#### LOCATION MAP

LATITUDE: 40°56′47" LONGITUDE: -81°27′48"

SCALE IN MILES 5.68 11.36 17.04 22.72 (1 IN:30,000 FT.)

STATE OF OHIO

### DEPARTMENT OF TRANSPORTATION

### STA-SUM ITS PART 2

### FOR PART 1, SEE VAR-CLEVELAND FREEWAY MANAGEMENT SYSTEM

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#### PROJECT DESCRIPTION

THE STARK-SUMMIT ITS PROJECT IS TO IMPROVE SAFETY THROUGH BETTER CONGESTION MANAGEMENT AND TRAVELLER INFORMATION THROUGHOUT THE AKRON CANTON REGION. THE SYSTEM COVERS PORTIONS OF MEDINA, PORTAGE, STARK AND SUMMIT COUNTIES

PROJECT EARTH DISTURBED AREA = N/A ESTIMATED CONCTRACTOR EARTH DISTURBED AREA = N/A NOTICE OF INTENT EARTH DISTURBED AREA = N/A

#### LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

#### 2008 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

UNDERGROUND UTILITIES TWO WORKING DAYS BEFORE YOU DIG CALL 1-800-362-2764 (TOLL FREE) OHIO UTILITIES PROTECTION SERVICE NON-MEMBERS

 $\bigcirc$ 

MUST BE CALLED DIRECTLY PLAN PREPARED BY:

DMIM HARRIS | AECOM

	ODOT STANDARD CONSTRUCTION DRAWINGS	SUPPLEMENTAL SPECIFICATIONS
ENGINEERS SEAL:	655 0.07.4	SEE PART 1
STATE OF ONO	SEE PART 1	
CHRISTO E-50111		SPECIAL PROVISIONS
SIGNED: Augela M Chisto DATE: 11 (24/08		SEE PART 1
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		

APPROVED\_ DATE \_\_\_\_ DISTRICT DEPUTY DIRECTOR

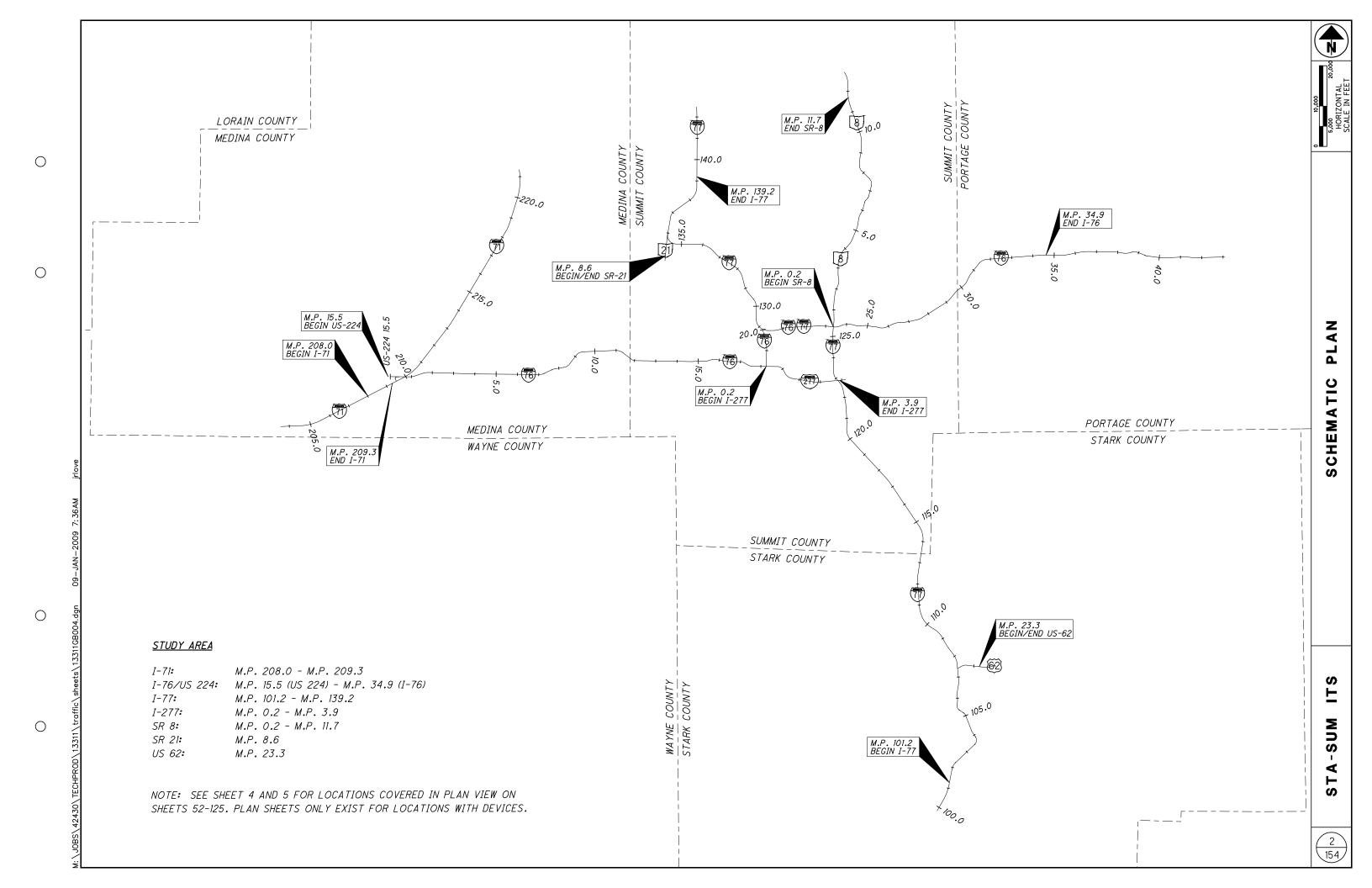
APPROVED. DATE\_ DIRECTOR, DEPARTMENT OF TRANSPORTATION

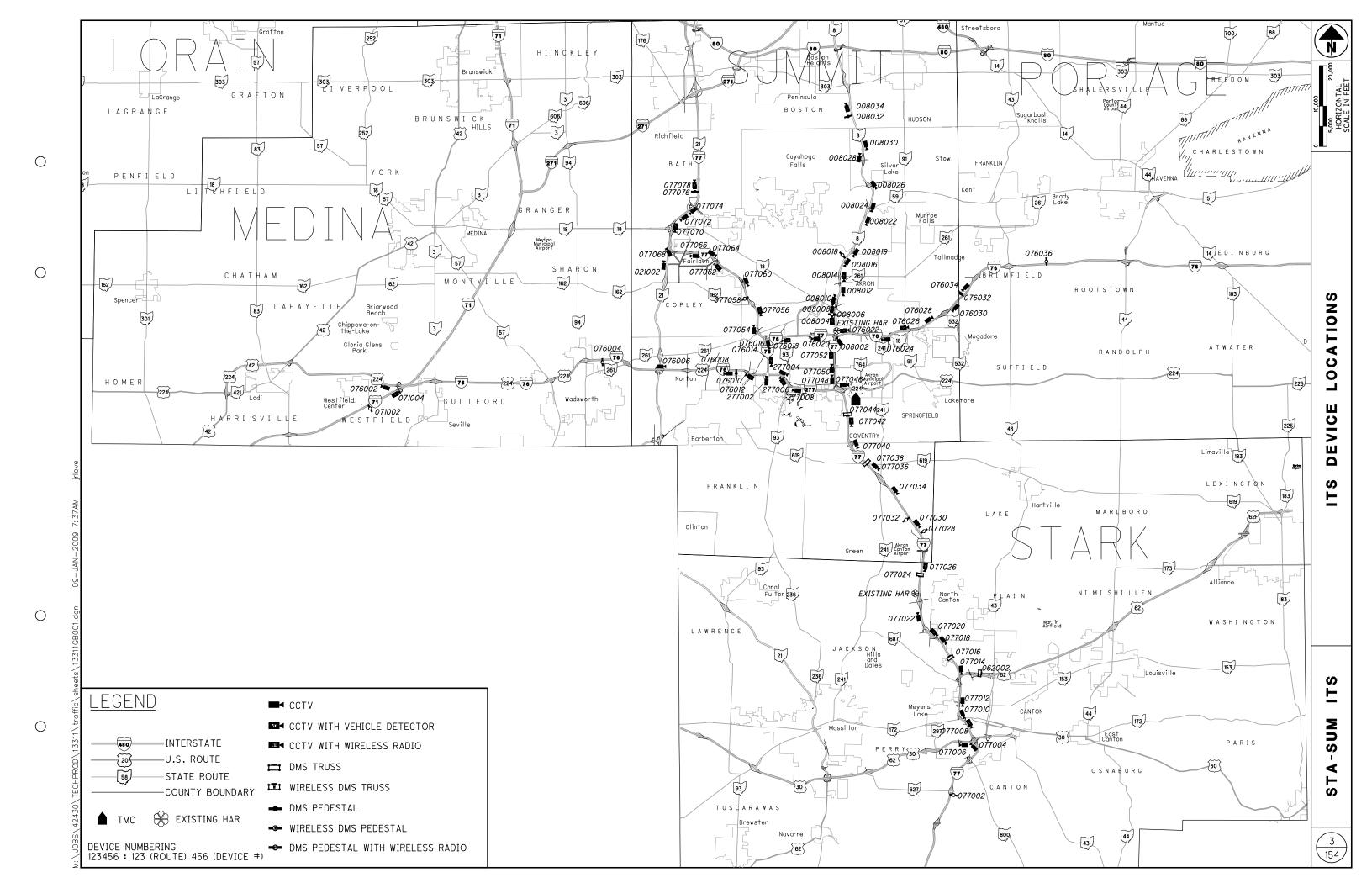
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331

SUM





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DEVICE

S

I-71 DEVICES							
DEVICE	SHL	EΤ	M.P.	OFFSET	DEVICE	COMM.	
NUMBER	PLANS	сомм.	м.Р.	OFFSET	DEVICE	LOMM.	
071002	52	132	208.00	101 RT′	DMS PEDESTAL	WIRELESS-CDMA	
071004	53	132	209.30	118 RT′	CCTV w/ VD	T-1	

			I-76 D	EVICES	•	
DEVICE	SHE	EΤ		OFFCET	DELVICE	60144
NUMBER	PLANS	сомм.	M.P.	OFFSET	DEVICE	COMM.
076002	54	133	0.53	167′ LT	CCTV	T-1
076004	55	133	10.62	74' RT	DMS PEDESTAL	WIRELESS-CDMA
076006	56	133	13.42	75′ L T	CCTV	T-1
076008	57	133	16.82	75′ RT	CCTV	SHARED EOC
076010	57	133	16.86	66′ RT	DMS PEDESTAL	EOC
076012	58	133	17.81	59′ RT	CCTV w/ VD	EOC
076014	60	133	19.39	50' RT	CCTV w/ VD	EOC
076016	61	133	20.24	37′ RT	CCTV	T-1
076018	62	133	21.54	92' RT	CCTV w/ VD	T-1
076020	63	133	22.88	124′ RT	CCTV	EOC
076022	65	133	24.30	83′ LT	CCTV w/ VD	T-1
076024	66	133	26.19	72′ RT	CCTV	EOC
076026	67	133	27.04	72′ LT	CCTV w/ VD	EOC
076028	68	134	28.45	79′ L T	CCTV	EOC
076030	69	134	29.80	70′ L T	CCTV	EOC
076032	71	134	30.62	73′ L T	DMS PEDESTAL	EOC
076034	71	134	30.68	85′ LT	CCTV	SHARED EOC
076036	72	134	34.92	77′ LT	DMS PEDESTAL	WIRELESS-CDMA

EOC - ETHERNET OVER COPPER CDMA - CODE DIVISION MULTIPLE ACCESS

DEVICE	SHE	EET				
NUMBER	PLANS	сомм.	M.P.	OFFSET	DEVICE	COMM.
077002	73	135	101.27	115′ RT	DMS PEDESTAL	WIRELESS-CDMA
077004	74	135	103.96	95′ LT	CCTV	EOC
077006	75	135	104.19	639' LT	CCTV	EOC
077008	75	135	105.13	132' RT	CCTV w/ VD	EOC
077010	76	135	105.53	68′ RT	CCTV	EOC
077012	77	135	106.20	61′ RT	CCTV	T-1
077014	78	135	107.45	64' RT	CCTV	EOC
077016	79	135	108.51	68' LT	DMS TRUSS	WIRELESS-CDMA
077018	80	135	109.46	198′ RT	CCTV	T-1
077020	81	135	110.00	66′ RT	CCTV w/ VD	T-1
077022	82	135	110.85	146′ LT	CCTV	T-1
HAR	83	135	111.97	155′ L T	EXISTING HAR	WIRELESS-CDMA
077024	85	136	112.80	82′ RT	DMS TRUSS	WIRELESS-CDMA
077026	86	136	113.45	95′ RT	CCTV w/ VD	EOC
077028	87	136	114.83	96′ RT	DMS PEDESTAL	WIRELESS RADIC
077030	87	136	115.21	85′ RT	CCTV	EOC
077032	88	136	116.29	92′ LT	DMS PEDESTAL	WIRELESS-CDMA
077034	89	136	117.21	119' RT	CCTV	EOC
077036	90	136	118.90	89' RT	CCTV	SHARED EOC
077038	90	136	118.93	86′ RT	DMS TRUSS	EOC
077040	91	136	120.24	94′ RT	CCTV	T-1
077042	92	136	121.42	78′ RT	CCTV w/ VD	SHARED T-1
077044	92	136	121.44	82′ RT	DMS TRUSS	T-1
077046	93	136	3.87	57′ LT	CCTV	EOC
077048	94	136	123.25	76′ LT	CCTV	EOC
077050	95	136	123.93	99′ LT	CCTV	EOC
077052	96	137	124.43	66′ LT	CCTV w/ VD	EOC
077054	97	137	129.24	131′ LT	CCTV	T-1
077056	98	137	130.27	94′ RT	CCTV w/ VD	T-1
077058	99	137	130.98	72′ L T	DMS PEDESTAL	WIRELESS-CDMA
077060	100	137	131.76	187′ RT	CCTV	EOC
077062	101	137	132.85	73′ L T	CCTV w/ VD	T-1
077064	102	137	133.71	80' RT	CCTV	EOC
077066	103	137	134.36	77′ L T	CCTV	T-1
077068	104	137	135.55	313' LT	CCTV	T-1
077070	105	137	136.66	80' RT	CCTV w/ VD	T-1
077072	106	137	137.58	69' RT	CCTV	T-1
077074	107	137	138.15	160' RT	CCTV	T-1
077076	108	137	139.11	86' LT	DMS PEDESTAL	T-1
077078	108	137	139.13	94' LT	CCTV w/ VD	SHARED T-1

I-277 DEVICES								
DEVICE	SHE	SHEET		OFFCET	DEVICE	60144		
NUMBER	PLANS	сомм.	M.P.	OFFSET	DEVICE	COMM.		
277002	59	138	.21	133′ RT	CCTV	EOC		
277004	110	138	.87	65′ LT	CCTV	T-1		
277006	110	138	1 <b>.</b> 15	60' RT	CCTV w/ VD	EOC		
277008	111	138	1.92	66′ RT	CCTV	T-1		

			SR-8	DEVICES	5	
DEVICE	SHE	ET		055657	DEVICE	20144
NUMBER	PLANS	сомм.	<i>M.P.</i>	OFFSET		COMM.
008002	64	140	23.45	52' RT	CCTV	SHARED T-1
HAR	64	140	0.24	268' RT	EXISTING HAR	T-1
008004	112	140	0.94	97′ LT	CCTV w/ VD	EOC
008006	112	140	1.24	76′ LT	DMS PEDESTAL	WIRELESS-CDMA
008008	113	140	1.44	81' LT	CCTV	EOC
008010	113	140	1.73	109' LT	CCTV	EOC
008012	114	140	2.38	62' RT	CCTV	T-1
008014	115	140	3.02	78' RT	CCTV w/ VD	T-1
008016	116	140	3.93	60' RT	CCTV	EOC
008018	116	140	4.01	72' LT	DMS PEDESTAL	WIRELESS-CDMA
008019	117	140	4.42	62' RT	CCTV	EOC
008022	118	140	6.17	95′ RT	CCTV	EOC
008024	119	140	6.70	122' RT	CCTV	EOC
008026	120	141	7.64	80' RT	CCTV	T-1
008028	121	141	6.07	73' RT	CCTV	EOC
008030	122	141	9.81	103' RT	CCTV	EOC
008032	123	141	11.64	76′ LT	DMS PEDESTAL	T-1
008034	123	141	11.66	72' LT	CCTV w/ VD	SHARED T-1

SR-21 DEVICES							
DEVICE	SHE	ET	14.0	OFFSET	DEVICE	00141	
NUMBER	PLANS	сомм.	М.Р.	OFFSET	DEVICE	COMM.	
021002	124	142	8.56	70′ RT	CCTV	T-1	

US 62 DEVICES							
DEVICE	SHE	ΕT		OFFCET	DEVICE	001414	
NUMBER	PLANS	сомм.	М.Р.	OFFSET	DEVICE	COMM.	
062002	125	139	23.26	67′ LT	DMS TRUSS	WIRELESS-CDMA	

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	I-71 DEVICES								
DEVICE	SHL	SET .	1.4.7	LONG.	DEVICE	сомм.			
NUMBER	PLANS	сомм.	LAT.	LONG.	DEVICE	LOMM.			
071002	52	132	41.01751	-81.92338	DMS PEDESTAL	WIRELESS-CDMA			
071004	53	132	41.02604	-81.90146	CCTV w/ VD	T-1			

			I-76 D	EVICES		
DEVICE	SHE	EΤ	/ A T	1.000	DELVICE	00144
NUMBER	PLANS	сомм.	LAT.	LONG.	DEVICE	COMM.
076002	54	133	41.03038	-81.89935	CCTV	T-1
076004	55	133	41.04689	-81.71324	DMS PEDESTAL	WIRELESS-CDMA
076006	56	133	41.04009	-81.66246	CCTV	T-1
076008	57	133	41.03900	-81.59690	CCTV	SHARED EOC
076010	57	133	41.03878	-81.59783	DMS PEDESTAL	EOC
076012	58	133	41.03572	-81.57975	CCTV w/ VD	EOC
076014	60	133	41.04747	-81.56479	CCTV w/ VD	EOC
076016	61	133	41.05971	-81.56790	CCTV	T-1
076018	62	133	41.06166	-81.54547	CCTV w/ VD	T-1
076020	63	133	41.06225	-81.51974	CCTV	EOC
076022	65	133	41.06368	-81.49303	CCTV w/ VD	T-1
076024	66	133	41.06106	-81.45721	CCTV	EOC
076026	67	133	41.06452	-81.44191	CCTV w/ VD	EOC
076028	68	134	41.07132	-81.41700	CCTV	EOC
076030	69	134	41.08299	-81.39656	CCTV	EOC
076032	71	134	41.09181	-81.38464	DMS PEDESTAL	EOC
076034	71	134	41.09108	-81.38517	CCTV	SHARED EOC
076036	72	134	41.10904	-81.31280	DMS PEDESTAL	WIRELESS-CDMA

