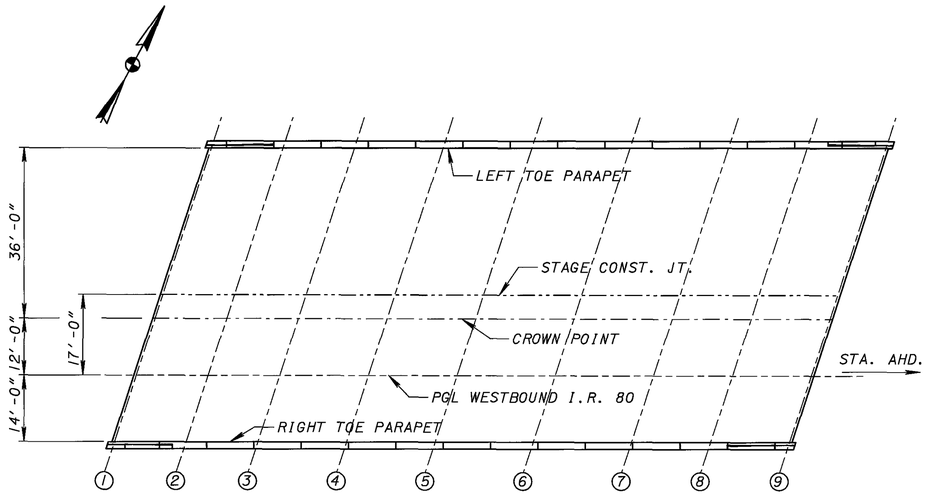
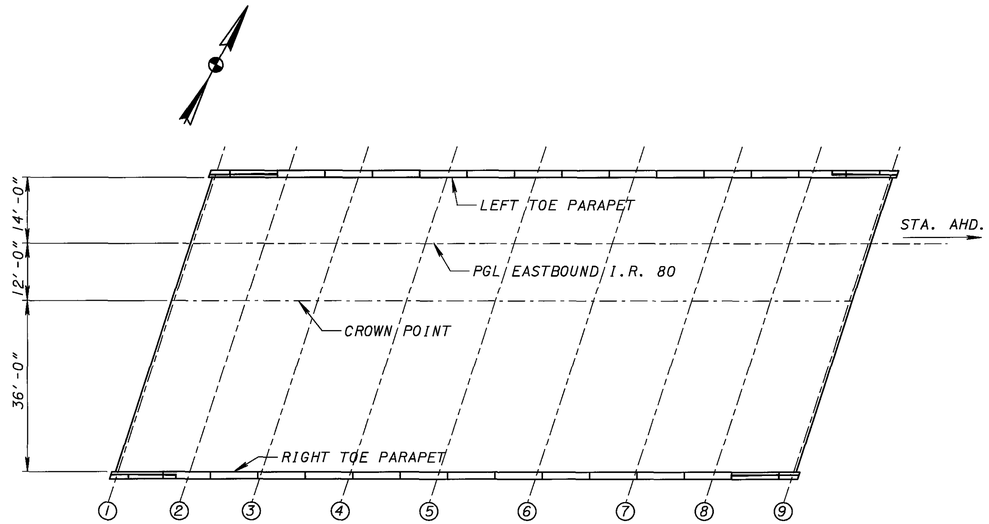


LEFT BRIDGE



RIGHT BRIDGE

FINAL DECK ELEVATION TABLE

SPAN NO.	LOCATION		LEFT TOE OF PARAPET STATION	LEFT TOE OF PARAPET DECK ELEV.	STAGE CONST. JOINT STATION	STAGE CONST. JOINT DECK ELEV.	CROWN POINT STATION	CROWN POINT DECK ELEV.	PROFILE GRADE LINE STATION	PROFILE GRADE LINE DECK ELEV.	RIGHT TOE OF PARAPET STATION	RIGHT TOE OF PARAPET DECK ELEV.
SPAN 1	1	℄ BRG. REAR ABUT.	584+98.48	949.28	584+88.26	949.59	584+86.61	949.64	584+82.65	949.38	584+78.03	949.08
	2	MID-SPAN	585+13.64	949.55	585+03.42	949.86	585+01.77	949.90	584+97.81	949.65	584+93.19	949.35
SPAN 2	3	℄ PIER 1	585+28.72	949.81	585+18.55	950.12	585+16.90	950.17	585+12.96	949.91	585+08.37	949.61
	4	MID-SPAN	585+47.46	950.14	585+37.28	950.45	585+35.64	950.50	585+31.70	950.24	585+27.10	949.94
SPAN 3	5	℄ PIER 2	585+66.23	950.47	585+56.02	950.77	585+54.38	950.82	585+50.43	950.57	585+45.82	950.27
	6	MID-SPAN	585+86.96	950.83	585+76.75	951.14	585+75.11	951.19	585+71.16	950.93	585+66.55	950.63
SPAN 4	7	℄ PIER 3	586+07.68	951.19	585+97.48	951.50	585+95.84	951.55	585+91.89	951.29	585+87.28	950.99
	8	MID-SPAN	586+24.35	951.48	586+14.14	951.79	586+12.50	951.84	586+08.55	951.58	586+03.94	951.28
	9	℄ BRG. FWD. ABUT.	586+40.94	951.77	586+30.78	952.08	586+29.14	952.13	586+25.20	951.87	586+20.61	951.58

FINAL DECK ELEVATION TABLE

SPAN NO.	LOCATION		LEFT TOE OF PARAPET STATION	LEFT TOE OF PARAPET DECK ELEV.	PROFILE GRADE LINE STATION	PROFILE GRADE LINE DECK ELEV.	CROWN POINT STATION	CROWN POINT DECK ELEV.	RIGHT TOE OF PARAPET STATION	RIGHT TOE OF PARAPET DECK ELEV.
SPAN 1	1	℄ BRG. REAR ABUT.	584+67.61	948.90	584+63.02	949.04	584+59.09	949.16	584+47.28	948.39
	2	MID-SPAN	584+82.69	949.16	584+78.10	949.30	584+74.17	949.42	584+62.36	948.65
SPAN 2	3	℄ PIER 1	584+97.76	949.43	584+93.17	949.57	584+89.24	949.69	584+77.44	948.92
	4	MID-SPAN	585+16.54	949.76	585+11.95	949.89	585+08.02	950.01	584+96.22	949.24
SPAN 3	5	℄ PIER 2	585+35.31	950.08	585+30.72	950.22	585+26.78	950.34	585+14.98	949.57
	6	MID-SPAN	585+56.03	950.45	585+51.44	950.59	585+47.51	950.70	585+35.70	949.94
SPAN 4	7	℄ PIER 3	585+76.74	950.81	585+72.15	950.95	585+68.21	951.07	585+56.40	950.30
	8	MID-SPAN	585+93.39	951.10	585+88.80	951.24	585+84.86	951.36	585+73.05	950.59
	9	℄ BRG. FWD. ABUT.	586+10.03	951.39	586+05.44	951.53	586+01.51	951.65	585+89.71	950.88

NOTES:

1. SEE SHEETS 12 & 13 OF 18 FOR ADDITIONAL DECK INFORMATION.

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	
PLC		5002311 (L) 5002346 (R)	

FINAL DECK ELEVATIONS - LEFT AND RIGHT BRIDGES
BRIDGE NO. MAH-80-0245 L/R
I.R. 80 OVER TURNER ROAD

MAH-80-0.97
PID 6080

15 / 18

1001
1100

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REINFORCING STEEL LIST

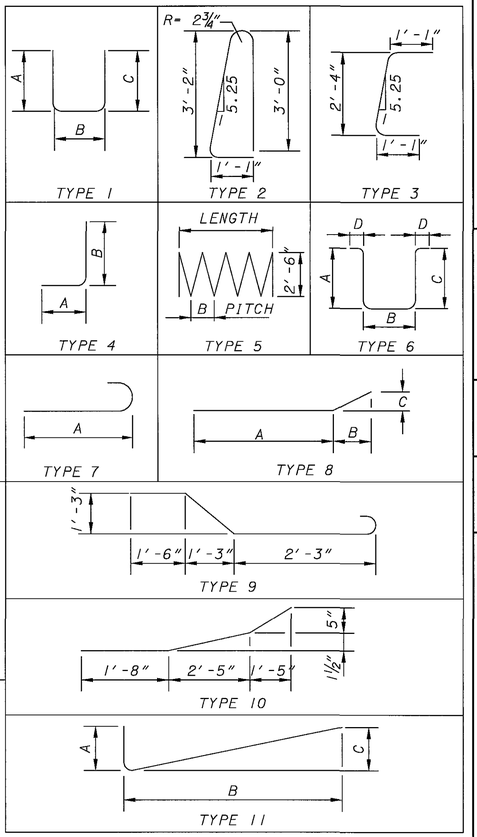
												WEIGHT	
	MARK	LEFT BRIDGE	RIGHT BRIDGE	LENGTH	TYPE	A	B	C	D	R	INCR.	LEFT	RIGHT
							SUPERSTRUCTURE						
							DECK						
	S401		288	35'-5"	STR								6814
	S402		204	3'-7"	1	1'-3"	1'-3"	1'-3"					488
*	S405	288		34'-0"	STR							6541	
	S406	204		3'-7"	1	1'-3"	1'-3"	1'-3"				488	
	S501		132	19'-5"	STR								2673
	S502		132	15'-4"	STR								2111
	S510	132		19'-7"	STR							2696	
	S511	132		15'-4"	STR							2111	
	S601		224	36'-1"	STR								12140
*	S610	224		34'-0"	STR							11439	
	S901		198	46'-1"	STR								31023
	S902		96	41'-10"	STR								13654
	S903		66	24'-0"	STR								5386
	S904		124	44'-10"	7	43'-7"							18902
	S905		62	46'-9"	STR								9855
	S906		26	41'-5"	7	40'-2"							3661
	S907		54	33'-5"	7	32'-2"							6135
	S908		26	36''-7"	STR								3131
	S909		25	34'-0"	STR								2890
	S910		26	40'-6"	STR								3580
	S911		62	41'-0"	STR								8643
	S912		25	38'-0"	STR								3230
	S930		26	44'-4"	7	43'-1"							3919
	S931		33	26'-0"	STR								2917
	S932		8	42'-8"	STR								1161
	S915	198		46'-1"	STR							31023	
	S916	102		41'-10"	STR							14508	
	S917	68		24'-0"	STR							5549	
	S918	136		44'-10"	7	43'-7"						20731	
	S919	68		46'-9"	STR							10809	
	S920	24		41'-7"	7	40'-4"						3393	
	S921	48		33'-5"	7	32'-2"						5454	
	S922	24		36'-7"	STR							2985	
	S923	24		34'-0"	STR							2774	
	S925	68		41'-0"	STR							9479	
	S926	24		40'-6"	STR							3305	
	S927	24		38'-0"	STR							3101	
	S935	24		44'-4"	7	43'-1"						3618	
	S936	34		26'-0"	STR							3006	
	S937	8		42'-8"	STR							1161	
	S1101		24	41'-2"	STR								5249
*	S1102	24		34'-0"	STR							4335	

* WITH MECHANICAL CONNECTOR (SEE NOTE 7)

MINIMUM LAP LENGTHS:

#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"

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"	#9 BARS L = 9'-2"
#5 BARS L = 3'-5"	#10 BARS L = 11'-7"
#6 BARS L = 4'-1"	#11 BARS L = 14'-3"
#8 BARS L = 7'-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		5002311 (L) 5002346 (R)	

REINFORCING STEEL LIST
BRIDGE NO. MAH-80-0245 L/R
I.R. 80 OVER TURNER ROAD

MAH-80-0.97
PID 6080

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REINFORCING STEEL LIST

SUPERSTRUCTURE

MARK	LEFT BRIDGE	RIGHT BRIDGE	LENGTH	TYPE	A	B	C	D	R	INCR.	WEIGHT LEFT	WEIGHT RIGHT
			PARAPET									
S503		16	33'-8"	STR								562
S504		32	33'-8"	STR								1124
S505		236	7'-5"	2								1826
S512	16		33'-8"	STR							562	
S513	32		33'-8"	STR							1124	
S514	236		7'-5"	2							1826	
S602		236	4'-4"	3	2'-4"	1'-1"	1'-1"					1536
S603		8	34'-6"	STR								415
S604		236	3'-3"	4	1'-1"	2'-4"						1152
S611	236		4'-4"	3	2'-4"	1'-1"	1'-1"				1536	
S612	8		34'-6"	STR							415	
S613	236		3'-3"	4	1'-1"	2'-4"					1152	
S515	32	32	10'-0"	STR							334	334
S516	12	12	5'-7"	10							70	70
S517	20	20	5'-6"	STR							115	115
S615	120	120	4'-10"	4	1'-1"	3'-11"					1051	1051
										TOTAL	156689	155746

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
A501	76				7'-9"	1	3'-2"	1'-8"	3'-2"				614	
A502	5				12'-3"	1	5'-5"	1'-8"	5'-5"				64	
A504	2 S.O. 7				7'-9" TO 4'-9"	1	3'-2" TO 1'-8"	1'-8"	3'-2" TO 1'-8"			3"	91	
A505	1 S.O. 8				12'-3" TO 5'-11"	1	5'-5" TO 2'-3"	1'-8"	5'-5" TO 2'-3"			5 1/2	76	
A506	1 S.O. 7				12'-3" TO 6'-3"	1	5'-5" TO 2'-5"	1'-8"	5'-5" TO 2'-5"			6"	68	
A507	4 S.O. 3				7'-9" TO 4'-9"	1	3'-2" TO 1'-8"	1'-8"	3'-2" TO 1'-8"			9"	78	
A510		76			7'-9"	1	3'-2"	1'-8"	3'-2"				614	
A511		5			12'-3"	1	5'-5"	1'-8"	5'-5"				64	
A512		1 S.O. 8			12'-3" TO 5'-11"	1	5'-5" TO 2'-3"	1'-8"	5'-5" TO 2'-3"			5 1/2	76	
A513		1 S.O. 7			12'-3" TO 6'-3"	1	5'-5" TO 2'-5"	1'-8"	5'-5" TO 2'-5"			6"	68	
A514		2 S.O. 4			7'-9" TO 4'-9"	1	3'-2" TO 1'-8"	1'-8"	3'-2" TO 1'-8"			6"	52	
A515		4 S.O. 4			7'-9" TO 4'-9"	1	3'-2" TO 1'-8"	1'-8"	3'-2" TO 1'-8"			6"	104	
A520			80		7'-3"	1	2'-11"	1'-8"	2'-11"					605
A521			1		8'-3"	8	1'-9"	5'-9"	3'-0"					9
A522			1		8'-10"	8	2'-4"	5'-9"	3'-0"					9
A523			1		4'-3"	STR								4
A524			1		4'-10"	STR								4
A525			1		7'-0"	STR								7
A526			1		7'-7"	STR								8
A527			5		12'-11"	1	5'-9"	1'-8"	5'-9"					67
A528			1 S.O. 6		10'-11" TO 5'-11"	1	4'-9" TO 2'-3"	1'-8"	4'-9" TO 2'-3"			6"		53
A529			1 S.O. 7		10'-3" TO 8'-3"	1	5'-3" TO 2'-3"	1'-8"	5'-3" TO 2'-3"			6"		68
A530				82	7'-3"	1	2'-11"	1'-8"	2'-11"					620
A531				5	12'-11"	1	5'-9"	1'-8"	5'-9"					67
A532				1 S.O. 8	12'-11" TO 5'-11"	1	5'-9" TO 2'-3"	1'-8"	5'-9" TO 2'-3"			6"		79

* WITH MECHANICAL CONNECTOR (SEE NOTE 7 ON SHEET 16/18)

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
	A534				1 S.O. 7	11'-11" TO 5'-11"	1	5'-3" TO 2'-3"	1'-8"	5'-3" TO 2'-3"			6"		65
	A535				4 S.O. 4	7'-9" TO 4'-9"	1	3'-2" TO 1'-8"	1'-8"	3'-2" TO 1'-8"			6"		104
	A536				1	9'-5"	8	1'-9"	6'-10"	3'-7"					10
	A537				1	10'-0"	8	2'-4"	6'-10"	3'-7"					10
	A538				1	4'-11"	STR								4
	A539				1	5'-6"	STR								6
	A540				1	8'-0"	STR								8
	A541				1	8'-7"	STR								9
	A542				1	8'-2"	8	1'-9"	5'-9"	3'-0"					9
	A543				1	7'-7"	8	2'-4"	5'-9"	3'-0"					8
	A544				1	4'-4"	STR								5
	A545				1	3'-9"	STR								4
	A546				1	7'-0"	STR								7
	A547				1	6'-5"	STR								7
	A550	1				8'-2"	8	1'-9"	5'-8"	3'-0"				9	
	A551	1				8'-9"	8	2'-4"	5'-8"	3'-0"				9	
	A552	1				4'-5"	STR							5	
	A553	1				5'-0"	STR							5	
	A554	1				7'-0"	STR							7	
	A555	1				7'-7"	STR							8	
	A556	1				9'-3"	8	1'-9"	6'-10"	3'-3"				10	
	A557	1				8'-8"	8	1'-2"	6'-10"	3'-3"				9	
	A558	1				4'-11"	STR							4	
	A559	1				4'-4"	STR							5	
	A560	1				8'-0"	STR							8	
	A561	1				7'-5"	STR							8	
	A565		1			9'-3"	8	1'-9"	6'-10"	3'-3"				10	
	A566		1			9'-10"	8	2'-4"	6'-10'	3'-3"				9	
	A567		1			4'-11"	STR							4	
	A568		1			5'-6"	STR							6	
	A569		1			8'-0"	STR							8	
	A570		1			8'-7"	STR							9	
	A571		1			8'-2"	8	1'-9"	5'-9"	3'-0"				9	
	A572		1			7'-7"	8	1'-2"	5'-9"	3'-0"				8	
	A573		1			4'-4"	STR							5	
	A574		1			3'-9"	STR							4	
	A575		1			7'-0"	STR							7	
	A576		1			6'-5"	STR							7	
	A580			1		9'-5"	8	1'-9"	6'-10"	3'-6"					10
	A581			1		8'-10"	8	1'-2"	6'-10"	3'-6"					8
	A582			1		4'-11"	STR								4
	A583			1		4'-4"	STR								5
	A584			1		8'-1"	STR								8
	A585			1		7'-6"	STR								8
	A586			4 S.O. 3		7'-9" TO 4'-9"	1	3'-2" TO 1'-8"	1'-8"	3'-2" TO 1'-8"			9"		78
*	A601	2				11'-9"	STR							35	
*	A602	2				30'-6"	STR							92	
*	A605		2			29'-7"	STR							89	
*	A606		2			12'-8"	STR							38	
*	A610			2		30'-8"	STR								92
*	A611			2		11'-7"	STR								35
*	A616				2	31'-4"	STR								94
*	A617				2	10'-8"	STR								32
	A618			12	12	7'-2"	4	6'-4"	1'-0"						258
	A620	44	44	44	44	5'-6"	14	1'-1"	1'-8"	1'-9"	1'-6"			727	727
*	A640	6				34'-0"	STR							306	
*	A641	6				34'-0"	STR							306	
*	A642		6			34'-0"	STR							306	
*	A643		6			34'-0"	STR							306	
	A644			12		36'-3"	STR								653
	A645				12	36'-3"	STR								653
	A701	18				5'-8"	STR							208	
	A702	18				5'-2"	STR							190	

NOTES:

1. SEE PAGE 16/18 FOR REINFORCEMENT NOTES & BENDING DIAGRAMS.

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

DESIGNED SK | DRAWN SK | REVIEWED JEK | DATE 8/04
CHECKED MTO | REVISED | STRUCTURE FILE NUMBER 5002311 (L) 5002346 (R)

REINFORCING STEEL LIST
BRIDGE NO. MAH-80-0245 L/R
I.R. 80 OVER TURNER ROAD

MAH-80-0.97
PID 6080

17 / 18

1003 / 1100

8/16/05 8:43:10 AM
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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
A705		18			5'-8"	STR							208	
A706		18			5'-2"	STR							190	
A710			18		5'-8"	STR								208
A711			18		5'-2"	STR								190
A716				18	5'-8"	STR								208
A717				18	5'-2"	STR								190
D801	42	42	42	42	6'-4"	9							1420	1420
A901	4				11'-9"	STR							160	
A902	4	4			42'-11"	STR							1167	
A903	12				9'-10"	11	1'-7"	8'-3"	2'-0"				367	
A904	4				9'-10"	4	8'-6"	1'-7"					122	
A905	10				11'-0"	STR							374	
A906	4				10'-0"	STR							136	
A907	4				30'-6"	STR							415	
A909	20				7'-8"	STR							521	
A910	8				6'-8"	STR							181	
A911	24				6'-5"	4	5'-1"	1'-7"					524	
A912	8				6'-5"	11	1'-7"	4'-11"	1'-2"				175	
A915		4			12'-8"	STR							172	
A916		4			29'-7"	STR			9"				402	
A917		12			7'-3"	4	5'-11"	1'-7"					296	
A918		4			7'-3"	11	1'-7"	5'-9"	1'-4"				99	
A919	4	4			42'-3"	STR							1149	
A921		24			6'-10"	4	5'-6"	1'-7"					490	
A922		8			6'-10"	11	1'-7"	5'-4"	1'-3"				163	
A923		10			8'-1"	STR							275	
A924		4			7'-1"	STR							96	
A930			8		47'-1"	STR								1281
A931			4		30'-8"	STR								417
A932			4		11'-7"	STR								158
A934			20		6'-11"	STR								414
A935			8		6'-0"	STR								163
A936			24		6'-3"	4	4'-11"	1'-7"						510
A937			8		6'-3"	11	1'-7"	4'-10"	1'-1"					170
A940				8	47'-1"	STR								1281
A941				4	10'-8"	STR								145
A943				4	31'-4"	STR								426
A944		20		20	7'-5"	STR							504	504
A945		8		8	6'-5"	STR							175	175
A946				24	6'-8"	4	5'-4"	1'-7"						544
A947				8	6'-8"	11	1'-7"	5'-3"	1'-2"					181
A951	2				3'-9"	STR							26	
A952	4				1'-8"	STR							23	
A953		2			2'-1"	STR							14	
A954			4		1'-6"	STR								20
A955		4		4	2'-1"	STR							28	28
												TOTAL	14617	13154

* WITH MECHANICAL CONNECTOR (SEE NOTE 7 ON SHEET 16/18)

PIERS

	MARK	LEFT BRIDGE PIER	LEFT BRIDGE PIER 2	LEFT BRIDGE PIER 3	RIGHT BRIDGE PIER 1	RIGHT BRIDGE PIER 2	RIGHT BRIDGE PIER 3	LENGTH	TYPE	A	B	C	D	R	INCR.	WEIGHT LEFT	WEIGHT RIGHT
	SP401	1						14'-5"	5			0'-4½"				214	
	SP402		1					16'-1"	5			0'-4½"				237	
	SP403			1				17'-3"	5			0'-4½"				253	
	SP404				1			12'-10"	5			0'-4½"					192
	SP405					1		14'-10"	5			0'-4½"					220
	SP406						1	15'-7"	5			0'-4½"					230
	P501	2 S.O. 3	2 S.O. 3	2 S.O. 3	2 S.O. 3	2 S.O. 3	2 S.O. 3	14'-2" TO 12'-6"	6	5'-2" TO 4'-4"	2'-8"	5'-2" TO 4'-4"	10"		5"	250	250
	P502	2 S.O. 3	2 S.O. 3	2 S.O. 3	2 S.O. 3	2 S.O. 3	2 S.O. 3	7'-1" TO 5'-5"	1	2'-4" TO 1'-6"	2'-8"	2'-4" TO 1'-6"			5"	117	117
	P503	45	45	45	45	45	45	14'-2"	6	5'-2	2'-8"	5'-2"	10"			1995	1995
	P504	45	45	45	45	45	45	7'-1"	1	2'-4"	2'-8"	2'-4"				997	997
	P505	58	58	58	58	58	58	3'-8"	4	10"	2'-11"					665	665
*	P601	2	2	2				14'-8"	STR							132	
*	P602	2	2	2				25'-6"	STR							230	
	P603				2	2	2	14'-10"	STR								134
	P604				2	2	2	25'-2"	STR								227
	P605				12	12	12	35'-6"	STR								1920
*	P606	6	6	6				33'-3"	STR							899	
*	P607	6	6	6				33'-3"	STR							899	
	P801	24	24	24	24	24	24	8'-6"	STR							1634	1634
	P1101	12	12	12	12	12	12	14'-4"	4	2'-0"	12'-8"					2742	2742
	P1102	12						18'-1"	7	16'-6"						1153	
	P1103		12					19'-9"	7	18'-2"						1259	
	P1104			12				20'-11"	7	19'-4"						1334	
	P1105				12			16'-6"	7	14'-11"							1052
	P1106					12		18'-6"	7	16'-11"							1179
	P1107						12	19'-3"	7	17'-8"							1227
*	P1108	5	5	5				14'-9"	8	12'-4"	2'-3"	1'-0"				1176	
*	P1109	7	7	7				15'-8"	4	1'-6"	14'-6"					1748	
*	P1110	7	7	7				26'-5"	4	1'-6"	25'-3"					2947	
*	P1111				5	5	5	14'-10"	8	12'-4"	2'-5"	1'-0"					1182
*	P1112				7	7	7	15'-11"	4	1'-6"	14'-9"						1776
*	P1113				7	7	7	26'-3"	4	1'-6"	25'-1"						2929
*	P1401	5	5	5				25'-4"	8	23'-0"	2'-3"	1'-0"				2907	
*	P1402				5	5	5	25'-2"	8	23'-0"	2'-1"	1'-0"					2888
															TOTAL	23788	23556

NOTES:

1. SEE PAGE 16/18 FOR REINFORCEMENT NOTES & BENDING DIAGRAMS.

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

DESIGNED SK | DRAWN SK | REVIEWED JEK | DATE 8/04
CHECKED MTO | REVISED | STRUCTURE FILE NUMBER 5002311 (L) 5002346 (R)

REINFORCING STEEL LIST
BRIDGE NO. MAH-80-0245 L/R
I.R. 80 OVER TURNER ROAD

MAH-80-0.97
PID 6080

18 / 18

1004
1100

8/16/05
8:43:48 AM
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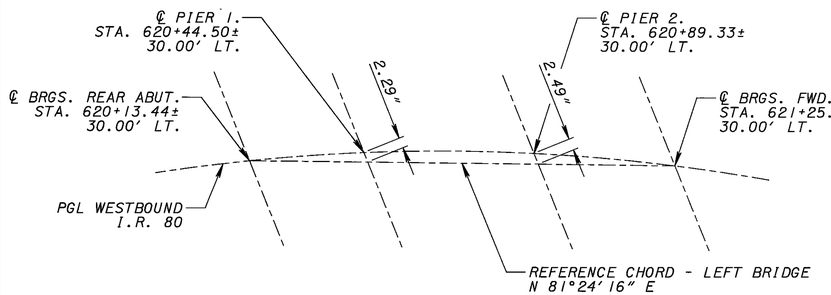
DOMINION EAST OHIO GAS (4" UNDERGROUND TO REMAIN)
SODDED FLUME AS PER STD. DWG. DM-4.1 (TYP.)
EX. ST. DECK SLAB TO BE REPLACED (TYP.)
℄ PIER 2. STA. 620+89.33± 30.00' LT.
22°32'34"± AVG. SKEW SEE NOTE 3
APPROXIMATE LIMITS OF TEMPORARY SHEETING (TYP.)
℄ PIER 1 STA. 620+44.50± 30.00' LT.
℄ BRGS. REAR ABUT. STA. 620+13.44± 30.00' LT.
STAGE CONST. JOINT
PROP. 15" STM
℄ BRGS. FWD. ABUT. STA. 621+25.31± 30.00' LT.
STA. 620+79.99 I.R. 80 = STA. 49+35.30 OHLTOWN ROAD
BRIDGE TERMINAL ASSEMBLY TYPE 2
PGL WESTBOUND I.R. 80
END APPR. SLAB STA. 620+12.90± 30.00' LT.
℄ CONST. IR-80
BEGIN APPR. SLAB STA. 621+25.99± 30.00' LT.
END APPR. SLAB STA. 620+37.58± 30.00' RT.
ORB-1
ORB-2
ORB-3
ORB-4
PGL EASTBOUND I.R. 80
BEGIN APPR. SLAB STA. 621+51.74± 30.00' RT.
BRIDGE TERMINAL ASSEMBLY TYPE 2
PROP. 15" STM
℄ BRGS. REAR ABUT. STA. 620+38.26± 30.00' RT.
℄ BRGS. FWD. ABUT. STA. 621+51.06± 30.00' RT.
EX. 15" CULV. TO BE REMAIN
TYPE A PRESSURE RELIEF JOINT (TYP.)
EX. 15" STM TO BE ABANDONED
BRIDGE TERMINAL ASSEMBLY TYPE 1 (TYP. UNLESS NOTED)
CATCH BASIN 3A (TYP.)
PROP. 15" STM
℄ PIER 1 STA. 620+69.39± 30.00' RT.
SBC (AMERITECH) EXISTING OVERHEAD (TO BE RELOCATED BY OTHERS)
ARMSTRONG CABLE OVERHEAD UNDER BRIDGE (TO BE RELOCATED BY OTHERS)
OHIO EDISON (OVERHEAD, TO BE RELOCATED BY OTHERS)
℄ PIER 2 STA. 621+14.66± 30.00' RT.
CITY OF YOUNGSTOWN DIV. OF WATER (8" UNDERGROUND TO REMAIN)
EXIST. PIERS AND ABUTMENTS TO BE REHABILITATED AND WIDENED (TYP.)
APPROXIMATE LIMITS OF NEW CRUSHED AGGREGATE SLOPE PROTECTION (TYP.)
OHLTOWN ROAD CONSTRUCTED N 31°11'13" W
22°45'30"± AVG. SKEW (SEE NOTE 3)

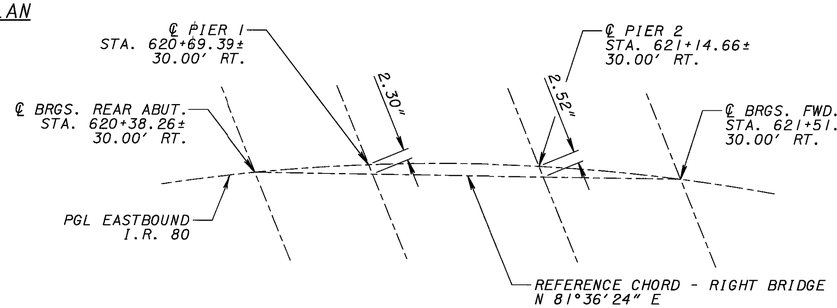
℄ CONST. IR-80
HORIZONTAL CURVE DATA

P.I. STA. 612+94.43
Δ = 27°27'29" RT.
Dc = 0°48'00"
R = 7161.97'
T = 1749.75'
L = 3432.27'
E = 210.64'

PLAN



REFERENCE CHORD DETAIL - LEFT BRIDGE
(NOT DRAWN TO SCALE)



REFERENCE CHORD DETAIL - RIGHT BRIDGE
(NOT DRAWN TO SCALE)

NOTES

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE; ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
2. EXISTING STRUCTURE ELEVATIONS ARE ±0.43 FEET LOWER THAN THOSE SHOWN ON THE ORIGINAL CONSTRUCTION PLANS DATED 1965.
3. FOR ABUTMENT AND PIER SKEWS, SEE DETAIL SHEETS.

LEGEND

- ■ - POINT OF MINIMUM VERTICAL CLEARANCE
- ⊕ - SOIL BORING LOCATION
- PGL - PROFILE GRADE LINE

TRAFFIC DATA (I.R. 80)

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

BENCHMARK DATA

BENCHMARK 29
CONCRETE MONUMENT WITH PIN
STA. 621+98, 0' OFFSET
EL. 1036.59

BENCHMARK 30
ORANGE-CAPPED REFERENCE PIN SET
STA. 621+99, 121' LT.
EL. 1024.43

EXISTING STRUCTURE

TYPE: CONTINUOUS REINFORCED CONCRETE SLAB WITH REINFORCED CONCRETE SUBSTRUCTURES

SPANS: LEFT - 31'-0", 45'-0", 36'-1"±
RIGHT - 31'-1", 45'-1", 36'-2"±
c/c BRGS. ALONG REFERENCE CHORD

ROADWAY: 38'-0"± t/t SAFETY CURBS

ORIGINAL DESIGN LOADING: CF-2000 (1957)

ALIGNMENT: 0°48'00" RIGHT CURVE

SKEW: LEFT - 22°32'34"± AVG.
RIGHT - 22°45'30"± AVG.
RIGHT FORWARD TO REFERENCE CHORD

WEARING SURFACE: 3¾"± ASPHALT ON 1¼"± LMC OVERLAY

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

YEAR CONSTRUCTED: 1969

STRUCTURE FILE NO.: 5002370 (L) & 5002400 (R)

PROPOSED STRUCTURE

PROPOSED WORK: NEW REINFORCED CONCRETE SLAB ON WIDENED SUBSTRUCTURES

TYPE: CONTINUOUS REINFORCED CONCRETE SLAB WITH REINFORCED CONCRETE SUBSTRUCTURES

SPANS: LEFT - 31'-3", 45'-0", 36'-1"±
RIGHT - 31'-1", 45'-1", 36'-2"±
c/c BRGS. ALONG REFERENCE CHORD

ROADWAY: LEFT - 74'-0" t/t PARAPETS
RIGHT - 62'-0" t/t PARAPETS

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

ALIGNMENT: 0°48'00" RIGHT CURVE

SKEW: LEFT - 22°32'34"± AVG.
RIGHT - 22°45'30"± AVG.
RIGHT FORWARD TO REFERENCE CHORD (NOTE 3)

WEARING SURFACE: 1" MONOLITHIC CONCRETE

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

SUPERELEVATION: 0.030

LATITUDE: N 41°07'24" LONGITUDE: W 80°46'48"

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

DESIGNED	DRAWN	REVIEWED	DATE
MTO	MTO	PLC	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
LMS		5002370 (L) 5002400 (R)	

MAHONING COUNTY
620+12.90± TO 621+25.99± (L)
620+37.58± TO 621+51.74± (R)

SITE PLAN
BRIDGE NO. MAH-80-0313 L/R
I.R. 80 OVER OHLTOWN ROAD

MAH-80-0.97
PID 6080

1 / 25

1005
1100

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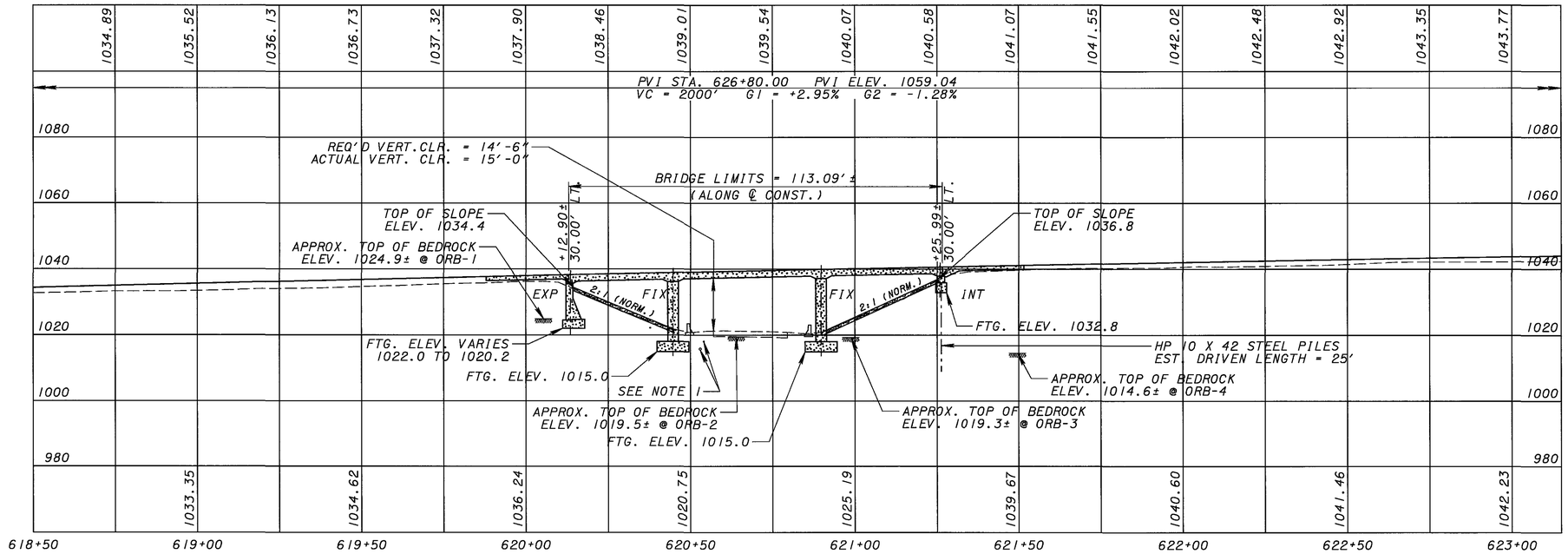
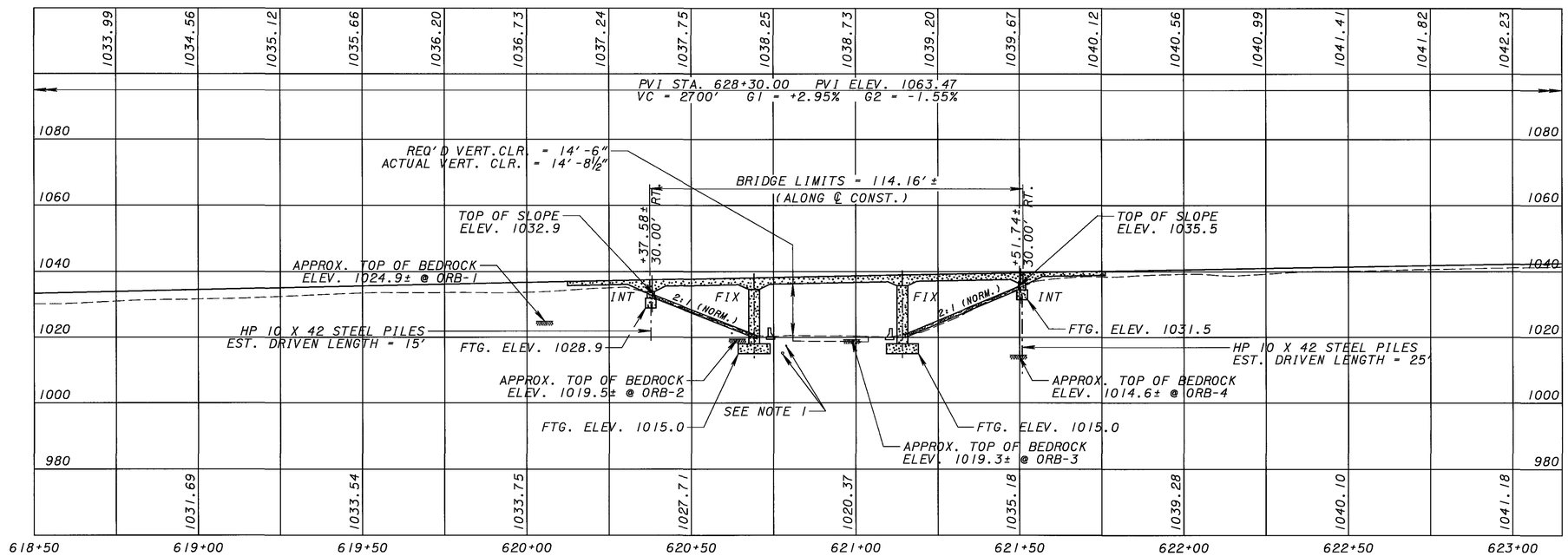


PROFILE ALONG PROFILE GRADE LINE WESTBOUND I.R. 80

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.



PROFILE ALONG PROFILE GRADE LINE EASTBOUND I.R. 80

NOTES:

1. EXISTING CITY OF YOUNGSTOWN DIV. OF WATER 8" WATER LINE AND DOMINION EAST OHIO GAS COMPANY, 4" GAS LINE TO REMAIN IN PLACE.

DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 330
WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
MTO	MTO	PLC	8/04

CHECKED	REVISED	STRUCTURE FILE NUMBER
LWS		5002370 (L) 5002400 (R)

MAHONING COUNTY
620+12.90± TO 621+25.99± (L)
620+37.58± TO 621+51.74± (R)

PROFILES - LEFT AND RIGHT BRIDGES
BRIDGE NO. MAH-80-0313 L/R
I.R. 80 OVER OHLTOWN ROAD

MAH-80-0.97
PID 6080

1006
1100

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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

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, PARAPETS, 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.

BRIDGE GENERAL NOTES

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.

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:
7 - HP 10X42 STEEL PILES, 15 FEET LONG, ORDER LENGTH

FORWARD ABUTMENT PILES:
16 - HP 10X42 STEEL PILES, 25 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 65/35 - CLASS 2 - HEAT TREATED OR AASHTO M103 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.

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.

ABBREVIATIONS:

ABUT.	-	ABUTMENT
AHD.	-	AHEAD
BOT.	-	BOTTOM
BRG.	-	BEARING
BTW.	-	BETWEEN
CONST.	-	CONSTRUCTION
C.P.P.	-	CORRUGATED POLYETHYLENE PIPE
CVN	-	CHARPY-V-NOTCH
EL./ELEV.	-	ELEVATION
EMBED.	-	EMBEDMENT
EXIST.	-	EXISTING
FF	-	FAR FACE
FTG.	-	FOOTING
FWD.	-	FORWARD
JT.	-	JOINT
LT.	-	LEFT
MAX.	-	MAXIMUM
MIN.	-	MINIMUM
NF	-	NEAR FACE
P.E.J.F.	-	PREFORMED EXPANSION JOINT FILLER
RT.	-	RIGHT
SER.	-	SERIES
SS	-	SUPERSTRUCTURE
TYP.	-	TYPICAL
UG	-	UNDERGROUND
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	MTO	8/04

CHECKED	REVISED	STRUCTURE FILE NUMBER
SK		5002370 (L) 5002400 (R)

BRIDGE GENERAL NOTES
BRIDGE NO. MAH-80-0313 L/R
I.R. 80 OVER OHLTOWN ROAD

MAH-80-0.97
PID 6080

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BRIDGE GENERAL NOTES

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.

FOUNDATION BEARING PRESSURE:

ABUTMENT FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM BEARING PRESSURE OF 2.8 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 4.3 TONS PER SQUARE FOOT. THE ALLOWABLE BEARING PRESSURE IS 6.0 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.

ASBESTOS NOTIFICATION AND ABATEMENT:

AN ASBESTOS SURVEY OF THE MAH-80-0313 L/R BRIDGES (STRUCTURE FILE NUMBERS 5002370/5002400) OVER OHLTOWN 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 57 SQUARE FEET OF 1/16-INCH SHEET ASBESTOS PACKING IS PRESENT ON THE REAR ABUTMENT OF THE LEFT BRIDGE. THE ORIGINAL CONSTRUCTION PLANS FOR THE EXISTING STRUCTURE 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 STRUCTURE 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.

OEPA NOTIFICATION FORM - LEFT BRIDGE:

A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORM FOR THE LEFT BRIDGE WITH ASBESTOS CONTAINING MATERIAL, 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 THIS 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 - LEFT BRIDGE:

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.

OEPA NOTIFICATION FORM - RIGHT BRIDGE:

A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORM FOR THE RIGHT BRIDGE WITHOUT ASBESTOS CONTAINING MATERIAL, 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: 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 OF PAYMENT - RIGHT BRIDGE:

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 ESSEN LANE, BATON ROUGE, LA 70809 SUITE 350
CENTERVILLE, OHIO 45341

DESIGNED	DRAWN	REVIEWED	DATE
DEK	EFD	MTO	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SK		5002370 (L) 5002400 (R)	

BRIDGE GENERAL NOTES
BRIDGE NO. MAH-80-0313 L/R
I.R. 80 OVER OHLTOWN ROAD

MAH-80-0.97
PID 6080

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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	3, 3A OF 25
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	192	82	CU YD	UNCLASSIFIED EXCAVATION, AS PER PLAN	128	64	55	27	162	30			74	8			3 OF 25
503	31100	67	27	CU YD	ROCK EXCAVATION		67		27	14	53				27			
505	11100	LUMP	LUMP		PILE DRIVING EQUIPMENT MOBILIZATION		LUMP		LUMP				LUMP				LUMP	
507	00100	225	280	FT	STEEL PILES HP10X42, FURNISHED		225		280	225				280				
507	00150	225	280	FT	STEEL PILES HP10X42, DRIVEN		225		280	225				280				
507	93301	9	14	EACH	STEEL POINTS, OR SHOES, AS PER PLAN		9		14	9				14				3 OF 25
509	10001	185522	150815	POUND	EPOXY COATED REINFORCING STEEL, AS PER PLAN	123681	61841	100543	50272	12775	23649	149098		7794	16447	126574		3 OF 25
509	20001	500	500	POUND	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN	333	167	333	167				500				500	3 OF 25
510	10000	140	163	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	140		163		24	116			47	116			
512	10100	694	639	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	463	231	426	213	54	353	287		48	304	287		
512	10300	26		SQ YD	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN	26						26						
512	33000	32	31	SQ YD	TYPE 2 WATERPROOFING	21	11	21	10	32				31				
516	13900	12		SQ FT	2" PREFORMED EXPANSION JOINT FILLER	8	4			12								
516	25001	268		SQ FT	NYLON REINFORCED NEOPRENE SHEETING, AS PER PLAN	179	89			268								3A OF 25
516	42600	82		FT	ELASTOMERIC BEARING PAD, MISC.: 12"x1½" UNREINFORCED ELASTOMERIC BEARING STRIP	55	27			82								
518	21200	89	79	CU YD	POROUS BACKFILL WITH FILTER FABRIC	59	30	53	26	89				79				
518	40001	193	166	FT	6" PERFORATED CORRUGATED PLASTIC PIPE, AS PER PLAN	129	64	111	55	193				166				6,7 OF 25
518	40011	60	60	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN	40	20	40	20	60				60				10-14 OF 25
526	25001	417	350	SQ YD	REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN (TYPE A)	278	139	233	117				417				350	3 OF 25
601	20000	374	300	SQ YD	CRUSHED AGGREGATE SLOPE PROTECTION		374		300	374				300				
SPECIAL	69071000	LUMP			ASBESTOS ABATEMENT	LUMP							LUMP					3A OF 25
843	50000	4	12	SQ FT	PATCHING CONCRETE STRUCTURES WITH TROWELABLE MORTAR	4		12		4				2	10			
892	10200	619	523	CU YD	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (DECK) WITH WARRANTY	413	206	349	174			619				523		
898	11000	35	35	CU YD	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (PARAPET)	23	12	23	12			35				35		
898	20100	56	38	CU YD	QC/QA CONCRETE, CLASS QSCI, SUBSTRUCTURE (PIER ABOVE FOOTING)	37	19	25	13		56				38			
898	20150	62	51	CU YD	QC/QA CONCRETE, CLASS QSCI, SUBSTRUCTURE (ABUTMENT)	41	21	34	17	62				51				
898	20300	51	18	CU YD	QC/QA CONCRETE, CLASS QSCI, SUBSTRUCTURE (FOOTING)		51		18	15	36				18			

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

DESIGNED SK | DRAWN SK | REVIEWED MTO | DATE 8/04
CHECKED DEK | REVISED | STRUCTURE FILE NUMBER 5002370 (L) 5002400 (R)

ESTIMATED BRIDGE QUANTITIES
BRIDGE NO. MAH-80-0313 L/R
I.R. 80 OVER OHLTOWN ROAD

MAH-80-0.97
PID 6080

1008
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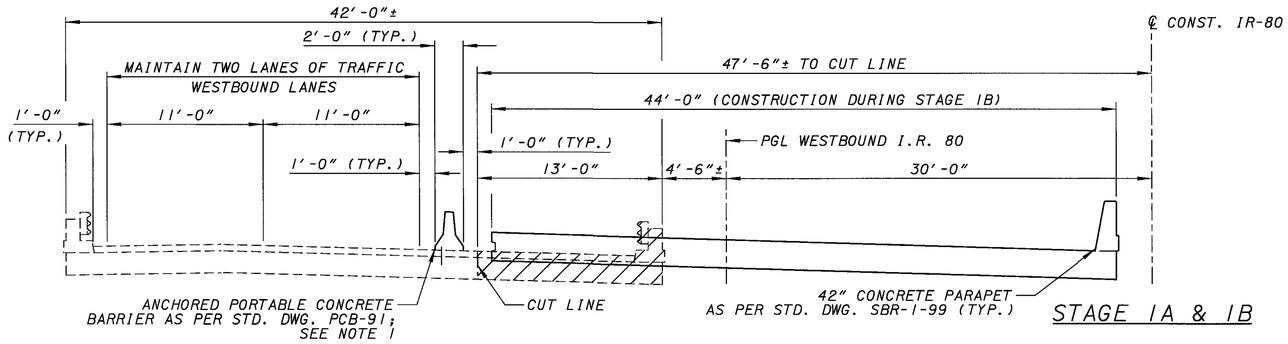
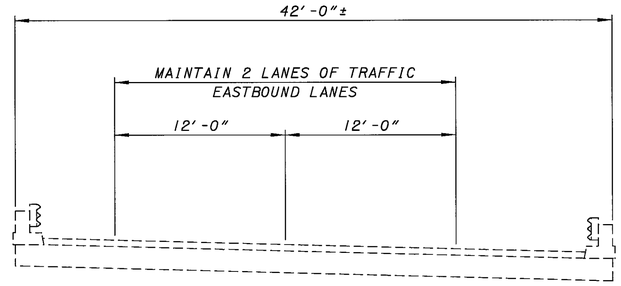
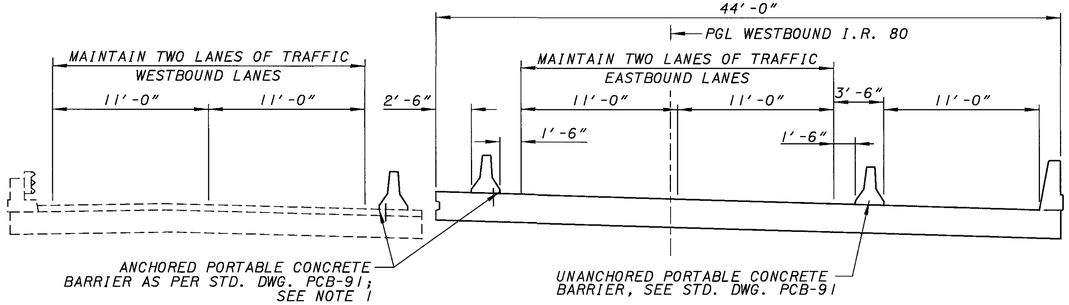
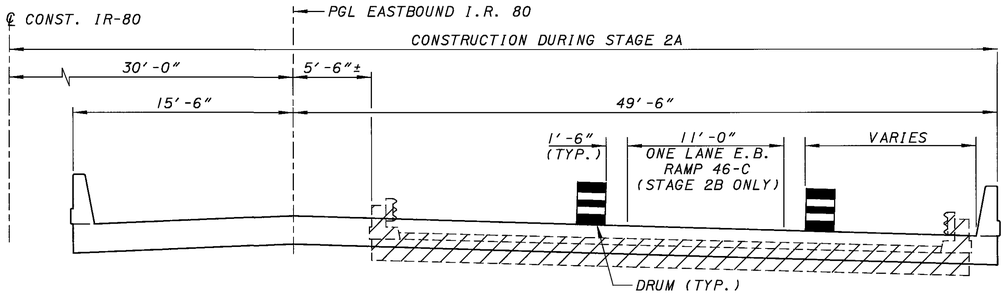


STAGE 1A & 1B







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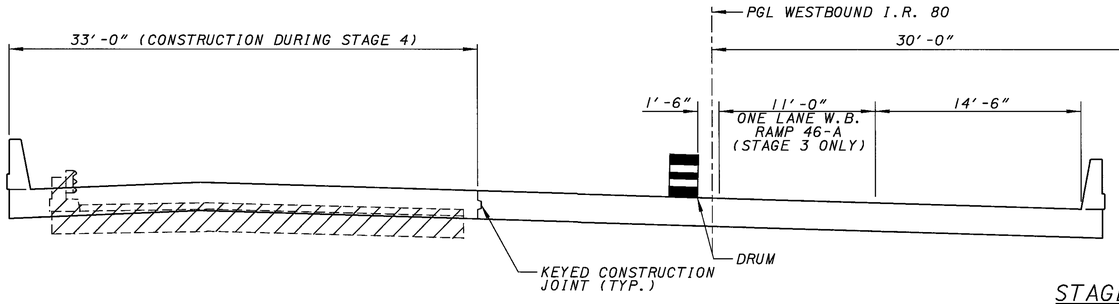
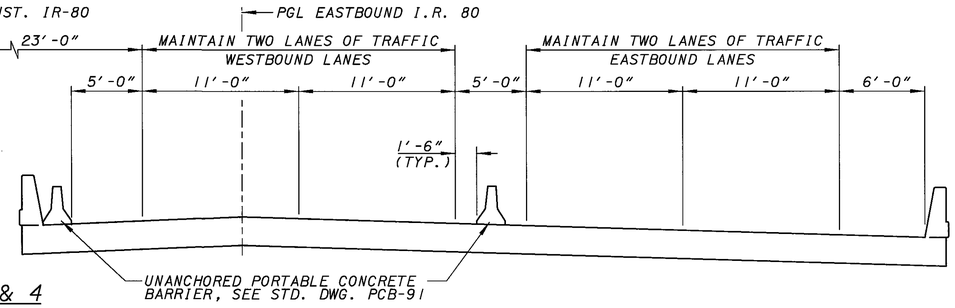
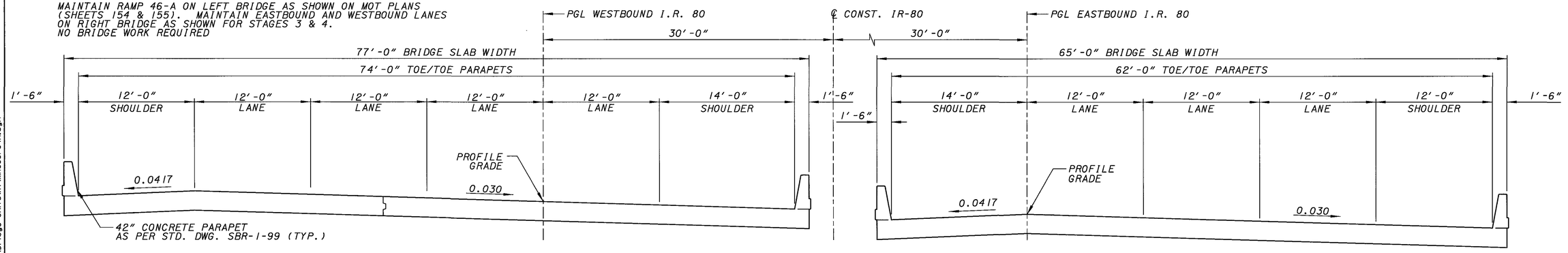




STAGE 3 & 4

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 REMOVAL OF ANCHOR HARDWARE, SHALL BE INCLUDED WITH 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 EASTERN AVENUE, SUITE 330
BOX 1963
WORTHINGTON, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
SSC	SSC/MTO	DEK	9/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MTO		5002370 (L) 5002400 (R)	

STAGE CONSTRUCTION DETAILS
BRIDGE NO. MAH-80-03.13 L/R
I.R. 80 OVER OHLTOWN ROAD

MAH-80-0.97
PID 6080

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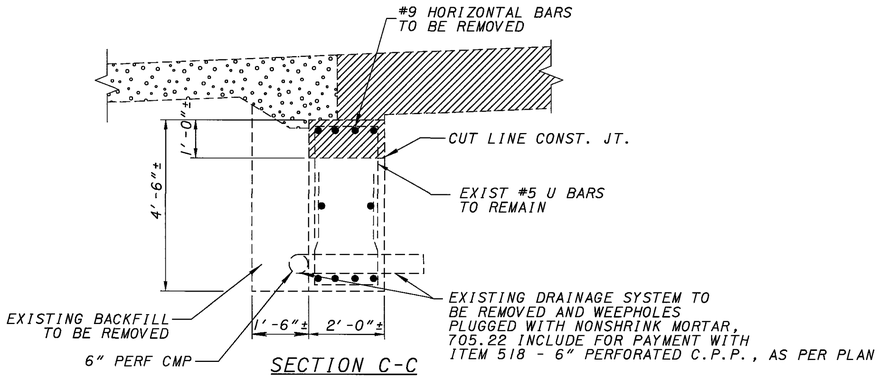
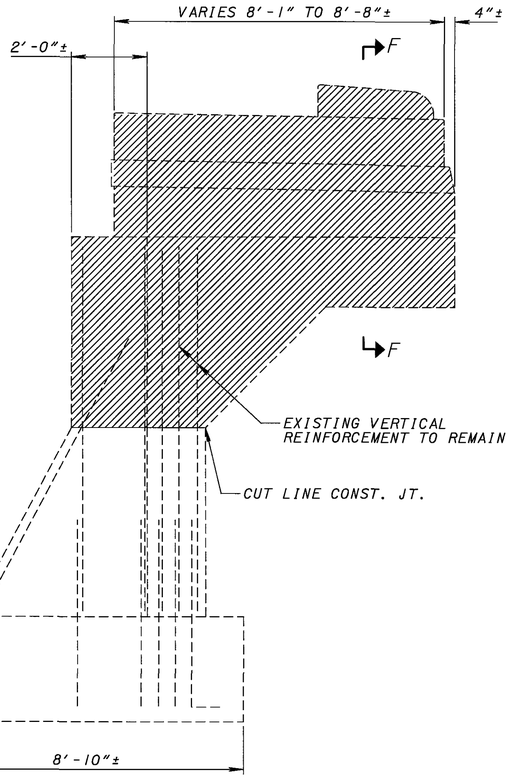
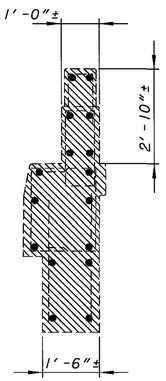


SECTION C-C



ELEVATION D-D



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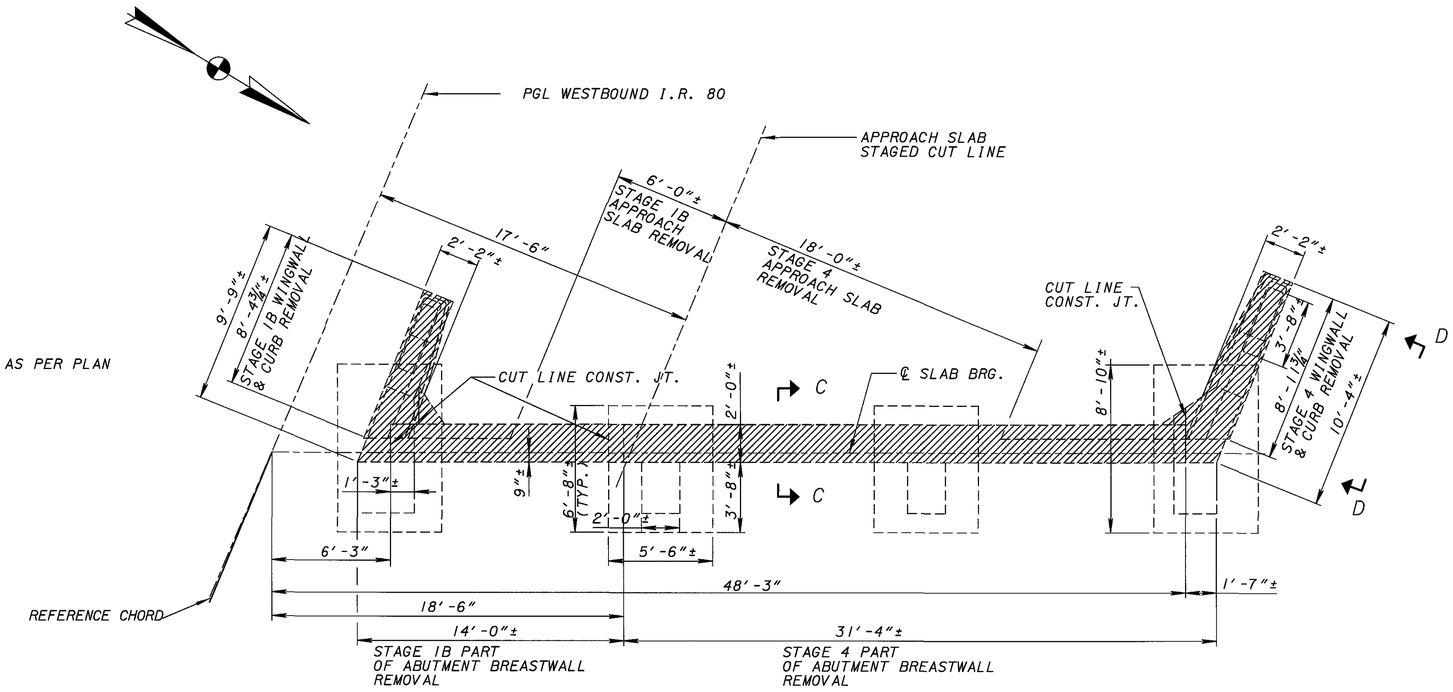
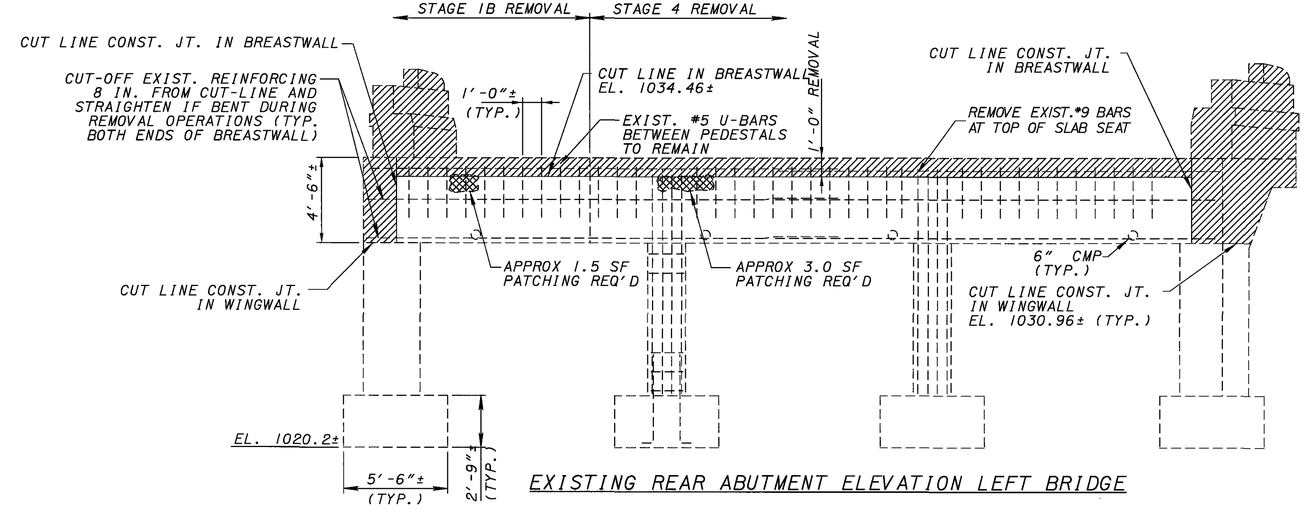


EXISTING REAR ABUTMENT PLAN LEFT BRIDGE

SCALE: 1/4" = 1'-0"



EXISTING REAR ABUTMENT ELEVATION LEFT BRIDGE

ABUTMENT CONC. PATCHING - SUMMARY TABLE (S.F.)			
	MEASURED QUANTITY	CONTINGENCY FACTOR	TOTAL QUANTITY
LEFT REAR ABUTMENT	4.5	1.25	5.6

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

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

DESIGNED	DRAWN	REVIEWED	DATE
BSS	SB	MTO	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JRH		5002370 (L) 5002400 (R)	

REAR ABUTMENT DEMOLITION DETAILS - LEFT BRIDGE
BRIDGE NO. MAH-80-0313 L/R
I.R. 80 OVER OHLTOWN ROAD

MAH-80-0.97
PID 6080

1010
1100

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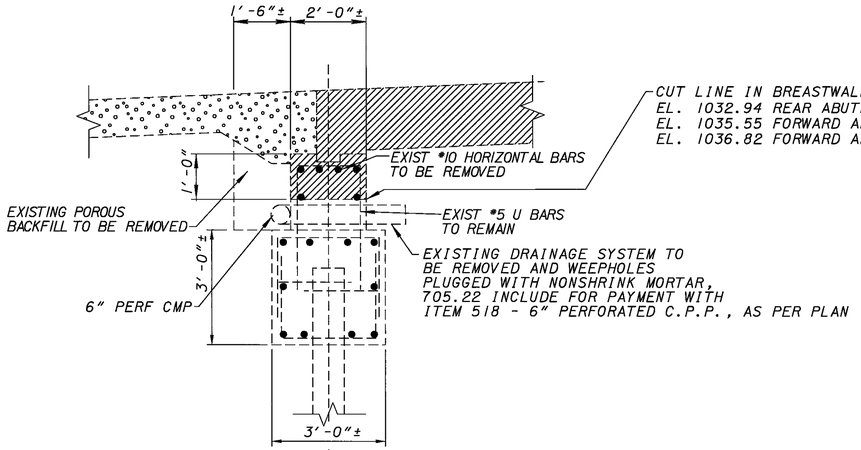
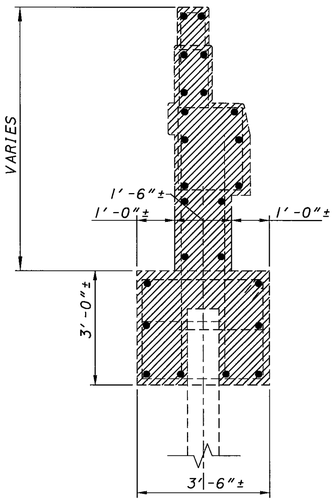


SECTION A-A



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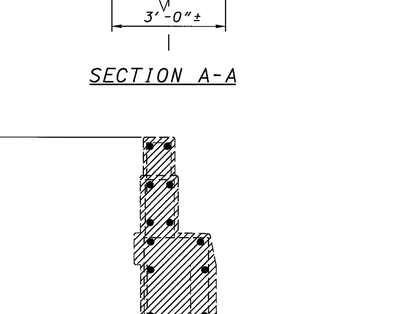
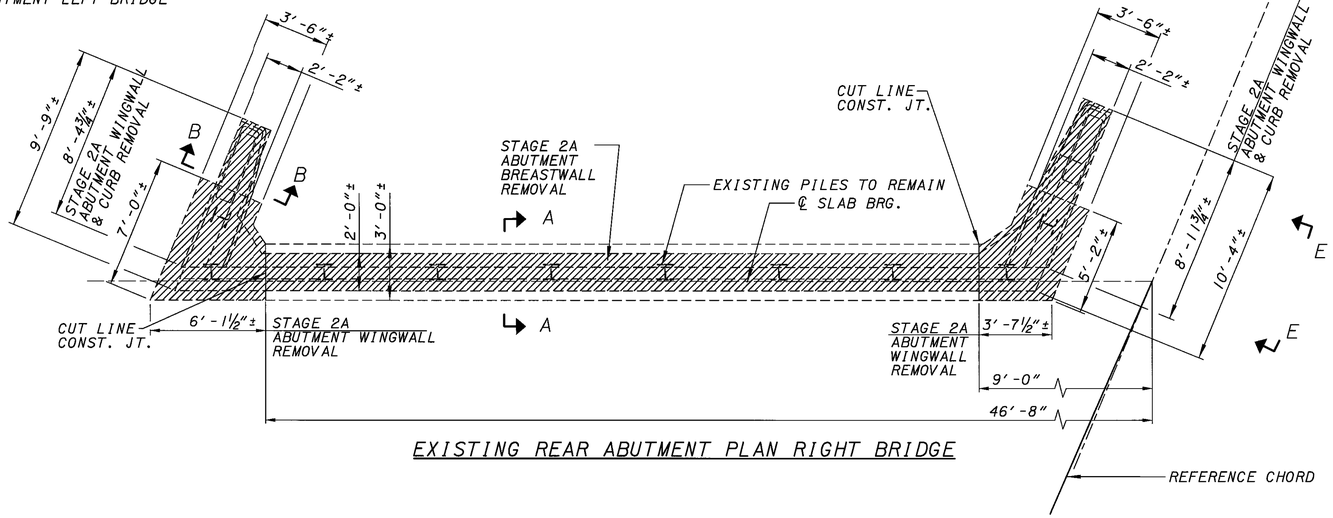
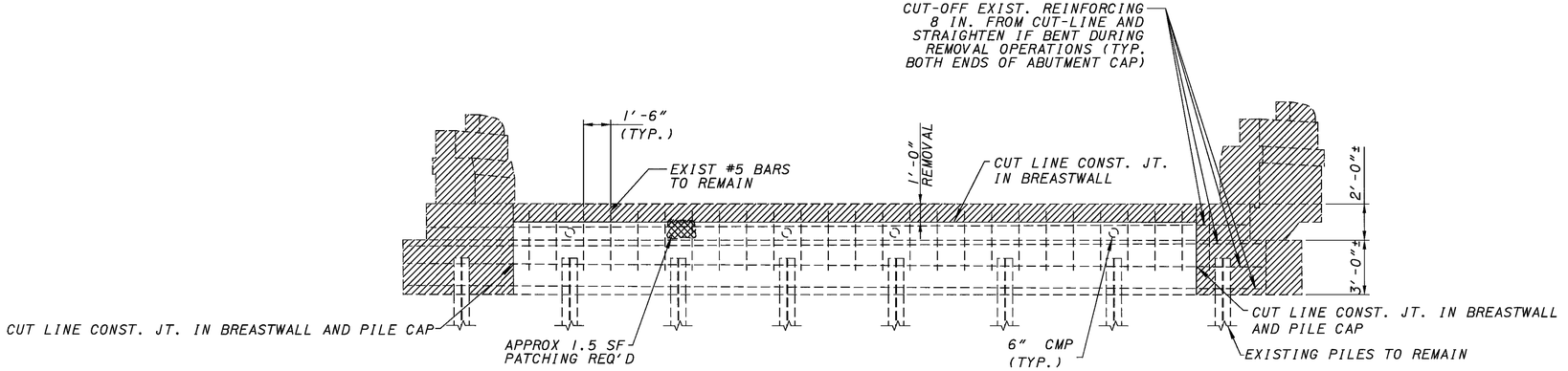


ELEVATION E-E

ALL WINGS SIMILAR ON PILE ABUTMENTS



EXISTING REAR ABUTMENT PLAN RIGHT BRIDGE



EXISTING REAR ABUTMENT ELEVATION RIGHT BRIDGE

ABUTMENT CONC. PATCHING - SUMMARY TABLE (S.F.)			
	MEASURED QUANTITY	CONTINGENCY FACTOR	TOTAL QUANTITY
RIGHT REAR ABUTMENT	1.5	1.25	1.9

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

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

DESIGNED	DRAWN	REVIEWED	DATE
BSS	SJB	MTO	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JRH		5002370 (L) 5002400 (R)	

REAR ABUTMENT DEMOLITION DETAILS - RIGHT BRIDGE

BRIDGE NO. MAH-80-0313 L/R
I.R. 80 OVER OHLTOWN ROAD

MAH-80-0.97
PID 6080

1011 / 1100

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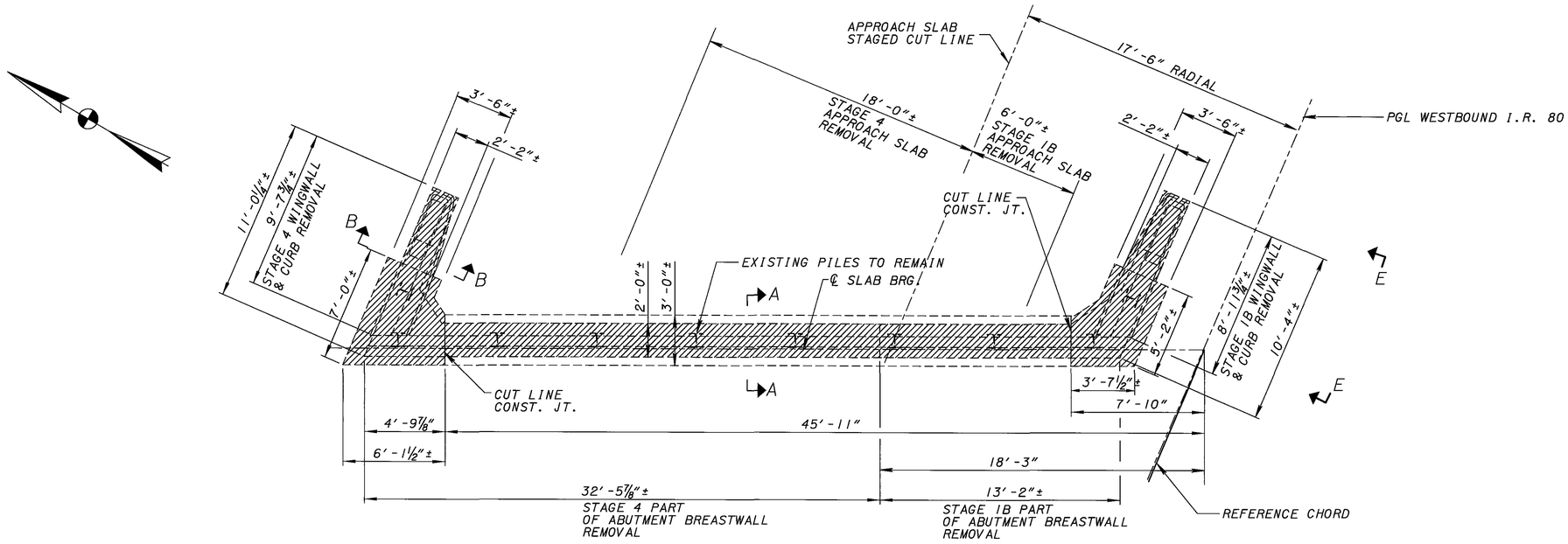
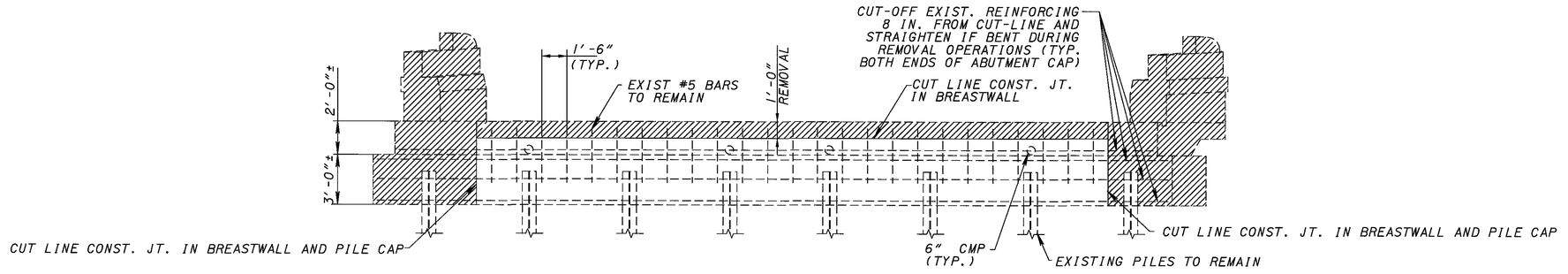


EXISTING FORWARD ABUTMENT PLAN LEFT BRIDGE

(SEE SHEET 7/25 FOR SECTIONS A-A, B-B, AND E-E)



EXISTING FORWARD ABUTMENT ELEVATION LEFT BRIDGE

LEGEND:

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

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

DESIGNED	DRAWN	REVIEWED	DATE
BSS	SB	MTO	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JRH		5002370 (L) 5002400 (R)	

FORWARD ABUTMENT DEMOLITION DETAILS - LEFT BRIDGE

BRIDGE NO. MAH-80-0313 L/R
I.R. 80 OVER OHLTOWN ROAD

MAH-80-0.97
PID 6080

8 / 25

1012
1100

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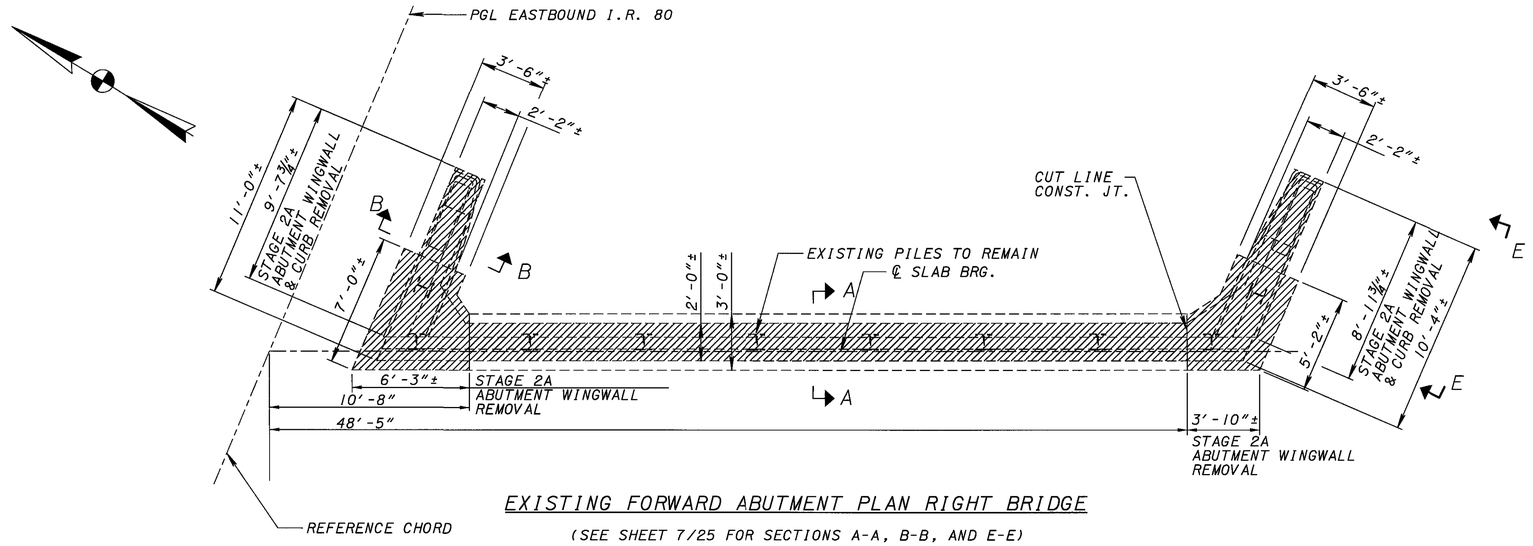
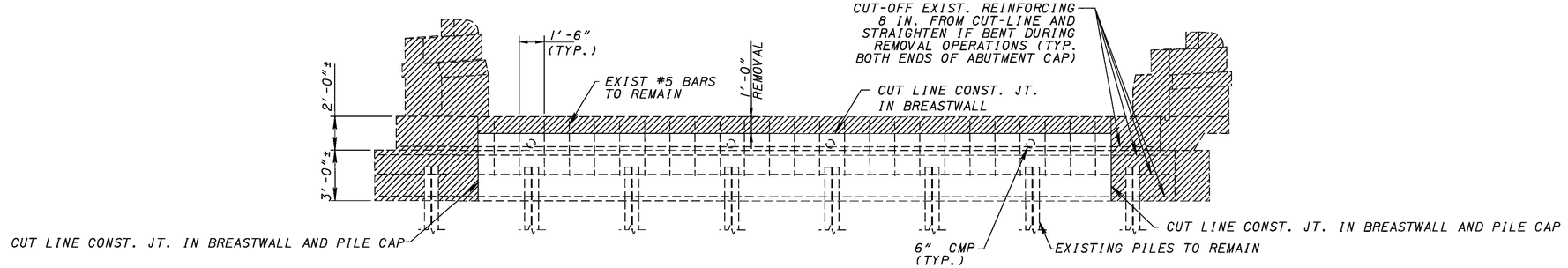


EXISTING FORWARD ABUTMENT PLAN RIGHT BRIDGE

(SEE SHEET 7/25 FOR SECTIONS A-A, B-B, AND E-E)



EXISTING FORWARD ABUTMENT ELEVATION RIGHT BRIDGE

LEGEND:

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

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

DESIGNED	DRAWN	REVIEWED	DATE
BSS	SB	MTO	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JRH		5002370 (L) 5002400 (R)	

FORWARD ABUTMENT DEMOLITION DETAILS - RIGHT BRIDGE
BRIDGE NO. MAH-80-0313 L/R
I.R. 80 OVER OHLTOWN ROAD

MAH-80-0.97
PID 6080

9 / 25

1013
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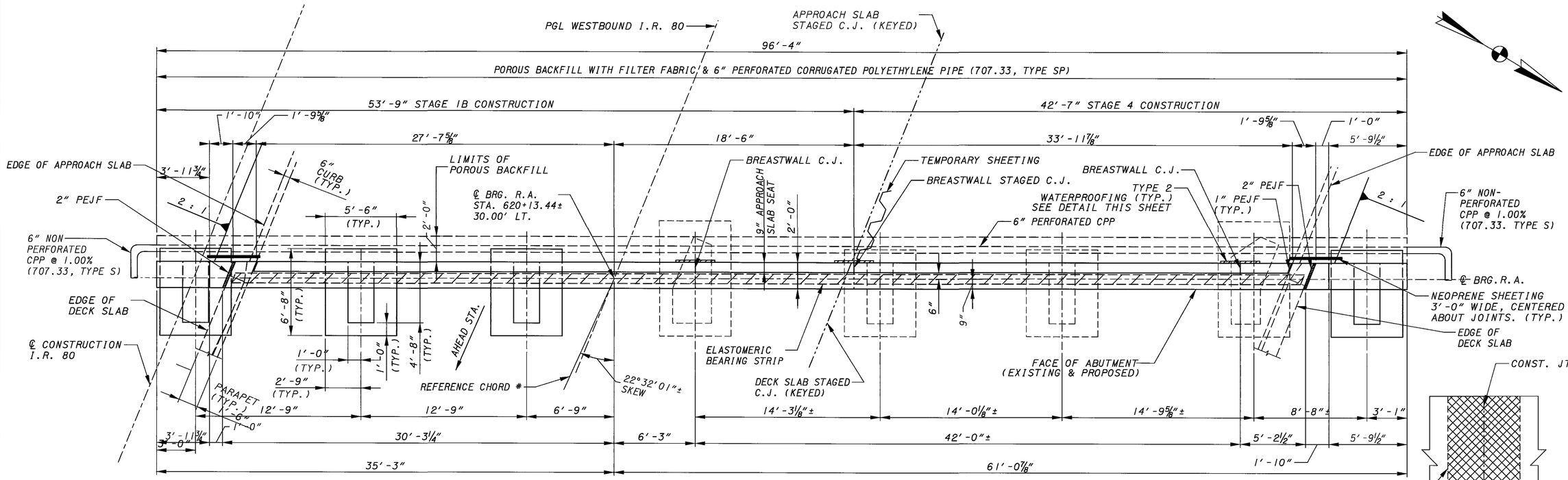
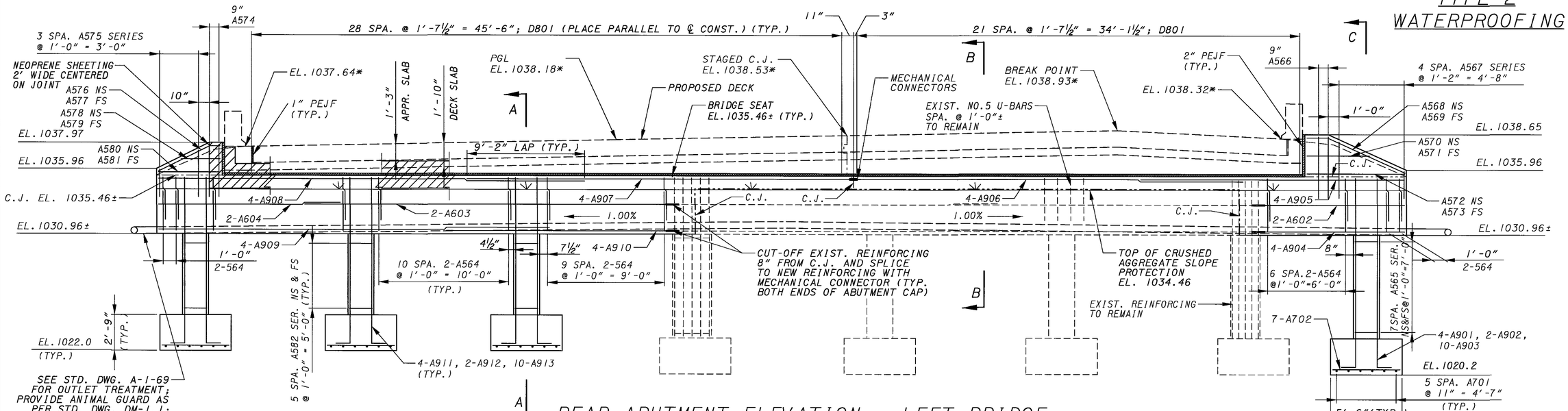


REAR ABUTMENT PLAN - LEFT BRIDGE

TYPE 2 WATERPROOFING



REAR ABUTMENT ELEVATION - LEFT BRIDGE

(SEE SHEET 11/25 FOR SECTION A-A, B-B, AND C-C)

* - ELEVATIONS SHOWN ARE AT BRIDGE LIMITS

\# - FOR REFERENCE CHORD DIAGRAM SEE SHEET 1/25.

