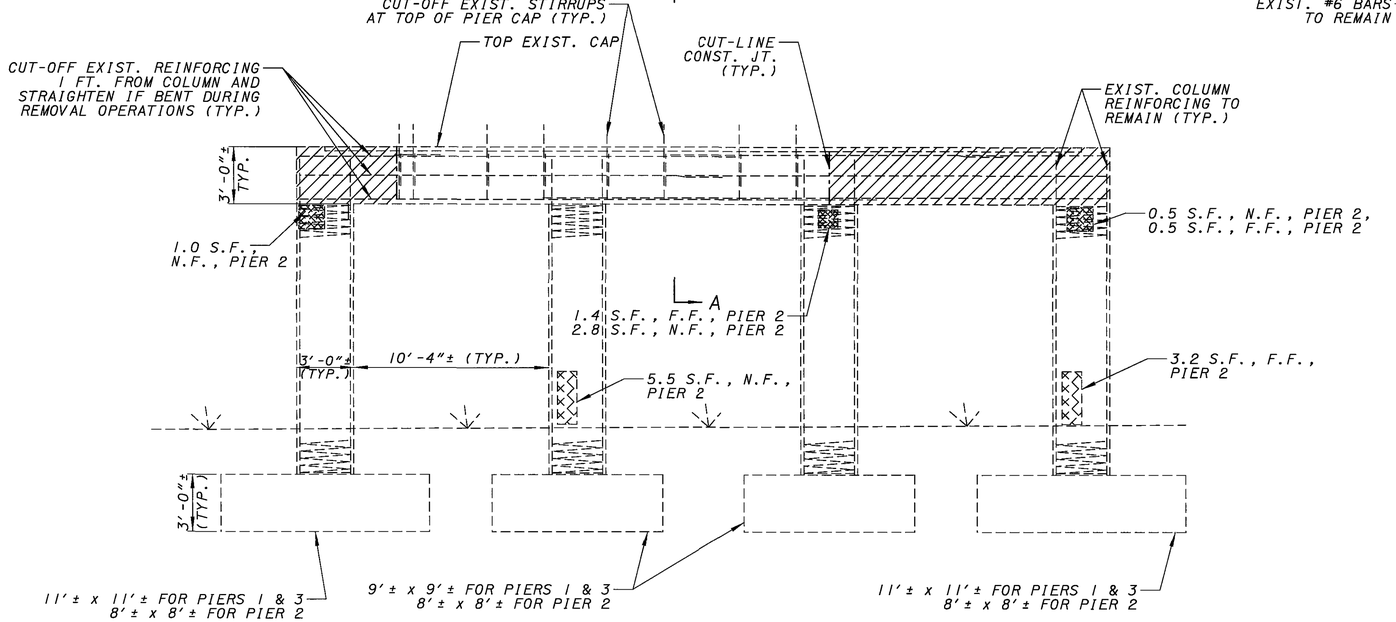
8/15/05 2:44:21 PM
s:\projects\37700\bridge-Turner\MH080P13C.dgn



EXISTING RIGHT PIER PLAN



SECTION A-A



EXISTING RIGHT PIER ELEVATION

LEGEND:

- ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN
- PORTIONS TO BE PATCHED WITH ITEM 843.

N.F. = NEAR FACE
F.F. = FAR FACE
S.F. = SQUARE FEET

PIER CONCRETE PATCHING - SUMMARY TABLE (SQ. FT.)

	MEASURED QUANTITY	CONTINGENCY FACTOR	TOTAL QUANTITY
RIGHT BRIDGE PIERS	14.85	1.25	18.50

NOTES:

1. FOR GENERAL NOTES SEE SHEET 2/18.

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350 WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
DEK	DEK	PLC	2/05
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MTO		5002311 (L) 5002346 (R)	

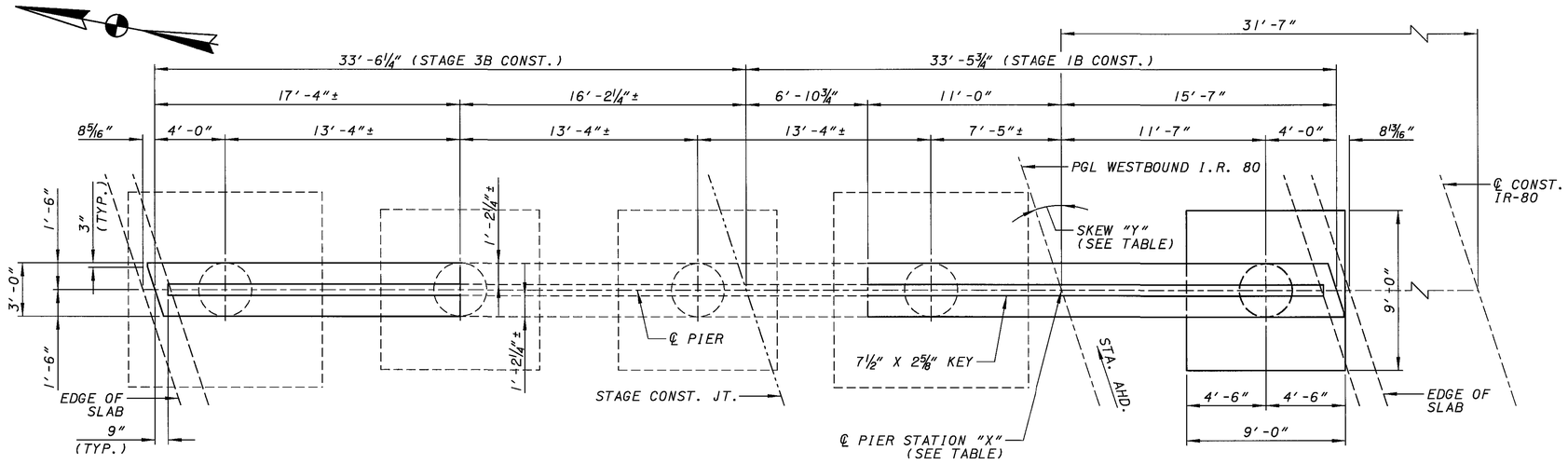
PIER REMOVAL DETAILS - RIGHT BRIDGE
BRIDGE NO. MAH-80-0245 L/R
I.R. 80 OVER TURNER ROAD