EOC - ETHERNET OVER COPPER CDMA - CODE DIVISION MULTIPLE ACCESS

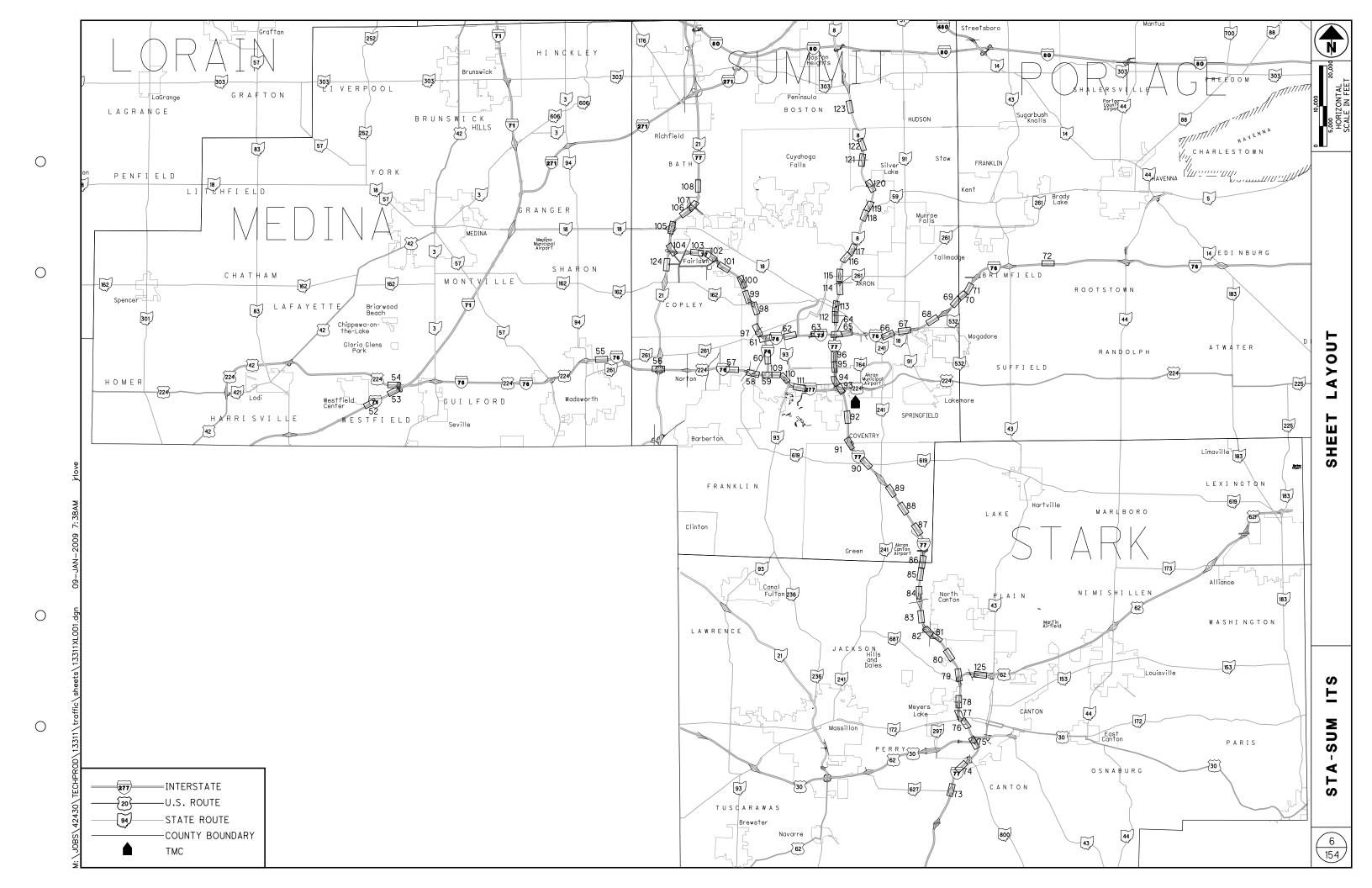
			1-// D	<u>EVICES</u>		
DEVICE		ET	LAT.	LONG.	DEVICE	COMM.
NUMBER	PLANS	СОММ.				COMINI.
077002	73	135	40.75082		DMS PEDESTAL	WIRELESS-CDMA
077004	74	135	40.78251	-81.38293	CCTV	EOC
077006	75	135	40.78430	-81.38680	CCTV	EOC
077008	75	135	40.79800	-81.39154	CCTV w/ VD	EOC
077010	76	135	40.80161	-81.39735		EOC
077012	77	135	40.81122	-81.39749	CCTV	T-1
077014	78	135	40.82923	-81.39691	CCTV	EOC
077016	79	135	40.84282	-81.40546	DMS TRUSS	WIRELESS-CDMA
077018	80	135	40.85464	-81.41500	CCTV	T-1
077020	81	135	40.85887		CCTV w/ VD	T-1
077022	82	135	40.86973	-81.43084		T-1
HAR	83	135	40.88592		EXISTING HAR	WIRELESS-CDMA
077024	85	136	40.89782		DMS TRUSS	WIRELESS-CDMA
077026	86	136		-81.42821		EOC
077028	87	136	40.92664	-81,43037	DMS PEDESTAL	WIRELESS RADIO
077030	87	136	40.93108	-81.43431		EOC
077032	88	136			DMS PEDESTAL	WIRELESS-CDMA
077034	89	136	40.95541	-81.45525		EOC
077036	90	136	40.97412	-81.47708		SHARED EOC
077038	90	136	40.97410		DMS TRUSS	EOC
077040	91	136	40.98867	-81.49286		T-1
077042	92	136		-81.49391		SHARED T-1
077044	92	136	41.00580		DMS TRUSS	T-1
077046	93	136	41.02561	-81.50043		EOC
077048	94	136	41.02999	-81.50524		EOC
077050	95	136	41.03995	-81.50545		EOC
077052	96	137	41.04706		CCTV w/ VD	EOC
077054	97	137	41.06546	-81.57415	CCTV	T-1
077056	98	137	41.08041	-81.57510		T-1
077058	99	137	41.08851		DMS PEDESTAL	WIRELESS-CDMA
077060	100	137	41.09955	-81.58708		EOC
077062	101	137	41.10876		CCTV w/ VD	T-1
077064	102	137	41.11724	-81.61622		EOC
077066	103	137	41.11891	-81.62823		T-1
077068	104	137	41.12033	-81.65148		T-1
077070	105	137	41.13622		CCTV w/ VD	T-1
077072	106	137	41.13622	-81.63909		T-1
077074	107	137	41.14557	-81.63909 -81.63001		T-1
077076	107				DMS PEDESTAL	T-1
077078	108	137	41.16372			SHARED T-1
011018	ΙΟδ	137	41.16403	-81.62648	LLIV W/ VD	SHAKEU I-I

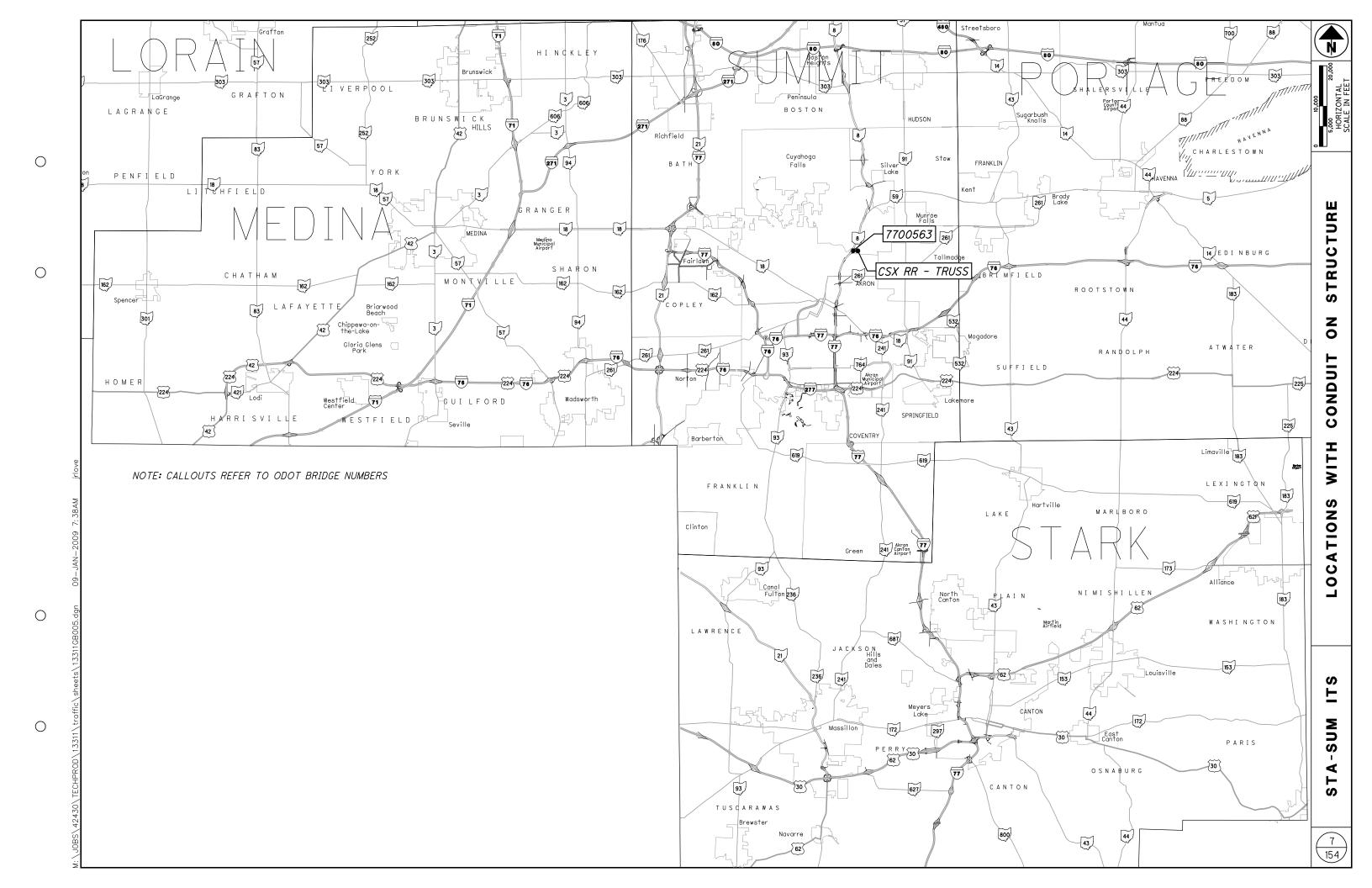
I-277 DEVICES										
DEVICE	SHE	EΤ	LAT.	1.000	DENICE	00141				
NUMBER	PLANS	сомм.		LONG.	DEVICE	СОММ.				
277002	59	138	41.03509	-81.56536	CCTV	EOC				
277004	110	138	41.03502	-81.55277	CCTV	T-1				
277006	110	138	41.03172	-81.54961	CCTV w/ VD	EOC				
277008	111	138	41.02633	-81.53759	CCTV	T-1				

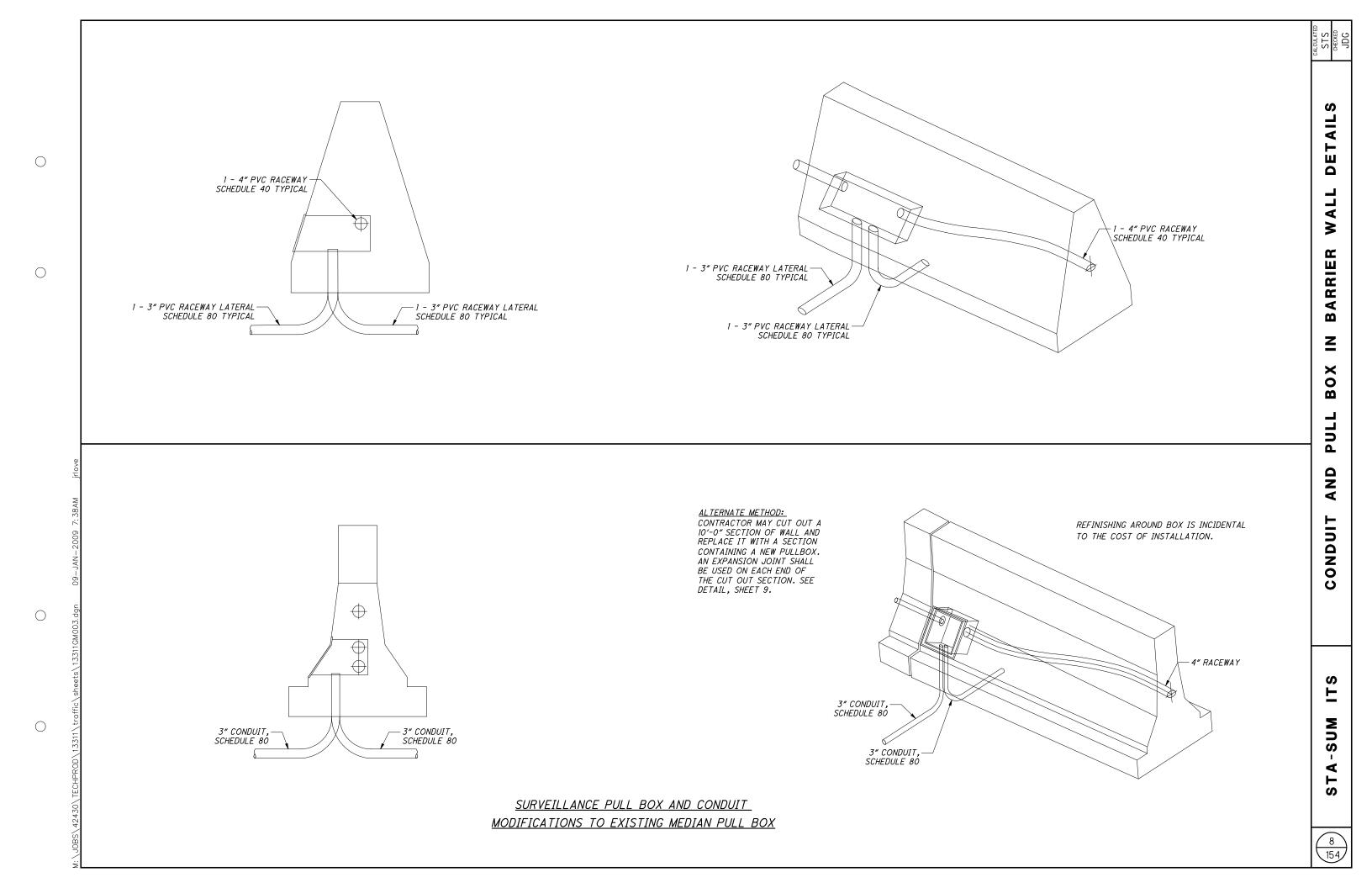
SR-8 DEVICES										
DEVICE	SHE	ET	LAT.	LONG.	DEVICE	COMM.				
NUMBER	PLANS	сомм.	LAT.	LONG.	DEVICE	COMM.				
008002	64	140	41.06163	-81.50327	CCTV	SHARED T-1				
HAR	64	140	41.06246	-81.50384	EXISTING HAR	T-1				
008004	112	140	41.07256	-81.50459	CCTV w/ VD	EOC				
008006	112	140	41.07690	-81.50444	DMS PEDESTAL	WIRELESS-CDMA				
008008	113	140	41.07987	-81.50408	CCTV	EOC				
008010	113	140	41.08396	-81.50349	CCTV	EOC				
008012	114	140	41.09295	-81.49920	CCTV	T-1				
008014	115	140	41.10216	-81.49970	CCTV w/ VD	T-1				
008016	116	140	41.11421	-81.49427	CCTV	EOC				
008018	116	140	41.11529	-81.49350	DMS PEDESTAL	WIRELESS-CDMA				
008019	117	140	41.11957	-81.48793	CCTV	EOC				
008022	118	140	41.14319	-81.47622	CCTV	EOC				
008024	119	140	41.14973	-81.47159	CCTV	EOC				
008026	120	141	41.16283	-81.47094	CCTV	T-1				
008028	121	141	41.18115	-81.47831	CCTV	EOC				
008030	122	141	41.19177	-81.47780	CCTV	EOC				
008032	123	141	41.21687	-81.48913	DMS PEDESTAL	T-1				
008034	123	141	41.21716	-81.48919	CCTV w/ VD	SHARED T-1				

SR-21 DEVICES										
DEVICE	SHE	EΤ		1.000	DEVICE	COMM.				
NUMBER	PLANS	сомм.	LAT.	LONG.	DEVICE	COMM.				
021002	124	142	41.11148	-81.65494	CCTV	T-1				

US 62 DEVICES										
DEVICE	SHE	EΤ		LONG	DEVICE	COMM.				
NUMBER	PLANS	сомм.	LAT.	LONG.	DEVICE	COMM.				
062002	125	139	40.82974	-81.37754	DMS TRUSS	WIRELESS-CDMA				



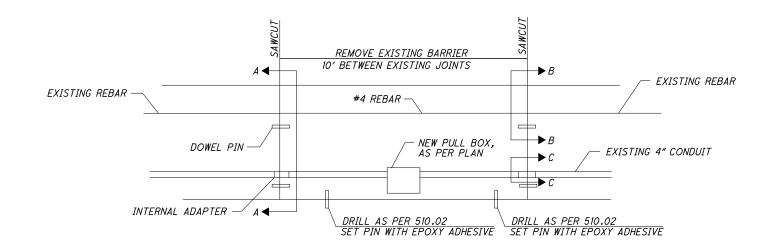




#### NOTES:

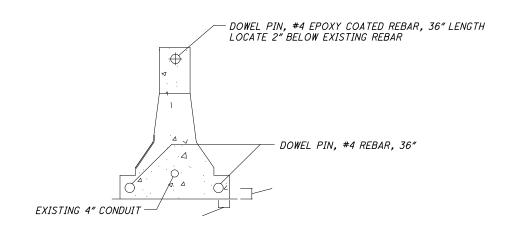
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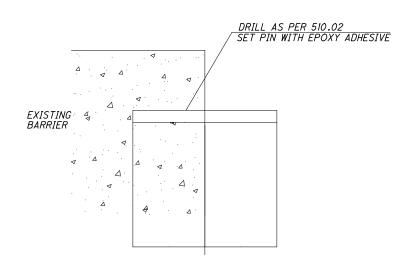
- 1. HORIZONTAL AND VERTICAL SAWCUT EXISTING BARRIER AT EXISTING JOINTS. REMOVE AND DISPOSE OF ALL MATERIAL BETWEEN CUTS DOWN TO THE BASE SLAB. HORIZONTAL AND VERTICAL SAWCUTS ARE INCIDENTAL TO BARRIER WORK.
- 2. SET DOWEL PINS BY EPOXY GROUTING IN EXISTING BARRIER WALL, CONNECT ALL CONDUITS AND SET NEW PULL BOX AS SHOWN.
- 3. POUR NEW CONCRETE. EXISTING BARRIER SHALL BE COATED WITH A BONDING COMPOUND, IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS, BEFORE THE POUR IS STARTED.
- 4. WORK SHALL INCLUDE ALL REMOVAL AND REPLACEMENT OF, STEEL, CONDUIT, MEDIAN PULL BOX (IF APPLICABLE) AND CONCRETE ITEMS.
- 5. THE CONTRACTOR SHALL ASSURE THAT THE REMOVAL AND REPLACEMENT OF MEDIAN BARRIER PROVIDES MINIMAL RISK TO MOTORISTS. UPON REMOVAL OF THE SECTIONS OF BARRIER TO BE REPLACED, THE CONTRACTOR SHALL INSTALL TWO TEMPORARY STEEL GUARDRAIL SECTIONS OF DOUBLE THICKNESS (NESTED) ACROSS THE OPENING ON EACH SIDE OF THE BARRIER. EACH END OF EACH SECTION SHALL BE BOLTED TO THE BARRIER USING FORMED END SECTIONS AND WEDGE BOLTS OF THE SIZE AND QUANTITY SHOWN ON STANDARD DRAWING GR-3.2. THE TEMPORARY STEEL GUARDRAIL SHALL BE IN PLACE BY THE END OF THE WORK SHIFT OR BEFORE THE CONTRACTOR LEAVES THE SITE. AS AN ALTERNATE, THE CONTRACTOR MAY POUR THE REPLACEMENT CONCRETE BARRIER THE SAME DAY AS THE ORIGINAL SECTION IS REMOVED.