ABBREVIATION:

C.J.	-	CONSTRUCTION JOINT	R.A.	-	REAR ABUTMENT
PGL	-	PROFILE GRADE LINE	BRG	-	BEARING
PEJF	-	PREFORMED EXPANSION JOINT FILLER	TYP	-	TYPICAL
CPP	-	CORRUGATED POLYETHYLENE PIPE	DWL	-	DOWEL
NS	-	NEAR SIDE			
FS	-	FAR SIDE			

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

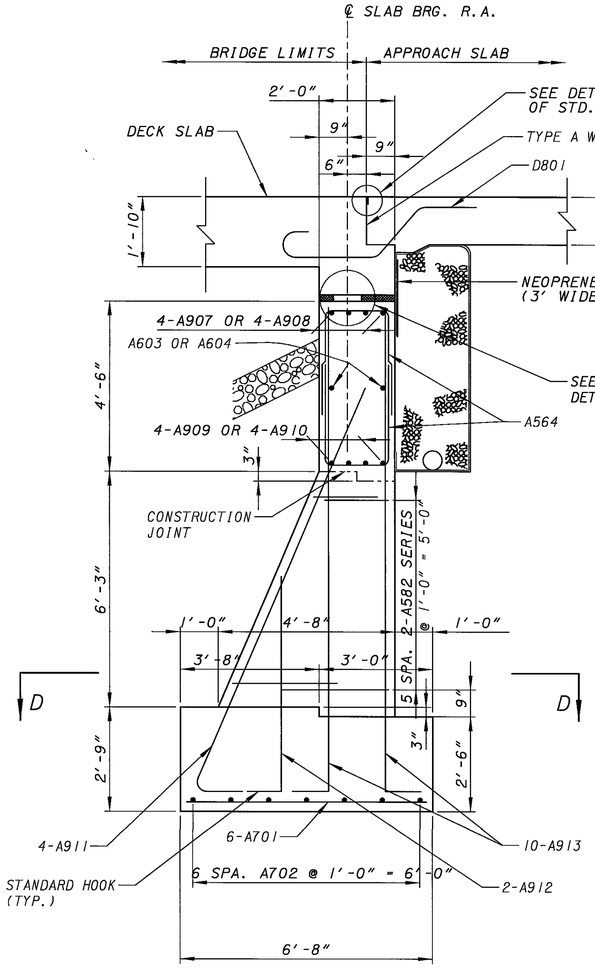
DESIGNED	DRAWN	REVIEWED	DATE
BSS	BSS/MTO	MTO	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JAH		5002370 (L) 5002400 (R)	

REAR ABUTMENT DETAILS - LEFT BRIDGE
BRIDGE NO. MAH-80-0313 L/R
I.R. 80 OVER OHLTOWN ROAD

MAH-80-0.97
PID 6080

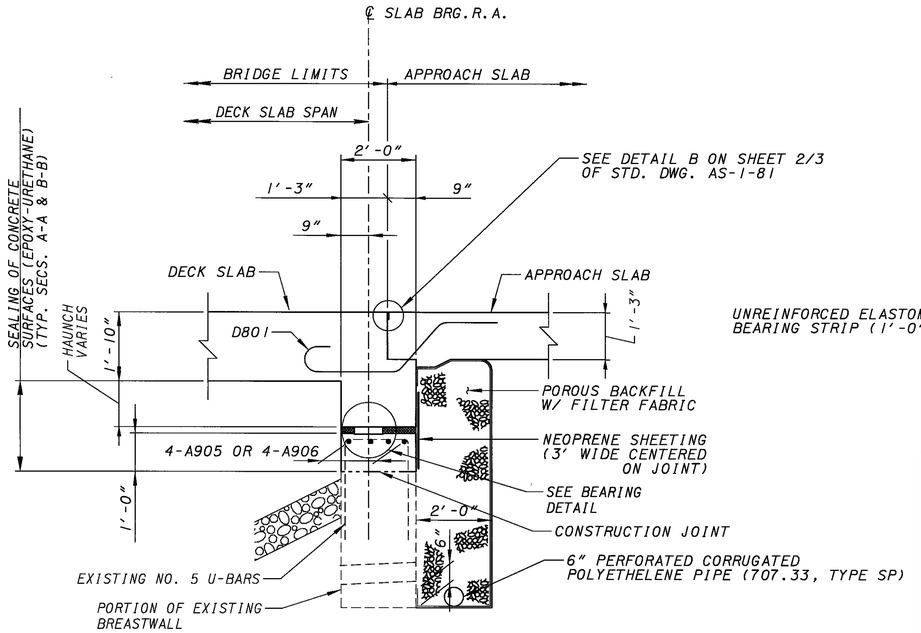
10/25

1014
1100

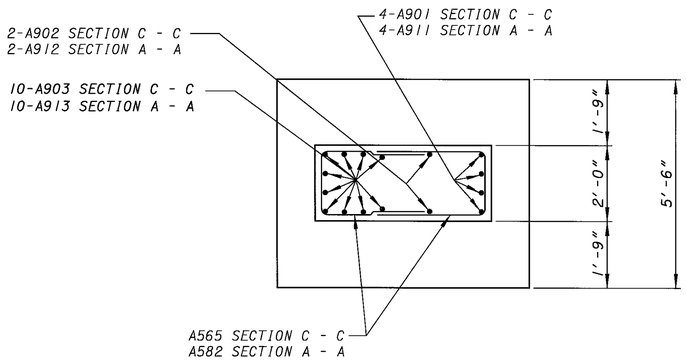


SECTION A-A

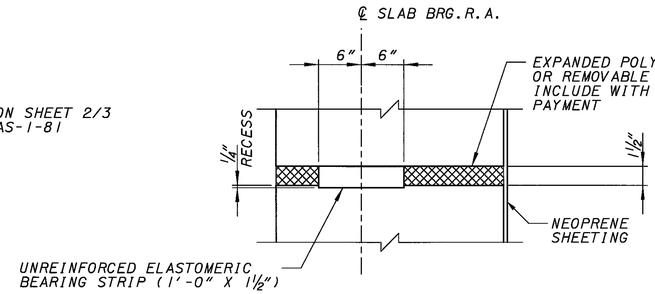
FOR ADDITIONAL DIMENSIONS AND NOTES REFER TO SECTION B - B.



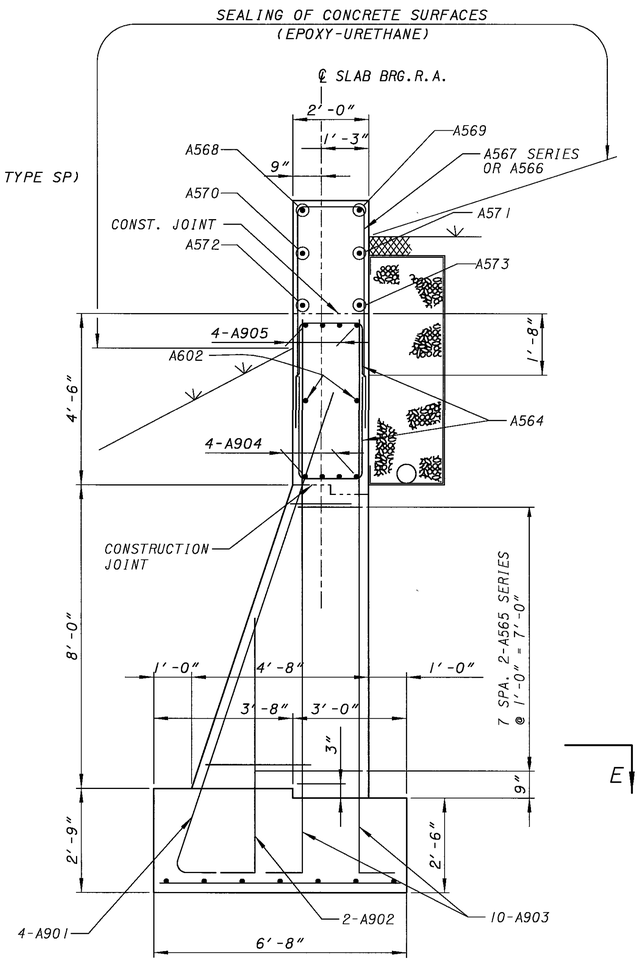
SECTION B-B



SECTION D-D & E-E



BEARING DETAIL



SECTION C-C

FOR ADDITIONAL DIMENSIONS AND NOTES REFER TO SECTIONS B-B & A-A.

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. FOR GENERAL NOTES, SEE SHEET 3 & 3A/25.
3. FOR REINFORCING DETAILS OF DECK SLAB HAUNCH, SEE SHEET 19/25.
4. FOR REINFORCING SCHEDULE, SEE SHEETS 24-25/25.

LEGEND:

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

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

DESIGNED	CHECKED
BSS	JAH
DRAWN	REVISED
BSS	
REVIEWED	DATE
MTO	8/04

STRUCTURE FILE NUMBER
5002370 (L)
5002400 (R)

PEDESTAL ABUTMENT DETAILS

BRIDGE NO. MAH-80-0313 L/R
I.R. 80 OVER OHLTOWN ROAD

MAH-80-0.97
PID 6080

11/25

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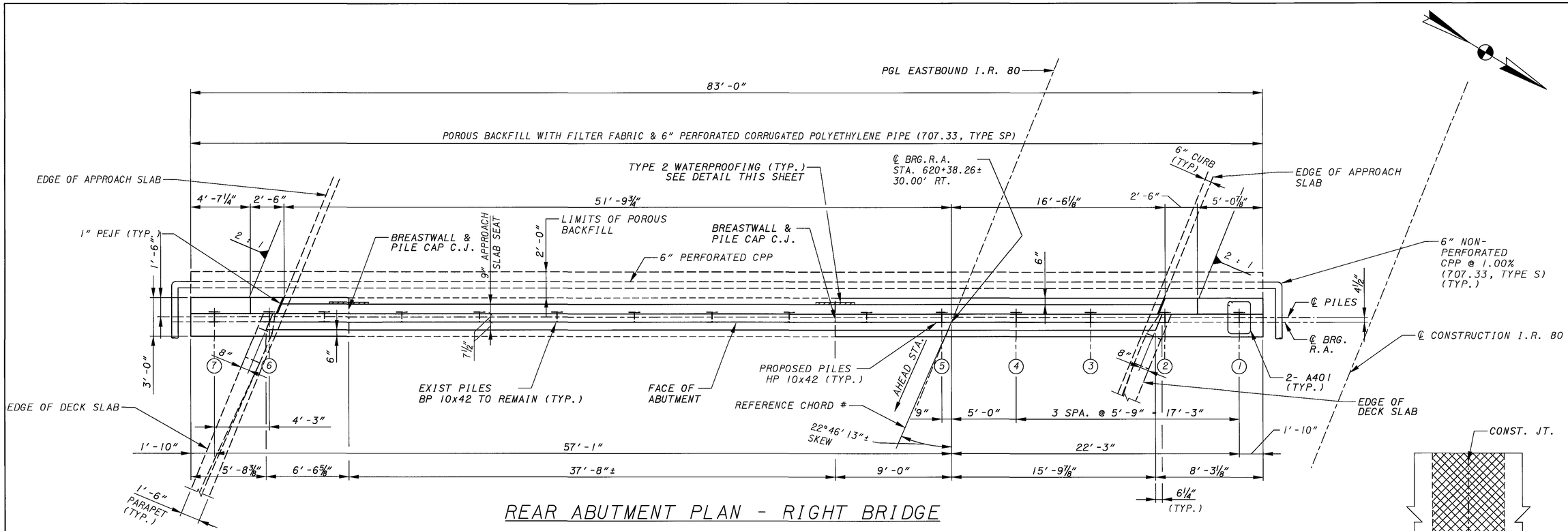
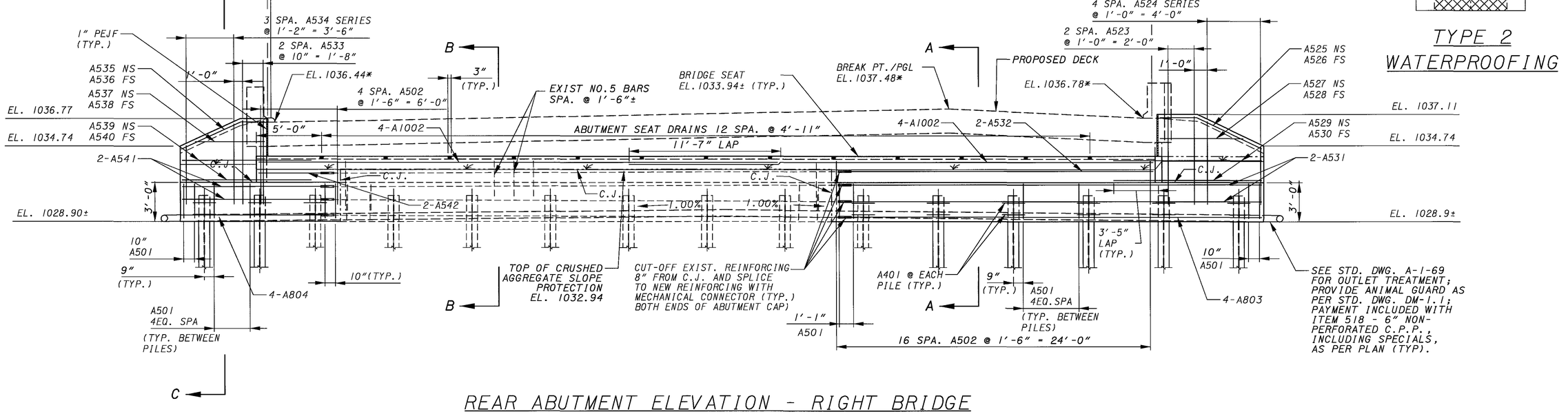


REAR ABUTMENT PLAN - RIGHT BRIDGE

TYPE 2 WATERPROOFING



REAR ABUTMENT ELEVATION - RIGHT BRIDGE

(SEE SHEET 15/25 FOR SECTIONS A-A, B-B, AND C-C)

* - ELEVATIONS SHOWN ARE AT BRIDGE LIMITS

- FOR REFERENCE CHORD DIAGRAM SEE SHEET 1/25.

ABBREVIATION:

C.J.	-	CONSTRUCTION JOINT	R.A.	-	REAR ABUTMENT
PGL	-	PROFILE GRADE LINE	BRG	-	BEARING
PEJF	-	PREFORMED EXPANSION JOINT FILLER	TYP	-	TYPICAL
CPP	-	CORRUGATED POLYETHYLENE PIPE	DWL	-	DOWELS
NS	-	NEAR SIDE			
FS	-	FAR SIDE			

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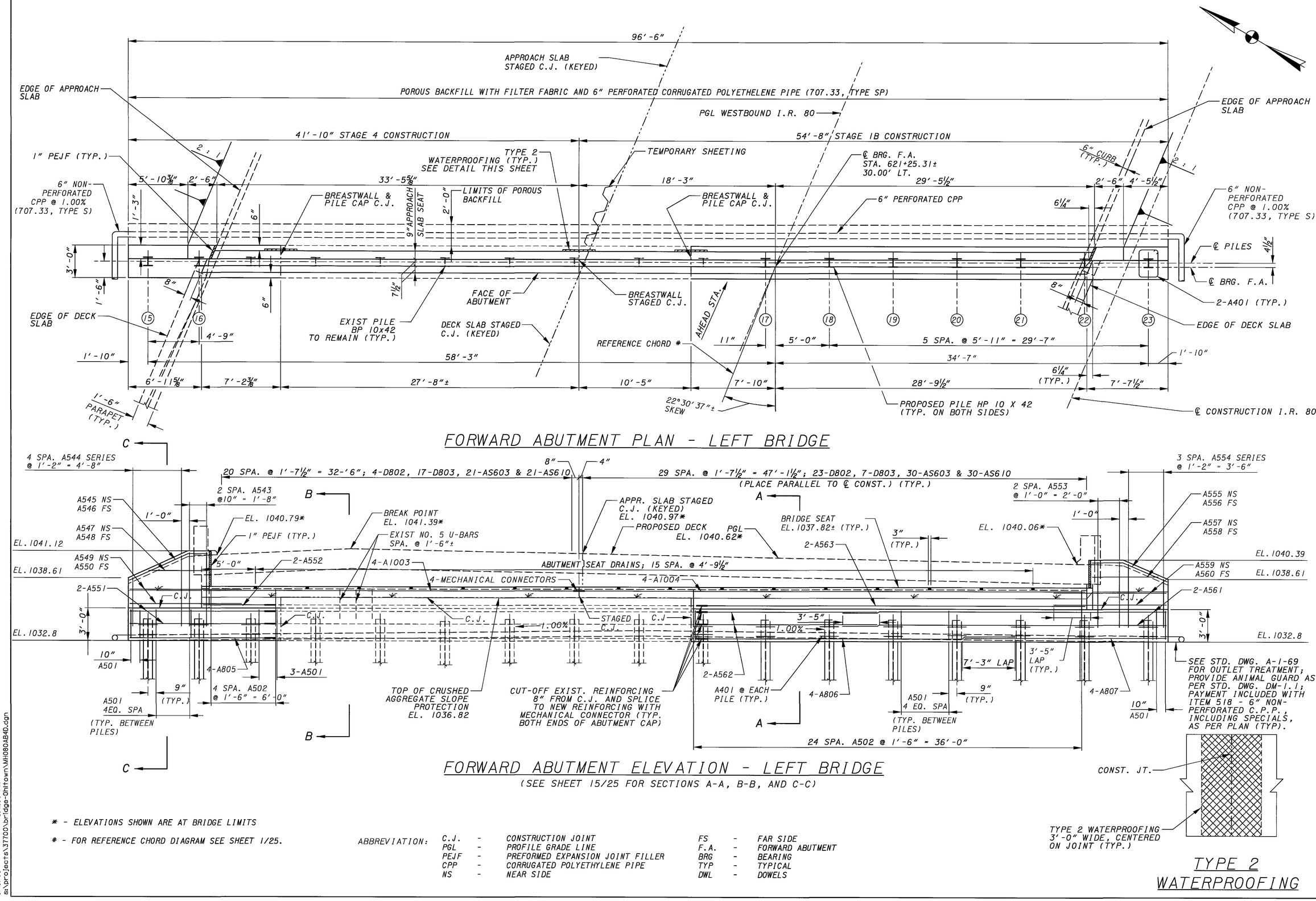
DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4151 EASTON WAY, SUITE 350 COLUMBUS, OHIO 43219

DESIGNED	DRAWN	REVIEWED	DATE
BSS	BSS	MTO	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JHB		5002370 (L) 5002400 (R)	

REAR ABUTMENT DETAILS - RIGHT BRIDGE
BRIDGE NO. MAH-80-0313 L/R
I.R. 80 OVER OHLTOWN ROAD

MAH-80-0.97
PID 6080



FORWARD ABUTMENT PLAN - LEFT BRIDGE

FORWARD ABUTMENT ELEVATION - LEFT BRIDGE

(SEE SHEET 15/25 FOR SECTIONS A-A, B-B, AND C-C)

* - ELEVATIONS SHOWN ARE AT BRIDGE LIMITS

- FOR REFERENCE CHORD DIAGRAM SEE SHEET 1/25.

ABBREVIATION:

C.J.	-	CONSTRUCTION JOINT	FS	-	FAR SIDE
PGL	-	PROFILE GRADE LINE	F.A.	-	FORWARD ABUTMENT
PEJF	-	PREFORMED EXPANSION JOINT FILLER	BRG	-	BEARING
CPP	-	CORRUGATED POLYETHYLENE PIPE	TYP	-	TYPICAL
NS	-	NEAR SIDE	DWL	-	DOWELS

TYPE 2 WATERPROOFING

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

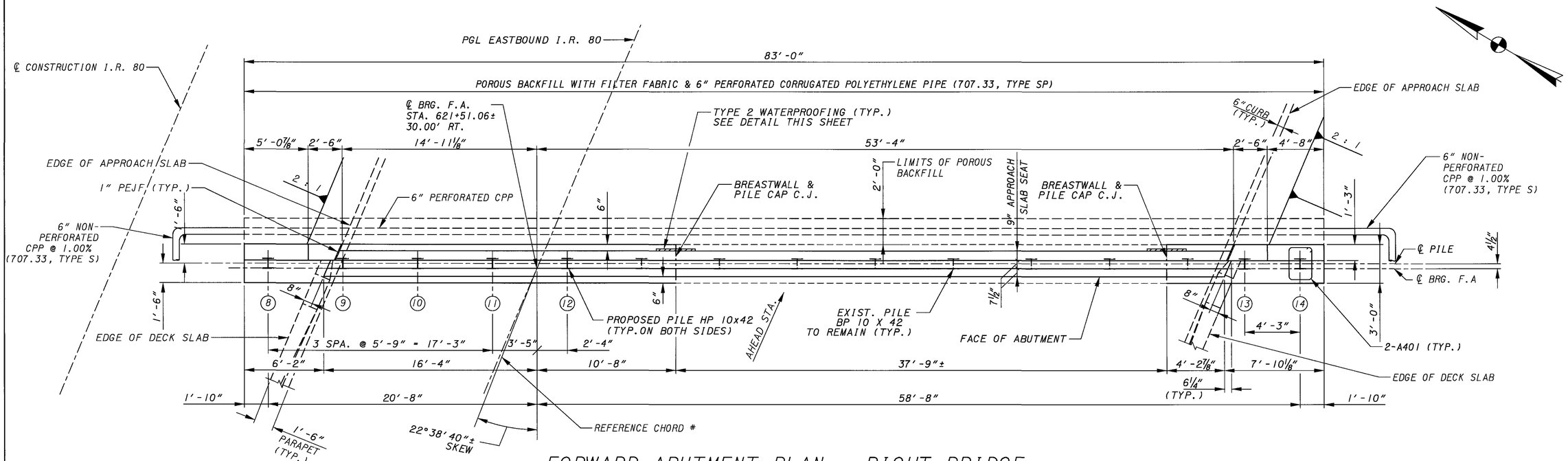
DESIGNED	DRAWN	REVIEWED	DATE
BSS	BSS	MTO	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JRH		5002370 (L) 5002400 (R)	

FORWARD ABUTMENT DETAILS - LEFT BRIDGE
BRIDGE NO. MAH-80-0313 L/R
I.R. 80 OVER OHLTOWN ROAD

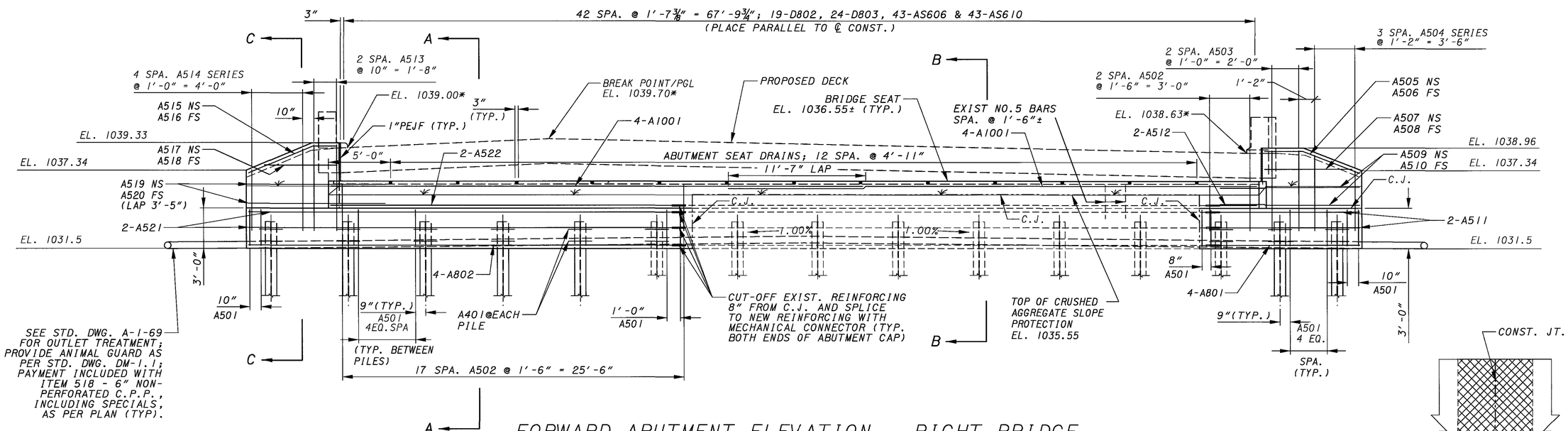
MAH-80-0.97
PID 6080

13/25

1017
1100

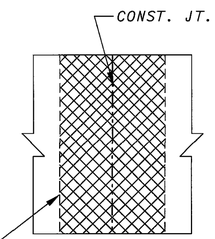


FORWARD ABUTMENT PLAN - RIGHT BRIDGE



FORWARD ABUTMENT ELEVATION - RIGHT BRIDGE

(SEE SHEET 15/25 FOR SECTIONS A-A, B-B, AND C-C)



TYPE 2 WATERPROOFING

* - ELEVATIONS SHOWN ARE AT BRIDGE LIMITS

- FOR REFERENCE CHORD DIAGRAM SEE SHEET 1/25.

ABBREVIATION:

C.J.	-	CONSTRUCTION JOINT	F.A.	-	FORWARD ABUTMENT
PGL	-	PROFILE GRADE LINE	BRG	-	BEARING
PEJF	-	PREFORMED EXPANSION JOINT FILLER	TYP	-	TYPICAL
CPP	-	CORRUGATED POLYETHYLENE PIPE	DWL	-	DOWELS
NS	-	NEAR SIDE			
FS	-	FAR SIDE			

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

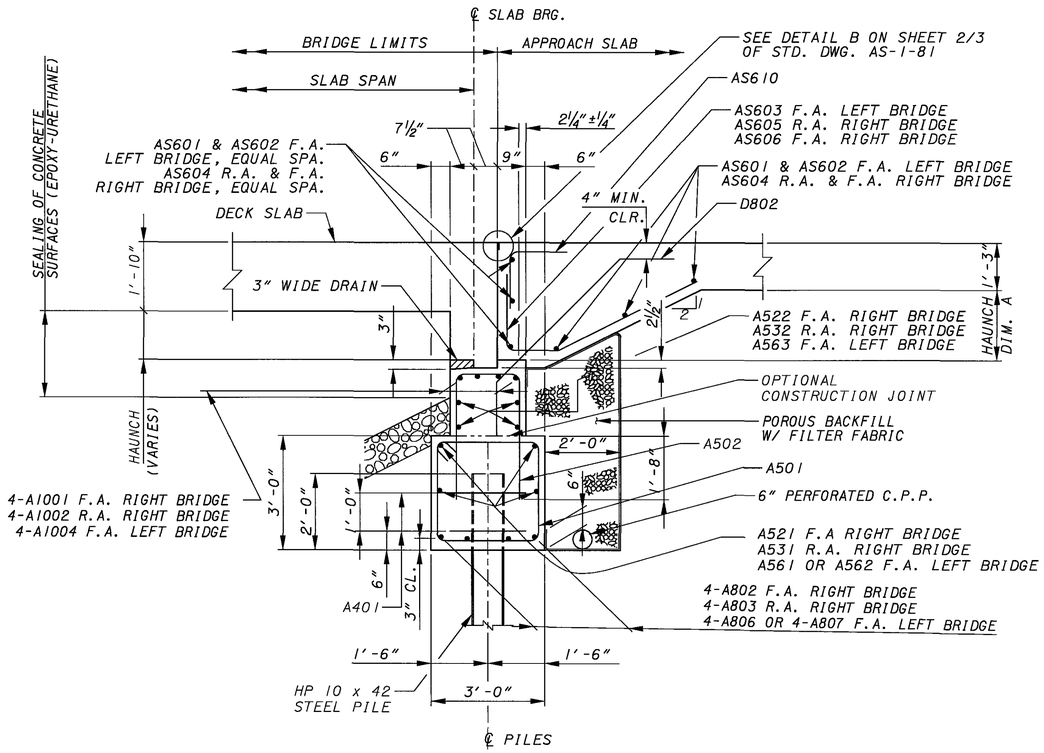
DESIGNED	DRAWN	REVIEWED	DATE
BSS	BSS/MTO	MTO	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JRH		5002370 (L) 5002400 (R)	

FORWARD ABUTMENT DETAILS - RIGHT BRIDGE
BRIDGE NO. MAH-80-0313 L/R
I.R. 80 OVER OHLTOWN ROAD

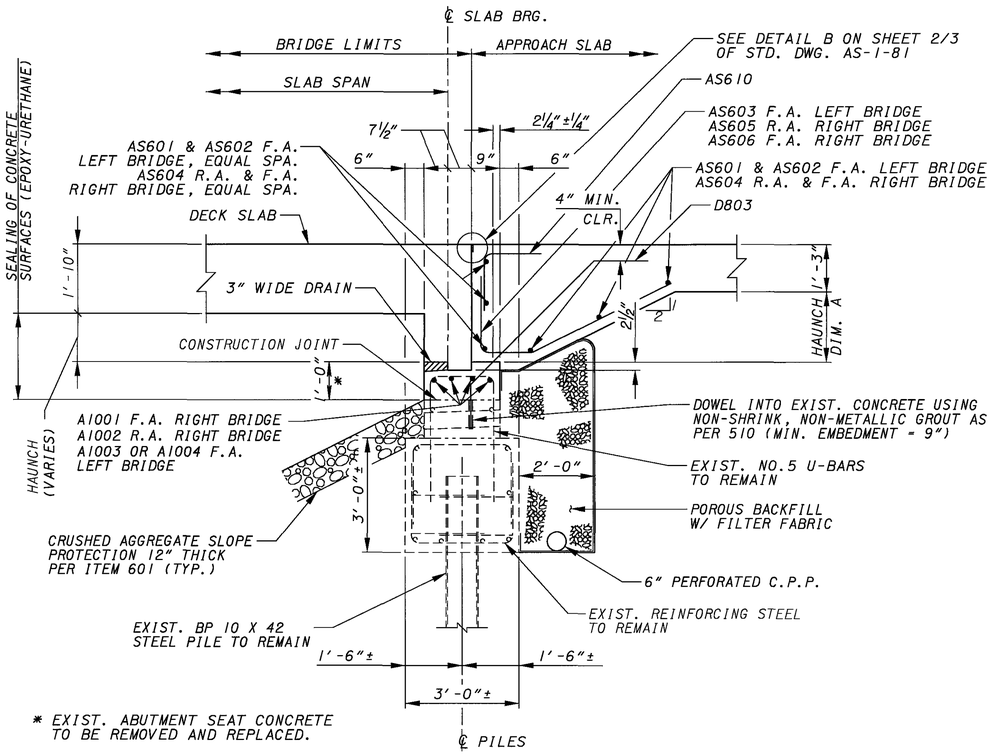
MAH-80-0.97
PID 6080

14/25

1018
1100



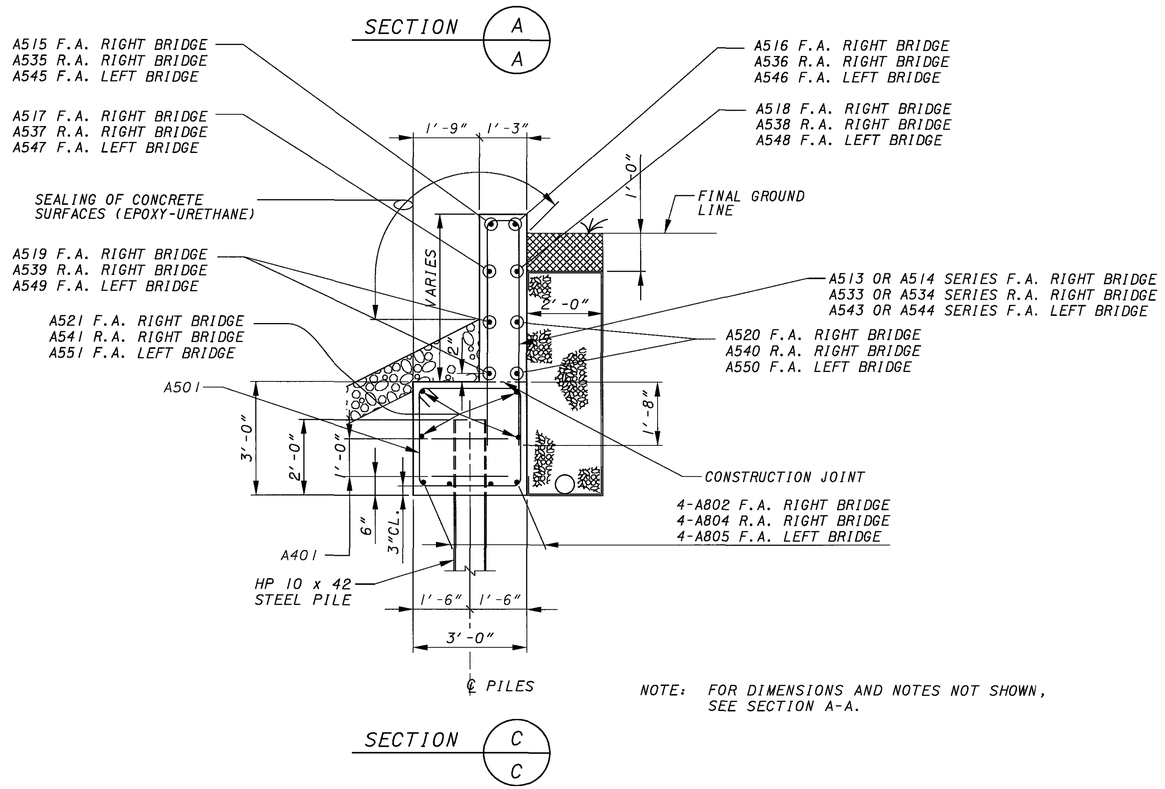
SECTION A-A



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

SECTION B-B

NOTE: FOR DIMENSIONS AND NOTES NOT SHOWN SEE SECTION A-A.



SECTION C-C

NOTE: FOR DIMENSIONS AND NOTES NOT SHOWN, SEE SECTION A-A.

HAUNCH DIM. A		
ABUTMENT	MINIMUM	MAXIMUM
RIGHT REAR	1.25'	2.29'
LEFT FWD.	0.99'	2.32'
RIGHT FWD.	0.83'	1.90'

LEGEND:

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

MINIMUM 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. FOR GENERAL NOTES, SEE SHEET 3 & 3A/25.
3. FOR REINFORCING DETAILS OF DECK SLAB HAUNCH, SEE SHEETS 19-20/25.
4. FOR REINFORCING SCHEDULE, SEE SHEETS 24-25/25.

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

DESIGNED BSS | DRAWN MTO/BSS | REVIEWED MTO | DATE 8/04
CHECKED JRH | REVISED | STRUCTURE FILE NUMBER 5002370 (L) 5002400 (R)

CAPPED-PILE ABUTMENT DETAILS

BRIDGE NO. MAH-80-0313 L/R
I.R. 80 OVER OHLTOWN ROAD

MAH-80-0.97
PID 6080

15 / 25

1019
1100

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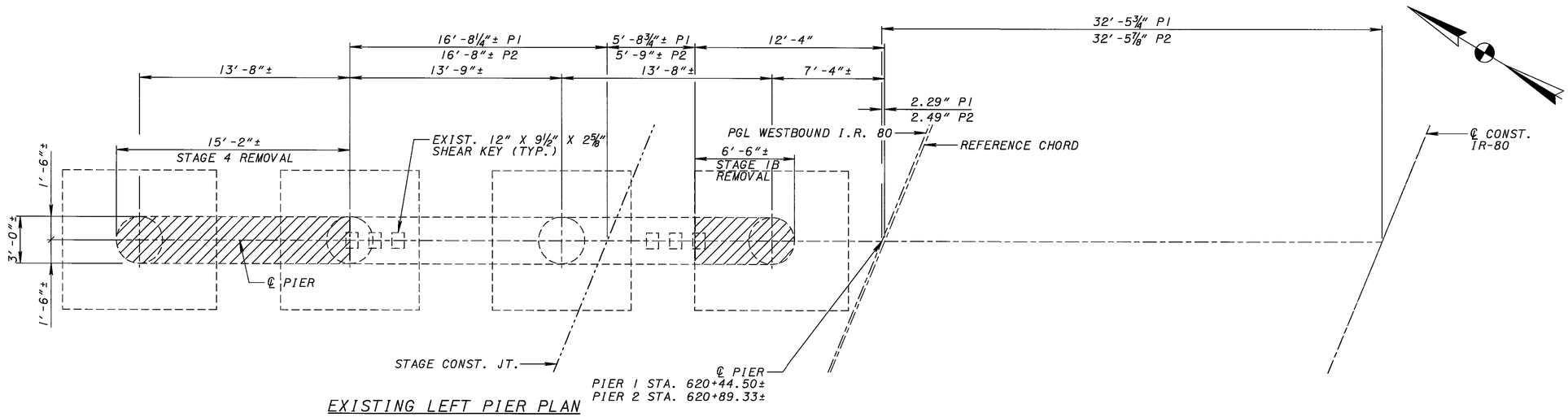
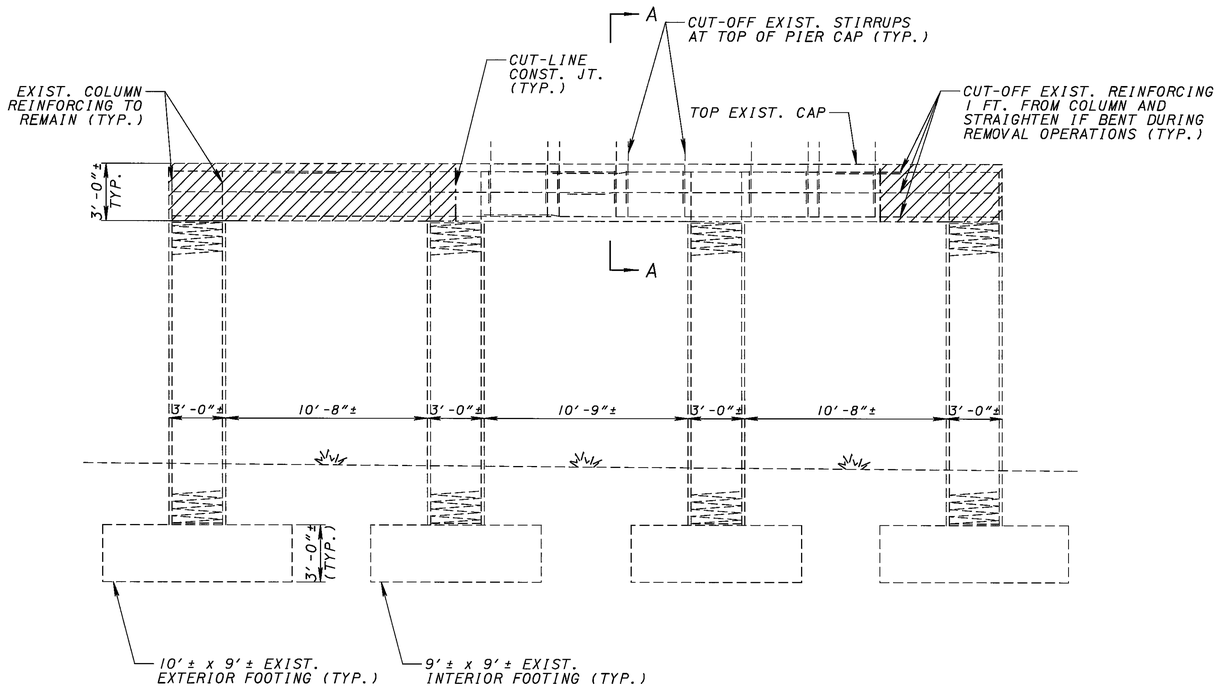
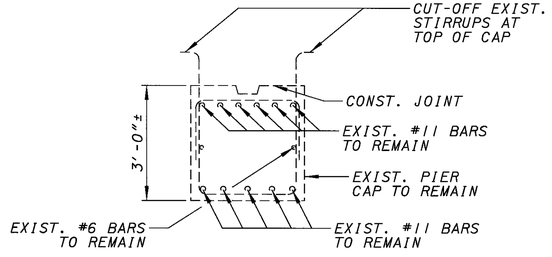


EXISTING LEFT PIER PLAN



EXISTING LEFT PIER ELEVATION



SECTION A-A

LEGEND:

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

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

8/15/05 3:42:09 PM
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DESIGN AGENCY
GANNETT FLEMING
ENGINEERS & ARCHITECTS, P.C.
4151 EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

REVIEWED	DATE	STRUCTURE FILE NUMBER
		5002370 (L) 5002400 (R)

DRAWN	REVISED
DEK	

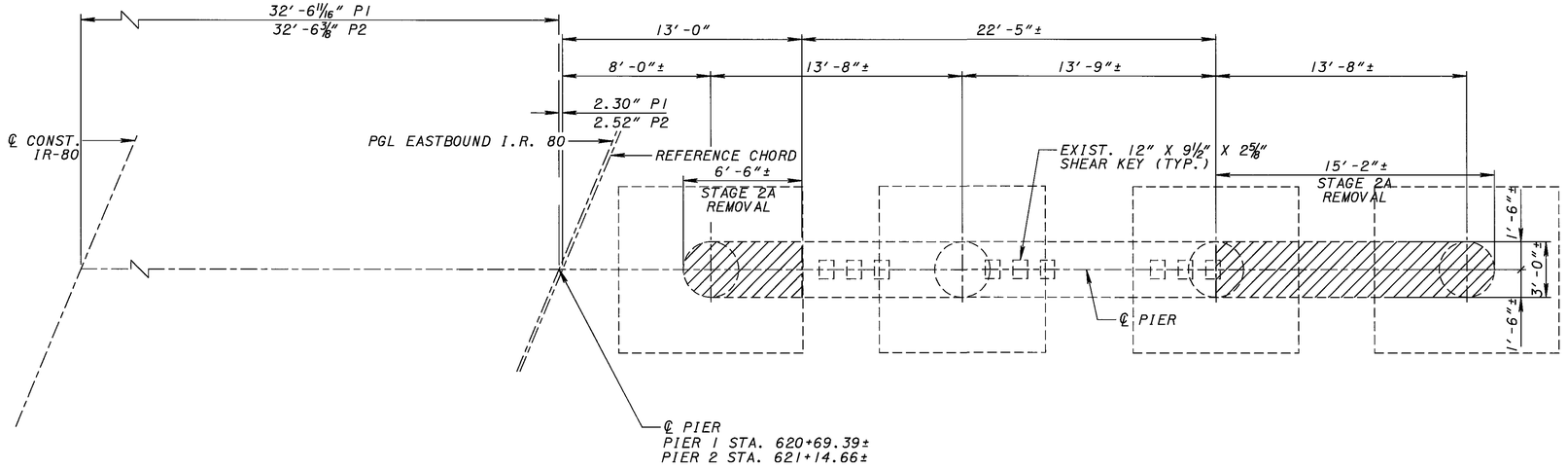
DESIGNED	CHECKED
DEK	MTO

PIER REMOVAL DETAILS - LEFT BRIDGE
BRIDGE NO. MAH-80-03.13 L/R
I.R. 80 OVER OHLTOWN ROAD

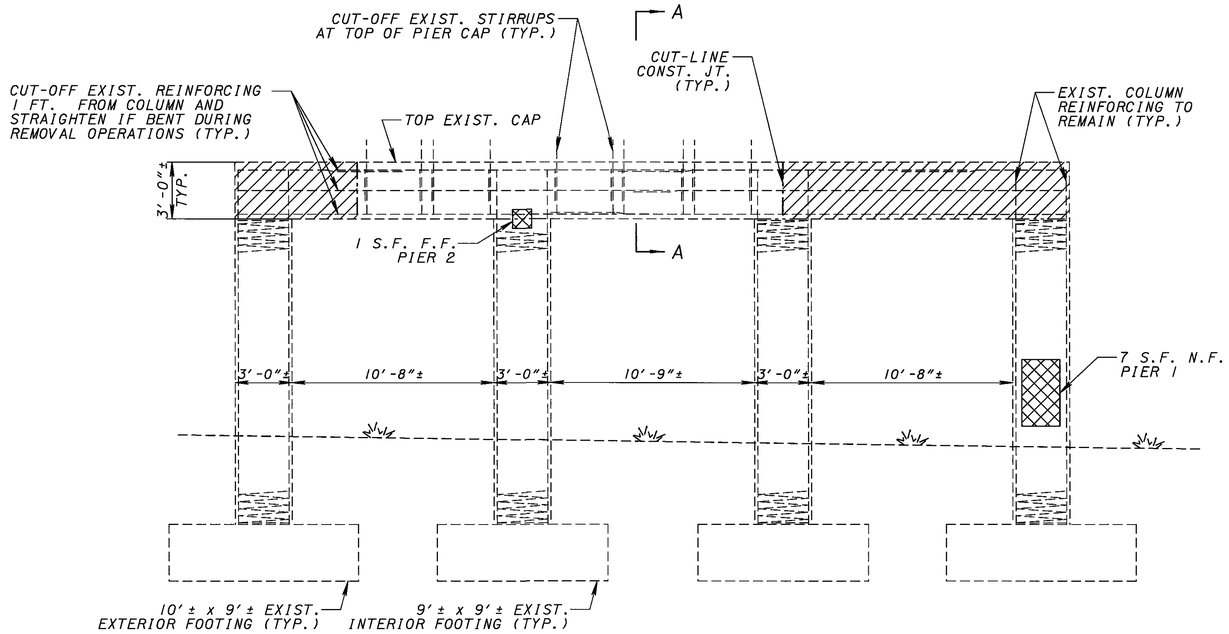
MAH-80-0.97
PID 6080

15A/25

1019A
1100



EXISTING RIGHT PIER PLAN



EXISTING RIGHT PIER ELEVATION

NOTES:

1. FOR SECTION A-A, SEE SHEET 15A/25.

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	8.00	1.25	10.00

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

REVIEWED	DATE	STRUCTURE FILE NUMBER
		5002370 (L) 5002400 (R)

DRAWN	REVISED
DEK	

DESIGNED	CHECKED
DEK	MTO

PIER REMOVAL DETAILS - RIGHT BRIDGE
BRIDGE NO. MAH-80-0313 L/R
I.R. 80 OVER OHLTOWN ROAD

MAH-80-0.97
PID 6080

15B/25

1019B
1100

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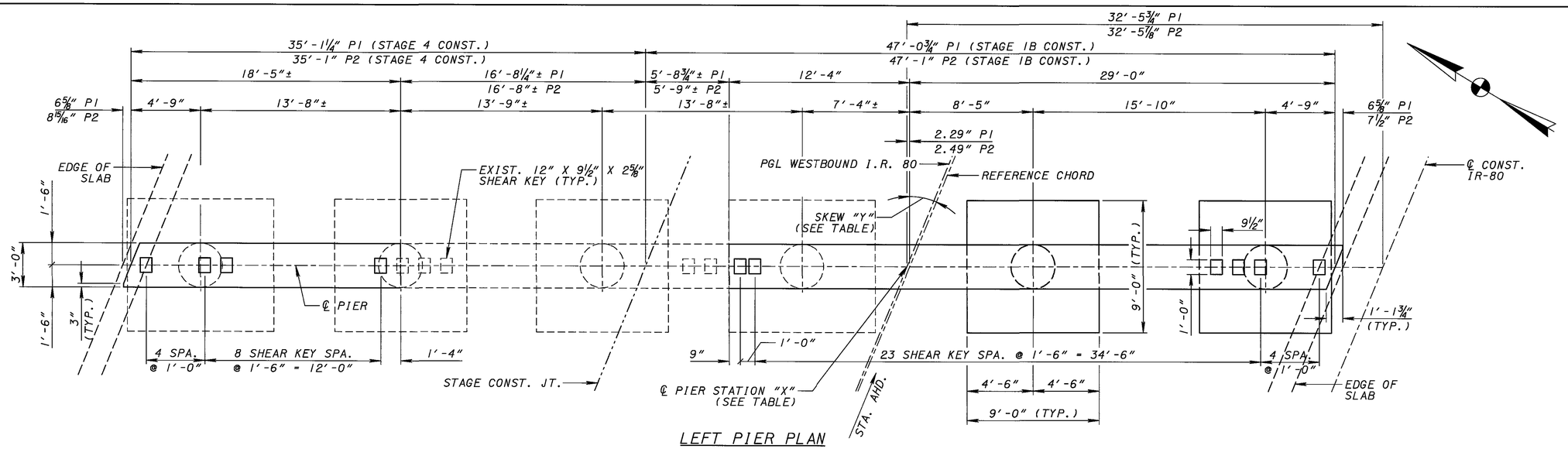
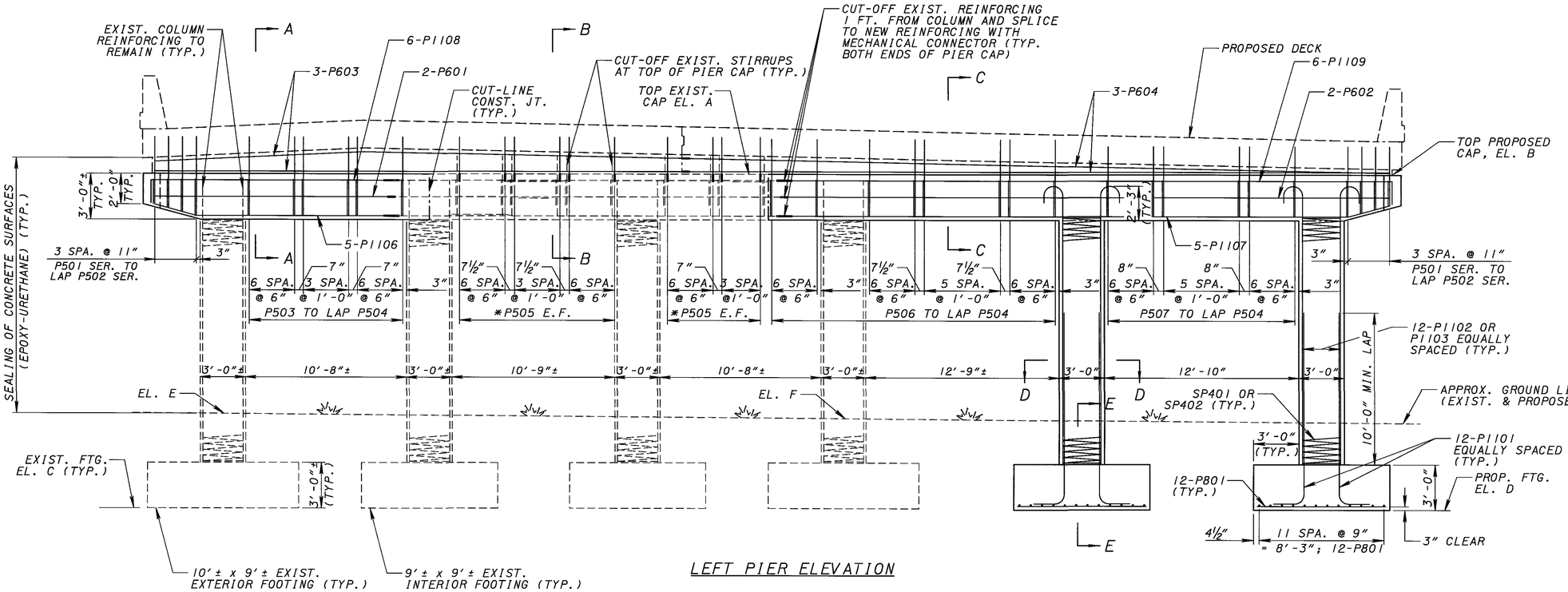


LEFT PIER PLAN



LEFT 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 THROUGH E-E, SEE SHEET 18/25.

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	620+44.50±	22°32'03"±	1036.13±	1036.13	1015.1±	1015.0	1021.3±	1021.8±
PIER 2	620+89.33±	22°35'34"±	1037.08±	1037.08	1015.1±	1015.0	1021.3±	1021.0±

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

DESIGNED	DRAWN	REVIEWED	DATE
MTO	MTO	PLC	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DEK		5002370 (L) 5002400 (R)	

PIER DETAILS - LEFT BRIDGE
BRIDGE NO. MAH-80-0313 L/R
I.R. 80 OVER OHLTOWN ROAD

MAH-80-0.97
PID 6080

16 / 25

1020 / 1100

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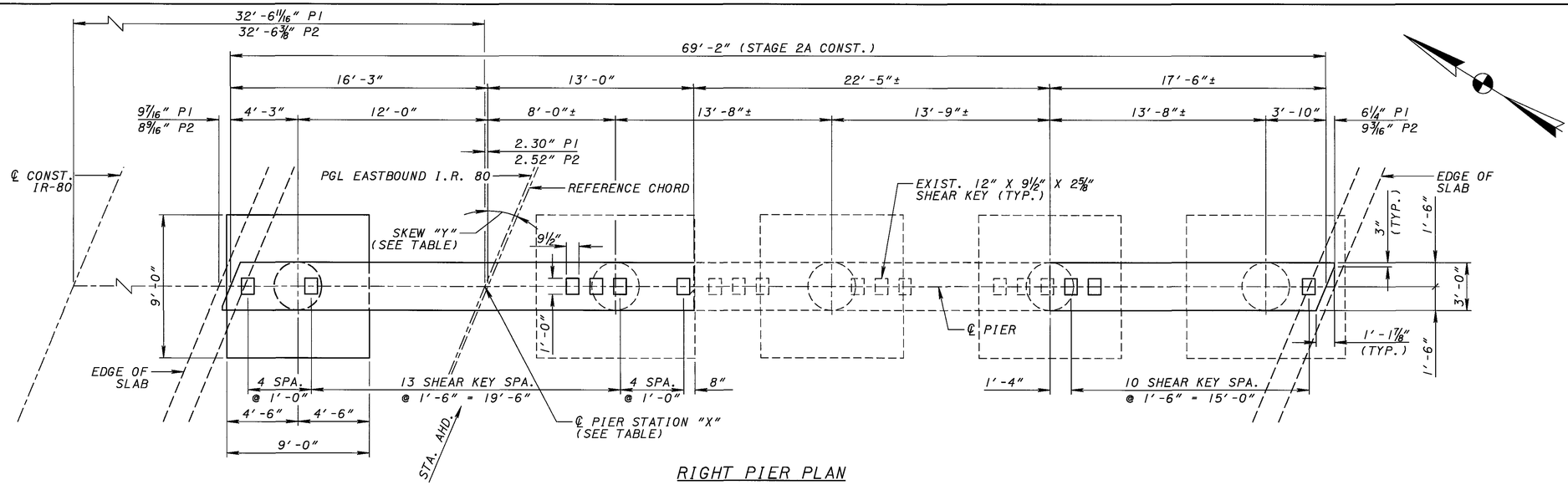
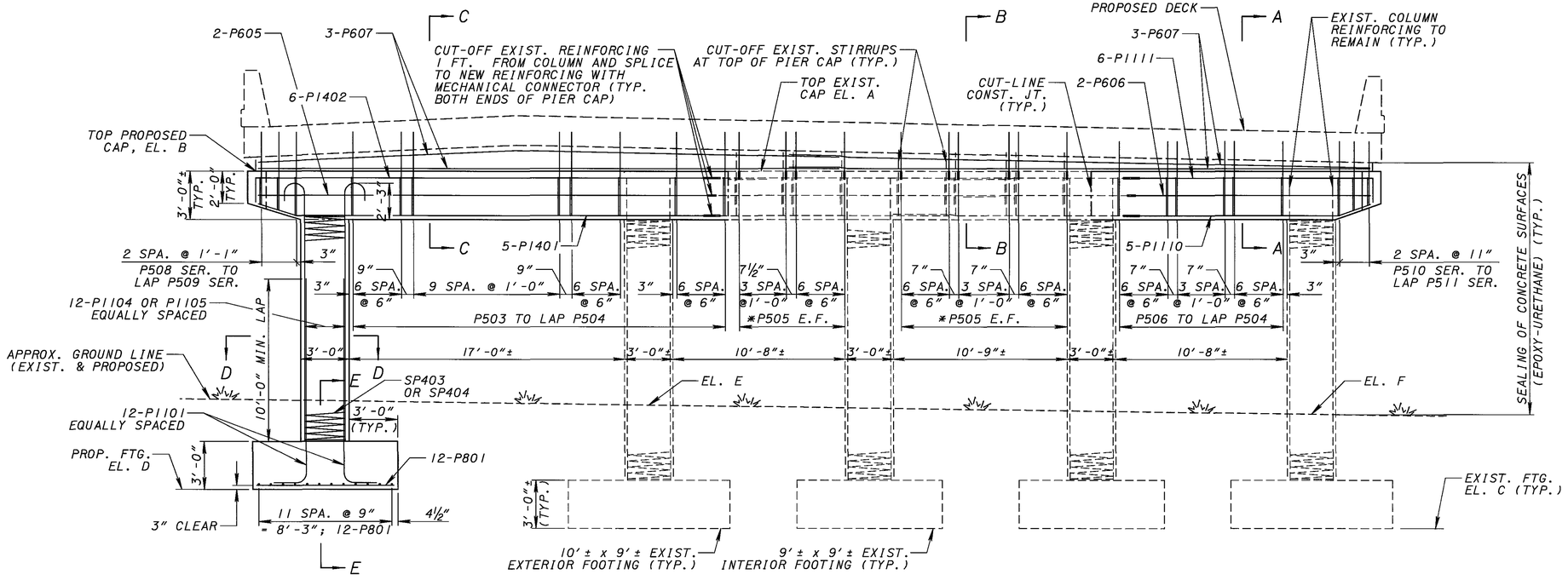


RIGHT PIER PLAN



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 THROUGH E-E, SEE SHEET 18/25.

3. CONSTRUCT THE NEW FOOTING AND COLUMN DURING STAGE 1B.

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	620+69.39±	22°51′35″±	1034.68±	1034.68	1012.6±	1015.0	1019.2±	1019.0±
PIER 2	621+14.66±	22°45′32″±	1035.73±	1035.73	1012.6±	1015.0	1019.2±	1018.6±

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

DESIGNED	DRAWN	REVIEWED	DATE
MTO	MTO	PLC	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DEK		5002370 (L) 5002400 (R)	

PIER DETAILS - RIGHT BRIDGE
BRIDGE NO. MAH-80-03.13 L/R
I.R. 80 OVER OHLTOWN ROAD

MAH-80-0.97
PID 6080

17 / 25

1021 / 1100

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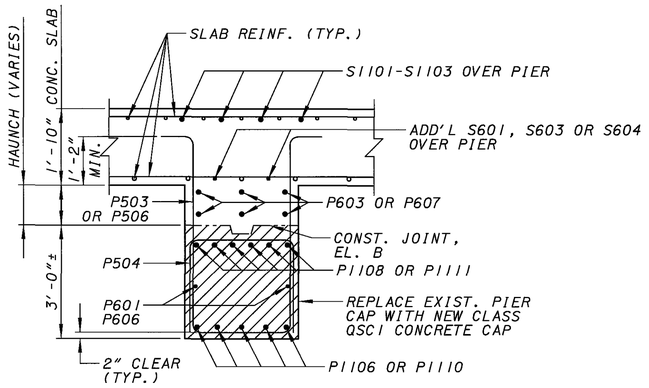
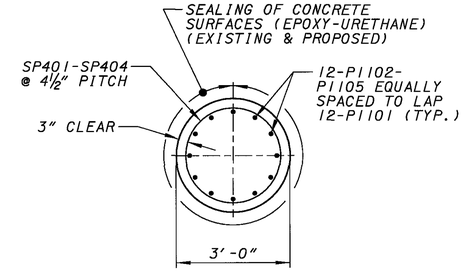
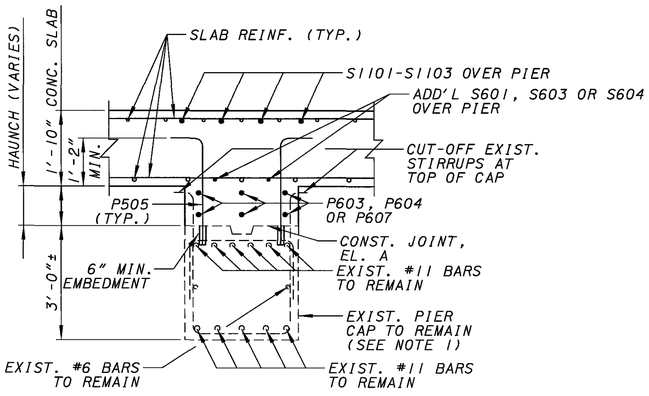


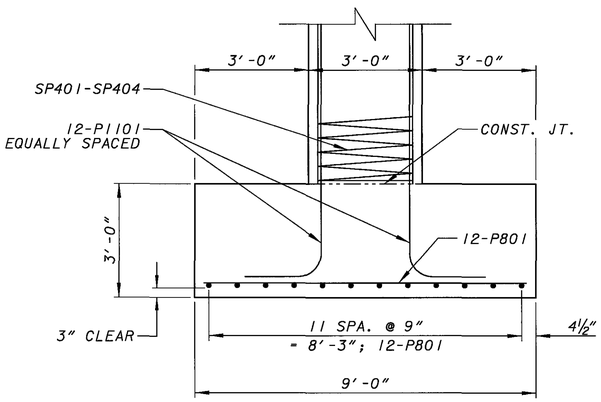
SECTION A-A



SECTION D-D



SECTION B-B



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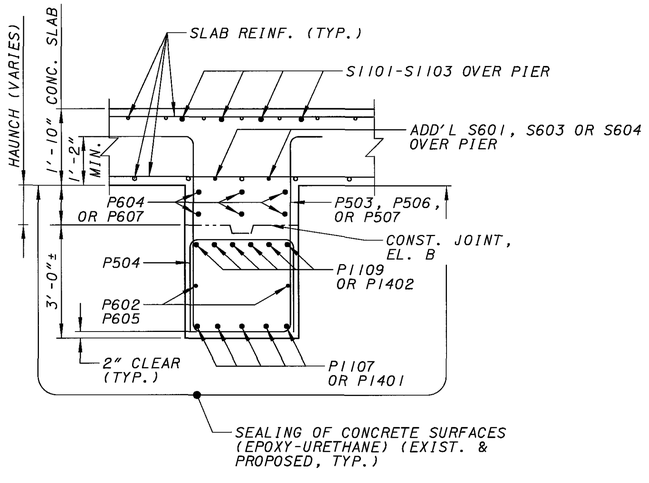

SECTION C-C

NOTES:

1. PREPARE THE TOP SURFACE OF THE EXISTING PIER CAP AS PER THE REQUIREMENTS OF THE "CUT LINE CONSTRUCTION JOINT PREPARATION" NOTE ON SHEET 3/25.

