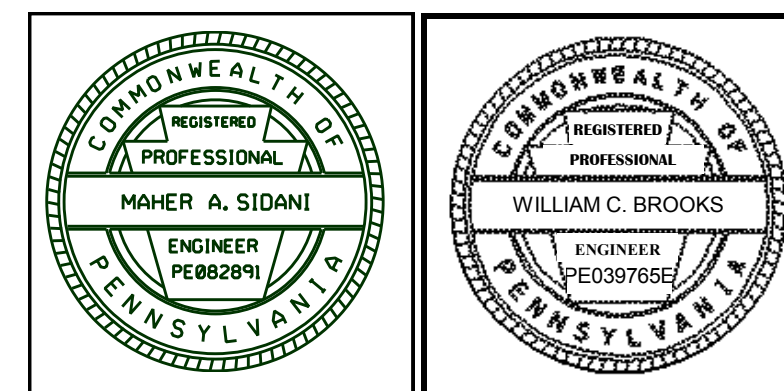


SUMMARY

REVISION NO	REVISIONS	DATE	BY	DISTRICT	COUNTY	ROUTE	SECTION	SHEET
1	ADDENDUM 8	12/1/16	STV	6-0	BUCKS	0095	001	62 OF 280

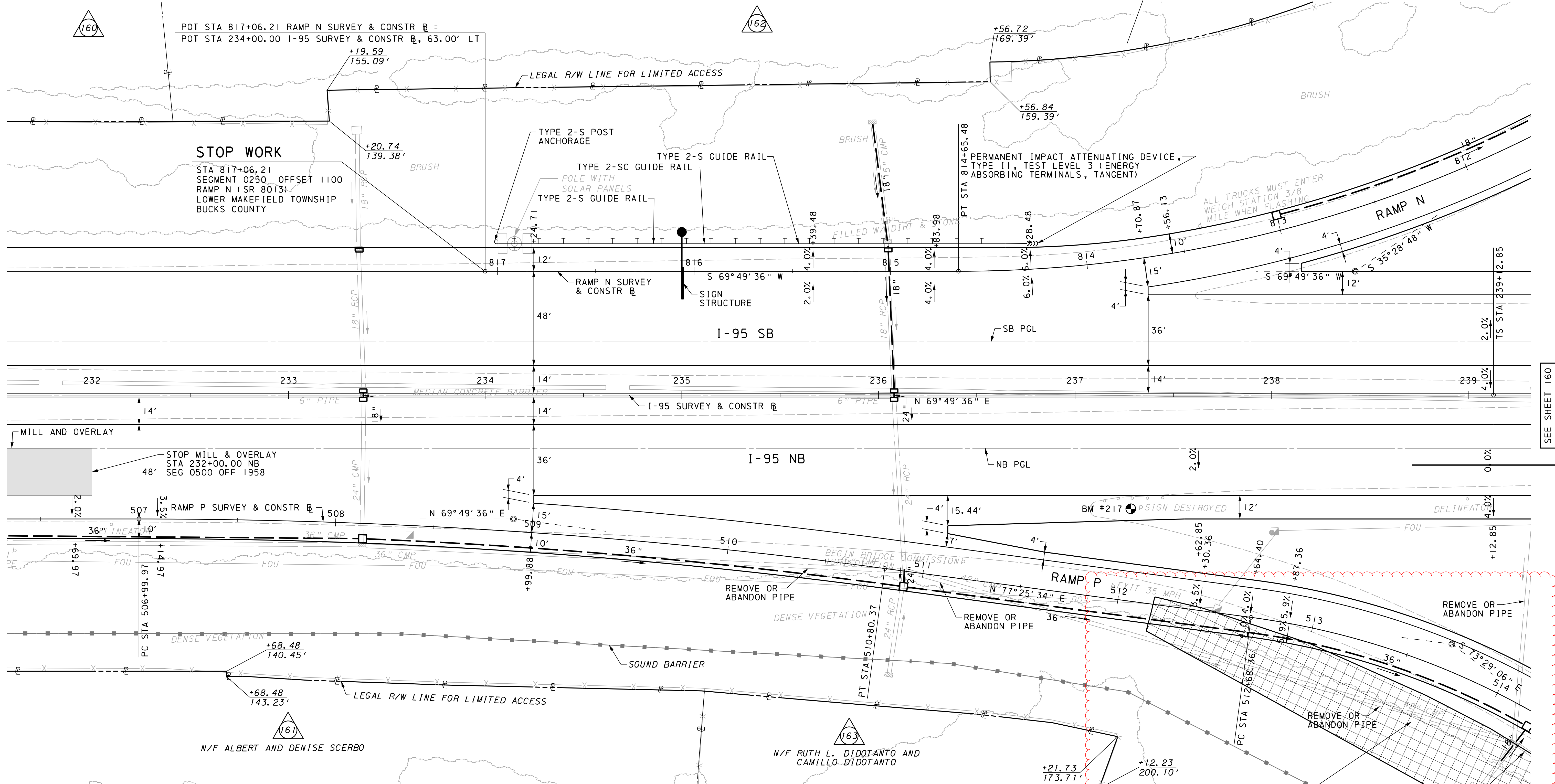
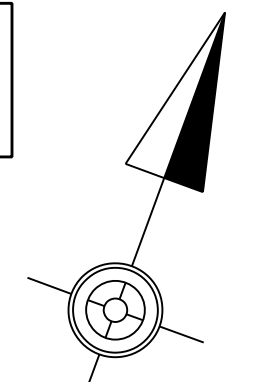
LOWER MAKEFIELD TOWNSHIP

STR STRUCTURE PLAN				SGN SIGN STRUCTURES										
QUANTITY	ITEM NO	DESCRIPTION	SEQ. NO	FOR TAB SEE SHEET	QUANTITY	ITEM NO	DESCRIPTION	SEQ. NO	FOR TAB SEE SHEET	QUANTITY	ITEM NO	DESCRIPTION	SEQ. NO	FOR TAB SEE SHEET
12060	9000 0701	1 1/4" TRICOLOR HDPE INNER DUCTS-UNDERGROUND	580	138-143	X	9000 1500	TRASH ENCLOSURE	603	STR	18	9000 4010	SPECKLED ALDER (ALNUS RUGOSE)	627	76-77
3	9000 0703	3' X 5' X 3' HANDHOLE	581	138-143	2845	9000 2000	CONCRETE GLARE SCREEN, TYPE 2	604	78-83	4	9000 4011	NINEBARK (PHYSOCARPUS OPULIFOLIUS)	628	76-77
3	9000 0705	PULL BOX WITH EXTENDER	582	138-143	1314	9000 2010	CONCRETE GLARE SCREEN, TYPE 3	605	78-83	3	9000 4012	BASSWOOD (TILIA AMERICANA)	629	76-77
200	9000 0706	2" STEEL GAS MAIN-ON STRUCTURE	583	138-143	1430	9000 2020	42" SINGLE FACE CONCRETE BARRIER WITH MOMENT SLAB AND TOE WALL	606	78-83	1	9000 4013	SASSAFRAS (SASSAFRAS ALBIDUM)	630	76-77
1000	9000 0707	2" STEEL GAS MAIN-UNDERGROUND	584	138-143	526	9000 2030	54" SINGLE FACE CONCRETE BARRIER WITH MOMENT SLAB	607	78-83	2	9000 4014	RED OAK (QUERCUS RUBRA)	631	76-77
1	9000 0708	CONCRETE PAD FOR GAS METER	585	138-143	2260	9000 2780	CONDUIT ATTACHMENT TO STRUCTURE	608	ESS	3	9000 4015	WILD BLACK CHERRY (PRUNUS SEROTINE)	632	76-77
1700	9000 0709	6" HDPE, SANITARY SLEEVE	586	138-143	3	9000 3000	TRANSITION A, CONCRETE GLARE SCREEN, 50" AND VARIABLE TO 54" AND VARIABLE HEIGHT, 24" TO 41 1/2" WIDTH	609	78-83	38	9000 4016	DOWNY SERVICEBERRY (AMELANCHIER CANADENSIS)	633	76-77
3	9000 0711	AIR RELEASE VALVE AND ENCLOSURE	587	138-143	2	9000 3010	TRANSITION B, CONCRETE GLARE SCREEN, 42" TO 50" HEIGHT, 24" TO 42 1/2" WIDTH	610	78-83	38	9000 4017	GREY DOGWOOD (CORNUS RACEMOSE)	634	76-77
3	9000 0712	SANITARY SEWER CLEANOUT AND ENCLOSURE	588	138-143	2	9000 3020	TRANSITION C, CONCRETE GLARE SCREEN, 50" AND VARIABLE HEIGHT, 24" TO 54" WIDTH	611	78-83	23	9000 4018	BLACK HUCKBERRY (GAYLUSSACIA BACCATA)	635	76-77
1	9000 0713	SANITARY SEWER PUMP STATION	589	138-143	1	9000 3030	TRANSITION D, CONCRETE GLARE SCREEN, 50" AND VARIABLE HEIGHT, 24" TO 54" WIDTH	612	78-83	15	9000 4019	CHOKE CHERRY (PRUNUS VIRGINIA)	636	76-77
1	9999 XXXX	NO ITEM	590		1	9000 3040	TRANSITION E, CONCRETE GLARE SCREEN, 42" TO 50" HEIGHT, 42 1/2" TO 54" WIDTH	613	78-83	8	9000 4020	MOUNTAIN LAUREL (KALMIA LATTIFOLIA)	637	76-77
1	9000 0715	CONNECTION TO EXISTING SANITARY MANHOLE	591	138-143	2	9000 3050	TRANSITION F, CONCRETE GLARE SCREEN, 42" HEIGHT, 42 1/2" TO 49 1/2" WIDTH	614	78-83	31	9000 4021	NEW JERSEY TEA (CEANOTHUS AMERICANUS)	638	76-77
750	9000 0716	4" STEEL CASING PIPE	592	138-143	2	9000 3060	TRANSITION G, CONCRETE GLARE SCREEN, 50" AND VARIABLE HEIGHT, 24" TO 60" WIDTH	615	78-83	5	9000 4022	SEALING ABANDONED WATER WELLS AND SPRINGS	639	76-77
450	9000 0717	16" STEEL CASING PIPE	593	138-143	1	9000 3070	TRANSITION H, CONCRETE GLARE SCREEN, 50" HEIGHT, 24" TO 42 1/2" WIDTH	616	78-83	22	9000 4444	MEDIA CONVERTERS IN CHASSIS	640	ESS
200	9000 0718	8" DUCTILE IRON WATER PIPE, CLASS 52-ON STRUCTURE	594	138-143	3	9000 3333	MEDIA CONVERTER CHASSIS WITH POWER SUPPLY	617	ESS	2150	9000 5063	4" MULTI-DUCT WITH (3) 1-1/4" INNERDUCTS	641	ITS
3300	9000 0719	8" DUCTILE IRON WATER PIPE, CLASS 52, UNDERGROUND	595	138-143	69	9000 4001	SYCAMORE (PLATAUS OCCIDENTALIS)	618	76-77	23	9000 5300	MEDIA CONVERTER, REMOTE END	642	ESS
130	9000 0720	6" DUCTILE IRON WATER PIPE, CLASS 52	596	138-143	17	9000 4002	BLACK GUM (NYSSA SYLVATICA)	619	76-77	112	9000 8020	152 WATT LED COBRA HEAD A	643	LP
3	9000 0721	8" MJ GATE VALVE	597	138-143	17	9000 4003	SWEET GUM (LIQUIDAMBAR STYRACIFLUA)	620	76-77	10	9000 8021	87 WATT LED COBRA HEAD B	644	LP
3	9000 0722	8" X 6" MJ TEE & GATE VALVE	598	138-143	26	9000 4004	RIVER BIRCH (BETULA NIGRA)	621	76-77	X	9000 8044	HIGHWAY LIGHTING ASSET NUMBERING	645	LP
1	9000 0723	8" X 8" MJ TEE & GATE VALVE	599	138-143	26	9000 4005	IRONWOOD (CARPINUS CAROLINIANA)	622	76-77	3430	9001 1000	REMOVE CONCRETE GLARE SCREEN	646	76-83
1	9000 0910	FIBERGLASS TRANSFORMER PAD (43"X37.5")	600	138-143	17	9000 4006	BLACK WILLOW (SALIX NIGRA)	623	76-77	18	9201 0001	NEMA 3R ENCLOSURE	647	ESS
31	9000 1111	15" HDPE PIPE	601	91-126	31	9000 4007	SPICE BUSH (LINDERA BENZOIN)	624	76-77	X	9203 0106	TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM	648	TCP
1	9000 1204	4'X4'X6' MANHOLE	602	138-143	22	9000 4008	ARROWWOOD (VIBURNUM DENTATUM)	625	76-77	30000	9627 1111	TEMPORARY BARRIER, CONCRETE, NEW JERSEY SHAPE (NYS DOT)	649	TCP
X	9000 1211	UTILITY SERVICES TO BM/AET BUILDING AND PARK & RIDE FACILITY	668	138-143	13	9000 4009	WINTER BERRY (ILEX VERTICILLATA)	626	76-77	100000	9628 1111	RESET TEMPORARY BARRIER, CONCRETE, NEW JERSEY SHAPE (NYS DOT)	650	TCP



DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0095	001	159 OF 280
LOWER MAKEFIELD TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	
1	ADDENDUM NO. 8	12/1/16	STV	

B.M., # GPS 217 ELEV 109.9880'
 57.83' RT STA 237+28.36 I-95 B.L.
 REBAR/ CAP



STOP WORK
 STA 817+06.21
 SEGMENT 0250 OFFSET 1100
 RAMP N (SR 8013)
 LOWER MAKEFIELD TOWNSHIP
 BUCKS COUNTY

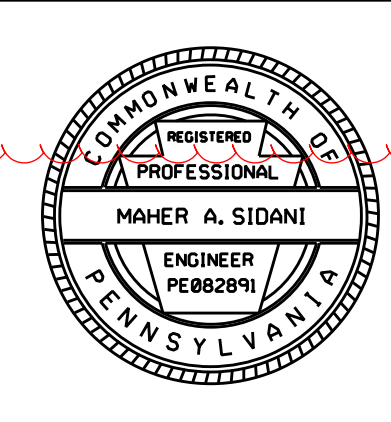
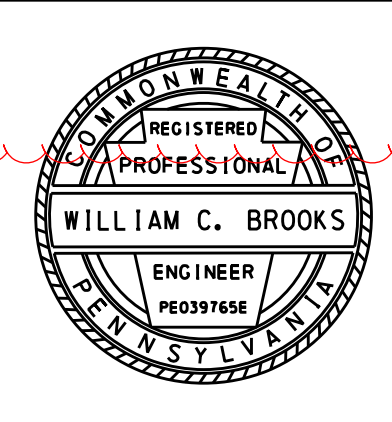
STOP MILL & OVERLAY
 STA 232+00.00 NB
 SEG 0500 OFF 1958

RAMP P - CURVE 1 PI STA 508+90.45 Δ = 7°35'58" RT T = 190.48' L = 380.40' R = 2868.00' E = 6.32' SUPERELEVATE 3.5%	I-95 - CURVE 6 PI STA 241+12.86 Δ = 1°48'47" LT Ls = 300.00' K = 149.99' P = 0.79' Xs = 299.97' Ys = 3.16' LT = 200.01' ST = 100.01' LC = 299.99'	RAMP N - CURVE 2 PI STA 812+75.84 Δ = 34°20'48" RT T = 201.80' L = 391.45' R = 653.00' E = 30.47' SUPERELEVATE 6.0%	RAMP P - CURVE 2 PI STA 513+71.36 Δ = 29°05'20" RT T = 103.00' L = 201.56' R = 397.00' E = 13.14' SUPERELEVATE 5.9%
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FOR RAMP N PROFILE, SEE SHEETS 245 AND 246
 FOR RAMP P PROFILE, SEE SHEETS 248 AND 249
 FOR I-95 PROFILE, SEE SHEETS 196-197, 220-221
 SURVEY BOOK NO. 1-19, 23-33 & 35

■ - MILL & OVERLAY



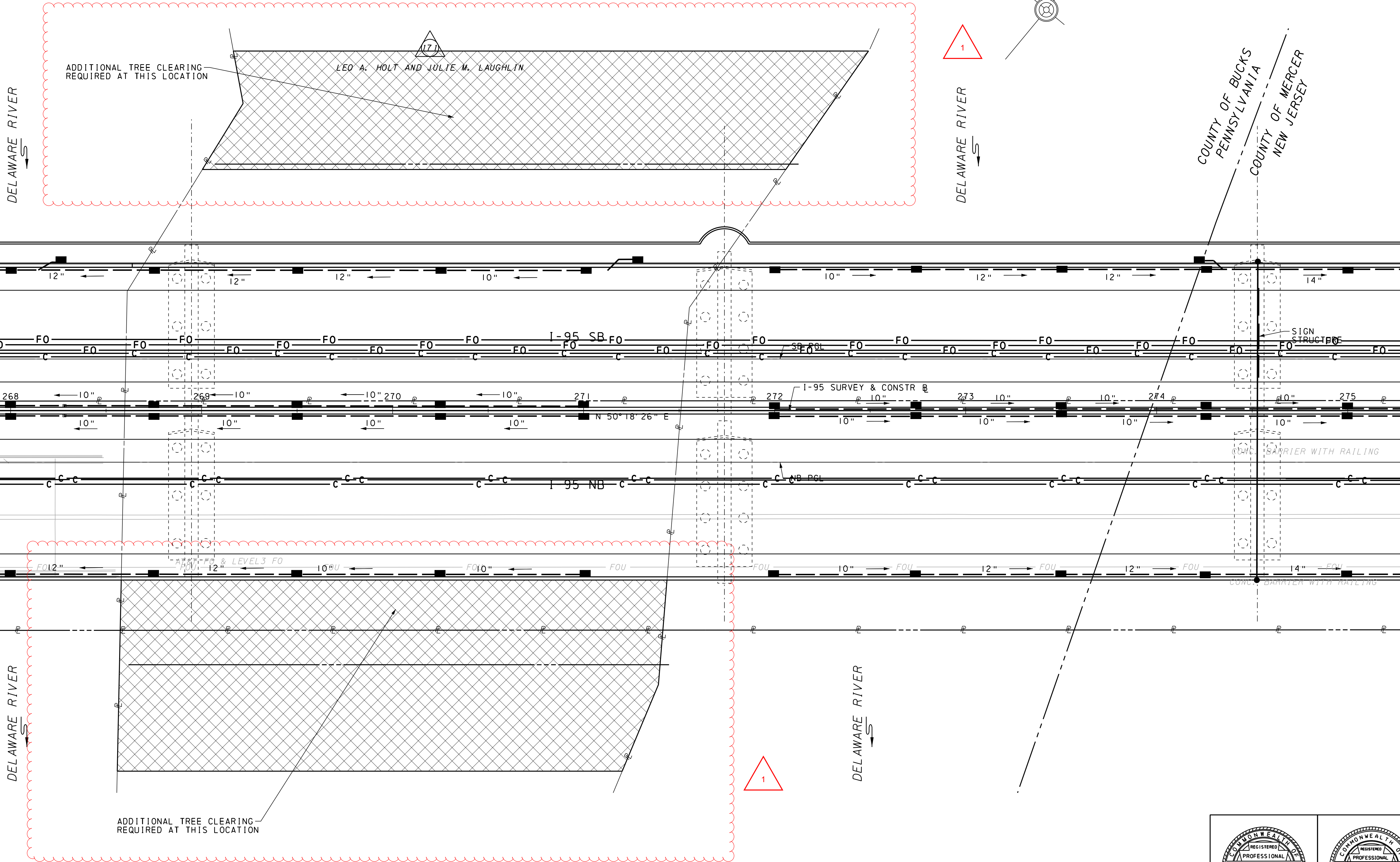
ADDITIONAL TREE CLEARING
 REQUIRED AT THIS LOCATION

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SEE SHEET 158

SEE SHEET 160

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0095	001	164 OF 280
LOWER MAKEFIELD TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	
1	ADDENDUM NO. 8	12/1/16	STV	



SEE SHEET 163

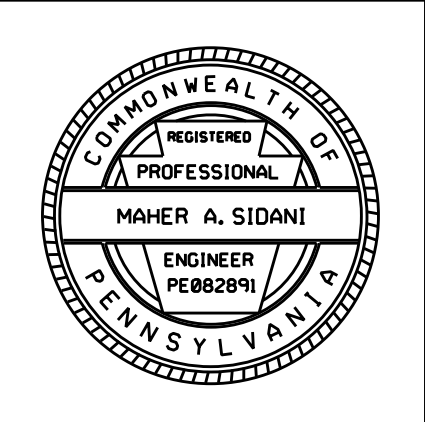
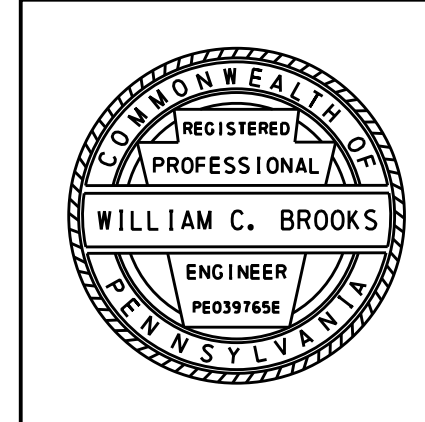
SEE SHEET 165

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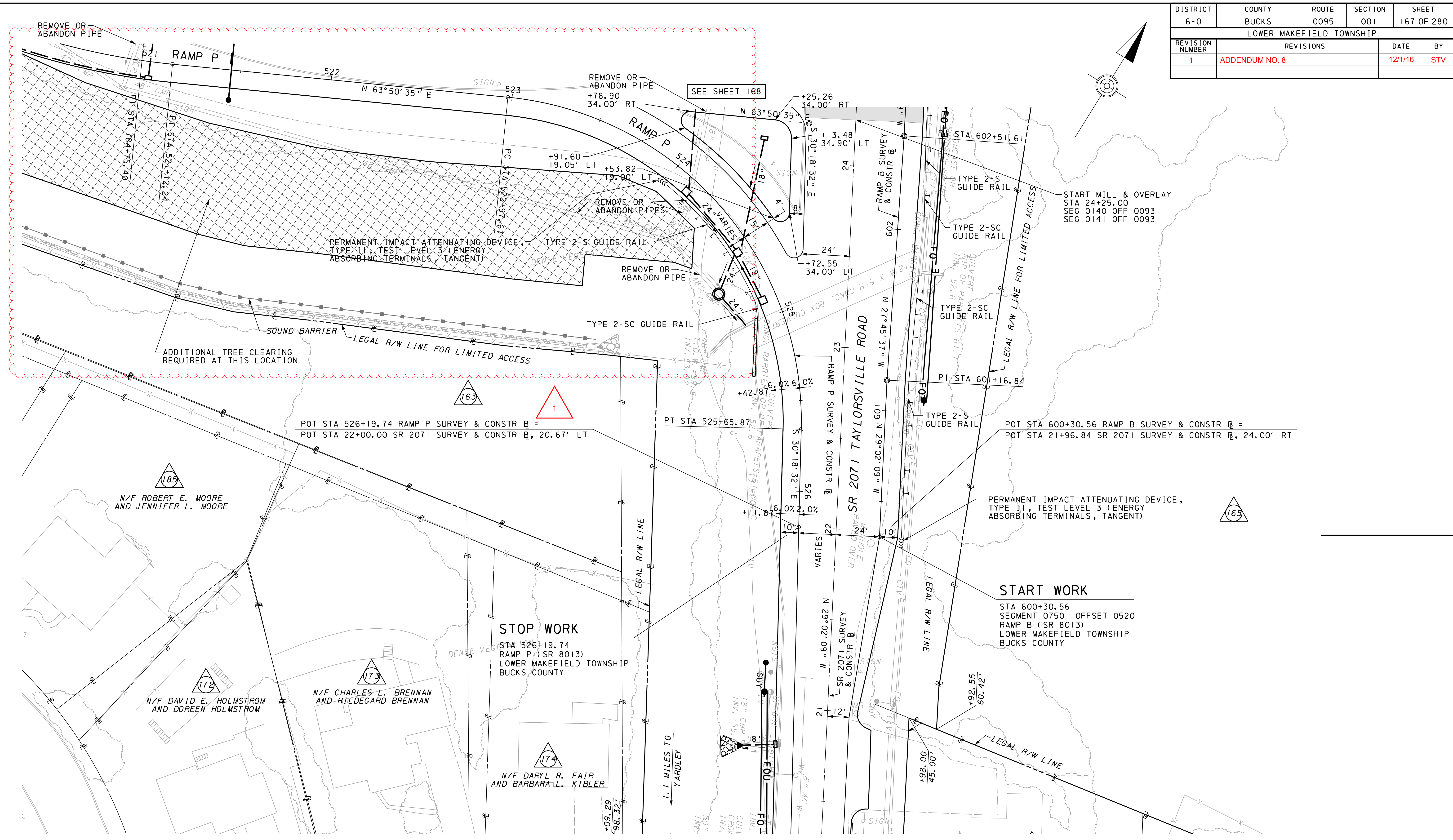


FOR I-95 PROFILE, SEE SHEETS 201-202, 225-226
SURVEY BOOK NO. 1-19, 23-33 & 35

■ - MILL & OVERLAY



DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0095	001	167 OF 280
LOWER MAKEFIELD TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	
1	ADDENDUM NO. 8	12/1/16	STV	



RAMP P - CURVE 4
 PI STA 524+64.14
 $\Delta = 85^{\circ}50'53''$ RT
 T = 166.48'
 L = 268.20'
 R = 179.00'
 E = 65.45'
 SUPERELEVATE 6.0%

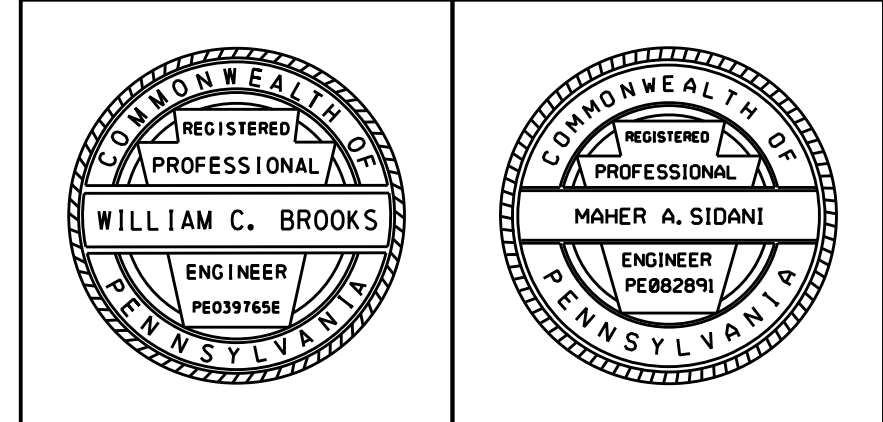
STOP WORK
 STA 526+19.74
 RAMP P (SR 8013)
 LOWER MAKEFIELD TOWNSHIP
 BUCKS COUNTY

START WORK
 STA 600+30.56
 SEGMENT 0750 OFFSET 0520
 RAMP B (SR 8013)
 LOWER MAKEFIELD TOWNSHIP
 BUCKS COUNTY



FOR RAMP B PROFILE, SEE SHEET 237
 FOR RAMP P PROFILE, SEE SHEET 250
 FOR TAYLORSVILLE ROAD PROFILE, SEE SHEET 228
 SURVEY BOOK NO. 1-19, 23-33 & 35

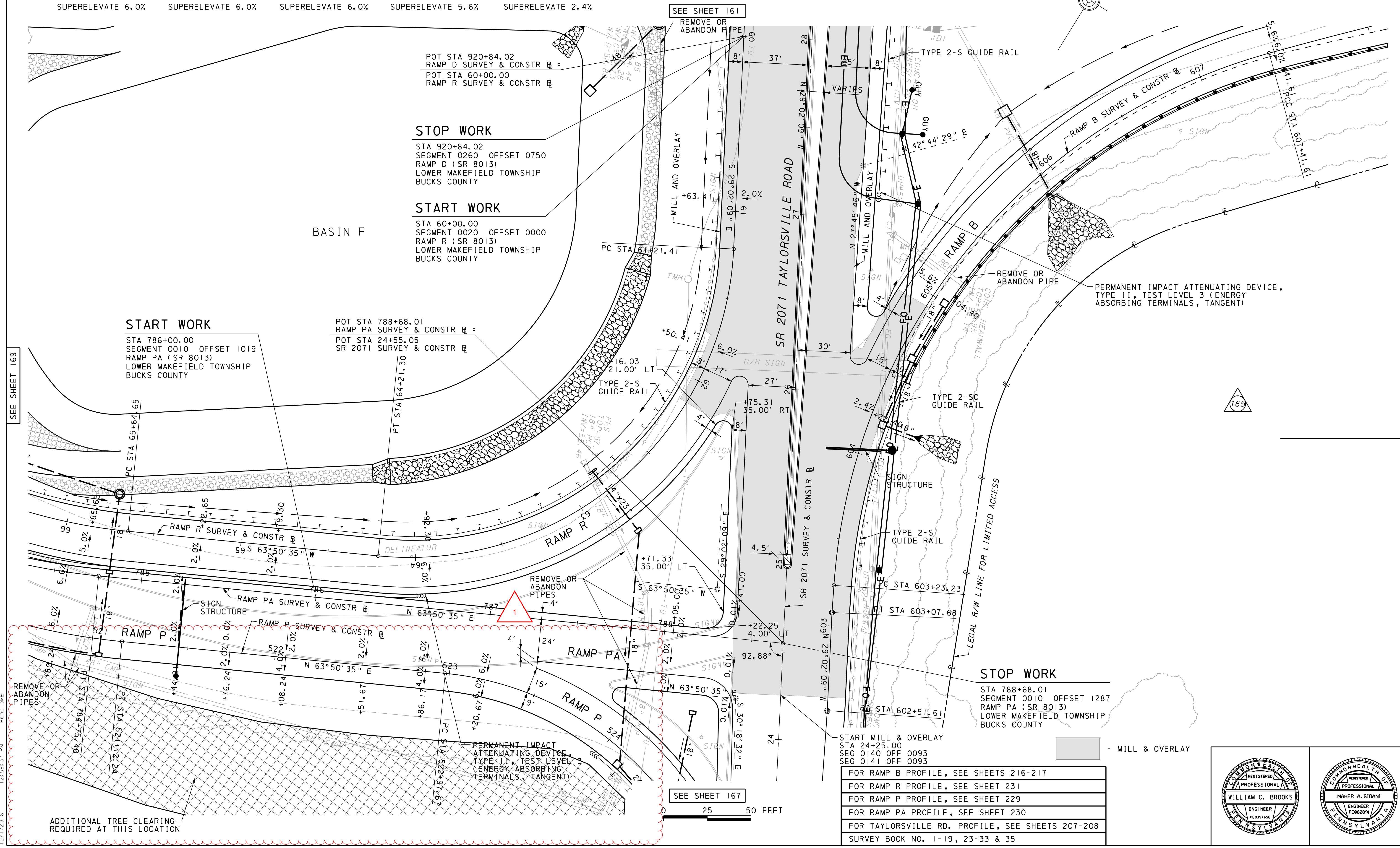
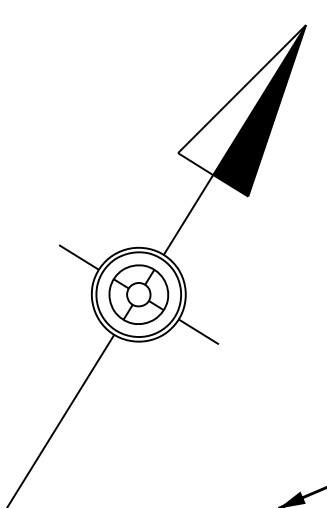
■ - MILL & OVERLAY



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RAMP R - CURVE 1 PI STA 63+15.95 $\Delta = 92^\circ 52' 44''$ RT T = 194.54' L = 299.89' R = 185.00' E = 83.46' SUPERELEVATE 6.0%	RAMP P - CURVE 3 PI STA 519+77.66 $\Delta = 42^\circ 40' 19''$ LT T = 148.43' L = 283.01' R = 380.00' E = 27.96' SUPERELEVATE 6.0%	RAMP P - CURVE 4 PI STA 524+64.14 $\Delta = 85^\circ 50' 53''$ RT T = 166.48' L = 268.20' R = 179.00' E = 65.45' SUPERELEVATE 6.0%	RAMP B - CURVE 1 PI STA 605+63.53 $\Delta = 70^\circ 30' 15''$ RT T = 240.31' L = 418.38' R = 340.00' E = 76.35' SUPERELEVATE 5.6%	RAMP B - CURVE 2 PI STA 609+38.48 $\Delta = 9^\circ 22' 45''$ RT T = 196.88' L = 392.88' R = 2400.00' E = 8.06' SUPERELEVATE 2.4%
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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0095	001	168 OF 280
LOWER MAKEFIELD TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	
1	ADDENDUM NO. 8	12/1/16	STV	



STOP WORK
 STA 920+84.02
 SEGMENT 0260 OFFSET 0750
 RAMP D (SR 8013)
 LOWER MAKEFIELD TOWNSHIP
 BUCKS COUNTY

START WORK
 STA 60+00.00
 SEGMENT 0020 OFFSET 0000
 RAMP R (SR 8013)
 LOWER MAKEFIELD TOWNSHIP
 BUCKS COUNTY

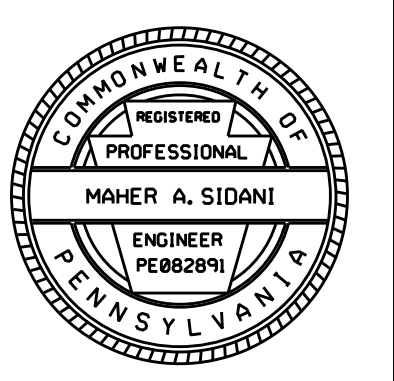
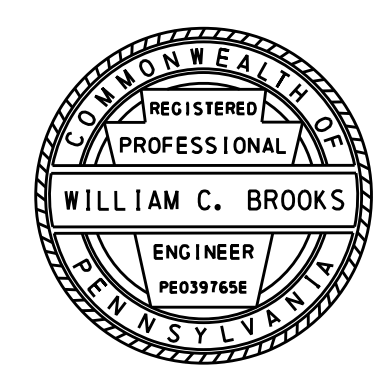
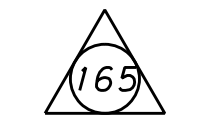
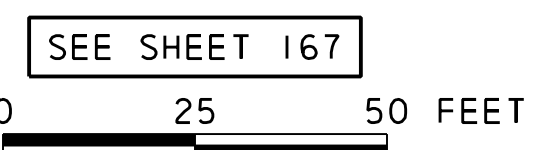
START WORK
 STA 786+00.00
 SEGMENT 0010 OFFSET 1019
 RAMP PA (SR 8013)
 LOWER MAKEFIELD TOWNSHIP
 BUCKS COUNTY

POT STA 788+68.01
 RAMP PA SURVEY & CONSTR @ =
 POT STA 24+55.05
 SR 2071 SURVEY & CONSTR @

STOP WORK
 STA 788+68.01
 SEGMENT 0010 OFFSET 1287
 RAMP PA (SR 8013)
 LOWER MAKEFIELD TOWNSHIP
 BUCKS COUNTY

START MILL & OVERLAY
 STA 24+25.00
 SEG 0140 OFF 0093
 SEG 0141 OFF 0093

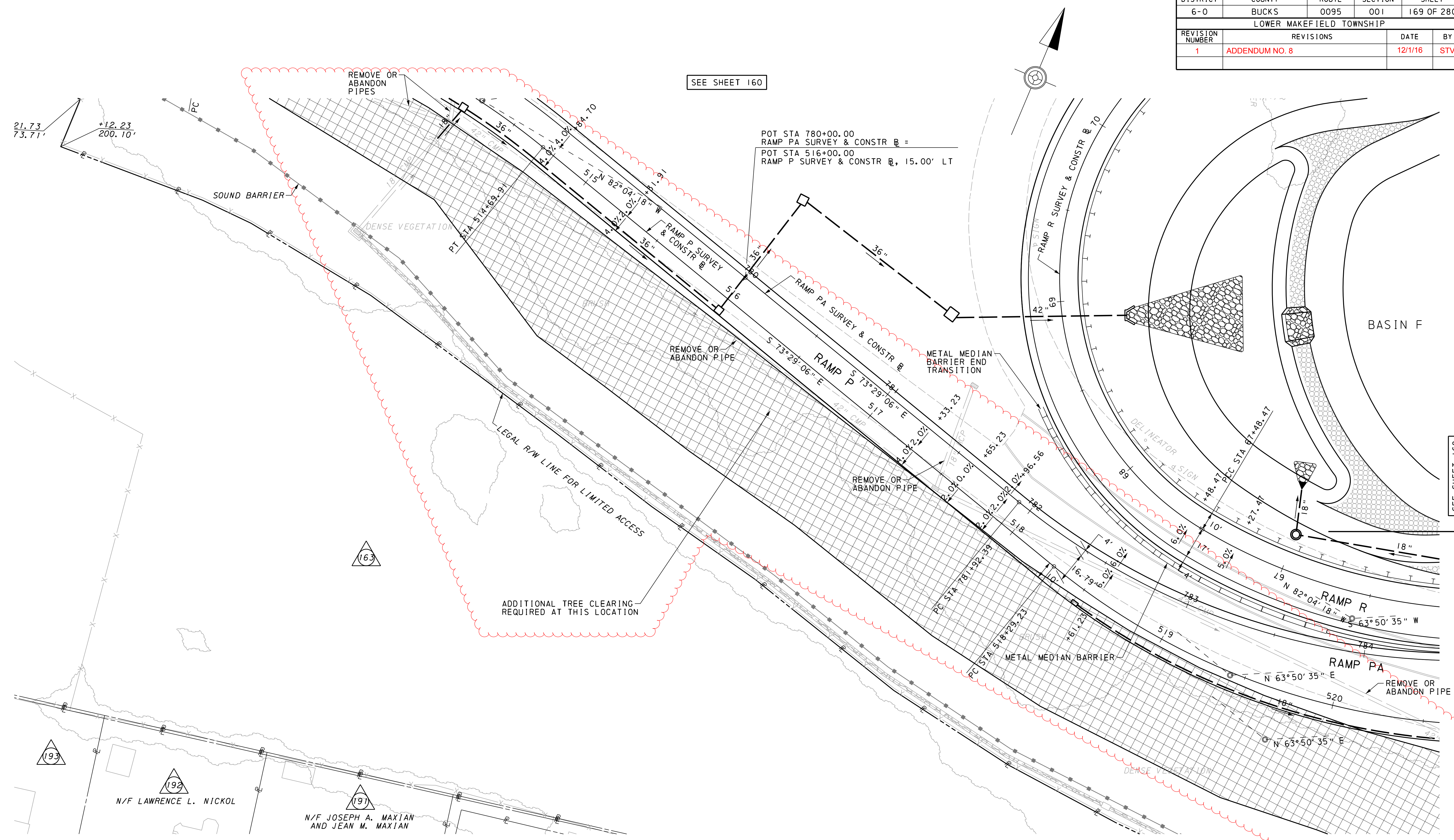
FOR RAMP B PROFILE, SEE SHEETS 216-217
FOR RAMP R PROFILE, SEE SHEET 231
FOR RAMP P PROFILE, SEE SHEET 229
FOR RAMP PA PROFILE, SEE SHEET 230
FOR TAYLORSVILLE RD. PROFILE, SEE SHEETS 207-208
SURVEY BOOK NO. 1-19, 23-33 & 35



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 12/1/2016 12:58:37 PM Jordan Kane

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0095	001	169 OF 280
LOWER MAKEFIELD TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	
1	ADDENDUM NO. 8	12/1/16	STV	

SEE SHEET 160



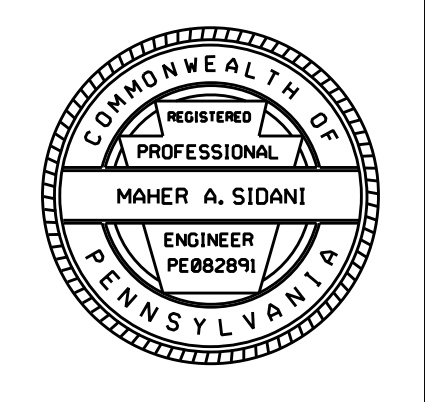
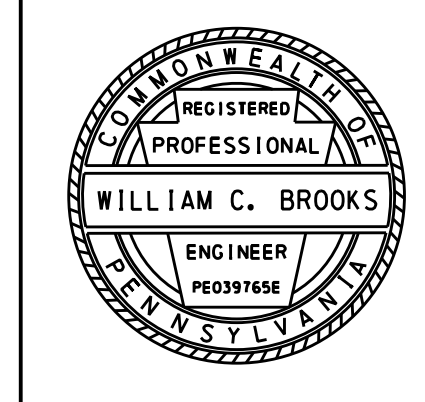
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<p>RAMP P - CURVE 2 PI STA 513+71.36 $\Delta = 29^{\circ}05'20''$ RT T = 103.00' L = 201.56' R = 397.00' E = 13.14' SUPERELEVATE 5.9%</p>	<p>RAMP P - CURVE 3 PI STA 519+77.66 $\Delta = 42^{\circ}40'19''$ LT T = 148.43' L = 283.01' R = 380.00' E = 27.96' SUPERELEVATE 6.0%</p>	<p>RAMP PA - CURVE 1 PI STA 783+40.82 $\Delta = 42^{\circ}40'19''$ LT T = 148.43' L = 183.82' R = 380.00' E = 27.96'</p>	<p>RAMP R - CURVE 2 PI STA 66+59.37 $\Delta = 34^{\circ}05'07''$ RT T = 94.72' L = 183.82' R = 309.00' E = 14.19' SUPERELEVATE 5.0%</p>	<p>RAMP R - CURVE 3 PI STA 72+04.25 $\Delta = 141^{\circ}32'13''$ RT T = 455.78' L = 392.78' R = 159.00' E = 323.72' SUPERELEVATE 6.0%</p>
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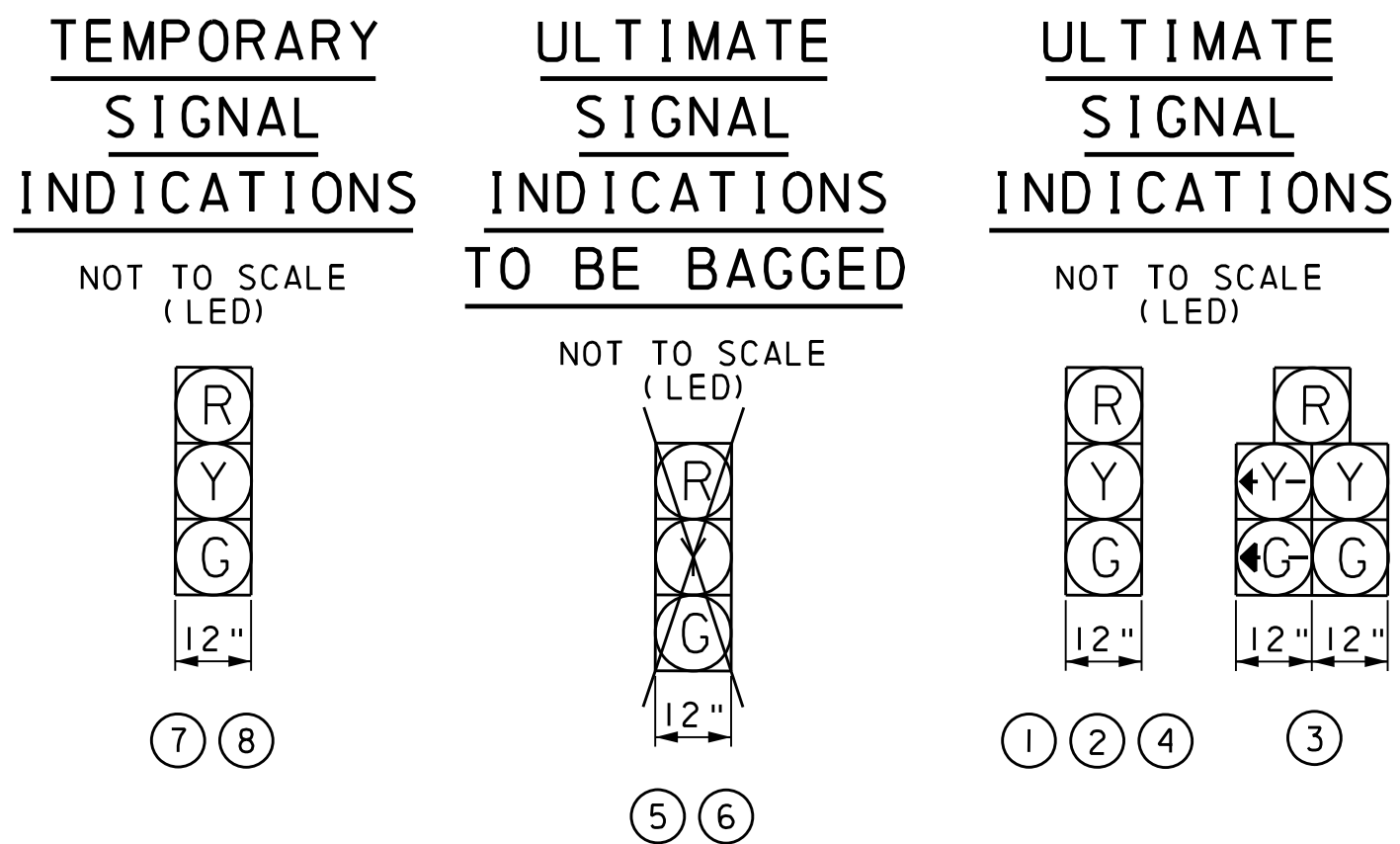


FOR RAMP R PROFILE, SEE SHEET 253
FOR RAMP PA PROFILE, SEE SHEET 251
FOR RAMP P PROFILE, SEE SHEETS 249 AND 250
SURVEY BOOK NO. 1-19, 23-33 & 35

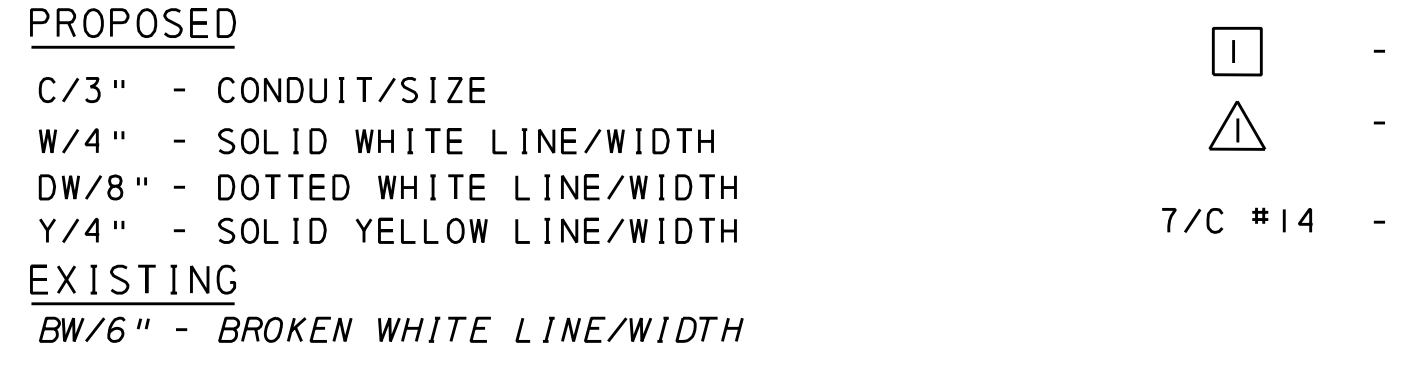
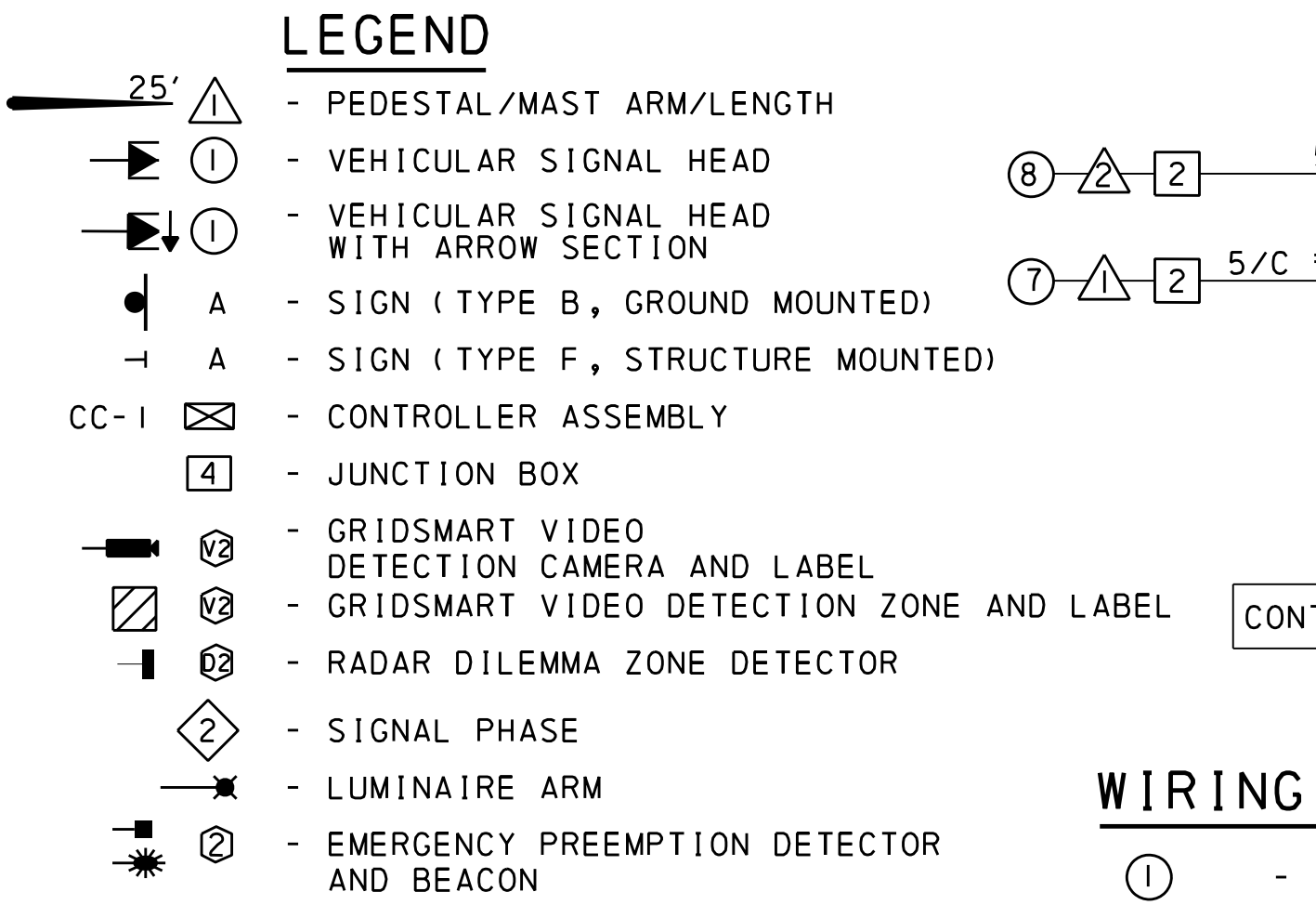
- MILL & OVERLAY



SEE SHEET 168



ALL SIGNALS TO BE EQUIPPED WITH TUNNEL VISORS AND BACKPLATES.



MOVEMENT, PHASING AND SEQUENCE CHART

PHASES	2+5			2+6			4			FLASHING
	INTERVAL	1	2	3	4	5	6	7	8	
SIGNALS	1,2	R	R	R	G	Y	R	R	R	Y
	3	G	G	G	G	Y	R	R	R	Y
	4	G	G	G	G	Y	R	R	R	Y
	7,8	R	R	R	R	R	R	G	Y	R
FIXED		5	2		5	2		3.5	2.5	
MINIMUM		5			11			5		
PASSAGE		5			++			5		
MEMORY		NON-LOCKING			MIN			NON-LOCKING		

SIGN TABULATION *

SYMBOL	SERIES NUMBER	SIZE (WxH)	QTY	DESCRIPTION	SQ FT
A	D3-4	96"x24"	1	OVERHEAD STREET NAME SIGN "Taylorsville Rd"	16
K	D3-4	90"x24"	1	OVERHEAD STREET NAME SIGN "I-295 WB"	15
L	R10-12	30"x36"	1	LEFT TURN YIELD ON GREEN SIGN	7.5
C	R9-3	24"x24"	4	NO PEDESTRIAN CROSSING SIGN	16
M	R3-1	30"x30"	1	NO RIGHT TURN SIGN	6.25
N	W1-6	48"x24"	1	LARGE SINGLE ARROW SIGN	8
P	OM4-3	18"x18"	2	END OF ROADWAY MARKER	4.5

* SEE SIGNING AND PAVEMENT MARKING PLANS FOR ADDITIONAL SIGNS
SEE CONSTRUCTION PLANS FOR ADDITIONAL INFORMATION

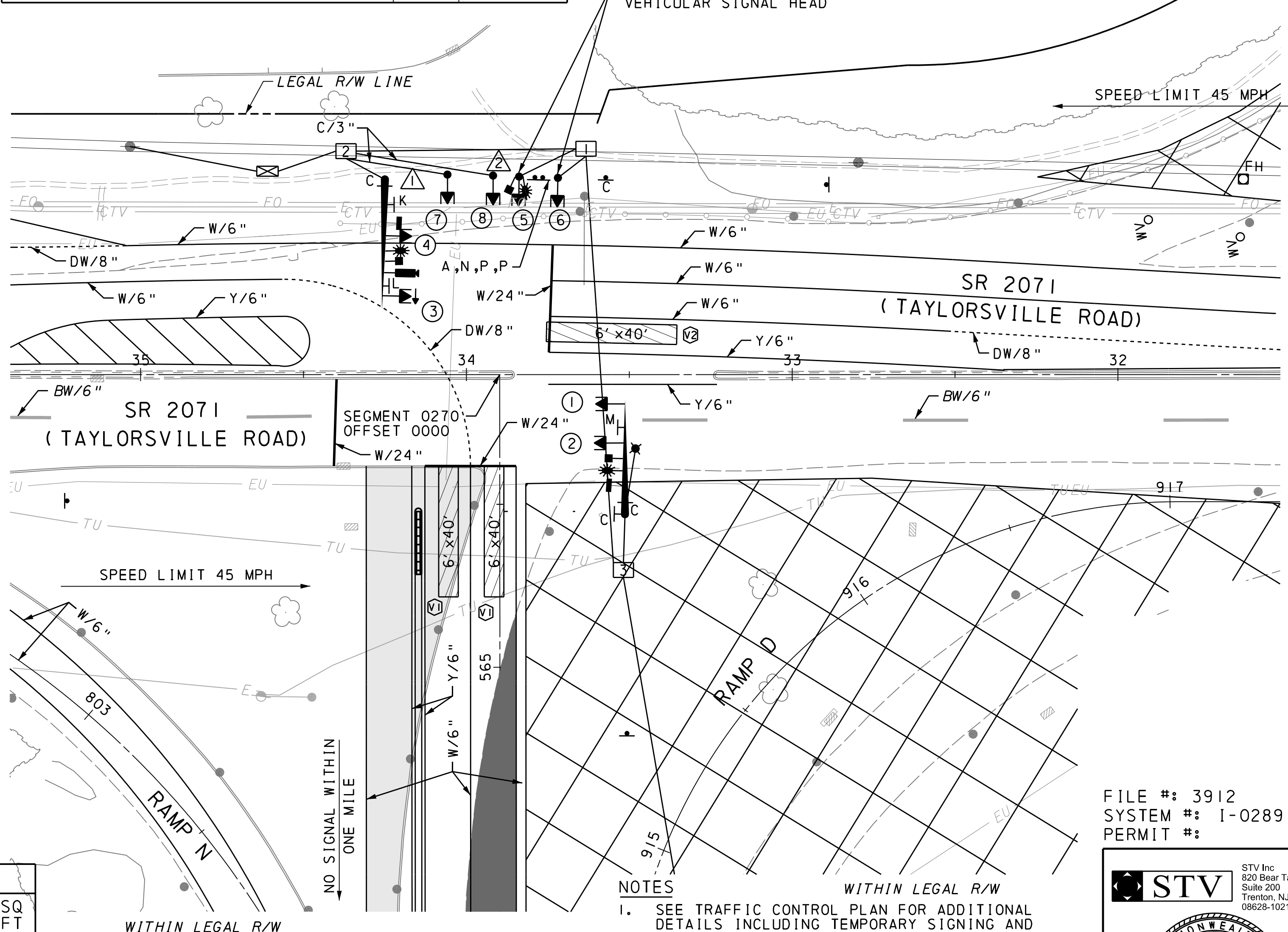
TEMPORARY SIGNAL TABULATION OF MATERIALS INCLUDED IN ITEM 9901-0701 (FOR INFORMATION ONLY)

STRUCTURE NUMBER	DESCRIPTION	QUANTITY	ROUTE	STATION	SIDE	OFFSET	PEDESTAL		
							H	M	N
△	TRAFFIC SIGNAL SUPPORT, 14' PEDESTAL	1	SR 2071	34+06	RT	61'	14'	11'	
△	TRAFFIC SIGNAL SUPPORT, 14' PEDESTAL	1	SR 2071	33+92	RT	61'	14'	11'	

VERTICAL POLES AND MAST ARMS TO BE DESIGNED BY MANUFACTURERS TO ADEQUATELY SUPPORT LOADS AS SHOWN ON THE PLAN OR MAXIMUM LOAD REQUIREMENTS ESTABLISHED BY AASHTO SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRE AND TRAFFIC SIGNALS, WHICHEVER IS GREATER.

TEMPORARY SIGNAL TABULATION OF MATERIALS INCLUDED IN ITEM 9901-0701 (FOR INFORMATION ONLY)

DESCRIPTION	QUAN.	LOCATION
VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	2	⑦ ⑧



- CONSTRUCTION NOTES**
- INSTALL TEMPORARY POLES △ AND △ AND VEHICULAR SIGNAL HEADS AS INDICATED. PROPERLY BAG ULTIMATE VEHICULAR SIGNAL HEADS NOT IN USE. ULTIMATE EMERGENCY PREEMPTION DETECTOR AND BEACON ON ULTIMATE POLES SHALL BE ACTIVATED. COORDINATE THE PROGRAMMING OF THE VIDEO DETECTION ZONES WITH LOWER MAKEFIELD TOWNSHIP.
 - SEE TRAFFIC CONTROL PLAN FOR ADDITIONAL DETAILS INCLUDING TEMPORARY SIGNING AND PAVEMENT MARKINGS.
 - SEE TRAFFIC SIGNAL PLAN AND TRAFFIC SIGNAL SYSTEM PLAN FOR DETAILS OF ALL EQUIPMENT AND PHASING NOT DETAILED ON THIS PLAN. REMOVE TEMPORARY TRAFFIC SIGNAL STRUCTURES △ AND △ AND UNBAG ALL ULTIMATE SIGNAL HEADS PRIOR TO ACTIVATING ULTIMATE SIGNAL.

SB I-95/FUTURE WB I-295 (RAMP DA)

TEMPORARY SIGNAL TABULATION OF MATERIALS INCLUDED IN ITEM 9901-0701 (FOR INFORMATION ONLY)

DESCRIPTION	LOCATION	3 INCH CONDUIT	TRENCH AND BACKFILL, TYPE 1	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR
② TO △	50	50	50	
② TO △	40	40	40	
△ TO ⑦				14
△ TO ⑧				14
TOTAL		90	90	160

FILE #: 3912
SYSTEM #: I-0289
PERMIT #:

STV
STV Inc
820 Bear Tavern Rd.
Suite 200
Trenton, NJ
08628-1021

REGISTERED PROFESSIONAL ENGINEER
SETH DAVID YOUNG
No. PE07858
PENNSYLVANIA

REG. PROF. ENGINEER
DATE

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	2071	301	171 OF 173

LOWER MAKEFIELD TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY
1	ADDENDUM NO. 8	12/01/16	STV

TRAFFIC SIGNAL NOTES

NO MODIFICATIONS OF THIS INSTALLATION ARE PERMITTED UNLESS PRIOR APPROVAL IS GRANTED IN WRITING.

ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE FOLLOWING PENNDOT PUBLICATIONS:
PUB 408, SPECIFICATIONS
PUB 148, TRAFFIC STANDARDS-SIGNALS TC-8800 SERIES
PUB 149, TRAFFIC SIGNAL DESIGN HANDBOOK
PUB 236, HANDBOOK OF APPROVED SIGNS.

ALL SIGNS AND PAVEMENT MARKINGS INDICATED ARE PART OF THE PERMIT. INSTALL AND MAINTAIN IN ACCORDANCE WITH PUBLICATION 212 AND PUBLICATION 236.

POST MOUNTED SIGNALS: INSTALL WITH MINIMUM SIGNAL HEAD CLEARANCE OF 2 FEET BEHIND FACE OF CURB OR THE EDGE OF SHOULDER AND 8 FEET ABOVE SIDEWALK OR PAVEMENT GRADE.

OVERHEAD SIGNALS: INSTALL WITH A MINIMUM SIGNAL HEAD CLEARANCE OF 2 FEET BEHIND FACE OF CURB OR EDGE OF THE SHOULDER. PROVIDE A MINIMUM SIGNAL HEAD CLEARANCE OF 16 FEET ABOVE ROADWAY; RIGIDLY MOUNT TOP AND BOTTOM; AND EQUIP WITH BACKPLATES. PROVIDE A MINIMUM HORIZONTAL DISTANCE OF 8 FEET BETWEEN SIGNALS AS MEASURED AT RIGHT ANGLES TO THE APPROACH.

DETERMINE WITH THE PENNDOT REPRESENTATIVE THE EXACT LOCATION OF DETECTORS PRIOR TO INSTALLATION.

CONSULT WITH LOCAL OFFICIALS AND UTILITIES TO RESOLVE CONFLICTS PRIOR TO CONSTRUCTION.

COMPLY WITH PROVISIONS OF THE LATEST AMENDMENT TO ACT 287, UNDERGROUND UTILITY LINE PROTECTION ACT, DATED DECEMBER 10, 1974.

OBTAIN A HIGHWAY OCCUPANCY PERMIT PRIOR TO ANY CHANGES IN INTERSECTION GEOMETRY REGARDING EXCAVATION.

ALL DESIGNERS AND CONTRACTORS UTILIZING THIS PLAN AND THE INFORMATION CONTAINED THEREON ARE CAUTIONED TO COMPLY WITH THE REQUIREMENTS OF THE LATEST AMENDMENT OF PENNSYLVANIA ACT 287, ENTITLED "UNDERGROUND UTILITY LINE PROTECTION ACT". ANY INFORMATION APPEARING ON THESE DRAWINGS AS TO THE UNDERGROUND LINES OF A USER, SUCH AS A PUBLIC UTILITY, HAS BEEN INCORPORATED HEREON PURSUANT TO SAID PENNSYLVANIA ACT 287.

ALL LOCATIONS OF UNDERGROUND UTILITIES AND RIGHT-OF-WAY ARE APPROXIMATE ONLY AND MUST BE VERIFIED PRIOR TO CONSTRUCTION. STV HAS NOT MADE AN INDEPENDENT DETERMINATION WITH RESPECT TO THE ACCURACY OR COMPLETENESS OF SUCH INFORMATION AND SPECIFICALLY DISCLAIMS ANY WARRANTY OR REPRESENTATION AS TO THE ACCURACY OF SUCH INFORMATION.

CALL BEFORE YOU DIG!

PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE-STOP CALL

PENNSYLVANIA ONE CALL SYSTEM, INC.
1-800-242-1776

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 6-0

COUNTY: BUCKS
MUNICIPALITY: LOWER MAKEFIELD TOWNSHIP
INTERSECTION: SR 2071 (TAYLORSVILLE ROAD) AND SB I-95/FUTURE WB I-295 RAMP (RAMP DA)

REVIEWED: DRJ/TBC REPRESENTATIVE DATE
RECOMMENDED: DATE

DISTRICT TRAFFIC ENGINEER DATE

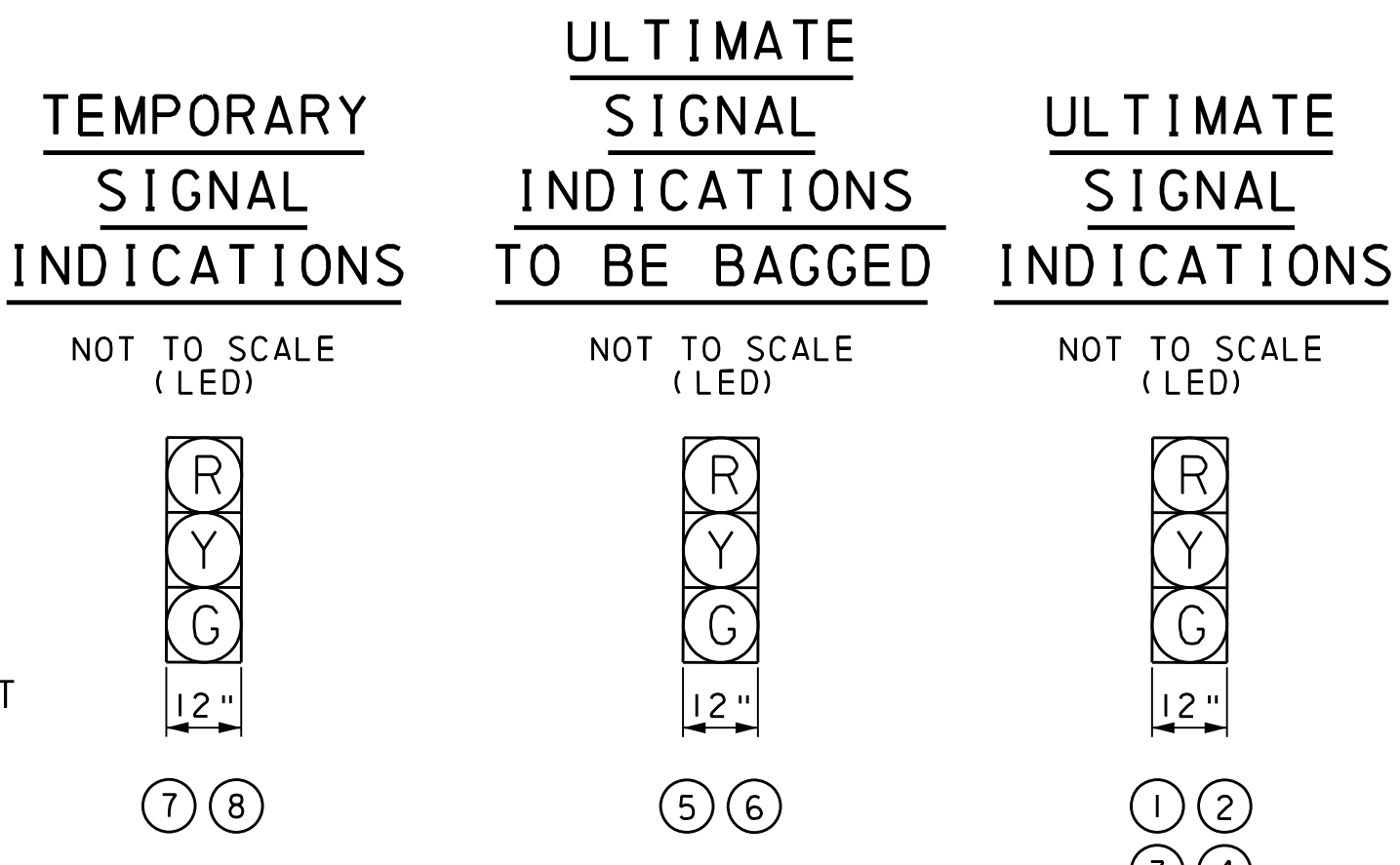
0 25 50
SCALE IN FEET

TEMPORARY SIGNAL TABULATION OF MATERIALS INCLUDED IN ITEM 9901-0701 (FOR INFORMATION ONLY)				
DESCRIPTION	3 INCH CONDUIT	TRENCH AND BACKFILL, TYPE 1	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	
☒ TO ②			70	
② TO △	10	10	10	
② TO △	10	10	10	
△ TO ⑦			14	
△ TO ⑧			14	
TOTAL	20	20	118	

TEMPORARY SIGNAL TABULATION OF MATERIALS INCLUDED IN ITEM 9901-0701 (FOR INFORMATION ONLY)									
STRUCTURE NUMBER	DESCRIPTION	QUANTITY	ROUTE	STATION	SIDE	OFFSET	PEDESTAL		
							H	M	N
△	TRAFFIC SIGNAL SUPPORT, 14' PEDESTAL	1	SR 2071	24+69	RT	45'	14'	11'	
△	TRAFFIC SIGNAL SUPPORT, 14' PEDESTAL	1	SR 2071	24+77	RT	44'	14'	11'	

VERTICAL POLES AND MAST ARMS TO BE DESIGNED BY MANUFACTURERS TO ADEQUATELY SUPPORT LOADS AS SHOWN ON THE PLAN OR MAXIMUM LOAD REQUIREMENTS ESTABLISHED BY AASHTO SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRE AND TRAFFIC SIGNALS, WHICHEVER IS GREATER.

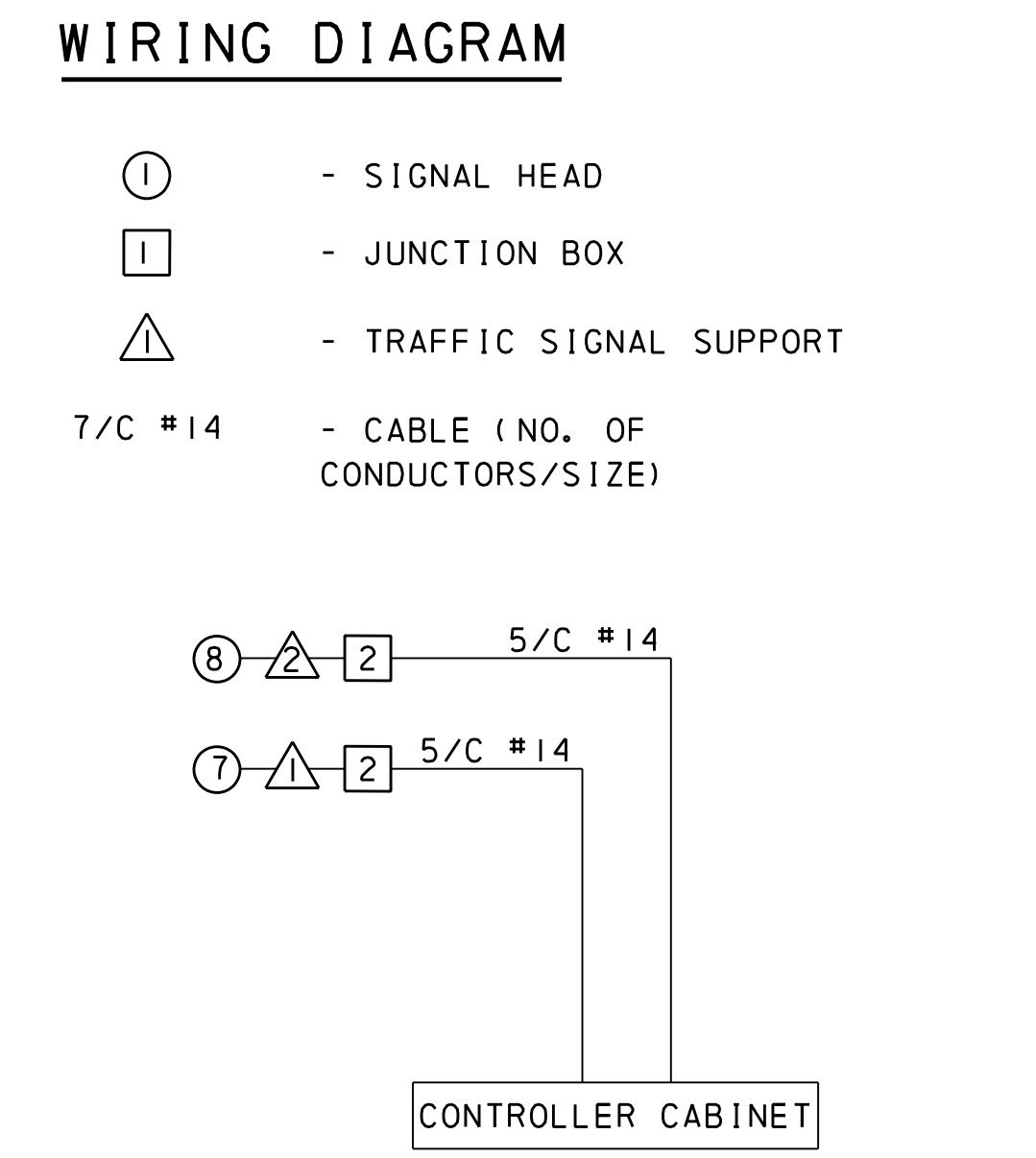
SIGN TABULATION *					
SYMBOL	SERIES NUMBER	SIZE (WxH)	QTY	DESCRIPTION	SQ FT
A	D3-4	96"x24"	1	OVERHEAD STREET NAME SIGN "Taylorsville Rd"	16
M	R3-1	30"x30"	1	NO RIGHT TURN SIGN	6.25
O	R3-2	30"x30"	1	NO LEFT TURN SIGN	6.25
C	R9-3	24"x24"	6	NO PEDESTRIAN CROSSING SIGN	24
N	W1-6	48"x24"	2	LARGE SINGLE ARROW SIGN	16
Y	OM4-3	18"x18"	2	END OF ROADWAY MARKER	4.5
Y	R5-1	30"x30"	4	DO NOT ENTER SIGN	-
AA	R6-1R	36"x12"	4	HORIZONTAL RIGHT ONE-WAY SIGN	-
AB	R6-1L	36"x12"	4	HORIZONTAL LEFT ONE-WAY SIGN	-
AC	R1-2	36"x36"	1	YIELD SIGN	-



TEMPORARY SIGNAL TABULATION OF MATERIALS INCLUDED IN ITEM 9901-0701 (FOR INFORMATION ONLY)		
DESCRIPTION	QUAN.	LOCATION
VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	2	⑦ ⑧

ALL SIGNALS TO BE EQUIPPED WITH TUNNEL VISORS AND BACKPLATES.

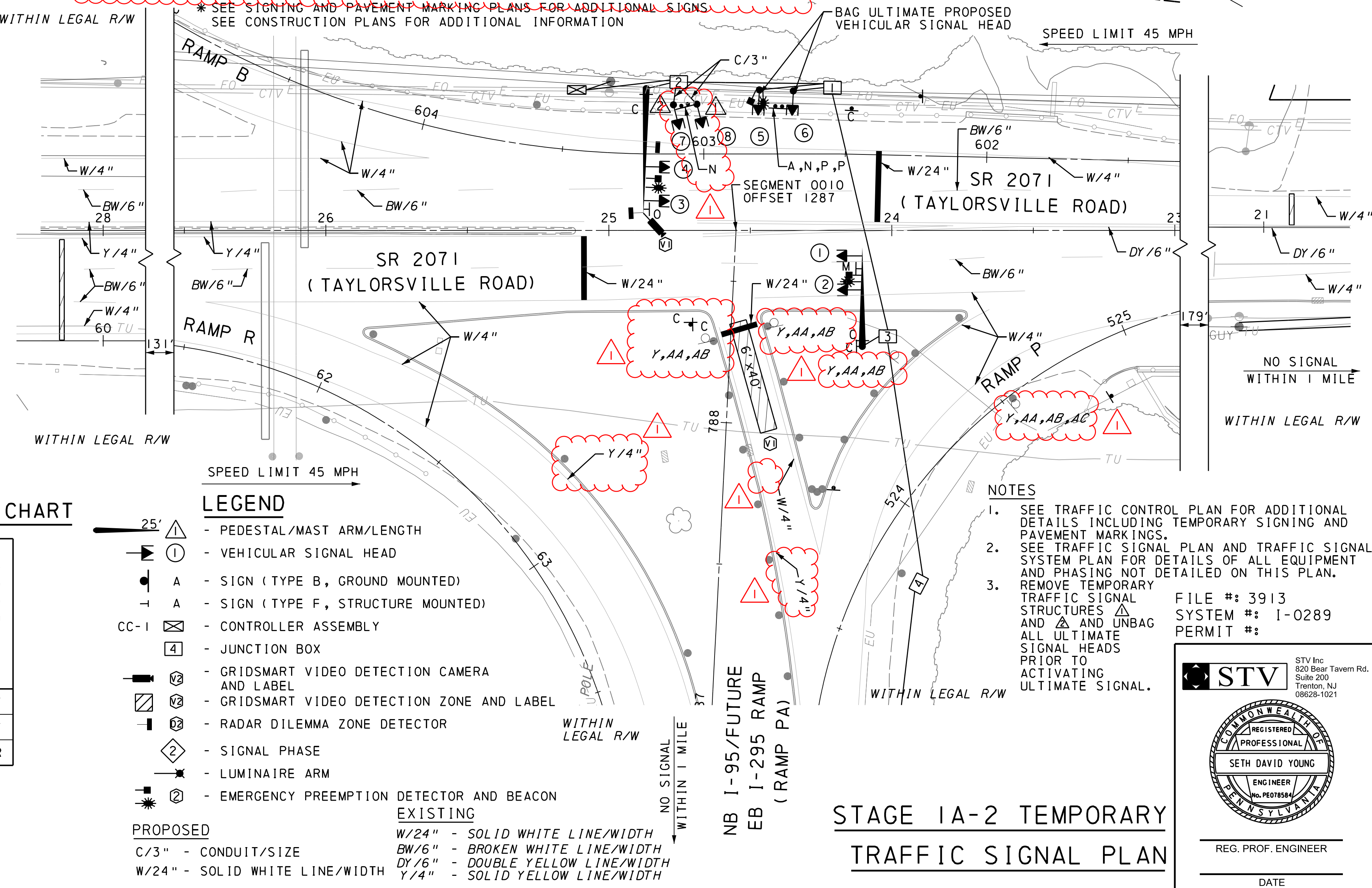
- CONSTRUCTION NOTES**
- INSTALL TEMPORARY POLES △ AND △ AND VEHICULAR SIGNAL HEADS AS INDICATED. PROPERLY BAG ULTIMATE VEHICULAR SIGNAL HEADS NOT IN USE. ULTIMATE EMERGENCY PREEMPTION DETECTOR AND BEACON ON ULTIMATE POLES SHALL BE ACTIVATED.
 - COORDINATE THE PROGRAMMING OF THE VIDEO DETECTION ZONES WITH LOWER MAKEFIELD TOWNSHIP.



MOVEMENT, PHASING AND SEQUENCE CHART

PHASES	2+6			4			FLASHING
	INTERVAL	1	2	3	4	5	
SIGNALS	1,2	G	Y	R	R	R	Y
	3,4	G	Y	R	R	R	Y
	7,8	R	R	R	G	Y	R
FIXED		5	2		3.5	2.5	
MINIMUM		11			5		
PASSAGE		++			5		
MEMORY		MIN			NON-LOCKING		

- LEGEND**
- 25' △ - PEDESTAL/MAST ARM/LENGTH
 - ① - VEHICULAR SIGNAL HEAD
 - A - SIGN (TYPE B, GROUND MOUNTED)
 - △ - SIGN (TYPE F, STRUCTURE MOUNTED)
 - CC-1 ☒ - CONTROLLER ASSEMBLY
 - ④ - JUNCTION BOX
 - ② - GRIDSART VIDEO DETECTION CAMERA AND LABEL
 - ② - GRIDSART VIDEO DETECTION ZONE AND LABEL
 - ② - RADAR DILEMMA ZONE DETECTOR
 - ② - SIGNAL PHASE
 - ☒ - LUMINAIRE ARM
 - ☒ - EMERGENCY PREEMPTION DETECTOR AND BEACON
- PROPOSED**
- C/3" - CONDUIT/SIZE
 - W/24" - SOLID WHITE LINE/WIDTH
 - BW/6" - BROKEN WHITE LINE/WIDTH
 - DY/6" - DOUBLE YELLOW LINE/WIDTH
 - Y/4" - SOLID YELLOW LINE/WIDTH
- EXISTING**
- W/24" - SOLID WHITE LINE/WIDTH
 - BW/6" - BROKEN WHITE LINE/WIDTH
 - DY/6" - DOUBLE YELLOW LINE/WIDTH
 - Y/4" - SOLID YELLOW LINE/WIDTH



- NOTES**
- SEE TRAFFIC CONTROL PLAN FOR ADDITIONAL DETAILS INCLUDING TEMPORARY SIGNING AND PAVEMENT MARKINGS.
 - SEE TRAFFIC SIGNAL PLAN AND TRAFFIC SIGNAL SYSTEM PLAN FOR DETAILS OF ALL EQUIPMENT AND PHASING NOT DETAILED ON THIS PLAN.
 - REMOVE TEMPORARY TRAFFIC SIGNAL STRUCTURES △ AND △ AND UNBAG ALL ULTIMATE SIGNAL HEADS PRIOR TO ACTIVATING ULTIMATE SIGNAL.
- FILE #: 3913
SYSTEM #: I-0289
PERMIT #:

STV
STV Inc
820 Bear Tavern Rd.
Suite 200
Trenton, NJ
08628-1021

REGISTERED PROFESSIONAL ENGINEER
SETH DAVID YOUNG
No. PE07858
PENNSYLVANIA

REG. PROF. ENGINEER
DATE

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CONSULT WITH LOCAL OFFICIALS AND UTILITIES TO RESOLVE CONFLICTS PRIOR TO CONSTRUCTION.

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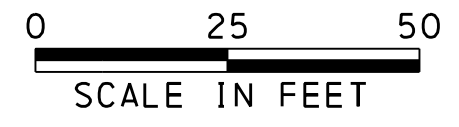
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PENNSYLVANIA ONE CALL SYSTEM, INC.
1-800-242-1776

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 6-0

COUNTY: BUCKS
MUNICIPALITY: LOWER MAKEFIELD TOWNSHIP
INTERSECTION: SR 2071 (TAYLORSVILLE ROAD)
AND NB I-95/FUTURE EB I-295 RAMP (RAMP PA)

REVIEWED: DRJBC REPRESENTATIVE
RECOMMENDED:

DISTRICT TRAFFIC ENGINEER DATE



DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	2071	301	173 OF 173
LOWER MAKEFIELD TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	
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1-800-242-1776

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 6-0

COUNTY : BUCKS
 MUNICIPALITY : LOWER MAKEFIELD TOWNSHIP
 INTERSECTION : SR 2071 (TAYLORSVILLE ROAD)
AND T-491 (WOODSIDE ROAD)

REVIEWED : ▲
 DRJTBC REPRESENTATIVE _____ DATE _____
 RECOMMENDED : _____

DISTRICT TRAFFIC ENGINEER _____ DATE _____

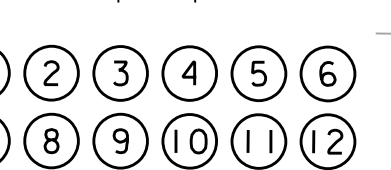
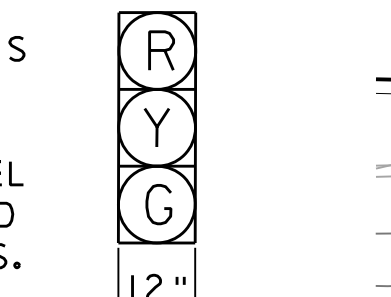


TEMPORARY SIGNAL TABULATION OF MATERIALS INCLUDED IN ITEM 9901-0701 (FOR INFORMATION ONLY)																						
STRUCTURE NUMBER	DESCRIPTION	QUANTITY	ROUTE	STATION	SIDE	OFFSET	MAST ARM															
							ARM "A"															
							H	K	L	SIGNAL LOCATION					SIGN LOCATION							
			M	N	O	P	Q	R	S	T	U	V										
▲	TRAFFIC SIGNAL SUPPORT, WOOD STRAIN POLE	1	SR 2071	39+20	RT	56' 40'	111'	51'	48'	37'			25'									
▲	TRAFFIC SIGNAL SUPPORT, WOOD STRAIN POLE	1	SR 2071	39+22	LT	56' 40'	128'	37'	34'	22'			11'									
▲	TRAFFIC SIGNAL SUPPORT, WOOD STRAIN POLE	1	SR 2071	37+97	LT	62' 40'	126'	55'	53'	43'			27'									
▲	TRAFFIC SIGNAL SUPPORT, WOOD STRAIN POLE	1	SR 2071	37+89	RT	64' 40'	128'	59'	57'	42'			25'									

- NOTES:
- VERTICAL POLES AND SPAN WIRE TO BE DESIGNED BY MANUFACTURERS TO ADEQUATELY SUPPORT LOADS AS SHOWN ON THE PLAN OR MAXIMUM LOAD REQUIREMENTS ESTABLISHED BY AASHTO SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRE AND TRAFFIC SIGNALS, WHICHEVER IS GREATER.
 - LOCATIONS OF WOOD POLES TO BE VERIFIED PRIOR TO CONSTRUCTION TO ENSURE THAT CONFLICTS WILL NOT OCCUR WITH EXISTING FEATURES AND PROPOSED CONSTRUCTION.

TEMPORARY SIGNAL INDICATIONS

NOT TO SCALE (LED)



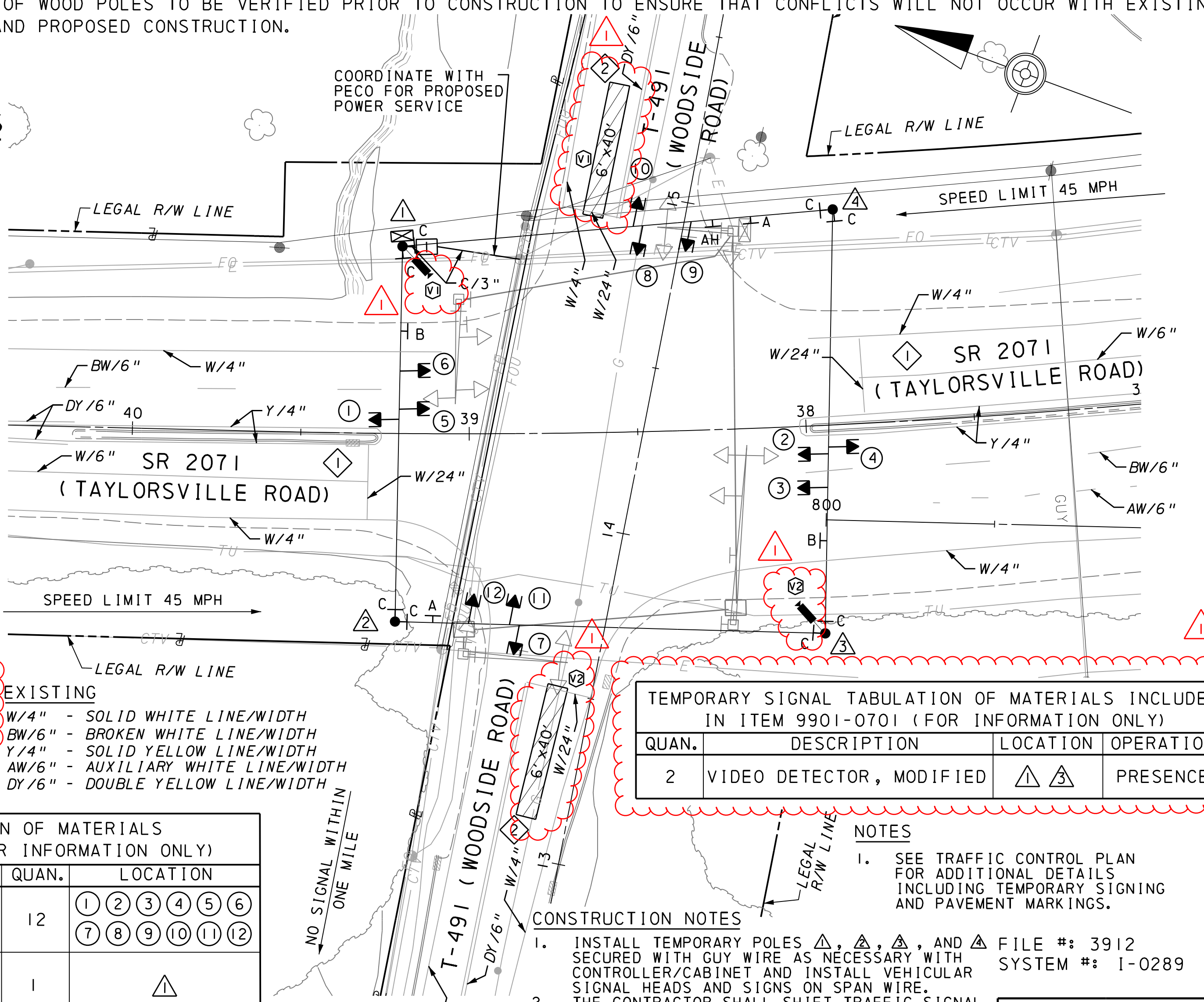
- ALL SIGNALS TO BE EQUIPPED WITH TUNNEL VISORS AND BACKPLATES.
- ① - SIGNAL HEAD
 - - JUNCTION BOX
 - ▲ - TRAFFIC SIGNAL SUPPORT
 - 7/C #14 - CABLE (NO. OF CONDUCTORS/SIZE)

- ### LEGEND
- ① - VEHICULAR SIGNAL HEAD
 - A - SIGN (SPAN WIRE MOUNTED)
 - CC-1 - CONTROLLER ASSEMBLY
 - - JUNCTION BOX
 - ② - GRIDSMART VIDEO DETECTION CAMERA AND LABEL
 - ③ - GRIDSMART VIDEO DETECTION ZONE AND LABEL
 - ◇ - SIGNAL PHASE

PROPOSED C/3" - CONDUIT/SIZE

TEMPORARY SIGNAL TABULATION OF MATERIALS INCLUDED IN ITEM 9901-0701 (FOR INFORMATION ONLY)		
DESCRIPTION	QUAN.	LOCATION
VEHICULAR SIGNAL HEAD, THREE 12" SECTIONS	12	① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫
NEMA TS-2; TYPE 2 CONTROLLER ASSEMBLY, TYPE 2 MOUNTING	1	▲
SHIFT SPAN WIRE MOUNTED SIGNAL HEADS AND SIGNS	1	-

TEMPORARY SIGNAL TABULATION OF MATERIALS INCLUDED IN ITEM 9901-0701 (FOR INFORMATION ONLY)					
SYMBOL	SERIES NUMBER	SIZE (WxH)	QTY	DESCRIPTION	SQ FT
A	D3-4	96"x24"	2	OVERHEAD STREET NAME SIGN "Taylorsville Rd"	32
B	D3-4	90"x24"	2	OVERHEAD STREET NAME SIGN "Woodside Rd"	30
C	R9-3	24"x24"	8	NO PEDESTRIAN CROSSING SIGN	32
AH	R10-11	30"x36"	1	NO TURN ON RED SYMBOL SIGN	7.5



TEMPORARY SIGNAL TABULATION OF MATERIALS INCLUDED IN ITEM 9901-0701 (FOR INFORMATION ONLY)			
QUAN.	DESCRIPTION	LOCATION	OPERATION
2	VIDEO DETECTOR, MODIFIED	▲ ③	PRESENCE

- NOTES
- SEE TRAFFIC CONTROL PLAN FOR ADDITIONAL DETAILS INCLUDING TEMPORARY SIGNING AND PAVEMENT MARKINGS.

- ### CONSTRUCTION NOTES
- INSTALL TEMPORARY POLES ▲, ▲, ▲, AND ▲ SECURED WITH GUY WIRE AS NECESSARY WITH CONTROLLER/CABINET AND INSTALL VEHICULAR SIGNAL HEADS AND SIGNS ON SPAN WIRE. THE CONTRACTOR SHALL SHIFT TRAFFIC SIGNAL HEADS AND SIGNS AS DIRECTED BY ENGINEER. PROPERLY BAG ULTIMATE VEHICULAR SIGNAL HEADS NOT IN USE.
 - REMOVE TEMPORARY TRAFFIC SIGNAL UPON ACTIVATION OF ULTIMATE TRAFFIC SIGNAL. TEMPORARY TRAFFIC SIGNAL SHALL BE OPERATIONAL PRIOR TO THE REMOVAL OF EXISTING TRAFFIC SIGNAL.
 - THE CONTRACTOR SHALL ADJUST VIDEO DETECTION ZONES AS DIRECTED BY ENGINEER.

STAGE WT-1 TO WT-4 TEMPORARY TRAFFIC SIGNAL PLAN

FILE #: 3912
SYSTEM #: 1-0289

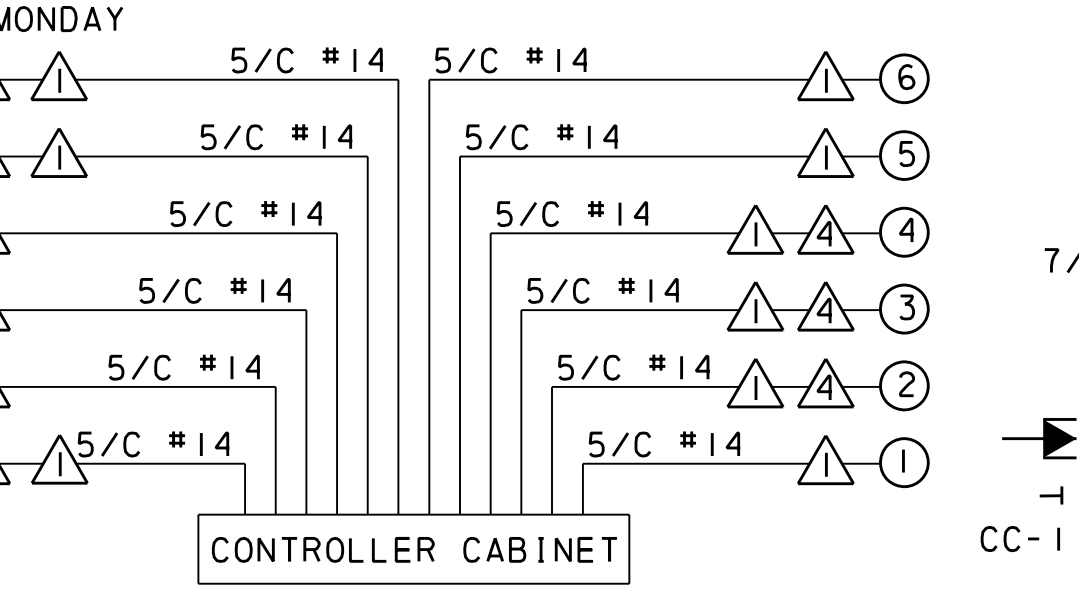
STV Inc
820 Bear Tavern Rd.
Suite 200
Trenton, NJ
08628-1021

REG. PROF. ENGINEER
DATE _____

TEMPORARY SIGNAL TABULATION OF MATERIALS INCLUDED IN ITEM 9901-0701 (FOR INFORMATION ONLY)						
DESCRIPTION	3 INCH CONDUIT	TRENCH AND BACKFILL, TYPE 1	SIGNAL CABLE, 14 AWG, 5 CONDUCTOR	JUNCTION BOX, JB-27	SPAN WIRE	ELECTRICAL SERVICE, TYPE A
PECO TO ①	28	28			550	1
① TO ②	15	15				
② TO ③			99			
③ TO ④			265			
④ TO ⑤			277			
⑤ TO ⑥			263			
⑥ TO ⑦			85			
⑦ TO ⑧			96			
⑧ TO ⑨			206			
⑨ TO ⑩			123			
⑩ TO ⑪			138			
⑪ TO ⑫			120			
⑫ TO ⑬			203			
⑬ TO ⑭			191			
TOTAL	43	43	2066	1	550	1

WEEKLY PROGRAM CHART

EVENT	*DAY	TIME	CYCLE	PROGRAM	OFFSET	REMARKS
1	1-5	6:00	65	PROGRAM 1		
2	1-5	10:00	70	FREE		
3	1-5	15:00	90	PROGRAM 2		
4	1-5	19:00	70	FREE		
5	5-7	24:00	70	FREE		

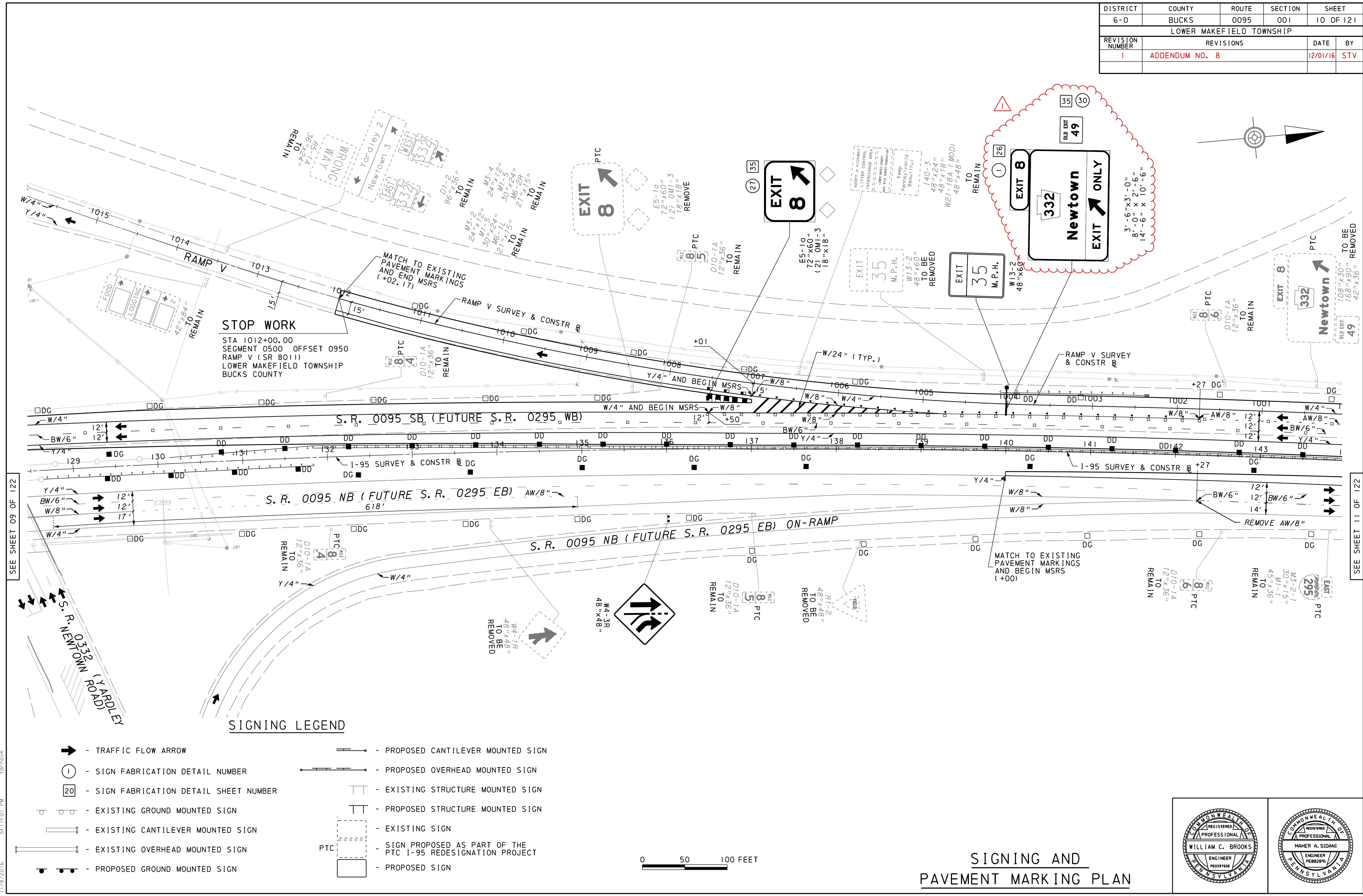


MOVEMENT, PHASING AND SEQUENCE CHART

PHASES	INTERVAL						FLASHING
	1	2	3	4	5	6	
1,2	G	Y	R	R	R	R	Y
3	G	Y	R	R	R	R	Y
4,5	G	Y	R	R	R	R	Y
6	G	Y	R	R	R	R	Y
7,8	R	R	R	G	Y	R	R
9	R	R	R	G	Y	R	R
10,11	R	R	R	G	Y	R	R
12	R	R	R	G	Y	R	R
FIXED	4	2		4	2		
MIN.	11			5			
PROGRAM 1	29	4	2	24	4	2	
PROGRAM 2	64	4	2	14	4	2	

I:\p\02\sect\4017395\4017395_0001\90_CAD_Models\Drawings\Highways\Sig\1 vs signal_Temporary_Taylorsville and Woodside 01_Scudder_Fa11s PA.dgn 11/17/2016 11:28:24 AM

DISTRICT	COUNTY	ROUTE	SECTION	SHEET	
6-0	BUCKS	0095	001	10 OF 121	
LOWER MAKEFIELD TOWNSHIP					
REVISION NUMBER	REVISIONS			DATE	BY
1	ADDENDUM NO. 8			12/01/16	STV



STOP WORK
 STA 1012+00.00
 SEGMENT 0500 OFFSET 0950
 RAMP V (SR 8011)
 LOWER MAKEFIELD TOWNSHIP
 BUCKS COUNTY

SIGNING LEGEND

- ➔ - TRAFFIC FLOW ARROW
- ① - SIGN FABRICATION DETAIL NUMBER
- 20 - SIGN FABRICATION DETAIL SHEET NUMBER
- - EXISTING GROUND MOUNTED SIGN
- ▭ - EXISTING CANTILEVER MOUNTED SIGN
- ▭ - EXISTING OVERHEAD MOUNTED SIGN
- - PROPOSED GROUND MOUNTED SIGN
- ▭ - PROPOSED CANTILEVER MOUNTED SIGN
- ▭ - PROPOSED OVERHEAD MOUNTED SIGN
- ▭ - EXISTING STRUCTURE MOUNTED SIGN
- ▭ - PROPOSED STRUCTURE MOUNTED SIGN
- ▭ - EXISTING SIGN
- ▭ - SIGN PROPOSED AS PART OF THE PTC I-95 REDESIGNATION PROJECT
- ▭ - PROPOSED SIGN

WILLIAM C. BROOKS
ENGINEER
PE039765E

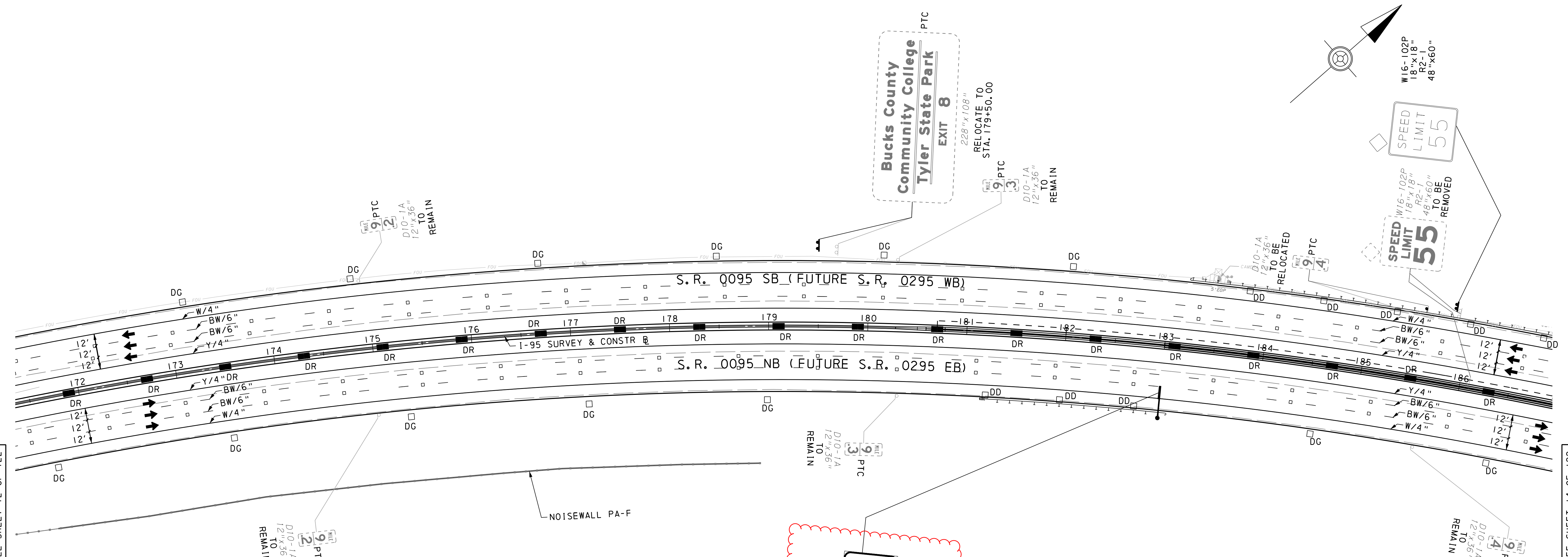
MAHER A. SIDANI
ENGINEER
PE082891

SIGNING AND PAVEMENT MARKING PLAN

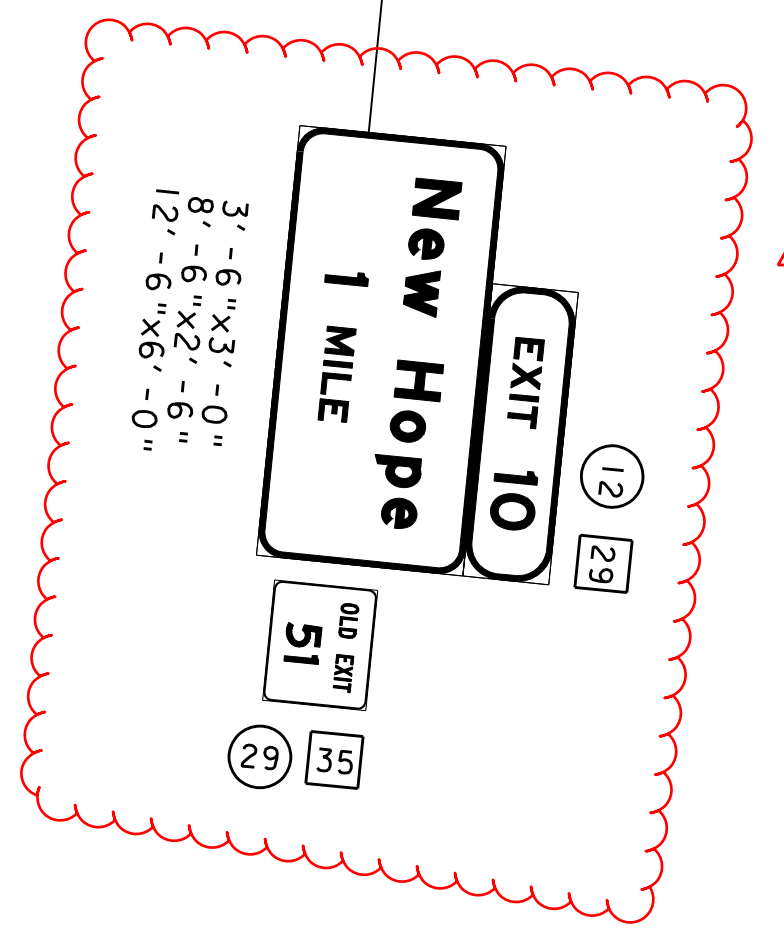
SEE SHEET 09 OF 122

SEE SHEET 11 OF 122

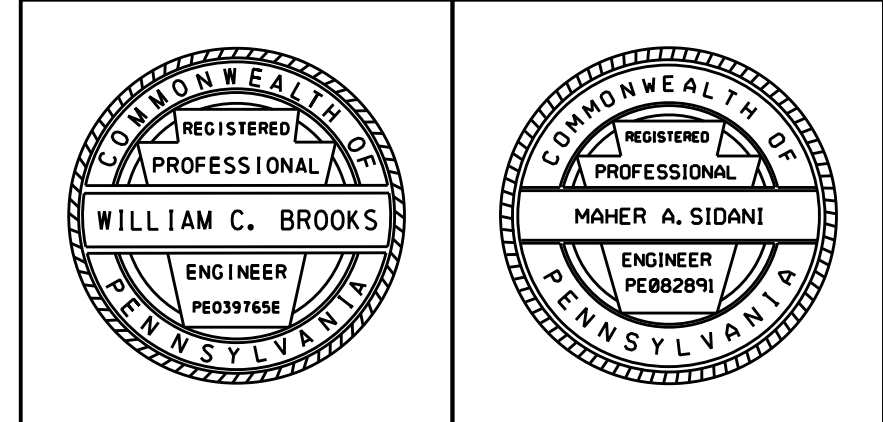
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0095	001	13 OF 121
LOWER MAKEFIELD TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	
1	ADDENDUM NO. 8	12/01/16	STV	



- SIGNING LEGEND**
- TRAFFIC FLOW ARROW
 - SIGN FABRICATION DETAIL NUMBER
 - SIGN FABRICATION DETAIL SHEET NUMBER
 - EXISTING GROUND MOUNTED SIGN
 - EXISTING CANTILEVER MOUNTED SIGN
 - EXISTING OVERHEAD MOUNTED SIGN
 - PROPOSED GROUND MOUNTED SIGN
 - PROPOSED CANTILEVER MOUNTED SIGN
 - PROPOSED OVERHEAD MOUNTED SIGN
 - EXISTING STRUCTURE MOUNTED SIGN
 - PROPOSED STRUCTURE MOUNTED SIGN
 - EXISTING SIGN
 - SIGN PROPOSED AS PART OF THE PTC I-95 REDESIGNATION PROJECT
 - PROPOSED SIGN