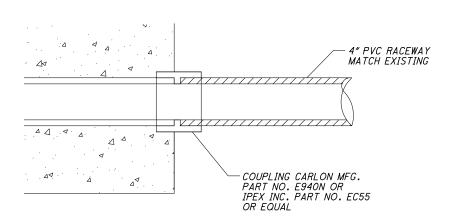


<u>CONCRETE BARRIER</u>

NEW OR REPLACEMENT MEDIAN PULL BOX IN EXISTING BARRIER







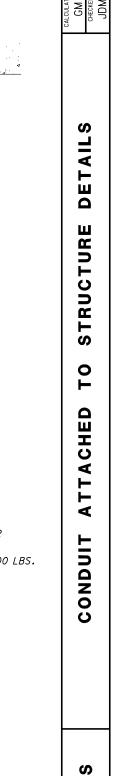
SECTION A-A

SECTION B-B

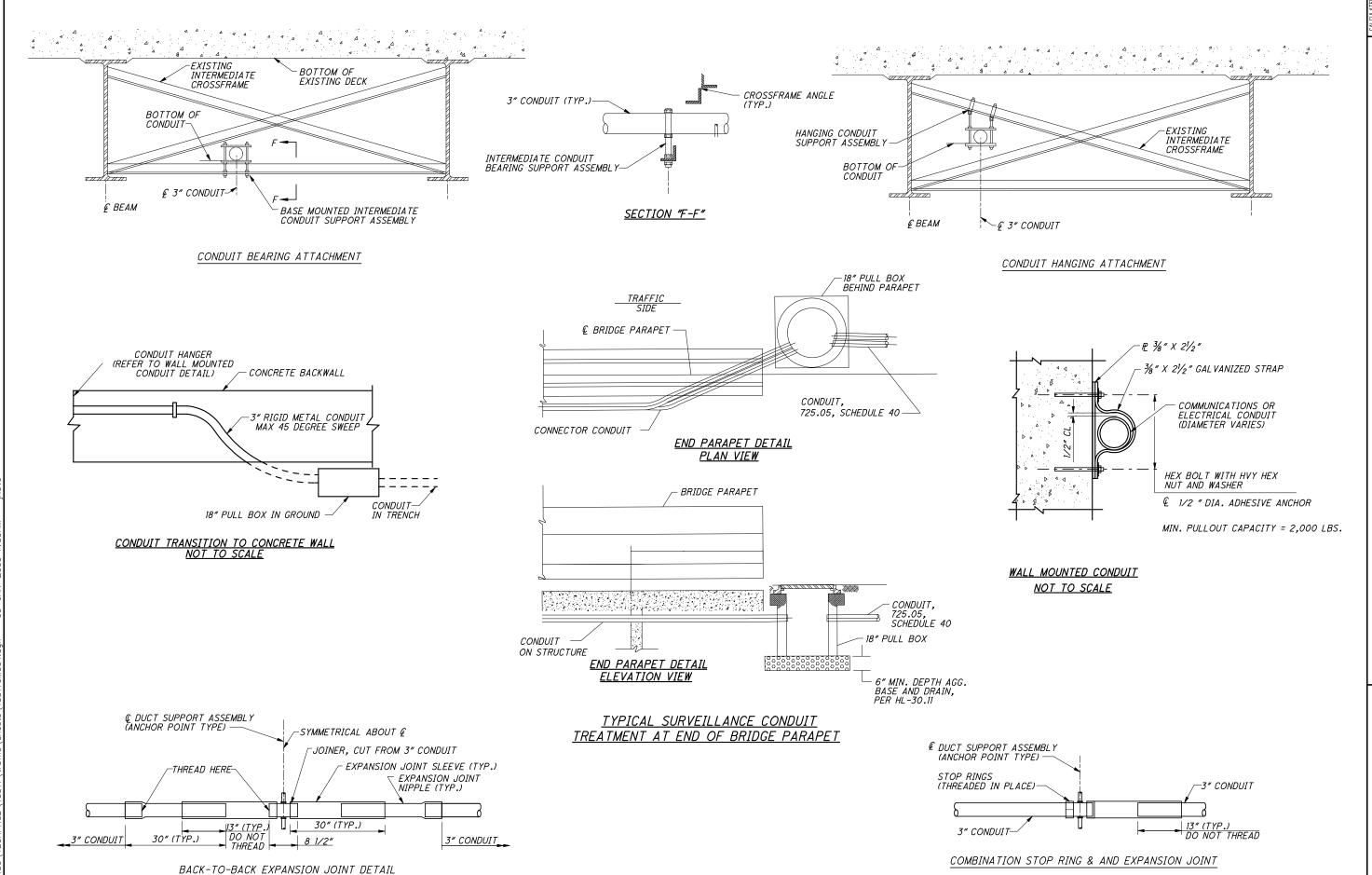
SECTION C-C

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TYPICAL EXPANSION JOINT DETAILS

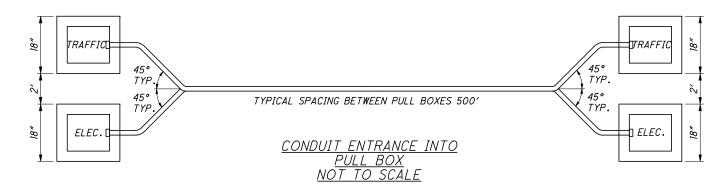
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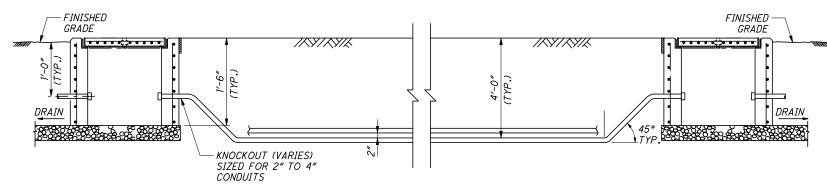


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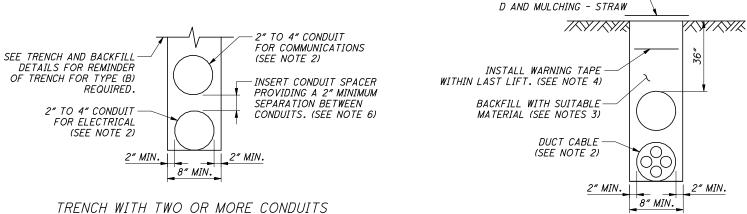
ET

CONDUI





## CONDUIT ENTRANCE INTO PULL BOX NOT TO SCALE



TRENCH WITH TWO OR MORE CONDUITS

NOT TO SCALE

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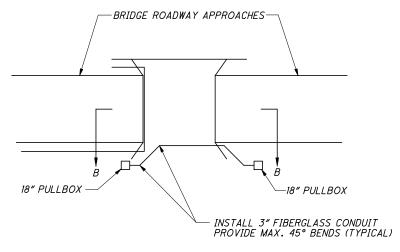
TRENCH WITH TWO OR MORE CONDUITS

WITH INNER DUCT
NOT TO SCALE

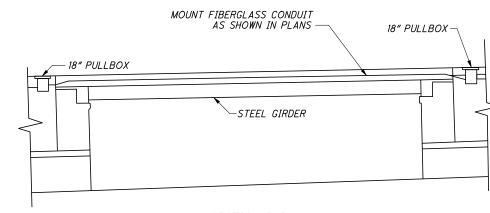
SEEDING AND SOILSUPPLEMENTS - FORMULA

#### NOTES:

- REMOVE AND STORE TOPSOIL FROM THE EXCAVATION. DISPOSE OF ALL UNSUITABLW MATERIAL BEFORE BACKFILLING.
- 2. CENTER THE CONDUIT IN THE TRENCH AND HOLD FIRMLY IN PLACE WHILE THE TRENCH IS BACKFILLED.
- 3. THE BACKFILL MATERIAL SHALL CONFORM TO ODOT ITEM 625 TRENCHING (INCIDENTAL).
- 4. INSTALL A 4 MIL PLASTIC ORANGE WARNING TAPE 6" TO 8" BELOW SURFACE, (INCIDENTAL) FOR THE ENTIRE LENGTH OF THE TRENCH.
- 5. AFTER BACKFILL MATERIAL IS PLACED IN UNPAVED AREAS, SEED AND MULCH OVER TRENCHED AREA.
- 6. PROVIDE HIGH IMPACT CONDUIT SPACERS AT INTERVALS NOT GREATER THAT 10'. SPACERS ARE CONSIDERED INCIDENTAL TO THE CONDUIT ITEM AND WILL NOT BE PAID FOR SEPARATELY.



<u>PLAN VIEW</u>



SECTION B-B

TYPICAL CONDUIT ATTACHMENT DETAILS

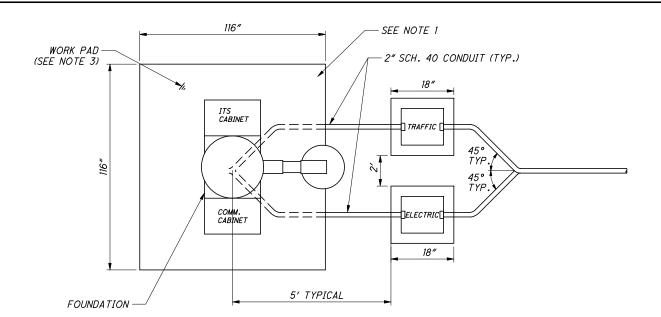
DETAIL "A"

NOT TO SCALE

S

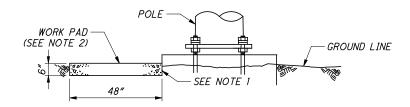
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PLAN VIEW

### CONCRETE PAD WITH CAMERA AND JUNCTION BOXES NOT TO SCALE



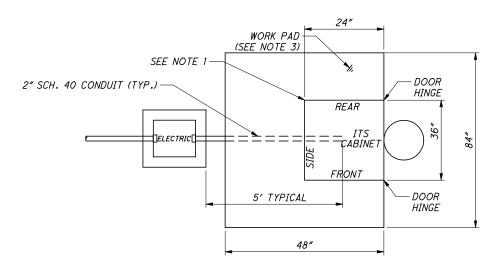
### CONCRETE WORK PAD FOR HAR AND VEHICLE DETECTOR ASSEMBLIES NOT TO SCALE

#### <u>NOTES</u>

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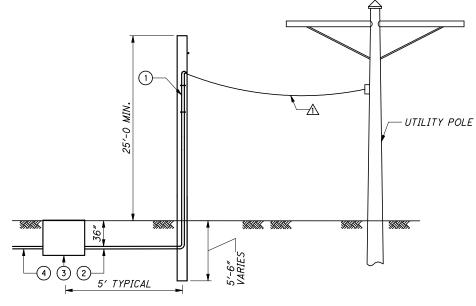
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- 1. 1/2" PREFORMED JOINT FILLER AS PER 705.03 SHALL BE USED BETWEEN FOUNDATIONS AND ADJACENT PAVED AREAS.
- 2. A MINIMUM OF ONE 48" X 84" X 6" WORK PAD SHALL BE LOCATED AT GROUND LEVEL BELOW EACH POLE MOUNTED CABINET UNLESS LOCATED IN AN OTHERWISE PAVED AREA OR SHOWN IN THE PLAN VIEW. WHEN REQUIRED, THIS ITEM SHALL BE PAID FOR UNDER THE DEVICE TYPE. IN LEVEL AREAS, THE TOP OF THE PAD SHALL BE 1" ABOVE THE GROUND LINE. IN STEEPLY SLOPED AREAS, THE PAD'S LOCATION SHALL BE ADJUSTED TO PROVIDE ACCESS AND DRAINAGE WHILE COMPLYING WITH THE REQUIRED CABINET MOUNTING HEIGHT.
- 3. A 6" THICK WORK PAD WITH DIMENSIONS SHOWN ON DETAILS SHALL BE PROVIDED UNLESS IN AN OTHERWISE PAVED AREA. WHEN REQUIRED, THIS ITEM SHALL BE PAID FOR UNDER THE DEVICE TYPE. IN LEVEL AREAS, THE TOP OF THE PAD SHALL BE 1" ABOVE THE GROUND LINE. IN STEEPLY SLOPED AREAS, THE PAD'S LOCATION SHALL BE ADJUSTED TO PROVIDE ACCESS AND DRAINAGE.



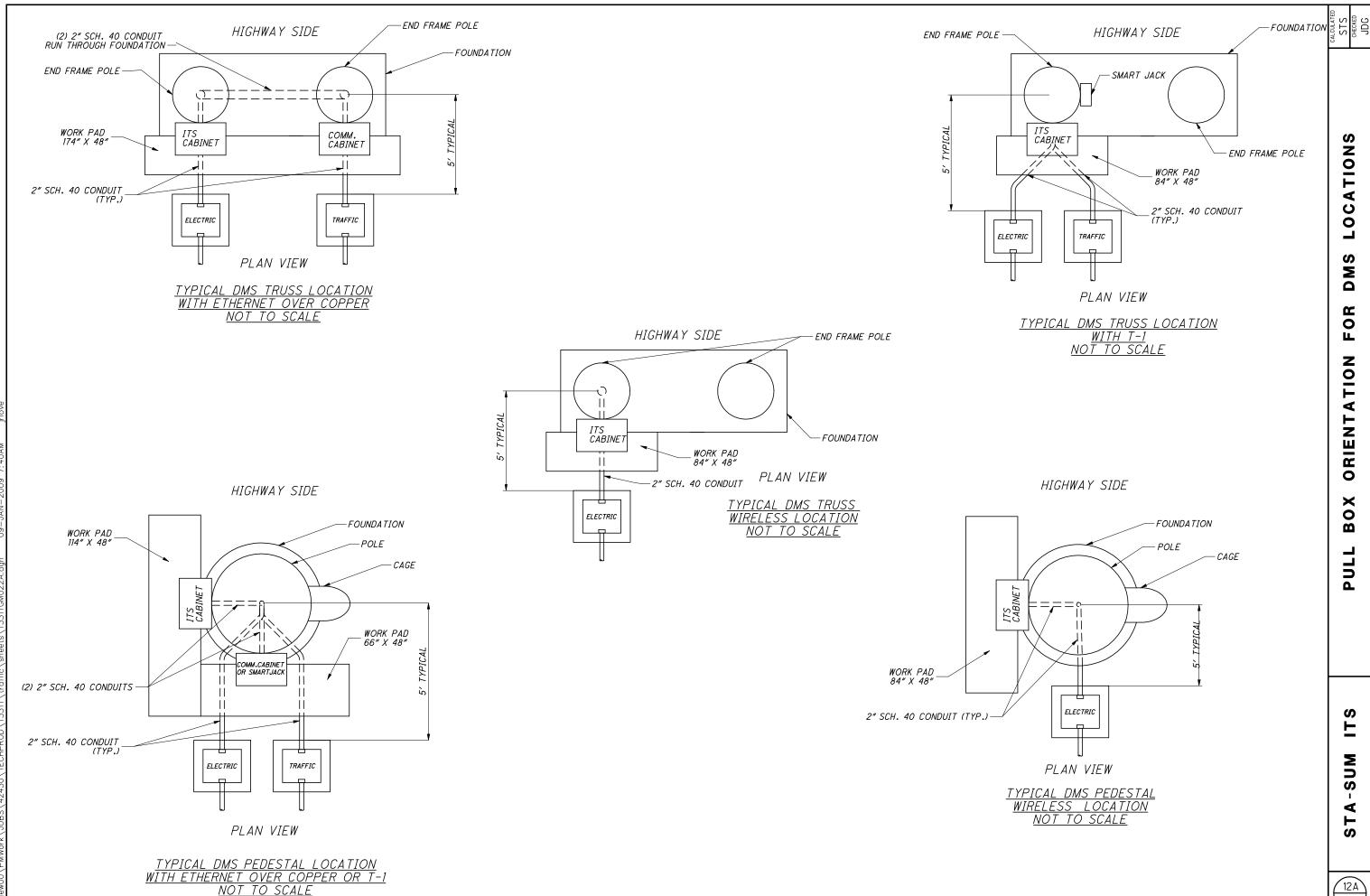
PLAN VIEW

## CONCRETE WORK PAD FOR HAR OR VEHICLE DETECTOR ASSEMBLY WITH CABINET NOT TO SCALE



COMMUNICATION SERVICE AS PER PLAN NOT TO SCALE

- A COMMUNICATIONS CABLE FURNISHED AND INSTALLED BY UTILITY
- 1) 2" CONDUIT RISER. SEE SHEET 14, DETAIL 4 CONDUIT MOUNTING BRACKET FOR MOUNTING DETAILS.
- (2) SCHEDULE 40 PVC CONDUIT IN TRENCH. CONDUIT SHALL BE 2" MINIMUM. TERMINATE THIS CONDUIT IN PULL BOX. CONDUIT INSTALLED AT A MINIMUM OF 36" BELOW GRADE.
- (3) CONCRETE PULL BOX, 18" WILL BE INSTALLED WITHIN 5 FT OF EVERY COMMUNICATION SERVICE.
- (4) CONDUIT PER PLAN BY CONTRACTOR.



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#### LEGEND:

#### WORK BY UTILITY:

- ↑ AERIAL SERVICE ENTRANCE CABLE FURNISHED AND INSTALLED BY UTILITY.
- SPLICING OF UTILITY'S SERVICE ENTRANCE CABLE ONTO CONTRACTOR'S SERVICE ENTRANCE CABLE BY UTILITY.
- TERMINATION OF CONTRACTOR SUPPLIED SERVICE ENTRANCE CABLE ONTO CONTRACTOR INSTALLED WOOD POLE/ H-FRAME.
- A EXISTING/PROPOSED ELECTRIC UTILITY POLE INSTALLED BY UTILITY.
- EXISTING/PROPOSED ELECTRIC UTILITY METER BASE INSTALLED BY UTILITY
- © COMMUNICATIONS CABLE FURBISHED AND INSTALLED BY UTILITY

#### WORK BY CONTRACTOR:

- (1) INSTALL 90° 24" RADIUS PVC BEND, SCHEDULE 80.
- (2) BURIED ELECTRIC WARNING RIBBON 12" ABOVE SERVICE LATERAL.
- 3 CONTRACTOR FURNISHED AND INSTALLED CLASS V WOOD POLE.
  MINIMUM 25' LONG. SEE TABLE ON THIS SHEET FOR
  SETTING DEPTHS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR
  TO FURNISH AND INSTALL A WOOD POLE THAT IS SUFFICIENT IN
  LENGTH TO MEET MIN. ROADWAY CLEARANCE OF 20FT.
- (4) CONTRACTOR INSTALLED EQUIPMENT STAND PER ODOT STANDARD HL-40.20. CHANNEL STRUT ATTACHED TO POLE PER DETAIL 4 ON SHEET 14.
- (5) UTILITY METER. CONTRACTOR TO SUPPLY MANUAL BYPASS TYPE SOCKET.
- 6 FUSIBLE SERVICE DISCONNECT SWITCH. FUSE SIZES & SERVICE RATING SHOWN ON PLAN SHEETS.
- (7) CONCRETE PULL BOX, 18" WILL BE INSTALLED WITHIN 5 FT OF EVERY ELECTRICAL SERVICE. NO ELECTRICAL SPLICES PERMITTED.
- 8 %" x 10' COPPER CLAD STEEL GROUNDING ROD ELECTRODE, APP. TOP OF GROUND ROD INSTALLED 30" BELOW GRADE AND AT LEAST 1' OFF EDGE OF POLE OR EQUIPMENT FOUNDATION. SEE DETAIL 'SITE GROUNDING.'
- 2" WEATHERHEAD AND STRAIN RELIEF HARDWARE FURNISHED & INSTALLED BY CONTRACTOR.
- 10) 2" CONDUIT RISER. SEE DETAIL 4 CONDUIT MOUNTING BRACKET FOR MOUNTING DETAILS.
- (1) SERVICE ENTRANCE CABLE IN CONDUIT BY CONTRACTOR. ALL SERVICE ENTRANCE CABLE SHALL BE #4-USE-5KV FOR 100A SERVICES AND #1/0 FOR 200A SERVICES OR AS REQUIRED BY UTILITY.
- 12 THREADED HUB TYPE CONDUIT COUPLING BETWEEN ENCLOSURES SIZED TO ACCOMADATE CONDUCTORS. SEE PLAN FOR WIRE REQUIREMENTS.
- (13) 1" SCHEDULE 80 PVC CONDUIT FOR GROUND.
- (14) 1-1/C #4 XHHW-2 GROUNDING ELECTRODE CONDUCTOR IN CONDUIT TO DISCONNECT SWITCH NEUTRAL BUS.
- (5) GROUNDING ELECTRODE CONDUCTOR ATTACHED TO GROUNDING ELECTRODE AT LEAST 24" BELOW GRADE WITH GROUND CLAMPS SUITABLE FOR DIRECT BURIAL. FROM THE DISCONNECT SWITCH NEUTRAL BUS, THE GROUNDING ELECTRODE CONDUCTOR MUST ALWAYS BE DIRECTED DOWNWARD OR HORIZONTAL.
- SCHEDULE 40 PVC CONDUIT IN TRENCH. CONDUIT SHALL BE 2" MINIMUM. TERMINATE THIS CONDUIT IN PULL BOX. CONDUIT INSTALLED A MINIMUM OF 36" BELOW GRADE.