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

DESIGNED	DRAWN	REVIEWED	DATE
MTO	MTO	PLC	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DEK		5002370 (L) 5002400 (R)	

PIER SECTIONS
BRIDGE NO. MAH-80-0313 L/R
I.R. 80 OVER OHLTOWN ROAD

MAH-80-0.97
PID 6080

18 / 25

1022
1100

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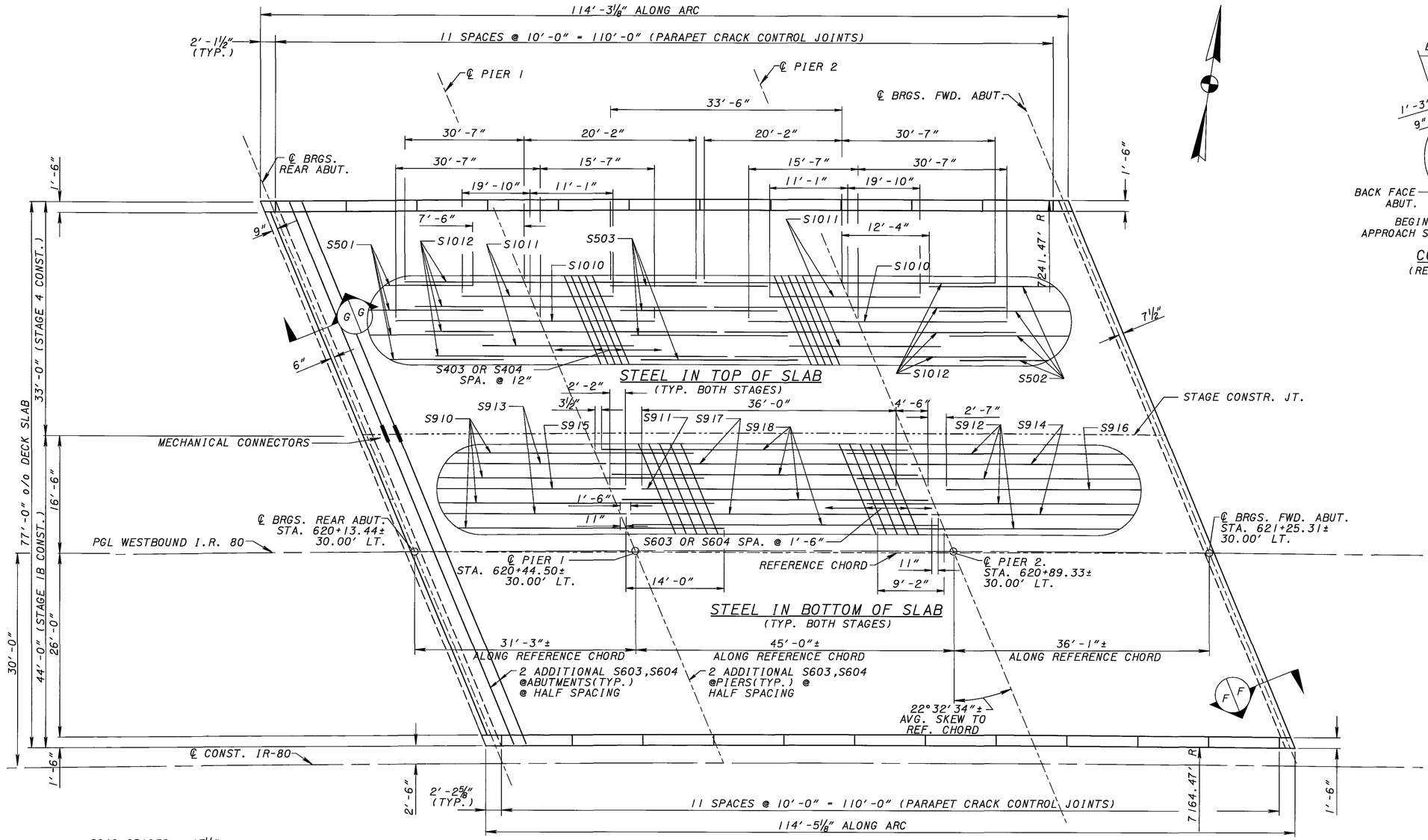
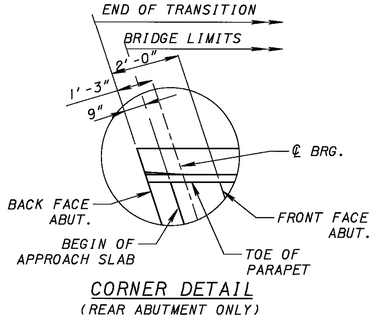
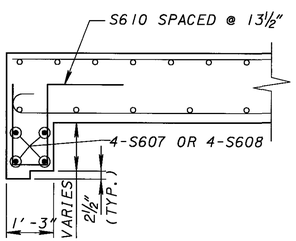
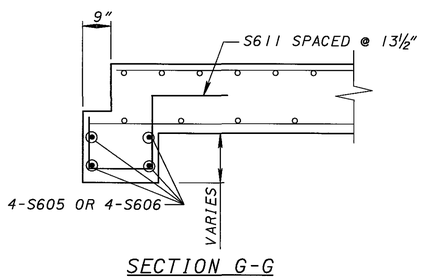




CORNER DETAIL
(REAR ABUTMENT ONLY)



SECTION F-F



SECTION G-G

DECK REINFORCING PLAN - LEFT BRIDGE

NOTES:

1. SEE STD. DWG. CS-1-03, SHEET 2/2, FOR BAR STAGGER DIAGRAM OVER PIERS DUE TO BRIDGE SKEW.
2. FOR GENERAL NOTES SEE SHEETS 3 & 3A/25.
3. FOR REINFORCING SCHEDULE AND LAP LENGTHS SEE SHEETS 24-25/25.

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

DESIGNED	DRAWN	REVIEWED	DATE
BSS	SJB	MTO	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JRH/DEK		5002370 (L) 5002400 (R)	

DECK PLAN - LEFT BRIDGE
BRIDGE NO. MAH-80-0313 L/R
I.R. 80 OVER OHLTOWN ROAD

MAH-80-0.97
PID 6080

19 / 25

1023
1100

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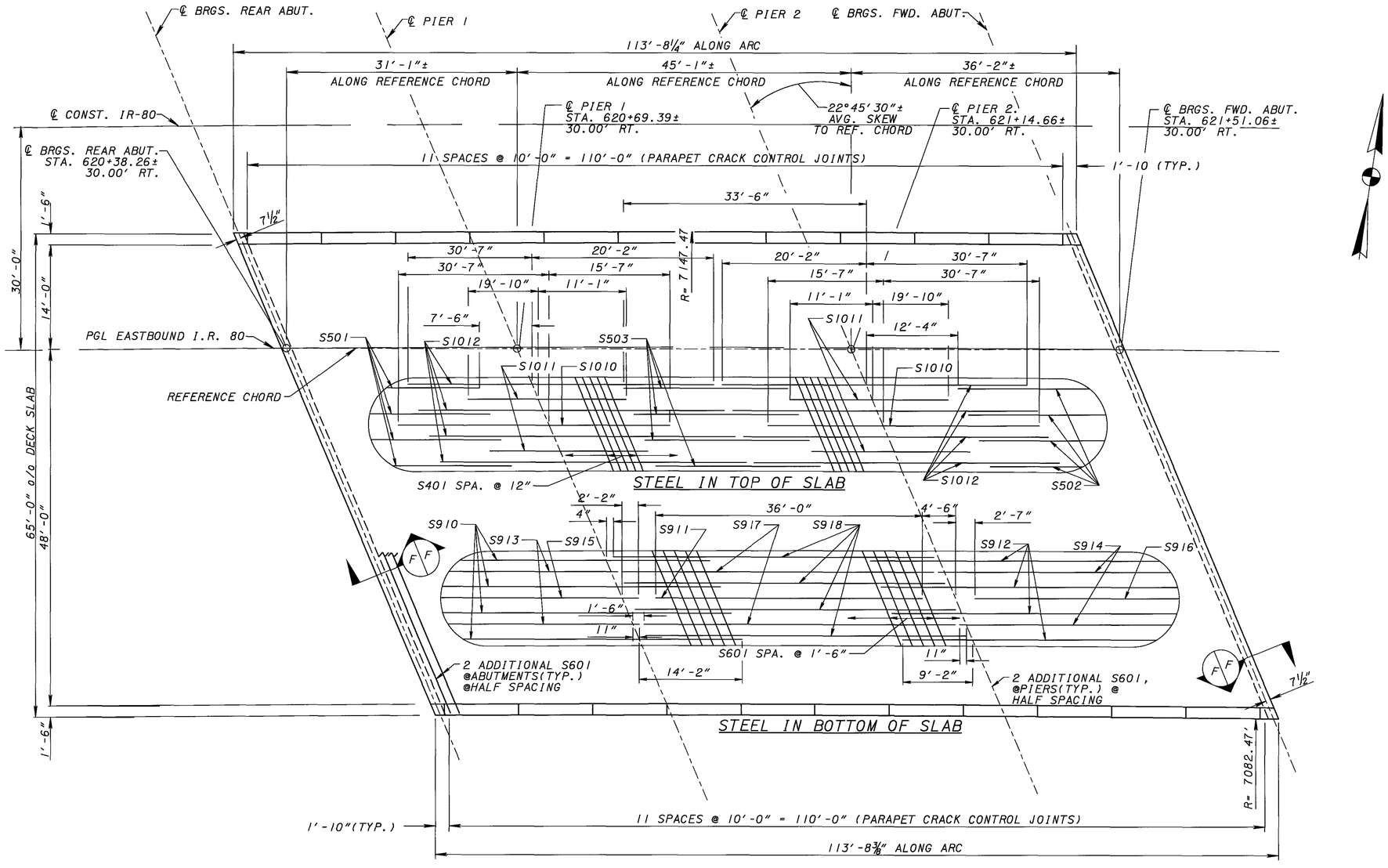
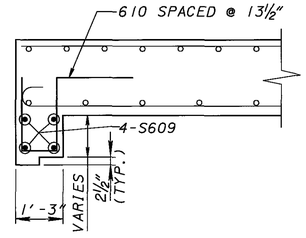


DECK REINFORCING PLAN - RIGHT BRIDGE



SECTION F-F

NOTES:

1. SEE STD. DWG. CS-1-03, SHEET 2/2, FOR BAR STAGGER DIAGRAM OVER PIERS DUE TO BRIDGE SKEW.
2. FOR GENERAL NOTES SEE SHEETS 3 & 3A/25.
3. FOR REINFORCING SCHEDULE AND LAP LENGTHS SEE SHEETS 24-25/25.

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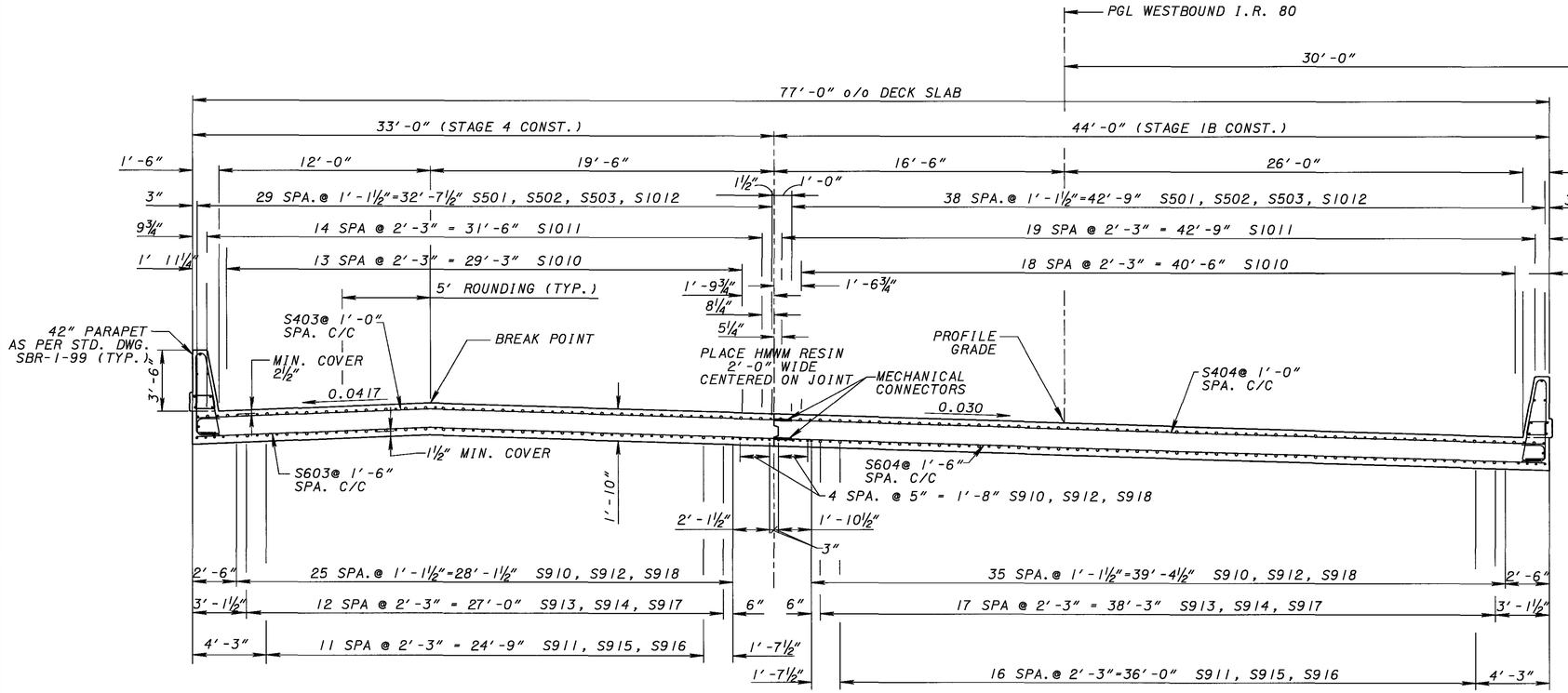
DESIGN AGENCY
GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
4181 EXECUTIVE PARKWAY SUITE 350 WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
BSS	SJB	MTO	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JRH/DEK		5002370 (L) 5002400 (R)	

DECK PLAN - RIGHT BRIDGE
BRIDGE NO. MAH-80-0313 L/R
I.R. 80 OVER OHLTOWN ROAD

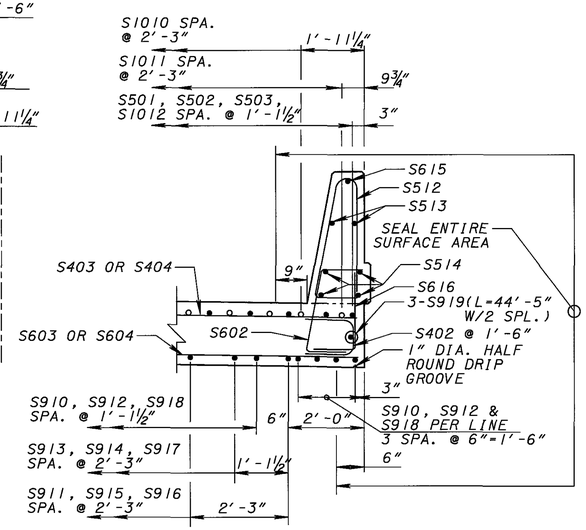
MAH-80-0.97
PID 6080



TRANSVERSE SECTION - LEFT BRIDGE

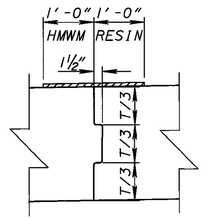
NOTES:

1. FOR GENERAL NOTES SEE SHEETS 3 & 3A/25.
2. FOR REINFORCING SCHEDULE AND LAP LENGTHS SEE SHEETS 24-25/25.
3. FOR ADDITIONAL SLAB DETAILS AND NOTES SEE STD. DWG. CS-1-03.

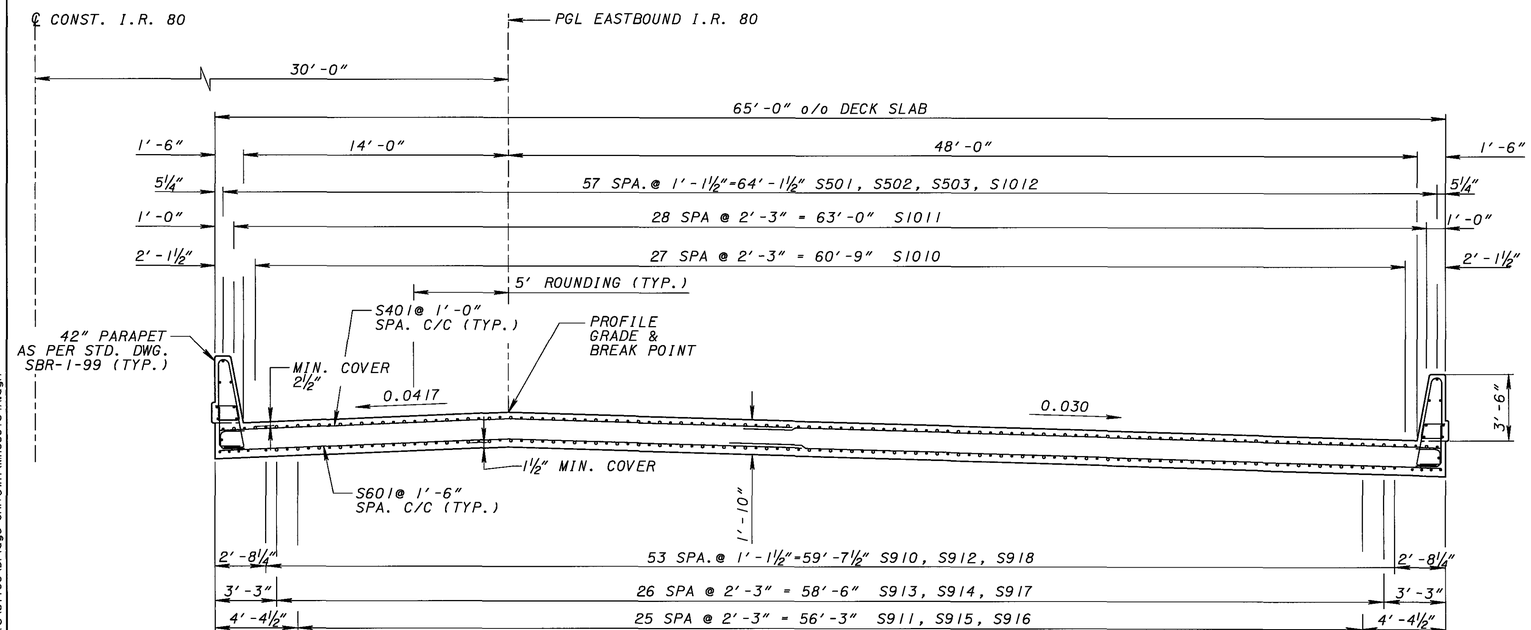


SECTION B-B LEFT BRIDGE

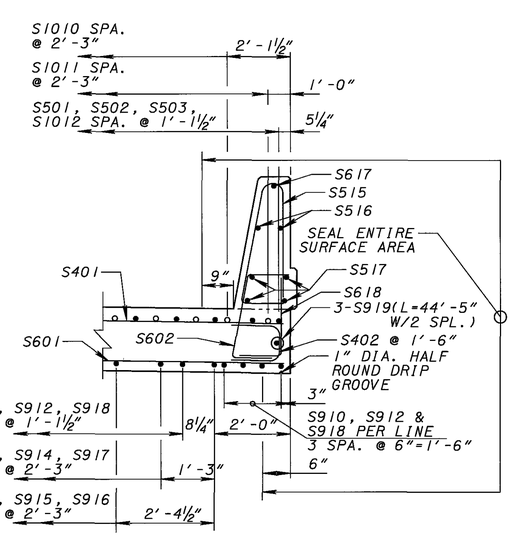
(TYP. BOTH SIDES)



STAGE CONST. JOINT



TRANSVERSE SECTION - RIGHT BRIDGE



SECTION B-B RIGHT BRIDGE

(TYP. BOTH SIDES)

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

DESIGNED	DRAWN	REVIEWED	DATE
BSS	SJB	MTO	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JRH/DEK		5002370 (L) 5002400 (R)	

TRANSVERSE SECTIONS - LEFT AND RIGHT BRIDGES

BRIDGE NO. MAH-80-0313 L/R
I.R. 80 OVER OHLTOWN ROAD

MAH-80-0.97
PID 6080

21 / 25

1025
1100

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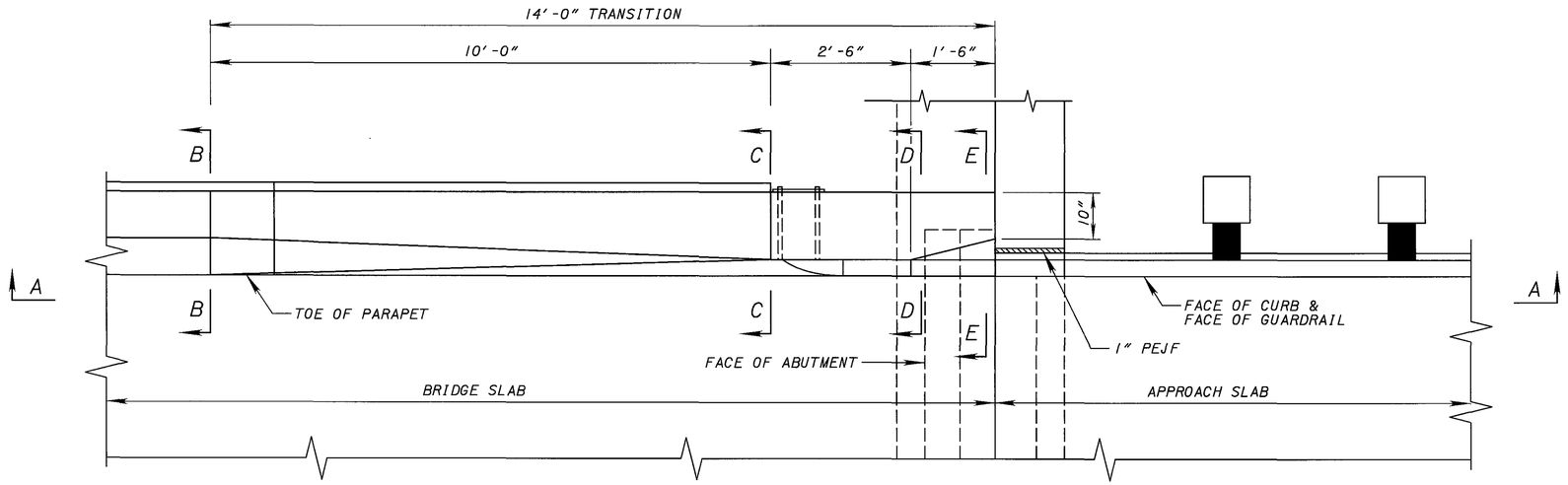
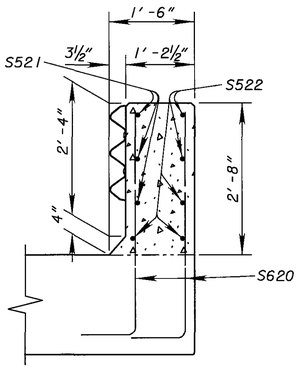
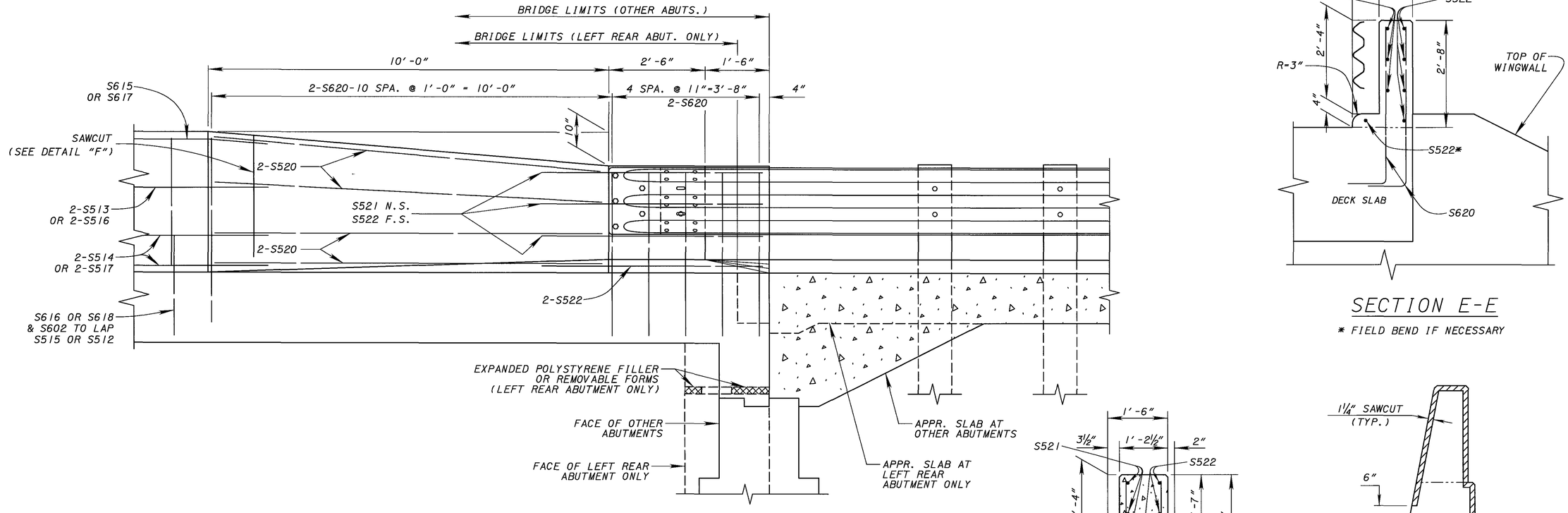


PART PLAN AT ABUTMENT

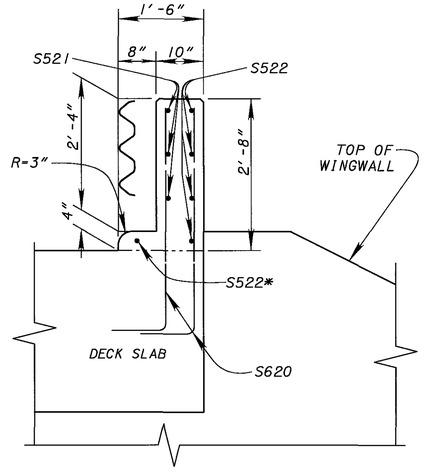
(CAPPED-PILE ABUTMENT SHOWN; SEE SHEET 10/25 FOR LEFT REAR ABUTMENT PLAN)



SECTION D-D

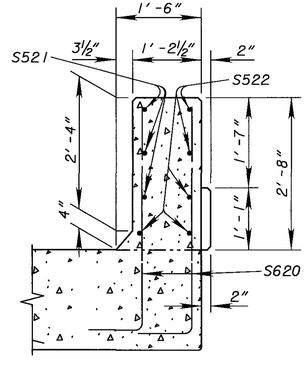


VIEW A-A

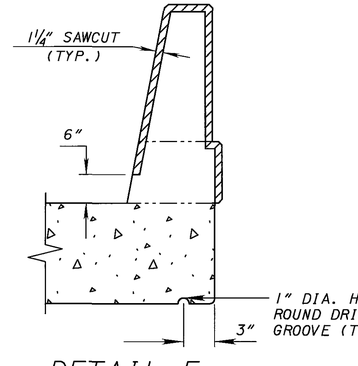


SECTION E-E

* 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, SEE SHEET 21 OF 25.
3. FOR DETAILS AND PAYMENT OF BRIDGE TERMINAL ASSEMBLY, SEE SHEET 211/1100.

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	MTO	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
SK		5002370 (L) 5002400 (R)	

PARAPET TRANSITION DETAILS
BRIDGE NO. MAH-80-03.13 L/R
I.R. 80 OVER OHLTOWN ROAD

MAH-80-0.97
PID 6080

1026
1100

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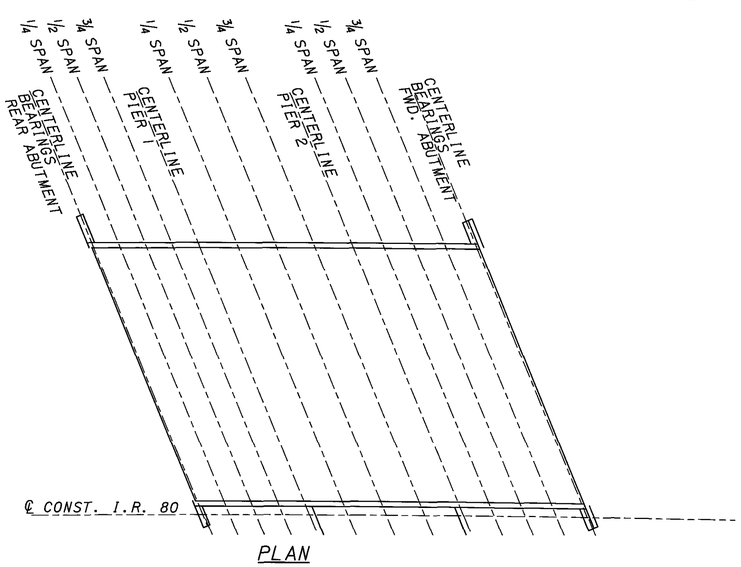
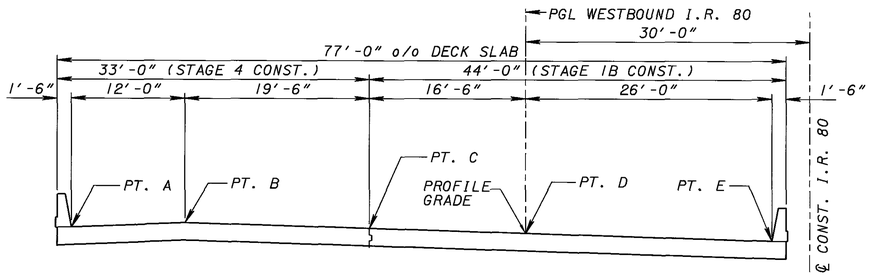
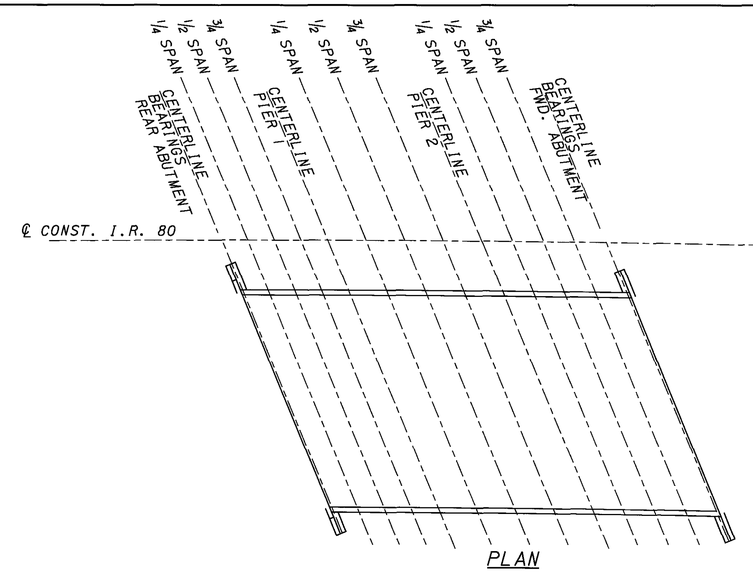


PLAN



TRANSVERSE SECTION - LEFT STRUCTURE



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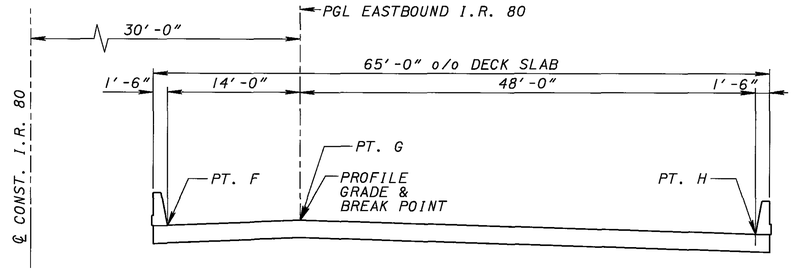

TRANSVERSE SECTION - RIGHT STRUCTURE

FINAL DECK ELEVATION TABLE
LEFT STRUCTURE

LOCATION	PT. A STA./ELEV.	PT. B STA./ELEV.	PT. C STA./ELEV.	PT. D STA./ELEV.	PT. E STA./ELEV.
CENTERLINE BEARINGS REAR ABUTMENT	619+94.18/1038.34	619+98.97/1038.95	620+06.79/1038.55	620+13.44/1038.20	620+23.99/1037.66
¼ SPAN	620+01.88/1038.52	620+06.69/1039.13	620+14.53/1038.72	620+21.20/1038.37	620+31.78/1037.83
½ SPAN	620+09.58/1038.69	620+14.40/1039.30	620+22.27/1038.89	620+28.96/1038.55	620+39.58/1038.00
¾ SPAN	620+17.28/1038.87	620+22.12/1039.47	620+30.01/1039.06	620+36.73/1038.72	620+47.37/1038.17
CENTERLINE PIER 1	620+24.99/1039.04	620+29.84/1039.65	620+37.75/1039.24	620+44.50/1038.89	620+55.17/1038.34
¼ SPAN	620+36.09/1039.28	620+40.96/1039.89	620+48.92/1039.48	620+55.69/1039.13	620+66.42/1038.58
½ SPAN	620+47.19/1039.53	620+52.09/1040.13	620+60.09/1039.72	620+66.89/1039.37	620+77.68/1038.82
¾ SPAN	620+58.29/1039.77	620+63.21/1040.37	620+71.25/1039.96	620+78.09/1039.61	620+88.94/1039.06
CENTERLINE PIER 2	620+69.42/1040.00	620+74.37/1040.61	620+82.45/1040.19	620+89.33/1039.84	621+00.23/1039.29
¼ SPAN	620+78.34/1040.19	620+83.30/1040.80	620+91.40/1040.38	620+98.29/1040.03	621+09.22/1039.47
½ SPAN	620+87.29/1040.38	620+92.27/1040.98	621+00.39/1040.57	621+07.30/1040.21	621+18.25/1039.66
¾ SPAN	620+96.25/1040.57	621+01.23/1041.17	621+09.37/1040.75	621+16.30/1040.40	621+27.28/1039.84
CENTERLINE BEARINGS FORWARD ABUTMENT	621+05.20/1040.75	621+10.20/1041.35	621+18.36/1040.93	621+25.31/1040.58	621+36.31/1040.02

FINAL DECK ELEVATION TABLE
RIGHT STRUCTURE

LOCATION	PT. F STA./ELEV.	PT. G STA./ELEV.	PT. H STA./ELEV.
CENTERLINE BEARINGS REAR ABUTMENT	620+32.49/1036.82	620+38.26/1037.52	620+58.18/1036.48
¼ SPAN	620+40.25/1036.97	620+46.04/1037.67	620+66.05/1036.63
½ SPAN	620+48.01/1037.13	620+53.82/1037.83	620+73.92/1036.79
¾ SPAN	620+55.78/1037.29	620+61.60/1037.98	620+81.79/1036.94
CENTERLINE PIER 1	620+63.53/1037.44	620+69.39/1038.14	620+89.66/1037.09
¼ SPAN	620+74.83/1037.66	620+80.71/1038.36	621+01.04/1037.31
½ SPAN	620+86.13/1037.88	620+92.02/1038.58	621+12.42/1037.53
¾ SPAN	620+97.43/1038.10	621+03.34/1038.80	621+23.80/1037.74
CENTERLINE PIER 2	621+08.73/1038.32	621+14.66/1039.01	621+35.19/1037.96
¼ SPAN	621+17.82/1038.49	621+23.76/1039.18	621+44.34/1038.13
½ SPAN	621+26.90/1038.66	621+32.86/1039.35	621+53.48/1038.29
¾ SPAN	621+35.99/1038.83	621+41.96/1039.52	621+62.63/1038.46
CENTERLINE BEARINGS FORWARD ABUTMENT	621+45.08/1039.00	621+51.06/1039.69	621+71.77/1038.63

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

DESIGNED	DRAWN	REVIEWED	DATE
BSS	BSS	MTO	8/04
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JRH		5002370 (L) 5002400 (R)	

FINAL DECK ELEVATIONS - LEFT AND RIGHT BRIDGES

BRIDGE NO. MAH-80-0313 L/R
I.R. 80 OVER OHLTOWN ROAD

MAH-80-0.97
PID 6080

1027
1100

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REINFORCING STEEL LIST

	MARK	LEFT BRIDGE	RIGHT BRIDGE	LENGTH	TYPE	A	B	C	D	R	INCR.	WEIGHT LEFT	WEIGHT RIGHT
					DECK								
	S401		230	36'-5"	STR								5595
	S402	154	154	3'-8"	1	1'-3"	1'-4"	1'-3"				377	377
*	S403	115		35'-7"	STR							2734	
*	S404	115		47'-6"	STR							3649	
	S501	69	58	24'-2"	STR							1739	1462
	S502	69	58	24'-3"	STR							1745	1467
	S503	69	58	22'-2"	STR							1595	1341
	S601		170	37'-2"	STR								9490
*	S603	85		35'-7"	STR							4543	
*	S604	85		47'-6"	STR							6064	
*	S605	4		35'-7"	STR							214	
*	S606	4		47'-6"	STR							285	
*	S607	4		35'-7"	STR							214	
*	S608	4		47'-6"	STR							285	
	S609		16	37'-2"	STR								893
	S610	75	128	4'-11"	14	1'-6"	0'-11"	1'-6"	1'-6"			554	945
	S611	75		5'-10"	14	1'-7"	1'-8"	1'-7"	1'-6"			657	
	S910	82	64	46'-11"	7	45'-8"						13080	10209
	S911	29	26	36'-0"	STR							3550	3182
	S912	82	64	46'-11"	7	45'-8"						13080	10209
	S913	31	27	33'-10"	7	32'-7"						3566	3106
	S914	31	27	38'-9"	7	37'-6"						4084	3557
	S915	29	26	35'-1"	7	33'-10"						3459	3101
	S916	29	26	35'-3"	7	34'-0"						3476	3116
	S917	31	27	42'-0"	STR							4427	3856
	S918	82	64	44'-5"	STR							12383	9665
	S919	6	6	44'-5"	STR							906	906
	S1010	66	56	46'-2"	STR							13111	11125
	S1011	70	58	30'-11"	STR							9312	7716
	S1012	138	116	50'-9"	STR							30136	25332
*	S1101	8		35'-7"	STR							1512	
*	S1102	8		47'-6"	STR							2019	
	S1103		16	42'-3"	STR								3592
					PARAPET								
	S512	174		7'-5"	2							1346	
	S513	12		33'-6"	STR							419	
	S514	24		33'-6"	STR							839	
	S515		174	7'-5"	2								1346
	S516		12	33'-3"	STR								416
	S517		24	33'-3"	STR								832
	S602	174	174	4'-5"	3							1154	1154
	S615	6		34'-3"	STR							309	
	S616	174		3'-4"	4	1'-1"	2'-5"					871	
	S617		6	34'-3"	STR								309
	S618		174	3'-4"	4	1'-1"	2'-5"						871
	S520	32	32	10'-0"	STR							334	334
	S521	12	12	5'-6"	12							69	69
	S522	20	20	5'-6"	STR							115	115
	S620	120	120	4'-11"	4	1'-1"	4'-0"					886	886
											TOTAL	149098	126574

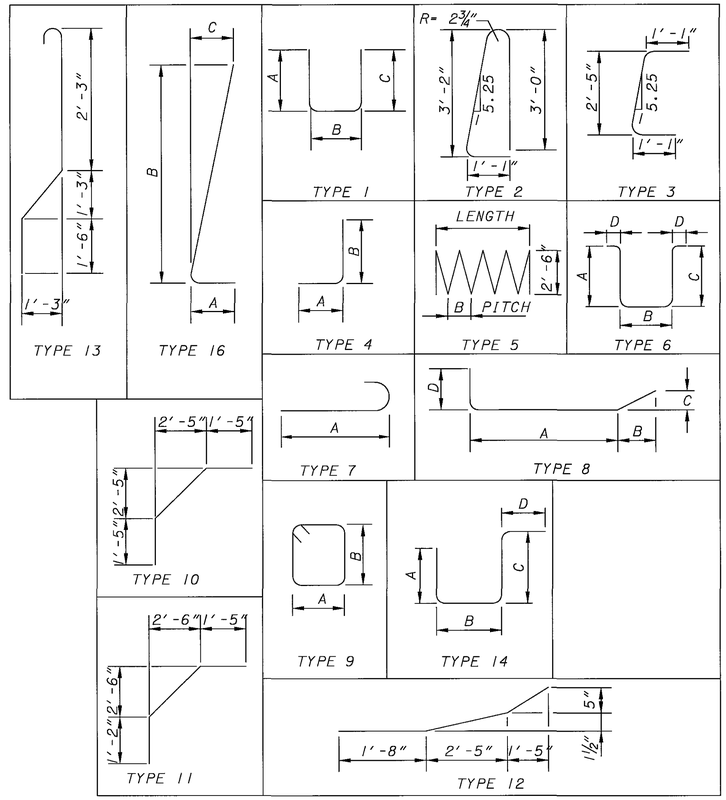
* WITH MECHANICAL CONNECTOR (SEE NOTE 7)

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 SHEETS 10 & 15/25.

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.
4181 EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

DESIGNED	DRAWN	REVIEWED	DATE
SK	SK	DEK	8/04

CHECKED	REVISED	STRUCTURE FILE NUMBER
MTO		5002370 (L) 5002400 (R)

REINFORCING STEEL LIST
BRIDGE NO. MAH-80-0313 L/R
I.R. 80 OVER OHLTOWN ROAD

MAH-80-0.97
PID 6080

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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		22	18	18	9'-0"	9	1'-9"	2'-6"					132	216
	A501		53	43	43	11'-0"	9	2'-8"	2'-7"					608	987
	A502		30	22	21	8'-1"	1	3'-4"	1'-8"	3'-4"				253	363
	A503				3	12'-8"	1	6'-0"	11"	6'-0"					40
	A504				1 S.O. 4	12'-0" TO 9'-6"	1	5'-8" TO 4'-5"	11'	5'-8" TO 4'-5"			5"		45
	A505				1	7'-6"	8	2'-9"	4'-6"	1'-7"					8
	A506				1	7'-1"	8	2'-4"	4'-6"	1'-7"					7
	A507				1	6'-9"	STR								7
	A508				1	6'-4"	STR								7
	A509				2	10'-10"	STR								23
	A510				2	10'-5"	STR								22
*	A511				4	11'-3"	STR								47
*	A512				2	4'-1"	STR								9
	A513				3	13'-4"	1	6'-4"	11"	6'-4"					42
	A514				1 S.O. 5	12'-8" TO 9'-4"	1	6'-0" TO 4'-4"	11"	6'-0" TO 4'-4"			5"		57
	A515				1	7'-1"	8	1'-10"	4'-11"	1'-11"					7
	A516				1	7'-7"	8	2'-4"	4'-11"	1'-11"					8
	A517				1	5'-4"	STR								6
	A518				1	5'-10"	STR								5
	A519				2	10'-4"	STR								22
	A520				2	10'-10"	STR								23
*	A521				4	32'-4"	STR								135
*	A522				2	26'-1"	STR								54
	A523			3		14'-0"	1	6'-8"	11"	6'-8"					44
	A524			1 S.O. 5		13'-4" TO 9'-8"	1	6'-4" TO 4'-6"	11"	6'-4" TO 4'-6"			5 1/2"		60
	A525			1		8'-1"	8	2'-9"	4'-11"	2'-3"					8
	A526			1		7'-8"	8	2'-4"	4'-11"	2'-3"					8
	A527			1		5'-7"	STR								6
	A528			1		5'-2"	STR								5
	A529			2		11'-4"	STR								24
	A530			2		10'-10"	STR								23
*	A531			4		32'-3"	STR								135
*	A532			2		24'-9"	STR								52
	A533			3		13'-6"	1	6'-5"	11"	6'-5"					42
	A534			1 S.O. 4		12'-8" TO 9'-8"	1	6'-0" TO 4'-6"	11"	6'-0" TO 4'-6"			6"		47
	A535			1		6'-7"	8	1'-10"	4'-5"	1'-11"					7
	A536			1		7'-1"	8	2'-4"	4'-5"	1'-11"					7
	A537			1		4'-10"	STR								4
	A538			1		5'-4"	STR								6
	A539			2		9'-10"	STR								19
	A540			2		10'-4"	STR								22
*	A541			4		11'-5"	STR								48
*	A542			2		5'-7"	STR								12
	A543		3			14'-4"	1	6'-10"	11"	6'-10				45	
	A544		1 S.O. 5			13'-6" TO 9'-6"	1	6'-5" TO 4'-5"	11"	6'-5" TO 4'-5"			6"	60	
	A545		1			8'-0"	8	1'-10"	5'-8"	2'-5"				8	
	A546		1			8'-6"	8	2'-4"	5'-8"	2'-5"				9	
	A547		1			5'-0"	STR							5	
	A548		1			5'-6"	STR							6	
	A549		2			10'-10"	STR							23	
	A550		2			11'-7"	STR							24	
*	A551		4			13'-4"	STR							56	
*	A552		2			6'-3"	STR							13	
	A553		3			12'-10"	1	6'-1"	11"	6'-1"				40	
	A554		1 S.O. 4			12'-6" TO 9'-6"	1	5'-11" TO 4'-5"	11"	5'-11" TO 4'-5"			6"	46	

* WITH MECHANICAL CONNECTOR (SEE NOTE 7 ON SHEET 24/25)

NOTES:

1. SEE SHEET 24/25 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
	A555		1			7'-3"	8	2'-9"	4'-3"	1'-8"				8	
	A556		1			6'-10"	8	2'-4"	4'-3"	1'-8"				6	
	A557		1			6'-2"	STR							6	
	A558		1			5'-9"	STR							6	
	A559		2			10'-9"	STR							22	
	A560		2			10'-3"	STR							21	
	A561		4			30'-0"	STR							125	
*	A562		4			17'-0"	STR							71	
*	A563		2			36'-6"	STR							76	
	A564	86				7'-7"	1	3'-1"	1'-8"	3'-1"				680	
	A565	2 S.O. 8				10'-1" TO 4'-9"	1	4'-4" TO 1'-8"	1'-8"	4'-4" TO 1'-8"			4½"	124	
	A566	2				10'-9"	1	4'-8"	1'-8"	4'-8"				22	
	A567	1 S.O. 5				9'-11" TO 5'-7"	1	4'-3" TO 2'-1"	1'-8"	4'-3" TO 2'-1"			6½"	48	
	A568	1				7'-10"	8	1'-8"	5'-7"	2'-7"				8	
	A569	1				7'-0"	8	0'-10"	5'-7"	2'-7"				7	
	A570	1				4'-9"	STR							5	
	A571	1				3'-11"	STR							4	
	A572	1				7'-3"	STR							8	
	A573	1				6'-5"	STR							7	
	A574	2				9'-5"	1	4'-0"	1'-8"	4'-0"				20	
	A575	1 S.O. 4				8'-9" TO 5'-9"	1	3'-8" TO 2'-2"	1'-8"	3'-8" TO 2'-2"			6"	30	
	A576	1				5'-2"	8	10"	3'-10"	2'-0"				5	
	A577	1				6'-0"	8	1'-8"	3'-10"	2'-0"				6	
	A578	1				3'-0"	STR							3	
	A579	1				3'-10"	STR							8	
	A580	1				4'-8"	STR							5	
	A581	1				5'-5"	STR							6	
	A582	6 S.O. 6				10'-1" TO 4'-9"	1	4'-4" TO 1'-8"	1'-8"	4'-4" TO 1'-8"			6½"	278	
*	A602	2				12'-0"	STR							36	
*	A603	2				30'-0"	STR							90	
	A604	2				14'-9"	STR							44	
	A701	24				6'-4"	STR							311	
	A702	28				5'-2"	STR							296	
*	A801				4	11'-3"	STR								120
*	A802				4	32'-4"	STR								345
*	A803			4		32'-3"	STR								344
*	A804			4		11'-5"	STR								122
*	A805		4			13'-4"	STR							142	
*	A806		4			30'-0"	STR							320	
	A807		4			20'-8"	STR							221	
	A901	4				14'-0"	16	1'-7"	12'-0"	4'-0"				190	
	A902	2				8'-0"	4	1'-7"	6'-8"					54	
	A903	10				15'-10"	4	1'-7"	14'-6"					538	
*	A904	4				12'-0"	STR							163	
	A905	4				21'-7"	STR							294	
*	A906	4				30'-0"	STR							408	
*	A907	4				30'-0"	STR							408	
	A908	4				32'-10"	STR							447	
	A909	4				30'-0"	STR							408	
*	A910	4				19'-10"	STR							270	
	A911	12				12'-4"	16	1'-7"	10'-2"	4'-4"				503	
	A912	6				7'-0"	4	1-7"	5'-8"					143	
	A913	30				14'-1"	4	1'-7"	12'-9"					1437	
	D801	51				6'-4"	13							862	
	D802			27	20	19	6'-2"	10						445	642
	D803			24	23	24	6'-0"	11						384	753
	A1001					8	40'-0"	STR							1377
	A1002				8		40'-0"	STR							1377
	A1003			4			34'-7"	STR						595	
	A1004			4			47'-7"	STR						819	
														TOTAL 12775	7794

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

DESIGNED BSS | DRAWN SK | REVIEWED DEK | DATE 8/04
CHECKED MTO | REVISED | STRUCTURE FILE NUMBER 5002370 (L) 5002400 (R)

REINFORCING STEEL LIST
BRIDGE NO. MAH-80-0313 L/R
I.R. 80 OVER OHLTOWN ROAD

MAH-80-0.97
PID 6080

24A/25

1028A
1100

8/16/05
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REINFORCING STEEL LIST

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
*	AS601		6			46'-4"	STR							418	
*	AS602		6			34'-5"	STR							310	
	AS603		51			7'-2"	8	1'-5"	3'-8"	1'-10"	1'-10"			549	
	AS604			12	12	36'-0"	STR								1298
	AS605			43		7'-9"	8	1'-5"	4'-1"	2'-0"	2'-0"				501
	AS606				43	6'-8"	8	1'-5"	3'-4"	1'-8"	1'-8"				431
	AS610		51	43	43	2'-10"	4	1'-6"	1'-6"					217	366
													TOTAL	**	**

PIERS

	MARK	LEFT BRIDGE PIER 1	LEFT BRIDGE PIER 2	RIGHT BRIDGE PIER 1	RIGHT BRIDGE PIER 2	LENGTH	TYPE	A	B	C	D	R	INCR.	WEIGHT LEFT	WEIGHT RIGHT
	SP401	2				15'-4"	5		4 1/2"					453	
	SP402		2			16'-3"	5		4 1/2"					478	
	SP403			1		13'-10"	5		4 1/2"						206
	SP404				1	14'-11"	5		4 1/2"						221
	P501	2 S.O. 4	2 S.O. 4			14'-4" TO 12'-4"	6	5'-3" TO 4'-3"	2'-8"	5'-3" TO 4'-3"	10"		4"	223	
	P502	2 S.O. 4	2 S.O. 4			7'-1" TO 5'-1"	1	2'-4" TO 1'-4"	2'-8"	2'-4" TO 1'-4"			4"	102	
	P503	18	18	31	31	14'-4"	6	5'-3"	2'-8"	5'-3"	10"			538	927
	P504	65	65	49	49	7'-1"	1	2'-4"	2'-8"	2'-4"				960	724
	P505	58	58	58	58	3'-8"	4	10"	2'-11"					444	444
	P506	27	27	18	18	13'-8"	6	4'-11"	2'-8"	4'-11"	10"			770	513
	P507	20	20			13'-2"	6	4'-8"	2'-8"	4'-8"	10"			549	
	P508			1 S.O. 3	1 S.O. 3	14'-0" TO 12'-4"	6	5'-1" TO 4'-3"	2'-8"	5'-1" TO 4'-3"	10"		5"		82
	P509			1 S.O. 3	1 S.O. 3	7'-1" TO 5'-5"	1	2'-4" TO 1'-6"	2'-8"	2'-4" TO 1'-6"			5"		39
	P510			1 S.O. 3	1 S.O. 3	13'-4" TO 11'-8"	6	4'-9" TO 3'-11"	2'-8"	4'-9" TO 3'-11"	10"		5"		78
	P511			1 S.O. 3	1 S.O. 3	7'-1" TO 5'-5"	1	2'-4" TO 1'-6"	2'-8"	2'-4" TO 1'-6"			5"		39
*	P601	2	2			15'-7"	STR							94	
*	P602	2	2			38'-6"	STR							231	
*	P603	6	6			34'-10"	STR							628	
*	P604	6	6			46'-10"	STR							844	
*	P605			2	2	26'-5"	STR								159
*	P606			2	2	14'-8"	STR								88
	P607			12	12	36'-5"	STR								1313
	P801	48	48	24	24	8'-8"	STR							2221	1111
	P1101	24	24	12	12	14'-4"	4	2'-0"	12'-8"					3655	1828
	P1102	24				19'-0"	7	17'-5"						2423	
	P1103		24			19'-11"	7	18'-4"						2540	
	P1104			12		17'-6"	7	15'-11"							1116
	P1105				12	18'-7"	7	17'-0"							1185
*	P1106	5	5			15'-10"	8	12'-8"	3'-0"	1'-0"				841	
*	P1107	5	5			38'-9"	8	35'-7'	3'-0"	1'-0"				2059	
*	P1108	6	6			16'-9"	4	1'-6"	15'-7"					1068	
*	P1109	6	6			39'-8"	4	1'-6"	38'-6"					2529	
*	P1110			5	5	14'-11"	8	12'-8"	2'-1"	1'-0"					793
*	P1111			6	6	15'-10"	4	1'-6"	14'-8"						1009
*	P1401			5	5	26'-8"	8	24'-0"	2'-6"	1'-0"					2040
*	P1402			6	6	27'-7"	4	26'-5"	1'-6"						2532
													TOTAL	23649	16447

* WITH MECHANICAL CONNECTOR (SEE NOTE 7 ON SHEET 24/25)

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

NOTES:

1. SEE SHEET 24/25 FOR REINFORCEMENT NOTES.

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

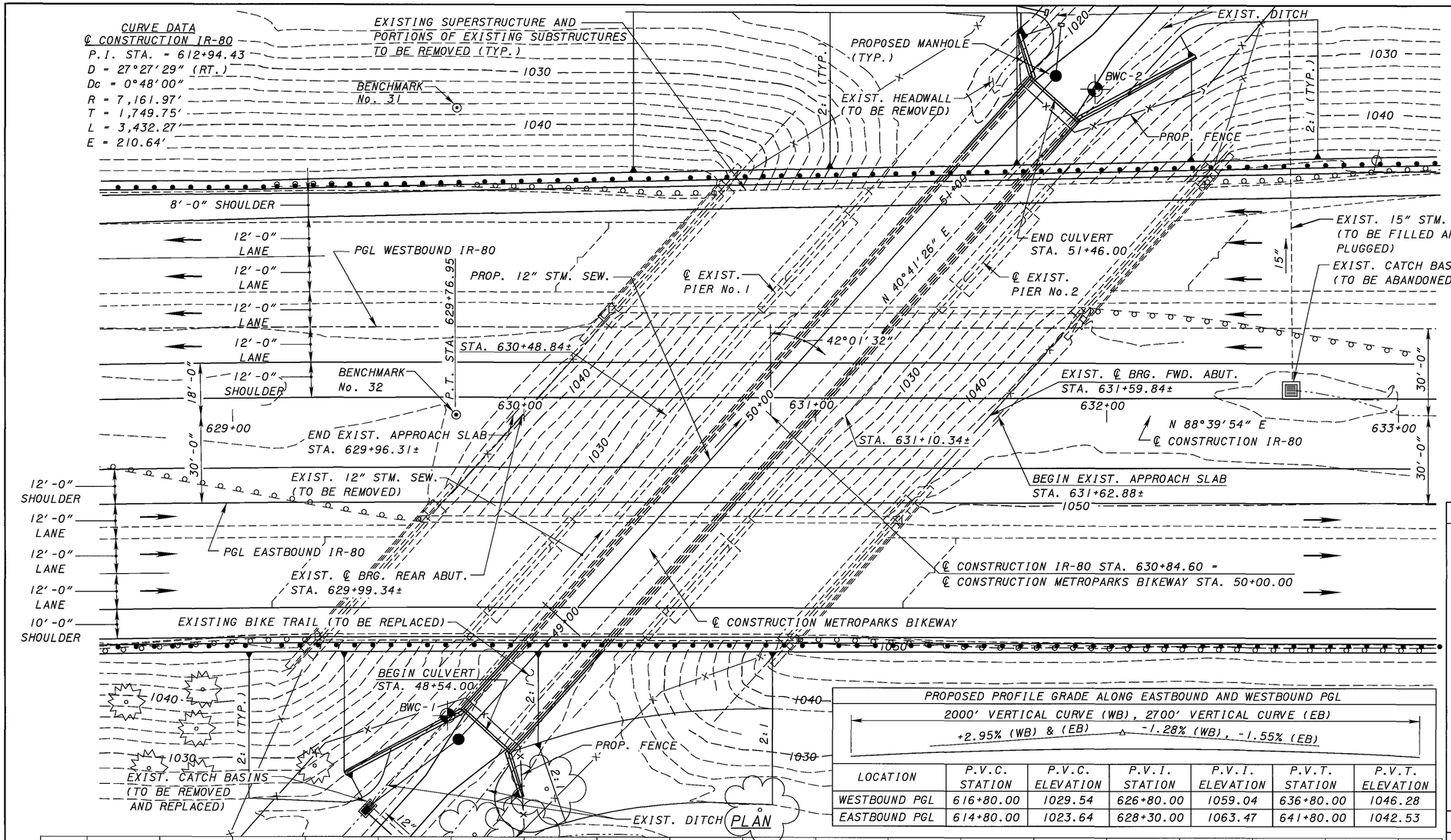
DESIGNED	DRAWN	REVIEWED	DATE
SK	SK	DEK	8/04
CHECKED	REVISED	REVISED	STRUCTURE FILE NUMBER
MTO			5002370 (L) 5002400 (R)

REINFORCING STEEL LIST
BRIDGE NO. MAH-80-03/13 L/R
I.R. 80 OVER OHLTOWN ROAD

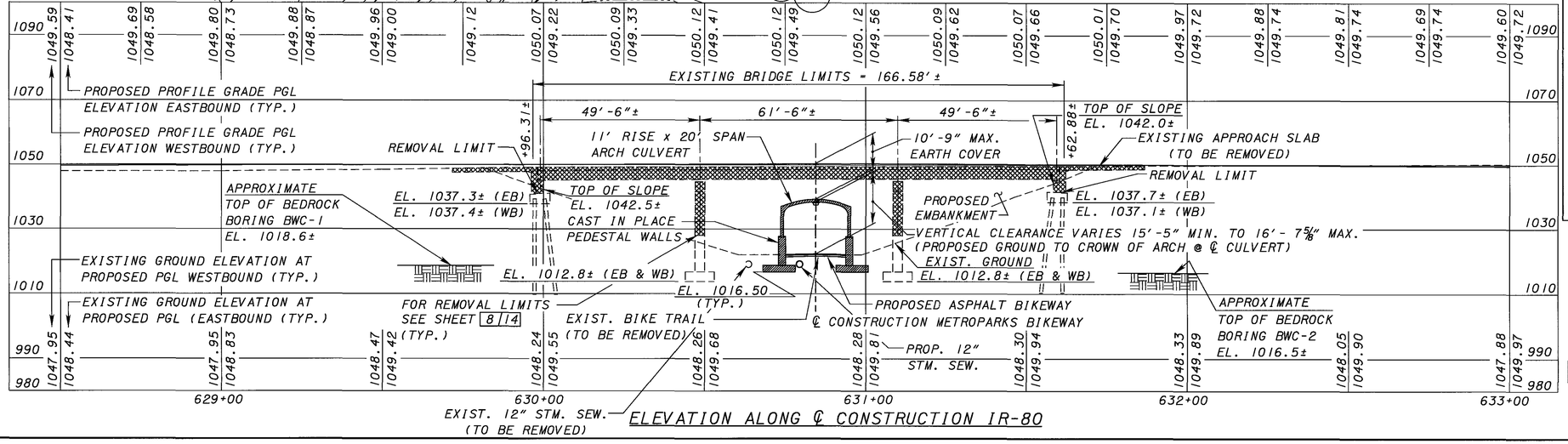
MAH-80-0.97
PID 6080

25 / 25

1029
1100



PROPOSED PROFILE GRADE ALONG EASTBOUND AND WESTBOUND PGL						
2000' VERTICAL CURVE (WB), 2700' VERTICAL CURVE (EB)						
+2.95% (WB) & (EB) △ -1.28% (WB), -1.55% (EB)						
LOCATION	P.V.C. STATION	P.V.C. ELEVATION	P.V.I. STATION	P.V.I. ELEVATION	P.V.T. STATION	P.V.T. ELEVATION
WESTBOUND PGL	616+80.00	1029.54	626+80.00	1059.04	636+80.00	1046.28
EASTBOUND PGL	614+80.00	1023.64	628+30.00	1063.47	641+80.00	1042.53



ELEVATION ALONG ℄ CONSTRUCTION IR-80

TRAFFIC DATA
CURRENT YEAR ADT (2006) = 55,110
CURRENT YEAR ADTT (2006) = 16,533
DESIGN YEAR ADT (2026) = 75,010
DESIGN YEAR ADTT (2026) = 22,505

BORING LOCATIONS		
BORING No.	STATION *	OFFSET *
BWC-1	629+73.69	103.07' RT.
BWC-2	631+96.06	111.71' LT.

* - STATIONS AND OFFSETS ARE FROM THE CENTERLINE OF I-80

BENCHMARK No. 31
TOP OF CAPPED PIN SET STA. 629+77.00, 105.00' LT. EL. 1037.29

BENCHMARK No. 32
TOP OF IRON PIN IN CONCRETE MONUMENT STA. 629+77.00, ℄ SURVEY & CONSTRUCTION I-80 EL. 1047.91

EXISTING STRUCTURE
TYPE: 3 SPAN CONTINUOUS STEEL BEAMS WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURES
SPANS: 49'-6"±, 61'-6"±, 49'-6"± c/c BRGS.
ROADWAY: 40'-0"± RIGHT STRUCTURE VARIES LEFT STRUCTURE TOE/TOE SAFETY CURBS
ORIGINAL DESIGN LOADING: CF-2000(57)
SKEW: 42°-10'-30"± LEFT FORWARD
WEARING SURFACE: 3¾"± ASPHALT ON 1¼"± LMC OVERLAY
APPROACH SLABS: AS-1-54 (25'-0"± LONG)
ALIGNMENT: RIGHT STRUCTURE 0°48' CURVE & TANGENT LEFT STRUCTURE - TANGENT
SUPERELEVATION: VARIES
DATE BUILT: 1969
STRUCTURE FILE No. 5002435 L - 5002494 R

PROPOSED STRUCTURE
TYPE: PRECAST REINFORCED THREE- SIDED ARCH CULVERT ON CAST IN PLACE PEDESTAL WALLS
SPAN x RISE: 20'-0" x 11'-0" WITH 4'-6" MINIMUM PEDESTALS
ALIGNMENT: TANGENT
SKEW: 42°-01'-32" LEFT FORWARD
LOADING: HS-25 AND THE ALTERNATE MILITARY LOADING
EARTH COVER: 10'-9" MAX.
LATITUDE: 41°07'24"
LONGITUDE: 80°46'36"

NOTES:

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

⊕ - INDICATES SOIL BORING LOCATIONS

▨ - INDICATES REMOVAL AS PER ITEM 202

PGL - PROFILE GRADE LINE

DESIGN AGENCY
TRANSYSTEMS CORPORATION
55 PUBLIC SQUARE - SUITE 1850
CLEVELAND, OHIO 44113-1907

DESIGNED NFF | DRAWN CAG | CHECKED BTA | REVISED | REVIEWED RER | DATE 7/19/05

STRUCTURE FILE NUMBER 5002443

SITE PLAN
BRIDGE NO. MAH-80-0332
IR-80 OVER METROPARKS BIKEWAY

MAH-80-0.97
PID 6080

1 / 14

1030 / 1100

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STRUCTURE GENERAL NOTES

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 ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING:

HS25 AND THE ALTERNATE MILITARY LOADING.

DESIGN DATA:

CAST-IN-PLACE STRUCTURES:
CONCRETE CLASS C - COMPRESSIVE STRENGTH 4000 P.S.I. (SUBSTRUCTURE)

REINFORCING STEEL - ASTM A615 OR A996 GRADE 60 MINIMUM YIELD STRENGTH 60,000 P.S.I.

PRECAST STRUCTURES:
OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS SECTION 603

ITEM 202 - STRUCTURE REMOVED OVER 20'-0" SPAN, AS PER PLAN:

WHEN NO LONGER NEEDED TO MAINTAIN TRAFFIC, THE EXISTING STRUCTURE SHALL BE REMOVED UPON RECEIVING PERMISSION FROM THE ENGINEER. ABUTMENTS MUST BE REMOVED TO THE EXTENT NECESSARY TO AVOID INTERFERENCE WITH FUTURE ROADWAY CONSTRUCTION AND SHALL SATISFY ALL OF THE CRITERIA FOR ITEM 202.

REMOVE EXISTING STRUCTURE COMPONENTS, INCLUDING ALL MISCELLANEOUS ITEMS ON/ABOVE THE SUPERSTRUCTURE NOT SEPARATELY ITEMIZED FOR PAYMENT. REMOVE EXISTING ABUTMENTS AND WINGWALLS AS SHOWN ON THE PLANS. REMOVE EXISTING PIER TO THE ELEVATIONS SHOWN ON THE PLANS.

FOUNDATION BEARING PRESSURE:

FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM BEARING PRESSURE OF 4.3 TONS PER SQUARE FOOT FOR THE CULVERT PEDESTAL WALLS AND 3.0 TONS PER SQUARE FOOT FOR THE WINGWALLS. THE ALLOWABLE BEARING PRESSURE IS 6 TONS PER SQUARE FOOT.

ITEM 503, UNCLASSIFIED EXCAVATION, INCLUDING ROCK, AS PER PLAN:

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

POROUS BACKFILL WITH FILTER FABRIC:

POROUS BACKFILL WITH FILTER FABRIC 2 FEET THICK SHALL EXTEND UP TO 1'-0" BELOW TOP OF PEDESTAL WALLS, TO 1'-0" BELOW THE EMBANKMENT SURFACE FOR THE WINGWALLS, AND LATERALLY TO THE ENDS OF THE WINGWALLS.

FOOTINGS:

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

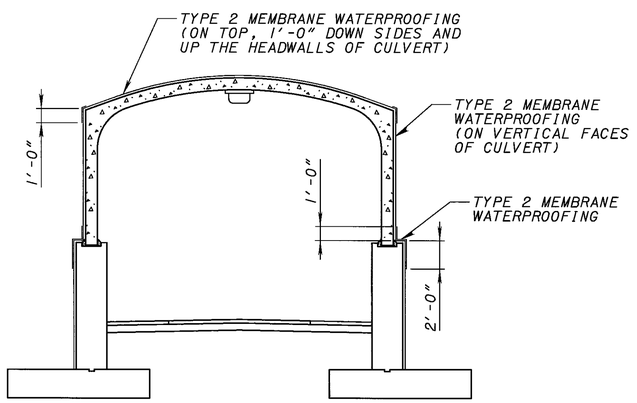
ITEM 512, TYPE 2 WATERPROOFING:

TYPE 2 MEMBRANE WATERPROOFING SHALL BE APPLIED TO THE TOP SURFACE OF THE PRECAST CULVERT SECTIONS AND SHALL EXTEND VERTICALLY DOWN ALL SIDES FOR THE PORTIONS OF THE CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL, AS SHOWN BELOW. THE EXTERIOR JOINT GAP ON THE TOP AND SIDES BETWEEN THE PRECAST CULVERT SECTIONS SHALL BE FILLED AS PER CMS 603 PRIOR TO INSTALLING THE MEMBRANE WATERPROOFING. PAYMENT FOR THE MEMBRANE WATERPROOFING SHALL BE AT THE CONTRACT PRICE BID PER SQUARE FOOT FOR ITEM TYPE 2 WATERPROOFING.

ITEM 512, SEALING OF CONCRETE SURFACES (NON-EPOXY), AS PER PLAN:

PRIOR TO APPLICATION OF ACRYLIC STAINS, APPLY NON-EPOXY CONCRETE SEALER TO MOLDED RANDOM CUT STONE SURFACES. THE PROVISIONS OF ITEM 512 APPLY, EXCEPT AS FOLLOWS:

1. APPLY SEALER WITH A BRUSH OR ROLLER ONLY.
2. USE A CLEAR SEALER.
3. VERIFY THE PRODUCT FURNISHED IS COMPATIBLE WITH THE PROPOSED STAIN PRODUCT. PROVIDE WRITTEN VERIFICATION TO THE ENGINEER.



ITEM 512, SPECIAL - SEALING, MISC.: ANTI-GRAFFITI COATING:

THE WORK PERFORMED FOR THIS ITEM SHALL CONSIST OF COATING THE INSIDE FACE OF THE PRECAST CULVERT INCLUDING THE EXPOSED SURFACES OF THE PEDESTAL WALLS. PRODUCTS USED TO COAT THE CONCRETE SURFACES SHALL BE AS MANUFACTURED BY THE POLY-CARB CO. (1-440-248-1223) MARK 73, DUMOND CHEMICAL INC. (1-212-859-6350), DUMOND CPU 647 GRAFFITTI BARRIER COAT, OR BY PROSOCO (1-800-255-4255) SURE KLEAN WEATHER SEAL BLOK-GUARD AND GRAFFITI CONTROL, OR AN APPROVED EQUAL.

ALL CONCRETE MUST BE CURED A MINIMUM OF 45 DAYS PRIOR TO THE APPLICATION. ALL SURFACES SHALL BE PREPARED IN ACCORDANCE WITH THE COATING MANUFACTURER'S RECOMMENDATIONS. A TEST PATCH SHALL BE COATED IN AN INCONSPICUOUS AREA TO DETERMINE ADHESION, COMPATIBILITY, AND FINISHED APPEARANCE FOR APPROVAL BY THE ENGINEER. ALL COATING OF CONCRETE FOR THE ENTIRE PROJECT SHALL BE PERFORMED AS ONE CONTINUOS OPERATION TO ASSURE CONSISTENCY AND UNIFORMITY OF APPEARANCE. PAYMENT FOR ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS REQUIRED TO STAIN THE CONCRETE SURFACES AS SHOWN IN THE PLANS, HEREIN SPECIFIED SHALL BE MADE AT THE SQUARE YARD PRICE BID FOR ITEM 512, SPECIAL - SEALING, MISC.: ANTI-GRAFFITI COATING.

ASBESTOS NOTIFICATION:

AN ASBESTOS SURVEY OF THE MAH-80-0332 L/R BRIDGES (STRUCTURE FILE NUMBERS 5002494/5002435) OVER METROPARKS BIKEWAY, 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.

MADE BY RCK DATE 05/13/04
CHECK'D BY MLR DATE 08/20/04

ESTIMATED QUANTITIES

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	FUNDING		REFERENCE SHEET NUMBER
					IM	NHS	
202	11003	LUMP		STRUCTURE REMOVED OVER 20' SPAN, AS PER PLAN	LUMP		2/14
202	22900	270	SQ YD	APPROACH SLAB REMOVED	270		
502	11100	LUMP		STRUCTURE FOR MAINTAINING TRAFFIC *	LUMP		1049
503	11100	LUMP		COFFERDAMS, CRIBS AND SHEETING	LUMP		
503	21321	LUMP		UNCLASSIFIED EXCAVATION, INCLUDING ROCK, AS PER PLAN	LUMP		2/14
509	10000	142808	POUND	EPOXY COATED REINFORCING STEEL	142808		
511	46000	469	CU YD	CLASS C CONCRETE, (ABOVE FOOTING)	469		
511	46500	423	CU YD	CLASS C CONCRETE, FOOTING	423		
511	71200	2142	SQ FT	CONCRETE, MISC.: MOLDED RANDOM CUT STONE SURFACE	2142		2A/14
511	71200	2142	SQ FT	CONCRETE, MISC.: STAINING CONCRETE SURFACES	2142		2A/14
511	81300	2	EACH	CONCRETE, MISC.: MOCK UP, MOLDED RANDOM CUT STONE SURFACE	2		2A/14
512	10051	260	SQ YD	SEALING OF CONCRETE SURFACES (NON-EPOXY), AS PER PLAN	260		2/14
512	33000	1748	SQ YD	TYPE 2 WATERPROOFING	1748		2/14
512	75500	1565	SQ YD	SPECIAL - SEALING MISC.: ANTI-GRAFFITI COATING	1565		2/14
516	13600	154	SQ FT	1" PREFORMED EXPANSION JOINT FILLER	154		
518	21200	434	CU YD	POROUS BACKFILL WITH FILTER FABRIC	434		2/14
518	40000	708	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	708		
518	40011	53	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN	53		1044
603	71000	292	FT	CONDUIT, TYPE A, PRECAST REINFORCED CONCRETE ARCH SECTIONS, (20' SPAN X 11' RISE)	292		

* - FOR ESTIMATED QUANTITIES PROVIDED FOR LUMP SUM "ITEM 502 - STRUCTURE FOR MAINTAING TRAFFIC", SEE SHEET NO. 1049.

DESIGN AGENCY
TRANSYSTEMS CORPORATION
55 PUBLIC SQUARE, SUITE 1650
CLEVELAND, OHIO 44113-1901

DESIGNED	DRAWN	REVIEWED	DATE
NFF	MLR	RER	7/19/05
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MLR		5002443	

GENERAL NOTES AND ESTIMATED QUANTITIES
BRIDGE NO. MAH-80-0332
IR-80 OVER METROPARKS BIKEWAY

MAH-80-0.97
PID 6080

2 / 14

1031
1100

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STRUCTURE GENERAL NOTES

ITEM 511, CONCRETE, MISC.: MOLDED RANDOM CUT STONE SURFACE

A. GENERAL:

THE WORK TO BE DONE UNDER THIS ITEM SHALL INCLUDE:

1. CONSTRUCT TEXTURED AND COLORED CONCRETE SURFACES USING MOLDS AND COLOR STAIN SYSTEM DESIGNED TO DUPLICATE CLOSELY THE APPEARANCE AND TEXTURE OF REAL RANDOM CUT STONE.
2. USE MOLDS WITH RANDOM CUT STONE DIMENSIONS OF 2'-0" TO 6'-0". THE RELIEF OF THE GROUT LINES SHALL BE AT LEAST 1⅛" BUT NOT EXCEED 1⅝".
3. USE REUSABLE, HIGH-STRENGTH URETHANE MOLDS.
4. NO LESS THAN 60 DAYS PRIOR TO THE CONSTRUCTION OF THE FIRST MOLDED RANDOM CUT STONE SURFACE, SUBMIT TO THE ENGINEER A 24" SQUARE SAMPLE OF THE PROPOSED RANDOM CUT STONE MOLD, INCLUDING MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS FOR ITS USE.
5. NO LESS THAN 30 DAYS PRIOR TO THE CONSTRUCTION OF THE FIRST MOLDED RANDOM CUT STONE SURFACE, SUBMIT TO THE ENGINEER ONE COPY OF SHOP DRAWINGS SHOWING PLAN, ELEVATION, AND DETAILS TO SHOW OVERALL PATTERN, JOINT LOCATIONS, FORM TIE LOCATIONS AND END, EDGE, AND OTHER SPECIAL CONDITIONS.
6. A PRE-INSTALLATION MEETING IS REQUIRED. SCHEDULE MEETING AMONG MANUFACTURER'S REPRESENTATIVES, APPROPRIATE SUB-CONTRACTORS, THE DISTRICT 4 PRODUCTION ADMINISTRATOR OR HIS DESIGNEE, MILL CREEK METROPARK REPRESENTATIVE AND THE ENGINEER TO ASSURE UNDERSTANDING OF FORMLINER USE, STAIN APPLICATION, AND THE REQUIREMENTS OF MOCKUP CONSTRUCTION.

B. PRODUCTS:

1. SIMULATED RANDOM CUT STONE MOLDS SHALL BE REUSABLE, MADE OF HIGH-STRENGTH URETHANE, AND EASILY ATTACHABLE TO FORMS. MOLDS SHALL NOT COMPRESS MORE THAN ¼" WHEN CONCRETE IS POURED AT RATE OF 10 VERTICAL FEET PER HOUR. MOLDS SHALL BE REMOVABLE WITHOUT CAUSING DETERIORATION OF SURFACE OR UNDERLYING CONCRETE. THE WALL MOLD PATTERN SHALL BE SIMILAR TO #11016-RANDOM CUT STONE (16") BY CUSTOM ROCK INTERNATIONAL (1-800-637-2447) OR APPROVED EQUAL.
2. USE A RELEASE AGENT THAT IS COMPATIBLE WITH MOLDS AND WITH COLOR STAIN SYSTEM TO BE APPLIED TO SURFACE. PROVIDE THE ENGINEER WITH MANUFACTURER'S SPECIFICATIONS FOR PRODUCT APPLICATION.
3. USE FORM TIES MADE OF EITHER METAL OR FIBERGLASS. METAL TIES WHICH WILL REMAIN PERMANENTLY EMBEDDED IN THE CONCRETE SHALL BE DESIGNED TO SEPARATE AT LEAST ONE INCH BACK FROM FINISHED SURFACE, LEAVING ONLY A NEAT HOLE TO BE PLUGGED WITH PATCHING MATERIAL. SUBMIT THE TYPE OF FORM TIES TO THE ENGINEER FOR APPROVAL PRIOR TO USE.