**SIGNING AND
PAVEMENT MARKING PLAN**

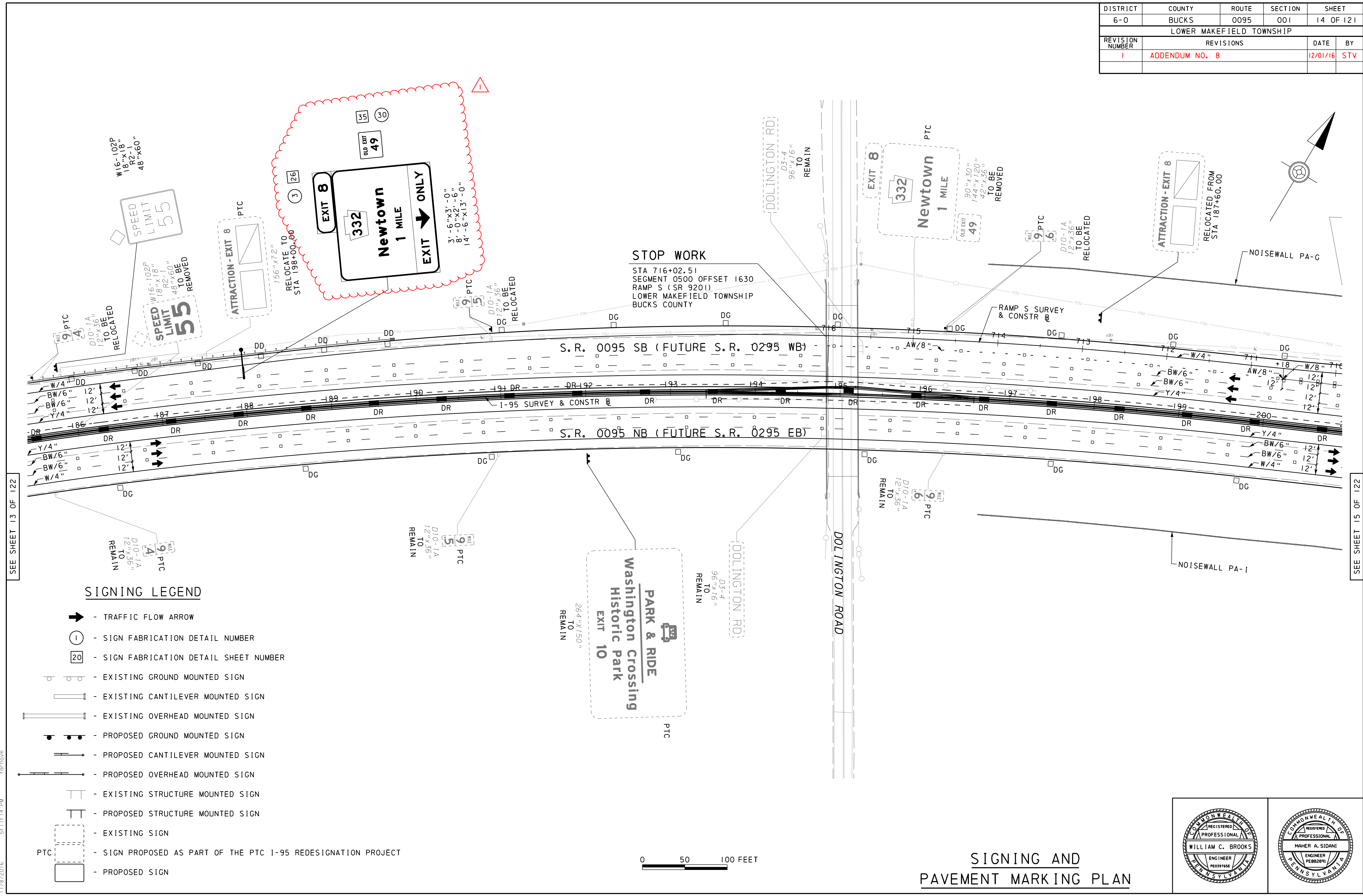


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SEE SHEET 12 OF 122

SEE SHEET 14 OF 122

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0095	001	14 OF 121
LOWER MAKEFIELD TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	
1	ADDENDUM NO. 8	12/01/16	STV	

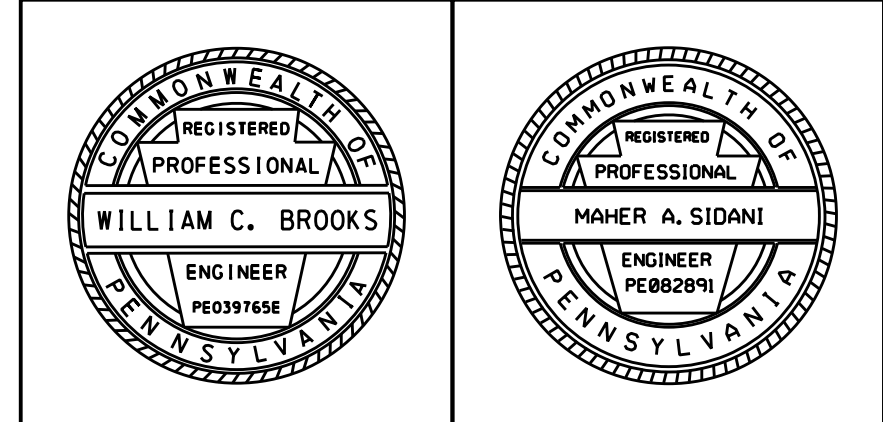


SIGNING LEGEND

- TRAFFIC FLOW ARROW
- SIGN FABRICATION DETAIL NUMBER
- SIGN FABRICATION DETAIL SHEET NUMBER
- EXISTING GROUND MOUNTED SIGN
- EXISTING CANTILEVER MOUNTED SIGN
- EXISTING OVERHEAD MOUNTED SIGN
- PROPOSED GROUND MOUNTED SIGN
- PROPOSED CANTILEVER MOUNTED SIGN
- PROPOSED OVERHEAD MOUNTED SIGN
- EXISTING STRUCTURE MOUNTED SIGN
- PROPOSED STRUCTURE MOUNTED SIGN
- EXISTING SIGN
- SIGN PROPOSED AS PART OF THE PTC I-95 REDESIGNATION PROJECT
- PROPOSED SIGN



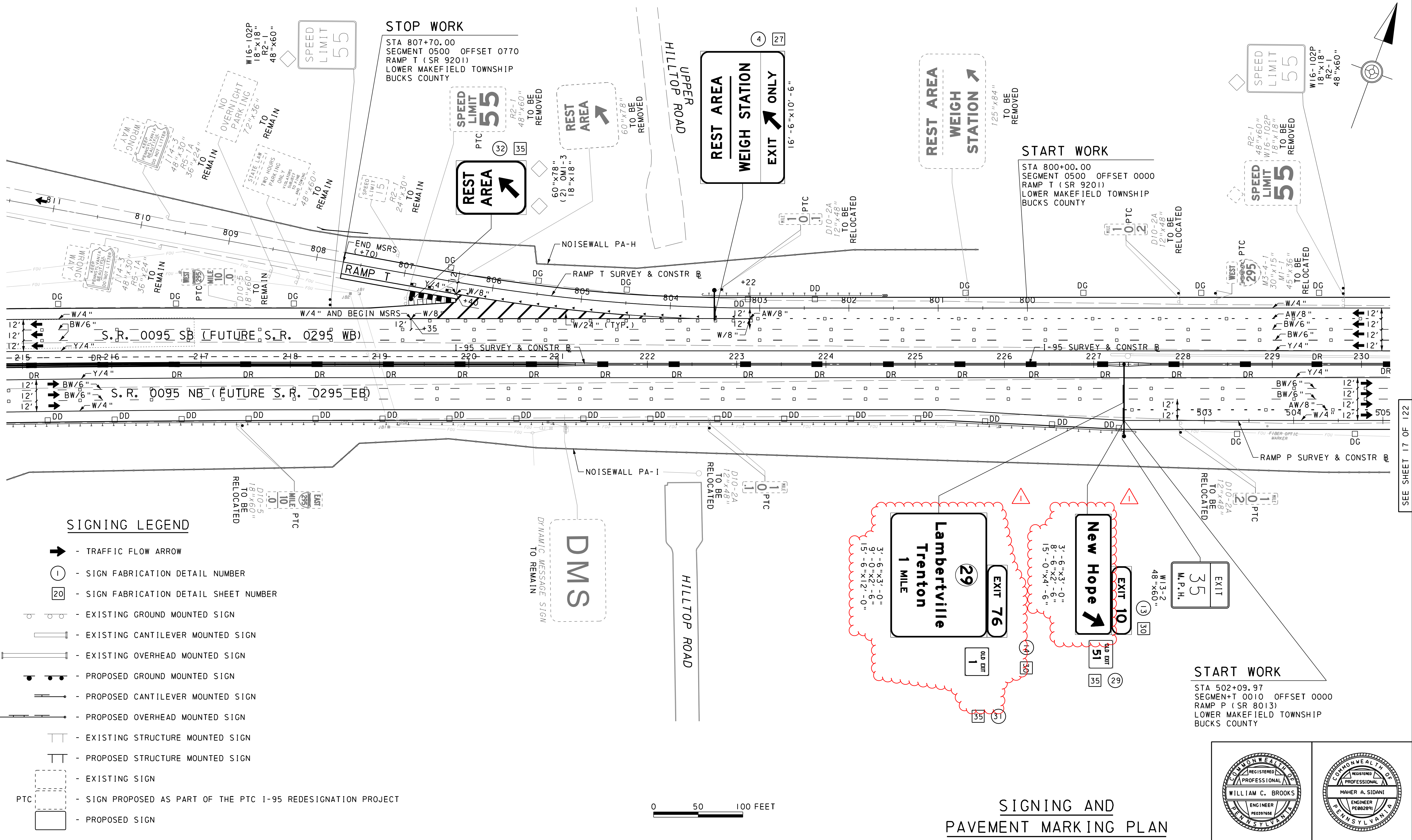
SIGNING AND PAVEMENT MARKING PLAN



SEE SHEET 13 OF 122

SEE SHEET 15 OF 122

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0095	001	16 OF 121
LOWER MAKEFIELD TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	
I	ADDENDUM NO. 8	12/01/16	STV	



SIGNING LEGEND

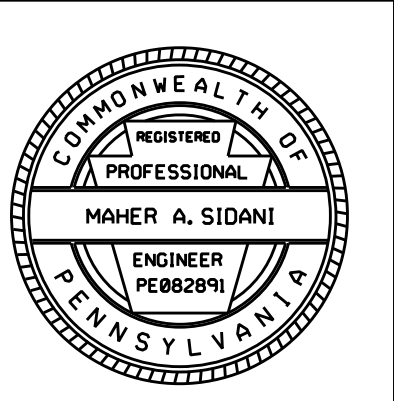
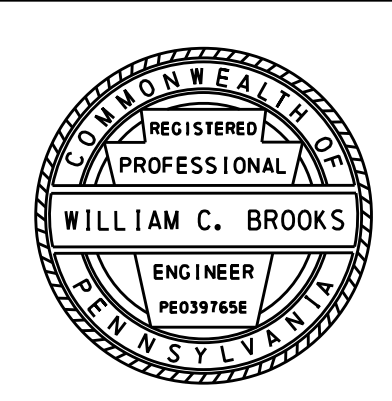
- ➔ - TRAFFIC FLOW ARROW
- ① - SIGN FABRICATION DETAIL NUMBER
- 20 - SIGN FABRICATION DETAIL SHEET NUMBER
- - EXISTING GROUND MOUNTED SIGN
- ▭ - EXISTING CANTILEVER MOUNTED SIGN
- ▭ - EXISTING OVERHEAD MOUNTED SIGN
- - PROPOSED GROUND MOUNTED SIGN
- ▭ - PROPOSED CANTILEVER MOUNTED SIGN
- ▭ - PROPOSED OVERHEAD MOUNTED SIGN
- ▭ - EXISTING STRUCTURE MOUNTED SIGN
- ▭ - PROPOSED STRUCTURE MOUNTED SIGN
- ▭ - EXISTING SIGN
- ▭ - SIGN PROPOSED AS PART OF THE PTC I-95 REDESIGNATION PROJECT
- ▭ - PROPOSED SIGN

DMS
DYNAMIC MESSAGE SIGN
TO REMAIN



SIGNING AND PAVEMENT MARKING PLAN

START WORK
STA 502+09.97
SEGMENT 0010 OFFSET 0000
RAMP P (SR 8013)
LOWER MAKEFIELD TOWNSHIP
BUCKS COUNTY



SEE SHEET 15 OF 122

SEE SHEET 17 OF 122

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0095	001	18 OF 121
LOWER MAKEFIELD TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	
I	ADDENDUM NO. 8	12/01/16	STV	

START WORK

STA 563+24.37
SEGMENT 0270 OFFSET 0240
RAMP DA (SR 8013)
LOWER MAKEFIELD TOWNSHIP
BUCKS COUNTY

STOP WORK

STA 611+99.14
SEGMENT 0750 OFFSET 0000
RAMP B (SR 8013)
LOWER MAKEFIELD TOWNSHIP
BUCKS COUNTY

START WORK

STA 900+00.00
SEGMENT 0260 OFFSET 0000
RAMP D (SR 8013)
LOWER MAKEFIELD TOWNSHIP
BUCKS COUNTY

STOP WORK

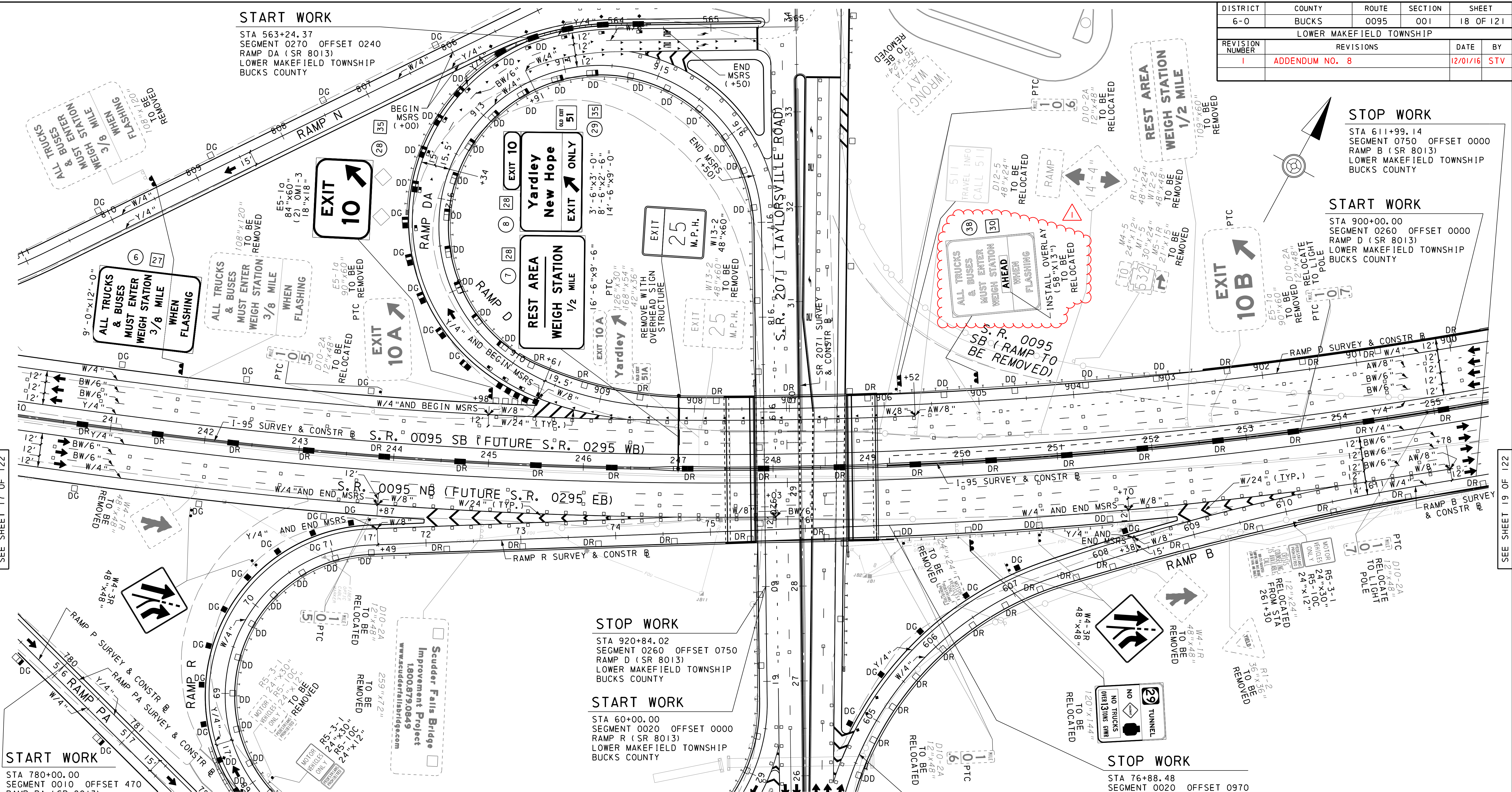
STA 920+84.02
SEGMENT 0260 OFFSET 0750
RAMP D (SR 8013)
LOWER MAKEFIELD TOWNSHIP
BUCKS COUNTY

START WORK

STA 60+00.00
SEGMENT 0020 OFFSET 0000
RAMP R (SR 8013)
LOWER MAKEFIELD TOWNSHIP
BUCKS COUNTY

STOP WORK

STA 76+88.48
SEGMENT 0020 OFFSET 0970
RAMP R (SR 8013)
LOWER MAKEFIELD TOWNSHIP
BUCKS COUNTY



SEE SHEET 17 OF 122

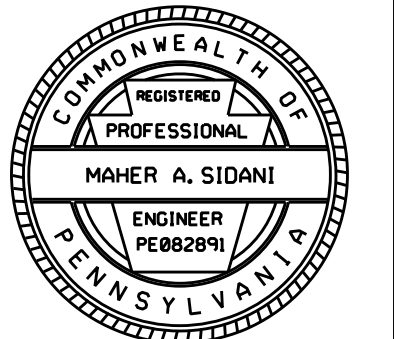
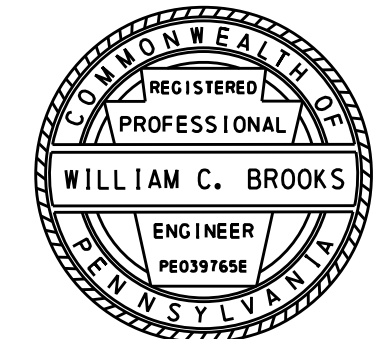
SEE SHEET 19 OF 122

SIGNING LEGEND

- ➔ - TRAFFIC FLOW ARROW
- ① - SIGN FABRICATION DETAIL NUMBER
- 20 - SIGN FABRICATION DETAIL SHEET NUMBER
- - EXISTING GROUND MOUNTED SIGN
- ▭ - EXISTING CANTILEVER MOUNTED SIGN
- ▭ - EXISTING OVERHEAD MOUNTED SIGN
- ▭ - PROPOSED GROUND MOUNTED SIGN
- ▭ - PROPOSED CANTILEVER MOUNTED SIGN
- ▭ - PROPOSED OVERHEAD MOUNTED SIGN
- ▭ - EXISTING STRUCTURE MOUNTED SIGN
- ▭ - PROPOSED STRUCTURE MOUNTED SIGN
- ▭ - EXISTING SIGN
- ▭ - SIGN PROPOSED AS PART OF THE PTC 1-95 REDESIGNATION PROJECT
- ▭ - PROPOSED SIGN
- PTC - SIGN PROPOSED AS PART OF THE PTC 1-95 REDESIGNATION PROJECT

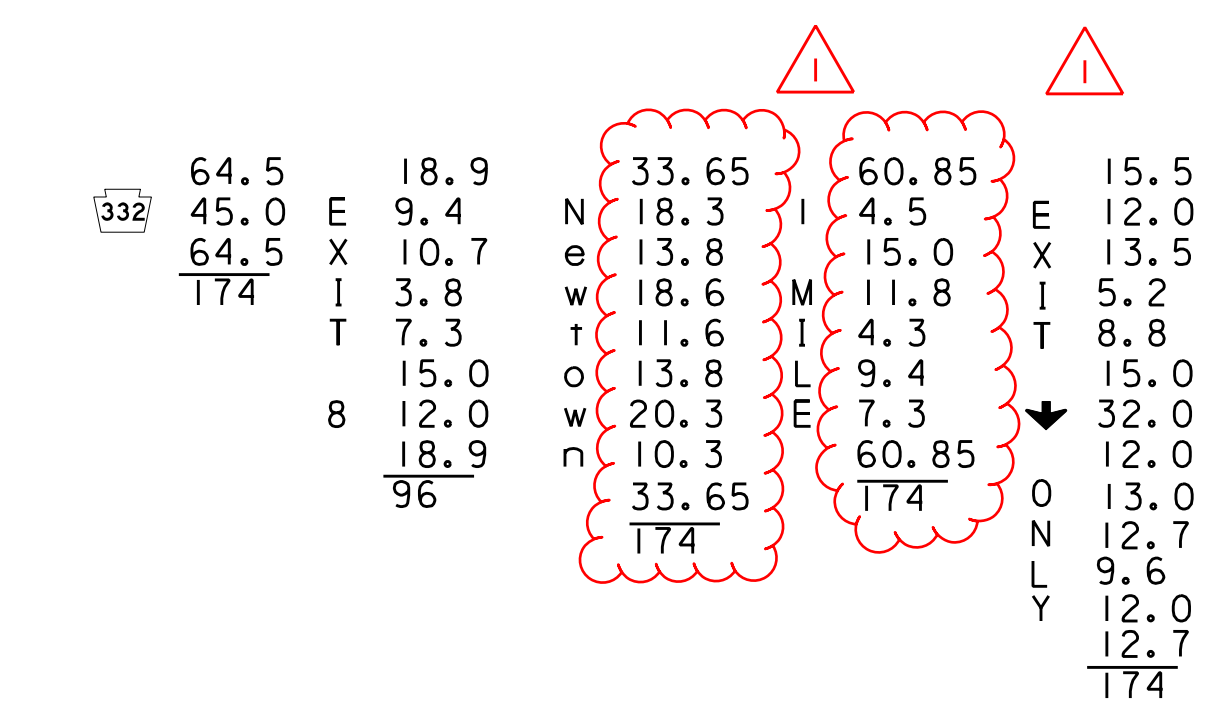
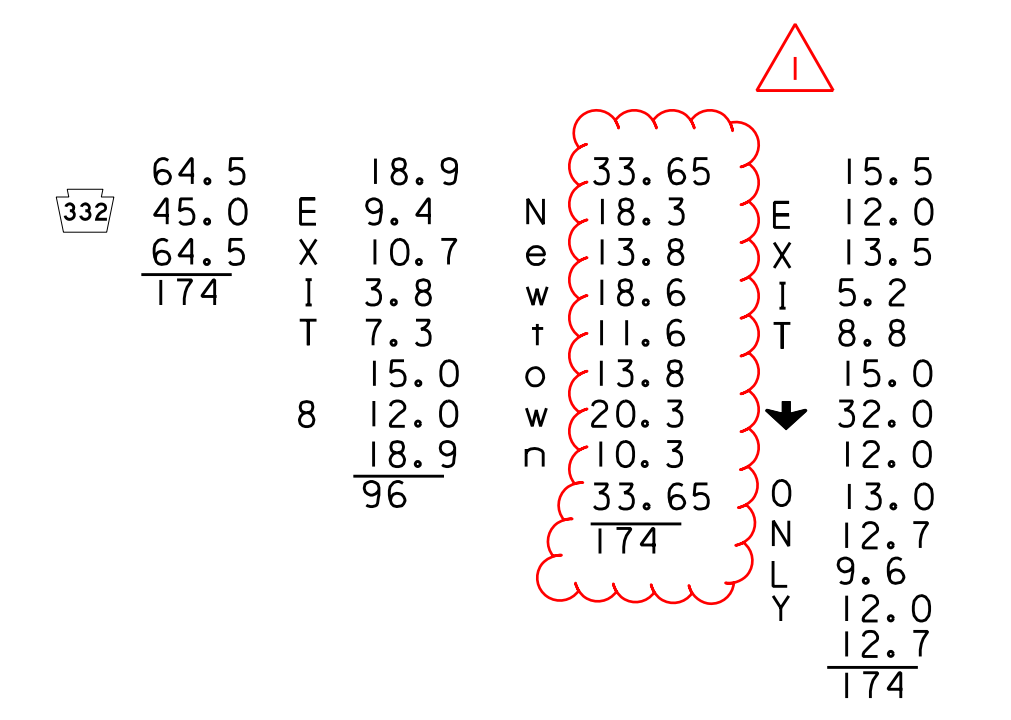
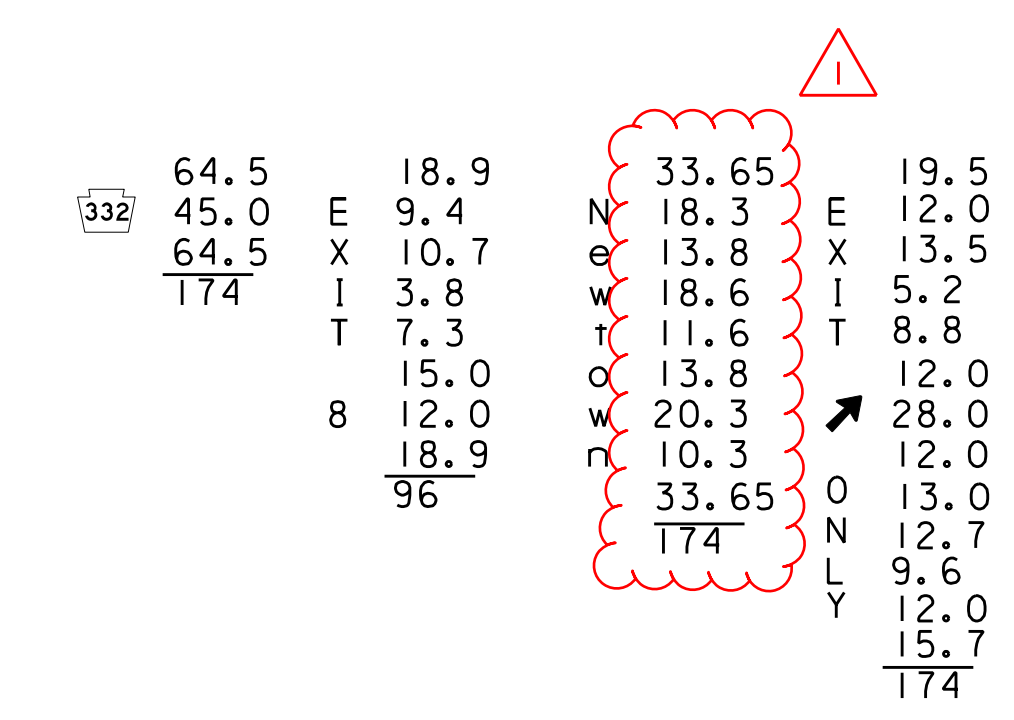
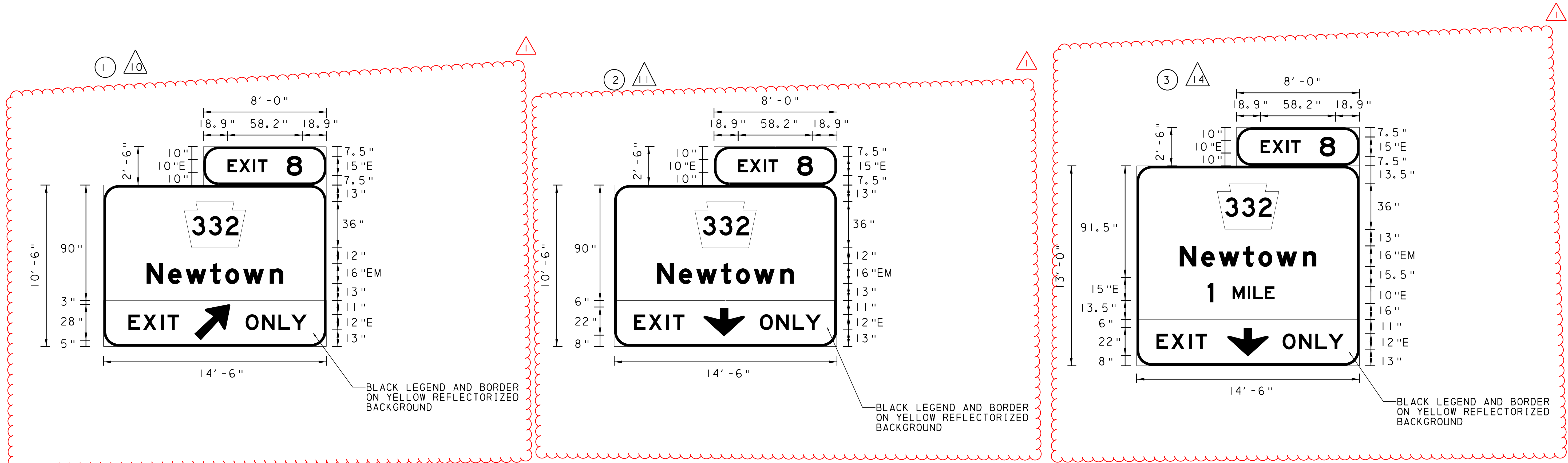
NOTE
1. SEE SHEETS 21, 22, 24 & 25 FOR TAYLORSVILLE ROAD

SIGNING AND PAVEMENT MARKING PLAN



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DISTRICT	COUNTY	ROUTE	SECTION	SHEET	
6-0	BUCKS	0095	001	26 OF 121	
LOWER MAKEFIELD TOWNSHIP					
REVISION NUMBER	REVISIONS			DATE	BY
1	ADDENDUM NO. 8			12/01/16	STV



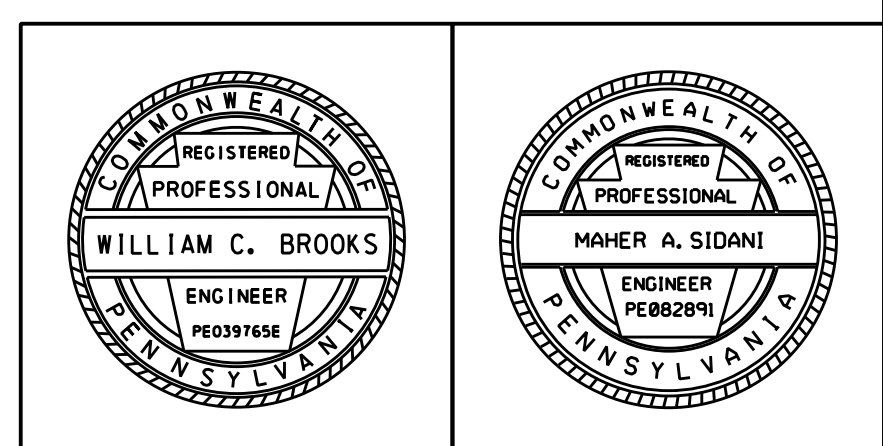
LEGEND

△ PLAN SHEET NUMBER - SIGN LOCATION

○ SIGN FABRICATION DETAIL NUMBER

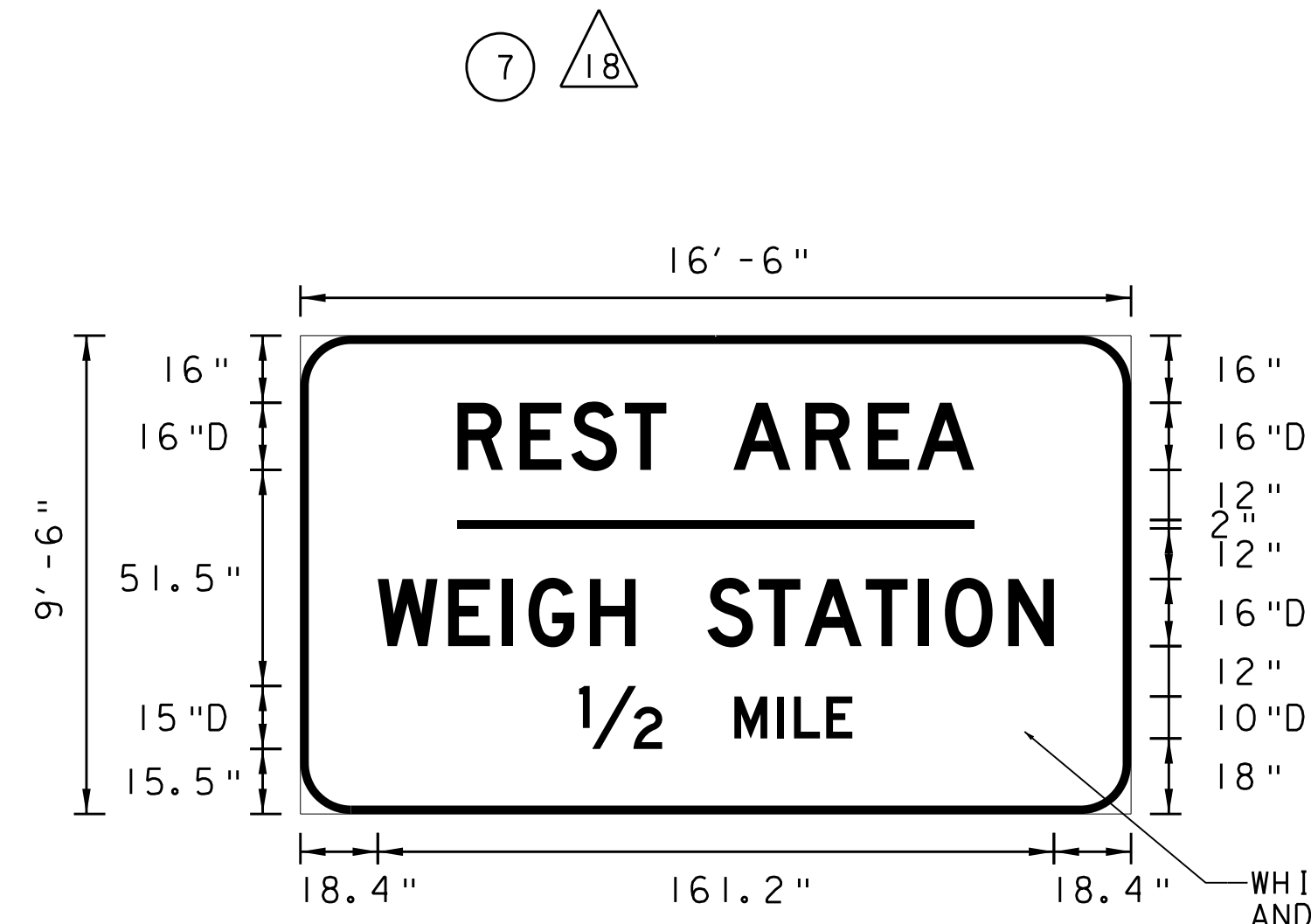
- NOTES**
- ALL SIGNS SHALL HAVE A GREEN REFLECTORIZED BACKGROUND WITH WHITE REFLECTORIZED LEGEND AND BORDER, UNLESS NOTED OTHERWISE.
 - ALL SIGNS HAVE A 2" BORDER WITH A 12" RADIUS ON CORNERS, UNLESS NOTED OTHERWISE.
 - ALL DIMENSIONS ARE GIVEN IN INCHES UNLESS OTHERWISE NOTED.
 - SEE TC-8701D, SHEET 7 OF 13, NOTE 1 FOR EXIT ONLY SIGN PANEL MARGIN AND BORDER THICKNESS.

SIGNING PLAN
SIGN FABRICATION DETAILS

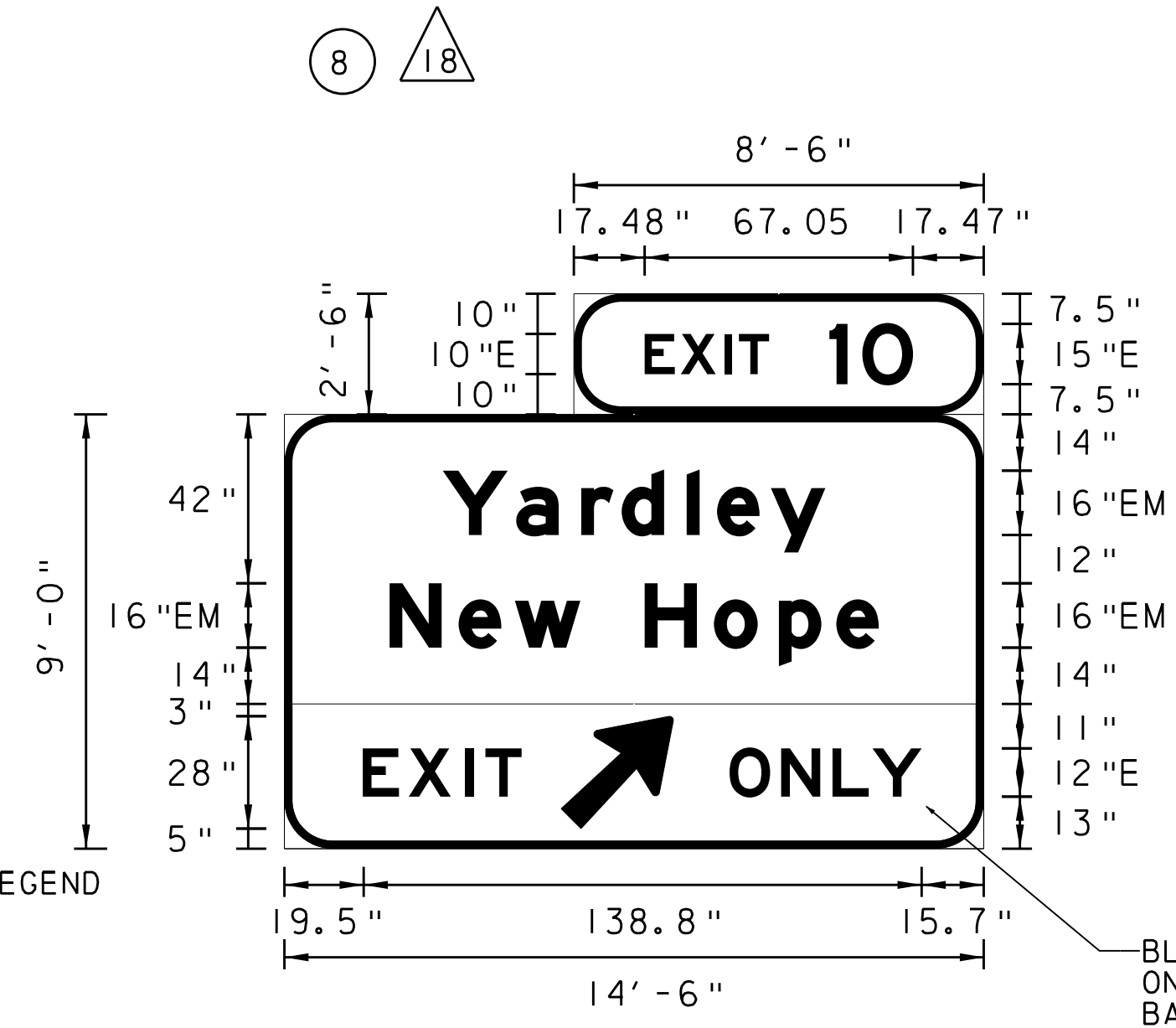


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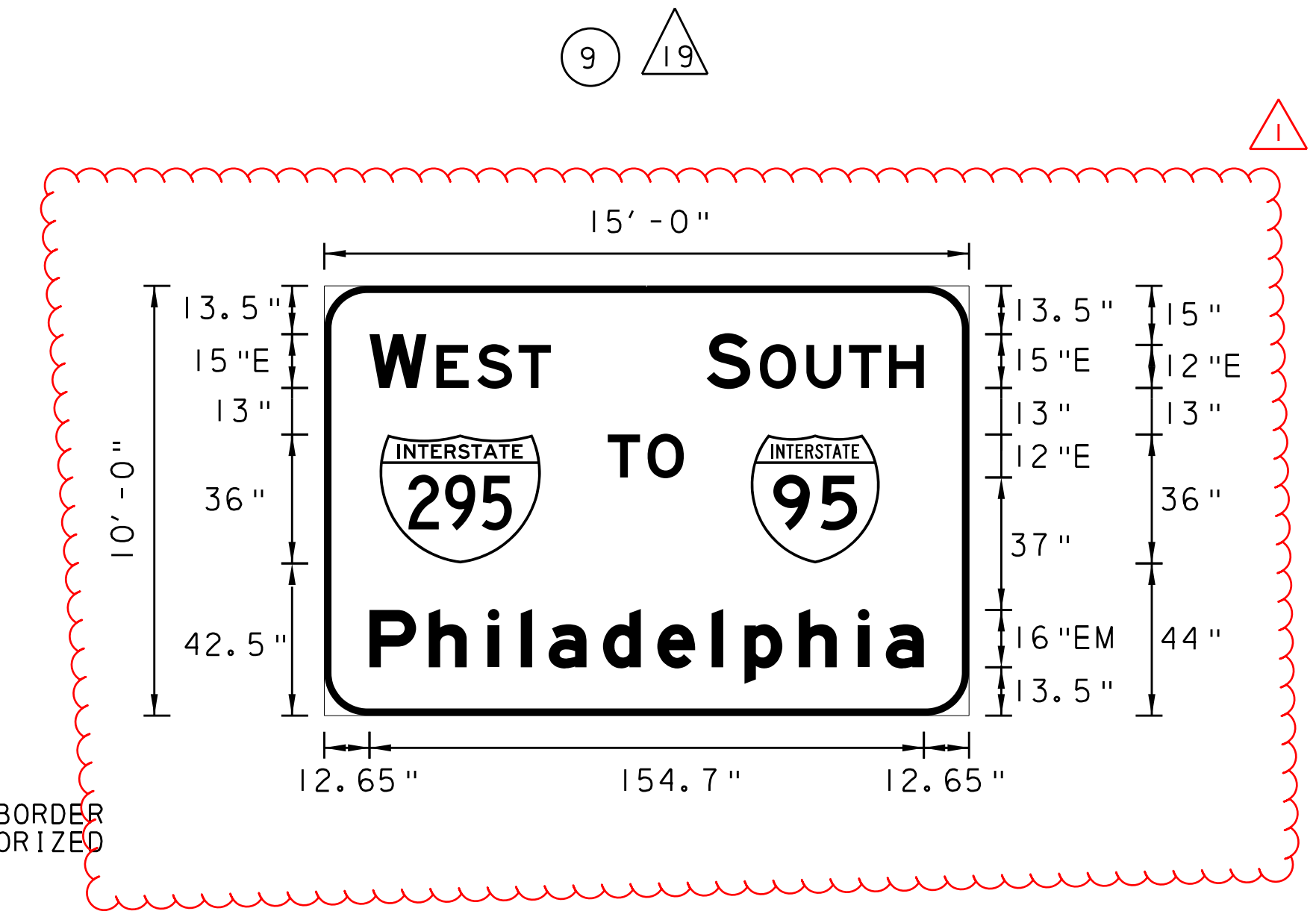
DISTRICT	COUNTY	ROUTE	SECTION	SHEET	
6-0	BUCKS	0095	001	28 OF 121	
LOWER MAKEFIELD TOWNSHIP					
REVISION NUMBER	REVISIONS			DATE	BY
I	ADDENDUM NO. 8			12/01/16	STV



WHITE REFLECTORIZED LEGEND AND BORDER ON BLUE REFLECTORIZED BACKGROUND



BLACK LEGEND AND BORDER ON YELLOW REFLECTORIZED BACKGROUND



R	37.4	37.4	18.4	66.45
E	14.6	123.2	17.0	22.0
S	12.8	37.4	12.8	15.0
T	13.8	198	6.2	10.1
A	9.8		14.6	3.9
R	16.0		10.8	8.0
E	16.4		16.0	6.1
A	14.6		13.8	66.45
11.8			10.8	198
13.4			14.4	
37.4			12.8	
198			6.2	
			15.0	
			10.8	
			18.4	
			198	

E	17.48	39.4	26.15	19.5
X	9.4	Y	18.0	18.3
I	10.7	a	16.3	13.8
T	3.8	r	10.1	15.8
	7.3	d	16.4	16.0
	15.0	i	7.9	18.3
	8.4	e	13.6	15.4
	12.45	y	12.9	13.8
	17.47	39.4	10.3	10.3
	102	174	26.15	12.7
			174	9.6
				12.0
				15.7
				174

W	12.65	15.45	12.65
E	18.5	45.0	17.3
S	11.3	18.7	16.4
T	12.0	11.3	9.1
A	8.8	9.9	7.9
R	43.5	18.7	15.0
S	14.7	36.0	15.1
O	13.0	24.95	15.3
U	12.0	180	9.1
T	11.3		15.1
H	9.6		16.4
	12.65		7.9
	180		10.1
			12.65
			180

LEGEND

- PLAN SHEET NUMBER - SIGN LOCATION
- SIGN FABRICATION DETAIL NUMBER

NOTES

1. ALL SIGNS SHALL HAVE A GREEN REFLECTORIZED BACKGROUND WITH WHITE REFLECTORIZED LEGEND AND BORDER, UNLESS NOTED OTHERWISE.
2. ALL SIGNS HAVE A 2" BORDER WITH A 12" RADIUS ON CORNERS, UNLESS NOTED OTHERWISE.
3. ALL DIMENSIONS ARE GIVEN IN INCHES UNLESS OTHERWISE NOTED.
4. SEE TC-8701D, SHEET 7 OF 13, NOTE 1 FOR EXIT ONLY SIGN PANEL MARGIN AND BORDER THICKNESS.

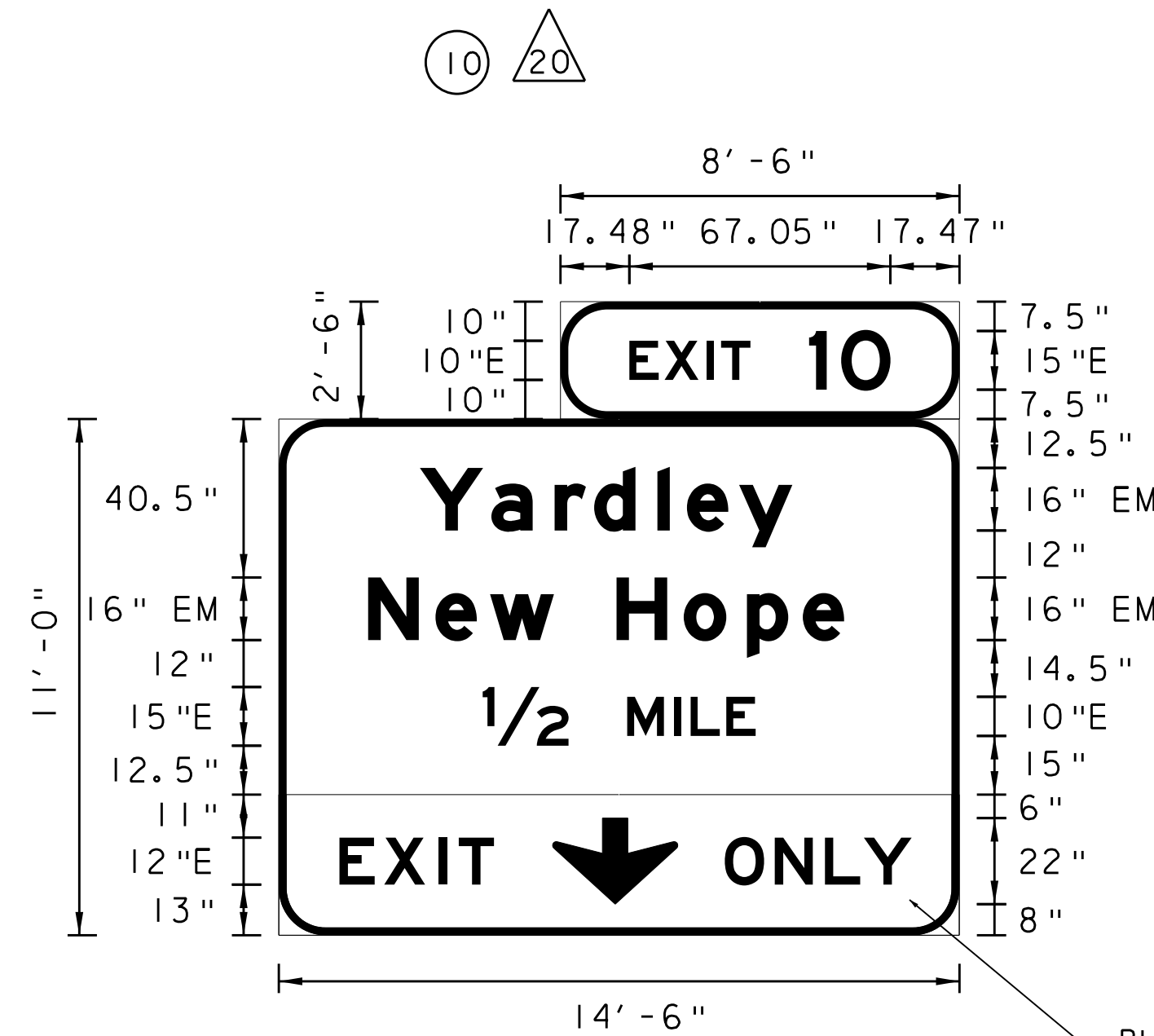
**SIGNING PLAN
SIGN FABRICATION DETAILS**

WILLIAM C. BROOKS
ENGINEER
PE039765E

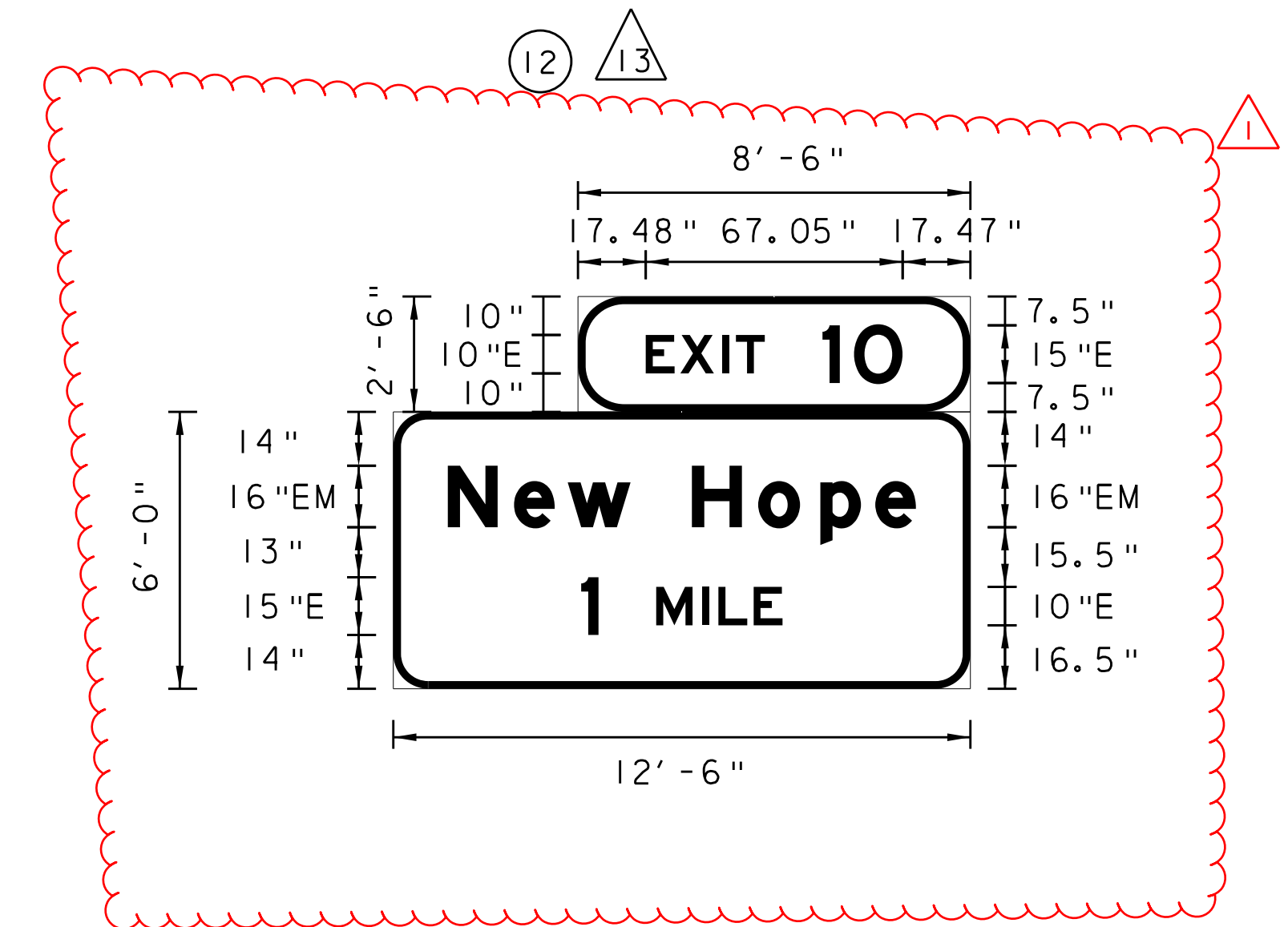
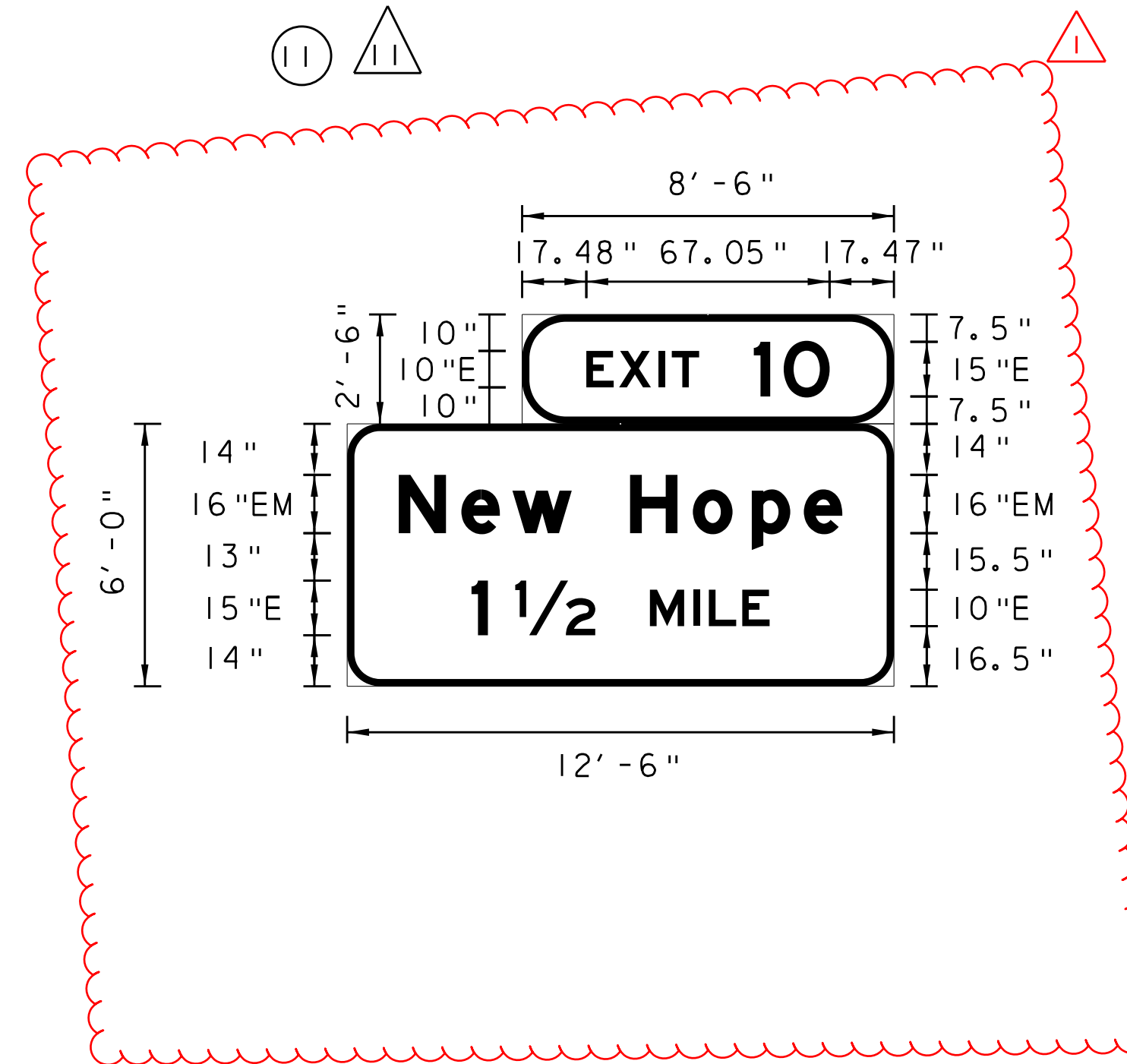
MAHER A. SIDANI
ENGINEER
PE082891

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET	
6-0	BUCKS	0095	001	29 OF 121	
LOWER MAKEFIELD TOWNSHIP					
REVISION NUMBER	REVISIONS			DATE	BY
1	ADDENDUM NO. 8			12/01/16	STV



BLACK LEGEND AND BORDER ON YELLOW REFLECTORIZED BACKGROUND



E	17.48	39.4	26.15	52.1	15.5
X	9.4	18.0	18.3	1/2	22.0
I	10.7	16.3	13.8	15.0	13.5
I	3.8	10.1	15.8	5.2	5.2
T	7.3	16.4	16.0	11.8	11.8
	15.0	7.9	18.3	4.3	8.8
I	8.4	13.6	15.4	9.4	15.0
O	12.45	12.9	13.8	7.3	32.0
	17.47	39.4	10.3	52.1	12.0
	102	174	26.15	174	13.0
			174		12.7
					9.6
					12.0
					12.7
					174

E	17.48	14.15	34.1
X	9.4	18.3	4.5
I	10.7	13.8	7.5
I	3.8	15.8	1/2
T	7.3	16.0	22.0
	15.0	18.3	15.0
I	8.4	15.4	M
O	12.45	13.8	11.8
	17.47	10.3	I
	102	14.15	4.3
		150	9.4
			7.3
			34.1
			150

E	17.48	14.15	48.85
X	9.4	18.3	4.5
I	10.7	13.8	15.0
I	3.8	15.8	M
T	7.3	16.0	11.8
	15.0	18.3	I
I	8.4	15.4	4.3
O	12.45	13.8	L
	17.47	10.3	E
	102	14.15	7.3
		150	48.85
			150

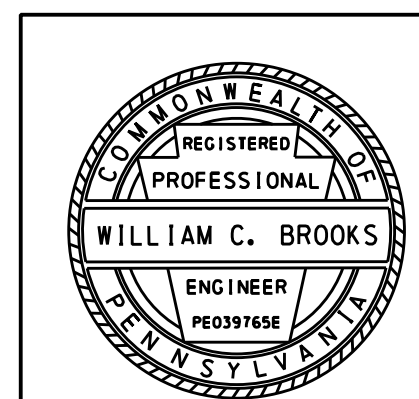
LEGEND

- PLAN SHEET NUMBER - SIGN LOCATION
- SIGN FABRICATION DETAIL NUMBER

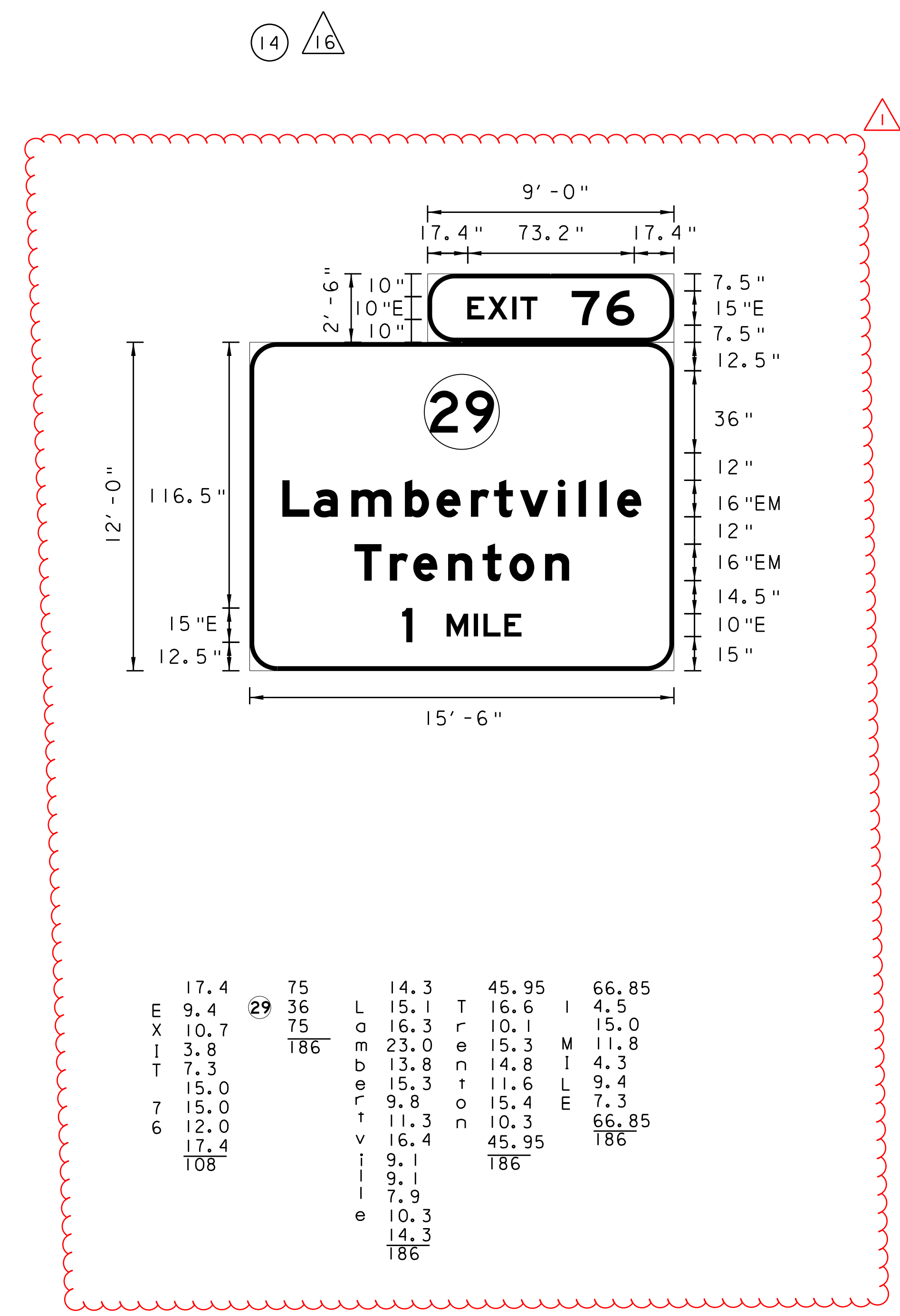
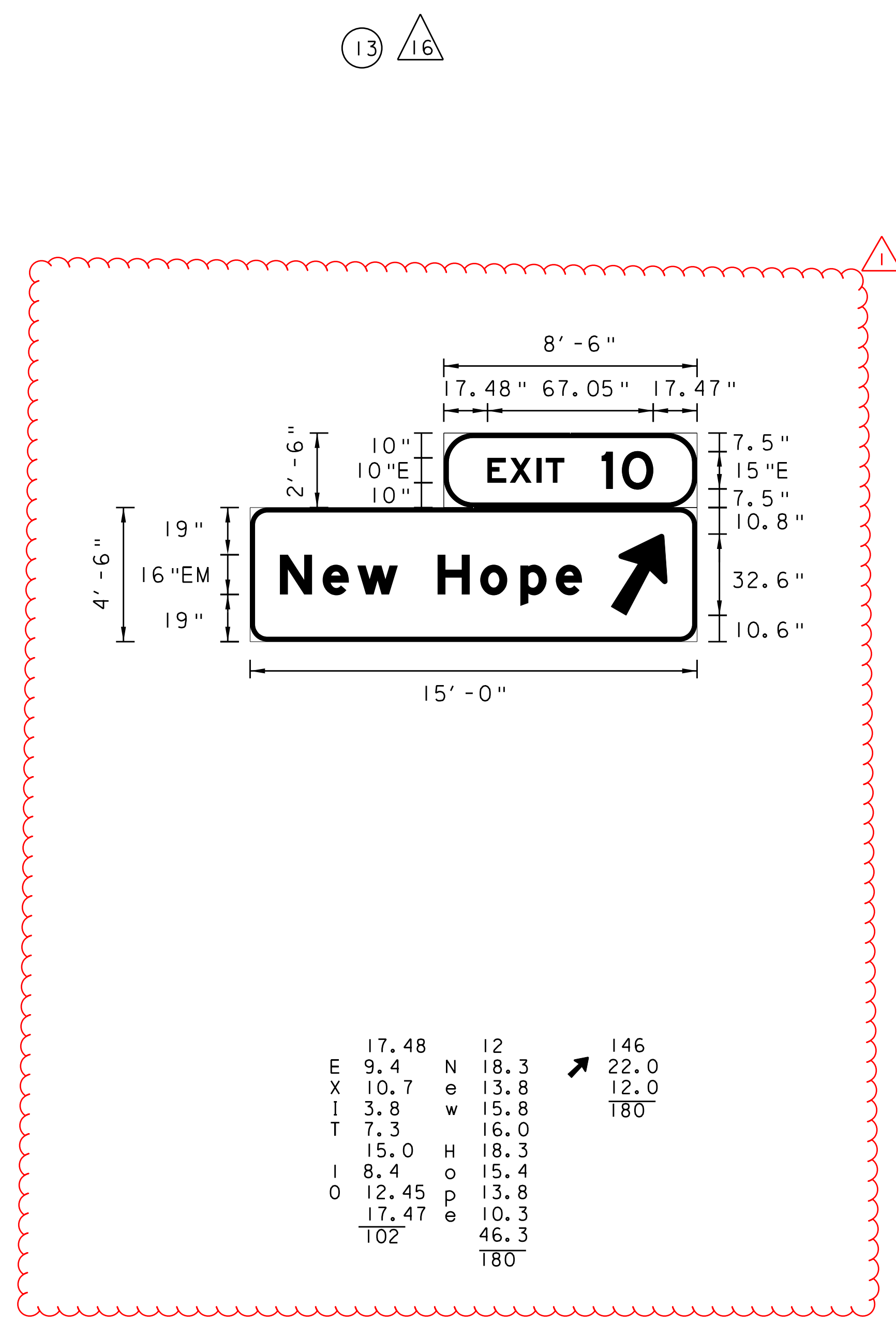
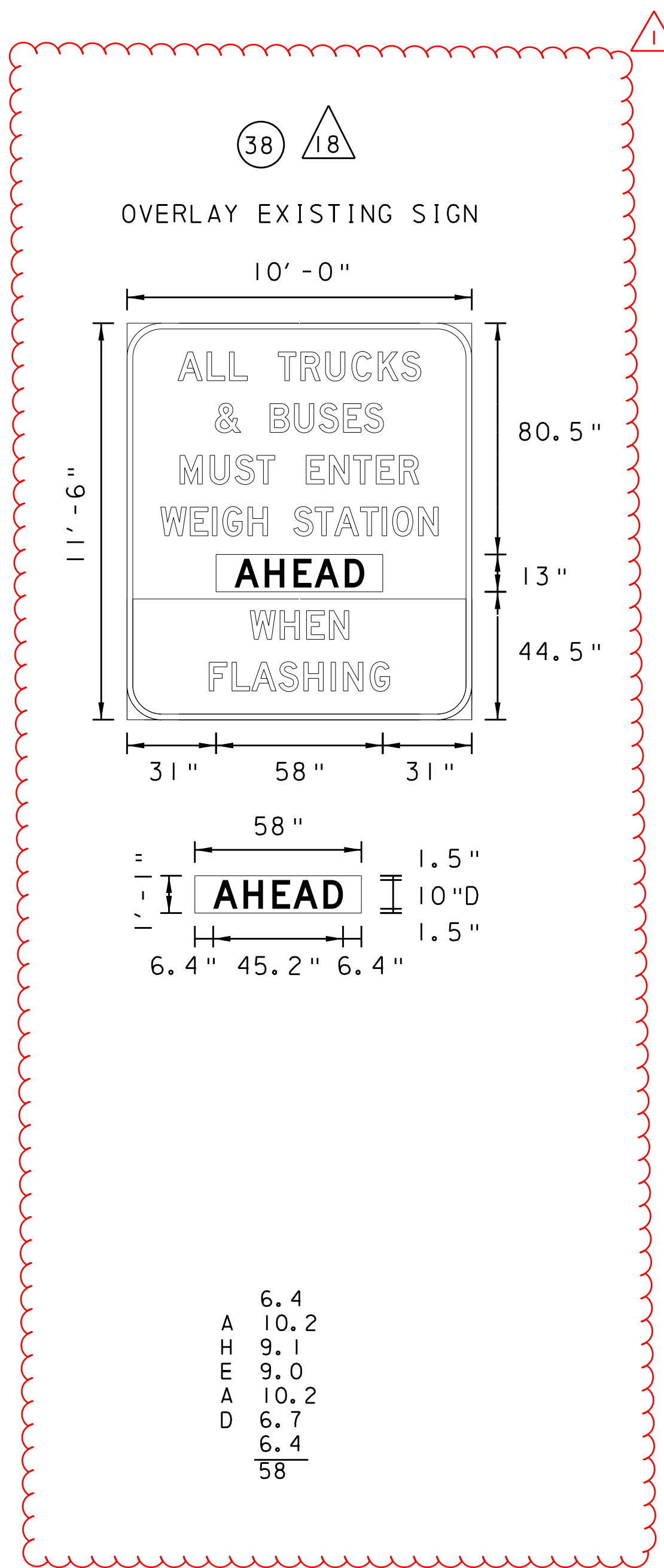
NOTES

1. ALL SIGNS SHALL HAVE A GREEN REFLECTORIZED BACKGROUND WITH WHITE REFLECTORIZED LEGEND AND BORDER, UNLESS NOTED OTHERWISE.
2. ALL SIGNS HAVE A 2" BORDER WITH A 12" RADIUS ON CORNERS, UNLESS NOTED OTHERWISE.
3. ALL DIMENSIONS ARE GIVEN IN INCHES UNLESS OTHERWISE NOTED.
4. SEE TC-8701D, SHEET 7 OF 13, NOTE 1 FOR EXIT ONLY SIGN PANEL MARGIN AND BORDER THICKNESS.

**SIGNING PLAN
SIGN FABRICATION DETAILS**



DISTRICT	COUNTY	ROUTE	SECTION	SHEET	
6-0	BUCKS	0095	001	30 OF 121	
LOWER MAKEFIELD TOWNSHIP					
REVISION NUMBER	REVISIONS			DATE	BY
1	ADDENDUM NO. 8			12/01/16	STV



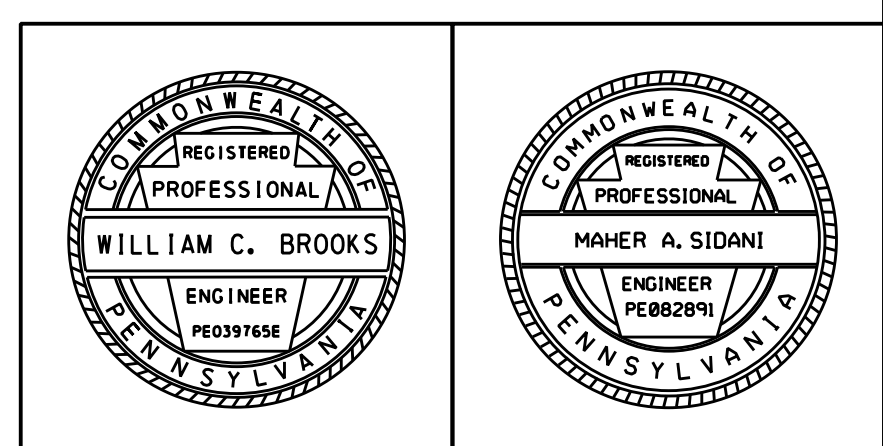
LEGEND

△ PLAN SHEET NUMBER - SIGN LOCATION

○ SIGN FABRICATION DETAIL NUMBER

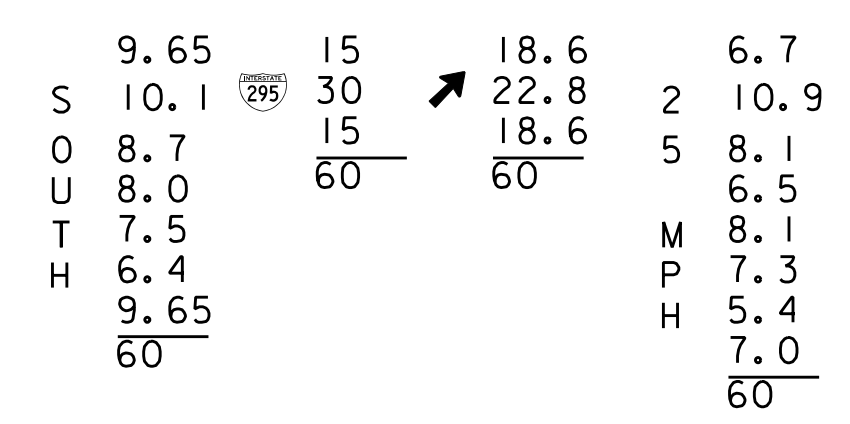
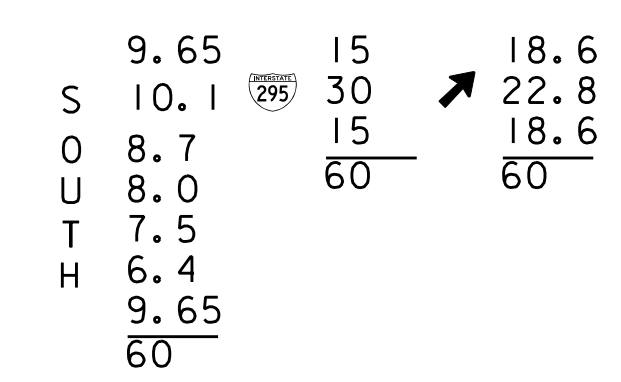
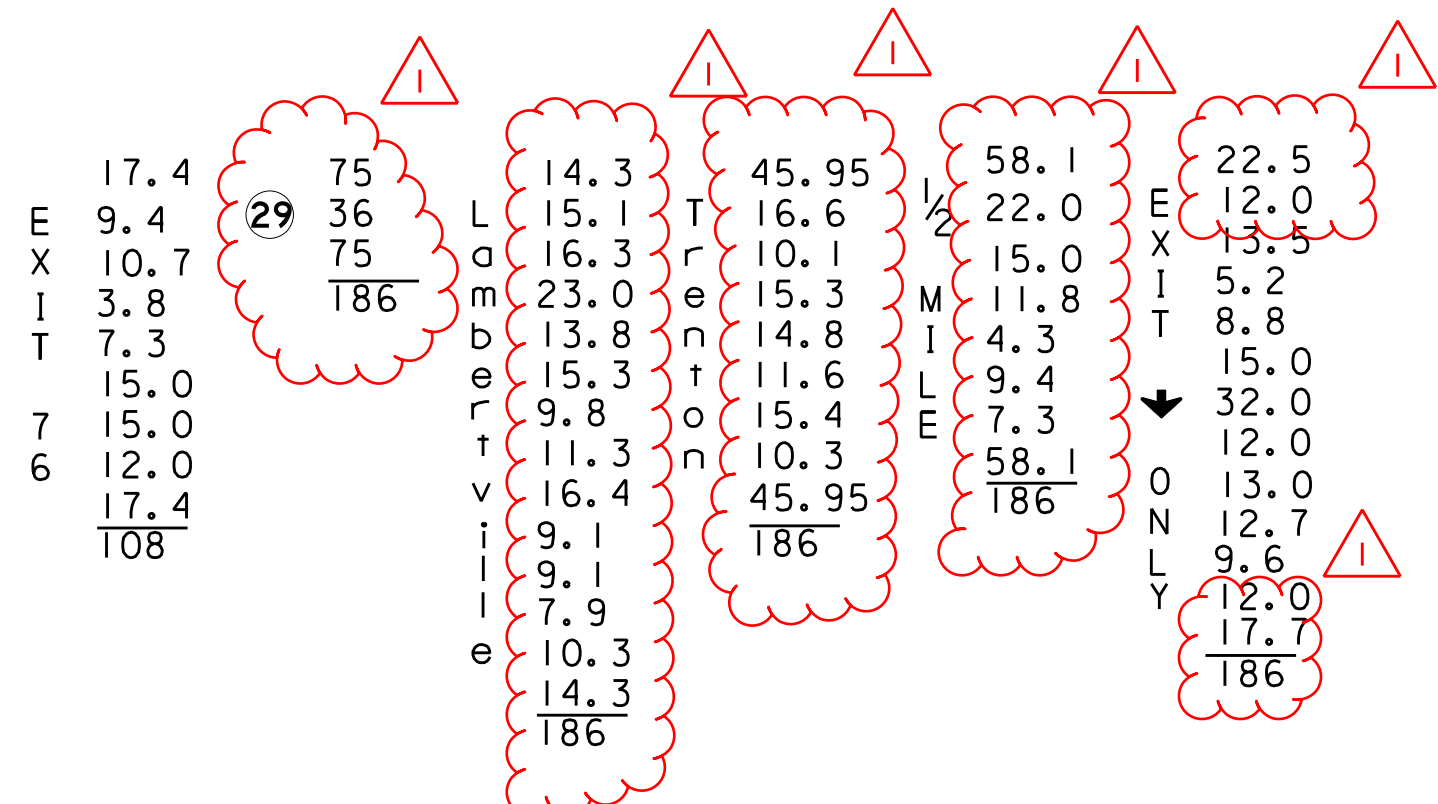
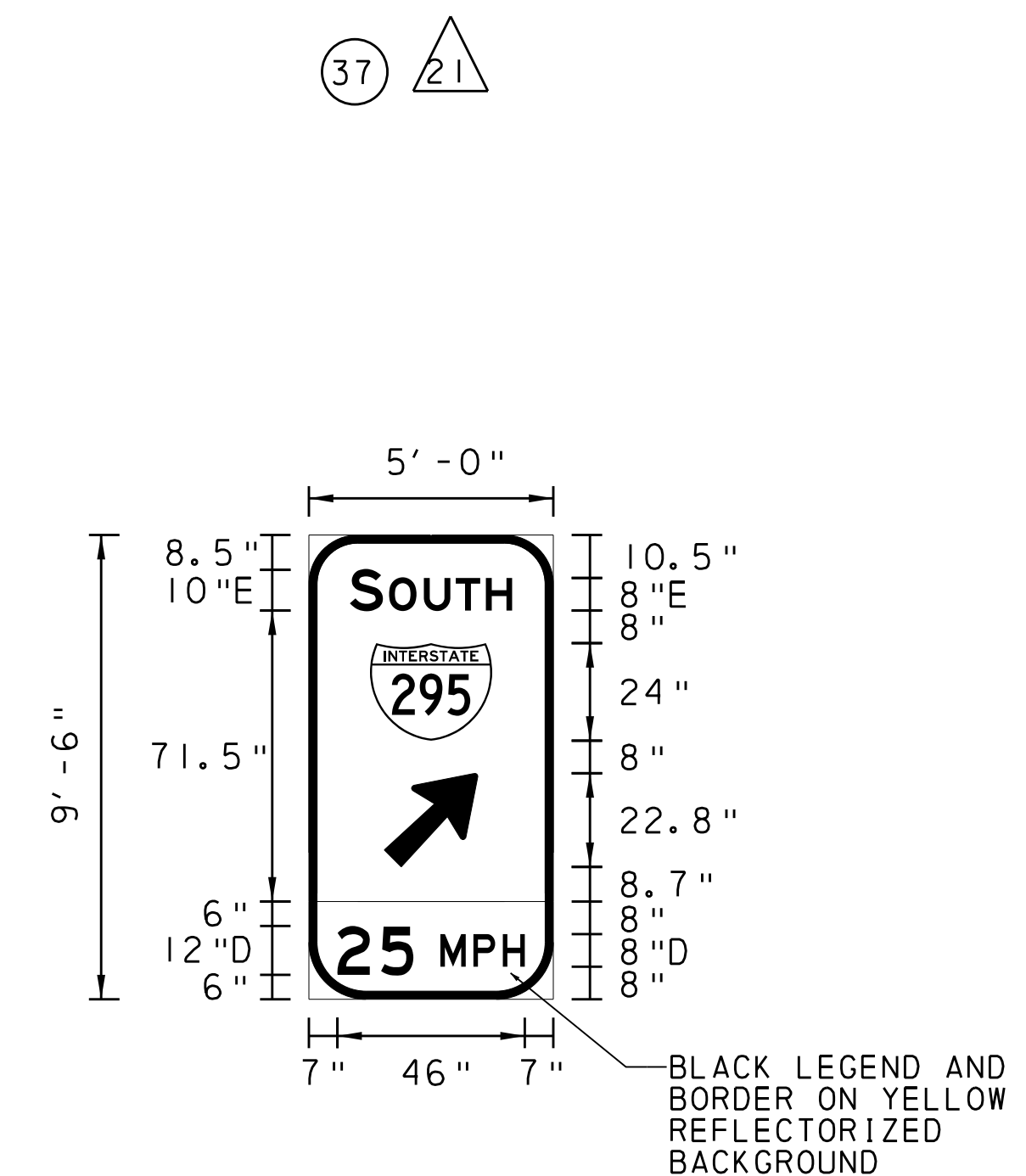
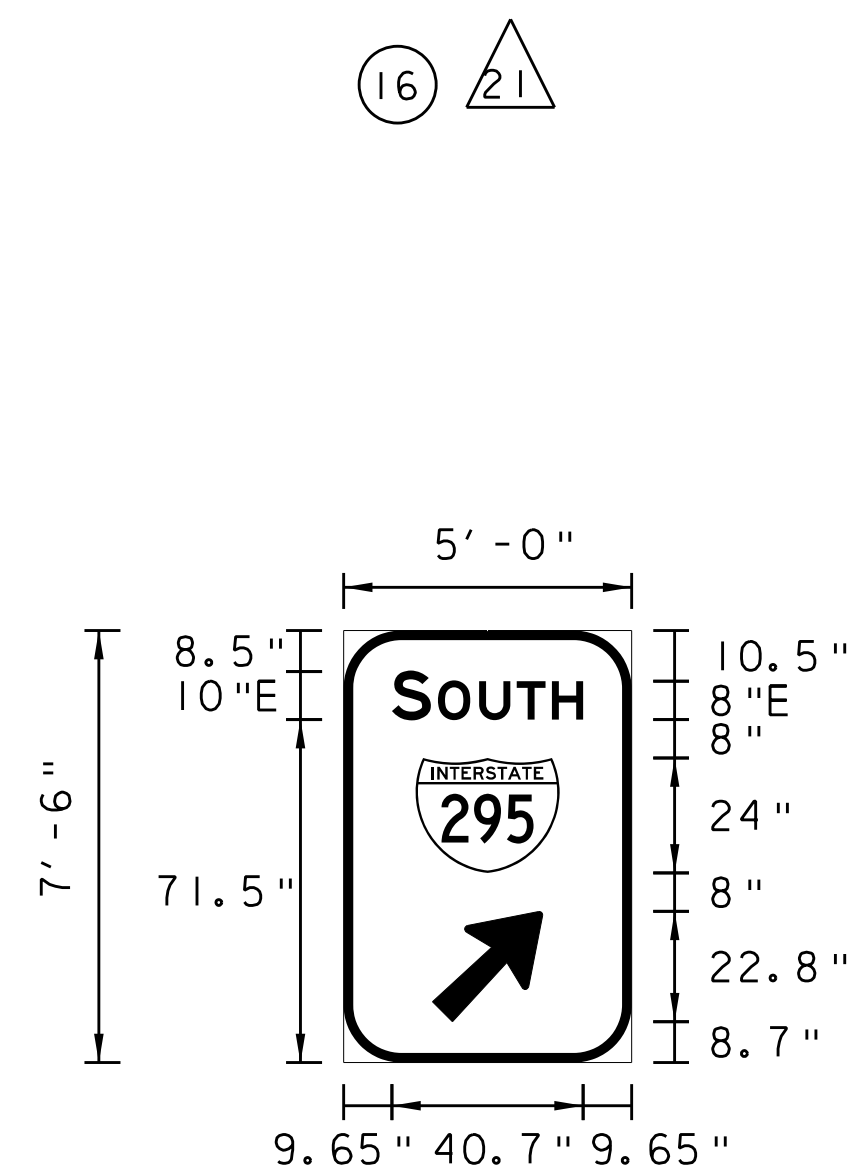
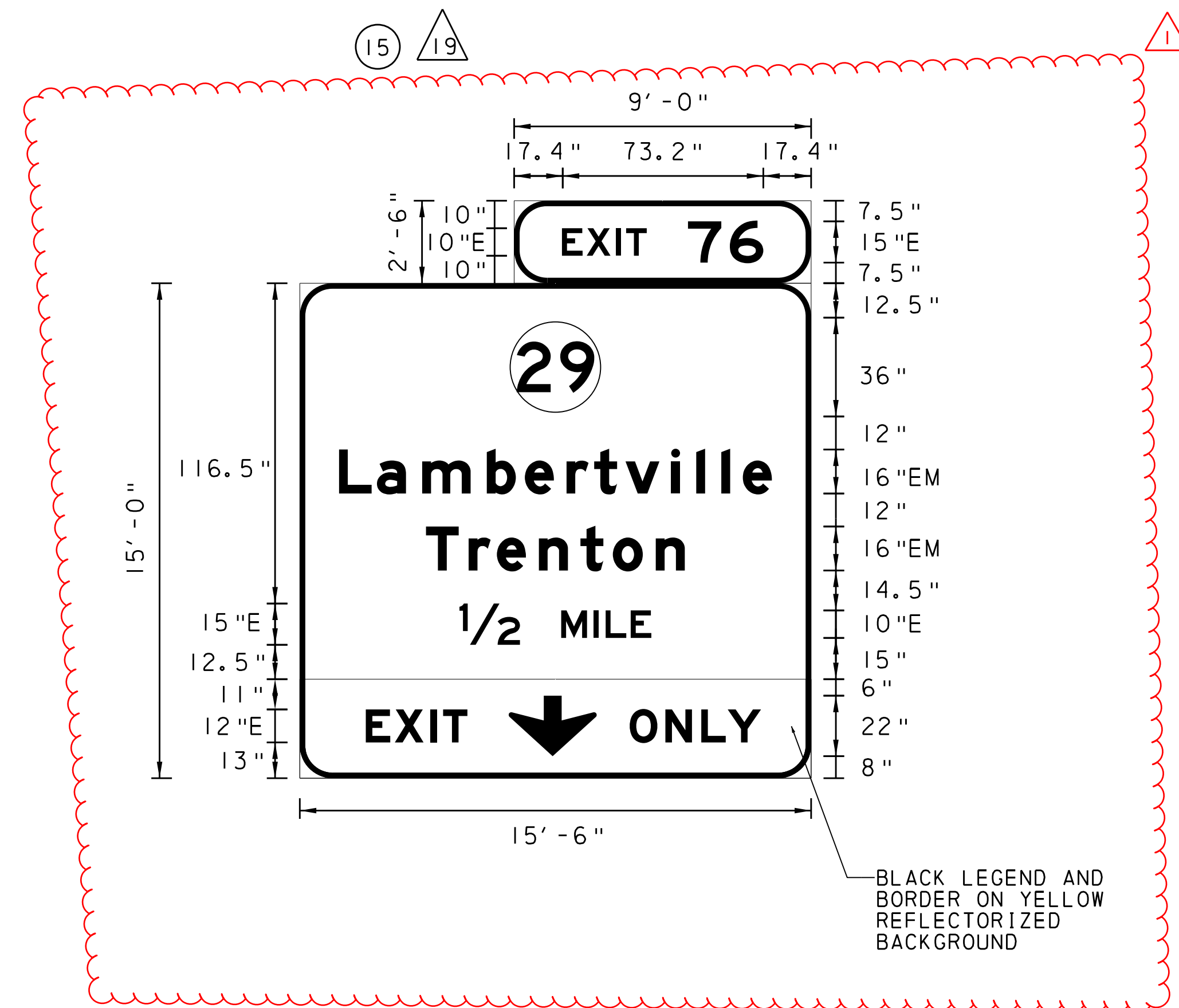
- NOTES**
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 - ALL SIGNS HAVE A 2" BORDER WITH A 12" RADIUS ON CORNERS, UNLESS NOTED OTHERWISE.
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 - SEE TC-8701D, SHEET 7 OF 13, NOTE 1 FOR EXIT ONLY SIGN PANEL MARGIN AND BORDER THICKNESS.

SIGNING PLAN
SIGN FABRICATION DETAILS



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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0095	001	31 OF 121
LOWER MAKEFIELD TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	
I	ADDENDUM NO. 8	12/01/16	STV	



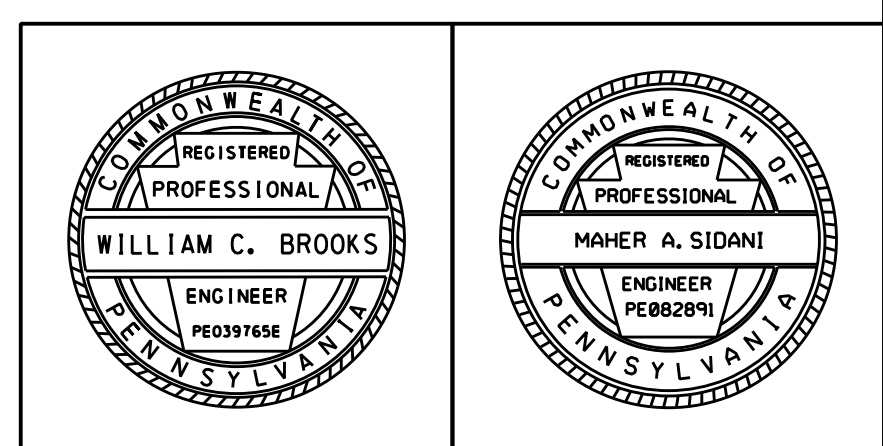
LEGEND

- PLAN SHEET NUMBER - SIGN LOCATION
- SIGN FABRICATION DETAIL NUMBER

NOTES

1. ALL SIGNS SHALL HAVE A GREEN REFLECTORIZED BACKGROUND WITH WHITE REFLECTORIZED LEGEND AND BORDER, UNLESS NOTED OTHERWISE.
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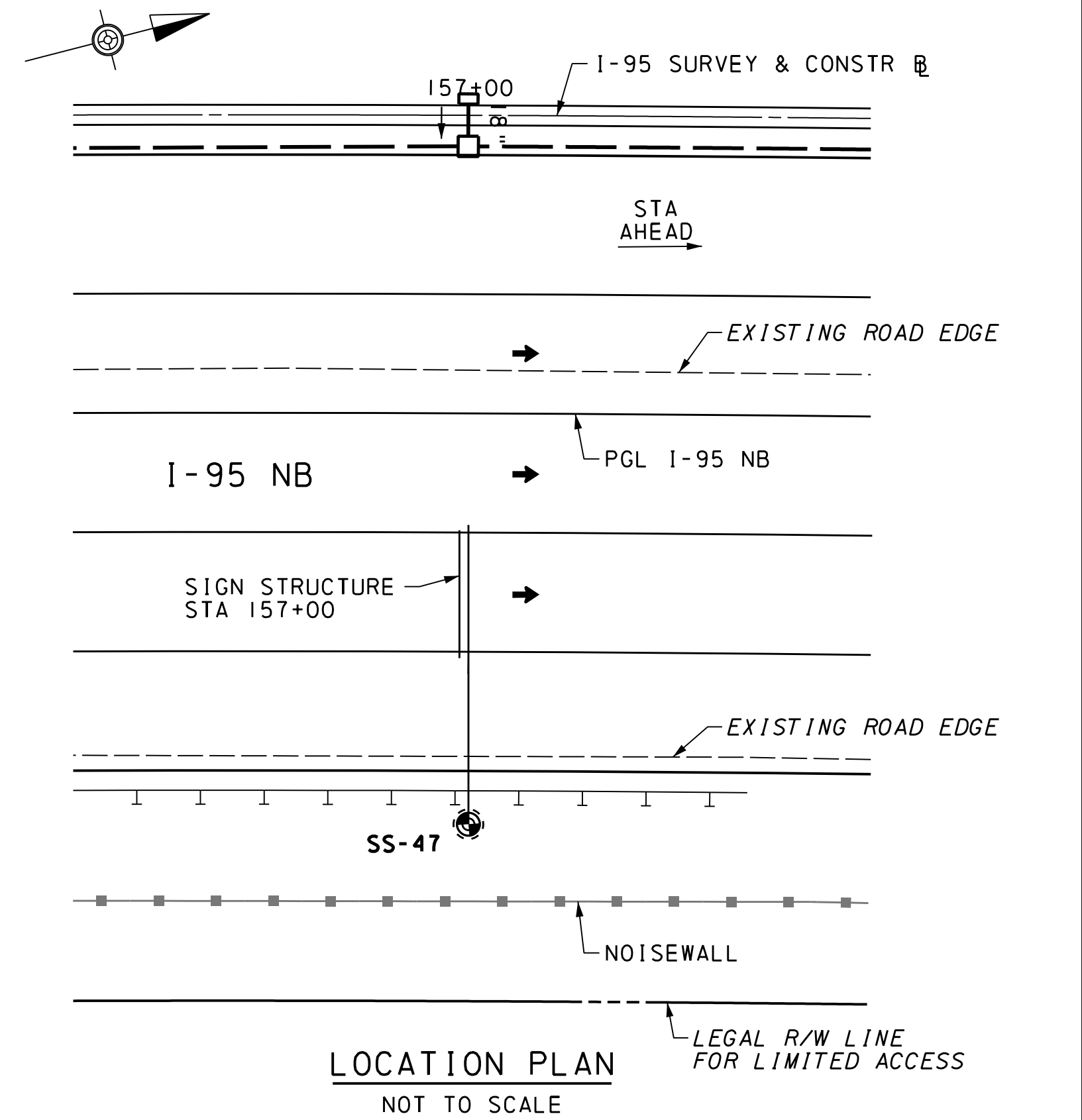
**SIGNING PLAN
SIGN FABRICATION DETAILS**



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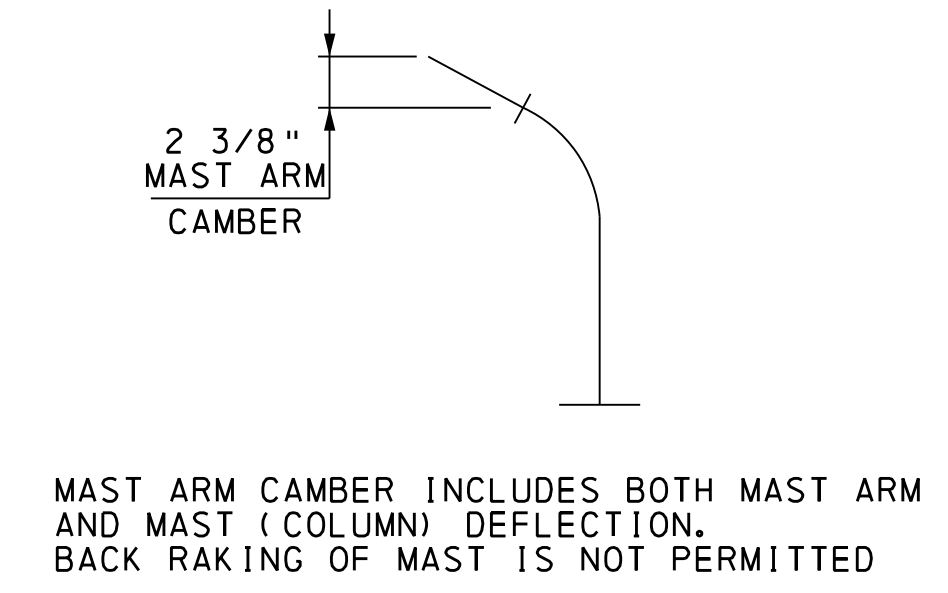
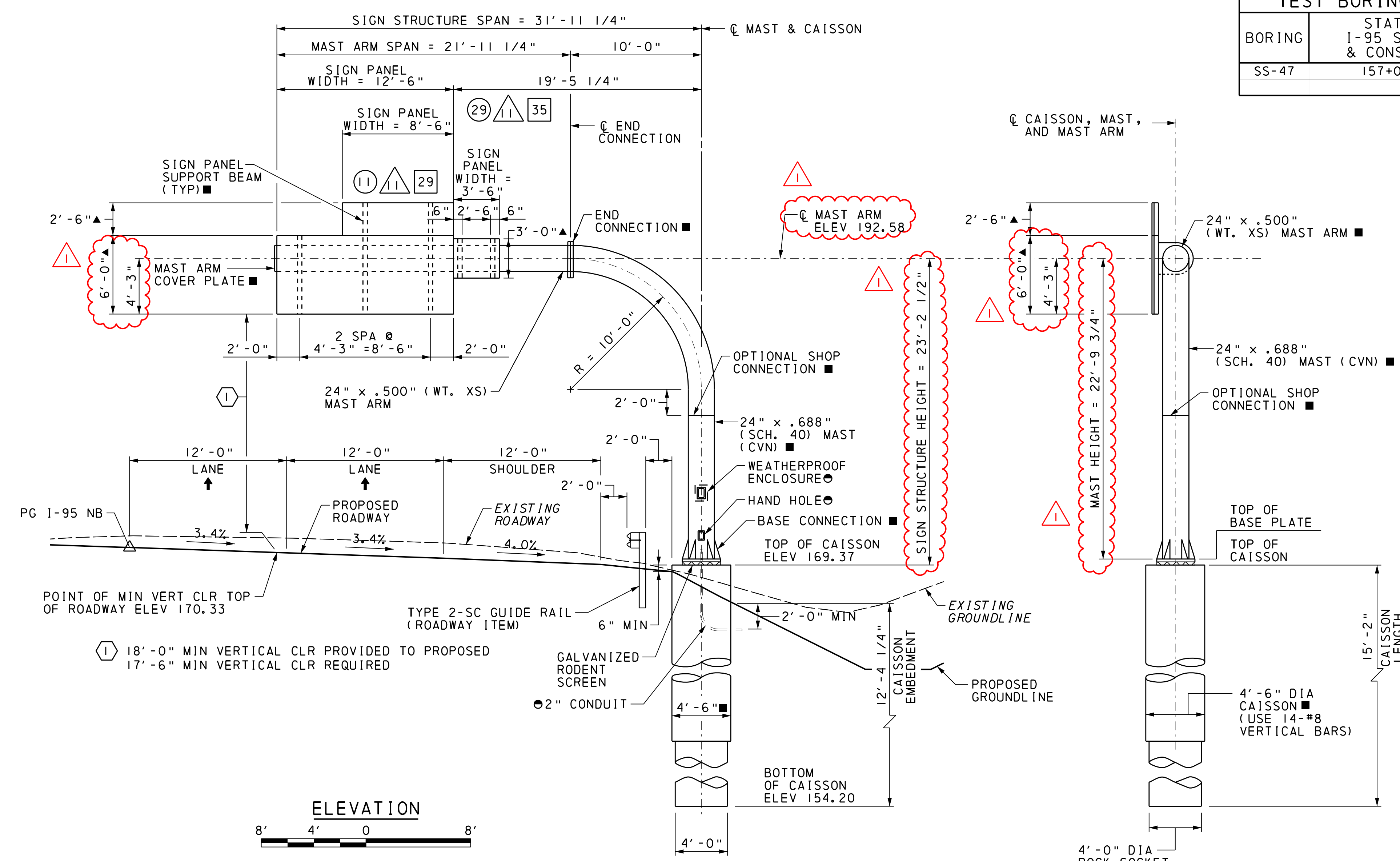
DISTRICT	COUNTY	ROUTE	SECTION	SHEET	
6-0	BUCKS	0095	001	38 OF 121	
LOWER MAKEFIELD TOWNSHIP					
REVISION NUMBER	REVISIONS			DATE	BY
1	ADDENDUM NO. 8			12/01/16	STV

TEST BORING LOCATIONS		
BORING	STATION	OFFSET
SS-47	157+00.00	68.69' RT

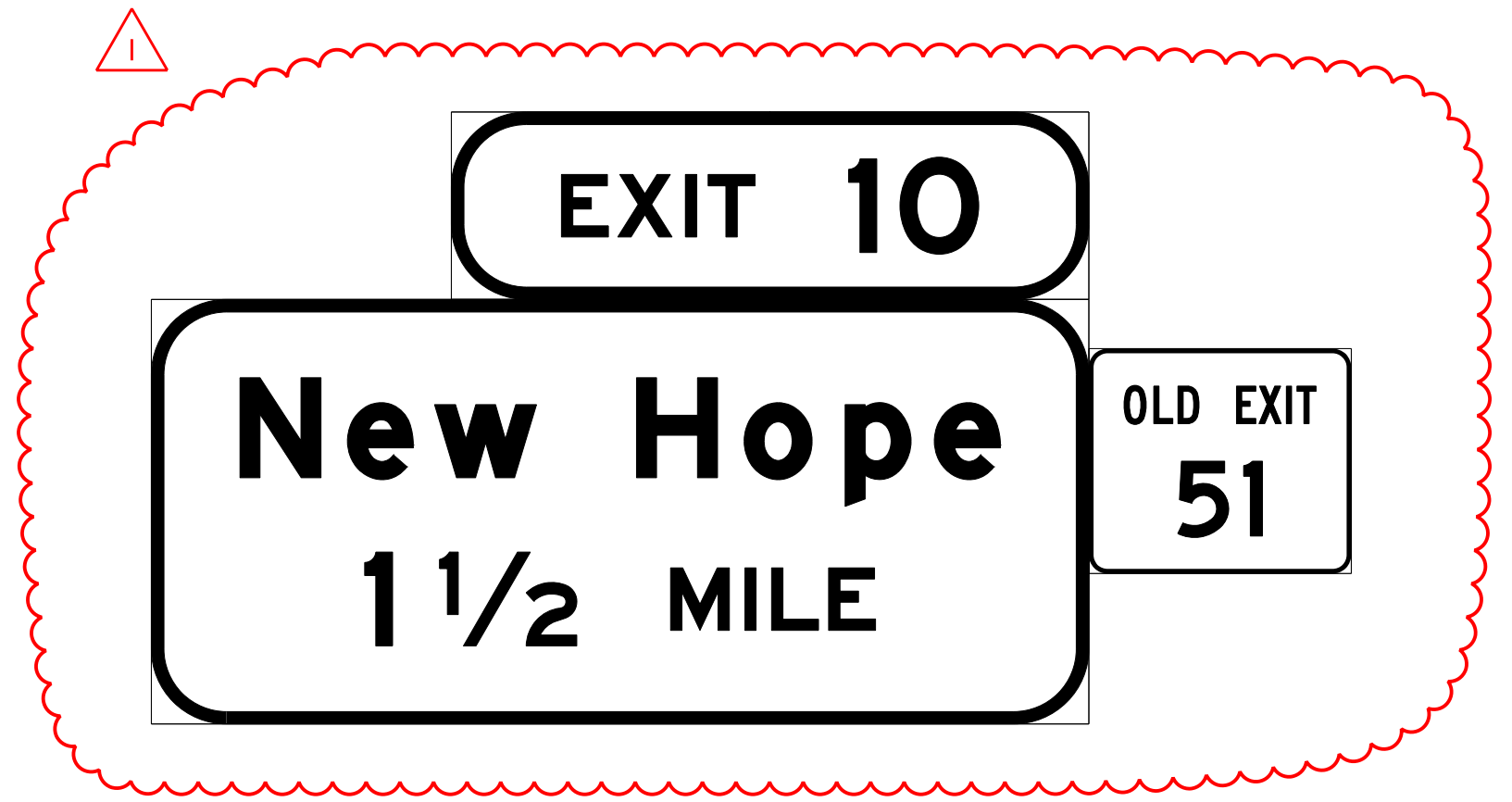


- LEGEND**
- ↑ DIRECTION OF TRAFFIC
 - ⊕ SIGN FABRICATION DETAIL NUMBER
 - ⊠ PLAN SHEET NUMBER - SIGN LOCATION
 - ⊞ SIGN FABRICATION DETAIL SHEET NUMBER
 - TEST BORING
- NOTES**
- FOR GENERAL NOTES, QUANTITIES, AND SUPPLEMENTAL DRAWINGS, SEE SHEET 39.
 - FOR TEST BORING LOGS, SEE SHEET 40.
 - ROADWAY DIMENSIONS ARE MEASURED ALONG CENTERLINE OF SIGN STRUCTURE.
 - ESTIMATED BEDROCK ELEVATION IS AT 159.2', MAINTAIN ROCK SOCKET LENGTH OF 5.0' IF THE BEDROCK IS ENCOUNTERED AT DIFFERENT ELEVATION.
- SEE PENNDOT BC-747M FOR DETAILS
 - SEE PENNDOT BC-741M FOR DETAILS
 - ▲ SIGN PANEL HEIGHT

DESIGN CRITERIA	
DESIGN SIGN AREA (A)	= 250.00 SQ. FT.
DESIGN SPAN	= 38'-0"
FATIGUE CATEGORY	= 1



HORIZONTAL CURVE DATA		VERTICAL CURVE DATA	
I-95 SURVEY & CONSTR B		I-95 SURVEY & CONSTR B (PGL I-95 NB)	
PI STA	161+68.70	PVT STA	153+00.00
Δ	16°52'24" RT	ELEV	168.90
T	1°00'00"	PVC STA	177+40.00
D	849.87'	ELEV	179.93
L	1687.44'		
R	5730.00'		
E	62.68'		
SUPERELEVATE 3.4%			



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

SCUDDER FALLS BRIDGE
REPLACEMENT PROJECT CONTRACT T-668A
CANTILEVER MONOPIPE SIGN STRUCTURE
I-95 NB - STA 157+00

GENERAL PLAN & ELEVATION

RECOMMENDED _____	S- 36597
DISTRICT BRIDGE ENGINEER _____	

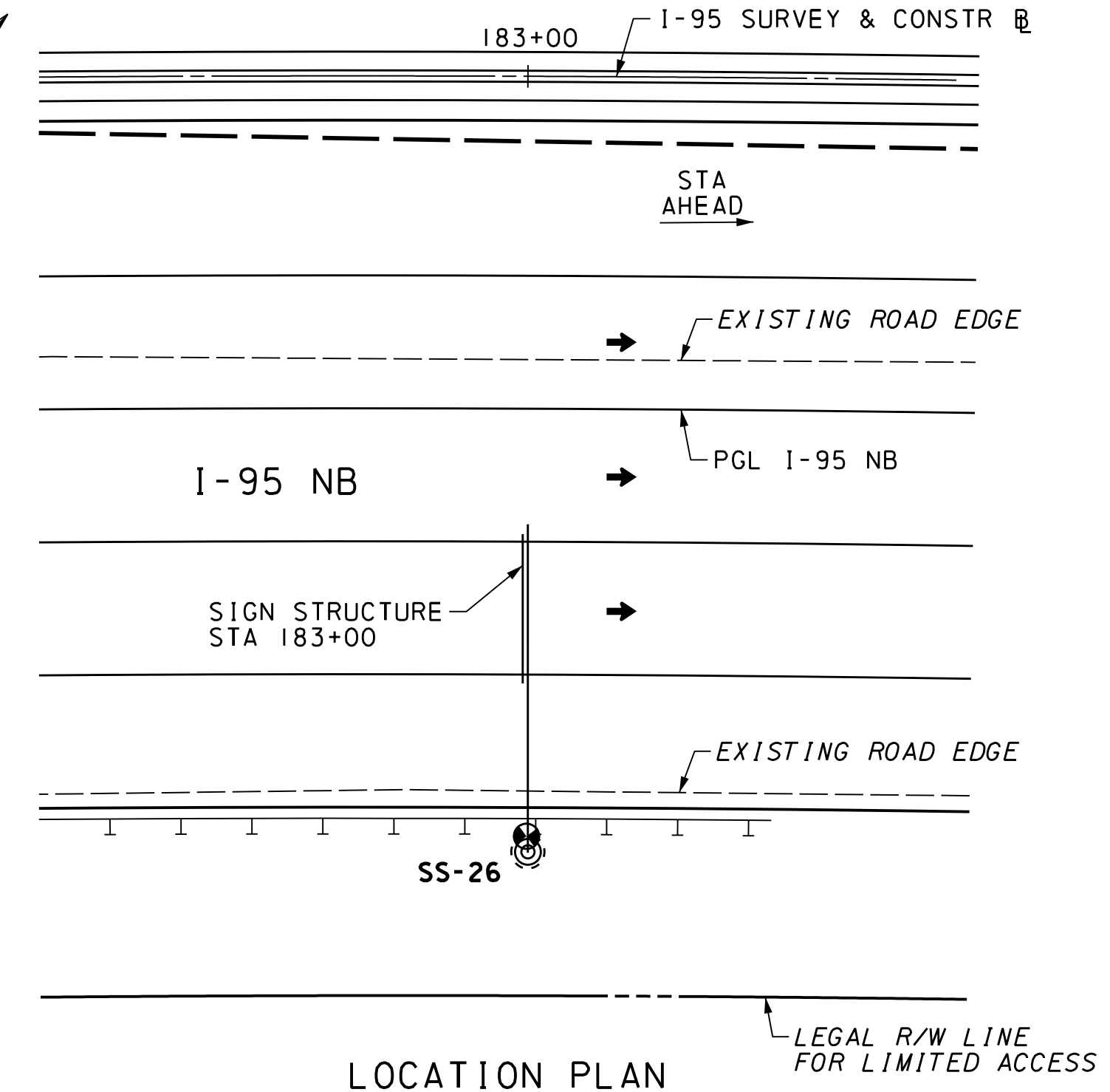
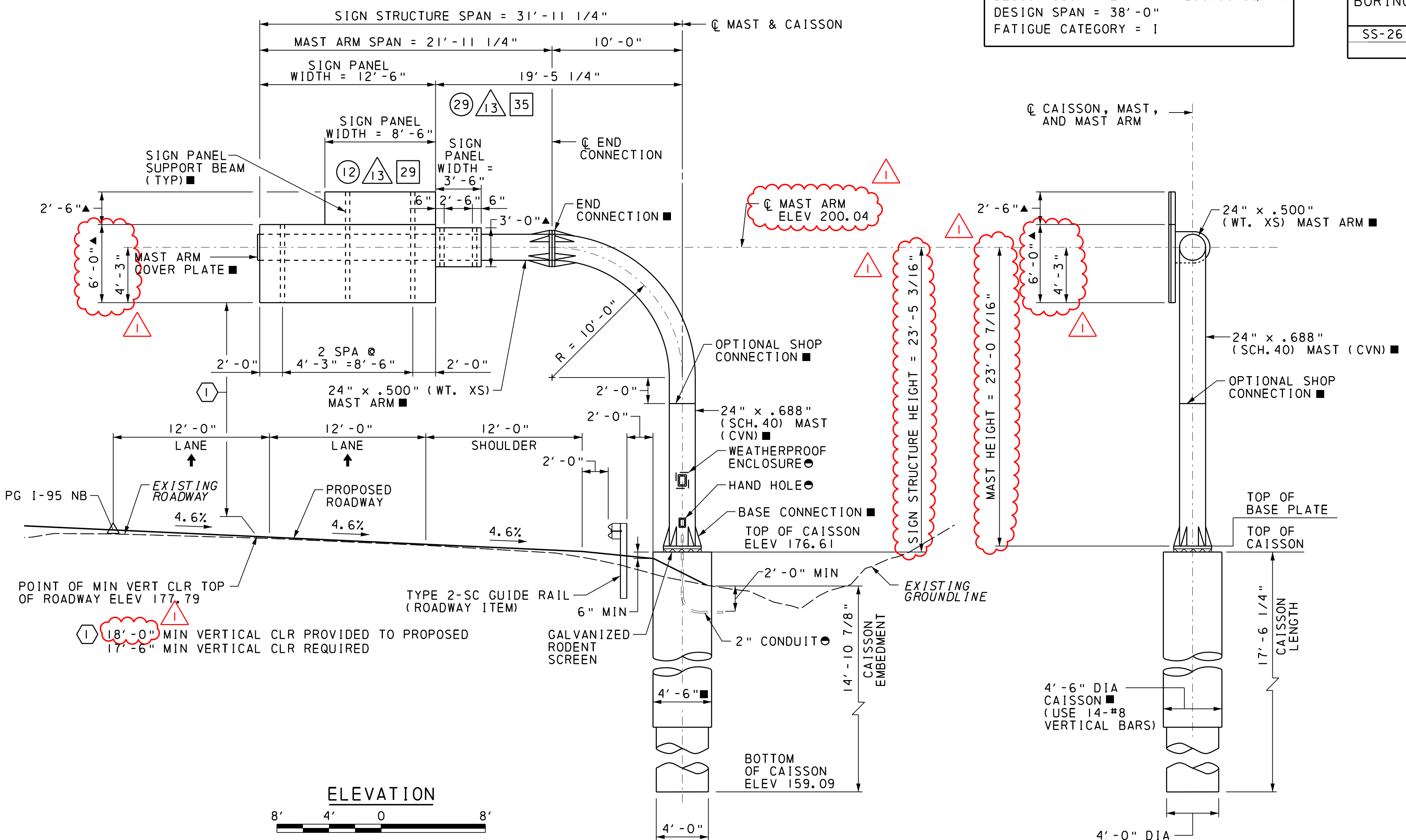
 STV REGISTERED PROFESSIONAL ENGINEER WILLIAM C. BROOKS REG. PROF. ENGINEER SEPTEMBER 14, 2016 DATE	 Michael Baker International REGISTERED PROFESSIONAL ENGINEER MAHER A. SIDANI REG. PROF. ENGINEER DATE
--	--