MAH-80-0.97
PID 6080

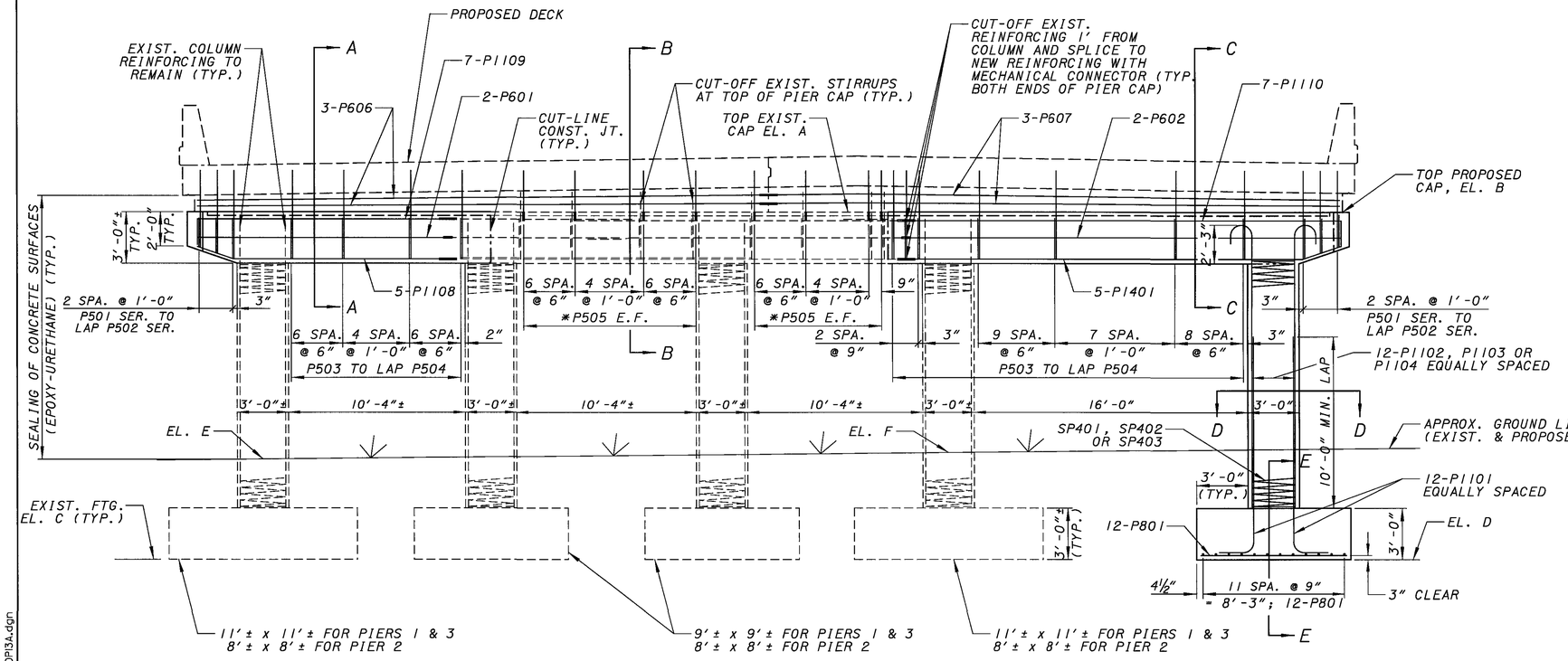
9B / 18

995B
1100

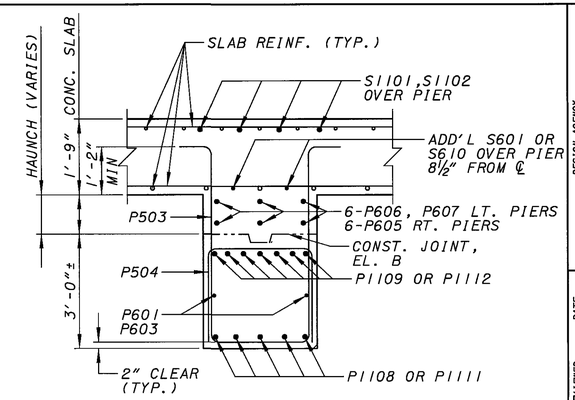
8/15/05 2:45:27 PM
s:\projects\37700\bridge-Turner\MH080PI3D.dgn