C. EXECUTION:

1. CLEAN MOLDS AND MAKE FREE OF BUILDUP PRIOR TO EACH POUR. INSPECT FOR BLEMISHES OR TEARS. REPAIR IF POSSIBLE FOLLOWING MANUFACTURER'S RECOMMENDATIONS. DAMAGED MOLDS SHALL BE REPLACED AT NO ADDITIONAL CHARGE TO THE STATE.
2. APPLY RELEASE AGENT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
3. PLACE MOLDS WITH LESS THAN ¼" SEPARATION BETWEEN THEM. ATTACH MOLDS TO FORM SECURELY FOLLOWING MANUFACTURER'S RECOMMENDATIONS.
4. WHERE FORM LINERS ABUT, CAREFULLY BLEND SURFACE TO MATCH THE BALANCE OF THE RANDOM CUT STONE PATTERN, AVOIDING VISIBLE SEAMS OR FORM MARKS.
5. PLACE FORM TIES AT THINNEST POINTS OF MOLDS (THE HIGH POINTS OF FINISHED SURFACE). NEATLY PATCH THE HOLE REMAINING AFTER DISENGAGING THE PROTRUDING PORTION OF THE TIE SO THAT IT WILL NOT BE VISIBLE AFTER COLORING THE CONCRETE SURFACE.

ITEM 511, CONCRETE, MISC.: STAINING CONCRETE SURFACES

A. GENERAL:

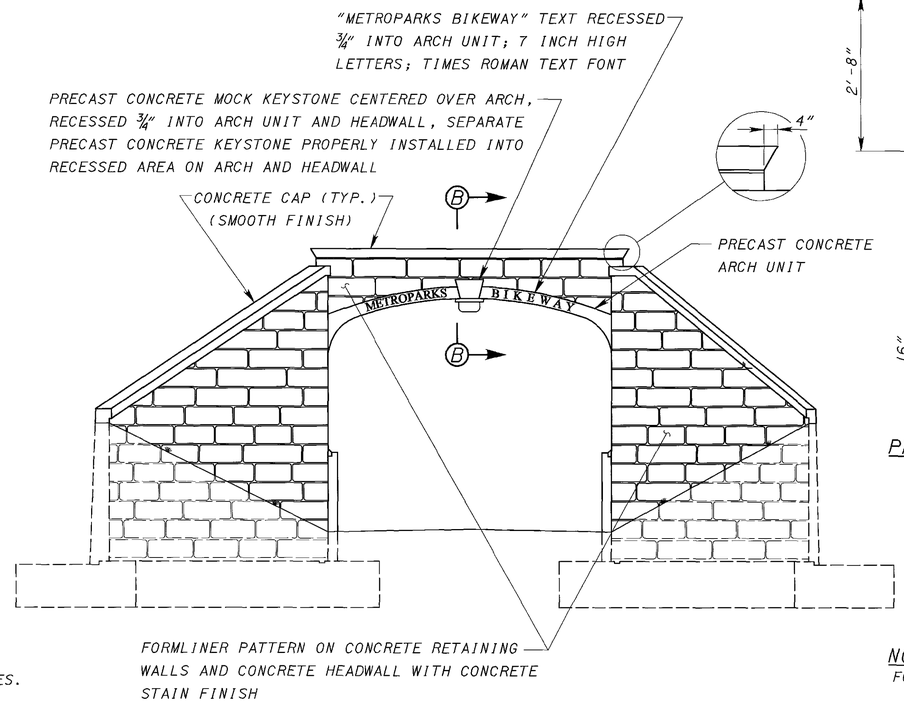
STAIN MOLDED RANDOM CUT STONE SURFACES USING AN ACRYLIC RESIN-BASED STAIN.

B. PRODUCTS:

1. PRODUCT SHALL CREATE A SURFACE FINISH THAT IS BREATHABLE (ALLOWING WATER VAPOR TRANSMISSION), AND THAT RESISTS DETERIORATION FROM WATER, ACID, ALKALI, FUNGI, SUNLIGHT OR WEATHERING.
2. STAIN MIX SHALL BE WATER BORNE, LOW VOC MATERIAL (LESS THAN 289 GRAMS/LITER), AND SHALL MEET REQUIREMENTS FOR WEATHERING RESISTANCE OF 2000 HOURS ACCELERATED EXPOSURE MEASURED IN ACCORDANCE WITH ASTM G-23. SCUB TEST 1000 REVOLUTIONS. ABRASIVE RESISTANCE (TABOR-CF-10) 500 CYCLES. ADHESION ASTM D-3359 1.00 mm CROSS CUTS ON GLASS PASS 3 OR HIGHER ON A SCALE OF 1 TO 5. SUPPLY INFORMATION PERTAINING TO CHEMICAL RESISTANCE ASTM D-1308 TO 87.

C. EXECUTION:

1. PROVIDE THE ENGINEER WITH THE MANUFACTURER'S SPECIFICATIONS FOR PRODUCT APPLICATION. APPLY THE PRODUCT IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS WITH EXCEPTIONS AS NOTED.
2. CLEAN SURFACE PRIOR TO APPLICATION OF STAIN MATERIALS BY PRESSURE WASHING WITH WATER, MINIMUM 3000 PSI (A RATE OF THREE TO FOUR GALLONS PER MINUTE), USING FAN NOZZLE PERPENDICULAR TO AND AT A DISTANCE OF ONE OR TWO FEET FROM SURFACE. COMPLETED SURFACE SHALL BE FREE OF BLEMISHES, DISCOLORATION, SURFACE VOIDS AND UNNATURAL FORM MARKS. DO NOT SANDBLAST. ETCHING IS NOT REQUIRED.
3. APPLY STAIN BY HAND USING A BRUSH OR ROLLER WHEN AMBIENT TEMPERATURE IS BETWEEN 50-90 DEGREES FAHRENHEIT.
4. FINAL COLORATION OF THE MOLDED CUT STONE SURFACES SHALL ACCURATELY SIMULATE THE MOTTLED APPEARANCE OF BROWN/BUFF COLORED NATURAL SANDSTONE INCLUDING THE MULTIPLE COLORS, SHADES, MINERAL OXIDATION, STAINING AND VEINING THAT IS APPARENT IN NATURAL SANDSTONE, AS APPROVED BY THE ENGINEER. THE DESIRED FINISH COLOR EFFECT SHALL BE ACHIEVED BY APPLYING ONE COLOR OVER ANOTHER OR BY INTERMIXING SEVERAL COLORS OF STAIN, AS PER MANUFACTURER'S SPECIFICATIONS. GROUT PATTERN JOINTS SHALL DISPLAY A UNIFORM COLOR AND APPEARANCE OF MORTARED JOINTS. ACTUAL COLORS USED ARE SUBJECT TO CHANGE AT THE DIRECTION OF THE ENGINEER ON REVIEW OF THE APPEARANCE OF THE MOCKUPS. USE COLORS AND TECHNIQUES AS APPROVED FOR THE FINAL MOCKUP.
5. WHERE EXPOSED SOIL OR PAVEMENT IS ADJACENT WHICH MAY SPLATTER DIRT OR SOIL FROM RAINFALL, OR WHERE SURFACE MAY BE EXPOSED TO OVERSPRAY FROM OTHER PROCESSES, PROVIDE TEMPORARY COVER OF FINISHED WORK.



AESTHETIC DETAILS

(TYPICAL AT BOTH ENDS OF CULVERT)

ITEM 511, CONCRETE, MISC.: MOCKUP, MOLDED RANDOM CUT STONE SURFACE

CONSTRUCT 2 MOCKUPS OF THE SIMULATED STONE FINISH AS DETAILED IN THE PLANS. CONSTRUCT MOCKUP IN A SAFE LOCATION IN THE VICINITY OF CONSTRUCTION. START CONSTRUCTION OF MOCKUP AT LEAST 60 DAYS BEFORE PROPOSED MOLDED CONCRETE WORK BEGINS, USING SAME MATERIALS, METHODS, AND WORK FORCE THAT WILL BE USED FOR THE PROJECT. RECAST EACH MOCKUP FROM THE SAME FORM. PROCEED WITH CONSTRUCTION OF MOLDED RANDOM CUT STONE SURFACES ONCE THE ENGINEER HAS DETERMINED THE MOLD MEETS SPECIFICATIONS AND PRODUCES SATISFACTORY RESULTS.

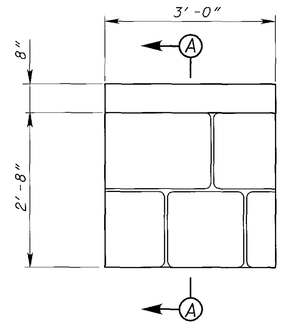
APPLY NON-EPOXY SEALER AND ACRYLIC STAIN IN ACCORDANCE WITH PLAN DETAILS AND MANUFACTURER'S RECOMMENDATIONS.

STAIN FIRST MOCKUP IN ACCORDANCE WITH THE PLAN DETAILS. CONFER WITH THE ENGINEER ON THE STAIN COLOR AND APPLICATION TECHNIQUE TO VERIFY THE PROCESS HAS PRODUCED A SURFACE PROVIDING THE APPEARANCE AND TEXTURE OF REAL RANDOM CUT STONE. IF NECESSARY, STAIN SECOND MOCKUPS, ADJUSTING STAIN COLORS AND APPLICATION TECHNIQUES TO PROVIDE THE APPEARANCE AND TEXTURE OF REAL RANDOM CUT STONE. ADJUST COLOR AND APPLICATION TECHNIQUES TO MEET THE APPROVAL OF THE ENGINEER. PROCEED WITH CONSTRUCTION OF MOLDED RANDOM CUT STONE SURFACES, USING THE APPROVED MOCKUP AS A QUALITY STANDARD.

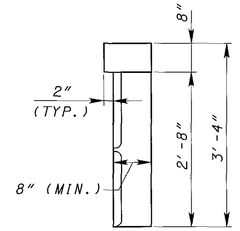
UPON COMPLETION OF PROJECT, DISPOSE OF MOCKUPS.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE ESTIMATED QUANTITIES TO COMPLETE THIS ITEM OF WORK.

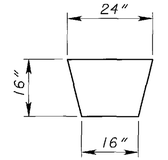
ITEM 511 - CONCRETE, MISC.: MOCKUP, MOLDED RANDOM CUT STONE SURFACE
2 EACH



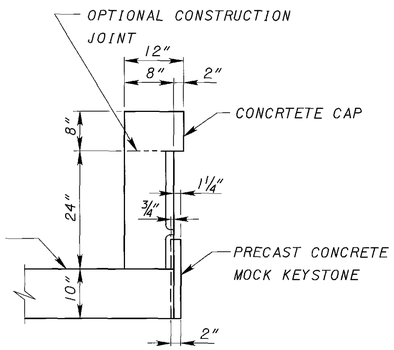
MOCKUP WALL ELEVATION



SECTION A-A



PRECAST CONCRETE MOCK KEYSTONE



SECTION B-B

NOTES:

FORMLINER: RANDOM CUT STONE PATTERN WITH A MAXIMUM RELIEF OF 1⅝" AND COURSE HEIGHT OF 12" TO 16" (SEE NOTE LABLED ITEM 511, CONCRETE MISC.: MOLDED RANDOM CUT STONE SURFACE, THIS SHEET.

CONCRETE STAIN: CONCRETE STAIN TO BE APPLIED TO ALL FORMLINER CONCRETE SURFACES. CONCRETE STAIN SHALL NOT BE APPLIED TO CAPS, ARCH UNIT AND KEYSTONE.

DESIGN AGENCY
TRANSYSTEMS CORPORATION
55 PUBLIC SQUARE, SUITE 1650
CLEVELAND, OHIO 44113-1901

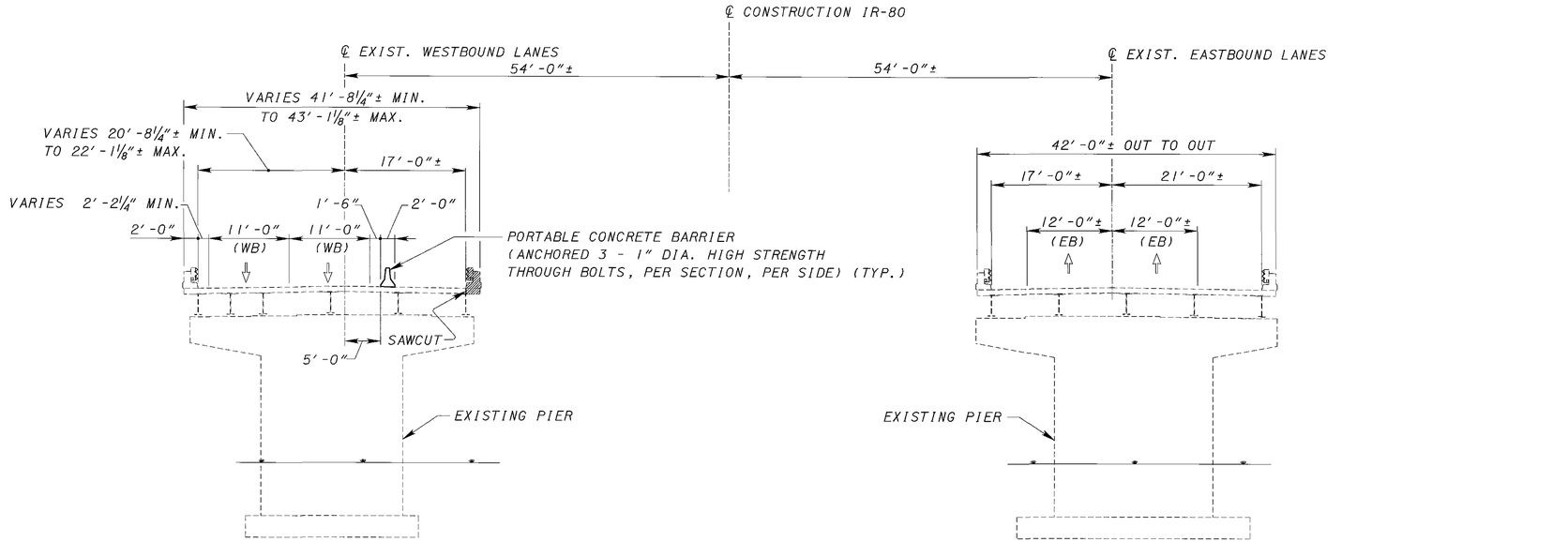
DESIGNED	DRAWN	REVIEWED	DATE
NFF	MLR	RER	7/19/05
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MLR		5002443	

GENERAL NOTES AND AESTHETIC DETAILS
BRIDGE NO. MAH-80-0332
IR-80 OVER METROPARKS BIKEWAY

MAH-80-0.97
PID 6080

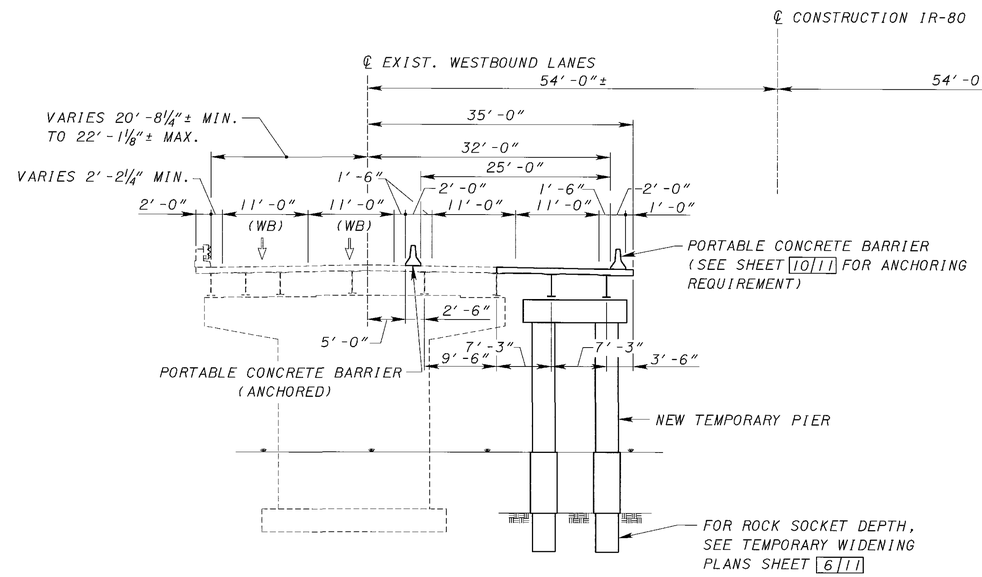
2A/14

1031A/1100



STAGE 1 - PRE-WIDENING REMOVAL

▨ - INDICATES REMOVAL



STAGE 1 - TEMPORARY WIDENING

STAGED CONSTRUCTION SEQUENCE:

STAGE 1

1.) INSTALL PORTABLE CONCRETE BARRIER AS SHOWN ON WESTBOUND STRUCTUTRE.

2.) DIRECT WESTBOUND TRAFFIC TOWARD NORTHERLY PORTION OF BRIDGE.

3.) REMOVE EXISTING DECK TO THE LIMITS SHOWN.

4.) CONSTRUCT WESTBOUND TEMPORARY SUPERSTRUCTURE AND SUBSTRUCTURE.

STAGE 2A & 2B

1.) DIRECT EASTBOUND TRAFFIC ONTO WESTBOUND STRUCTURE.

2.) REMOVE EXISTING EASTBOUND SUPERSTRUCTURE AND SUBSTRUCTURE TO THE LIMITS SHOWN.

3.) INSTALL PRECAST REINFORCED THREE-SIDED ARCH CULVERT ON CAST IN PLACE PEDESTAL WALLS.

4.) BACKFILL TO ELEVATION SHOWN UNDER WESTBOUND LANES AND TO NEW PROFILE UNDER EASTBOUND LANES.

5.) CONSTRUCT NEW PAVEMENT AND SLOPES AS SHOWN ON PLANS.

STAGE 3 & 4

1.) DIRECT TRAFFIC IN PHASES TO NEW EASTBOUND LANES.

2.) REMOVE EXISTING WESTBOUND SUPERSTRUCTURE AND SUBSTRUCTURE TO THE LIMITS SHOWN.

3.) BACKFILL TO NEW PROFILE.

4.) CONSTRUCT NEW PAVEMENT.

STAGE 5

1.) RESUME NORMAL TRAFFIC.

DESIGN AGENCY
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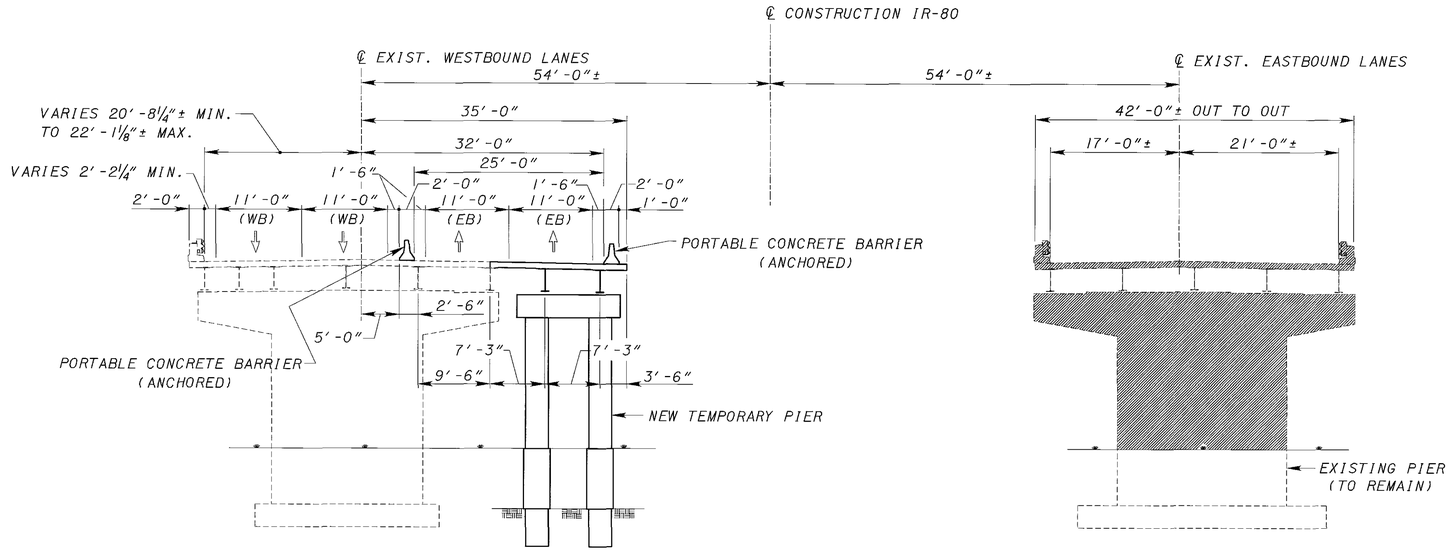
55 PUBLIC SQUARE, SUITE 1650
CLEVELAND, OHIO 44113-1901

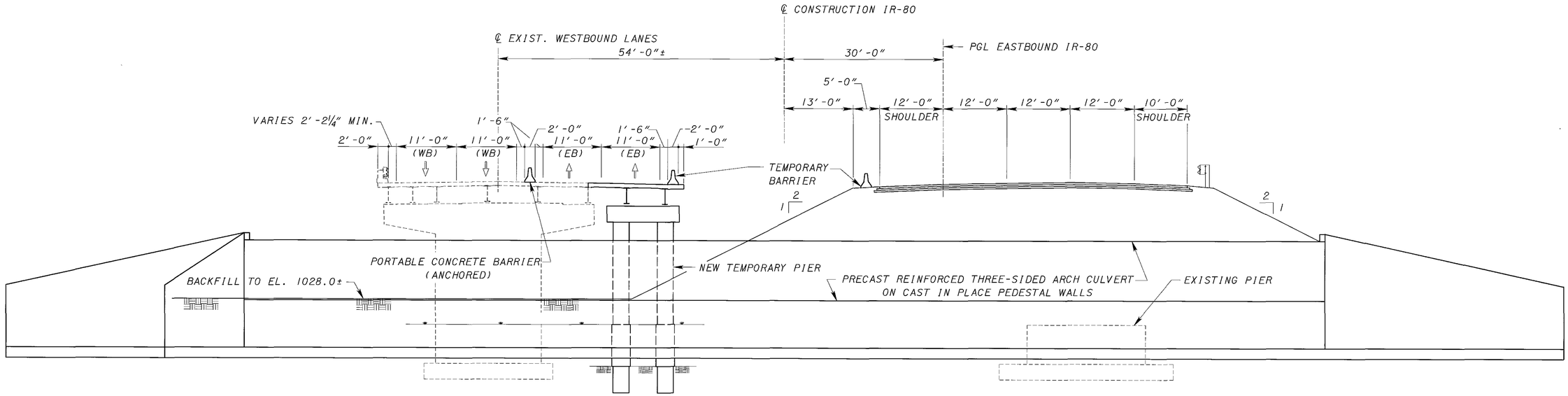
DESIGNED	DRAWN	REVIEWED	DATE
NFF	CAG	RER	7/19/05
CHECKED	REVISED	STRUCTURE FILE NUMBER	
BTA		5002443	

STAGE 1 CONSTRUCTION DETAILS
BRIDGE NO. MAH-80-0332
IR-80 OVER METROPARKS BIKEWAY

MAH-80-0.97
PID 6080



STAGE 2A - REMOVAL



STAGE 2A - CONSTRUCTION

▨ - INDICATES REMOVAL

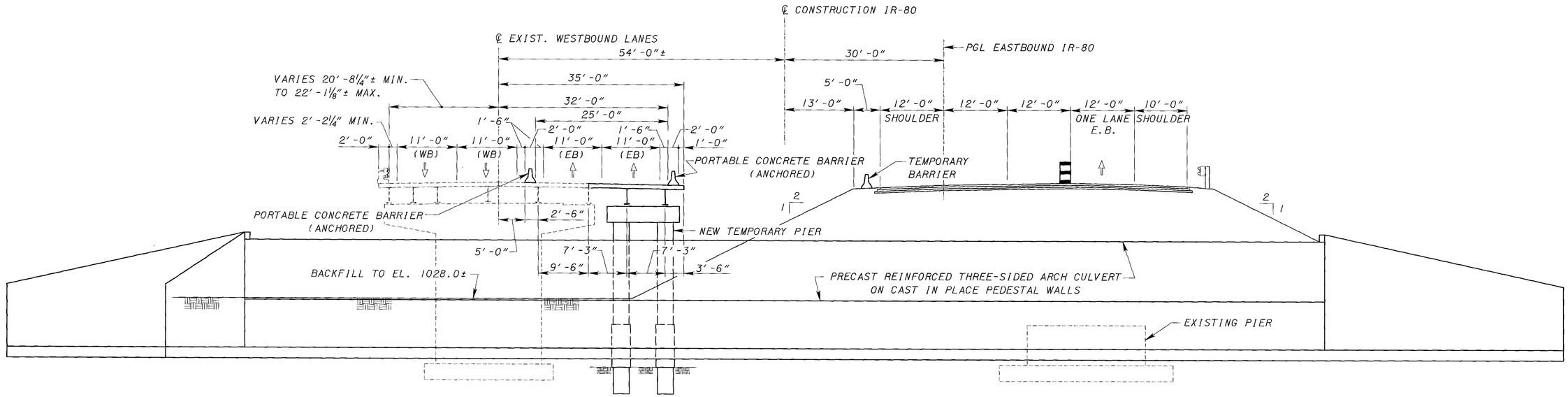
DESIGN AGENCY
TRANSYSTEMS CORPORATION
55 PUBLIC SQUARE, SUITE 1650
CLEVELAND, OHIO 44113-1901

DESIGNED	DRAWN	REVIEWED	DATE
NFF	CAG	RER	7/19/05
CHECKED	REVISED	STRUCTURE FILE NUMBER	
BTA		5002443	

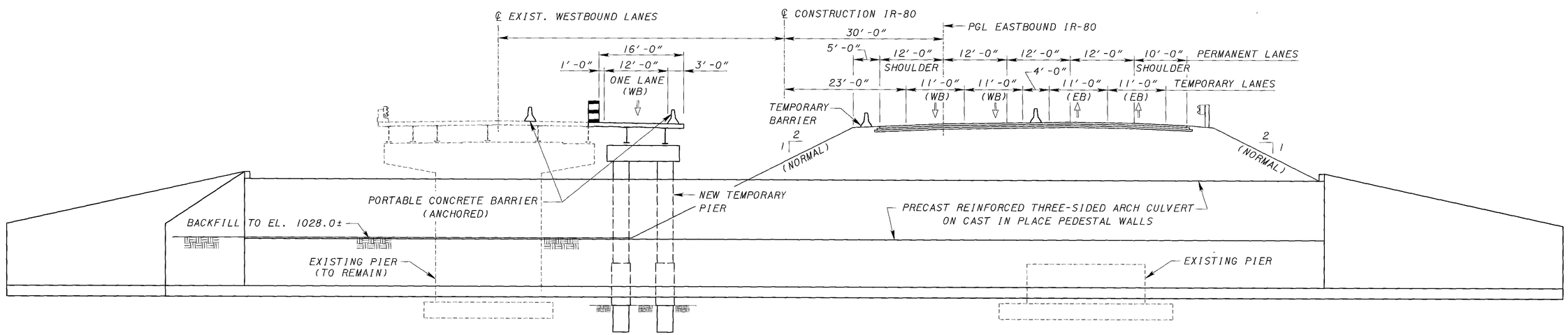
STAGE 2 CONSTRUCTION DETAILS

BRIDGE NO. MAH-80-0332
IR-80 OVER METROPARKS BIKEWAY

MAH-80-0.97
PID 6080



STAGE 2B



STAGE 3

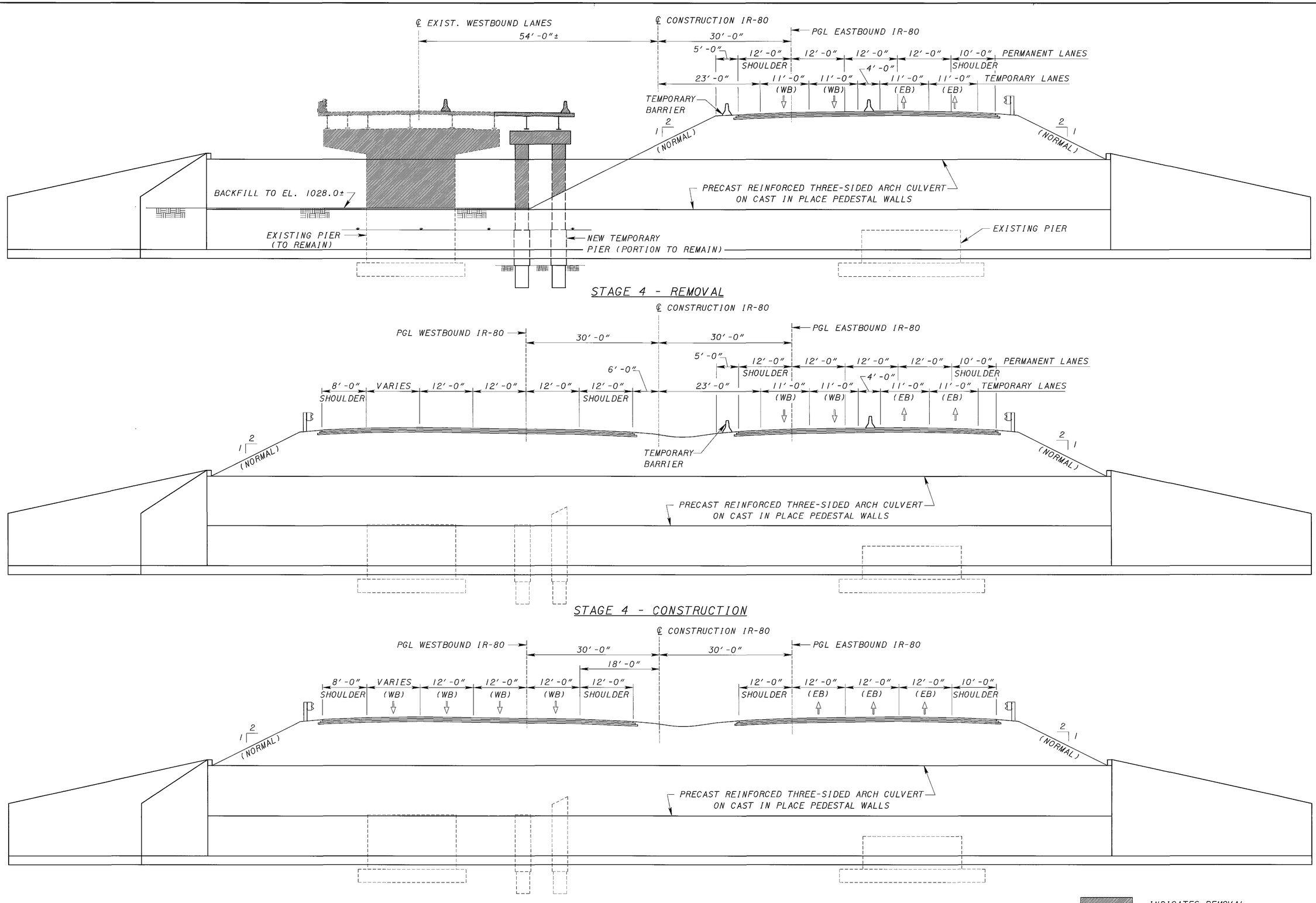
DESIGN AGENCY
TRANSYSTEMS CORPORATION
55 PUBLIC SQUARE, SUITE 1650
CLEVELAND, OHIO 44113-1901

DESIGNED	DRAWN	REVIEWED	DATE
NFF	CAG	RER	7/19/05
CHECKED	REVISED	STRUCTURE FILE NUMBER	
BTA		5002443	

STAGE 2 AND 3 CONSTRUCTION DETAILS
BRIDGE NO. MAH-80-0332
IR-80 OVER METROPARKS BIKEWAY

MAH-80-0.97
PID 6080

1034
1100



DESIGN AGENCY
TRANSYSTEMS CORPORATION
55 PUBLIC SQUARE, SUITE 1650
CLEVELAND, OHIO 44113-1901

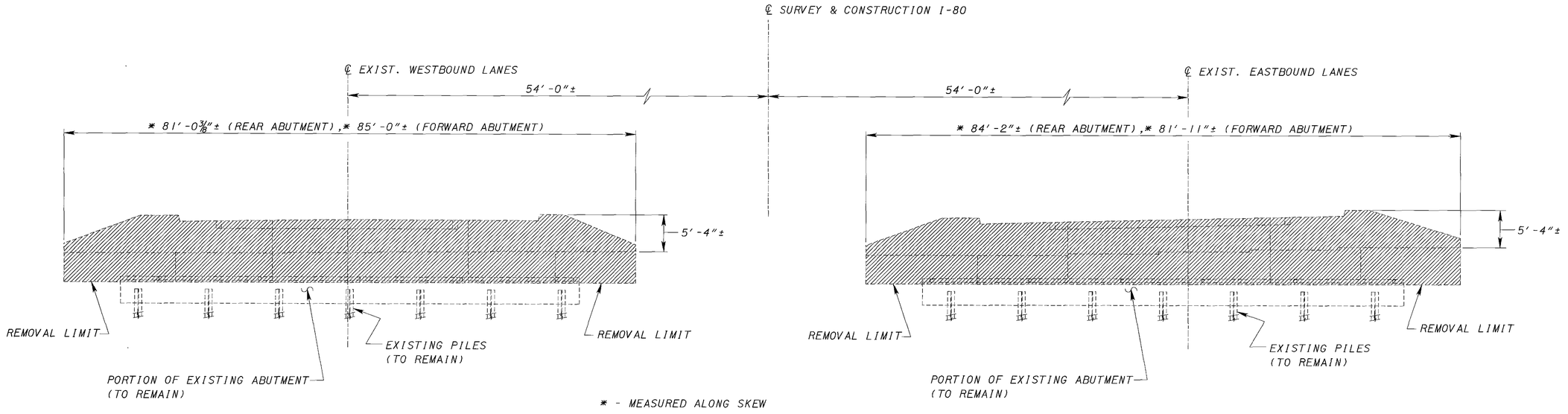
DESIGNED	DRAWN	REVIEWED	DATE
NFF	CAG	RER	7/19/05
CHECKED	REVISED	STRUCTURE FILE NUMBER	
BTA		5002443	

STAGE 4 AND 5 CONSTRUCTION DETAILS
BRIDGE NO. MAH-80-0332
IR-80 OVER METROPARKS BIKEWAY

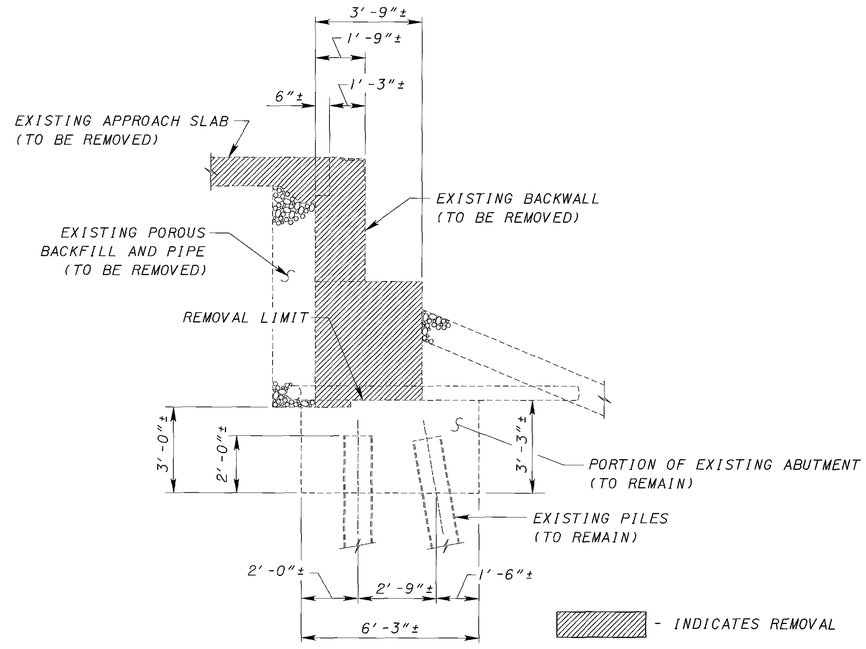
MAH-80-0.97
PID 6080

6 / 14

1035
1100



FINAL ABUTMENT REMOVAL ELEVATION



FINAL ABUTMENT REMOVAL SECTION

NOTES:

1. FOR TEMPORARY ABUTMENT REMOVAL, SEE THE TEMPORARY WIDENING PLANS, SHEETS 4 11 AND 5 11.

DESIGN AGENCY
TRANSYSTEMS CORPORATION
55 PUBLIC SQUARE, SUITE 1850
CLEVELAND, OHIO 44113-1901

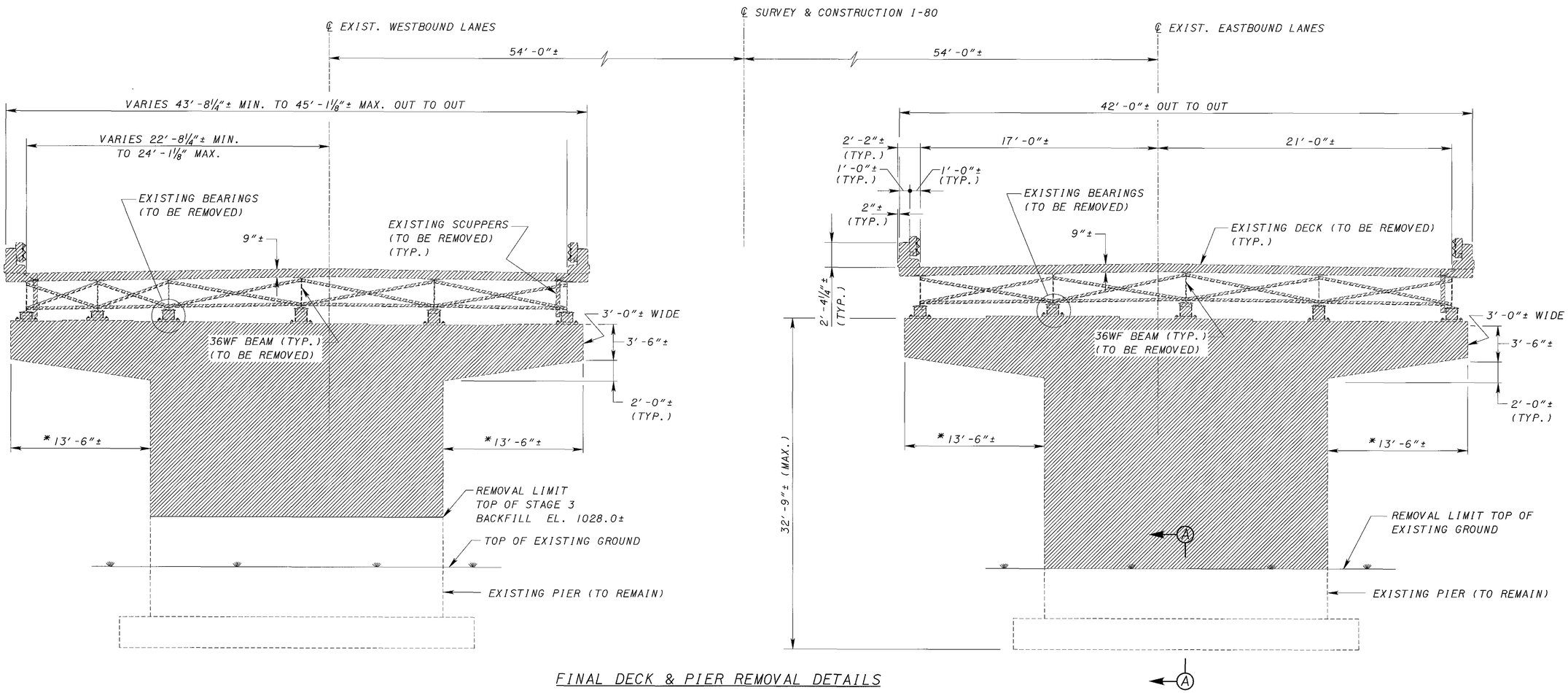
DESIGNED	DRAWN	REVIEWED	DATE
NFF	CAG	RER	7/19/05
CHECKED	REVISED	STRUCTURE FILE NUMBER	
BTA		5002435 L 5002494 R	

FINAL ABUTMENT REMOVAL DETAILS
BRIDGE NO. MAH-80-0332
I-80 OVER METROPARKS BIKEWAY

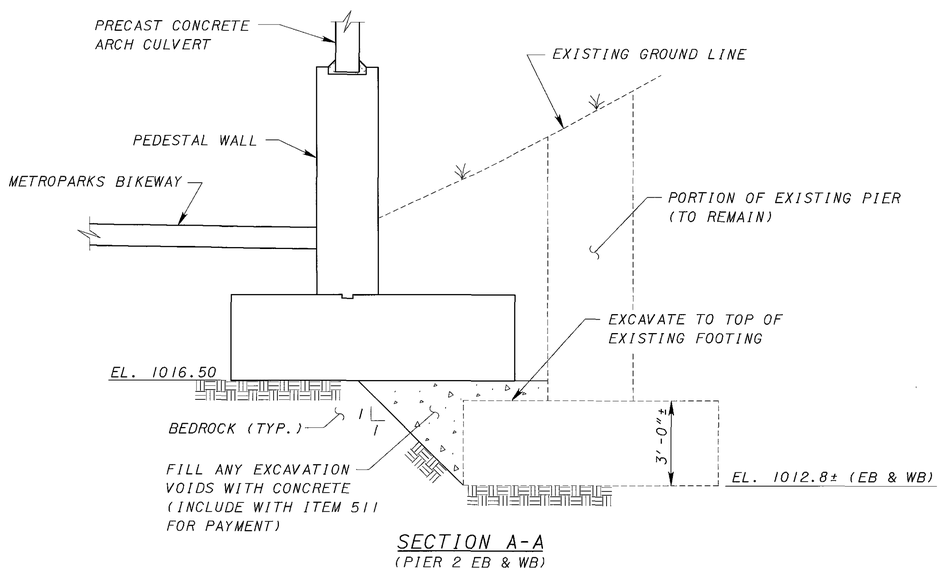
MAH-80-0.97
PID 6080

7 / 14

1036
1100



FINAL DECK & PIER REMOVAL DETAILS



SECTION A-A
(PIER 2 EB & WB)

NOTES:

* - MEASURED ALONG SKEW

▨ - INDICATES REMOVAL

DESIGN AGENCY
TRANSYSTEMS CORPORATION
55 PUBLIC SQUARE, SUITE 1850
CLEVELAND, OHIO 44113-1901

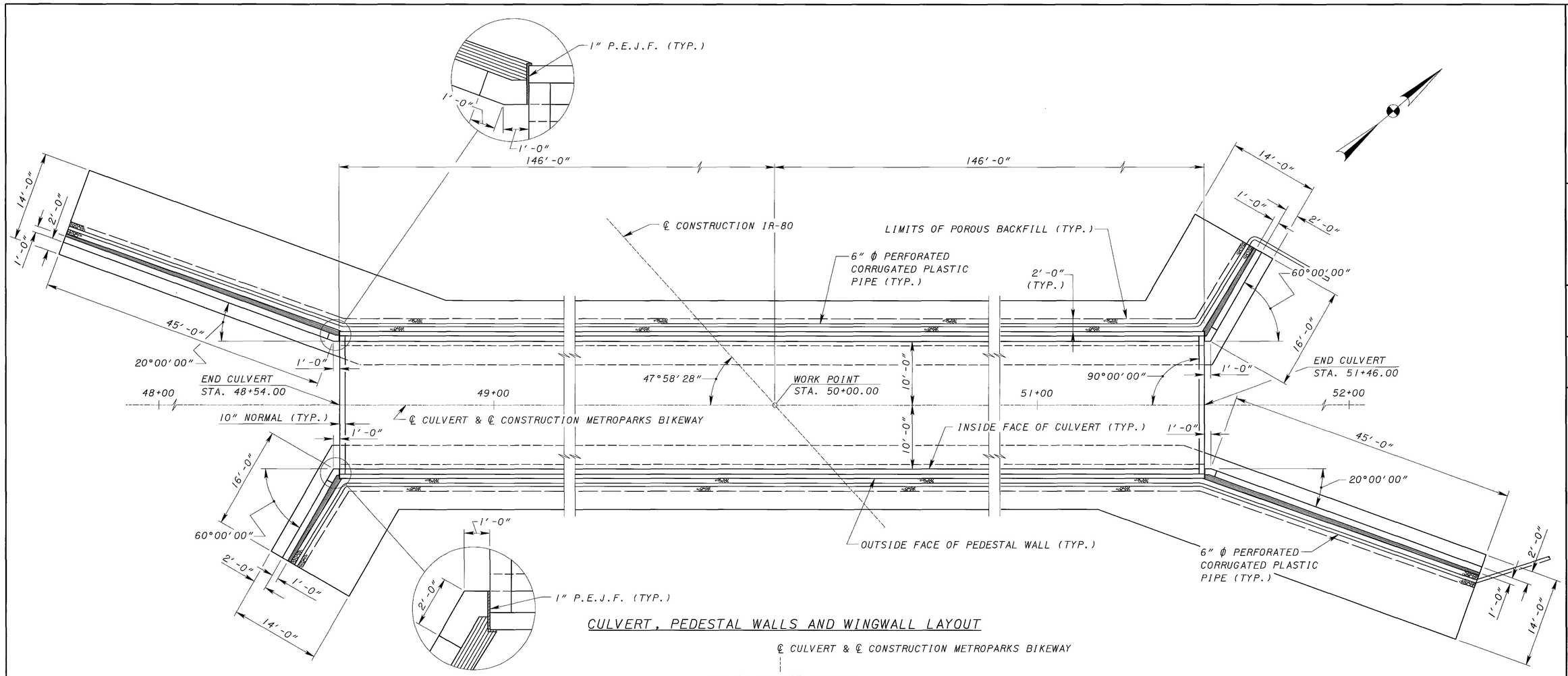
DESIGNED	DRAWN	REVIEWED	DATE
NFF	CAG	RER	7/19/05
CHECKED	REVISED	STRUCTURE FILE NUMBER	
BTA		5002435 5002494 R	

FINAL DECK & PIER REMOVAL DETAILS
BRIDGE NO. MAH-80-0332
IR-80 OVER METROPARKS BIKEWAY

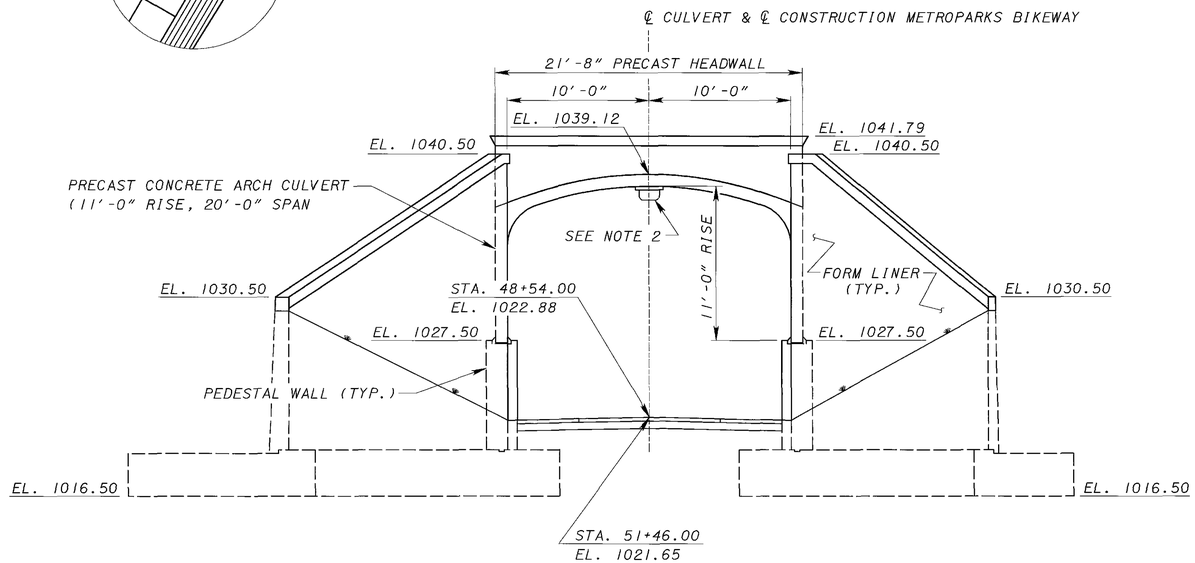
MAH-80-0.97
PID 6080

8 / 14

1037
1100



CULVERT, PEDESTAL WALLS AND WINGWALL LAYOUT



TYPICAL END ELEVATION

NOTE:

1. FOR CULVERT FOOTING DETAILS, SEE SHEET 10|14.
2. FOR LIGHTING DETAILS, SEE SHEETS 1059 TO 1062.
3. FOR DRAINAGE DETAILS, SEE SHEET 1044.
4. FOR AESTHETIC DETAILS, SEE SHEET 2A|14.

DESIGN AGENCY
TRANSYSTEMS CORPORATION
55 PUBLIC SQUARE, SUITE 650
CLEVELAND, OHIO 44113-1901

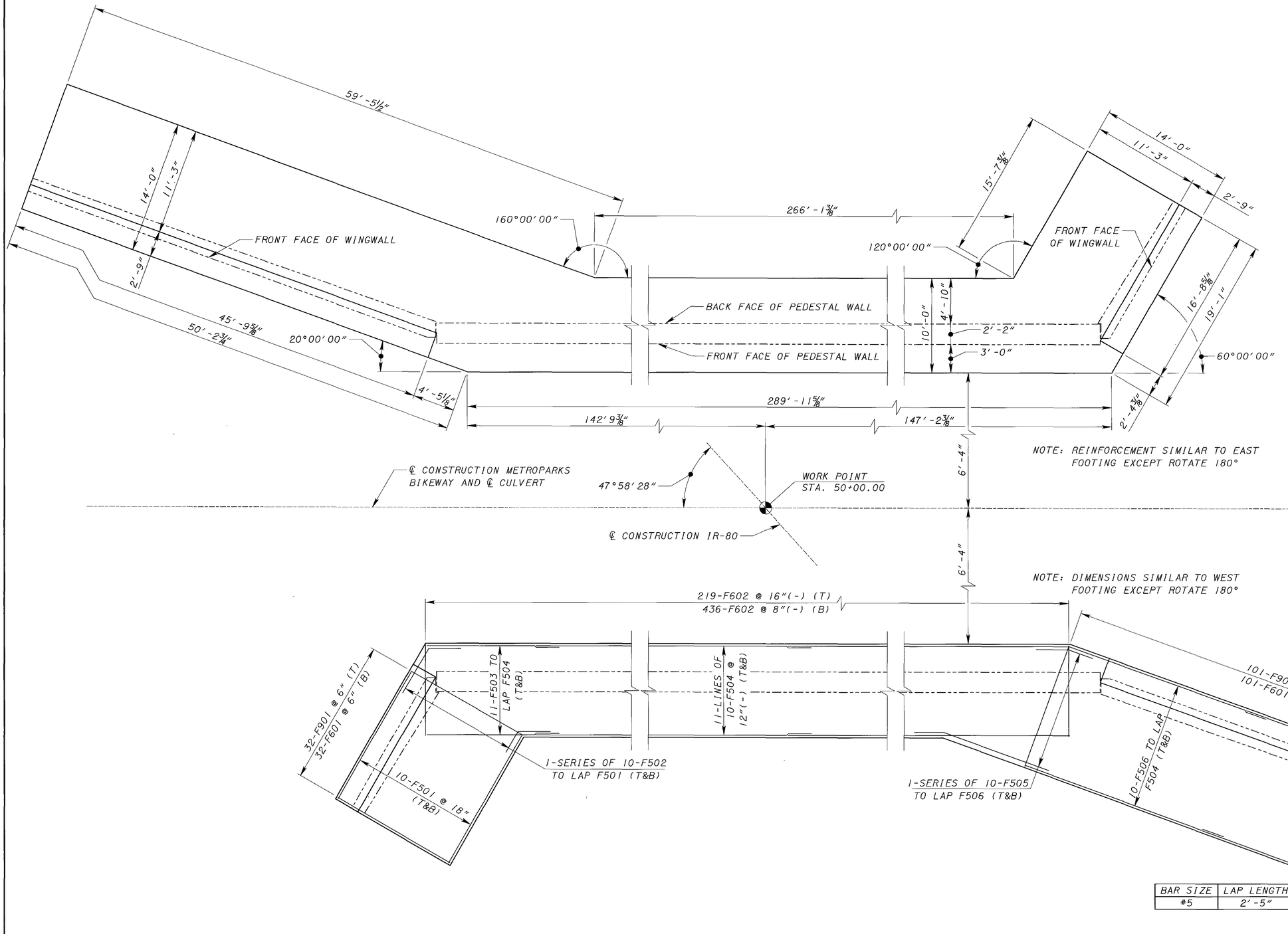
DESIGNED	DRAWN	REVIEWED	DATE
MLR	CAG	RER	7/19/05
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RCK		5002443	

CULVERT LAYOUT
IR-80 OVER METROPARKS BIKEWAY

MAH-80-0.97
PID 6080

9/14

1038
1100



BAR SIZE	LAP LENGTH
#5	2'-5"

FOOTING LAYOUT AND REINFORCING PLAN

NOTES:
1. FOR REINFORCEMENT SCHEDULE, SEE SHEET 14|14.
2. THE FOLLOWING ABBREVIATIONS ARE USED:
   T = TOP
   B = BOTTOM

DESIGN AGENCY
TRANSYSTEMS CORPORATION
55 PUBLIC SQUARE, SUITE 1650
CLEVELAND, OHIO 44113-1901

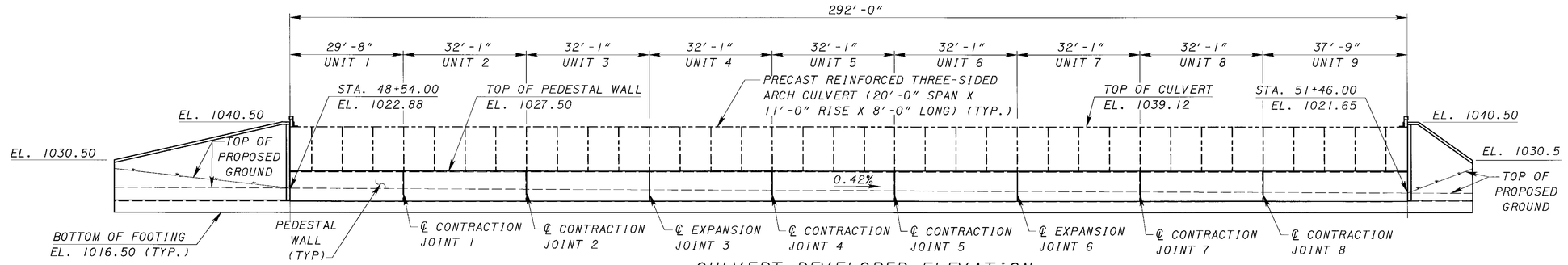
DESIGNED	DRAWN	REVIEWED	DATE
MLR	MLR	RER	7/19/05
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RCK		5002443	

CULVERT FOUNDATION PLAN
BRIDGE NO. MAH-80-0332
IR-80 OVER METROPARKS BIKEWAY

MAH-80-0.97
PID 6080

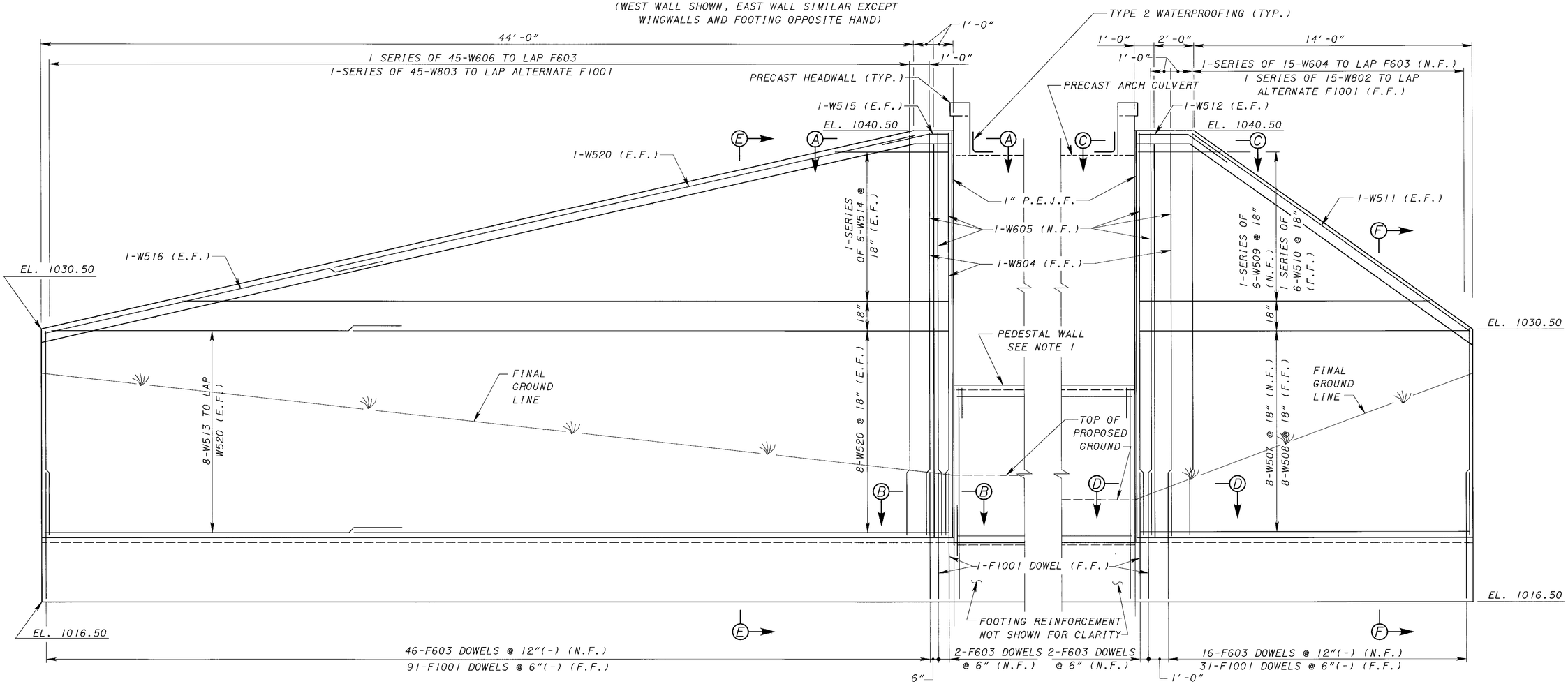
10 | 14

1039
1100



CULVERT DEVELOPED ELEVATION

(WEST WALL SHOWN, EAST WALL SIMILAR EXCEPT WINGWALLS AND FOOTING OPPOSITE HAND)



SOUTHWEST WINGWALL ELEVATION

(NORTHEAST WALL SIMILAR EXCEPT OPPOSITE HAND)

BAR SIZE	LAP LENGTH
#5	2'-5"
#6	3'-3"
#8	8'-3"

NORTHWEST WINGWALL ELEVATION

(SOUTHEAST WALL SIMILAR EXCEPT OPPOSITE HAND)

NOTES:
1. FOR PEDESTAL WALL DETAILS, SEE SHEET 12|14.
2. FOR SECTIONS A-A THRU F-F, SEE SHEET 13|14.
3. FOR EXPANSION AND CONTRACTION JOINT DETAILS, SEE SHEET 13|14.
4. FOR REINFORCEMENT SCHEDULE, SEE SHEET 14|14.
5. FOR FOOTING PLAN, SEE SHEET 10|14.
6. FOR AESTETHIC TREATMENT REFER TO SHEET 2A|14.

DESIGN AGENCY
TRANSYSTEMS CORPORATION
55 PUBLIC SQUARE, SUITE 1850
CLEVELAND, OHIO 44113-1901

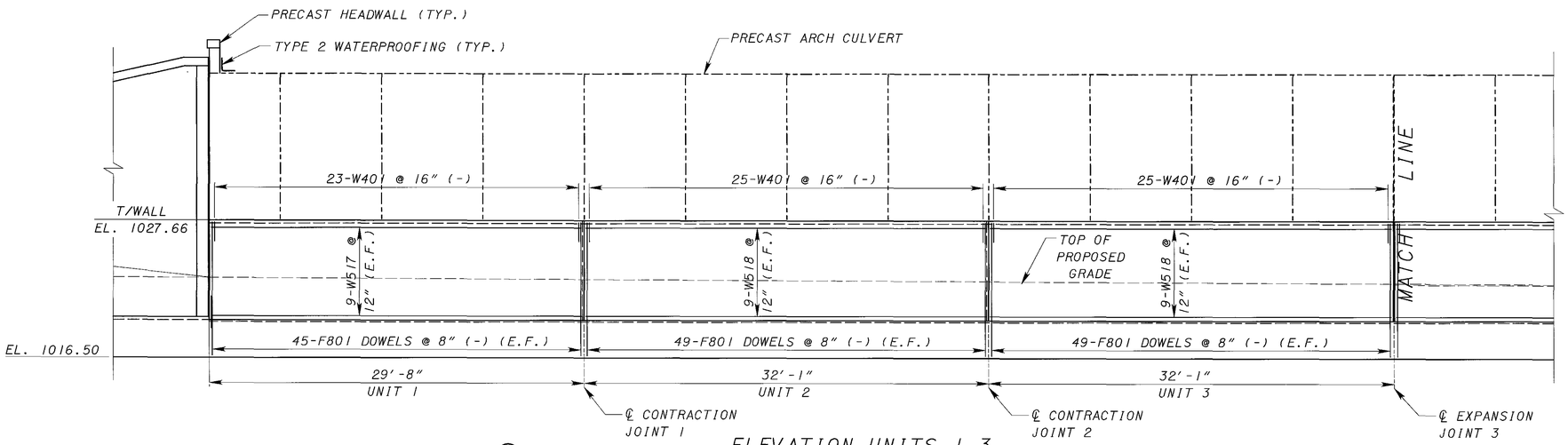
DESIGNED	DRAWN	REVIEWED	DATE
MLR	MLR	RER	7/19/05
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RCK		5002443	

CULVERT WALL DETAIL
BRIDGE NO. MAH-80-0332
IR-80 OVER METROPARKS BIKEWAY

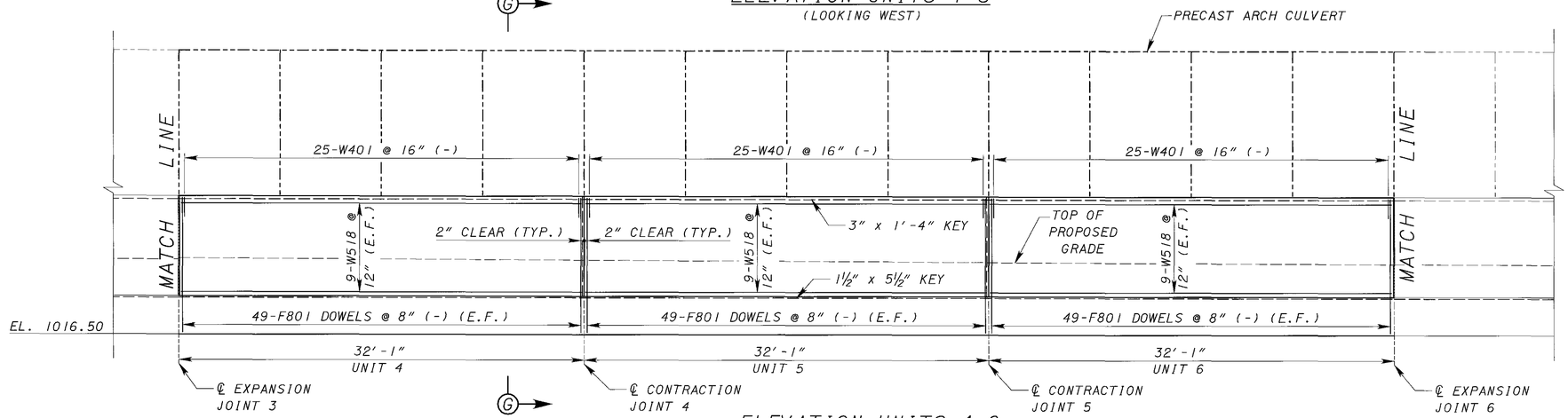
MAH-80-0.97
PID 6080

11 / 14

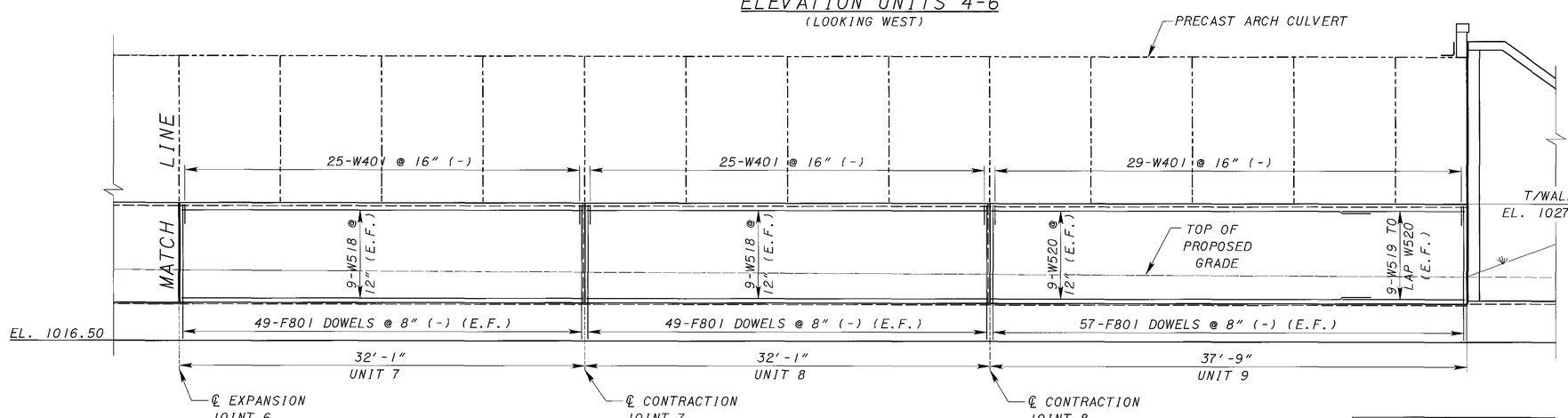
1040
1100



ELEVATION UNITS 1-3
(LOOKING WEST)



ELEVATION UNITS 4-6
(LOOKING WEST)



ELEVATION UNITS 7-9
(LOOKING WEST)

BAR SIZE	LAP LENGTH
#5	2'-5"

NOTES

1. FOR SECTION G-G, SEE SHEET 13|14 .
2. FOR REINFORCING SCHEDULE, SEE SHEET 14|14 .
3. THE FOLLOWING ABBREVIATIONS ARE USED:
   - E.F.: EACH FACE
   - N.F.: NEAR FACE
   - F.F.: FAR FACE
   - T: TOP
   - B: BOTTOM
4. FOR WINGWALL DETAILS, SEE SHEET 11|14 .
5. FOR FOOTING DETAILS, SEE SHEET 10|14 .

DESIGN AGENCY
TRANSYSTEMS CORPORATION
55 PUBLIC SQUARE, SUITE 1650
CLEVELAND, OHIO 44113-1901

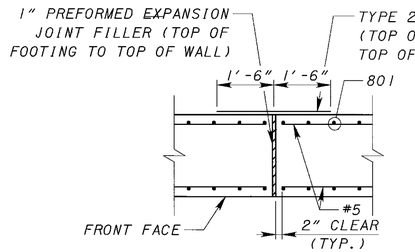
DESIGNED	DRAWN	REVIEWED	DATE
MLR	MLR	RER	7/19/05
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RCK		5002443	

PEDESTAL WALL ELEVATION
BRIDGE NO. MAH-80-0332
IR-80 OVER METROPARKS BIKEWAY

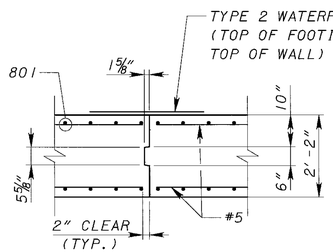
MAH-80-0.97
PID 6080

12 | 14

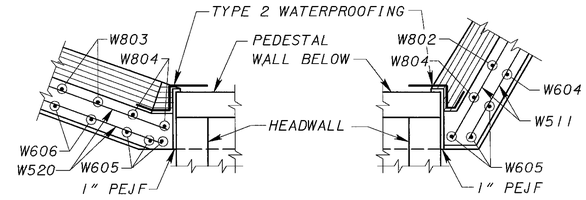
1041
1100



EXPANSION JOINT

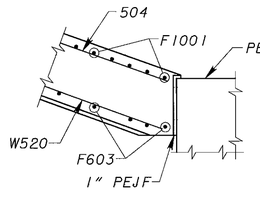


CONTRACTION JOINT

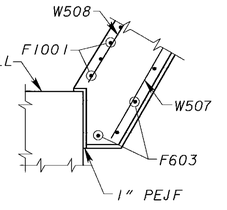


SECTION A-A

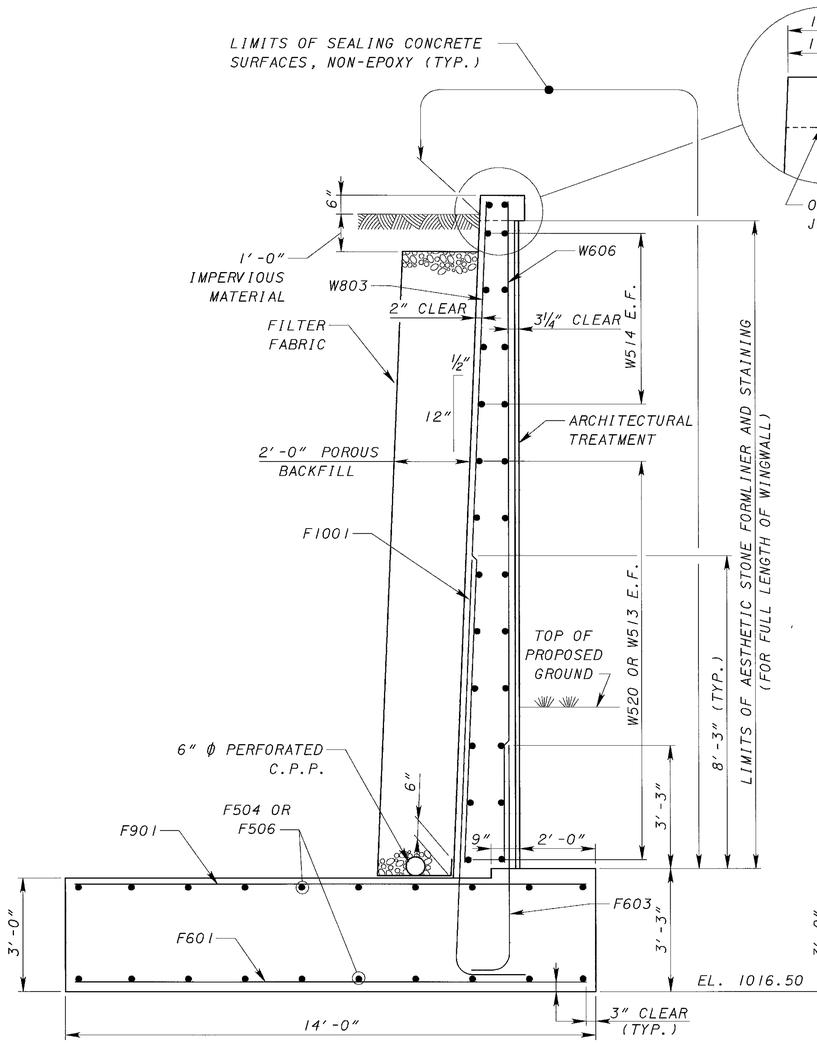
SECTION C-C



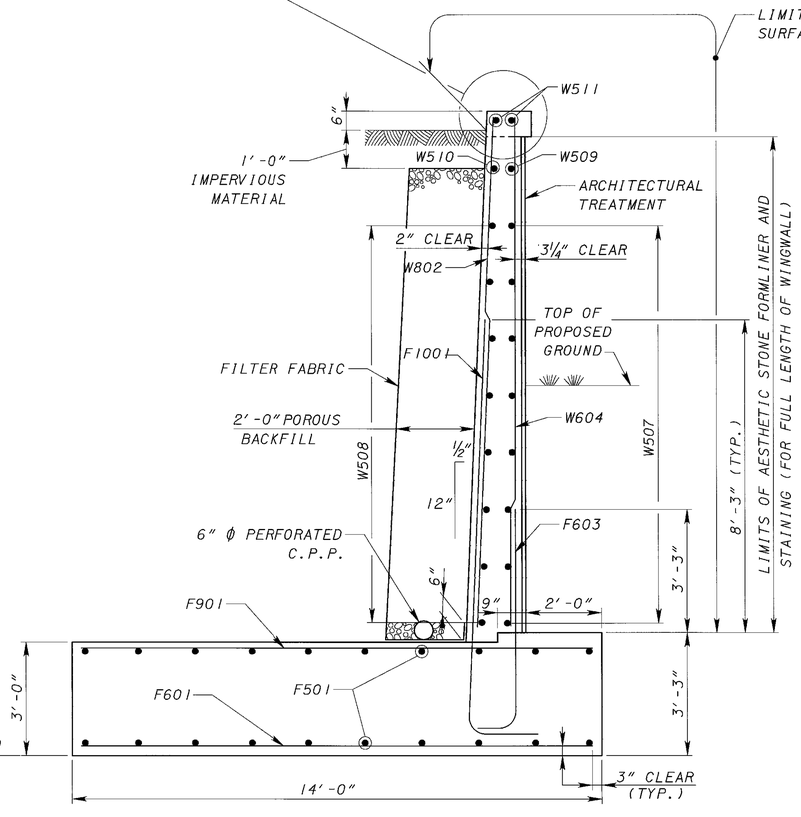
SECTION B-B



SECTION D-D

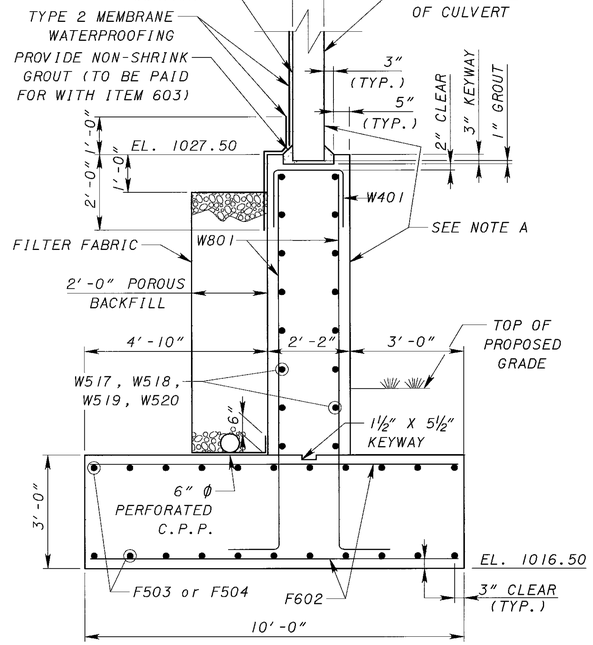


SECTION E-E



SECTION F-F

NOTE A:
THE EXPOSED INSIDE SURFACE OF PEDESTAL WALLS AND THE PRECAST ARCH CULVERT SHALL BE SEALED WITH ANTI-GRAFFITI FROM STA. 48+54.00 TO STA. 51+46.00.