- (T) CONDUIT AND CABLE PER PLAN BY CONTRACTOR. NO SPLICES PERMITTED IN PULLBOX. STRIP CASING BACK FROM ELECTRICAL CABLE AND PULL CABLE THROUGH TO DISCONNECT.
- (18) 2" 725.04 CONDUIT INSTALLED A MINIMUM OF 36" BELOW GRADE.
  CONDUIT RUN IS CONTINUOUS BETWEEN EQUIPMENT STAND AND
  UTILITY POLE/TRANSFORMER OR AS INDICATED ON PLAN SHEETS.
- (9) CONTRACTOR SHALL INSTALL CONDUIT NO CLOSER THAN 2' FROM EDGE OF UTILITY TRANSFORMER PAD. APPROACH TO TRANSFORMER MUST BE COORDINATED WITH UTILITY.
- NEMA 4X CIRCUIT BREAKER ENCLOSURE WITH TWO 2-POLE, 600V BOLT-ON TYPE CIRCUIT BREAKERS. ENCLOSURE SHALL BE SERVICE ENTRANCE RATED. PROVIDE ONE PADLOCK FOR EACH ENCLOSURE. PADLOCK SHALL BE IN ACCORDANCE WITH THE SPECIAL PROVISIONS.
- (1) DO NOT EXTEND CONDUIT ABOVE THE SECONDARY OR NEUTRAL POSITION AT ANY TIME. CONDUIT SHALL MAINTAIN A MINUMUM CLEARANCE OF 6" BELOW THE SECONDARY OR NEUTRAL.

#### NOTES:.

- CONTRACTOR MUST COORDINATE WITH UTILITIES' FIELD ENGINEER.

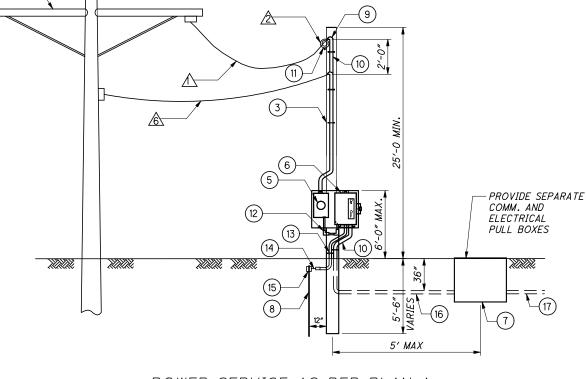
  CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING AND COORDINATING

  OF ALL UTILITES, RELATED WORK, AND INSPECTIONS AS NECESSITATED BY

  THE PROJECT.
- 2. ALL WORK AND MATERIALS SHOWN ON ELECTRICAL SERVICE DETAILS FROM THE ELECTRIC UTILITY POLE TO THE DISCONNECT IS INCIDENTAL TO POWER SERVICE PAY ITEMS.

WOOD POLE SETTING

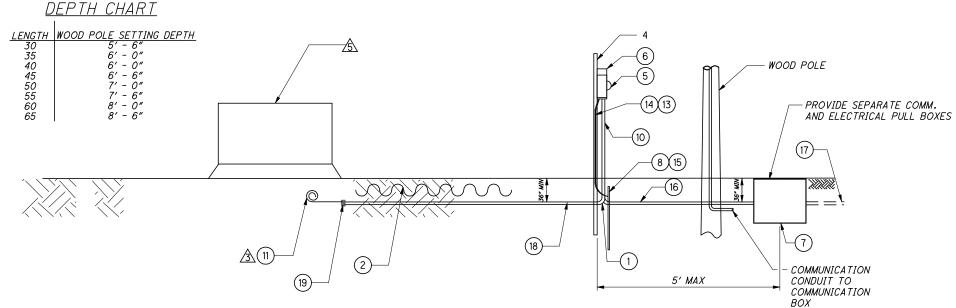
- 3. OHIO EDISON AND AEP CONDUIT SYSTEMS SHALL BE INSTALLED PER NEC AND LOCAL REQUIREMENTS.
- 4. ALL PROPOSED SERVICE TYPES AND LOCATIONS ARE SUBJECT TO APPROVAL FROM UTILITY. CONTRACTOR IS RESPONSIBLE FOR FURNISHING AND INSTALLING ALL EQUIPMENT ACCORDING TO ENGINEER'S APPROVAL.



### POWER SERVICE AS PER PLAN A DETAIL 1 POWER SERVICE, TYPE A, 240/12

#### <u>POWER SERVICE, TYPE A, 240/120V</u> 3 WIRE. 1 PHASE. PER PLAN

- \* SEE STANDARD CONSTRUCTION DRAWING HL-40.10 FOR MORE DETAILS.
- \* 60A DISCONNECTS WILL BE FUSED AT 30A.
- \* 100A DISCONNECTS WILL BE FUSED AT 80A.



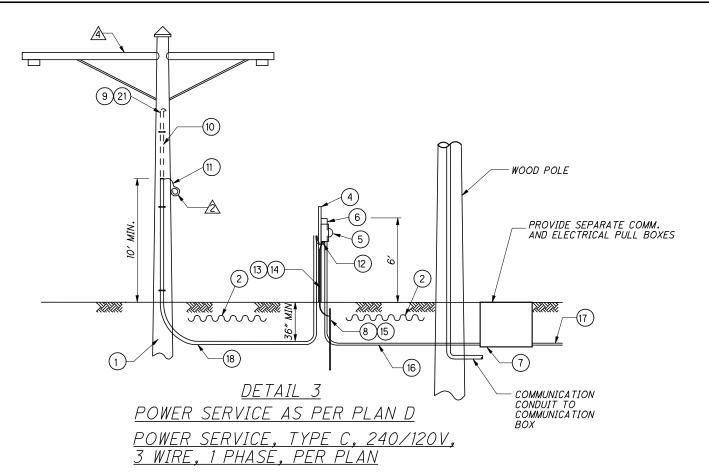
#### <u>POWER SERVICE AS PER PLAN C</u>

DETAIL 2 <u>POWER SERVICE, TYPE B, 240/120V 3 WIRE,</u> 1 PHASE. PER PLAN

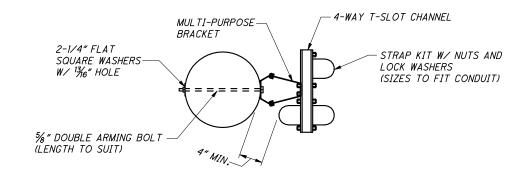
- \* SEE STANDARD CONSTRUCTION DRAWING HL-40.20 FOR MORE DETAILS.
- \* 30A DISCONNECTS WILL BE FUSED AT 30A.
- \* 100A DISCONNECTS WILL BE FUSED AT 80A.



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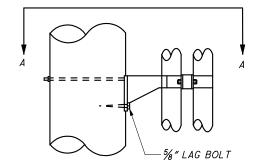
- \*\* 200A SERVICE WITH TWO 100A CIRCUIT BREAKERS
- \* SEE STANDARD CONSTRUCTION DRAWING HL-40.20 FOR MORE DETAILS
- \* 30A DISCONNECTS WILL BE FUSED @ 30A
- \* 100A DISCONNECTS WILL BE FUSED @ 80A



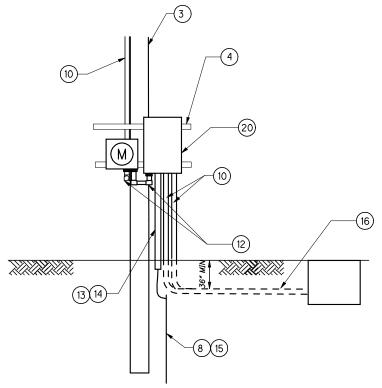
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#### ELEVATION A-A DETAIL 4

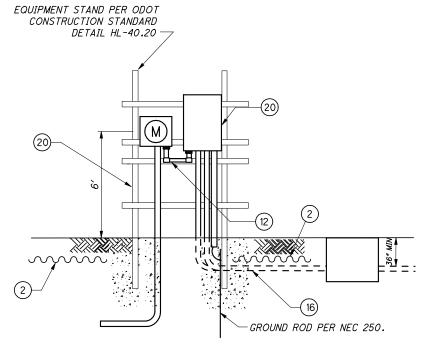


DETAIL 4 CONDUIT MOUNTING BRACKET



DETAIL 5 POWER SERVICE, DUAL, 240/120V *3 WIRE, 1 PHASE, PER PLAN* 

- \* CIRCUIT BREAKERS SIZED PER PLANS
- \* SEE STANDARD CONSTRUCTION DRAWING HL-40.10 FOR DOUBLE ENCLOSURE DETAILS



DETAIL 6 POWER SERVICE, DUAL UNDERGROUND, 240/120V. 3 WIRE. 1 PHASE. PER PLAN

- \* CIRCUIT BREAKERS SIZED PER PLANS
- \* SEE STANDARD CONSTRUCTION DRAWING HL-40.20 FOR MORE DETAILS



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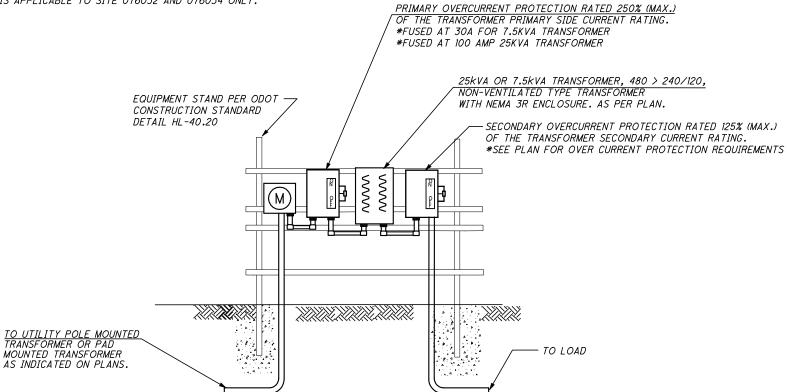
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NEMA 3R CIRCUIT BREAKER ENCLOSURE. -480V SERVICE DROP SECONDARY OVERCURRENT PROTECTION RATED 125% (MAX.) OF THE TRANSFORMER SECONDARY CURRENT RATING. SEE PLAN FOR OVER CURRENT PROTECTION REQUIREMENTS 25kVA OR 7.5kVA TRANSFORMER, 480 > 240/120, -NON-VENTILATED TYPE TRANSFORMER WITH NEMA 3R ENCLOSURE. AS PER PLAN. DISCONNECT, NOT FUSED - EQUIPMENT STAND LOCATED AS SHOWN ON PLAN. COMMUNICATIONS DROP PRIMARY OVERCURRENT PROTECTION RATED 250% (MAX.) OF THE TRANSFORMER PRIMARY SIDE CURRENT RATING. \*FUSED AT 30A FOR 7.5KVA TRANSFORMER \*FUSED AT 100 AMP 25KVA TRANSFORMER TO LOAD XXXX XXXX

#### DETAIL 8 POWER SERVICE AS PER PLAN F POWER SERVICE, TYPE A, 480V 3 WIRE, 1 PHASÉ, PER PLAN

- \* CIRCUIT BREAKERS SIZED PER PLANS
- \* SEE STANDARD CONSTRUCTION DRAWING HL-40.20
- \* SEE DETAIL 6 ON TYPICAL SINGLE LINE DIAGRAM SHEET 16. \* THIS DETAIL IS APPLICABLE TO SITE 076032 AND 076034 ONLY.



#### NOTES:

- 1. THE ELECTRIC POWER SERVICE W/ TRANSFORMER IS PER THE ELECTRICAL DETAILS FOR TYPE A, TYPE B, AND TYPE C POWER SERVICES WITH THE FOLLOWING
  - A. A TRANSFORMER AND DISCONNECT ARE ADDED AS SHOWN ON THIS DETAIL.
  - B. AN EQUIPMENT STAND SHALL BE USED FOR ALL ELECTRIC POWER SERVICE TYPES TO ACCOMODATE ALL OF THE EQUIPMENT AS SHOWN ON THIS DETAIL.

#### DETAIL 7 POWER SERVICE WITH TRANSFORMER

- \* CIRCUIT BREAKERS SIZED PER PLANS
- \* SEE STANDARD CONSTRUCTION DRAWING HL-40.20 FOR MORE DETAILS

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CCTV OR DMS

CABINET

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#### ELECTRICAL LEGEND:

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- 1) IF A METAL CONDUIT OR GROUND IS BROUGHT FORWARD FROM THE SERVICE ENTRANCE, THEN NEUTRAL AND GROUND CANNOT BE BONDED AT DEVICE CABINET. IF GROUND IS BROUGHT FORWARD THEN SIZE THE GROUND THE SAME AS THE NEUTRAL CONDUCTOR. SEE 'CONTINUOUS METALLIC PATH BETWEEN DEVICES' DETAIL 1.
- (2) FEEDER SIZED PER PLAN. NO EQUIPMENT GROUND AND NO METALLIC CONDUIT BROUGHT FORWARD FROM SERVICE ENTRANCE.
- (3) SERVICE ENTRANCE CONDUCTORS SIZED PER PLAN
- (4) FUSIBLE OR MAIN BREAKER DISCONNECT. OVERCURRENT PROTECTION DEVICES ARE AS SIZED PER PLAN. TYPICAL FUSE CONFIGURATIONS FOR 120/240V SERVICE: 30A FOR ONE CAMERA 80A FOR ONE DMS 80A FOR ONE DMS AND ONE CAMERA 100A FOR TWO DMS
- 5 NEUTRAL AND GROUND BONDED AT SERVICE ENTRANCE
- (6) SERVICE ENTRANCE RATED DISTRIBUTION EQUIPMENT.
- 7) TWO POLE CIRCUIT BREAKER FOR FEEDERS ARE SIZED AS PER PLAN. TYPICAL CIRCUIT BREAKER CONFIGURATIONS FOR 120/240 SERVICE: 30A FOR ONE CAMERA 80A FOR ONE DMS 80A FOR ONE DMS AND ONE CAMERA
- 8 CIRCUIT BREAKERS FOR LOCAL EQUIPMENT ARE SIZED PER MANUFACTURER RECOMMENDATIONS

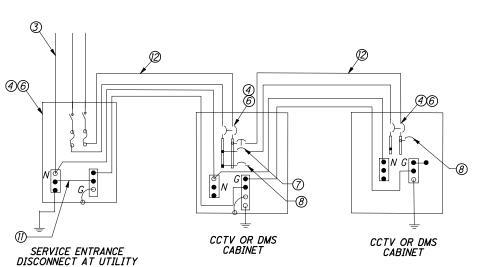
100A FOR TWO DMS

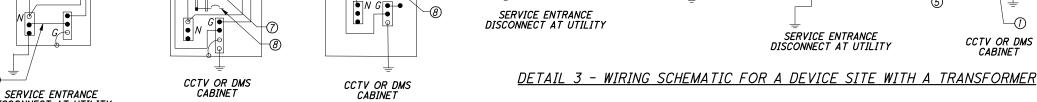
- (9) MULTIPLE MAIN BREAKER DISCONNECTS. CIRCUIT BREAKERS ARE AS SIZED PER PLAN TYPICAL CIRCUIT BREAKER CONFIGURATIONS FOR 120/240V SFRVICE: 30A FOR ONE CAMERA 80A FOR ONE DMS 80A FOR ONE DMS AND ONE CAMERA REFER TO PLANS FOR EXCEPTIONS
- (10) NOTE NOT USED.
- (1) NEUTRAL AND GROUND ARE BONDED ONLY AT THE SERVICE ENTRANCE
- (2) FEEDER SIZED PER PLAN. EQUIPMENT GROUND BROUGHT FORWARD FROM SERVICE ENTRANCE AND SIZED THE SAME AS THE PHASE AND NEUTRAL CONDUCTORS. IF METALLIC CONDUIT IS USED, THEN MAY USE GROUNDING BUSHINGS ON BOTH ENDS OF THE CONDUIT IN LIEU OF A GROUNDING CONDUCTOR.
- (3) PRIMARY OVER CURRENT PROTECTION RATED 250% (MAX.) OF THE PRIMARY SIDE CURRENT RATING. 30A FOR 7.5 KVA TRANSFORMER
- (4) SECONDARY OVER CURRENT PROTECTION RATED 125% (MAX.) OF THE SECONDARY SIDE CURRENT RATING. SEE PLANS FOR FUSE SIZES.

100 AMPS FOR 25 KVA TRANSFORMER.

(15) 480>240/120 XFRM LOCATED AT DMS SITE

- 1. SEE PLAN SHEETS FOR SITE SPECIFIC ELECTRICAL EQUIPMENT RATINGS.
- 2. SURGE PROTECTION DEVICES NOT SHOWN HERE.
- 3.ALL CCTV OR DMS CABINETS ARE REMOTE FROM THE SERVICE ENTRANCE DISCONNECT AT UTILITY.