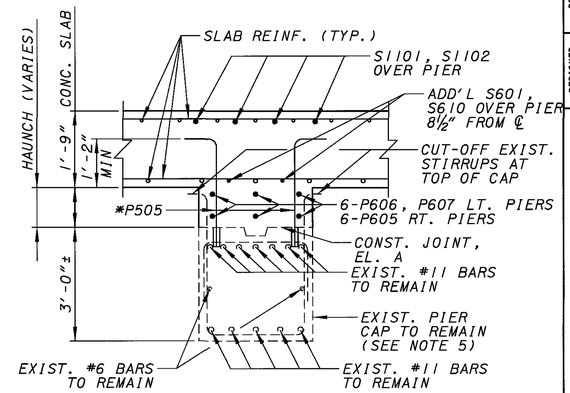
LEFT PIER PLAN



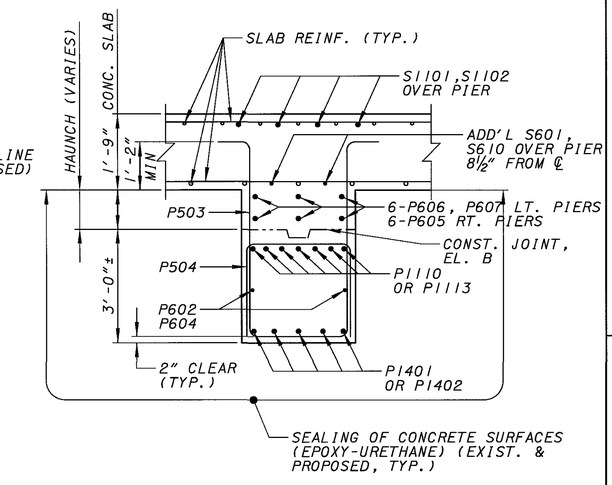
LEFT PIER ELEVATION



SECTION A-A



SECTION B-B



SECTION C-C

NOTES:

* 1. DOWEL P505 BARS 6" MIN. INTO EXIST. CONCRETE USING NONSHRINK, NONMETALLIC GROUT AS PER ITEM 510. ADJUST DOWEL SPACING TO CLEAR EXIST. REINFORCING BY 3" MIN.
2. FOR SECTIONS D-D AND E-E, SEE SHEET 11/18.
3. FOR GENERAL NOTES SEE SHEET 2/18.
4. FOR REINFORCING SCHEDULE AND LAP LENGTHS SEE SHEETS 16-18/18.
5. PREPARE THE TOP SURFACE OF THE EXISTING PIER CAP AS PER THE REQUIREMENTS OF THE "CUT LINE CONSTRUCTION JOINT PREPARATION" NOTE ON SHEET 2/18.

LEGEND:

N.F. = NEAR FACE
F.F. = FAR FACE
S.F. = SQUARE FEET

LEFT PIER DATA

PIER NO.	STATION "X"	SKEW "Y"	EL. A	EL. B	EL. C	EL. D	EL. E	EL. F
PIER 1	585+12.96±	18°10'36"±	946.85±	946.85	926.60±	926.6	932.46±	932.87±
PIER 2	585+50.43±	18°13'33"±	947.49±	947.49	925.60±	925.6	930.55±	931.12±
PIER 3	585+91.89±	18°12'54"±	948.21±	948.21	925.10±	925.1	931.71±	932.15±

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EASTON WAY, SUITE 330 COLUMBUS, OHIO 43219

DESIGNED	DRAWN	REVIEWED	DATE
MTO	MTO	JEK	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SK		5002311 (L) 5002346 (R)	