SECTION G-G

NOTES:
1. FOR WINGWALL DETAILS, SEE SHEET 11|14.
2. FOR PEDESTAL WALL DETAILS, SEE SHEET 12|14.
3. FOR OUTLET OF 6" C.P.P., REFER TO THE ROADWAY PLANS, CULVERT DRAINAGE SHEET.
4. FOR FORM LINER NOTE, SEE GENERAL NOTES SHEET 2A|14.

DESIGN AGENCY
TRANSYSTEMS CORPORATION
55 PUBLIC SQUARE, SUITE 1850
CLEVELAND, OHIO 44113-1901

DESIGNED	DRAWN	REVIEWED	DATE
MLR	MLR	RER	7/19/05
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RCK		5002443	

CULVERT WALL DETAIL
BRIDGE NO. MAH-80-0332
IR-80 OVER METROPARKS BIKEWAY

MAH-80-0.97
PID 6080

13 / 14

1042 / 1100

BAR SCHEDULE

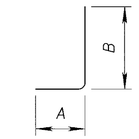
MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC.
W401	454	4'-8"	1415	2	1'-6"	1'-10"	1'-6"				
F501	40	15'-5"	643	STR							
	4 SERIES	5'-10"			2'-6"	1'-9"	3'-0"				
F502	OF	TO	315	19							4 9/16"
	10 BARS	9'-3"			5'-11"	1'-9"	3'-0"				
F503	44	14'-2"	719	STR							
F504	480	30'-0"	15019	STR							
	4 SERIES	5'-9"			2'-5"	3'-3"	1'-2"				
F505	OF	TO	435	19							12 7/16"
	10 BARS	15'-1"			11'-9"	3'-3"	1'-2"				
F506	40	22'-5"	935	STR							
W507	40	15'-9"	657	STR							
W508	16	14'-8"	245	STR							
	2 SERIES	3'-2"									
W509	OF	TO	105	STR							25"
	6 BARS	13'-7"									
	2 SERIES	2'-1"									
W510	OF	TO	92	STR							25"
	6 BARS	12'-7"									
W511	4	16'-10"	70	STR							
W512	4	4'-1"	17	19	1'-10"	1'-11"	1'-5"				
W513	32	17'-9"	592	STR							
	4 SERIES	5'-9"									
W514	OF	TO	556	STR							79"
	6 BARS	38'-8"									
W515	4	4'-0"	17	19	1'-8"	2'-4"	7"				
W516	4	17'-2"	72	STR							
W517	18	29'-4"	551	STR							
W518	126	31'-9"	4173	STR							
W519	18	9'-10"	185	STR							
W520	72	30'-0"	2253	STR							
F601	266	13'-6"	5394	STR							
F602	1310	9'-6"	18692	STR							
F603	132	7'-0"	1388	1	1'-0"	6'-2"					
	2 SERIES	10'-7"									
W604	OF	TO	698	STR							8 7/16"
	15 BARS	20'-5"									
W605	12	20'-7"	371	STR							
	2 SERIES	10'-7"									
W606	OF	TO	2095	STR							2 11/16"
	45 BARS	20'-5"									

BAR SCHEDULE

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC.
F801	1780	11'-4"	53863	1	1'-4"	10'-2"					
	2 SERIES	10'-7"									
W802	OF	TO	1242	STR							8 7/16"
	15 BARS	20'-5"									
	2 SERIES	10'-7"									
W803	OF	TO	3725	STR							2 11/16"
	45 BARS	20'-5"									
W804	6	20'-7"	330	STR							
F901	266	13'-6"	12209	STR							
F1001	252	12'-8"	13735	11	6"	11'-2"	1-10"				

TOTAL WEIGHT = 142808

BAR BENDING DIAGRAMS



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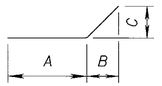

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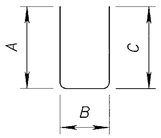

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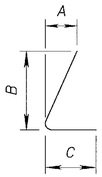


TYPE-11

NOTES:

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, F601:

F: LOCATION OF THE BAR IN THE STRUCTURE (FOOTING)
W: LOCATION OF THE BAR IN THE STRUCTURE (WALL)
6: BAR SIZE DESIGNATION NO. 6
01: SEQUENCE NUMBER

BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE NOTED. "STD." WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BAR BEND AT THE END OF THE BAR. ALL REINFORCING STEEL IS TO BE EPOXY COATED. STRAIGHT BARS ARE INDICATED BY "STR".

DESIGN AGENCY
TRANSYSTEMS CORPORATION
55 PUBLIC SQUARE, SUITE 1650
CLEVELAND, OHIO 44113-1901

DESIGNED	DRAWN	REVIEWED	DATE
MLR	MLR	RER	7/19/05
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RCK		5002443	

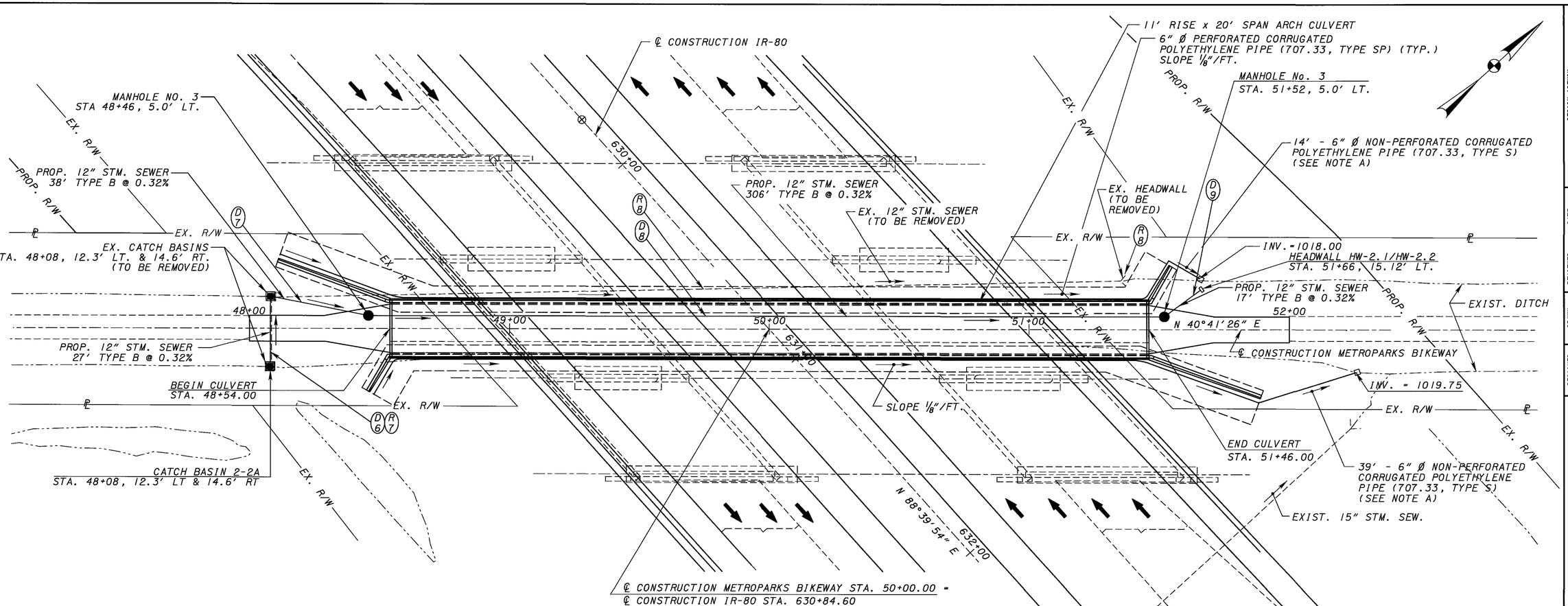
REINFORCEMENT SCHEDULE

BRIDGE NO. MAH-80-0332
IR-80 OVER METROPARKS BIKEWAY

MAH-80-0.97
PID 6080

14/14

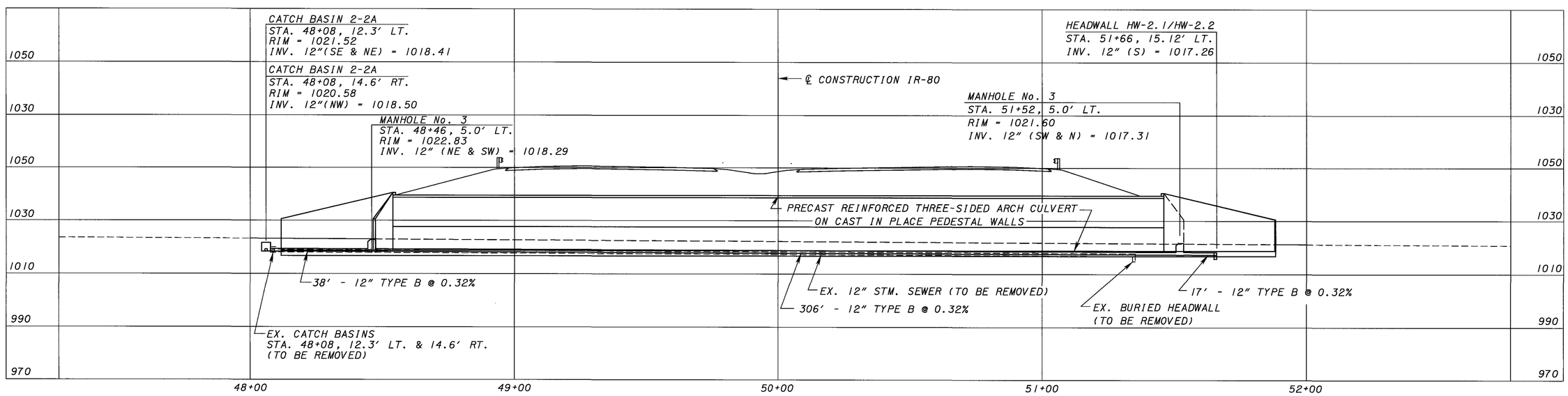
1043
1100



PLAN

FOR CULVERT DRAINAGE QUANTITIES, SEE SHEET 793 OF 1100.

NOTE A:
PROVIDE EROSION CONTROL PAD AND ANIMAL GUARD FOR OUTLET PIPE AS PER O.D.O.T. STD. DRAWING DM-1.1. INCLUDE WITH ITEM 518 - 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS, AS PER PLAN FOR PAYMENT.



PROFILE

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DESIGN AGENCY
TRANSYSTEMS CORPORATION
55 PUBLIC SQUARE, SUITE 1850
CLEVELAND, OHIO 44113-1901

DESIGNED	DRAWN	REVIEWED	DATE
DES	CAG	RER	7/19/05
CHECKED	REVISED		STRUCTURE FILE NUMBER
NFF			5002443

CULVERT DRAINAGE DETAILS
STA. 48+54.00 TO STA. 51+46.00

MAH-80-0.97
PID 6080

1044
1100

EXIST. 12" STM. SEW.
(TO BE REMOVED)

PROP. 12" STM. SEW.

1022.48
49+50.00
1022.53

FILL ANY EXCAVATION
VOIDS WITH CONCRETE

PROP. 12" STM. SEW.

EXIST. 12" STM. SEW.
(TO BE REMOVED)

1022.69
49+00.00
1022.71

6" UNDERDRAIN (TYP.)

EXIST. 12" STM. SEW.
(TO BE REMOVED)

1022.5

1022.90
48+50.00
1022.92

CATCH BASIN 2-2A
STA. 48+08, 12.3' LT.
RIM = 1021.52
INV. 12"(SE & NE) = 1018.41

MANHOLE No. 3
STA. 48+46, 5.0' LT.
RIM = 1022.83
INV. 12" (W & NE) 1018.29

CATCH BASIN 2-2A
STA. 48+08, 14.6' RT.
RIM = 1020.58
INV. 12"(NW) = 1018.50

3:1

3:1

EXIST. CATCH BASIN
(TO BE REMOVED)

EXIST. 12" STM. SEW.
(TO BE REMOVED)

27' - 12" TYPE B @ 0.32%

EXIST. 12" STM. SEW.
(TO BE REMOVED)

EXIST. CATCH BASIN
(TO BE REMOVED)

1023.11
48+00.00
1023.11

47+50.00
1023.19

1030
1025
1020
1015

60 55 50 45 40 35 30 25 20 15 10 5 ℄ 5 10 15 20 25 30 35 40 45 50 55 60

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DESIGN AGENCY
TRANSYSTEMS CORPORATION
55 PUBLIC SQUARE, SUITE 1850
CLEVELAND, OHIO 44113-1901

DESIGNED	DRAWN	REVIEWED	DATE
NFF	CAG	RER	7/19/05
CHECKED	REVISED	STRUCTURE FILE NUMBER	
BTA		5002443	

CULVERT DRAINAGE DETAILS

BRIDGE No. MAH-80-0332
OVER METROPARKS BIKEWAY

MAH-80-0.97
PID 6080

1045
1100

HEADWALL HW-2.1/HW-2.2
STA. 51+66, 15.12' LT.
INV. 12" (S) = 1017.26

MANHOLE No. 3
STA. 51+52.00, 5.0' LT.
RIM = 1021.6
INV. 12" (SW & N) 1017.31

1021.0

17' - 12" CONDUIT, TYPE B @ 0.32%

1021.42
52+00.00
1021.42

PROP. 6" Ø NON-PERFORATED
CORRUGATED POLYETHYLENE PIPE
(707.33, TYPE S)

1021.3

1021.3

6" UNDERDRAIN (TYP.)

1021.63
51+50.00
1021.53

PROP. 12" STM. SEW.

EXIST. 12" STM. SEW.
(TO BE REMOVED)

PROP. 12" STM. SEW.

1021.84
51+00.00
1021.75

FILL ANY EXCAVATION
VOIDS WITH CONCRETE

EXIST. 12" STM. SEW.
(TO BE REMOVED)

PROP. 12" STM. SEW.

1022.05
50+50.00
1022.05

EXIST. 12" STM. SEW.
(TO BE REMOVED)

PROP. 12" STM. SEW.

1022.27
50+00.00
1022.21

1025 1020 1015

60 55 50 45 40 35 30 25 20 15 10 5 ℄ 5 10 15 20 25 30 35 40 45 50 55 60

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DESIGN AGENCY
TRANSYSTEMS CORPORATION
55 PUBLIC SQUARE, SUITE 1650
CLEVELAND, OHIO 44113-1901

DESIGNED	DRAWN	REVIEWED	DATE
NFF	CAG	RER	7/19/05
CHECKED	REVISED	STRUCTURE FILE NUMBER	
BTA		5002443	

CULVERT DRAINAGE DETAILS

BRIDGE No. MAH-80-0332
OVER METROPARKS BIKEWAY

MAH-80-0.97
PID 6080

1046
1100

℄ CONSTRUCTION METROPARKS BIKEWAY

EXIST. ABUTMENT (TYP.)

51+00

42° 10′ 30″± (RECORD) (TYP.)

EXIST. PIER (TYP.)

11′-0″ LANE (WESTBOUND)

11′-0″ LANE (WESTBOUND)

2′-0″ PORTABLE CONCRETE BARRIER (ANCHORED)

℄ EXISTING WESTBOUND LANES

LIMIT OF ASPHALT COURSE

PHASE CONSTRUCTION JOINT

EXIST. CONCRETE DECK REMOVAL LIMITS (TYP.)

11′-0″ LANE (EASTBOUND)

EXIST. SCUPPER (TO BE REMOVED) (TYP.)

EXIST. CURB AND PARAPET (TO BE REMOVED)

TEMPORARY SHEETING (TYP.)

11′-0″ LANE (EASTBOUND)

25′-0″ APPROACH SLAB (TYP.)

NEW TEMPORARY WIDENED ABUTMENT (TYP.)

18′-0″

NEW TEMPORARY PIER (TYP.)

35′-0″

19′-6″ ASPHALT COURSE

25′-0″

EXIST. GUARDRAIL (TO BE REMOVED)

54′-0″±

42° 01′ 32″

N 40° 41′ 26″ E

NEW TEMPORARY WIDENED DECK

10′-0″ (TYP.)

NEW WIDENED APPROACH SLAB WITH ASPHALT COURSE (DOWEL INTO EXISTING APPROACH SLAB) (TYP.)

2′-0″ PORTABLE CONCRETE BARRIER (ANCHORED)

EXISTING BIKE TRAIL (TO BE REPLACED)

EXIST. ℄ BRG. FORWARD ABUT. STA. 631+59.84±

℄ CONSTRUCTION IR-80 N 88° 39′ 54″ E

630+00

50+00

631+00

632+00

EXIST. ℄ BRG. REAR ABUT. STA. 629+99.34±

END APPROACH SLAB STA. 629+96.31±

℄ PIER 1 STA. 630+48.84±

℄ PIER 2 STA. 631+10.34±

BEGIN APPROACH SLAB STA. 631+62.88±

℄ CONSTRUCTION IR-80 STA. 630+84.60 = ℄ CONSTRUCTION METROPARKS BIKEWAY STA. 50+00.00

49′-6″±

61′-6″±

49′-6″±

- INDICATES REMOVAL

GENERAL PLAN

166.58′± BRIDGE LIMITS

3′-0″ Ø DRILLED SHAFT

2 1 (NORMAL)

℄ CONSTRUCTION METROPARKS BIKEWAY

1 2 (NORMAL)

3′-0″ Ø DRILLED SHAFT

APPROXIMATE TOP OF BEDROCK BORING BWC-1 EL. 1018.6

3′-6″ Ø DRILLED SHAFT (TYP. @ PIERS)

APPROXIMATE TOP OF BEDROCK BORING BWC-2 EL. 1016.5

5′-0″ SOCKETED INTO BEDROCK (TYP.)

ELEVATION

NOTES:

1. FOR EXISTING TOP OF DECK ELEVATIONS, SEE SHEET 10/11.

DESIGN AGENCY
TRANSYSTEMS CORPORATION
55 PUBLIC SQUARE, SUITE 1650 CLEVELAND, OHIO 44113-1901

DESIGNED NFF
DRAWN CAG
CHECKED BTA
REVISED
REVIEWED RER DATE 7/19/05
STRUCTURE FILE NUMBER 5002443

TEMPORARY WIDENING - GENERAL PLAN & ELEVATION
BRIDGE NO. MAH-80-0332 L
IR-80 OVER METROPARKS BIKEWAY

MAH-80-0.97
PID 6080

1 / 11

1047
1100

TEMPORARY STRUCTURE GENERAL NOTES

DESIGN SPECIFICATIONS:

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

DESIGN LOADING:

MODIFIED SUPERSTRUCTURE: HS20, CASE I AND THE ALTERNATE MILITARY LOADING.

DESIGN DATA:

CONCRETE CLASS S - COMPRESSIVE STRENGTH 4500 psi (SUPERSTRUCTURE)
CONCRETE CLASS C - COMPRESSIVE STRENGTH 4000 psi (SUBSTRUCTURE)
CONCRETE CLASS S MODIFIED - COMPRESSIVE STRENGTH 4000 psi (DRILLED SHAFT)

REINFORCING STEEL - ASTM A615 OR A996,
GRADE 60 MINIMUM YIELD STRENGTH 60,000 psi
STRUCTURAL STEEL - ASTM A709 GRADE 50 YIELD STRENGTH 50,000 psi

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

AS-1-81	DATED (REVISED)	7-19-02
BS-1-93	DATED (REVISED)	7-19-02
GSD-1-96	DATED (REVISED)	7-19-02
PCB-91	DATED (REVISED)	7-19-02

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.

TEMPORARY STRUCTURE - GENERAL:

THE CONTRACTOR MAY SUBSTITUTE USED OR ALTERNATE MEMBERS FOR THE MEMBERS SHOWN ON THE TEMPORARY STRUCTURE PLANS, PROVIDED THAT THE STRENGTH OF THE SUBSTITUTE OR ALTERNATE MEMBER IS EQUAL TO OR GREATER THAN THE ORIGINAL MEMBER. SUBMIT CALCULATIONS FOR THE SUBSTITUTE OR ALTERNATE MEMBER ACCORDING TO 502. USE ONLY NEW BOLTS.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN:

DESCRIPTION: THIS WORK CONSISTS OF THE REMOVAL OF CONCRETE DECKS INCLUDING SIDEWALKS, PARAPETS, RAILINGS, DECK JOINTS AND OTHER APPURTENANCES FROM STEEL SUPPORTING SYSTEMS (BEAMS, GIRDERS, CROSS FRAMES, ETC.). THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED 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.

PROTECTION OF TRAFFIC: PRIOR TO DEMOLITION OF ANY PORTIONS OF THE EXISTING SUPERSTRUCTURE, SUBMIT PLANS FOR THE PROTECTION OF TRAFFIC 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 TEMPORARY VERTICAL CLEARANCES SPECIFIED ON THE PLANS OR IN THE PROPOSAL AT ALL TIMES EXCEPT AS OTHERWISE APPROVED BY THE DIRECTOR.

PROTECTION OF STEEL SUPPORTS SYSTEM: BEFORE DECK SLAB CUTTING IS PERMITTED, DRAW THE OUTLINE OF PRIMARY STEEL MEMBERS IN CONTACT WITH THE BOTTOM OF THE DECK ON THE SURFACE OF THE DECK. DRILL SMALL DIAMETER PILOT HOLES 2 INCHES OUTSIDE THESE LINES TO CONFIRM THE LOCATION OF FLANGE EDGES. DECK CUTS OVER OR WITHIN 2 INCHES OF FLANGE EDGES SHALL NOT EXTEND LOWER THAN THE BOTTOM LAYER OF DECK SLAB REINFORCING STEEL. CUTS MADE OUTSIDE 2 INCHES OF FLANGE EDGES MAY EXTEND THE FULL DEPTH OF THE DECK . PERFORM WORK CAREFULLY DURING THE CUTTING OF THE DECK SLAB TO AVOID DAMAGING STEEL MEMBERS THAT ARE TO BE INCORPORATED INTO THE PROPOSED STRUCTURE.

REMOVAL METHODS: THE CONTRACTOR MAY REMOVE CONCRETE BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE TOOLS. FOR REMOVALS OVER BRIDGE MEMBERS (STEEL BEAM), THE CONTRACTOR MAY USE A HAMMER HEAVIER THAN 35 POUNDS BUT NOT TO EXCEED 90 POUNDS UNLESS APPROVED BY THE ENGINEER. REMOVAL METHODS OVER BRIDGE MEMBERS SHALL ENSURE ADEQUATE DEPTH CONTROL AND PREVENT NICKING OR GOUGING THE PRIMARY STEEL MEMBERS.

DECK REMOVALS: DUE TO THE POSSIBLE PRESENCE OF WELDED ATTACHMENTS TO EXISTING STRUCTURAL STEEL (FINISHING MACHINE, SCUPPER AND FORM SUPPORTS, ETC.) PERFORM WORK CAREFULLY DURING DECK REMOVAL TO AVOID DAMAGING STRINGERS WHICH ARE TO REMAIN. REPLACE OR REPAIR STRINGERS DAMAGED BY THE REMOVAL OPERATIONS AT NO COST TO THE PROJECT. SUBMIT PROPOSED REPAIRS, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER, IN WRITING TO THE DIRECTOR AT LEAST 20 DAYS BEFORE PERFORMING REPAIR WORK.

EXTRANEOUS MEMBERS: REMOVE EXISTING EXTRANEOUS MEMBERS (i.e., FINISHING MACHINE AND FORM SUPPORTS, ETC., AND THE SUPPORT FOR SCUPPERS AND BULB ANGLES WHICH ARE TO BE REMOVED) ATTACHED BY WELDED CONNECTION TO THE DESIGNATED TENSION PORTIONS OF THE TOP FLANGES OF EXISTING STEEL MEMBERS AND GRIND THE FLANGE SURFACES SMOOTH. CAREFULLY GRIND PARALLEL TO THE FLANGES.

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 PROFFESIONAL ENGINEER, SHOWING THE ALLOWABLE STRESSES AND THE MAXIMUM STRESSES PRODUCED BY THE REMOVAL METHODS OR EQUIPMENT TO THE DIRECTOR FOR REVIEW AND APPROVAL AT LEAST 20 DAYS BEFORE CONSTRUCTION BEGINS.

MEASUREMENT & PAYMENT: THIS 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, AS PER PLAN.

CUT LINE CONSTRUCTION JOINT PREPARATION:

SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL, IF REQUIRED IN THE PLANS, 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.

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 AND 513.04.

BASE CONTRACT BID PRICES UPON A 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 WHICH HAVE BEEN VERIFIED IN THE FIELD.

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. 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 BY THE 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 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.

ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL 3, AS PER PLAN:

ALL REQUIREMENTS OF 513 APPLY TO SHOP AND FIELD FABRICATED MEMBERS EXCEPT AS MODIFIED HEREIN.:

ONLY THE FOLLOWING CMS DESCRIPTIONS SHALL APPLY:

A. STRAIGHTENING 513.11
B. HOLES FOR HIGH STRENGTH AND BEARING BOLTS 513.19
C. HIGH STRENGTH STEEL BOLTS, NUTS AND WASHERS 513.20
D. WELDING 513.21
E. NONDESTRUCTIVE TESTING 513.25
F. SHIPPING, STORAGE AND ERECTION 513.26
G. STRUCTURAL STEEL NEED NOT BE PAINTED

THE FOLLOWING MEMBERS ARE INCLUDED IN THIS ITEM:
ROLLED STEEL BEAMS, BEARINGS AND CROSSFRAMES.

ITEM 518 - POROUS BACKFILL WITH FILTER FABRIC

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.

ITEM 524 - DRILLED SHAFTS

THE DESIGN LOAD TO BE SUPPORTED BY EACH DRILLED SHAFT IS 100.0 TONS AT THE ABUTMENTS AND PIERS. THIS LOAD IS RESISTED BY SHAFT ADHESION WITHIN A PORTION OF THE BEDROCK SOCKET AND ALSO BY SHAFT END BEARING. THE ALLOWABLE BEDROCK SOCKET ADHESION IS 70.0 TONS, ASSUMED TO ACT ALONG THE BOTTOM 5.0 FEET OF THE BEDROCK SOCKET FOR THE ABUTMENTS AND PIERS. THE ALLOWABLE END BEARING PRESSURE IS 6.0 TONS PER SQUARE FOOT. THE REINFORCING STEEL SHALL BE EPOXY COATED ACCORDING TO 709.00.

ITEM 526 - REINFORCED CONCRETE APPROACH SLAB (T=15"), AS PER PLAN C

IN ADDITION TO THE PROVISIONS OF ITEM 526, THIS ITEM SHALL INCLUDE THE DRILLING OR FORMING OF HOLES INTO THE EXISTING APPROACH SLAB AND THE FURNISHING AND PLACING OF GROUT INTO HOLES. NON-SHRINK EPOXY GROUT SHALL BE USED IN ACCORDANCE WITH CMS 510 AND CMS 705.20. DEPTH OF HOLES SHALL BE 1'-0". PAYMENT FOR DRILLING OR FORMING HOLES AND FURNISHING AND PLACING MATERIALS SHALL BE INCLUDED WITH ITEM 526. IN ADDITION, THE REINFORCING STEEL FOR THE APPROACH SLAB NEED NOT TO BE EPOXY COATED.

MAINTENANCE:

MAINTAIN ALL PORTIONS OF THE TEMPORARY STRUCTURE IN GOOD CONDITION WITH REGARD TO STRENGTH, SAFETY AND RIDABILITY. THE DEPARTMENT WILL CONSIDER THIS MAINTENANCE TO BE INCIDENTAL TO ITEM 614, MAINTAINING TRAFFIC.

CLOSING OF THE TEMPORARY STRUCTURE:

IF FOR ANY REASON OR AT ANY TIME THE TEMPORARY STRUCTURE'S ABILITY TO SAFELY CARRY TRAFFIC IS IN QUESTION, IMMEDIATELY TAKE THE ACTIONS NECESSARY TO PROTECT TRAFFIC, REPAIR AND REOPEN THE TEMPORARY STRUCTURE. WHEN CLOSING A TEMPORARY STRUCTURE FOR THIS PURPOSE, IMMEDIATELY NOTIFY THE ENGINEER AND THE APPROPRIATE LAW ENFORCEMENT AGENCY. THE DEPARTMENT WILL CONSIDER THE COSTS ASSOCIATED WITH CLOSING THE TEMPORARY STRUCTURE TO BE INCIDENTAL TO ITEM 614, MAINTAINING TRAFFIC.

INDEX OF SHEETS:

DESIGN AGENCY
TRANSYSTEMS CORPORATION
55 PUBLIC SQUARE, SUITE 650
CLEVELAND, OHIO 44113-1901

DESIGNED	DRAWN	REVIEWED	DATE
NFF	CAG	RER	7/19/05
CHECKED	REVISED	STRUCTURE FILE NUMBER	
BTA		5002443	

TEMPORARY WIDENING - STRUCTURE GENERAL NOTES
BRIDGE NO. MAH-80-0332 L
IR-80 OVER METROPARKS BIKEWAY

MAH-80-0.97
PID 6080

2/11

1048
1100

MADE BY: CAG DATE: 6/22/04
CHECK'D BY: MLR DATE: 7/30/04

ESTIMATED QUANTITIES (FOR INFORMATION ONLY) (SEE NOTE 1)

ITEM	TOTAL	UNIT	DESCRIPTION	REAR ABUTMENT	FORWARD ABUTMENT	PIERS	SUPERSTRUCTURE	GENERAL	REFERENCE SHEET NUMBER
202	LUMP		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN					LUMP	2/11
503	LUMP		COFFERDAMS, CRIBS AND SHEETING					LUMP	
503	LUMP		UNCLASSIFIED EXCAVATION, AS PER PLAN					LUMP	2/11
509	36661	POUND	EPOXY COATED REINFORCING STEEL, AS PER PLAN	3604	4904	8052	20101		2/11
509	300	POUND	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN					300	2/11
510	185	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	59	47		79		
511	87	CU YD	CLASS S CONCRETE, SUPERSTRUCTURE (DECK)				87		
511	29	CU YD	CLASS C CONCRETE, PIER			29			
511	41	CU YD	CLASS C CONCRETE, ABUTMENT INCLUDING FOOTING	19	22				
513	60815	POUND	STRUCTURAL STEEL MEMBERS, LEVEL 3, AS PER PLAN *				60815		2/11
518	LUMP		POROUS BACKFILL WITH FILTER FABRIC					LUMP	2/11
518	35	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	15	20				
524	15	FT	DRILLED SHAFTS, 30" DIAMETER, INTO BEDROCK	5	10				2/11
524	46	FT	DRILLED SHAFTS, 36" DIAMETER, ABOVE BEDROCK	22	24				2/11
524	20	FT	DRILLED SHAFTS, 36" DIAMETER, INTO BEDROCK			20			2/11
524	25	FT	DRILLED SHAFTS, 42" DIAMETER, ABOVE BEDROCK			25			2/11
526	128	SQ YD	REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN C	64	64				2/11
848	488	SQ YD	OVERLAY, MISC.: 2¾" ASPHALT COURSE				488		10/11

* - INCLUDES STEEL BEARINGS

NOTES:

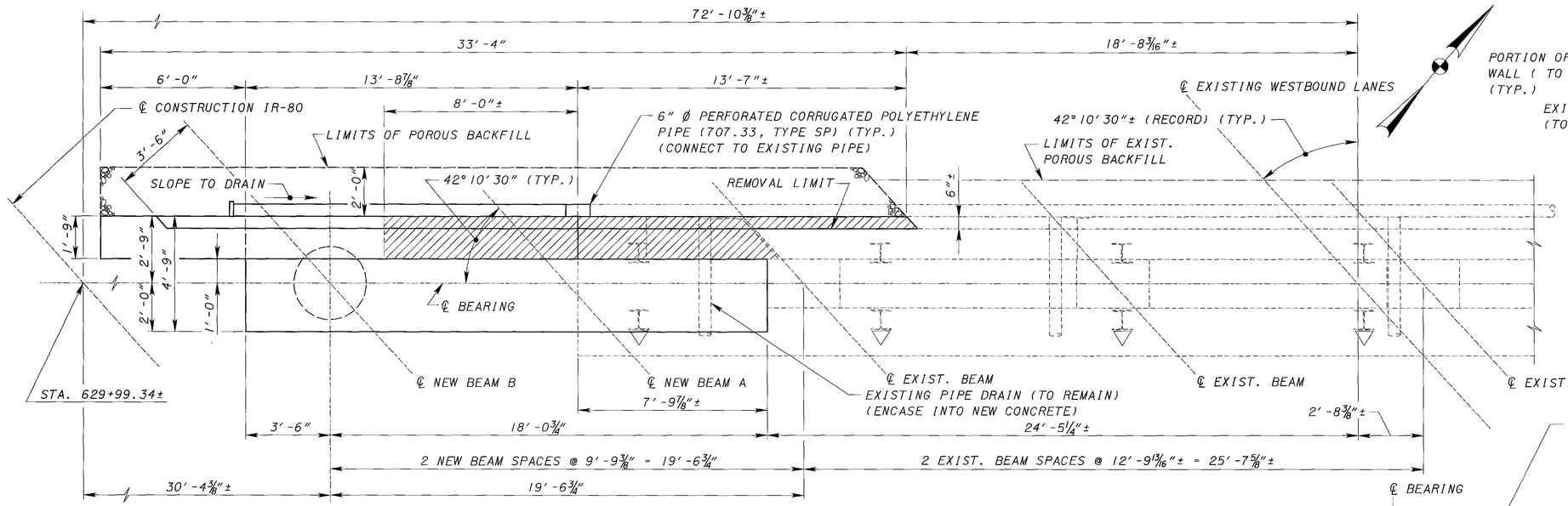
1. THE PAYMENT FOR THE TEMPORARY STRUCTURE WILL BE MADE PER THE LUMP SUM BID FOR "ITEM 502, STRUCTURE FOR MAINTAINING TRAFFIC". SEE SHEET 1031/1100 FOR ADDITIONAL INFORMATION. THE QUANTITIES SHOWN ON THIS DRAWING ARE FOR INFORMATION ONLY AND ARE NOT INTENDED TO BE USED FOR ANY OTHER PURPOSE. THE CONTRACTOR SHALL OBTAIN HIS/HER OWN QUANTITIES TO BE USED AS A BASIS TO ARRIVE AT THE LUMP SUM PRICE BID FOR THIS ITEM.

DESIGN AGENCY
TRANSYSTEMS CORPORATION
55 PUBLIC SQUARE, SUITE 1650
CLEVELAND, OHIO 44113-1901

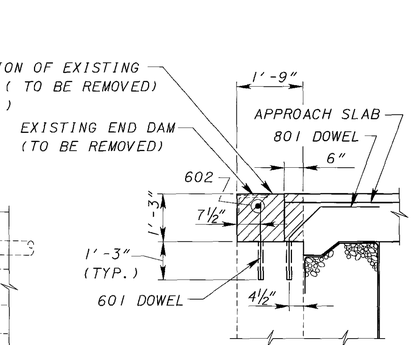
DESIGNED NFF | DRAWN CAG | REVIEWED RER | DATE 7/19/05
CHECKED BTA | REVISED | STRUCTURE FILE NUMBER 5002443

TEMPORARY WIDENING - ESTIMATED QUANTITIES
BRIDGE NO. MAH-80-0332 L
IR-80 OVER METROPARKS BIKEWAY

MAH-80-0.97
PID 6080

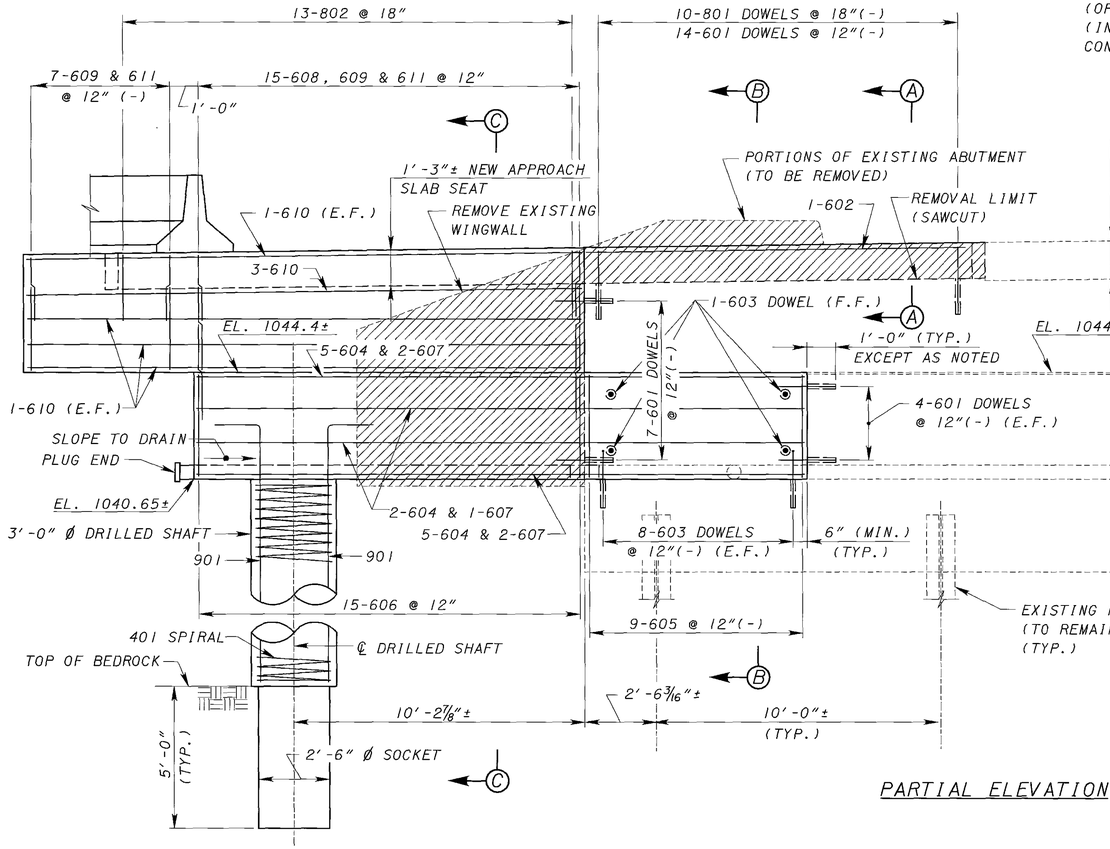


PARTIAL PLAN



SECTION A-A

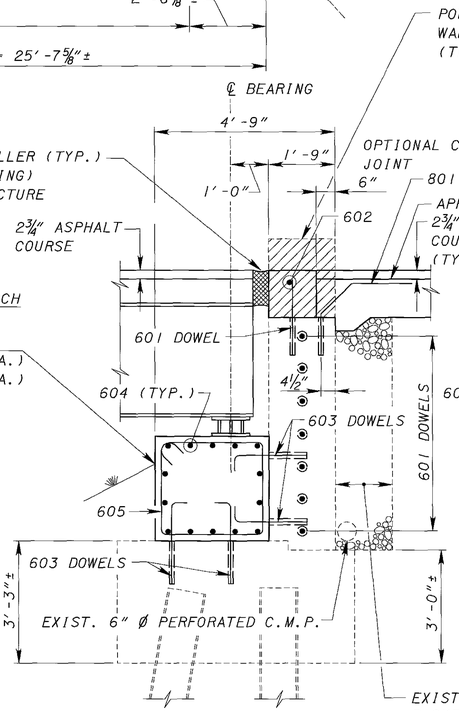
▨ - INDICATES REMOVAL



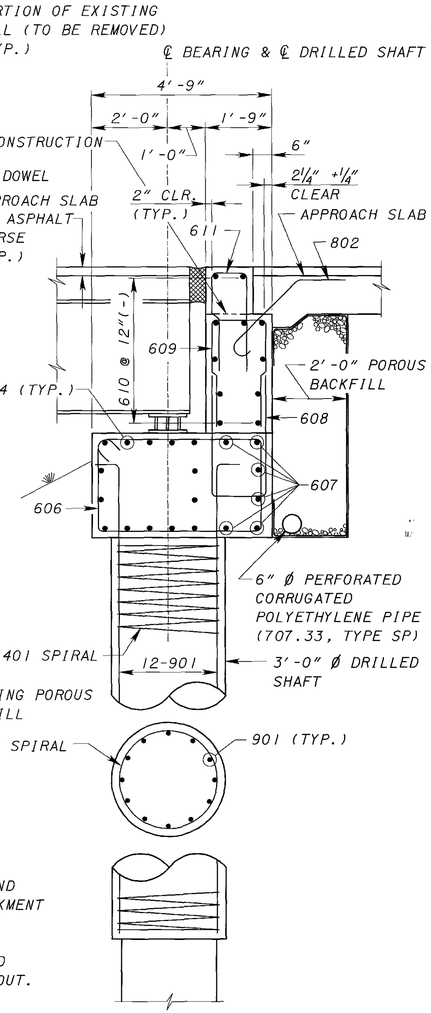
PARTIAL ELEVATION

NOTES:

1. ALL REINFORCING BAR MARKS SHALL BE PREFIXED AS FOLLOWS:
   REAR ABUTMENT - RA
   FORWARD ABUTMENT - FA
2. FOR REINFORCING SCHEDULE, SEE SHEET 11 11.
3. POROUS BACKFILL WITH FILTER FABRIC 2'-0" THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, TO 1'-0" BELOW THE EMBANKMENT SURFACE, AND LATERALLY TO THE END OF THE WINGWALLS.
4. PAYMENT FOR DRILLING OR FORMING HOLES AND FURNISHING AND PLACING GROUT SHALL BE INCLUDED IN THE CONTRACT PRICES BID FOR ITEM 510 - DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT.
5. THE FOLLOWING ABBREVIATIONS WERE USED:
   CLR. CLEAR — F.F. - FAR FACE
   E.F. - EACH FACE — TYP. - TYPICAL
   EL. - ELEVATION
   EXIST. - EXISTING



SECTION B-B



SECTION C-C

DESIGN AGENCY: TRANSYSTEMS CORPORATION, 55 PUBLIC SQUARE, SUITE 1650, CLEVELAND, OHIO 44113-1901

DATE: 7/19/05
REVISED: RER
STRUCTURE FILE NUMBER: 5002443
DRAWN: CAG
REVISED:
DESIGNED: NFF
CHECKED: BTA

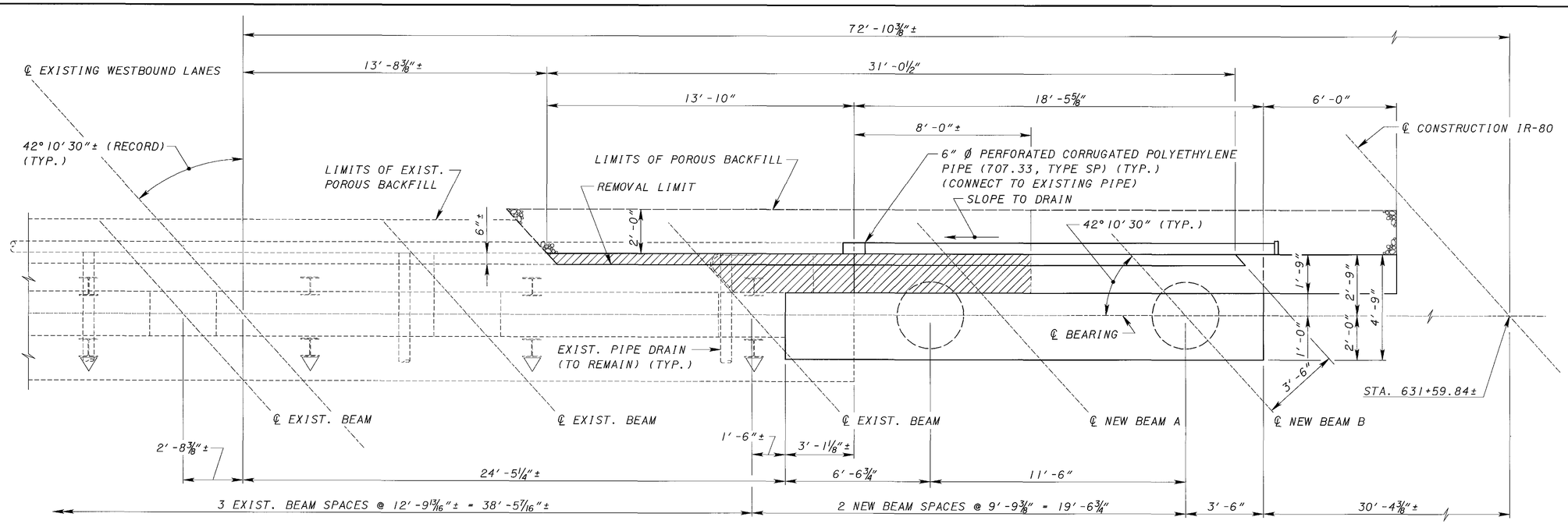
TEMPORARY WIDENING - REAR ABUTMENT DETAILS

BRIDGE NO. MAH-80-0332 L
IR-80 OVER METROPARKS BIKEWAY

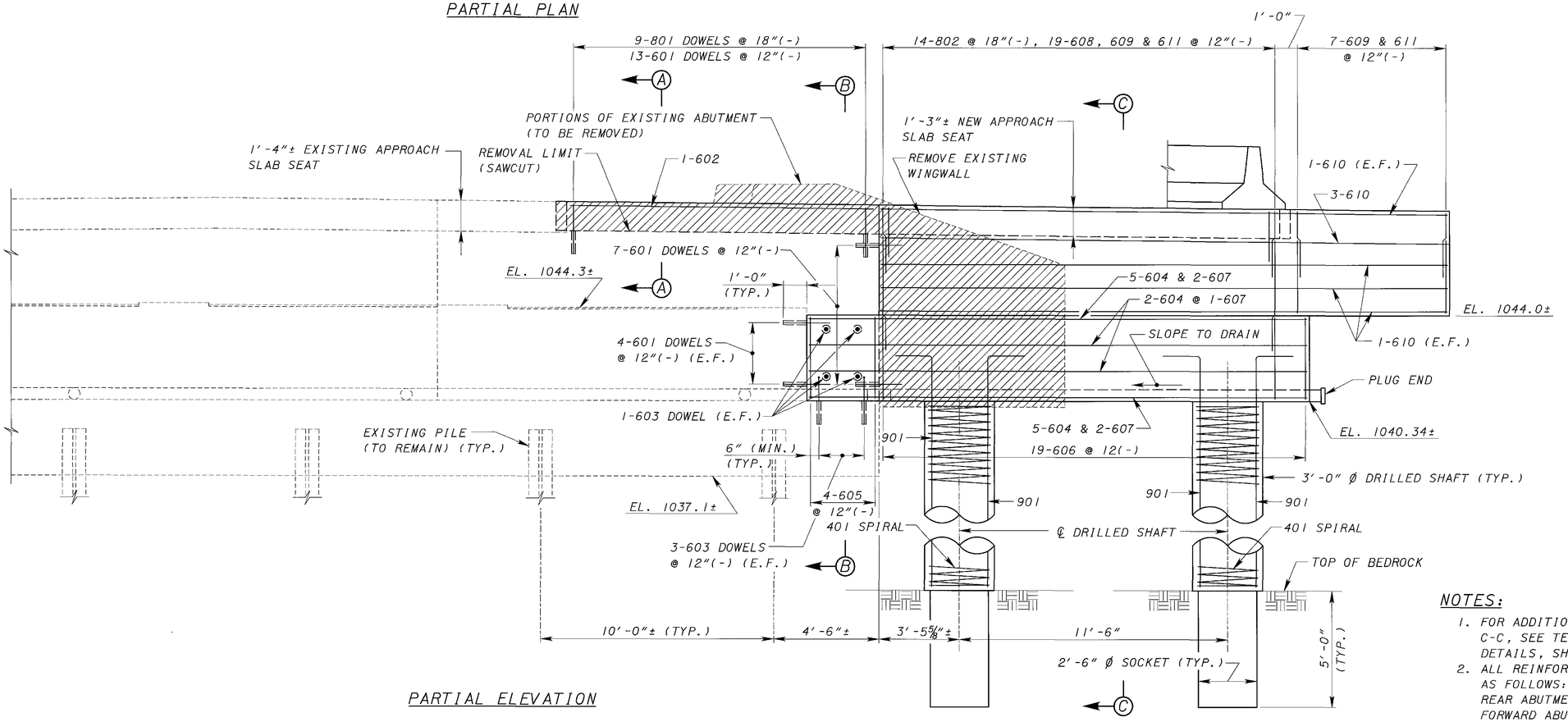
MAH-80-0.97
PID 6080

4 11

10150
1100



PARTIAL PLAN



PARTIAL ELEVATION

NOTES:

1. FOR ADDITIONAL NOTES AND SECTIONS A-A, B-B & C-C, SEE TEMPORARY REAR ABUTMENT WIDENING DETAILS, SHEET 4 | 11 .
2. ALL REINFORCING BAR MARKS SHALL BE PREFIXED AS FOLLOWS:
   REAR ABUTMENT - RA
   FORWARD ABUTMENT - FA

DESIGN AGENCY
TRANSYSTEMS CORPORATION
45 PUBLIC SQUARE, SUITE 1650
CLEVELAND, OHIO 44113-1901

DESIGNED	DRAWN	REVIEWED	DATE
NFF	CAG	RER	7/19/05
CHECKED	REVISED	STRUCTURE FILE NUMBER	
BTA		5002443	

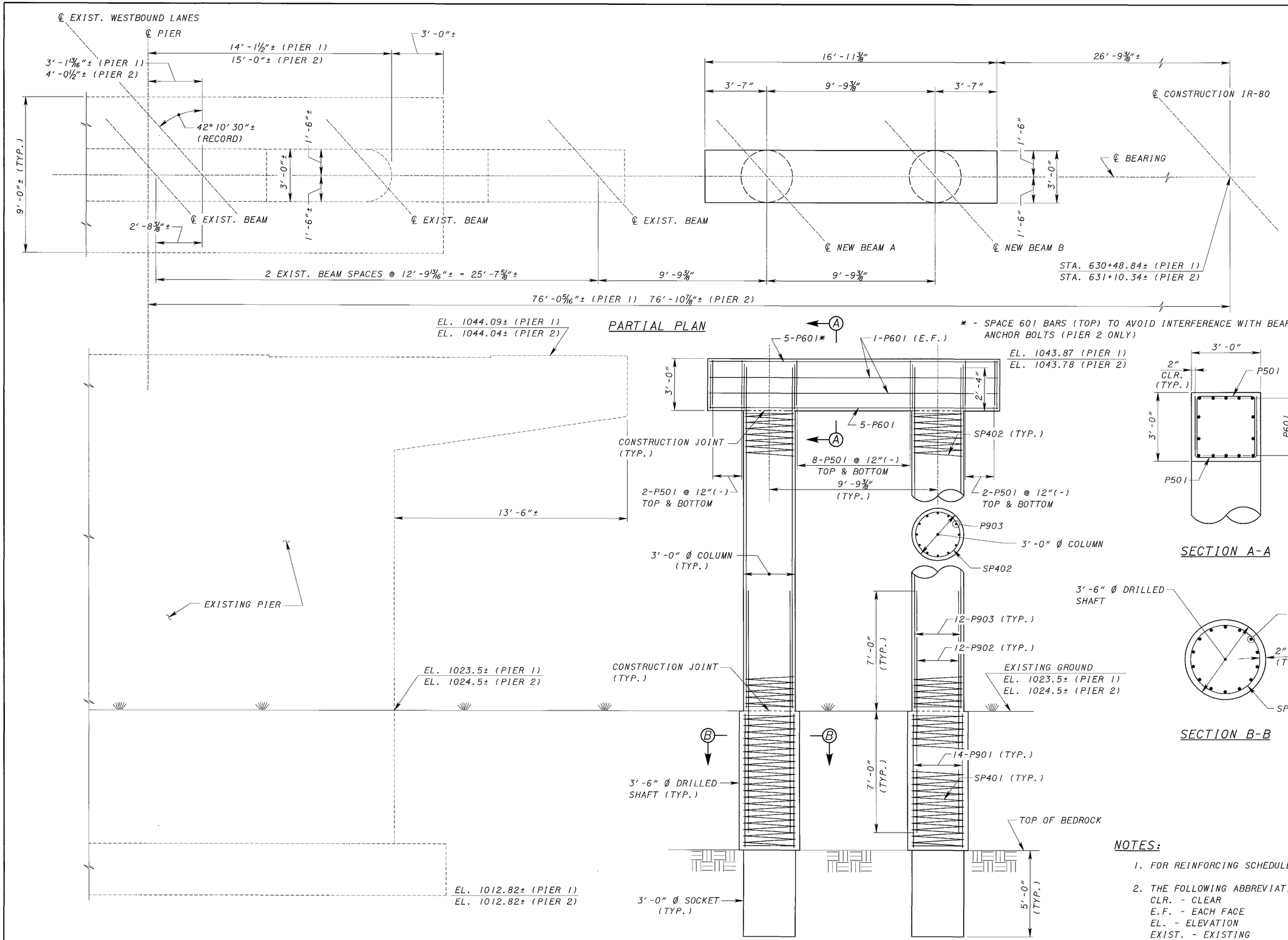
TEMPORARY WIDENING - FORWARD ABUTMENT DETAILS

BRIDGE NO. MAH-80-0332 L
IR-80 OVER METROPARKS BIKEWAY

MAH-80-0.97
PID 6080

5 | 11

1051 | 1100



NOTES:

1. FOR REINFORCING SCHEDULE, SEE SHEET 11/11.
2. THE FOLLOWING ABBREVIATIONS WERE USED:
   CLR. - CLEAR
   E.F. - EACH FACE
   EL. - ELEVATION
   EXIST. - EXISTING
   TYP. _ TYPICAL

DESIGN AGENCY
TRANSYSTEMS CORPORATION
55 PUBLIC SQUARE, SUITE 1650
CLEVELAND, OHIO 44113-1901

DESIGNED	DRAWN	REVIEWED	DATE
NFF	CAG	RER	7/19/05
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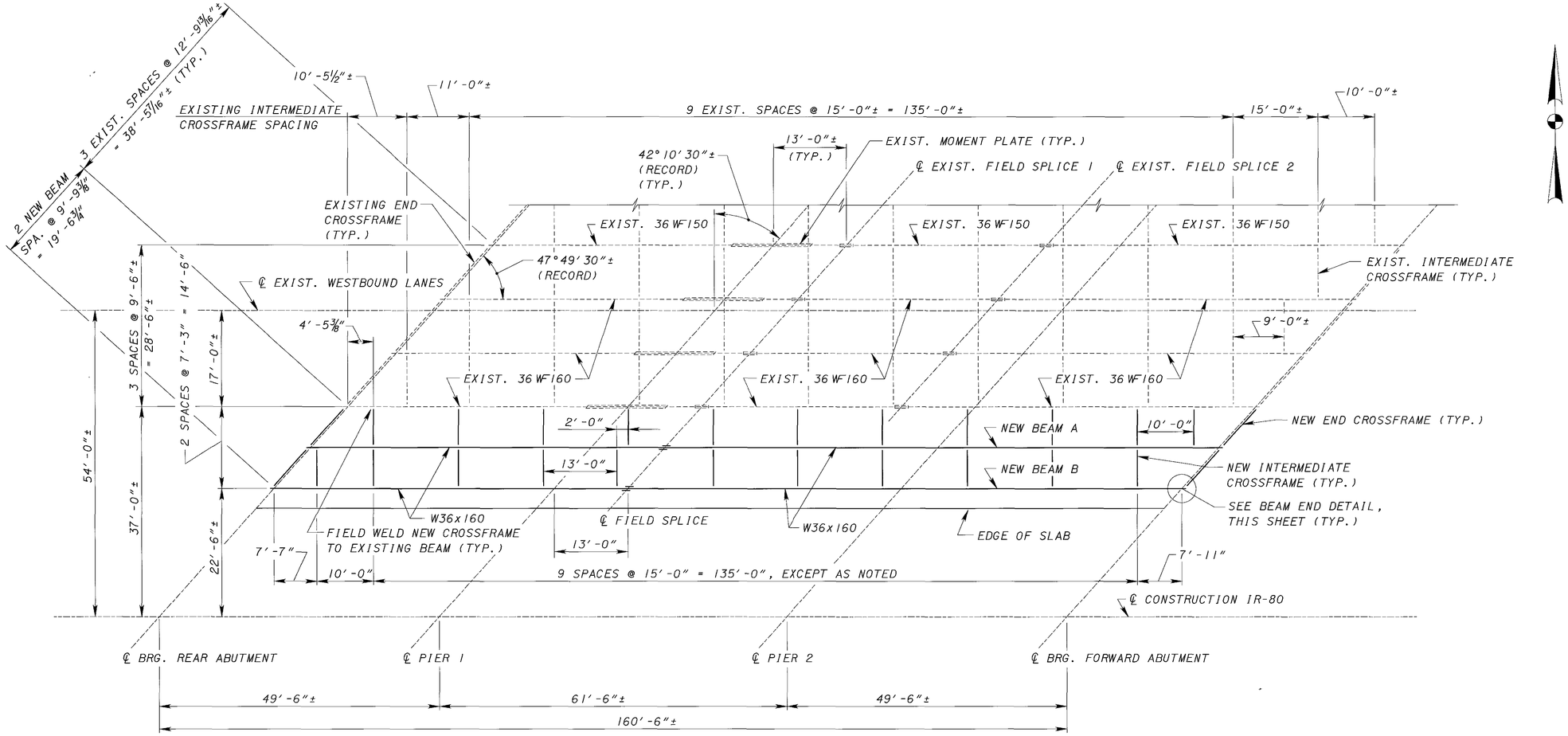
BTA		5002443	

TEMPORARY WIDENING - PIERS 1 AND 2
BRIDGE NO. MAH-80-0332 L
IR-80 OVER METROPARKS BIKEWAY

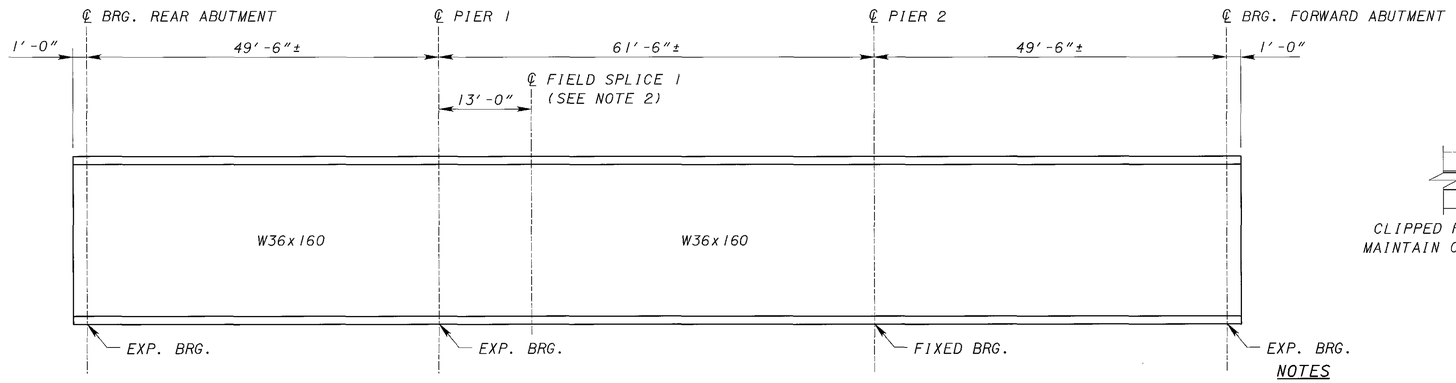
MAH-80-0.97
PID 6080

6 / 11

1052
1100

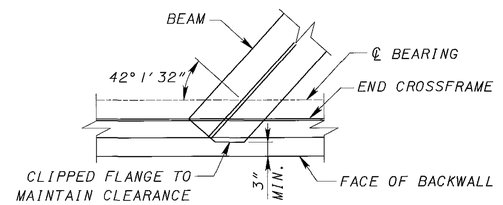


PARTIAL FRAMING PLAN



PROPOSED BEAM ELEVATION

(NEW BEAMS A & B)



BEAM END DETAIL

NOTES

1. FOR DETAILS OF PROPOSED INTERMEDIATE CROSSFRAMES AND END CROSSFRAMES, REFER TO ODOT STANDARD DRAWING GSD-1-96.
2. FOR BEAM SPLICE NOTES AND DETAILS, REFER TO ODOT STANDARD DRAWING BS-1-93, SHEET 3 OF 3.
3. BEAM CAMBER IS NOT REQUIRED.
4. FOR BEARING DETAILS, SEE SHEET 8/11.

DESIGN AGENCY
TRANSYSTEMS CORPORATION
55 PUBLIC SQUARE, SUITE 1650
CLEVELAND, OHIO 44113-1901

DESIGNED	DRAWN	REVIEWED	DATE
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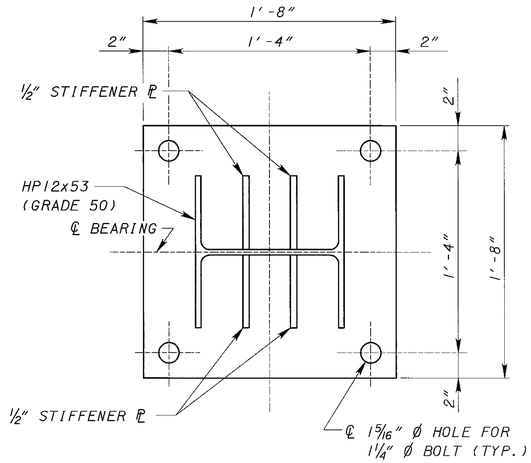
TEMPORARY WIDENING - FRAMING PLAN
BRIDGE NO. MAH-80-0332 L
IR-80 OVER METROPARKS BIKEWAY

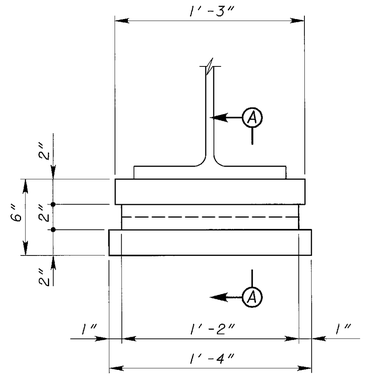
MAH-80-0.97
PID 6080

7/11

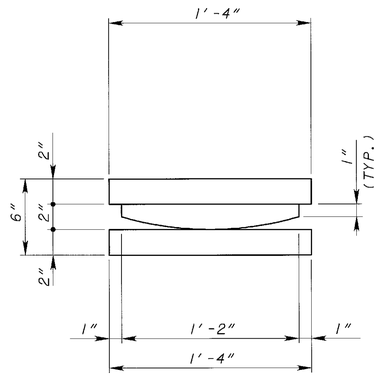
1053
1100



PLAN

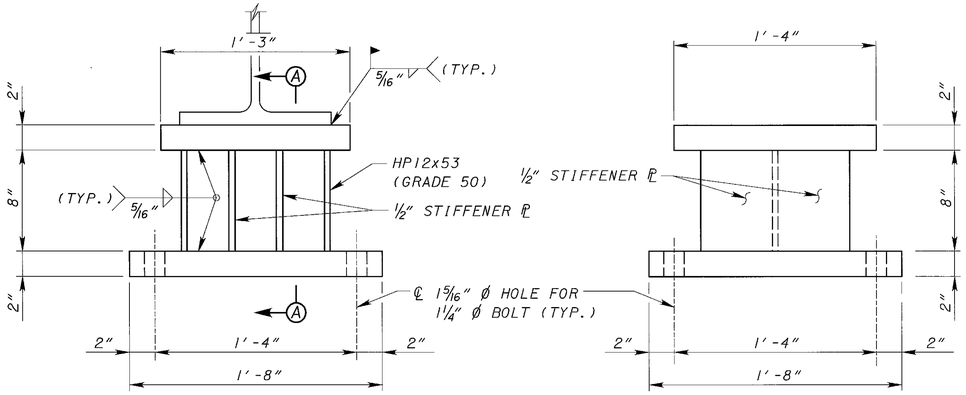


ELEVATION



SECTION A-A

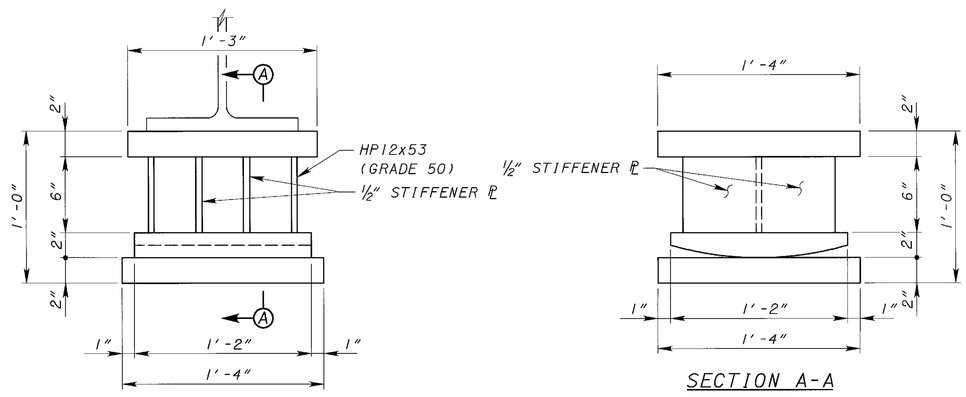
ABUTMENT - EXPANSION BEARING



ELEVATION

SECTION A-A

PIER - FIXED BEARING



ELEVATION

SECTION A-A

PIER - EXPANSION BEARING

NOTE:

SEE SHEET 2|11, PARAGRAPH "TEMPORARY STRUCTURE - GENERAL", WHICH ALLOWS THE CONTRACTOR TO CONSIDER SUBSTITUTING FOR USED OR ALTERNATE STRUCTURAL MEMBERS.

DESIGN AGENCY
TRANSYSTEMS CORPORATION
55 PUBLIC SQUARE, SUITE 1850
CLEVELAND, OHIO 44113-1901

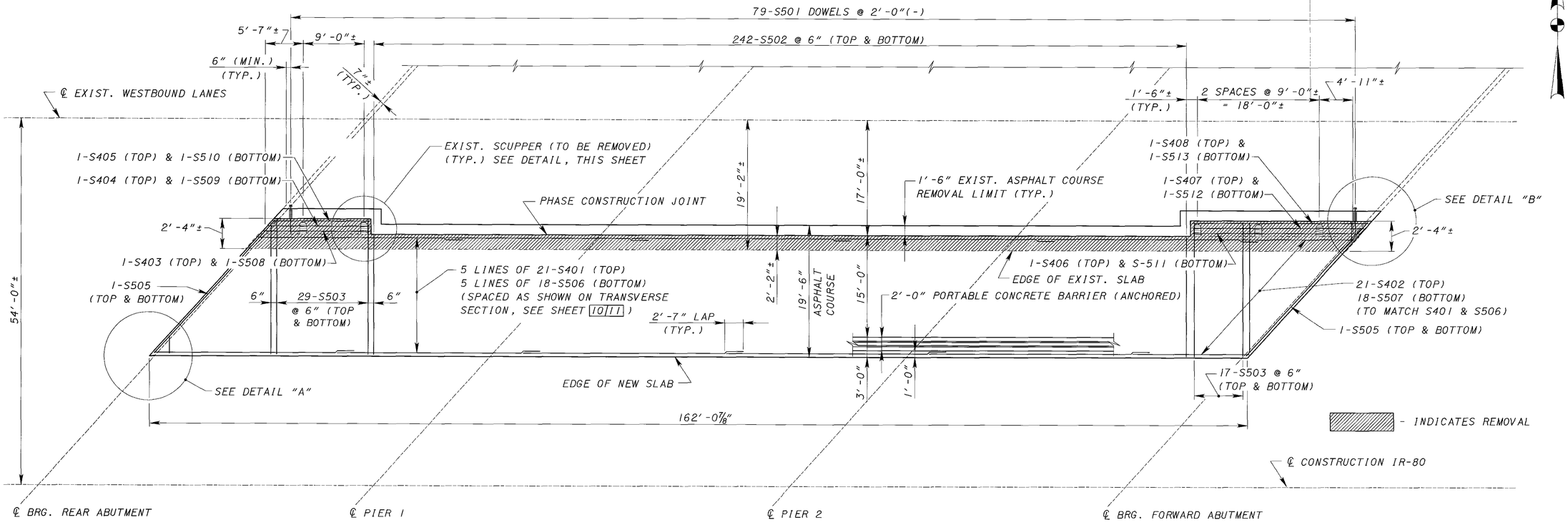
DESIGNED	DRAWN	REVIEWED	DATE
NFF	CAG	RER	7/19/05
CHECKED	REVISED	STRUCTURE FILE NUMBER	
BTA		5002443	

TEMPORARY WIDENING - BEARING DETAILS
BRIDGE NO. MAH-80-0332 L
IR-80 OVER METROPARKS BIKEWAY

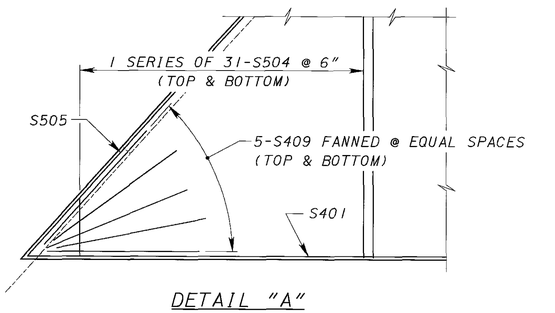
MAH-80-0.97
PID 6080

8 | 11

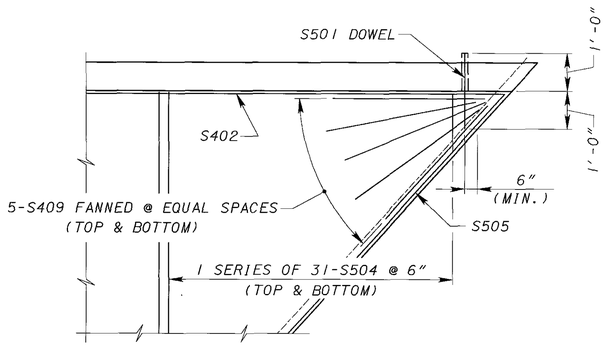
1054
1100



PARTIAL SLAB PLAN



DETAIL "A"



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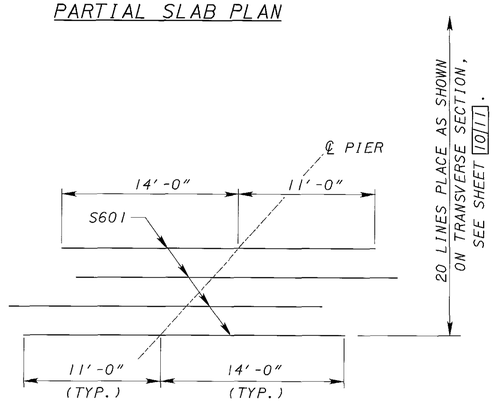
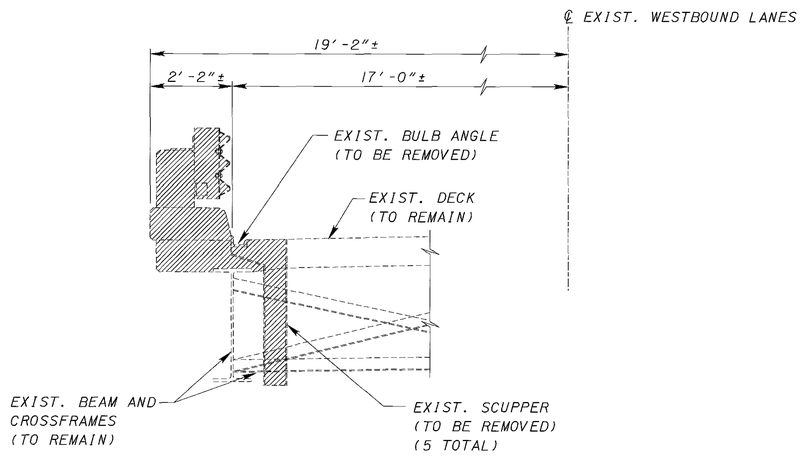


ADDITIONAL REINFORCEMENT OVER PIERS



SCUPPER REMOVAL DETAIL

NOTES:

1. FOR TRANSVERSE SECTION, SEE SHEET 10|11.
2. FOR REINFORCING SCHEDULE, SEE SHEET 11|11.
3. FOR TOP OF DECK ELEVATIONS, SEE SHEET 10|11.
4. FOR DETAILS OF PROPOSED INTERMEDIATE CROSSFRAMES AND END CROSSFRAMES, REFER TO ODOT STANDARD DRAWING GSD-1-96.