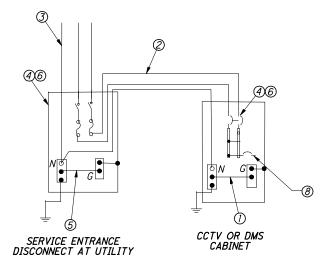


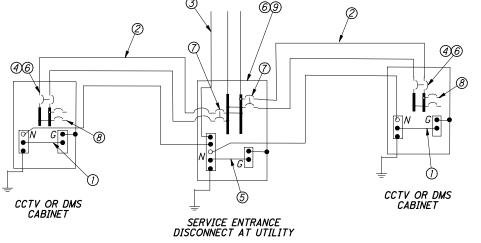
DISCONNECT LOCATED WITHIN

5FT OF TRANSFORMER

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#### DETAIL 1 - CONTINUOUS METALLIC PATHS BETWEEN DEVICES



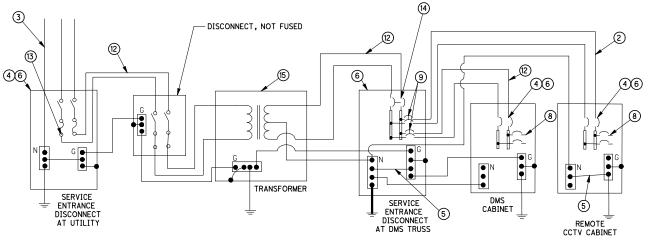


480>240/120V TRANSFORMER

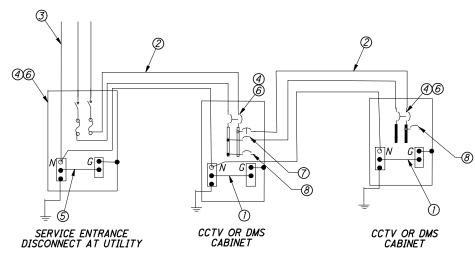
LOCATED AT SERVICE POINT

<u>DETAIL 4 - TYPICAL WIRING SCHEMATIC FOR A MULTI-DEVICE SITE</u> (CAMERA FED FROM SERVICE ENTRANCE)

#### DETAIL 2 - TYPICAL WIRING SCHEMATIC FOR A SINGLE DEVICE SITE





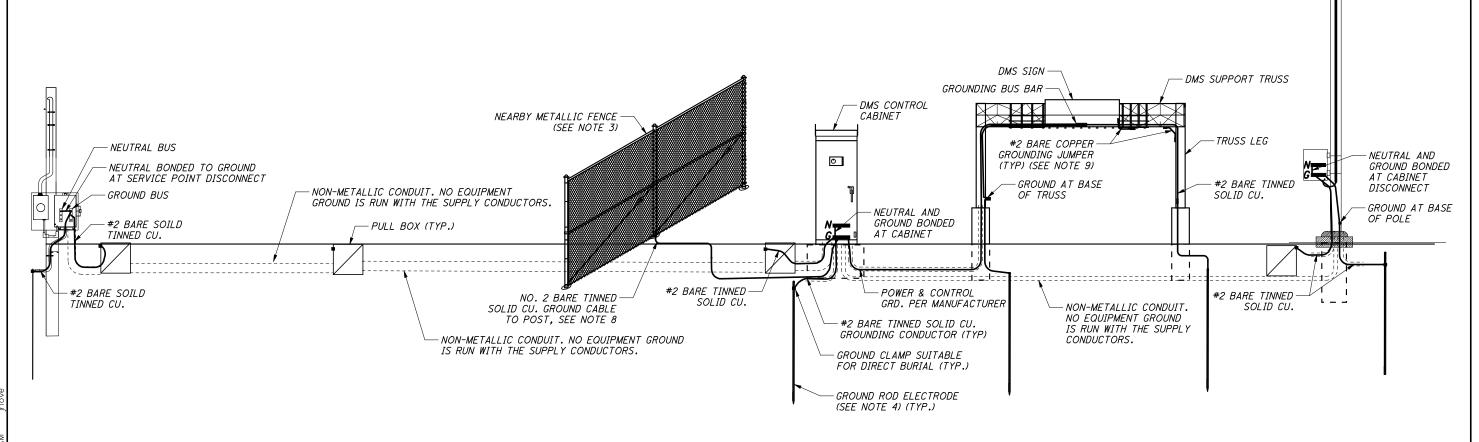


<u> DETAIL 5 - TYPICAL WIRING SCHEMATIC FOR A</u> MULTI-DEVICE (CAMERA FED FROM DMS)



E GROUNDING

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#### DMS SITE GROUND RING

#### NOTES:

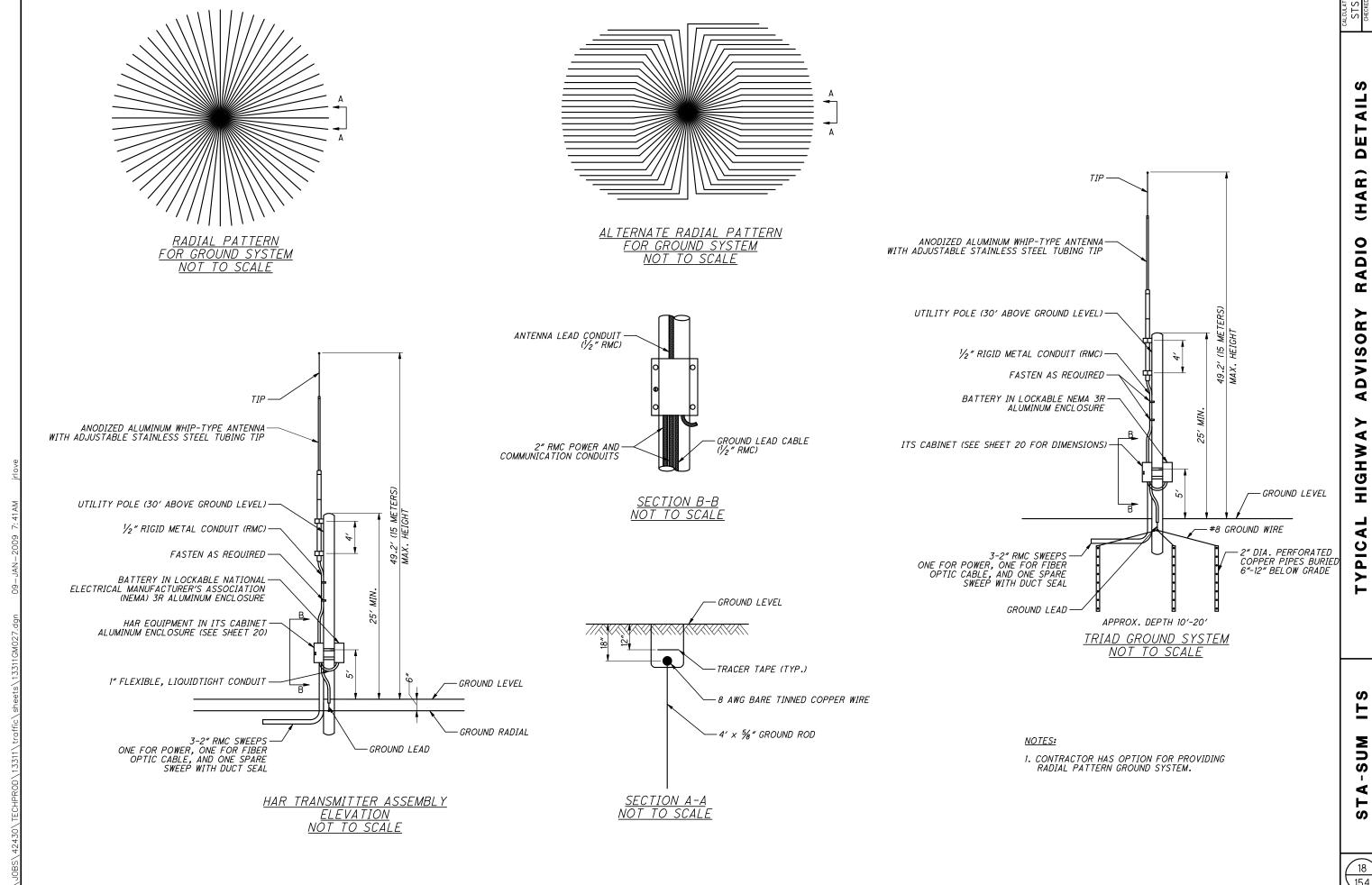
- 1. ADDITIONAL GROUND ROD ELECTRODES SHALL BE ADDED TO GROUNDING CONDUCTOR AS REQUIRED UNTIL RESISTANCE TO GROUND IS 5 OHMS OR LESS FOR DEVICE LOCATIONS AND 25 OHMS OR LESS AT POWER SERVICE AND PULL BOX. IF ADDITIONAL GROUND ROD ELECTRODES ARE REQUIRED IN ORDER TO ACHIEVE REQUIRED RESISTANCE THEY SHALL RADIATE OUT FROM EXISTING GROUND ROD ELECTRODES, SHALL BE CONNECTED WITH #2 BARE TINNED SOLID CONDUCTOR, AND SHALL BE 30' FROM CONNECTED GROUND ROD. ALL COMMUNICATION EQUIPMENT GROUNDING SITES SHALL BE TESTED FOR RESISTANCE TO GROUND USING THE THREE-POINT/FALL-OF-POTENTIAL TEST PER ANSI/I/EEE STD 81. SEE GROUNDING SPECIFICATIONS.
- 2. GROUND ROD ELECTRODES SHALL NOT BE ROUTED THROUGH FOUNDATIONS.
- 3. FENCES AND OTHER METALLIC STRUCTURES WITH PATHS TO GROUND SHALL BE CONNECTED TO THE GROUNDING CONDUCTOR IF THEY ARE LOCATED WITHIN 10' OF THE GROUNDING ELECTRODE SYSTEM OR ANY OBJECT GROUNDED TO THE GROUNDING ELECTRODE SYSTEM. SEE STANDARD CONSTRUCTION DRAWING HI -50.11.
- 4. GROUND ROD ELECTRODES SHALL BE BURIED TO A MINIMUM DEPTH OF 36 INCHES BELOW FINISHED GRADE, WHERE POSSIBLE.
- 5. CCTV CAMERA AND ASSOCIATED PULL BOX SHALL BE CONNECTED TO THE DMS SITE GROUND RING ONLY WHEN EITHER THE DMS TRUSS OR THE DMS CONTROL CABINET IS LOCATED CLOSER TO THE BASE OF THE CCTV POLE THAN THE LENGTH OF THE CCTV POLE.

- 6. ALL EQUIPMENT GROUNDS SHALL BE PROPERLY CONNECTED TO A CHASSIS; ALL PAINT AND OTHER COATINGS, INCLUDING GALVANIZATION, SHALL BE REMOVED PRIOR TO TERMINATION OF A GROUND. AFTER THE GROUND IS TERMINATED A NON-OXIDIZING COATING SHALL BE PAINTED OVER THE EXPOSED METAL SURFACES.
- 7. GROUNDING ELECTRODE SYSTEM CONNECTIONS TO FENCING SHALL BE MADE USING HEAVY DUTY TINNED LISTED PIPE CLAMPS DESIGNED FOR GROUNDING AND STAINLESS STEEL HARDWARE. SEE STANDARD CONSTRUCTION DRAWING HL 50.11.
- 8. ALL GROUNDING DIAGRAMS ARE SCHEMATIC ONLY.
- 9. ALL METALLIC MEMBERS OF THE DMS TRUSS AND THE DMS SIGN WITHIN 6 FEET OF EACH OTHER SHALL BE BONDED TOGETHER. WELDS SHALL BE CONSIDERED AN ACCEPTABLE BONDING METHOD. U-BOLT CONNECTIONS SHALL NOT BE CONSIDERED AN ACCEPTABLE BONDING METHOD.
- 10. AT LEAST AN 8 INCH MINIMUM BENDING RADIUS SHALL BE MAINTAINED ON ALL GROUNDING ELECTRODE CONDUCTORS. THE ANGLE OF ANY BEND SHALL NOT BE LESS THEN 90°.
- 11. GROUNDING CONDUCTORS SHALL ALWAYS ROUTE AS STRAIGHT AS POSSIBLE. "U" FORM JUMPERS SHALL BE ACCEPTABLE ONLY FOR GATES AND DOORS.

12. THE QUANTITY OF GROUNDING ELECTRODE CONDUCTORS CONNECTED TO A GROUND ROD ELECTRODE SHALL BE LIMITED TO FOUR.

CCTV CAMERA-

- 13. WHENEVER POSSIBLE, GROUND ROD ELECTRODES SHALL BE INSTALLED NO CLOSER THAN 16.5' FROM A FOUNDATION.
- 14. SEE SHEET 19 FOR DETAILED NEUTRAL AND EQUIPMENT GROUND CONDUCTOR INSTALLATION REQUIREMENTS.
- 15. GROUNDING ELECTRODE CONDUCTORS SHALL BE INSTALLED IN ONE CONTINUOUS LENGTH. SPLICING SHALL BE PERMITTED ONLY BY IRREVERSIBLE COMPRESSION-TYPE CONNECTORS LISTED AS GROUNDING AND BONDING EQUIPMENT OR BY EXOTHERMIC WELDING PROCESS.



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DET (HAR)

ADIO  $\mathbf{\alpha}$ ADVISORY ⋖ HIGHW

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POLE TUBE WALL Ø WALL-0.06" \ 0

- HANDHOLE COVER 0.1875" THICK

TTYP.

H.R.M.S.

0.219"

6.00"

SECTION A-A

WALL 75 -(2)-0.25" HEX HEAD STAINLESS STEEL

-0.38" DIA. PARK STAND EYE BOLT (ONE FOR

ORIENTATION VIEW FOR

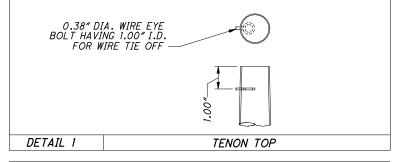
—2.75″

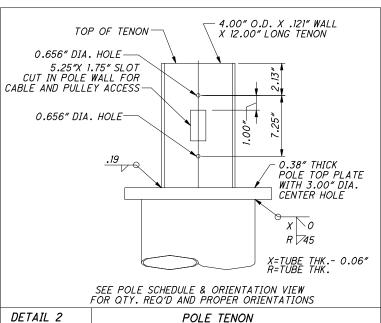
EACH ARM) SEE

ORIENTATIONS.

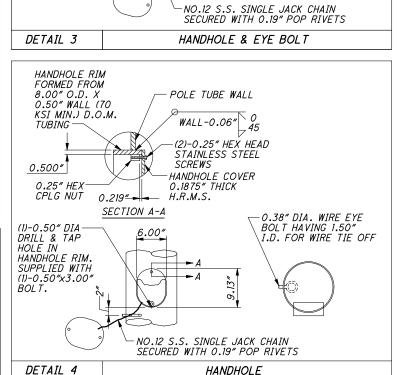








MATERIAL DATA								
COMPONENT	ASTM DESIGNATION	MIN. YIELD (KSI)						
POLE SHAFTS	A595 GR.A	55						
BASE PLATES	A36	36						
POLE TOP PLATE	A36	36						
TENON - C.D.S. TUBING		42						
ANCHOR BOLTS	F1554 GR.55	55						
GAL VANIZING - STRUCTURE	A123							
GAL VANIZING - HARDWARE	A153							



EACH ANCHOR BOLT PROVIDED WITH

(2) HEX NUTS AND (2) WASHERS

PER BOLT WITH THREADED END GALVANIZED AT LEAST 12".

1.25"———

6.00"-

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HANDHOLE RIM

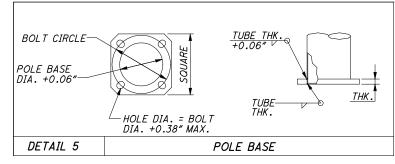
(70 KSI MIN.)

<u>0.500″</u>

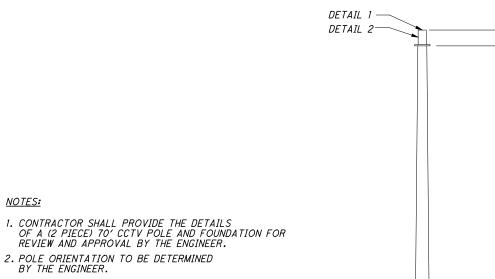
0.25" HEX CPLG NUT

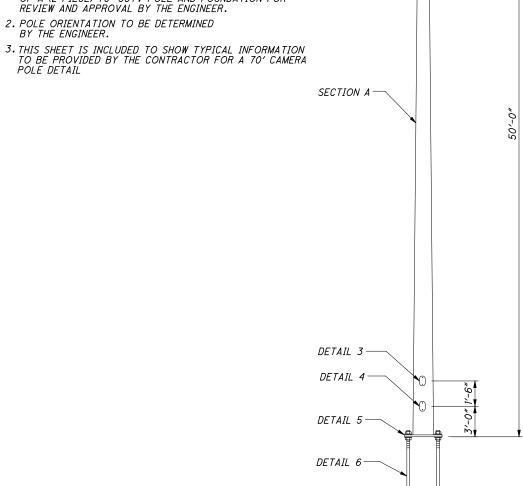
D.O.M. TUBING

FORMED FROM 8.00" O.D. X 0.50" WALL



DE	DETAIL 5 POLE BASE						DETAIL	6	ANCHOR BOLT					
	POLE DATA													
				NO.	TUBE					POLE BASE				
ITEM Q	QTY.	DESIGNATION EPA/MASS (FT )/(LB)	HEIGHT L.L (FT) ARM REQ	L.D. ARMS REQ'D	SECTION	BASE DIAMETER (IN)	TOP DIAMETER (IN)	LENGTH (FT)	GAUGE OR THICK	MINIMUM SLIP LENGHT	SQUARE (IN)	BOLT CIRCLE DIA (IN)	THICK (IN)	BOLT HOLE DIA. (IN)
1	2	AHM050-SPCL (GV) 2.8/120(LD+CAMERA) 7.9/150(PANEL BOX)	50.00	1	А	18.00	6.00	50.00	5 GA	N/A				1.563

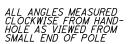




CCTV CAMERA POLE (50 FT.)

PARK STAND

> HANDHOLE ORIENTATION VIEW



MAXIMUM HORIZONTAL DEFLECTION IS 1" FOR A SUSTAINED 30 MPH WIND VELICITY W/NO GUST

LOADING AND ALLOWING STRESS CRITERIA: 1994 AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS."

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NOTES:

REVIEW AND APPROVAL BY THE ENGINEER.

2. POLE ORIENTATION TO BE DETERMINED

BY THE ENGINEER.