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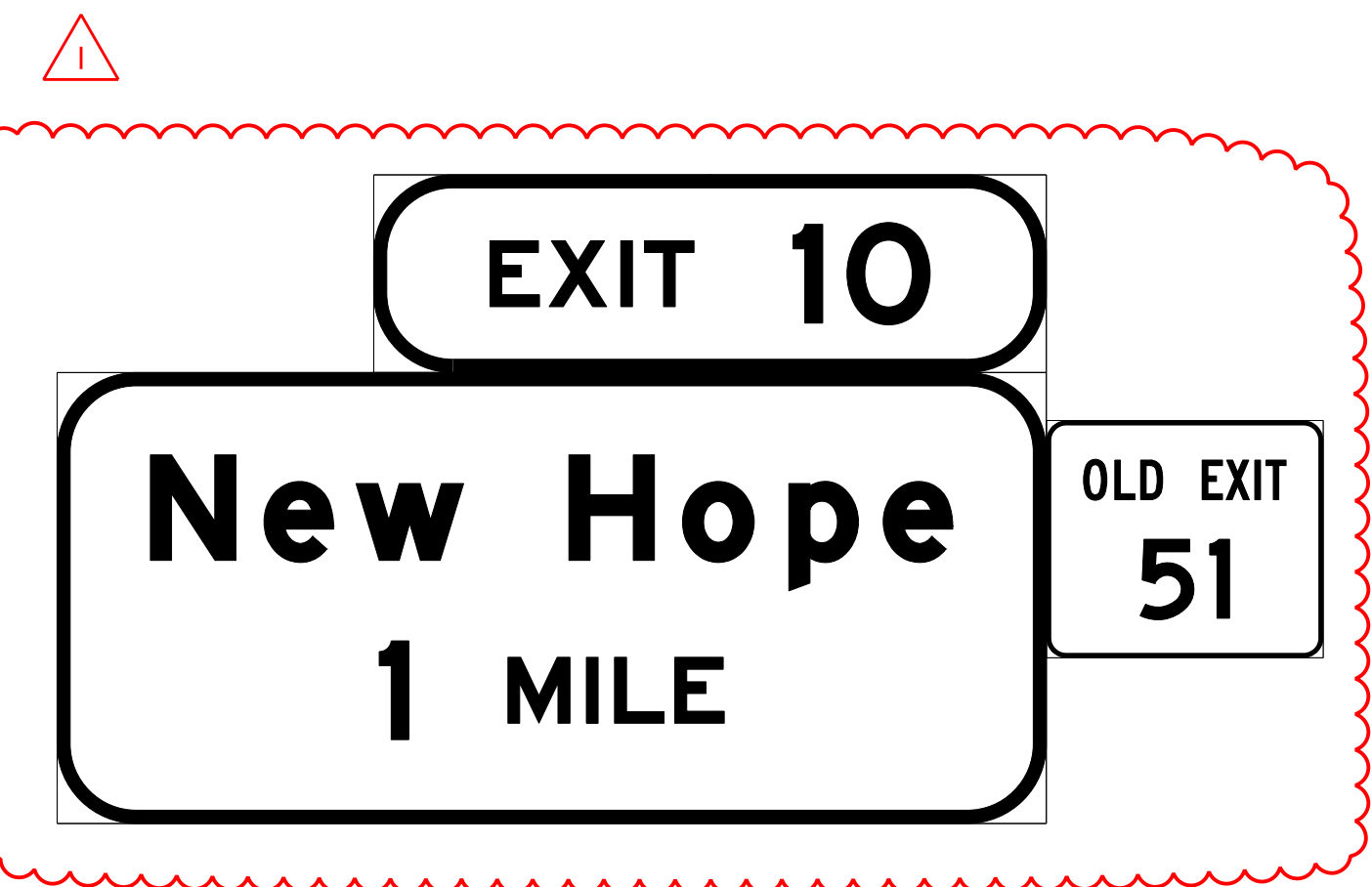
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0095	001	41 OF 121
LOWER MAKEFIELD TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	
I	ADDENDUM NO. 8	12/01/16	STV	

DESIGN CRITERIA	
DESIGN SIGN AREA (A)	= 250.00 SQ. FT.
DESIGN SPAN	= 38'-0"
FATIGUE CATEGORY	= I

TEST BORING LOCATIONS		
BORING	STATION	OFFSET
SS-26	183+00.00	70.7' RT



- LEGEND**
- ↑ DIRECTION OF TRAFFIC
 - ⊕ SIGN FABRICATION DETAIL NUMBER
 - ⊕ PLAN SHEET NUMBER - SIGN LOCATION
 - ⊕ SIGN FABRICATION DETAIL SHEET NUMBER
 - ⊕ TEST BORING
- NOTES**
1. FOR GENERAL NOTES, QUANTITIES, AND SUPPLEMENTAL DRAWINGS, SEE SHEET 42.
 2. FOR TEST BORING LOGS, SEE SHEET 43.
 3. ROADWAY DIMENSIONS ARE MEASURED ALONG CENTERLINE OF SIGN STRUCTURE.
 4. ESTIMATED BEDROCK ELEVATION IS AT 164.09', MAINTAIN ROCK SOCKET LENGTH OF 5.0' IF THE BEDROCK IS ENCOUNTERED AT DIFFERENT ELEVATION.
- SEE PENNDOT BC-747M FOR DETAILS
 - SEE PENNDOT BC-741M FOR DETAILS
 - ▲ SIGN PANEL HEIGHT



MAST ARM CAMBER INCLUDES BOTH MAST ARM AND MAST (COLUMN) DEFLECTION. BACK RAKING OF MAST IS NOT PERMITTED

CAMBER DIAGRAM
NOT TO SCALE

HORIZONTAL CURVE DATA	VERTICAL CURVE DATA
I-95 SURVEY & CONSTR B	I-95 SURVEY & CONSTR B (PGL I-95 NB)
PI STA 178+43.83 Δ = 24° 32' 48" RT D = 1° 29' 18" T = 837.56' L = 1649.42' R = 3850.00' E = 90.05' SUPERELEVATE 4.6%	PVT STA 179+90.00 ELEV 179.86 PVC STA 218+25.00 ELEV 160.63

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PE029795E
REG. PROF. ENGINEER
SEPTEMBER 14, 2016
DATE

Michael Baker International
300 American Metro Blvd., Ste. 154
Hamilton, NJ 08619

MAHER A. SIDANI
REGISTERED PROFESSIONAL ENGINEER
PE028991
REG. PROF. ENGINEER
DATE

COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF TRANSPORTATION

SCUDDER FALLS BRIDGE
 REPLACEMENT PROJECT CONTRACT T-668A
 CANTILEVER MONOPIPE SIGN STRUCTURE
 I-95 NB - STA 183+00

GENERAL PLAN & ELEVATION

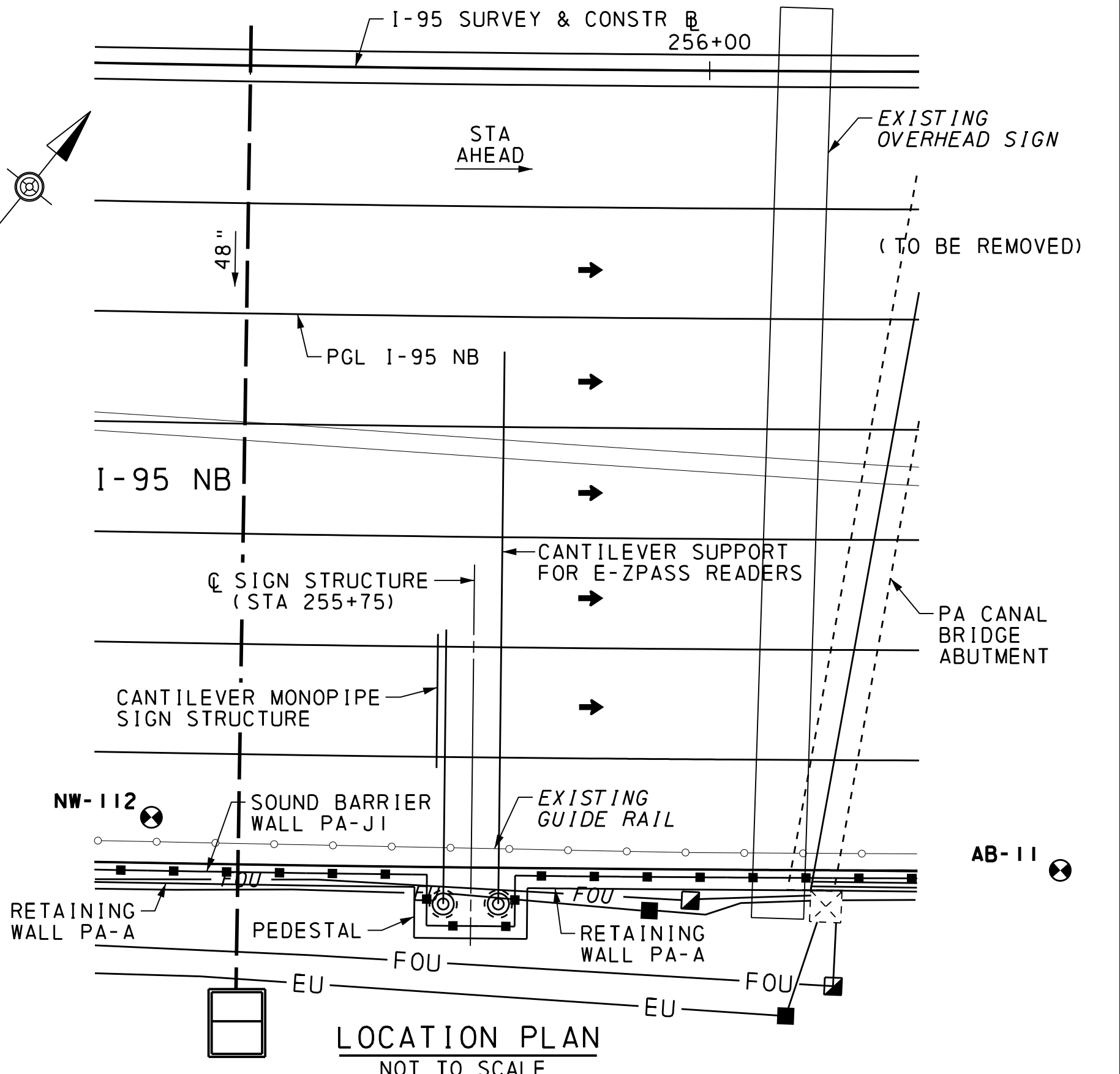
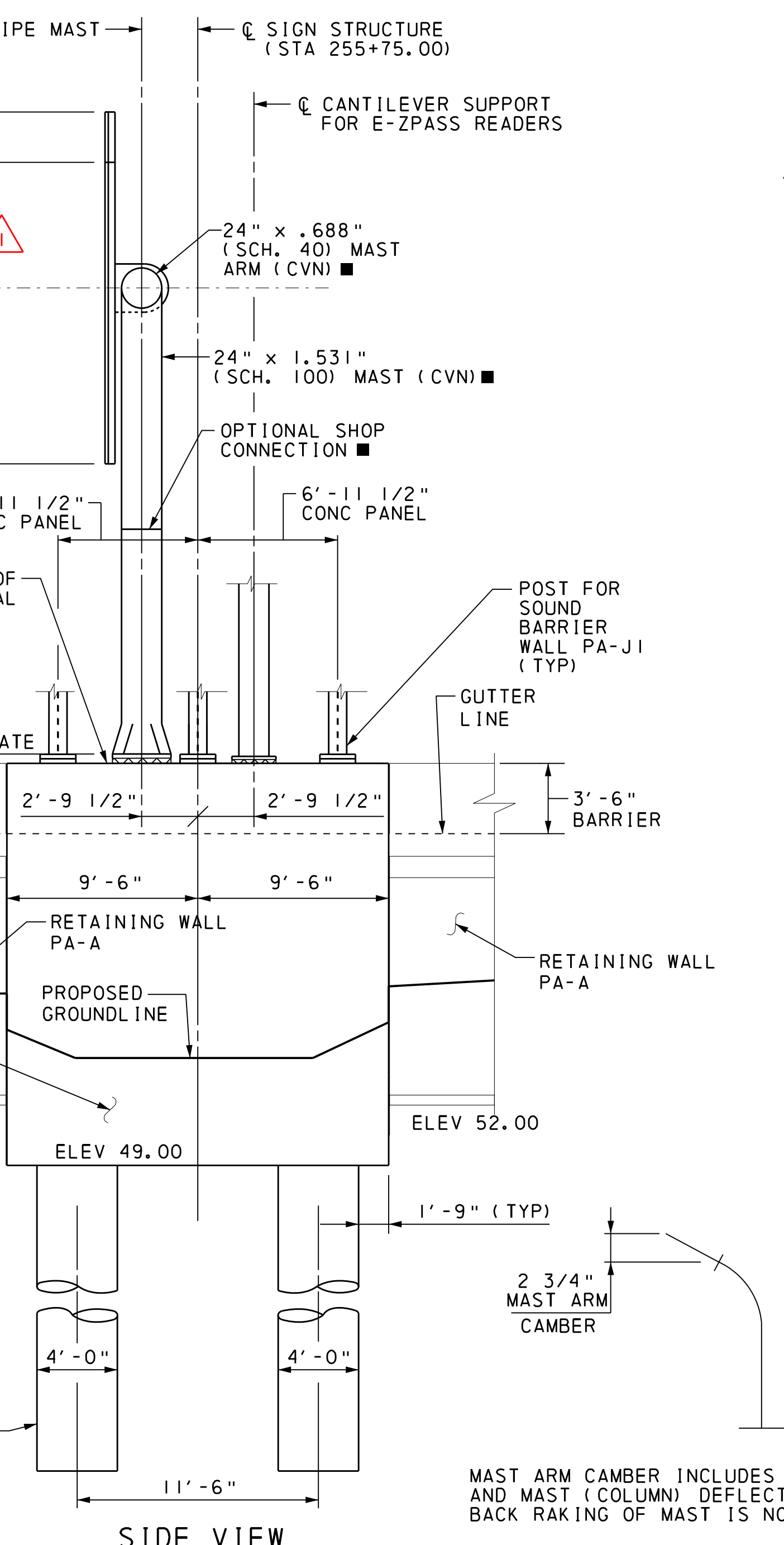
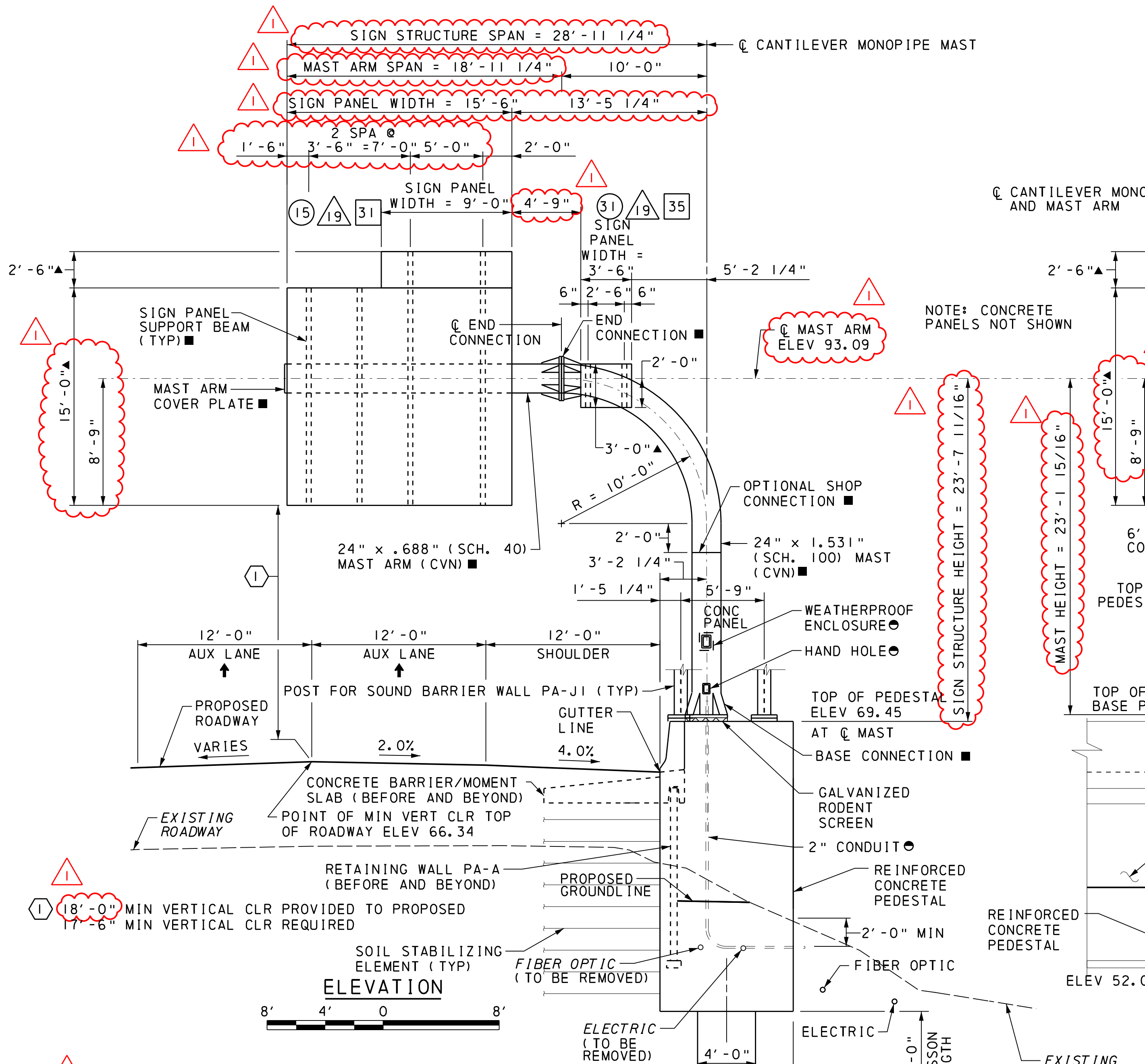
RECOMMENDED _____	
DISTRICT BRIDGE ENGINEER	S- 36558

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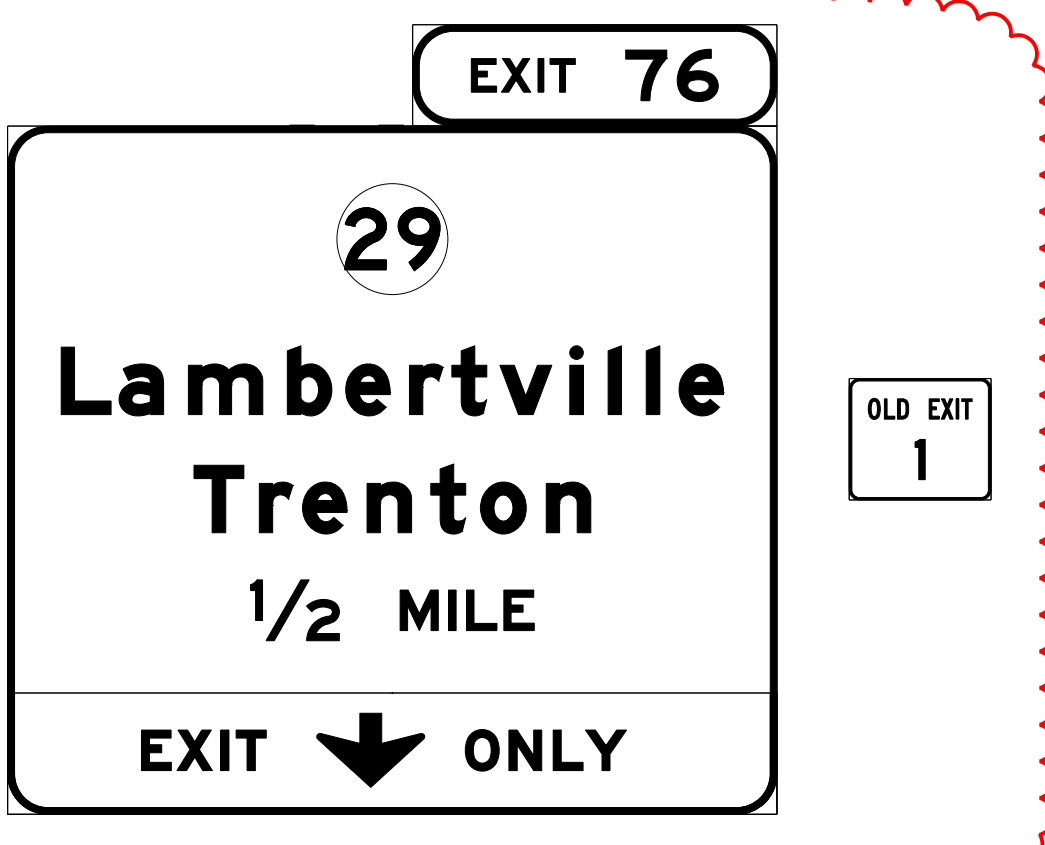
DISTRICT	COUNTY	ROUTE	SECTION	SHEET	
6-0	BUCKS	0095	001	49 OF 121	
LOWER MAKEFIELD TOWNSHIP					
REVISION NUMBER	REVISIONS			DATE	BY
I	ADDENDUM NO. 8			12/01/16	STV

DESIGN CRITERIA		
DESIGN SIGN AREA (A)	= 540.00 SQ. FT.	
DESIGN SPAN	= 38'-0"	
FATIGUE CATEGORY	= 1	

TEST BORING LOCATIONS		
BORING	STATION	OFFSET
NW-112	255+40.00	79.5' RT
AB-11	256+38.00	81.8' RT



- LEGEND**
- ↑ DIRECTION OF TRAFFIC
 - ⊕ SIGN FABRICATION DETAIL NUMBER
 - ⊠ PLAN SHEET NUMBER - SIGN LOCATION
 - ⊞ SIGN FABRICATION DETAIL SHEET NUMBER
 - ⊙ TEST BORING
- NOTES**
- FOR GENERAL NOTES, QUANTITIES, AND SUPPLEMENTAL DRAWINGS, SEE SHEET 50.
 - FOR TEST BORING LOGS, SEE SHEETS 51, 52, AND 53.
 - ROADWAY DIMENSIONS ARE MEASURED ALONG CENTERLINE OF SIGN STRUCTURE.
 - ESTIMATED BEDROCK ELEVATION IS AT ELEVATION 20'.
- SEE PENNDOT BC-747M FOR DETAILS
 - SEE PENNDOT BC-741M FOR DETAILS
 - ▲ SIGN PANEL HEIGHT



HORIZONTAL CURVE DATA	
I-95 SURVEY & CONSTR B	
PI	STA 256+27.67
Δ	= 1° 48' 47" LT
Ls	= 300.00'
K	= 149.99'
p	= 0.79'
Xs	= 299.97'
Ys	= 3.16'
LT	= 200.01'
ST	= 100.01'
LC	= 299.99'

VERTICAL CURVE DATA	
I-95 SURVEY & CONSTR B	
(PGL I-95 NB)	
	-2.86% Δ -0.62%
PVI	STA 253+90.00
PVI	ELEV 66.25
VC	420.00'
MO	1.18'

CAMBER DIAGRAM NOT TO SCALE

STV
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 Trenton, NJ
 08628-1021

REGISTERED PROFESSIONAL ENGINEER
 WILLIAM C. BROOKS
 REG. PROF. ENGINEER
 SEPTEMBER 14, 2016
 DATE

Michael Baker International
 Michael Baker International
 300 American Metro Blvd, Ste. 154
 Hamilton, NJ 08619

REGISTERED PROFESSIONAL ENGINEER
 MAHER A. SIDANI
 REG. PROF. ENGINEER
 DATE

COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF TRANSPORTATION

SCUDDER FALLS BRIDGE
 REPLACEMENT PROJECT CONTRACT T-668A
 CANTILEVER MONOPIPE SIGN STRUCTURE
 I-95 NB - STA 255+75

GENERAL PLAN & ELEVATION

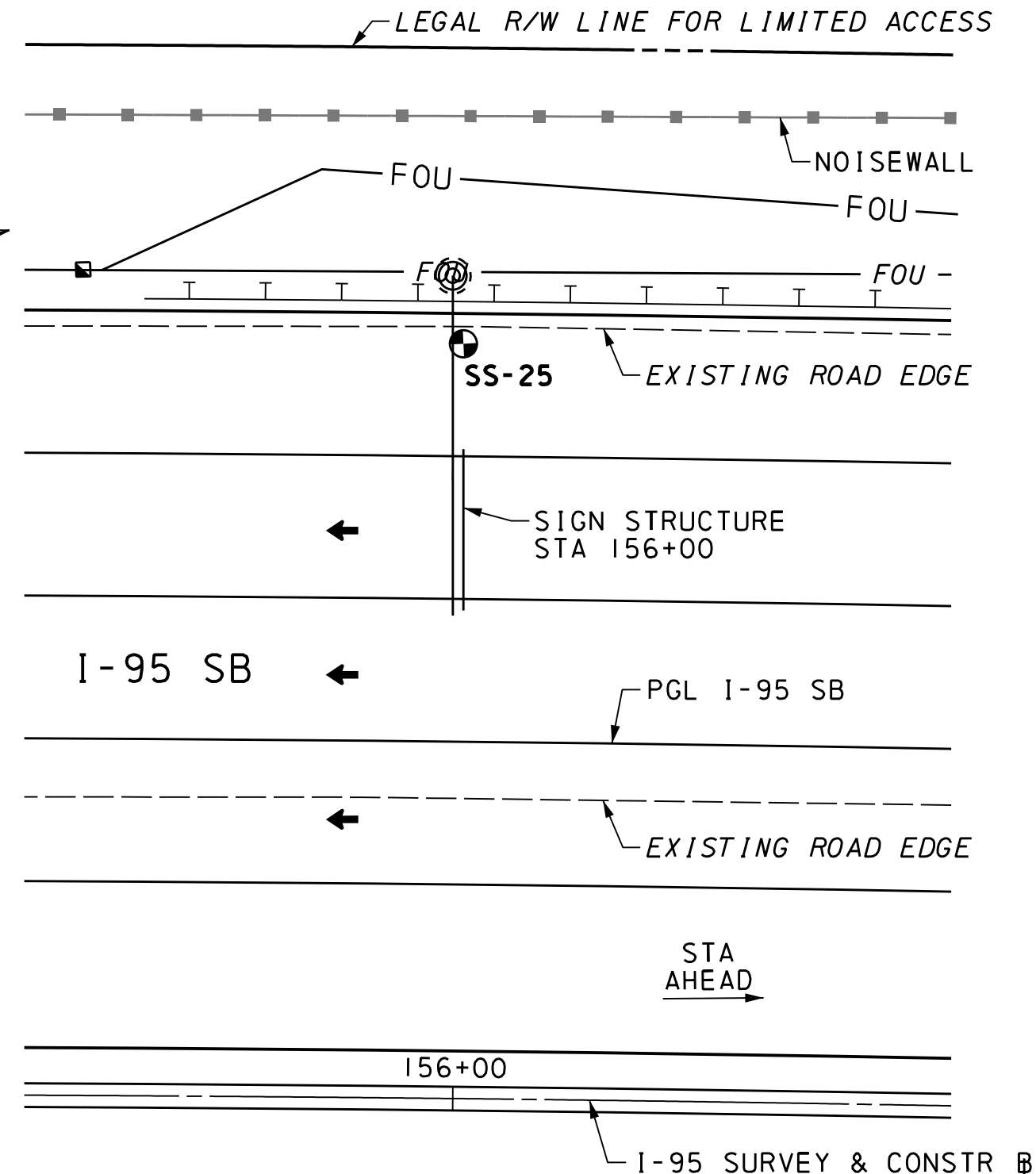
RECOMMENDED _____
 DISTRICT BRIDGE ENGINEER

PA SS-4
 S- 36560

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET	
6-0	BUCKS	0095	001	54 OF 121	
LOWER MAKEFIELD TOWNSHIP					
REVISION NUMBER	REVISIONS			DATE	BY
I	ADDENDUM NO. 8			12/01/16	STV

TEST BORING LOCATIONS		
BORING	STATION	OFFSET
SS-25	156+00.00	63.4' LT



- LEGEND**
- ↑ DIRECTION OF TRAFFIC
 - ⊕ SIGN FABRICATION DETAIL NUMBER
 - △ PLAN SHEET NUMBER - SIGN LOCATION
 - ⊞ SIGN FABRICATION DETAIL SHEET NUMBER
 - TEST BORING
- NOTES**
- FOR GENERAL NOTES, QUANTITIES, AND SUPPLEMENTAL DRAWINGS, SEE SHEET 55.
 - FOR TEST BORING LOGS, SEE SHEET 56.
 - ROADWAY DIMENSIONS ARE MEASURED ALONG CENTERLINE OF SIGN STRUCTURE.
 - ESTIMATED BEDROCK ELEVATION IS AT 157.9', MAINTAIN ROCK SOCKET LENGTH OF 5.0' IF THE BEDROCK IS ENCOUNTERED AT DIFFERENT ELEVATION.
- SEE PENNDOT BC-747M FOR DETAILS
 - SEE PENNDOT BC-741M FOR DETAILS
 - ▲ SIGN PANEL HEIGHT

PA SS-6

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

**SCUDDER FALLS BRIDGE
REPLACEMENT PROJECT CONTRACT T-668A**
CANTILEVER MONOPIPE SIGN STRUCTURE
I-95 SB - STA 156+00

GENERAL PLAN & ELEVATION

RECOMMENDED _____

DISTRICT BRIDGE ENGINEER **S- 36561**

DESIGN CRITERIA
DESIGN SIGN AREA (A) = 400.00 SQ. FT.
DESIGN SPAN = 38'-0"
FATIGUE CATEGORY = I

STV Inc.
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WILLIAM C. BROOKS
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SEPTEMBER 14, 2016
DATE

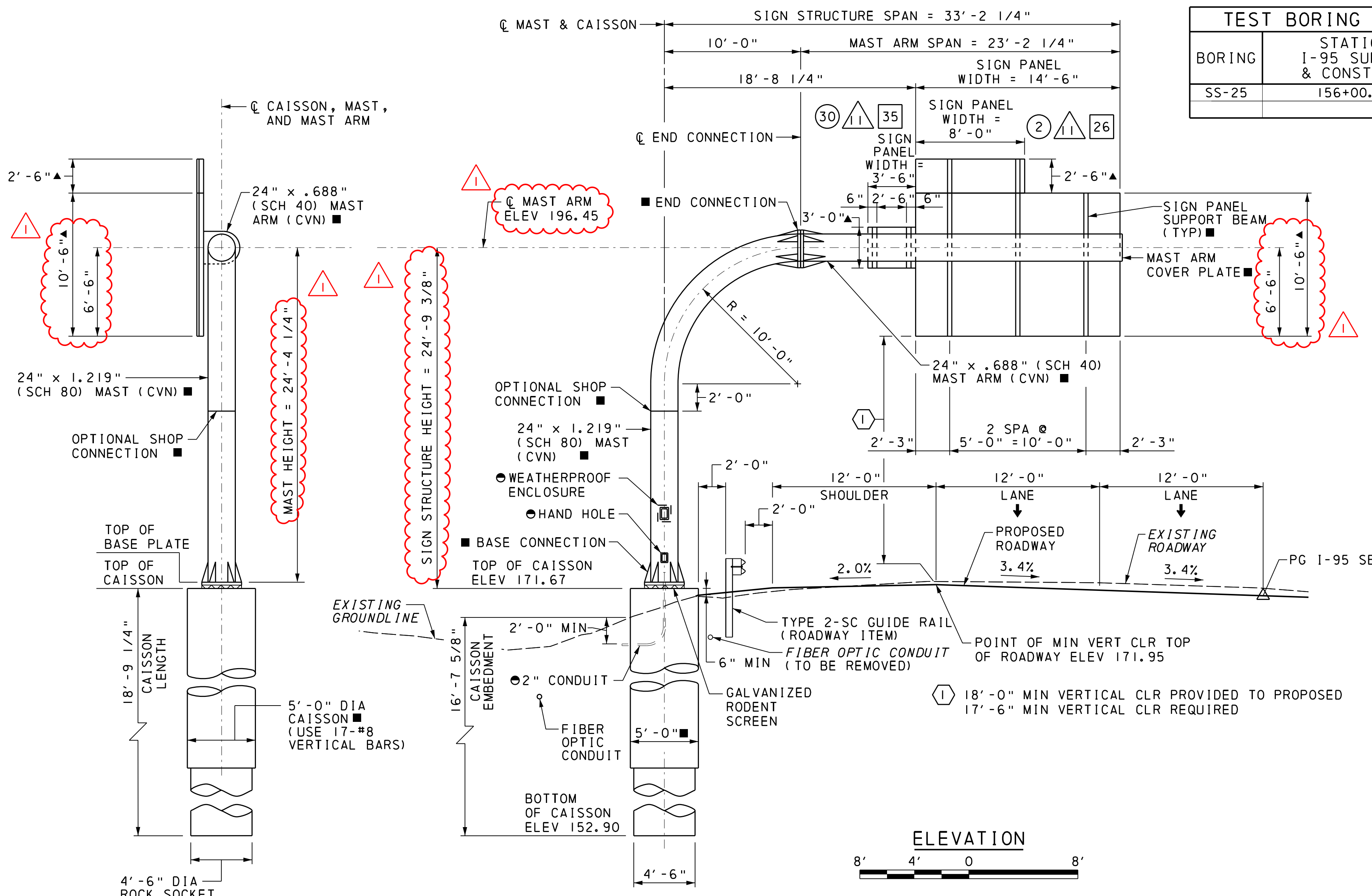
Michael Baker International
300 American Metro Blvd, Ste. 154
Hamilton, NJ 08619

MAHER A. SIDANI
REGISTERED PROFESSIONAL ENGINEER
PE082891
REG. PROF. ENGINEER
DATE

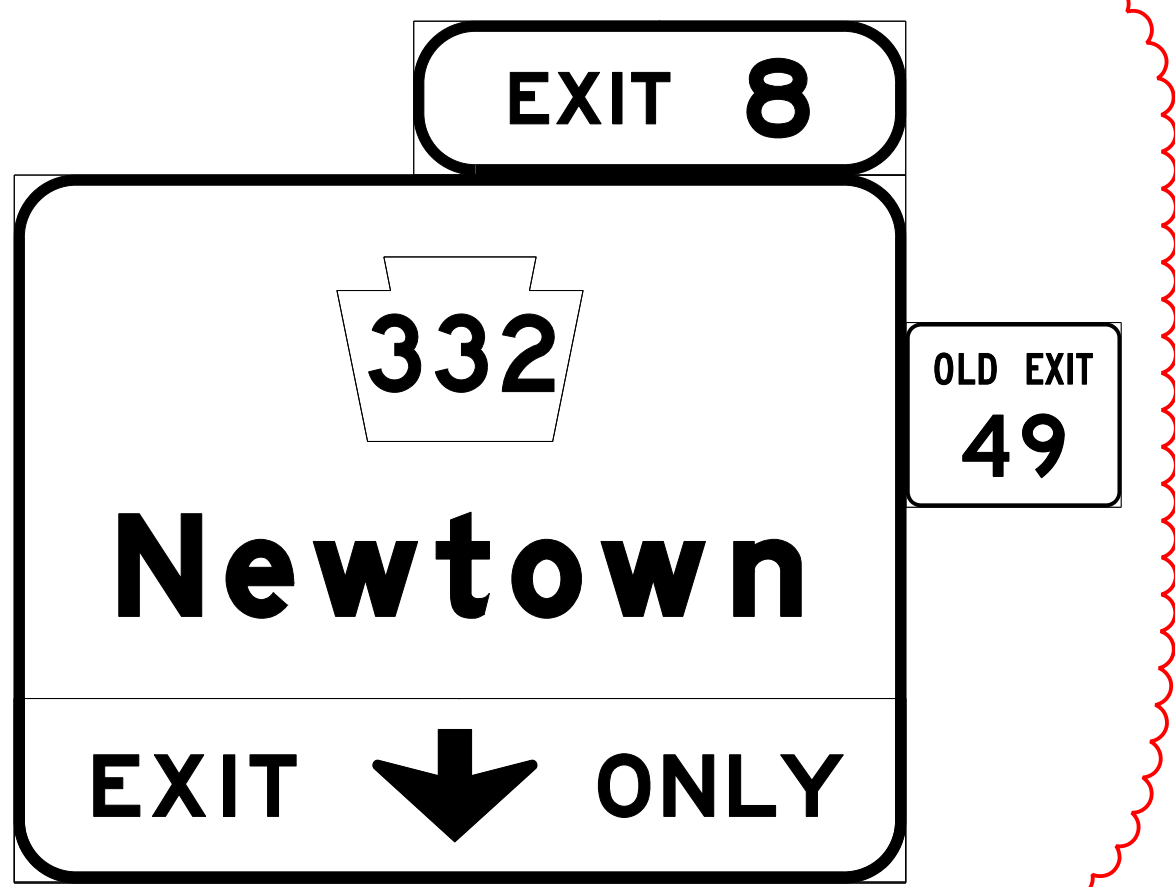
MAST ARM CAMBER INCLUDES BOTH MAST ARM AND MAST (COLUMN) DEFLECTION. BACK RAKING OF MAST IS NOT PERMITTED

CAMBER DIAGRAM
NOT TO SCALE

HORIZONTAL CURVE DATA	VERTICAL CURVE DATA
I-95 SURVEY & CONSTR ⊞	I-95 SURVEY & CONSTR ⊞ (PGL I-95 SB)
PI STA 161+68.70 Δ = 16°52'24" RT D = 1°00'00" T = 849.87' L = 1687.44' R = 5730.00' E = 62.68' SUPERELEVATE 3.4%	PVT STA 152+60.00 ELEV 169.60 PVC STA 169+25.00 ELEV 177.10



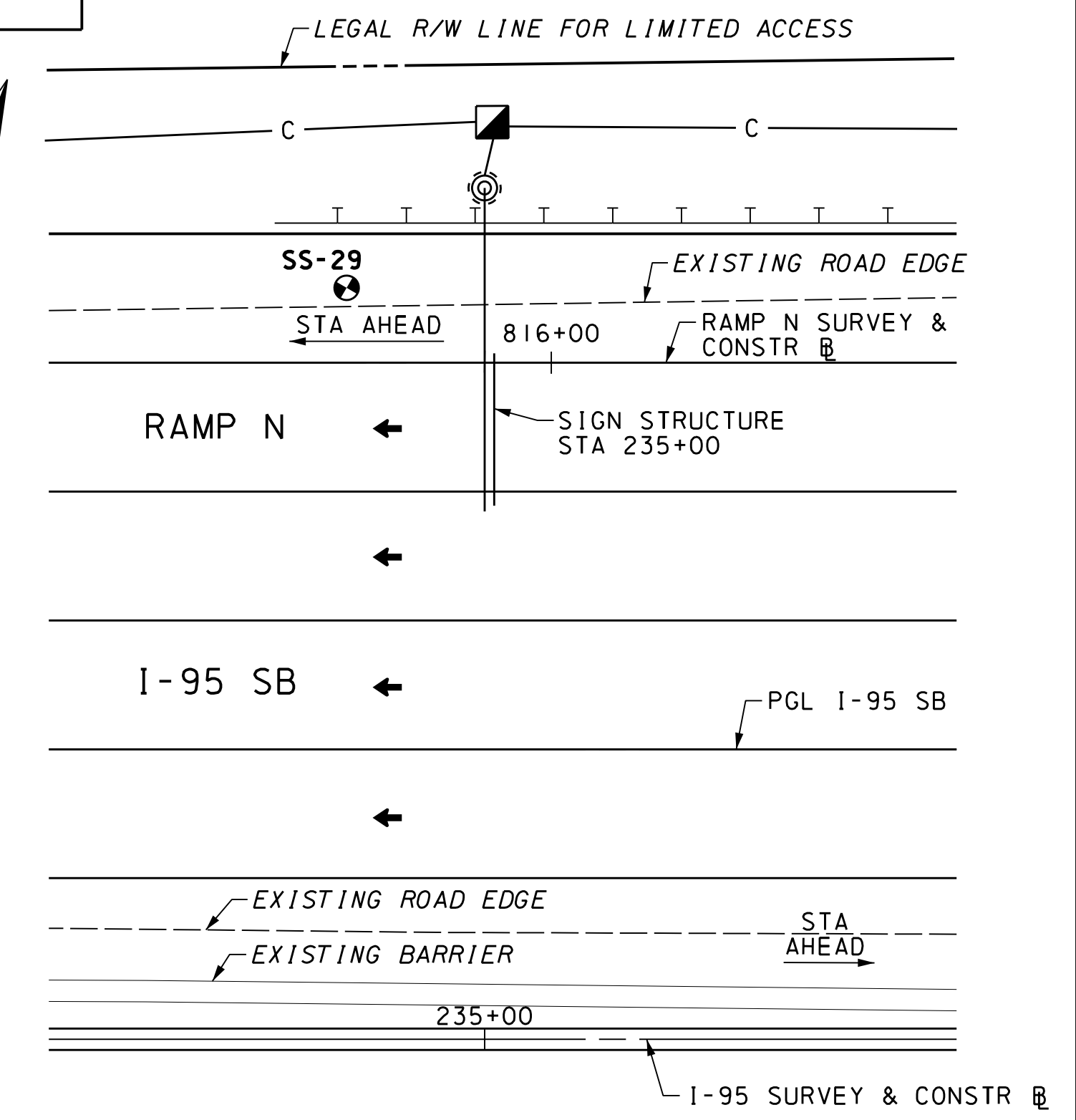
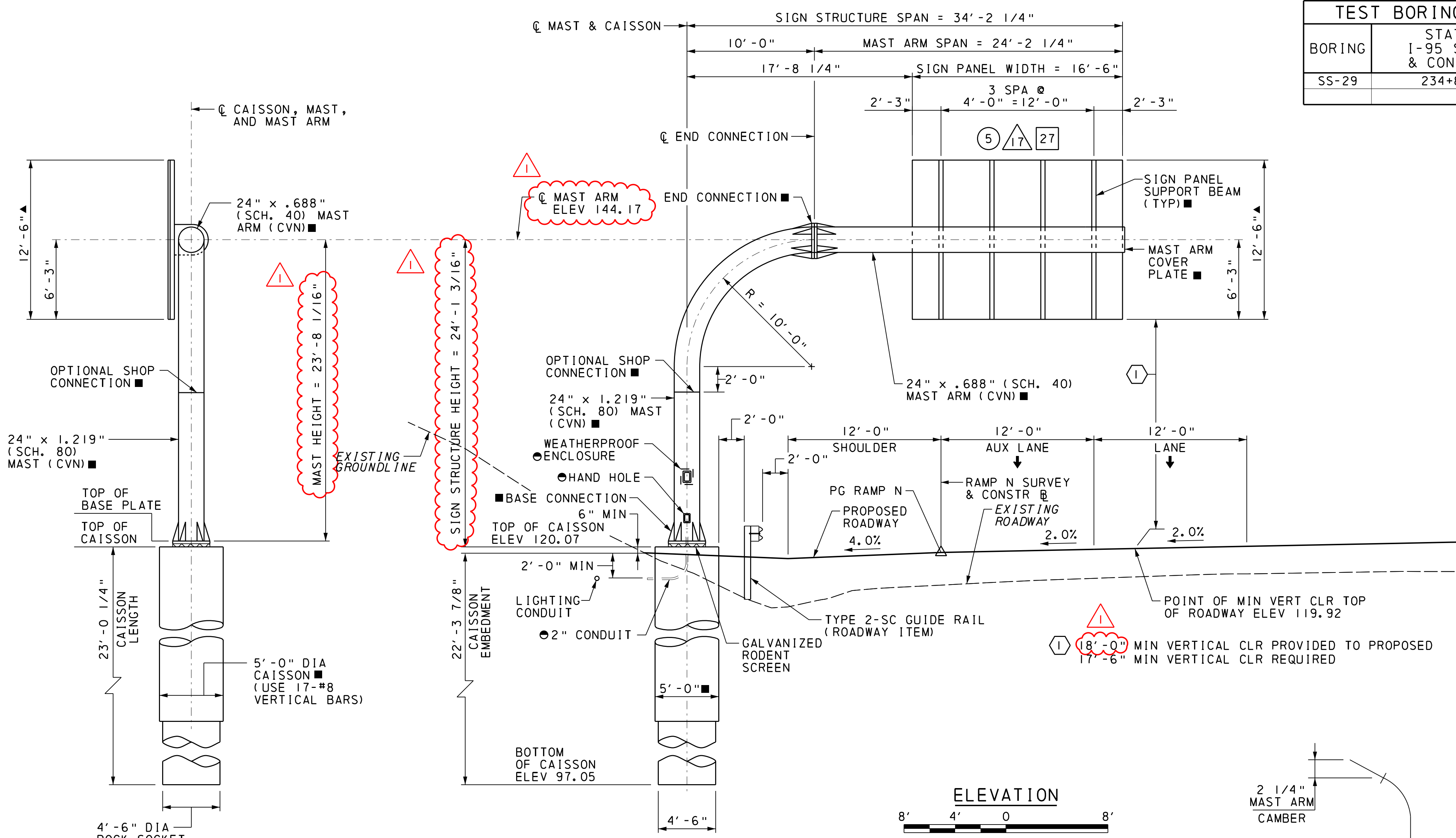
SIDE VIEW
8' 4' 0' 8'



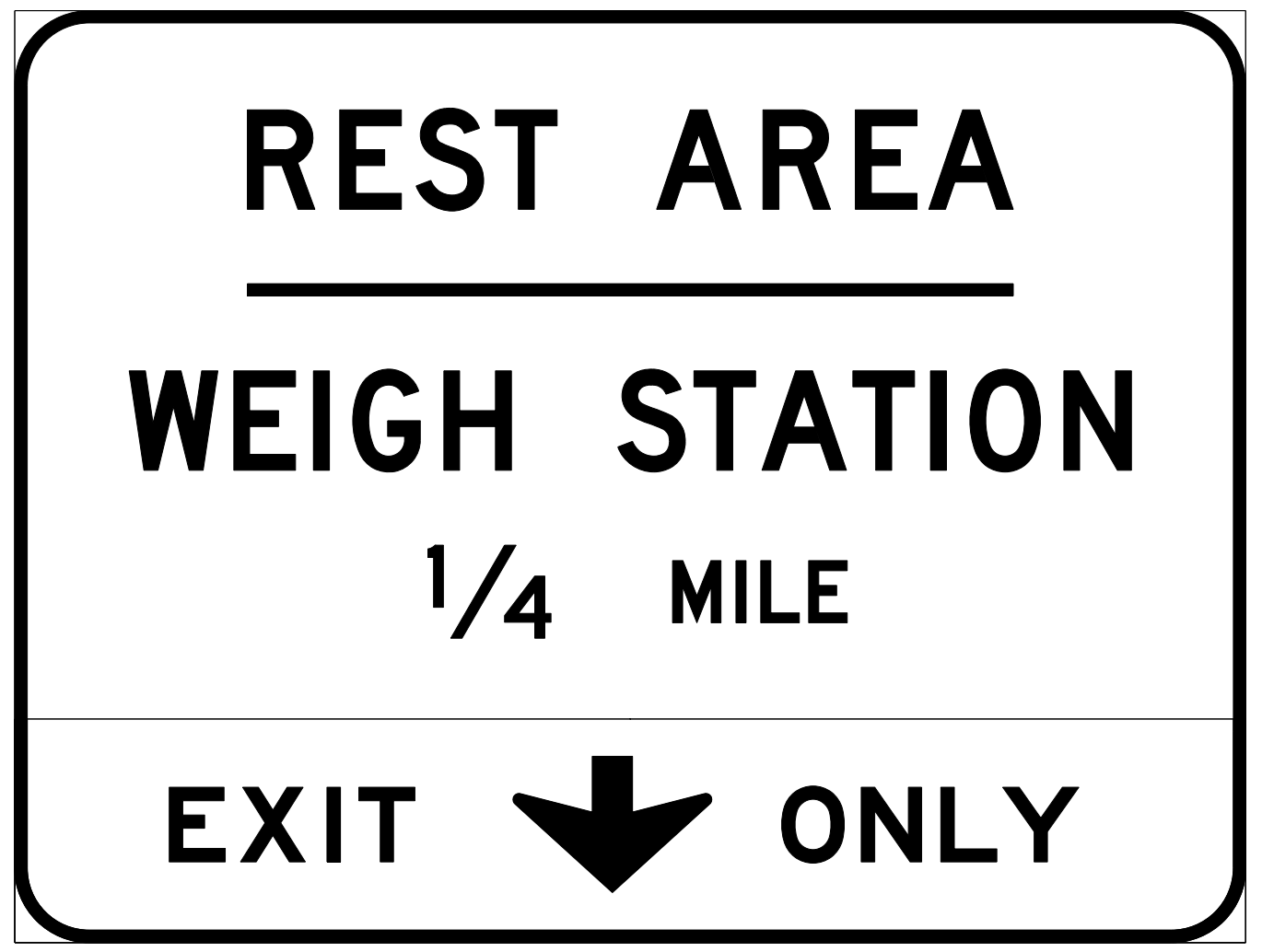
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DISTRICT	COUNTY	ROUTE	SECTION	SHEET	
6-0	BUCKS	0095	001	64 OF 121	
LOWER MAKEFIELD TOWNSHIP					
REVISION NUMBER	REVISIONS			DATE	BY
I	ADDENDUM NO. 8			12/01/16	STV

TEST BORING LOCATIONS		
BORING	STATION	OFFSET
SS-29	I-95 SURVEY & CONSTR B 234+87.00	70.0' LT



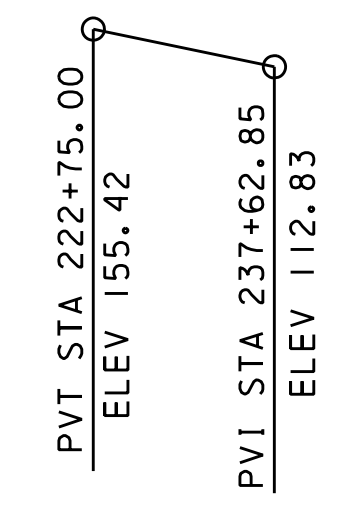
- LEGEND**
- ↑ DIRECTION OF TRAFFIC
 - ⊕ SIGN FABRICATION DETAIL NUMBER
 - ⊠ PLAN SHEET NUMBER - SIGN LOCATION
 - ⊞ SIGN FABRICATION DETAIL SHEET NUMBER
 - TEST BORING
- NOTES**
1. FOR GENERAL NOTES, QUANTITIES, AND SUPPLEMENTAL DRAWINGS, SEE SHEET 65.
 2. FOR TEST BORING LOGS, SEE SHEET 66.
 3. ROADWAY DIMENSIONS ARE MEASURED ALONG CENTERLINE OF SIGN STRUCTURE.
 4. ESTIMATED BEDROCK ELEVATION IS AT 102.05', MAINTAIN ROCK SOCKET LENGTH OF 5.0' IF THE BEDROCK IS ENCOUNTERED AT DIFFERENT ELEVATION.
- SEE PENNDOT BC-747M FOR DETAILS
 - SEE PENNDOT BC-741M FOR DETAILS
 - ▲ SIGN PANEL HEIGHT



DESIGN CRITERIA
DESIGN SIGN AREA (A) = 400.00 SQ. FT.
DESIGN SPAN = 38'-0"
FATIGUE CATEGORY = 1

HORIZONTAL CURVE DATA	
I-95 SURVEY & CONSTR B TANGENT N 69°49'36" E	RAMP N SURVEY & CONSTR B TANGENT S 69°49'36" W

VERTICAL CURVE DATA	
I-95 SURVEY & CONSTR B (PGL I-95 SB)	RAMP N SURVEY & CONSTR B GRAPHIC GRADE - CONTROLLED BY I-95



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SEPTEMBER 14, 2016
DATE

Michael Baker International
Michael Baker International
300 American Metro Blvd., Ste. 154
Hamilton, NJ 08619

REGISTERED PROFESSIONAL ENGINEER
MAHER A. SIDANI
PE082891

REG. PROF. ENGINEER
DATE

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

SCUDDER FALLS BRIDGE
REPLACEMENT PROJECT CONTRACT T-668A
CANTILEVER MONOPIPE SIGN STRUCTURE
I-95 SB - STA 235+00

GENERAL PLAN & ELEVATION

RECOMMENDED _____

DISTRICT BRIDGE ENGINEER

PA SS-9

S- 36564

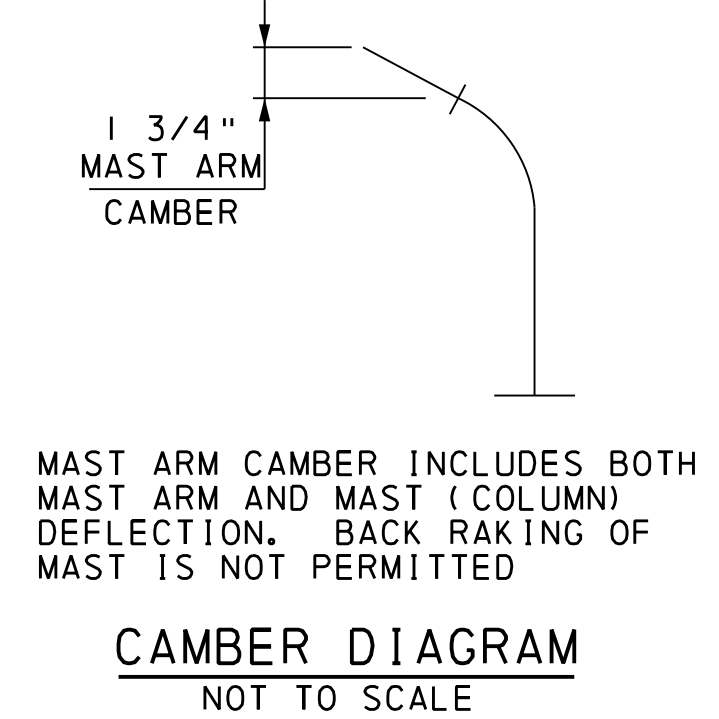
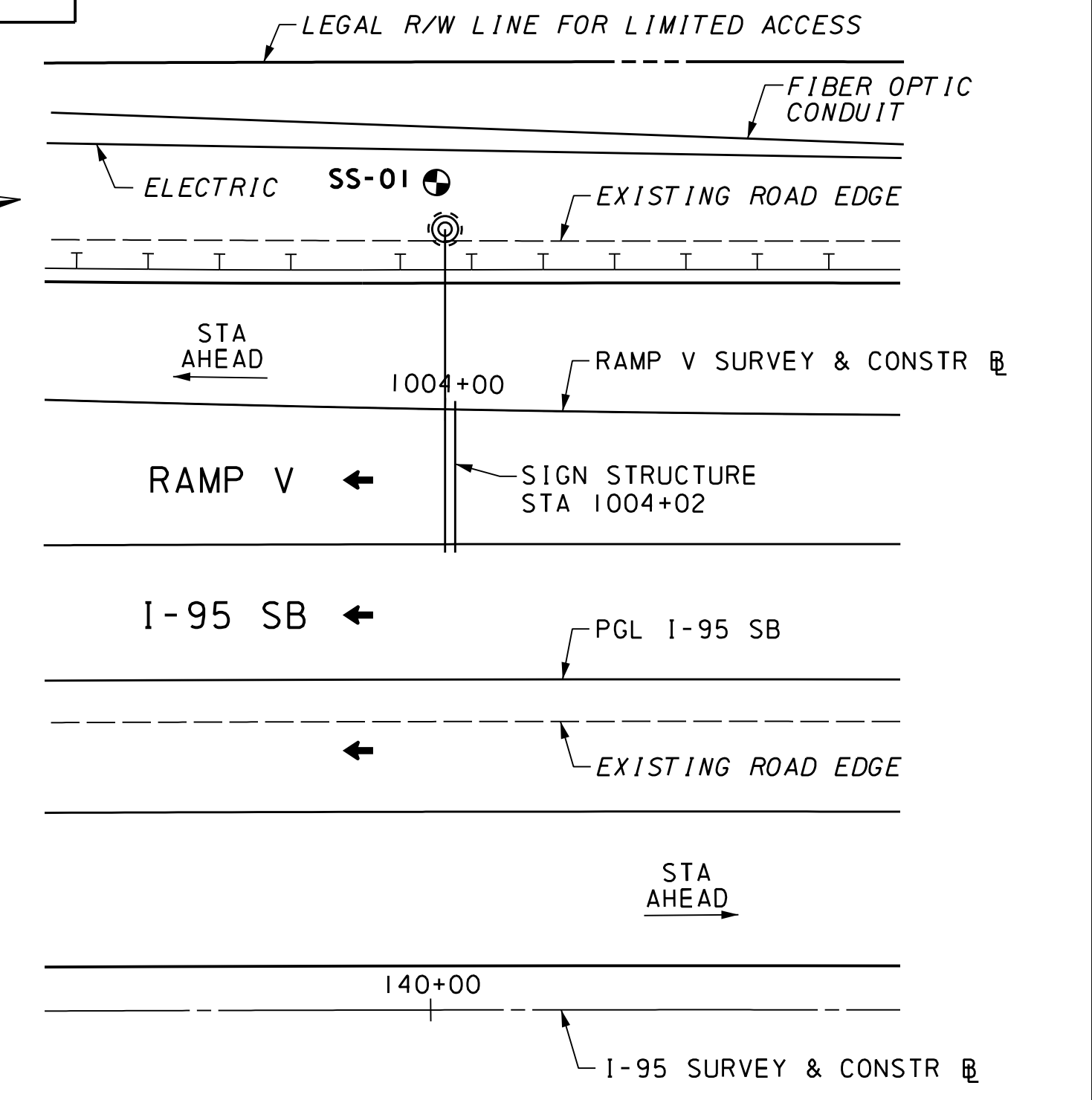
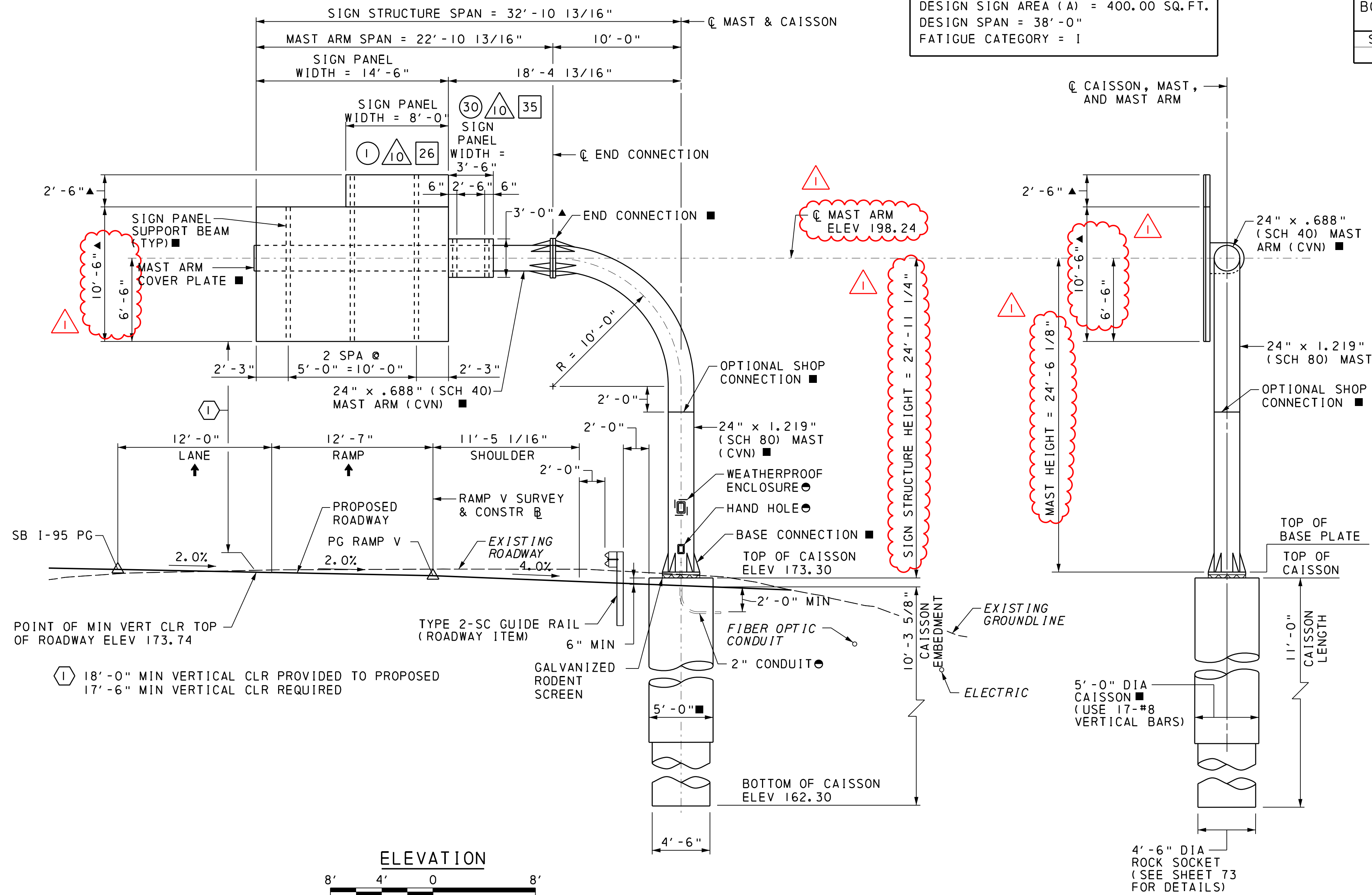
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DESIGNED: BDM CADD: JCD CHECKED: JLG

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0095	001	72 OF 121
LOWER MAKEFIELD TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	
I	ADDENDUM NO. 8	12/01/16	STV	

DESIGN CRITERIA		
DESIGN SIGN AREA (A)	=	400.00 SQ. FT.
DESIGN SPAN	=	38'-0"
FATIGUE CATEGORY	=	I

TEST BORING LOCATIONS		
BORING	STATION	OFFSET
SS-01	I-95 SURVEY & CONSTR B	76.5' LT



- LEGEND**
- ↑ DIRECTION OF TRAFFIC
 - ⊕ SIGN FABRICATION DETAIL NUMBER
 - ⊠ PLAN SHEET NUMBER - SIGN LOCATION
 - ⊞ SIGN FABRICATION DETAIL SHEET NUMBER
 - ⊙ TEST BORING

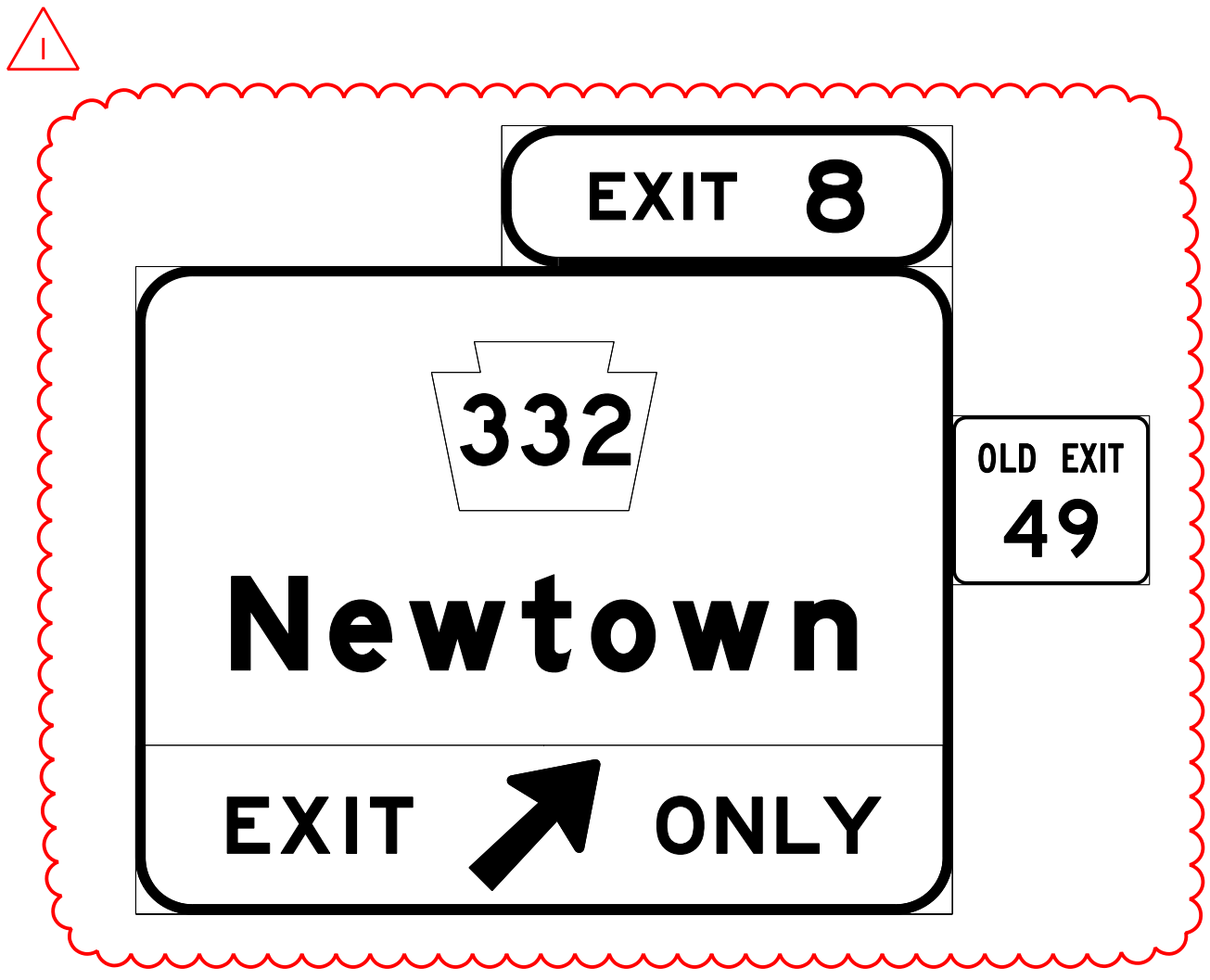
- NOTES**
1. FOR GENERAL NOTES, QUANTITIES, AND SUPPLEMENTAL DRAWINGS, SEE SHEET 73.
 2. FOR TEST BORING LOGS, SEE SHEET 74.
 3. ROADWAY DIMENSIONS ARE MEASURED ALONG CENTERLINE OF SIGN STRUCTURE.
 4. ESTIMATED BEDROCK ELEVATION IS AT 167.5', MAINTAIN ROCK SOCKET LENGTH OF 5.2' IF THE BEDROCK IS ENCOUNTERED AT DIFFERENT ELEVATION.
- SEE PENNDOT BC-747M FOR DETAILS
 - SEE PENNDOT BC-741M FOR DETAILS
 - ▲ SIGN PANEL HEIGHT

HORIZONTAL CURVE DATA

I-95 SURVEY & CONSTR B	RAMP V SURVEY & CONSTR B
PI STA 126+86.28	PI STA 1008+61.73
Δ = 19°49'44" RT	Δ = 17°40'02" RT
D = 0°22'22"	D = 1°43'33"
T = 2686.28'	T = 515.96'
L = 5318.83'	L = 1023.73'
R = 15368.71'	R = 3320.00'
E = 233.00'	E = 39.85'
SUPERELEVATE NC	SUPERELEVATE NC

VERTICAL CURVE DATA

I-95 SURVEY & CONSTR B (PGL I-95 SB)	RAMP V SURVEY & CONSTR B GRAPHIC GRADE - CONTROLLED BY I-95
PVI STA 134+55.00 ELEV 176.66	PVC STA 148+60.00 ELEV 169.69



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

SCUDDER FALLS BRIDGE
REPLACEMENT PROJECT CONTRACT T-668A
CANTILEVER MONOPIPE SIGN STRUCTURE
RAMP V - STA 1004+02

GENERAL PLAN & ELEVATION

 STV Michael Baker International 820 Bear Tavern Rd. Suite 200 Trenton, NJ 08628-1021	 Michael Baker International MAHER A. SIDANI REG. PROF. ENGINEER PE082891
 WILLIAM C. BROOKS REG. PROF. ENGINEER SEPTEMBER 14, 2016 DATE	 MAHER A. SIDANI REG. PROF. ENGINEER DATE

RECOMMENDED _____

DISTRICT BRIDGE ENGINEER _____

S- 36566

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DESIGNED: BDM | CADD: JCD | CHECKED: JLG

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0095	001	01 OF 32
LOWER MAKEFIELD TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	
1	ADDENDUM NO. 8	12/01/16	PKP	

LEGEND (SEE GENERAL NOTES)

EXISTING	PROPOSED	DESCRIPTION
	J.B. 27 [Symbol]	JUNCTION BOX, JB-27, GALVANIZED STEEL
[Symbol]	[Symbol]	UTILITY POLE
	[Symbol]	HAND HOLE
	[Symbol]	PULL BOX
FOU	FOU	UNDERGROUND FIBER OPTIC FACILITIES
FO	FO	OVERHEAD FIBER OPTIC FACILITIES
EU	EU	UNDERGROUND ELECTRIC FACILITIES
E	E	OVERHEAD ELECTRIC FACILITIES
TU	TU	UNDERGROUND TELEPHONE FACILITIES
T	T	OVERHEAD TELEPHONE FACILITIES
CTVU	CTVU	UNDERGROUND CABLE FACILITIES
CTV	CTV	OVERHEAD CABLE FACILITIES
G	G	GAS PIPE
W	W	WATER PIPE
WV	WV	WATER VALVE
FH	FH	FIRE HYDRANT
S	S	SANITARY SEWER
	CO	SANITARY SEWER CLEANOUT
	[Symbol]	AIR RELEASE VALVE
	FOU	GLUED CAP SPARE CONDUITS
	C	CONDUIT FOR ROADWAY LIGHTING AND SPARE CONDUITS
	[Symbol]	MANHOLE

ABBREVIATIONS

GRS	-	GALVANIZED RATED STEEL
UG	-	UNDERGROUND
MJ	-	MECHANICAL JOINT
FH	-	FIRE HYDRANT
LMTSA	-	LOWER MAKEFIELD TOWNSHIP SEWER AUTHORITY

GENERAL NOTES

ADVANCE UTILITY RELOCATION

PECO (ELECTRIC):

- PECO SHALL PERFORM THE RELOCATION OF OVERHEAD/ UNDERGROUND ELECTRIC LINES INCLUDING INSTALLATION OF POLES, SPLICES, PERFORM INSPECTION, REMOVAL OF EXISTING OVERHEAD ELECTRIC LINES AND POLES AS SHOWN ON THE PLANS.
- ALL DISTANCES, STATIONS, OFFSETS AND LENGTHS ARE APPROXIMATE. PECO TO FIELD VERIFY ALL STATIONS AND LENGTHS PRIOR TO COMMENCING WORK.
- PECO SHALL COORDINATE WITH THE OTHER UTILITY COMPANIES WITHIN PROJECT LIMITS.
- BASED ON AGREEMENT BETWEEN PECO AND VERIZON-PA, INC., THE LAST UTILITY (VERIZON-PA, INC. AND SUNESYS) OFF THE POLE, REMOVES THE POLE.
- PECO SHALL MAINTAIN A MINIMUM OF 4'-6" VERTICAL CLEARANCE AND 3'-6" HORIZONTAL CLEARANCE FROM PROPOSED OVERHEAD SIGN STRUCTURES AND PROPOSED LIGHTING STANDARDS.
- PECO IS RESPONSIBLE FOR ALL CUSTOMER NOTIFICATIONS REQUIRED DUE TO ANY POWER OUTAGES.
- PECO CABLE DEPARTMENT WILL PERFORM ALL UNDERGROUND PORTIONS OF WORK INCLUDING INSTALLATION OF CABLES.
- PECO SHALL SECURE HIGHWAY OCCUPANCY PERMIT FROM PENNDOT PRIOR TO BEGINNING ANY UTILITY RELOCATION WORK.
- PECO SHALL PROVIDE NECESSARY MAINTENANCE AND PROTECTION OF TRAFFIC AS PER PENNDOT REQUIREMENTS. PECO SHALL COORDINATE WITH COMMISSION PRIOR TO BEGINNING ANY UTILITY RELOCATION WORK.
- PECO ANTICIPATES BEGINNING RELOCATION WORK BY ~~DECEMBER 2016~~ ^{FEBRUARY 2017} AND EXPECTS TO BE COMPLETE ON OR ABOUT ~~DECEMBER 2016~~ ^{JUNE 1, 2017}.
- PECO WILL REQUIRE APPROXIMATELY 60 WORKING DAYS TO RELOCATE OVERHEAD FACILITIES.
- PECO WILL REQUIRE APPROXIMATELY 27 WORKING DAYS TO PERFORM RELOCATION.

SUNESYS:

- SUNESYS SHALL COORDINATE THEIR WORK WITH OTHER UTILITY COMPANIES WITHIN PROJECT LIMITS.
- SUNESYS IS RESPONSIBLE FOR ALL CUSTOMER NOTIFICATIONS REQUIRED DUE TO ANY OUTAGES.
- SUNESYS WILL RELOCATE FIBER OPTIC FACILITIES AFTER PECO HAS COMPLETED WITH THEIR ENTIRE RELOCATION.
- SUNESYS WILL REQUIRE APPROXIMATELY 50 WORKING DAYS TO RELOCATE FIBER OPTIC FACILITIES (OVERHEAD AND UNDERGROUND).
- SUNESYS WILL COMPLETE THE RELOCATION OF FIBER OPTIC FACILITIES BY ~~DECEMBER 2016~~ ^{JUNE 1, 2017}.
- SUNESYS SHALL COORDINATE WITH PECO AND VERIZON FOR REMOVAL OF EXISTING POLES.

VERIZON-PA, INC.:

- VERIZON-PA, INC. SHALL COORDINATE THEIR WORK WITH OTHER UTILITY COMPANIES WITHIN PROJECT LIMITS.
- VERIZON-PA, INC. IS RESPONSIBLE FOR ALL CUSTOMER NOTIFICATIONS REQUIRED DUE TO ANY TELEPHONE OUTAGES.
- VERIZON-PA, INC. SHALL RELOCATE FIBER OPTIC FACILITIES AFTER PECO & SUNESYS HAVE COMPLETED WITH THEIR ENTIRE RELOCATION.
- VERIZON-PA, INC. WILL REQUIRE APPROXIMATELY 36 WORKING DAYS TO RELOCATE FIBER OPTIC FACILITIES.
- VERIZON-PA, INC. WILL REQUIRE APPROXIMATELY 20 WORKING DAYS TO REMOVE EXISTING FIBER OPTIC FACILITIES.
- VERIZON-PA, INC. WILL COMPLETE THE RELOCATION OF FIBER OPTIC FACILITIES BY ~~DECEMBER 31, 2016~~ ^{JUNE 1, 2017}.

COMCAST:

- COMCAST SHALL COORDINATE THEIR WORK WITH OTHER UTILITY COMPANIES WITHIN PROJECT LIMITS.
- COMCAST IS RESPONSIBLE FOR ALL CUSTOMER NOTIFICATIONS REQUIRED DUE TO ANY CABLE OUTAGES.
- COMCAST WILL RELOCATE CABLES FACILITIES AFTER PECO IS COMPLETED WITH THEIR ENTIRE RELOCATION.
- COMCAST WILL REQUIRE APPROXIMATELY 15 WORKING DAYS TO RELOCATE CABLE FACILITIES.
- COMCAST WILL REQUIRE APPROXIMATELY 15 WORKING DAYS TO REMOVE EXISTING CABLE FACILITIES.
- COMCAST WILL COMPLETE THE RELOCATION OF FIBER OPTIC FACILITIES BY ~~DECEMBER 2016~~ ^{JUNE 1, 2017}.

UTILITY SERVICES TO BM/AET BUILDING AND PROPOSED TRAFFIC SIGNALS:

UTILITY WORK	UTILITY COMPANY WORK ORDER	REMARKS
ELECTRIC (PECO)	13995100	FOR PROPOSED TRAFFIC SIGNALS
	14017530	FOR BM/AET BUILDING
GAS (PECO)	14033007	FOR PENNDOT CAMERA
	TBD 14227618	FOR BM/AET BUILDING
COMMUNICATIONS (COMCAST & VERIZON)	TBD	FOR BM/AET BUILDING
SANITARY SEWER (LMTSA)	TBD	FOR BM/AET BUILDING
WATER (PA AMERICAN WATER)	308391557	FOR BM/AET BUILDING

UTILITY CONSTRUCTION (DURING MAINLINE CONTRACT)

PECO (GAS):

- CONTRACTOR SHALL COORDINATE THEIR WORK WITH PECO-GAS AND PERFORM EXCAVATION, BACKFILL AND PAVEMENT RESTORATION FOR NEW GAS MAIN INSTALLATION AS WELL AS FURNISH AND INSTALL SERVICE PIPE FROM THE GAS METER TO THE BM/AET BUILDING.
- PECO-GAS WILL FURNISH AND INSTALL THE PROPOSED GAS MAIN ALONG WOODSIDE ROAD FROM CLEARVIEW DRIVE TO TAYLORSVILLE ROAD.
- PECO-GAS WILL FURNISH AND INSTALL THE PROPOSED SERVICE LINE ALONG TAYLORSVILLE ROAD TO PROPOSED GAS METER.
- PECO-GAS WILL PERFORM INSPECTIONS AND REQUIRED TIE-INS.
- PECO-GAS WILL FURNISH AND INSTALL ALL METERS, PIPE AND FITTINGS REQUIRED FOR PROPOSED GAS FACILITIES (MAIN AND SERVICE LINE) UP TO THE METER.
- PECO-GAS REQUESTS 12 WEEKS ADVANCE NOTICE FROM THE START OF CONSTRUCTION.
- PECO-GAS REQUIRES 30 WORKING DAYS TO INSTALL THE GAS MAIN AND SERVICE LINES.

PECO (ELECTRIC):

- NOTIFY PECO-ELECTRIC TWELVE (12) WEEKS IN ADVANCE FOR REQUIRED SHUTDOWNS DURING THE INSTALLATION OF PROPOSED SIGN STRUCTURES, TRAFFIC SIGNALS, LIGHTING STANDARDS AND REMOVAL OF EXISTING SIGN STRUCTURE.
- THE CONTRACTOR SHALL COORDINATE THEIR WORK WITH PECO-ELECTRIC FOR PROPOSED ELECTRIC SERVICES FOR PROPOSED TRAFFIC SIGNALS, ROADWAY LIGHTING AND BM/AET BUILDING.

PA AMERICAN WATER:

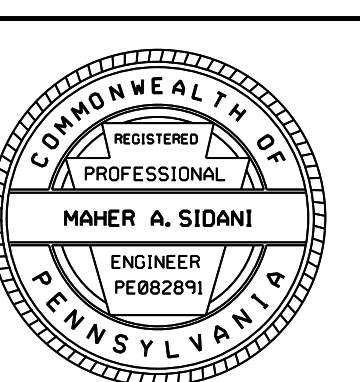
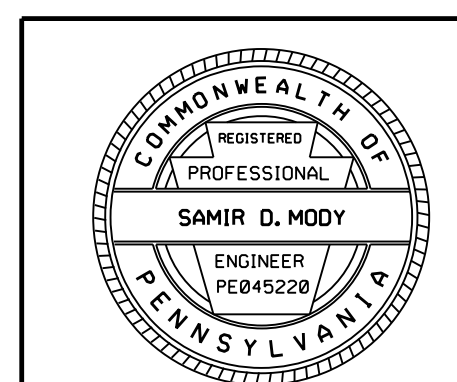
- THE CONTRACTOR SHALL COORDINATE THEIR WORK WITH PA AMERICAN WATER FOR PROPOSED TIE-INS AT EXISTING WATER MAIN.
- NOTIFY PA AMERICAN WATER TWO (2) WEEKS IN ADVANCE TO SCHEDULE INSPECTION.
- THE 8" DIP WATER LINE FROM CLEARVIEW DRIVE TO WATER METER PIT AT TAYLORSVILLE ROAD WILL BE OWNED AND MAINTAINED BY PA AMERICAN WATER. THE 8" DIP WATER LINE FROM WATER METER PIT (INCLUDING WATER METER PIT) TO BM/AET BUILDING WILL BE OWNED AND MAINTAINED BY DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION.
- THE 8" DIP WATER LINE SHALL BE OF PRESSURE CLASS 350.
- PREQUALIFY WITH PA AMERICAN WATER BY COMPLETING A CONTRACTOR WORK EXPERIENCE QUESTIONNAIRE.

LOWER MAKEFIELD TOWNSHIP:

- NOTIFY LOWER MAKEFIELD TOWNSHIP TWO (2) WEEKS IN ADVANCE TO SCHEDULE INSPECTION.
- COORDINATE AND SCHEDULE LMTSA INSPECTION DURING THE CONSTRUCTION OF DRAINAGE SYSTEM AND MEDIAN BARRIER AT I-95 STA. 222+19.
- COORDINATE AND SCHEDULE LMTSA INSPECTION OF NEW FORCE MAIN TO BM/AET BUILDING.

VERIZON:

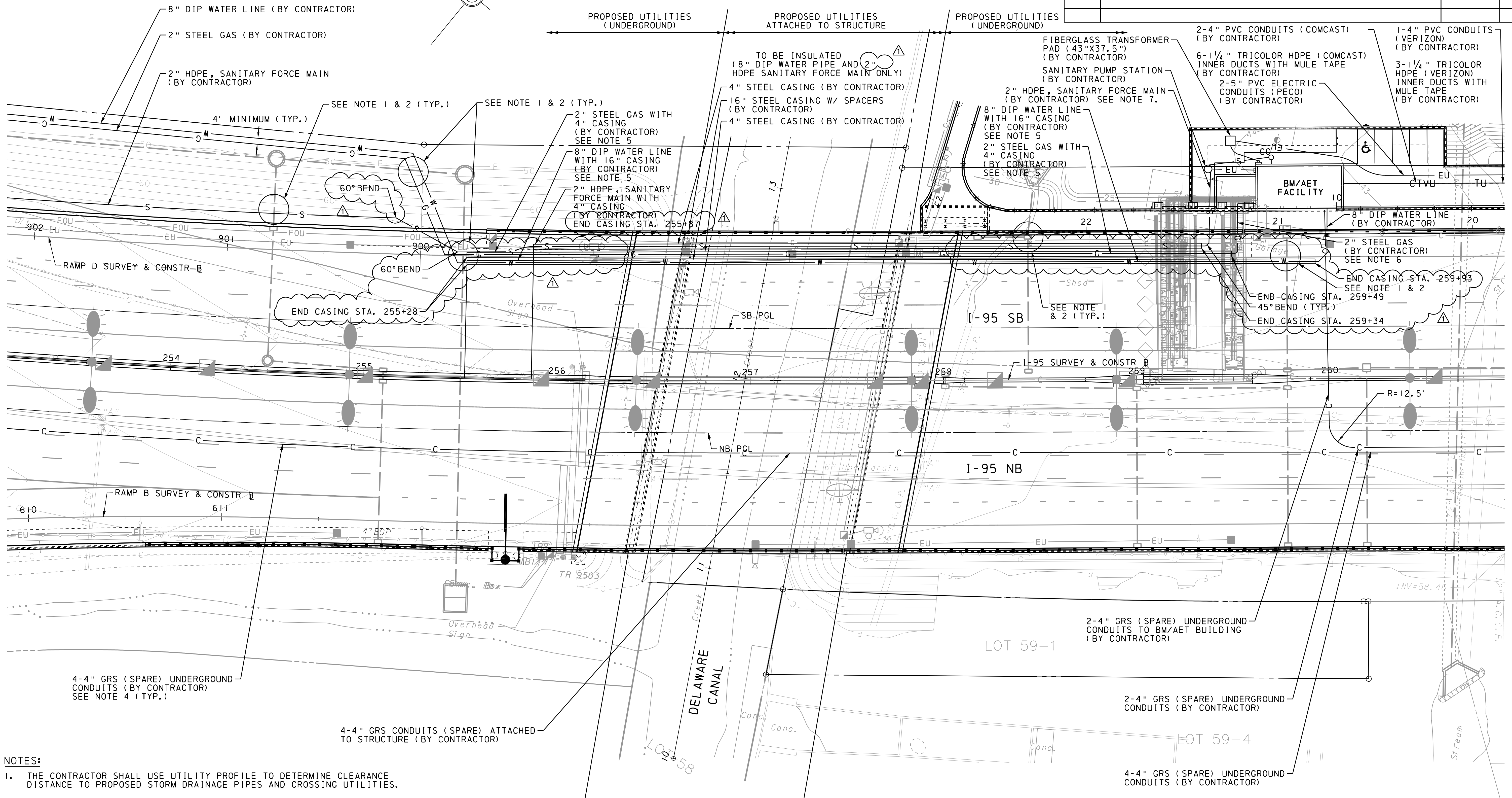
- VERIZON WILL RELOCATE ALL OVERHEAD & UNDERGROUND FACILITIES WITHIN PROJECT LIMITS.
- CONTRACTOR SHALL COORDINATE WITH VERIZON FOR THE RELOCATION OF VERIZON FACILITIES.



**UTILITY CONSTRUCTION PLAN
GENERAL NOTES & LEGEND**

SEE SHEET 18

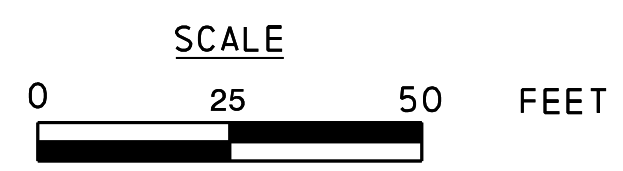
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6-0	BUCKS	0095	001	03 OF 32	
LOWER MAKEFIELD TOWNSHIP					
REVISION NUMBER	REVISIONS			DATE	BY
1	ADDENDUM NO. 8			12/01/16	PKP



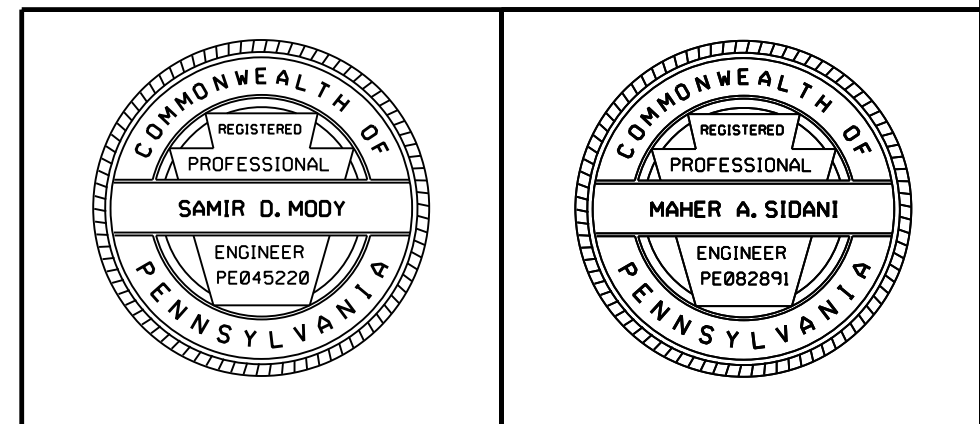
SEE SHEET 11

SEE SHEET 04

- NOTES:**
1. THE CONTRACTOR SHALL USE UTILITY PROFILE TO DETERMINE CLEARANCE DISTANCE TO PROPOSED STORM DRAINAGE PIPES AND CROSSING UTILITIES.
 2. THE CONTRACTOR SHALL SCHEDULE UTILITY WORK WITH STORM DRAINAGE AND LIGHTING CONDUIT INSTALLATIONS.
 3. REFER TO BRIDGE PLANS FOR CONDUIT CONFIGURATION AND LOCATIONS.
 4. CONTRACTOR SHALL INSTALL PULL STRING IN ALL PROPOSED SPARE CONDUITS.
 5. GAS, WATER AND SANITARY SERVICE PIPE SHALL HAVE A MINIMUM COVER OF 5 FEET BETWEEN STA. 258+90 TO STA. 259+55.
 6. GAS PIPE ELEVATION AND LOCATION SHALL BE BELOW THE GANTRY CORBEL AND A MINIMUM OF 2 FEET CLEAR (HORIZONTAL) FROM THE GANTRY.
 7. SANITARY PIPE/DISCHARGE PIPE SHOULD ENTER THE GROUND BETWEEN THE TIP OF THE PA-BM MOMENT SLAB AND THE BUILDING/GENERATOR ROOM.

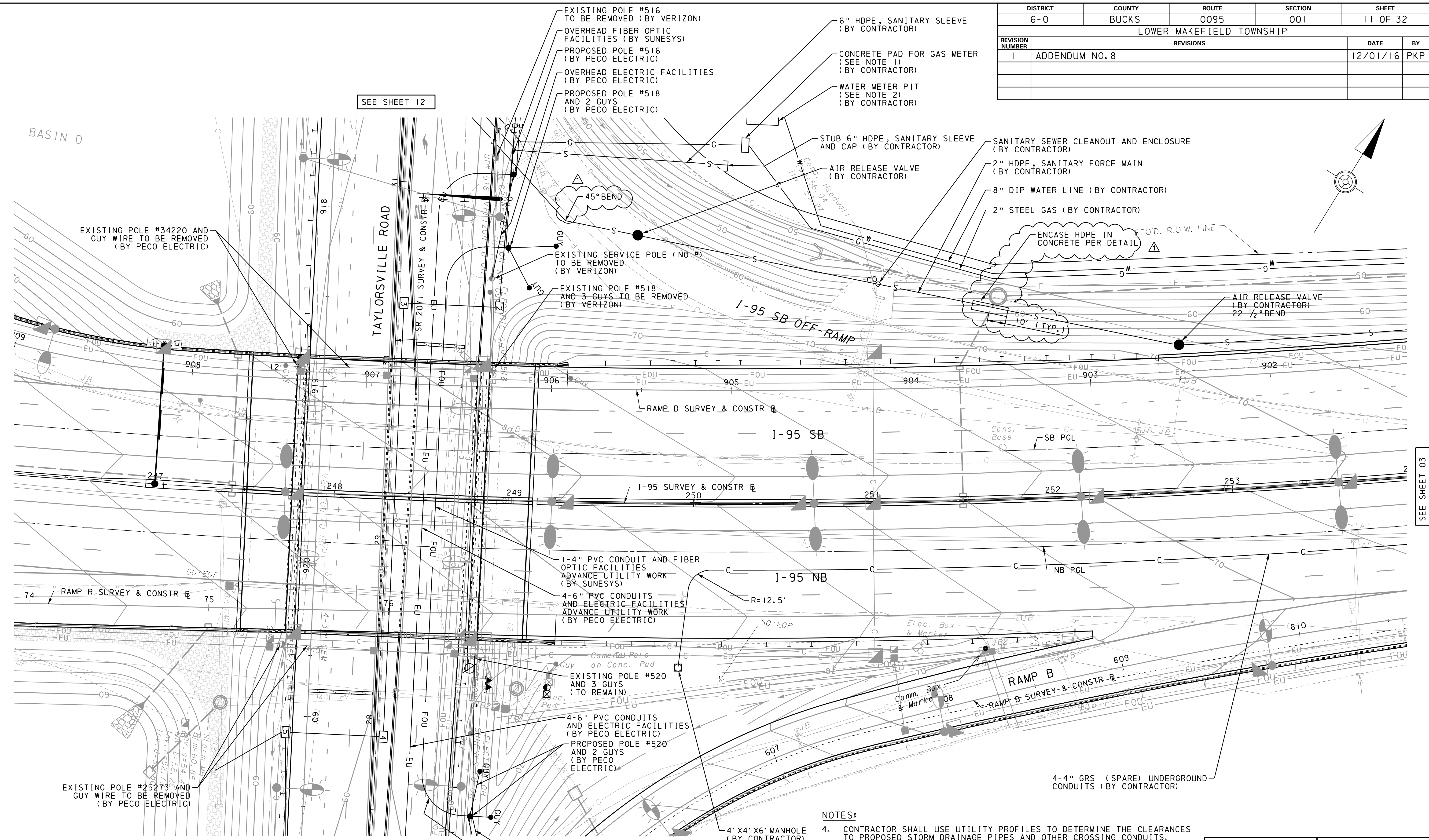


UTILITY CONSTRUCTION PLAN - 2



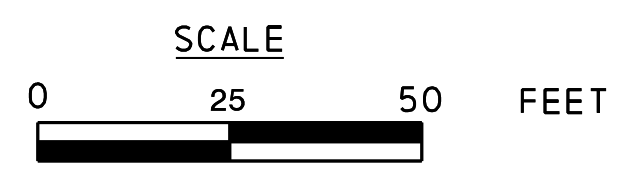
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LOWER MAKEFIELD TOWNSHIP					
REVISION NUMBER	REVISIONS			DATE	BY
1	ADDENDUM NO. 8			12/01/16	PKP

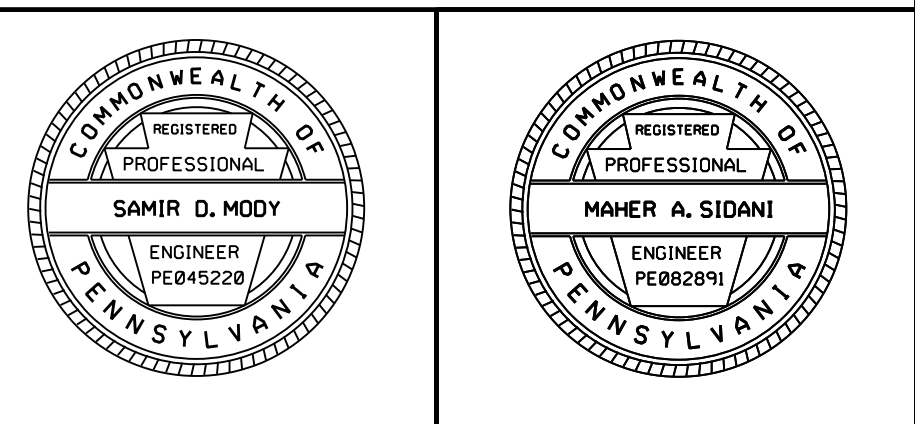


- NOTES:**
- CONTRACTOR SHALL CONFIRM THE LOCATION AND SIZE OF CONCRETE PAD FOR GAS METER WITH PECO-GAS PRIOR INSTALLATION.
 - CONTRACTOR SHALL CONFIRM THE LOCATION AND SIZE OF WATER METER PIT WITH PA AMERICAN WATER PRIOR INSTALLATION.
 - CONTRACTOR SHALL COORDINATE THEIR UTILITY WORK WITH UTILITY INSTALLATION.

- NOTES:**
- CONTRACTOR SHALL USE UTILITY PROFILES TO DETERMINE THE CLEARANCES TO PROPOSED STORM DRAINAGE PIPES AND OTHER CROSSING CONDUITS.
 - CONTRACTOR SHALL SCHEDULE UTILITY WORK WITH STORM DRAINAGE AND LIGHTING CONDUIT.
 - CONTRACTOR SHALL AVOID DISTURBING THE UNDERGROUND PECO-ELECTRIC CONDUITS AND SUNESYS CONDUITS DURING CONSTRUCTION.



UTILITY CONSTRUCTION PLAN -10



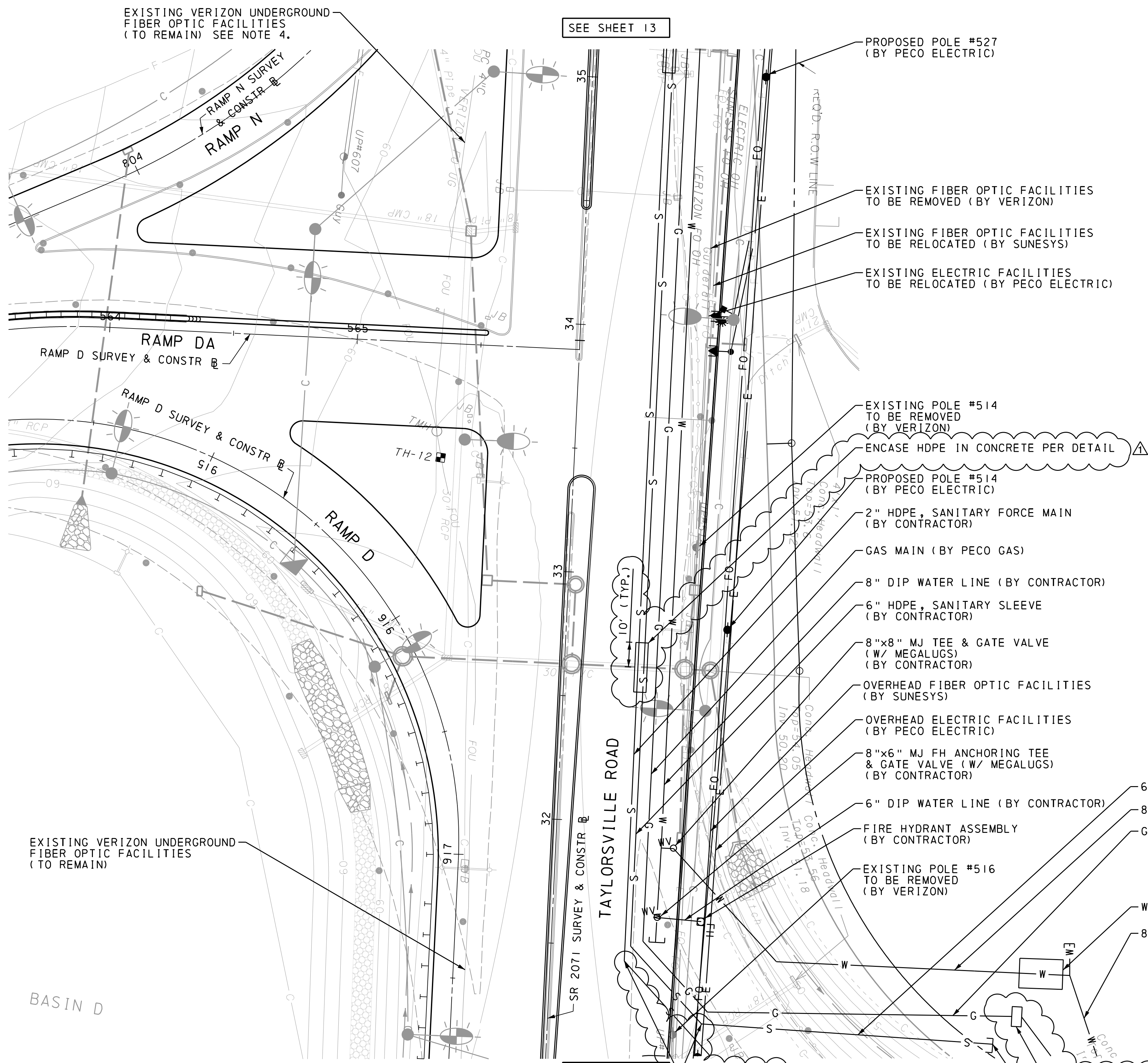
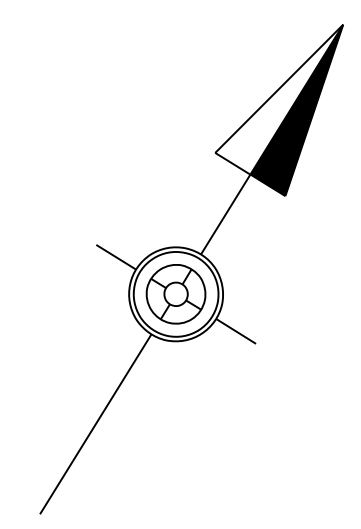
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SEE SHEET 12

SEE SHEET 10

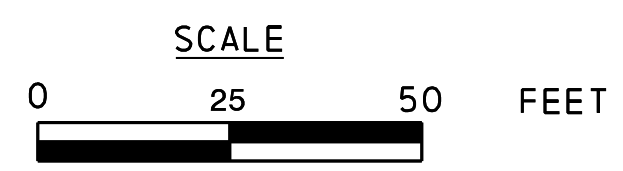
SEE SHEET 03

DISTRICT	COUNTY	ROUTE	SECTION	SHEET	
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LOWER MAKEFIELD TOWNSHIP					
REVISION NUMBER	REVISIONS			DATE	BY
1	ADDENDUM NO. 8			12/01/16	PKP

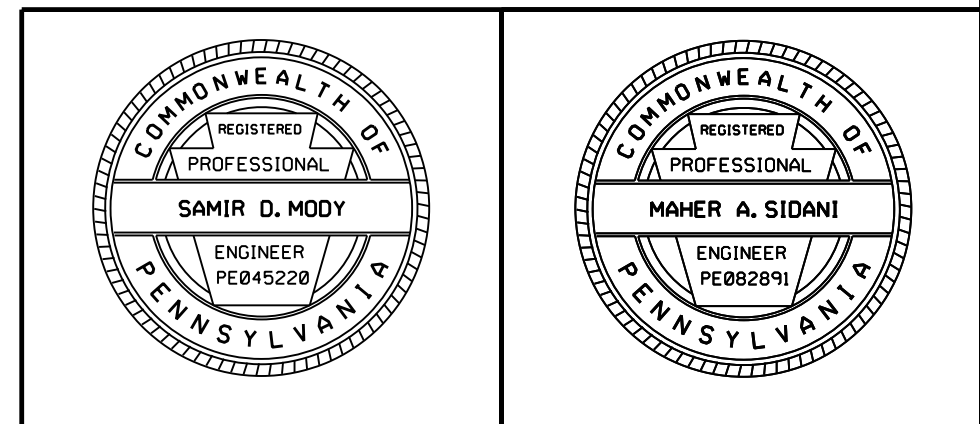


TEST HOLE LOCATION						TEST HOLE DESCRIPTION			
TEST HOLE NO.	STATION	OFFSET	NORTHING	EASTING	LOCATION DESCRIPTION	ELEVATION	UTILITY TYPE	UTILITY SIZE	COVER
TH-12	33+43.58	53.93' LT	349357.89	2776343.61	TAYLORSVILLE ROAD SB	56.76	TELEPHONE	4"	6.53

- NOTES:**
- CONTRACTOR SHALL CONFIRM THE LOCATION OF CONCRETE PAD FOR GAS METER WITH PECO-GAS PRIOR INSTALLATION.
 - CONTRACTOR SHALL CONFIRM THE LOCATION AND SIZE OF WATER METER PIT WITH PA AMERICAN WATER PRIOR INSTALLATION.
 - SEE NOTES 4 & 5 UCP #10
 - SEE NOTE 3 ON UCP #9.

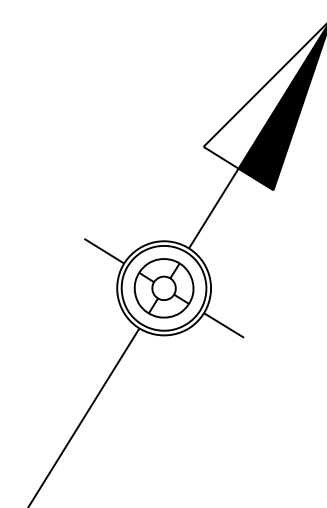


UTILITY CONSTRUCTION PLAN -11

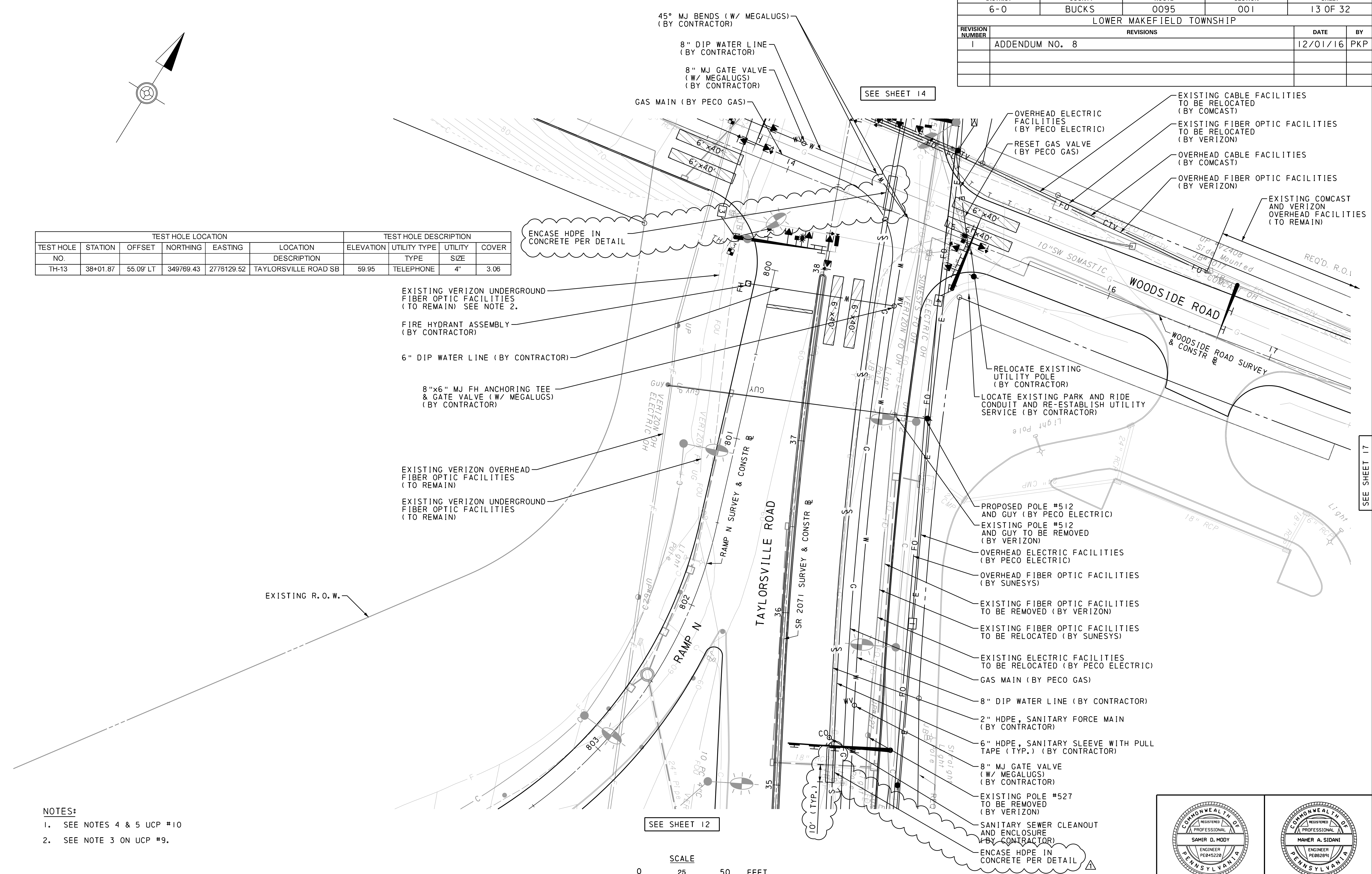


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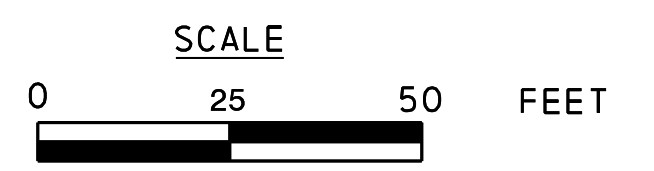
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6-0	BUCKS	0095	001	13 OF 32	
LOWER MAKEFIELD TOWNSHIP					
REVISION NUMBER	REVISIONS			DATE	BY
1	ADDENDUM NO. 8			12/01/16	PKP



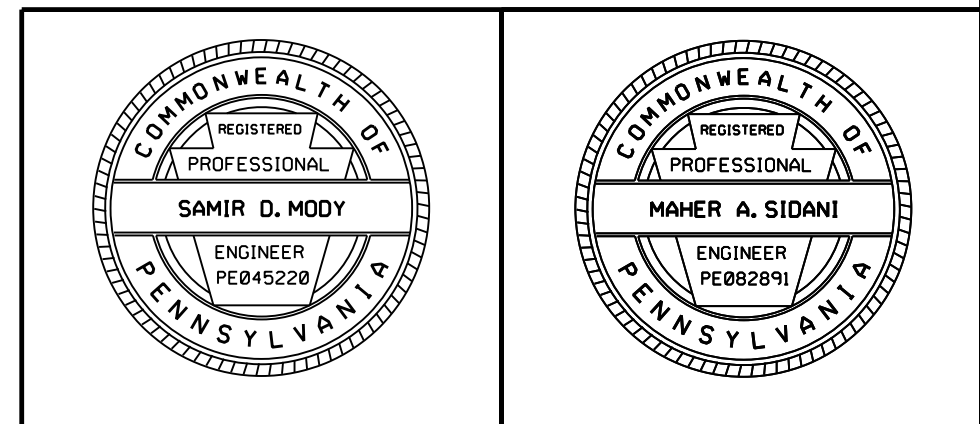
TEST HOLE LOCATION					TEST HOLE DESCRIPTION				
TEST HOLE NO.	STATION	OFFSET	NORTHING	EASTING	LOCATION DESCRIPTION	ELEVATION	UTILITY TYPE	UTILITY SIZE	COVER
TH-13	38+01.87	55.09' LT	349769.43	2778129.52	TAYLORSVILLE ROAD SB	59.95	TELEPHONE	4"	3.06



- NOTES:**
- SEE NOTES 4 & 5 UCP #10
 - SEE NOTE 3 ON UCP #9.