DESIGN AGENCY
TRANSYSTEMS CORPORATION
55 PUBLIC SQUARE, SUITE 1850
CLEVELAND, OHIO 44113-1901

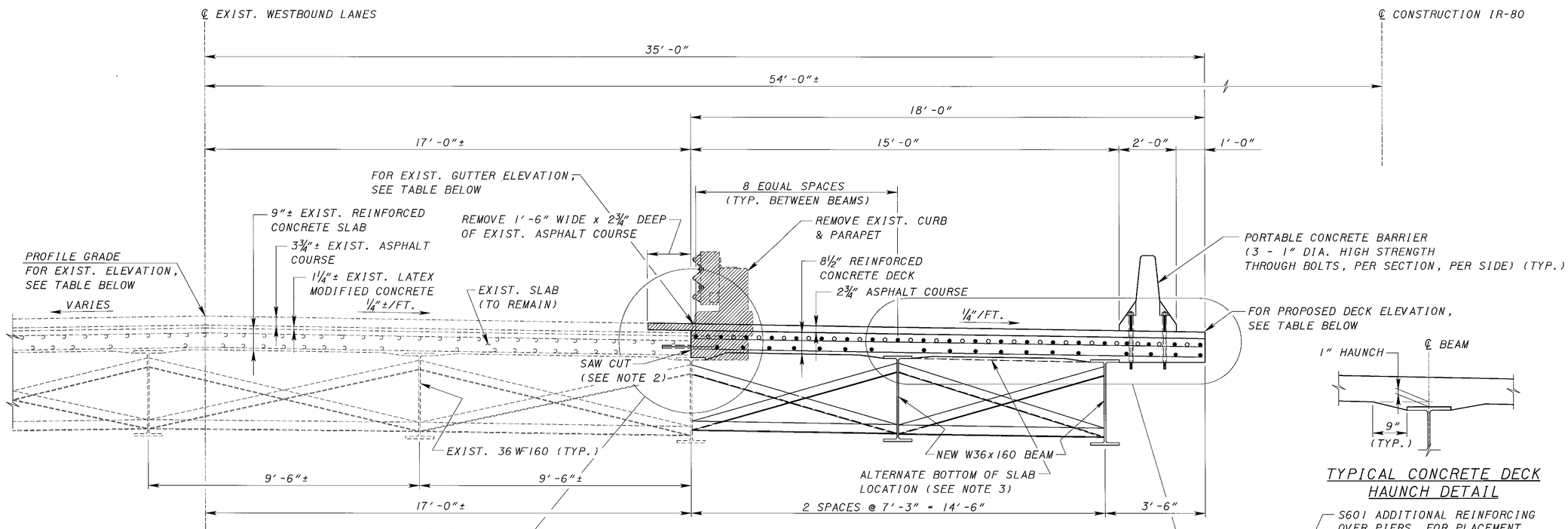
DESIGNED	DRAWN	REVIEWED	DATE
NFF	CAG	RER	7/19/05
CHECKED	REVISED	STRUCTURE FILE NUMBER	
BTA		5002443	

TEMPORARY WIDENING - SLAB PLAN
BRIDGE NO. MAH-80-0332 L
IR-80 OVER METROPARKS BIKEWAY

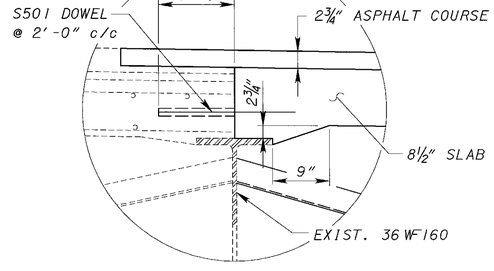
MAH-80-0.97
PID 6080

9 | 11

1055 | 1100

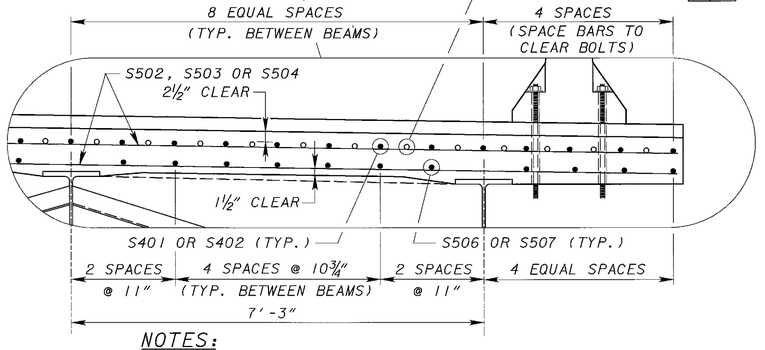


PARTIAL TRANSVERSE SECTION



▨ - INDICATES REMOVAL

TYPICAL CONCRETE DECK HAUNCH DETAIL



TOP OF DECK ELEVATIONS
(INCLUDES 2¾″ ASPHALT COURSE)

STATION	EXISTING PROFILE GRADE ELEVATION	EXISTING GUTTER ELEVATION	PROPOSED END OF WIDENED DECK ELEVATION
630+00	1049.45±	1049.31±*	-
630+25	1049.44±	1049.26±*	-
630+50	1049.69±	1049.12±	1048.73±
630+75	1049.65±	1049.22±	1048.85±
631+00	1049.61±	1049.16±	1048.79±
631+25	1049.55±	1049.13±	1048.77±
631+50	1049.47±	1049.11±	1048.74±
631+75	1049.42±	1048.93±	1048.54±
632+00	1049.35±	1048.87±	1048.48±
632+25	1048.88±	1048.95±*	-

* - AT EDGE OF EXISTING APPROACH SLAB

NOTES:

1. DECK SLAB CONCRETE QUANTITY: THE ESTIMATED QUANTITY OF DECK SLAB CONCRETE IS BASED ON THE CONSTANT DECK SLAB THICKNESS, AS SHOWN, PLUS THE QUANTITY OF CONCRETE THAT FORMS EACH BEAM HAUNCH. THE ESTIMATE ASSUMES A CONSTANT HAUNCH THICKNESS OF 1 INCH AND A CONSTANT HAUNCH WIDTH OUTSIDE THE EDGE OF EACH BEAM FLANGE OF 9 INCHES.

2. PERFORM WORK CAREFULLY DURING DECK REMOVAL TO AVOID DAMAGING TOP FLANGE OF EXISTING BEAMS. REPLACE OR REPAIR DAMAGED BEAMS BY THE REMOVAL OPERATIONS AT NO COST TO THE PROJECT. SUBMIT PROPOSED REPAIRS, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER, IN WRITING TO THE DIRECTOR AT LEAST 20 DAYS BEFORE PERFORMING REPAIR WORK.

3. AT THE OPTION OF THE CONTRACTOR, THE ALTERNATE LOCATION OF THE BOTTOM OF SLAB SHOWN ON THE PLANS IS ACCEPTABLE AT NO EXTRA COST TO THE PROJECT.

4. FOR FRAMING PLAN, SEE SHEET 7/11.

5. FOR SLAB PLAN, SEE SHEET 9/11.

DESIGN AGENCY
TRANSYSTEMS CORPORATION
55 PUBLIC SQUARE, SUITE 1650
CLEVELAND, OHIO 44113-1901

DESIGNED	DRAWN	REVIEWED	DATE
NFF	CAG	RER	7/19/05
CHECKED	REVISED	STRUCTURE FILE NUMBER	
BTA		5002443	

TEMPORARY WIDENING - TRANSVERSE SECTION
BRIDGE NO. MAH-80-0332 L
IR-80 OVER METROPARKS BIKEWAY

MAH-80-0.97
PID 6080

10/11

1056
1100

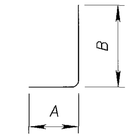
BAR SCHEDULE

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC.
REAR ABUTMENT											
RA401	1	21'-9"	33	27	0'-4½"	2'-8"					
RA601	29	2'-3"	98	STR.							
RA602	1	13'-3"	20	STR.							
RA603	20	3'-1"	93	1	1'-0"	2'-3"					
RA604	14	21'-7"	445	STR.							
RA605	9	12'-10"	174	3	2'-8"	3'-5"					
RA606	15	16'-4"	308	3	4'-5"	3'-5"					
RA607	6	13'-5"	121	STR.							
RA608	15	7'-5"	167	2	3'-2"	1'-5"					
RA609	22	6'-7"	218	2	2'-9"	1'-5"					
RA610	11	19'-5"	321	STR.							
RA611	22	6'-1"	201	2	2'-9"	0'-11"					
RA801	10	3'-11"	105	13	1'-3"	1'-0"	1'-0"	1'-3"			
RA802	13	5'-1"	176	18	3'-2"	1'-0"	1'-0"				
RA901	12	26'-1"	1064	1	1'-7"	24'-9"					
TOTAL WEIGHT REAR ABUTMENT = 3604											
FORWARD ABUTMENT											
FA401	2	23'-4"	70	27	0'-4½"	2'-8"					
FA601	28	2'-3"	95	STR.							
FA602	1	13'-6"	20	STR.							
FA603	10	3'-1"	46	1	1'-0"	2'-3"					
FA604	14	21'-3"	447	STR.							
FA605	4	12'-10"	77	3	2'-8"	3'-5"					
FA606	19	16'-4"	466	3	4'-5"	3'-5"					
FA607	6	18'-2"	164	STR.							
FA608	19	7'-5"	212	2	3'-2"	1'-5"					
FA609	26	6'-7"	257	2	2'-9"	1'-5"					
FA610	11	24'-2"	399	STR.							
FA611	26	6'-1"	238	2	2'-9"	0'-11"					
FA801	9	3'-11"	95	13	1'-3"	1'-0"	1'-0"	1'-3"			
FA802	14	5'-1"	190	18	3'-2"	1'-0"	1'-0"				
FA901	24	26'-1"	2128	1	1'-7"	24'-9"					
TOTAL WEIGHT FORWARD ABUTMENT = 4904											

BAR SCHEDULE

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC.
PIER 1											
SP401	2	5'-8"	52	27	0'-4½"	3'-2"					
SP402	2	17'-3"	150	27	0'-4½"	2'-8"					
P501	24	7'-9"	194	2	2'-8"	2'-8"	2'-8"				
P601	14	16'-8"	351	STR.							
P901	28	5'-8"	540	STR.							
P902	24	14'-0"	1142	STR.							
P903	24	19'-6"	1591	STR.							
TOTAL WEIGHT PIER 1 = 4020											
PIER 2											
SP401	2	6'-8"	61	27	0'-4½"	3'-2"					
SP402	2	16'-3"	142	27	0'-4½"	2'-8"					
P501	24	7'-9"	194	2	2'-8"	2'-8"	2'-8"				
P601	14	16'-8"	351	STR.							
P901	28	6'-8"	635	STR.							
P902	24	14'-0"	1142	STR.							
P903	24	18'-6"	1507	STR.							
TOTAL WEIGHT PIER 2 = 4032											
SUPERSTRUCTURE											
S401	105	30'-0"	2104	STR.							
S402	21	24'-8"	346	STR.							
S403	1	15'-10"	11	STR.							
S404	1	15'-0"	10	STR.							
S405	1	14'-1"	9	STR.							
S406	1	24'-6"	16	STR.							
S407	1	25'-5"	17	STR.							
S408	1	26'-3"	18	STR.							
S409	20	8'-0"	107	STR.							
S501	79	2'-0"	165	STR.							
S502	484	17'-8"	8920	STR.							
S503	92	19'-11"	1911	STR.							
	4 SERIES	3'-0"									
S504	OF	TO	1445	STR.							6½"
	31 BARS	19'-6"									
S505	4	27'-0"	113	STR.							
S506	90	30'-0"	2816	STR.							
S507	18	24'-8"	463	STR.							
S508	1	15'-10"	17	STR.							
S509	1	15'-0"	16	STR.							
S510	1	14'-1"	15	STR.							
S511	1	24'-6"	26	STR.							
S512	1	25'-5"	27	STR.							
S513	1	26'-3"	27	STR.							
S601	40	25'-0"	1502	STR.							
TOTAL WEIGHT SUPERSTRUCTURE = 20101											

BAR BENDING DIAGRAMS



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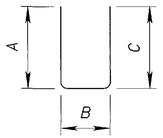

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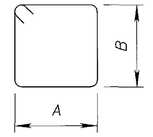

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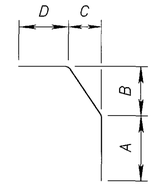

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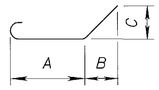

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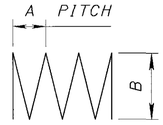


TYPE-27

NOTES:

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, RA601:

RA: LOCATION OF THE BAR IN THE STRUCTURE (REAR ABUTMENT)
6: BAR SIZE DESIGNATION NO. 6
01: SEQUENCE NUMBER

BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE NOTED. "STD." WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BAR BEND AT THE END OF THE BAR. ALL REINFORCING STEEL IS TO BE EPOXY COATED. STRAIGHT BARS ARE INDICATED BY "STR".

DESIGN AGENCY
TRANSYSTEMS CORPORATION
55 PUBLIC SQUARE, SUITE 1650
CLEVELAND, OHIO 44113-1901

DESIGNED	DRAWN	REVIEWED	DATE
NFF	CAG	RER	7/19/05
CHECKED	REVISED	STRUCTURE FILE NUMBER	
BTA		5002443	

TEMPORARY WIDENING - REINFORCING SCHEDULE
BRIDGE NO. MAH-80-0332 L
IR-80 OVER METROPARKS BIKEWAY

MAH-80-0.97
PID 6080

11 / 11

1057
1100

CLOSURE NOTIFICATION

THE CONTRACTOR SHALL ADVISE THE ODOT DISTRICT OFFICE (330-786-2211) AND MILL CREEK METROPARKS (330-702-3000 EXT. 26) EIGHTEEN (18) DAYS IN ADVANCE OF WHEN THE CLOSURE SHOULD BE IN EFFECT. ALL WORK ZONE DEVICES REQUIRED SHALL BE FURNISHED, ERECTED, MAINTAINED, AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR

CLOSURE DURATION (MULTIPLE CLOSURES MAY BE NEEDED DURING THE COURSE OF CONSTRUCTION)

LENGTH AND DURATION OF CLOSURE AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. THE CONTRACTOR SHALL SUBMIT, IN WRITING, A PLANNED SCHEDULE FOR THE DURATION AND NUMBER OF CLOSURES ANTICIPATED. CONSTRUCTION WORK MAY BE PERFORMED BEFORE AND AFTER THE CLOSURE LIMITATION DATES, BUT THERE SHALL BE NO RESTRICTIONS TO BIKEWAY TRAFFIC. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SCHEDULE AND PERFORM THE CONSTRUCTION WORK WITHIN THE CLOSURE LIMITATION TIME. THE FAILURE OF THE CONTRACTOR TO MEET THE CLOSURE LIMITATION DATES WILL CAUSE SEPARATE LIQUIDATED DAMAGES OF $500.00 PER CALENDAR DAY OF OVERRUN OF DETOUR LIMITATION TIME TO BE ASSESSED. THE CONTRACTOR WILL COMPLY WITH ALL PROVISIONS OF 108.07 OF THE DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS.

CONSTRUCTION SAFETY FENCING

CONSTRUCTION SAFETY FENCING SHALL BE PROVIDED TO RESTRICT ACCESS DURING CONSTRUCTION. FENCING MATERIAL SHALL BE CHAINLINK, CMS 607. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION, MAINTENANCE AND SUBSEQUENT REMOVAL OF ALL CONSTRUCTION SAFETY FENCING.

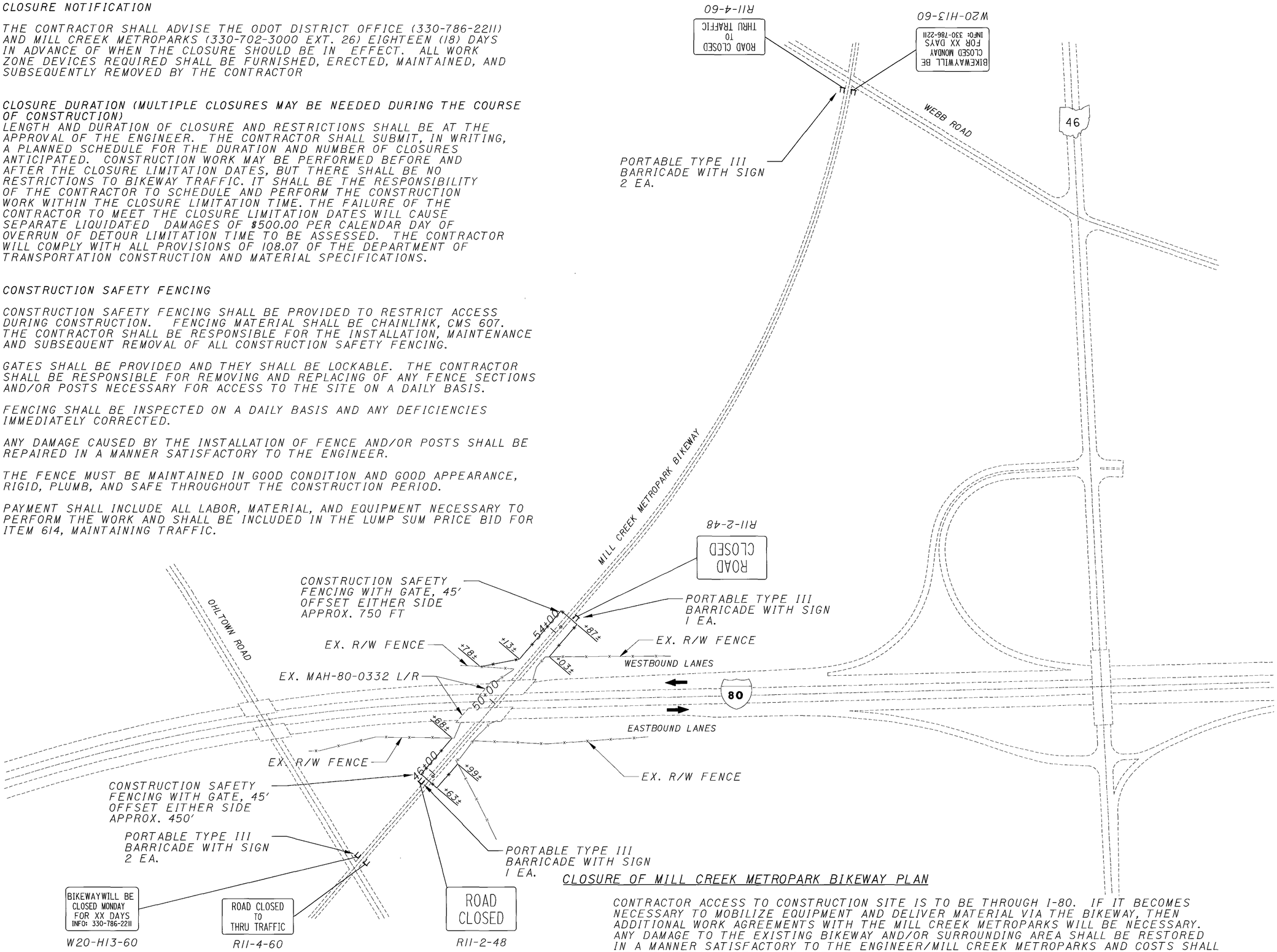
GATES SHALL BE PROVIDED AND THEY SHALL BE LOCKABLE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND REPLACING OF ANY FENCE SECTIONS AND/OR POSTS NECESSARY FOR ACCESS TO THE SITE ON A DAILY BASIS.

FENCING SHALL BE INSPECTED ON A DAILY BASIS AND ANY DEFICIENCIES IMMEDIATELY CORRECTED.

ANY DAMAGE CAUSED BY THE INSTALLATION OF FENCE AND/OR POSTS SHALL BE REPAIRED IN A MANNER SATISFACTORY TO THE ENGINEER.

THE FENCE MUST BE MAINTAINED IN GOOD CONDITION AND GOOD APPEARANCE, RIGID, PLUMB, AND SAFE THROUGHOUT THE CONSTRUCTION PERIOD.

PAYMENT SHALL INCLUDE ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO PERFORM THE WORK AND SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC.



CLOSURE OF MILL CREEK METROPARK BIKEWAY PLAN

CONTRACTOR ACCESS TO CONSTRUCTION SITE IS TO BE THROUGH I-80. IF IT BECOMES NECESSARY TO MOBILIZE EQUIPMENT AND DELIVER MATERIAL VIA THE BIKEWAY, THEN ADDITIONAL WORK AGREEMENTS WITH THE MILL CREEK METROPARKS WILL BE NECESSARY. ANY DAMAGE TO THE EXISTING BIKEWAY AND/OR SURROUNDING AREA SHALL BE RESTORED IN A MANNER SATISFACTORY TO THE ENGINEER/MILL CREEK METROPARKS AND COSTS SHALL BE INCIDENTAL TO THE PROJECT.

DESIGN AGENCY
TRANSYSTEMS CORPORATION
55 PUBLIC SQUARE, SUITE 1650 CLEVELAND, OHIO 44113-1960

DESIGNED	DRAWN	REVIEWED	DATE
HJF	HJF	RER	7/19/05
CHECKED	REVISED	STRUCTURE FILE NUMBER	
NFF		5002443	

MILL CREEK METROPARK BIKEWAY CLOSURE PLAN
BRIDGE No. MAH-80-0332
I-80 OVER MILL CREEK METROPARK BIKEWAY

MAH-80-0.97
PID 6080

1058
1100

REFERENCE NO.	SHEET No.	SIDE	ROADWAY	STATION TO STATION		603	625	625	625	625	625	625	625	625	625	625	SPECIAL	625	631			
						4" CONDUIT, TYPE E	NO. 4 AWG 600 VOLT DISTRIBUTION CABLE	NO. 10 AWG 600 VOLT DISTRIBUTION CABLE	CONDUIT, 1-1/4", 725.04, AS PER PLAN	CONDUIT, 2", 725.05	LUMINAIRE, MISC.: TUNNEL LIGHTING	TRENCH	JUNCTION BOX, AS PER PLAN	PULL BOX, 725.08, 18"	GROUND ROD	POWER SERVICE, AS PER PLAN	PLASTIC CAUTION TAPE	HIGH VOLTAGE TEST	TIMER WITH ENCLOSURE			
						FT	FT	FT	FT	FT	EACH	FT	EACH	EACH	EACH	EACH	FT	LUMP	EACH			
PS1	1061	RT			40+79		900								1	1						
	1061	RT		40+79	41+05		108			26		26					26					
	1061	RT			41+05	40								1								
	1061	RT		41+05	44+65		1110			360		360					360					
	1061	RT			44+65	40								1								
	1061	RT		44+65	48+25		1110			360		360					360					
	1061	RT			48+25	40								1								
	1061	RT		48+25	48+45		105			30		30					30					
PS2	1061	RT			48+45										1	1			1			
	1061	RT		48+45	48+65			150		40		40					40					
①	1061	℄			48+65	40			2.5		1		1	1								
	1061	℄		48+65	49+10			150	45													
②	1061	℄			49+10				2.5		1		1									
	1061	℄		49+10	49+55			150	45													
③	1061	℄			49+55				2.5		1		1									
	1061	℄		49+55	50+00			150	45													
④	1061	℄			50+00				2.5		1		1									
	1061	℄		50+00	50+45			150	45													
⑤	1061	℄			50+45				2.5		1		1									
	1061	℄		50+45	50+90			150	45													
⑥	1061	℄			50+90				2.5		1		1									
	1061	℄		50+90	51+35			150	45													
⑦	1061	℄			51+35				2.5		1		1									
TOTALS CARRIED TO GENERAL SUMMARY						160	3333	1050	287.5	816	7	816	7	4	2	2	816	LUMP	1			

LIGHTING PLAN SUB-SUMMARY
MAH-80-0.97 (0332) (I-80 OVER METROPARKS BIKEWAY)

CALCULATED HJF
CHECKED SSS

MAH-80-0.97
PID 6080

1059
1100

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UNDERDRAINS FOR PULL BOXES

REFERENCE IS MADE TO THE STANDARD DRAWINGS FOR DETAILS OF DRAINING PULL BOXES. UNDERDRAINS FOR PULL BOXES SHALL BE USED AS DIRECTED BY THE ENGINEER AND SHALL BE PROVIDED WHERE THE LENGTH REQUIRED FOR A SATISFACTORY OUTLET DOES NOT EXCEED APPROXIMATELY 40 FEET. AN ANIMAL GUARD SHALL BE INCLUDED AT THE OUTLET END OF THE DRAIN. AN ESTIMATED QUANTITY OF 160 FEET FOR CMS "ITEM 603 4" CONDUIT, TYPE E" IS INCLUDED IN THE LIGHTING PLAN SUB-SUMMARY FOR THIS PURPOSE.

ITEM 625 - JUNCTION BOX, AS PER PLAN

THE JUNCTION BOX SHALL HAVE AN EMBOSSMENT IN THE BACK OF THE BOX THAT SHALL BE DRILLED AND TAPPED FOR A 1/4" - 20 CAP SCREW FOR CONNECTION OF GROUNDS.

WHEN SURFACE MOUNTED, THE JUNCTION MAY HAVE IN LIEU OF BOSSED DRILLED AND TAPPED CONNECTIONS, FIELD INSTALLED HUBS TO ACCOMMODATE THE CONDUITS ENTERING THE BOX.

ITEM 625 - POWER SERVICE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF THE SPECIFICATIONS, THE FOLLOWING IS ADDED.

THE POWER SUPPLYING AGENCY FOR THIS PROJECT IS:

POWER COMPANY OHIO EDISON

ADDRESS 730 SOUTH AVENUE

ADDRESS YOUNGSTOWN, OH 44502

PHONE # 800-633-4766 CONTACT: MR. BILL SPEECE

POWER SERVICE SHALL BE METERED.

THE CONTRACTOR SHALL CONTACT THE METER SECTION OF THE POWER COMPANY FOR INFORMATION REGARDING THE METER BASE INSTALLATION PRIOR TO ORDERING POLES. THE CONTRACTOR WILL BE RESPONSIBLE FOR REQUESTING AND SCHEDULING ANY INSPECTIONS THE POWER COMPANY MAY REQUIRE FOR THE POWER SERVICE HOOK UP. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT THE POWER COMPANY FOR THE ELECTRICAL SERVICE CONNECTION. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR SPLICE POWER CABLE INTO THE POWER COMPANY'S CIRCUITS. THE VOLTAGE SUPPLIED SHALL BE NOMINALLY 120/240 VOLTS. SINGLE PHASE, THREE-WIRE, GROUNDED NEUTRAL. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS AND THE PAYING OF ALL FEES.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CHARGES MADE BY THE POWER COMPANY FOR WORK BY THE COMPANY IN CONJUNCTION WITH THE ESTABLISHMENT OF THE REQUIRED SERVICE.

THE CONTRACTOR SHALL PAY ELECTRICAL ENERGY CHARGES FOR NEW POWER SERVICES ESTABLISHED BY THIS PROJECT. AFTER ACCEPTANCE OF THE LIGHTING, THE POWER SERVICE ELECTRICAL ENERGY ACCOUNT SHALL BE TRANSFERRED TO THE MAINTAINING AGENCY NOTED IN THE PLANS.

THIS SHALL INCLUDE NEW POWER SERVICE ESTABLISHED BY THIS PROJECT.

A 24-HOUR TIMER (CMS 731.10) SHALL BE USED IN LIEU OF PHOTO-ELECTRIC CONTROL AND SHALL BE PAID FOR UNDER SEPARATE PAY ITEM. THE TIMER SHALL BE WIRED AND INITIALLY SET TO TURN THE LIGHTS ON AT DAWN AND OFF AT THE PARK'S CLOSING TIME. ALL TIMER SETTINGS SHALL BE FULLY ADJUSTABLE.

PAYMENT WILL BE MADE AT THE UNIT BID PRICE FOR EACH CMS ITEM 625, "POWER SERVICE, AS PER PLAN" WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625 - HIGH VOLTAGE TEST

A LUMP SUM FOR PERFORMING THE HIGH VOLTAGE TEST REQUIRED BY CMS 625.19.E HAS BEEN INCLUDED IN THE SUB-SUMMARY.

ITEM 625 - CONDUIT, 1-1/4", 725.04, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF 625 AND 725.04, CONDUITS INSTALLED UNDER THIS ITEM SHALL BE ATTACHED TO THE CEILING OF CULVERT SECTIONS. THE CONDUIT SHALL BE SECURED TO THE CEILING BY TWO-HOLE STRAPS SPACED AT 5 FOOT INTERVALS. TWO HOLES SHALL BE DRILLED 1 INCH INTO THE CONCRETE TO ACCOMMODATE 1/4-INCH DIAMETER STAINLESS STEEL AND/OR EPOXY CONCRETE ANCHORS.

PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE BID, PER LINEAR FOOT, OF "ITEM 625 CONDUIT, 1-1/4", 725.04, AS PER PLAN", FURNISHED AND INSTALLED INCLUDING ALL FITTINGS AND APPURTENANCES, JOINTS, BENDS AND GROUND, IN PLACE AND ACCEPTED. FOR PAYMENT PURPOSES, BRANCH CONDUIT TO LUMINAIRES SHALL BE CONSIDERED AS CONDUIT BENDS AND SHALL BE INCLUDED IN THIS PAY ITEM. BRANCH CONDUIT SHALL NOT EXCEED 30 INCHES IN LENGTH UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

ITEM SPECIAL - PLASTIC CAUTION TAPE

THE LOCATION OF UNDERGROUND CONDUIT AND BURIED ELECTRICAL CABLES SHALL BE MARKED BY THE USE OF A CONTINUOUS IDENTIFYING TAPE BURIED IN THE TRENCH ABOVE THE LINE. THE IDENTIFYING TAPE SHALL BE AN INERT MATERIAL, APPROXIMATELY 6 INCHES WIDE COMPOSED OF POLYETHYLENE PLASTIC, HIGHLY RESISTANT TO ALKALIS, ACIDS, OR OTHER CHEMICAL COMPONENTS LIKELY TO BE ENCOUNTERED IN SOILS. THE TAPE SHALL BE BRIGHT RED WITH IDENTIFYING PRINTING "ELECTRIC" IN BLACK LETTERS, ONE SIDE ONLY. TAPE SHALL BE SUPPLIED IN CONTINUOUS ROLLS WITH THE IDENTIFYING LETTERING REPEATED CONTINUOUSLY THE FULL LENGTH OF THE TAPE. IDENTIFYING TAPE SHALL BE BURIED ON THE ELECTRIC LINE TRENCH WITH ONE STRIP APPROXIMATELY 6 TO 10 INCHES BELOW THE FINAL FINISHED GRADE. THE TAPE SHALL BE PLACED IN THE TRENCH WITH THE PRINTED SIDE UP AND SHALL BE ESSENTIALLY PARALLEL WITH THE FINISHED SURFACE. THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO INSURE THAT THE TAPE IS NOT PULLED, DISTORTED, OR OTHERWISE MISPLACED IN COMPLETING THE TRENCH BACKFILL. THE TAPE SHALL BE PAID FOR PER LINEAR FOOT OF "ITEM SPECIAL PLASTIC CAUTION TAPE" COMPLETE AND IN PLACE.

ITEM 625 - LUMINAIRE, MISC.: TUNNEL LIGHTING

IN ADDITION TO THE REQUIREMENTS OF ODOT'S CONSTRUCTION AND MATERIAL SPECIFICATIONS, LUMINAIRES FOR TUNNEL LIGHTING UNITS SHALL BE AS FOLLOWS:

LUMINAIRES FOR TUNNEL LIGHTING UNITS WITH 100 WATT HIGH PRESSURE SODIUM LAMPS SHALL BE:
- *HOLOPHANE PARKPAK WITH PHOTOMETRIC DISTRIBUTION 34070.IES;*
- *GENERAL ELECTRIC GARAGE GARD WITH PHOTOMETRIC DISTRIBUTION GE179899.IES;*
- *LITHONIA PGR WITH PHOTOMETRIC DISTRIBUTION 98062203.IES;*
- *OR EQUAL AS APPROVED BY THE ENGINEER.*

LUMINAIRES FOR TUNNEL LIGHTING UNITS WHICH ARE CEILING MOUNTED SHALL BE FURNISHED WITH AN INTEGRAL FUSE HOLDER AND 10-AMPERE FUSES.

LIGHTING ILLUMINATION SHALL BE A MINIMUM 1.0 FOOT-CANDLES.

LIGHTING FIXTURE SHALL BE VANDAL RESISTANT.

MINIMUM VERTICAL CLEARANCE TO BOTTOM OF LIGHT FIXTURE SHALL BE 14'-0".

PAYMENT WILL BE MADE AT THE UNIT PRICE BID UNDER CMS ITEM 625 - LUMINAIRE, MISC.: TUNNEL LIGHTING". WHICH SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

CALCULATED HJF | CHECKED EDR

LIGHTING GENERAL NOTES

MAH-80-0.97 (0332) (I-80 OVER METROPARKS BIKEWAY)

MAH-80-0.97
PID 6080

1060
1100

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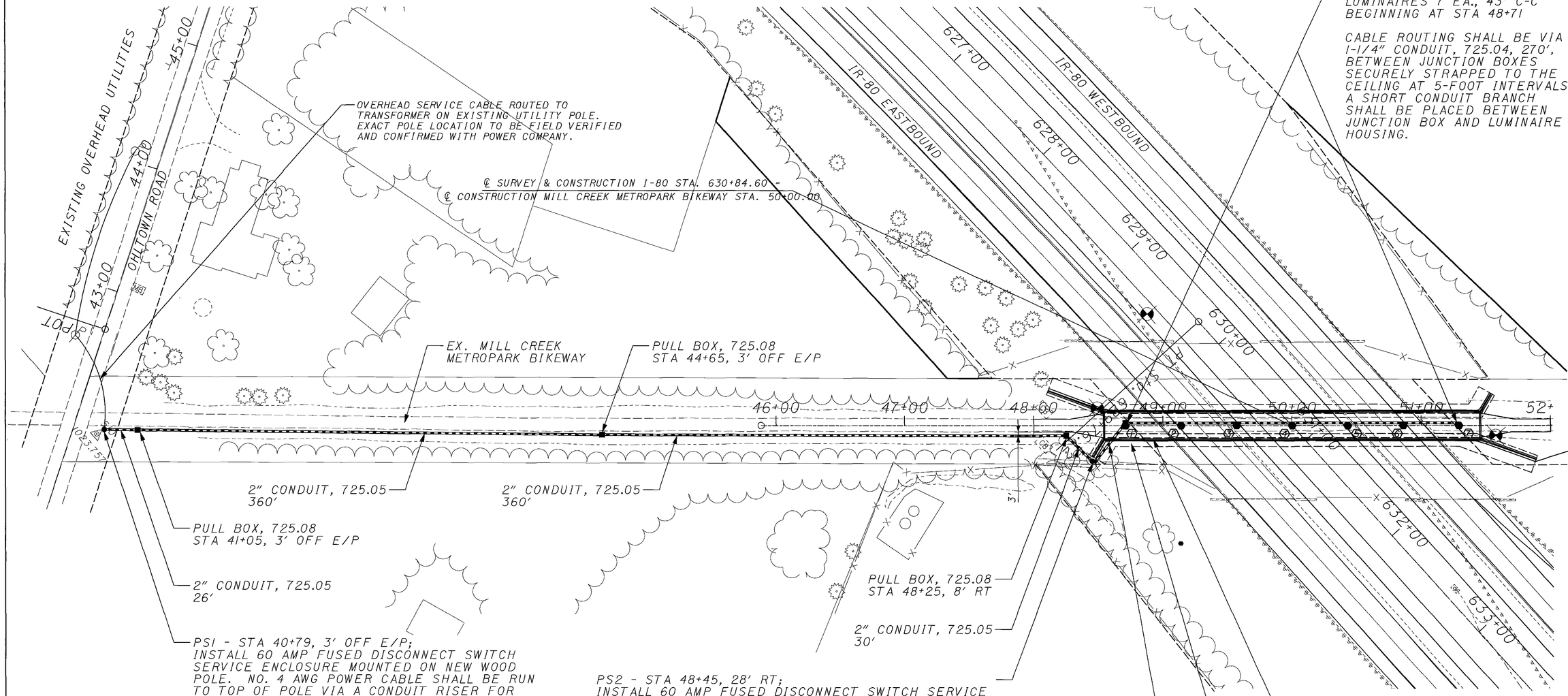

PLAN SHEET NOTES:

1. POTENTIAL POWER SERVICE MAY BE PROVIDED ALONG EXISTING OVERHEAD UTILITIES ON SOUTH SIDE OF OHLTOWN ROAD AT ITS INTERSECTION WITH THE BIKEWAY ENTRANCE. TRANSFORMER LOCATION SHALL BE FIELD VERIFED. CONFIRMATION IS REQUIRED FROM THE LOCAL POWER COMPANY.

   CABLE ROUTING SHALL BE VIA 2-INCH CONDUIT FROM PULL BOX AT STA. 41+05 TO 2-INCH RISER UP NEW WOOD POLE TO SERVICE ENCLOSURE. THIS SERVICE SHALL BE METERED AS REQUIRED BY THE POWER COMPANY.

   LOCATION OF CONTROL CENTER FOR LIGHTING AND LOCATION OF 2" CONDUIT SHALL BE COORDINATED BETWEEN THE CONTRACTOR, PROJECT ENGINEER, POWER COMPANY AND MILL CREEK METROPARKS.

2. ALL AREAS DISRUPTED AND ANY DAMAGE CAUSED BY PERFORMANCE OF THE ELECTRICAL WORK SHALL BE RESTORED TO A CONDITION THAT EXISTED PRIOR TO BEGINNING THE WORK IN A MANNER SATISFACTORY TO THE PROJECT ENGINEER AND THE MILL CREEK METROPARKS.

HORIZONTAL SCALE IN FEET
0 20 40 80
CALCULATED H.J.F
CHECKED E.D.R

LIGHTING PLAN
MAH-80-0.97 (0332) (I-80 OVER METROPARKS BIKEWAY)
MAH-80-0.97 PID 6080

1061
1100

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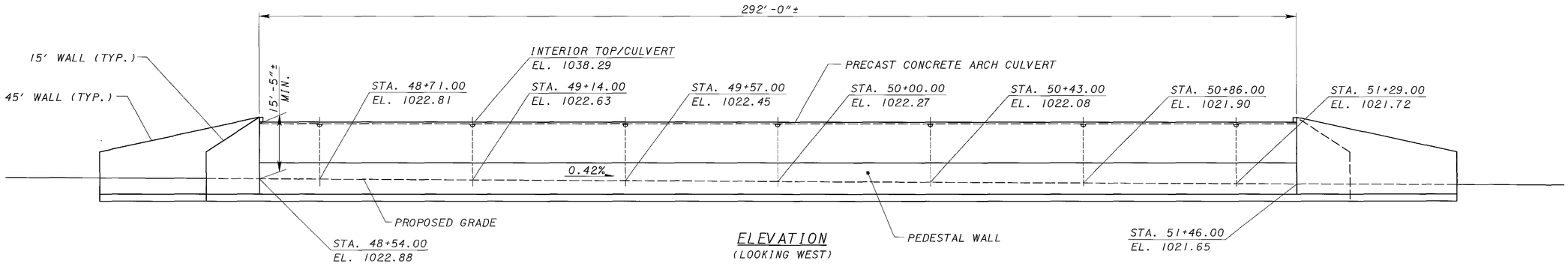
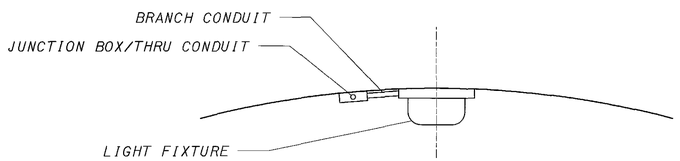
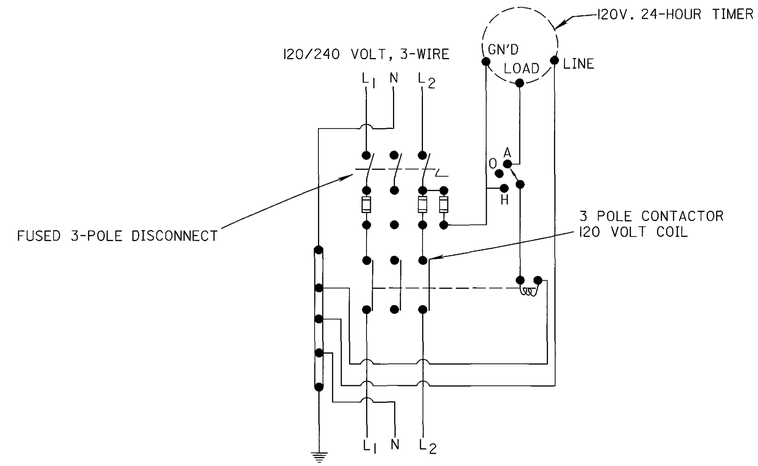
LUMINAIRE INSTALLATION NOTES:

1. LUMINAIRE SHALL BE MOUNTED TO CULVERT CEILING A MINIMUM OF 1 FOOT FROM ANY CULVERT SECTION BUTT JOINT. SEE CULVERT WALL DETAIL FOR JOINT LAYOUT.



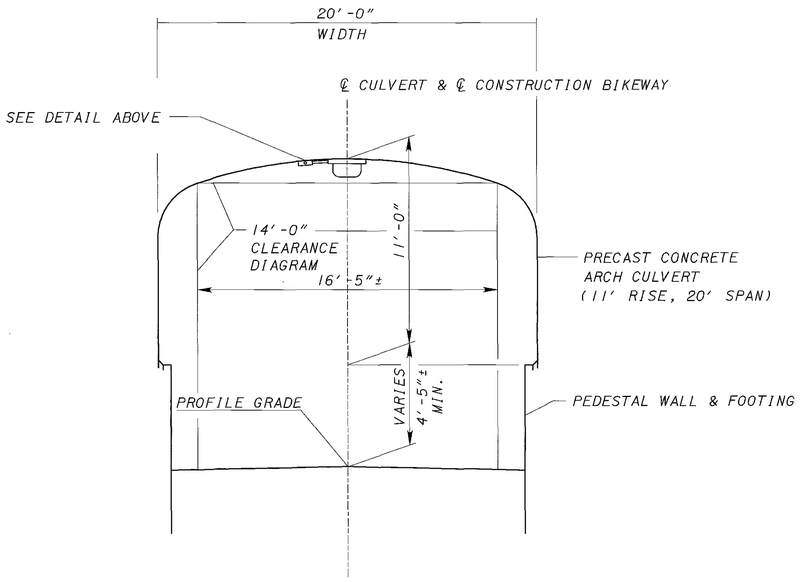
ELEVATION
(LOOKING WEST)





TIMER WIRING DIAGRAM

120/240 VOLT, 3-WIRE
GROUNDED NEUTRAL
SINGLE CIRCUIT



INTERIOR OF TUNNEL SECTION

TUNNEL SECTION SHOWN FOR ILLUSTRATION OF LUMINAIRE ONLY.
SEE CULVERT DETAILS FOR ACTUAL CONSTRUCTION.

CALCULATED HJF
CHECKED EDR

LIGHTING DETAILS
MAH-80-0.97 (0332) (I-80 OVER METROPARKS BIKEWAY)

MAH-80-0.97
PID 6080

1062
1100

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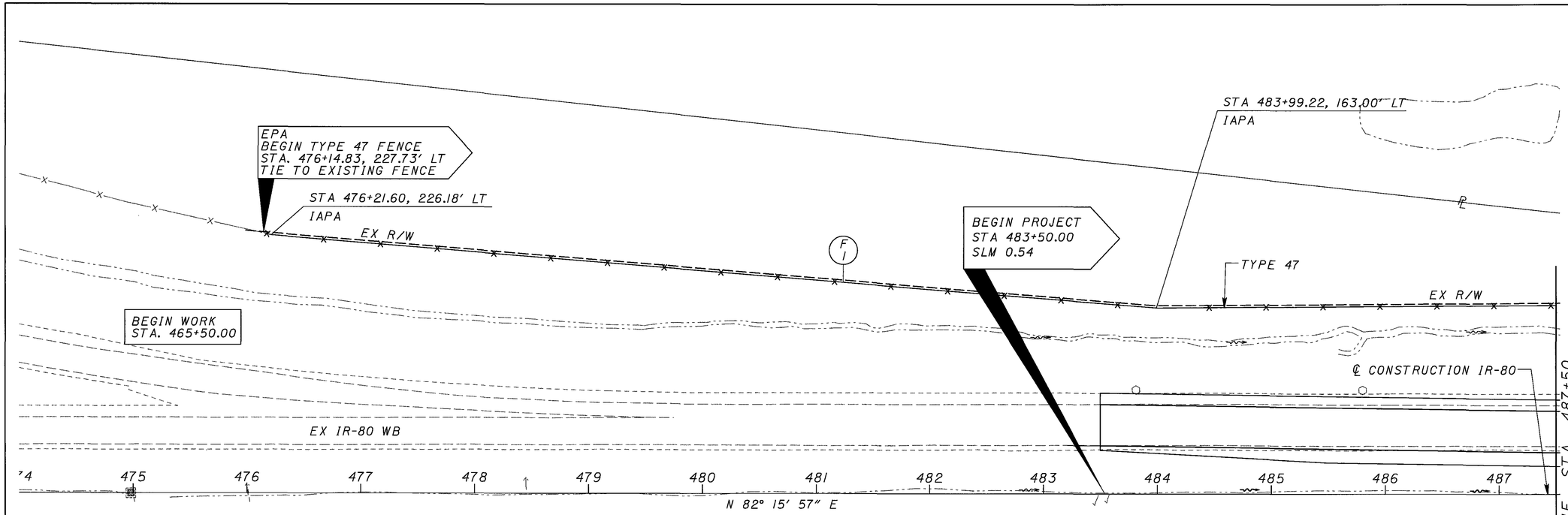

REF NO.	SHEET NO.	STATION FROM		STATION TO		SIDE	202 FENCE REMOVED	607 FENCE, TYPE 47	607 FENCE, TYPE CL, AS PER PLAN	607 GATE, TYPE CL, AS PER PLAN
							FT	FT	FT	EACH
F-1	1063-1064	CL	476+14.83	CL	495+33.18	LT		1966		
F-2	1064	A	7+79.81	CL	495+14.15	RT		778		
F-3	1064	CL	495+22.46	CL	495+25.55	LT/RT			30	
F-4	1064	CL	495+76.61	CL	496+35.41	LT/RT			530	1
F-5	1064-1066	CL	496+77.12	CL	520+19.42	LT			2410	
F-6	1064	CL	496+65.80	CL	496+69.17	LT/RT			31	
F-7	1064-1066	CL	496+56.14	BL	520+60.42	RT			2515	
F-8	1066	CL	520+19.42	CL	520+19.42	LT/RT			106	
F-9	1068	CL	545+47.68	CL	545+47.68	LT/RT			106	
F-10	1068-1071	CL	545+47.58	CL	585+00.31	LT			4036	
F-11	1068-1071	BL	545+88.58	CL	584+42.72	RT			3985	1
F-12			NOT USED							
F-13	1071	CL	584+66.81	CL	584+76.22	LT/RT			33	
F-14	1071	CL	584+47.21	CL	586+01.07	LT/RT			502	1
F-15	1071	CL	586+11.29	CL	586+21.44	LT/RT		31		
F-16	1071-1074	CL	586+45.43	CL	619+89.28	LT		3516		
F-17	1071-1074	CL	585+87.84	CL	620+60.02	RT		3567		
F-18	1074	CL	620+25.96	CL	620+27.19	LT/RT		5		
F-19	1074	CL	621+40.17	CL	621+42.60	LT/RT		6		
F-20	1074-1076	CL	621+03.64	46A	47+19.47	LT		2864		
F-21	1074-1076	CL	621+77.26	46C	62+73.00	RT		3252		
F-22	1077-1082	CL	663+54.80	WB	723+86.08	LT		6078		
F-23	1064	LIP	51+29.80	LIP	53+00.00	LT			172	
	1063-108	CL	476+14.83	WB	723+86.08	LT/RT	36459			
TOTALS CARRIED TO GENERAL SUMMARY							36459	22063	14456	3

NOTE:

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

2. ALL TYPE 47 FENCE IS 2' INSIDE LIMITED ACCESS LINE UNLESS OTHERWISE NOTED.

ITEM 607 - FENCE, TYPE CL, AS PER PLAN
ITEM 607 - GATE, TYPE CL, AS PER PLAN

THE CONTRACTOR SHALL CONSTRUCT THE CHAIN LINK FENCE IN ACCORDANCE WITH ITEM 607 IN CMS 2005.

THE FENCING AND GATES SHALL BE 72" AND SHALL INCLUDE BLACK VINYL COATED FABRIC WITH BLACK POSTS, RAILS, AND ASSOCIATED EQUIPMENT. THE BLACK COLOR SHALL BE FEDERAL COLOR NUMBER 27038.

ALL MATERIALS, LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 607 - FENCE, TYPE CL, AS PER PLAN AND ITEM 607 - GATE, TYPE CL, AS PER PLAN.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SUJ
CHECKED AJP

FENCING PLAN
STA 476+14.83 TO STA 487+50

MAH-80-0.97

1063
1100

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NOTE:

1. ALL MEASUREMENTS ARE TAKEN FROM THE ℄ OF CONSTRUCTION OF IR-80 UNLESS OTHERWISE NOTED.
2. FENCE STREAM CROSSINGS DESIGNED ACCORDING TO STANDARD DRAWING-FENCE DETAILS, F-3.4, CROSSING TYPE 3.
2. FENCE BRIDGE TIE-INS DESIGNED ACCORDING TO STANDARD DRAWING- FENCE DETAILS AT BRIDGES, F-3.1.
3. FENCE TIE-INS TO CULVERT HEADWALLS DESIGNED ACCORDING TO STANDARD DRAWING- FENCE TERMINALS, F-3.3, TYPE A.
4. ALL TYPE 47 FENCE IS 2' INSIDE LIMITED ACCESS LINE UNLESS OTHERWISE NOTED.
5. ALL TYPE CL, APP FENCE IS 1' INSIDE LIMITED ACCESS LINE UNLESS OTHERWISE NOTED.
6. DRIVE GATE DESIGNED ACCORDING TO STANDARD DRAWING, FENCE DETAILS, F-1.1.

FELIX TESNER
LOUISE TESNER
CO-TRUSTEES

℄ CONSTRUCTION
LIPKEY ROAD

℄ LIPKEY RD STA 52+00.0, 31.4' LT
IAPA

℄ LIPKEY RD STA 51+29.8, 43.0' LT
EPA

STA 490+98.44, 167.99' LT
CPA

STA 491+48.45, 123.00' LT
CPA

STA 495+24.85, 123.00' LT
CPA

STA. 496+77.12, 88.00' LT
EPA

STA 496+82.08, 134.00' LT
CPA

THE MAHONING VALLEY SANITARY DISTRICT
TIE TO
EXISTING FENCE

N 1° 26' 03.49" W

EX R/W

EX R/W

LA-R/W

TYPE CL, APP

TYPE 47

EX LA-R/W

℄ R/W & CONSTRUCTION IR-80

FELIX TESNER AND LOUISE TESNER, CO-TRUSTEES

MATCH LINE STA 487+50

MATCH LINE STA 501+00

488 489 490 491 492 493 494 495 496 497 498 499 500

N 82°15'57" E

N 80°43'44" E

℄ RAMP A

TYPE A
CONNECTION

STA 491+08.22, 148.74' RT
IAPA

PT STA 9+27.08

STREAM
CROSSING

TYPE 47

STA 494+87.67, 129.85' RT
CPA

EPA
BEGIN TYPE 47 FENCE
STA. 7+79.81 RAMP A,
77.06' RT

STA 490+67.90, 167.68' RT
IAPA

STA 491+54.25, 123.20' RT
CPA

STA 491+57.95, 159.82' RT
CPA

℄ STA 495+76.04 IR-80
℄ STA 50+00.00 LIPKEY ROAD

EX R/W

N 1° 27' 35" W

TYPE CL, APP

14' GATE
TYPE CL, APP

TIE TO
EXISTING FENCE

STA. 496+56.14, 102.70' RT =
EPA

STA 496+51.58, 144.17' RT
CPA

EX LA-R/W

TYPE CL, APP

℄ R/W & CONSTRUCTION
IR-80 EB

℄ IR-80 EB
STA 499+90.00, 107.17' RT
IAPA

℄ IR-80 EB
STA 500+00.00, 108.91' RT
IAPA

PC ℄ EB STA 497+85.96
℄ IR-80 STA 497+85.96
30' RT

LA-R/W

FELIX TESNER AND LOUISE TESNER, CO-TRUSTEES

CHRISTOPHER D. SMITH

THE MAHONING VALLEY
SANITARY DISTRICT

F 1 F 2 F 3 F 4 F 5 F 6 F 7 F 23

FENCE

EPA = END POST ASSEMBLY
IAPA = INTERMEDIATE ANCHOR POST ASSEMBLY
CPA = CORNER POST ASSEMBLY

N
HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SUJ
CHECKED AJP

FENCING PLAN
STA 487+50 TO STA 501+00

MAH-80-0.97

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CH ESMT

THE MAHONING VALLEY SANITARY DISTRICT

SPILL CONTAINMENT
WEST BASIN

℄ R/W & CONSTRUCTION IR-80

STA 507+90.00, 134.00' LT
IAPA

CH ESMT

PC STA 507+35.90

STA 508+00.00, 135.90' LT
IAPA

LA-R/W

TYPE CL, APP

EX LA-R/W

℄

F 5

MATCH LINE STA 501+00

501 502 503 504 505 506 507 508 509 510 511 512 513 514

STA 514+00

MATCH LINE

EX LA-R/W

PT ℄ EB STA 503+10.07

TS ℄ EB STA 505+22.28

F 7

TYPE CL, APP

℄ R/W & CONSTRUCTION
IR-80 EB

SC ℄ EB STA 511+72.28

CS ℄ STA 514+17.96

LA-R/W

THE MAHONING VALLEY SANITARY DISTRICT

FENCE

EPA = END POST ASSEMBLY
IAPA = INTERMEDIATE ANCHOR POST ASSEMBLY
CPA = CORNER POST ASSEMBLY

NOTE:

1. ALL MEASUREMENTS ARE TAKEN FROM THE ℄ OF CONSTRUCTION OF IR-80 UNLESS OTHERWISE NOTED.
2. FENCE STREAM CROSSINGS DESIGNED ACCORDING TO STANDARD DRAWING-FENCE DETAILS, F-3.4, CROSSING TYPE 3.
3. ALL TYPE CL, APP FENCE IS 1' INSIDE LIMITED ACCESS LINE UNLESS OTHERWISE NOTED.

N

0 25 50 100
HORIZONTAL SCALE IN FEET

CALCULATED SUJ
CHECKED AJP

FENCING PLAN
STA 501+00 TO STA 514+00

MAH-80-0.97

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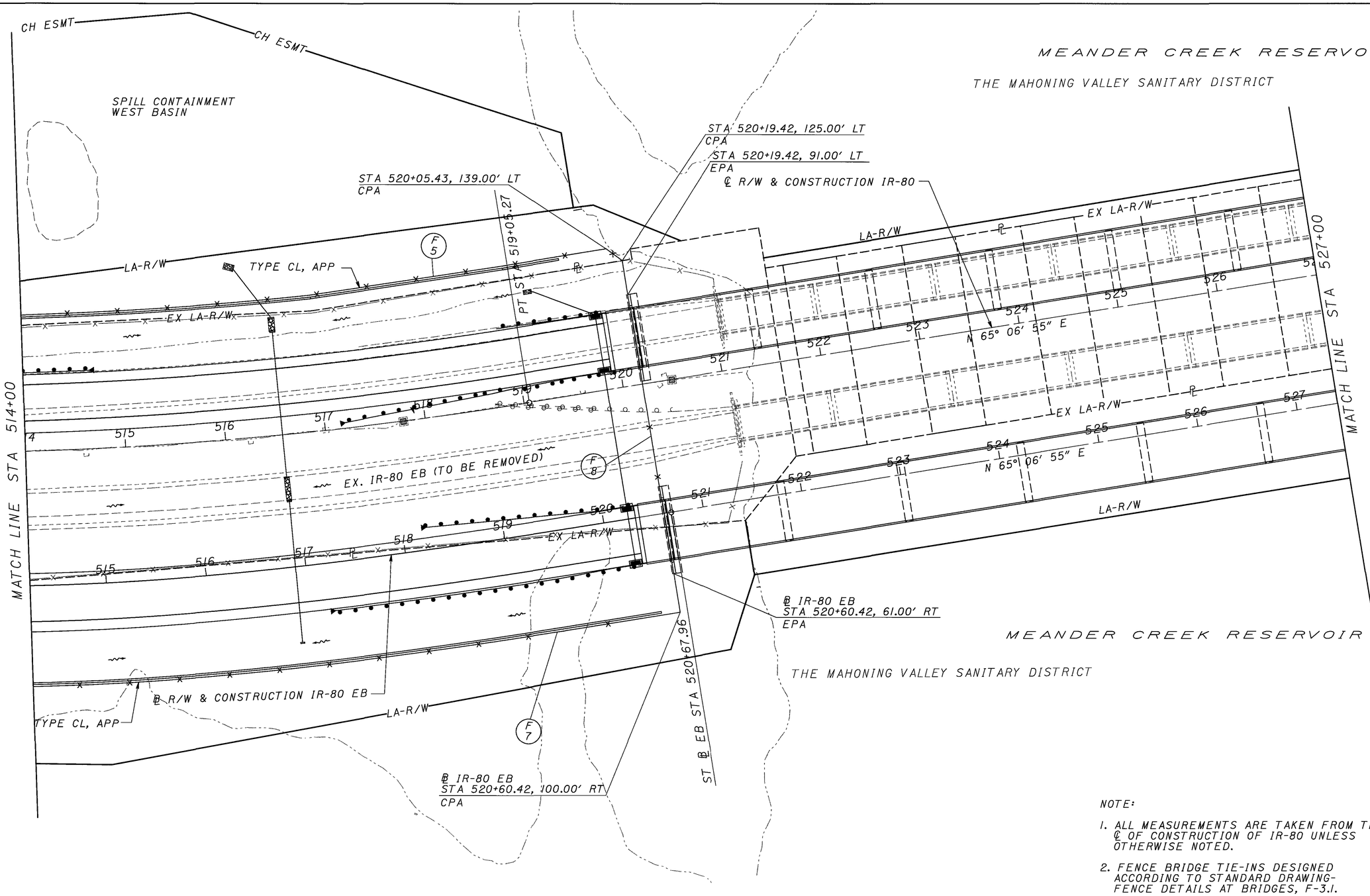

MEANDER CREEK RESERVOIR

FENCE

EPA = END POST ASSEMBLY
IAPA = INTERMEDIATE ANCHOR POST ASSEMBLY
CPA = CORNER POST ASSEMBLY

NOTE:

1. ALL MEASUREMENTS ARE TAKEN FROM THE ℄ OF CONSTRUCTION OF IR-80 UNLESS OTHERWISE NOTED.
2. FENCE BRIDGE TIE-INS DESIGNED ACCORDING TO STANDARD DRAWING-FENCE DETAILS AT BRIDGES, F-3.1.
3. ALL TYPE CL, 72" FENCE IS 1' INSIDE LIMITED ACCESS LINE UNLESS OTHERWISE NOTED.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SUJ
CHECKED AJP

FENCING PLAN
STA 514+00 TO STA 527+00

MAH-80-0.97

1066
1100

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THE MAHONING VALLEY SANITARY DISTRICT

MEANDER CREEK RESERVOIR

N 3° 31' 19" W (CALC)

℄ R/W & CONSTRUCTION IR-80

LA-R/W

EX LA-R/W

℄

MATCH LINE STA 527+00

MATCH LINE STA 540+00

528 529 530 531 532 533 534 535 536 537 538 539 540

+92.83

N 65°06'55" E

EX IR-80 EB (TO BE REMOVED)

N 65°06'55" E

℄ R/W & CONSTRUCTION IR-80 EB

TRACT 15 JACKSON TOWNSHIP

TRACT 6 AUSTINTOWN TOWNSHIP

THE MAHONING VALLEY SANITARY DISTRICT

MEANDER CREEK RESERVOIR

HORIZONTAL SCALE IN FEET

0 25 50 100

CALCULATED SUJ

CHECKED AJP

FENCING PLAN

STA 527+00 TO STA 540+00

MAH-80-0.97

1067
1100

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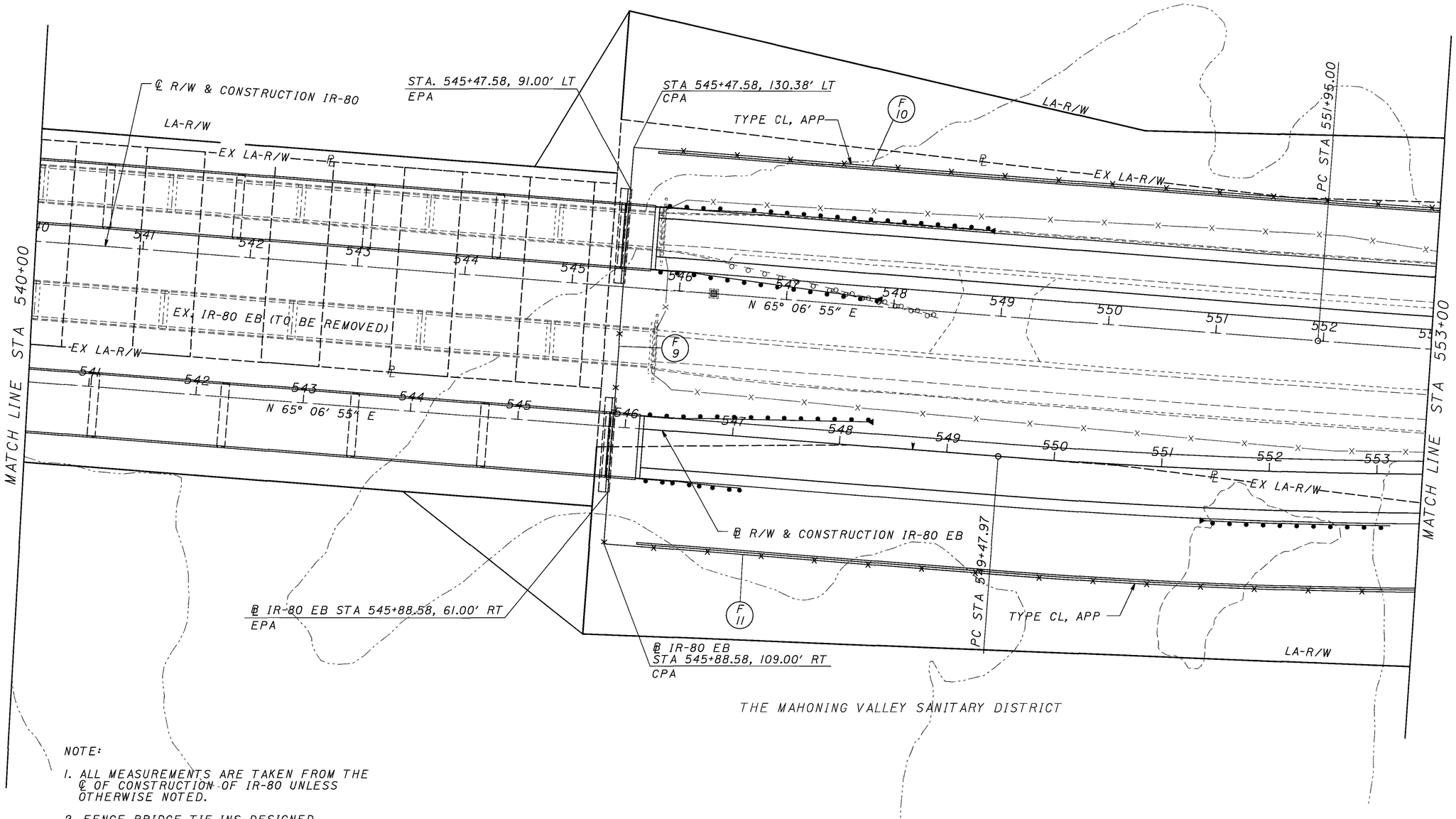
MEANDER CREEK RESERVOIR

THE MAHONING VALLEY SANITARY DISTRICT



NOTE:

1. ALL MEASUREMENTS ARE TAKEN FROM THE ℄ OF CONSTRUCTION OF IR-80 UNLESS OTHERWISE NOTED.
2. FENCE BRIDGE TIE-INS DESIGNED ACCORDING TO STANDARD DRAWING-FENCE DETAILS AT BRIDGES, F-3.1.
3. ALL TYPE CL, APP FENCE IS 1' INSIDE LIMITED ACCESS LINE UNLESS OTHERWISE NOTED.

FENCE

EPA = END POST ASSEMBLY
IAPA = INTERMEDIATE ANCHOR POST ASSEMBLY
CPA = CORNER POST ASSEMBLY

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SUJ
CHECKED AJP

FENCING PLAN
STA 540+00 TO STA 553+00

MAH-80-0.97

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THE MAHONING VALLEY SANITARY DISTRICT

MEANDER CREEK RESERVOIR

LA-R/W

EX LA-R/W

TYPE CL, APP

℄ R/W & CONSTRUCTION IR-80

PT STA 559+76.66
EQUATION:
STA 559+76.66 BK =
STA 559+80.76 AH

F 10

13'

EX LA-R/W

LA-R/W

MATCH LINE STA 553+00

554 555 556 557 558 559 560 561 562 563 564 565 566

EX. IR-80 EB (TO BE REMOVED)

+95.84

N 61° 12 '25" E

N 57° 18 '48" E

MATCH LINE STA 566+00

EX LA-R/W

℄ R/W & CONSTRUCTION IR-80 EB

TYPE CL, APP

F 11

LA R/W

PT STA 557+28.17

CH ESMT

℄ IR-80 EB
STA 561+50.00, 109.00' RT
CPA

℄ IR-80 EB
STA 561+60.00, 107.00' RT
CPA

CH ESMT

PC STA 563+21.58

LA R/W

FENCE

EPA = END POST ASSEMBLY
IAPA = INTERMEDIATE ANCHOR POST ASSEMBLY
CPA = CORNER POST ASSEMBLY

SPILL CONTAINMENT EAST BASIN

CH ESMT

THE MAHONING VALLEY SANITARY DISTRICT

NOTE:

1. ALL MEASUREMENTS ARE TAKEN FROM THE ℄ OF CONSTRUCTION OF IR-80 UNLESS OTHERWISE NOTED.
2. FENCE TIE-INS TO CULVERT HEADWALLS DESIGNED ACCORDING TO STANDARD DRAWING-FENCE TERMINALS, F-3.3, TYPE A.
3. ALL TYPE CL, APP FENCE IS 1' INSIDE LIMITED ACCESS LINE UNLESS OTHERWISE NOTED.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SUJ
CHECKED AJP

FENCING PLAN
STA 553+00 TO STA 566+00

MAH-80-0.97

1069
1100

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THE MAHONING VALLEY SANITARY DISTRICT

STA 570+10.00, 128.00' LT
IAPA

STA 570+00.00, 130.00' LT
IAPA

F 10

LA-R/W

EX LA-R/W

℄

MATCH LINE STA 566+00

567 568 569 570 571 572 573 574 575 576

N 61° 12' 25" E

TYPE CL, APP

LA-R/W

EX LA-R/W

MATCH LINE STA 577+00

THE MAHONING VALLEY SANITARY DISTRICT

℄ IR-80 EB
STA 566+50.00, 107.00' RT
IAPA

PT STA 567+10.95 EB ℄ =
POT STA 566+64.28 ℄ IR-80
30' RT

℄ R/W
& CONSTRUCTION
IR-80 EB

STA 567+00.00, 135.42' RT
IAPA

TYPE CL, APP

℄ R/W & CONSTRUCTION IR-80

LA-R/W

THE MAHONING VALLEY SANITARY DISTRICT

F 11

STA 575+16.07, 135.42' RT
EPA

R/W

THE MAHONING VALLEY SANITARY DISTRICT

EUGENE R. SHARP AND AUDREY E. SHARP

NOTE:

1. ALL MEASUREMENTS ARE TAKEN FROM THE ℄ OF CONSTRUCTION OF IR-80 UNLESS OTHERWISE NOTED.
2. FENCE STREAM CROSSINGS DESIGNED ACCORDING TO STANDARD DRAWING-FENCE DETAILS, F-3.4, CROSSING TYPE 3.
3. FENCE TIE-INS TO CULVERT HEADWALLS DESIGNED ACCORDING TO STANDARD DRAWING-FENCE TERMINALS, F-3.3, TYPE A, TYPE B, TYPE D
5. ALL TYPE 47 FENCE IS 2' INSIDE LIMITED ACCESS LINE UNLESS OTHERWISE NOTED.
6. ALL TYPE CL, APP FENCE IS 1' INSIDE LIMITED ACCESS LINE UNLESS OTHERWISE NOTED.

FENCE

EPA - END POST ASSEMBLY
IAPA - INTERMEDIATE ANCHOR POST ASSEMBLY
CPA - CORNER POST ASSEMBLY

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SLJ
CHECKED AJP

FENCING PLAN
STA 566+00 TO STA 577+00

MAH-80-0.97

1070
1100

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THE MAHONING VALLEY SANITARY DISTRICT

THE MAHONING VALLEY SANITARY DISTRICT

TIE INTO EXISTING FENCE

TYPE CL, APP

EX R/W

PC STA 51+08.22

STA 585+13.66, 128.09' LT
CPA

LA-R/W

BILLY W. WILLIAMS

JOSEPHINE S. HALE

STA 587+99.73, 125.00' LT
IAPA

STA 589+88.62, 143.29' LT
CPA

STA 589+72.37, 120.99' LT
CPA

TYPE 47

STA 589+00.04, 125.00' LT

F 10

TYPE CL, APP

F 16

EX LA-R/W

F 14

STA 586+77.36, 170.34' LT
EPA

MATCH LINE STA 577+00

℄ R/W & CONSTRUCTION & R/W IR-80

578 579 580 581 582 583 584 585 586 587 588 589

N 61°12'25" E

F 13

F 15

STA 585+86.05, 121.30' RT
EPA

MATCH LINE STA 590+00

STREAM CROSSING
STA 584+13.03, 127.70' RT
CPA

F 11

EX LA-R/W

℄

TYPE CL, APP

LA-R/W

8 9 10 11 12 13 14 5

F 17

EX LA-R/W

TYPE 47

30' GATE
TYPE CL, APP

R/W

℄ CONSTRUCTION SERVICE ROAD

36' GATE
TYPE CL, APP

48

N 10°28'14" W

EX R/W

℄ STA 585+61.26 IR-80 =
℄ STA 50+00.00 TURNER ROAD

℄ STA 15+06.29 SERVICE ROAD =
℄ STA 48+25.14 TURNER ROAD

℄ TURNER ROAD

STA 589+00.53, 138.02' RT
IAPA

THE MAHONING VALLEY SANITARY DISTRICT

STA 578+00.00, 128.00' RT
IAPA

EX R/W

TIE INTO EXISTING FENCE

TERANCE H. HELMINIAK, ANNE HELMINIAK AND HENRY J. HELMINIAK

STA 577+00.00, 135.42' RT
IAPA

EUGENE R. SHARP AND AUDREY E. SHARP

FENCE

EPA = END POST ASSEMBLY
IAPA = INTERMEDIATE ANCHOR POST ASSEMBLY
CPA = CORNER POST ASSEMBLY

NOTES:

1. ALL MEASUREMENTS ARE TAKEN FROM THE ℄ OF CONSTRUCTION OF IR-80 UNLESS OTHERWISE NOTED.
2. FENCE STREAM CROSSINGS DESIGNED ACCORDING TO STANDARD DRAWING-FENCE DETAILS, F-3.4, CROSSING TYPE 3.
3. FENCE BRIDGE TIE-INS DESIGNED ACCORDING TO STANDARD DRAWING-FENCE DETAILS AT BRIDGES, F-3.1.
4. FENCE TIE-INS TO CULVERT HEADWALLS DESIGNED ACCORDING TO STANDARD DRAWING-FENCE TERMINALS, F-3.3, TYPE A.
5. DRIVE GATES DESIGNED ACCORDING TO STANDARD DRAWING-FENCE DETAILS, F-1.1.
6. ALL TYPE 47 FENCE IS 2' INSIDE LIMITED ACCESS LINE UNLESS OTHERWISE NOTED.
7. ALL TYPE CL, APP FENCE IS 1' INSIDE LIMITED ACCESS LINE UNLESS OTHERWISE NOTED.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SUJ
CHECKED AJP

FENCING PLAN
STA 577+00 TO STA 590+00

MAH-80-0.97

1071
1100

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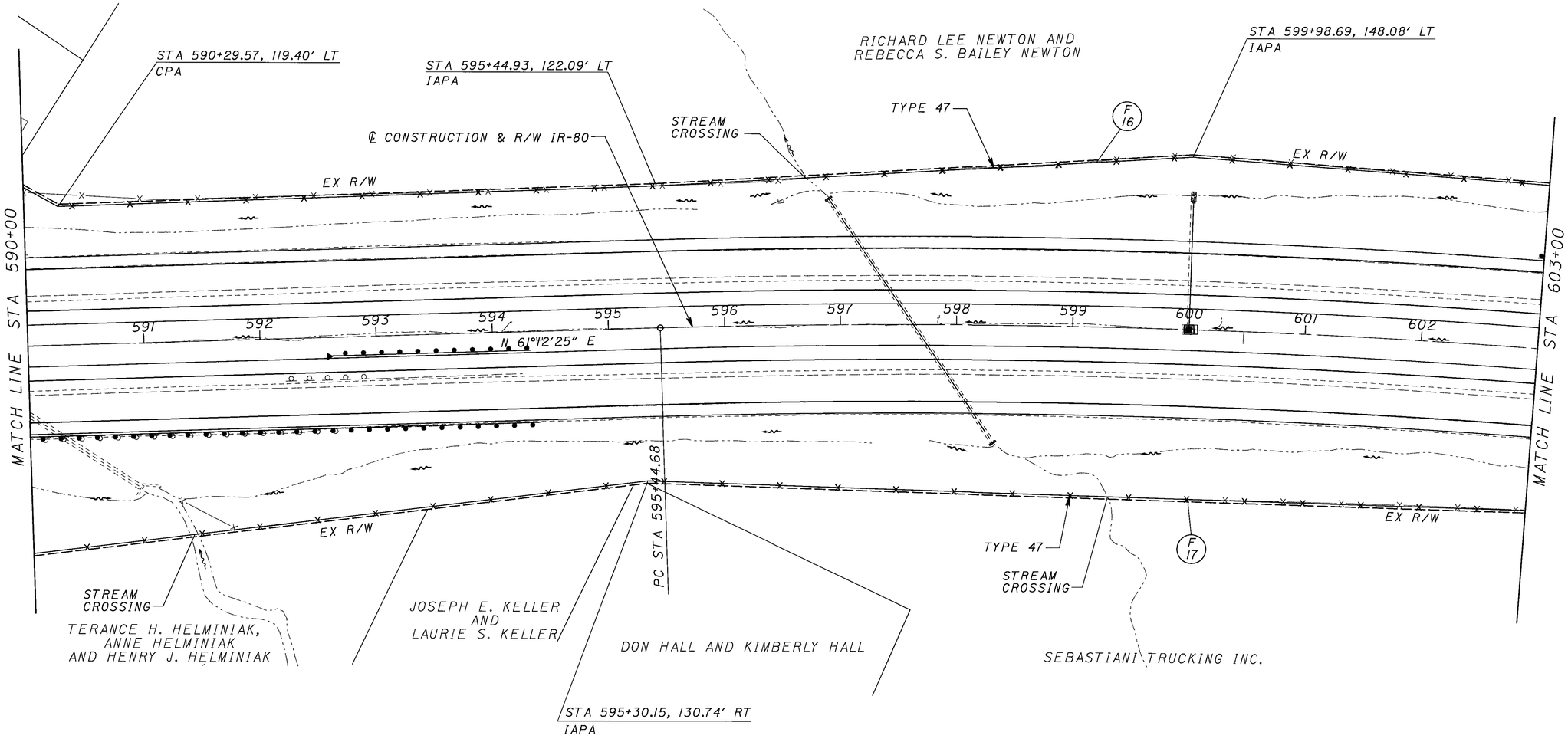

FENCE

EPA = END POST ASSEMBLY
IAPA = INTERMEDIATE ANCHOR POST ASSEMBLY
CPA = CORNER POST ASSEMBLY

NOTES:

1. ALL MEASUREMENTS ARE TAKEN FROM THE ℄ OF CONSTRUCTION OF IR-80 UNLESS OTHERWISE NOTED.
2. FENCE STREAM CROSSINGS DESIGNED ACCORDING TO STANDARD DRAWING-FENCE DETAILS, F-3.4, CROSSING TYPE 3.
3. ALL TYPE 47 FENCE IS 2' INSIDE LIMITED ACCESS LINE UNLESS OTHERWISE NOTED.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SUJ
CHECKED AJP

FENCING PLAN
STA 590+00 TO STA 603+00

MAH-80-0.97

1072
1100

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RICHARD LEE NEWTON AND
REBECCA S. BAILEY NEWTON

SEBASTIANI TRUCKING INC.