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DATA/POWER CABLES

-CONDUITS INSIDE OF POLE

-POWER CABLES BETWEEN CABINETS

DETAIL 'C' INTERNAL CONDUITS

NOT TO SCALE

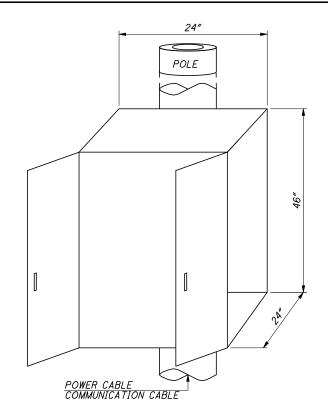
OFFICE SENIOR ITS ENGINEER

NOTE: CONFIGURATION OF THIS DETAIL SHALL BE SUBMITTED FOR APPROVAL BY THE CENTRAL

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ER M O

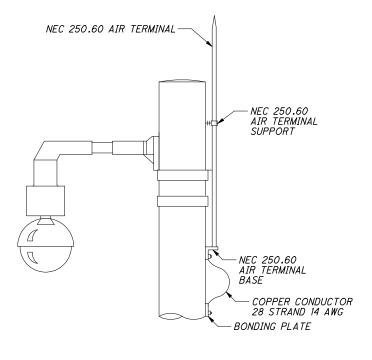
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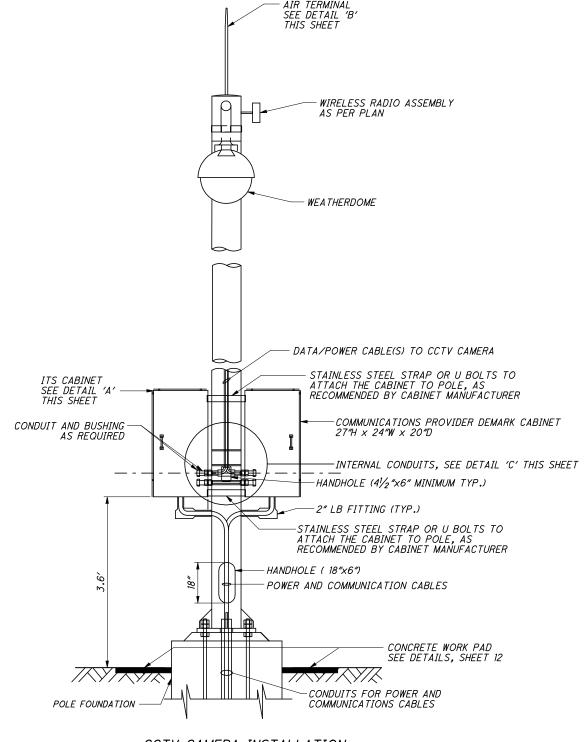
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#### DETAIL 'A' ITS CABINET NOT TO SCALE



DETAIL 'B' AIR TERMINAL NOT TO SCALE

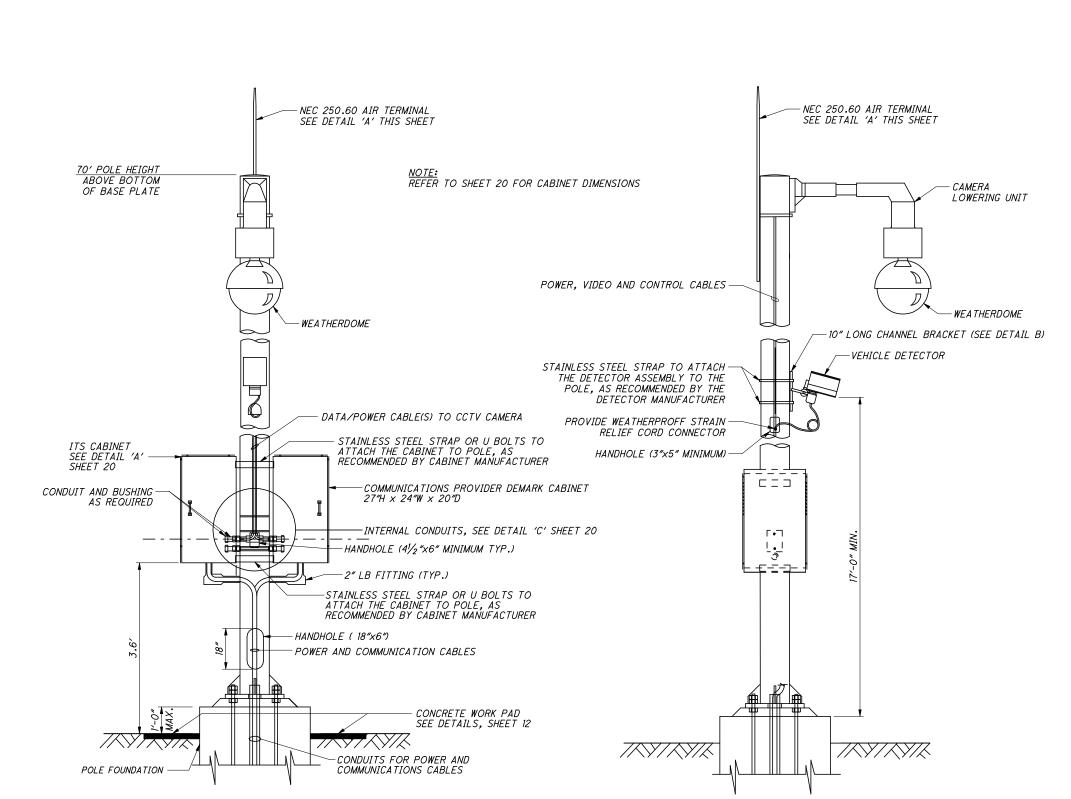


#### CCTV CAMERA INSTALLATION NOT TO SCALE

#### CCTV POLE CAMERA ASSEMBLY NOTES:

- 1. THIS DRAWING REPRESENTS ONLY A TYPICAL SITE OVERVIEW OF THE SYSTEM. THIS DRAWING IS NOT INTENDED TO SHOW ALL DEVICES OR COMBINATION OF DEVICES IN THE SYSTEM. BASED ON SITE CONFIGURATIONS EACH SITE MAY CONTAIN ONE OR MORE COMBINATIONS NOT SHOWN ON THE PLANS.
- 2. CABINETS SHOULD NOT BE LOCATED ON THE SAME SIDE OF THE POLE AS THE CCTV DOME HOUSING.
- 3. CCTV POLE SHALL BE INSTALLED WITH CAMERA LOWERING SYSTEM.
- 4. CCTV LOWERING SYSTEM MANUFACTURER SHALL PROVIDE ADEQUATE LENGTH OF CCTV CABLE FOR 70' POLE.
- 5. MAINTAIN 6' FROM GUARDRAIL PLACEMENT OR AS DIRECTED BY THE ENGINEER.





VEHICLE DETECTOR UNIT, SIDE VIEW

NOT TO SCALE

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<u>VEHICLE DETECTOR UNIT,</u> <u>MOUNTED ON CCTV CAMERA POLE</u> NOT TO SCALE



DETAIL 'A'

NOT TO SCALE

THROUGH HOLE

0

1/4" THREADED HOLE

WELDING AROUND

IN FORGED BODY

*IN SLEEVE* 

THIS PART OF BRACKET AS SHOWN IS FOR MOUNTING THE 10" LONG

CHANNEL BRACKET VERTICALLY

NEC 250.60 AIR TERMINAL

NEC 250.60

SUPPORT

AIR TERMINAL

NEC 250.60 AIR

TERMINAL BASE

COPPER CONDUCTOR

THROUGH HOLE

%6″ DIA.

28 STRAND 14 AWG

BONDING PLATE

1"x1/2" CHANNEL

3/8" DIA. (TYP.)

#### NOTES:

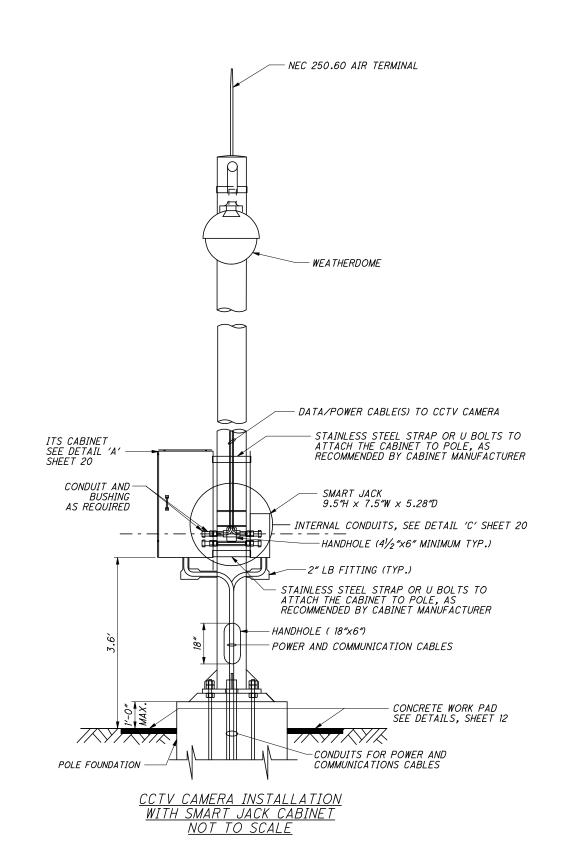
- 1. MOUNT VEHICLE DETECTOR UNIT SO THAT THE DETECTOR IS MOUNTED ON THE ROADWAY SIDE OF POLE AT A HEIGHT RECOMMENDED BY THE MANUFACTURER.
- 2. SUPPORT HOOKS SHOULD BE APPROPRIATELY SIZED FOR THE NUMBER AND SIZE OF CONDUCTORS TO BE SUPPORTED. SUPPORT ELECTRICAL AND COMMUNICATION CABLES WITH SEPARATE HOOKS.
- 3. RUN ALL WIRING INSIDE THE POLE AND PROVIDE STRAIN RELIEF AND SUPPORT FOR ALL CONTROL CABLES.
- 4. SEE PLAN SHEETS FOR VEHICLE DETECTOR LOCATIONS.
- 5. WHEN INSTALLING THE MOUNTING BRACKETS FOR VEHICLE DETECTORS, ALIGN AND ANGLE THE DETECTORS TO COVER THE DETECTION ZONE(S) PER MANUFACTURER'S SPECIFICATIONS.



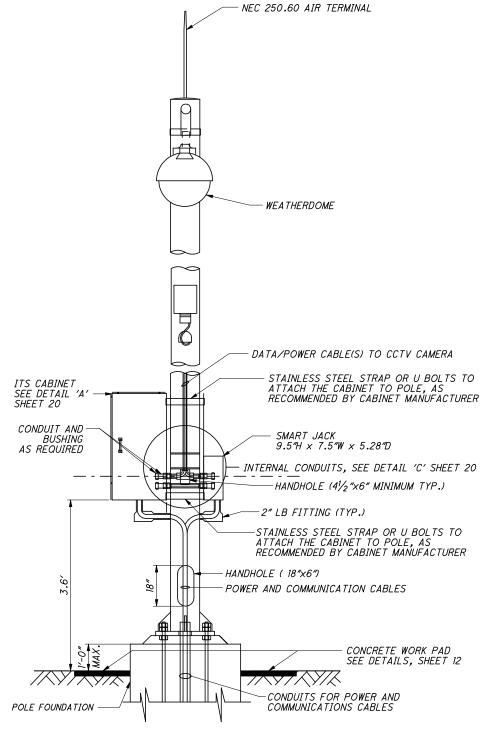
CCTV WITH SMART JACK



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<u>VEHICLE DETECTOR UNIT, SIDE VIEW</u>

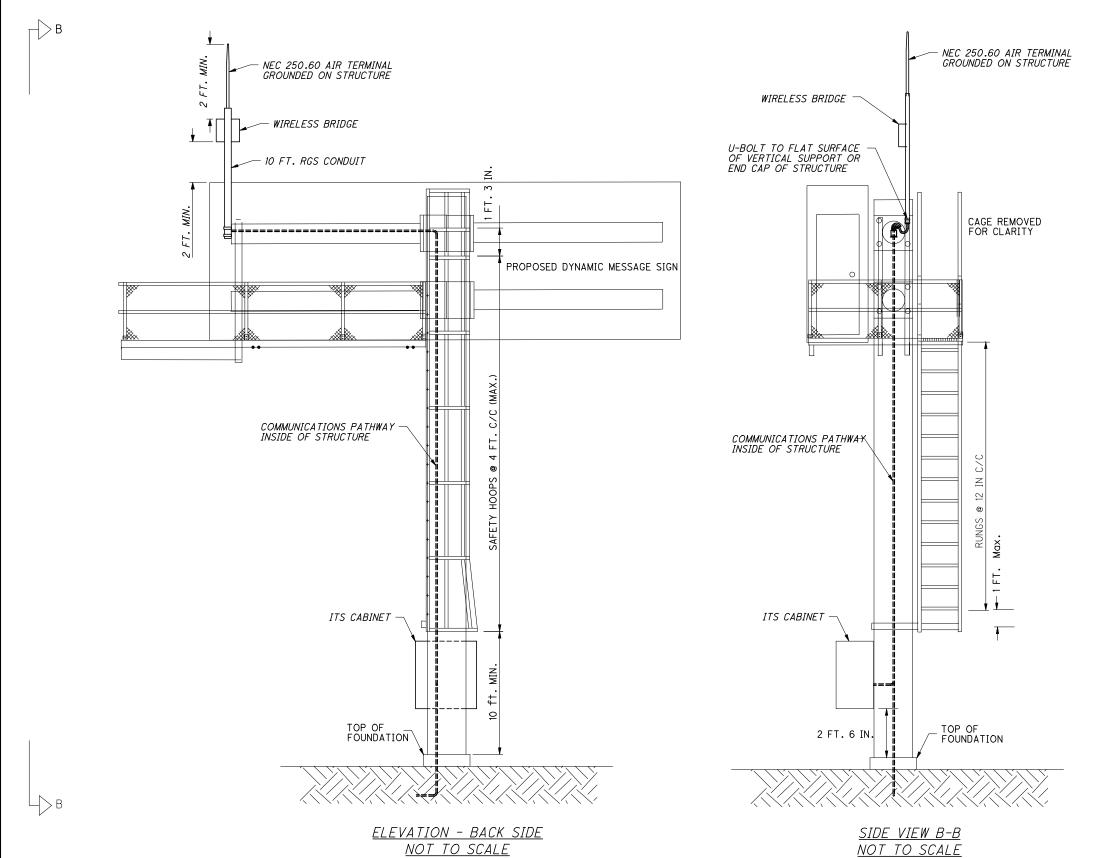
<u>WITH SMART JACK CABINET</u>

<u>NOT TO SCALE</u>



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#### NOTES:

- 1. RUN ALL WIRING INSIDE THE STRUCTURE AND PROVIDE STRAIN RELIEF AND SUPPORT FOR ALL CABLES.
- 2. WHEN INSTALLING THE MOUNTING BRACKETS FOR THE WIRELESS UNIT ALIGN AND ANGLE FOR LINE OF SIGHT TO DEVICE 077030.
- 3. PLACEMENT OF WIRELESS UNIT SHALL BE OPPOSITE TO THE ROADWAY ON THE CATWALK SIDE OF THE DMS.
- 4. FINAL LOCATION AND INSTALLATION PROCEDURES SHALL BE APPROVED BY THE CENTRAL OFFICE SENIOR ITS ENGINEER.

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CHANGEABLE MESSAGE SIGN, Unlimited Message, as Per Plan a or B

A-SUM IT

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#### **GENERAL**

ITEMS INDICATED IN THESE PLANS "AS PER PLAN" (APP) ARE AS SPECIFIED IN THESE PLANS OR IN THE SPECIAL PROVISIONS. SEE SPECIAL PROVISIONS FOR ADDITIONAL PROJECT NOTES.

#### CONDUIT RISER (BY SIZE)

RISERS AND WEATHERHEADS SHALL BE INSTALLED UNDER THIS PROJECT ON POLES. PAYMENT FOR THESE ITEMS AND THEIR INSTALLATION SHALL FALL UNDER:

625E34001: POWER SERVICE, AS PER PLAN A,B,C,D,E 632F89300: WOOD POLF

## CONDUIT MISC .: 3", FIBERGLASS REINFORCED, ATTACHED TO STRUCTURE

CONDUIT SHALL BE INSTALLED UNDERNEATH THE BRIDGE DECK. OR IN THE LOCATIONS SHOWN ON THE PLAN. INSTALLATION PRACTICES SHALL CONFORM TO 625.12. STANDARD CLAMP TYPE CONDUIT HANGERS SHALL BE USED. STRAP HANGERS ARE NOT ACCEPTABLE. ALL HANGERS AND HANGER HARDWARE SHALL BE GALVANIZED. HOLES FOR EXPANSION ANCHORS SHALL BE DRILLED AS PER 510.03 EXPANSION ANCHORS SHALL BE SET WITH EPOXY ADHESIVE. THREAD ADHESIVE SHALL BE USED ON BOTH THE ANCHOR BOLT MACHINE SCREW AND THE CONDUIT CLAMP SCREW AND NUT.

## UTILITY NOTE

UTILITIES TO BE CONTACTED WITH REGARD TO POSSIBLE CONFLICT WITH WORK HEREIN ARE LISTED IN THE SPECIAL PROVISIONS. CONTRACTOR SHALL CONTACT THE OHIO UTILITIES PROTECTION SERVICE (OUPS) AND ANY NON-MEMBERS OF OUPS AT LEAST TWO WORKING DAYS BEFORE DIGGING. CONTRACTOR SHALL MAKE EVERY EFFORT TO MAINTAIN A 15' CLEARANCE FROM ALL EXISTING UTILITIES. IF THIS CLEARANCE IS NOT POSSIBLE THE CONTRACTOR MUST RECEIVE APPROVAL FROM THE CENTRAL OFFICE SENIOR ITS ENGINEER FOR PLACEMENT OF THE DEVICE.

# ITEM 632 - SIGNALIZATION, MISC .: FOUNDATION TEST HOLE

IF UNDERGROUND OBSTRUCTIONS ARE ENCOUNTERED THAT PRECLUDE THE USE OF STANDARD OR ALTERNATE FOUNDATION DESIGNS FOR ANY STRAIN POLES, SIGNAL SUPPORTS, OR OVERHEAD SIGN SUPPORTS, PROVIDE THE SENIOR CENTRAL OFFICE ITS ENGINEER WITH COMPLETE INFORMATION REGARDING THE OBSTRUCTION, INCLUDING TYPE (I.E. UTILITY), SIZE, DEPTH, AND LATERAL CLEARANCES TO THE SIDES OF THE FOUNDATION EXCAVATION. COVER THE FOUNDATION HOLE WITH A STEEL PLATE UNTIL THE ENGINEER DETERMINES IF A NEW FOUNDATION LOCATION WILL BE REQUIRED. BACKFILL AND COMPACT THE HOLE AND RESTORE THE SURFACE AS DESCRIBED UNDER "RESTORATION OF DISTURBED AREAS" WHEN DIRECTED BY THE SENIOR CENTRAL OFFICE ITS

PAYMENT FOR FOUNDATION TEST HOLES INCLUDES THE COST OF ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, AND OTHER INCIDENTALS, INCLUDING BACKFILL, COMPACTING, AND SURFACE RESTORATION AND EXCAVATION OF A NEW FOUNDATION HOLE. THE DEPARTMENT WILL PAY FOR EACH FOUNDATION HOLE THAT MUST BE ABANDONED AT THE CONTRACT UNIT BID PRICE FOR "ITEM 632 - SIGNALIZATION, MISC.: FOUNDATION TEST WAS ASSOCIATED AND ASSOCIATED ASSOC HOLE" OR ITEM 630 - SIGNING MISC .: FOUNDATION TEST HOLE.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY AS CONTINGENCY QUANTITIES FOR USE AS DESCRIBED HEREIN.

<u>ITEM</u>	<u>TOTAL</u>	<u>UNIT</u>	<u>DESCRIPTION</u>
<i>632</i>	15	EACH	SIGNALIZATION, MISC.: FOUNDATION TEST HOLE

## HIGHWAY ADVISORY RADIO ADVANCE WARNING STATIC SIGN

FOR THIS PROJECT STATIC SIGNS WILL BE ERECTED IN ADVANCE OF THE HIGHWAY ADVISORY RADIOS TO PROVIDE MOTORISTS WITH ADVANCE WARNING. THE CONTRACTOR SHALL INSTALL A DI2-HT HIGHWAY ADVISORY RADIO SIGNING AS SHOWN IN THE ODOT SIGN DESIGN MANUAL. BELOW IS A LISTING OF THE APPROXIMATE LOCATIONS WHERE ADVANCE WARNING SIGNS WILL BE PLACED. THE FINAL PLACEMENT OF THE SIGNS WILL BE DETERMINED BY THE STRENGTH OF THE SIGNAL AND SHALL BE APPROVED BY THE CENTRAL OFFICE SENIOR ITS ENGINEER.