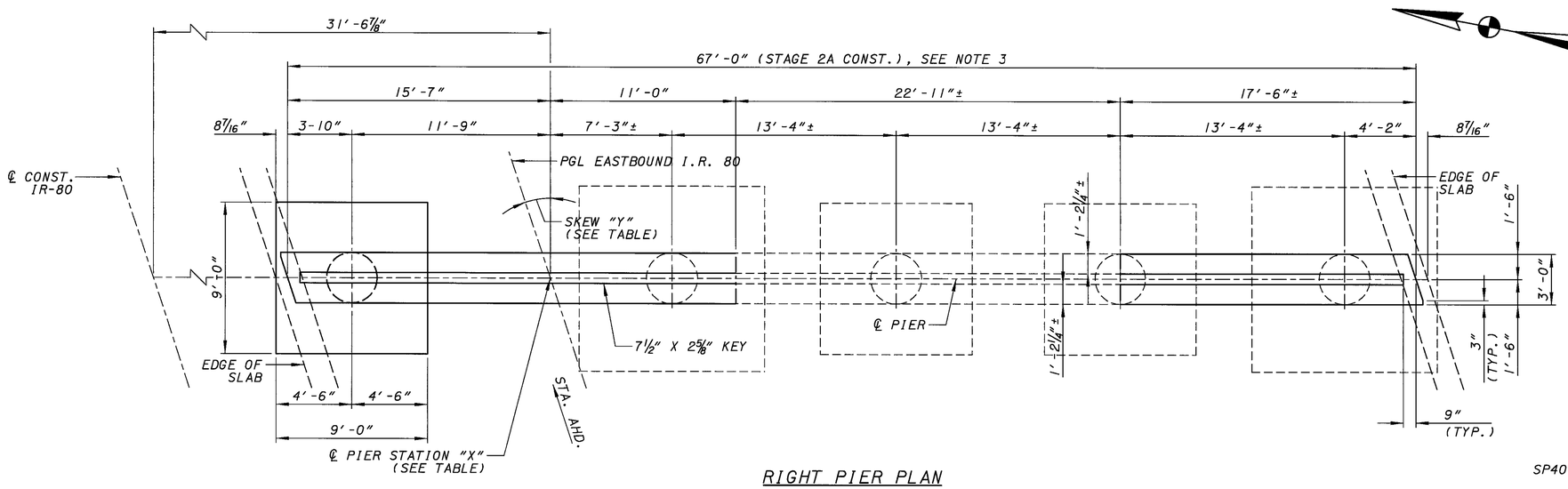
PIER DETAILS - LEFT BRIDGE
BRIDGE NO. MAH-80-0245 L/R
I.R. 80 OVER TURNER ROAD

MAH-80-0.97
PID 6080

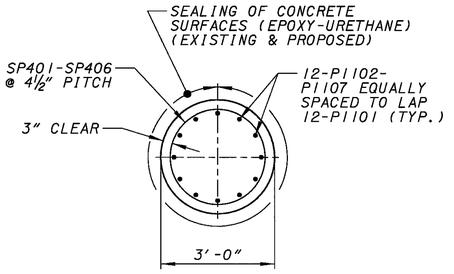
10 / 18

996
1100

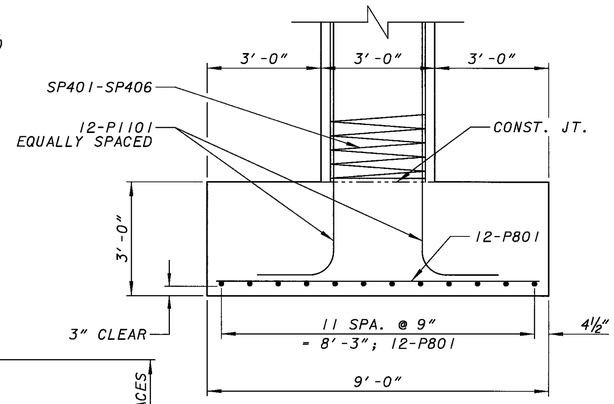
8/15/05 2:46:27 PM
s:\projects\37700\bridge-Turner\MH080PI3A.dgn



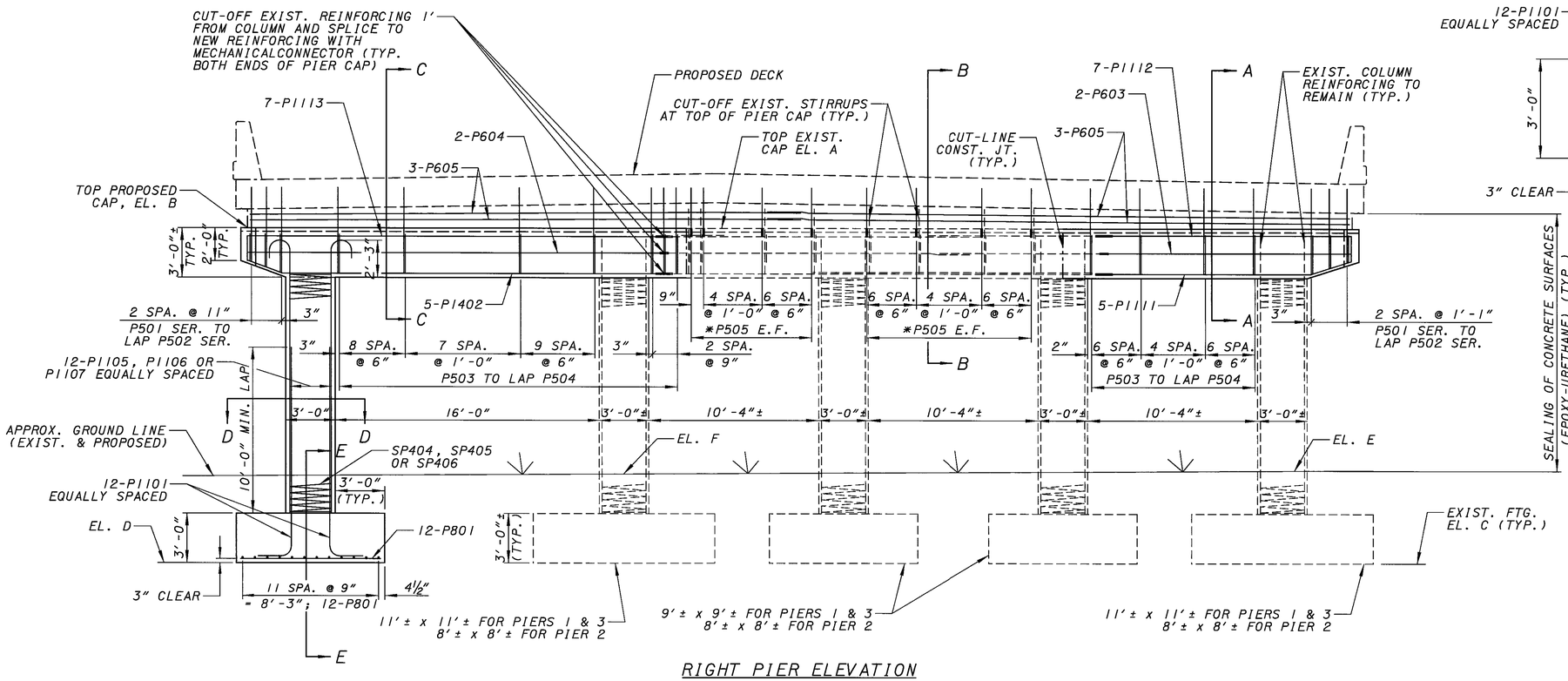
RIGHT PIER PLAN



SECTION D-D



SECTION E-E



RIGHT PIER ELEVATION

NOTES:

* 1. DOWEL P505 BARS 6" MIN. INTO EXIST. CONCRETE USING NONSHRINK, NONMETALLIC GROUT AS PER ITEM 510.
2. FOR SECTIONS A-A, B-B AND C-C, SEE SHEET 10/18.
3. CONSTRUCT THE NEW FOOTINGS AND COLUMNS DURING STAGE 1B.
4. FOR GENERAL NOTES SEE SHEET 2/18.
5. FOR REINFORCING SCHEDULE AND LAP LENGTHS SEE SHEETS 16-18/18.