STA 605+75.80, 145.54' LT
IAPA

TYPE 47

STA 607+98.63, 158.06' LT
IAPA

F
16

STA 611+98.56, 138.05' LT
IAPA

EX R/W

EX R/W

℄ R/W & CONSTRUCTION IR-80

MATCH LINE STA 603+00

MATCH LINE STA 616+00

604 605 606 607 608 609 610 611 612 613 614 615

EX R/W

TYPE 47

EX R/W

STA 604+76.16, 129.59' RT
IAPA

STA 608+98.71, 142.94' RT
IAPA

STA 610+98.51, 117.94' RT
IAPA

F
17

STA 613+98.69, 117.95' RT
IAPA

SEBASTIANI TRUCKING INC.

SEBASTIANI TRUCKING INC.

FENCE

EPA - END POST ASSEMBLY
IAPA - INTERMEDIATE ANCHOR POST ASSEMBLY
CPA - CORNER POST ASSEMBLY

NOTES:

1. ALL MEASUREMENTS ARE TAKEN FROM THE ℄ OF CONSTRUCTION OF IR-80 UNLESS OTHERWISE NOTED.
2. ALL TYPE 47 FENCE IS 2' INSIDE LIMITED ACCESS LINE UNLESS OTHERWISE NOTED.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SUJ
CHECKED AJP

FENCING PLAN
STA 603+00 TO STA 616+00

MAH-80-0.97

1073
1100

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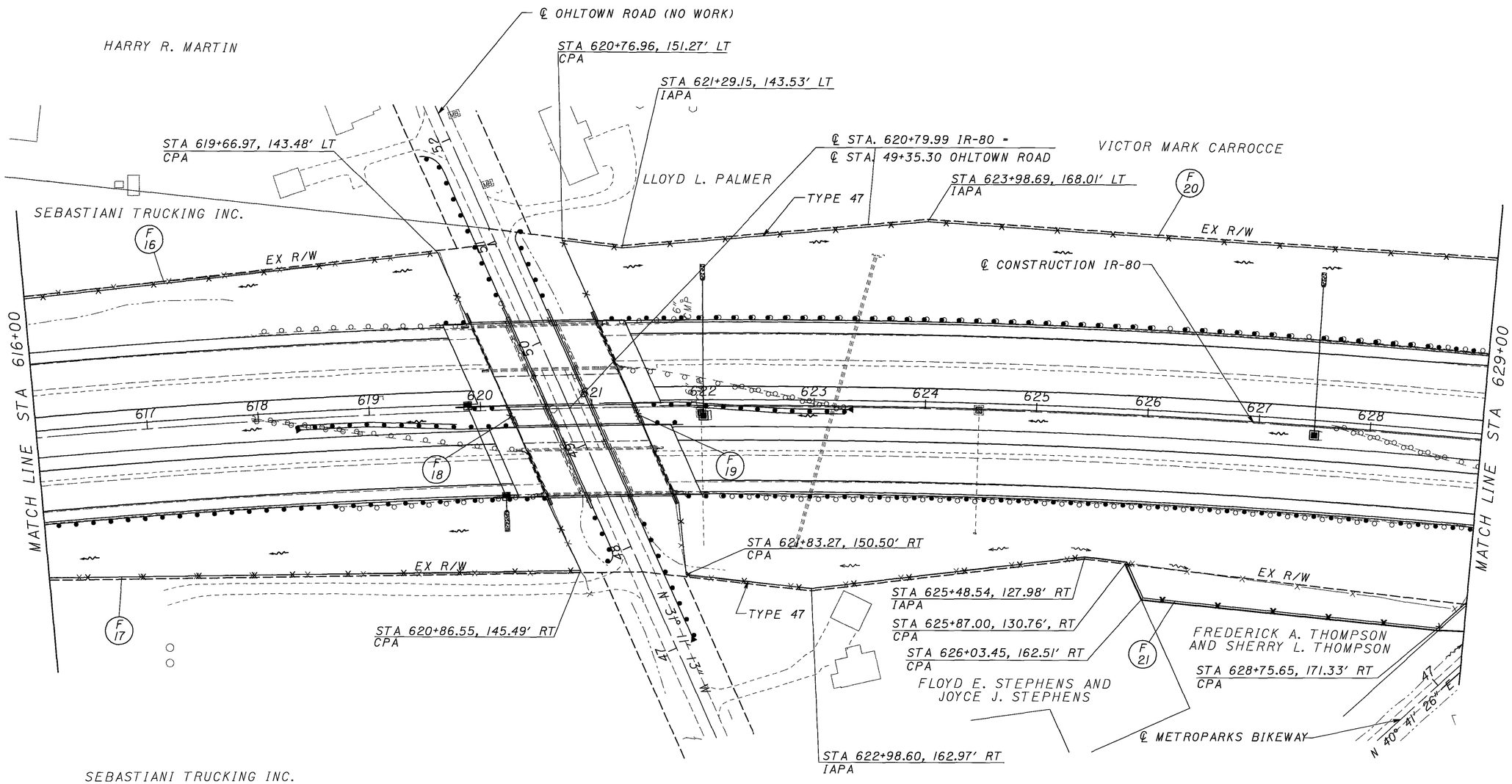

FENCE

EPA = END POST ASSEMBLY
IAPA = INTERMEDIATE ANCHOR POST ASSEMBLY
CPA = CORNER POST ASSEMBLY

NOTES:

1. ALL MEASUREMENTS ARE TAKEN FROM THE ℄ OF CONSTRUCTION OF IR-80 UNLESS OTHERWISE NOTED.
2. FENCE BRIDGE TIE-INS DESIGNED ACCORDING TO STANDARD DRAWING-FENCE DETAILS AT BRIDGES, F-3.1.
3. ALL TYPE 47 FENCE IS 2' INSIDE LIMITED ACCESS LINE UNLESS OTHERWISE NOTED.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SUJ
CHECKED AJP

FENCING PLAN
STA 616+00 TO STA 629+00

MAH-80-0.97

1074
1100

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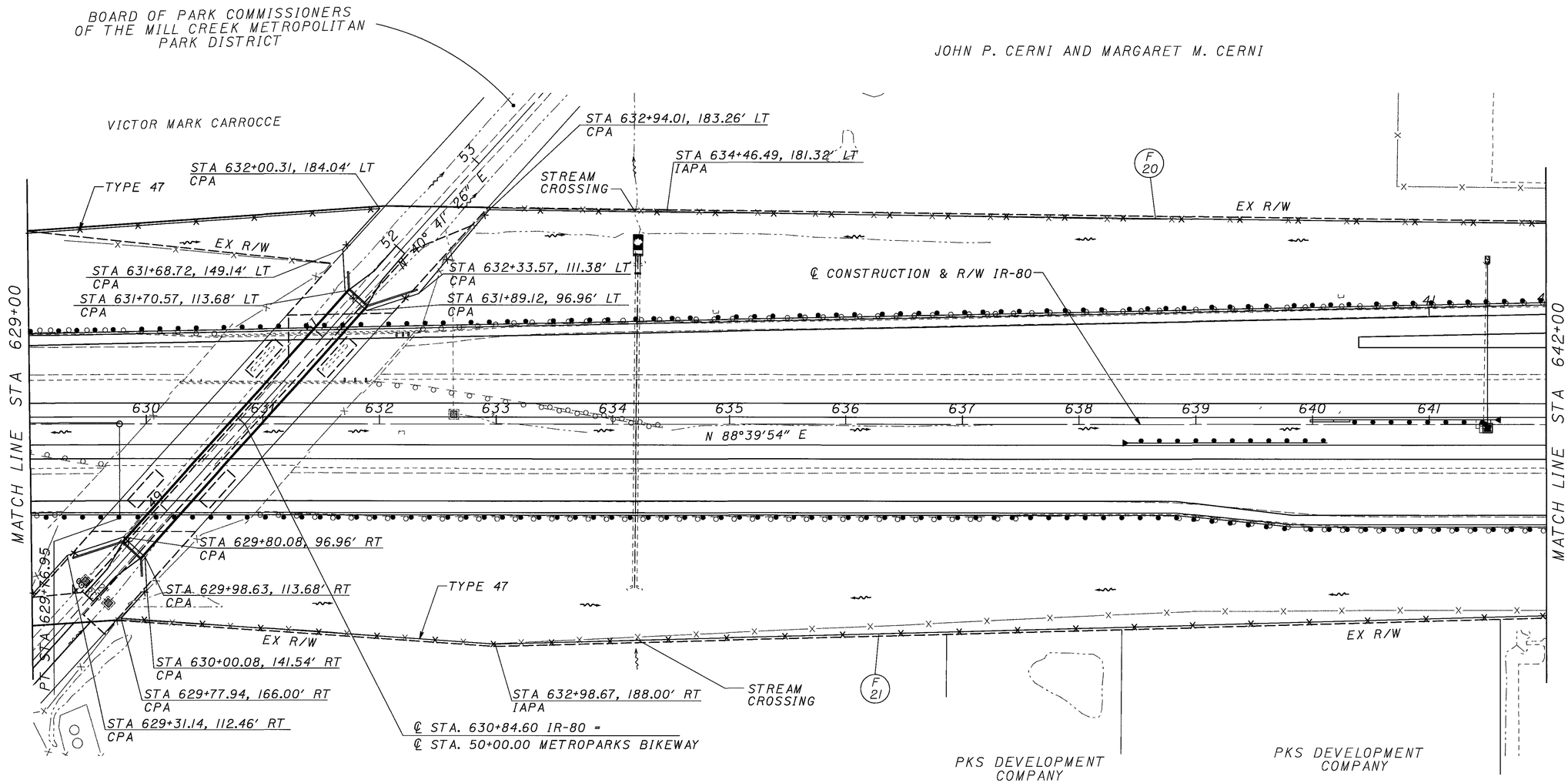

FENCE

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CPA = CORNER POST ASSEMBLY

NOTES:

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3. ALL TYPE 47 FENCE IS 2' INSIDE LIMITED ACCESS LINE UNLESS OTHERWISE NOTED.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SUJ
CHECKED AJP

FENCING PLAN
STA 629+00 TO STA 642+00

MAH-80-0.97

1075
1100

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FENCING PLAN
STA 642+00 TO STA 655+00

MAH-80-0.97

1076
1100

CALCULATED SUJ
CHECKED AJP

HORIZONTAL SCALE IN FEET
0 25 50 100

PROPOSED RAMPS (BY OTHERS)

STA 644+98.69, 168.00' LT
IAPA

EPA
END TYPE 47 FENCE
STA. 47+19.47, RAMP 46-A
24.37' LT, TIE TO EXISTING

℄ RAMP 46-A

CS STA 50+78.18

JOHN P. CERNI AND
MARGARET M. CERNI

TYPE 47

EX R/W

TS STA 43+57.41
STA 643+57.35 ℄ IR-80, 97.62' LT

STA 645+07.83 ℄ RAMP 46-A, 16' RT
STA 645+09.19 ℄ IR-80, 89' LT

SC STA 46+56.61

℄ CONSTRUCTION & R/W IR-80

℄ RAMP 46-E

SC STA 77+34.71

STA 75+38.45 ℄ RAMP 46-E, 16' LT
STA 654+74.58 ℄ IR-80, 89' LT

CS Sta. 75+37.86

STA 642+00

MATCH LINE STA 642+00

643 644 645 646 647 648 649 650 651 652 653 654

N 88° 39' 54" E

STA 655+00

MATCH LINE STA 655+00

53 54 55 56 57 58 59 60 61 62 63 64 65

TYPE 47

EX R/W

STA 642+28.36 ℄ IR-80, 78' RT
PC STA 52+28.36 ℄ RAMP 46-C

STA 56+55.30, RAMP 46-C, 49.47' RT
IAPA

STA 646+82.65 ℄ IR-80, 89' RT
STA 56+81.82 ℄ RAMP 46-C, 16' LT

PCC STA 57+81.83

℄ RAMP 46-C

PC STA 63+61.68

STREAM CROSSING

SANRAY CORPORATION

PT STA 61+01.39

EX R/W

STA 62+17.77, RAMP 46-C, 80.26' RT
IAPA

EPA
END TYPE 47 FENCE
STA. 62+73.00, RAMP 46-C
81.03' RT, TIE TO EXISTING

MEANDER INN INCORPORATED

CRACKER BARREL OLD COUNTRY STORE, INC.

PKS DEVELOPMENT COMPANY

FENCE

EPA = END POST ASSEMBLY
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CPA = CORNER POST ASSEMBLY

NOTES:

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2. FENCE STREAM CROSSINGS DESIGNED ACCORDING TO STANDARD DRAWING-FENCE DETAILS, F-3.4, CROSSING TYPE 3.
3. ALL TYPE 47 FENCE IS 2' INSIDE LIMITED ACCESS LINE UNLESS OTHERWISE NOTED.

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ALIBABA CHARCHOR, INC

BUDGET LUXURY INN OF YOUNGSTOWN, LTD., AN OHIO LIMITED PARTNERSHIP

EPA
BEGIN TYPE 47 FENCE
STA. 663+54.80, 251.24' LT,
TIE TO EXISTING

TYPE 47

STA 666+98.20, 178.04' LT
IAPA

F 22

EX R/W

℄ RAMP 46-E

℄ CONSTRUCTION & R/W IR-80

PC STA 72+57.18 ℄ RAMP
STA. 657+57.18 ℄ IR-80, 78' LT.

N 2° 47' 27" W

52
51
49
48

MATCH LINE STA 655+00

MATCH LINE STA 668+00

655 656 657 658 659 660 661 662 663 664 665 666 667

N 88°39'54" E

IR-80 EB

℄ STA. 656+83.18 IR-80 =
℄ STA. 50+00.00 SR-46

℄ SR-46 (NO WORK)

EX. SR-46 RAMP

EX R/W

END WORK
IR-80 EB
STA. 663+70.00

FENCE

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CPA = CORNER POST ASSEMBLY

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HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SUJ
CHECKED AJP

FENCING PLAN
STA 655+00 TO STA 668+00

MAH-80-0.97

1077
1100

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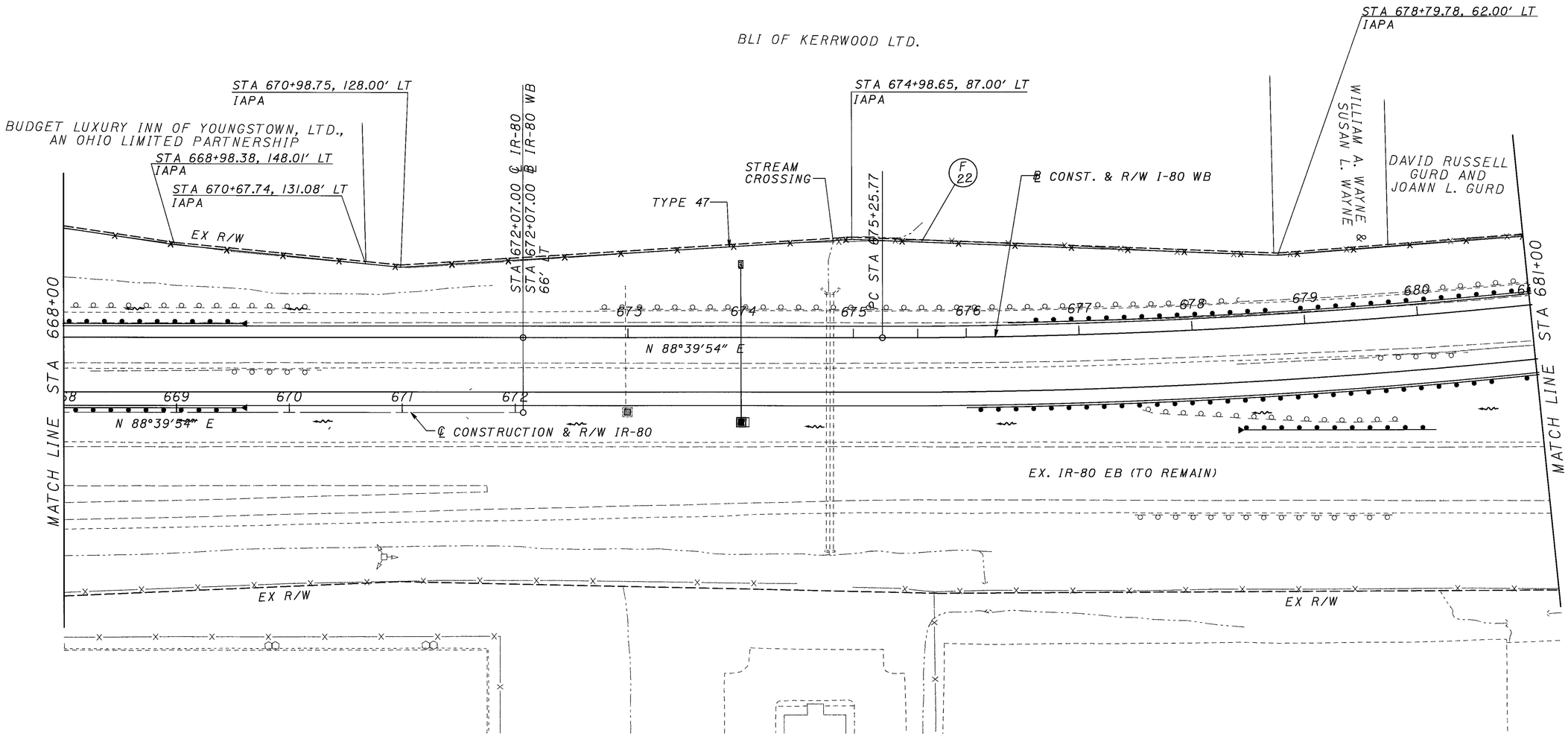

FENCE

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IAPA = INTERMEDIATE ANCHOR POST ASSEMBLY
CPA = CORNER POST ASSEMBLY

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3. ALL TYPE 47 FENCE IS 2' INSIDE LIMITED ACCESS LINE UNLESS OTHERWISE NOTED.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SUJ
CHECKED AJP

FENCING PLAN
STA 668+00 TO STA 681+00

MAH-80-0.97

1078
1100

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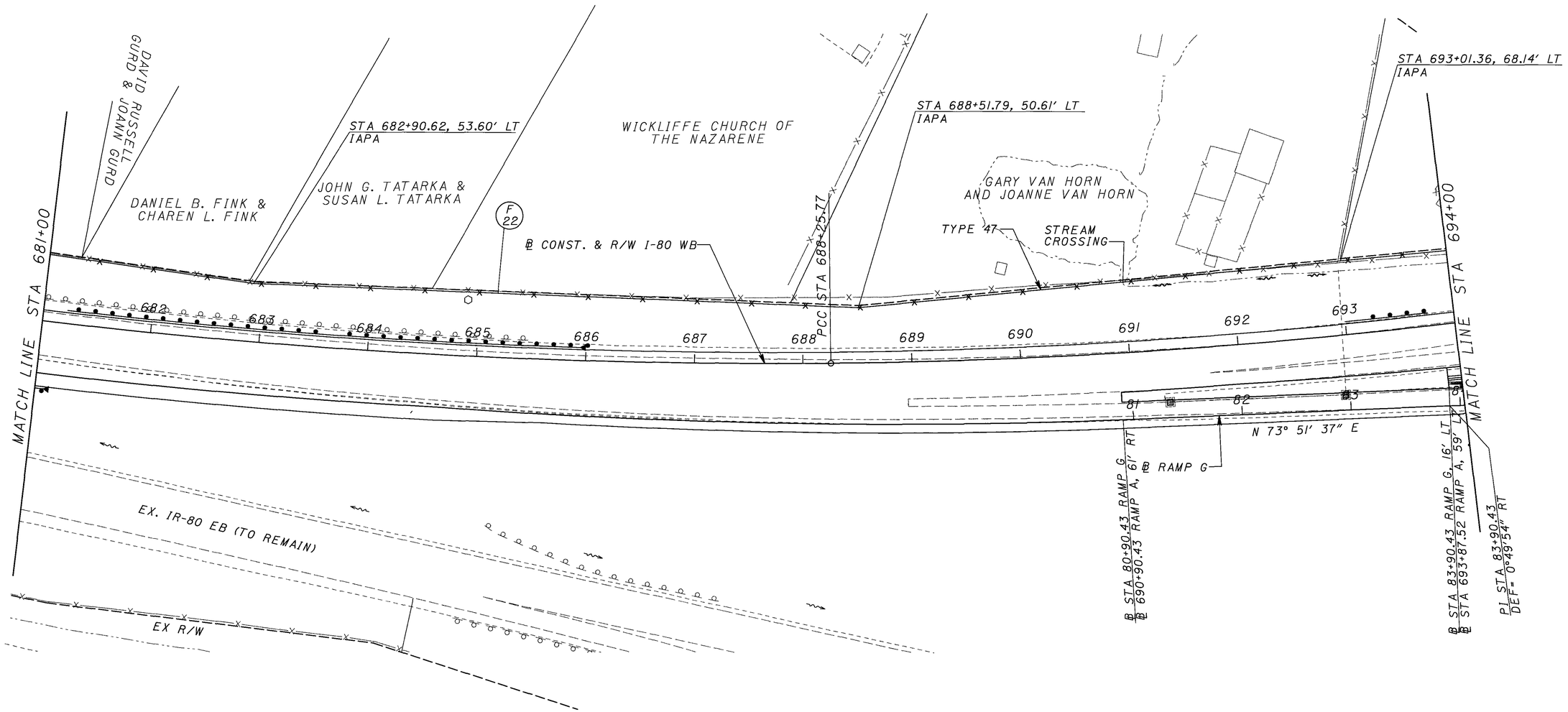

FENCE

EPA - END POST ASSEMBLY
IAPA - INTERMEDIATE ANCHOR POST ASSEMBLY
CPA - CORNER POST ASSEMBLY

NOTES:

1. ALL MEASUREMENTS ARE TAKEN FROM THE ℄ OF CONSTRUCTION OF IR-80 UNLESS OTHERWISE NOTED.
2. FENCE STREAM CROSSINGS DESIGNED ACCORDING TO STANDARD DRAWING-FENCE DETAILS, F-3.4, CROSSING TYPE 3.
3. ALL TYPE 47 FENCE IS 2' INSIDE LIMITED ACCESS LINE UNLESS OTHERWISE NOTED.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SUJ
CHECKED AJP

FENCING PLAN
STA 681+00 TO STA 694+00

MAH-80-0.97

1079
1100

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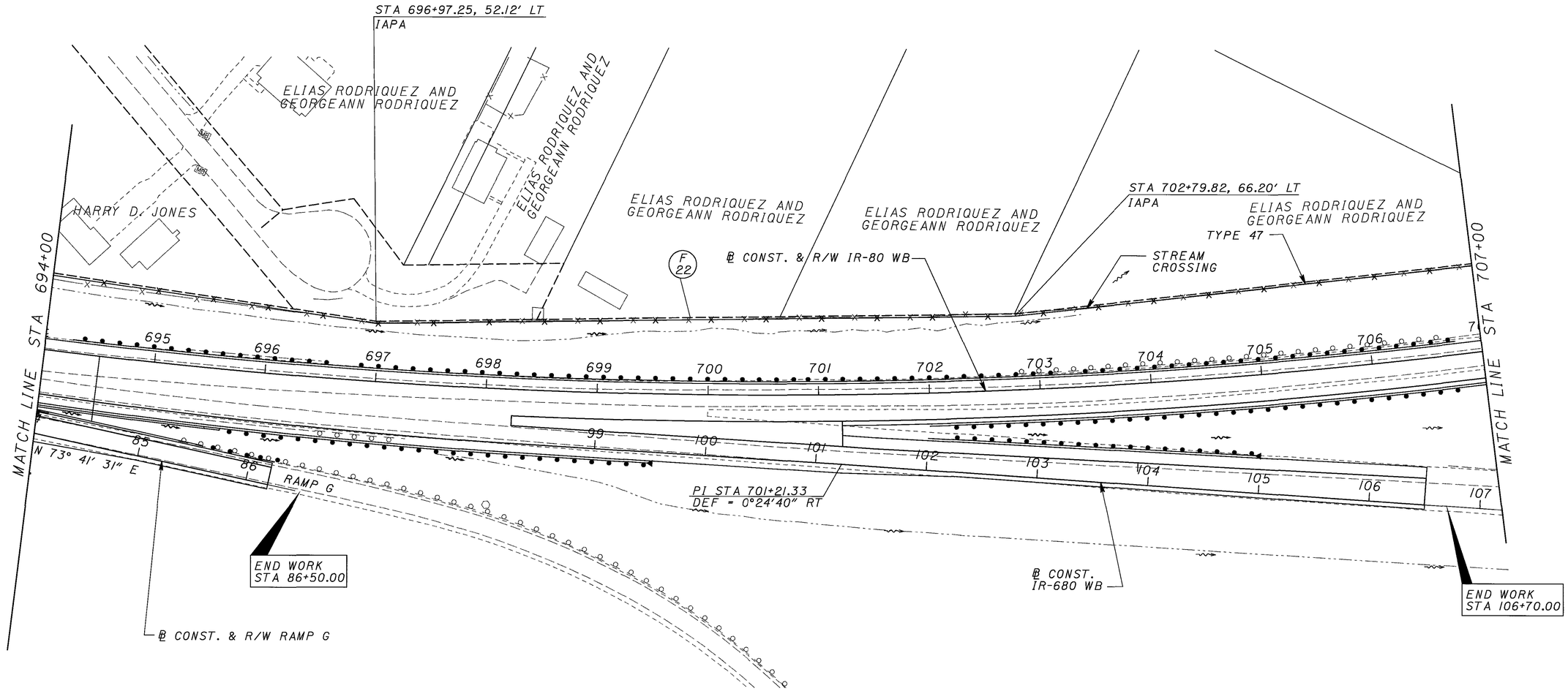

NOTES:

1. ALL MEASUREMENTS ARE TAKEN FROM THE ℄ OF CONSTRUCTION OF IR-80 UNLESS OTHERWISE NOTED.
2. FENCE STREAM CROSSINGS DESIGNED ACCORDING TO STANDARD DRAWING-FENCE DETAILS, F-3.4, CROSSING TYPE 3.
3. ALL TYPE 47 FENCE IS 2' INSIDE LIMITED ACCESS LINE UNLESS OTHERWISE NOTED.

FENCE

EPA = END POST ASSEMBLY
IAPA = INTERMEDIATE ANCHOR POST ASSEMBLY
CPA = CORNER POST ASSEMBLY

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SUJ
CHECKED AJP

FENCING PLAN
STA 694+00 TO STA 707+00

MAH-80-0.97

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1100

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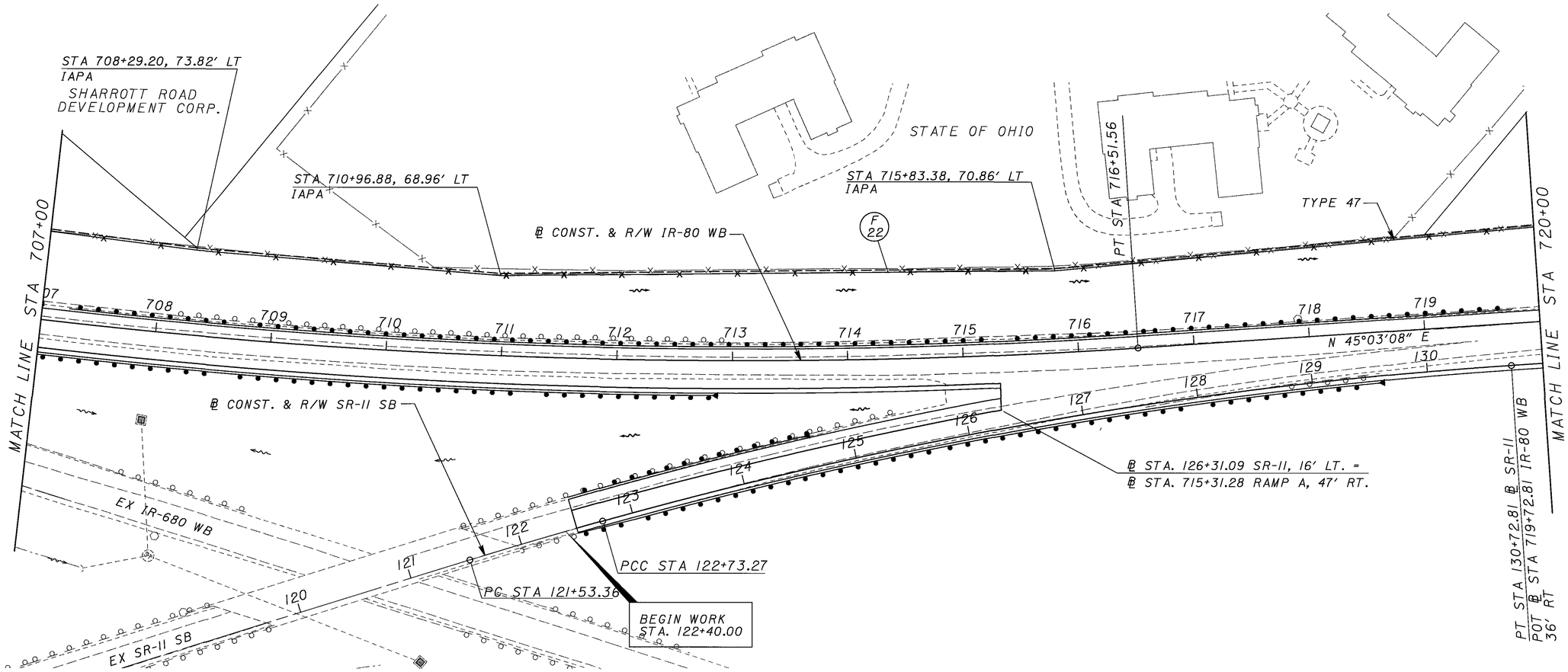

FENCE

EPA - END POST ASSEMBLY
IAPA - INTERMEDIATE ANCHOR POST ASSEMBLY
CPA - CORNER POST ASSEMBLY

NOTES:

1. ALL MEASUREMENTS ARE TAKEN FROM THE ℄ OF CONSTRUCTION OF IR-80 UNLESS OTHERWISE NOTED.
2. ALL TYPE 47 FENCE IS 2' INSIDE LIMITED ACCESS LINE UNLESS OTHERWISE NOTED.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SUJ
CHECKED AJP

FENCING PLAN
STA 707+00 TO STA 720+00

MAH-80-0.97

1081
1100

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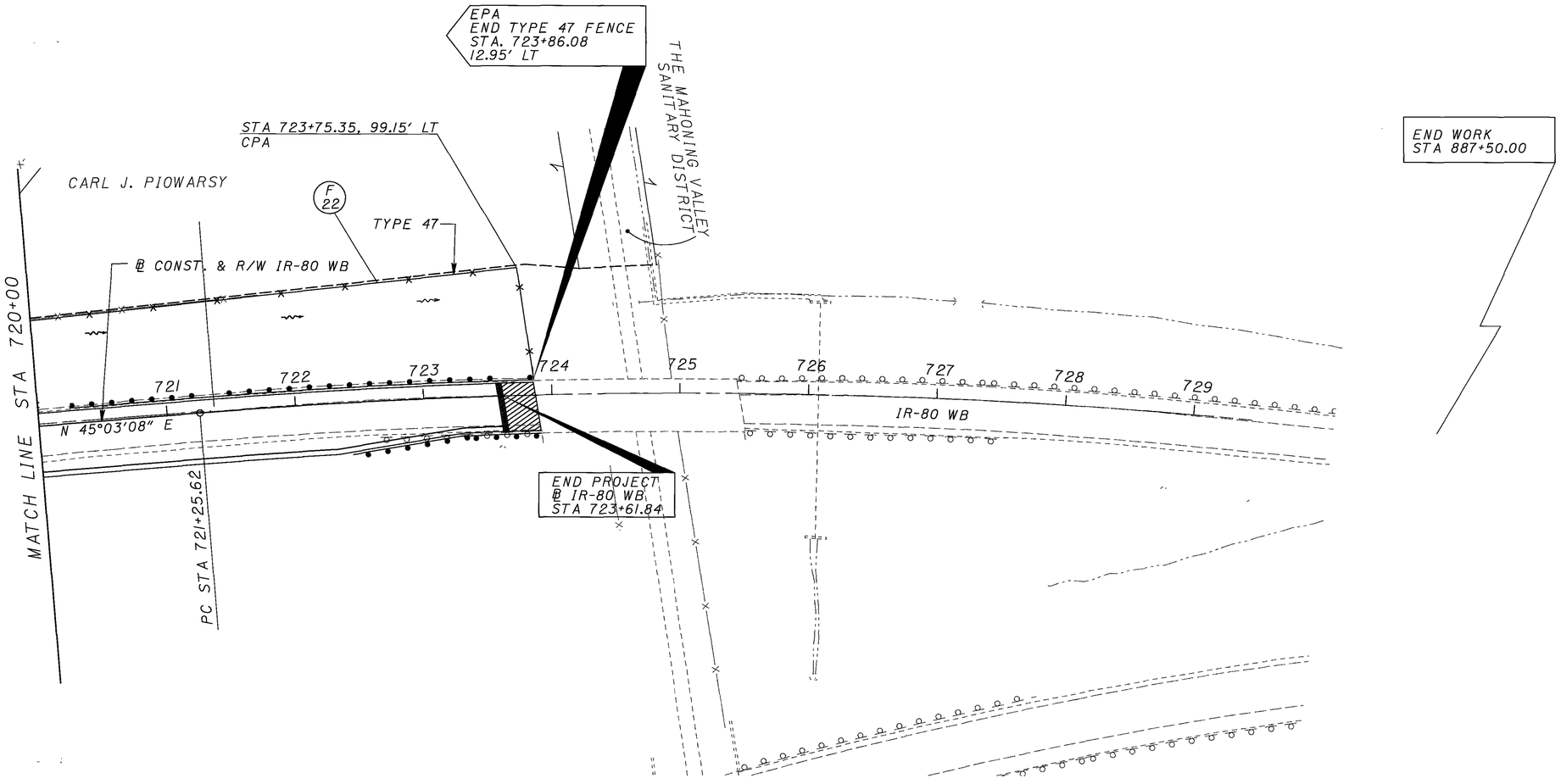

FENCE

EPA - END POST ASSEMBLY
IAPA - INTERMEDIATE ANCHOR POST ASSEMBLY
CPA - CORNER POST ASSEMBLY

NOTES:

1. ALL MEASUREMENTS ARE TAKEN FROM THE ℄ OF CONSTRUCTION OF IR-80 UNLESS OTHERWISE NOTED.
2. FENCE BRIDGE TIE-INS DESIGNED ACCORDING TO STANDARD DRAWING-FENCE DETAILS AT BRIDGES, F-3.1. TERMINALS, F-3.3, TYPE A, TYPE B, TYPE D
3. ALL TYPE 47 FENCE IS 2' INSIDE LIMITED ACCESS LINE UNLESS OTHERWISE NOTED.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED SUJ
CHECKED AJP

FENCING PLAN
STA 720+00 TO STA 730+00

MAH-80-0.97

1082
1100

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MAH-80-0.97
TRACTS 13 & 15, JACKSON TOWNSHIP
TRACTS 4, 5 & 6, AUSTINTOWN TOWNSHIP
MAHONING COUNTY, OHIO

MONUMENT LEGEND

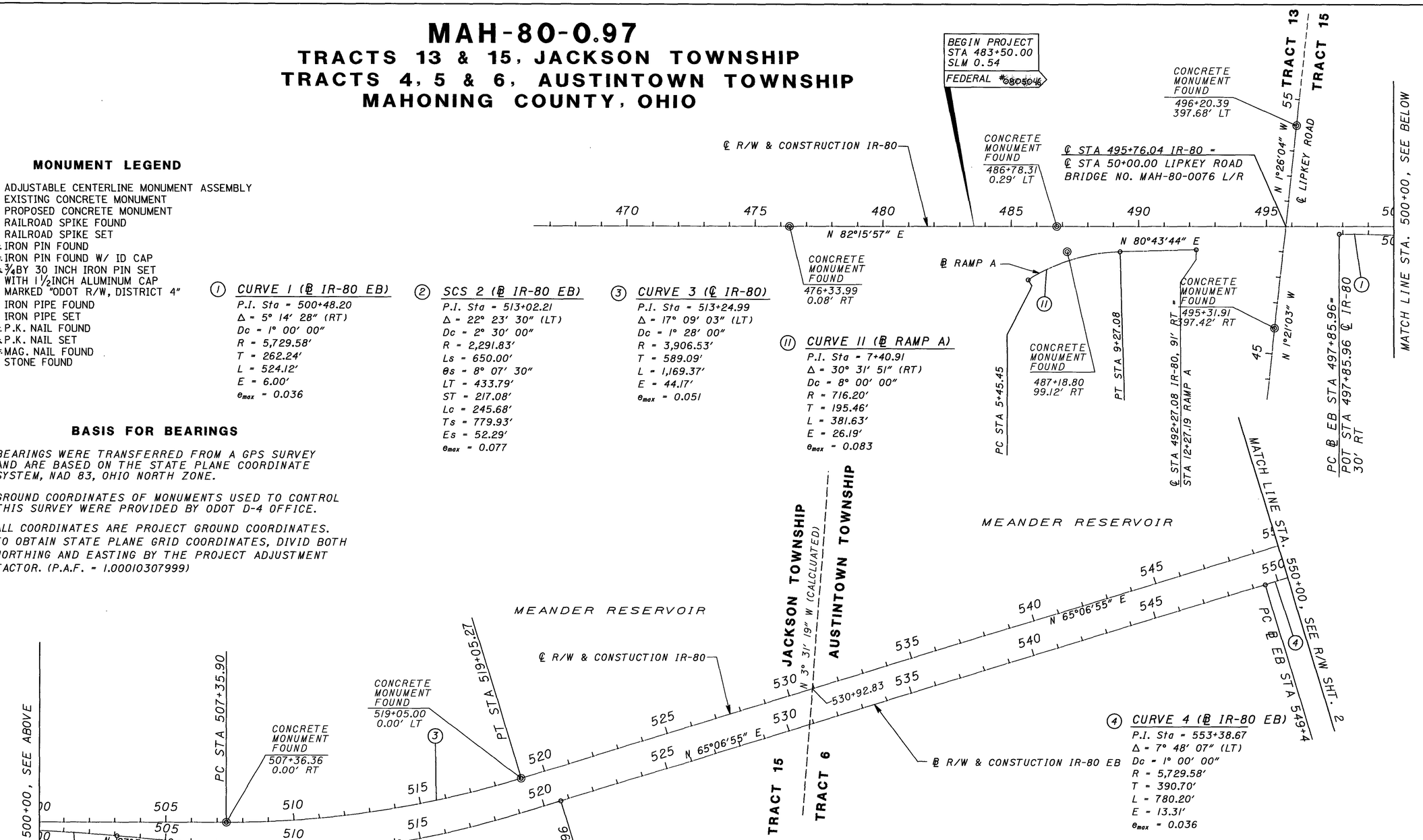
- ADJUSTABLE CENTERLINE MONUMENT ASSEMBLY
- EXISTING CONCRETE MONUMENT
- PROPOSED CONCRETE MONUMENT
- RAILROAD SPIKE FOUND
- RAILROAD SPIKE SET
- I.R.F. IRON PIN FOUND
- I.R.F. IRON PIN FOUND W/ ID CAP
- I.R.S. 3/4 BY 30 INCH IRON PIN SET WITH 1 1/2 INCH ALUMINUM CAP MARKED "ODOT R/W, DISTRICT 4"
- P.F. IRON PIPE FOUND
- P.S. IRON PIPE SET
- P.K.F. P.K. NAIL FOUND
- P.K.S. P.K. NAIL SET
- M.N.F. MAG. NAIL FOUND
- STONE FOUND

BASIS FOR BEARINGS

BEARINGS WERE TRANSFERRED FROM A GPS SURVEY AND ARE BASED ON THE STATE PLANE COORDINATE SYSTEM, NAD 83, OHIO NORTH ZONE.

GROUND COORDINATES OF MONUMENTS USED TO CONTROL THIS SURVEY WERE PROVIDED BY ODOT D-4 OFFICE.

ALL COORDINATES ARE PROJECT GROUND COORDINATES. TO OBTAIN STATE PLANE GRID COORDINATES, DIVID BOTH NORTHING AND EASTING BY THE PROJECT ADJUSTMENT FACTOR. (P.A.F. = 1.00010307999)



(1) CURVE 1 (℄ 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

(2) SCS 2 (℄ IR-80 EB)
P.I. Sta = 513+02.21
Δ = 22° 23' 30" (LT)
Dc = 2° 30' 00"
R = 2,291.83'
Ls = 650.00'
θs = 8° 07' 30"
LT = 433.79'
ST = 217.08'
Lc = 245.68'
Ts = 779.93'
Es = 52.29'
e_{max} = 0.077

(3) CURVE 3 (℄ IR-80)
P.I. Sta = 513+24.99
Δ = 17° 09' 03" (LT)
Dc = 1° 28' 00"
R = 3,906.53'
T = 589.09'
L = 1,169.37'
E = 44.17'
e_{max} = 0.051

(11) CURVE 11 (℄ 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

(4) CURVE 4 (℄ IR-80 EB)
P.I. Sta = 553+38.67
Δ = 7° 48' 07" (LT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 390.70'
L = 780.20'
E = 13.31'
e_{max} = 0.036

I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE BY KS ASSOCIATES IN 2003.

THE ESTABLISHMENT OF THE PROPERTY LINES AND EXISTING RIGHT OF WAY LINES SHOWN ON THIS PLAN AS OF THIS DATE WAS PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION.

BY Phil Y Shih
PHIL Y. SHIH

SURVEYOR NO. 7668 DATE 6/30/2004

NOTES:
1. THE EXISTING RIGHT OF WAY WIDTH AND LOCATION WERE DETERMINED BASED ON FIELD EVIDENCE, RECORD DEEDS, AND ODOT PROJECTS MAH-80-5.98, MAH-80S-7.01, MAH-80-2.30, AND MAH-80-3.37.
2. STATIONS AND OFFSETS ARE FROM THE CENTERLINE OF RIGHT OF WAY OF IR-80 OR BASELINE OF RIGHT OF WAY IR-80 WESTBOUND.

RECEIVED _____, 20____
RECORDED _____, 20____
BOOK _____ PAGE _____
MAHONING COUNTY RECORDER

N
HORIZONTAL SCALE IN FEET
0 200 400
PID NO. 6080
R/W DESIGNER SUJ
R/W REVIEWER PYS

CENTERLINE PLAT
STA. 467+00 TO STA. 550+00
MAH-80-0.97
1 / 18
1083 / 1100

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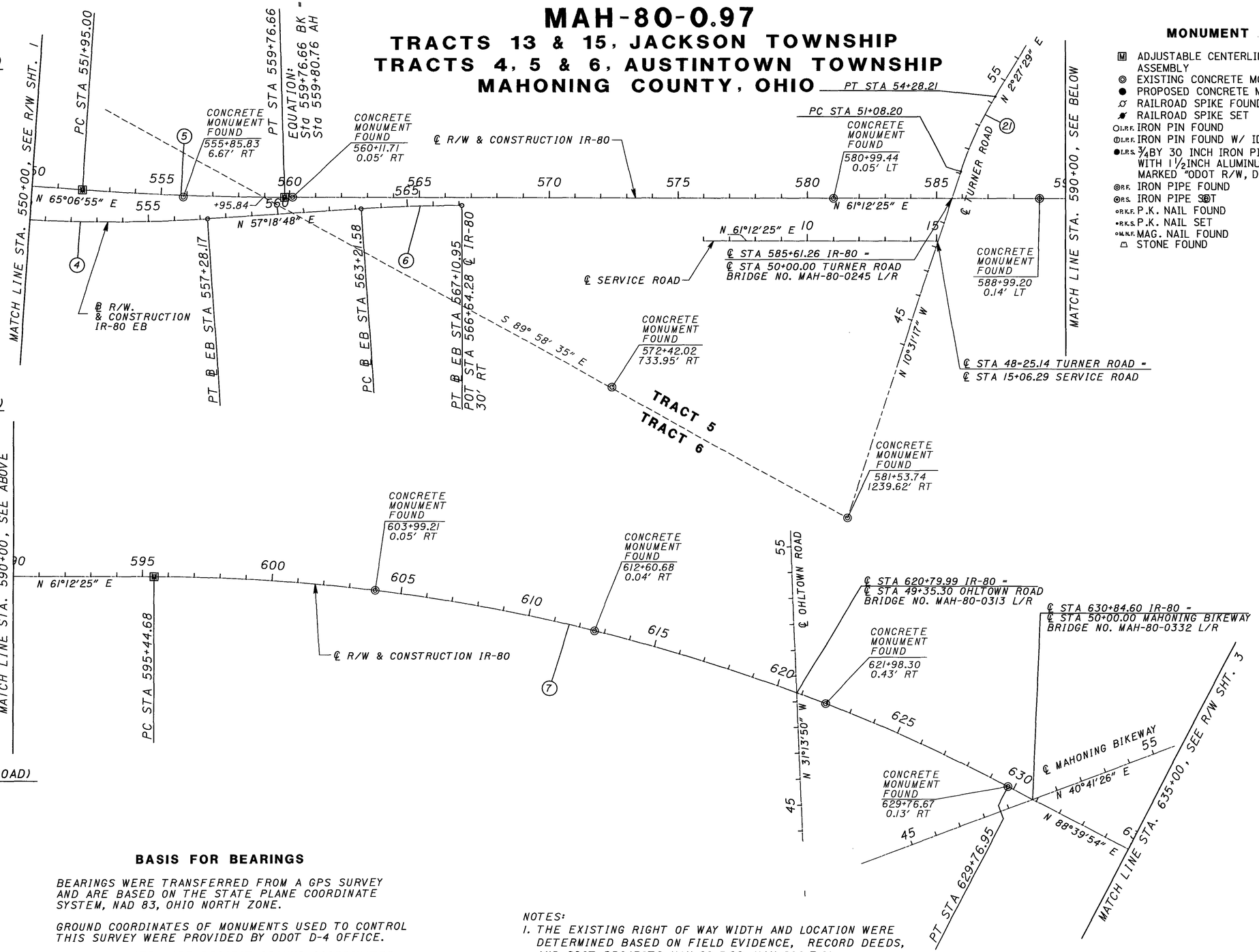
MAH-80-0.97

TRACTS 13 & 15, JACKSON TOWNSHIP
TRACTS 4, 5 & 6, AUSTINTOWN TOWNSHIP
MAHONING COUNTY, OHIO



④ **CURVE 4 (℄ IR-80 EB)**
P.I. Sta = 553+38.67
Δ = 7° 48' 07" (LT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 390.70'
L = 780.20'
E = 13.31'
e_{max} = 0.036

⑤ **CURVE 5 (℄ IR-80)**
P.I. Sta = 555+85.98
Δ = 3° 54' 30" (LT)
Dc = 0° 30' 00"
R = 11,459.16'
T = 390.98'
L = 781.66'
E = 6.67'
e_{max} = 0.019

⑥ **CURVE 6 (℄ IR-80 EB)**
P.I. Sta = 565+16.34
Δ = 3° 53' 37" (RT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 194.76'
L = 389.37'
E = 3.31'
e_{max} = 0.036

⑦ **CURVE 7 (℄ IR-80)**
P.I. Sta = 612+94.43
Δ = 27° 27' 29" (RT)
Dc = 0° 48' 00"
R = 7,161.97'
T = 1,749.75'
L = 3,432.27'
E = 210.64'
e_{max} = 0.030

㉑ **CURVE 21 (℄ TURNER ROAD)**
P.I. Sta = 52+68.88
Δ = 12° 48' 02" (RT)
Dc = 4° 00' 00"
R = 1,432.39'
T = 160.68'
L = 320.02'
E = 8.98'

MONUMENT LEGEND

- ▣ ADJUSTABLE CENTERLINE MONUMENT ASSEMBLY
- ◎ EXISTING CONCRETE MONUMENT
- ● PROPOSED CONCRETE MONUMENT
- ⊘ RAILROAD SPIKE FOUND
- ⊘ RAILROAD SPIKE SET
- ○I.R.F. IRON PIN FOUND
- ⊙I.R.F. IRON PIN FOUND W/ ID CAP
- ●I.R.S. ¾ BY 30 INCH IRON PIN SET WITH 1½ INCH ALUMINUM CAP MARKED "ODOT R/W, DISTRICT 4"
- ◎P.F. IRON PIPE FOUND
- ◎P.S. IRON PIPE SET
- ○P.K.F. P.K. NAIL FOUND
- •P.K.S. P.K. NAIL SET
- ○M.F. MAG. NAIL FOUND
- △ STONE FOUND

BASIS FOR BEARINGS

BEARINGS WERE TRANSFERRED FROM A GPS SURVEY AND ARE BASED ON THE STATE PLANE COORDINATE SYSTEM, NAD 83, OHIO NORTH ZONE.

GROUND COORDINATES OF MONUMENTS USED TO CONTROL THIS SURVEY WERE PROVIDED BY ODOT D-4 OFFICE.

ALL COORDINATES ARE PROJECT GROUND COORDINATES. TO OBTAIN STATE PLANE GRID COORDINATES, DIVID BOTH NORTHING AND EASTING BY THE PROJECT ADJUSTMENT FACTOR. (P.A.F. = 1.00010307999)

NOTES:
1. THE EXISTING RIGHT OF WAY WIDTH AND LOCATION WERE DETERMINED BASED ON FIELD EVIDENCE, RECORD DEEDS, AND ODOT PROJECTS MAH-80-5.98, MAH-80S-7.01, MAH-80-2.30, AND MAH-80-3.37.
2. STATIONS AND OFFSETS ARE FROM THE CENTERLINE OF RIGHT OF WAY OF IR-80 OR THE BASELINE OF RIGHT OF WAY OF IR-80 WESTBOUND.

HORIZONTAL SCALE IN FEET: 0, 200, 400

PID NO. 86080

R/W DESIGNER SUJ
R/W REVIEWER PYS

CENTERLINE PLAT
STA. 550+00 TO STA. 635+00

MAH-80-0.97

2 / 18

1084 / 1100

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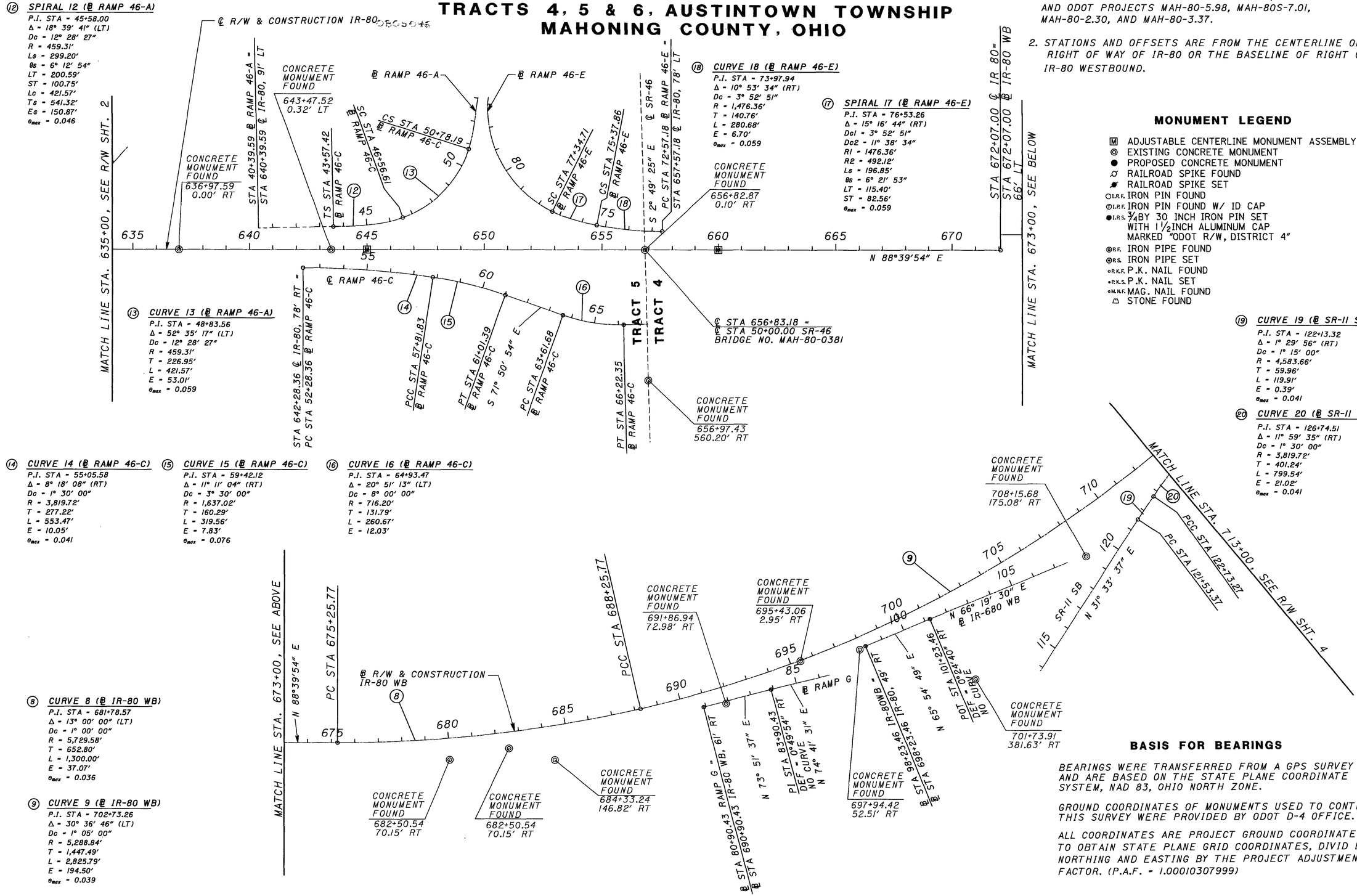
MAH-80-0.97
TRACT 13 & 15, JACKSON TOWNSHIP
TRACTS 4, 5 & 6, AUSTINTOWN TOWNSHIP
MAHONING COUNTY, OHIO



⑫ **SPIRAL 12 (℄ RAMP 46-A)**
P.I. STA = 45+58.00
Δ = 18° 39' 41" (LT)
Dc = 12° 28' 27"
R = 459.31'
Ls = 299.20'
θs = 6° 12' 54"
LT = 200.59'
ST = 100.75'
Lc = 421.57'
Ts = 541.32'
Es = 150.87'
θmax = 0.046

⑬ **CURVE 13 (℄ RAMP 46-A)**
P.I. STA = 48+83.56
Δ = 52° 35' 17" (LT)
Dc = 12° 28' 27"
R = 459.31'
T = 226.95'
L = 421.57'
E = 53.01'
θmax = 0.059

⑭ **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'
θmax = 0.041

⑮ **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'
θmax = 0.076

⑯ **CURVE 16 (℄ RAMP 46-C)**
P.I. STA = 64+93.47
Δ = 20° 51' 13" (LT)
Dc = 8° 00' 00"
R = 716.20'
T = 131.79'
L = 260.67'
E = 12.03'

⑱ **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'
θmax = 0.059

⑰ **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'
θmax = 0.059

⑧ **CURVE 8 (℄ IR-80 WB)**
P.I. STA = 681+78.57
Δ = 13° 00' 00" (LT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 652.80'
L = 1,300.00'
E = 37.07'
θmax = 0.036

⑨ **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'
θmax = 0.039

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'
θmax = 0.041

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'
θmax = 0.041

NOTES:

DETERMINED BASED ON FIELD EVIDENCE, RECORD DEEDS, AND ODOT PROJECTS MAH-80-5.98, MAH-80S-7.01, MAH-80-2.30, AND MAH-80-3.37.

2. STATIONS AND OFFSETS ARE FROM THE CENTERLINE OF RIGHT OF WAY OF IR-80 OR THE BASELINE OF RIGHT OF WAY IR-80 WESTBOUND.

MONUMENT LEGEND

- Ⓜ ADJUSTABLE CENTERLINE MONUMENT ASSEMBLY
- ◎ EXISTING CONCRETE MONUMENT
- ● PROPOSED CONCRETE MONUMENT
- ⌀ RAILROAD SPIKE FOUND
- ⌀ RAILROAD SPIKE SET
- ○I.R.F. IRON PIN FOUND
- ⓘI.R.F. IRON PIN FOUND W/ ID CAP
- ●I.R.S. ¾ BY 30 INCH IRON PIN SET WITH 1½ INCH ALUMINUM CAP MARKED "ODOT R/W, DISTRICT 4"
- ◎P.F. IRON PIPE FOUND
- ◎P.S. IRON PIPE SET
- ◦P.K.F. P.K. NAIL FOUND
- ◦P.K.S. P.K. NAIL SET
- ◦M.N.F. MAG. NAIL FOUND
- △ STONE FOUND

BASIS FOR BEARINGS

BEARINGS WERE TRANSFERRED FROM A GPS SURVEY AND ARE BASED ON THE STATE PLANE COORDINATE SYSTEM, NAD 83, OHIO NORTH ZONE.

GROUND COORDINATES OF MONUMENTS USED TO CONTROL THIS SURVEY WERE PROVIDED BY ODOT D-4 OFFICE.

ALL COORDINATES ARE PROJECT GROUND COORDINATES. TO OBTAIN STATE PLANE GRID COORDINATES, DIVID BOTH NORTHING AND EASTING BY THE PROJECT ADJUSTMENT FACTOR. (P.A.F. = 1.00010307999)

HORIZONTAL SCALE IN FEET
0 200 400

PID NO. 86080

R/W DESIGNER SUJ
R/W REVIEWER PYS

CENTERLINE PLAT
STA. 635+00 TO STA. 713+00

MAH-80-0.97

3 / 18

1085 / 1100

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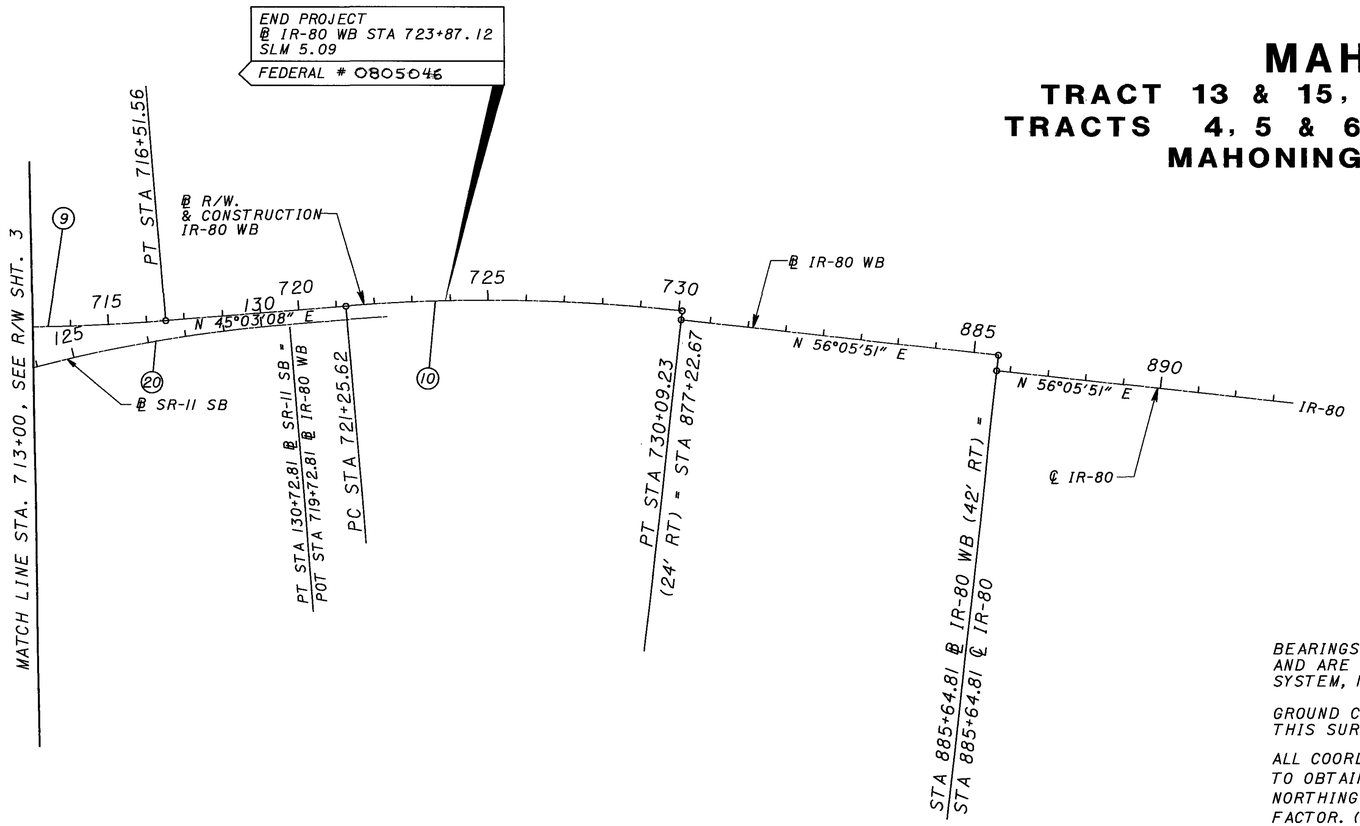
MAH-80-0.97
TRACT 13 & 15, JACKSON TOWNSHIP1
TRACTS 4, 5 & 6, AUSTINTOWN TOWNSHIP
MAHONING COUNTY, OHIO



BASIS FOR BEARINGS

BEARINGS WERE TRANSFERRED FROM A GPS SURVEY AND ARE BASED ON THE STATE PLANE COORDINATE SYSTEM, NAD 83, OHIO NORTH ZONE.

GROUND COORDINATES OF MONUMENTS USED TO CONTROL THIS SURVEY WERE PROVIDED BY ODOT D-4 OFFICE.

ALL COORDINATES ARE PROJECT GROUND COORDINATES. TO OBTAIN STATE PLANE GRID COORDINATES, DIVID BOTH NORTHING AND EASTING BY THE PROJECT ADJUSTMENT FACTOR. (P.A.F. = 1.00010307999)

(9) 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'
e_{max} = 0.039

(10) 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'
e_{max} = 0.040

(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'
e_{max} = 0.041

MONUMENT LEGEND

- ▣ ADJUSTABLE CENTERLINE MONUMENT ASSEMBLY
- ◎ EXISTING CONCRETE MONUMENT
- ● PROPOSED CONCRETE MONUMENT
- ⌀ RAILROAD SPIKE FOUND
- ⌀ RAILROAD SPIKE SET
- ○I.R.F. IRON PIN FOUND
- ⊙I.R.F. IRON PIN FOUND W/ ID CAP
- ●I.R.S. ¾ BY 30 INCH IRON PIN SET WITH 1½ INCH ALUMINUM CAP MARKED "ODOT R/W, DISTRICT 4"
- ◎P.F. IRON PIPE FOUND
- ◎P.S. IRON PIPE SET
- ○P.K.F. P.K. NAIL FOUND
- ●P.K.S. P.K. NAIL SET
- ⊙M.N.F. MAG. NAIL FOUND
- △ STONE FOUND

NOTES:
1. THE EXISTING RIGHT OF WAY WIDTH AND LOCATION WERE DETERMINED BASED ON FIELD EVIDENCE, RECORD DEEDS, AND ODOT PROJECTS MAH-80-5.98, MAH-80S-7.01, MAH-80-2.30, AND MAH-80-3.37.
2. STATIONS AND OFFSETS ARE FROM THE CENTERLINE OF RIGHT OF WAY OF IR-80, OR THE BASELINE OF RIGHT OF WAY OF IR-80 WESTBOUND.

MONUMENTS TO BE SET DURING CONSTRUCTION

STATION	DIST. FROM ℄ OF R/W		ADJUSTABLE ℄ MONUMENT	PROJECT GROUND COORDINATES	
	LEFT	RIGHT		NORTHING	EASTING
PC STA 551+95.00	0	0	1	532646.14	2436011.15
PT STA 559+76.66	0	0	1	532998.98	2436708.47
PC STA 595+44.68	0	0	1	534715.54	2439831.76
POT STA 645+00.00	0	0	1	535634.55	2444637.10
POT STA 660+00.00	0	0	1	535669.50	2446136.69
*TOTAL			5		

*TOTAL CARRIED TO GENERAL SUMMARY

ADJUSTABLE CENTERLINE MONUMENTS ARE SHOWN ON STANDARD CONSTRUCTION DRAWING RM-1.1 (REV. 4-18-03) OF THE OHIO DEPARTMENT OF TRANSPORTATION. THE PLACEMENT OF THE MONUMENTS SHALL BE UNDER THE DIRECTION OF A SURVEYOR REGISTERED IN THE STATE OF OHIO AND ARE TO BE SET, AS SHOWN, BY THE HIGHWAY CONTRACTOR AT THE TIME OF CONSTRUCTION. ANY ALTERATIONS, WITH PRIOR APPROVAL OF THE OHIO DEPARTMENT OF TRANSPORTATION, SHALL BE NOTED AND O.D.O.T. SHALL BE NOTIFIED OF THE NEW LOCATIONS.

HORIZONTAL SCALE IN FEET
0 200 400

PID NO. 86080

R/W DESIGNER SUJ
R/W REVIEWER PYS

CENTERLINE PLAT
STA. 713+00 TO STA. 730+00

MAH-80-0.97

4 / 18

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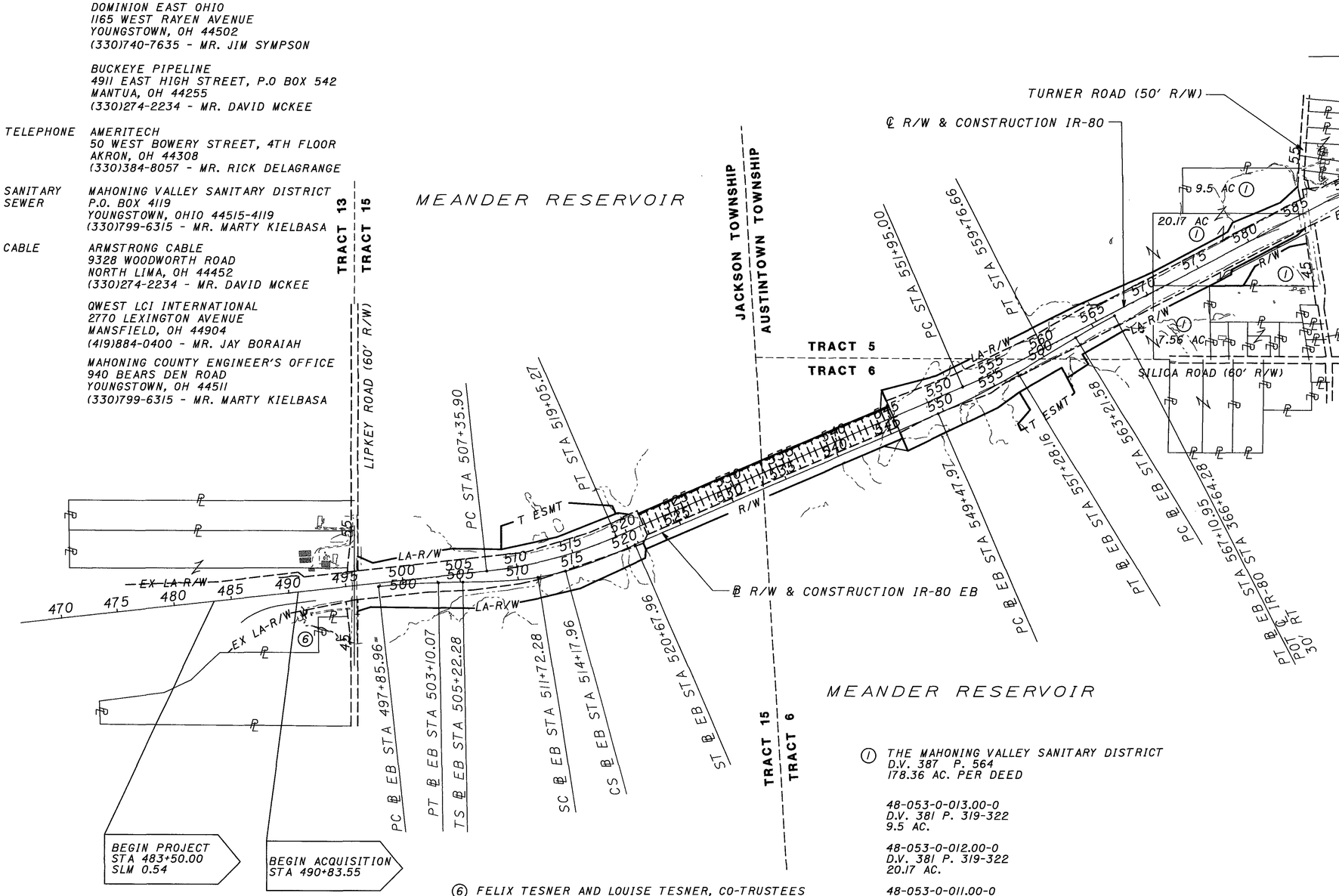
MAH-80-0.97
TRACTS 13 & 15, JACKSON TOWNSHIP
TRACTS 4, 5 & 6, AUSTINTOWN TOWNSHIP
MAHONING COUNTY, OHIO

UTILITY OWNERS

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE UTILITIES AS REQUIRED BY SECTION 153.64 O.R.C.

GAS	OHIO EDISON 730 SOUTH AVENUE YOUNGSTOWN, OHIO 44502 (330)740-7635 - MR. BILL SPEECE
	DOMINION EAST OHIO 1165 WEST RAYEN AVENUE YOUNGSTOWN, OH 44502 (330)740-7635 - MR. JIM SYMPSON
	BUCKEYE PIPELINE 4911 EAST HIGH STREET, P.O BOX 542 MANTUA, OH 44255 (330)274-2234 - MR. DAVID MCKEE
TELEPHONE	AMERITECH 50 WEST BOWERY STREET, 4TH FLOOR AKRON, OH 44308 (330)384-8057 - MR. RICK DELAGRANGE
SANITARY SEWER	MAHONING VALLEY SANITARY DISTRICT P.O. BOX 4119 YOUNGSTOWN, OHIO 44515-4119 (330)799-6315 - MR. MARTY KIELBASA
CABLE	ARMSTRONG CABLE 9328 WOODWORTH ROAD NORTH LIMA, OH 44452 (330)274-2234 - MR. DAVID MCKEE
	QWEST LCI INTERNATIONAL 2770 LEXINGTON AVENUE MANSFIELD, OH 44904 (419)884-0400 - MR. JAY BORAIAH
	MAHONING COUNTY ENGINEER'S OFFICE 940 BEARS DEN ROAD YOUNGSTOWN, OH 44511 (330)799-6315 - MR. MARTY KIELBASA



① *THE MAHONING VALLEY SANITARY DISTRICT*
D.V. 387 P. 564
178.36 AC. PER DEED

48-053-0-013.00-0
D.V. 381 P. 319-322
9.5 AC.

48-053-0-012.00-0
D.V. 381 P. 319-322
20.17 AC.

48-053-0-011.00-0
D.V. 387 P. 570
7.56 AC.

⑥ *FELIX TESNER AND LOUISE TESNER, CO-TRUSTEES*
50-050-0-003.00-0
D.V. 3209 P. 132
5.631 AC

STRUCTURE KEY
- RESIDENTIAL
- COMMERCIAL
- OUT-BUILDING

CONVENTIONAL SIGNS
- County Line
- Township Line
- Tract Line
- Corporation Line ——— or ———
- Fence Line (existing) -x-x-x- (proposed) -x-x-x-
- Center Line
- Trees ,Stumps (to be removed)
- Utility Poles: Telephone, Power, Light
- Right of Way (only) ——— R/W ———
- Limited Access & Right of Way ——— LA-R/W ———
- Exist. Limited Access & Right of Way — EX LA-R/W —
- Exist. Right of Way ——— EX R/W ———
- Temp. Right of Way ——— T ESMT ———
- Channel Easement ——— CH ESMT ———
- Utility Easement ——— U ESMT ———
- Property Line ——℄—— (in existing fence) -x-x-℄-x-x-
- Railroad ++++++++++ or ——|——|——
- Guardrail (existing) (proposed)
- Construction Limits ---- Const. Limits ----

REV. BY	DATE	DESCRIPTION
PYS	10/11/04	UPDATED ILA, ILA-1, ILA-6

FIELD REVIEW BY: PYS — DATE: 6/17/2004
OWNERSHIP VERIFIED BY: PYS — DATE: 6/17/2004
DATE COMPLETED: 6/25/2004

SCALE IN FEET: 0, 250, 500, 1000

PID NO. 6080

R/W DESIGNER SUJ
R/W REVIEWER PYS

PROPERTY MAP
STA 467+00 TO STA 600+00

MAH-80-0.97

5/18

1087
1100

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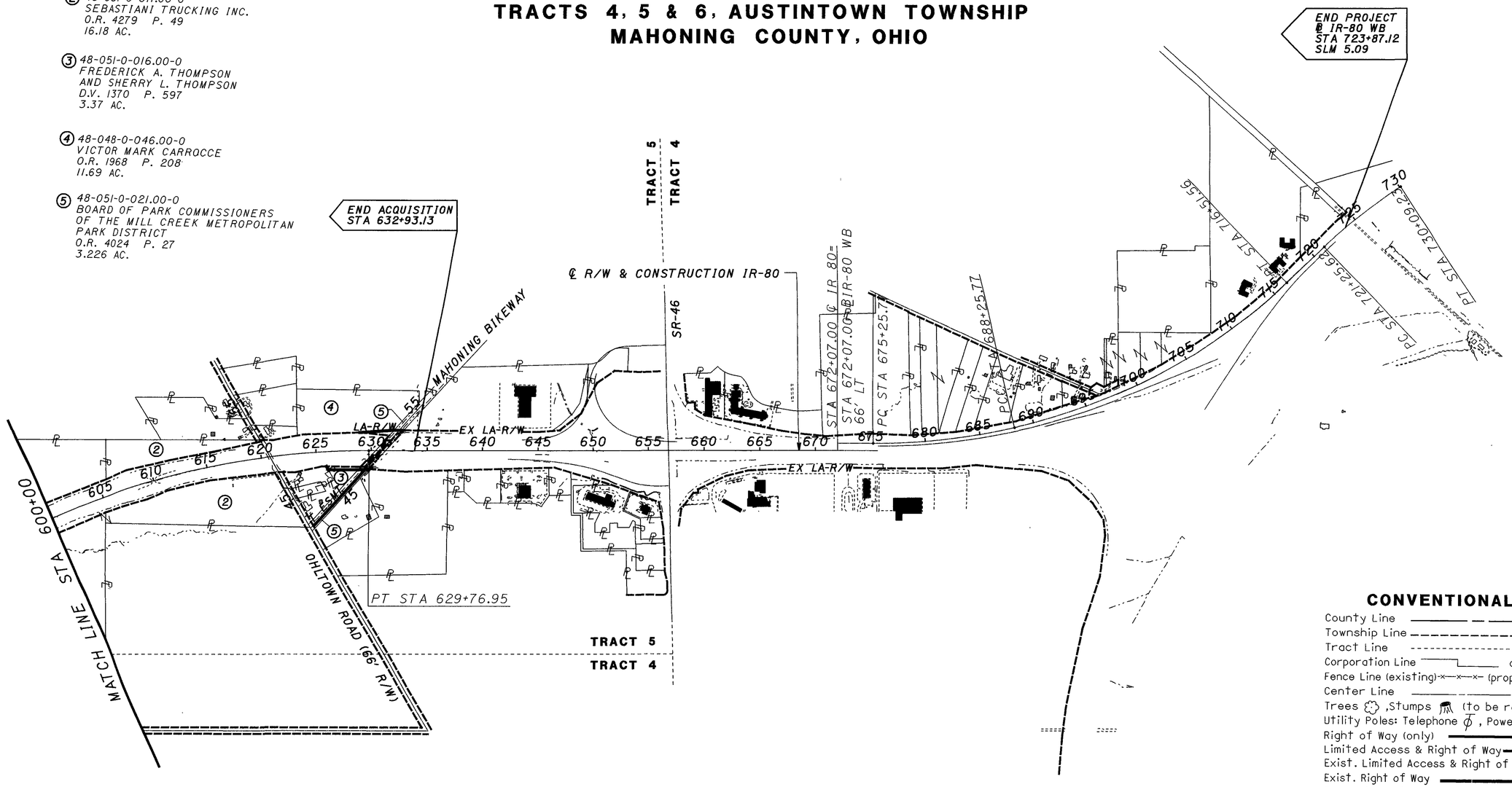
MAH-80-0.97
TRACTS 13 & 15, JACKSON TOWNSHIP
TRACTS 4, 5 & 6, AUSTINTOWN TOWNSHIP
MAHONING COUNTY, OHIO

② 48-051-0-011.00-0
SEBASTIANI TRUCKING INC.
O.R. 4279 P. 49
16.18 AC.