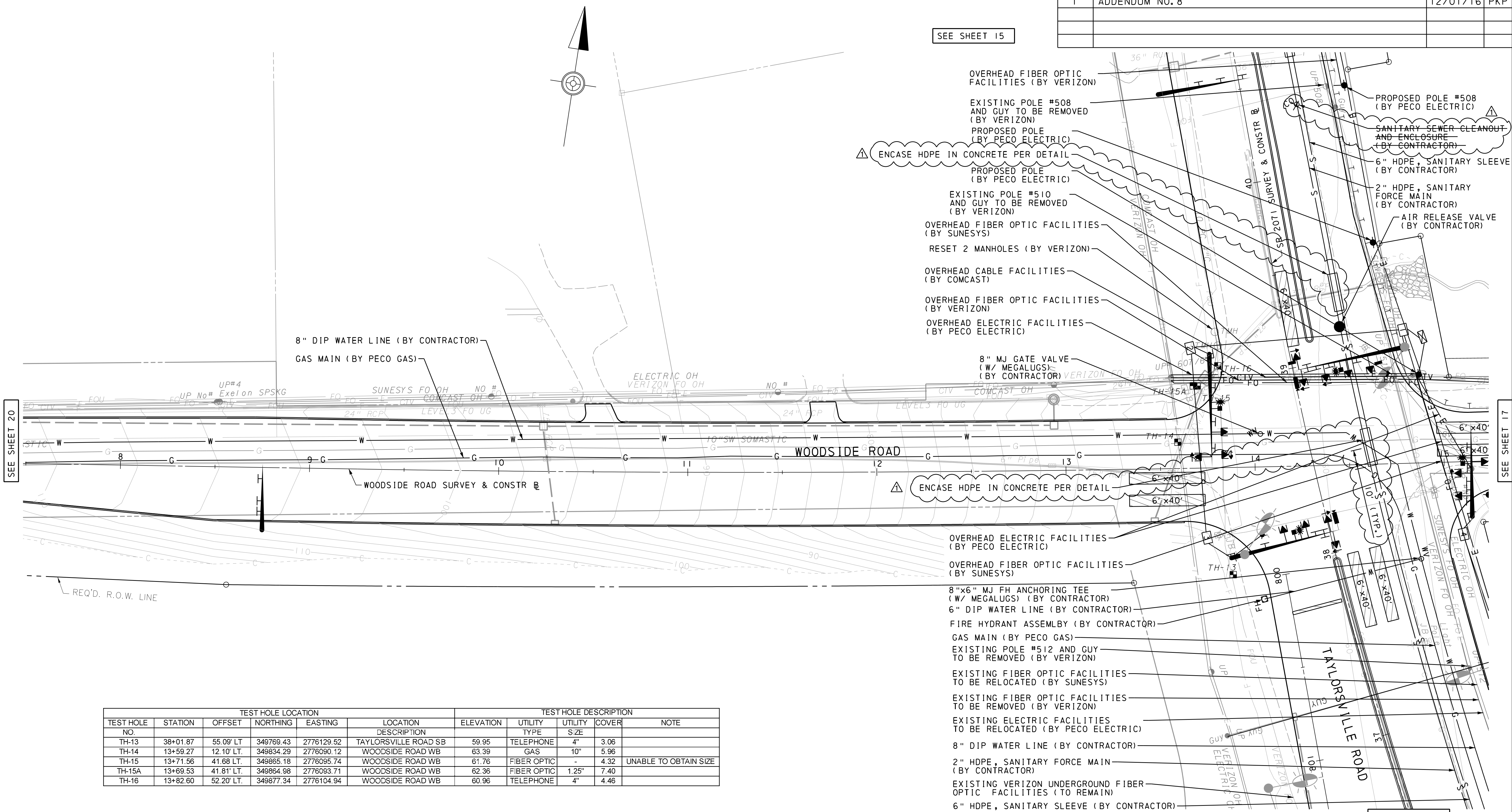


UTILITY CONSTRUCTION PLAN -12



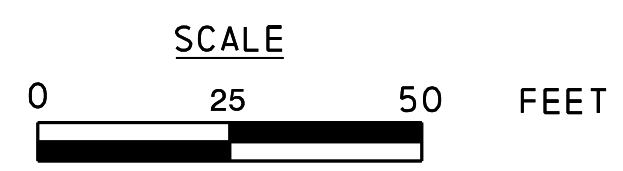
DISTRICT	COUNTY	ROUTE	SECTION	SHEET	
6-0	BUCKS	0095	001	14 OF 32	
LOWER MAKEFIELD TOWNSHIP					
REVISION NUMBER	REVISIONS			DATE	BY
1	ADDENDUM NO. 8			12/01/16	PKP

SEE SHEET 15



TEST HOLE NO.	TEST HOLE LOCATION				LOCATION DESCRIPTION	ELEVATION	TEST HOLE DESCRIPTION			NOTE
	STATION	OFFSET	NORTHING	EASTING			UTILITY TYPE	UTILITY SIZE	COVER	
TH-13	38+01.87	55.09' LT	349769.43	2776129.52	TAYLORSVILLE ROAD SB	59.95	TELEPHONE	4"	3.06	
TH-14	13+59.27	12.10' LT.	349834.29	2776090.12	WOODSIDE ROAD WB	63.39	GAS	10"	5.96	
TH-15	13+71.56	41.68' LT.	349865.18	2776095.74	WOODSIDE ROAD WB	61.76	FIBER OPTIC	-	4.32	UNABLE TO OBTAIN SIZE
TH-15A	13+69.53	41.81' LT.	349864.98	2776093.71	WOODSIDE ROAD WB	62.36	FIBER OPTIC	1.25"	7.40	
TH-16	13+82.60	52.20' LT.	349877.34	2776104.94	WOODSIDE ROAD WB	60.96	TELEPHONE	4"	4.46	

- NOTE:**
- SEE NOTES 4 & 5 UCP #10.
 - SEE NOTE 3 UCP #9.



UTILITY CONSTRUCTION PLAN -13

SAMIR D. MODY
ENGINEER
PE#45229

MAHER A. SIDANI
ENGINEER
PE#82891

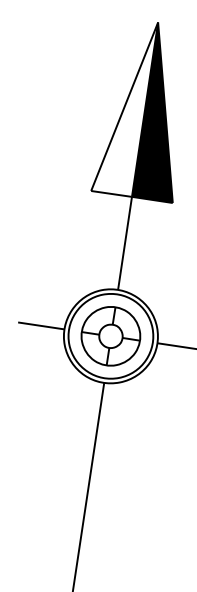
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SEE SHEET 16

DISTRICT	COUNTY	ROUTE	SECTION	SHEET	
6-0	BUCKS	0095	001	15 OF 32	
LOWER MAKEFIELD TOWNSHIP					
REVISION NUMBER	REVISIONS			DATE	BY
1	ADDENDUM NO. 8			12/01/16	PKP

ENCASE HDPE IN CONCRETE PER DETAIL

BLOCK 20-28
LOT 116



SEE SHEET 14

- PROPOSED POLE (BY PECO ELECTRIC)
- EXISTING POLE AND GUY TO BE REMOVED (BY VERIZON)
- PROPOSED GUY POLE (BY PECO ELECTRIC)
- EXISTING POLE AND GUY TO BE REMOVED (BY VERIZON)

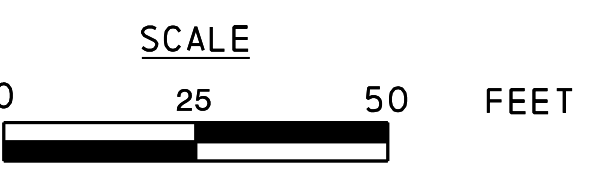
- EXISTING TELEPHONE FACILITIES TO BE RELOCATED (BY VERIZON)
- EXISTING ELECTRIC FACILITIES TO BE RELOCATED (BY PECO ELECTRIC)
- OVERHEAD FIBER OPTIC FACILITIES (BY VERIZON)
- OVERHEAD ELECTRIC FACILITIES (BY PECO ELECTRIC)
- EXISTING POLE AND GUY TO BE REMOVED (BY VERIZON)
- UNDERGROUND FIBER OPTIC FACILITIES (BY VERIZON)
- PROPOSED POLE AND GUY (BY PECO ELECTRIC)
- 6" HDPE, SANITARY SLEEVE (BY CONTRACTOR)
- 2" HDPE, SANITARY FORCE MAIN (BY CONTRACTOR)

- EXISTING POLE TO BE REMOVED (BY VERIZON)
- PROPOSED POLE (BY PECO ELECTRIC)
- SANITARY SEWER CLEANOUT AND ENCLOSURE (BY CONTRACTOR)
- UNDERGROUND FIBER OPTIC FACILITIES (BY VERIZON)
- PROPOSED POLE #508 (BY PECO ELECTRIC)

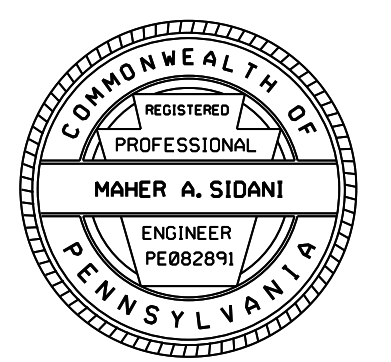
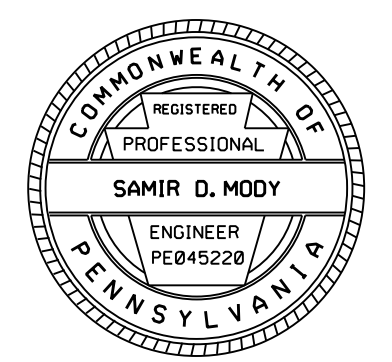
ENCASE HDPE IN CONCRETE PER DETAIL

Conc. Headwall
Top=64.71
Inv. 56.71
(Invert estimate based on 36" pipe)

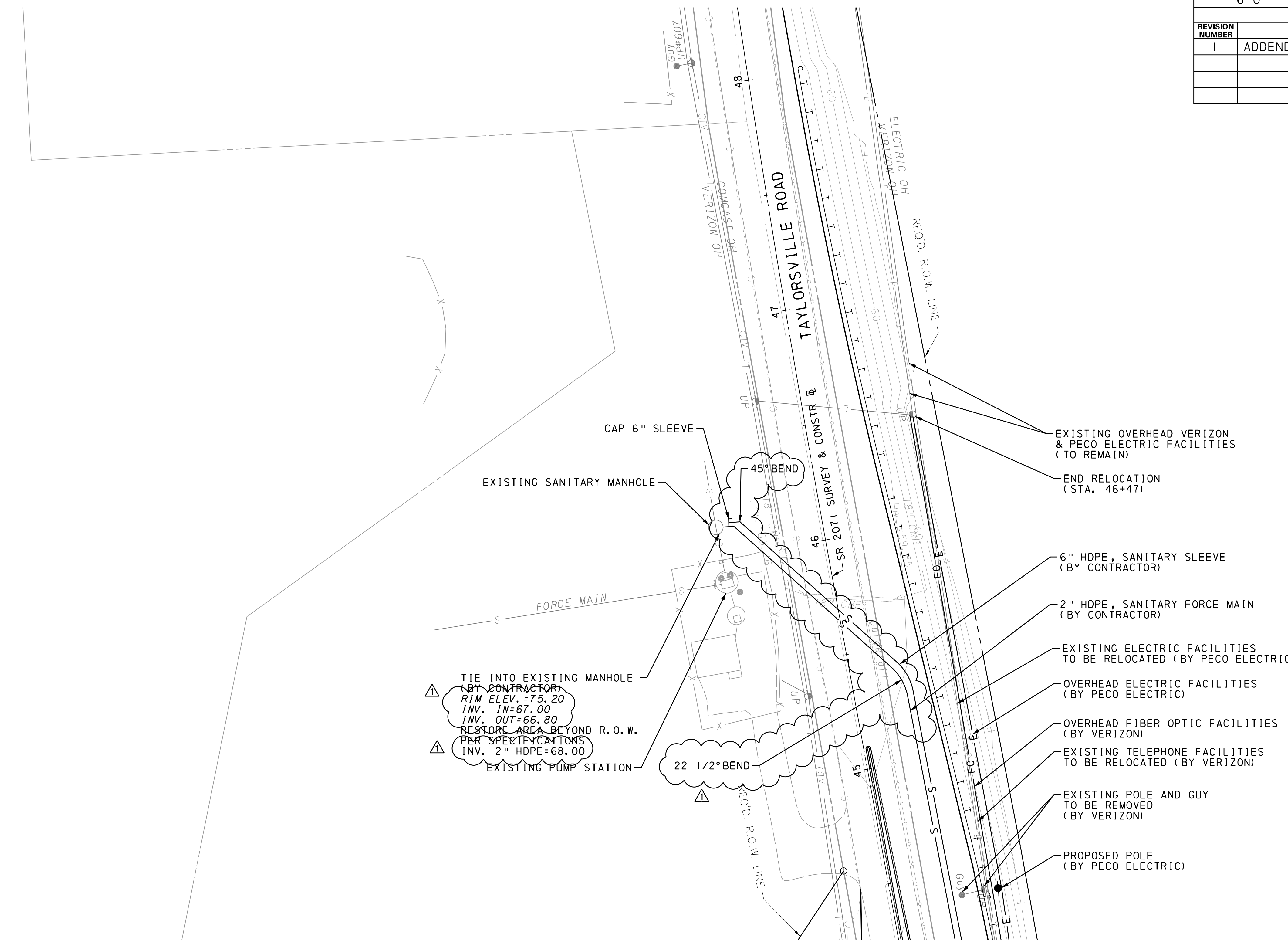
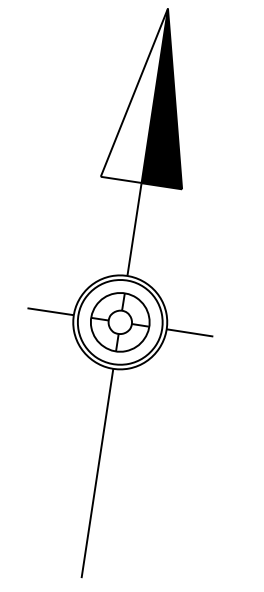
Conc. Headwall
TOP=59.10
Filler Elev. 56.6
Ground Elev. 56.6
Inv. 56.6
(Invert estimate based on 36" pipe)



NOTE:
1. SEE NOTES 4 & 5 UCP #10



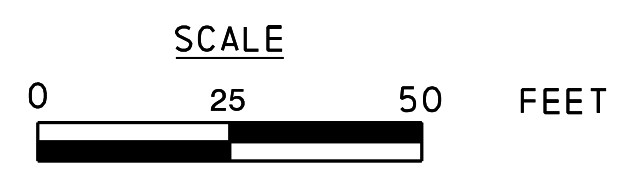
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0095	001	16 OF 32
LOWER MAKEFIELD TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	
1	ADDENDUM NO. 8	12/01/16	PKP	



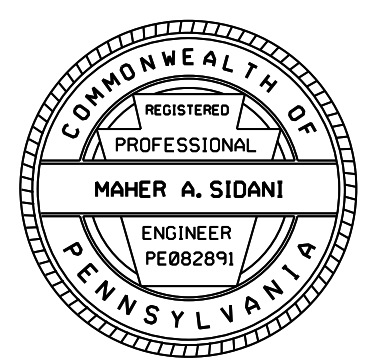
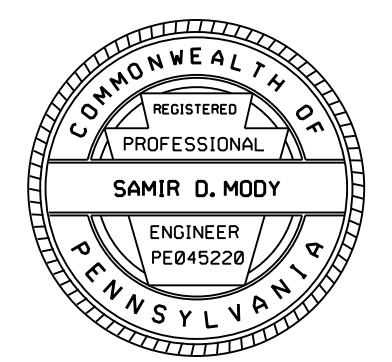
SEE SHEET 15

NOTES:

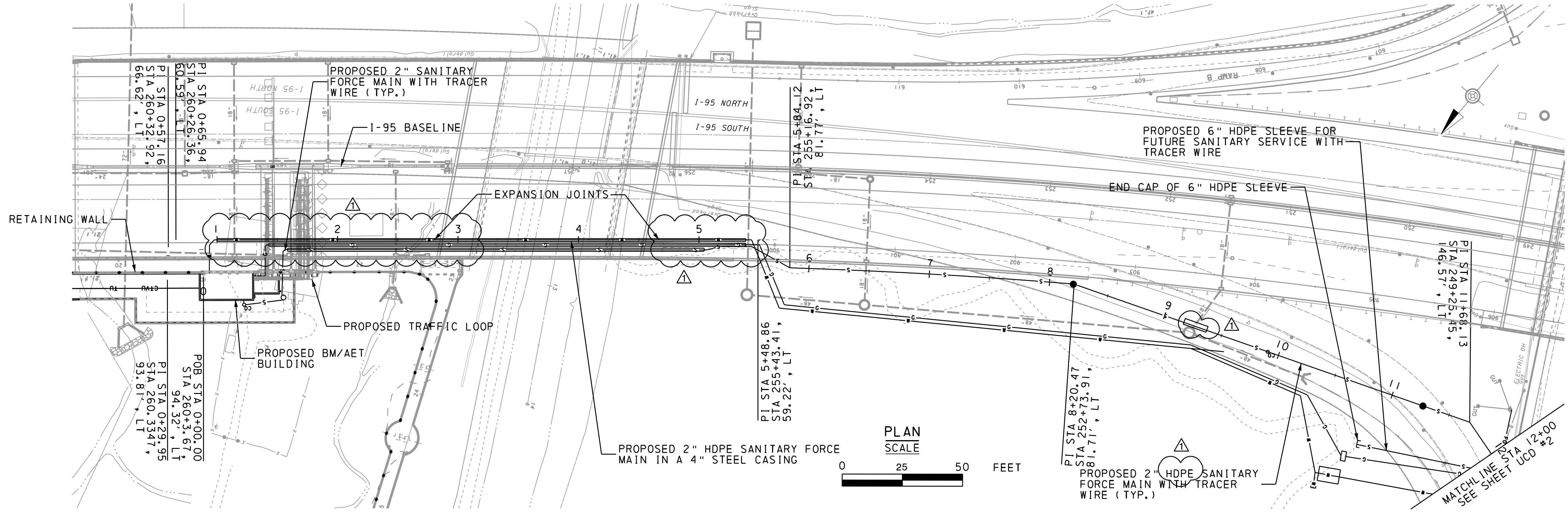
1. SEE NOTE 3 UCP #9.
2. SEE NOTES 4 & 5 UCP #10.



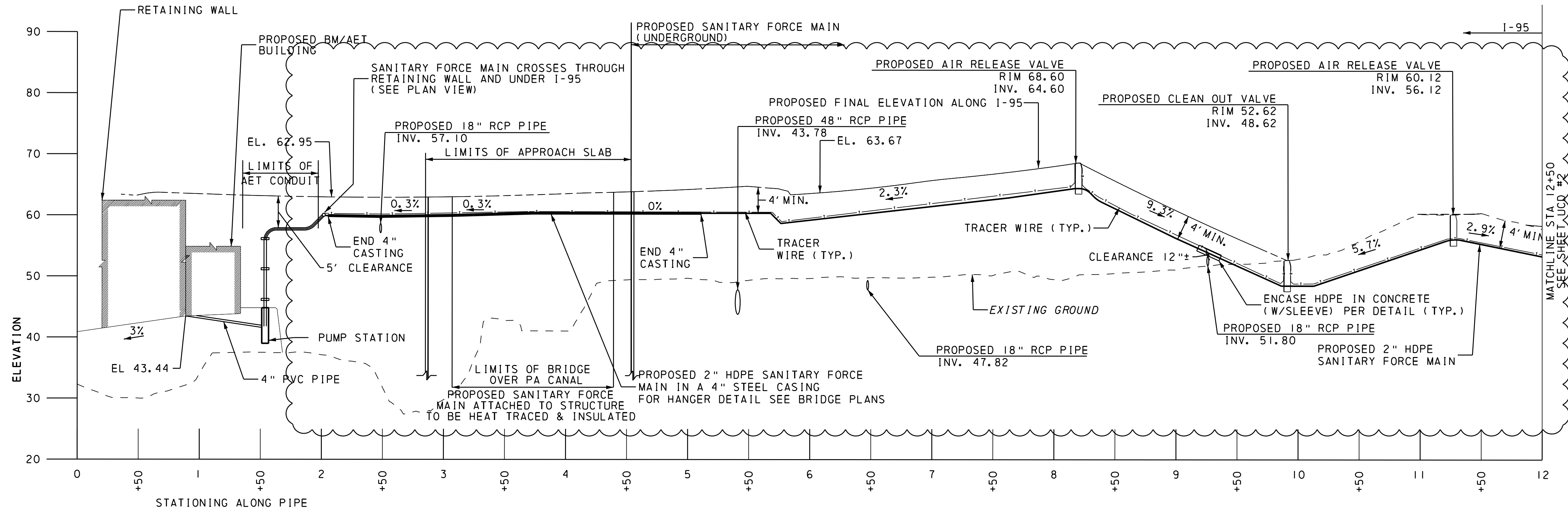
UTILITY CONSTRUCTION PLAN -15



DISTRICT	COUNTY	ROUTE	SECTION	SHEET	
6-0	BUCKS	0095	001	21 OF 32	
LOWER MAKEFIELD TOWNSHIP					
REVISION NUMBER	REVISIONS			DATE	BY
1	ADDENDUM NO. 8			12/01/16	PKP

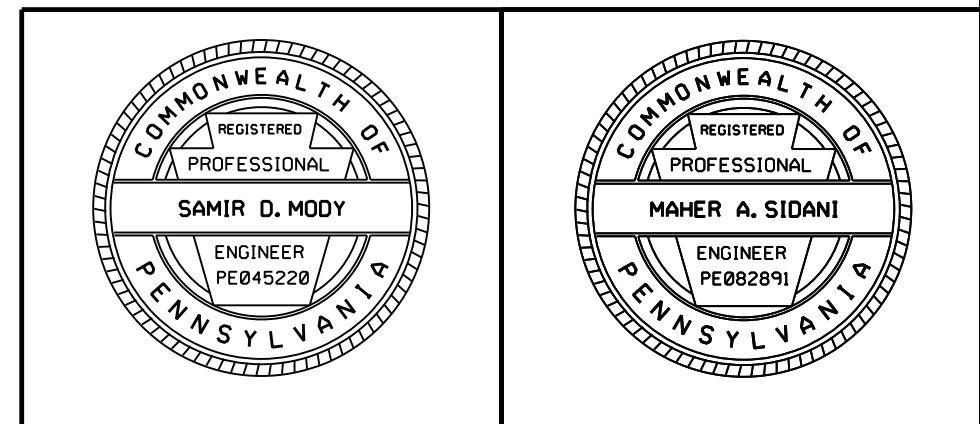


- NOTE:
1. PROVIDE CONCRETE THRUST BLOCKS AT VERTICAL AND HORIZONTAL BENDS (TYP.). STANDARD BENDS SHALL BE USED AND SHALL BE ADJUSTED IN FIELD TO MEET FIELD CONDITIONS.
 2. WHERE CLEARANCE OF SANITARY FORCE MAIN IS LESS THAN 18 INCHES AT CROSSING UTILITY, ENCASE HDPE PIPE IN CONCRETE PER DETAIL.
 3. CLEARANCES SHOWN ARE BASED UPON OUTSIDE DIAMETER OF PIPES.
 4. PROVIDE SHOP DRAWING FOR FORCE MAIN LAYOUT AND THRUST BLOCKS.

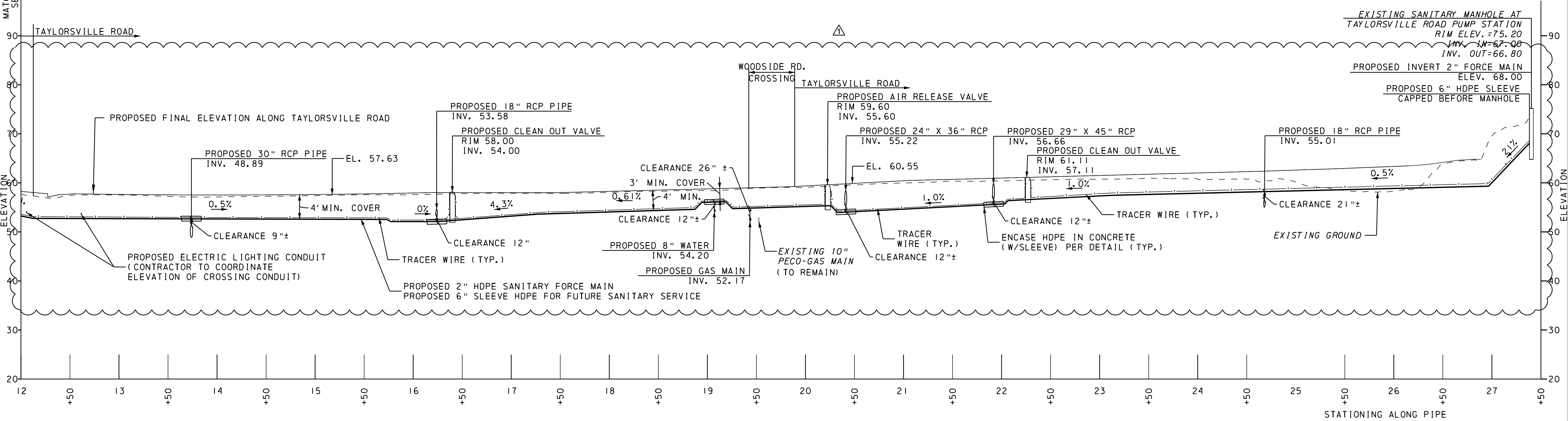
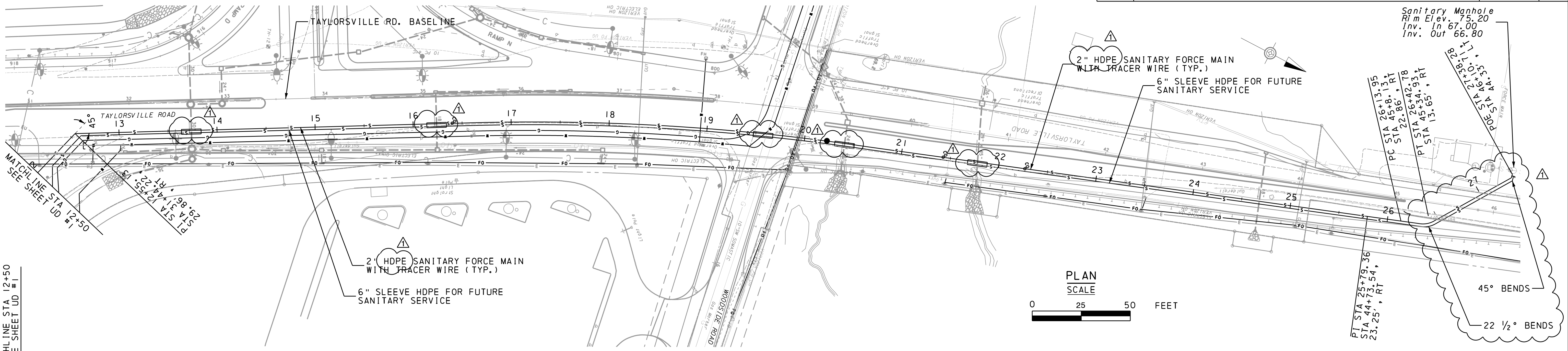


PROPOSED SANITARY PLAN AND PROFILE- I

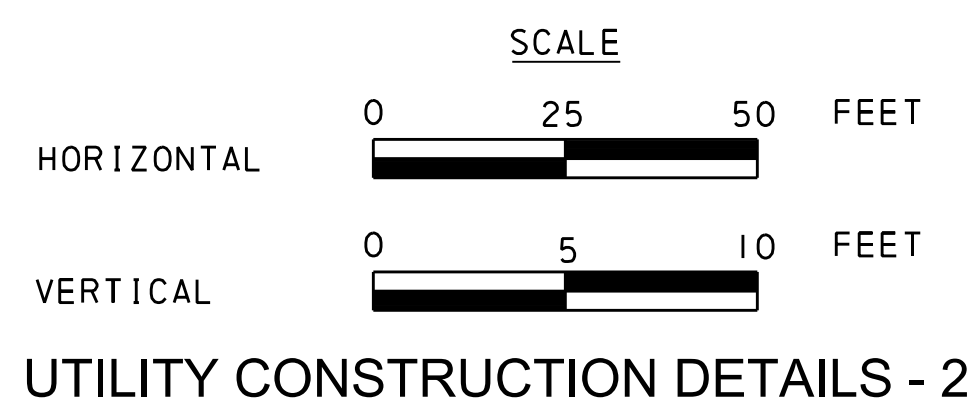
UTILITY CONSTRUCTION DETAILS - 1



DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0095	001	22 OF 32
LOWER MAKEFIELD TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	
1	ADDENDUM NO. 8	12/01/16	PKP	

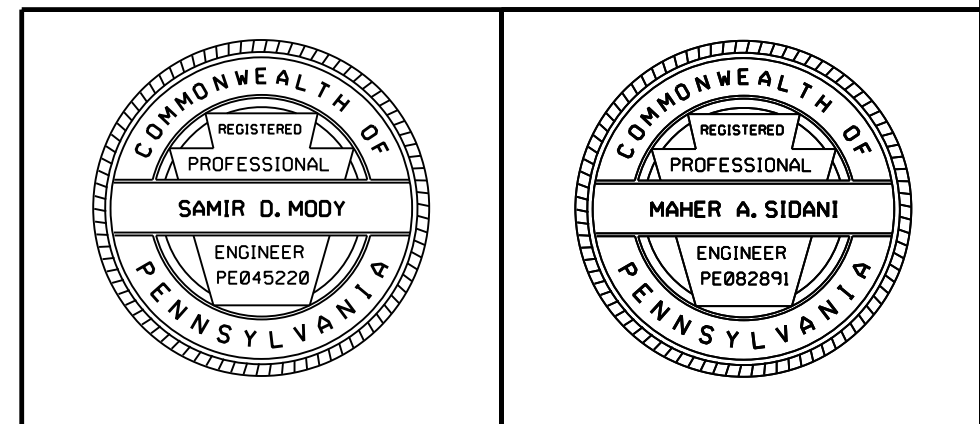


SEE NOTES SHEET 21 OF 32/UCD-1

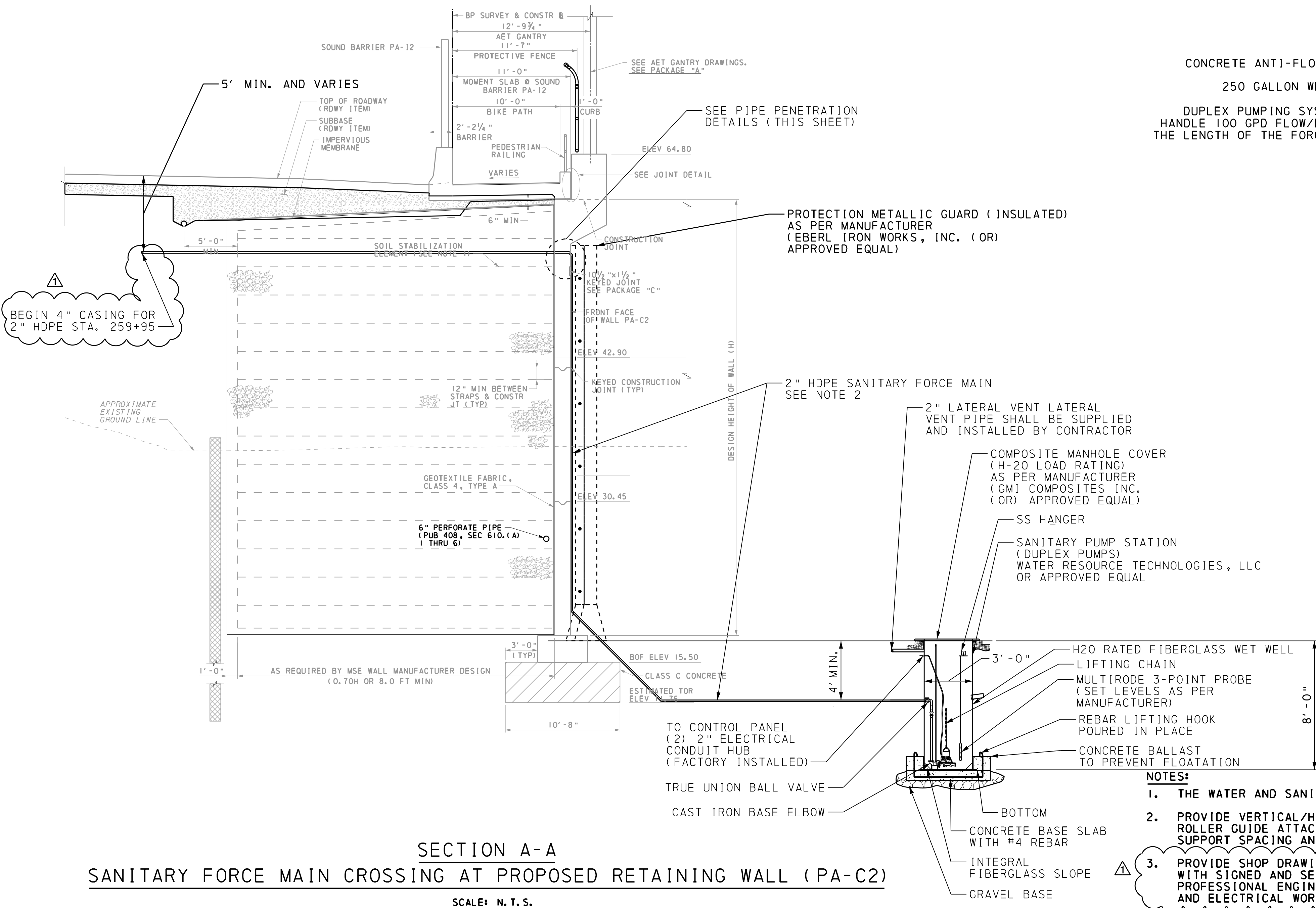
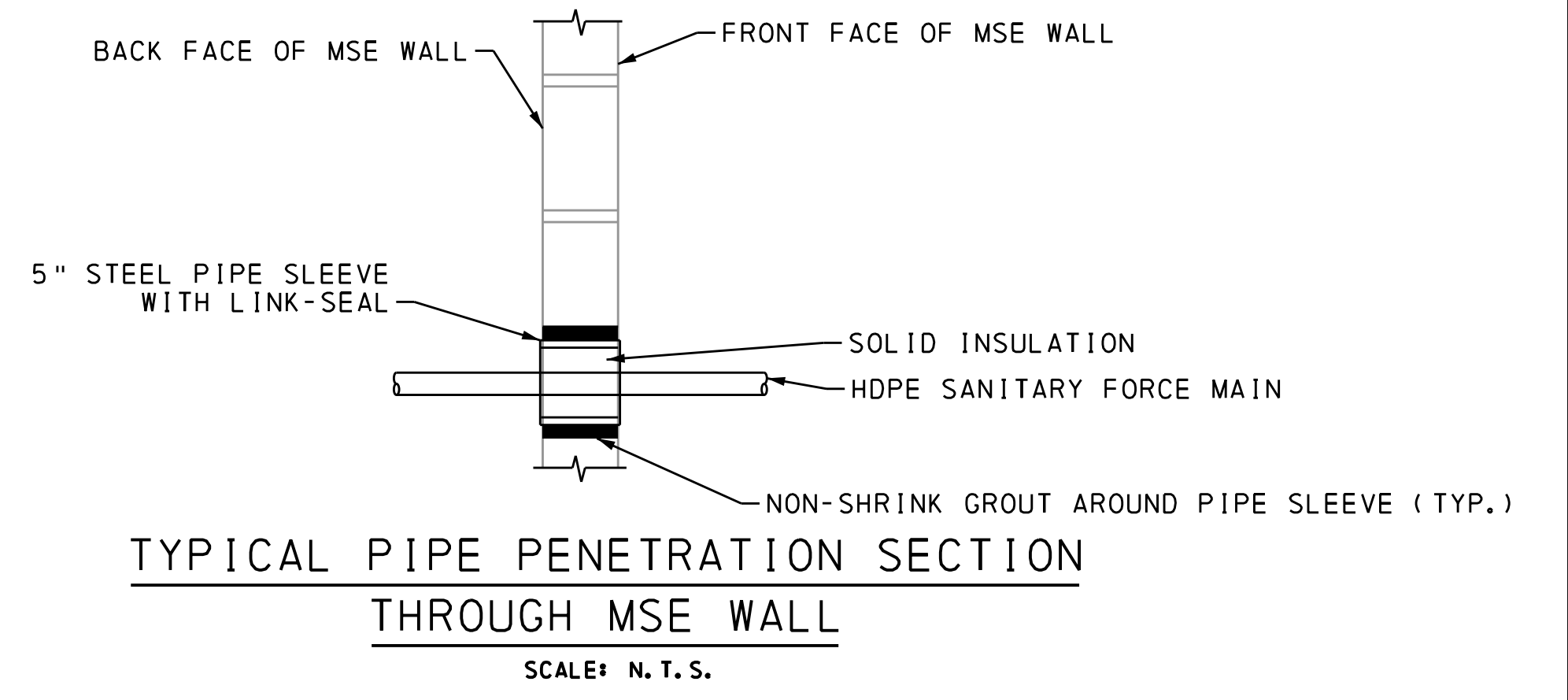
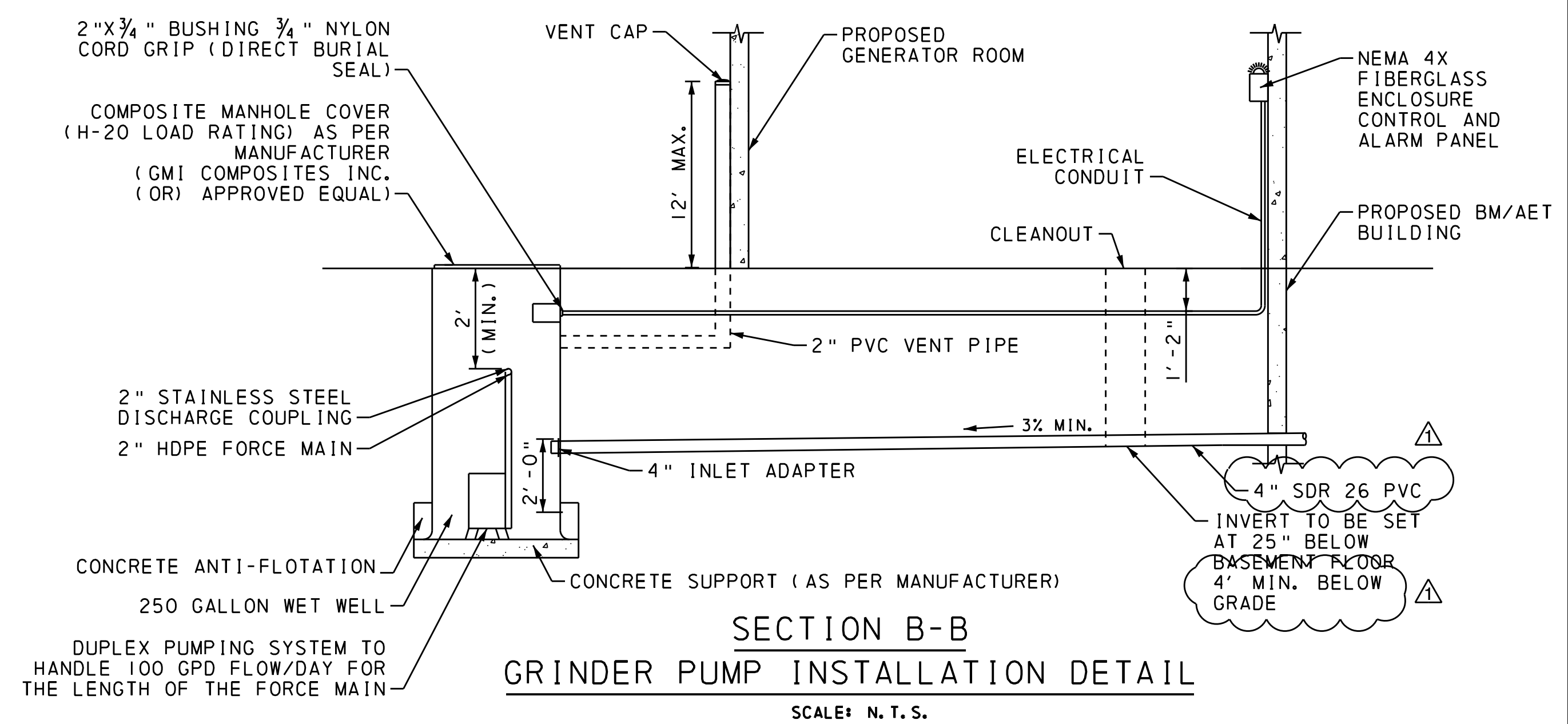
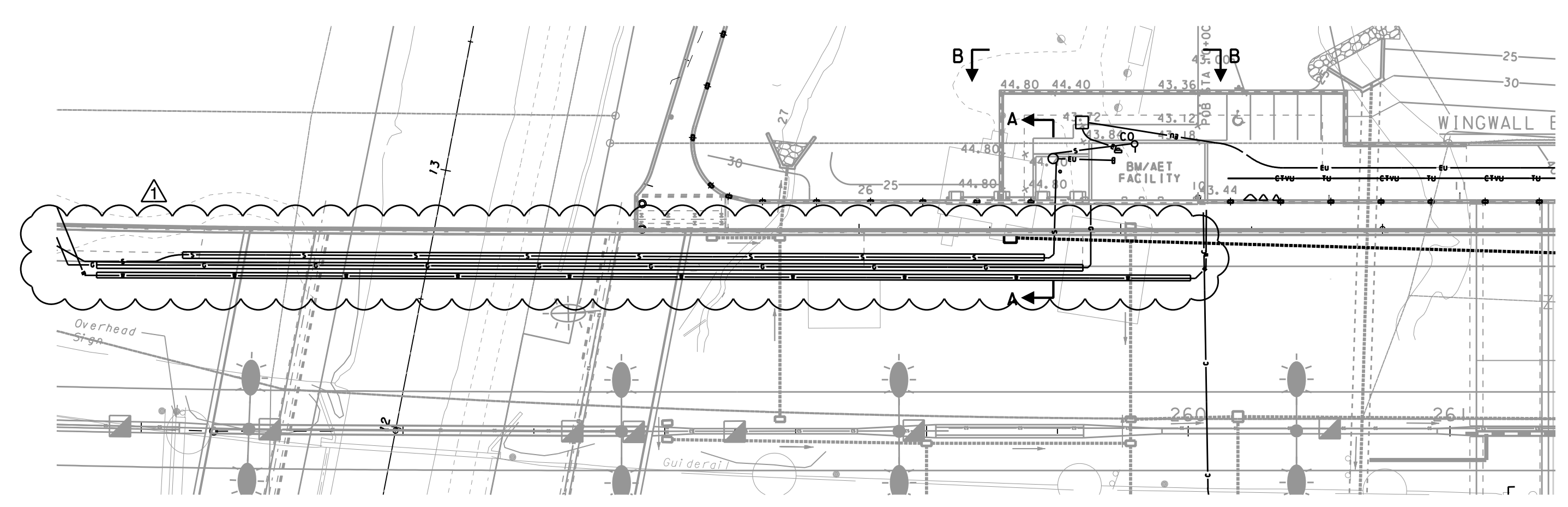


PROPOSED SANITARY PLAN AND PROFILE-2

UTILITY CONSTRUCTION DETAILS - 2

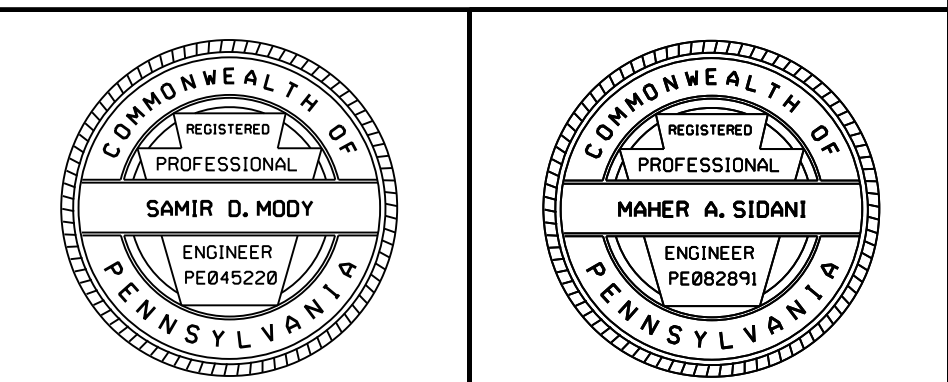


DISTRICT	COUNTY	ROUTE	SECTION	SHEET	
6-0	BUCKS	0095	001	28 OF 32	
LOWER MAKEFIELD TOWNSHIP					
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PUMP INFO	
DESIGN FLOW (GPM)	29.86 GPM
DESIGN HEAD (TDH)	102.6 FEET
HORSEPOWER	3.1 HP
VOLTAGE AND PHASE	230V 1PH
RPM	3230
MANUFACTURER	FLYGT, MP 3068 OR APPROVED EQUAL
IMPELLER DIAMETER	139 mm
PUMP DISCHARGE SIZE	1.50 INCH
STATION PIPING SIZE	2.0 INCH

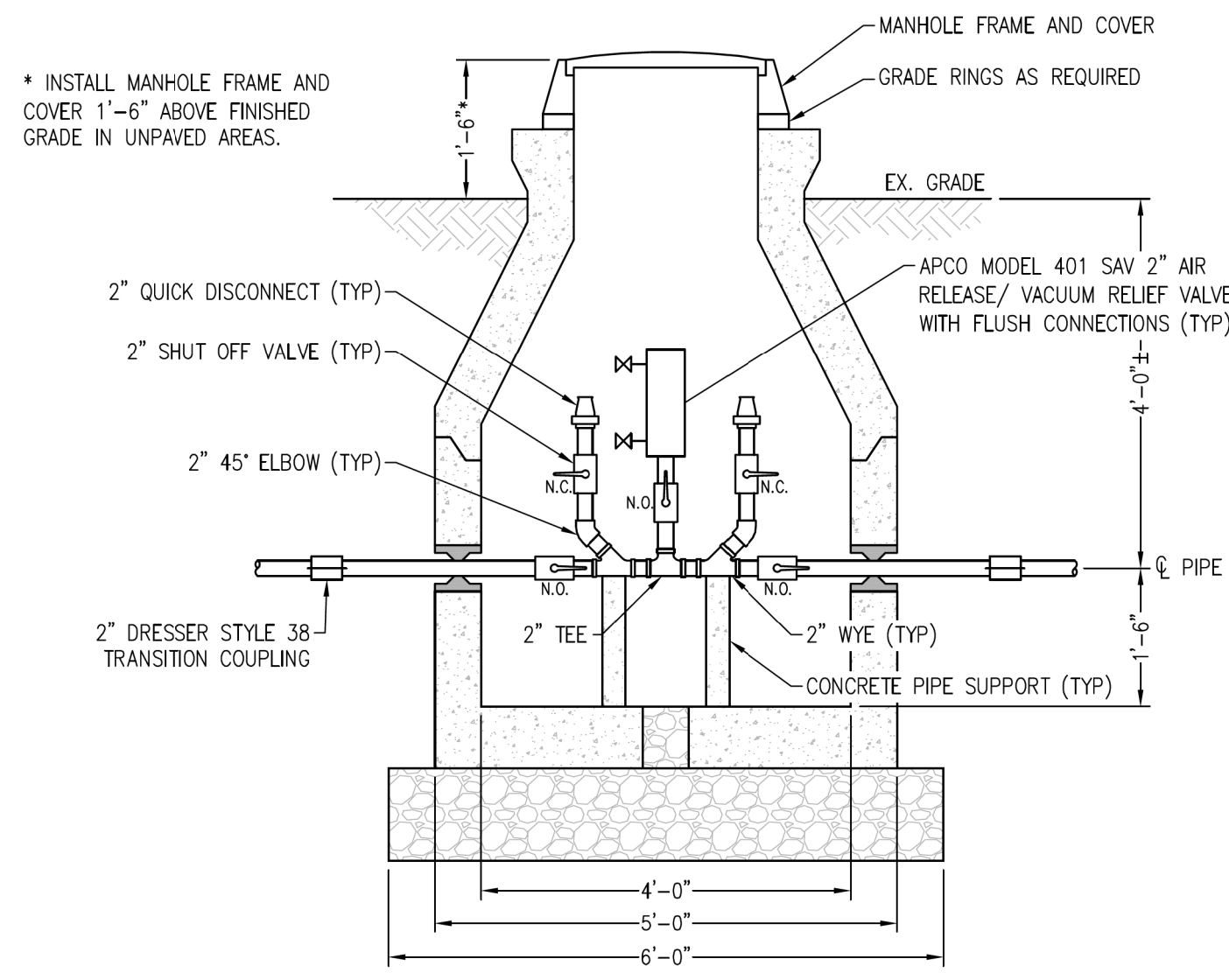
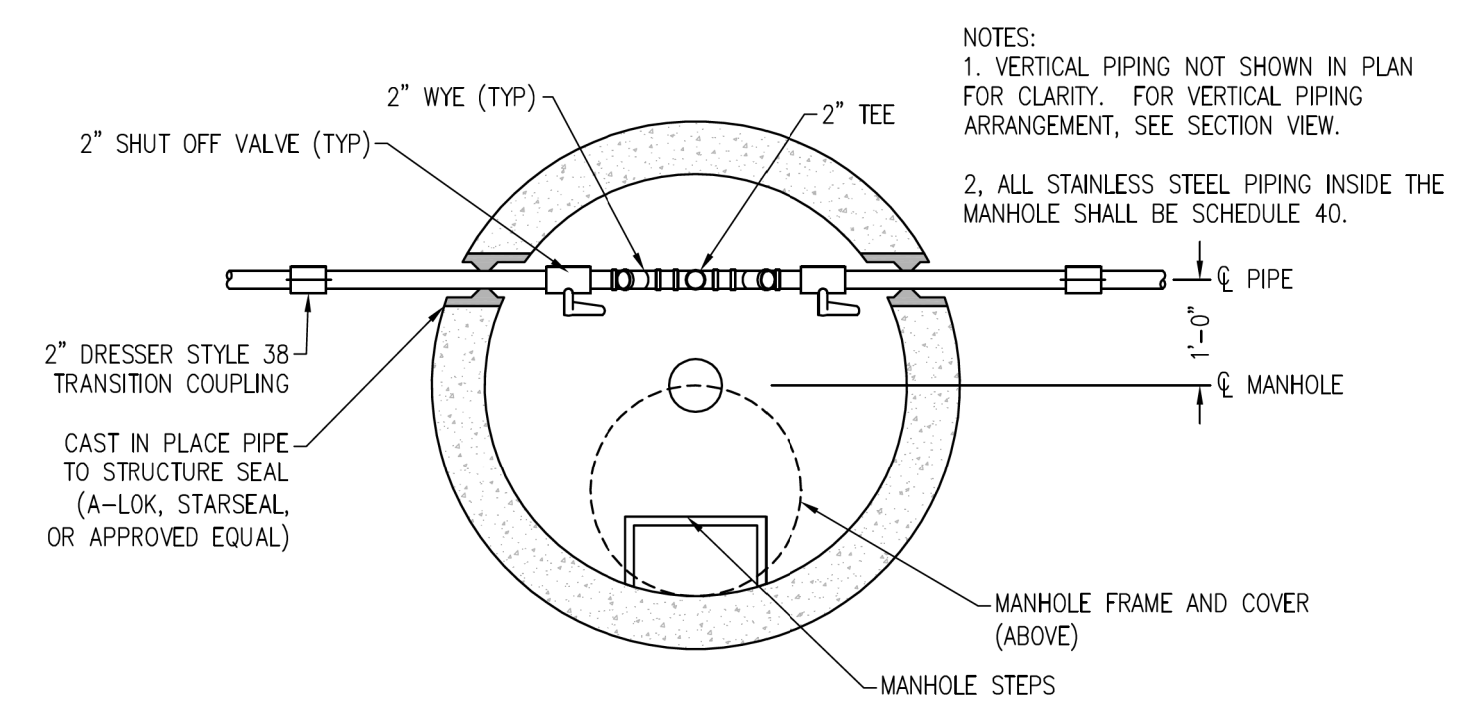
- NOTES:**
1. THE WATER AND SANITARY PIPE SHALL NOT HAVE 90 DEG. BENDS.
 2. PROVIDE VERTICAL/HORIZONTAL UTILITY SUPPORTS (ADJUSTABLE DOUBLE ROLLER GUIDE ATTACHED TO RETAINING WALL. COORDINATE UTILITY SUPPORT SPACING AND LOCATION WITH RETAINING WALL MANUFACTURER.
 3. PROVIDE SHOP DRAWINGS OF PUMP STATION AND PIPING PRIOR TO CONSTRUCTION WITH SIGNED AND SEALED PUMP STATION AND FORCE MAIN CALCULATION BY A PROFESSIONAL ENGINEER IN THE STATE OF PENNSYLVANIA. CLEANOUT, VENT PIPE AND ELECTRICAL WORK SHALL BE PART OF SANITARY PUMP PAY ITEM.



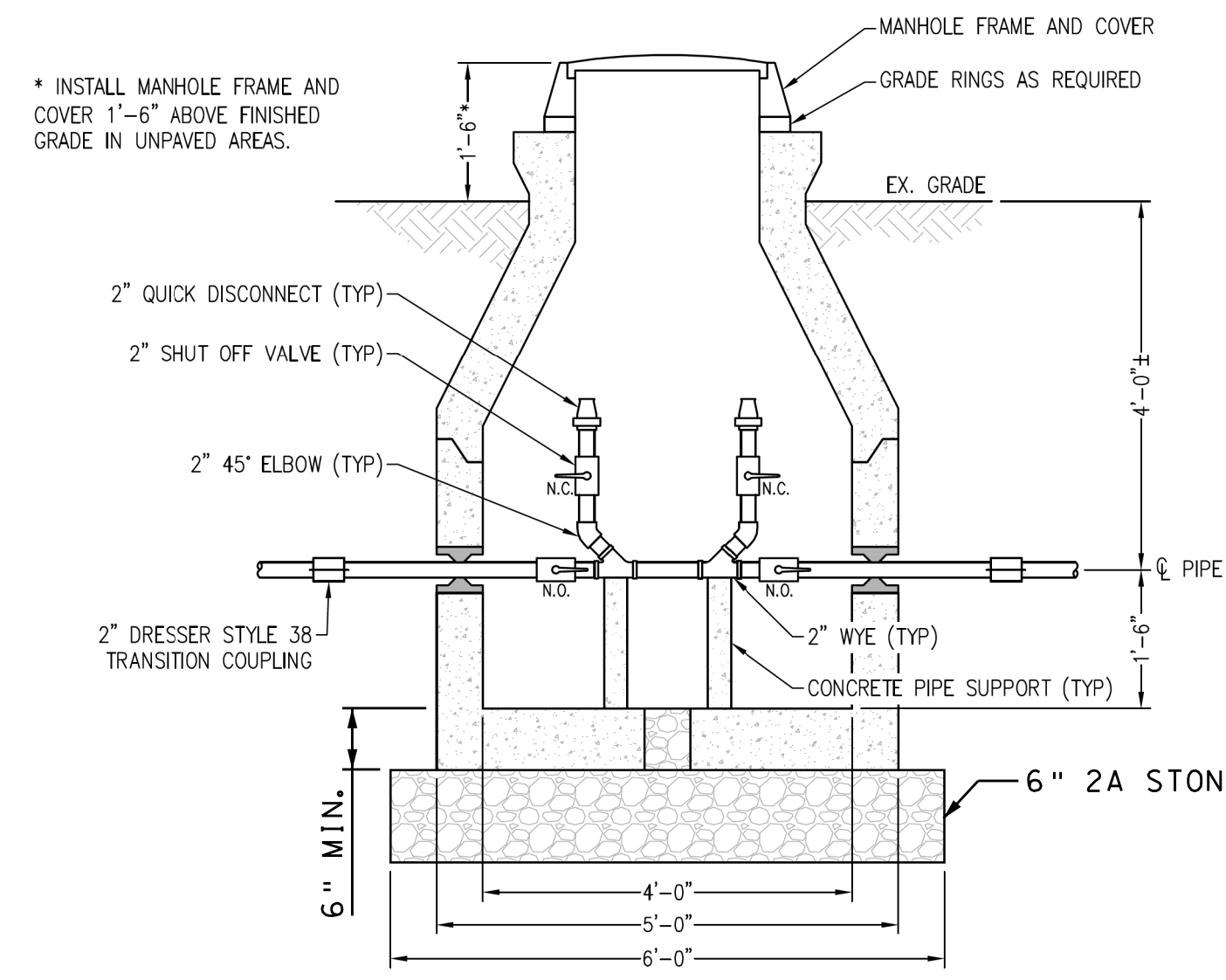
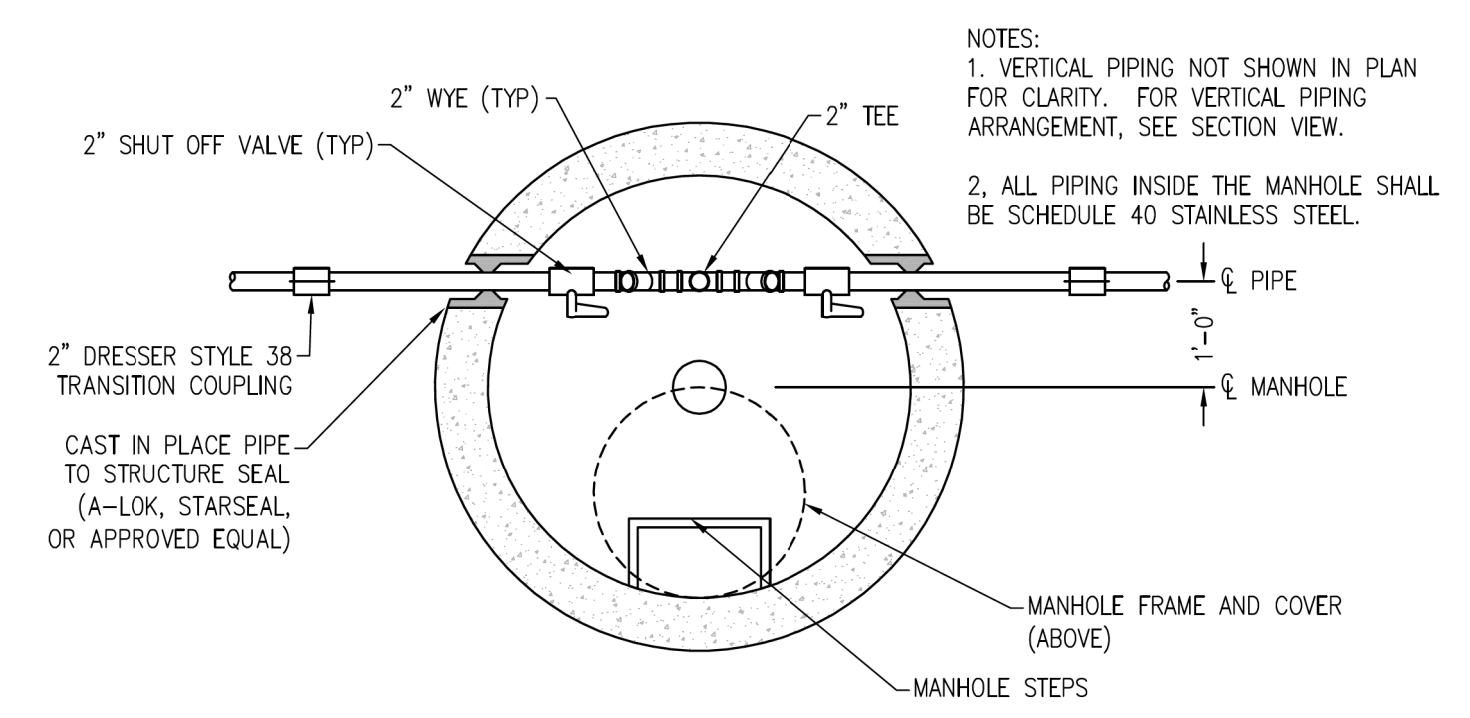
DISTRICT	COUNTY	ROUTE	SECTION	SHEET	
6-0	BUCKS	0095	001	30 OF 32	
LOWER MAKEFIELD TOWNSHIP					
REVISION NUMBER	REVISIONS			DATE	BY
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NOTES: (MANHOLE SANITARY SEWER)

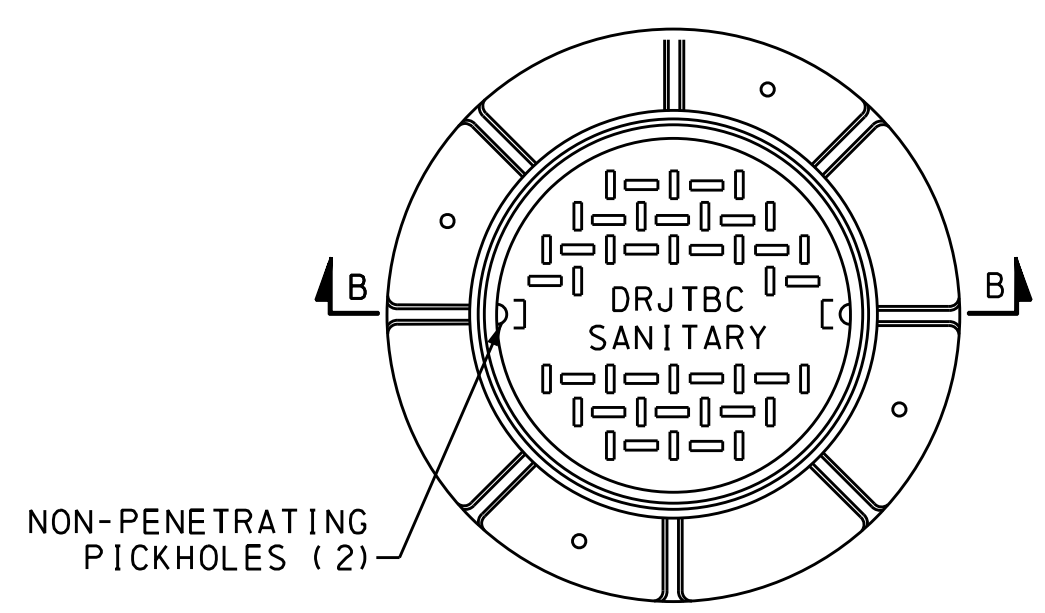
- BOLT MANHOLE FRAME IN PLACE WITH TWO 3/4" DIA. BOLTS AND FLAT WASHERS.
- ORIENTATION OF PIPES SHOWN FOR ILLUSTRATION PURPOSES ONLY. FOR ACTUAL LOCATIONS SEE UTILITY PLANS.
- THE SHELF SHALL SLOPE TOWARD THE INVERT CHANNEL AT THE RATE OF 1" PER FOOT (MIN.)
- THE DEPTH OF THE INVERT CHANNEL SHALL BE NOT LESS THAN 3/4" OF THE DIAMETER OF THE PIPE.
- FOR LENGTH OF PIPE CONNECTIONS TO MANHOLES, SEE UTILITY PLANS.
- FINISHED GRADE SHALL BE FLUSH WITH TOP OF COVER ON MANHOLE FRAME AND COVER UNLESS OTHERWISE NOTED.
- SANITARY MANHOLES SHALL BE STAMPED WITH "DRJTBC SANITARY".
- PROVIDE SHOP DRAWING FOR CONNECTION TO EXISTING SANITARY MANHOLE.



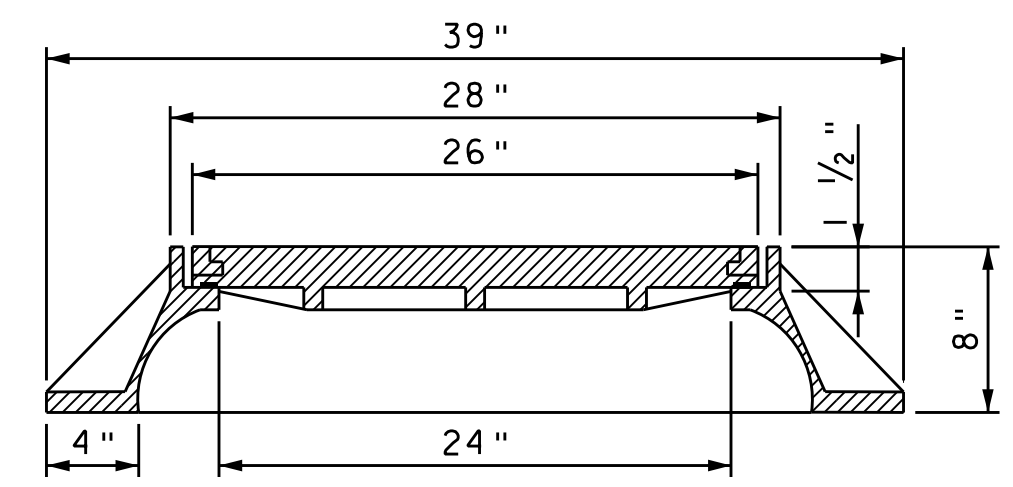
LOW PRESSURE SEWER AIR RELEASE MANHOLE W/ TWO WAY CLEAN OUTS



LOW PRESSURE SEWER TWO WAY CLEAN OUT MANHOLE

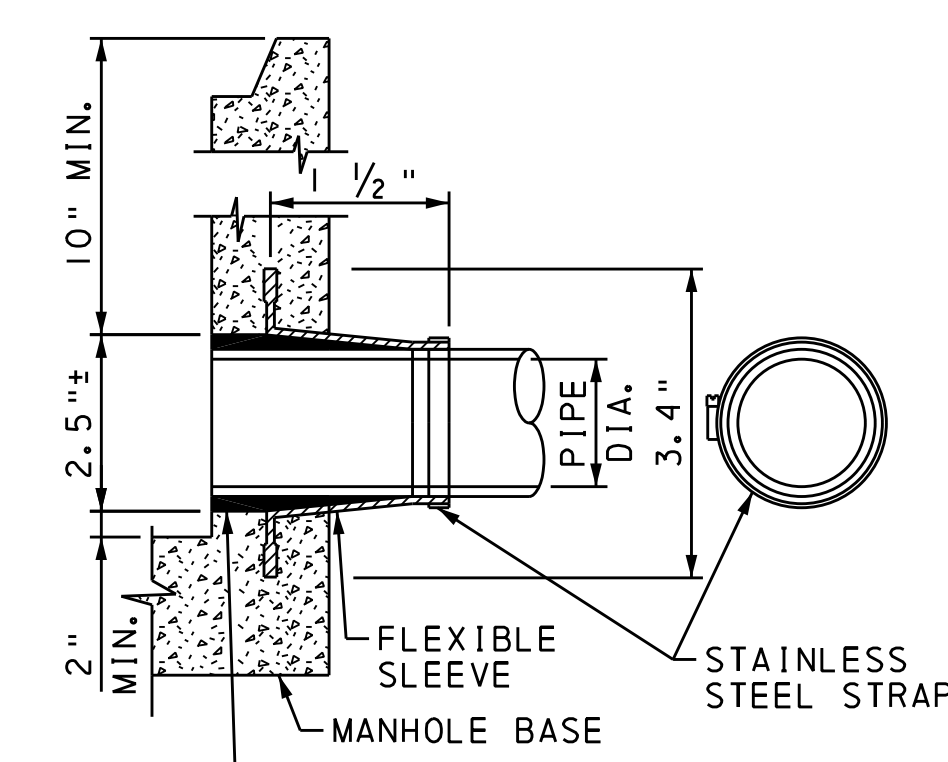


PLAN
SCALE: N. T. S.

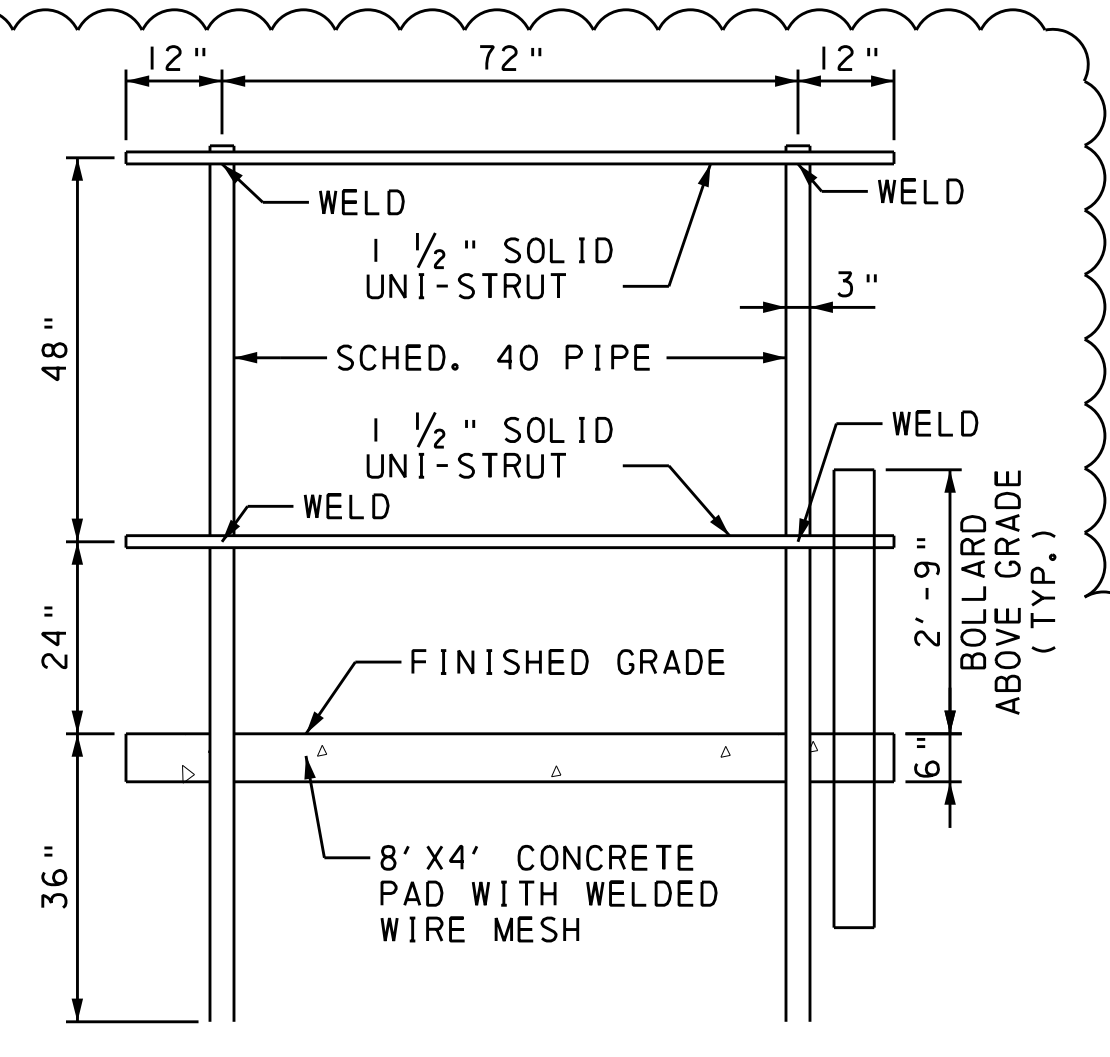


SECTION B-B
SCALE: N. T. S.

MANHOLE FRAME AND COVER
SCALE: N. T. S.



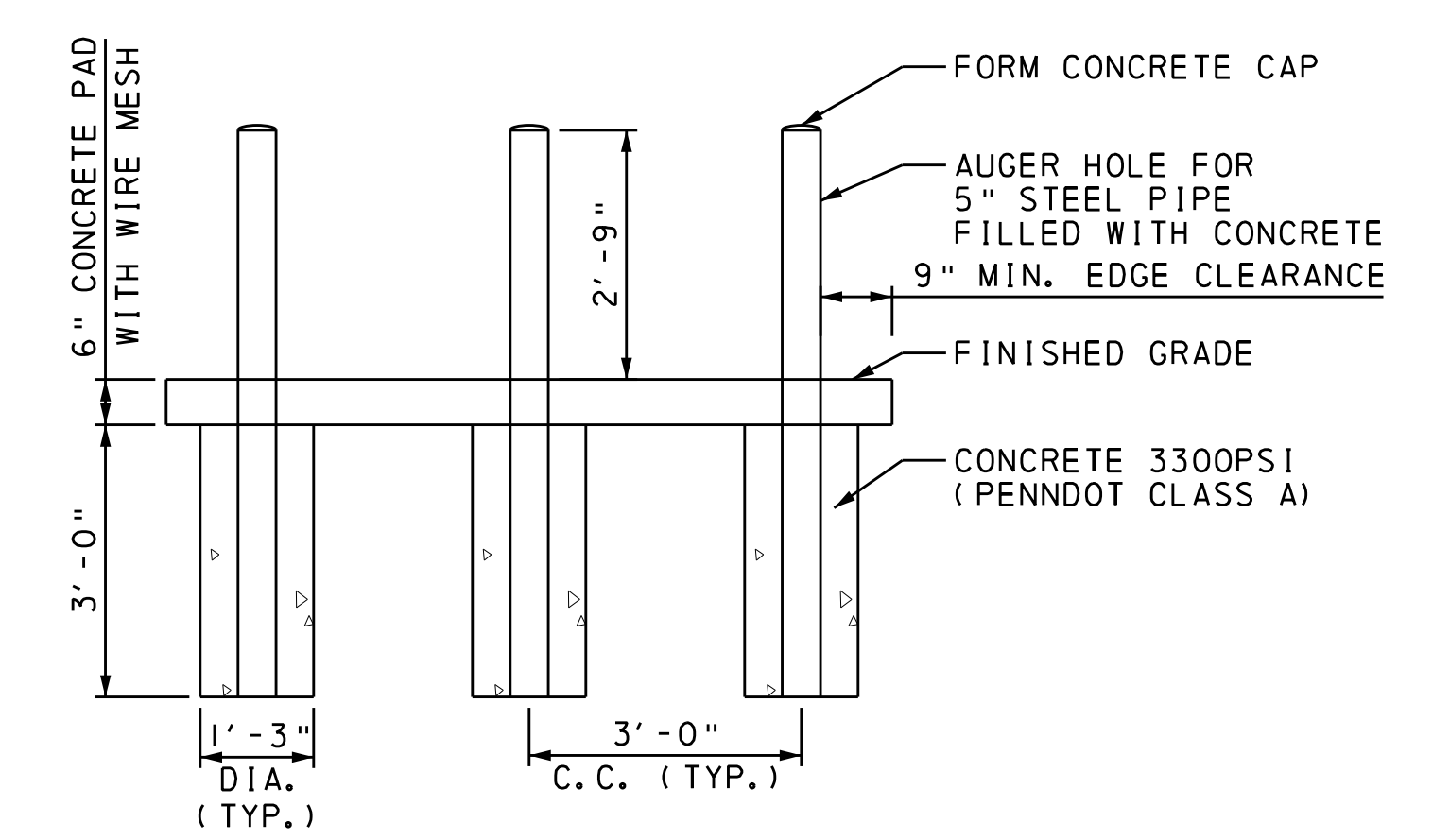
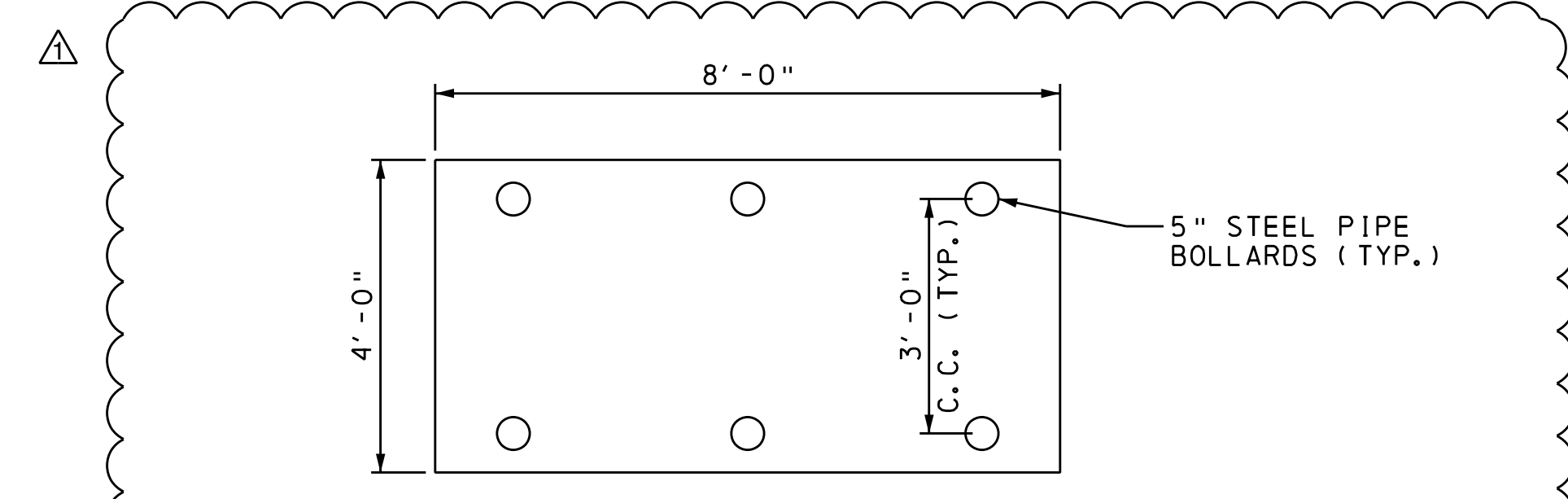
FLEXIBLE MANHOLE SLEEVE
OPTIONAL A-LOK CAST INTO EXISTING MANHOLE
SCALE: N. T. S.



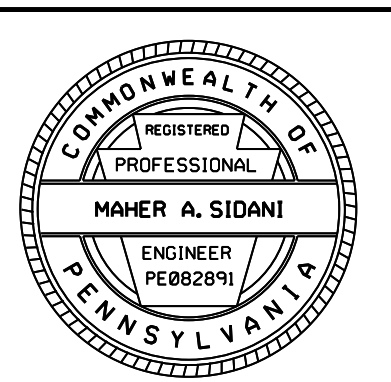
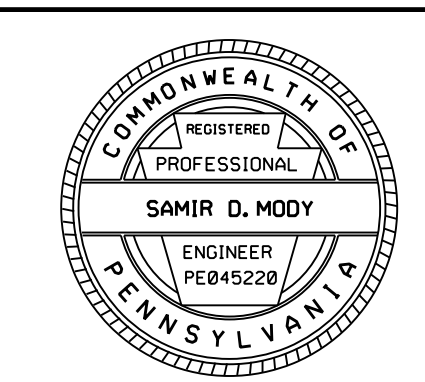
FREE STANDING PECO-GAS METER SUPPORT
SCALE: N. T. S.

NOTES: (PECO GAS METER SUPPORT)

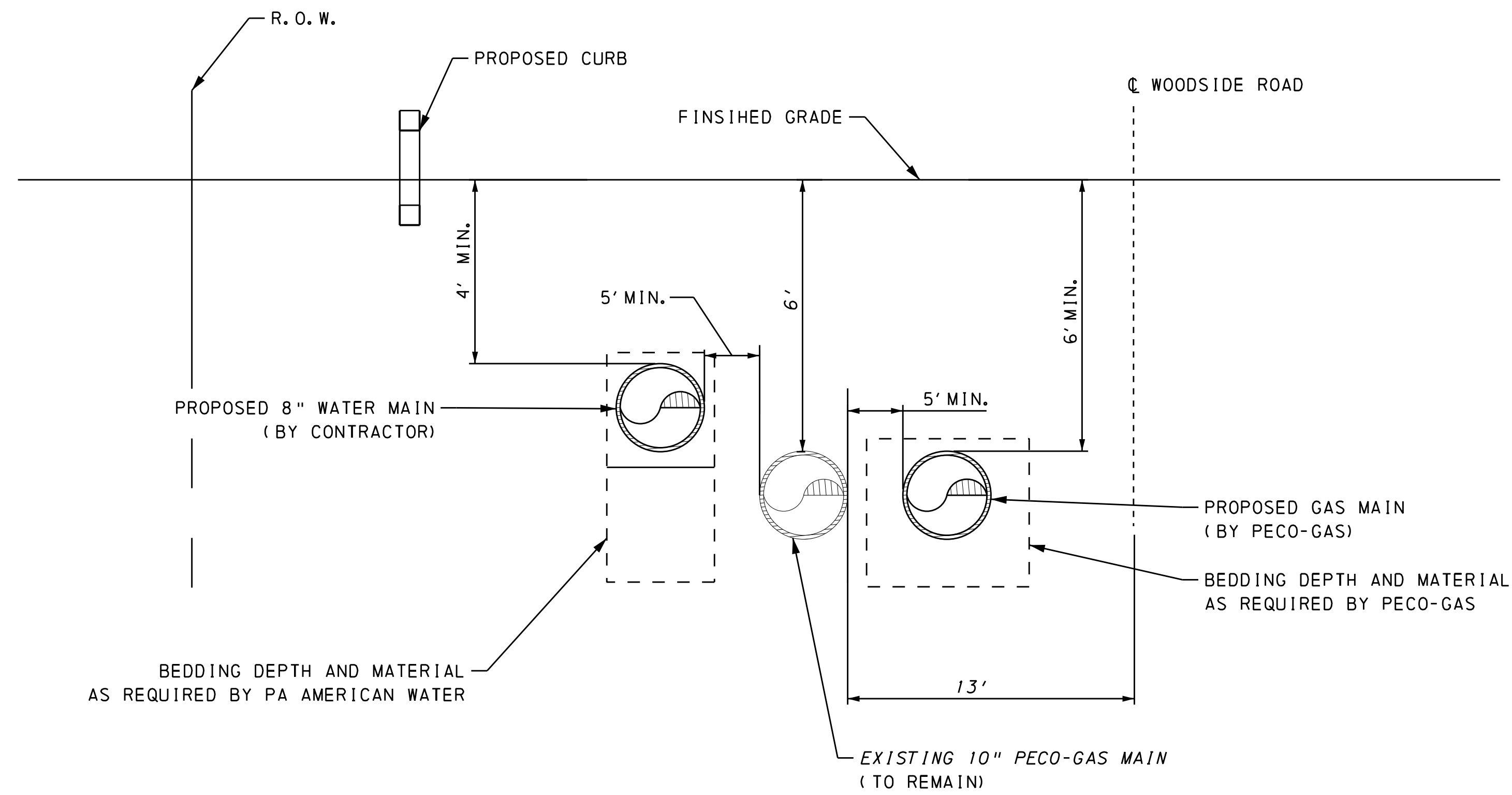
- PROVIDE SHOP DRAWING SHOWING LAYOUT OF METER SUPPORT, BOLLARDS, GAS REGULATOR AND SHUT OFF VALVES PRIOR TO INSTALLATION.
- ALL COSTS ASSOCIATED WITH THE INSTALLATION OF METER SUPPORT AND BOLLARDS SHOULD BE INCLUDED UNDER "CONCRETE PAD FOR GAS METER" PAY ITEM.
- ALL COSTS ASSOCIATED WITH THE INSTALLATION OF GAS REGULATOR AND SHUT OFF VALVES SHOULD BE INCLUDED UNDER "2" STEEL GAS MAIN" PAY ITEM.



GAS METER CONCRETE PAD AND BOLLARDS
SCALE: N. T. S.

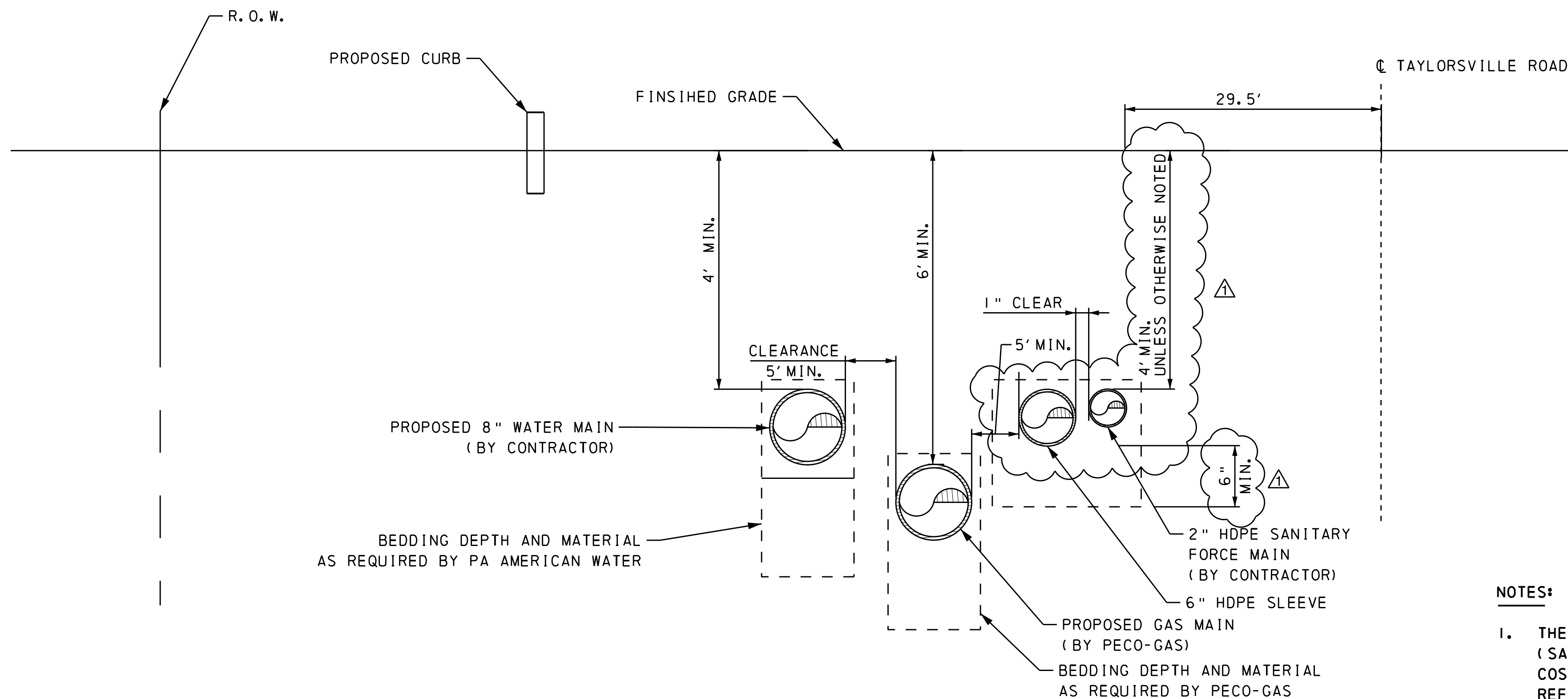


DISTRICT	COUNTY	ROUTE	SECTION	SHEET	
6-0	BUCKS	0095	001	31 OF 32	
LOWER MAKEFIELD TOWNSHIP					
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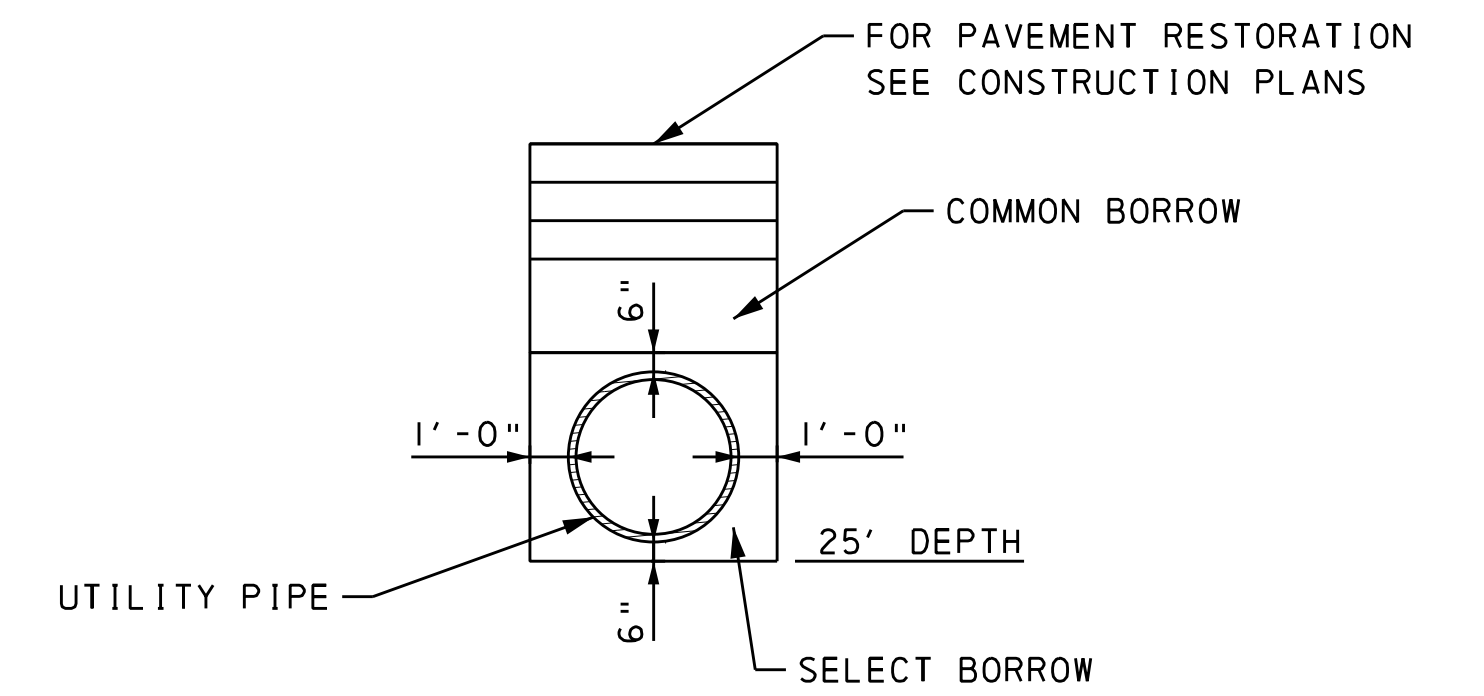
**LOCATION OF PROPOSED WATER AND GAS MAIN
ALONG WOODSIDE ROAD BETWEEN STA. 0+50 TO 14+50**

SCALE: N. T. S.



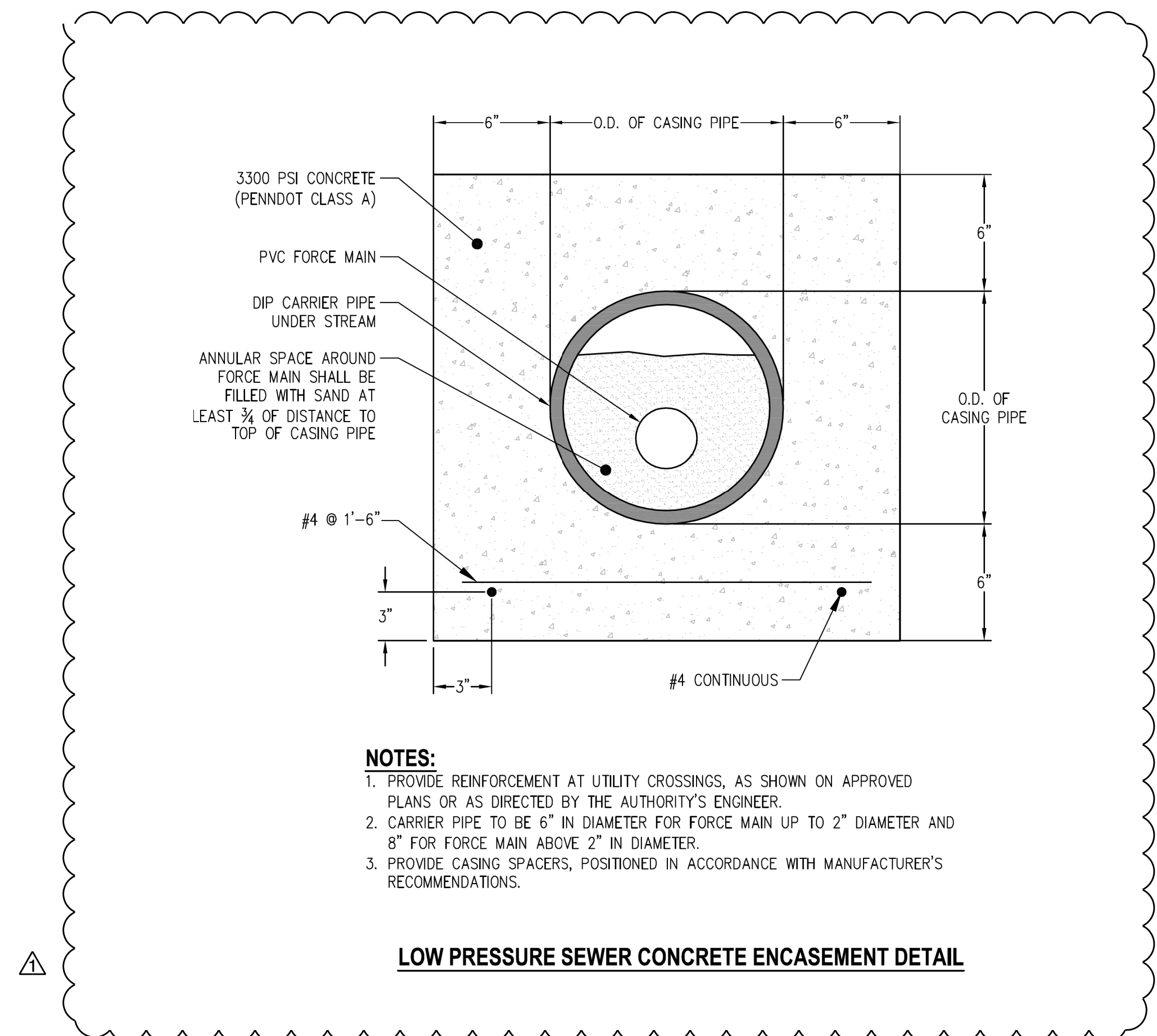
**LOCATION OF PROPOSED WATER MAIN, GAS MAIN AND SANITARY PIPE/SLEEVE
ALONG TAYLORSVILLE ROAD BETWEEN STA. 38+50 TO 31+50**

SCALE: N. T. S.



TYPICAL UTILITY BACKFILL

SCALE: N. T. S.



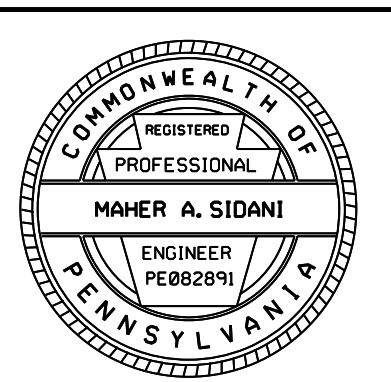
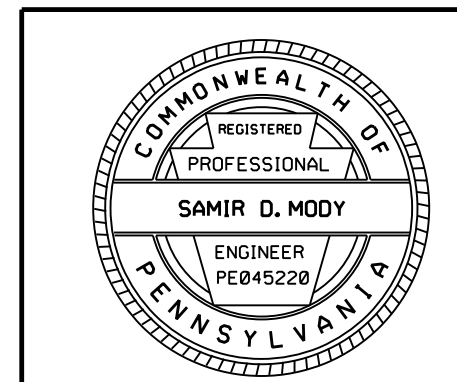
NOTES:

1. PROVIDE REINFORCEMENT AT UTILITY CROSSINGS, AS SHOWN ON APPROVED PLANS OR AS DIRECTED BY THE AUTHORITY'S ENGINEER.
2. CARRIER PIPE TO BE 6" IN DIAMETER FOR FORCE MAIN UP TO 2" DIAMETER AND 8" FOR FORCE MAIN ABOVE 2" IN DIAMETER.
3. PROVIDE CASING SPACERS, POSITIONED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

LOW PRESSURE SEWER CONCRETE ENCASEMENT DETAIL

NOTES:

1. THE UNIT PRICE FOR THE SERVICE PIPES (SANITARY, GAS AND WATER) SHALL INCLUDE THE COST FOR SHEETING, EXCAVATION AND BACKFILL. REFER TO CONTRACT SPECIFICATION FOR MORE DETAILS.



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CABLE SCHEDULE

- 1 1 - 12 FIBER OPTIC CABLE
- 2 1 - 144 FIBER OPTIC CABLE
- 3 1 - 48 FIBER OPTIC CABLE
- 4 3 - #2 AWG ELECTRICAL CABLE
- 5 3 - #4 AWG ELECTRICAL CABLE
- 6 3 - #8 AWG ELECTRICAL CABLE
- 7 3 - #12 AWG ELECTRICAL CABLE
- 8 3 - #10 AWG ELECTRICAL CABLE
- 9 6 - #10 AWG ELECTRICAL CABLE
- 10 3 - #4/0 ELECTRICAL CABLE
- 11 3 - #1/0 AWG ELECTRICAL CABLE

12 3 - #6 AWG 1

CONDUIT SCHEDULE

- A 4 - 1 1/4" HDPE PVC (COMMUNICATIONS)
- B 1 - 2" PVC (ELECTRICAL)
- C 1 - 2" PVC (COMMUNICATIONS)
- D 1 - 3" PVC (ELECTRICAL)
- E 1 - 2" RMC (COMMUNICATIONS)
- F 1 - 2" RMC (ELECTRICAL)
- G 1 - 4" RMC MULTICELL (COMMUNICATIONS) WITH 3 - 1 1/4" INNERDUCTS
- H 2 - 2" RMC CONDUIT (COMMUNICATIONS)
- I 2 - 2" PVC CONDUIT (COMMUNICATIONS)
- J 1 - 4" FRE WITH 4 - 1 1/4" INNER-DUCTS 1

CONSTRUCTION NOTES

- 1 INSTALL COMMUNICATIONS CABLE(S) IN NEW CONDUIT(S).
- 2 REROUTE EXISTING COMMUNICATIONS CABLE(S) IN NEW CONDUIT(S).
- 3 INSTALL ELECTRICAL CABLE(S) IN NEW CONDUIT(S).
- 4 INSTALL CONDUIT(S) USING TRENCHING METHOD, TYPE I.
- 5 INSTALL CONDUIT(S) USING TRENCHING METHOD, TYPE II.
- 6 INSTALL CONDUIT(S) USING TRENCHING METHOD, TYPE III.
- 7 INSTALL CONDUIT(S) USING TRENCHING METHOD, TYPE IV.
- 8 INSTALL CONDUIT(S) USING THE DIRECTIONAL DRILLING METHOD.
- 9 INSTALL CONDUIT(S) IN PARAPET/BRIDGE PARAPET.
- 10 INSTALL CONDUIT(S) IN CONDUIT RACK ON UNDERSIDE OF BRIDGE. CAP CONDUIT(S) AT NJ ABUTMENT.
- 11 INSTALL CONDUIT(S) ADJACENT TO BRIDGE ABUTMENT USING TRENCHING METHOD.
- 12 INSTALL E-ZPASS CONTROL CABLE(S) AS REQUIRED. INSTALL ON MAST ARM USING STAINLESS STEEL STRAPS AT 6' INTERVALS.
- 13 REINSTALL (1) E-ZPASS LANE KIT AND INSTALL (1) NEW E-ZPASS LANE KIT ON STRUCTURE. COORDINATE INSTALLATION WITH PENNDOT. PROVIDE ALL NECESSARY BRACKETS AND MAST ARM EXTENSION TO INSTALL AND ALIGN THE E-ZPASS LANE KIT WITH THE LANE.
- 14 TERMINATE FIBER OPTIC CABLE INSIDE CABINET AND PROVIDE 50 FEET OF SLACK CABLE.
- 15 REINSTALL EXISTING COMMUNICATIONS CABINET.
- 16 INSTALL JUNCTION BOX JB-1 (POWER).
- 17 INSTALL JUNCTION BOX JB-2 (COMMUNICATIONS).
- 18 INSTALL JUNCTION BOX JB-11 (COMMUNICATIONS).
- 19 INSTALL JUNCTION BOX JB-12 (POWER) IN SHOULDER.
- 20 INSTALL JUNCTION BOX JB-25 (POWER).
- 21 PROPOSED SPLICE LOCATION. INSTALL FIBER SPLICE ENCLOSURE AND SLACK, AS REQUIRED. SPLICE NEW OR REROUTED FIBER TO INTERCEPTED NEW OR EXISTING FIBER.
- 22 INSTALL 100' FIBER CABLE SLACK.
- 23 REMOVE EXISTING MAST ARM. INSTALL 60' MAST ARM AND FOUNDATION. SEE PENNDOT STANDARD DRAWING TRAFFIC SIGNAL SUPPORT - MAST ARM.
- 24 EXISTING TO REMAIN.
- 25 MOUNT ON WEST ABUTMENT.
- 26 MOUNT ON EAST ABUTMENT.
- 27 DISCONNECT AND REMOVE EXISTING CABLING. ABANDON CONDUIT IN PLACE.
- 28 DISCONNECT AND REMOVE EXISTING CABINET, JUNCTION BOXES, AND MISC. HARDWARE.
- 29 DISCONNECT AND REMOVE EXISTING ITS CAMERA ASSEMBLY AND MISC. POLE EQUIPMENT.
- 30 REMOVE E-ZPASS VEHICLE COUNTER AND EXISTING SIGN STRUCTURE OR MAST ARM DURING CONSTRUCTION. REMOVE ASSOCIATED CONDUIT AND CABLING. COORDINATE WITH PENNDOT PRIOR TO REMOVAL OF READERS AND BEFORE REINSTALLATION.
- 31 PULL BACK CABLING IN EXISTING CONDUIT FROM NEXT EXISTING JUNCTION BOX NORTH TO LAST EXISTING OR NEW JUNCTION BOX SOUTH AND REROUTE CABLING THROUGH NEW CONDUIT TO NEXT JUNCTION BOX. ABANDON EXISTING CONDUIT SECTION IN PLACE.
- 32 INTERCEPT NEW/EXISTING CABLE IN NEW/EXISTING JUNCTION BOX.
- 33 INSTALL CONDUIT IN RETAINING WALL PARAPET.

34 REMOVE EXISTING ITS CAMERA POLE, CAMERA, AND CABINET. STORE POLE, CAMERA AND CABINET DURING CONSTRUCTION. REINSTALL EXISTING CABINET, CABINET EQUIPMENT, AND CAMERA AND POLE. PERFORM WORK DURING OFF-PEAK HOURS TO MINIMIZE DOWNTIME. 1

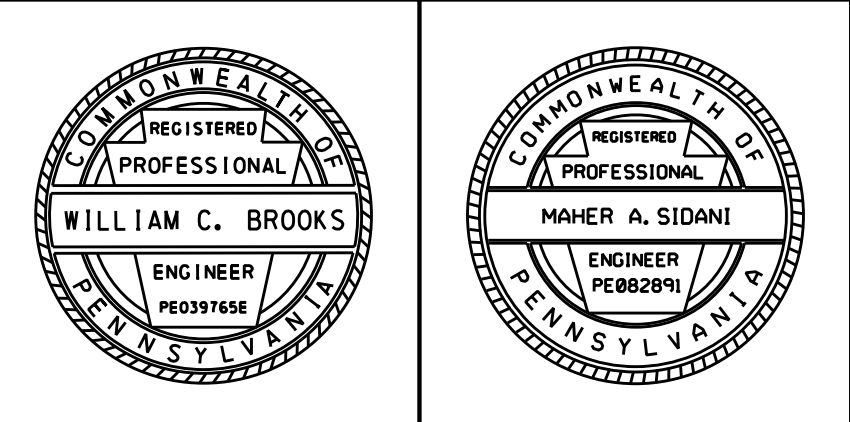
35 INSTALL CONDUIT(S) IN 4" STEEL SLEEVE.

36 INSTALL JUNCTION BOX JB-27. 1

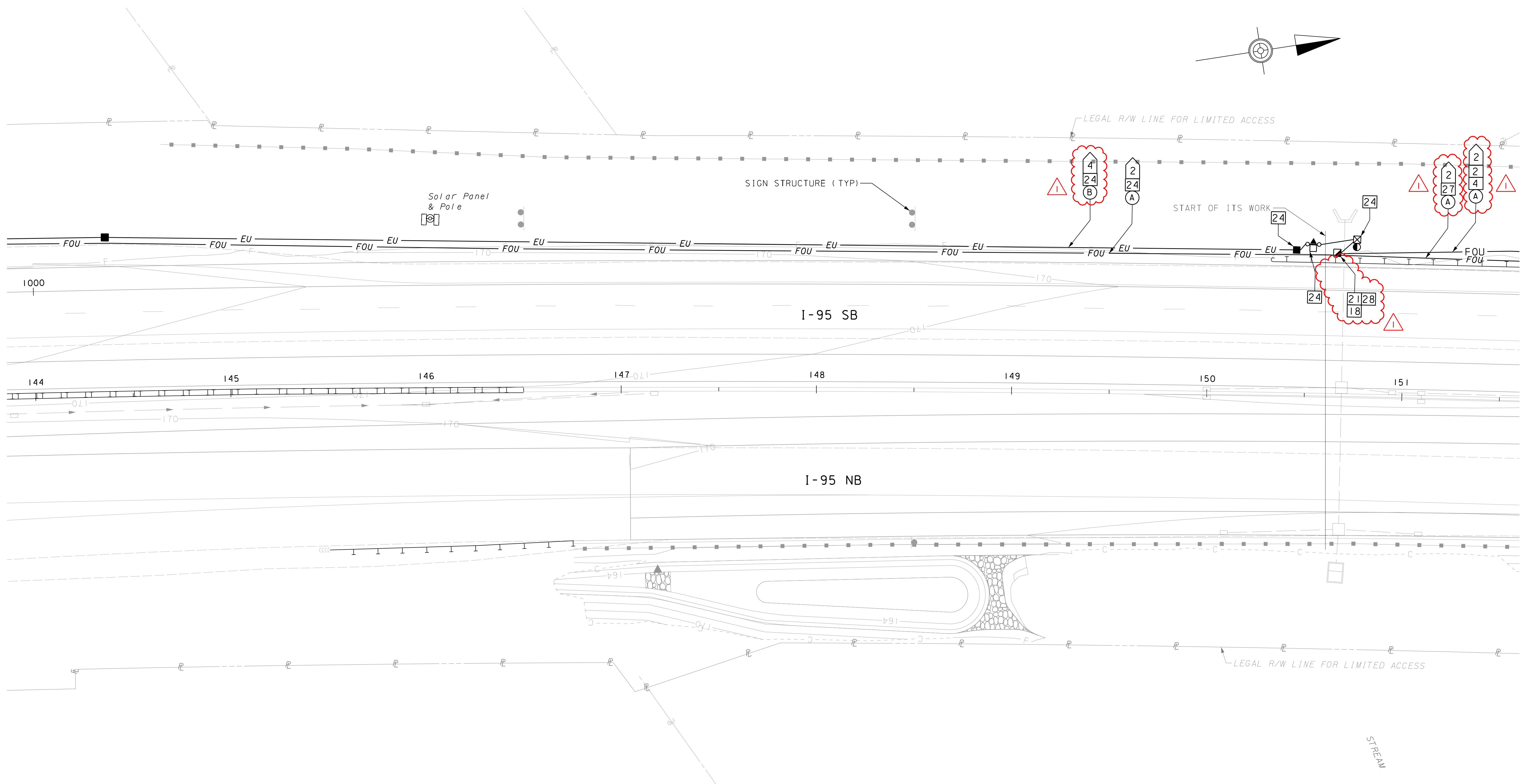
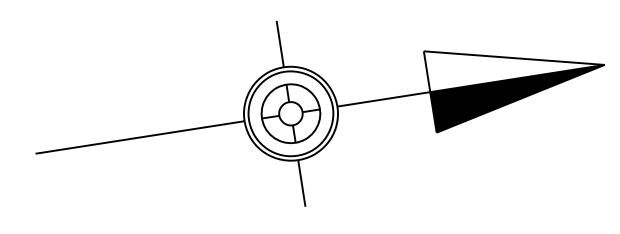
37 INSTALL CONDUIT(S) IN 6" STEEL SLEEVE. 1

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ITS PLAN
CONSTRUCTION NOTES



DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0095	001	3 OF 28
LOWER MAKEFIELD TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	
1	ADDENDUM NO. 8	12/01/16	STV	



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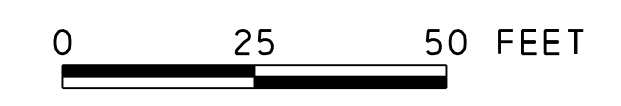
SEE SHEET 4

LEGEND

- | | | | | | |
|-------|---------------------------------|---|-----------------------------|---|--------------------|
| —c— | NEW CONDUIT | ■ | COMMUNICATIONS JUNCTION BOX | ⚡ | MAST ARM |
| —FOU— | NEW UNDERGROUND FIBER | ■ | ELECTRICAL JUNCTION BOX | ⊕ | UTILITY POLE |
| —EU— | NEW UNDERGROUND ELECTRICAL | Ⓜ | DYNAMIC MESSAGE SIGN | □ | TRANSFORMER |
| —EU— | EXISTING UNDERGROUND ELECTRICAL | □ | VEHICLE DETECTOR | ▲ | SERVICE DISCONNECT |
| —FOU— | EXISTING UNDERGROUND FIBER | ⦿ | ITS CAMERA ASSEMBLY | — | UTILITY PEDESTAL |
| ⊠ | COMMUNICATIONS CABINET | ○ | ITS CAMERA POLE | Ⓜ | E-ZPASS READER |

NOTES

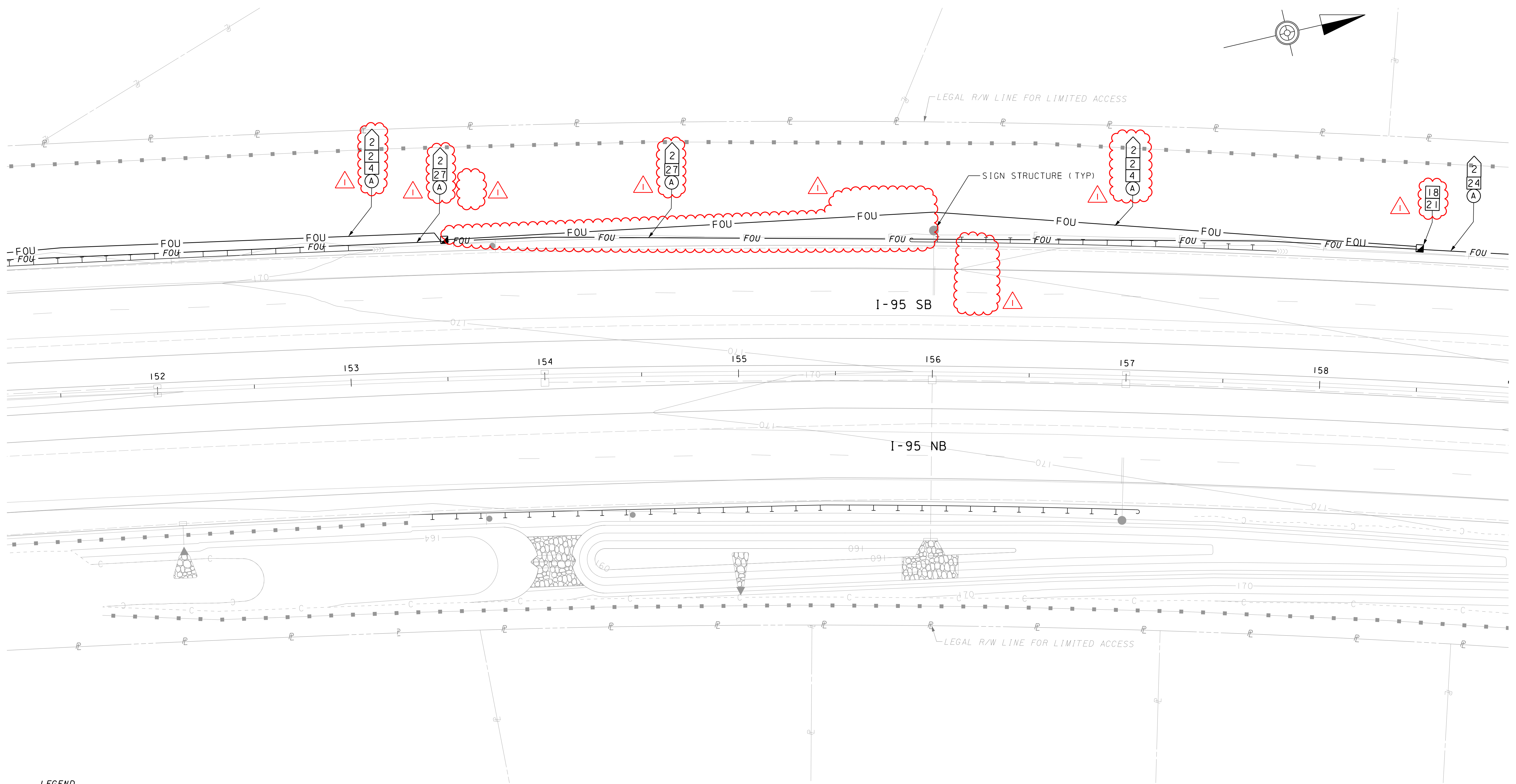
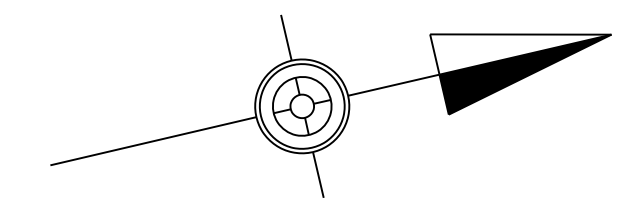
- SEE SHEET 1 FOR GENERAL NOTES AND ABBREVIATIONS. SEE SHEET 2 FOR CONSTRUCTION NOTES.
- DURING STAGE 1 OF CONSTRUCTION, INSTALL NEW ITS EQUIPMENT ON SB SIDE OF ROADWAY BEFORE NEW SB LANES ARE CONSTRUCTED. REMOVE EXISTING SB ITS EQUIPMENT ONCE NEW ITS EQUIPMENT IS INSTALLED AND OPERATIONAL AND BEFORE CONSTRUCTION BEGINS ON THE NEW SB LANES. CONTRACTOR TO ENSURE NEW ITS EQUIPMENT IS NOT IMPACTED DURING SB LANE CONSTRUCTION.