PAYMENT FOR HIGHWAY ADVISORY RADIO ADVANCE WARNING STATIC SIGN WILL BE MADE UNDER THE FOLLOWING ITEMS:

ITEM 630E07600 - GROUND MOUNTED SUPPORT, WIO X 12 BEAM ITEM 630E81200 - SIGN ERECTED, EXTRUSHEET ITEM 630E84500 - GROUND MOUNTED BEAM SUPPORT FOUNDATION

APPLICABLE HAR	LOCATION DESCRIPTION
SUMMIT HAR	US-224W EAST OF SR-241

## ITEM 619 - FIELD OFFICE, TYPE A, AS PER PLAN

IN ADDITON TO THE REQUIREMENTS IN THE CMS, THE FOLLOWING SHALL BE INCLUDED IN THE DISTRICT FOUR FIELD OFFICE:

- 2. INTERNET CONNECTION PER ITEM 619 3. COPIER CAPABLE OF 11"X 17" PRINTS (PLAN SHEET PAGES)
- 4. BASE STATION AND TWO (2) HAND HELD UNITS CAPABLE OF COMMUNICATING WITH THE DISTRICT TWELVE FIELD OFFICE/ENGINEER.

THE DISTRICT FOUR FIELD OFFICE IS MEANT TO SERVE AS AN AUXILIARY OFFICE, IN DISTRICT FOUR, TO THE MAIN FIELD OFFICE WHICH WILL BE IN DISTRICT TWELVE.

#### CONSTRUCTION INITIATION:

THE CONTRACTOR SHALL ADVISE THE DISTRICT PUBLIC INFORMATION OFFICER AT 330-786-2211 (PAUL A.PUTNAM@DOT.STATE.OH.US), WORK ZONE TRAFFIC MANAGER AT 330-786-4817 (LISA.BOSE@DOT.STATE.OH.US), AND TRAFFIC ENGINEER 330-786-3145 (KEN.GREENE@DOT.STATE.OH.US) FOURTEEN (14) DAYS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. THE CONTRACTOR WILL IMMEDIATELY INFORM THE DISTRICT OFFICE OF COMMUNICATIONS AND THE PROJECT ENGINEER OF ANY AND ALL DELAYS AND/OR CHANGES REGARDING THE CONSTRUCTION PROJECT. THE PROJECT ENGINEER WILL PROVIDE CLARIFICATION FOR ANY QUESTIONS ABOUT THIS NOTIFICATION REQUIREMENT.

### COORDINATION WITH OTHER PROJECTS

THE CONTRACTOR SHALL BE REQUIRED TO COORDINATE THE WORK WITH OTHER ONGOING PROJECTS TO INCLUDE BUT NOT LIMITED TO THE FOLLOWING PROJECTS:

PID	PROJECT DESCRIPTION	ESTIMATED START DATE
78679	SUM SR 0021 05.14	12/7/2007
80989	SUM SR 0008 01.75	1/17/2008
78119	SUM SR 0008 09.10	2/21/2008
77037	MED IR 0076 00.69	3/13/2008
25536	STA US 0062 22.42	3/13/2008
83373	STA IR 0077 NOISE WALLS	7/1/2008
81528	SUM SR 0008 07.60	7/17/2008
80560	STA/SUM IR 0077 17.63/00.40	10/1/2008
76347	SUM SR 0008 04.30	10/1/2008
11661	SUM SR 0008 10.66	10/1/2008
24507	SUM SR 0008 13.30	10/1/2008
82597	SUM IR 0271 03.54	7/11/2007
81150	SUM IR 0271 07.56 SLOPE	7/1/2009
81149	SUM IR 0271 09.30 SLOPE	7/1/2009
82433	SUM IR 0271 06.90	5/29/2008
25277	SUM IR 0077 31.88	10/1/2008
84735	STA IR 0077 08.40	4/15/2009

#### CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM OUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM, CLEARING AND GRUBBING.

MANY LOCATIONS FOR CLEARING AND GRUBBING HAVE BEEN LOCATED ON THE PLANS. THESE LOCATIONS ARE NOT INTENDED TO IDENTIFY ALL POTENTIAL AREAS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO VISIT EACH LOCATION AND IDENTIFY THE WORK REQUIRED IN CONJUNCTION WITH THE SENIOR CENTRAL OFFICE ITS ENGINEER.

## FOUNDATIONS FOR SUPPORTS

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY AND RESOLVE POTENTIAL CONFLICTS WITH EXISTING UTILITIES NOT SHOWN IN THESE PLANS PRIOR TO CONSTRUCTION. WORK MAY BEGIN ONLY AFTER THE CONTRACTOR HAS ASSURED THE ENGINEER THAT ALL EXISTING UTILITIES ARE CLEAR. DUE TO THE POSSIBILITY OF CONFLICT WITH EXISTING OR UNDERGROUND OBSTRUCTIONS (INCLUDING THE POSSIBILITY OF UNRECORDED OBSTRUCTIONS) WHICH COULD AFFECT THE LOCATION OF THE FOUNDATIONS FOR THESE ITEMS, AND CONSEQUENTLY, THE DESIGN OF THE VARIOUS SUPPORTS, AND/OR AND/OR NOT PLACE FINAL ORDERS FOR THESE ITEMS UNTIL THE FOUNDATION LOCATIONS AND/OR SPAN LENGTHS HAVE BEEN FIELD VERIFIED AND HE HAS RECEIVED, FROM THE SENIOR CENTRAL OFFICE ITS ENGINEER, WRITTEN NOTICE TO PROCEED WITH THE ORDERS FOR THESE ITEMS.

IF ANY FOUNDATION LOCATIONS MUST BE ADJUSTED, THE CONTRACTOR SHALL NOTIFY THE SENIOR CENTRAL OFFICE ITS ENGINEER, WHO WILL DETERMINE THE REVISED LOCATIONS AND IF ANY SUPPORT DESIGN CHANGES ARE NECESSARY, IN CONSULTATION WITH DISTRICT 4. THE CONTRACTOR WILL NOT BE RESPONSIBLE FOR DETERMINING THE REVISED DESIGN. THE SENIOR CENTRAL OFFICE ITS ENGINEER WILL SUBSEQUENTLY INFORM THE CONTRACTOR OF ANY CHANGES NECESSARY, AND AUTHORIZE THE CONTRACTOR TO ORDER THE SUPPORTS.

THE CONTRACTOR SHALL, WHEN DEVELOPING THE PROGRESS SCHEDULE, AND THOSE OF THEIR SUBCONTRACTORS, ENSURE THAT THE FOUNDATIONS ARE INSTALLED AT THE EARLIEST TIME AS IS FEASIBLE AND PRACTICAL, AND SHALL INCLUDE SUFFICIENT TIME FOR THE ORDERING, MANUFACTURE, DELIVERY, AND INSTALLATION OF THESE ITEMS AFTER THE FOUNDATIONS ARE

NO PAYMENTS FOR DELIVERED MATERIALS FOR THESE ITEMS WILL BE MADE UNTIL THE FOUNDATIONS ARE IN PLACE, AND IF CHANGES IN THE DESIGN OF THESE ITEMS ARE REQUIRED, NO PAYMENTS WILL BE MADE FOR ITEMS MANUFACTURED TO THE ORIGINAL DESIGNS.

## PUBLIC SAFETY

INSTALL PROPOSED GUARDRAIL PRIOR TO, OR IN CONJUNCTION WITH, THE INSTALLATION OF ANY DEVICES WHICH REQUIRE PROTECTION. NO HAZARD SHALL BE LEFT UNPROTECTED.

THE ENGINEER WILL ORDER WORK STOPPED ON THE PROJECT IF THE CONTRACTOR FAILS TO COMPLY WITH THIS REQUIREMENT. WORK WILL NOT RESUME UNTIL THE VIOLATION IS CORRECTED TO THE SATISFACTION OF THE SENIOR CENTRAL OFFICE ITS ENGINEER.

## CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A "W-BEAM RAIL SPLICE" AS SHOWN IN AASHTO M 180. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

## ITEM 202E42207, ANCHOR ASSEMBLY REMOVED, AS PER PLAN

WHEN IT IS NECESSARY TO REMOVE TYPE E-98 GUARDRAIL CONTRACTOR SHALL ONLY REMOVE THE LAST SECTION (12.5') OF TYPE E-98 GUARDRAIL. THE REMAING 37.5' OF TYPE E GUARDRAIL SHALL BE REUSED AS TYPE 5 GUARDRAILAND SPLICED TO PROPOSED GUARD RAIL. THE PAY ITEM SHALL ONLY INCLUDE REMOVAL OF FINAL SECTION (12.5') OF TYPE E-98 GUARDRAIL.

## ANCHOR ASSEMBLY, TYPE E-98

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING GUARDRAIL END TERMINALS, OR AN APPROVED EQUAL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE AT WWW.DOT.STATE.OH.US/DRRC/ UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS:

1) THE ET-2000 (1997) MANUFACTURED BY TRINITY INDUSTRY 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

THE LENGTH OF THE ET-2000 (1997) SYSTEM IS CONSIDERED TO BE 50'-0" [15.24M], INCLUSIVE OF TWO 25'-0" [7.62M] LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG./ REV. DATE	ODOT APPROVAL DATE
SS265M	ET-2000 (1997) PLAN, ELEVATION AND SECTIONS	6/20/97	3/6/98
SS142	ET2000 PLUS 50'-0" PLAN, ELEVATION AND SECTION 25'-0" RAIL, SLEEVE W/PL POSTS 1-4	4/12/00	7/31/00
SS141	ET2000 PLUS PLAN, ELEVATION AND SECTION 25'-0" RAIL, HBA POSTS 1-4	2/29/00	7/31/00
SS158	ET2000 PLUS 50'-0" WITH 12'-6" PANELS AND HBA POSTS 1-4 PLAN, ELEVATION AND SECTION	5/22/00	7/31/00

2) THE SKT-350 MANUFACTURED BY ROAD SYSTEMS, INC. 2516 MALLORY LANE, STOW, OHIO, 44224, (TELÉPHONE: 330-346-0721).

THE LENGTH OF THE SKT-350 SYSTEM IS CONSIDERED TO BE 50'-0" [15.24M], INCLUSIVE OF FOUR 12'-6" [3.81M] LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PREAPPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG./ REV. DATE	ODOT APPROVAL DATE
SKT-4M	SEQUENTIAL KINKING TERMINAL (SKT-350) ASSEMBLY WITH 4 FOUNDATION TUBES	12/11/97	3/6/98

THE FACE OF THE TYPE E-98 IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19, APPROXIMATELY 18" X 18" [450MM X 450MM], OR 12" [30MM] X 18" [450MM] IF APPLIED TO A RECTANGULAR ET-2000 "PLUS" EXTRUDER HEAD.

REFER TO THE MANUFACTURER'S INSTRUCTION REGARDING THE INSTALLATION OF, AND THE GRADING AROUND, THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4-INCHES CIOOMJ ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 27-3/4-INCHES [706MM] FROM THE

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4-INCHES [100MM] ABOVE THE GROUND LINE.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, TYPE E-98, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ELEVATIONS ARE BASED ON STATE PLANE GRID, OHIO NORTHERN NAD 83.

ACCURACY OF COMMON HAND-HELD GPS DEVICES IS INADEQUATE FOR LAYOUT OF PROPOSED FIELD FQUIPMENT.

# CONCRETE MEDIAN BARRIER REPLACEMENT

REMOVING, GRADING AND INSTALLING THE REPLACEMENT BARRIER IN A CONTINUOUS OPERATION SHALL BE LIMITED TO 10 FEET AND SHALL AT ALL TIMES BE SUBJECT TO THE APPROVAL OF THE SENIOR CENTRAL OFFICE ITS ENGINEER. THE ENGINEER SHALL BE SATISFIED THAT ALL INSTALLATIONS WILL AFFORD MAXIMUM PROTECTION FOR TRAFFIC.

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#### GENERAL MAINTENANCE OF TRAFFIC

ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED, MAINTAINED, AND REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH THE CURRENT EDITION OF THE OHIO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICE FOR CONSTRUCTION AND MAINTENANCE OPERATIONS (HEREIN AFTER REFERRED TO AS OMUTCD). COPIES OF WHICH ARE AVAILABLE FROM THE OHIO DEPARTMENT OF TRANSPORTATION, BUREAU OF CONTRACT SALES, 1980 WEST BROAD STREET, COLUMBUS, OHIO 43223. PAYMENT FOR ALL THE ITEMS REQUIRED TO MAINTAIN TRAFFIC SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC. CONSTRUCTION OPERATIONS SHALL NOT BEGIN UNTIL ALL TRAFFIC CONTROL PLANS ARE SUBMITTED AND APPROVED BY THE ENGINEER.

ALL TRENCHES SHALL BE BACK FILLED OR SECURELY PLATED DURING NON-WORKING HOURS.

"EXCAVATED AREAS" SHALL BE PROTECTED BY THE USE OF BARRICADES OR PLASTIC DRUMS WITH CAUTION TAPE (PLASTIC FENCE WHERE PEDESTRIANS ARE INVOLVED). "EXCAVATED AREAS" MUST NOT BE LEFT OPEN WITHIN THE CLEAR ZONE DURING NON-WORKING HOURS UNLESS PROTECTED BY GUARDRAIL OR CONCRETE BARRIER. THIS ALSO APPLIES TO OPENINGS IN THE MEDIAN BARRIER.

ACCESS TO ADJOINING PROPERTIES SHALL BE MAINTAINED AT ALL TIMES.

NO MATERIALS OR EQUIPMENT SHALL BE STORED ON ODOT RIGHT-OF-WAY UNLESS IT IS BEHIND GUARDRAIL OR 30-FEET FROM THE EDGE OF PAVEMENT. NO MATERIALS OR EQUIPMENT SHALL BE STORED WITHIN THE RIGHT-OF-WAY WITHOUT WRITTEN PERMISSION FROM ODOT. THE CONTRACTOR SHALL ARRANGE OPERATIONS TO PREVENT ANY INTERFERENCE WITH TRAFFIC FLOWING THROUGH THE WORK ZONE. THE CONTRACTOR IS EXPRESSLY PROHIBITED FROM ENTERING, CROSSING, OR INFRINGING UPON THE REMAINING OPEN LANES ADJACENT TO A LANE CLOSURE. ALL VEHICLES, EQUIPMENT, PERSONNEL, AND ACTIVITIES SHALL BE RESTRICTED TO ONE SIDE OF ANY OPEN LANE OF TRAFFIC UNLESS OTHERWISE APPROVED BY THE ENGINEER.

ALL TRAFFIC CONTROL DEVICES SHALL BE APPROVED FOR CONDITION AND LOCATION BY THE CONSTRUCTION INSPECTOR BEFORE THE CONTRACTOR WILL BE ALLOWED TO BEGIN WORKING. IF THE CONTRACTOR DOES NOT COMPLY WITH THE STANDARDS, HIS PERMIT SHALL BE REVOKED AND ALL WORK SHALL BE FERMINATED.

A TOTAL OF 12 MONTHS FOR ITEM 614E18510 PORTABLE CHANGEABLE MESSAGE SIGN HAS BEEN INCLUDED IN THE PAY ITEMS FOR USE IN MAINTENANCE OF TRAFFIC ACTIVITIES OR WHEN A LANE CLOSURE IS NEEDED. IT IS ANTICIPATED THAT THESE DEVICES WILL NOT BE NEEDED FOR THE ENTIRE DURATION OF THE PROJECT. THE HOURS OF USE SHALL BE DEDUCTED FROM THE TOTAL PROVIDED QUANTITY.

## 642-44 WORKSITE TRAFFIC SUPERVISOR, AS PER PLAN

SUBJECT TO APPROVAL OF THE ENGINEER, THE CONTRACTOR SHALL EMPLOY AND IDENTIFY (SOMEONE OTHER THAN THE SUPERINTENDENT) A CERTIFIED WORKSITE TRAFFIC SUPERVISOR (WTS) BEFORE STARTING WORK IN THE FIELD. THE WTS MAY BE CERTIFIED FROM ONE OF THE FOLLOWING ORGANIZATIONS:

- 1. AMERICAN TRAFFIC SAFETY SERVICE ASSOCIATION (ATSSA), PHONE NUMBER 1-800-272-8772, CERTIFIED TRAFFIC CONTROL SUPERVISOR (TCS).
- 2. NATIONAL HIGHWAY INSTITUTE, DESIGN AND OPERATION OF WORK ZONE TRAFFIC CONTROL, PHONE NUMBER 1-703-235-0528.
- 3. THE OHIO CONTRACTORS ASSOCIATION, TRAFFIC CONTROL SUPERVISOR (OCA/TCS) WORK ZONE CLASS, ONLY IF TAKEN AFTER MAY 5, 2004, PHONE NUMBER 1-614-599-7915.
- 4. OHIO LABORERS' TRAINING, TRAFFIC CONTROL SUPERVISORS CLASS, PHONE NUMBER 1-740-599-7915.
- A COPY OF EACH WTSS CERTIFICATION AND 24-HOUR CONTACT INFORMATION SHALL BE PROVIDED TO THE ENGINEER AT THE PRECONSTRUCTION CONFERENCE. THE WTS ONLY HAS TO BE ON SITE FOR LANE CLOSURES, THE WTS POSITION HAS THE RESPONSIBILITY OF MONITORING AND CORRECTING TRAFFIC CONTROL DEFICIENCIES FOR THE ENTIRE WORK ZONE. THE DUTIES OF THE WTS ARE AS FOLLOWS:
- 1. BE AVAILABLE ON A 24-HOUR PER DAY BASIS, AND BE ABLE TO BE ON SITE FOR ALL EMERGENCY TRAFFIC CONTROL NEEDS WITHIN ONE HOUR OF NOTIFICATION BY POLICE OR PROJECT STAFF AND BE PREPARED TO EFFECT CORRECTIVE MEASURES IMMEDIATELY ON EXISTING WORK ZONE TRAFFIC CONTROL DEVICES
- 2. ATTEND PRECONSTRUCTION MEETING AND ALL PROJECT MEETINGS WHERE TRAFFIC CONTROL MANAGEMENT IS DISCUSSED.
- 3. BE AVAILABLE FOR MEETINGS OR DISCUSSIONS WITH THE ENGINEER UPON REQUEST OR WITHIN 36 HOURS.
- 4. BE AWARE OF, AND COORDINATE IF NECESSARY, ALL TRAFFIC CONTROL OPERATIONS, INCLUDING THOSE OF SUBCONTRACTORS AND SUPPLIERS.
- 5. COORDINATE PROJECT ACTIVITIES WITH ALL LAW ENFORCEMENT OFFICERS (LEOS). A WTS SHALL ALSO BE THE MAIN CONTACT PERSON WITH THE LEOS WHILE THEY ARE ON THE PROJECT.
- 6. COORDINATE MEETINGS WITH ODOT PERSONNEL, LEOS AND OTHER APPLICABLE ENTITIES BEFORE EACH PLAN PHASE SWITCH TO DISCUSS WORK ZONE TRAFFIC CONTROL.
- 7. ENSURE COMPLIANCE WITH THE CONTRACT DOCUMENTS FOR SIGNS, BARRICADES, TEMPORARY CONCRETE BARRIER, PAVEMENT MARKINGS, PORTABLE MESSAGE SIGNS, AND OTHER TRAFFIC CONTROL DEVICES ON A DAILY BASIS; AND FACILITATE ANY CORRECTIVE ACTION NECESSARY.
- 8. NOTIFY THE CONTRACTOR OF THE NEED FOR CLEANING AND MAINTENANCE OF ALL TRAFFIC CONTROL DEVICES, INCLUDING THE COVERING AND REMOVAL OF INAPPLICABLE SIGNS.
- 9. INSPECT, EVALUATE, PROPOSE NECESSARY MODIFICATIONS TO, AND DOCUMENT THE EFFECTIVENESS OF, THE TRAFFIC CONTROL DEVICES AND/OR TRAFFIC OPERATIONS WHEN A LANE IS CLOSED.
- 10. COMPLETE THE DEPARTMENT APPROVED LONG TERM INSPECTION FORM (CA-D-8) AFTER EACH INSPECTION AS REQUIRED IN # 9 AND SUBMIT IT TO THE ENGINEER THE FOLLOWING WORK DAY. THESE REPORTS SHALL INCLUDE A CHECKLIST OF ALL TRAFFIC CONTROL MAINTENANCE ITEMS TO BE REVIEWED.