LEGEND:

N.F. = NEAR FACE
F.F. = FAR FACE
S.F. = SQUARE FEET

RIGHT PIER DATA

PIER NO.	STATION "X"	SKEW "Y"	EL. A	EL. B	EL. C	EL. D	EL. E	EL. F
PIER 1	584+93.17±	18°08'32"±	946.15±	946.15	927.60±	927.5	933.18±	932.97±
PIER 2	585+30.72±	18°09'18"±	946.80±	946.80	926.10±	926.1	931.88±	931.69±
PIER 3	585+72.15±	18°09'41"±	947.51±	947.51	926.10±	926.1	932.38±	931.78±

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350 WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
MTO	MTO	JEK	8/04

CHECKED	REVISED
SK	

STRUCTURE FILE NUMBER
5002311 (L)
5002346 (R)

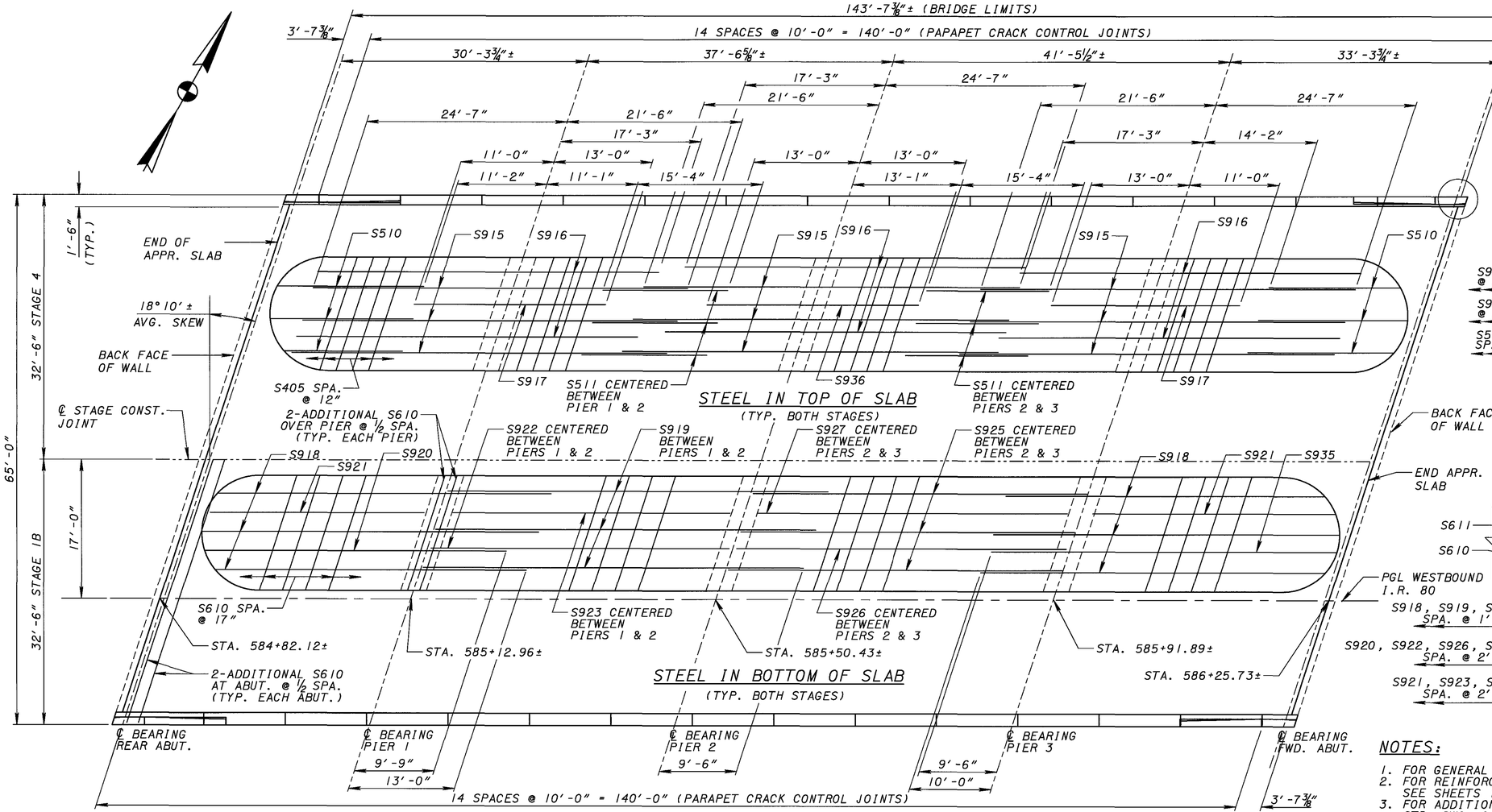
PIER DETAILS - RIGHT BRIDGE
BRIDGE NO. MAH-80-0245 L/R
I.R. 80 OVER TURNER ROAD

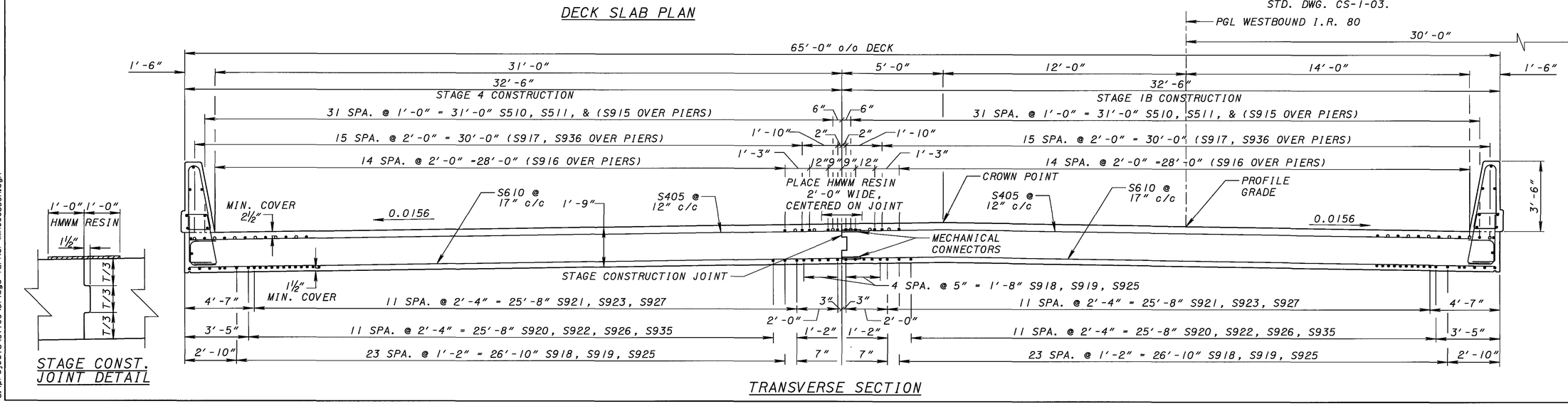
MAH-80-0.97
PID 6080

11 / 18

997
1100

8/15/05 2:47:11 PM
s:\projects\37700\bridge-Turner\MH080PI3B.dgn





DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
SK/MTO	SK	JEK	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DEK		5002311 (L) 5002346 (R)	

DECK DETAILS - LEFT BRIDGE

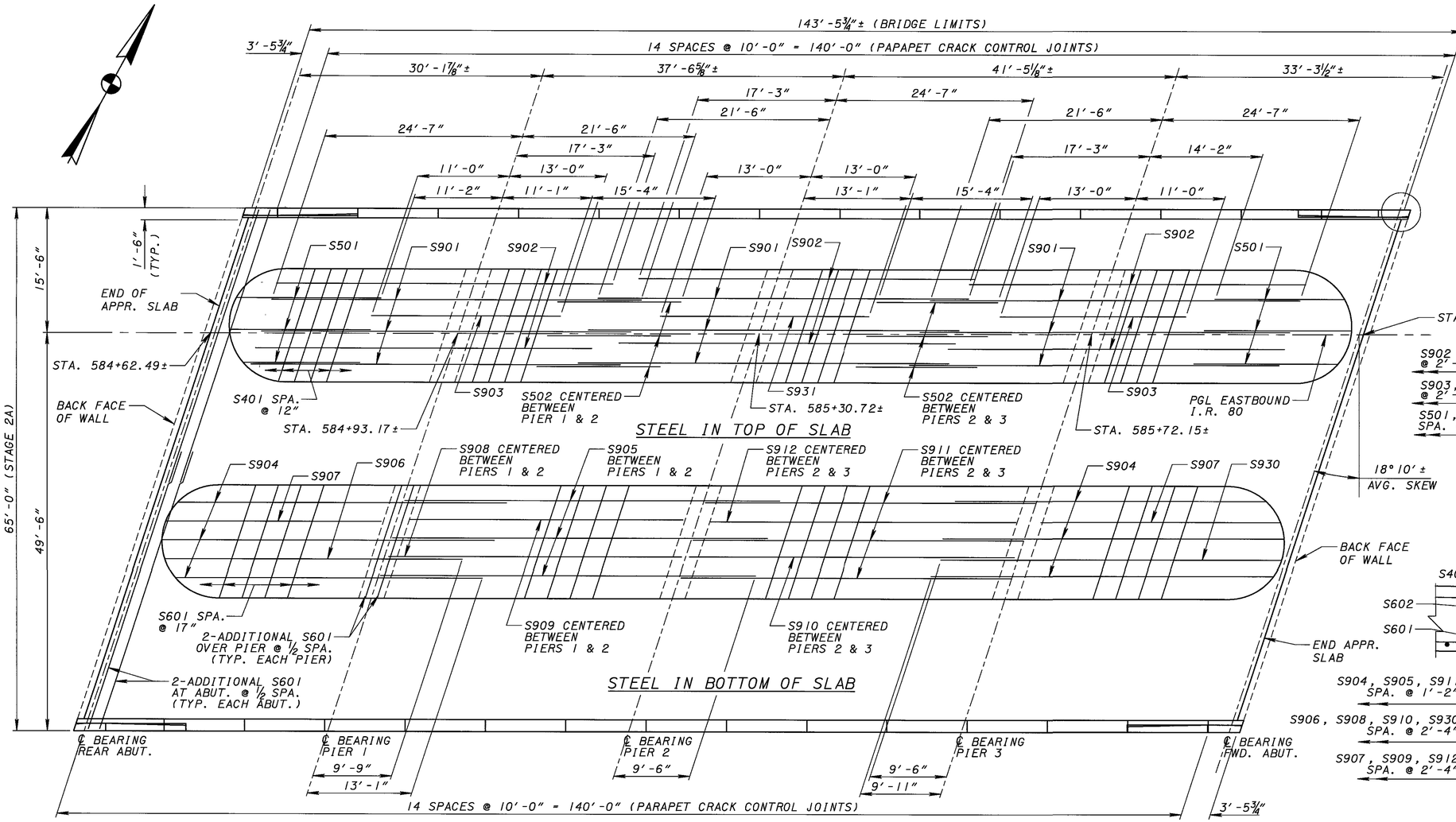
BRIDGE NO. MAH-80-0245 L/R
I.R. 80 OVER TURNER ROAD