**ITS PLAN
NEW CONSTRUCTION**

<p>WILLIAM C. BROOKS ENGINEER PE0397656 PENNSYLVANIA</p>	<p>MAHER A. SIDANI ENGINEER PE082891 PENNSYLVANIA</p>
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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0095	001	4 OF 28
LOWER MAKEFIELD TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	
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SEE SHEET 3

SEE SHEET 5

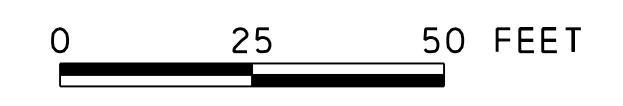
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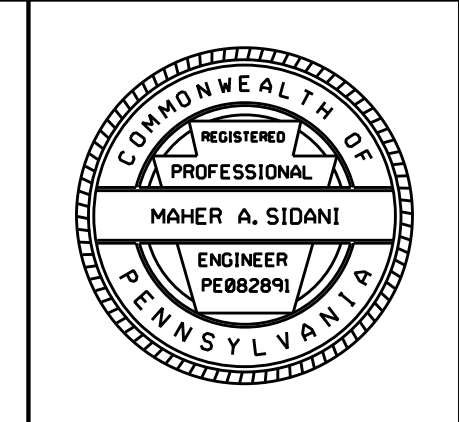
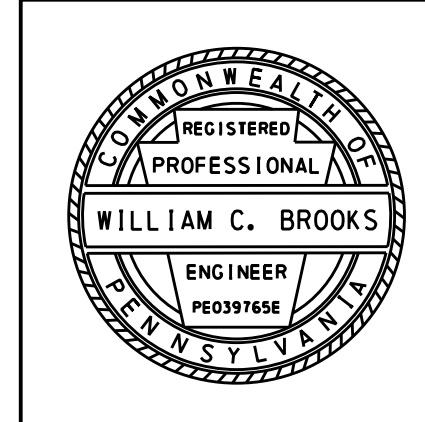
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|---------|---------------------------------|---|-----------------------------|-----------|--------------------|
| — c — | NEW CONDUIT | ■ | COMMUNICATIONS JUNCTION BOX | ⚡ | MAST ARM |
| — Fou — | NEW UNDERGROUND FIBER | ■ | ELECTRICAL JUNCTION BOX | ⊕ | UTILITY POLE |
| — Eu — | NEW UNDERGROUND ELECTRICAL | ⏏ | DYNAMIC MESSAGE SIGN | □ | TRANSFORMER |
| — Eu — | EXISTING UNDERGROUND ELECTRICAL | □ | VEHICLE DETECTOR | ▲ | SERVICE DISCONNECT |
| — Fou — | EXISTING UNDERGROUND FIBER | ● | ITS CAMERA ASSEMBLY | — | UTILITY PEDESTAL |
| ☒ | COMMUNICATIONS CABINET | ○ | ITS CAMERA POLE | — ZPASS — | E-ZPASS READER |

NOTES

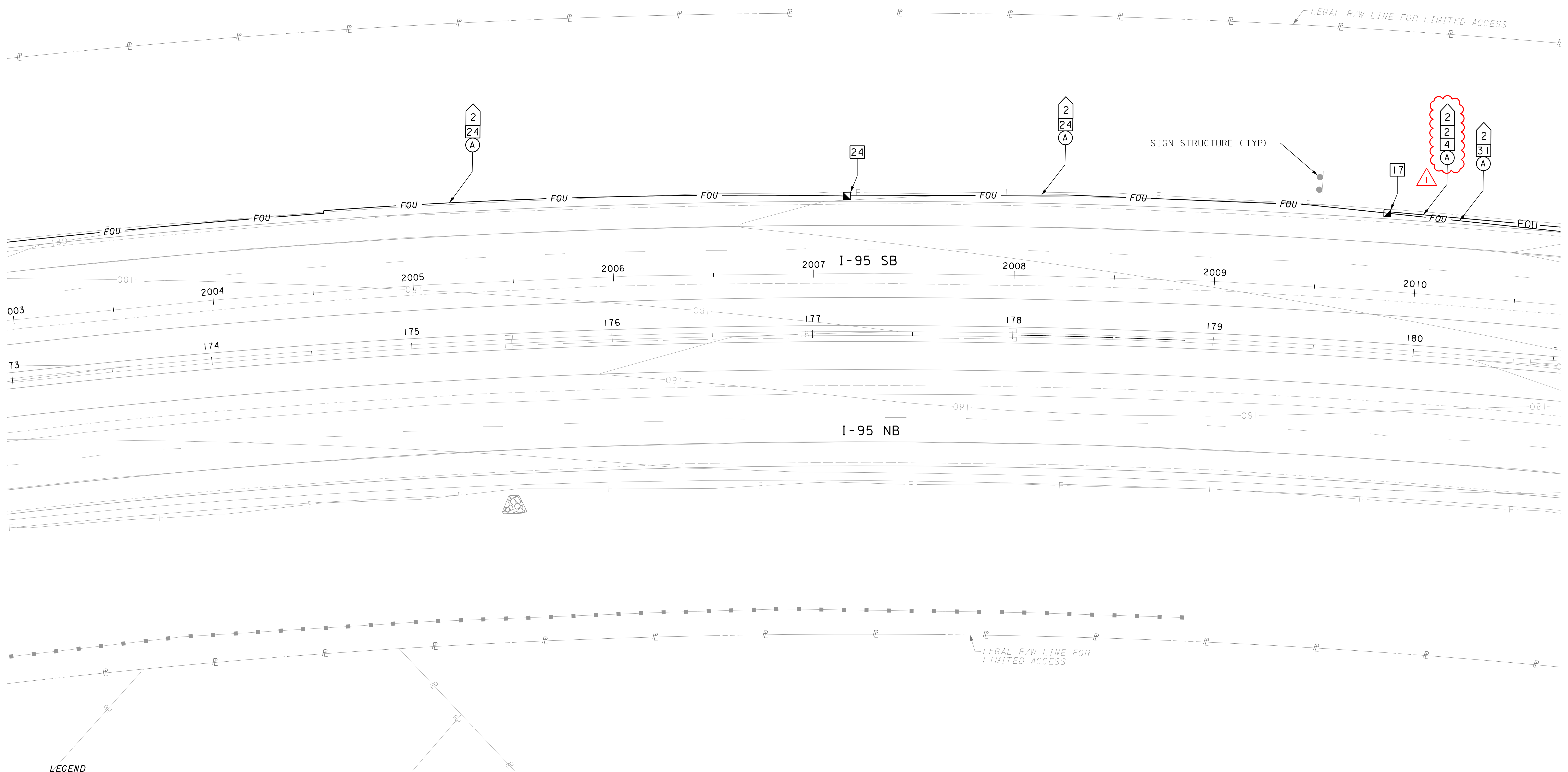
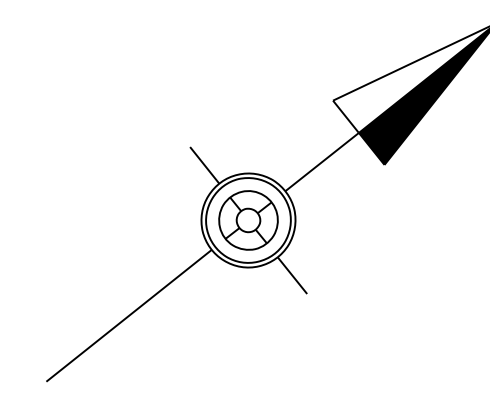
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**ITS PLAN
NEW CONSTRUCTION**



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LOWER MAKEFIELD TOWNSHIP				
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1	ADDENDUM NO. 8	12/01/16	STV	



SEE SHEET 6

SEE SHEET 8

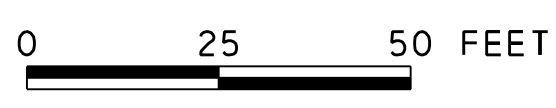
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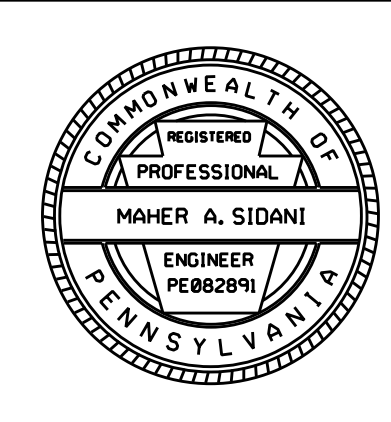
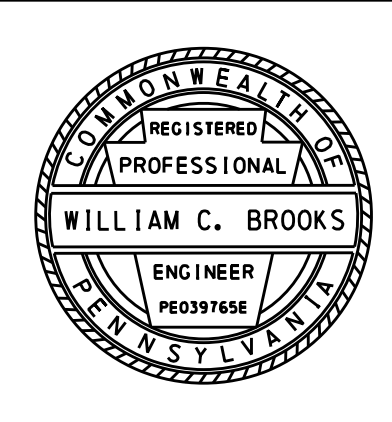
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|-------|---------------------------------|---|-----------------------------|---|--------------------|
| —c— | NEW CONDUIT | ■ | COMMUNICATIONS JUNCTION BOX | ⚡ | MAST ARM |
| —FOU— | NEW UNDERGROUND FIBER | ■ | ELECTRICAL JUNCTION BOX | ⊕ | UTILITY POLE |
| —EU— | NEW UNDERGROUND ELECTRICAL | ⏏ | DYNAMIC MESSAGE SIGN | □ | TRANSFORMER |
| —eu— | EXISTING UNDERGROUND ELECTRICAL | □ | VEHICLE DETECTOR | ▲ | SERVICE DISCONNECT |
| —fou— | EXISTING UNDERGROUND FIBER | ● | ITS CAMERA ASSEMBLY | ⚡ | UTILITY PEDESTAL |
| ☒ | COMMUNICATIONS CABINET | ○ | ITS CAMERA POLE | ⚡ | E-ZPASS READER |

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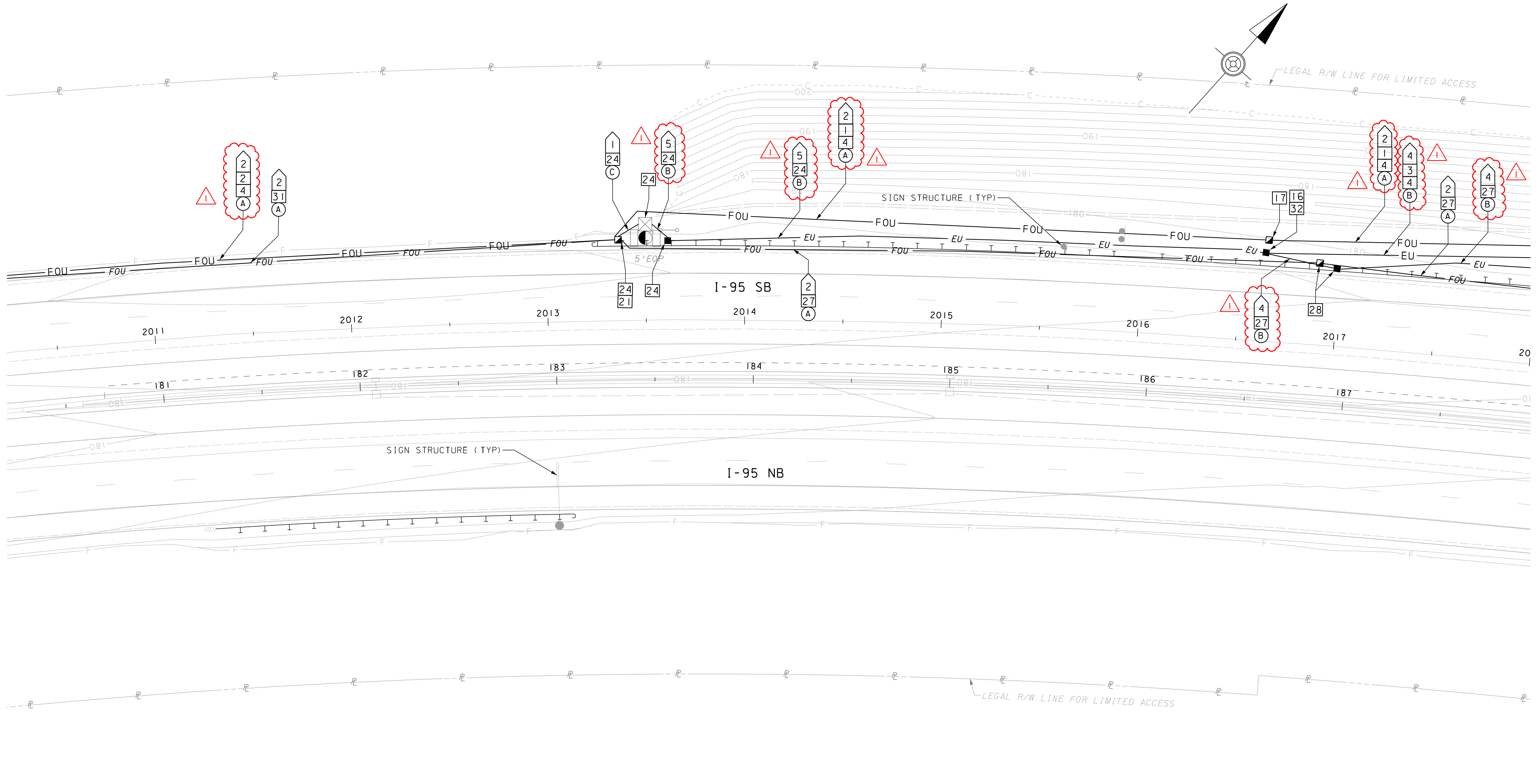
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**ITS PLAN
NEW CONSTRUCTION**



DISTRICT	COUNTY	ROUTE	SECTION	SHEET
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LOWER MAKEFIELD TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	
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SEE SHEET 7

SEE SHEET 9

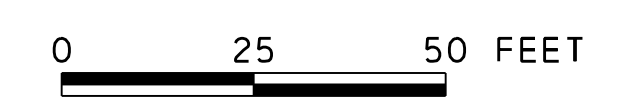
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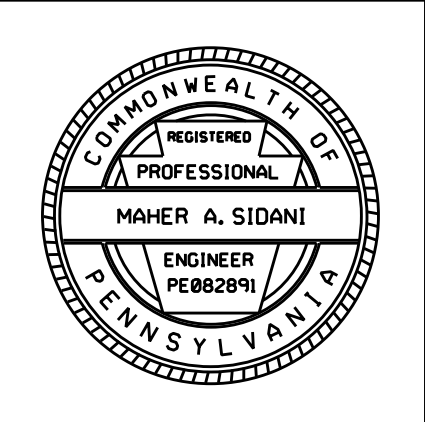
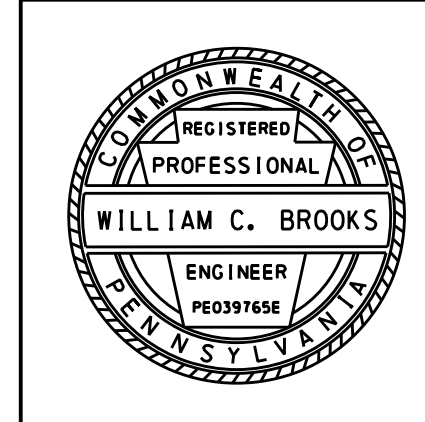
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|-------|---------------------------------|---|-----------------------------|-----------|--------------------|
| —c— | NEW CONDUIT | ■ | COMMUNICATIONS JUNCTION BOX | ⚡ | MAST ARM |
| —FOU— | NEW UNDERGROUND FIBER | ■ | ELECTRICAL JUNCTION BOX | ⊕ | UTILITY POLE |
| —EU— | NEW UNDERGROUND ELECTRICAL | Ⓜ | DYNAMIC MESSAGE SIGN | □ | TRANSFORMER |
| —EU— | EXISTING UNDERGROUND ELECTRICAL | □ | VEHICLE DETECTOR | ▲ | SERVICE DISCONNECT |
| —FOU— | EXISTING UNDERGROUND FIBER | ● | ITS CAMERA ASSEMBLY | — | UTILITY PEDESTAL |
| ☒ | COMMUNICATIONS CABINET | ○ | ITS CAMERA POLE | —E-ZPASS— | E-ZPASS READER |

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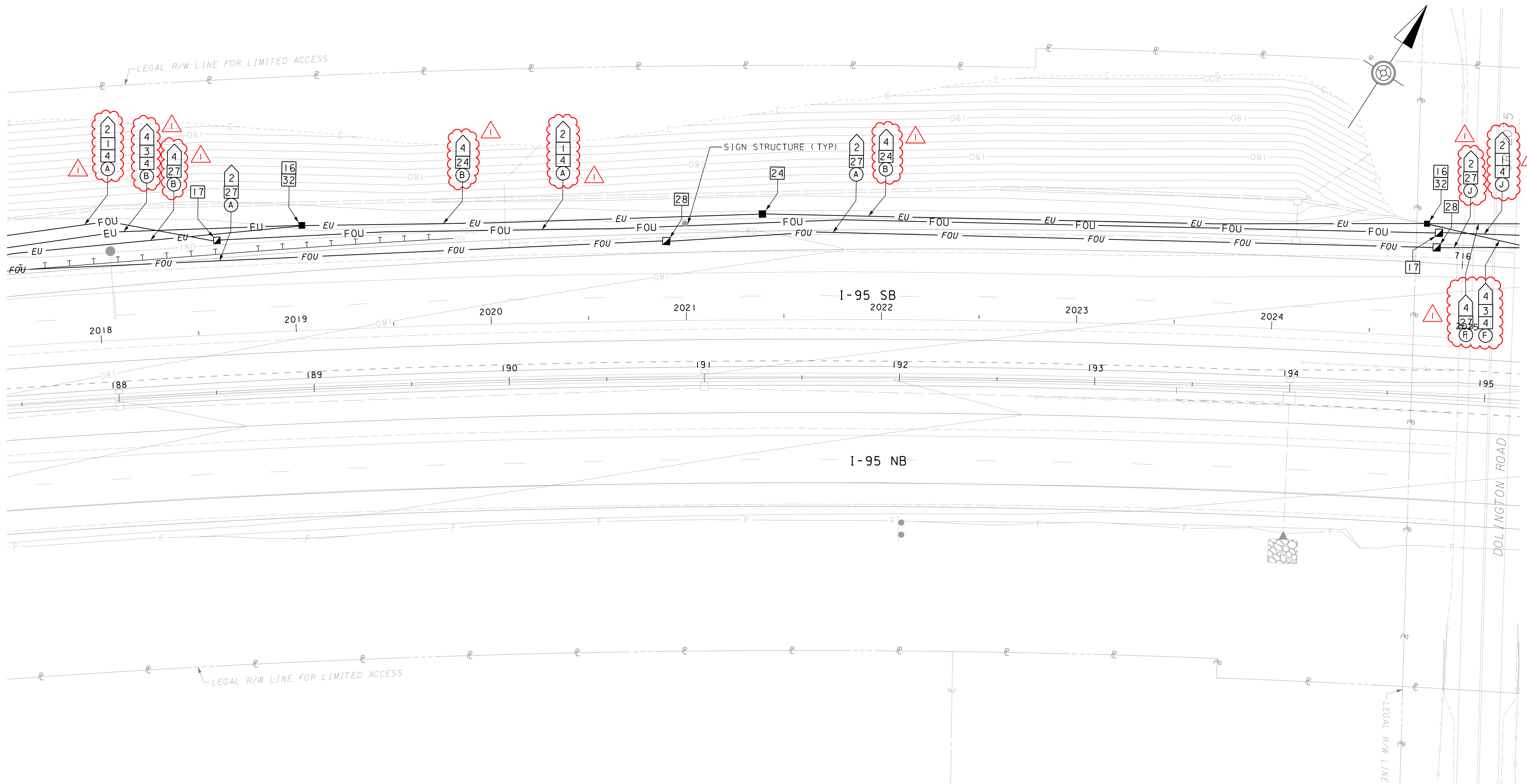
- SEE SHEET 1 FOR GENERAL NOTES AND ABBREVIATIONS. SEE SHEET 2 FOR CONSTRUCTION NOTES.
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**ITS PLAN
NEW CONSTRUCTION**



DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0095	001	9 OF 28
LOWER MAKEFIELD TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	
1	ADDENDUM NO. 8	12/01/16	STV	



SEE SHEET 8

SEE SHEET 10

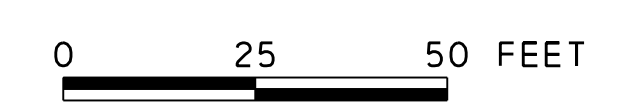
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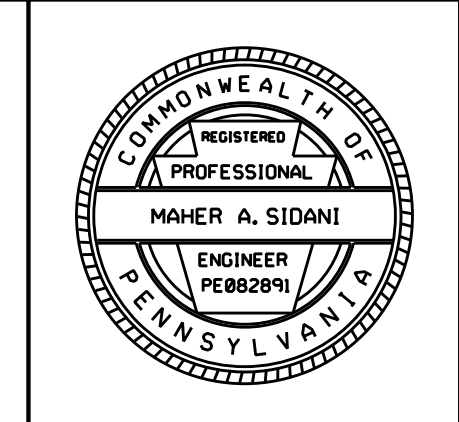
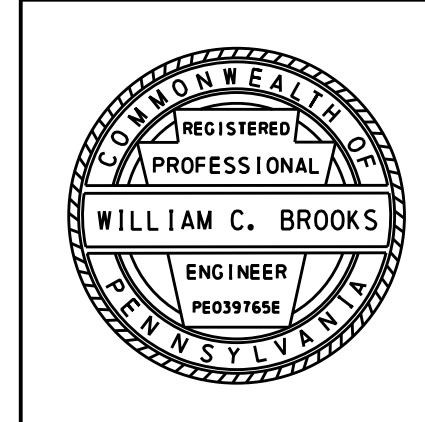
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| — c — | NEW CONDUIT | ■ | COMMUNICATIONS JUNCTION BOX | ⚡ | MAST ARM |
| — FOU — | NEW UNDERGROUND FIBER | ■ | ELECTRICAL JUNCTION BOX | ⊕ | UTILITY POLE |
| — EU — | NEW UNDERGROUND ELECTRICAL | Ⓜ | DYNAMIC MESSAGE SIGN | □ | TRANSFORMER |
| — EU — | EXISTING UNDERGROUND ELECTRICAL | □ | VEHICLE DETECTOR | ▲ | SERVICE DISCONNECT |
| — FOU — | EXISTING UNDERGROUND FIBER | ● | ITS CAMERA ASSEMBLY | — | UTILITY PEDESTAL |
| ☒ | COMMUNICATIONS CABINET | ○ | ITS CAMERA POLE | —E-ZPASS— | E-ZPASS READER |

NOTES

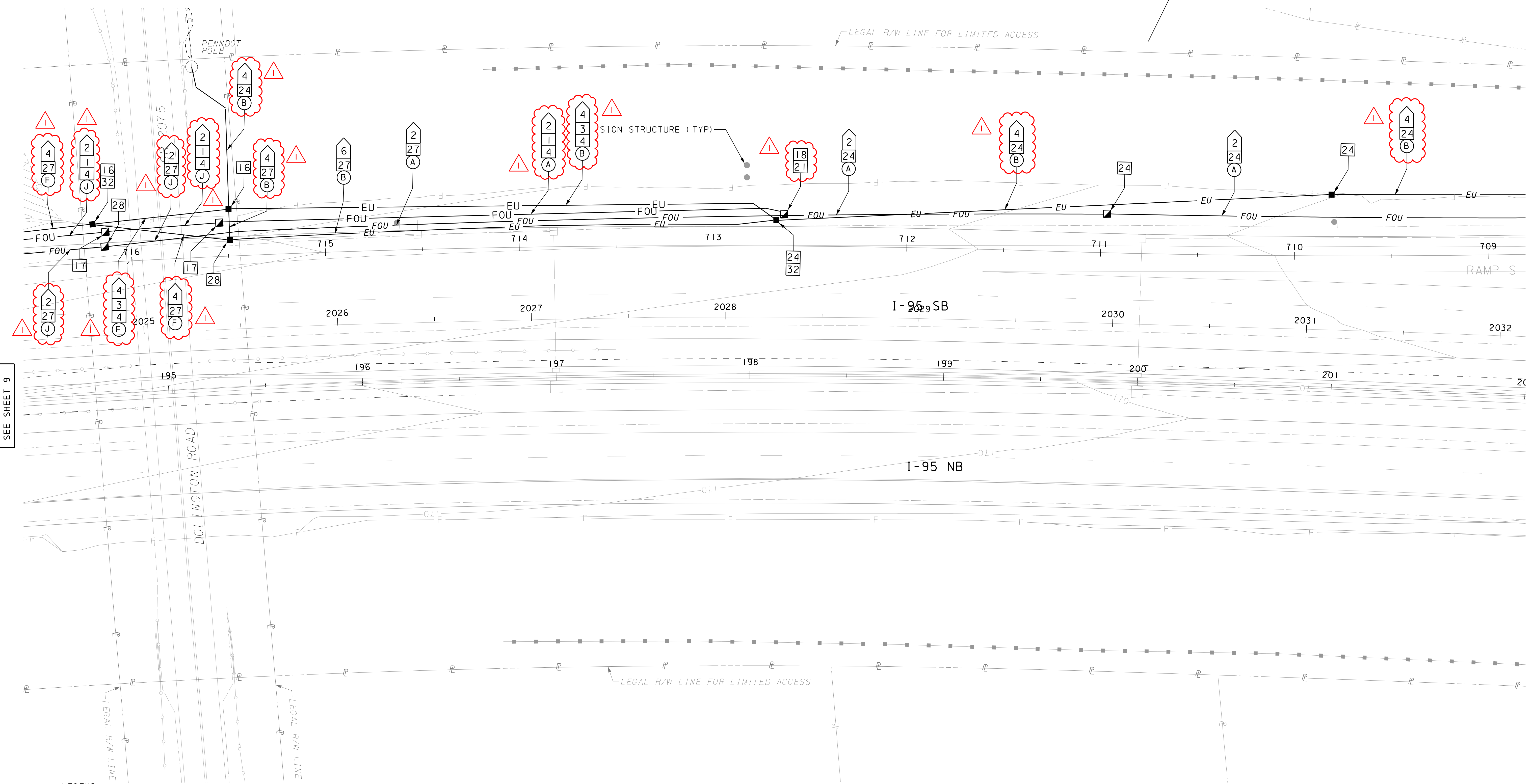
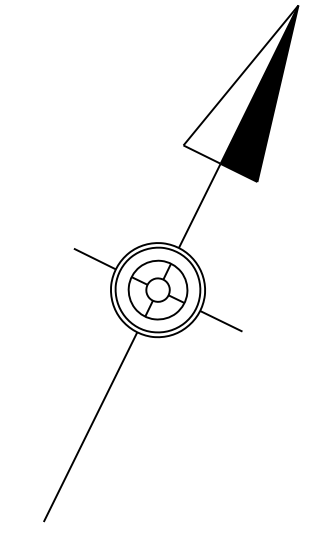
- SEE SHEET 1 FOR GENERAL NOTES AND ABBREVIATIONS. SEE SHEET 2 FOR CONSTRUCTION NOTES.
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**ITS PLAN
NEW CONSTRUCTION**



DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0095	001	10 OF 28
LOWER MAKEFIELD TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	
1	ADDENDUM NO. 8	12/01/16	STV	



SEE SHEET 9

SEE SHEET 11

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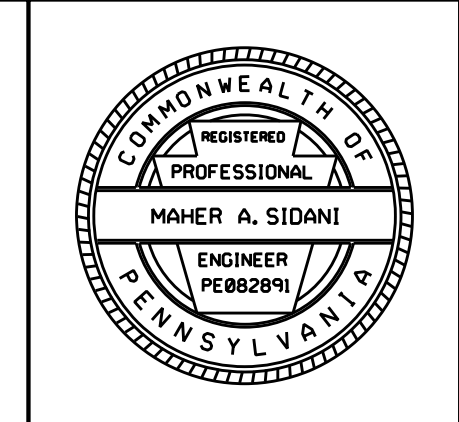
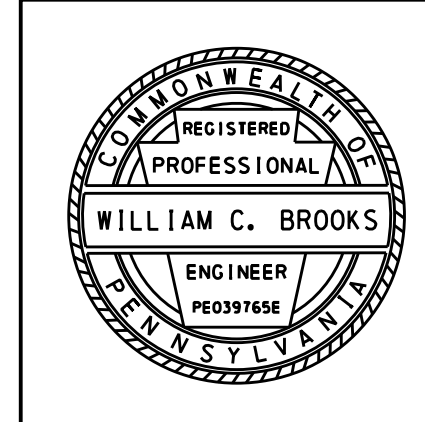
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|-------|---------------------------------|---|-----------------------------|--------|--------------------|
| —c— | NEW CONDUIT | ■ | COMMUNICATIONS JUNCTION BOX | ⚡ | MAST ARM |
| —FOU— | NEW UNDERGROUND FIBER | ■ | ELECTRICAL JUNCTION BOX | ⊕ | UTILITY POLE |
| —EU— | NEW UNDERGROUND ELECTRICAL | ⏏ | DYNAMIC MESSAGE SIGN | □ | TRANSFORMER |
| —EU— | EXISTING UNDERGROUND ELECTRICAL | □ | VEHICLE DETECTOR | ▲ | SERVICE DISCONNECT |
| —FOU— | EXISTING UNDERGROUND FIBER | ● | ITS CAMERA ASSEMBLY | — | UTILITY PEDESTAL |
| ⊠ | COMMUNICATIONS CABINET | ○ | ITS CAMERA POLE | —ZPASS | E-ZPASS READER |

NOTES

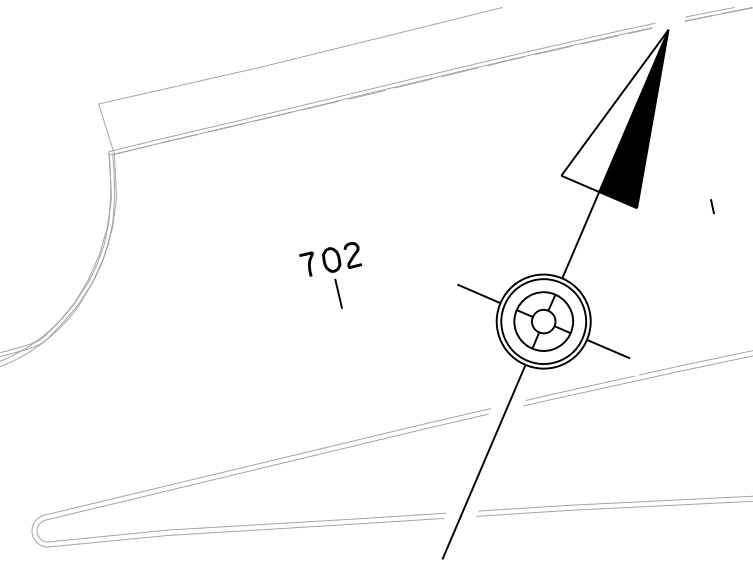
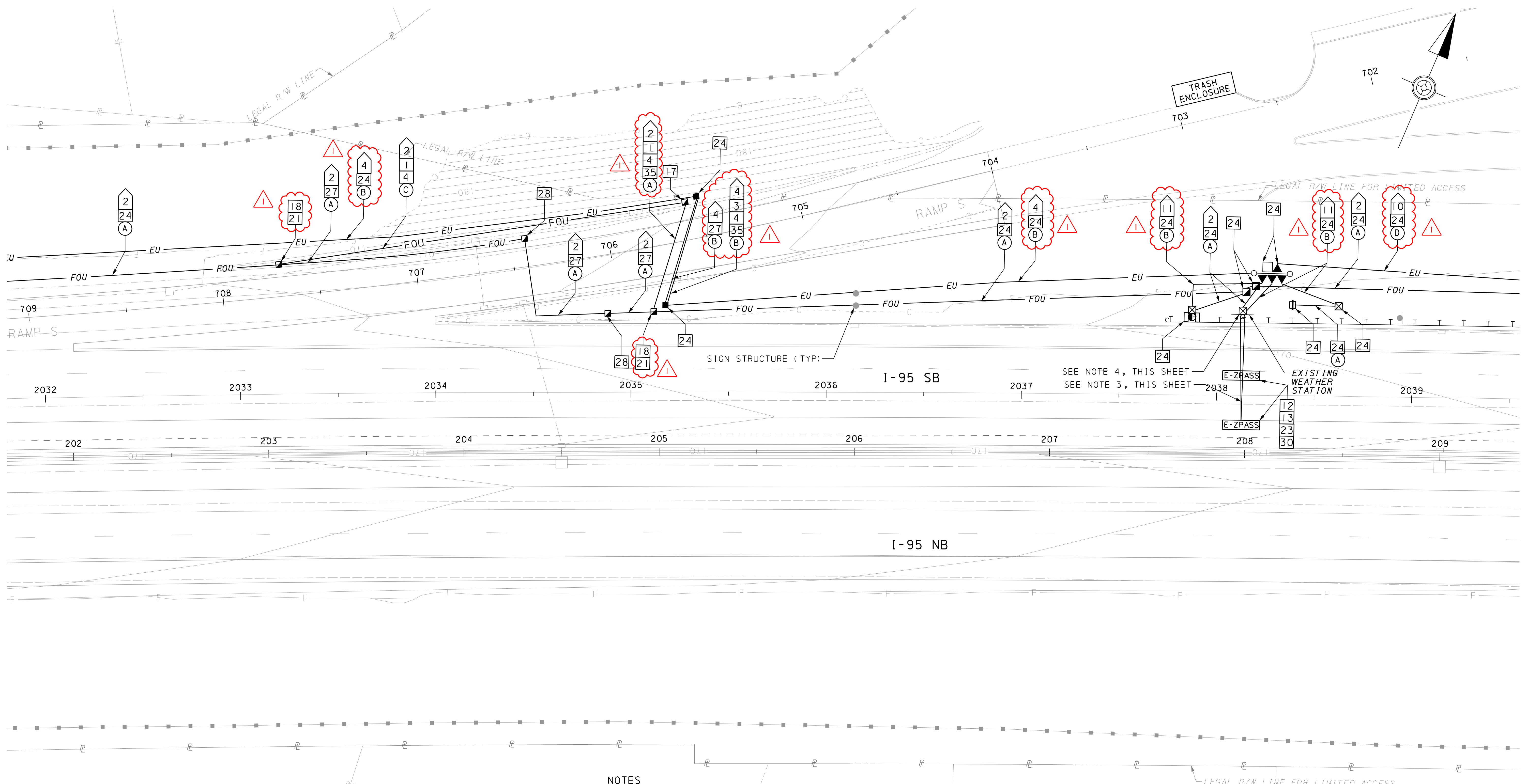
- SEE SHEET 1 FOR GENERAL NOTES AND ABBREVIATIONS. SEE SHEET 2 FOR CONSTRUCTION NOTES.
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**ITS PLAN
NEW CONSTRUCTION**



DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0095	001	11 OF 28
LOWER MAKEFIELD TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	
1	ADDENDUM NO. 8	12/01/16	STV	



SEE SHEET 10

SEE SHEET 12

LEGEND

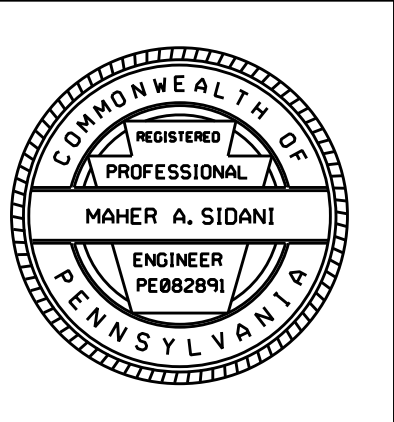
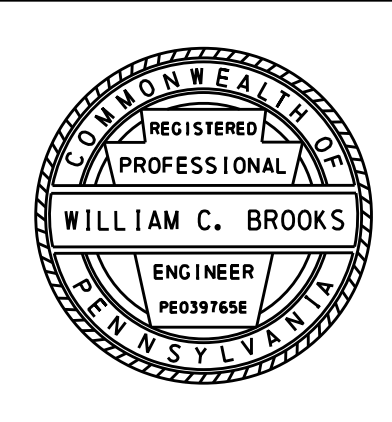
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|-------|---------------------------------|---|-----------------------------|---|--------------------|
| —c— | NEW CONDUIT | ■ | COMMUNICATIONS JUNCTION BOX | ⚡ | MAST ARM |
| —Fou— | NEW UNDERGROUND FIBER | ■ | ELECTRICAL JUNCTION BOX | ⊕ | UTILITY POLE |
| —EU— | NEW UNDERGROUND ELECTRICAL | Ⓜ | DYNAMIC MESSAGE SIGN | □ | TRANSFORMER |
| —EU— | EXISTING UNDERGROUND ELECTRICAL | □ | VEHICLE DETECTOR | ▲ | SERVICE DISCONNECT |
| —FOU— | EXISTING UNDERGROUND FIBER | ● | ITS CAMERA ASSEMBLY | ⊖ | UTILITY PEDESTAL |
| ⊠ | COMMUNICATIONS CABINET | ○ | ITS CAMERA POLE | Ⓜ | E-ZPASS |
| | | | | Ⓜ | E-ZPASS READER |

NOTES

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- FOR MAST ARM DETAILS SEE DRAWING TC-8801.
- FOR E-ZPASS CABINET WIRING DIAGRAM, SEE SHEET 24.

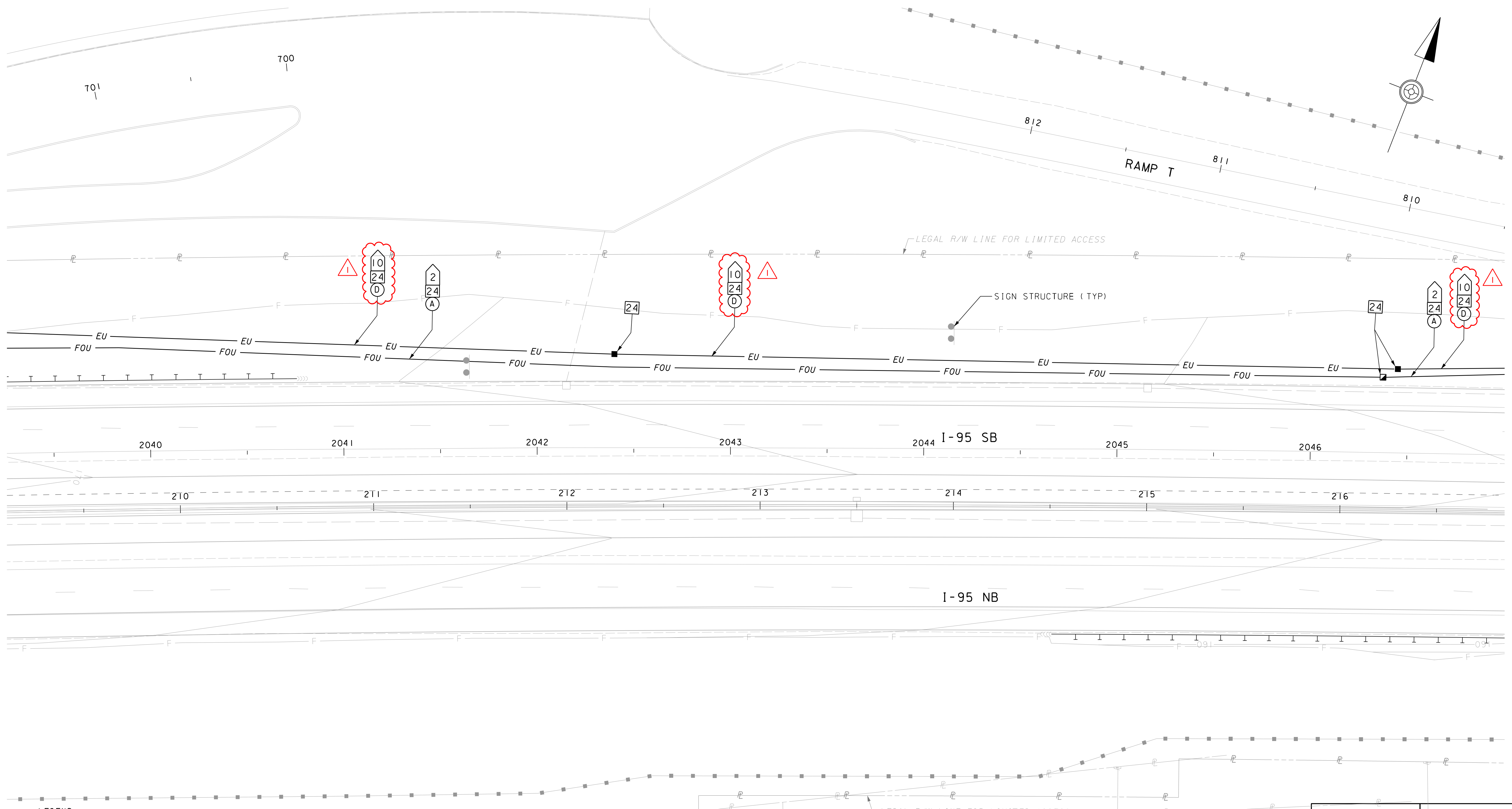


**ITS PLAN
NEW CONSTRUCTION**



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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0095	001	12 OF 28
LOWER MAKEFIELD TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	
1	ADDENDUM NO. 8	12/01/16	STV	



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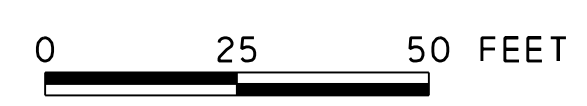
SEE SHEET 11

SEE SHEET 13

LEGEND			
-C-	NEW CONDUIT	☒	COMMUNICATIONS CABINET
-FOU-	NEW UNDERGROUND FIBER	☑	COMMUNICATIONS JUNCTION BOX
-EU-	NEW UNDERGROUND ELECTRICAL	■	ELECTRICAL JUNCTION BOX
-EU-	EXISTING UNDERGROUND ELECTRICAL	Ⓛ	DYNAMIC MESSAGE SIGN
-FOU-	EXISTING UNDERGROUND FIBER	□	VEHICLE DETECTOR
●	ITS CAMERA ASSEMBLY	○	ITS CAMERA POLE
○	UTILITY POLE	⊕	UTILITY PEDESTAL
⚡	MAST ARM	⚡	SERVICE DISCONNECT
□	TRANSFORMER	⚡	E-ZPASS READER

NOTES

- SEE SHEET 1 FOR GENERAL NOTES AND ABBREVIATIONS. SEE SHEET 2 FOR CONSTRUCTION NOTES.
- DURING STAGE I OF CONSTRUCTION, ITS EQUIPMENT SHALL REMAIN OPERATIONAL.

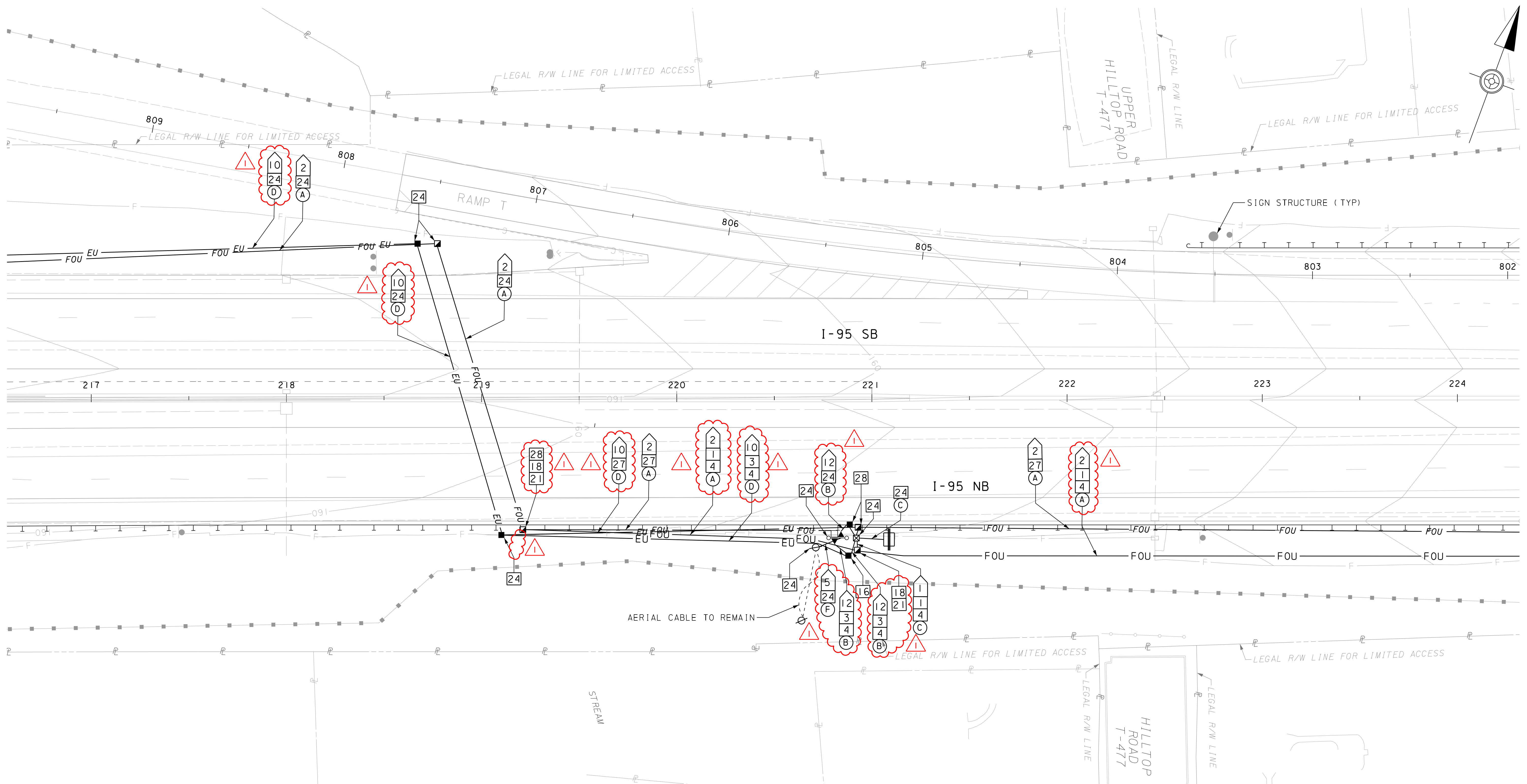


**ITS PLAN
NEW CONSTRUCTION**

WILLIAM C. BROOKS
REGISTERED PROFESSIONAL ENGINEER
NO. 0037656
PENNSYLVANIA

MAHER A. SIDANI
REGISTERED PROFESSIONAL ENGINEER
NO. 0082891
PENNSYLVANIA

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0095	001	13 OF 28
LOWER MAKEFIELD TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	
1	ADDENDUM NO. 8	12/01/16	STV	



SEE SHEET 12

SEE SHEET 14

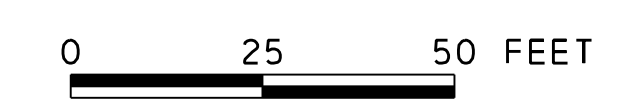
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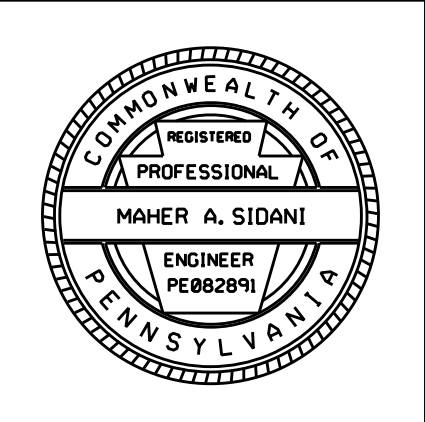
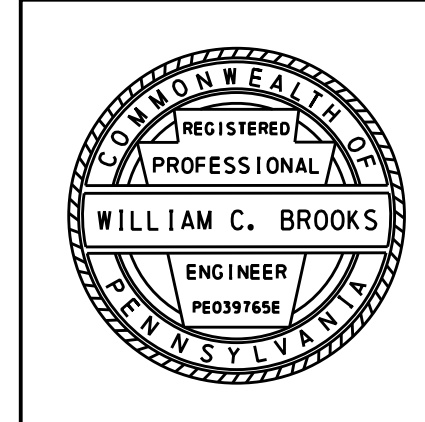
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|-------|---------------------------------|---|-----------------------------|----------|--------------------|
| —c— | NEW CONDUIT | ■ | COMMUNICATIONS JUNCTION BOX | ◀ | MAST ARM |
| —FOU— | NEW UNDERGROUND FIBER | ■ | ELECTRICAL JUNCTION BOX | ○ | UTILITY POLE |
| —EU— | NEW UNDERGROUND ELECTRICAL | □ | DYNAMIC MESSAGE SIGN | □ | TRANSFORMER |
| —EU— | EXISTING UNDERGROUND ELECTRICAL | □ | VEHICLE DETECTOR | ▲ | SERVICE DISCONNECT |
| —FOU— | EXISTING UNDERGROUND FIBER | ● | ITS CAMERA ASSEMBLY | — | UTILITY PEDESTAL |
| ☒ | COMMUNICATIONS CABINET | ○ | ITS CAMERA POLE | —E-ZPASS | E-ZPASS READER |

NOTES

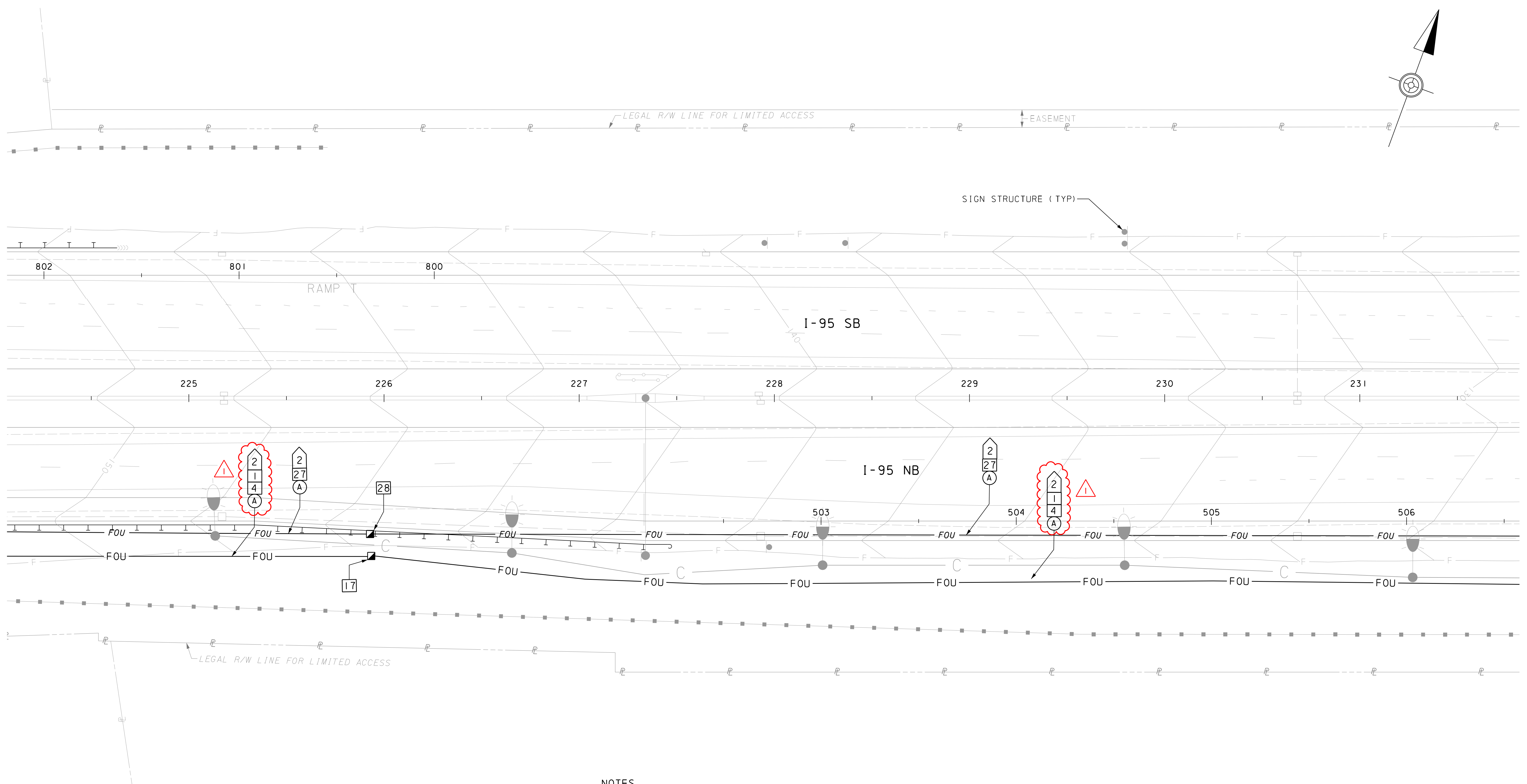
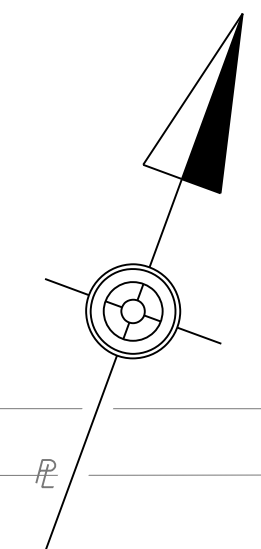
- SEE SHEET 1 FOR GENERAL NOTES AND ABBREVIATIONS. SEE SHEET 2 FOR CONSTRUCTION NOTES.
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ITS PLAN
NEW CONSTRUCTION



DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0095	001	14 OF 28
LOWER MAKEFIELD TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	
1	ADDENDUM NO. 8	12/01/16	STV	



SEE SHEET 13

SEE SHEET 15

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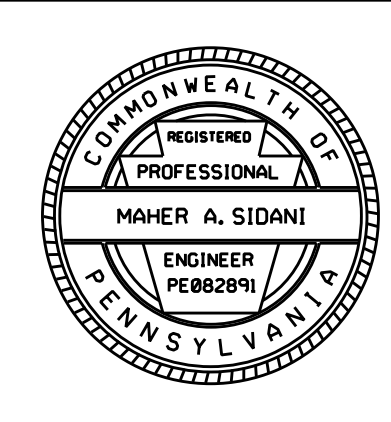
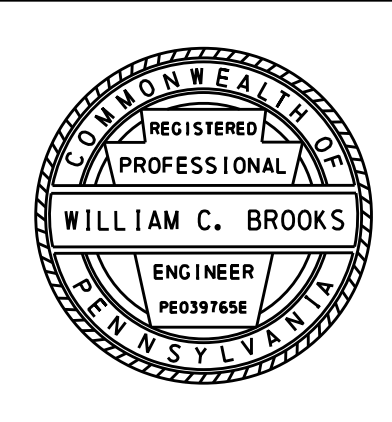
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| —c— | NEW CONDUIT | ■ | COMMUNICATIONS JUNCTION BOX | ⚡ | MAST ARM |
| —FOU— | NEW UNDERGROUND FIBER | ■ | ELECTRICAL JUNCTION BOX | ⊕ | UTILITY POLE |
| —EU— | NEW UNDERGROUND ELECTRICAL | ⏏ | DYNAMIC MESSAGE SIGN | □ | TRANSFORMER |
| —EU— | EXISTING UNDERGROUND ELECTRICAL | □ | VEHICLE DETECTOR | ▲ | SERVICE DISCONNECT |
| —FOU— | EXISTING UNDERGROUND FIBER | ● | ITS CAMERA ASSEMBLY | ⚙ | UTILITY PEDESTAL |
| ⊠ | COMMUNICATIONS CABINET | ○ | ITS CAMERA POLE | Ⓜ | E-ZPASS READER |

NOTES

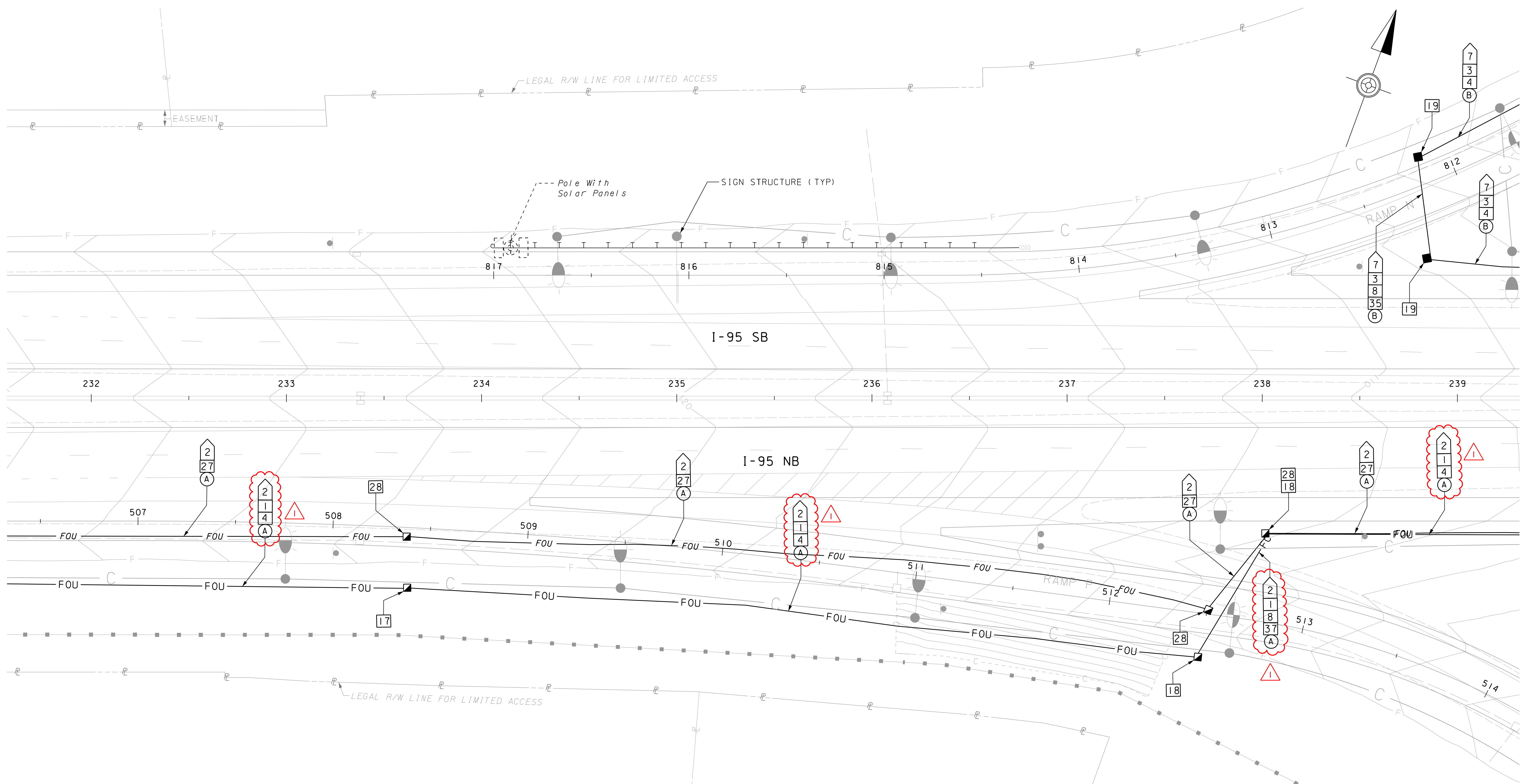
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**ITS PLAN
NEW CONSTRUCTION**



DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0095	001	15 OF 28
LOWER MAKEFIELD TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	
1	ADDENDUM NO. 8	12/01/16	STV	



SEE SHEET 14

SEE SHEET 16

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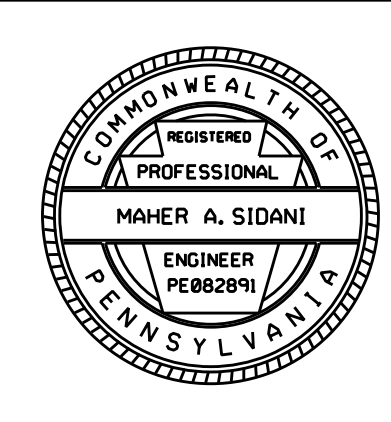
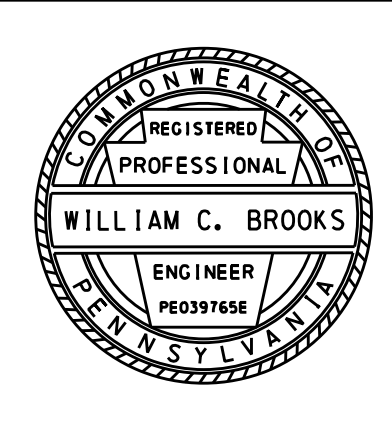
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|---------|---------------------------------|---|-----------------------------|---|--------------------|
| — c — | NEW CONDUIT | ■ | COMMUNICATIONS JUNCTION BOX | ⊖ | MAST ARM |
| — Fou — | NEW UNDERGROUND FIBER | ■ | ELECTRICAL JUNCTION BOX | ⊕ | UTILITY POLE |
| — Eu — | NEW UNDERGROUND ELECTRICAL | Ⓜ | DYNAMIC MESSAGE SIGN | □ | TRANSFORMER |
| — Eu — | EXISTING UNDERGROUND ELECTRICAL | □ | VEHICLE DETECTOR | ▲ | SERVICE DISCONNECT |
| — Fou — | EXISTING UNDERGROUND FIBER | ● | ITS CAMERA ASSEMBLY | — | UTILITY PEDESTAL |
| ⊠ | COMMUNICATIONS CABINET | ○ | ITS CAMERA POLE | — | E-ZPASS |
| | | | | | E-ZPASS |
| | | | | | E-ZPASS |

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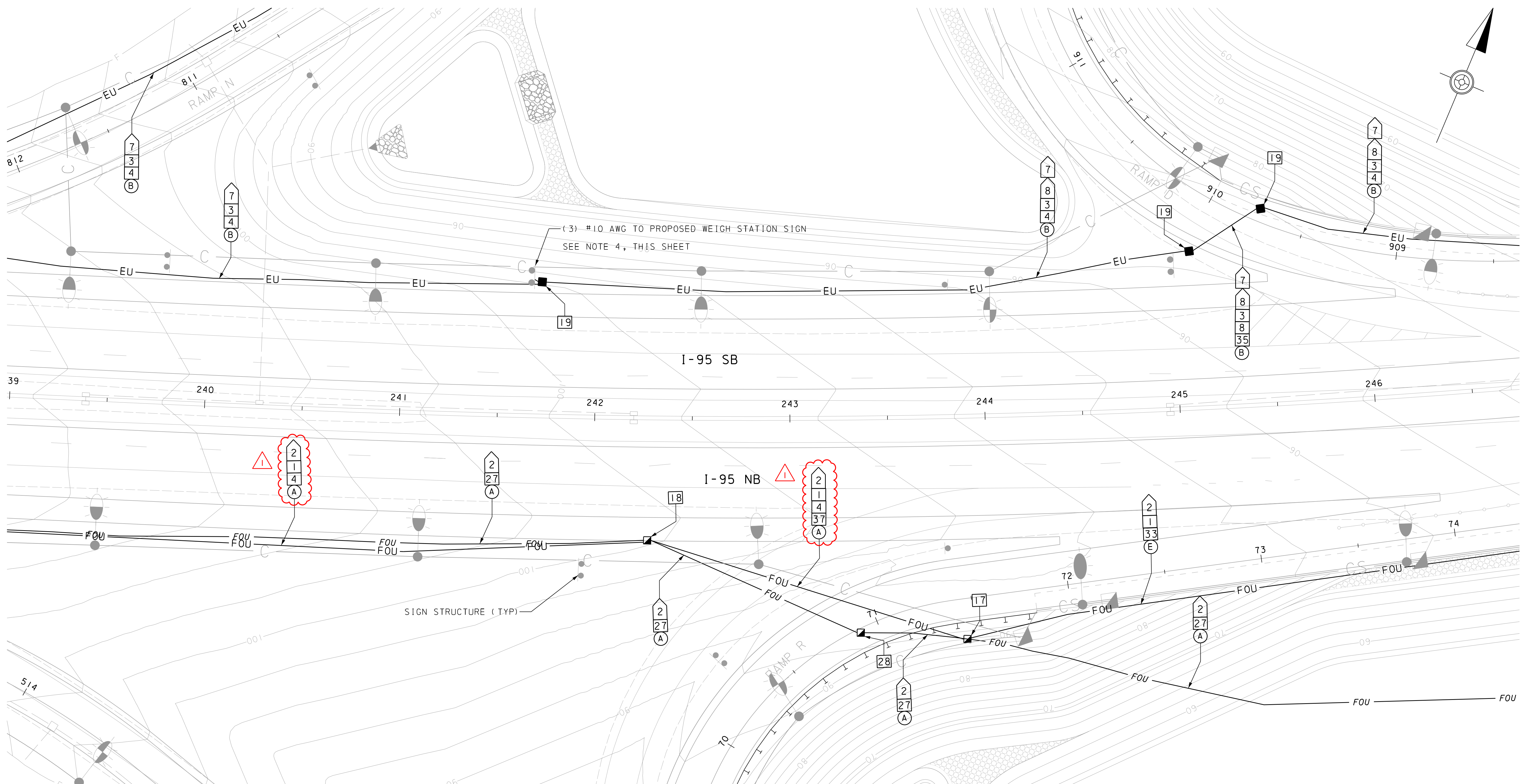
- SEE SHEET 1 FOR GENERAL NOTES AND ABBREVIATIONS. SEE SHEET 2 FOR CONSTRUCTION NOTES.
- INSTALL CONDUIT AND CABLES TO WEIGH STATION SIGNS BEFORE CONSTRUCTION BEGINS ON THE SB ROADWAY.
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ITS PLAN
NEW CONSTRUCTION



DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0095	001	16 OF 28
LOWER MAKEFIELD TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	
1	ADDENDUM NO. 8	12/01/16	STV	



SEE SHEET 15

SEE SHEET 17

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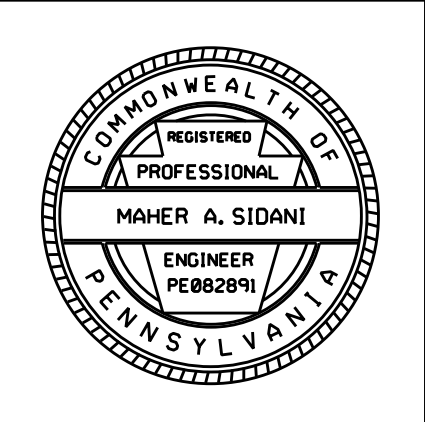
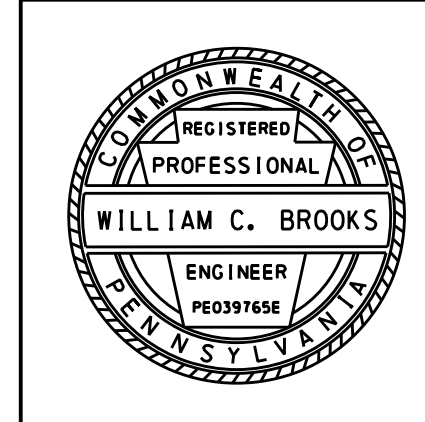
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- c — NEW CONDUIT
- FOU — NEW UNDERGROUND FIBER
- EU — NEW UNDERGROUND ELECTRICAL
- EU — EXISTING UNDERGROUND ELECTRICAL
- FOU — EXISTING UNDERGROUND FIBER
- ☒ COMMUNICATIONS CABINET
- ☑ COMMUNICATIONS JUNCTION BOX
- ELECTRICAL JUNCTION BOX
- Ⓜ DYNAMIC MESSAGE SIGN
- VEHICLE DETECTOR
- ITS CAMERA ASSEMBLY
- ITS CAMERA POLE
- ⚡ MAST ARM
- ⊕ UTILITY POLE
- TRANSFORMER
- ▲ SERVICE DISCONNECT
- UTILITY PEDESTAL
- Ⓜ E-ZPASS E-ZPASS READER

NOTES

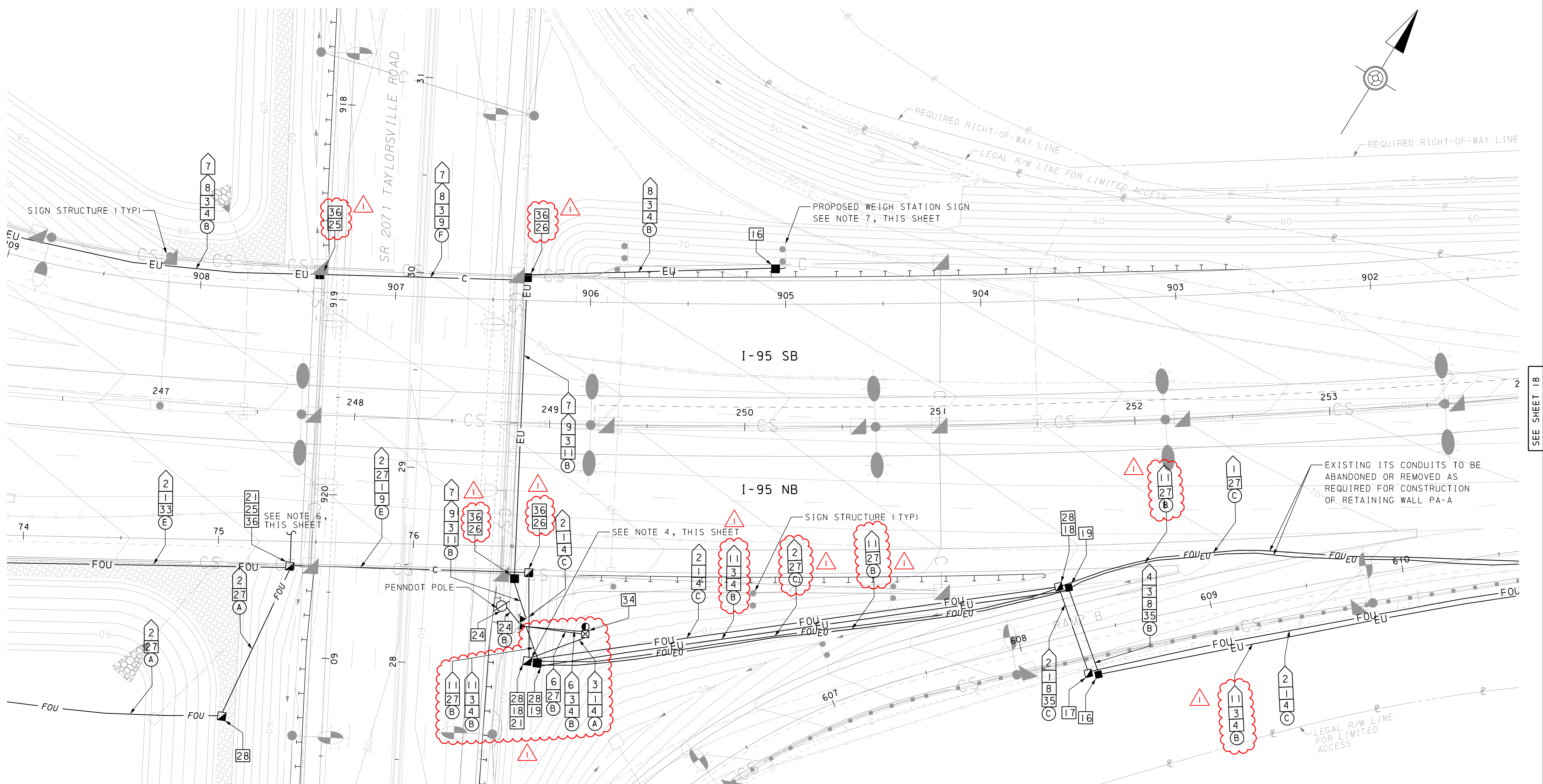
1. SEE SHEET 1 FOR GENERAL NOTES AND ABBREVIATIONS. SEE SHEET 2 FOR CONSTRUCTION NOTES.
2. INSTALL CONDUIT AND CABLES TO WEIGH STATION SIGNS BEFORE CONSTRUCTION BEGINS ON THE SB ROADWAY.
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4. FOR WEIGH STATION SIGN CONNECTIVITY, SEE SHEET 26. FOR SIGN DETAILS SEE SIGNAGE PLANS.

0 25 50 FEET



ITS PLAN
NEW CONSTRUCTION

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0095	001	17 OF 28
LOWER MAKEFIELD TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	
1	ADDENDUM NO. 8	12/01/16	STV	



SEE SHEET 16

SEE SHEET 18

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|-------|---------------------------------|---|-----------------------------|----------|--------------------|
| —c— | NEW CONDUIT | ■ | COMMUNICATIONS JUNCTION BOX | ⊙ | MAST ARM |
| —FOU— | NEW UNDERGROUND FIBER | ■ | ELECTRICAL JUNCTION BOX | ⊙ | UTILITY POLE |
| —EU— | NEW UNDERGROUND ELECTRICAL | ⊙ | DYNAMIC MESSAGE SIGN | □ | TRANSFORMER |
| —EU— | EXISTING UNDERGROUND ELECTRICAL | □ | VEHICLE DETECTOR | ▲ | SERVICE DISCONNECT |
| —FOU— | EXISTING UNDERGROUND FIBER | ● | ITS CAMERA ASSEMBLY | — | UTILITY PEDESTAL |
| ⊠ | COMMUNICATIONS CABINET | ○ | ITS CAMERA POLE | —E-ZPASS | E-ZPASS READER |

NOTES

- SEE SHEET 1 FOR GENERAL NOTES AND ABBREVIATIONS. SEE SHEET 2 FOR CONSTRUCTION NOTES.
- INSTALL CONDUIT AND CABLES TO WEIGH STATION SIGNS BEFORE CONSTRUCTION BEGINS ON SB ROADWAY.
- DURING STAGE 2 OF CONSTRUCTION, INSTALL NEW ITS EQUIPMENT ON NB SIDE OF ROADWAY BEFORE NEW NB LANES ARE CONSTRUCTED. REMOVE EXISTING NB ITS EQUIPMENT ONCE NEW ITS EQUIPMENT IS INSTALLED AND OPERATIONAL AND BEFORE CONSTRUCTION BEGINS ON THE NEW NB LANES. CONTRACTOR TO ENSURE NEW ITS EQUIPMENT IS NOT IMPACTED DURING NB LANE CONSTRUCTION.
- DISCONNECT EXISTING FIBER SPLICE.
- INSTALL TEMPORARY FIBER AND POWER ACROSS RAMP B. REPLACE WITH PERMANENT FIBER AND POWER ACCORDING TO TRAFFIC CONTROL PLAN SEQUENCING.
- SEE SHEET 25 FOR SPLICE DETAILS. SEE TRAFFIC SIGNAL PLANS FOR FIBER CONTINUATION TO TRAFFIC SIGNAL CONTROLLER CABINET.
- FOR WEIGH STATION CONNECTIVITY, SEE SHEET 26. FOR SIGN DETAILS, SEE SIGNAGE PLAN SHEET 27.

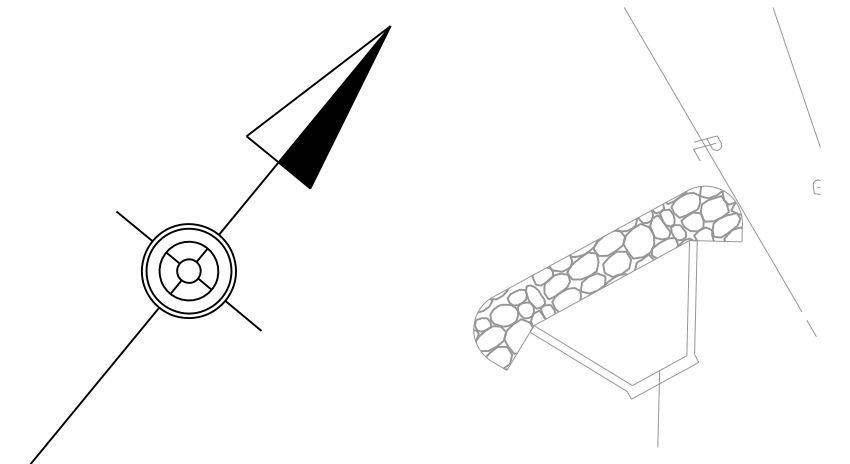
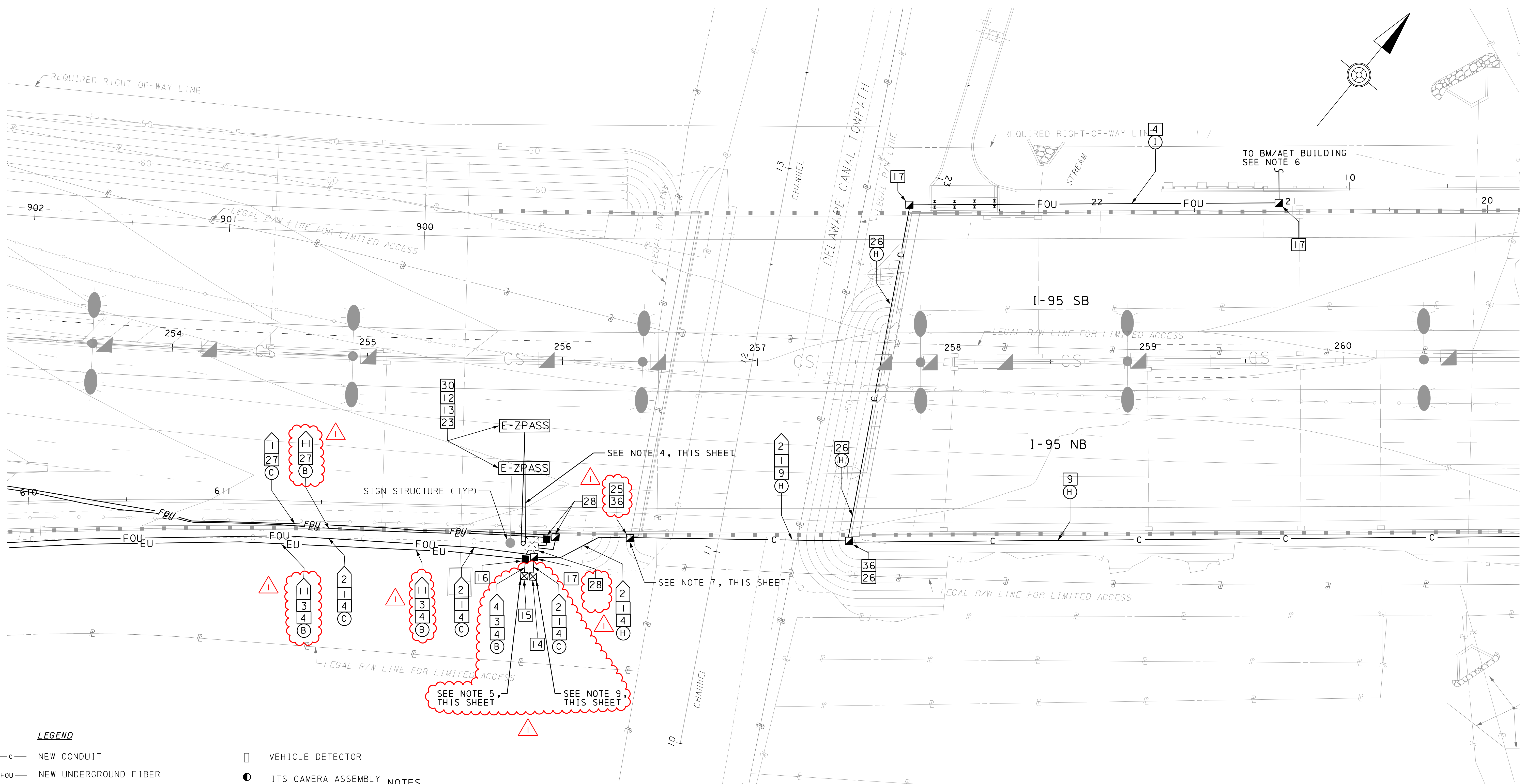
**ITS PLAN
NEW CONSTRUCTION**

0 25 50 FEET

WILLIAM C. BROOKS
ENGINEER
NO. 9037656
PENNSYLVANIA

MAHER A. SIDANI
ENGINEER
NO. 982891
PENNSYLVANIA

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0095	001	18 OF 28
LOWER MAKEFIELD TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	
1	ADDENDUM NO. 8	12/01/16	STV	



SEE SHEET 17

SEE SHEET 19

LEGEND

- C — NEW CONDUIT
- FOU — NEW UNDERGROUND FIBER
- EU — NEW UNDERGROUND ELECTRICAL
- EU — EXISTING UNDERGROUND ELECTRICAL
- FOU — EXISTING UNDERGROUND FIBER
- ☒ COMMUNICATIONS CABINET
- ☑ COMMUNICATIONS JUNCTION BOX
- ELECTRICAL JUNCTION BOX
- Ⓜ DYNAMIC MESSAGE SIGN
- VEHICLE DETECTOR
- ITS CAMERA ASSEMBLY
- ITS CAMERA POLE
- ⚡ MAST ARM
- ⊕ UTILITY POLE
- TRANSFORMER
- ▲ SERVICE DISCONNECT
- UTILITY PEDESTAL
- Ⓜ E-ZPASS E-ZPASS READER

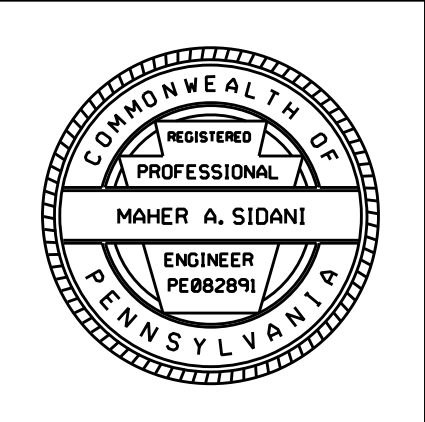
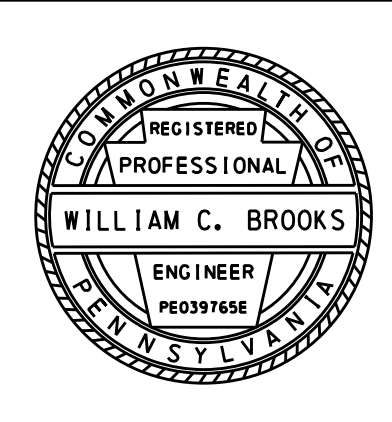
NOTES

1. SEE SHEET 1 FOR GENERAL NOTES AND ABBREVIATIONS. SEE SHEET 2 FOR CONSTRUCTION NOTES.
2. DURING STAGE 1 OF CONSTRUCTION, INSTALL CONDUIT TO BM/AET FACILITY FROM JUNCTION BOX ON SB SIDE OF I-95.
3. DURING STAGE 2 OF CONSTRUCTION, INSTALL NEW ITS EQUIPMENT ON NB SIDE OF ROADWAY BEFORE NEW NB LANES ARE CONSTRUCTED. REMOVE EXISTING NB ITS EQUIPMENT ONCE NEW ITS EQUIPMENT IS INSTALLED AND OPERATIONAL AND BEFORE CONSTRUCTION BEGINS ON THE NEW NB LANES. CONTRACTOR TO ENSURE NEW ITS EQUIPMENT IS NOT IMPACTED DURING NB LANE CONSTRUCTION. PULL FIBER TO BM/AET BUILDING FROM SPLICE LOCATION BEFORE NB LANES ARE CONSTRUCTED.
4. FOR MAST ARM DETAILS, SEE DRAWING TC-8801.
5. FOR E-ZPASS CABINET WIRING DETAILS, SEE SHEET 24 AND FOR FIBER SPLICE DETAIL, SEE SHEET 25.
6. PENETRATE BUILDING AT LOWER LEVEL. REFER TO PACKAGE A FOR MSC WALL DETAILS AND PACKAGE C FOR BUILDING DETAILS. INSTALL JUNCTION BOXES IN PATH FLUSH WITH BIKE PATH SURFACE. SEE GRADING AND BRIDGE PLANS.
7. ROUTE CONDUITS FROM JUNCTION BOX UP INTO PARAPET TO CONTINUE TO THE MAIN RIVER BRIDGE.
8. SEE SHEET 27 FOR CONDUIT MOUNTING DETAILS.

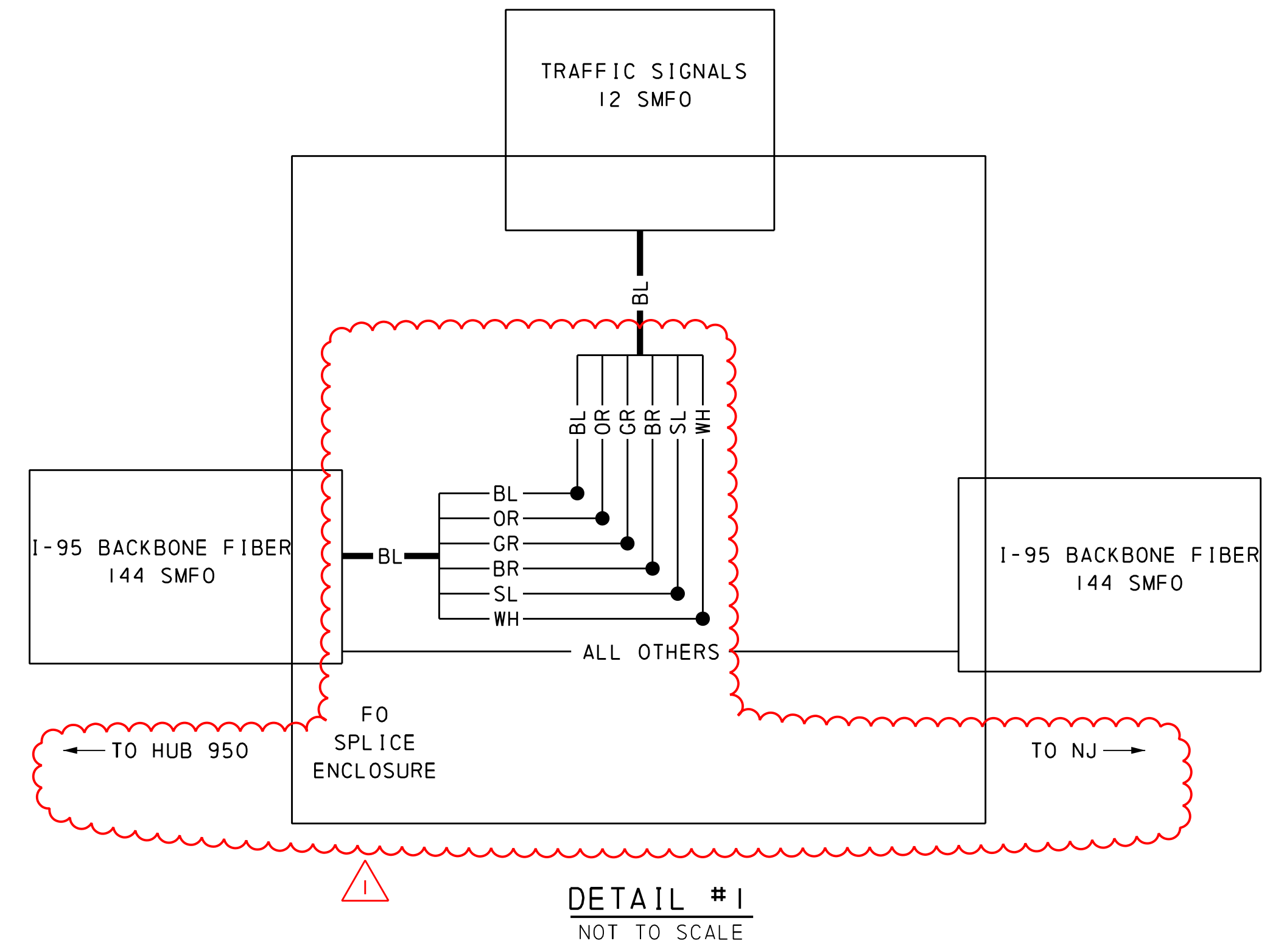
9. INSTALL FIBER TERMINATION CABINET WITH SPLICE ENCLOSURE AND PATCH PANEL.



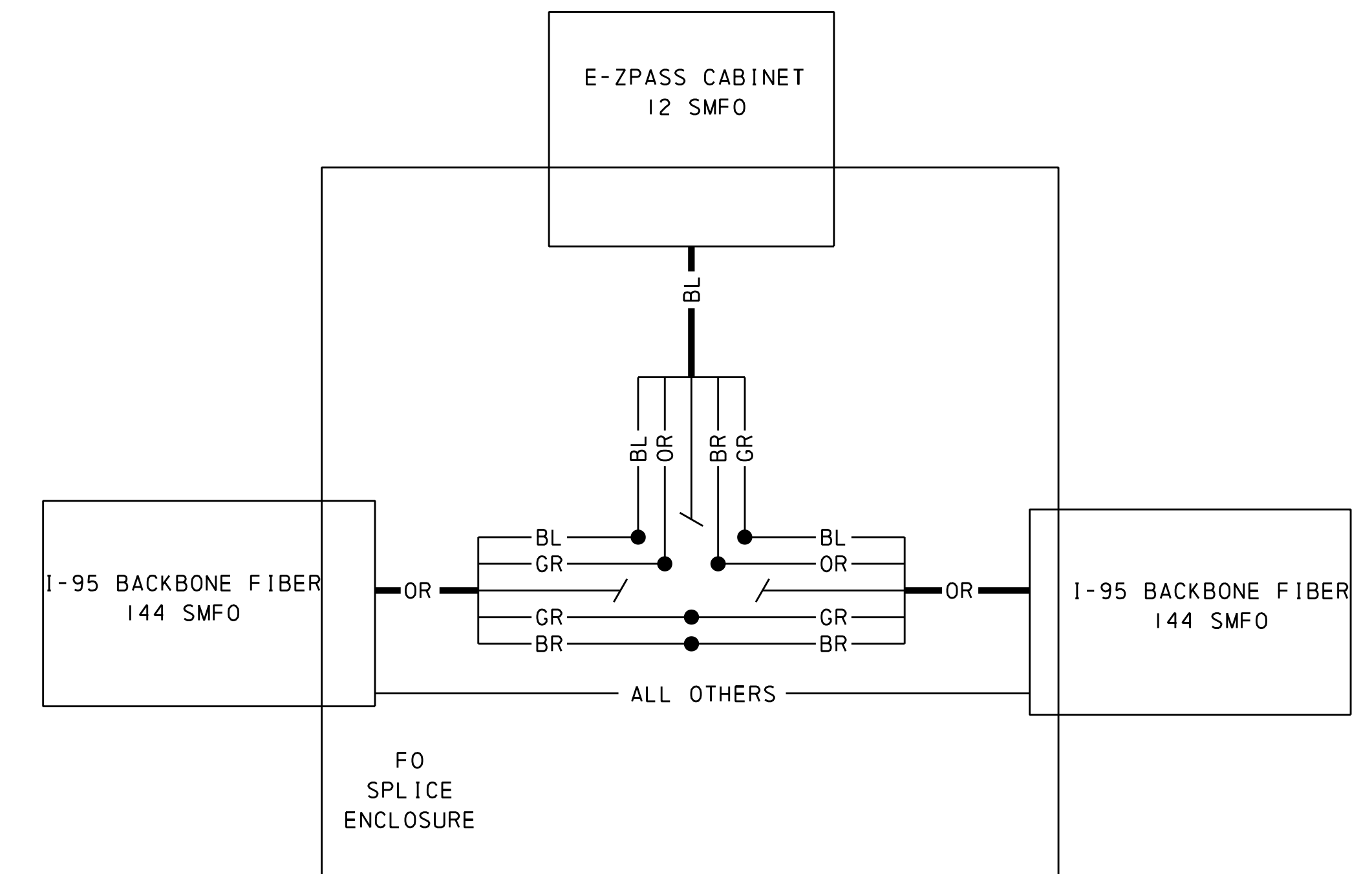
ITS PLAN
NEW CONSTRUCTION



DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0095	001	25 OF 28
LOWER MAKEFIELD TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	
1	ADDENDUM NO. 8	12/01/16	STV	



DETAIL #1
NOT TO SCALE



DETAIL #2
NOT TO SCALE

LEGEND

	CABINET # DETAIL NUMBER
	FO BUFFER
	FIBER
	FUSION SPLICE
	UNTERMINATED FIBER(S) OR BUFFER(S)
	PATCH FIBERS

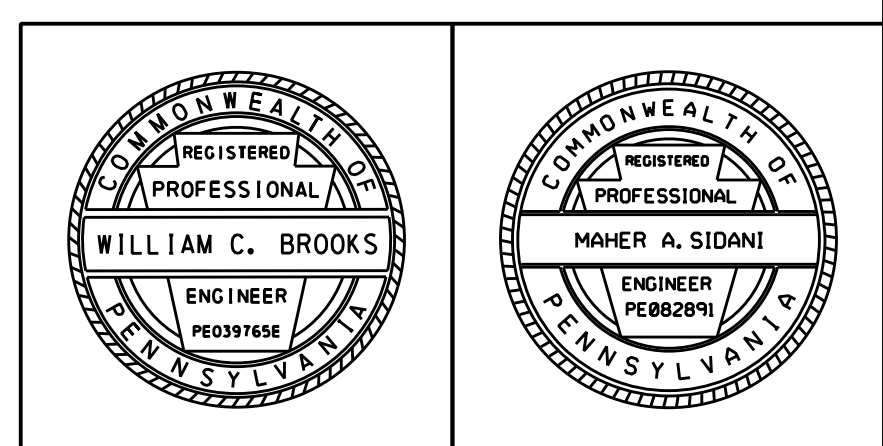
FIBER STRAND AND BUFFER TUBE COLOR STANDARD

AQ	AQUA	RD	RED
BK	BLACK	RS	ROSE
BL	BLUE	SL	SLATE
BR	BROWN	VI	VIOLET
GR	GREEN	WH	WHITE
OR	ORANGE	YL	YELLOW

NOTES

- FIBER STRANDS OR BUFFERS NOT SHOWN ARE TO BE LEFT UNTERMINATED.
- COORDINATE FIBER OPTIC FUSION SPLICES WITH THE ENGINEER.
- SPLICING CONTRACTOR SHALL CHECK FOR OPTICAL TRAFFIC PRIOR TO SPLICING FIBER OPTIC CABLE.

ITS PLAN
SPLICE ENCLOSURE DETAIL



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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	2071	301	10 OF 12
LOWER MAKEFIELD TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	
1	ADDENDUM NO. 8	12/01/16	STV	

GENERAL NOTES

NO MODIFICATIONS OF THIS INSTALLATION ARE PERMITTED UNLESS PRIOR APPROVAL IS GRANTED IN WRITING.

REFER TO TRAFFIC SIGNAL PERMIT DRAWING FOR INDIVIDUAL INTERSECTION OPERATION, GEOMETRY, PHASING AND CRITICAL TIMES.

FOR CONSTRUCTION AND INSPECTION THE SYSTEM PERMIT SHOULD ALWAYS BE ACCOMPANIED WITH TRAFFIC SIGNAL PERMIT DRAWING.

TEST THE SYSTEM AT LOCAL INTERSECTION LEVEL, SUBSYSTEM LEVEL, MASTER CONTROLLER LEVEL AND PERSONAL COMPUTER REMOTE DIAL UP LEVEL.

GATHER THE SYSTEM FAILURE CRITICAL ALARMS REPORT AND ARCHIVE THEM WHERE APPLICABLE.

SET UP PENNDOT DISTRICT 6-0 COMPUTER WITH THE SYSTEM DATABASE AND GRAPHICS. MODIFY THE DATABASE AND GRAPHICS FOR SYSTEMS REVISIONS.

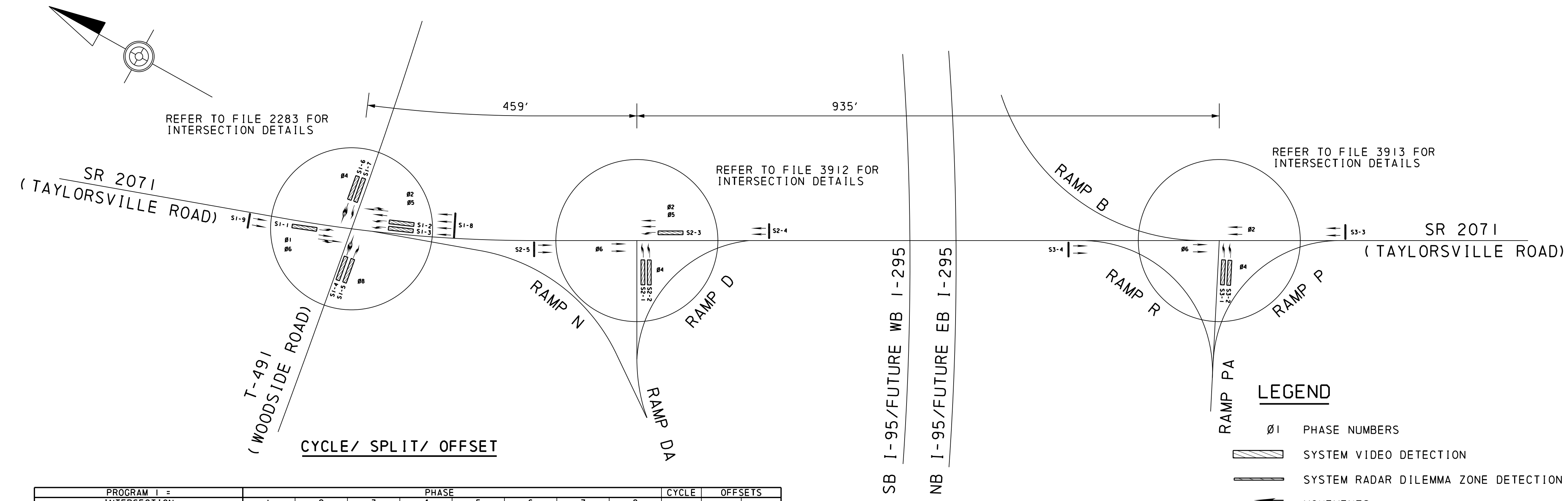
ASSIGN LOOP DETECTORS AND PROGRAM THE CONTROLLERS TO GATHER TRAFFIC VOLUMES IN 15 MINUTE INTERVAL, WHERE APPLICABLE.

EXACT LOCATION OF DETECTORS SHALL BE DETERMINED PRIOR TO INSTALLATION BY A REPRESENTATIVE OF PENNDOT.

MAINTAIN MASTER CONTROLLER COMMUNICATION SUCH AS PHONE DROPS.

PRIOR TO INSTALLATION THE CONTRACTOR SHALL CONSULT WITH THE LOCAL OFFICIALS AND UTILITY COMPANIES TO RESOLVE ANY PROBLEMS WHICH MAY BE CREATED DUE TO THE LOCATION OF UTILITIES.

COMPLY WITH PROVISIONS OF ACT 287 FOR PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES.



LEGEND

- Ø1 PHASE NUMBERS
- SYSTEM VIDEO DETECTION
- SYSTEM RADAR DILEMMA ZONE DETECTION
- MOVEMENTS

PROGRAM #	INTERSECTION	PHASE								CYCLE	OFFSETS
		1	2	3	4	5	6	7	8		
1	T-491 (WOODSIDE ROAD)	12 (LAG)	30		16	12 (LEAD)	30		32	90	11
2	T-491 (WOODSIDE ROAD)									90	76
3	T-491 (WOODSIDE ROAD)									90	43
4	T-491 (WOODSIDE ROAD)									90	82

SYSTEM NOTES

- PROGRAM TO BE SELECTED BY CLOSED LOOP SYSTEM (TIME OF DAY) OR TBC BACKUP.
- CYCLES, SPLITS, AND OFFSETS ARE IN SECONDS.
- PRIMARY COORDINATION: FIBER OPTIC CABLE
SECONDARY COORDINATION: TBC (DEFAULT TO BACKUP TBC)
- TRAFFIC SIGNAL COMMUNICATION FIBER OPTIC CABLE SHALL SPLICE TO THE PENNDOT I-95 BACKBONE SMFO CABLE IN ORDER TO CONNECT TO THE PENNDOT DISTRICT 6-0 TMC.

SR 2071(TAYLORSVILLE ROAD) & T-491(WOODSIDE ROAD)

WEEKLY PROGRAM CHART

EVENT	DAY	TIME	CYCLE	PROGRAM	OFFSET	REMARKS
1	1-5	6:00	90	PROGRAM 1	11 SEC	COORD
2	1-5	15:00	90	PROGRAM 2	82 SEC	COORD
3	1-5	10:00	90	FREE		
4	1-5	19:00	90	FREE		
5	5-7	24:00	90	FREE		

OFFSETS REFERENCED TO BEGINNING OF INTERVAL 5.
SR 2071(TAYLORSVILLE ROAD) & SB I-95/FUTURE WB I-295 (RAMP DA)

WEEKLY PROGRAM CHART

EVENT	DAY	TIME	CYCLE	PROGRAM	OFFSET	REMARKS
1	1-5	6:00	90	PROGRAM 1	76 SEC	COORD
2	1-5	15:00	90	PROGRAM 2	43 SEC	COORD
3	1-5	10:00	90	FREE		
4	1-5	19:00	90	FREE		
5	5-7	24:00	90	FREE		

OFFSETS REFERENCED TO BEGINNING OF INTERVAL 5.
SR 2071(TAYLORSVILLE ROAD) & NB I-95/FUTURE EB I-295 (RAMP PA)

WEEKLY PROGRAM CHART

EVENT	DAY	TIME	CYCLE	PROGRAM	OFFSET	REMARKS
1	1-5	6:00	90	PROGRAM 1	12 SEC	COORD
2	1-5	15:00	90	PROGRAM 2	4 SEC	COORD
3	1-5	10:00	90	FREE		
4	1-5	19:00	90	FREE		
5	5-7	24:00	90	FREE		

OFFSETS REFERENCED TO BEGINNING OF INTERVAL 2.

SYSTEM NOTES (CONT.)

- CONTRACTOR SHALL FURNISH AND INSTALL MANAGED NETWORK SWITCHES IN THE PROPOSED TRAFFIC SIGNAL CABINETS AND HUB 9507 IN THE NORTHWEST QUADRANT OF THE INTERCHANGE OF SR 0332 AND SR 0095 TO PROVIDE A FULLY FUNCTIONAL COMMUNICATIONS SYSTEM BETWEEN THE TRAFFIC SIGNAL CABINETS/CONTROLLERS WITH THE COMMUNICATIONS HUB AND THE PENNDOT DISTRICT 6-0 RTMC, SEE INTERCONNECT PLANS FOR DETAILS.
- CONTRACTOR SHALL PROVIDE THE SETUP OF CENTRAL SYSTEM SOFTWARE FOR FULL IMPLEMENTATION AND OPERATION OF THE CLOSED LOOP SIGNAL SYSTEM AND COMMUNICATION WITH THE PENNDOT DISTRICT 6-0 RTMC.
- CONTRACTOR SHALL PROVIDE THE NECESSARY CABINET AND CABLE LABELING/DOCUMENTATION.
- COORDINATE THE INSTALLATION OF THE MANAGED NETWORK SWITCHES, SYSTEM SETUP AND CABINET AND CABLE LABELING/DOCUMENTATION WITH PENNDOT DISTRICT 6-0 INFORMATION TECHNOLOGY RESOURCES, TRAFFIC UNIT AND SIGNALS UNIT.