③ 48-051-0-016.00-0
FREDERICK A. THOMPSON
AND SHERRY L. THOMPSON
D.V. 1370 P. 597
3.37 AC.

④ 48-048-0-046.00-0
VICTOR MARK CARROCCE
O.R. 1968 P. 208
11.69 AC.

⑤ 48-051-0-021.00-0
BOARD OF PARK COMMISSIONERS
OF THE MILL CREEK METROPOLITAN
PARK DISTRICT
O.R. 4024 P. 27
3.226 AC.



STRUCTURE KEY
- RESIDENTIAL
- COMMERCIAL
- OUT-BUILDING

CONVENTIONAL SIGNS
- County Line
- Township Line
- Tract Line
- Corporation Line ____ or ____
- Fence Line (existing) -x-x-x- (proposed) -x-x-x-
- Center Line
- Trees, Stumps (to be removed)
- Utility Poles: Telephone, Power, Light
- Right of Way (only) R/W
- Limited Access & Right of Way LA-R/W
- Exist. Limited Access & Right of Way EX LA-R/W
- Exist. Right of Way EX R/W
- Temp. Right of Way T ESMT
- Channel Easement CH ESMT
- Utility Easement U ESMT
- Property Line ℄ (in existing fence)
- Railroad or
- Guardrail (existing) (proposed)
- Construction Limits Const. Limits

REV. BY	DATE	DESCRIPTION
TWW	3/28/05	DELETE PARCEL 2-WL
FIELD REVIEW BY: PYS		DATE: 6/17/2004
OWNERSHIP VERIFIED BY: PYS		DATE: 6/21/2004
DATE COMPLETED: 6/24/2004		

SCALE IN FEET: 0, 250, 500, 1000

PID NO. 6080

R/W DESIGNER SUJ
R/W REVIEWER PYS

PROPERTY MAP
STA 600+00 TO STA 730+00

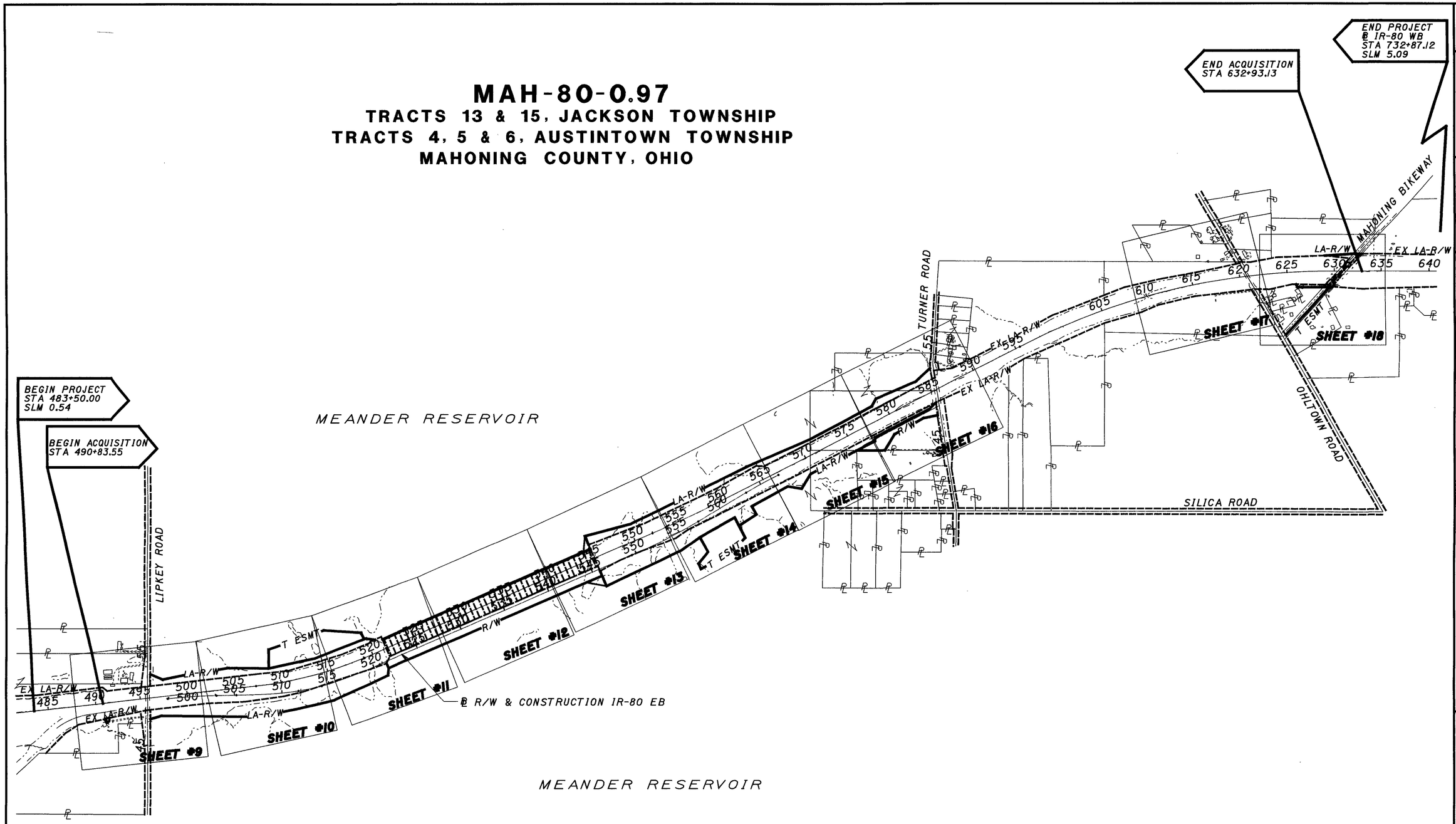
MAH-80-0.97

6/18

1088
1100

$TIME$
$DATE$
$FILE$

MAH-80-0.97
TRACTS 13 & 15, JACKSON TOWNSHIP
TRACTS 4, 5 & 6, AUSTINTOWN TOWNSHIP
MAHONING COUNTY, OHIO



SCALE IN FEET: 0, 250, 500, 1000

PID NO. 6080

R/W DESIGNER SUJ

R/W REVIEWER PYS

KEY MAP

MAH-80-0.97

REV. BY	DATE	DESCRIPTION
TWW	3/28/05	DELETE PARCEL 2-WL
PYS	10/11/04	UPDATED ILA, ILA-I, ILA-6

DATE COMPLETED: 6/24/2004

7/18

1089
1100

$DATE$
$TIME$
$FILE$

TOTAL NUMBER OF:

5 OWNERSHIPS
19 PARCELS
0 TOTAL TAKES

0 OWNERSHIPS WITH STRUCTURES INVOLVED
0 OWNERSHIPS WITH "P" ITEMS

NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE

ALL AREAS IN ACRES

ALL RIGHT OF WAY ACQUIRED IN THE NAME OF THE "STATE OF OHIO, DEPARTMENT OF TRANSPORTATION", UNLESS OTHERWISE NOTED.

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD BOOK	OWNERS RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS AND PERSONALTY	AS ACQUIRED BOOK	AS ACQUIRED PAGE
ILA	THE MAHONING VALLEY SANITARY DISTRICT	9-11	387	399	N/A	N/A		8.674	0.000	8.674	NONE			STATE			
			387	152													
ILA-1		9-11	386	209				3.801	0.000	3.801							
			387	152													
			389	342													
ISH-1		11-13	387	152			4.710	17.015	4.710	12.305					INCLUDING 10.359 AC EXISTING AERIAL EASEMENT PRO TAKEN FROM EXISTING STANDARD HIGHWAY EASEMENT		
			389	342													
			387	185													
			389	298													
ILA-2		13-15	389	298				3.455	0.000	3.455							
			386	159													
ILA-3		13-15	389	298				7.561	0.000	7.561							
			387	509													
	TOTAL						4.710	40.275	4.710	35.565							
IT		10-11	386	209				4.724	0.000	4.724					TO CONSTRUCT SPILL CONTAINMENT BASIN		
			389	342													
IT-1		14	389	298				3.144	0.000	3.144					TO CONSTRUCT SPILL CONTAINMENT BASIN		
IT-2		13	389	298				0.133	0.000	0.133					TO CONSTRUCT BRIDGE ABUTMENT SLOPE		
IT-3		13	389	298				0.240	0.000	0.240					TO CONSTRUCT BRIDGE ABUTMENT SLOPE		
ILA-5		15	387	570	48-053-0-011.00-0	7.56	0.783	0.619	0.000	0.619			6.158				
ILA-4		15-16	381	319, 322	48-053-0-012.00-0	20.17	7.062	1.266	0.000	1.266							
ILA-7		15-16						0.851	0.000	0.851							
ISH		15-16						1.727	0.000	1.727							
	TOTAL					20.17	7.062	3.844	0.000	3.844		4.712	4.552				
ILA-6		16	381	319, 322	48-053-0-013.00-0	9.5	0.642	0.584	0.000	0.584		8.274					
	GRAND TOTAL						13.197	45.553	4.710	40.843							
2WL	SEBASTIANI TRUCKING INC.	17	4279	49	48-051-0-011.00-0	16.18	0.448								NO R/W NEEDED		
3WL	FREDERICK A. & SHERRY L. THOMPSON	18	1370	597	48-051-0-016.00-0	3.37	0.000	0.188	0.000	0.188			3.182				
4WL	VICTOR MARK CARROCCE	18	1968	208	48-048-0-046.00-0	11.69	0.000	0.163	0.000	0.163		11.527					
5WLR	BOARD OF PARK COMMISSIONERS OF THE	18	4024	27	48-051-0-021.00-0	3.226	0.037	0.729	0.037	0.692		1.664	0.833		PRO TAKEN FROM 0.037 AC EXISTING		
	MILL CREEK METROPOLITAN PARK DISTRICT														STANDARD HIGHWAY EASEMENT		
5T		18						0.159	0.000	0.159					TO CONSTRUCT ELECTRIC CONDUIT		
															RESERVING THE RIGHT TO OPERATE AND		
															MAINTAIN A BIKE PATH		
6WL	FELIX TESNER AND LOUISE TESNER,	9	3209	132	50-050-0-003.00-0	5.631	0.000	0.040	0.000	0.040			5.591				
	CO-TRUSTEES										NONE			STATE			
	TED UNDERHILL, SUCCESSOR CO-TRUSTEE																
	VINCENT TESNER, SUCCESSOR CO-TRUSTEE																

NOTE:
UNDER NO CIRCUMSTANCES ARE THE TEMPORARY EASEMENTS TO BE USED FOR THE STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

NOTE:
ALL TEMPORARY PARCELS TO BE OF 36 MONTH DURATION.

REV. BY	DATE	DESCRIPTION
TWW	3/28/05	DELETE PARCEL 2-WL
DJH	1/28/05	REVISED OWNER'S NAME; PCL 6
DJH	1/21/05	CHANGED OWNER'S RECORD; PCL1
PYS	10/13/04	REVISED ILA, ILA-1, ILA-6
DJH	8/30/04	CHANGED PCL 5-WL TO 5-WLR

FIELD REVIEW BY: PYS DATE: 6/17/2004
OWENERSHIP VERIFIED BY: PYS DATE: 6/21/2004
DATE COMPLETED: 6/28/2004

FEDERAL PROJECT NO.

PID NO. 6080

STATE JOB NO. 046000

R/W DESIGNER SUJ
R/W REVIEWER PYS

SUMMARY OF ADDITIONAL RIGHT OF WAY

MAH-80-0.97

1090
1100

MAH-80-0.97

TRACTS 13 & 15, JACKSON TOWNSHIP
TRACTS 4, 5 & 6, AUSTINTOWN TOWNSHIP
MAHONING COUNTY, OHIO

BEGIN PROJECT
STA 483+50.00
SLM 0.54

℄ STA 495+76.04 IR-80 =
℄ STA 50+00.00 LIPKEY ROAD

50-050-0-004.00-0
FELIX TESNER
LOUISE TESNER
CO-TRUSTEES
O.R. 3209 P. 134
18.75 AC.

BEGIN ACQUISITION
STA 490+83.55

495+90.28
125.00' LT

50-050-0-003.01-0
FELIX TESNER AND LOUISE TESNER, CO-TRUSTEES
O.R. 3209 P. 130
5.48 AC.

EX LA-R/W

℄ R/W & CONSTRUCTION IR-80

TRACT 13

TRACT 15

N 1° 26' 04" W 54.37'

EX R/W

274.34'

496+20.39
397.68' LT

℄ CONSTRUCTION
LIPKEY ROAD

① THE MAHONING VALLEY SANITARY DISTRICT

496+34.27
250.00' LT

CONST. LIMITS

500+50.00
207.01' LT

497+60.00
179.07' LT

S 68°18'20" E
144.36'

N 76° 45' 46" E
291.34'

LA-R/W

125.76'

ILA-1

POB
496+20.47
125.00'

EX LA-R/W

S 82° 15' 57" W
1115.74'

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

MATCH LINE STA 501+00

488 489 490 491 492 493 494 495 496 497 498 499 500

N 82°15'57" E

60.00'

12" RCP

UG. ELEC.

CURVE I

N 80°43'44" E

℄ RAMP A
N 77° 01' 18" E
59.79'

491+43.09
163.48' RT

POB

S 77°01'18" W
421.05'

495+62.39
125.00' RT

S 6°24'18" W
33.24'

UE/UT

CELLULAR TOWER

491+34.97
195.72' RT

490+83.55
168.95' RT

N 33°48'51" W
48.04'

491+04.67
212.10' RT

S 53°52'44" W
34.44'

PT STA 9+27.08

EX LA-R/W

6WL

BEGIN WORK
℄ RAMP A
STA. 7+75.00

CONST. LIMITS

495+92.57
125.00' RT

N 82° 15' 57" E
606.79'

POB

EX LA-R/W

TYPE D CONC BARRIER

ILA

℄ R/W & CONSTRUCTION
IR-80 EB

S 7° 15' 39" W
120.83'

497+00.00
201.89' RT

S 89° 14' 09" W
1017.52'

LA-R/W

PC ℄ EB STA 497+85.96 =
℄ IR-80 STA 497+85.96
30' RT

495+81.18
225.00' RT

N 1° 21' 03" W
274.12'

N 1° 20' 03" W

EX R/W

100.58'

6 50-050-0-003.00-0
FELIX TESNER AND LOUISE TESNER, CO-TRUSTEES
O.R. 3209 P. 132
5.631 AC.

50-050-0-002.00-0
CHRISTOPHER D. SMITH
O.R. 5328 P. 840
26.506 AC.

495+31.91
397.42' RT

① THE MAHONING VALLEY SANITARY DISTRICT

NOTES:
1. THE EXISTING RIGHT OF WAY WIDTH AND LOCATION WERE DETERMINED BASED ON FIELD EVIDENCE, RECORD DEEDS, AND ODOT PROJECTS MAH-80-5.98, MAH-80S-7.01, MAH-80-2.30, AND MAH-80-3.37.
2. STATIONS AND OFFSETS ARE FROM THE CENTERLINE OF RIGHT OF WAY OF IR 80, OR THE BASELINE OF RIGHT OF WAY OF IR-80 WESTBOUND.

MONUMENT LEGEND

- ▣ ADJUSTABLE CENTERLINE MONUMENT ASSEMBLY
- ◎ EXISTING CONCRETE MONUMENT
- ● PROPOSED CONCRETE MONUMENT
- ∅ RAILROAD SPIKE FOUND
- ∅ RAILROAD SPIKE SET
- ○I.R.F. IRON PIN FOUND
- ⓘI.R.F. IRON PIN FOUND W/ ID CAP
- ●I.R.S. ¾ BY 30 INCH IRON PIN SET WITH 1½ INCH ALUMINUM CAP MARKED "ODOT R/W, DISTRICT 4"
- ◎P.F. IRON PIPE FOUND
- ◉P.S. IRON PIPE SET
- ◦P.K.F. P.K. NAIL FOUND
- •P.K.S. P.K. NAIL SET
- ◦M.N.F. MAG. NAIL FOUND
- △ STONE FOUND

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

STRUCTURE KEY

- RESIDENTIAL
- COMMERCIAL
- OUT-BUILDING

REV. BY	DATE	DESCRIPTION
DJH	1/21/05	CHANGED OWNER'S RECORD; PCL 1
PYS	10/11/04	REVISED ILA, ILA-1

DATE COMPLETED: 6/24/2004

HORIZONTAL SCALE IN FEET
0 25 50 100

PID NO. 86080

R/W DESIGNER SUJ
R/W REVIEWER PYS

RIGHT OF WAY PLAN
STA 487+50 TO STA 501+00

MAH-80-0.97

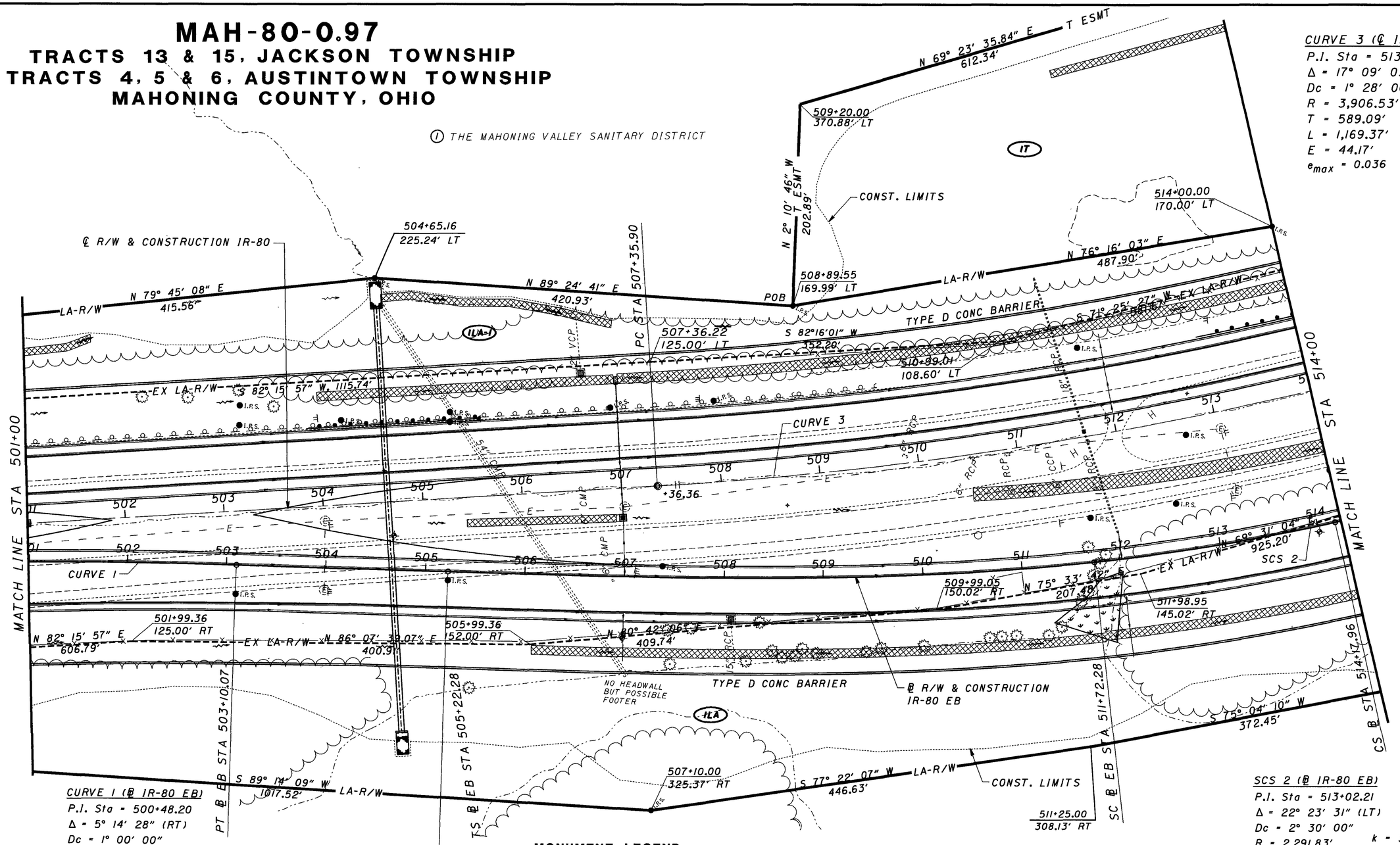
9 / 18

1091
1100

$TIME$
$DATE$
$FILE$

MAH-80-0.97

TRACTS 13 & 15, JACKSON TOWNSHIP
TRACTS 4, 5 & 6, AUSTINTOWN TOWNSHIP
MAHONING COUNTY, OHIO



CURVE 3 (℄ IR-80)
P.I. Sta = 513+24.99
Δ = 17° 09' 03" (LT)
Dc = 1° 28' 00"
R = 3,906.53'
T = 589.09'
L = 1,169.37'
E = 44.17'
e_{max} = 0.036

CURVE 1 (℄ 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

SCS 2 (℄ IR-80 EB)
P.I. Sta = 513+02.21
Δ = 22° 23' 31" (LT)
Dc = 2° 30' 00"
R = 2,291.83'
Ls = 650.00'
θs = 8° 07' 30"
LT = 433.79'
ST = 217.08'
x = 648.69'
y = 30.68'
k = 324.78'
p = 7.68'
Δc = 6° 08' 31" (LT)
Lc = 245.68'
Ts = 779.93'
Es = 52.29'
e_{max} = 0.077

MONUMENT LEGEND

- ▣ ADJUSTABLE CENTERLINE MONUMENT ASSEMBLY
- ◎ EXISTING CONCRETE MONUMENT
- ● PROPOSED CONCRETE MONUMENT
- RAILROAD SPIKE FOUND
- RAILROAD SPIKE SET
- I.P.F. IRON PIN FOUND
- I.P.F. IRON PIN FOUND W/ ID CAP
- I.P.S. ¾ BY 30 INCH IRON PIN SET WITH 1½ INCH ALUMINUM CAP MARKED "ODOT R/W, DISTRICT 4"
- P.F. IRON PIPE FOUND
- P.S. IRON PIPE SET
- P.K.F. P.K. NAIL FOUND
- P.K.S. P.K. NAIL SET
- M.N.F. MAG. NAIL FOUND
- STONE FOUND

① THE MAHONING VALLEY SANITARY DISTRICT

NOTES:

1. THE EXISTING RIGHT OF WAY WIDTH AND LOCATION WERE DETERMINED BASED ON FIELD EVIDENCE, RECORD DEEDS, AND ODOT PROJECTS MAH-80-5.98, MAH-80S-7.01, MAH-80-2.30, AND MAH-80-3.37.
2. STATIONS AND OFFSETS ARE FROM THE CENTERLINE OF RIGHT OF WAY OF IR 80, OR BASELINE OF RIGHT OF WAY OF IR-80 WESTBOUND.

HORIZONTAL SCALE IN FEET: 0, 25, 50, 100

P.I.D. NO. 86080

R/W DESIGNER: SUJ
R/W REVIEWER: PYS

RIGHT OF WAY PLAN
STA 501+00 TO STA 514+00

MAH-80-0.97

10/18

REV. BY	DATE	DESCRIPTION
DJH	1/21/05	CHANGED OWNER'S RECORD; PCL 1

DATE COMPLETED: 6/24/2004

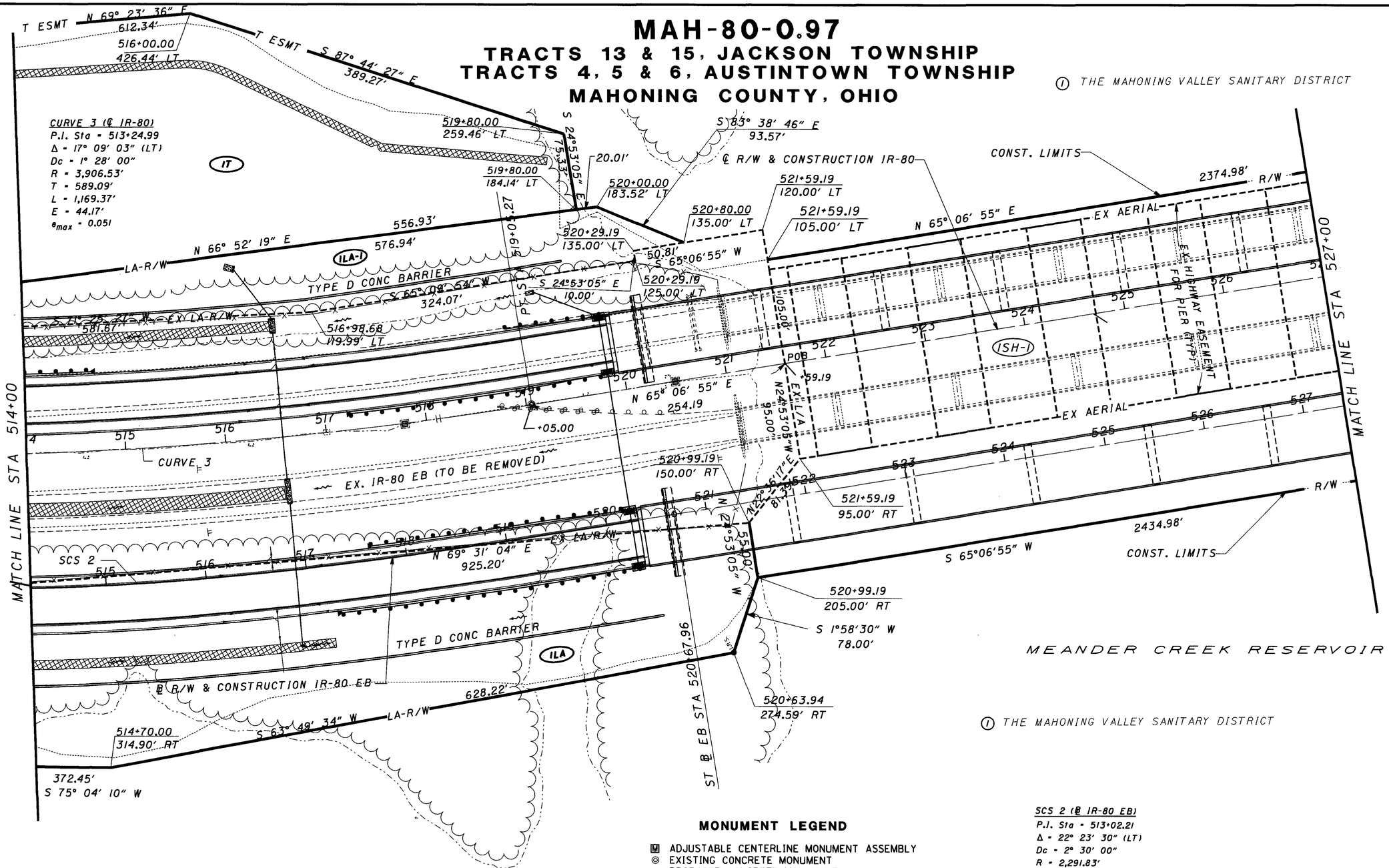
1092
1100

$TIME$
$DATE$
$FILE$

MAH-80-0.97

TRACTS 13 & 15, JACKSON TOWNSHIP
TRACTS 4, 5 & 6, AUSTINTOWN TOWNSHIP
MAHONING COUNTY, OHIO

(1) THE MAHONING VALLEY SANITARY DISTRICT



(1) THE MAHONING VALLEY SANITARY DISTRICT

MONUMENT LEGEND

- ADJUSTABLE CENTERLINE MONUMENT ASSEMBLY
- ◎ EXISTING CONCRETE MONUMENT
- ● PROPOSED CONCRETE MONUMENT
- RAILROAD SPIKE FOUND
- RAILROAD SPIKE SET
- ○I.P.F. IRON PIN FOUND
- ⓘI.P.F. IRON PIN FOUND W/ ID CAP
- ●I.P.S. ¾ BY 30 INCH IRON PIN SET WITH 1½ INCH ALUMINUM CAP MARKED "ODOT R/W, DISTRICT 4"
- ◎P.F. IRON PIPE FOUND
- ◉P.S. IRON PIPE SET
- ◦P.K.F. P.K. NAIL FOUND
- •P.K.S. P.K. NAIL SET
- ◦M.N.F. MAG. NAIL FOUND
- STONE FOUND

NOTES:

1. THE EXISTING RIGHT OF WAY WIDTH AND LOCATION WERE DETERMINED BASED ON FIELD EVIDENCE, RECORD DEEDS, AND ODOT PROJECT MAH-80-5.98, MAH-80S-7.01, MAH-80-2.30, AND MAH-80-3.37.
2. STATIONS AND OFFSETS ARE FROM THE CENTERLINE OF RIGHT OF WAY OF IR 80, OR BASELINE OF RIGHT OF WAY OF IR-80 WESTBOUND.

SCS 2 (℄ IR-80 EB)

P.I. Sta = 513+02.21
Δ = 22° 23' 30" (LT)
Dc = 2° 30' 00"
R = 2,291.83'
Ls = 650.00'
θs = 8° 07' 30"
LT = 433.79'
ST = 217.08'
x = 648.69'
y = 30.68'
k = 324.78'
p = 7.68'
Δc = 6° 08' 31" (LT)
Lc = 245.68'
Ts = 779.93'
Es = 52.29'
emax = 0.077

REV. BY	DATE	DESCRIPTION
DJH	1/21/05	CHANGE OWNER'S RECORD; PCL 1

DATE COMPLETED: 6/24/2004

HORIZONTAL SCALE IN FEET: 0, 25, 50, 100

PID NO. 6080

R/W DESIGNER SUJ
R/W REVIEWER PYS

RIGHT OF WAY PLAN
STA 514+00 TO STA 527+00

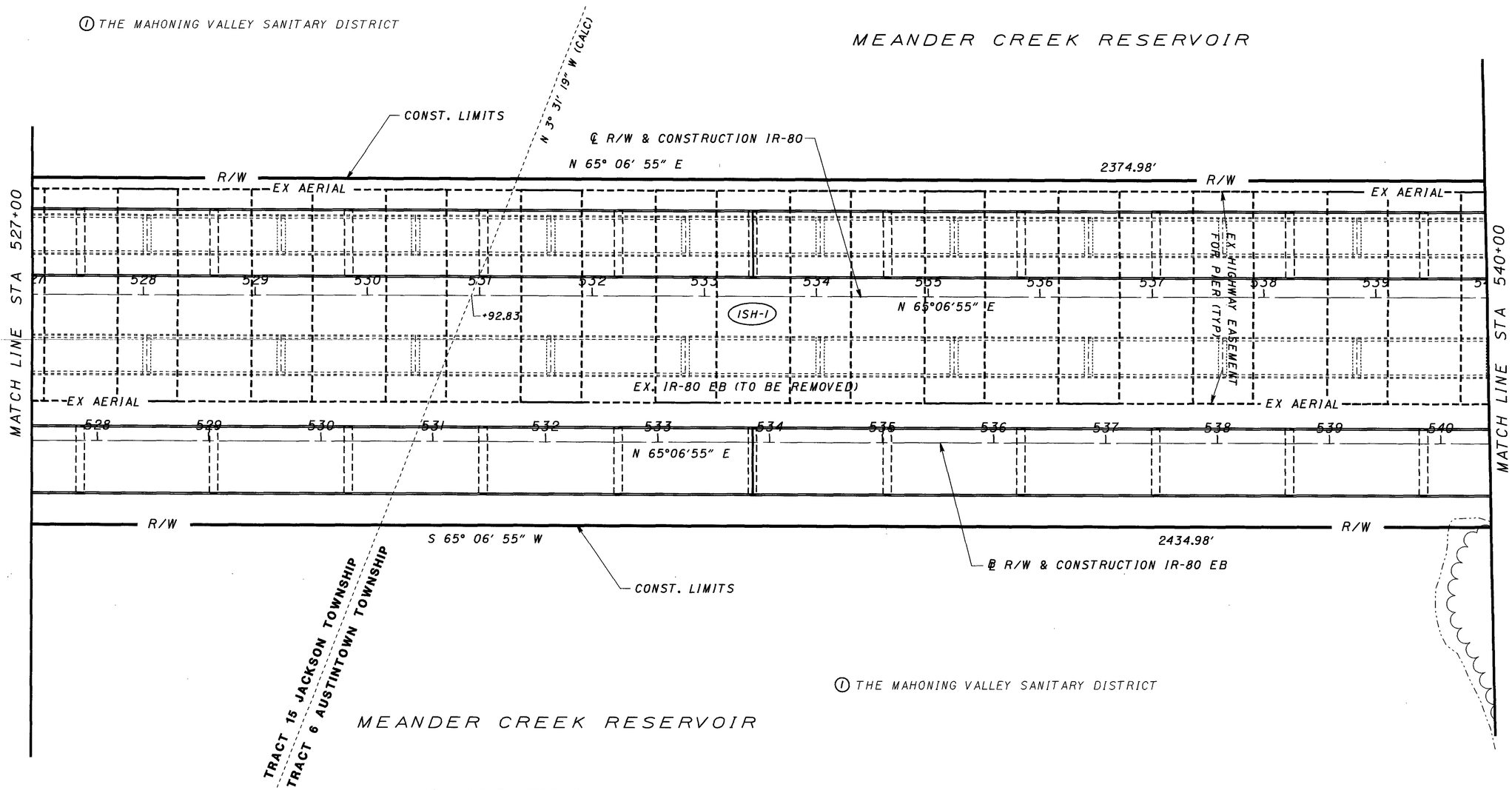
MAH-80-0.97

11/18

1093
1100

$TIME$
$DATE$
$FILE$

MAH-80-0.97
TRACTS 13 & 15, JACKSON TOWNSHIP
TRACTS 4, 5 & 6, AUSTINTOWN TOWNSHIP
MAHONING COUNTY, OHIO



① THE MAHONING VALLEY SANITARY DISTRICT
MEANDER CREEK RESERVOIR

MONUMENT LEGEND

- Ⓜ ADJUSTABLE CENTERLINE MONUMENT ASSEMBLY
- ◎ EXISTING CONCRETE MONUMENT
- ● PROPOSED CONCRETE MONUMENT
- ⌀ RAILROAD SPIKE FOUND
- ⌀ RAILROAD SPIKE SET
- ○I.P.F. IRON PIN FOUND
- ⊙I.P.F. IRON PIN FOUND W/ ID CAP
- ●I.P.S. ¾ BY 30 INCH IRON PIN SET WITH 1½ INCH ALUMINUM CAP MARKED "ODOT R/W, DISTRICT 4"
- ◎P.F. IRON PIPE FOUND
- ◉P.S. IRON PIPE SET
- ○P.K.F. P.K. NAIL FOUND
- •P.K.S. P.K. NAIL SET
- ○M.N.F. MAG. NAIL FOUND
- △ STONE FOUND

NOTES:

1. THE EXISTING RIGHT OF WAY WIDTH AND LOCATION WERE DETERMINED BASED ON FIELD EVIDENCE, RECORD DEEDS, AND ODOT PROJECTS MAH-80-5.98, MAH-80S-7.01, MAH-80-2.30, AND MAH-80-3.37.
2. STATIONS AND OFFSETS ARE FROM THE CENTERLINE OF RIGHT OF WAY OF IR-80, OR THE BASELINE OF RIGHT WAY OF IR-80 WESTBOUND.

REV. BY	DATE	DESCRIPTION
DJH	1/21/05	CHANGED OWNER'S RECORD; PCL 1

DATE COMPLETED: 6/24/2004

HORIZONTAL SCALE IN FEET: 0, 25, 50, 100

PID NO. 6080

R/W DESIGNER: SUJ
R/W REVIEWER: PYS

RIGHT OF WAY PLAN
STA 527+00 TO STA 540+00

MAH-80-0.97

12/18

1094
1100

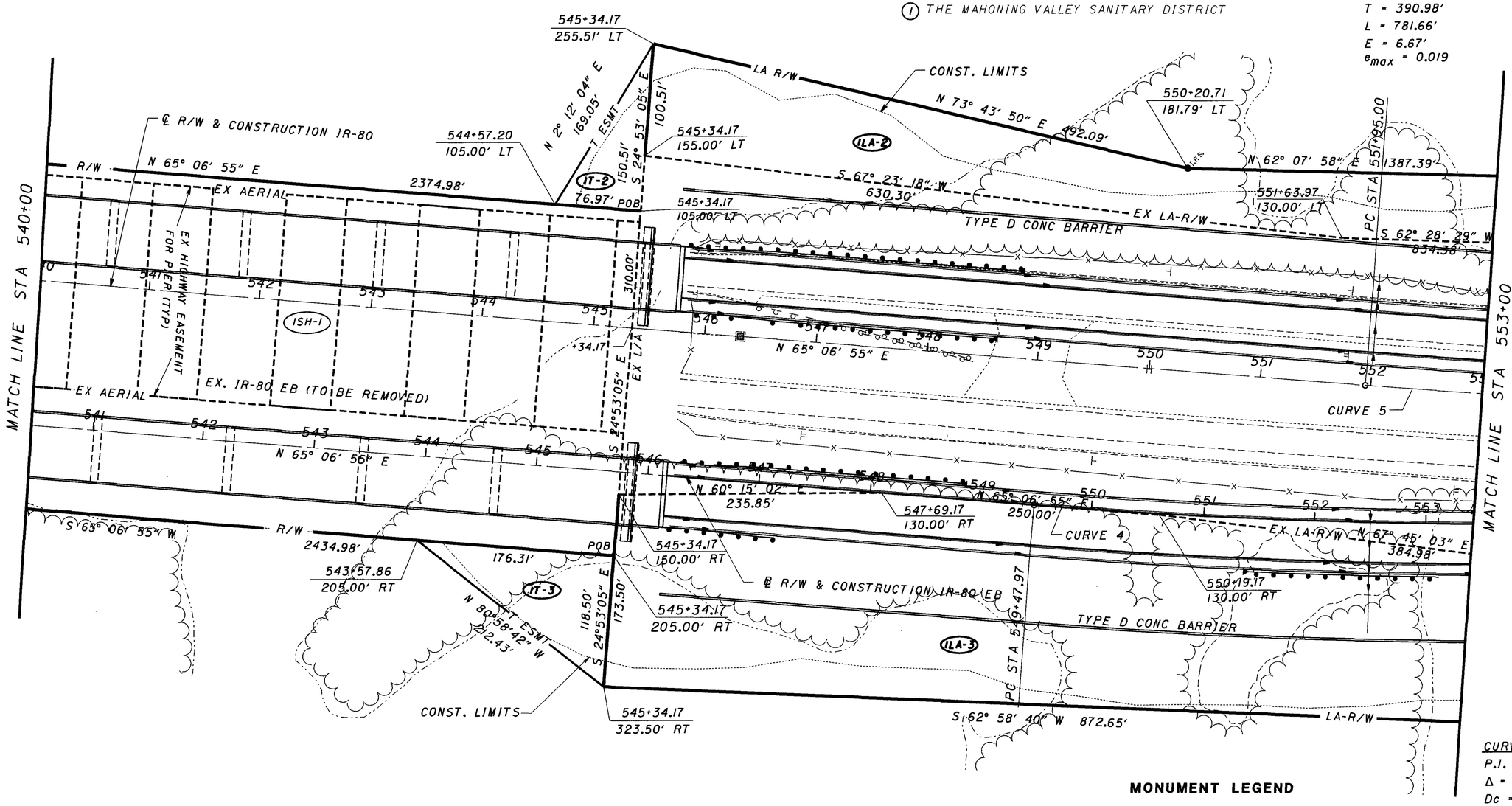
$TIME$
$DATE$ $FILE$

MAH-80-0.97

TRACTS 13 & 15, JACKSON TOWNSHIP
TRACTS 4, 5 & 6, AUSTINTOWN TOWNSHIP
MAHONING COUNTY, OHIO

MEANDER CREEK RESERVOIR

(1) THE MAHONING VALLEY SANITARY DISTRICT



(1) THE MAHONING VALLEY SANITARY DISTRICT

MEANDER CREEK RESERVOIR

CURVE 5 (℄ IR-80)
P.I. Sta = 555+85.98
Δ = 3° 54' 30" (LT)
Dc = 0° 30' 00"
R = 11,459.16'
T = 390.98'
L = 781.66'
E = 6.67'
e_{max} = 0.019

CURVE 4 (℄ IR-80 EB)
P.I. Sta = 553+38.67
Δ = 7° 48' 07" (LT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 390.70'
L = 780.20'
E = 13.31'
e_{max} = 0.036

MONUMENT LEGEND

- ADJUSTABLE CENTERLINE MONUMENT ASSEMBLY
- EXISTING CONCRETE MONUMENT
- PROPOSED CONCRETE MONUMENT
- RAILROAD SPIKE FOUND
- RAILROAD SPIKE SET
- I.R.F. IRON PIN FOUND
- I.R.F. IRON PIN FOUND W/ ID CAP
- I.R.S. ¾ BY 30 INCH IRON PIN SET WITH 1½ INCH ALUMINUM CAP MARKED "ODOT R/W, DISTRICT 4"
- P.F. IRON PIPE FOUND
- P.S. IRON PIPE SET
- P.K.F. P.K. NAIL FOUND
- P.K.S. P.K. NAIL SET
- M.N.F. MAG. NAIL FOUND
- STONE FOUND

NOTES:

1. THE EXISTING RIGHT OF WAY WIDTH AND LOCATION WERE DETERMINED BASED ON FIELD EVIDENCE, RECORD DEEDS, AND ODOT PROJECTS MAH-80-5.98, MAH-80S-7.01, MAH-80-2.30, AND MAH-80-3.37.
2. STATIONS AND OFFSETS ARE FROM THE CENTERLINE OF RIGHT OF WAY OF IR-80, OR THE BASELINE OF RIGHT OF WAY OF IR-80 WESTBOUND.

REV. BY	DATE	DESCRIPTION
DJH	1/21/05	CHANGED OWNER'S RECORD; PCL 1
DJH	8/30/04	REMOVE PARCEL 1A

DATE COMPLETED: 6/24/2004

HORIZONTAL SCALE IN FEET: 0, 25, 50, 100

PID NO. 6080

R/W DESIGNER SUJ
R/W REVIEWER PYS

RIGHT OF WAY PLAN
STA 540+00 TO STA 553+00

MAH-80-0.97

13/18

1095
1100

$TIME$
$DATE$
$FILE$

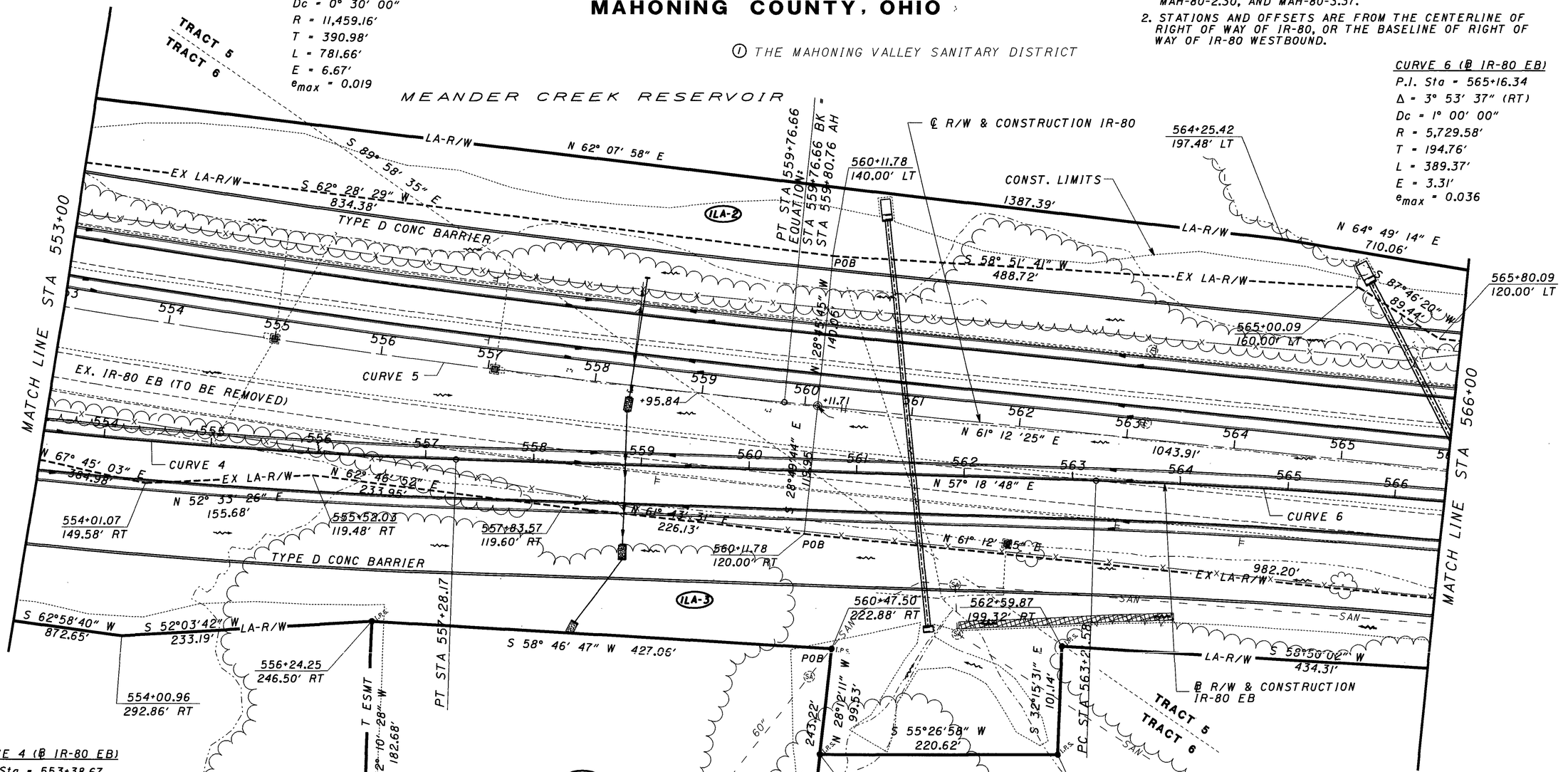
MAH-80-0.97
TRACTS 13 & 15, JACKSON TOWNSHIP
TRACTS 4, 5 & 6, AUSTINTOWN TOWNSHIP
MAHONING COUNTY, OHIO

CURVE 5 (℄ IR-80)
P.I. Sta = 555+85.98
Δ = 3° 54′ 30″ (LT)
Dc = 0° 30′ 00″
R = 11,459.16′
T = 390.98′
L = 781.66′
E = 6.67′
e_{max} = 0.019

NOTES:
1. THE EXISTING RIGHT OF WAY WIDTH AND LOCATION WERE DETERMINED BASED ON FIELD EVIDENCE, RECORD DEEDS, AND ODOT PROJECTS MAH-80-5.98, MAH-80S-7.01, MAH-80-2.30, AND MAH-80-3.37.
2. STATIONS AND OFFSETS ARE FROM THE CENTERLINE OF RIGHT OF WAY OF IR-80, OR THE BASELINE OF RIGHT OF WAY OF IR-80 WESTBOUND.

Ⓘ THE MAHONING VALLEY SANITARY DISTRICT

CURVE 6 (℄ IR-80 EB)
P.I. Sta = 565+16.34
Δ = 3° 53′ 37″ (RT)
Dc = 1° 00′ 00″
R = 5,729.58′
T = 194.76′
L = 389.37′
E = 3.31′
e_{max} = 0.036



MONUMENT LEGEND

- ▣ ADJUSTABLE CENTERLINE MONUMENT ASSEMBLY
- ◎ EXISTING CONCRETE MONUMENT
- ● PROPOSED CONCRETE MONUMENT
- ⌀ RAILROAD SPIKE FOUND
- ✱ RAILROAD SPIKE SET
- ○I.P.F. IRON PIN FOUND
- ⓘI.P.F. IRON PIN FOUND W/ ID CAP
- ●I.P.S. ¾ BY 30 INCH IRON PIN SET WITH 1½ INCH ALUMINUM CAP MARKED "ODOT R/W, DISTRICT 4"
- ◎P.F. IRON PIPE FOUND
- ◉P.S. IRON PIPE SET
- ◦P.K.F. P.K. NAIL FOUND
- •P.K.S. P.K. NAIL SET
- ◦M.N.F. MAG. NAIL FOUND
- △ STONE FOUND

REV. BY	DATE	DESCRIPTION
DJH	1/21/04	CHANGED OWNER'S RECORD; PCL I

DATE COMPLETED: 6/24/2004

HORIZONTAL SCALE IN FEET: 0, 25, 50, 100

PID NO. 80 80

R/W DESIGNER SUJ
R/W REVIEWER PYS

RIGHT OF WAY PLAN
STA 553+00 TO STA 566+00

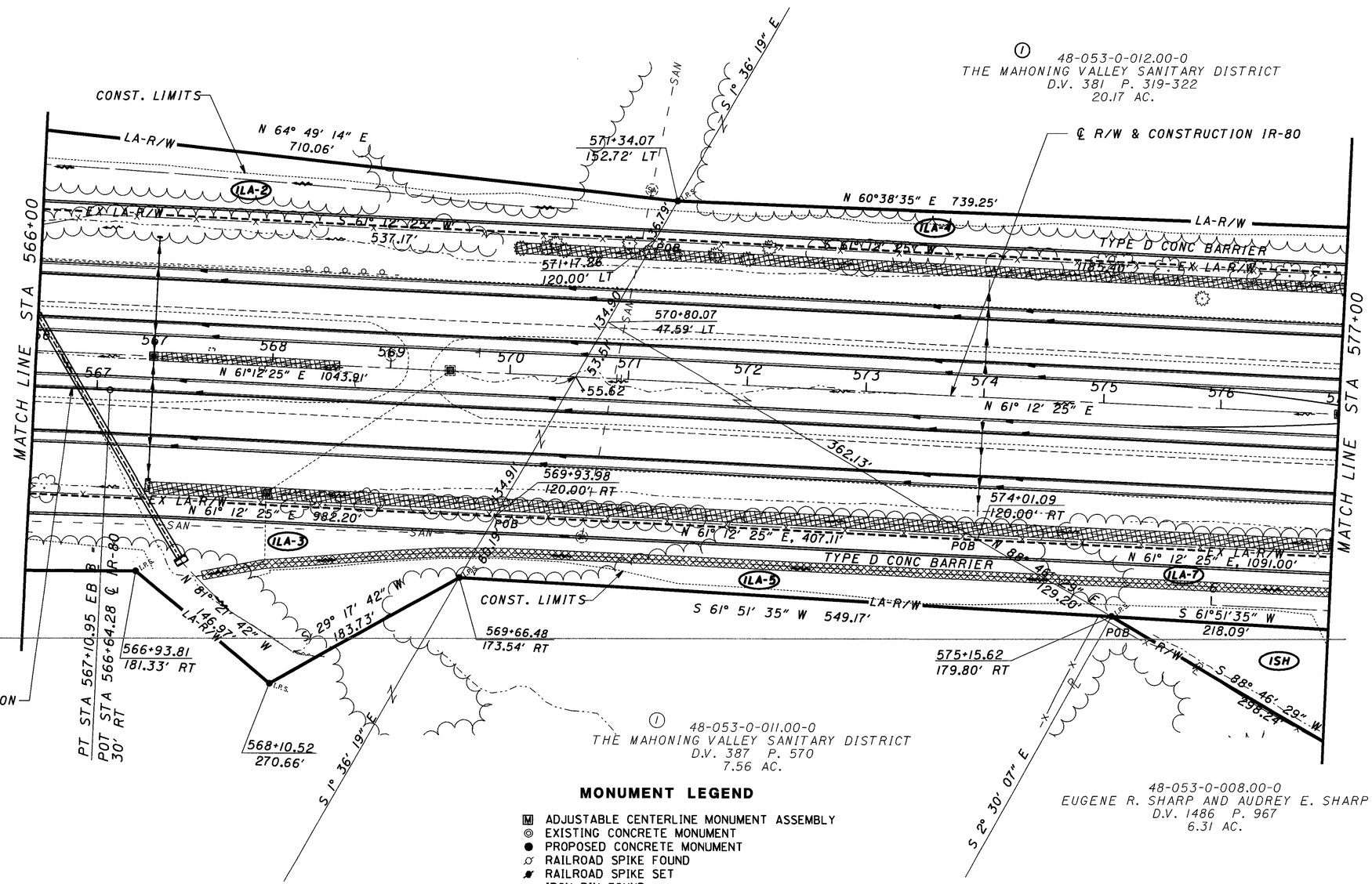
MAH-80-0.97

14/18

1096
1100

$TIME$
$DATE$
$FILE$

MAH-80-0.97
TRACTS 13 & 15, JACKSON TOWNSHIP
TRACTS 4, 5 & 6, AUSTINTOWN TOWNSHIP
MAHONING COUNTY, OHIO



CURVE 6 (℄ IR-80 EB)
P.I. Sta = 565+16.34
Δ = 3° 35' 37" (RT)
Dc = 1° 00' 00"
R = 5,729.58'
T = 194.76'
L = 389.37'
E = 3.31'
e_{max} = 0.036

① 48-053-0-011.00-0
THE MAHONING VALLEY SANITARY DISTRICT
D.V. 387 P. 570
7.56 AC.

48-053-0-008.00-0
EUGENE R. SHARP AND AUDREY E. SHARP
D.V. 1486 P. 967
6.31 AC.

MONUMENT LEGEND

- Ⓜ ADJUSTABLE CENTERLINE MONUMENT ASSEMBLY
- ◎ EXISTING CONCRETE MONUMENT
- ● PROPOSED CONCRETE MONUMENT
- ⌀ RAILROAD SPIKE FOUND
- ◢ RAILROAD SPIKE SET
- ○ I.P.F. IRON PIN FOUND
- ⊙ I.P.F. IRON PIN FOUND W/ ID CAP
- ● I.P.S. ¾ BY 30 INCH IRON PIN SET WITH 1½ INCH ALUMINUM CAP MARKED "ODOT R/W, DISTRICT 4"
- ◎ P.F. IRON PIPE FOUND
- ◉ P.S. IRON PIPE SET
- ◦ P.K.F. P.K. NAIL FOUND
- • P.K.S. P.K. NAIL SET
- ⊙ M.N.F. MAG. NAIL FOUND
- △ STONE FOUND

NOTES:

1. THE EXISTING RIGHT OF WAY WIDTH AND LOCATION WERE DETERMINED BASED ON FIELD EVIDENCE, RECORD DEEDS, AND ODOT PROJECTS MAH-80-5.98, MAH-80S-7.01, MAH-80-2.30, AND MAH-80-3.37.
2. STATIONS AND OFFSETS ARE FROM THE CENTERLINE OF RIGHT OF WAY OF IR-80, OR THE BASELINE OF RIGHT OF WAY OF IR-80 WESTBOUND.

REV. BY	DATE	DESCRIPTION
DJH	1/21/05	CHANGED OWNER'S RECORD; PCL 1

DATE COMPLETED: 6/24/2004

HORIZONTAL SCALE IN FEET: 0, 25, 50, 100

PID NO. 6080

R/W DESIGNER SUJ
R/W REVIEWER PYS

RIGHT OF WAY PLAN
STA 566+00 TO STA 577+00

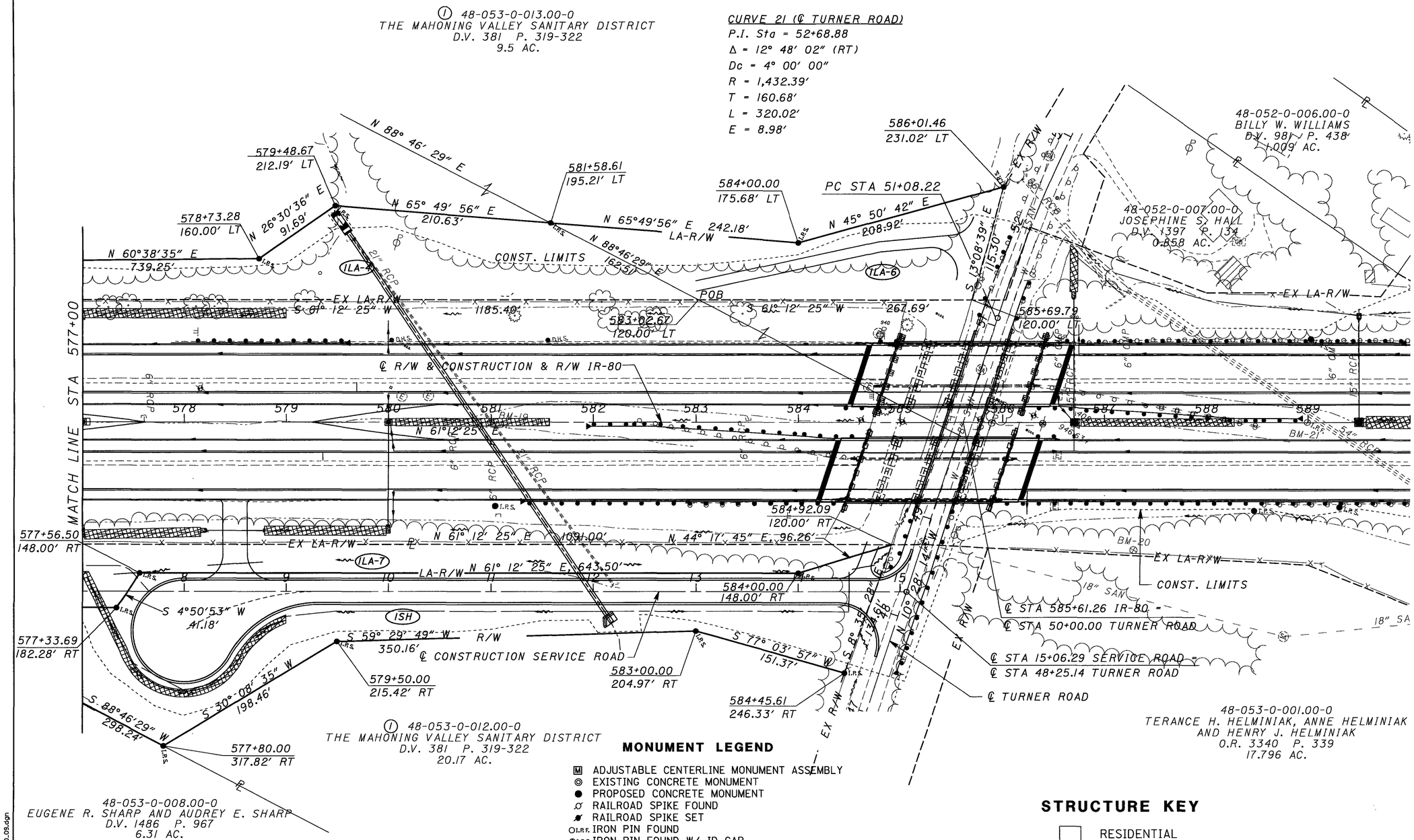
MAH-80-0.97

15/18

1097
1100

$TIME$
$DATE$
$FILE$

MAH-80-0.97
TRACTS 13 & 15, JACKSON TOWNSHIP
TRACTS 4, 5 & 6, AUSTINTOWN TOWNSHIP
MAHONING COUNTY, OHIO



MONUMENT LEGEND

- ▣ ADJUSTABLE CENTERLINE MONUMENT ASSEMBLY
- ◎ EXISTING CONCRETE MONUMENT
- ● PROPOSED CONCRETE MONUMENT
- ⊄ RAILROAD SPIKE FOUND
- ⊄ RAILROAD SPIKE SET
- ○I.R.F. IRON PIN FOUND
- ⊙I.R.F. IRON PIN FOUND W/ ID CAP
- ●I.R.S. ¾ BY 30 INCH IRON PIN SET WITH 1½ INCH ALUMINUM CAP MARKED "ODOT R/W, DISTRICT 4"
- ◎P.F. IRON PIPE FOUND
- ◎P.S. IRON PIPE SET
- ◦P.K.F. P.K. NAIL FOUND
- •P.K.S. P.K. NAIL SET
- ◦M.N.F. MAG. NAIL FOUND
- △ STONE FOUND

STRUCTURE KEY

- RESIDENTIAL
- COMMERCIAL
- OUT-BUILDING

NOTES:

1. THE EXISTING RIGHT OF WAY WIDTH AND LOCATION WERE DETERMINED BASED ON FIELD EVIDENCE, RECORD DEEDS, AND ODOT MAH-80-5.98, MAH-80S-7.01, MAH-80-2.30, AND MAH-80-3.37.
2. STATIONS AND OFFSETS ARE FROM THE CENTERLINE OF RIGHT OF WAY OF IR-80, OR THE BASELINE OF RIGHT OF WAY OF IR-80 WESTBOUND.

REV. BY	DATE	DESCRIPTION
PYS	10/11/04	REVISED ILA-6

DATE COMPLETED: 6/24/2004

HORIZONTAL SCALE IN FEET: 0, 25, 50, 100

PID NO. 86080

R/W DESIGNER SUJ
R/W REVIEWER PYS

RIGHT OF WAY PLAN
STA 577+00 TO STA 590+00

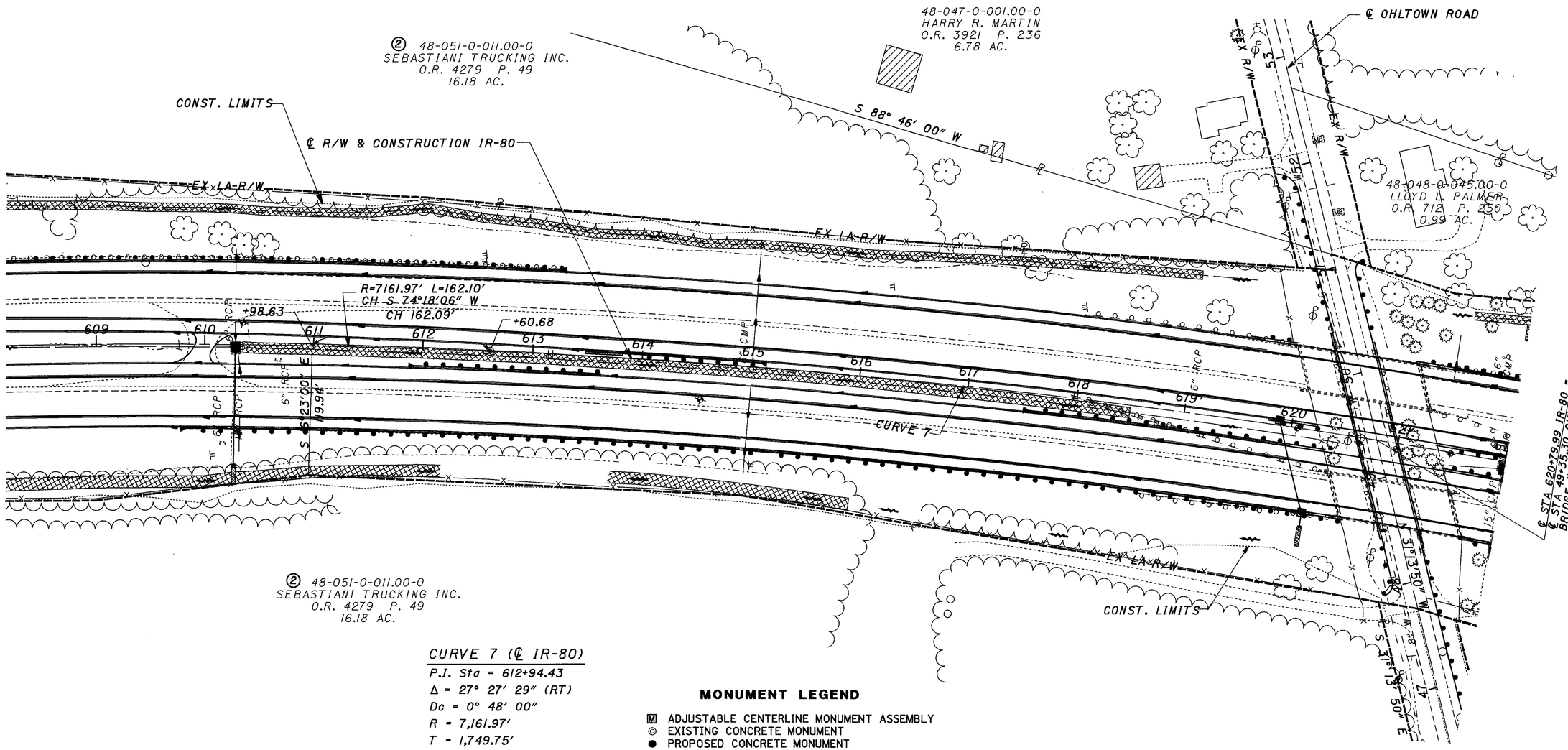
MAH-80-0.97

16/18

1098
1100

11/8/2004 11:35:4 AM
e:\projects\37700\ROW\RP8080_09.dgn

MAH-80-0.97
TRACTS 13 & 15, JACKSON TOWNSHIP
TRACTS 4, 5 & 6, AUSTINTOWN TOWNSHIP
MAHONING COUNTY, OHIO



② 48-051-0-011.00-0
SEBASTIANI TRUCKING INC.
O.R. 4279 P. 49
16.18 AC.

CURVE 7 (℄ IR-80)

P.I. Sta = 612+94.43
Δ = 27° 27' 29" (RT)
Dc = 0° 48' 00"
R = 7,161.97'
T = 1,749.75'
L = 3,432.27'
E = 210.64'
e_{max} = 0.030

MONUMENT LEGEND

- ▣ ADJUSTABLE CENTERLINE MONUMENT ASSEMBLY
- ◎ EXISTING CONCRETE MONUMENT
- ● PROPOSED CONCRETE MONUMENT
- ⌀ RAILROAD SPIKE FOUND
- ⌀ RAILROAD SPIKE SET
- ○I.P.F. IRON PIN FOUND
- ⓘI.P.F. IRON PIN FOUND W/ ID CAP
- ●I.P.S. ¾ BY 30 INCH IRON PIN SET WITH 1½ INCH ALUMINUM CAP MARKED "ODOT R/W, DISTRICT 4"
- ◎P.F. IRON PIPE FOUND
- ◉P.S. IRON PIPE SET
- ◦P.K.F. P.K. NAIL FOUND
- •P.K.S. P.K. NAIL SET
- ◦M.N.F. MAG. NAIL FOUND
- △ STONE FOUND

STRUCTURE KEY

- RESIDENTIAL
- COMMERCIAL
- OUT-BUILDING

NOTES:

1. THE EXISTING RIGHT OF WAY WIDTH AND LOCATION WERE DETERMINED BASED ON FIELD EVIDENCE, RECORD DEEDS, AND ODOT PROJECTS MAH-80-5.98, MAH-80S-7.01, MAH-80-2.30, AND MAH-80-3.37.
2. STATIONS AND OFFSETS ARE FROM THE CENTERLINE OF RIGHT OF WAY OF IR-80, OR THE BASELINE OF RIGHT OF WAY OF IR-80 WESTBOUND.

REV. BY	DATE	DESCRIPTION
TWW	3/28/05	DELETE PARCEL 2-WL

DATE COMPLETED: 6/24/2004

HORIZONTAL SCALE IN FEET: 0, 25, 50, 100

PID NO. 6080

R/W DESIGNER SUJ
R/W REVIEWER PYS

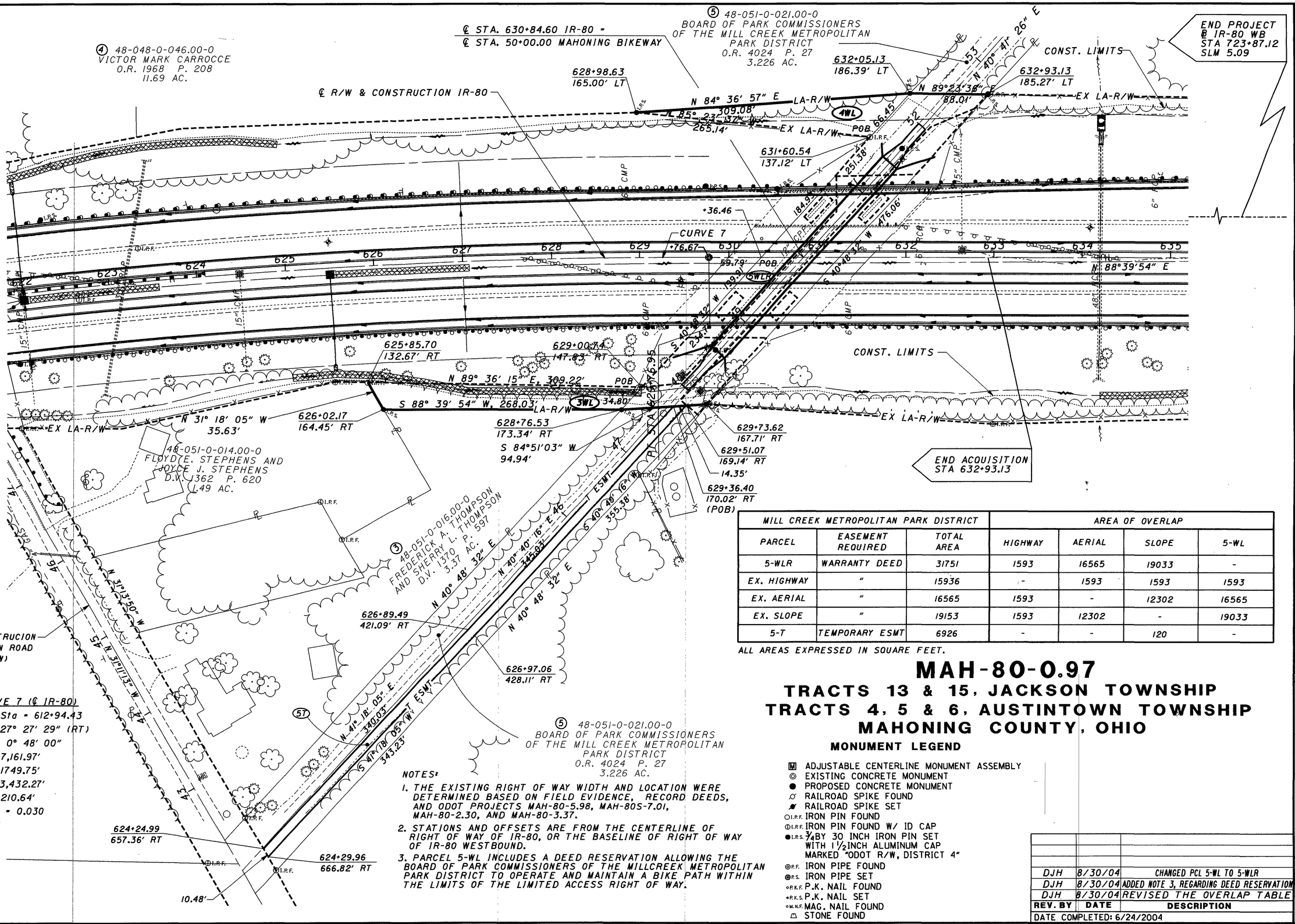
RIGHT OF WAY PLAN
STA 609+00 TO STA 622+00

MAH-80-0.97

17/18

1099
1100

$TIME$
$DATE$
$FILE$



MILL CREEK METROPOLITAN PARK DISTRICT			AREA OF OVERLAP			
PARCEL	EASEMENT REQUIRED	TOTAL AREA	HIGHWAY	AERIAL	SLOPE	5-WL
5-WLR	WARRANTY DEED	31751	1593	16565	19033	-
EX. HIGHWAY	"	15936	-	1593	1593	1593
EX. AERIAL	"	16565	1593	-	12302	16565
EX. SLOPE	"	19153	1593	12302	-	19033
5-T	TEMPORARY ESMT	6926	-	-	120	-

ALL AREAS EXPRESSED IN SQUARE FEET.

MAH-80-0.97

TRACTS 13 & 15, JACKSON TOWNSHIP
TRACTS 4, 5 & 6, AUSTINTOWN TOWNSHIP
MAHONING COUNTY, OHIO

MONUMENT LEGEND

- Ⓜ ADJUSTABLE CENTERLINE MONUMENT ASSEMBLY
- ◎ EXISTING CONCRETE MONUMENT
- ● PROPOSED CONCRETE MONUMENT
- ⌀ RAILROAD SPIKE FOUND
- ⌀ RAILROAD SPIKE SET
- ○I.P.F. IRON PIN FOUND
- ⓘI.P.F. IRON PIN FOUND W/ ID CAP
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- •P.K.S. P.K. NAIL SET
- ◦M.N.F. MAG. NAIL FOUND
- △ STONE FOUND

NOTES:

1. THE EXISTING RIGHT OF WAY WIDTH AND LOCATION WERE DETERMINED BASED ON FIELD EVIDENCE, RECORD DEEDS, AND ODOT PROJECTS MAH-80-5.98, MAH-80S-7.01, MAH-80-2.30, AND MAH-80-3.37.
2. STATIONS AND OFFSETS ARE FROM THE CENTERLINE OF RIGHT OF WAY OF IR-80, OR THE BASELINE OF RIGHT OF WAY OF IR-80 WESTBOUND.
3. PARCEL 5-WL INCLUDES A DEED RESERVATION ALLOWING THE BOARD OF PARK COMMISSIONERS OF THE MILLCREEK METROPOLITAN PARK DISTRICT TO OPERATE AND MAINTAIN A BIKE PATH WITHIN THE LIMITS OF THE LIMITED ACCESS RIGHT OF WAY.

REV. BY	DATE	DESCRIPTION
DJH	8/30/04	CHANGED PCL 5-WL TO 5-WLR
DJH	8/30/04	ADDED NOTE 3, REGARDING DEED RESERVATION
DJH	8/30/04	REVISED THE OVERLAP TABLE

DATE COMPLETED: 6/24/2004

RIGHT OF WAY PLAN
STA 625+00 TO STA 635+00

PID NO. 6080

R/W DESIGNER SUJ
R/W REVIEWER PYS

MAH-80-0.97

18/18

1100
1100

HORIZONTAL SCALE IN FEET
0 25 50 100

$TIME$
$DATE$
$FILE$