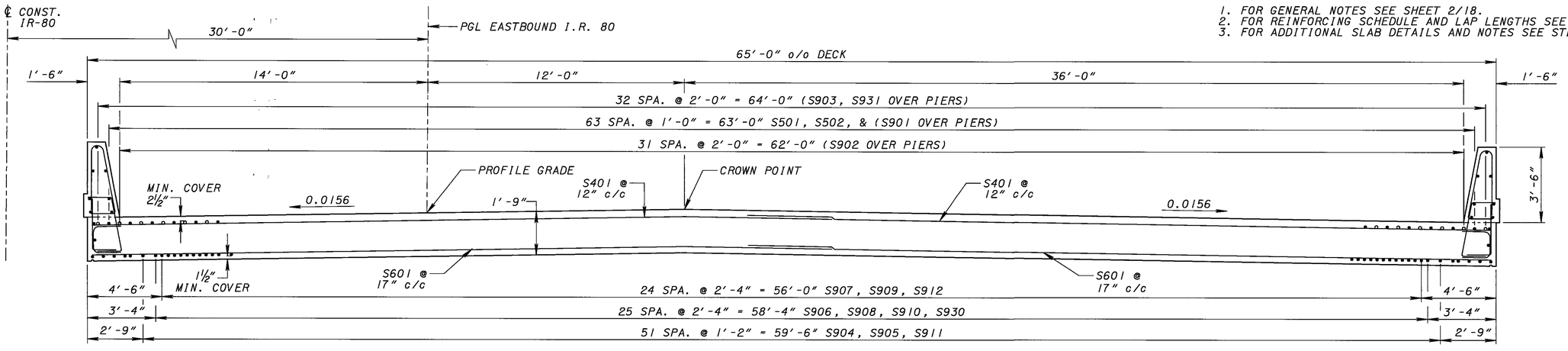
MAH-80-0.97
PID 6080

12 / 18

998
1100

8/15/05 2:47:40 PM
s:\projects\37700\bridge-Turner-MH080SD3A.dgn





TRANSVERSE SECTION

NOTES:

1. FOR GENERAL NOTES SEE SHEET 2/18.
2. FOR REINFORCING SCHEDULE AND LAP LENGTHS SEE SHEETS 16-18/18.
3. FOR ADDITIONAL SLAB DETAILS AND NOTES SEE STD. DWG. CS-1-03.

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
SK/MTO	SK	JEK	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DEK		5002311 (L) 5002346 (R)	