SYSTEM #: I-0289

REG. PROF. ENGINEER

DATE

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 6-0

COUNTY : BUCKS

MUNICIPALITY : LOWER MAKEFIELD TOWNSHIP

INTERSECTION : TAYLORSVILLE ROAD CORRIDOR

REVIEWED : _____

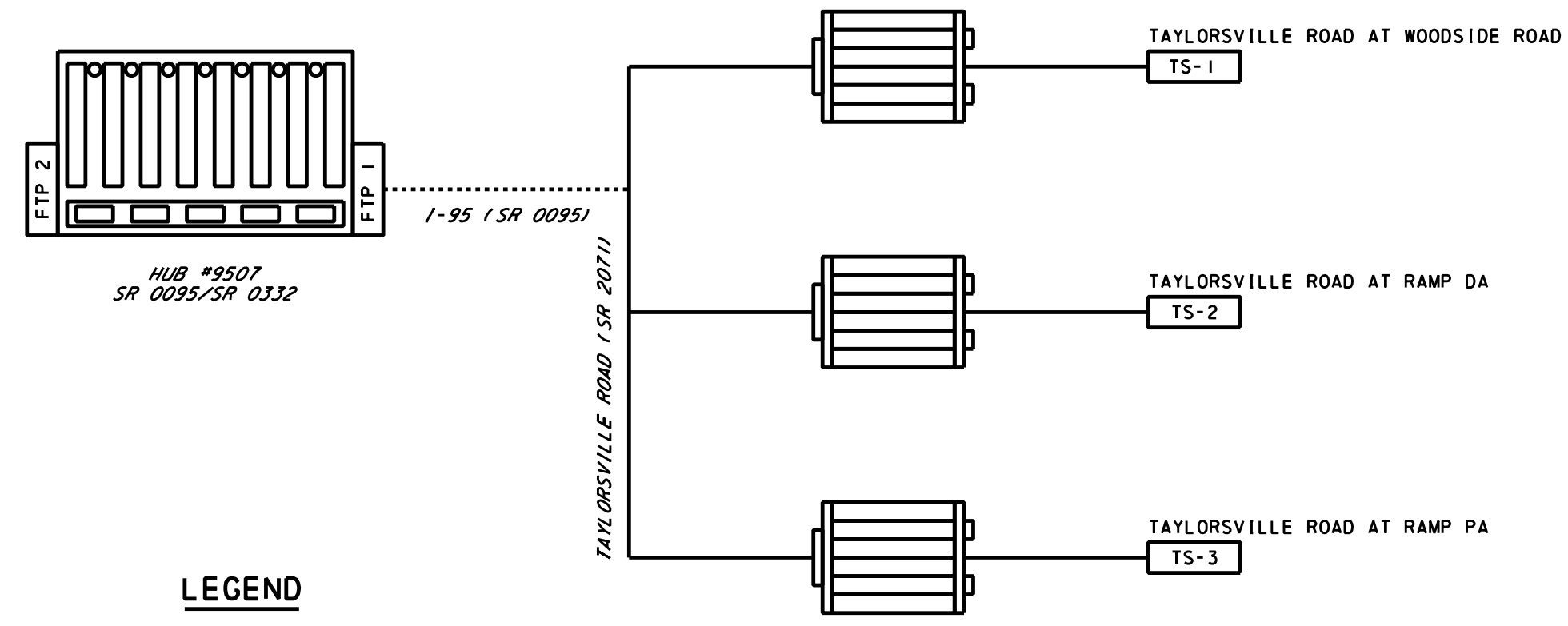
MUNICIPAL OFFICIAL _____ DATE _____

RECOMMENDED : _____

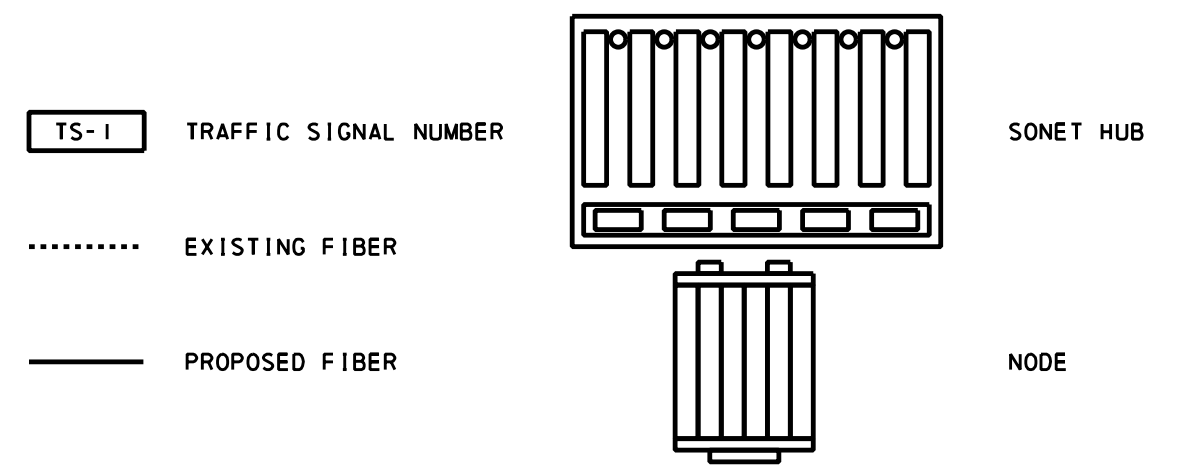
DISTRICT TRAFFIC ENGINEER _____ DATE _____

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MISCELLANEOUS				
ITEM NUMBER	DESCRIPTION	QUAN.	LOCATION	
9000 0044	MANAGED NETWORK SWITCH	4	<input checked="" type="checkbox"/> CC-1 SR 2071 (TAYLORSVILLE ROAD) AND T-491 (WOODSIDE ROAD) <input checked="" type="checkbox"/> CC-1 SR 2071 (TAYLORSVILLE ROAD) AND SB I-95/FUTURE WB I-295 RAMP (RAMP DA) <input checked="" type="checkbox"/> CC-1 SR 2071 (TAYLORSVILLE ROAD) AND NB I-95/FUTURE EB I-295 RAMP (RAMP PA) - HUB 9507 (NORTHWEST QUADRANT OF SR 0095 AND SR 0332 INTERCHANGE)	
9000 0027	SYSTEM SETUP	1	COORDINATE WITH PENNDOT RTMC	
LS				



LEGEND



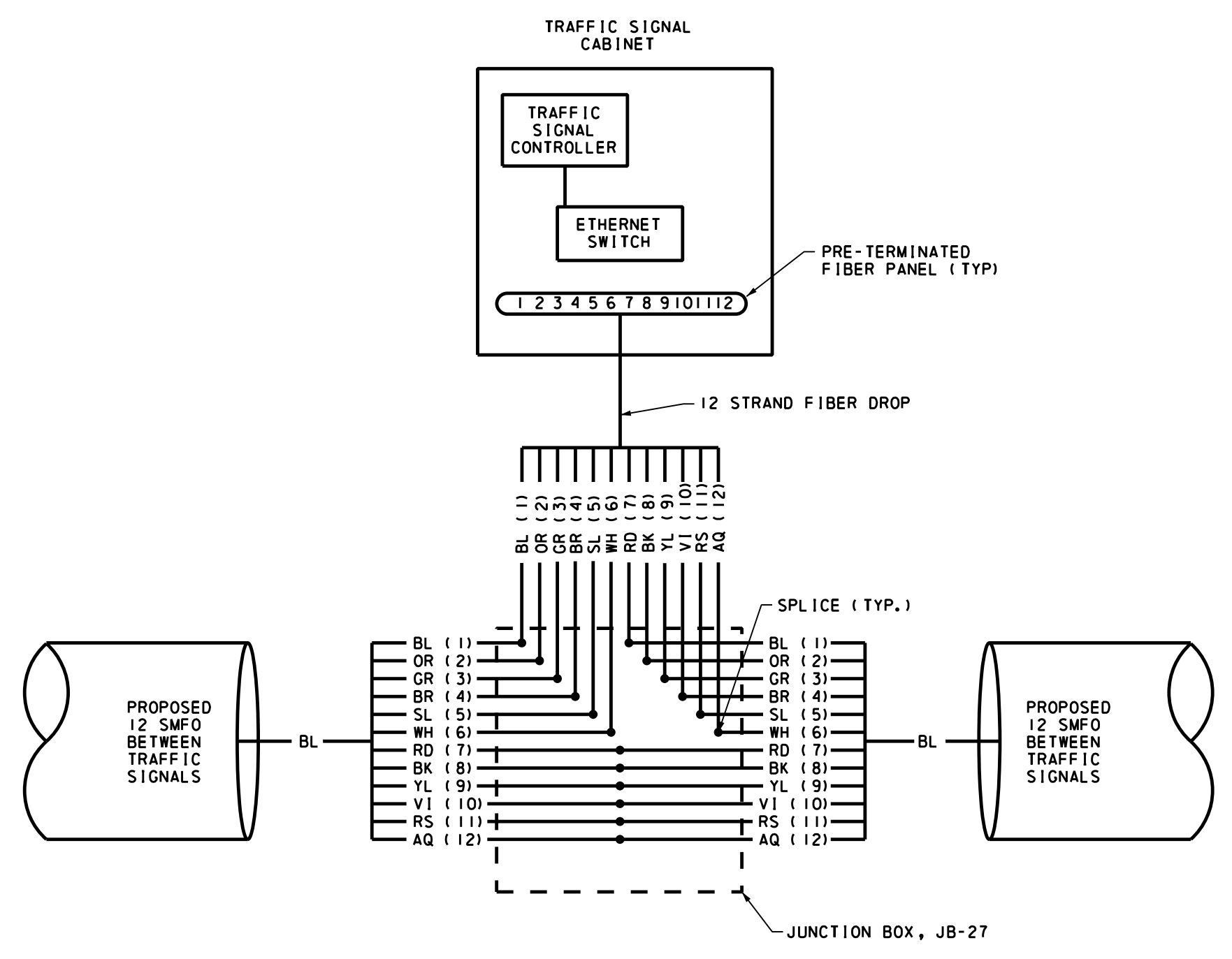
SINGLE LINE DIAGRAM
(SR 2071 TALORSVILLE ROAD)

- NOTES**
1. USE BLUE BUFFER TUBE PER PENNDOT STANDARDS.
 2. IN HUB 9507 THE I-95 FIBER TERMINATES IN FTP1; USE PORTS 1-4 FOR PATCHING.
 3. INSTALL MANAGED NETWORK SWITCH IN HUB #9507 ON EIA 19 INCH SHELF.
 4. SEE ITS PLANS FOR SPLICE DETAILS TO THE EXISTING I-95 BACKBONE FIBER.

TRENCH, CONDUIT, JUNCTION BOX, ELECTRICAL ITEMS

DESCRIPTION	LOCATION	3 INCH CONDUIT		TRENCH AND BACKFILL, TYPE I		TRENCH AND BACKFILL, TYPE III		JUNCTION BOX, JB-27		FIBER OPTIC CABLE	
		LF	LF	LF	LF	LF	LF	LF	LF		
W 1 TO W 1											11
W 1 TO W 4											118
W 4 TO 1		201	201					1			201
1 TO DA 2		171	171								171
DA 2 TO DA 1											75
DA 2 TO DA 1											21
DA 1 TO 2		358	358					1			358
2 TO 3		54	10	46				1			54
3 TO 4		260	260					1			260
4 TO 5		55	6	51				1			55
5 TO ITS		48	48								48
5 TO 6		284	146	140				1			284
6 TO PA 3		132	85	49							132
PA 3 TO PA 1											95
PA 1 TO PA 2											54
PA 2 TO PA 1											33
TOTAL		1563	1285	286				6			1970

- W 1 - EQUIPMENT INSTALLED AS PART OF WOODSIDE ROAD SIGNAL
 DA 1 - EQUIPMENT INSTALLED AS PART OF RAMP DA SIGNAL
 PA 1 - EQUIPMENT INSTALLED AS PART OF RAMP PA SIGNAL
 ITS - ITS JUNCTION BOX INSTALLED AS PART OF ITS PLANS



SPLICE DETAIL

FIBER COLOR STANDARD			
AQ	AQUA	RD	RED
BK	BLACK	RS	ROSE
BL	BLUE	SL	SLATE
BR	BROWN	VI	VIOLET
GR	GREEN	WH	WHITE
OR	ORANGE	YL	YELLOW

NOTES

1. FIBER STRANDS OR BUFFERS NOT SHOWN ARE TO BE LEFT UNTERMINATED.
2. COORDINATE FIBER OPTIC FUSION SPLICES WITH THE ENGINEER.
3. SPLICING CONTRACTOR SHALL CHECK FOR OPTICAL TRAFFIC PRIOR TO SPLICING FIBER OPTIC CABLE.
4. CONTRACTOR SHALL FURNISH AND INSTALL MANAGED NETWORK SWITCHES IN THE PROPOSED TRAFFIC SIGNAL CABINETS AND HUB 9507 IN THE NORTHWEST QUADRANT OF THE INTERCHANGE OF SR 0332 AND SR 0095 TO PROVIDE A FULLY FUNCTIONAL COMMUNICATIONS SYSTEM BETWEEN THE TRAFFIC SIGNAL CABINETS/CONTROLLERS WITH THE COMMUNICATIONS HUB AND THE PENNDOT DISTRICT 6-0 RTMC.
5. CONTRACTOR SHALL PROVIDE THE SETUP OF CENTRAL SYSTEM SOFTWARE FOR FULL IMPLEMENTATION AND OPERATION OF THE CLOSED LOOP SIGNAL SYSTEM AND COMMUNICATION WITH THE PENNDOT DISTRICT 6-0 RTMC.
6. CONTRACTOR SHALL PROVIDE THE NECESSARY CABINET AND CABLE LABELING/DOCUMENTATION.
7. COORDINATE THE INSTALLATION OF THE MANAGED NETWORK SWITCHES, SYSTEM SETUP AND CABINET AND CABLE LABELING/DOCUMENTATION WITH PENNDOT DISTRICT 6-0 INFORMATION TECHNOLOGY RESOURCES, TRAFFIC UNIT AND SIGNALS UNIT.

INTERCONNECT PLAN

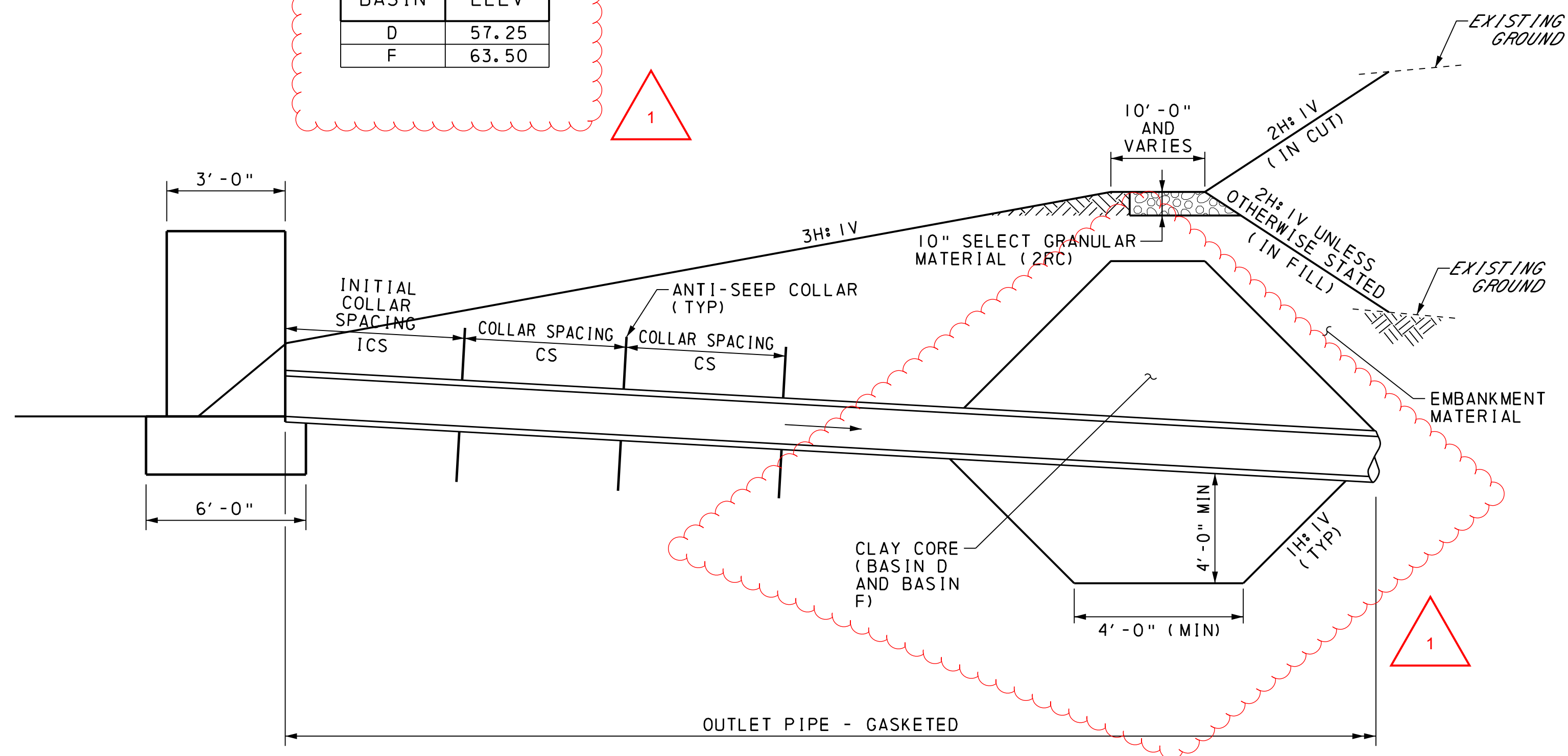
STV Inc. 820 Bear Tavern Rd. Suite 200 Trenton, NJ 08628-1021

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
 ENGINEERING DISTRICT 6-0
 COUNTY : BUCKS
 MUNICIPALITY : LOWER MAKEFIELD TOWNSHIP
 INTERSECTION : TAYLORSVILLE ROAD CORRIDOR
 SYSTEM #: 1-0289
 REVIEWED : _____
 MUNICIPAL OFFICIAL _____ DATE _____
 RECOMMENDED : _____
 DISTRICT TRAFFIC ENGINEER _____ DATE _____

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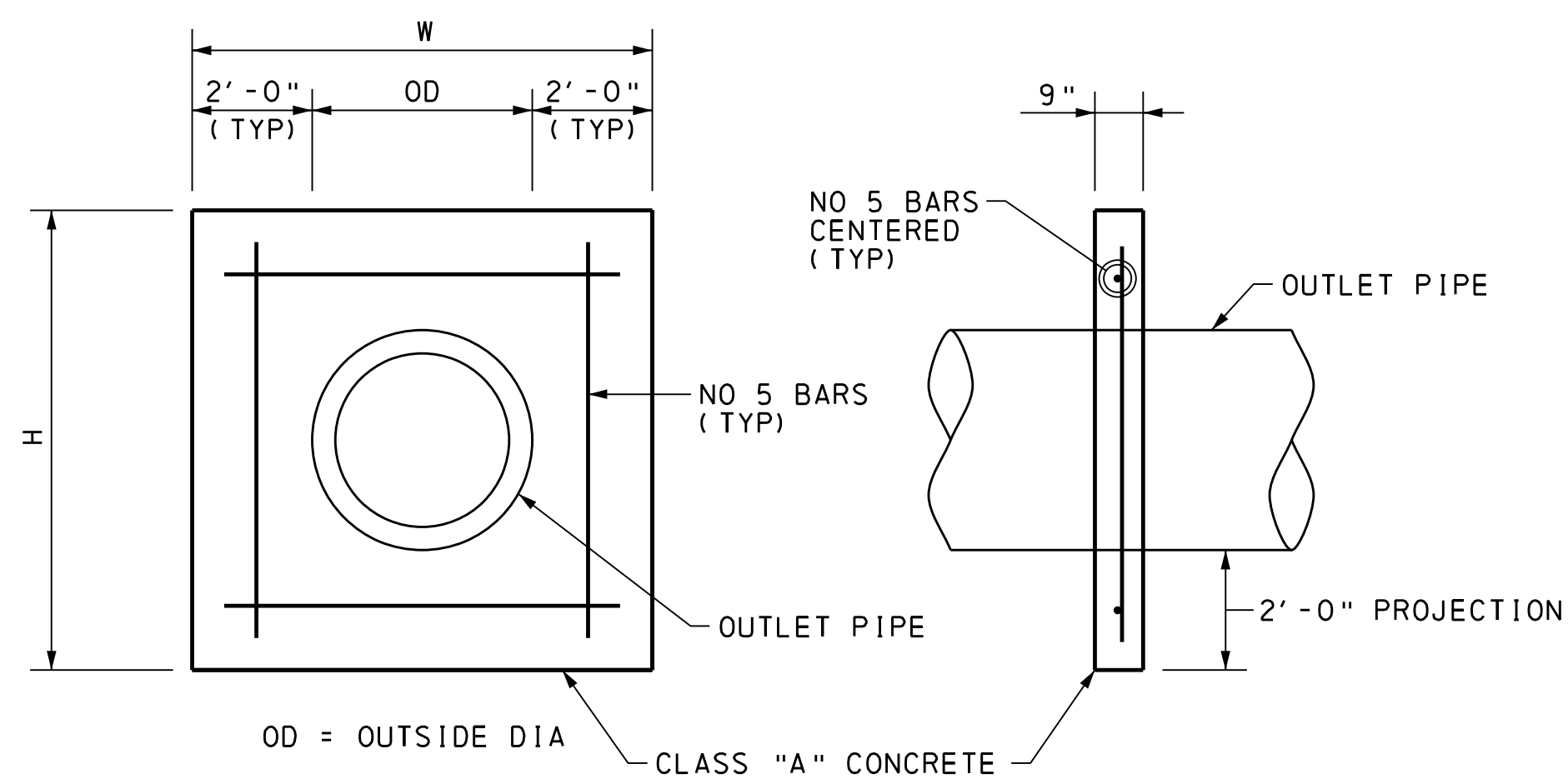
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0095	001	28 OF 52
LOWER MAKEFIELD TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	
1	ADDENDUM NO. 8	12/1/16	STV	

BASIN	CLAY CORE TOP ELEV
D	57.25
F	63.50



PARTIAL TYPICAL SECTION AT BASIN OUTLET

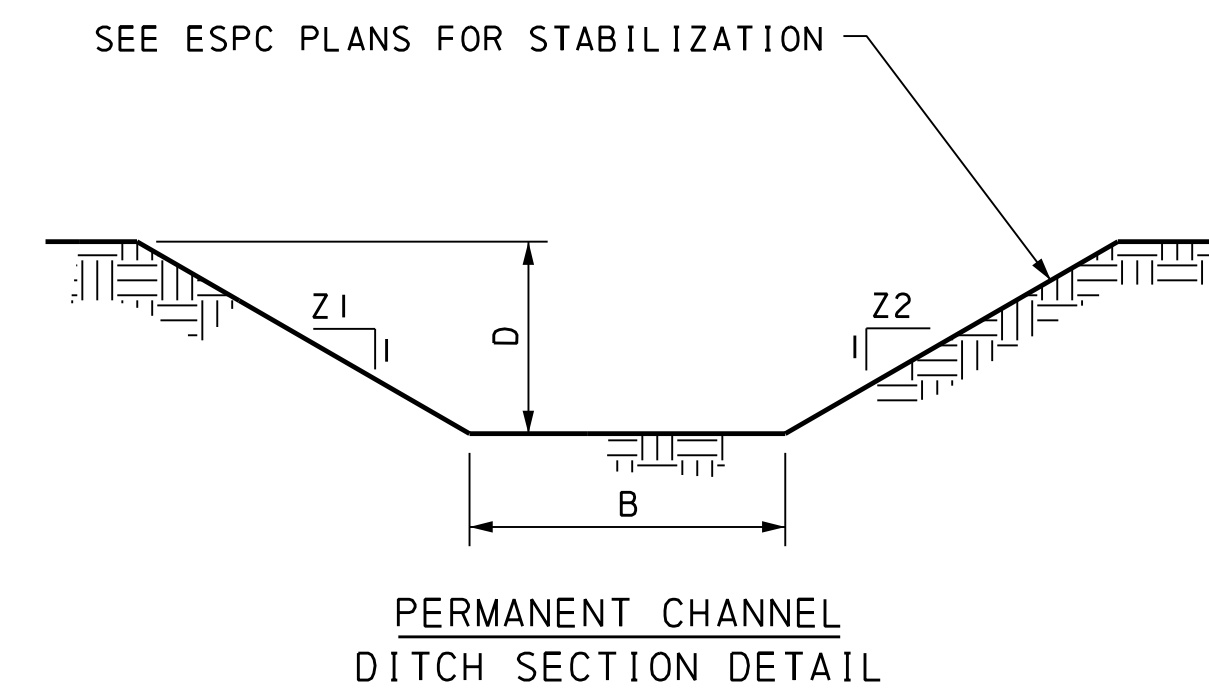
NOT TO SCALE
ITEM NO. 0872-0001



CONCRETE ANTI-SEEP COLLAR DETAIL

NOT TO SCALE
ITEM NO. 0872-0001

ANTI-SEEP COLLAR SCHEDULE					
BASIN NO.	PIPE SIZE (IN)	COLLAR SIZE (IN) H+W	NUMBER OF COLLARS	DISTANCE RISER TO 1ST COLLAR (FT)	COLLAR SPACING (FT)
F	48	107	3	20	20
C	24	78	1	15	0
D	30	85	2	15	15



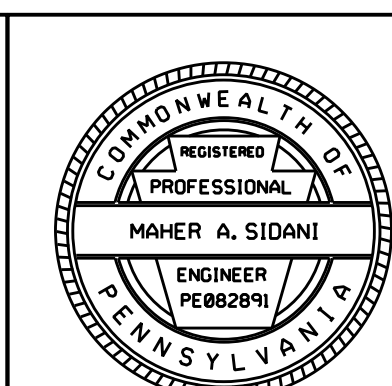
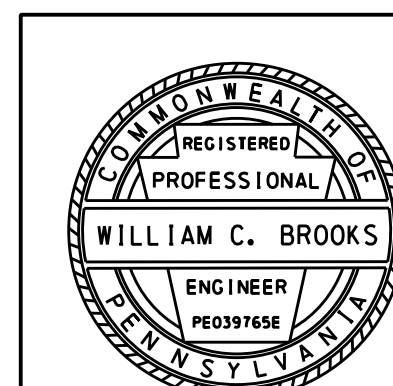
CHANNEL NO.	STATIONS	BOTTOM WIDTH B (FT)	FRONT SLOPE Z1	BACK SLOPE Z2	TOTAL DEPTH D (FT)	BED SLOPE %	PERM. LINING
PC-L	I-95 SB STA 183+50 TO 194+40	1.5	2	2	2.5	0.7	FORMULA N
PC-NN	RAMP S STA 704+00 TO 708+00	2	3	3	2.0	1.5	FORMULA N
PC-PP.1	I-95 CL STA 133+35 TO 137+20	0	4	4	2.2	0.5	FORMULA B
PC-PP.2	I-95 CL STA 137+20 TO 140+60	0	4	4	2.1	0.5	FORMULA B
PC-PP.3	I-95 CL STA 140+60 TO 143+90	0	3	3	2.0	0.5	FORMULA B
PC-PP.4	I-95 NB STA 143+90 TO 147+15	0	3	3	1.6	0.5	FORMULA B
PC-R	I-95 SB STA 249+00 TO 251+20	0	2	2	6.0	0.35	FORMULA N
PC-Y	I-95 SB STA 133+30 TO 128+65	2	3	3	2.4	0.5	FORMULA N
PC-SS	RAMP D STA 916+00 TO 919+00	0	3	3	1.67	0.8	FORMULA B
PC-TT	RAMP R STA 59+50 TO 66+00	0	3	3	1.67	0.9	FORMULA B
PC-UU	RAMP B STA 605+00 TO 608+50	0	3	3	3.0	0.35	FORMULA N

NOTES

- ESTABLISH AND MAINTAIN CONTINUOUS CONTACT BETWEEN THE ROLLED EROSION CONTROL PRODUCTS AND THE SOIL.
- PROVIDE ANCHORING DEVICES IN ACCORDANCE WITH PUBLICATION 408, SECTION 806.2(d).

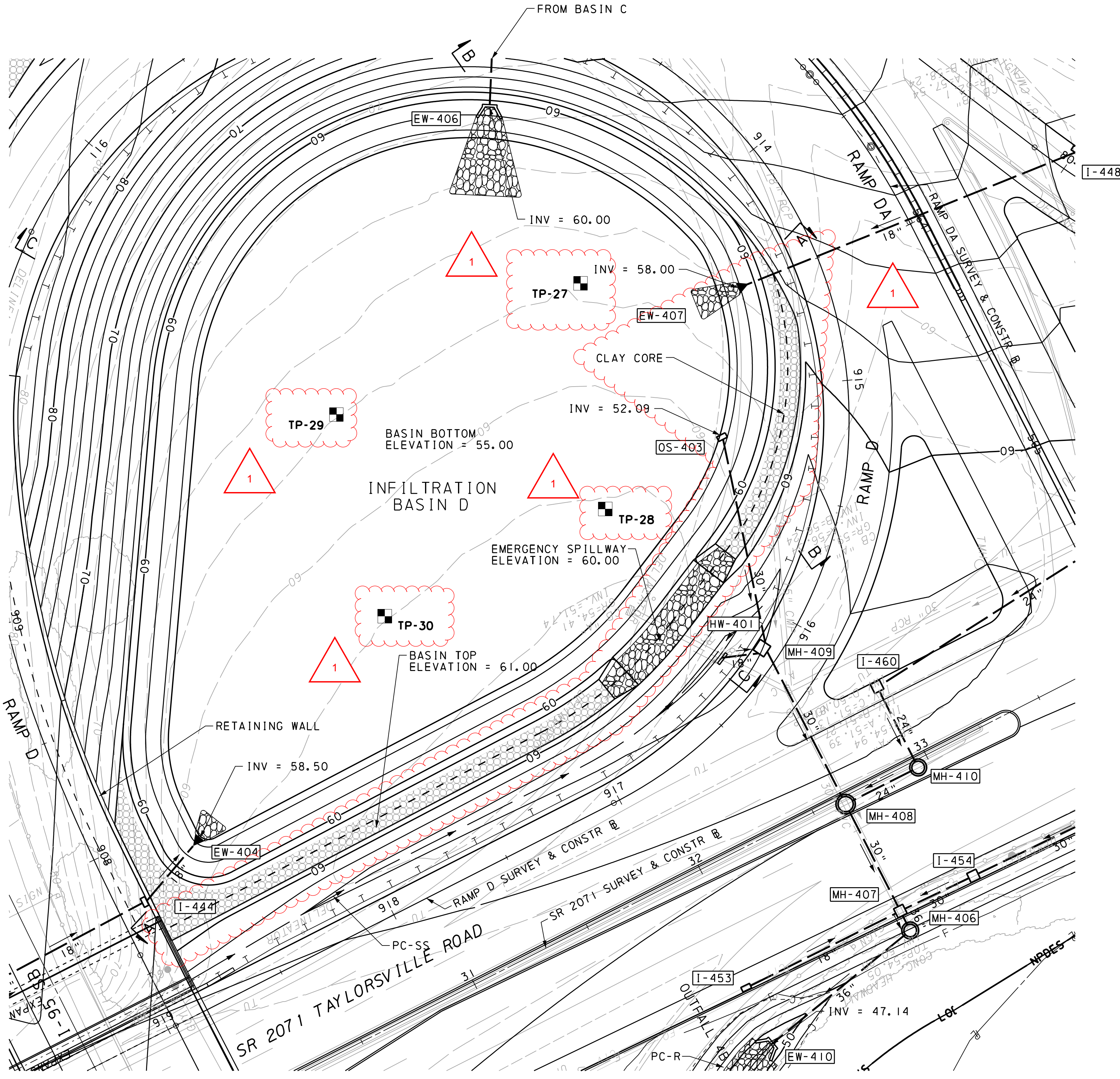
PERMANENT CHANNEL SCHEDULE

**POST CONSTRUCTION
STORMWATER MANAGEMENT PLAN
DETAILS**



DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0095	001	47 OF 52
LOWER MAKEFIELD TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	
1	ADDENDUM NO. 8	12/1/16	STV	

DRAINAGE AREA 4B



TEST PIT	GROUND SURFACE ELEV. (FT)	TEST ELEV. (FT)	TESTED INFILTRATION RATES (IN/HR)
PATP-27	62.46	57.5	1200
		55.5	1000
PATP-28	57.47	53.5	420
PATP-29	62.47	57.5	>3600
		55.5	1500
PATP-30	58.13	53.1	0
		52.1	3.75

DESIGN STORM	DESIGN INFLOW (CFS)	PEAK DISCHARGE (CFS)	WATER SURFACE ELEVATION (FT)	OUTLET STRUCTURE DRAIN TIME (HR)
1 YR	20.19	0.04	56.67	0.07
2 YR	26.74	0.96	56.73	1.48
5 YR	37.14	3.45	56.90	1.74
10 YR	46.83	7.28	57.17	1.92
25 YR	62.31	13.48	57.66	2.15
50 YR	75.65	17.90	58.21	2.32
100 YR	90.35	21.57	58.90	2.49

- BASIN CONSTRUCTION SEQUENCE**
1. CLEAR AND GRUB THE BASIN AREA.
 2. EXCAVATE THE BASIN AND BERM TO CONTOUR ELEVATIONS.
 3. CONSTRUCT OUTLET STRUCTURE OS-403 AND DISCHARGE PIPING.
 4. PERMANENTLY SEED AND STABILIZE THE BASIN IN ACCORDANCE WITH THE EROSION AND SEDIMENT POLLUTION CONTROL PLANS.

INFILTRATION BASIN D PLAN
0 25 50 FEET

**POST CONSTRUCTION
STORMWATER MANAGEMENT PLAN
DETAILS**

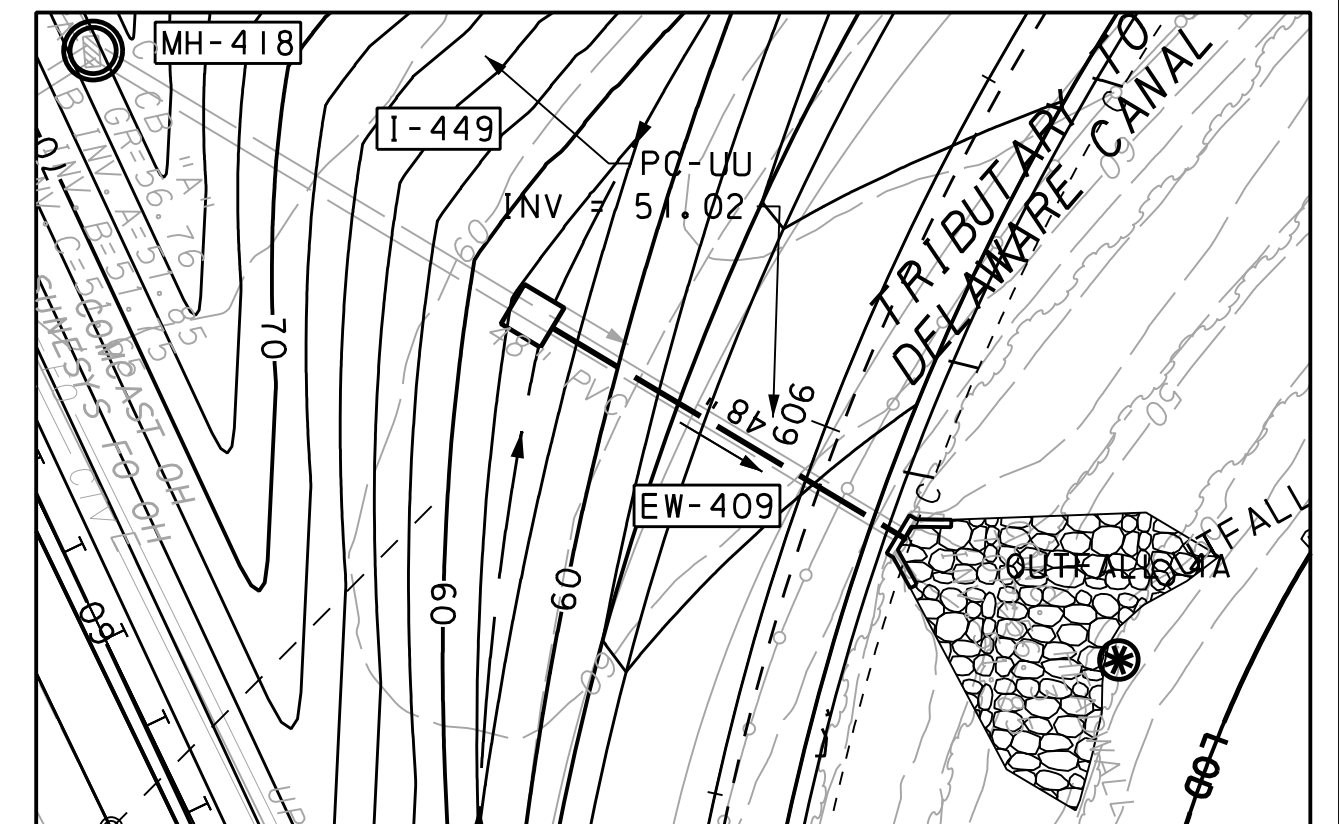
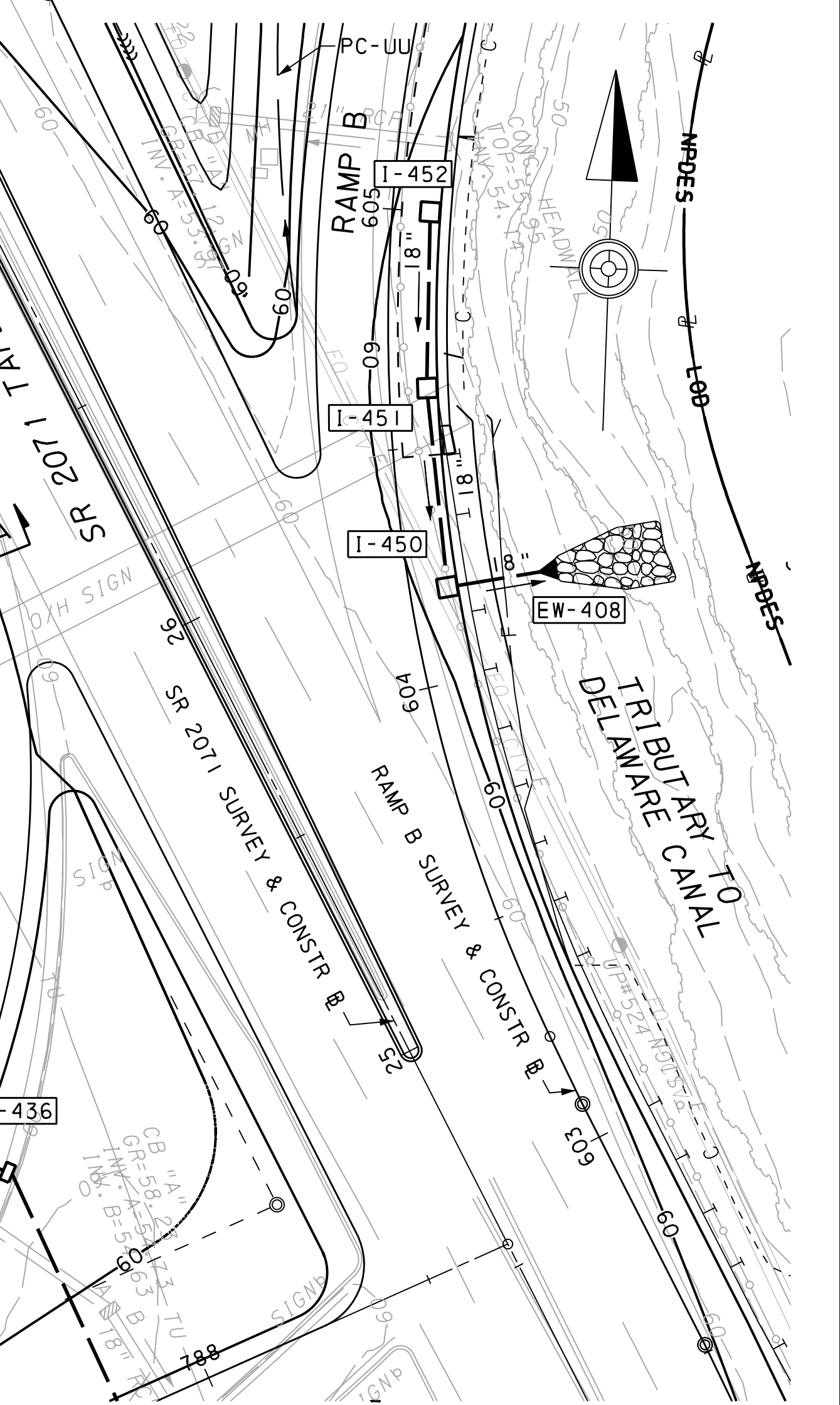
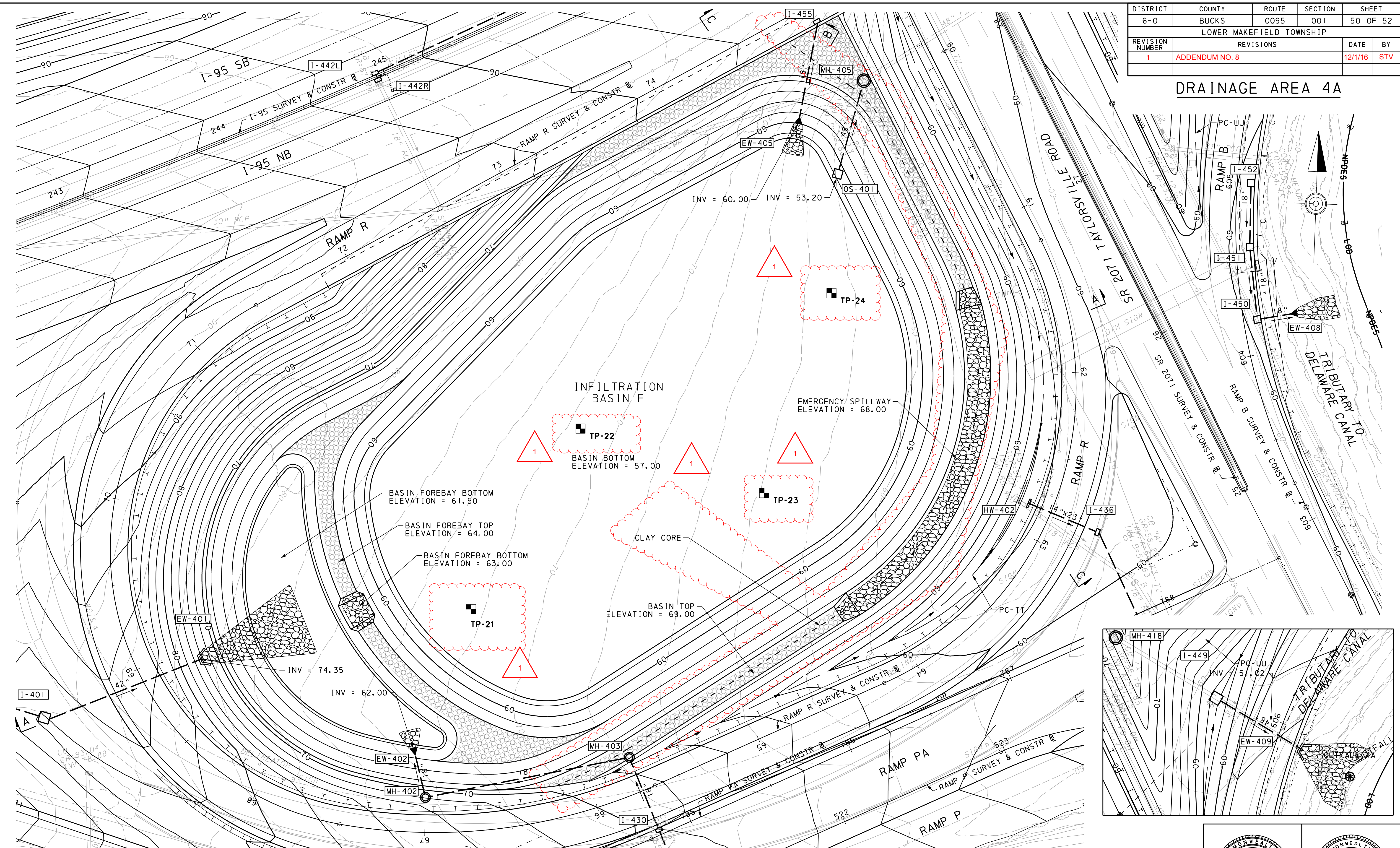
WILLIAM C. BROOKS
ENGINEER
PE039765E

MAHER A. SIDANI
ENGINEER
PE082891

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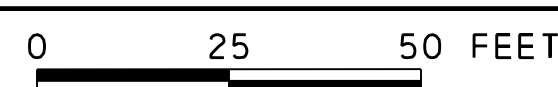
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
6-0	BUCKS	0095	001	50 OF 52
LOWER MAKEFIELD TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	
1	ADDENDUM NO. 8	12/1/16	STV	

DRAINAGE AREA 4A

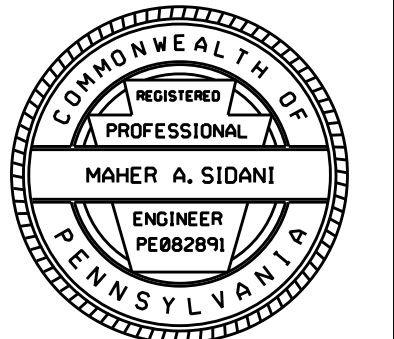
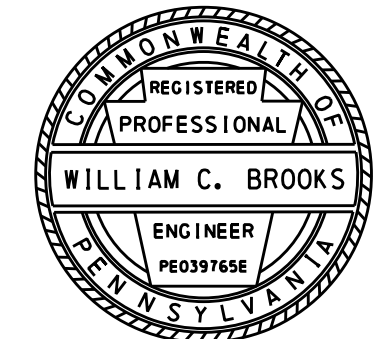


- NOTES**
- SEE SHEET 52 OF 52 FOR TEST PIT DATA
 - SEE SHEET 52 OF 52 FOR STORMWATER SUMMARY
 - SEE SHEET 52 OF 52 FOR BASIN CONSTRUCTION SEQUENCE

INFILTRATION BASIN F PLAN

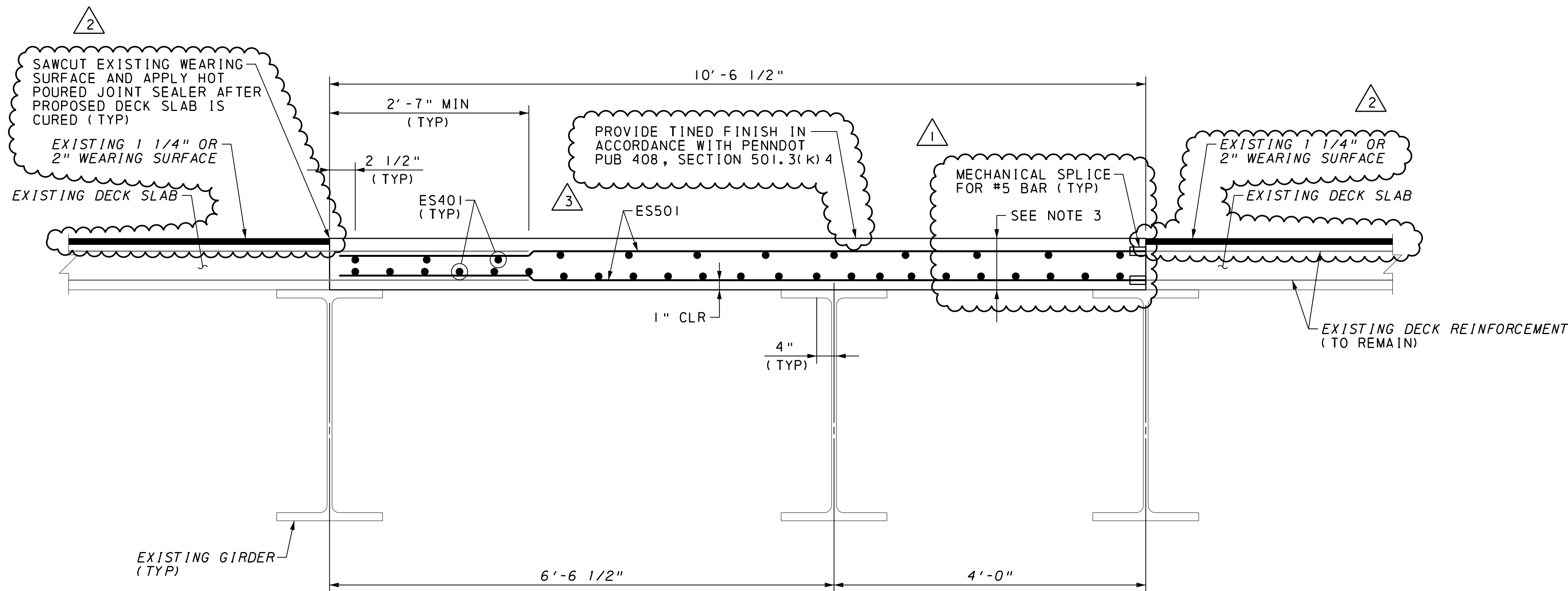


**POST CONSTRUCTION
STORMWATER MANAGEMENT PLAN
DETAILS**

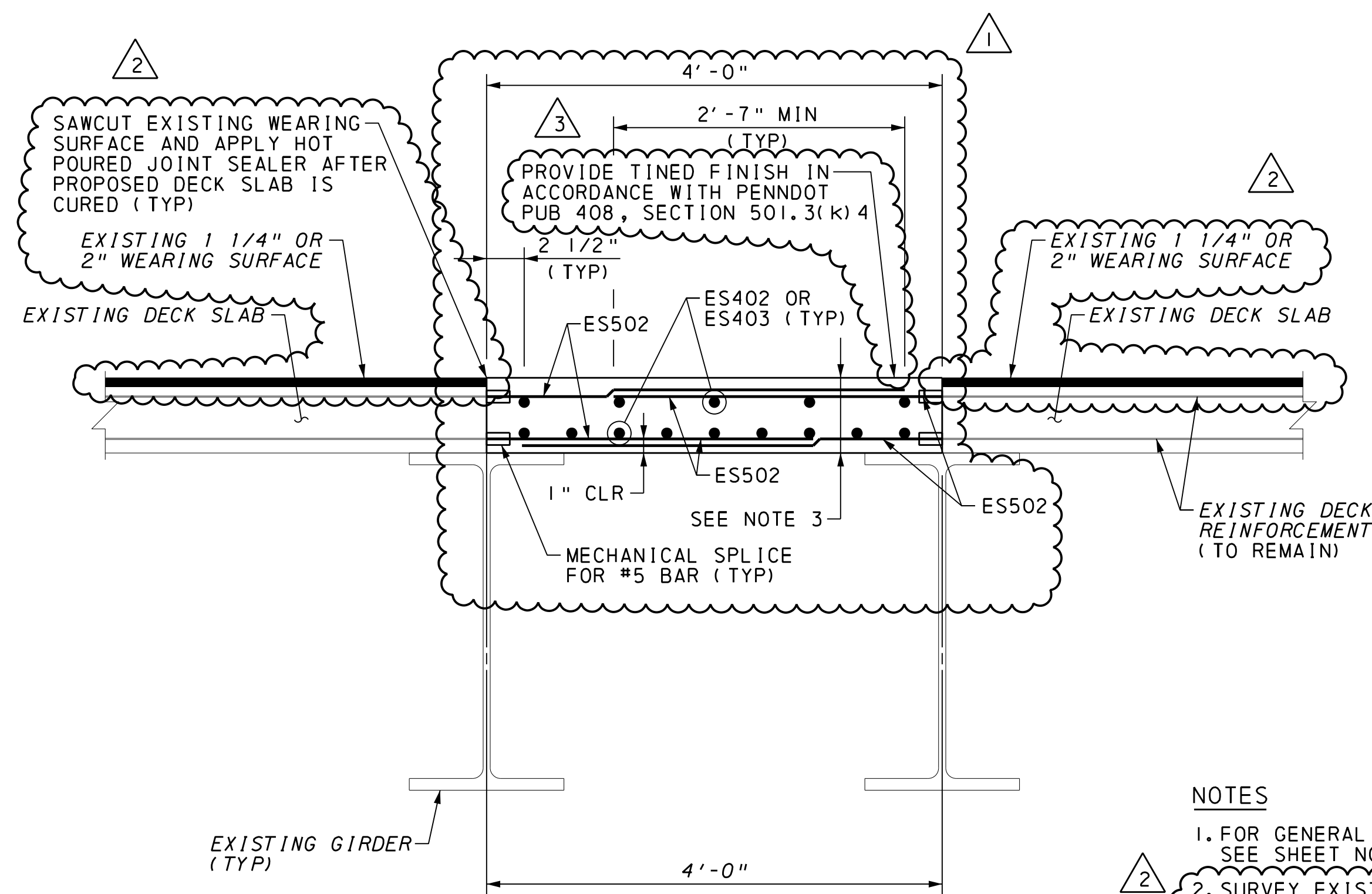
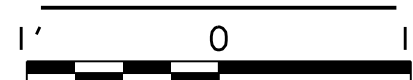


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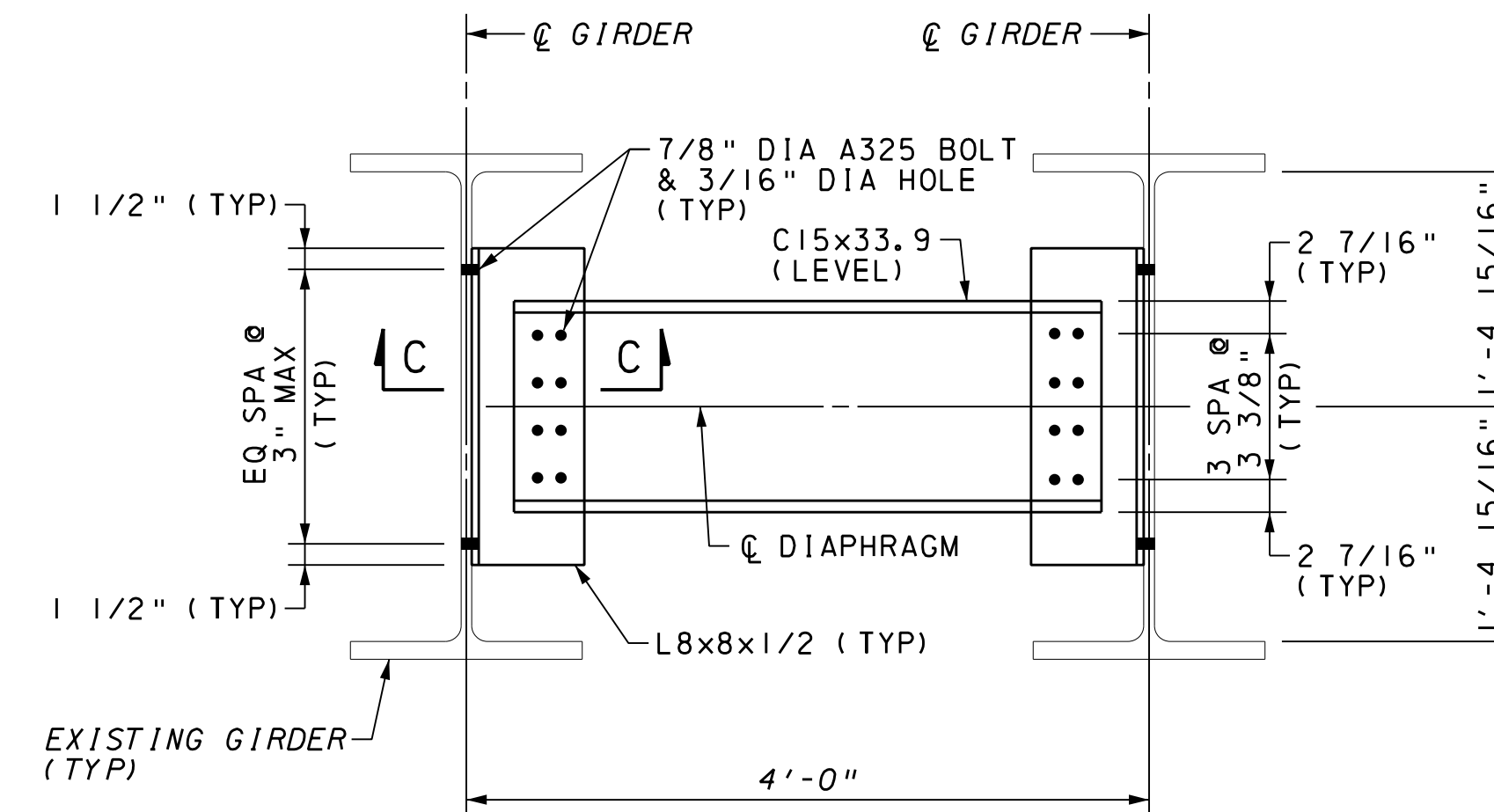
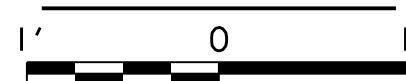
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SECTION A-A



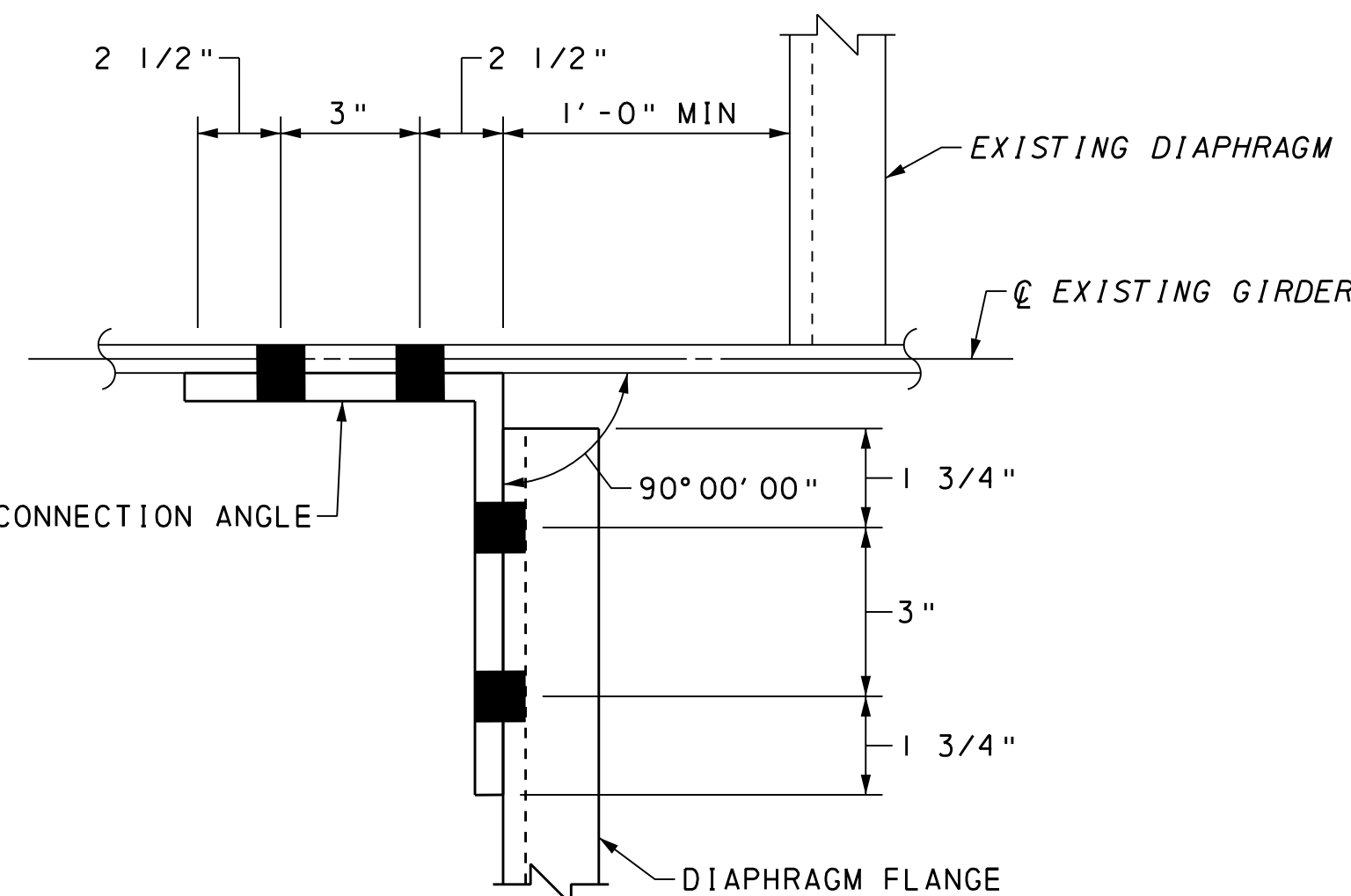
SECTION B-B



TEMPORARY MEDIAN DIAPHRAGM DETAILS



TEMPORARY DECK SLAB REINFORCEMENT BAR SCHEDULE										
MARK	SIZE	TYPE	LENGTH	NUMBER	A	B	C	D	E	REMARKS
ES401	4	STR	30'-3"	35						
ES402	4	STR	28'-3 3/4"	42						
ES403	4	STR	24'-3"	14						
ES501	5	STR	10'-3 1/2"	122						MECHANICAL SPLICE
ES502	5	STR	3'-9"	844						MECHANICAL SPLICE



SECTION C-C

NOT TO SCALE

NOTES

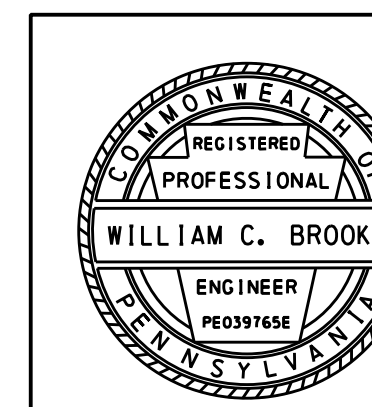
1. FOR GENERAL NOTES AND LIST OF ABBREVIATIONS, SEE SHEET NO'S 2 & 3.
2. SURVEY EXISTING ROADWAY SURFACE AT ONE-TENTH POINTS ALONG GIRDERS WHERE SLAB IS TO BE REPLACED AND MATCH TEMPORARY SLAB TO THESE ELEVATIONS.
3. PROVIDE TEMPORARY SLAB THICKNESS EQUAL TO EXISTING DECK SLAB THICKNESS, PLUS THE THICKNESS OF EXISTING WEARING SURFACES.
4. FOR LOCATION OF SECTIONS A-A AND B-B, SEE SHEET NO 47.
5. "E" PREFIX IN BAR MARKS INDICATE EPOXY-COATED BARS.
6. MATERIALS AND WORK PERFORMED TO CONSTRUCT DETAILS ON THIS SHEET ARE TO BE PAID AS PART OF "9018-0052 REMOVAL OF EXISTING BRIDGE, S-3541/S13056".

Mark	Description	By	Chk'd	Recm'd	Date
3	ADDENDUM NO. 8	CMP	GK		12/01/16
2	ADDENDUM NO. 7	CMP	GK		11/18/16
1	ADDENDUM NO. 4	CMP	GK		11/4/16

REVISIONS

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

SCUDDER FALLS BRIDGE
REPLACEMENT PROJECT CONTRACT T-668A
SR 0095, STA 248+29.92
OVER TAYLORSVILLE ROAD
I SPAN INTEGRAL ABUTMENT STEEL GIRDER BRIDGE
TEMPORARY DECK SLAB DETAILS 2

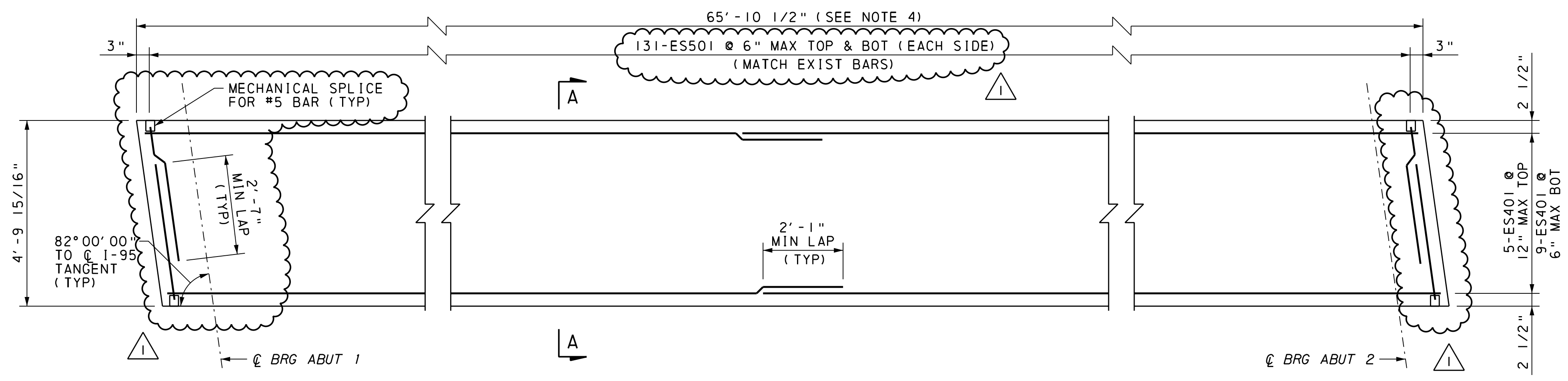


RECOMMENDED _____

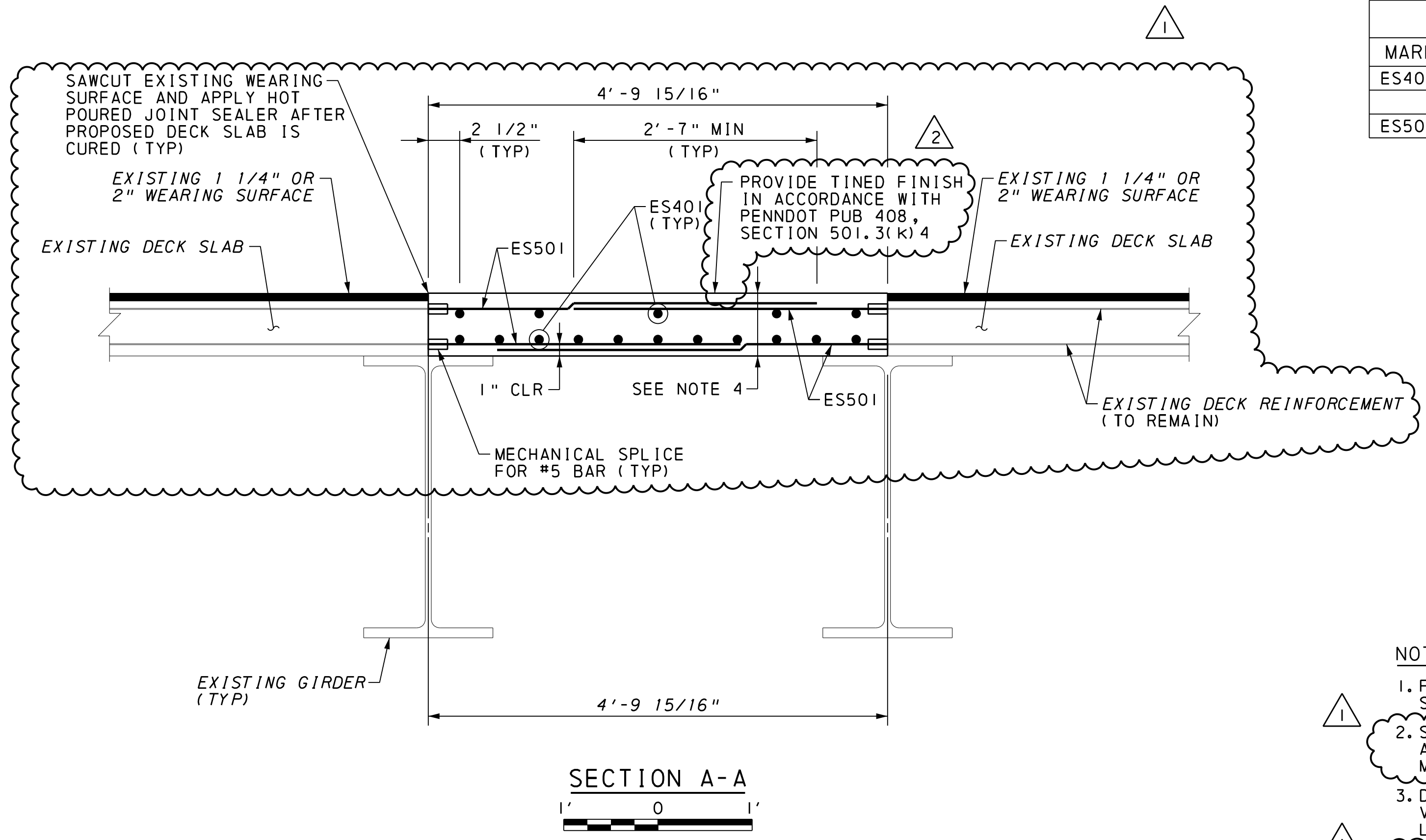
SHEET 48 OF 62

S- 36222

REVISION NUMBER	REVISIONS	CKD.	BY	DATE
1	ADDENDUM NO. 7	CMP	KJW	11/18/16
2	ADDENDUM NO. 8	CMP	KJW	12/01/16



TEMPORARY SLAB PLAN
(CONSTRUCT DURING STAGE 1A-1)
2' 1' 0' 2'

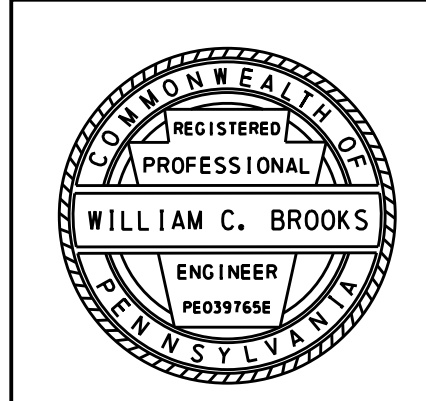


SECTION A-A
1' 0' 1'

TEMPORARY DECK SLAB REINFORCEMENT BAR SCHEDULE										
MARK	SIZE	TYPE	LENGTH	NUMBER	A	B	C	D	E	REMARKS
ES401	4	STR	32'-9 1/4"	28						
ES501	5	STR	3'-8 1/2"	524						MECHANICAL SPLICE

NOTES

- FOR GENERAL NOTES AND LIST OF ABBREVIATIONS, SEE SHEET NO'S 2 & 3.
- SURVEY EXISTING ROADWAY SURFACE AT ONE-TENTH POINTS ALONG GIRDERS WHERE SLAB IS TO BE REPLACED AND MATCH TEMPORARY SLAB TO THESE ELEVATIONS.
- DIMENSIONS GIVEN ARE APPROXIMATE AND SHOULD BE VERIFIED IN FIELD. REINFORCEMENT BARS DETAILING LENGTHS TO BE MODIFIED AS REQUIRED.
- PROVIDE TEMPORARY SLAB THICKNESS EQUAL TO EXISTING DECK SLAB THICKNESS, PLUS THE THICKNESS OF EXISTING WEARING SURFACE.
- "E" PREFIX IN BAR MARKS INDICATE EPOXY-COATED BARS.
- COST OF TEMPORARY DECK SLAB IS INCIDENTAL TO COST OF REMOVAL OF EXISTING BRIDGE, S-3542/SI3057 (S-36221).
- FOR LOCATION AND DETAILS OF TEMPORARY DIAPHRAGM, SEE SHEET NO'S 7 & 8.



DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION
SCUDDER FALLS BRIDGE REPLACEMENT PROJECT
CONTRACT NO. T - 668A
S-36221 (PA CANAL BRIDGE)

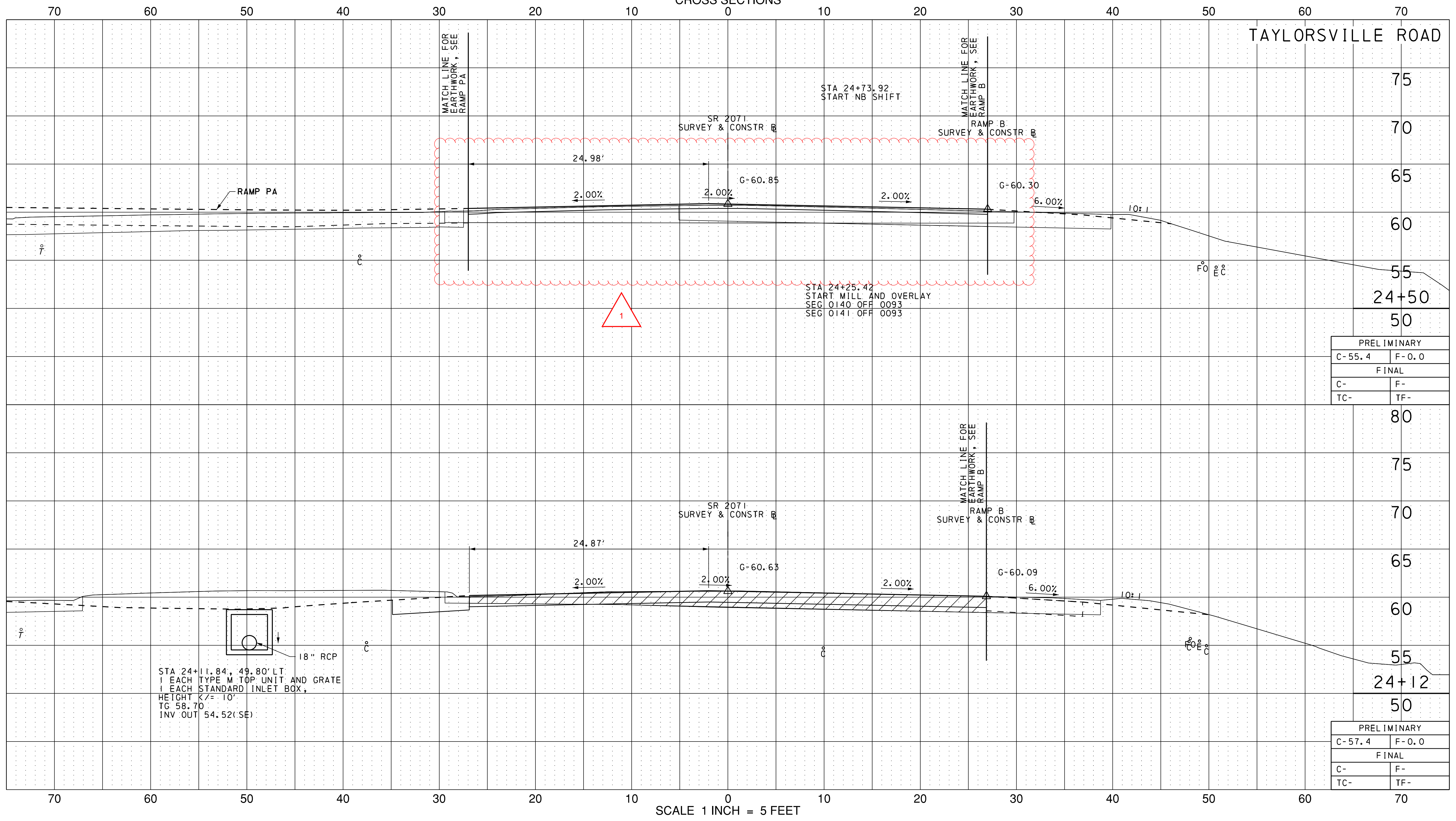
TEMPORARY DECK SLAB DETAILS

DRAWN BY JCD ENGINEER KJW STRUCTURE NO. S-36221
IN CHARGE RDS FILE
DATE 06-03-2016 SCALE SHEET NO. 51 OF 62

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ADDENDUM 8
12/1/16
STV

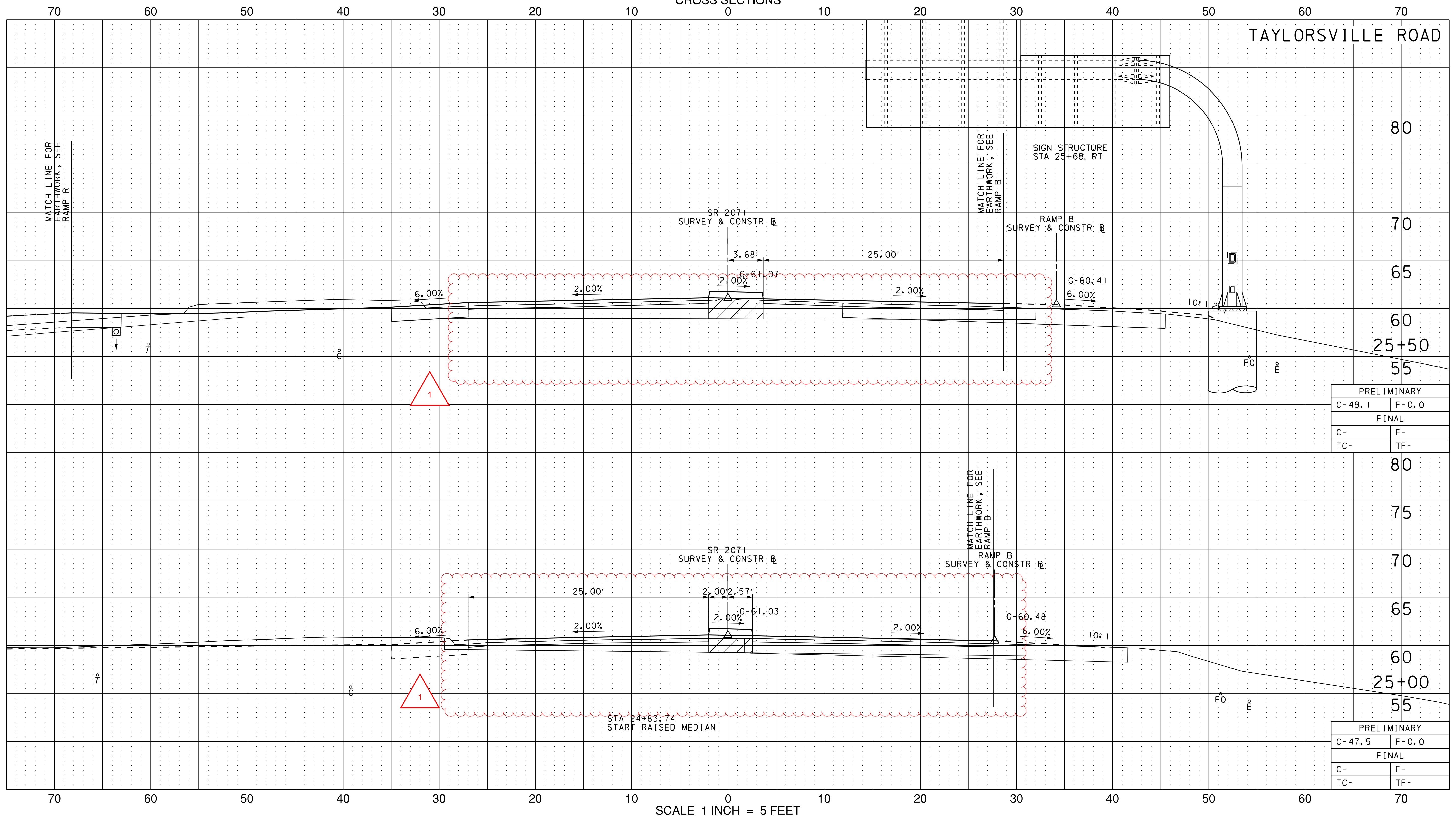
PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
CROSS SECTIONS



CROSS SECTIONS
TAYLORSVILLE ROAD

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PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
CROSS SECTIONS



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FINAL	
C-	F-
TC-	TF-

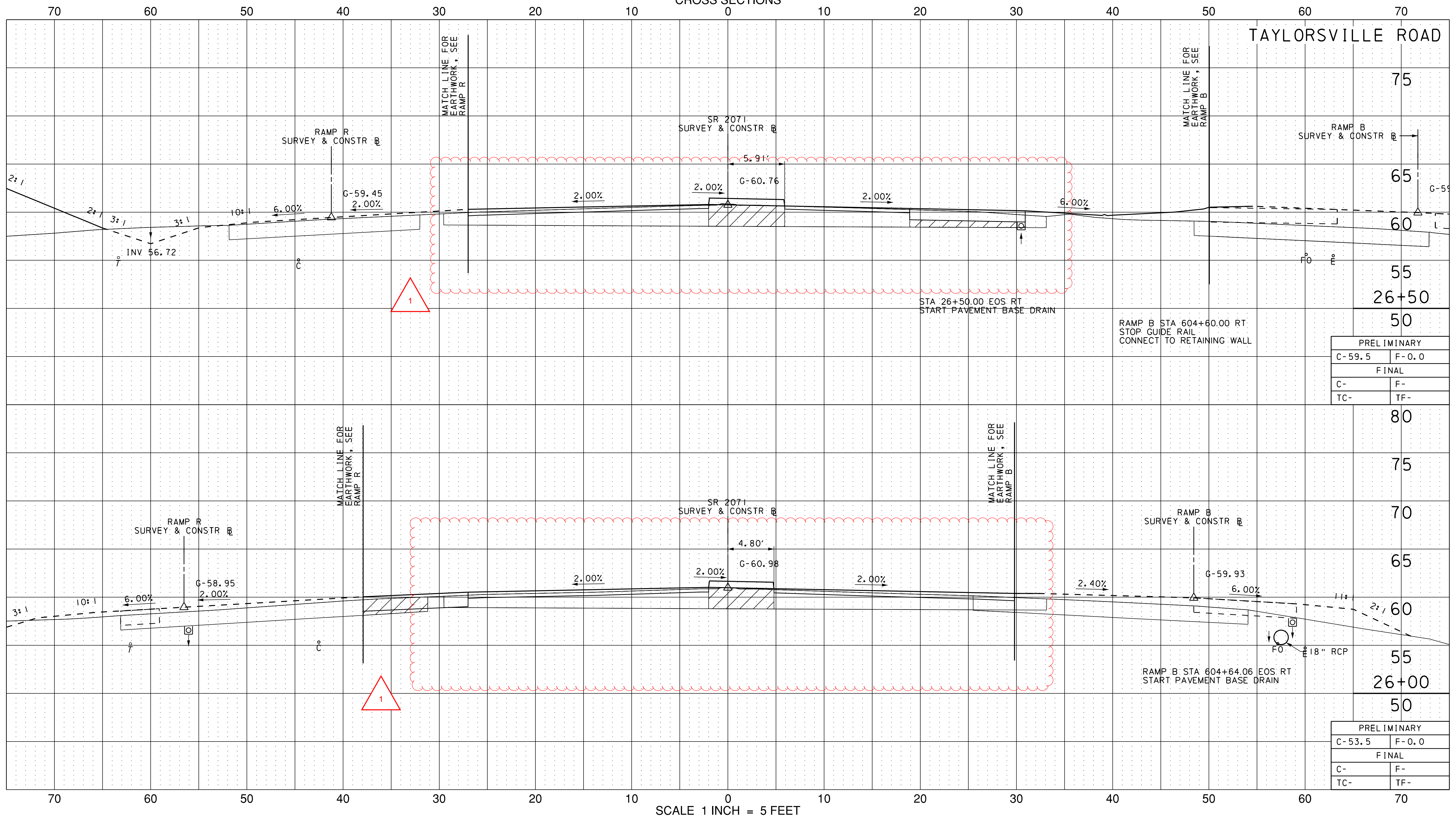
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FINAL	
C-	F-
TC-	TF-

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REVISION 1
ADDENDUM 8
12/1/16
STV

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
CROSS SECTIONS



PRELIMINARY	
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FINAL	
C-	F-
TC-	TF-

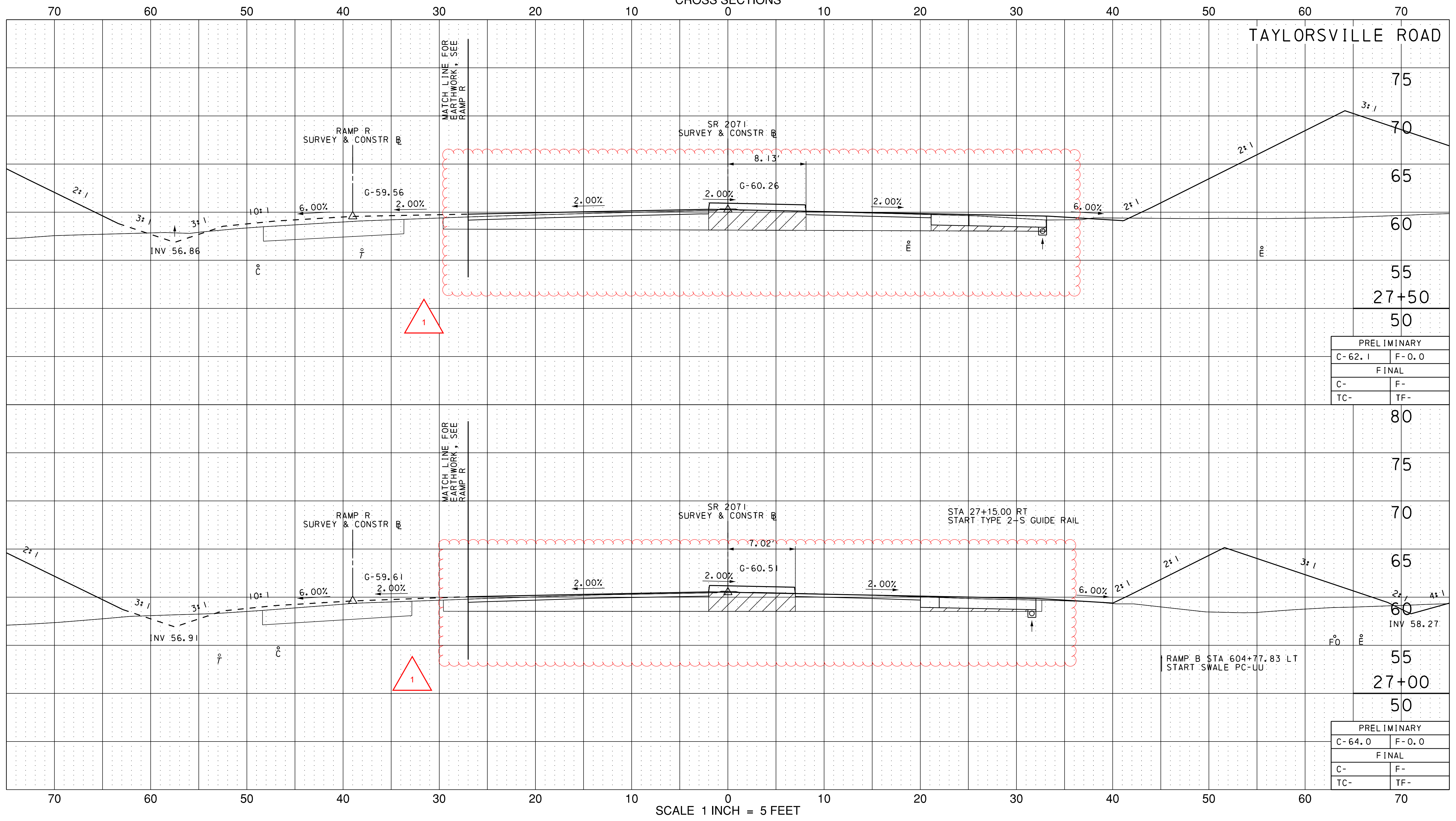
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FINAL	
C-	F-
TC-	TF-

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CROSS SECTIONS
TAYLORSVILLE ROAD

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PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
CROSS SECTIONS



PRELIMINARY	
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FINAL	
C-	F-
TC-	TF-

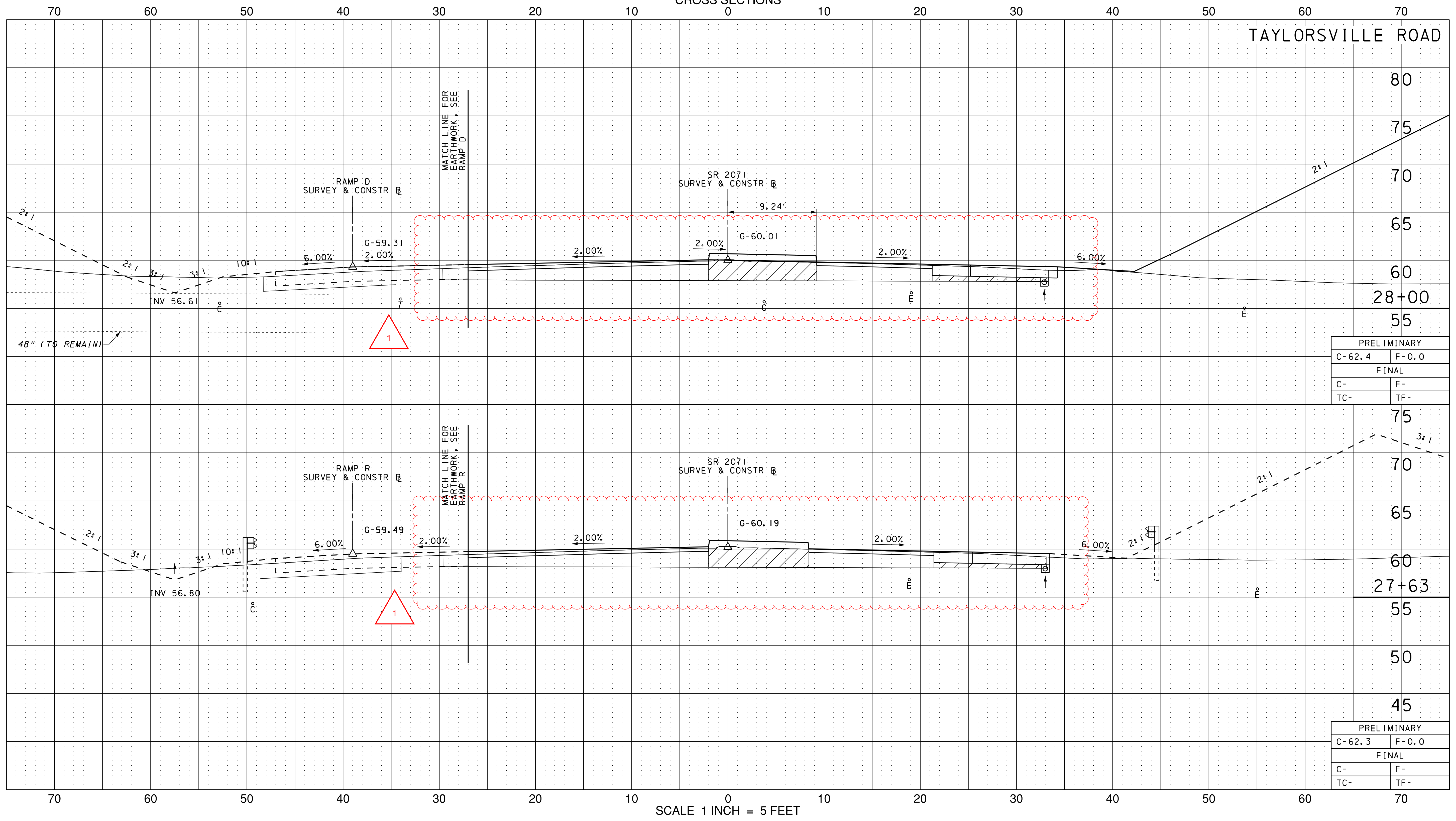
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FINAL	
C-	F-
TC-	TF-

SCALE 1 INCH = 5 FEET

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PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
CROSS SECTIONS



PRELIMINARY	
C-62.4	F-0.0
FINAL	
C-	F-
TC-	TF-

PRELIMINARY	
C-62.3	F-0.0
FINAL	
C-	F-
TC-	TF-

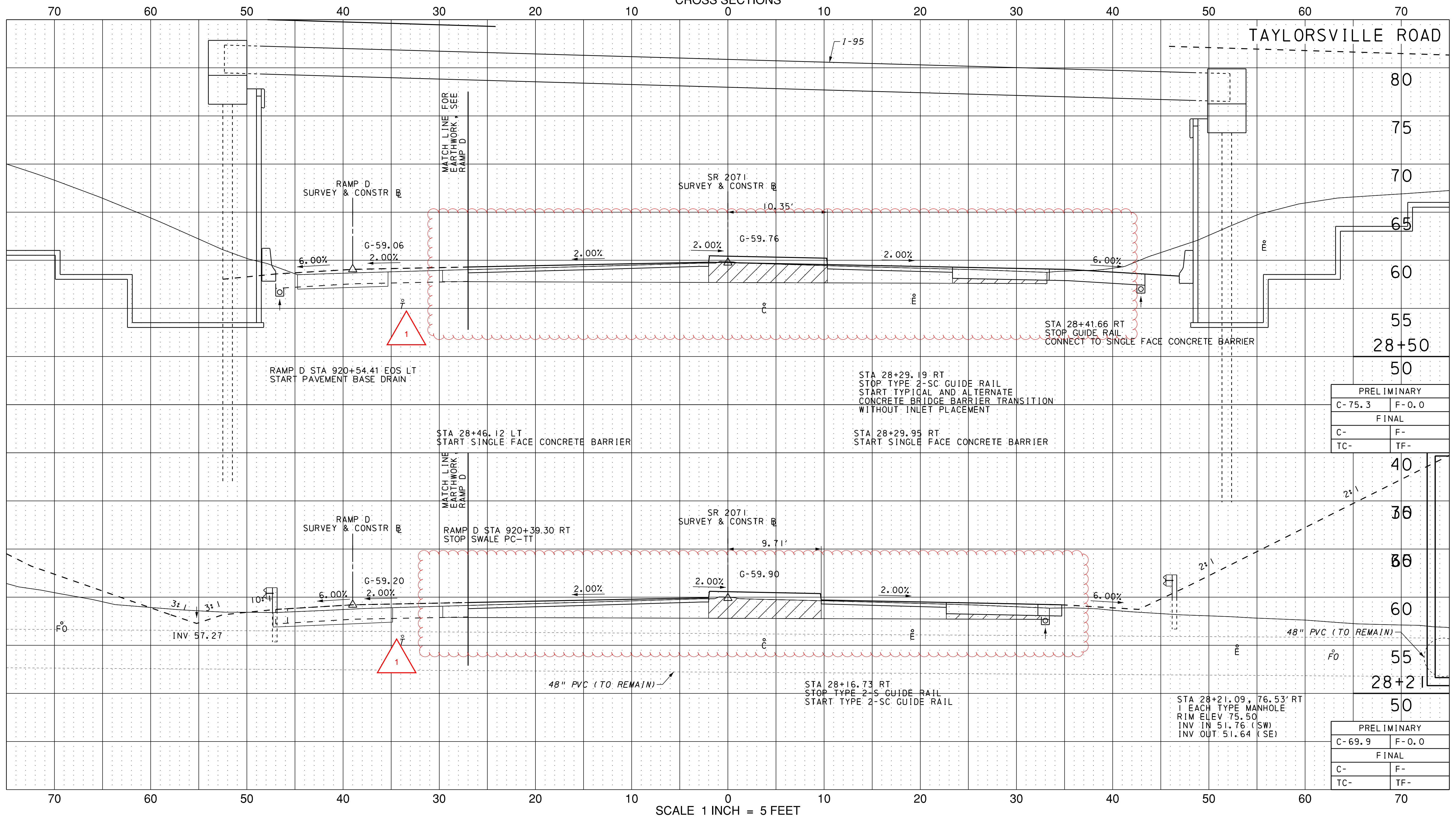
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CROSS SECTIONS
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12/1/16
STV

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CROSS SECTIONS



SCALE 1 INCH = 5 FEET

CROSS SECTIONS
TAYLORSVILLE ROAD

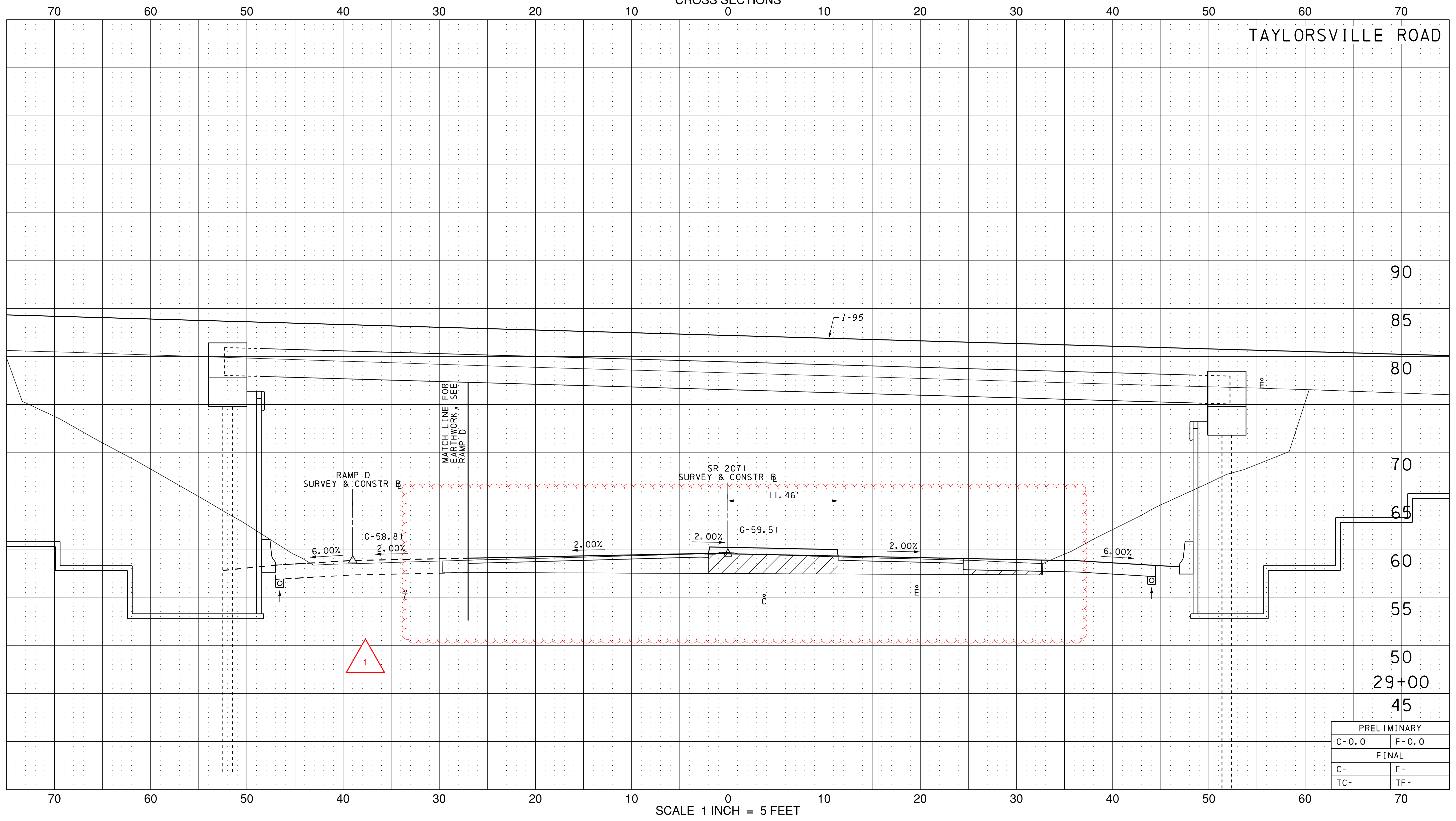
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PRELIMINARY	
C- 75.3	F- 0.0
FINAL	
C-	F-
TC-	TF-

PRELIMINARY	
C- 69.9	F- 0.0
FINAL	
C-	F-
TC-	TF-

REVISION 1
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12/1/16
STV

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
CROSS SECTIONS

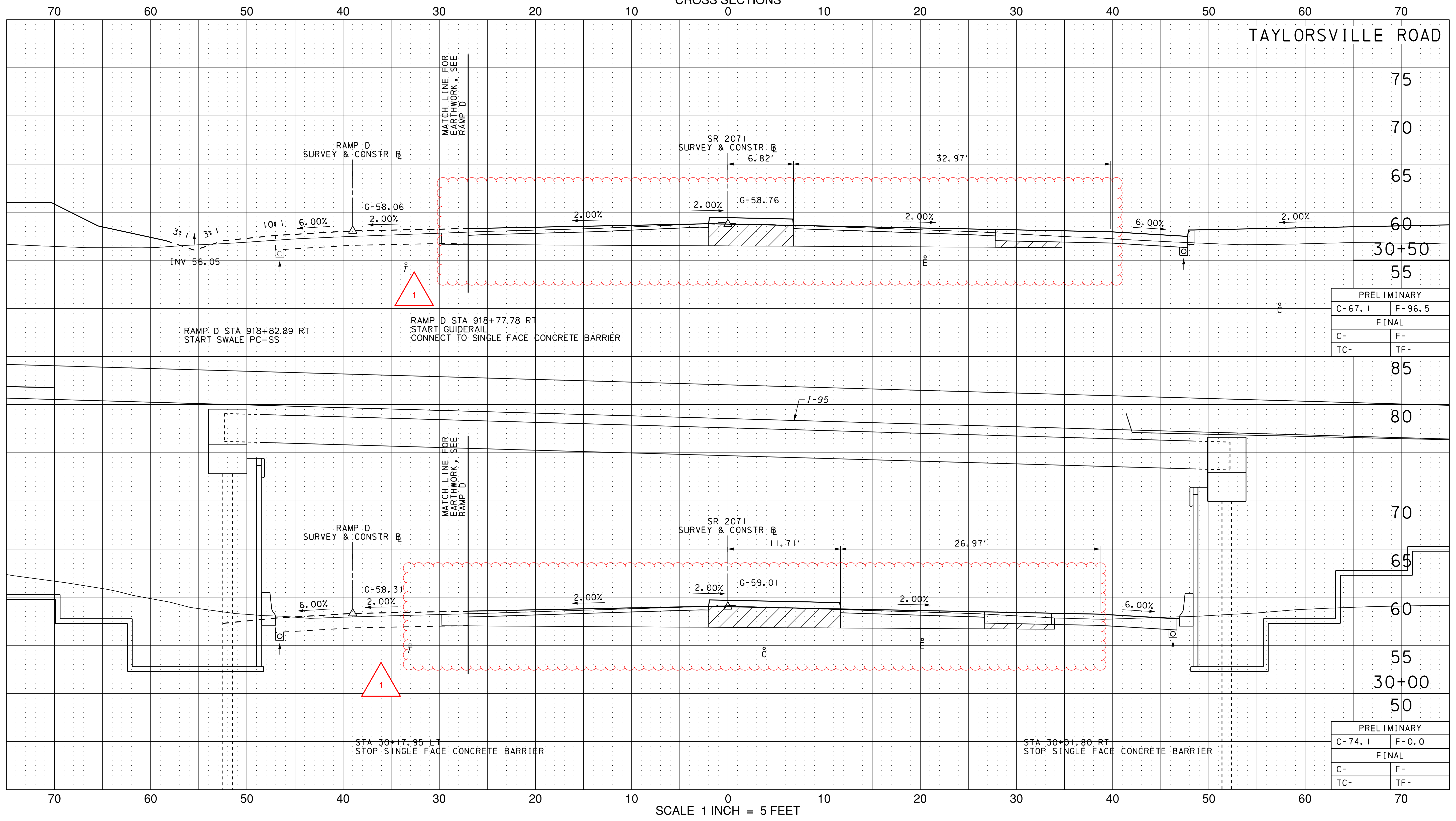


PRELIMINARY	
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FINAL	
C-	F-
TC-	TF-

CROSS SECTIONS
TAYLORSVILLE ROAD

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PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
CROSS SECTIONS



PRELIMINARY	
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FINAL	
C-	F-
TC-	TF-

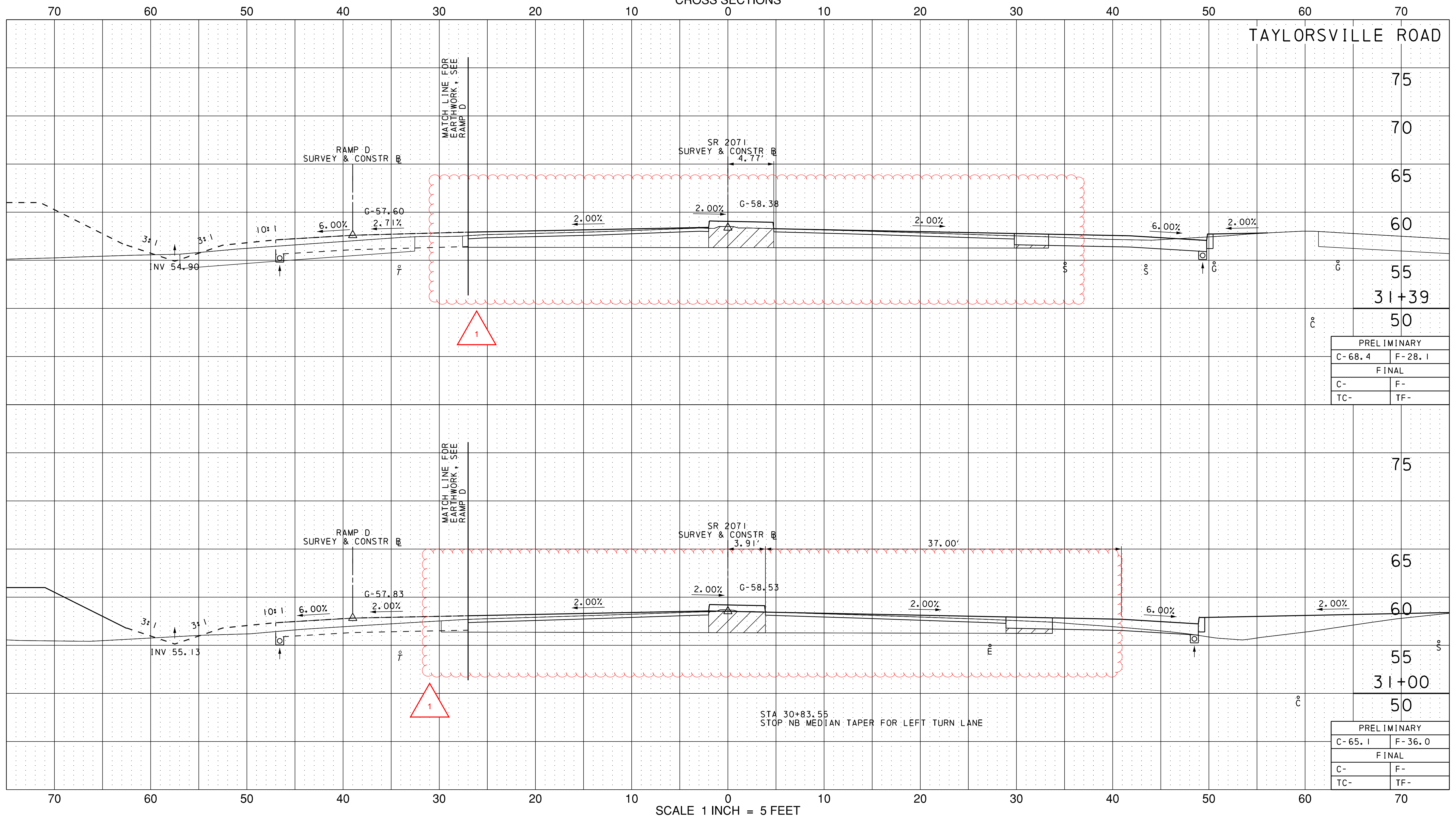
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FINAL	
C-	F-
TC-	TF-

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CROSS SECTIONS
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PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
CROSS SECTIONS



PRELIMINARY	
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FINAL	
C-	F-
TC-	TF-

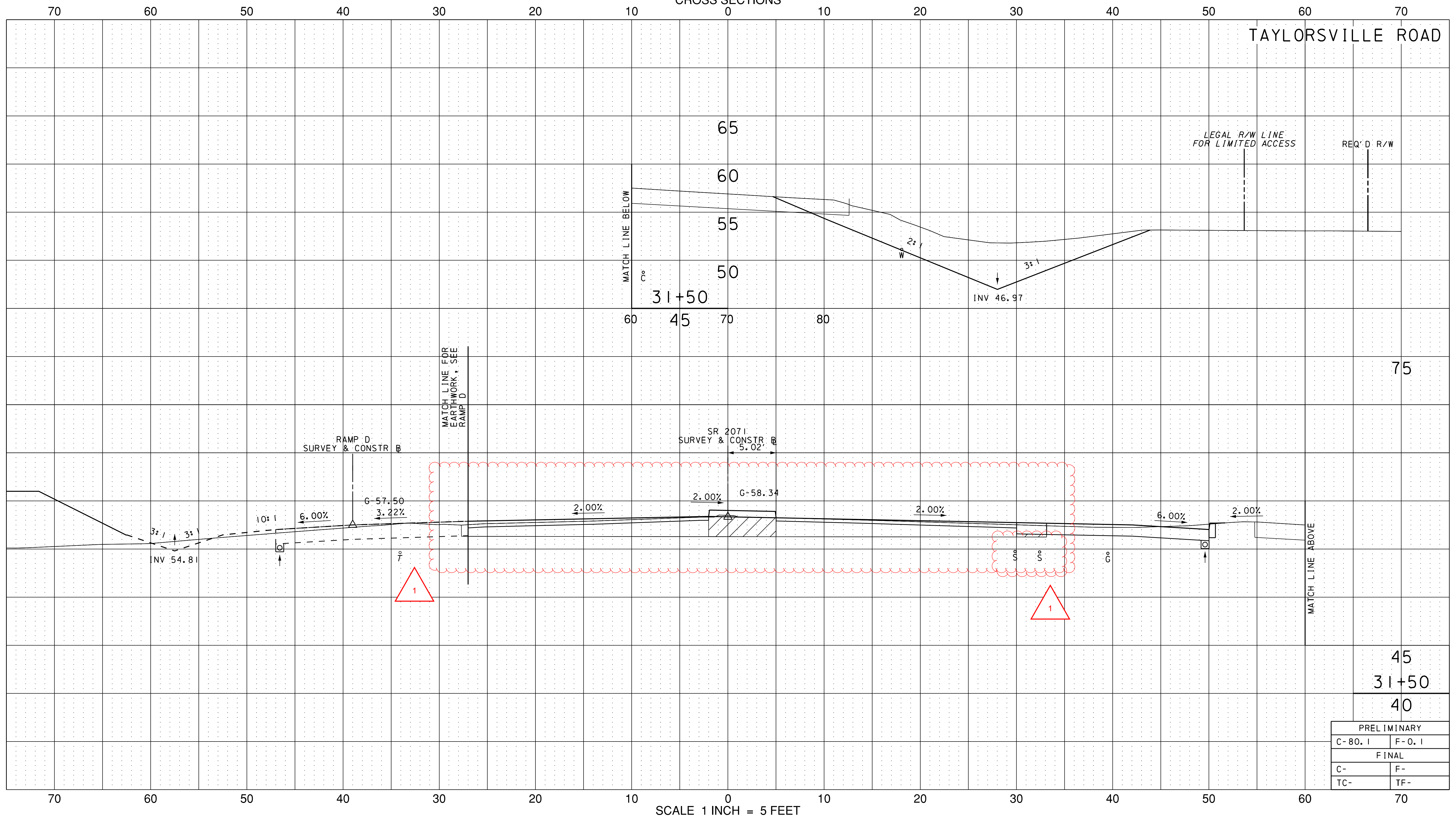
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FINAL	
C-	F-
TC-	TF-