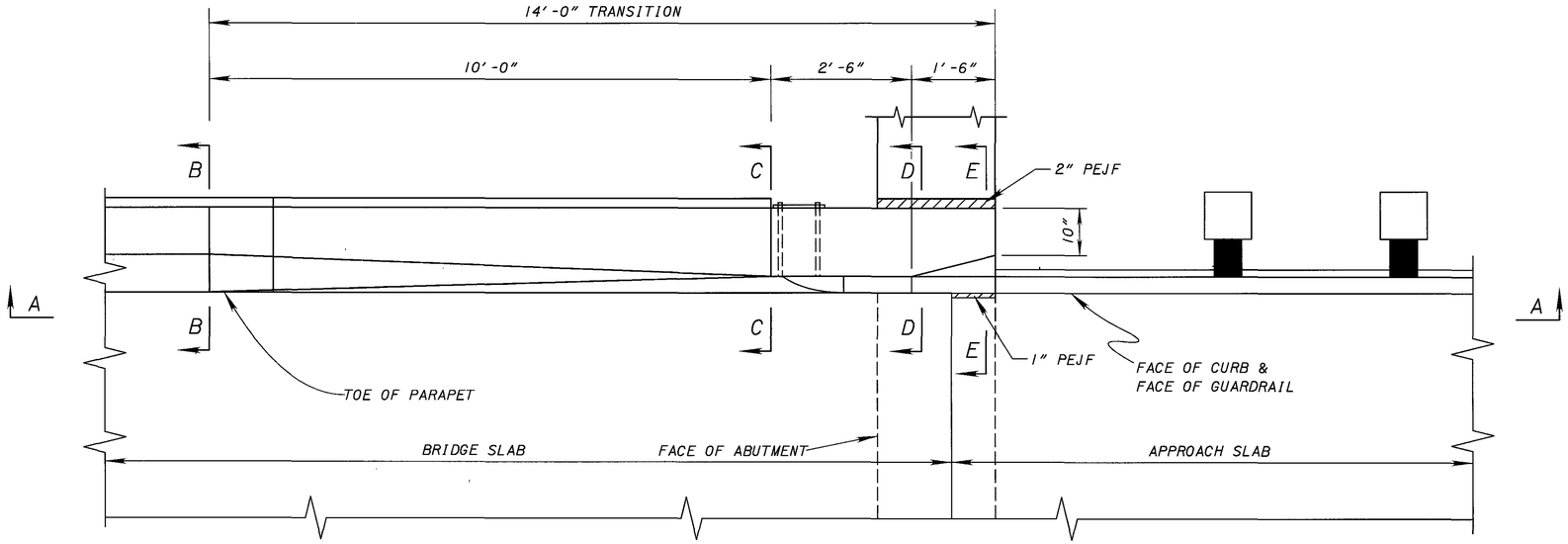
DECK DETAILS - RIGHT BRIDGE
BRIDGE NO. MAH-80-0245 L/R
I.R. 80 OVER TURNER ROAD

MAH-80-0.97
PID 6080

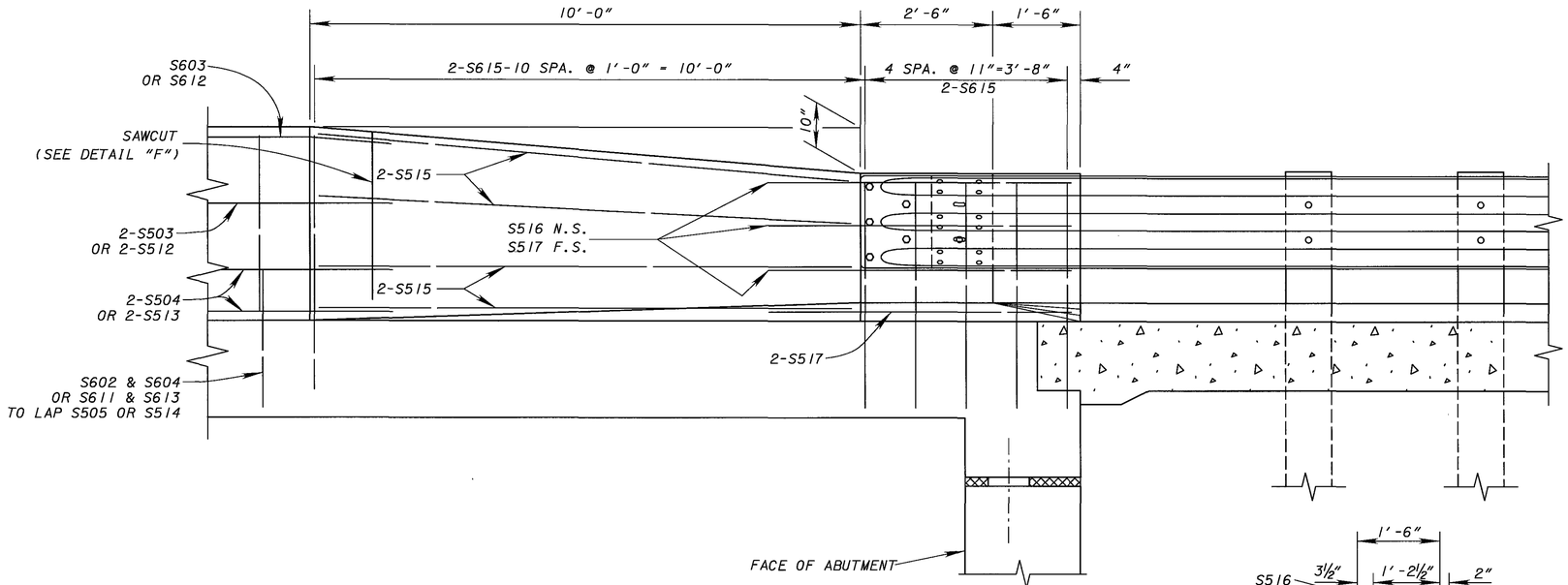
13 / 18

999
1100

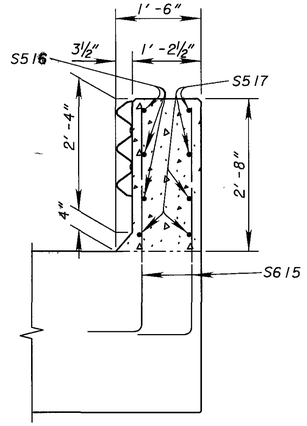
8/15/05 2:48:00 PM
s:\projects\37700\bridge-Turner\MH080SD3B.dgn



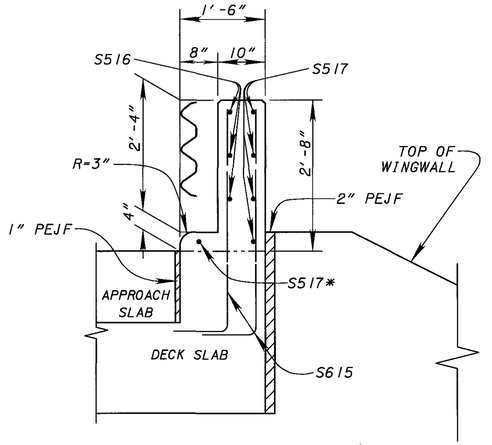
PART PLAN AT ABUTMENT



VIEW A-A

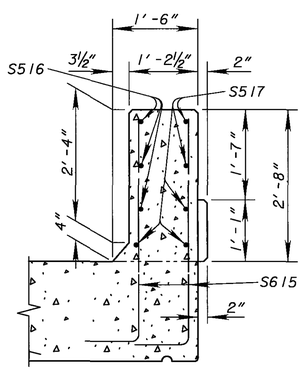


SECTION D-D

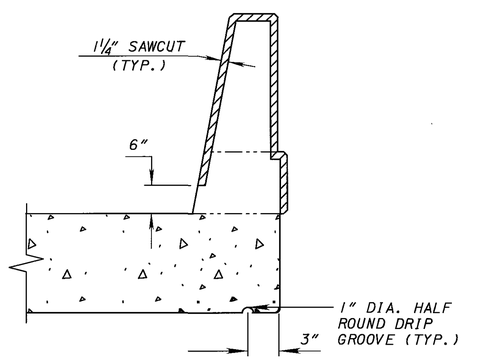


SECTION E-E

* FIELD BEND IF NECESSARY



SECTION C-C



DETAIL F

NOTES:

1. FOR PARAPET DETAILS AND NOTES NOT SHOWN, SEE STD. DWG. SBR-1-99.
2. FOR SECTION B-B AND PARAPET REINFORCING DETAILS, SEE SHEETS 12 & 13 OF 18.
3. FOR DETAILS AND PAYMENT OF BRIDGE TERMINAL ASSEMBLY, SEE SHEET 206/1100.
4. FOR REINFORCING SCHEDULE AND LAP LENGTHS SEE SHEETS 16-18/18.
5. FOR GENERAL NOTES SEE SHEET 2/18.

LEGEND:

N.S. = NEAR SIDE
F.S. = FAR SIDE

DESIGN AGENCY
GANNETT FLEMING
ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
EFD	EFD	JEK	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SK		5002311 (L) 5002346 (R)	

PARAPET TRANSITION DETAILS
BRIDGE NO. MAH-80-0245 L/R
I.R. 80 OVER TURNER ROAD

MAH-80-0.97
PID 6080

1000
1100

8/15/05 2:48:36 PM
s:\projects\37700\bridge-Turner\MH080S03C.dgn