SCALE 1 INCH = 5 FEET

CROSS SECTIONS
TAYLORSVILLE ROAD

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CROSS SECTIONS



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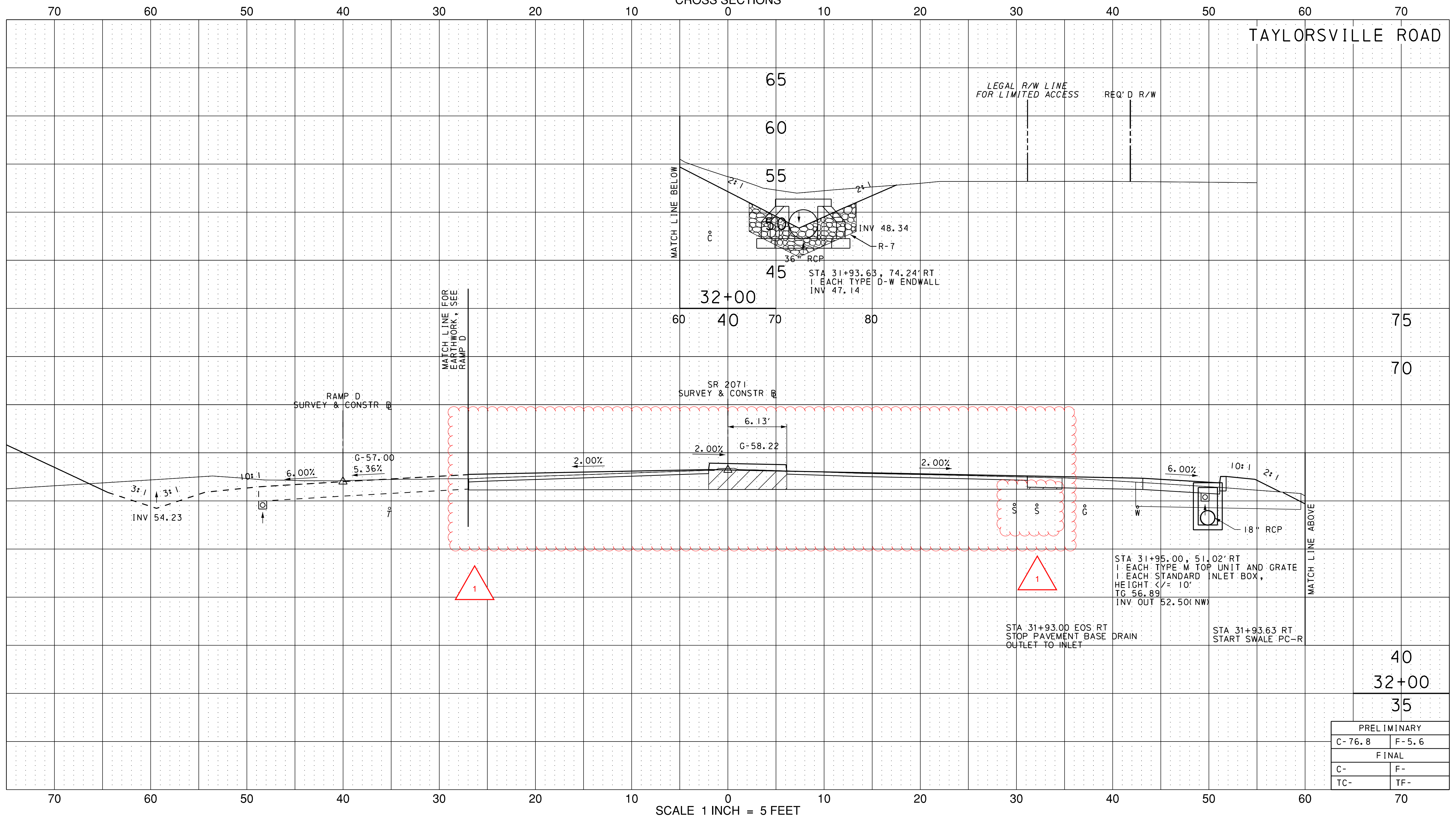
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FINAL	
C-	F-
TC-	TF-

CROSS SECTIONS
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ADDENDUM 8
12/1/16
STV

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
CROSS SECTIONS

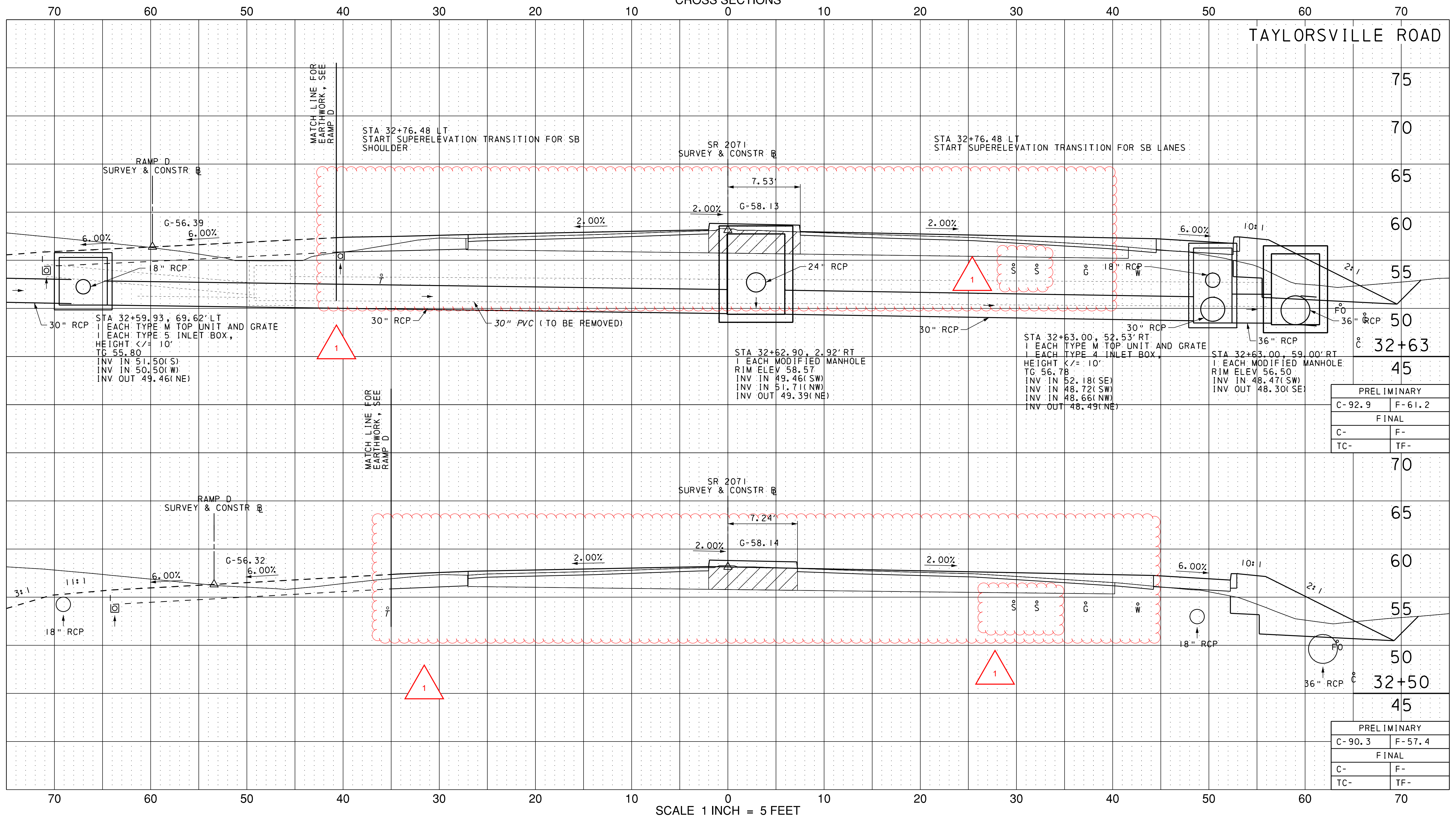


PRELIMINARY	
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FINAL	
C-	F-
TC-	TF-

CROSS SECTIONS
TAYLORSVILLE ROAD

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PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
CROSS SECTIONS



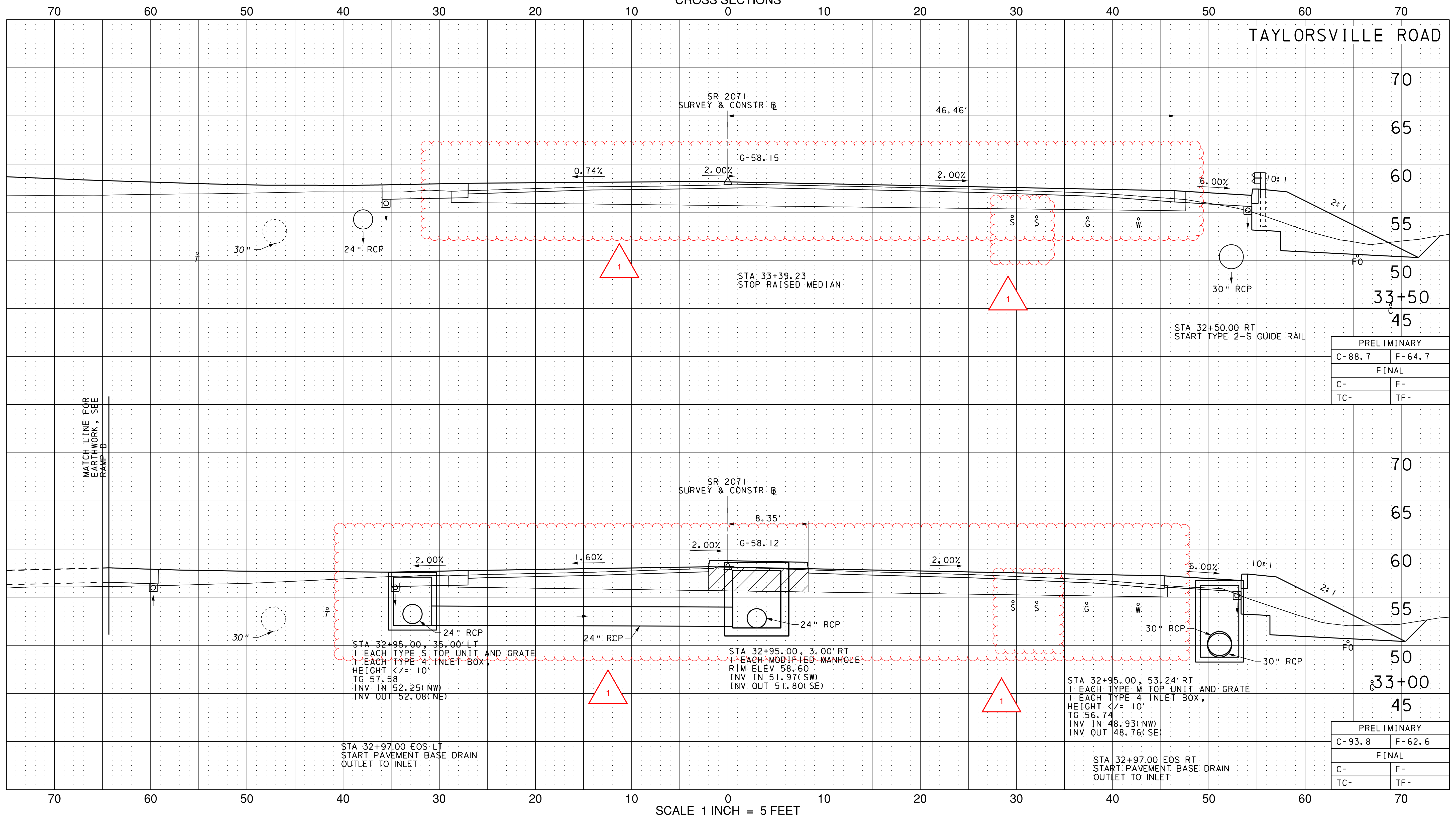
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CROSS SECTIONS
TAYLORSVILLE ROAD

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CROSS SECTIONS



PRELIMINARY	
C-88.7	F-64.7
FINAL	
C-	F-
TC-	TF-

PRELIMINARY	
C-93.8	F-62.6
FINAL	
C-	F-
TC-	TF-

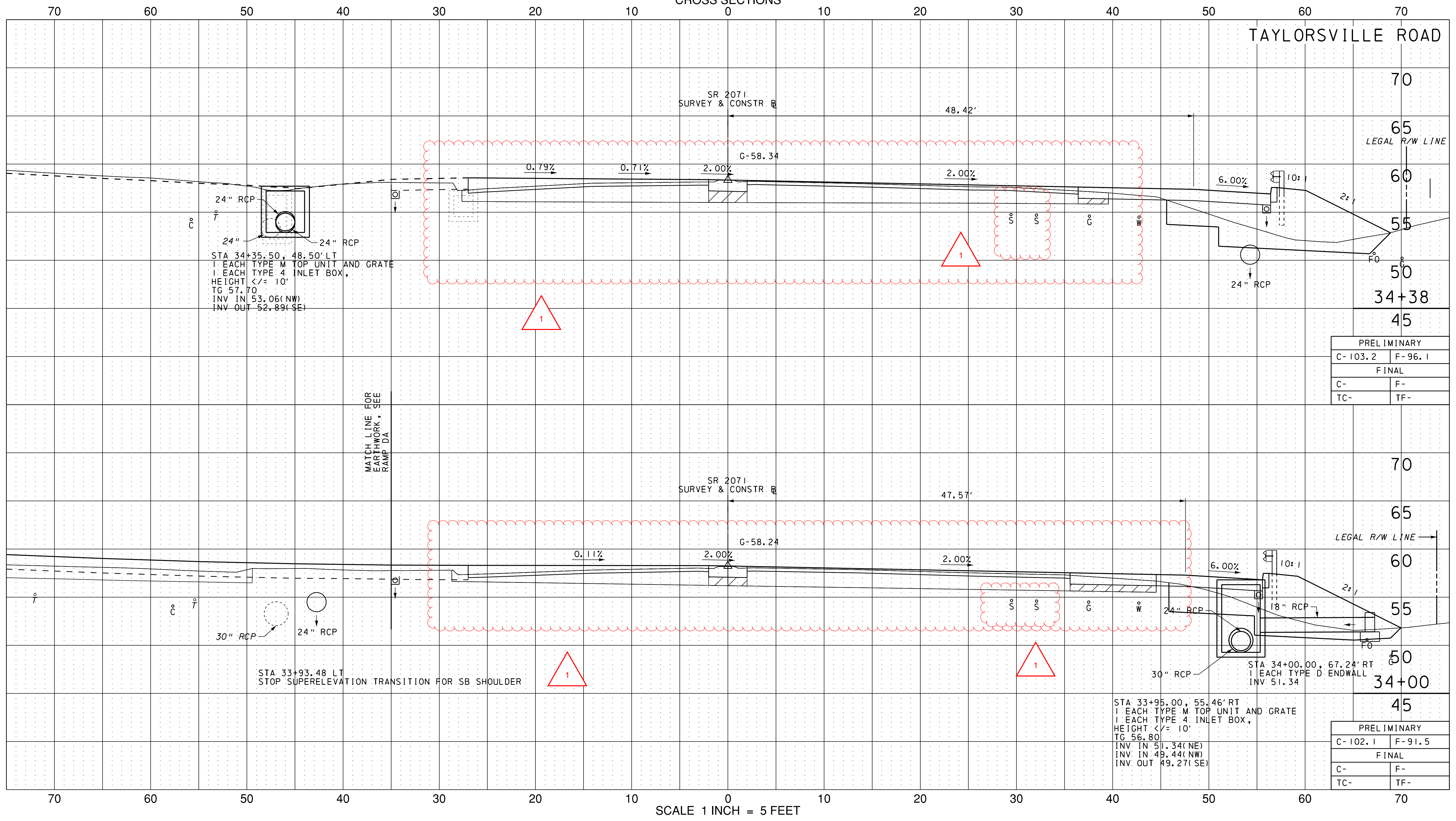
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CROSS SECTIONS
TAYLORSVILLE ROAD

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12/1/16
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CROSS SECTIONS



24" RCP
24" RCP
24" RCP
STA 34+35.50, 48.50' LT
1 EACH TYPE M TOP UNIT AND GRATE
1 EACH TYPE 4 INLET BOX,
HEIGHT $\leq 10'$
TG 57.70
INV IN 53.06(NW)
INV OUT 52.89(SE)

STA 33+93.48 LT
STOP SUPERELEVATION TRANSITION FOR SB SHOULDER

STA 33+95.00, 55.46' RT
1 EACH TYPE M TOP UNIT AND GRATE
1 EACH TYPE 4 INLET BOX,
HEIGHT $\leq 10'$
TG 56.80
INV IN 51.34(NE)
INV IN 49.44(NW)
INV OUT 49.27(SE)

PRELIMINARY	
C-103.2	F-96.1
FINAL	
C-	F-
TC-	TF-

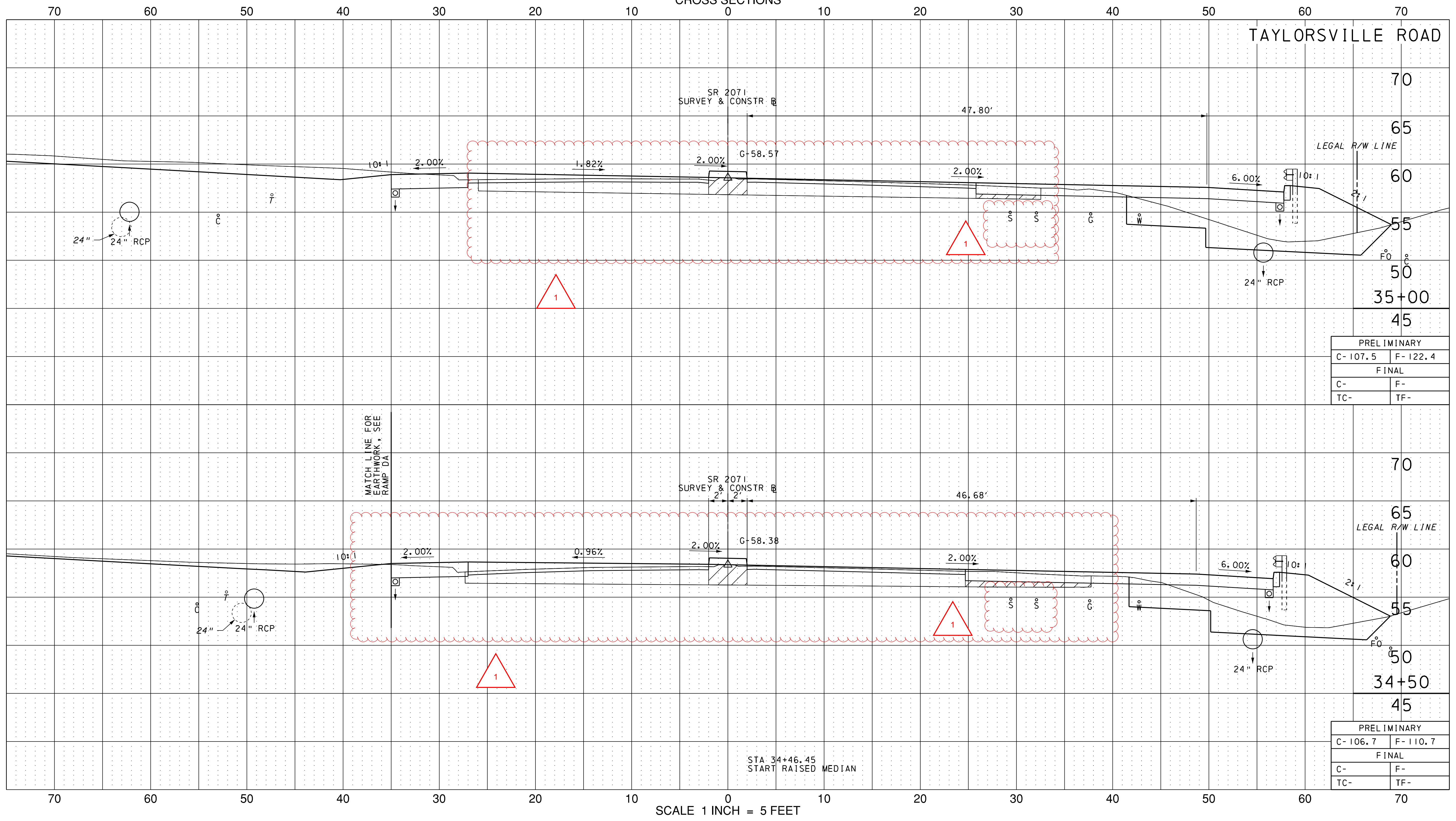
PRELIMINARY	
C-102.1	F-91.5
FINAL	
C-	F-
TC-	TF-

SCALE 1 INCH = 5 FEET

CROSS SECTIONS
TAYLORVILLE ROAD

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PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
CROSS SECTIONS



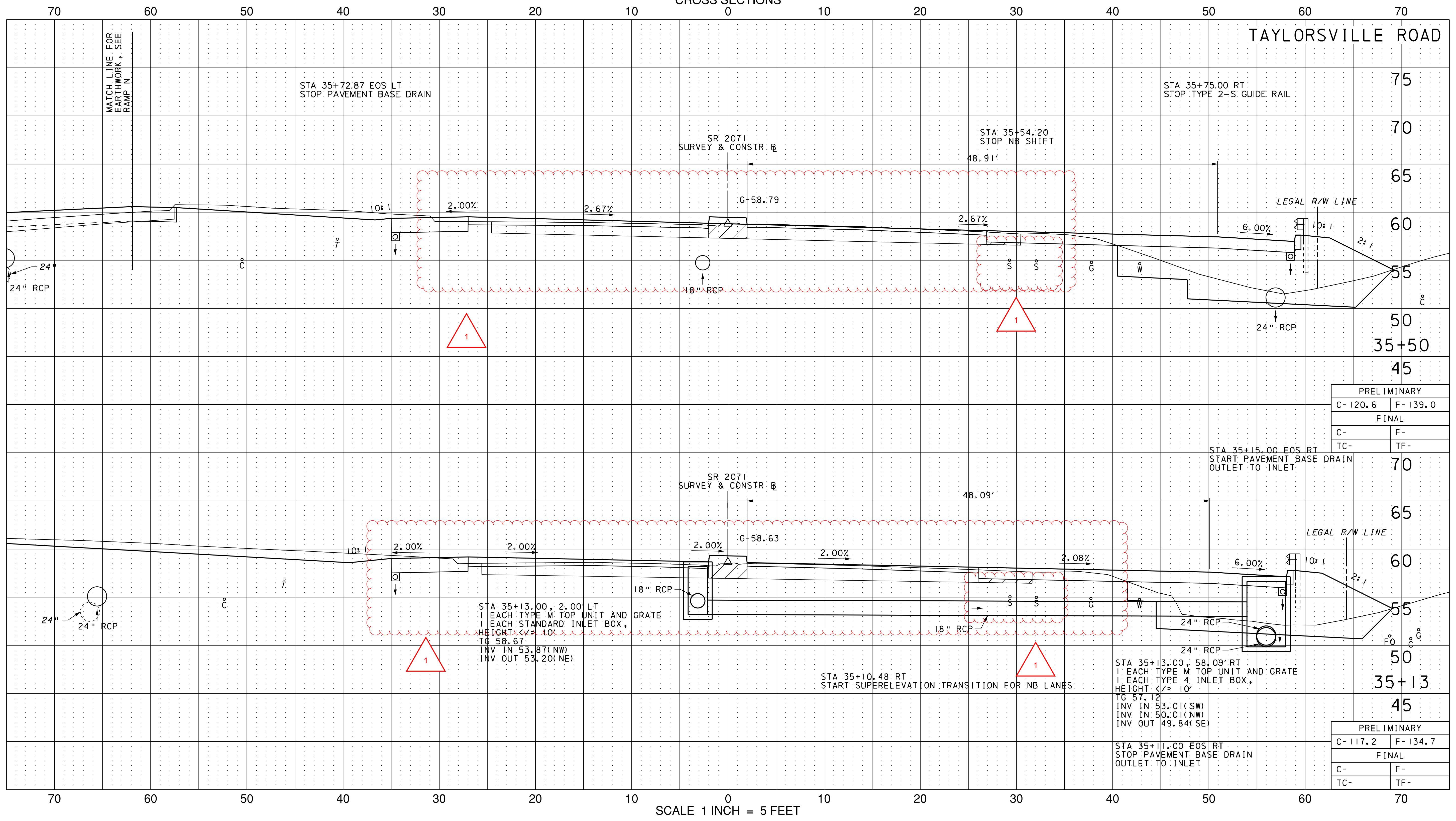
PRELIMINARY	
C-107.5	F-122.4
FINAL	
C-	F-
TC-	TF-

PRELIMINARY	
C-106.7	F-110.7
FINAL	
C-	F-
TC-	TF-

CROSS SECTIONS
TAYLORSVILLE ROAD

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PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
CROSS SECTIONS



PRELIMINARY	
C- 120.6	F- 139.0
FINAL	
C-	F-
TC-	TF-

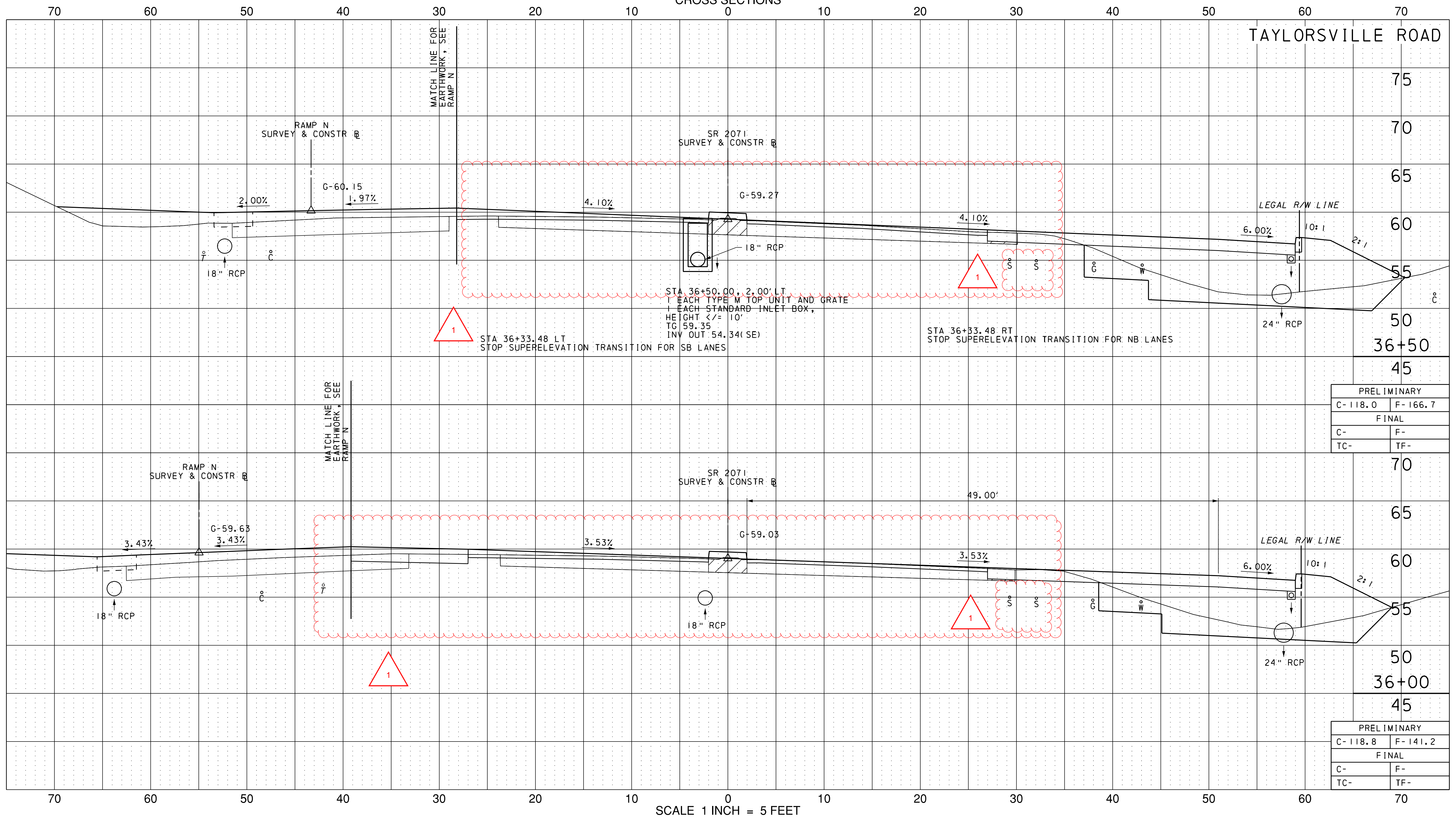
PRELIMINARY	
C- 117.2	F- 134.7
FINAL	
C-	F-
TC-	TF-

CROSS SECTIONS
TAYLORSVILLE ROAD

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12/1/16
STV

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
CROSS SECTIONS



PRELIMINARY	
C-118.0	F-166.7
FINAL	
C-	F-
TC-	TF-

PRELIMINARY	
C-118.8	F-141.2
FINAL	
C-	F-
TC-	TF-

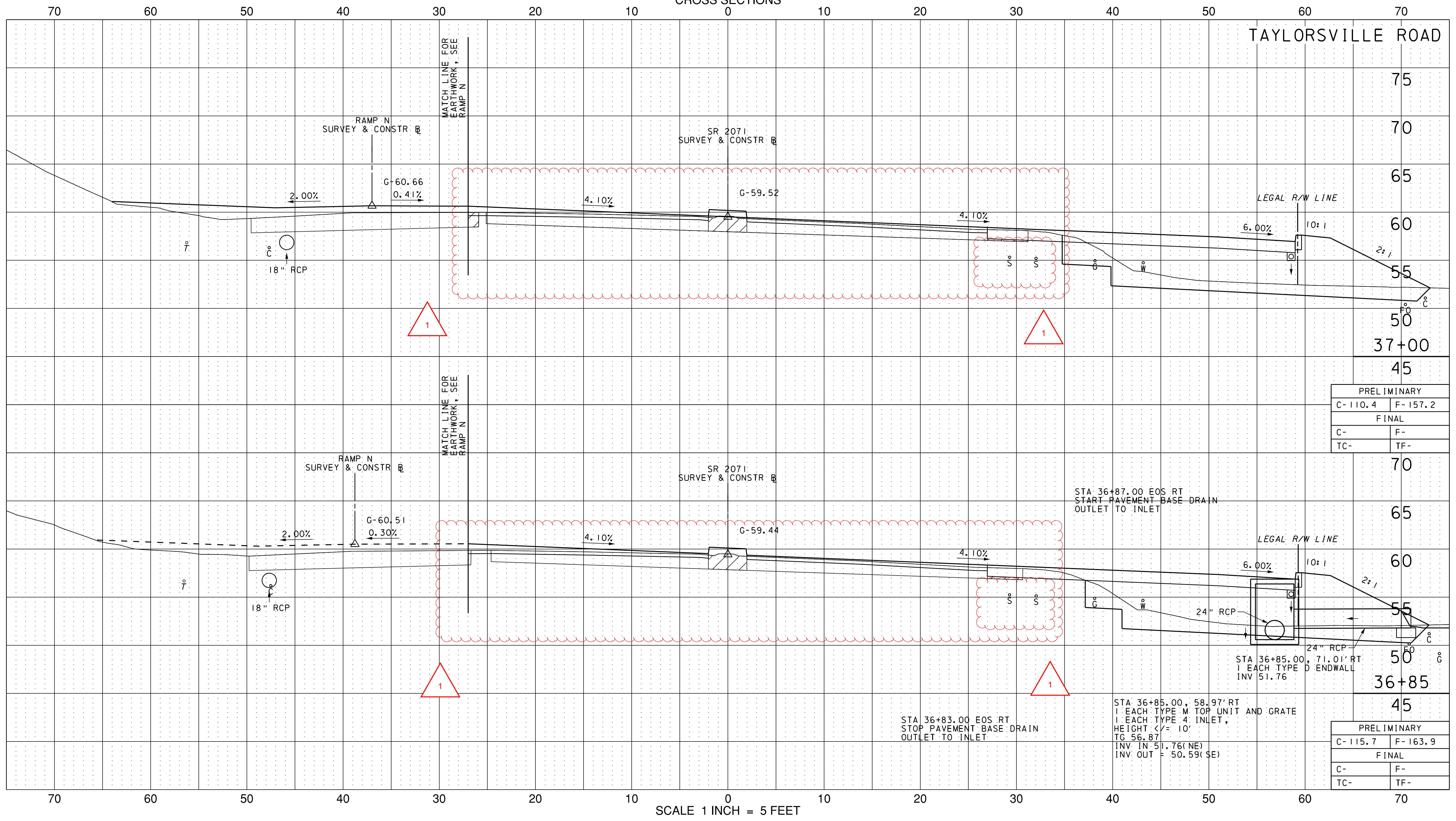
SCALE 1 INCH = 5 FEET

CROSS SECTIONS
TAYLORSVILLE ROAD

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12/1/16
STV

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
CROSS SECTIONS



PRELIMINARY	
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FINAL	
C-	F-
TC-	TF-

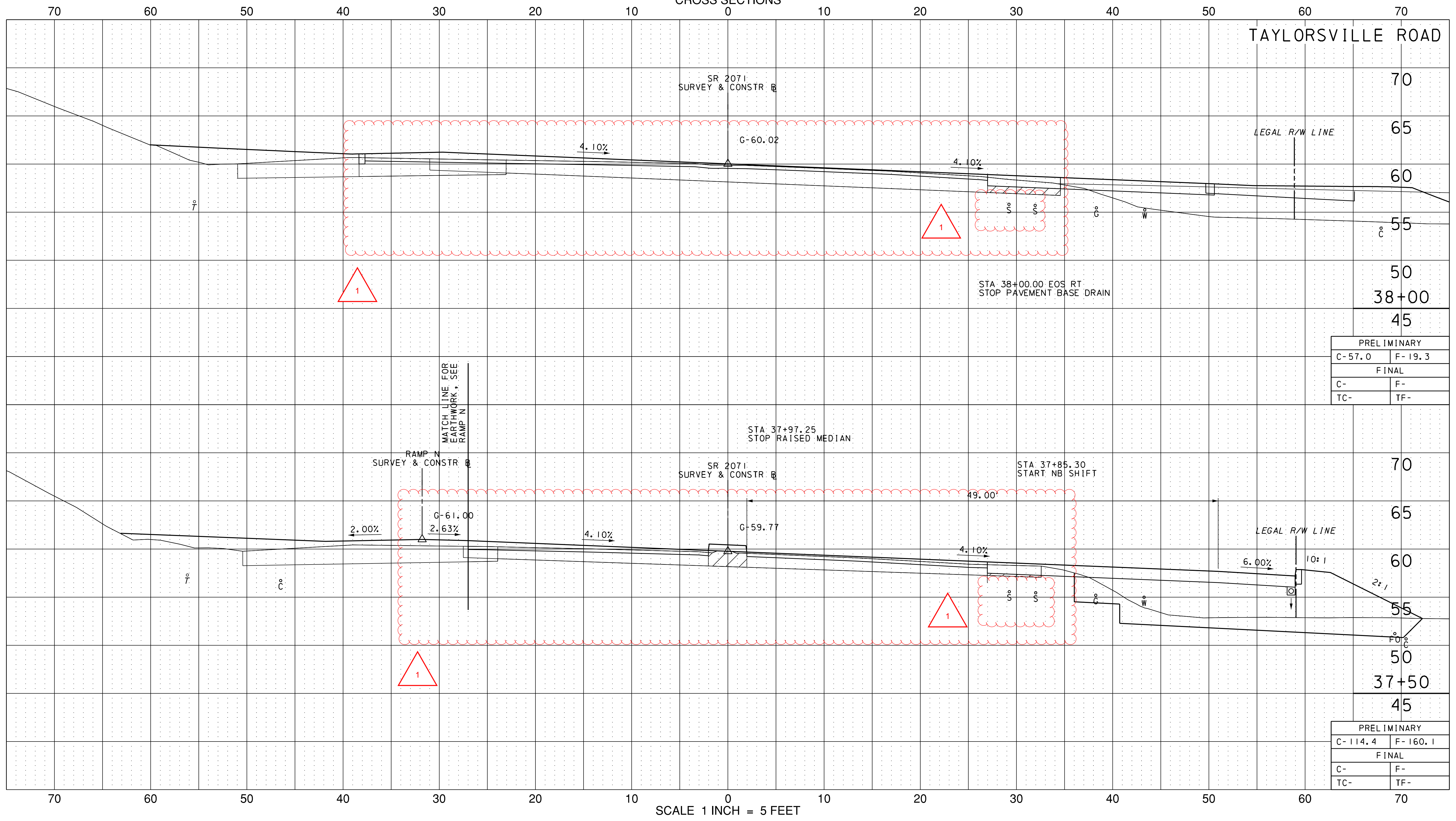
PRELIMINARY	
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FINAL	
C-	F-
TC-	TF-

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CROSS SECTIONS
TAYLORVILLE ROAD

REVISION 1
ADDENDUM 8
12/1/16
STV

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
CROSS SECTIONS

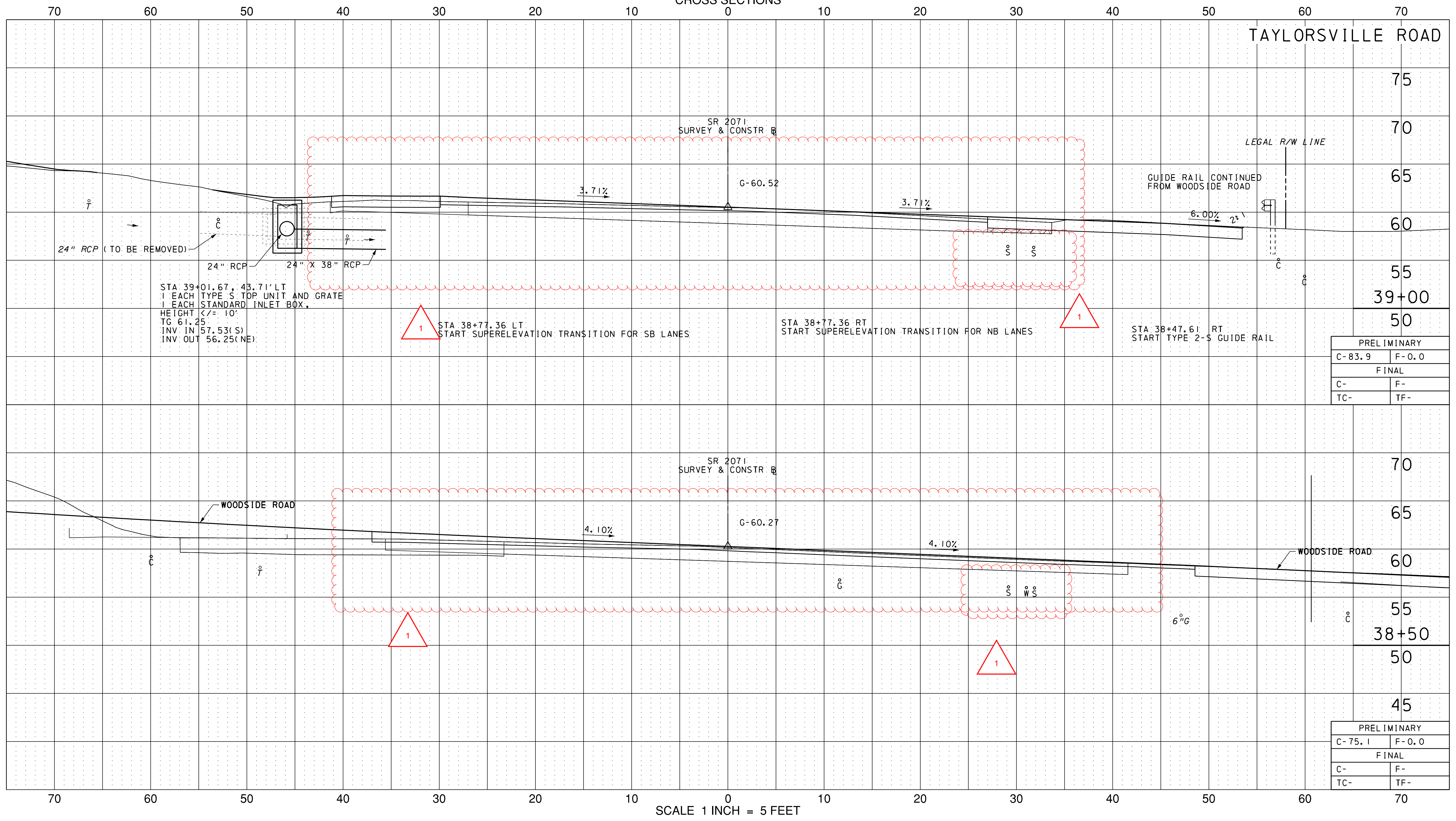


CROSS SECTIONS
TAYLORSVILLE ROAD

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REVISION 1
ADDENDUM 8
12/1/16
STV

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
CROSS SECTIONS



PRELIMINARY	
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FINAL	
C-	F-
TC-	TF-

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C-	F-
TC-	TF-

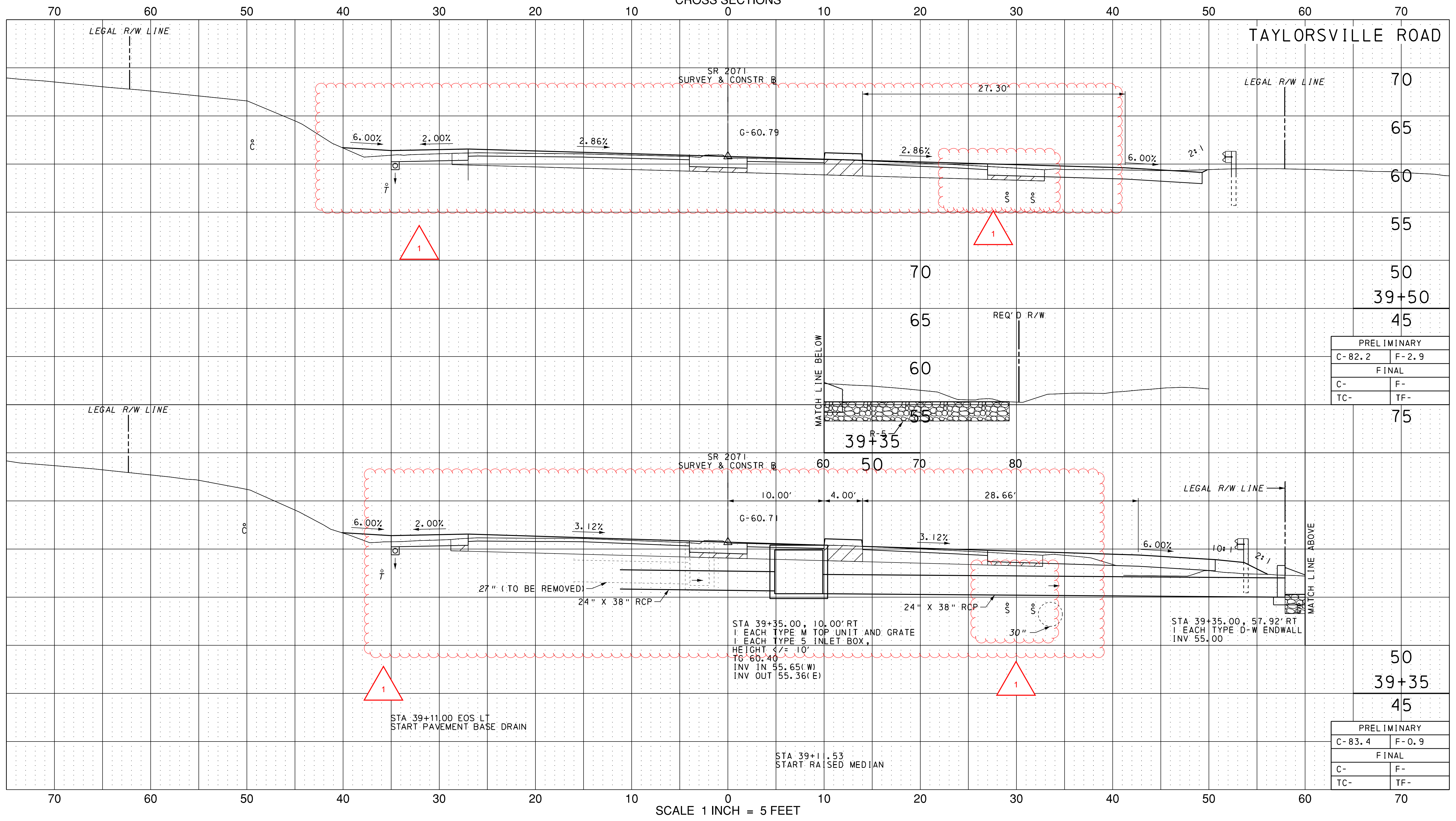
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REVISION 1
ADDENDUM 8
12/1/16
STV

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
CROSS SECTIONS



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TC-	TF-

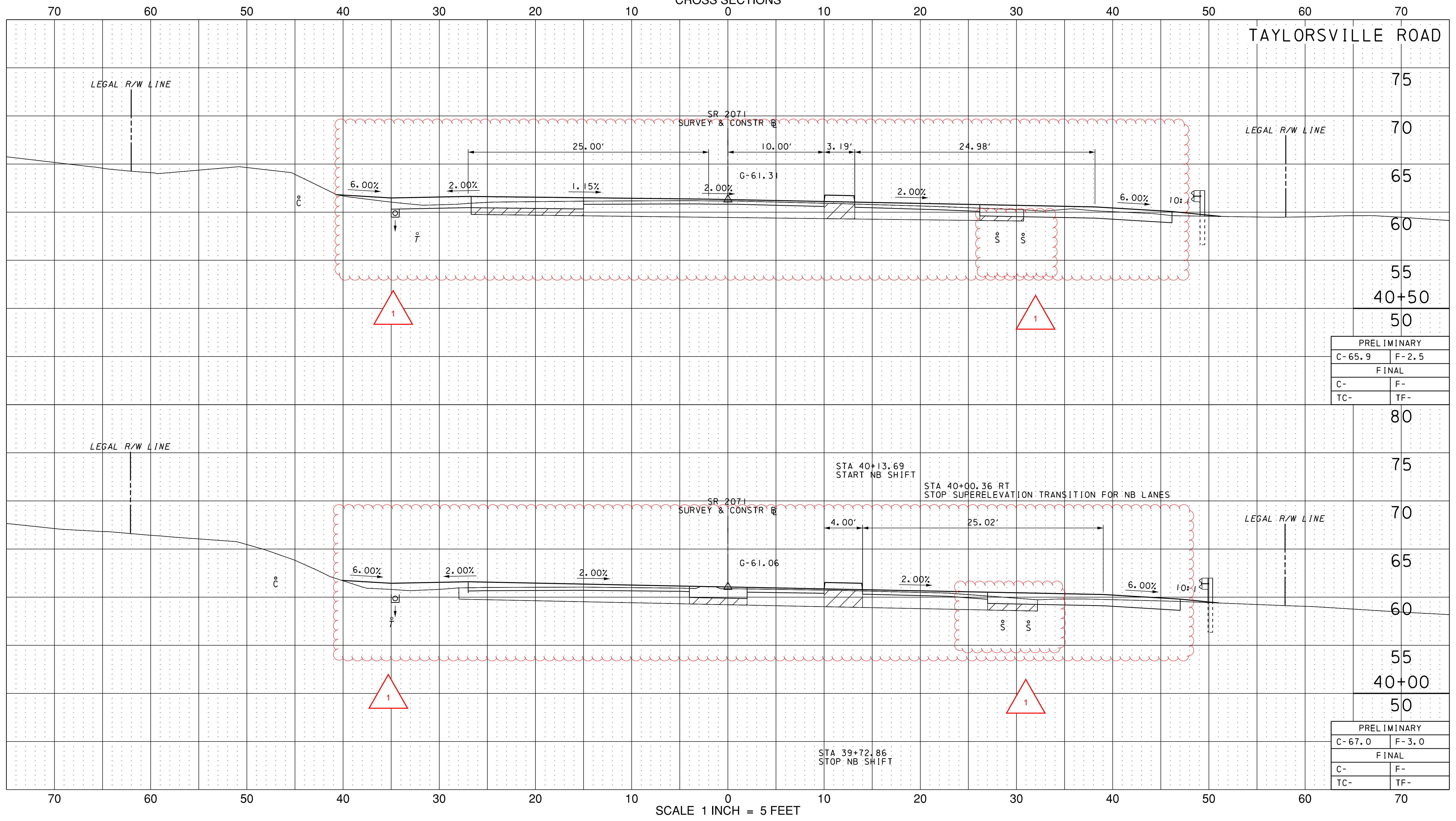
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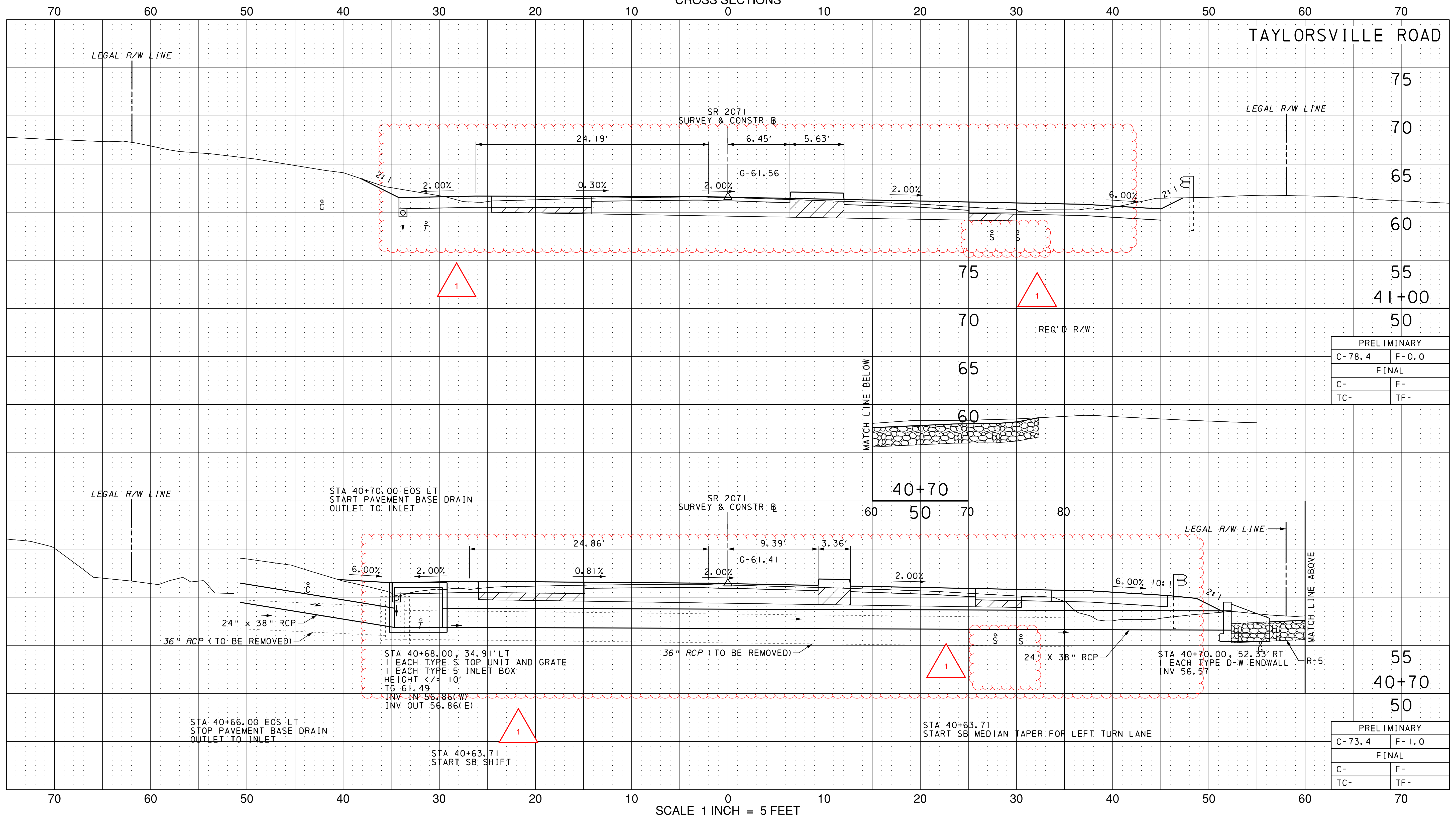


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REVISION 1
ADDENDUM 8
12/1/16
STV

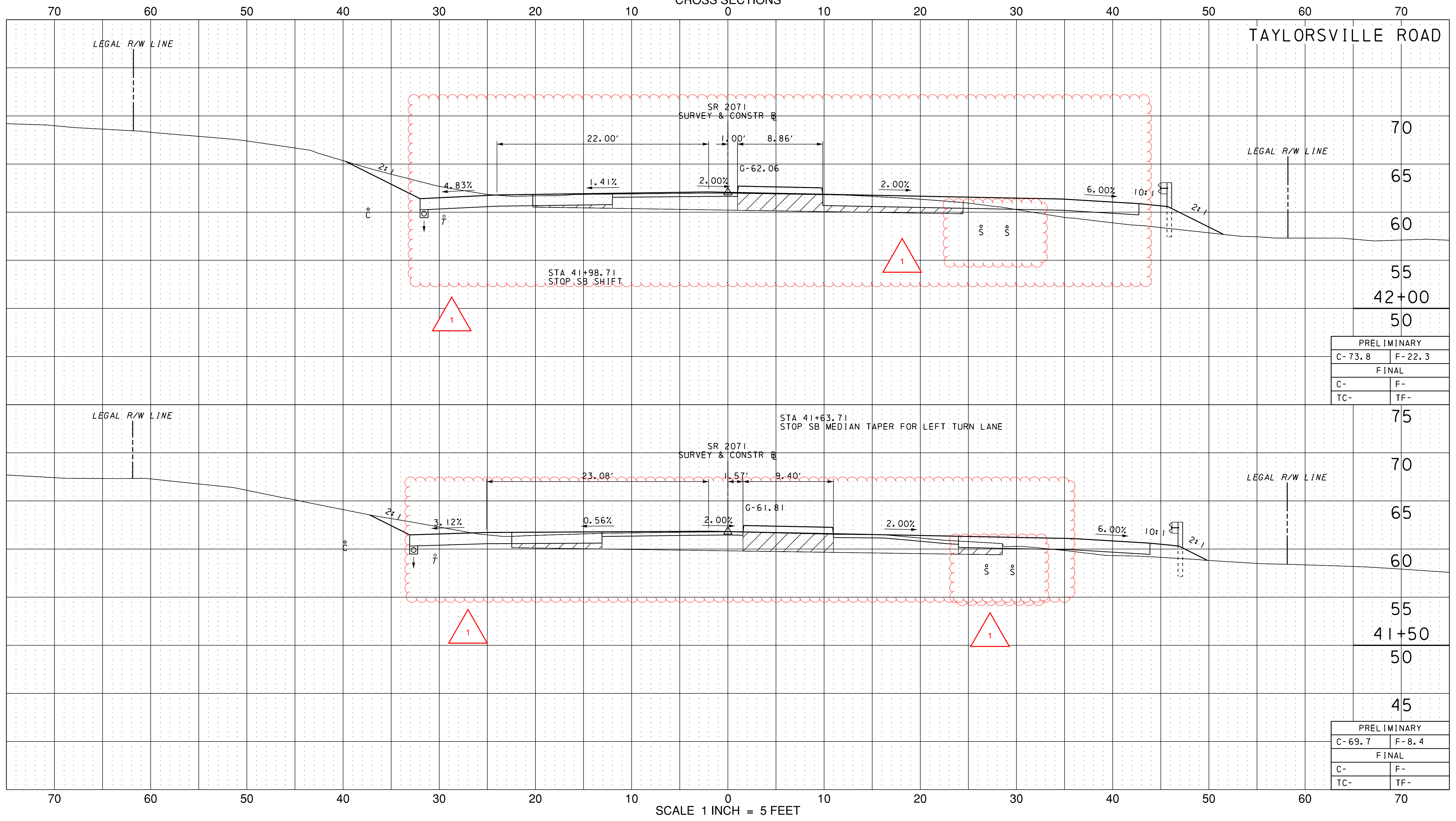
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CROSS SECTIONS



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TAYLORSVILLE ROAD

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CROSS SECTIONS



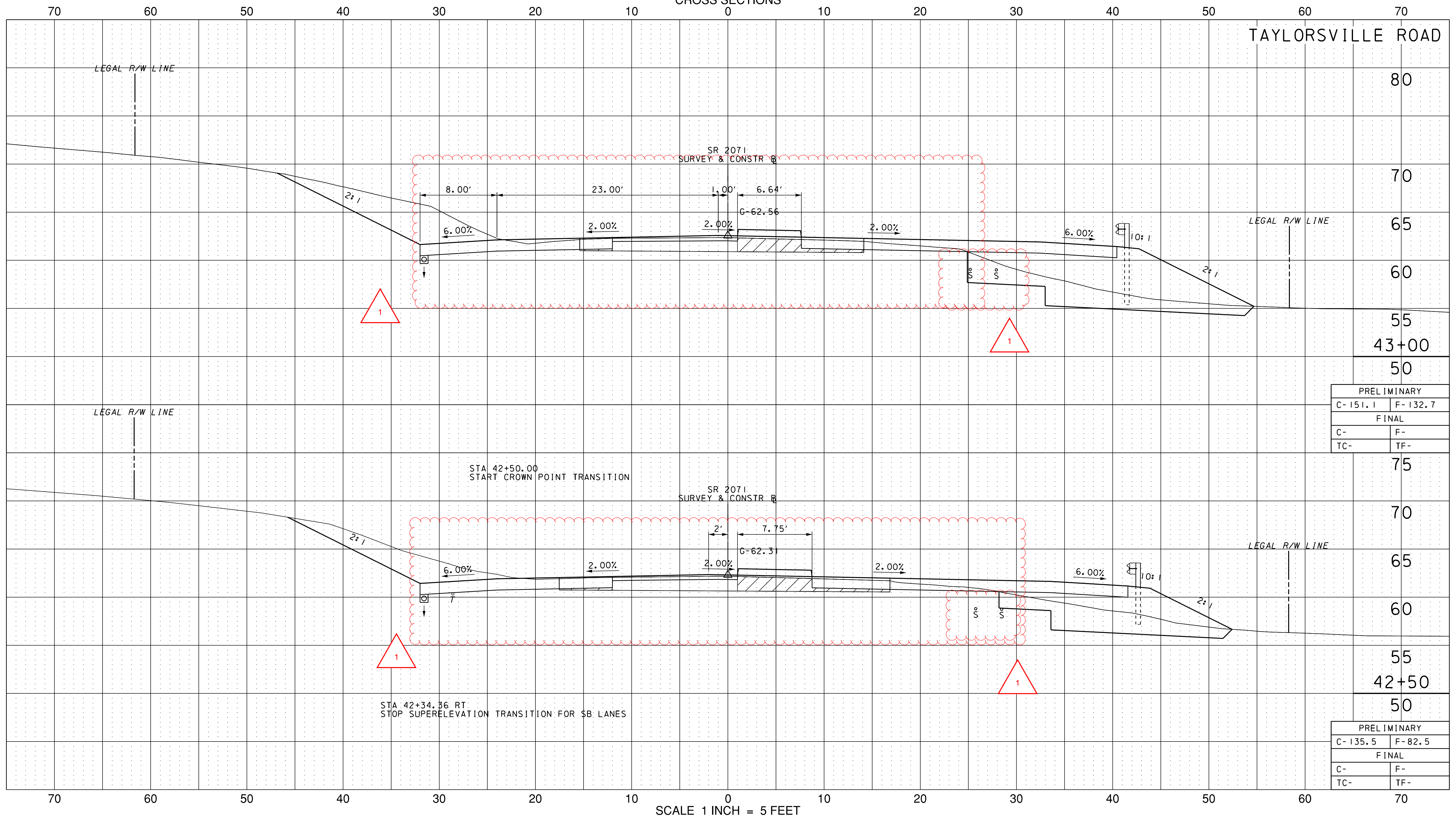
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C-	F-
TC-	TF-

PRELIMINARY	
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FINAL	
C-	F-
TC-	TF-

CROSS SECTIONS
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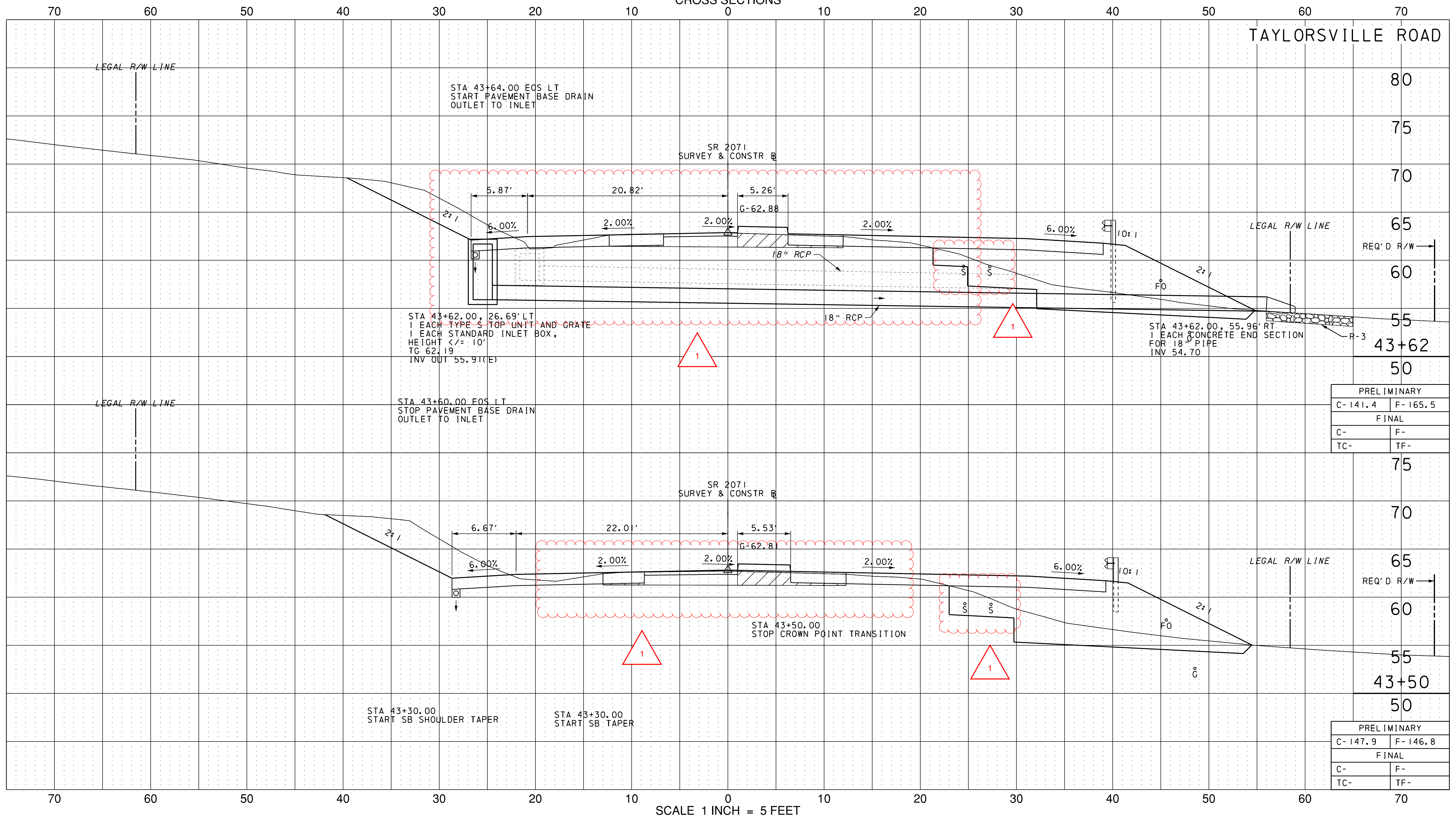


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REVISION 1
ADDENDUM 8
12/1/16
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CROSS SECTIONS

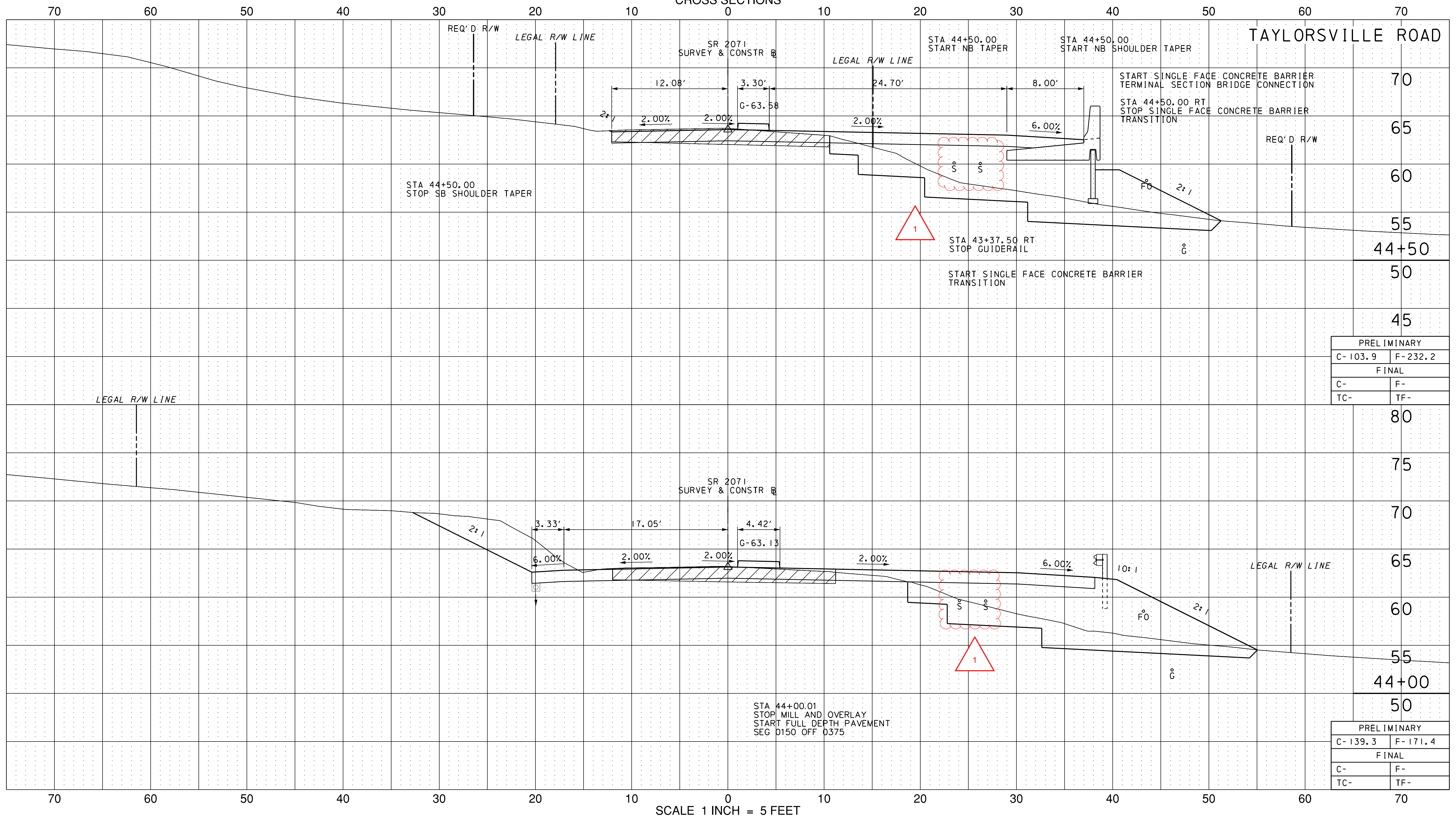


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REVISION 1
ADDENDUM 8
12/1/16
STV

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
CROSS SECTIONS



PRELIMINARY	
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FINAL	
C-	F-
TC-	TF-

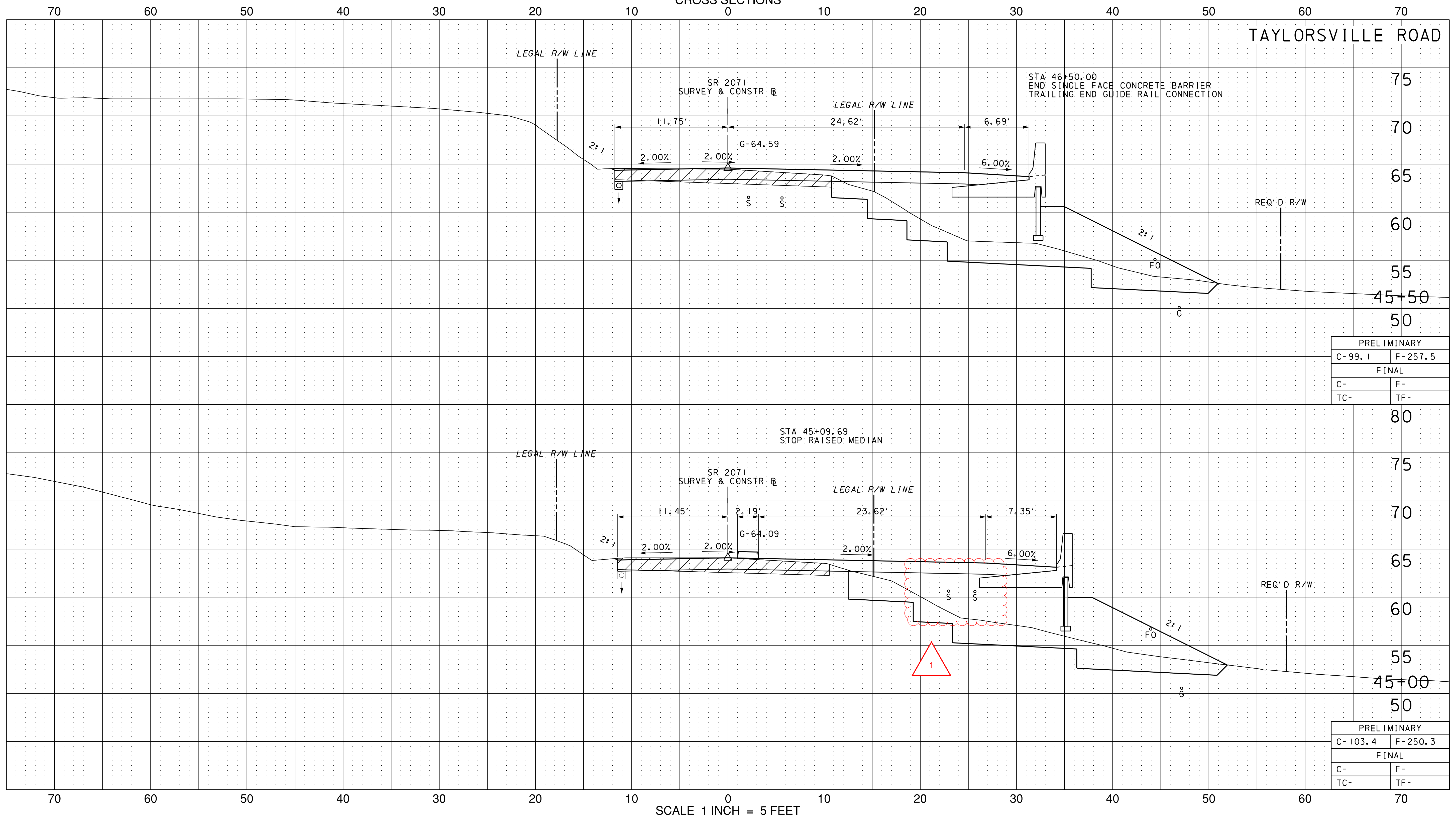
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TC-	TF-

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REVISION 1
ADDENDUM 8
12/1/16
STV

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
CROSS SECTIONS



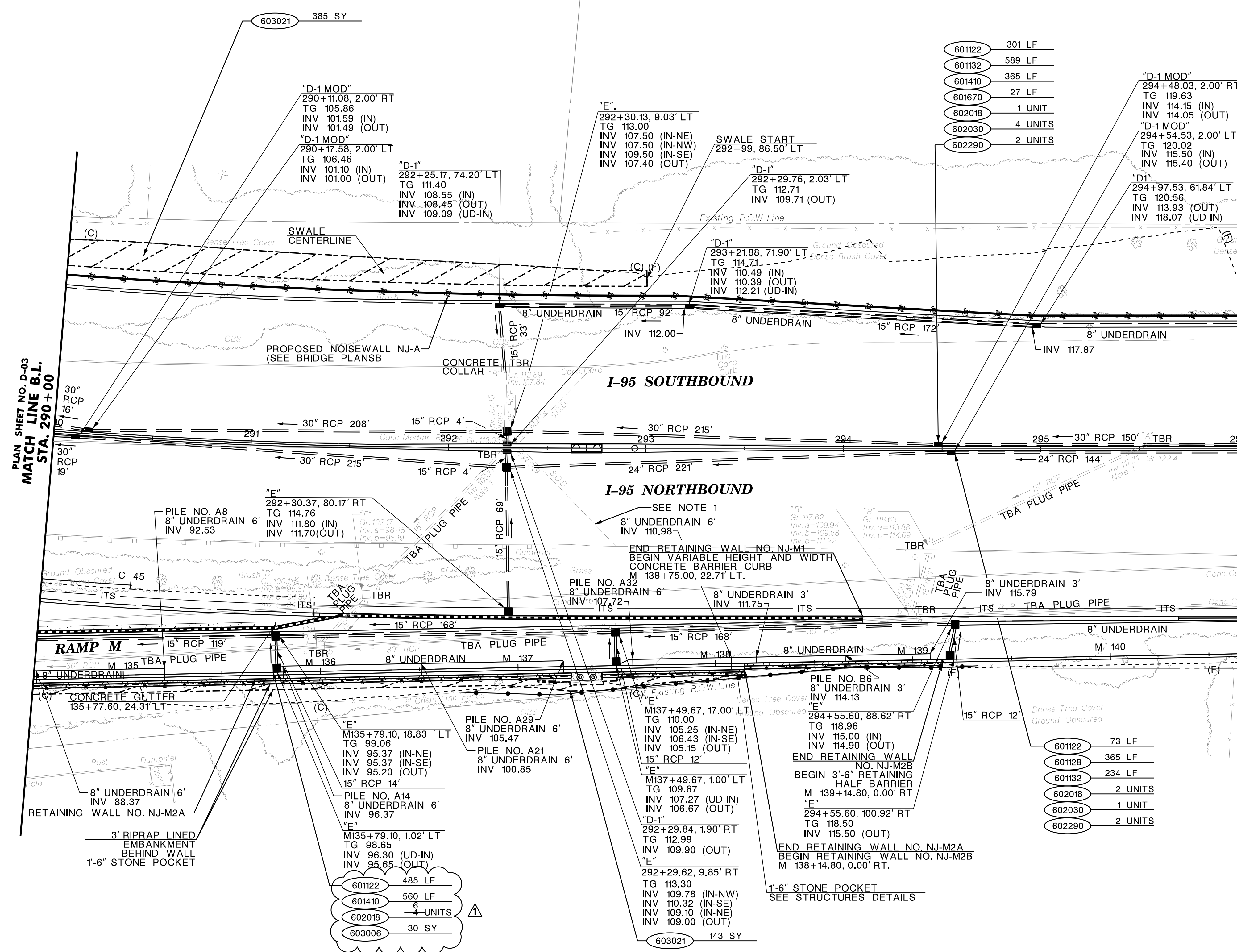
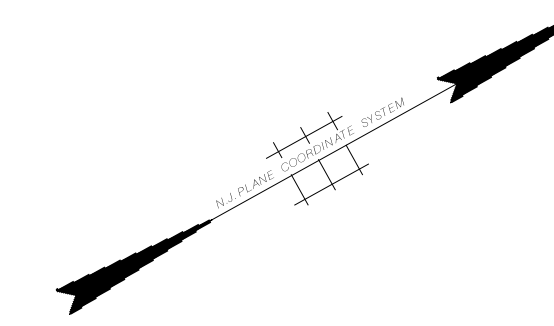
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FINAL	
C-	F-
TC-	TF-

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FINAL	
C-	F-
TC-	TF-

SCALE 1 INCH = 5 FEET

CROSS SECTIONS
TAYLORSVILLE ROAD

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ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY
601122P	15" REINFORCED CONCRETE PIPE	859 L.F.
601128P	24" REINFORCED CONCRETE PIPE	365 L.F.
601132P	30" REINFORCED CONCRETE PIPE	823 L.F.
601410P	8" CORRUGATED STEEL UNDERDRAIN PIPE	925 L.F.
601670M	CLEANING EXISTING PIPE, 12" TO 24" DIAMETER	27 L.F.
602018M	INLET, TYPE E	9-7 UNITS
602030M	INLET, TYPE D-1	5 UNITS
602290M	INLET, NON-STANDARD, TYPE D-1 MOD	4 UNITS
603006P	CONCRETE SLOPE GUTTER, 6" THICK	30 S.Y.
603021P	RIPRAP STONE SLOPE PROTECTION, 18" THICK (D50=9")	528 S.Y.

NOTE:

- PROPOSED UNDERDRAIN SHALL CONNECT EXISTING SUBSURFACE DRAINS TO THE PROPOSED DRAINAGE SYSTEM.
- GUIDERAIL POSTS SHALL BE SPACED TO ACCOMMODATE INLETS AND PIPE CROSSINGS.
- BASED ON FIELD BORINGS, SHALLOW BEDROCK MAY BE ENCOUNTERED. ROCK CUT IS ANTICIPATED. THE INTACT ROCK CORES TESTED HAVE VERY HIGH COMPRESSIVE STRENGTH. CONTRACTOR IS ADVISED TO USE THE APPROPRIATE EQUIPMENT SO THAT THE ROCK EXCAVATION, IF ENCOUNTERED CAN BE SMOOTHLY PERFORMED. REFER TO THE PROJECT GEOTECHNICAL REPORT FOR DETAILS OF BORING INFORMATION AND ROCK CORE TEST STRENGTH.



DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION

DRAINAGE PLANS

SCUDDER FALLS BRIDGE REPLACEMENT PROJECT

CONTRACT NO. T-668A

MICHAEL BAKER INTERNATIONAL, INC.
CERTIFICATION OF AUTHORIZATION NO. 24GA27954700

MAHER A. SIDANI
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 37787

ADDENDUM NO.8	EJM	LAW	11/29/2016
REVISION	BY	C'K'D	DATE

USER: eric.martinelli
 DATE & TIME: 30-NOV-2016 15:35
 Baker.PW Path Location: Master File

D-04
D-21

71
1020

ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY
158088M	INFILTRATION SAND LAYER, 6" THICK	3049 S.Y.
203040M	GEOTEXTILE	6411 S.Y.
302053P	COARSE GRADE AGGREGATE, SIZE NO. 4	1694 C.Y.
302060P	COARSE AGGREGATE, SIZE NO. 57	19 C.Y.
601122P	15" REINFORCED CONCRETE PIPE	920 L.F.
601124P	18" REINFORCED CONCRETE PIPE	71 L.F.
601132P	30" REINFORCED CONCRETE PIPE	211 L.F.
601249P	6" HIGH DENSITY POLYETHYLENE PIPE	200 L.F.
601370M	15" REINFORCED CONCRETE END SECTION	2 UNITS
601380M	30" REINFORCED CONCRETE END SECTION	1 UNIT
601407P	6" PERFORATED HIGH DENSITY POLYETHYLENE PIPE	640 L.F.
601410P	8" CORRUGATED STEEL UNDERDRAIN PIPE	106 L.F.
601679M	8" DUCTILE IRON PIPE	47 L.F.
602006P	CONCRETE HEADWALL	2 C.Y.
602009M	INLET, TYPE A	10 UNITS
602012M	INLET, TYPE B	8 UNITS
602018M	INLET, TYPE E	5 UNITS
602036M	INLET, TYPE E-1	2-9 UNITS
602054M	MANHOLE, 4' DIAMETER	2 UNITS
602057M	MANHOLE, 5' DIAMETER	1 UNIT
602060M	MANHOLE, 6' DIAMETER	1 UNIT
603024P	RIPRAP STONE SLOPE PROTECTION, 24" THICK (D50=12")	145 S.Y.
603036P	RIPRAP STONE CHANNEL PROTECTION, 12" THICK (D50=6")	74 S.Y.
606095P	TURF PAVERS	142 S.Y.
804018P	PLANTING SOIL BED, 18" THICK	3049 S.Y.
602290M	INLET, NON-STANDARD, TYPE E-1 DROP	1 UNIT

737 LF	601122
1 UNIT	601370
7 UNITS	602009
5 UNITS	602012
3 UNITS	602018
1 UNIT	602054
1 UNIT	602057
12 SY	603036

90 SY	203040
19 CY	302060
106 LF	601410
47 LF	601679
2 UNITS	602009

NOTE:

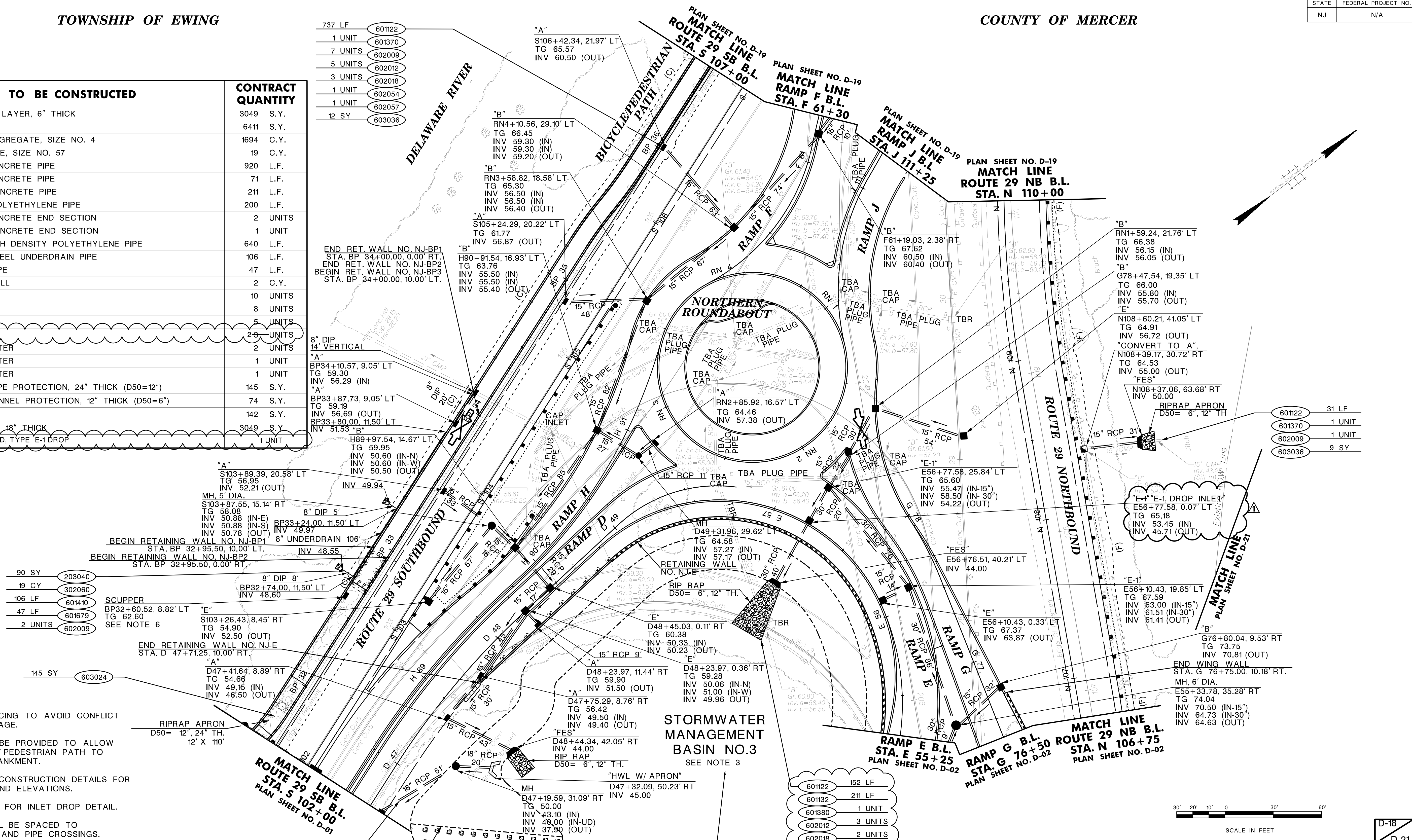
- ADJUST GUIDERAIL SPACING TO AVOID CONFLICT WITH PROPOSED DRAINAGE.
- SMALL OPENINGS WILL BE PROVIDED TO ALLOW RUNOFF FROM BICYCLE/PEDESTRIAN PATH TO DISCHARGE DOWN EMBANKMENT.
- SEE BASIN DETAIL ON CONSTRUCTION DETAILS FOR UNDERDRAIN LAYOUT AND ELEVATIONS.
- SEE DRAINAGE DETAILS FOR INLET DROP DETAIL.
- GUIDERAIL POSTS SHALL BE SPACED TO ACCOMMODATE INLETS AND PIPE CROSSINGS.
- SEE BRIDGE PLANS FOR SCUPPER QUANTITIES AND DETAILS.
- FOR LENGTH AND WIDTH OF RIPRAP APRON SEE DETAIL SHEETS.
- SEE CONSTRUCTION DETAILS AND STRUCTURES PLANS FOR WALL DRAIN AND OUTLET PROTECTION DETAILS.

71 LF	601124
2 CY	602006
1 UNIT	602054

3049 SY	158088
6321 SY	203040
200 LF	601249
640 LF	601407
3049 SY	804018
1694 CY	302053
142 SY	606095

601122	152 LF
601132	211 LF
601380	1 UNIT
602012	3 UNITS
602018	2 UNITS
602036	2-9 UNITS
602060	1 UNIT
603036	53 SY
602290	1 UNIT

USER: eric.marinelli
DATE & TIME: 30-NOV-2016 15:40
Baker.PW Path Location: Master File



DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION

DRAINAGE PLANS

SCUDDER FALLS BRIDGE REPLACEMENT PROJECT

CONTRACT NO. T-668A

MICHAEL BAKER INTERNATIONAL, INC.
CERTIFICATION OF AUTHORIZATION NO. 24GA27954700

ADDENDUM NO.8	EJM	LAW	11/29/2016	MAHER A. SIDANI
REVISION	BY	C/K'D	DATE	NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 37787

LEGEND OF SYMBOLS

- LOAD CENTER - FOUNDATION AND METER CABINET (TYPE 2M) 240/480 VOLT
- METER CABINET (TYPE MC) 240/480 VOLT
- JUNCTION BOX FOUNDATION
- EXISTING JUNCTION BOX FOUNDATION - TO REMAIN/REMOVE
- 18" X 36" JUNCTION BOX
- EXISTING 18" X 36" JUNCTION BOX - TO BE REMOVED
- JUNCTION BOX FRAME AND COVER (STRUCTURAL PAY ITEM)
- 10" X 36" JUNCTION BOX
- LIGHTING CONDUIT AND CABLE
- LED, WATTAGE VARIES, I.E.S. TYPE VARIES, MEDIUM, PENDANT MOUNT LUMINAIRE
- EXISTING TRANSFORMER LOAD CENTER
- EXISTING LIGHTING STANDARD ASSEMBLY TO BE REMOVED
- NJDOT CONVENTIONAL LIGHTING STANDARD WITH 152 WATT LED (UNLESS OTHERWISE NOTED ON PLANS), I.E.S. TYPE II LUMINAIRE
- NJDOT CONVENTIONAL LIGHTING STANDARD WITH 152 WATT LED, I.E.S. TYPE III LUMINAIRE
- NJDOT CONVENTIONAL LIGHTING STANDARD WITH 152 WATT LED, I.E.S. TYPE IV LUMINAIRE
- NJDOT CONVENTIONAL LIGHTING STANDARD WITH 250 WATT HIGH PRESSURE SODIUM I.E.S. TYPE III SEMI-CUT-OFF LUMINAIRE
- EXISTING LIGHTING CONDUIT - TO BE REMOVED UNLESS OTHERWISE SPECIFIED
- EXISTING SCUDDER FALLS BRIDGE LIGHTING ASSEMBLY - TO BE REMOVED
- EXISTING LIGHTING JUNCTION BOX - TO BE REMOVED UNLESS OTHERWISE SPECIFIED
- EXISTING LIGHTING CABINET
- (6) 252 WATT LED, I.E.S. TYPE V LUMINAIRE, TOWER LIGHTING STANDARD ASSEMBLY
- EXISTING TOWER LIGHTING STANDARD ASSEMBLY, TYPE 100-G, TO BE REMOVED

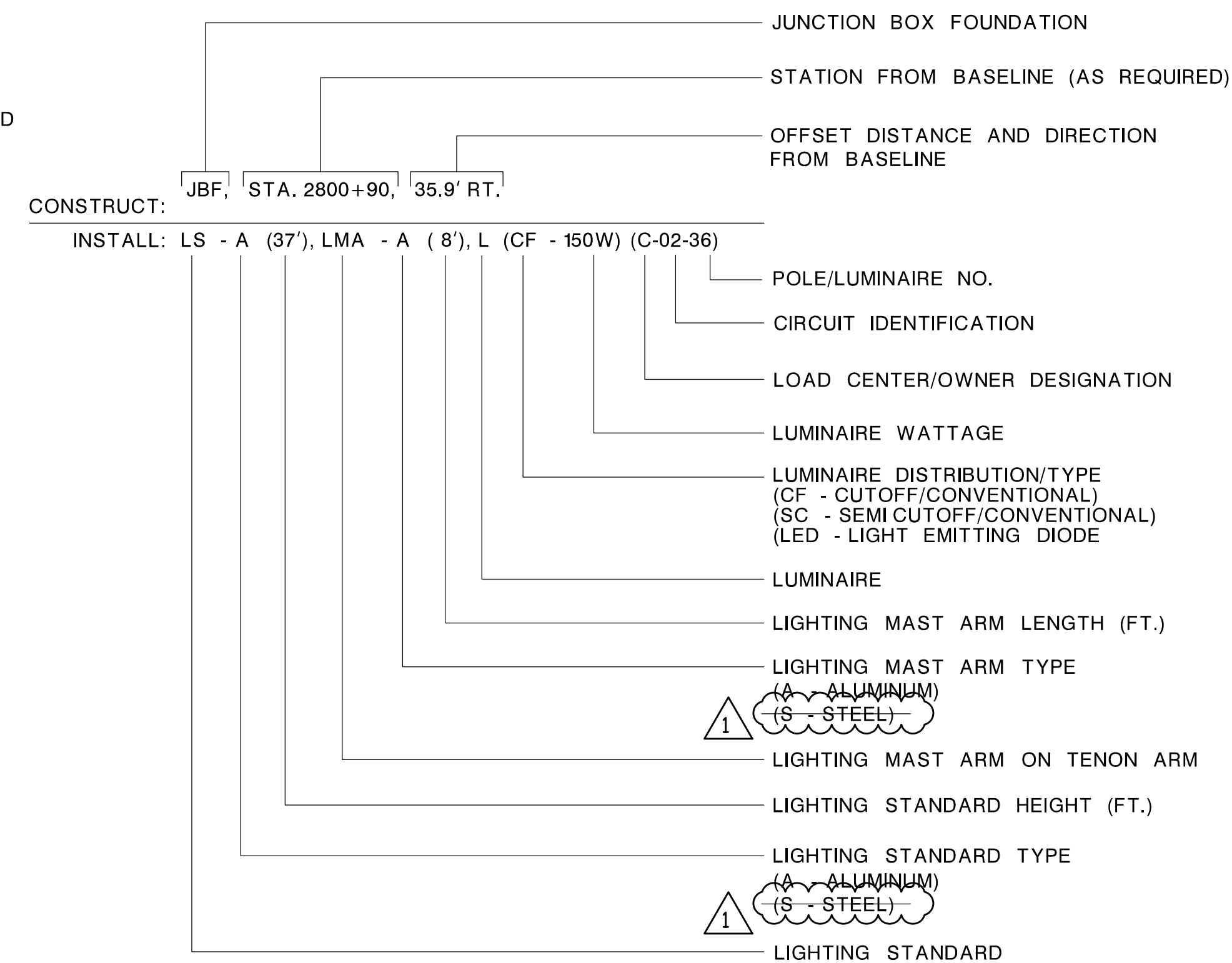
ABBREVIATIONS

- 1/C ONE CONDUCTOR
- CF CUTOFF
- CKT. CIRCUIT
- CKTS. CIRCUITS
- DIA. DIAMETER
- FND FOUNDATION
- GND GROUND
- LED LIGHT EMITTING DIODE
- LF LINEAR FOOT
- LT. LEFT
- PSE&G PUBLIC SERVICE ELECTRIC AND GAS COMPANY
- RT. RIGHT
- RNMC RIGID NON-METALLIC CONDUIT
- RMC RIGID METALLIC CONDUIT
- SC SEMI CUTOFF
- SS STAINLESS STEEL
- STA. STATION
- T/ TOP OF
- TYP TYPICAL
- W WATTS

GENERAL NOTES:

1. ALL MATERIALS AND EQUIPMENT FURNISHED AND INSTALLED UNDER THIS CONTRACT SHALL BE NEW, UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS OR IN THE SPECIFICATION.
2. UNDERGROUND CONDUITS SHALL BE SLOPED TOWARD JUNCTION BOXES, JUNCTION BOX FOUNDATIONS OR DRAINAGE TEES. TEES SHALL BE INSTALLED AT THE LOW POINT OF ALL CONDUIT RUNS.
3. THE CONTRACTOR SHALL NOT DISTURB THOSE LIGHTING FACILITIES WHICH WILL REMAIN.
4. ONLY THOSE AREAS REQUIRING LIGHTING SYSTEM MODIFICATIONS AS A RESULT OF THE ROADWAY CONSTRUCTION HAS BEEN SHOWN ON THE HIGHWAY LIGHTING PLANS. FOR CLARITY, ALL OTHER EXISTING LIGHTING HAS NOT BEEN SHOWN.
5. STATION AND OFFSET LOCATIONS FOR LIGHTING STANDARD ASSEMBLIES, LOAD CENTERS AND IN GROUND JUNCTION BOXES HAVE BEEN DERIVED PERPENDICULAR FROM THE CLOSEST ADJACENT ROADWAY BASELINE.
6. UNLESS OTHERWISE NOTED, INSTALL ALL NJDOT GROUND MOUNTED HIGHWAY LIGHTING STANDARDS WITH TRANSFORMER BASES (SEE NJDOT STANDARD ELECTRICAL DETAIL L-01).
7. THE CONTRACTOR SHALL REMOVE/ABANDON ALL ABOVE GROUND LIGHTING FACILITIES, FOUNDATIONS AND JUNCTION BOXES WHICH WILL NO LONGER BE REQUIRED WITHIN THE PROJECT LIMITS. COST OF REMOVAL OF VARIOUS HIGHWAY LIGHTING FACILITIES SHALL BE INCLUDED UNDER THE PAY ITEM "CLEARING SITE".
8. CONDUIT RUNS ARE SHOWN DIAGRAMMATICALLY, AND MAY BE ADJUSTED TO SUIT FIELD CONDITIONS DURING CONSTRUCTION, WITH APPROVAL FROM THE PROJECT ENGINEER.
9. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FURNISH LIGHTING STANDARDS THAT MEET THE REQUIREMENTS OF NJDOT STANDARD DETAIL L-01, WHICH PROVIDES FOR MOUNTING HEIGHTS (26'-0" AND 40'-0") PUBLISHED IN SECTION 11 OF THE NJDOT DESIGN MANUAL FOR CONVENTIONAL LIGHTING SYSTEMS.
10. COORDINATE INSTALLATION OF LIGHTING STANDARD ASSEMBLIES, CONDUIT ROUTING AND JUNCTION BOXES WITH CONSTRUCTION OF ITS, UTILITY AND DRAINAGE PLANS.
11. AT EACH LIGHTING STANDARD LOCATION, CORRECTLY INSTALL LUMINAIRE OPTICS WITH THE DISTRIBUTION TYPE AS SPECIFIED PARALLEL TO THE ROADWAY OR CURB. PROVIDE OPTIC WITH THE TERM "STREET SIDE" CAST INTO THE BASE. VERIFY THAT PROPER NIGHT TIME DISTRIBUTION IS ACHIEVED.
12. ALL INFORMATION CONCERNING EXISTING LIGHTING FACILITIES AS SHOWN ON THE PROJECT "HIGHWAY LIGHTING PLANS" AND DESCRIBED BY NOTATION, HAS BEEN OBTAINED FROM AVAILABLE EXISTING LIGHTING PLANS (PROVIDED BY THE NEW JERSEY DEPARTMENT OF TRANSPORTATION) AND ONSITE FIELD CHECKS. THE EXISTING LIGHTING INFORMATION AS PRESENTED IS ESSENTIALLY CORRECT, HOWEVER, SOMEWHAT INCOMPLETE IN TERMS OF ACCURATELY DEFINING CIRCUIT AND POLE IDENTIFICATION. THE INFORMATION DOES NOT NECESSARILY REPRESENT AS-BUILT CONDITIONS. THE CONTRACTOR SHALL VERIFY EXISTING LIGHTING CONDITIONS (CIRCUIT AND POLE ID, POLE LOCATIONS, CONDUIT ROUTING, ETC.) PRIOR TO START OF ANY MODIFICATIONS TO OR REMOVAL OF EXISTING LIGHTING SYSTEM EQUIPMENT. NO SPECIFIC PAYMENT SHALL BE MADE FOR VERIFICATION OF EXISTING LIGHTING FACILITIES. ALL COST SHALL BE INCLUDED INTO THE VARIOUS PAY ITEMS.
13. EXISTING CONDUITS AND WIRES WHICH ARE PROPOSED TO BE INCORPORATED INTO THE PERMANENT LIGHTING SYSTEM SHALL NOT BE DAMAGED DURING THE CONSTRUCTION OF GUIDE RAIL OR ANY STRUCTURE FOUNDATION. IF ANY CIRCUITRY IS DAMAGED, THE CONTRACTOR SHALL REPLACE THE DAMAGED PORTION OF THE CIRCUITRY WITH NEW CONDUIT AND REPLACE THE WIRING WITH NEW WIRING FROM JB/JBF TO JB/JBF. NO PAYMENT SHALL BE MADE FOR REPLACING THE DAMAGED CONDUIT AND WIRES.
14. ALL EXISTING CONDUITS THAT ARE NOT BEING REUSED IN THE REVISED SYSTEM ARE TO HAVE ALL WIRES REMOVED PRIOR TO BEING CAPPED AND ABANDONED. THE EXISTING CONDUITS NOTED AS BEING ABANDONED MAY BE ENTIRELY REMOVED AS AN INCIDENTAL ITEM OF CONSTRUCTION UNDER THE PAY ITEM "CLEARING SITE" AND ALL HOLES LEFT IN THE REMAINING JUNCTION BOXES AND FOUNDATIONS SHALL BE PATCHED.
15. EXISTING HIGHWAY LIGHTING SYSTEM FOOTCANDLE VALUES MUST BE MAINTAINED IN ALL AREAS OF LIGHTING SYSTEM MODIFICATIONS DURING ALL STAGES OF CONSTRUCTION. SECTIONS OF THE EXISTING LIGHTING SYSTEM TO BE REMOVED SHALL NOT EXCEED THE SECTIONS TO BE REPLACED WITH PERMANENT AND/OR TEMPORARY LIGHTING, SO THAT AT NO TIME ANYTHING LESS THAN FULL EXISTING HIGHWAY LIGHTING IS OPERATIONAL. ANY PORTION OF THE REMOVED EXISTING LIGHTING SYSTEM EQUIPMENT MAY BE REUSED FOR TEMPORARY LIGHTING. TEMPORARY LIGHTING MAY ALSO CONSIST OF WOOD POLES, BRACKET ARMS AND LUMINAIRES OF EQUAL PERFORMANCE, CONSISTANT WITH EXISTING LIGHTING, AND SERVICED BY OVERHEAD WIRING. EXISTING REMOVED LUMINAIRE ASSEMBLIES MAY BE REUSED ON TEMPORARY WOOD POLES. TEMPORARY WIRING SHALL BE SPLICED INTO EXISTING LIGHTING CIRCUITS WHERE APPLICABLE, TO MAINTAIN OR RE-ESTABLISH EXISTING CIRCUITRY. TEMPORARY LIGHTING SHALL MEET THE REQUIREMENTS OF NJDOT STANDARD SPECIFICATIONS, SECTIONS 701.03, 703.03 AND 703.04. CONTRACTOR TO SUBMIT FOR APPROVAL ALL COSTS TO BE INCLUDED IN PAY ITEM "TEMPORARY HIGHWAY LIGHTING SYSTEM".
16. REFER TO STRUCTURE DRAWINGS FOR BRIDGE / BARRIER MOUNTING, UNDERDECK LUMINAIRE MOUNTING, AND CONDUIT ROUTING DETAILS.

NJDOT LIGHTING STANDARD CONSTRUCT/INSTALL LEGEND



HIGHWAY LIGHTING			
STV 820 BEAR TAVERN ROAD, SUITE 200, TRENTON, NJ 08628			
N.J. CERTIFICATE OF AUTHORIZATION NO. 24GA28018400			
RONALD L. MEEK			
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 43525			
ADDENDUM NO. 8	DH	SDY	12/01/16
REVISION	BY	C'K'D	DATE

DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION

**HIGHWAY LIGHTING
LEGEND & GENERAL NOTES
SCUDDER FALLS BRIDGE REPLACEMENT PROJECT
CONTRACT NO. T-668A**

MICHAEL BAKER INTERNATIONAL
CERTIFICATION OF AUTHORIZATION NO. 24GA27954700

MAHER A. SIDANI
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 37787

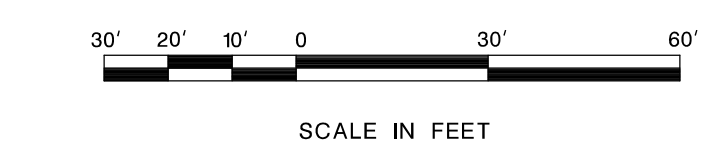
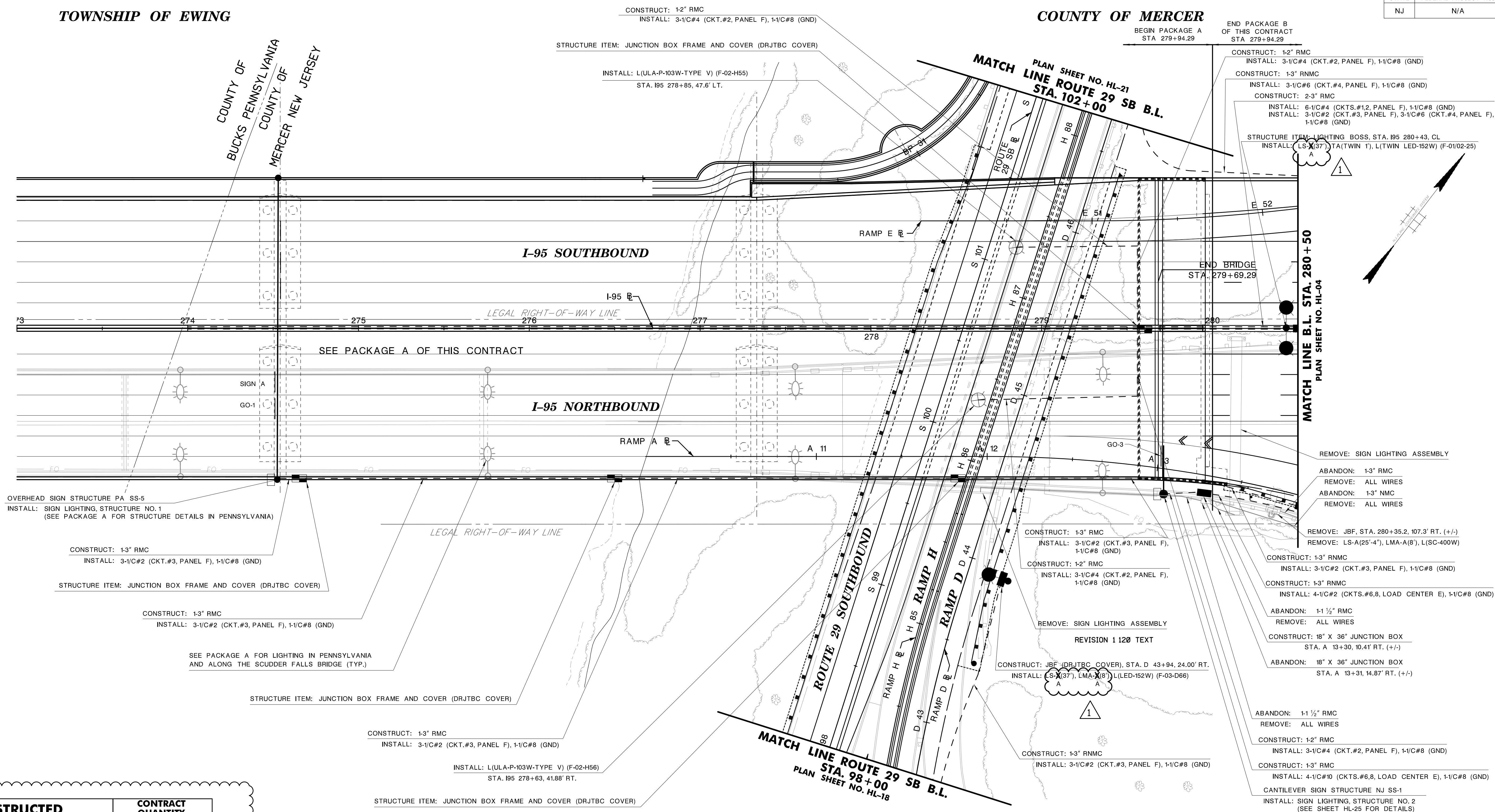
HL-01
HL-42

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1020

TOWNSHIP OF EWING

COUNTY OF MERCER

STATE	FEDERAL PROJECT NO.
NJ	N/A



ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY
701015P	2" RIGID METALLIC CONDUIT	290 LF
701021P	3" RIGID METALLIC CONDUIT	835 LF
701030P	3" RIGID NONMETALLIC CONDUIT	360 LF
701102M	18"X36" JUNCTION BOX	1 U
701117M	JUNCTION BOX FOUNDATION	1 U
701192P	GROUND WIRE, NO. 8 AWG	1345 LF
701195P	MULTIPLE LIGHTING WIRE, NO. 2 AWG	2945 LF
701196P	MULTIPLE LIGHTING WIRE, NO. 4 AWG	1455 LF
701198P	MULTIPLE LIGHTING WIRE, NO. 6 AWG	640 LF
703006M	LIGHTING STANDARD STEEL	2 U
703015M	LIGHTING MAST ARM STEEL	1 U
703021M	SIGN LIGHTING, STRUCTURE NO. 1	LS
703021M	SIGN LIGHTING, STRUCTURE NO. 2	LS
703027M	UNDERDECK LIGHTING TYPE P	2 U
703X01M	LED LUMINAIRE	3 U
	1' TENON ARM MOUNT	2 U
703003M	LIGHTING STANDARD ALUMINUM	2 U
703012M	LIGHTING MAST ARM ALUMINUM	1 U

NOTES:

- SEE PACKAGE A FOR SERVICE PANEL DETAILS FOR ALL LOW LEVEL LIGHTING STANDARDS. SEE SHEET HL-39 FOR SERVICE PANEL DETAILS FOR ALL HIGH MAST AND SIGN LIGHTING AT ROUTE 29 INTERCHANGE.
- SEE STRUCTURE PLANS FOR UNDERDECK LIGHTING ROUTING DETAILS. THE PORTION OF THE 2" RMC CONDUIT FROM THE LUMINAIRE TO POINT WHERE CONDUIT ENTERS THE DECK SHALL BE PAID FOR UNDER PAY ITEM 701015P 2" RIGID METALLIC CONDUIT.

HIGHWAY LIGHTING
 STV 820 BEAR TAVERN ROAD, SUITE 200, TRENTON, NJ 08628
 N.J. CERTIFICATE OF AUTHORIZATION NO. 24GA28018400

RONALD L. MEEK
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 43525

DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION

HIGHWAY LIGHTING PLANS / EXISTING LIGHTING REMOVAL
SCUDDER FALLS BRIDGE REPLACEMENT PROJECT
CONTRACT NO. T-668A

MICHAEL BAKER INTERNATIONAL
 CERTIFICATION OF AUTHORIZATION NO. 24GA27954700

ADDENDUM NO. 8	DH	SDY	12/01/16
REVISION	BY	C'K'D	DATE

MAHER A. SIDANI
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 37787



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CONSTRUCT: 1-3" RMMC
INSTALL: 3-1/C#6 (CKT.#4, PANEL F), 1-1/C#8 (GND)

CONSTRUCT: 1-3" RMC
INSTALL: 16-1/C#2 (CKTS.#1,2,3,4,5,6,7,8, LOAD CENTER E), 1-1/C#8 (GND)

CONSTRUCT: 1-2" RMC
INSTALL: 3-1/C#4 (CKT.#2, PANEL F), 1-1/C#8 (GND)

STRUCTURE ITEM: LIGHTING BOSS, STA. I95 283+68, CL
INSTALL: LS-X(37), TA(TWIN 1), L(TWIN LED-152W) (F-01/02-27)

CONSTRUCT: 10" X 36" JUNCTION BOX (DRJTC COVER)
INSTALL: STA. I95 283+51, CL

CONSTRUCT: 1-3" RMC
INSTALL: 6-1/C#4 (CKTS.#1,2, PANEL F), 1-1/C#8 (GND)

CONSTRUCT: 10" X 36" JUNCTION BOX (DRJTC COVER)
INSTALL: STA. I95 282+17, CL

CONSTRUCT: LIGHTING BOSS, STA. I95 282+07, CL
INSTALL: LS-X(37), TA(TWIN 1), L(TWIN LED-152W) (F-01/02-26)

CONSTRUCT: 1-3" RMC
INSTALL: 6-1/C#4 (CKTS.#1,2, PANEL F), 1-1/C#8 (GND)

CONSTRUCT: 10" X 36" JUNCTION BOX (DRJTC COVER)
INSTALL: STA. I95 280+52, CL

CONSTRUCT: 18" X 36" JUNCTION BOX (DRJTC COVER)
INSTALL: STA. E 52+29, 18.39' LT. (+/-)

CONSTRUCT: 2-3" RMC (CONDUIT CROSSING)
INSTALL: 3-1/C#6 (CKT.#4, PANEL F), 1-1/C#8 (GND)
(1) SPARE

CONSTRUCT: 2-3" RMC (CONDUIT CROSSING)
INSTALL: 3-1/C#2 (CKT.#3, PANEL F), 1-1/C#8 (GND)
(1) SPARE

CONSTRUCT: 1-2" RMC
INSTALL: 3-1/C#4 (CKT.#2, PANEL F), 1-1/C#8 (GND)

CONSTRUCT: 18" X 36" JUNCTION BOX (DRJTC COVER)
INSTALL: STA. A 13+88, 6.33' RT. (+/-)

CONSTRUCT: 1-3" RMMC
INSTALL: 3-1/C#2 (CKT.#3, PANEL F), 1-1/C#8 (GND)

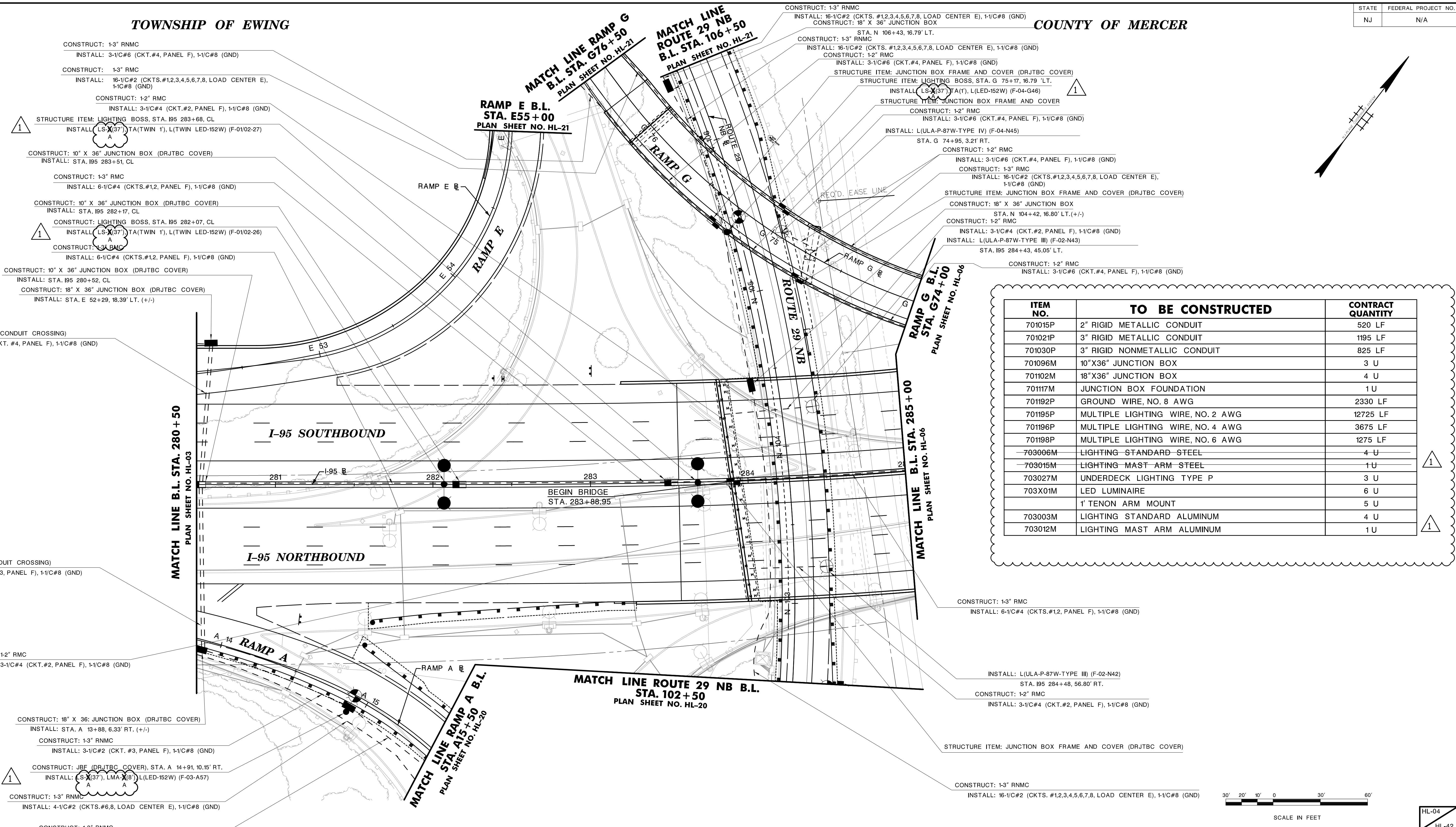
CONSTRUCT: JBC (DRJTC COVER), STA. A 14+91, 10.15' RT.
INSTALL: LS-X(37), LMA-X(8), L(LED-152W) (F-03-A57)

CONSTRUCT: 1-3" RMMC
INSTALL: 4-1/C#2 (CKTS.#6,8, LOAD CENTER E), 1-1/C#8 (GND)

CONSTRUCT: 1-3" RMMC
INSTALL: 3-1/C#2 (CKT.#3, PANEL F), 1-1/C#8 (GND)

NOTES:

- SEE PACKAGE A FOR SERVICE PANEL DETAILS FOR ALL LOW LEVEL LIGHTING STANDARDS. SEE SHEET HL-39 FOR SERVICE PANEL DETAILS FOR ALL HIGH MAST AND SIGN LIGHTING AT ROUTE 29 INTERCHANGE.
- SEE STRUCTURE PLANS FOR UNDERDECK LIGHTING ROUTING DETAILS. THE PORTION OF THE 2" RMC CONDUIT FROM THE LUMINAIRE TO POINT WHERE CONDUIT ENTERS THE DECK SHALL BE PAID FOR UNDER PAY ITEM 701015P 2" RIGID METALLIC CONDUIT.
- SEE HL-05 FOR EXISTING LIGHTING EQUIPMENT ITEMS TO BE REMOVED.



ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY
701015P	2" RIGID METALLIC CONDUIT	520 LF
701021P	3" RIGID METALLIC CONDUIT	1195 LF
701030P	3" RIGID NONMETALLIC CONDUIT	825 LF
701096M	10"X36" JUNCTION BOX	3 U
701102M	18"X36" JUNCTION BOX	4 U
701117M	JUNCTION BOX FOUNDATION	1 U
701192P	GROUND WIRE, NO. 8 AWG	2330 LF
701195P	MULTIPLE LIGHTING WIRE, NO. 2 AWG	12725 LF
701196P	MULTIPLE LIGHTING WIRE, NO. 4 AWG	3675 LF
701198P	MULTIPLE LIGHTING WIRE, NO. 6 AWG	1275 LF
703006M	LIGHTING STANDARD-STEEL	4 U
703015M	LIGHTING MAST ARM STEEL	1 U
703027M	UNDERDECK LIGHTING TYPE P	3 U
703X01M	LED LUMINAIRE	6 U
	1' TENON ARM MOUNT	5 U
703003M	LIGHTING STANDARD ALUMINUM	4 U
703012M	LIGHTING MAST ARM ALUMINUM	1 U



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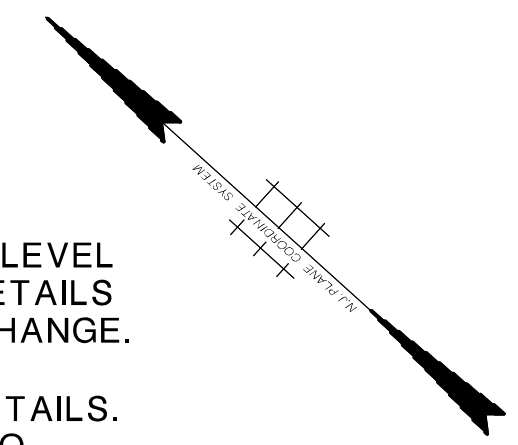
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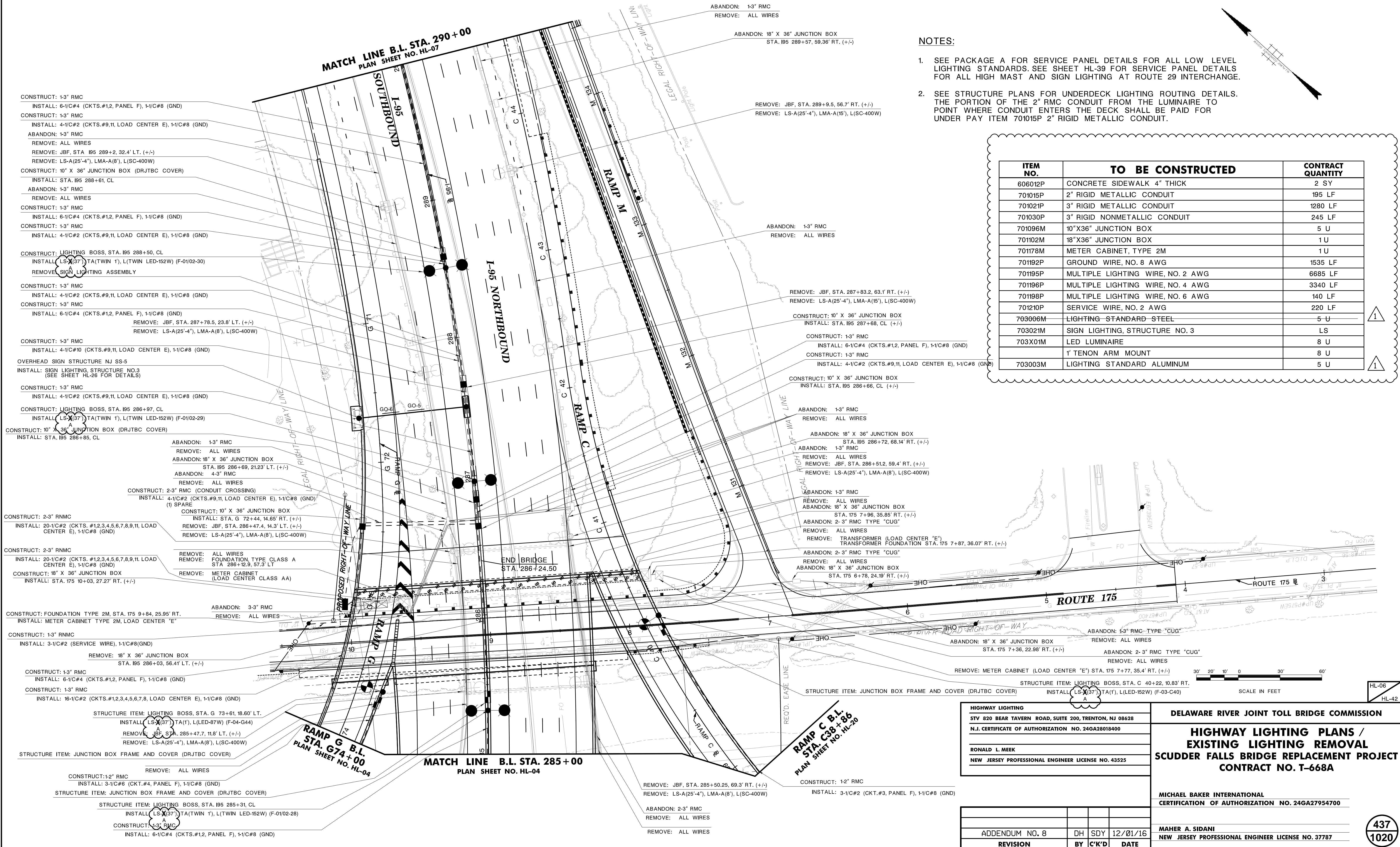
MAHER A. SIDANI
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 37787



NOTES:

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- SEE STRUCTURE PLANS FOR UNDERDECK LIGHTING ROUTING DETAILS. THE PORTION OF THE 2" RMC CONDUIT FROM THE LUMINAIRE TO POINT WHERE CONDUIT ENTERS THE DECK SHALL BE PAID FOR UNDER PAY ITEM 701015P 2" RIGID METALLIC CONDUIT.

ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY
606012P	CONCRETE SIDEWALK 4" THICK	2 SY
701015P	2" RIGID METALLIC CONDUIT	195 LF
701021P	3" RIGID METALLIC CONDUIT	1280 LF
701030P	3" RIGID NONMETALLIC CONDUIT	245 LF
701096M	10"X36" JUNCTION BOX	5 U
701102M	18"X36" JUNCTION BOX	1 U
701178M	METER CABINET, TYPE 2M	1 U
701192P	GROUND WIRE, NO. 8 AWG	1535 LF
701195P	MULTIPLE LIGHTING WIRE, NO. 2 AWG	6685 LF
701196P	MULTIPLE LIGHTING WIRE, NO. 4 AWG	3340 LF
701198P	MULTIPLE LIGHTING WIRE, NO. 6 AWG	140 LF
701210P	SERVICE WIRE, NO. 2 AWG	220 LF
703006M	LIGHTING STANDARD STEEL	5 U
703021M	SIGN LIGHTING STRUCTURE NO. 3	LS
703X01M	LED LUMINAIRE	8 U
	1' TENON ARM MOUNT	8 U
703003M	LIGHTING STANDARD ALUMINUM	5 U



CONSTRUCT: 1-3" RMC
INSTALL: 6-1/C#4 (CKTS.#1,2, PANEL F), 1-1/C#8 (GND)

CONSTRUCT: 1-3" RMC
INSTALL: 4-1/C#2 (CKTS.#9,11, LOAD CENTER E), 1-1/C#8 (GND)

ABANDON: 1-3" RMC
REMOVE: ALL WIRES
REMOVE: JBF, STA. 195 289+2, 32.4' LT. (+/-)
REMOVE: LS-A(25'-4"), LMA-A(8"), L(SC-400W)

CONSTRUCT: 10" X 36" JUNCTION BOX (DRJTBC COVER)
INSTALL: STA. 195 288+61, CL

ABANDON: 1-3" RMC
REMOVE: ALL WIRES

CONSTRUCT: 1-3" RMC
INSTALL: 6-1/C#4 (CKTS.#1,2, PANEL F), 1-1/C#8 (GND)

CONSTRUCT: 1-3" RMC
INSTALL: 4-1/C#2 (CKTS.#9,11, LOAD CENTER E), 1-1/C#8 (GND)

CONSTRUCT: LIGHTING BOSS, STA. 195 288+50, CL
INSTALL: LS-X(37) TA(TWIN 1), L(TWIN LED-152W) (F-0102-30)
REMOVE: SIGN LIGHTING ASSEMBLY

CONSTRUCT: 1-3" RMC
INSTALL: 4-1/C#2 (CKTS.#9,11, LOAD CENTER E), 1-1/C#8 (GND)

CONSTRUCT: 1-3" RMC
INSTALL: 6-1/C#4 (CKTS.#1,2, PANEL F), 1-1/C#8 (GND)
REMOVE: JBF, STA. 287+78.5, 23.8' LT. (+/-)
REMOVE: LS-A(25'-4"), LMA-A(8"), L(SC-400W)

CONSTRUCT: 1-3" RMC
INSTALL: 4-1/C#10 (CKTS.#9,11, LOAD CENTER E), 1-1/C#8 (GND)

OVERHEAD SIGN STRUCTURE NJ SS-5
INSTALL: SIGN LIGHTING STRUCTURE NO.3 (SEE SHEET HL-26 FOR DETAILS)

CONSTRUCT: 1-3" RMC
INSTALL: 4-1/C#2 (CKTS.#9,11, LOAD CENTER E), 1-1/C#8 (GND)

CONSTRUCT: LIGHTING BOSS, STA. 195 286+97, CL
INSTALL: LS-X(37) TA(TWIN 1), L(TWIN LED-152W) (F-0102-29)

CONSTRUCT: 10" X 36" JUNCTION BOX (DRJTBC COVER)
INSTALL: STA. 195 286+85, CL

ABANDON: 1-3" RMC
REMOVE: ALL WIRES
ABANDON: 18" X 36" JUNCTION BOX
STA. 195 286+69, 21.23' LT. (+/-)
ABANDON: 4-3" RMC
REMOVE: ALL WIRES
CONSTRUCT: 2-3" RMC (CONDUIT CROSSING)
INSTALL: 4-1/C#2 (CKTS.#9,11, LOAD CENTER E), 1-1/C#8 (GND)
(1) SPARE
CONSTRUCT: 10" X 36" JUNCTION BOX
INSTALL: STA. G 72+44, 14.65' RT. (+/-)
REMOVE: JBF, STA. 286+47.4, 14.3' LT. (+/-)
REMOVE: LS-A(25'-4"), LMA-A(8"), L(SC-400W)

CONSTRUCT: 2-3" RMC
INSTALL: 20-1/C#2 (CKTS.#1,2,3,4,5,6,7,8,9,11, LOAD CENTER E), 1-1/C#8 (GND)

CONSTRUCT: 2-3" RMC
INSTALL: 20-1/C#2 (CKTS.#1,2,3,4,5,6,7,8,9,11, LOAD CENTER E), 1-1/C#8 (GND)
CONSTRUCT: 18" X 36" JUNCTION BOX
INSTALL: STA. 175 10+03, 27.27' RT. (+/-)

ABANDON: 3-3" RMC
REMOVE: ALL WIRES

CONSTRUCT: FOUNDATION TYPE 2M, STA. 175 9+84, 25.95' RT.
INSTALL: METER CABINET TYPE 2M, LOAD CENTER "E"

CONSTRUCT: 1-3" RMC
INSTALL: 3-1/C#2 (SERVICE WIRE), 1-1/C#8(GND)
REMOVE: 18" X 36" JUNCTION BOX
STA. 195 286+03, 56.41' LT. (+/-)

CONSTRUCT: 1-3" RMC
INSTALL: 6-1/C#4 (CKTS.#1,2, PANEL F), 1-1/C#8 (GND)

CONSTRUCT: 1-3" RMC
INSTALL: 16-1/C#2 (CKTS.#1,2,3,4,5,6,7,8, LOAD CENTER E), 1-1/C#8 (GND)

STRUCTURE ITEM: LIGHTING BOSS, STA. G 73+61, 18.60' LT.
INSTALL: LS-X(37) TA(1), L(LED-87W) (F-04-G44)
REMOVE: JBF, STA. 285+47.7, 11.8' LT. (+/-)
REMOVE: LS-A(25'-4"), LMA-A(8"), L(SC-400W)

STRUCTURE ITEM: JUNCTION BOX FRAME AND COVER (DRJTBC COVER)

CONSTRUCT: 1-2" RMC
INSTALL: 3-1/C#6 (CKT.#4, PANEL F), 1-1/C#8 (GND)
STRUCTURE ITEM: JUNCTION BOX FRAME AND COVER (DRJTBC COVER)

STRUCTURE ITEM: LIGHTING BOSS, STA. 195 285+31, CL
INSTALL: LS-X(37) TA(TWIN 1), L(TWIN LED-152W) (F-0102-28)
CONSTRUCT: 1-3" RMC
INSTALL: 6-1/C#4 (CKTS.#1,2, PANEL F), 1-1/C#8 (GND)

REMOVE: ALL WIRES

REMOVE: JBF, STA. 285+50.25, 69.3' RT. (+/-)
REMOVE: LS-A(25'-4"), LMA-A(8"), L(SC-400W)

ABANDON: 2-3" RMC
REMOVE: ALL WIRES

REMOVE: ALL WIRES

CONSTRUCT: 1-2" RMC
INSTALL: 3-1/C#2 (CKT.#3, PANEL F), 1-1/C#8 (GND)

RAMP G B.L. STA. 74+00
PLAN SHEET NO. HL-04

MATCH LINE B.L. STA. 285+00
PLAN SHEET NO. HL-04

RAMP C B.L. STA. C38+86
PLAN SHEET NO. HL-20

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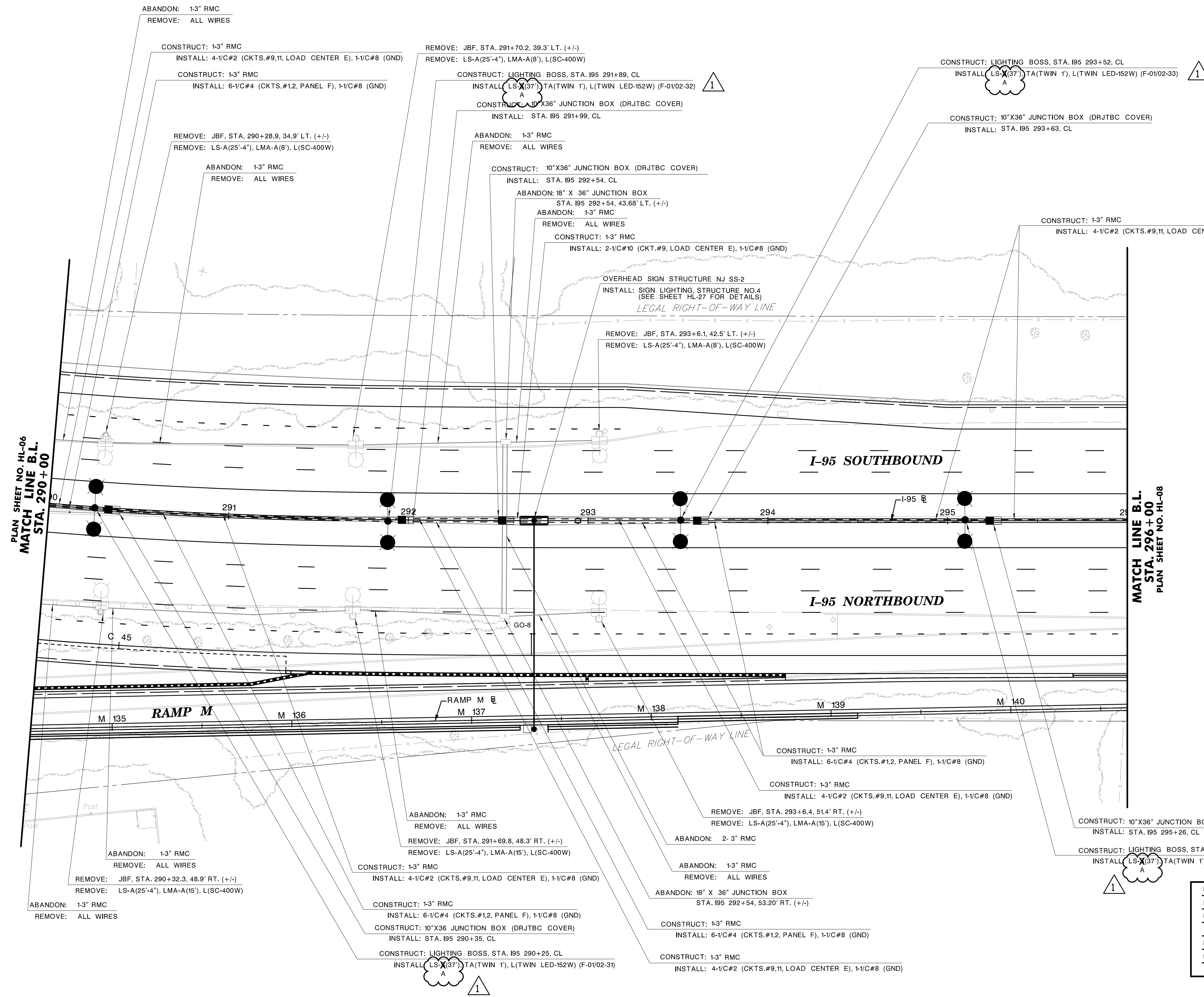
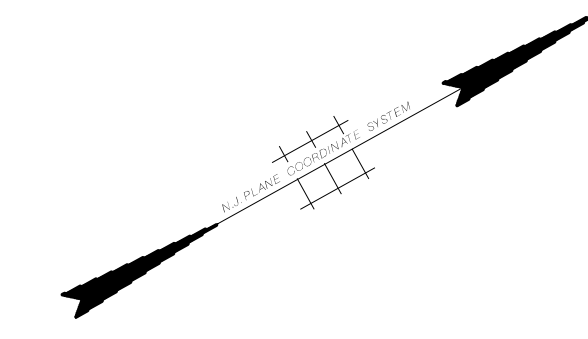
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NOTE:

1. SEE PACKAGE A FOR SERVICE PANEL DETAILS FOR ALL LOW LEVEL LIGHTING STANDARDS. SEE SHEET HL-39 FOR SERVICE PANEL DETAILS FOR ALL HIGH MAST AND SIGN LIGHTING AT ROUTE 29 INTERCHANGE.

ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY
701021P	3" RIGID METALLIC CONDUIT	1330 LF
701096M	10"X36" JUNCTION BOX	5 U
701192P	GROUND WIRE, NO. 8 AWG	1245 LF
701195P	MULTIPLE LIGHTING WIRE, NO. 2 AWG	2585 LF
701196P	MULTIPLE LIGHTING WIRE, NO. 4 AWG	3485 LF
703006M	LIGHTING STANDARD STEEL	4 U
703021M	SIGN LIGHTING, STRUCTURE NO. 4	LS
703X01M	LED LUMINAIRE	8 U
	1' TENON ARM MOUNT	8 U
703003M	LIGHTING STANDARD ALUMINUM	4 U



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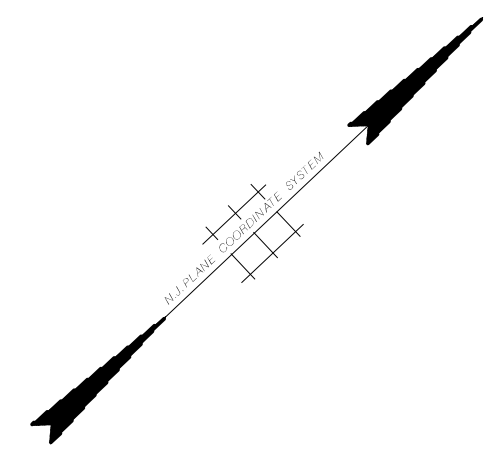
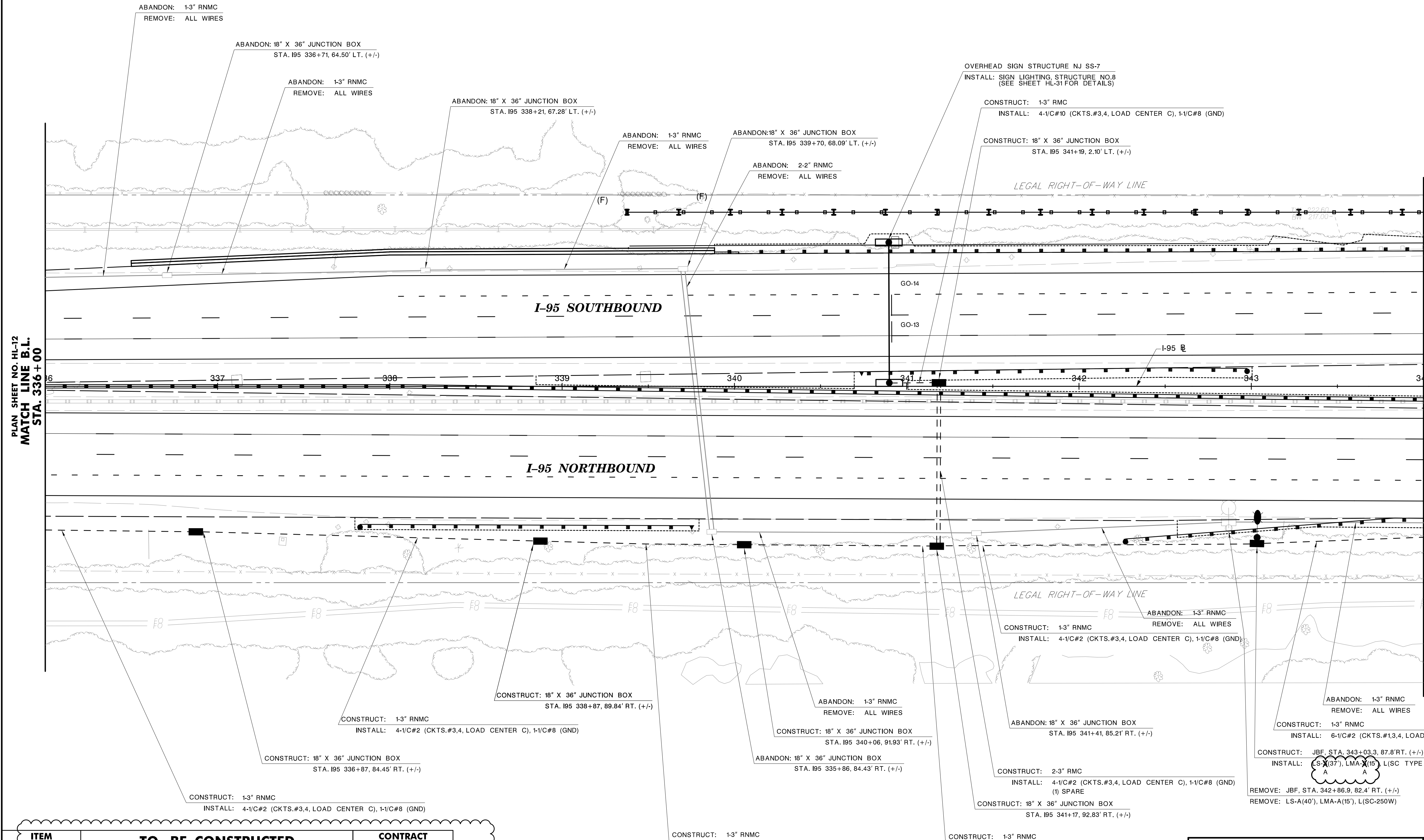
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PLAN SHEET NO. HL-12
MATCH LINE B.L.
STA. 336+00

MATCH LINE B.L.
STA. 344+00
PLAN SHEET NO. HL-14

ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY
701021P	3" RIGID METALLIC CONDUIT	245 LF
701030P	3" RIGID NONMETALLIC CONDUIT	885 LF
701102M	18"X36" JUNCTION BOX	5 U
701117M	JUNCTION BOX FOUNDATION	1 U
701192P	GROUND WIRE, NO. 8 AWG	1025 LF
701195P	MULTIPLE LIGHTING WIRE, NO. 2 AWG	4175 LF
703006M	LIGHTING STANDARD STEEL	1 U
703015M	LIGHTING MAST ARM STEEL	1 U
703018M	LUMINAIRE	1 U
703021M	SIGN LIGHTING, STRUCTURE NO. 8	LS
703003M	LIGHTING STANDARD ALUMINUM	1 U
703012M	LIGHTING MAST ARM ALUMINUM	1 U

NOTE:
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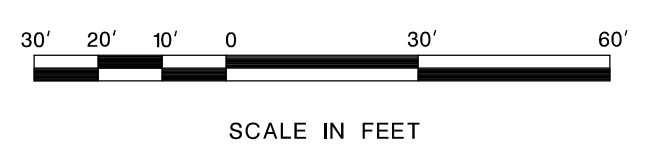
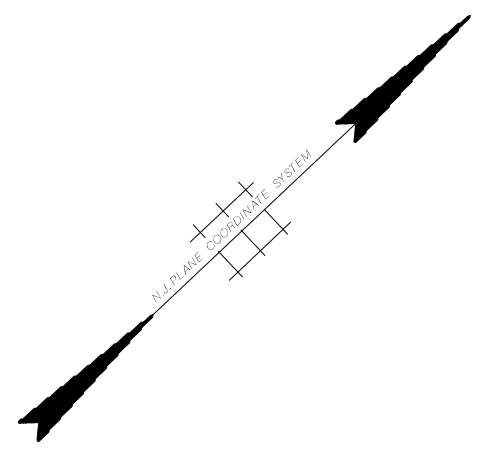
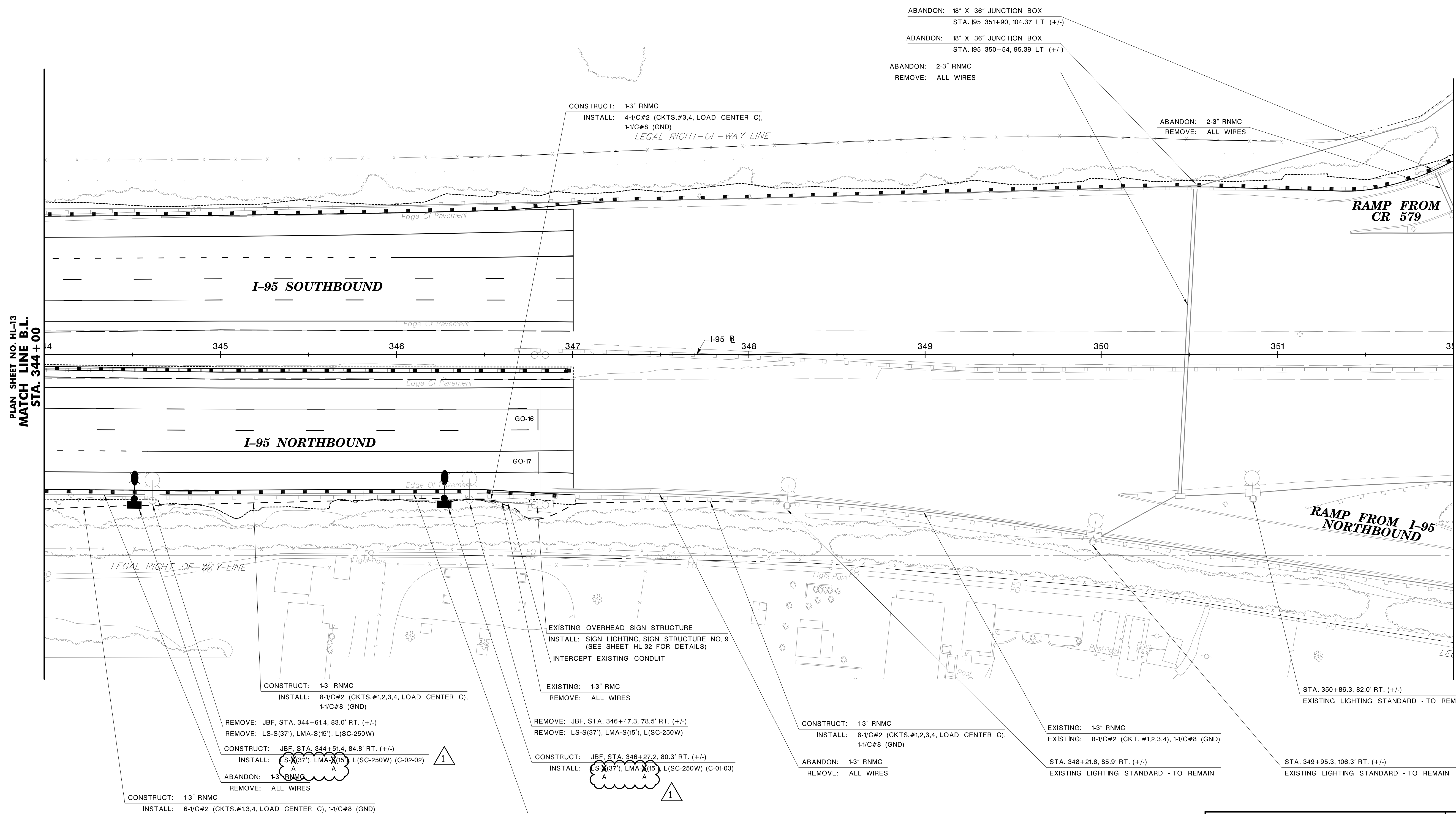
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PLAN SHEET NO. HL-13
MATCH LINE B.L.
STA. 344+00

MATCH LINE B.L.
STA. 352+00
PLAN SHEET NO. HL-15

ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY
701030P	3" RIGID NONMETALLIC CONDUIT	480 LF
701117M	JUNCTION BOX FOUNDATION	2 U
701192P	GROUND WIRE, NO. 8 AWG	480 LF
701195P	MULTIPLE LIGHTING WIRE, NO. 2 AWG	3805 LF
703006M	LIGHTING STANDARD STEEL	2 U
703015M	LIGHTING MAST ARM STEEL	2 U
703018M	LUMINAIRE	2 U
703021M	SIGN LIGHTING, STRUCTURE NO. 9	LS
703003M	LIGHTING STANDARD ALUMINUM	2 U
703012M	LIGHTING MAST ARM ALUMINUM	2 U

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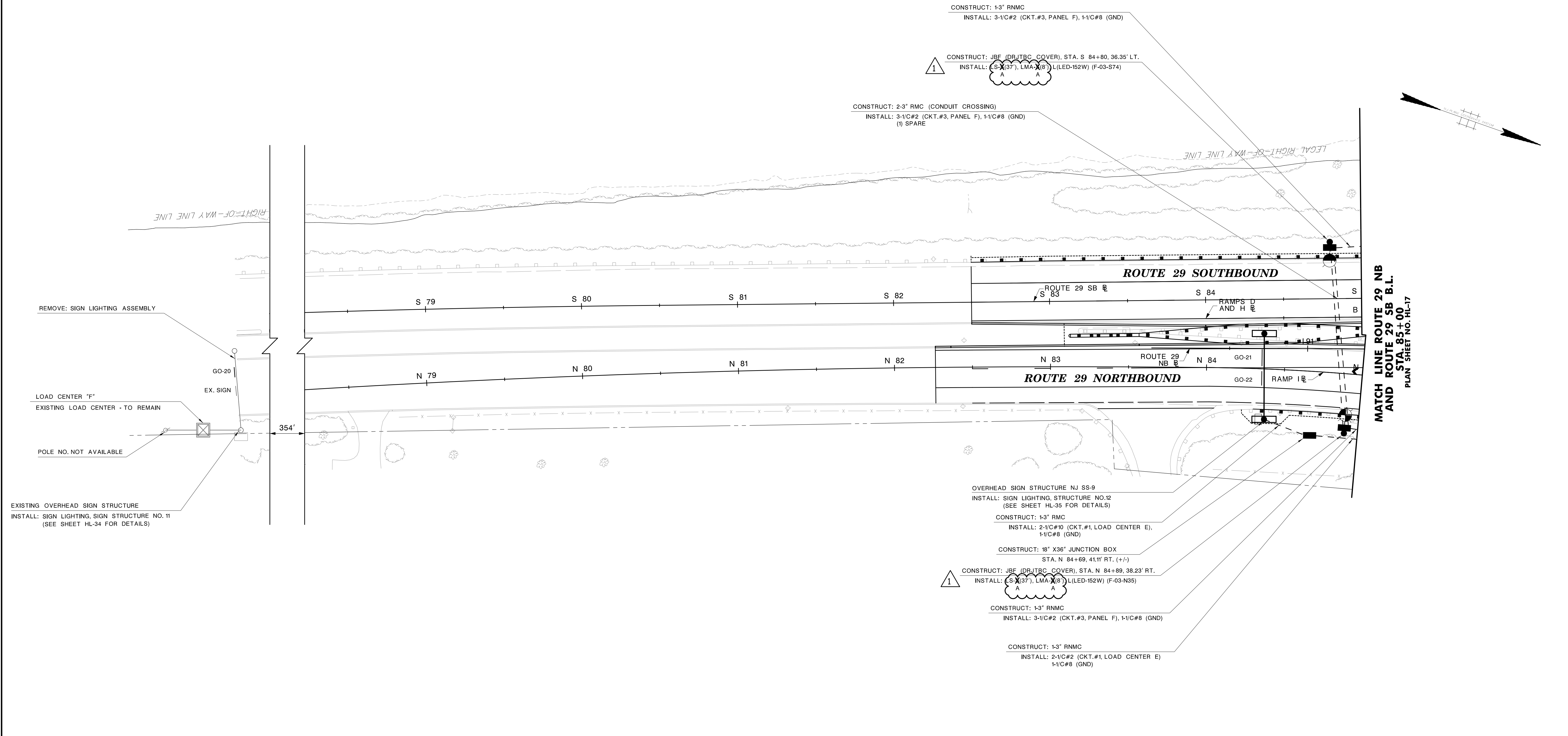
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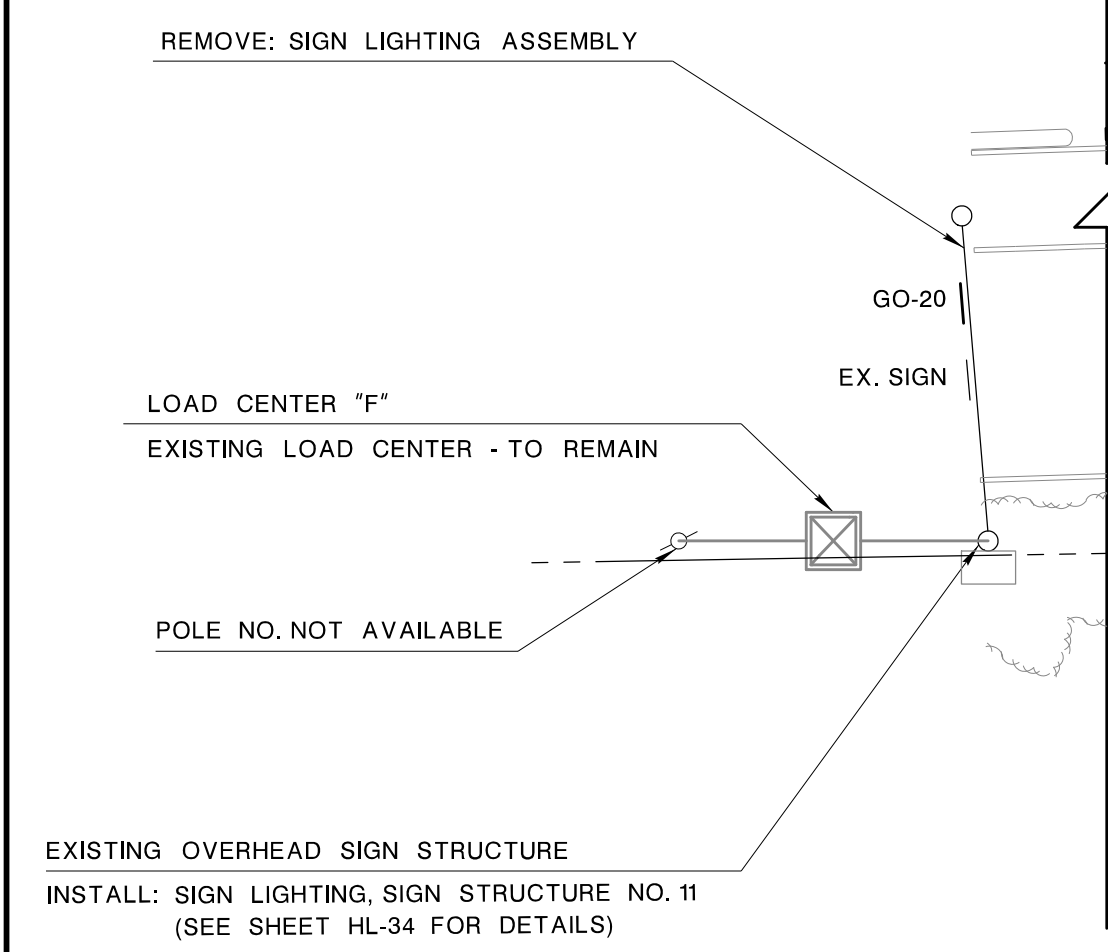
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MATCH LINE ROUTE 29 NB
 AND ROUTE 29 SB B.L.
 STA. 85+00
 PLAN SHEET NO. HL-17



OVERHEAD SIGN STRUCTURE NJ SS-9
 INSTALL: SIGN LIGHTING, STRUCTURE NO.12
 (SEE SHEET HL-35 FOR DETAILS)

CONSTRUCT: 1-3" RMC
 INSTALL: 2-1/2" #10 (CKT.#1, LOAD CENTER E),
 1-1/2" #8 (GND)

CONSTRUCT: 18" X36" JUNCTION BOX
 STA. N 84+69, 41.11' RT. (+/-)

CONSTRUCT: JBF (DRJTBC COVER), STA. N 84+89, 38.23' RT.
 INSTALL: (LS)(37'), LMA (8') L(LED-152W) (F-03-N35)

CONSTRUCT: 1-3" RMC
 INSTALL: 3-1/2" #2 (CKT.#3, PANEL F), 1-1/2" #8 (GND)

CONSTRUCT: 1-3" RMC
 INSTALL: 2-1/2" #2 (CKT.#1, LOAD CENTER E)
 1-1/2" #8 (GND)



ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY
701021P	3" RIGID METALLIC CONDUIT	295 LF
701030P	3" RIGID NONMETALLIC CONDUIT	70 LF
701102M	18" X36" JUNCTION BOX	1 U
701117M	JUNCTION BOX FOUNDATION	2 U
701192P	GROUND WIRE, NO. 8 AWG	235 LF
701195P	MULTIPLE LIGHTING WIRE, NO. 2 AWG	560 LF
703006M	LIGHTING STANDARD STEEL	2 U
703015M	LIGHTING MAST ARM STEEL	2 U
703021M	SIGN LIGHTING, STRUCTURE NO. 11	LS
703021M	SIGN LIGHTING, STRUCTURE NO. 12	LS
703X01M	LED LUMINAIRE	2 U
703003M	LIGHTING STANDARD ALUMINUM	2 U
703012M	LIGHTING MAST ARM ALUMINUM	2 U

NOTE:

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RONALD L. MEEK
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 43525

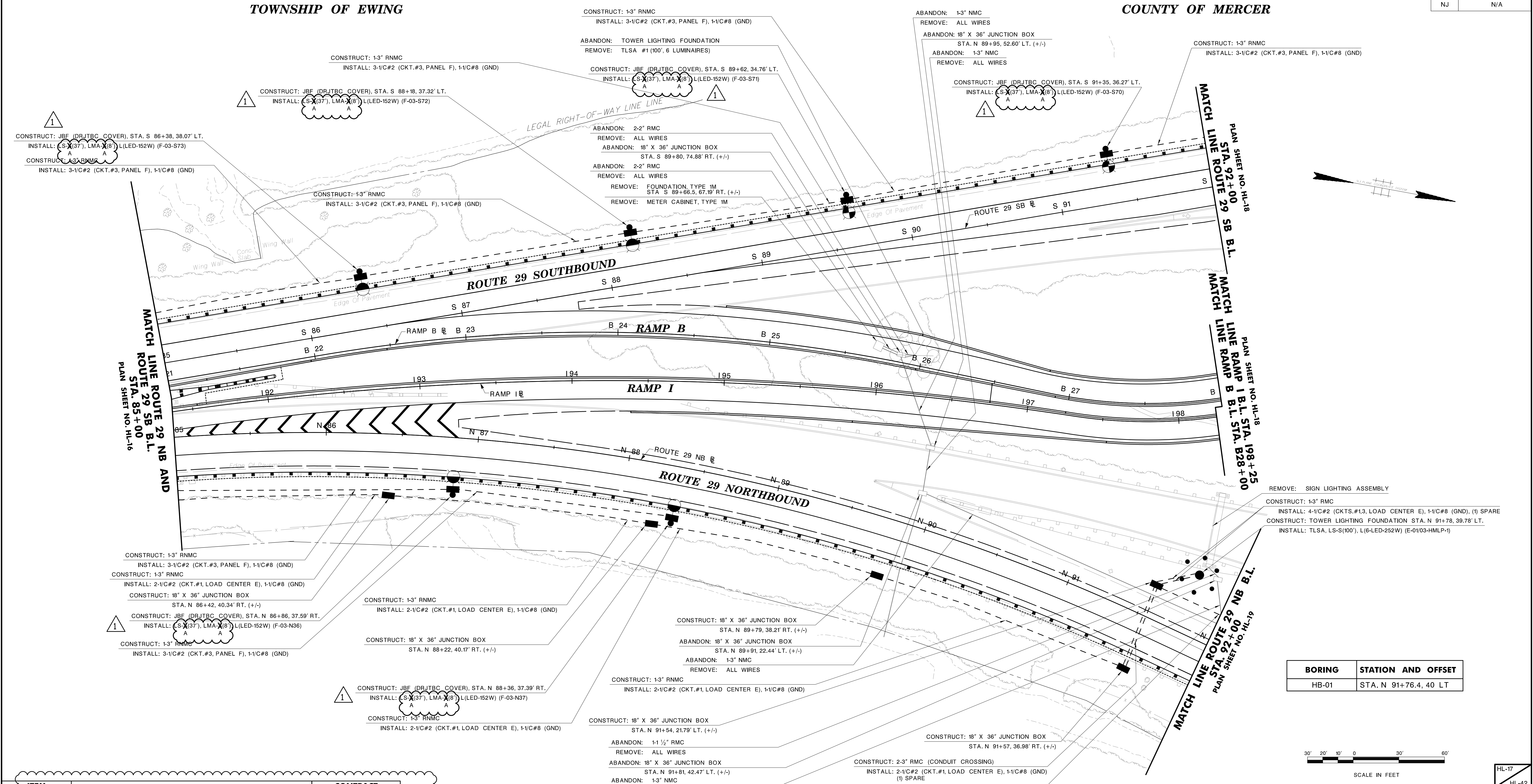
DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION

HIGHWAY LIGHTING PLANS
SCUDDER FALLS BRIDGE REPLACEMENT PROJECT
CONTRACT NO. T-668A

MICHAEL BAKER INTERNATIONAL
 CERTIFICATION OF AUTHORIZATION NO. 24GA27954700

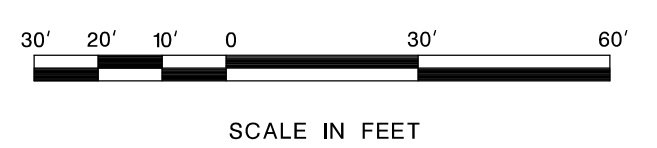
ADDENDUM NO. 8	DH	SDY	12/01/16
REVISION	BY	C'K'D	DATE

MAHER A. SIDANI
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 37787



REMOVE: SIGN LIGHTING ASSEMBLY
 CONSTRUCT: 1-3" RMC
 INSTALL: 4-1/C#2 (CKTS.#1,3, LOAD CENTER E), 1-1/C#8 (GND), (1) SPARE
 CONSTRUCT: TOWER LIGHTING FOUNDATION STA. N 91+78, 39.78' LT.
 INSTALL: TLSA, LS-S(100'), L(6-LED-252W) (E-01/03-HMLP-1)

BORING	STATION AND OFFSET
HB-01	STA. N 91+76.4, 40 LT



ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY
701021P	3" RIGID METALLIC CONDUIT	205 LF
701030P	3" RIGID NONMETALLIC CONDUIT	1885 LF
701102M	18"X36" JUNCTION BOX	5 U
701117M	JUNCTION BOX FOUNDATION	6 U
701192P	GROUND WIRE, NO. 8 AWG	1985 LF
701195P	MULTIPLE LIGHTING WIRE, NO. 2 AWG	5270 LF
703006M	LIGHTING STANDARD STEEL	6 U
703015M	LIGHTING MAST ARM STEEL	6 U
703030M	TOWER LIGHTING	1 U
703X01M	LED LUMINAIRE	6 U
703003M	LIGHTING STANDARD ALUMINUM	6 U
703012M	LIGHTING MAST ARM ALUMINUM	6 U

NOTE:
 1. SEE PACKAGE A FOR SERVICE PANEL DETAILS FOR ALL LOW LEVEL LIGHTING STANDARDS. SEE SHEET HL-39 FOR SERVICE PANEL DETAILS FOR ALL HIGH MAST AND SIGN LIGHTING AT ROUTE 29 INTERCHANGE.
 2. TOWER LIGHT LUMINAIRE SHALL BE PAID FOR UNDER PAY ITEM 703018M LUMINAIRE.

HIGHWAY LIGHTING
 STV 820 BEAR TAVERN ROAD, SUITE 200, TRENTON, NJ 08628
 N.J. CERTIFICATE OF AUTHORIZATION NO. 24GA28018400
 RONALD L. MEEK
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 43525

DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION
HIGHWAY LIGHTING PLANS / EXISTING LIGHTING REMOVAL
SCUDDER FALLS BRIDGE REPLACEMENT PROJECT
CONTRACT NO. T-668A

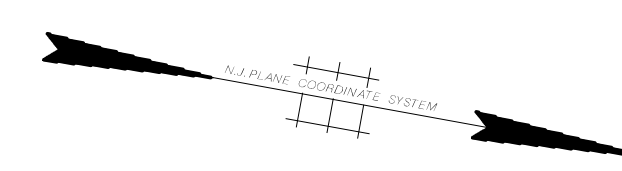
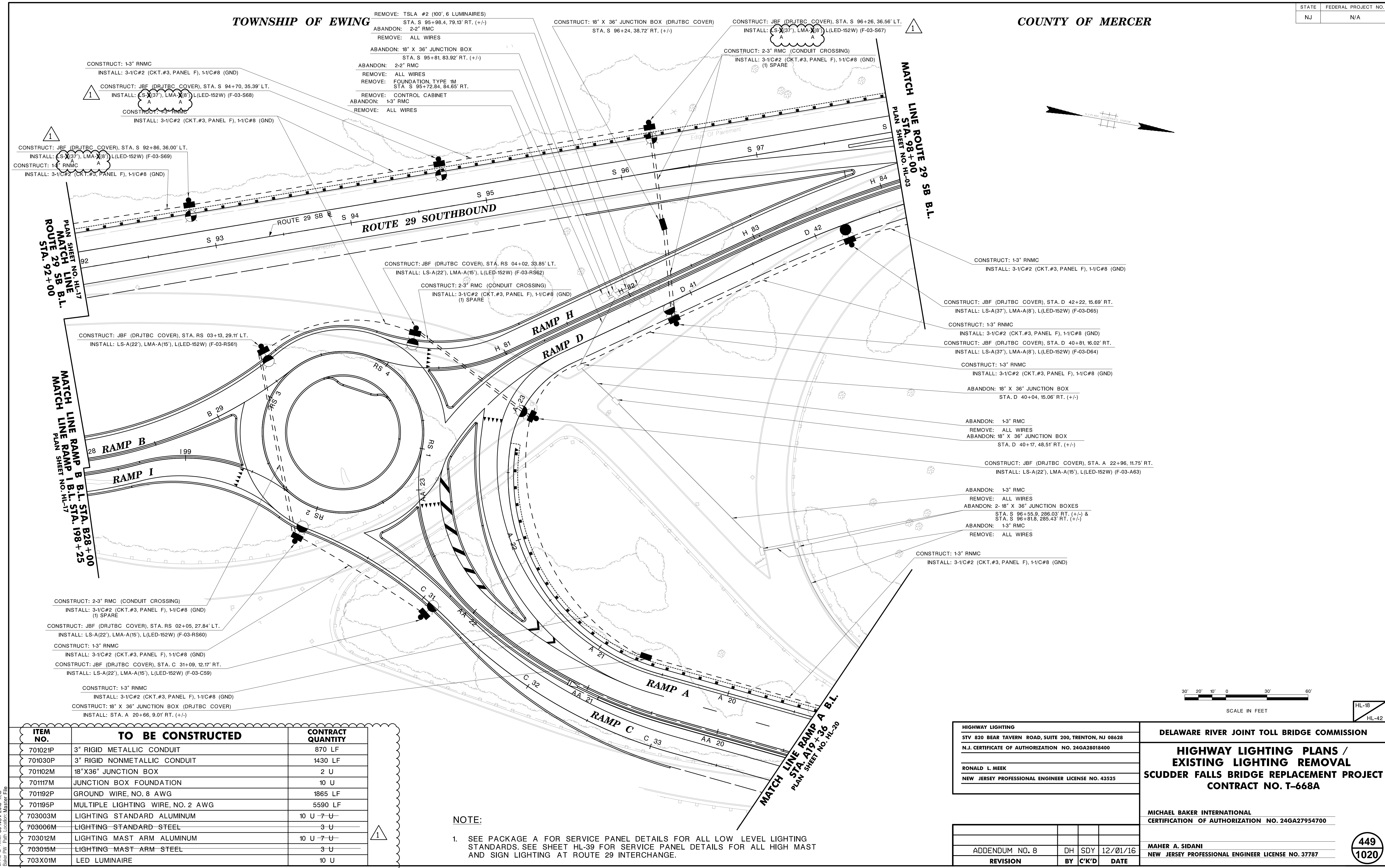
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 CERTIFICATION OF AUTHORIZATION NO. 24GA27954700

MAHER A. SIDANI
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 37787

ADDENDUM NO.	BY	DATE
8	DH SDY	12/01/16
REVISION	BY	DATE

TOWNSHIP OF EWING

COUNTY OF MERCER



ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY
701021P	3" RIGID METALLIC CONDUIT	870 LF
701030P	3" RIGID NONMETALLIC CONDUIT	1430 LF
701102M	18" X 36" JUNCTION BOX	2 U
701117M	JUNCTION BOX FOUNDATION	10 U
701192P	GROUND WIRE, NO. 8 AWG	1865 LF
701195P	MULTIPLE LIGHTING WIRE, NO. 2 AWG	5590 LF
703003M	LIGHTING STANDARD ALUMINUM	10 U - 7 U
703006M	LIGHTING STANDARD STEEL	3 U
703012M	LIGHTING MAST ARM ALUMINUM	10 U - 7 U
703015M	LIGHTING MAST ARM STEEL	3 U
703X01M	LED LUMINAIRE	10 U

NOTE:

- SEE PACKAGE A FOR SERVICE PANEL DETAILS FOR ALL LOW LEVEL LIGHTING STANDARDS. SEE SHEET HL-39 FOR SERVICE PANEL DETAILS FOR ALL HIGH MAST AND SIGN LIGHTING AT ROUTE 29 INTERCHANGE.

HIGHWAY LIGHTING
 STV 820 BEAR TAVERN ROAD, SUITE 200, TRENTON, NJ 08628
 N.J. CERTIFICATE OF AUTHORIZATION NO. 24GA28018400

RONALD L. MEEK
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 43525

DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION

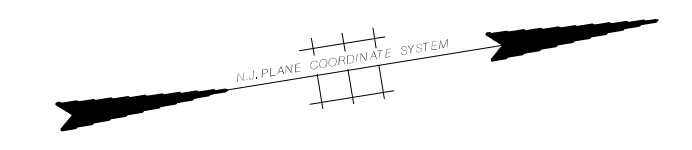
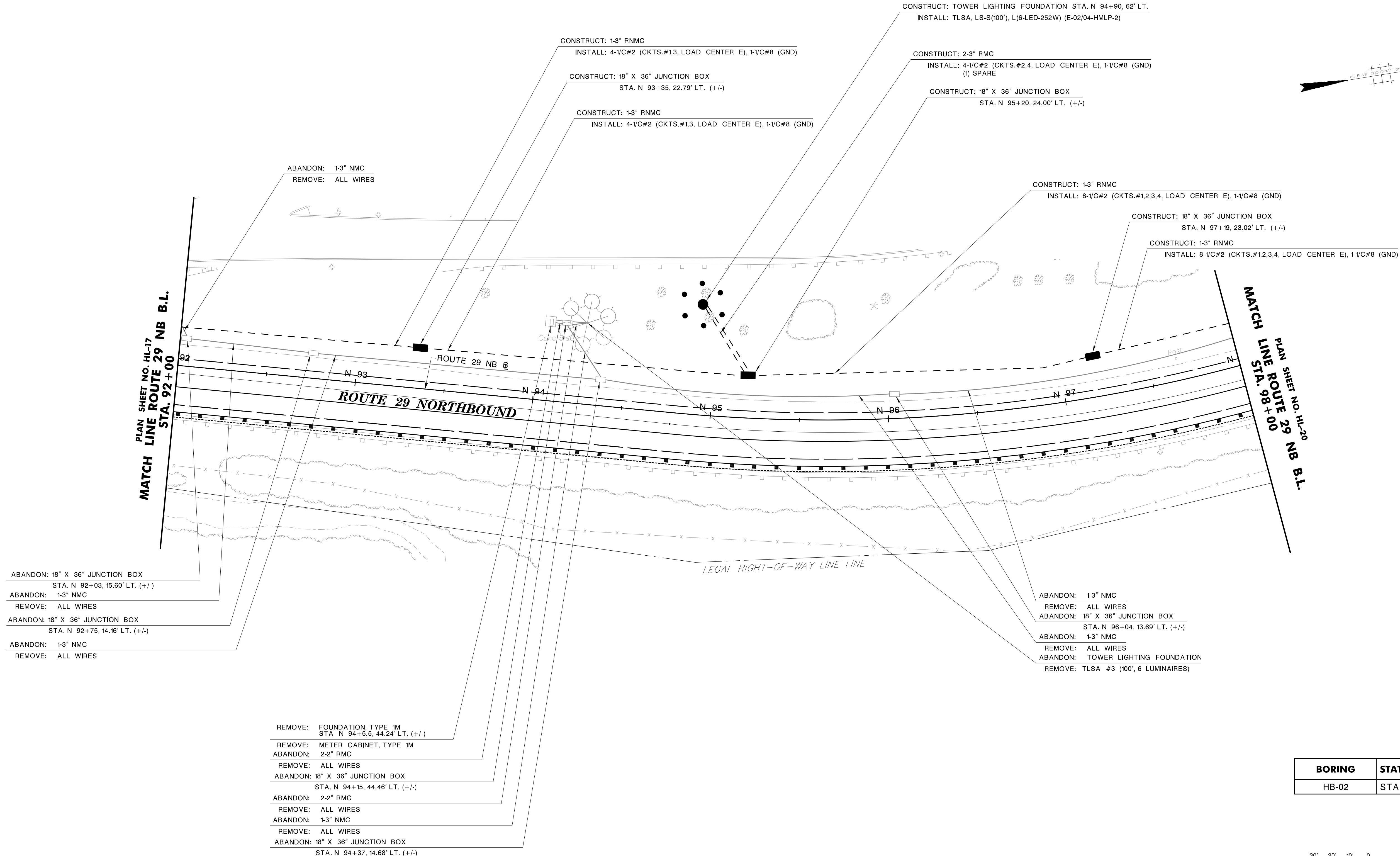
HIGHWAY LIGHTING PLANS / EXISTING LIGHTING REMOVAL
SCUDDER FALLS BRIDGE REPLACEMENT PROJECT
CONTRACT NO. T-668A

ADDENDUM NO. 8	DH	SDY	12/01/16
REVISION	BY	C'K'D	DATE

MICHAEL BAKER INTERNATIONAL
 CERTIFICATION OF AUTHORIZATION NO. 24GA27954700

MAHER A. SIDANI
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 37787

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BORING	STATION AND OFFSET
HB-02	STA. N 94+90.6, 62 RT



HL-19
HL-42

NOTE:

- SEE PACKAGE A FOR SERVICE PANEL DETAILS FOR ALL LOW LEVEL LIGHTING STANDARDS. SEE SHEET HL-39 FOR SERVICE PANEL DETAILS FOR ALL HIGH MAST AND SIGN LIGHTING AT ROUTE 29 INTERCHANGE.
- TOWER LIGHT LUMINAIRE SHALL BE PAID FOR UNDER PAY ITEM 703010M LUMINAIRE.

ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY
701021P	3" RIGID METALLIC CONDUIT	110 LF
701030P	3" RIGID NONMETALLIC CONDUIT	655 LF
701102M	18"X36" JUNCTION BOX	3 U
701192P	GROUND WIRE, NO. 8 AWG	710 LF
701195P	MULTIPLE LIGHTING WIRE, NO. 2 AWG	4035 LF
703030M	TOWER LIGHTING	1 U

HIGHWAY LIGHTING
STV 820 BEAR TAVERN ROAD, SUITE 200, TRENTON, NJ 08628
N.J. CERTIFICATE OF AUTHORIZATION NO. 24GA28018400

RONALD L. MEEK
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 43525

DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION

HIGHWAY LIGHTING PLANS / EXISTING LIGHTING REMOVAL
SCUDDER FALLS BRIDGE REPLACEMENT PROJECT
CONTRACT NO. T-668A

MICHAEL BAKER INTERNATIONAL
CERTIFICATION OF AUTHORIZATION NO. 24GA27954700

MAHER A. SIDANI
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 37787

ADDENDUM NO. 8	DH	SDY	12/01/16
REVISION	BY	C'K'D	DATE

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1020

USER: HENDL
DATE & TIME: 30-NOV-2016 11:19
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TOWNSHIP OF EWING

COUNTY OF MERCER

STATE	FEDERAL PROJECT NO.
NJ	N/A

OVERHEAD SIGN STRUCTURE NJ SS-11
 INSTALL: SIGN LIGHTING, STRUCTURE NO.14
 (SEE SHEET HL-37 FOR DETAILS)
 CONSTRUCT: 1-3" RNMIC
 INSTALL: 4-1/C#2 (CKTS.#6,8, LOAD CENTER E), 1-1/C#8 (GND)
 CONSTRUCT: 1-3" RMC
 INSTALL: 4-1/C#10 (CKTS.#5,7, LOAD CENTER E), 1-1/C#8 (GND)
 CONSTRUCT: 18" X 36" JUNCTION BOX
 STA. A 15+99, 10.74' RT. (+/-)
 CONSTRUCT: 1-3" RNMIC
 INSTALL: 8-1/C#2 (CKTS.#5,6,7,8, LOAD CENTER E), 1-1/C#8 (GND)
 CONSTRUCT: 1-3" RNMIC
 INSTALL: 3-1/C#2 (CKT.#3, PANEL F), 1-1/C#8 (GND)
 CONSTRUCT: JBF (DRJTBC COVER), STA. A 16+33, 7.48' RT.
 INSTALL: LS(X37), LMA(X18) L(LED-152W) (F-03-A58)
 CONSTRUCT: 1-3" RNMIC
 INSTALL: 3-1/C#2 (CKT.#3, PANEL F), 1-1/C#8 (GND)
 ABANDON: 18" X 36" JUNCTION BOX
 STA. N 99+68, 118.32' LT. (+/-)
 ABANDON: 1-3" NMC
 REMOVE: ALL WIRES
 ABANDON: 18" X 36" JUNCTION BOX
 STA. N 99+66, 150.16' LT. (+/-)
 ABANDON: 1-3" NMC
 REMOVE: ALL WIRES
 ABANDON: 18" X 36" JUNCTION BOX
 STA. N 99+64, 181.71' LT. (+/-)
 ABANDON: 1-3" NMC
 REMOVE: ALL WIRES
 REMOVE: FOUNDATION, TYPE 1M
 STA. N 98+94.4, 56.73' LT. (+/-)
 REMOVE: CONTROL CABINET
 ABANDON: 2-2" RMC
 REMOVE: ALL WIRES
 ABANDON: 18" X 36" JUNCTION BOX
 STA. N 98+88, 65.48' LT. (+/-)
 ABANDON: 2-2" RMC
 REMOVE: ALL WIRES
 CONSTRUCT: 1-3" RMC
 INSTALL: 4-1/C#10 (CKTS.#6,8, LOAD CENTER E), 1-1/C#8 (GND)
 REMOVE: TLSA #4 (100', 6 LUMINAIRES)
 STA. N 98+79.1, 64.12' LT. (+/-)
 ABANDON: 1-3" NMC
 REMOVE: ALL WIRES
 ABANDON: 18" X 36" JUNCTION BOX
 STA. A 19+13, 55.87' RT. (+/-)
 CONSTRUCT: 1-3" RMC
 INSTALL: 3-1/C#2 (CKT.#3, PANEL F), 1-1/C#8 (GND)

ABANDON: 1-3" NMC
 REMOVE: ALL WIRES

ABANDON: 1-3" NMC
 REMOVE: ALL WIRES
 ABANDON: 18" X 36" JUNCTION BOX
 STA. N 102+38, 75.43' LT. (+/-)
 ABANDON: 1-3" NMC
 REMOVE: ALL WIRES

CONSTRUCT: 1-3" RNMIC
 INSTALL: 16-1/C#2 (CKTS.#1,2,3,4,5,6,7,8, LOAD CENTER E), 1-1/C#8 (GND)

CONSTRUCT: JBF (DRJTBC COVER), STA. N 102+50, 33.85' RT.
 INSTALL: LS(X37), LMA(X18) L(LED-152W) (F-03-N41)

CONSTRUCT: 18" X 36" JUNCTION BOX
 STA. N 102+44, 22.15' LT.

CONSTRUCT: 1-3" RNMIC
 INSTALL: 3-1/C#2 (CKT.#3, PANEL F), 1-1/C#8 (GND)

CONSTRUCT: 1-3" RNMIC
 INSTALL: 16-1/C#2 (CKTS.#1,2,3,4,5,6,7,8, LOAD CENTER E), 1-1/C#8 (GND)

CONSTRUCT: 1-2" RMC
 INSTALL: 3-1/C#2 (CKT.#3, PANEL F), 1-1/C#8 (GND)
 STRUCTURE ITEM: JUNCTION BOX FRAME AND COVER (DRJTBC COVER)

CONSTRUCT: 1-2" RMC
 INSTALL: 3-1/C#2 (CKT.#3, PANEL F), 1-1/C#8 (GND)
 STRUCTURE ITEM: LIGHTING BOSS, STA. C 38+10, 10.81' RT.

INSTALL: LS(X37) TA(1), L(LED-152W) (F-03-C39)
 INSTALL: L(LMA-P77W-TYPE IV) (F-03-N38)
 STA. C 37+56, 3' LT.

CONSTRUCT: 1-2" RMC
 INSTALL: 3-1/C#2 (CKT.#3, PANEL F), 1-1/C#8 (GND)

CONSTRUCT: 18" X 36" JUNCTION BOX
 STA. N 100+69, 16.91' LT.

CONSTRUCT: 1-2" RMC
 INSTALL: 3-1/C#2 (CKT.#3, PANEL F), 1-1/C#8 (GND)

ABANDON: 1-3" NMC
 REMOVE: ALL WIRES

ABANDON: 18" X 36" JUNCTION BOX
 STA. N 100+47, 13.67' LT. (+/-)
 STRUCTURE ITEM: JUNCTION BOX FRAME AND COVER (DRJTBC COVER)

CONSTRUCT: 18" X 36" JUNCTION BOX (DRJTBC COVER)
 STA. N 100+48, 31.09' RT.

CONSTRUCT: 1-2" RMC
 INSTALL: 3-1/C#2 (CKT.#3, PANEL F), 1-1/C#8 (GND)

CONSTRUCT: 18" X 36" JUNCTION BOX
 STA. A 17+94, 12.17' RT. (+/-)

CONSTRUCT: 1-3" RNMIC
 INSTALL: 16-1/C#2 (CKTS.#1,2,3,4,5,6,7,8, LOAD CENTER E), 1-1/C#8 (GND)

CONSTRUCT: 2-3" RMC (CONDUIT CROSSING)
 INSTALL: 8-1/C#2 (CKTS.#5,6,7,8, LOAD CENTER E), 1-1/C#8 (GND)
 (1) SPARE

CONSTRUCT: 18" X 36" JUNCTION BOX
 STA. N 99+28, 31' LT. (+/-)

CONSTRUCT: 2-3" RMC
 INSTALL: 4-1/C#2 (CKTS.#2,4, LOAD CENTER E), 1-1/C#8 (GND)
 (1) SPARE

CONSTRUCT: TOWER LIGHTING FOUNDATION STA. N 99+05, 32.90' LT.
 INSTALL: TLSA, LS-S(100'), L(6-LED-252W) (E-02/04-HMLP-3)

CONSTRUCT: 1-3" RNMIC
 INSTALL: 8-1/C#2 (CKTS.#1,2,3,4, LOAD CENTER E), 1-1/C#8 (GND)

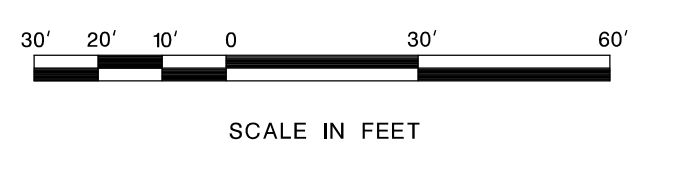
CONSTRUCT: 2-3" RMC (CONDUIT CROSSING)
 INSTALL: 3-1/C#2 (CKT.#3, PANEL F), 1-1/C#8 (GND)
 (1) SPARE

CONSTRUCT: 1-3" RNMIC
 INSTALL: 16-1/C#2 (CKT.#3, PANEL F), 1-1/C#8 (GND)

CONSTRUCT: 18" X 36" JUNCTION BOX (DRJTBC COVER)
 STA. N 98+60, 31.19' RT. (+/-)

ABANDON: 1-3" NMC
 REMOVE: ALL WIRES
 ABANDON: 18" X 36" JUNCTION BOX
 STA. N 98+04, 16.64' LT. (+/-)

BORING	STATION AND OFFSET
HB-03	STA. N 99+05.1, 33 LT



ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY
701015P	2" RIGID METALLIC CONDUIT	515 LF
701021P	3" RIGID METALLIC CONDUIT	825 LF
701030P	3" RIGID NONMETALLIC CONDUIT	1580 LF
701102M	18"X36" JUNCTION BOX	8 U
701117M	JUNCTION BOX FOUNDATION	2 U
701192P	GROUND WIRE, NO. 8 AWG	2540 LF
701195P	MULTIPLE LIGHTING WIRE, NO. 2 AWG	14375 LF
703006M	LIGHTING STANDARD STEEL	3 U
703015M	LIGHTING MAST ARM STEEL	2 U
703021M	SIGN LIGHTING, STRUCTURE NO. 13	LS
703021M	SIGN LIGHTING, STRUCTURE NO. 14	LS
703027M	UNDERDECK LIGHTING TYPE P	1 U
703030M	TOWER LIGHTING	1 U
703X01M	LED LUMINAIRE	3 U
	1' TENON ARM MOUNT	1 U
703003M	LIGHTING STANDARD ALUMINUM	3 U
703012M	LIGHTING MAST ARM ALUMINUM	2 U

CONSTRUCT: 18" X 36" JUNCTION BOX (DRJTBC COVER)
 STA. A 18+54, 8.72' RT. (+/-)
 CANTILEVER SIGN STRUCTURE NJ SS-12
 INSTALL: SIGN LIGHTING, STRUCTURE NO.13
 (SEE SHEET HL-36 FOR DETAILS)
 CONSTRUCT: 2-3" RMC (CONDUIT CROSSING)
 INSTALL: 3-1/C#2 (CKT.#3, PANEL F), 1-1/C#8 (GND)
 (1) SPARE
 CONSTRUCT: 18" X 36" JUNCTION BOX (DRJTBC COVER)
 STA. C 35+08, 21.64' RT. (+/-)

NOTES:

- SEE PACKAGE A FOR SERVICE PANEL DETAILS FOR ALL LOW LEVEL LIGHTING STANDARDS. SEE SHEET HL-39 FOR SERVICE PANEL DETAILS FOR ALL HIGH MAST AND SIGN LIGHTING AT ROUTE 29 INTERCHANGE.
- SEE STRUCTURE PLANS FOR UNDERDECK LIGHTING ROUTING DETAILS. THE PORTION OF THE 1 1/4" RMC CONDUIT FROM THE LUMINAIRE TO POINT WHERE CONDUIT ENTERS THE DECK SHALL BE PAID FOR UNDER PAY ITEM 701008P 1 1/4" RIGID METALLIC CONDUIT.

3. TOWER LIGHT LUMINAIRE SHALL BE PAID FOR UNDER PAY ITEM 703018M LUMINAIRE

HIGHWAY LIGHTING
 STV 820 BEAR TAVERN ROAD, SUITE 200, TRENTON, NJ 08628
 N.J. CERTIFICATE OF AUTHORIZATION NO. 24GA28018400
 RONALD L. MEEK
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 43525

DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION

HIGHWAY LIGHTING PLANS /
 EXISTING LIGHTING REMOVAL
 SCUDDER FALLS BRIDGE REPLACEMENT PROJECT
 CONTRACT NO. T-668A

MICHAEL BAKER INTERNATIONAL
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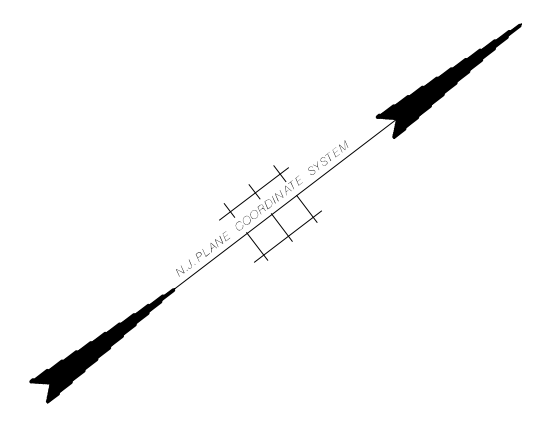
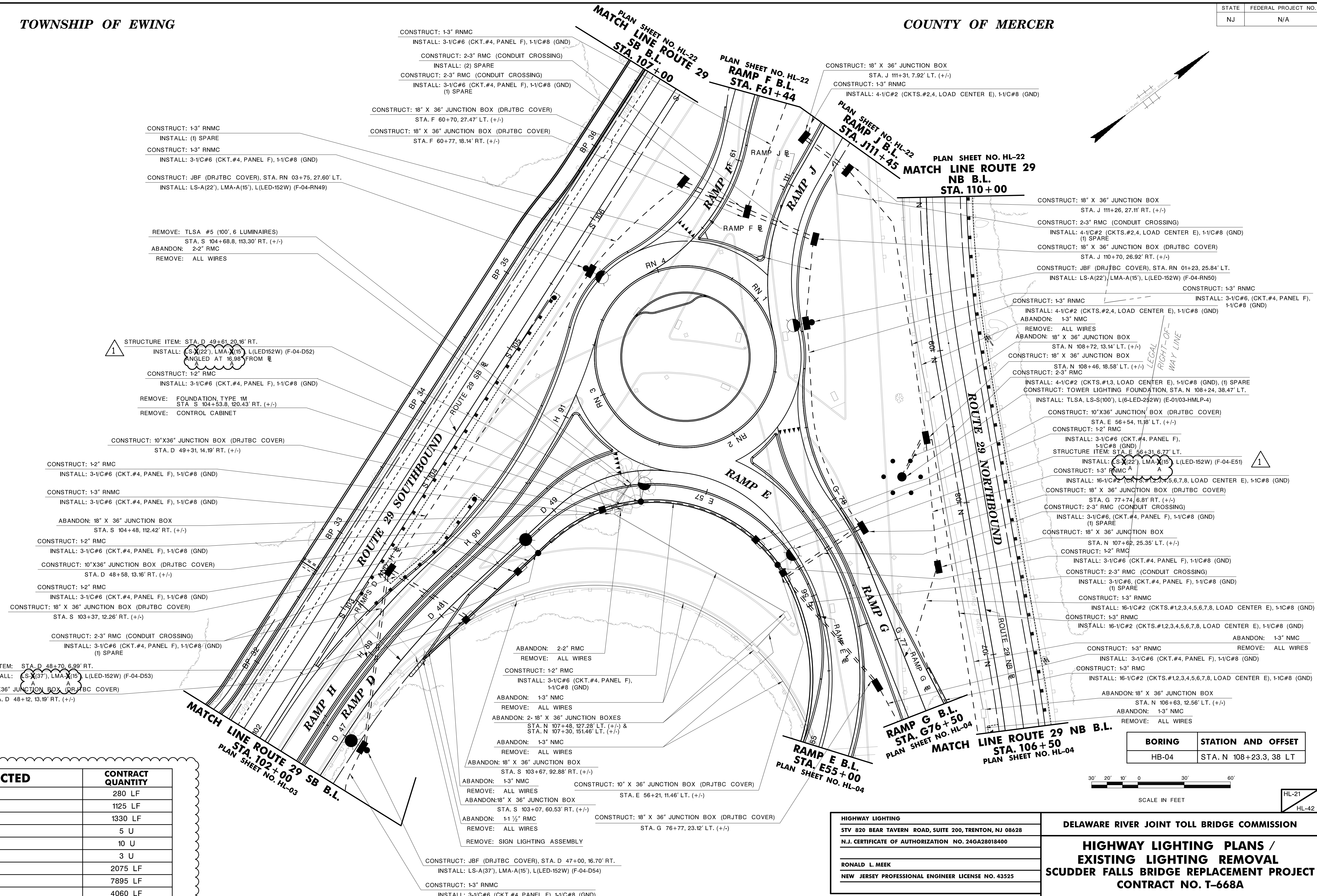
MAHER A. SIDANI
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 37787

ADDENDUM NO.	BY	SDY	DATE
8	DH	SDY	12/01/16
REVISION	BY	C/K'D	DATE

HL-20
 HL-42

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 1020

USER: HANNDI
 DATE & TIME: 30-NOV-2016 11:19
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ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY
701015P	2" RIGID METALLIC CONDUIT	280 LF
701021P	3" RIGID METALLIC CONDUIT	1125 LF
701030P	3" RIGID NONMETALLIC CONDUIT	1330 LF
701096M	10"X36" JUNCTION BOX	5 U
701102M	18"X36" JUNCTION BOX	10 U
701117M	JUNCTION BOX FOUNDATION	3 U
701192P	GROUND WIRE, NO. 8 AWG	2075 LF
701195P	MULTIPLE LIGHTING WIRE, NO. 2 AWG	7895 LF
701198P	MULTIPLE LIGHTING WIRE, NO. 6 AWG	4060 LF
703003M	LIGHTING STANDARD ALUMINUM	6 U - 3 U
703006M	LIGHTING STANDARD STEEL	3 U
703012M	LIGHTING MAST ARM ALUMINUM	6 U - 3 U
703015M	LIGHTING MAST ARM STEEL	3 U
703030M	TOWER LIGHTING	1 U
703X01M	LED LUMINAIRE	6 U

NOTE:

- SEE PACKAGE A FOR SERVICE PANEL DETAILS FOR ALL LOW LEVEL LIGHTING STANDARDS. SEE SHEET HL-39 FOR SERVICE PANEL DETAILS FOR ALL HIGH MAST AND SIGN LIGHTING AT ROUTE 29 INTERCHANGE.
- TOWER LIGHT LUMINAIRE SHALL BE PAID FOR UNDER PAY ITEM 703018M LUMINAIRE.

BORING	STATION AND OFFSET
HB-04	STA. N 108+23.3, 38 LT

HIGHWAY LIGHTING
 STV 820 BEAR TAVERN ROAD, SUITE 200, TRENTON, NJ 08628
 N.J. CERTIFICATE OF AUTHORIZATION NO. 24GA28018400

RONALD L. MEEK
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 43525

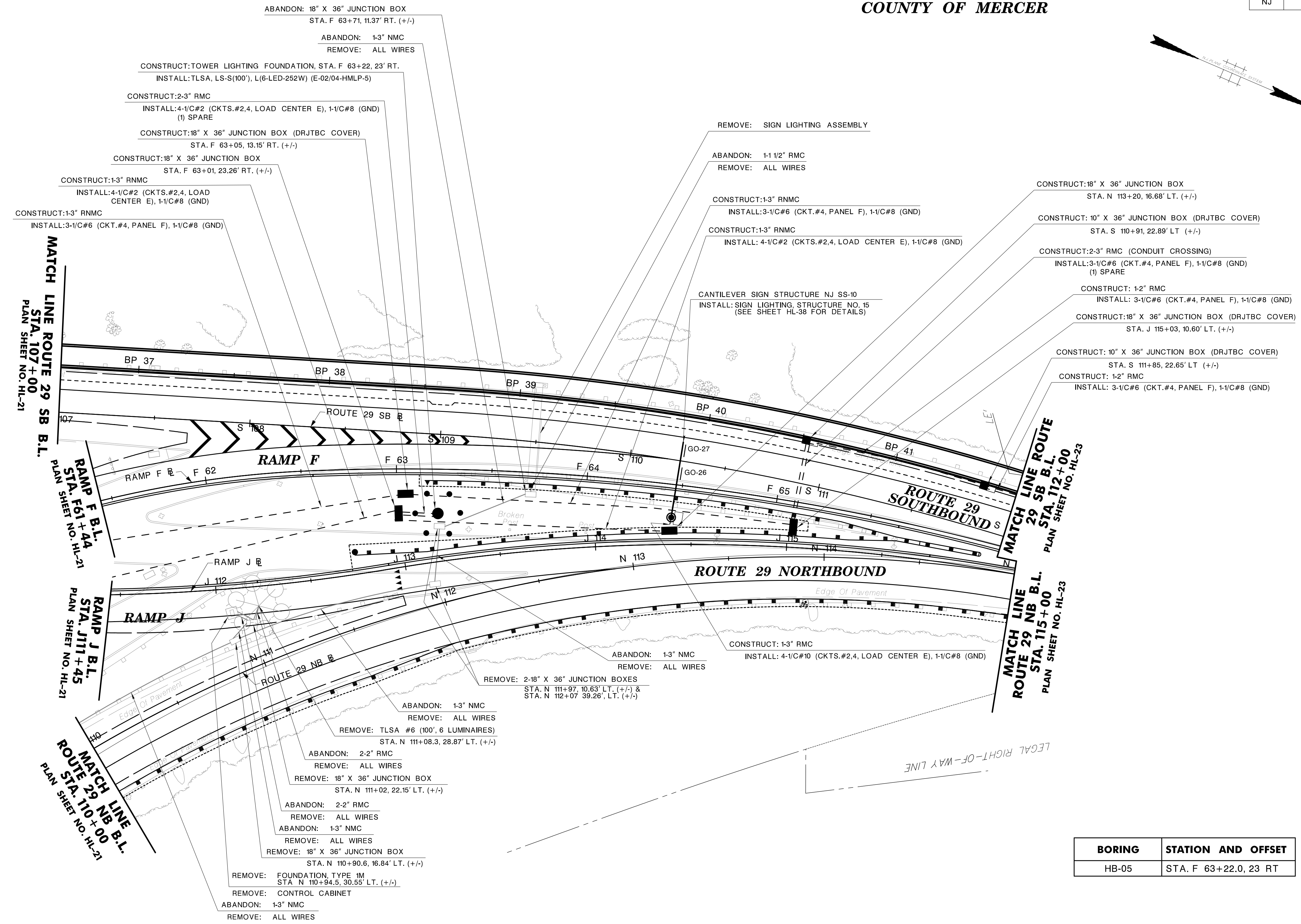
DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION

HIGHWAY LIGHTING PLANS / EXISTING LIGHTING REMOVAL
SCUDDER FALLS BRIDGE REPLACEMENT PROJECT
CONTRACT NO. T-668A

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ADDENDUM NO.	BY	DATE
8	DH SDY	12/01/16
REVISION	BY	DATE

MAHER A. SIDANI
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 37787



BORING	STATION AND OFFSET
HB-05	STA. F 63+22.0, 23 RT

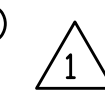


ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY
701015P	2" RIGID METALLIC CONDUIT	125 LF
701021P	3" RIGID METALLIC CONDUIT	160 LF
701030P	3" RIGID NONMETALLIC CONDUIT	560 LF
701096M	10" X 36" JUNCTION BOX	2 U
701102M	18" X 36" JUNCTION BOX	4 U
701192P	GROUND WIRE, NO. 8 AWG	935 LF
701195P	MULTIPLE LIGHTING WIRE, NO. 2 AWG	1415 LF
701198P	MULTIPLE LIGHTING WIRE, NO. 6 AWG	1720 LF
703021M	SIGN LIGHTING, STRUCTURE NO. 15	LS
703030M	TOWER LIGHTING	1 U

NOTE:

- SEE PACKAGE A FOR SERVICE PANEL DETAILS FOR ALL LOW LEVEL LIGHTING STANDARDS. SEE SHEET HL-39 FOR SERVICE PANEL DETAILS FOR ALL HIGH MAST AND SIGN LIGHTING AT ROUTE 29 INTERCHANGE.

~~2. TOWER LIGHT LUMINAIRE SHALL BE PAID FOR UNDER PAY ITEM 703018M LUMINAIRE.~~



HIGHWAY LIGHTING
 STV 820 BEAR TAVERN ROAD, SUITE 200, TRENTON, NJ 08628
 N.J. CERTIFICATE OF AUTHORIZATION NO. 24GA28018400

RONALD L. MEEK
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 43525

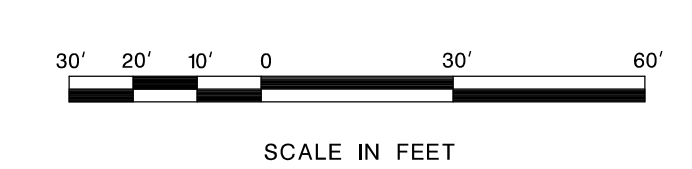
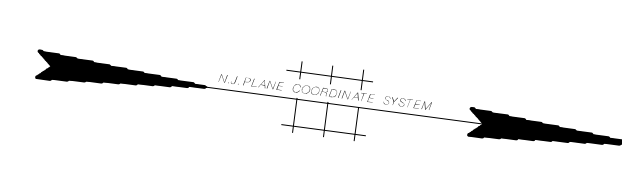
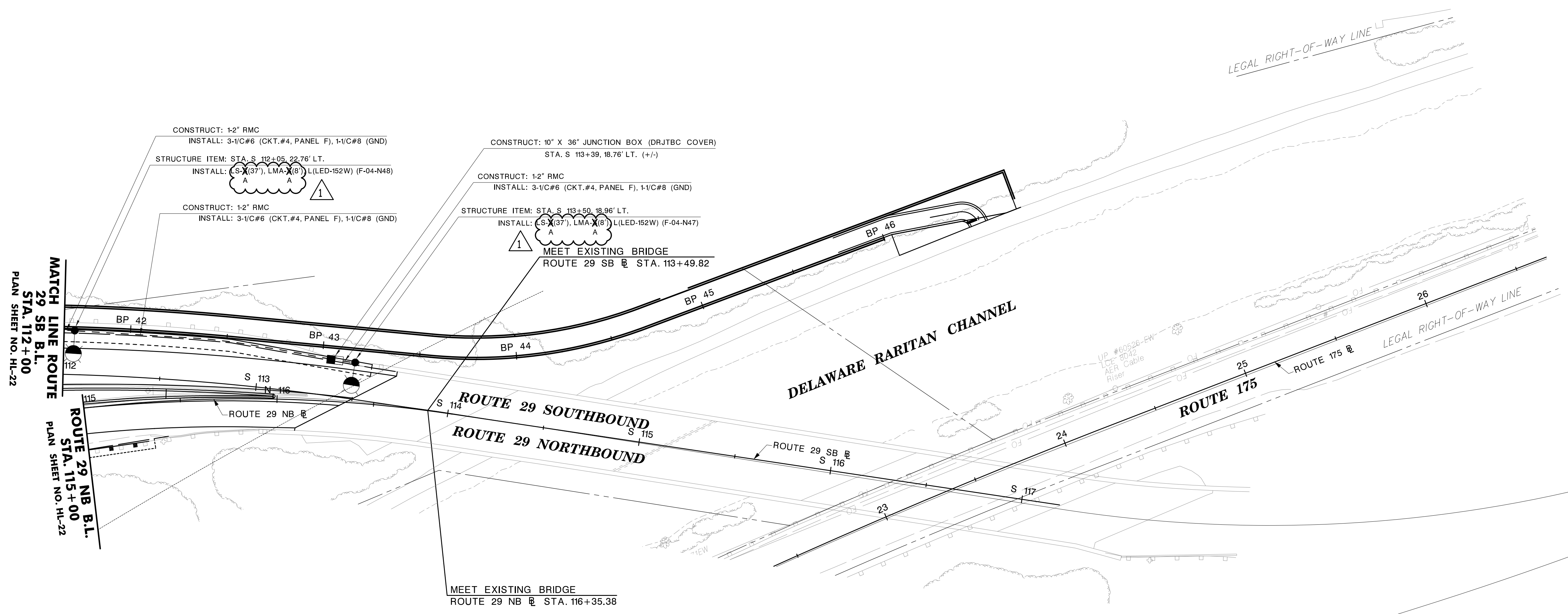
DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION

**HIGHWAY LIGHTING PLANS /
 EXISTING LIGHTING REMOVAL
 SCUDDER FALLS BRIDGE REPLACEMENT PROJECT
 CONTRACT NO. T-668A**

MICHAEL BAKER INTERNATIONAL
 CERTIFICATION OF AUTHORIZATION NO. 24GA27954700

MAHER A. SIDANI
 NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 37787

ADDENDUM NO. 8	DH	SDY	12/01/16
REVISION	BY	C'K'D	DATE



HL-23
HL-42

ITEM NO.	TO BE CONSTRUCTED	CONTRACT QUANTITY
701015P	2" RIGID METALLIC CONDUIT	170 LF
701096M	10" X 36" JUNCTION BOX	1 U
701192P	GROUND WIRE, NO. 8 AWG	170 LF
701198P	MULTIPLE LIGHTING WIRE, NO. 6 AWG	505 LF
703006M	LIGHTING STANDARD STEEL	2 U
703015M	LIGHTING MAST ARM STEEL	2 U
703X01M	LED LUMINAIRE	2 U
703003M	LIGHTING STANDARD ALUMINUM	2 U
703012M	LIGHTING MAST ARM ALUMINUM	2 U

NOTE:
1. SEE PACKAGE A FOR SERVICE PANEL DETAILS FOR ALL LOW LEVEL LIGHTING STANDARDS. SEE SHEET HL-39 FOR SERVICE PANEL DETAILS FOR ALL HIGH MAST AND SIGN LIGHTING AT ROUTE 29 INTERCHANGE.

HIGHWAY LIGHTING
STV 820 BEAR TAVERN ROAD, SUITE 200, TRENTON, NJ 08628
N.J. CERTIFICATE OF AUTHORIZATION NO. 24GA28018400

RONALD L. MEEK
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 43525

DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION

HIGHWAY LIGHTING PLANS
SCUDDER FALLS BRIDGE REPLACEMENT PROJECT
CONTRACT NO. T-668A

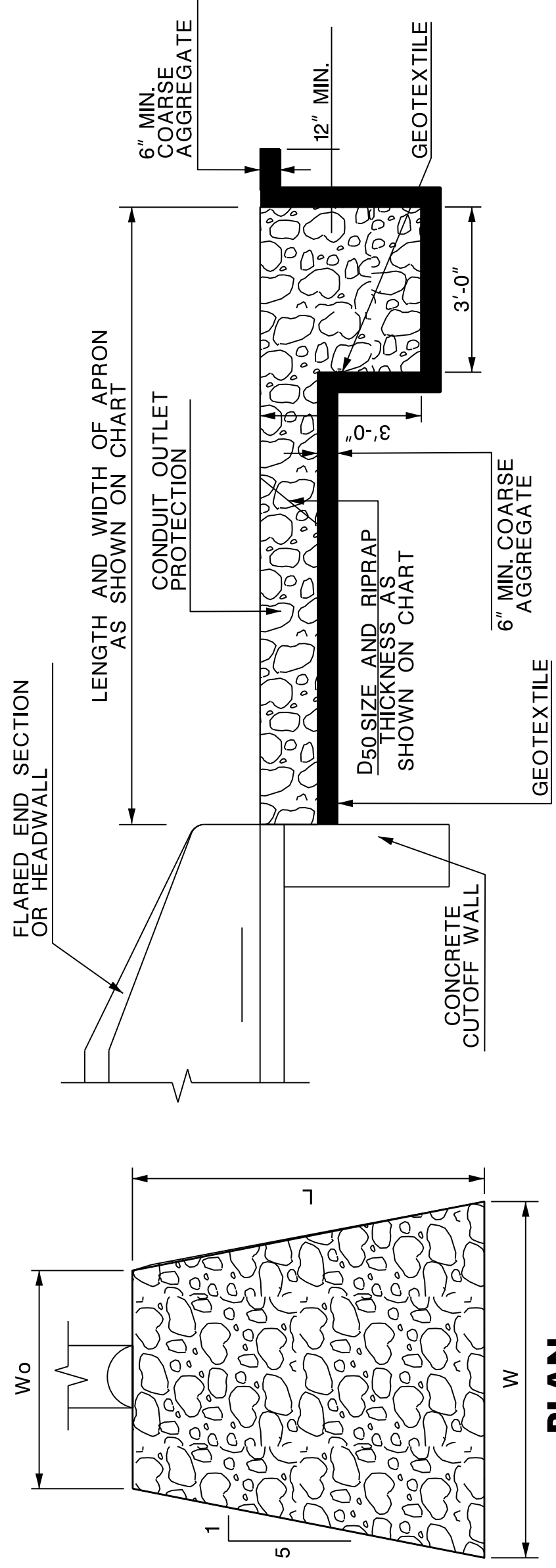
ADDENDUM NO. 8	DH	SDY	12/01/16
REVISION	BY	C'K'D	DATE

MICHAEL BAKER INTERNATIONAL
CERTIFICATION OF AUTHORIZATION NO. 24GA27954700

MAHER A. SIDANI
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 37787

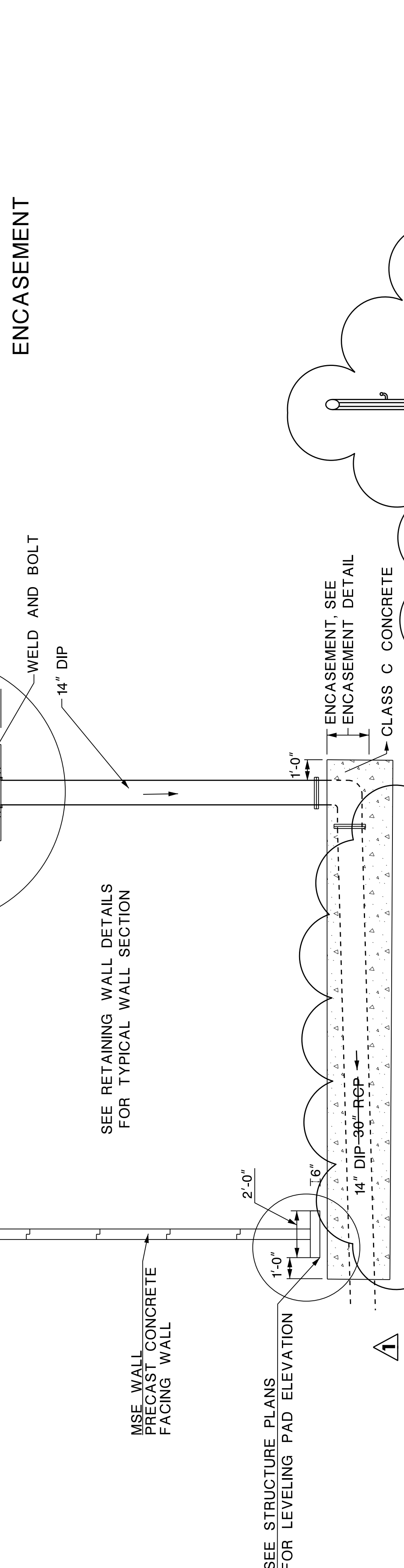
454
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USER: HANDEL
DATE & TIME: 30-NOV-2016 11:19
Baker.PW Path Location: Master File



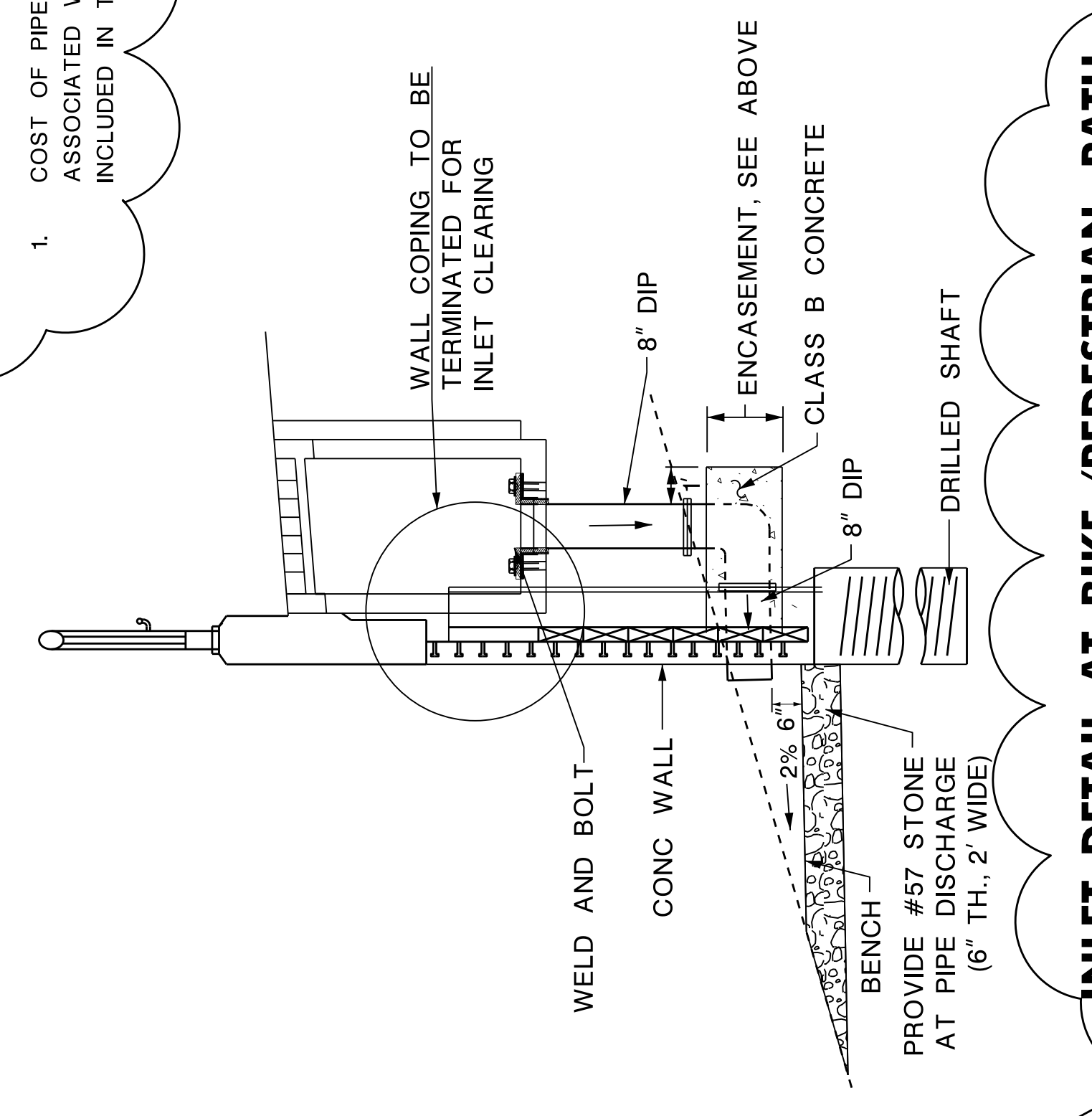
SECTION
STORMWATER OUTFALL PROTECTION

STATION	OFFSET	L (FT)	W (FT)	W0 (FT)	D50 (IN)	THICKNESS (IN)
353+00	152.83' LT	15	12	6.00	6	12
353+58.38	94.37' LT	5	5	3.75	6	12
A13+33.66	129.03' RT	5	5	3.75	6	12
A15+23.64	135.83' RT	28	19	7.50	6	12
D42+39.16	38.99' RT	5	5	3.75	6	12
A23+17.86	38.91' RT	11	8	3.75	6	12
C31+43.40	101.58' LT	16	11	4.50	6	12
I97+62.93	60.69' RT	12	16	3.75	6	12
D48+44.34	67.29' RT	15	10	3.75	6	12
E56+76.51	40.21' LT	34	21	7.50	6	12
N105+96.48	46.19' RT	11	14	3.75	6	12
N108+37.06	66.68' RT	10	13	3.75	6	12
S114+94.27	92.19' LT	9	13	3.75	6	12

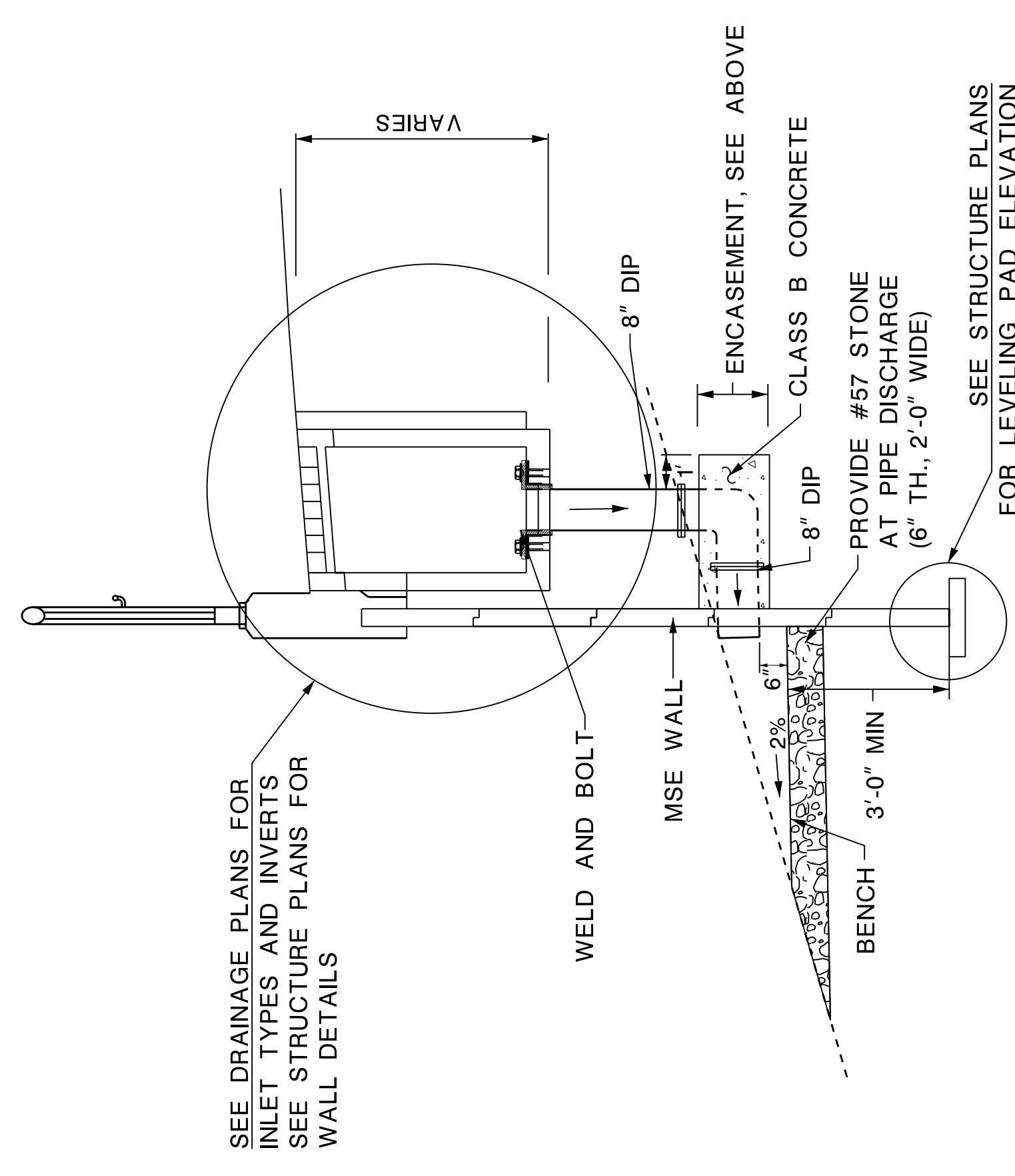


E-1 DROP INLET DETAIL
INLET DROP DETAIL AT RAMP E
NOTE: **STA. E56 + 77.78**

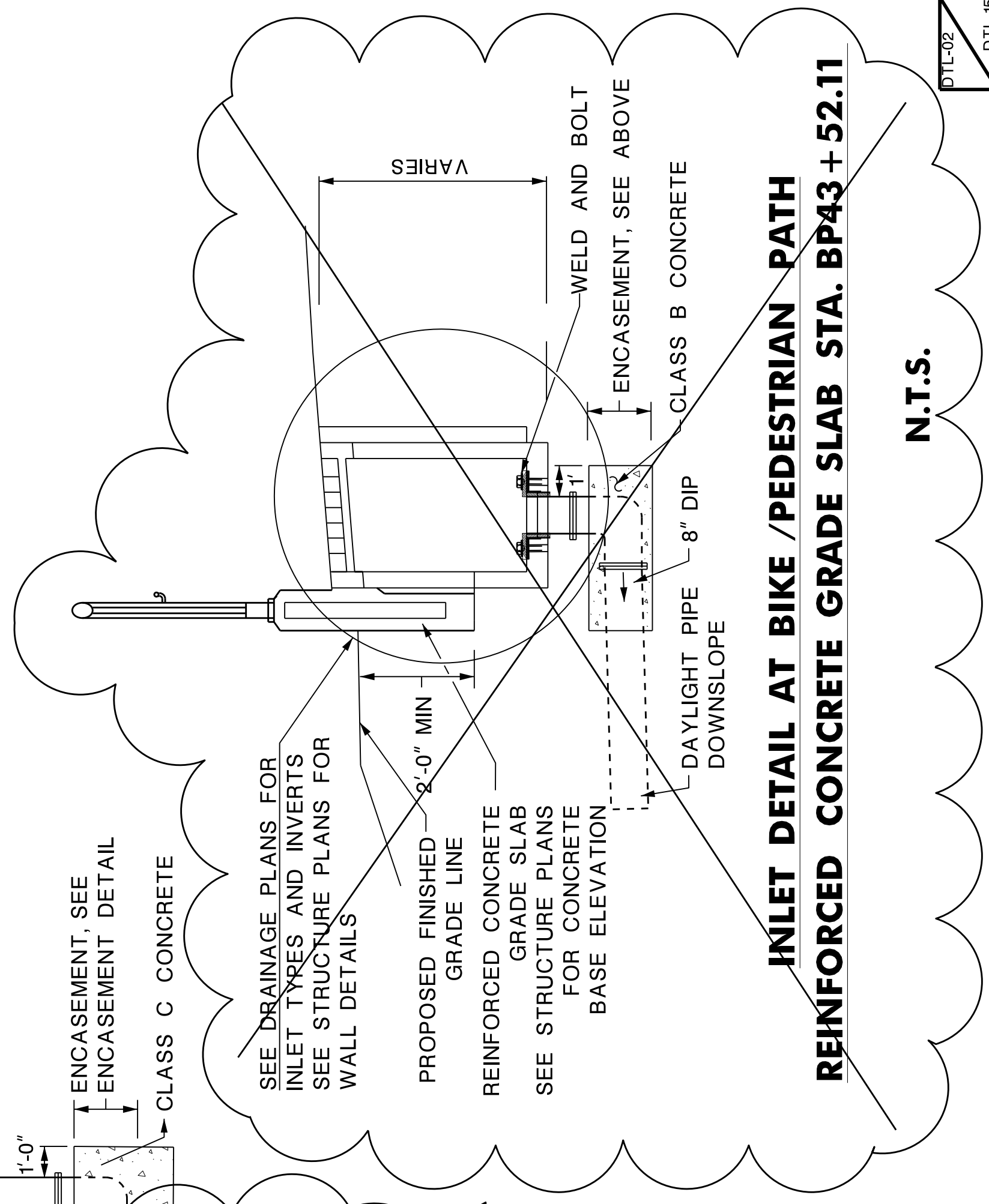
- COST OF PIPE, ELBOWS AND ENCASEMENT ASSOCIATED WITH DROP INLET ARE TO BE INCLUDED IN THE COST OF THE INLET



INLET DETAIL AT BIKE / PEDESTRIAN PATH
SOLDIER PILE WALL STA. BP45 + 82.85
BP45 + 86.55



INLET DETAIL AT BIKE / PEDESTRIAN PATH
MSE WALL STA. BP36 + 95.14 AND STA. BP39 + 09.66



INLET DETAIL AT BIKE / PEDESTRIAN PATH
REINFORCED CONCRETE GRADE SLAB STA. BP43 + 52.11

N.T.S.

NOTES:

- PAY ITEMS FOR PIPE AND STONE ASSOCIATED WITH THE BIKE/PEP INLETS ARE INCLUDED ON THE DRAINAGE PLANS.
- SEE DRAINAGE PLANS FOR PIPES INTO THE INLET BOXES. DETAILS ON THIS SHEET ARE PROVIDED FOR DROP CONNECTIONS ADJACENT TO THE WALLS AND PIPES OUT.

DELAWARE RIVER JOINT TOLL BRIDGE COMMISSION

CONSTRUCTION DETAILS
SCUDDER FALLS BRIDGE REPLACEMENT PROJECT
CONTRACT NO. T-668A

MICHAEL BAKER INTERNATIONAL, INC.
CERTIFICATION OF AUTHORIZATION NO. 246A27954700

MAHER A. SIDANI
NEW JERSEY PROFESSIONAL ENGINEER LICENSE NO. 37787

ADDENDUM NO.8	EJM	LAW	11/29/2016	DATE
REVISION	BY	C/K/D		