A COPY OF THE FORM WILL BE PROVIDED AT THE PRE-CONSTRUCTION MEETING. ANY DEFICIENCIES OBSERVED SHALL BE NOTED, ALONG WITH RECOMMENDED CORRECTIVE ACTIONS AND THE DATES BY WHICH SUCH CORRECTIONS WERE, OR WILL BE, COMPLETED. A COPY OF THIS DOCUMENT CAN BE FOUND IN THE DEPARTMENT OF TRANSPORTATION CONSTRUCTION INSPECTION FORMS MANUAL DATED 10/15/06 OR CURRENT REVISION.

11. VERIFY THAT ALL FLAGGING OPERATIONS ARE BEING CONDUCTED PER THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES

12. HAVE COPIES OF THE ODOT TEMPORARY TRAFFIC CONTROL MANUAL AND APPLICABLE STANDARDS AND SPECIFICATIONS INCLUDED IN THE CONTRACT DOCUMENTS AVAILABLE AT ALL TIMES ON THE PROJECT.

SHOULD THE CONTRACTOR'S FAILURE TO PERFORM ANY OF THE DUTIES DESCRIBED ABOVE RESULT IN A MAINTENANCE OF TRAFFIC SAFETY ISSUE, THE DEPARTMENT WILL DEDUCT THE PRORATED DAILY AMOUNT FOR ITEM 614 MAINTENANCE OF TRAFFIC FROM THE CONTRACTOR'S NEXT SCHEDULED ESTIMATE.

IF THREE OR MORE FAILURES TO PERFORM THE DUTIES SET FORTH ABOVE OCCUR, THE WTS SHALL BE IMMEDIATELY REMOVED FROM THE WORK IN ACCORDANCE WITH C&MS 108.05.

PAYMENT FOR THE WTS SHALL BE INCLUDED UNDER THE LUMP SUM ITEM 614 MAINTAINING TRAFFIC.

#### RESTRICTIONS

THE CONTRACTOR SHALL SUBMIT A SCHEDULE TO THE OHIO DEPARTMENT OF TRANSPORTATION INDICATING THE LOCATIONS AND DATES OF THE LANE CLOSURES AT LEAST THREE (3) DAYS PRIOR TO THE IMPLEMENTATION OF ANY SUCH CLOSURES. THE CONTRACTOR SHALL ALSO NOTIFY THE LOCAL LAW ENFORCEMENT AGENCIES OF LANE CLOSURES AT LEAST THREE (3) DAYS PRIOR TO IMPLEMENTATION. LANE CLOSURES MAY ONLY BE IMPLEMENTED AT THE TIMES PERMITTED BY THE DISTRICT 3 OR DISTRICT 4 PERMITTED LANE CLOSURE TIMES" LIST, WHICH CAN BE LOCATED AT: HTTP://PLCM.DOT.STATE.OH.US/PLCM.PLCM.WEB.JSP. CLOSURE TIMES FOR DISTRICT 4 WILL ONLY BE ALLOWED BY THE CLOSURE TIMES ON THE ABOVE WEBSITE AND NOT ON ANY OTHER DISTRICT'S WEBSITE. THE OTHER DISTRICT'S LANE CLOSURE LISTS CAN BE FOUND AT THE SAME LOCATION. THE LATEST REVISION OF THE PERMITTED LANE CLOSURE LIST, AS OF 14 DAYS PRIOR TO THE BID DATE, SHALL BE IN EFFECT FOR THIS PROJECT. ANY ROADWAY NOT LISTED IN THE "DISTRICT 3 OR 4 PERMITTED LANE CLOSURE TIMES" SHALL NOT HAVE ANY CLOSURES WEEKDAYS FROM 7AM-9AM AND 3PM-6PM. 3 LANE CLOSURES TIMES" SHALL NOT HAVE ANY CLOSURES WEEKDAYS FROM 7AM-9AM AND 3PM-6PM. 3 LANE CLOSURES SARE PERMITTED ON ANY 4 OR 5 LANE FREEWAY FROM 1AM TO 5AM MONDAY THRU FRIDAY MORNING.

ITEM 614, MAINTAINING TRAFFIC (LANES OPEN DURING HOLIDAYS OR SPECIAL EVENTS)
NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING
THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

CHRISTMAS FOURTH OF JULY NEW YEARS LABOR DAY MEMORIAL DAY THANKSGIVING (OTHER HOLIDAY OR EVENT)

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY OR EVENT FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

DAY OF THE WEEK TIME ALL LANES MUST BE OPEN TO TRAFFIC

SUNDAY 12:00N FRIDAY THROUGH 6:00 AM MONDAY

MONDAY 12:00N FRIDAY THROUGH 6:00 AM TUESDAY

TUESDAY 12:00N MONDAY THROUGH 6:00 AM WEDNESDAY

WEDNESDAY 12:00N TUESDAY THROUGH 6:00 AM THURSDAY

THURSDAY 12:00N WEDNESDAY THROUGH 6:00 AM MONDAY

FRIDAY 12:00N THURSDAY THROUGH 6:00 AM MONDAY SATURDAY 12:00N FRIDAY THROUGH 6:00 AM MONDAY

NO EXTENSIONS OF TIME SHALL BE GRANTED FOR DELAYS IN MATERIAL DELIVERIES, UNLESS SUCH DELAYS ARE INDUSTRY-WIDE, OR FOR LABOR STRIKES, UNLESS SUCH STRIKES ARE AREA-WIDE.

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED LIQUIDATED DAMAGES IN ACCORDANCE WITH CMS 108.07.

## ENTRANCE RAMP CLOSURE

THE ENGINEER MAY REQUIRE AN ENTRANCE RAMP TO BE CLOSED IF, IN HIS/HER OPINION ALLOWING TRAFFIC TO MERGE INTO THE WORK AREA IS UNSAFE OR IF SIGNIFICANT CONGESTION DEVELOPS.

THE RAMPS SHALL BE CLOSED IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING MT-98.28, FXIT RAMP CLOSURE.

#### LANE CLOSURES

ALL LANE AND RAMP CLOSURES SHALL BE CONSIDERED INCIDENTAL TO THE LUMP SUM BID ITEM 614 - MAINTAINING TRAFFIC.

SINGLE LANE CLOSURES SHALL BE MADE IN ACCORDANCE WITH MT-95.30 AND MEET THE FOLLOWING CONDITIONS:

- A. 42-INCH (GRABBER OR EQUAL) CONES MAY BE SUBSTITUTED FOR DRUMS AT NIGHT IN TANGENT SECTIONS, IF THEY ARE EQUIPPED WITH A FOUR 6-INCH REFLECTORIZED STRIPED BANDS AND SPACED PER ODOT STANDARDS.
- B. THE BARRIER TRUCK SHALL BE EQUIPPED WITH AN APPROVED ENERGY ABSORPTION DEVICE AND A TYPE C FLASHING ARROW PANEL.
- C. ALL ADVANCED LEAD-IN SIGNS SHALL BE 48" X 48" AN INCLUDE TWO (2) 24" RED FLAGS AND FLASHING TYPE A LIGHTS.
- D. A FLASHING ARROW PANEL (96" X 48") TYPE "C" SHALL BE USED IN ALL LANE CLOSURES IN ACCORDANCE WITH THE OMUTCD.

TWO-LANE CLOSURES SHALL BE MADE IN ACCORDANCE WITH FIGURE TA-37 OF THE OMUTCD. ITEMS A THROUGH D ABOVE, WHICH DEFINE THE CONDITIONS FOR A SINGLE LANE CLOSURE, SHALL APPLY TO THE TWO-LANE CLOSURE.

THE CENTER LANE OF ANY THREE OR MORE LANE DIRECTIONAL ROADWAY WITH A POSTED SPEED LIMIT GREATER THAN 35 MPH SHALL NOT BE CLOSED CLOSED BY ITSELF. TRAFFIC SHALL BE PERMITTED TO PASS ON ONLY ONE SIDE OF THE WORK AREA UNDER THESE CONDITIONS:

WHEN ONE OR TWO LANES ARE CLOSED AT AN EXIT OR ENTRANCE RAMP MT-98.10 AND MT-98.20 SHALL APPLY

AN EXIT RAMP MAY BE CLOSED BY THE PROJECT ENGINEER IF, IN HIS/HER OPINION, ALLOWING TRAFFIC TO USE THE RAMP IS UNSAFE. ALL EXIT RAMP CLOSURES SHALL BE IN ACCORDANCE WITH WITH ODOT STANDARD CONSTRUCTION DRAWING MT-88.20, LANE CLOSURE AT EXIT RAMP USING DRUMS, RAMPS SHALL ONLY BE CLOSED DURING NON-PEAK HOURS AND DETOURS SHALL BE POSTED. COST OF THE DETOUR SIGNS ARE PART OF THE LUMP SUM 614 MAINTAINING TRAFFIC. A TRUCK SHALL BE USED FOR PROTECTION WHEN WORKERS ARE SETTING ADVANCE WARNING SIGNS AND THE SHOULDER IS LESS THAN 10 FT.

THE PROTECTION VEHICLE SHALL BE EQUIPPED WITH AN APPROVED ENERGY ABSORPTION DEVICE THAT MEETS NCHRP 350, LEVEL III.

IN THE CASE OF TWO LANE EXIT RAMPS, ONLY ONE EXIT LANE SHALL BE MAINTAINED THROUGH A LANE CLOSURE.

ONLY ONE EXIT RAMP MAY BE CLOSED IN EACH DIRECTION AT ANYONE TIME.

A WORK ZONE TRAFFIC SUPERVISOR IS REQUIRED ON SITE WHEN CLOSING LANES ON FREEWAYS OR

## AIRWAY/HIGHWAY CLEARANCE FOR AIRPORTS AND HELIPORTS

SITES WITHIN THIS PROJECT MAY BE WITHIN THE INFLUENCE AREA OF A PUBLIC USE AIRPORT OR HELIPORT. THE CONTRACTOR IS ADVISED THAT NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT AT MAXIMUM OPERATING HEIGHT SHALL EXCEED THE HEIGHT OF THE PERMANENT POLE (IN PLACE) IF ANY TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT WILL EXCEED THE PERMANENT POLE HEIGHT AT THESE SITES, THE CONTRACTOR IS ADVISED THAT COORDINATION WITH THE FEDERAL AVIATION ADMINISTRATION (FAA) WILL BE NECESSARY PRIOR TO ERECTING SUCH TEMPORARY STRUCTURES OR OPERATING SUCH EQUIPMENT ON THE PROJECT.

THE CONTRACTOR WILL BE REQUIRED TO SUBMIT FORM 7460-1 TO THE FAA. A COPY OF THE SUBMISSION AND TWO COPIES OF FORM 7460-1 SHALL BE FORWARDED TO THE ODOT OFFICE OF AVIATION. THE CONTRACTOR IS ADVISED THAT NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT SHALL EXCEED THE PERMISSIBLE HEIGHT, UNTIL A COPY OF THE FAA APPROVAL AND ODOT OFFICE OF AVIATION PERMIT HAS BEEN FURNISHED TO THE PROJECT ENGINEER.

FAA APPROVAL MAY TAKE UP TO 45 DAYS. ALL SUBMISSIONS SHALL BE DIRECTED TO THESE OFFICES:

EXPRESS PROCESSING CENTER
THE FEDERAL AVIATION ADMINISTRATION
SOUTHWEST REGIONAL OFFICE
AIR TRAFFIC AIRSPACE BRANCH ASW-520
2601 MEACHAN BLVD.
FORT WORTH, TX 76137-4298

OHIO DEPARTMENT OF AVIATION OFFICE OF AVIATION 2829 WEST DUBLIN-GRANVILLE ROAD COLUMBUS, OHIO 43235 614-793-5046

## ITS EQUIPMENT NOTES:

1) DMS CONTROL CABLE, DMS CONTROLLER, AND DMS CONTROLLER CABINET SHALL BE PAID FOR UNDER ITEM 631, SIGN LIGHTING MISC.: DMS ASSEMBLY, EACH.

2) WIRELESS CABLE SHALL BE PAID UNDER ITEM 632, "WIRELESS COMMUNICATION ASSEMBLY". CCTV CAMERA DRIVER AND CCTV CONTROL CABLE SHALL BE PAID UNDER ITEM "CCTV CAMERA ASSEMBLY"

3) IN ALL CONDUIT INSTALLED ON THIS PROJECT, THE CONTRACTOR SHALL PLACE PULL ROPE AND PLUGS IN ALL UNUSED INNERDUCT CONDUIT IMMEDIATELY UPON INSTALLATION, THIS WORK WILL BE SUBSIDIARY TO THE VARIOUS PAY ITEMS.

4) ALL ITS FIELD EQUIPMENT CABINETS WILL BE KEYED WITH CORBIN #2.

5) CONTROLLER WORK PADS SHALL BE SIZED AS PER SHEETS 12 AND 12A . EXCAVATE A MINIMUM OF

BELOW GRADE. PLACE AND COMPACT 6" OF MATERIAL CONFORMING TO 304.02. INSTALL CONTROLLER WORK PAD THAT IS A MINIMUM OF 6" THICK.

6) ALL DMS SIGNS SHALL BE POSITIONED SO THAT THE MAXIMUM VIEWING ANGLE IS 1500 FEET PRIOR TO THE LOCATION OF THE SIGN. ANCHOR BOLTS FOR THE SIGN WILL BE POSITIONED SO THAT THE SIGN IS PERPENDICULAR TO THE ROADWAY CENTERLINE.

7) CONTRACTOR SHALL USE ELECTRONIC SURVEY METHODS FOR LOCATING ALL DEVICES. ODOT WILL REVIEW THE PLACEMENT OF ALL EQUIPMENT IN THE FIELD BEFORE BEGINNING WORK.

8) CONTRACTOR SHALL ENSURE ALL EQUIPMENT IS GROUNDED AN ACCORDANCE WITH THE MANUFACTURER SPECIFICATIONS.

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#### SHOULDER WORK

FIGURE TA-4 OF THE OMUTCD SHALL APPLY TO ALL WORK THAT IS CONFINED TO THE SHOULDERS OR ANY OF THE RAMPS. THE FOLLOWING CONDITIONS SHALL APPLY:

CONE OR DRUM SPACING SHALL BE AT 40 FEET (APPROXIMATELY EACH SKIP DASH)

THE "EXPRESSWAY" VALUE SHALL BE USED FOR DISTANCES ON SIGN. THE SIGN SHALL BE PLACED AT THE BEGINNING OF A RAMP WHERE THE WORK AREA IS LESS THAN 1200 FEET FROM THE STREET (ENTRANCE RAMPS) OR THE EXIT GORE (EXIT RAMPS).

A PROTECTION VEHICLE EQUIPPED WITH AN APPROVED ENERGY ABSORPTION DEVICE SHALL BE USED. THE ADJACENT LANE SHALL BE CLOSED WHEN THE BERM WIDTH IS LESS THAN 10 FEET.

#### LAW ENFORCEMENT OFFICER WITH PATROL CAR

IN ADDITION TO THE REQUIREMENTS OF 614 AND THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), A UNIFORMED LAW ENFORCEMENT OFFICER (AND OFFICIAL PATROL CAR WITH WORKING TOP MOUNTED EMERGENCY FLASHING LIGHTS) SHALL BE PROVIDED FOR CONTROLLING TRAFFIC FOR THE FOLLOWING TASKS:

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED.

FOR EXIT RAMP CLOSURES: DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE.

SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

FOR SHORT TERM CLOSURE.

LAW ENFORCEMENT OFFICERS (L.E.O.'S) SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED. THE L.E.O.'S ARE CONSIDERED TO BE EMPLOYED BY THE CONTRACTOR AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACTIONS. ALTHOUGH THEY ARE EMPLOYED BY THE CONTRACTOR, THE PROJECT ENGINEER SHALL HAVE CONTROL OVER THEIR PLACEMENT. THE OFFICIAL PATROL CAR SHALL BE A PUBLIC SAFETY VEHICLE AS REQUIRED BY THE OHIO REVISED CODE. THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THESE SERVICES. LAW ENFORCEMENT OFFICERS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS BODYE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR). THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR 1000 HOURS

THE HOURS PAID SHALL INCLUDE MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

IF CONTRACTORS WISH TO UTILIZE L.E.O.'S FOR FLAGGING AND TRAFFIC CONTROL OTHER THAN FOR THAT REQUIRED IN THESE PLANS, THEY MAY DO SO AT THEIR OWN EXPENSE. PAYMENT FOR THE EXCESS ABOVE THE CONTRACT REQUIREMENTS WILL BE INCLUDED UNDER ITEM 614 - MAINTAINING

THE CONTRACTOR SHALL PROVIDE THE SERVICES OF SPECIAL DUTY LAW ENFORCEMENT OFFICERS (L.E.O.) FOR THE PURPOSE OF ASSISTING WITH CLOSING AND OPENING LANES, AND GUIDING TRAFFIC THROUGH THE WORK AREA.

## ALTERNATIVE METHODS

IF THE CONTRACTOR SO ELECTS, HE/SHE MAY SUBMIT ALTERNATE METHODS FOR THE MAINTENANCE OF TRAFFIC, PROVIDED THE INTENT OF THE ABOVE PROVISIONS IS FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS FROM THE CHANGE. NO ALTERNATE PLAN SHALL BE PLACED IN EFFECT UNTIL APPROVAL HAS BEEN GRANTED BY THE ENGINEER AND ODOT IN

# FLOOD LIGHTING

FLOODLIGHTING OF THE WORK SITE FOR OPERATIONS CONDUCTED DURING NIGHT TIME PERIODS WILL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE HIGHWAY. TO INSURE THE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND THE ENGINEER WILL DRIVE THROUGH THE WORK SITE EACH NIGHT, WHEN THE LIGHT IS IN PLACE AND OPERATIVE, PRIOR TO COMMENCING ANY WORK. IF GLARE IS DETECTED, THE LIGHT PLACEMENT AND SHIFLDING WILL BE ADJUSTED.

## MAINTENANCE OF TRAFFIC SCHEME (AT ALL LOCATIONS)

DEVISE A SIMPLE MAINTENANCE OF TRAFFIC SCHEME STAMPED BY A PROFESSIONAL ENGINEER (SCHEME MAY BE A HAND SKETCH). PRESENT THE MAINTENANCE OF TRAFFIC SCHEME TO THE DISTRICT WORK ZONE TRAFFIC CONTROL ENGINEER AND PROJECT ENGINEER FOR ACCEPTANCE AT LEAST TWO WEEKS PRIOR TO IMPLEMENTATION.

THE MAINTENANCE OF TRAFFIC SCHEME MUST PRESENT, IN GENERAL, THE METHODS FOR MAINTAINING TRAFFIC THAT THE CONTRACTOR PROPOSES TO USE FOR CONDUCTING THE REQUIRED WORK IN A SAFE AND EFFICIENT MANNER. THE MAINTENANCE OF TRAFFIC SCHEME MUST BE IN CONFORMANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (O.M.U.T.C.D.), LATEST REVISION, AND THE REFERENCED STANDARD CONSTRUCTION DRAWINGS, THE ATTACHED MAINTENANCE OF TRAFFIC SHEETS, AND THE SPECIFICATIONS. DO NOT COMMENCE WORK UNTIL THE MAINTENANCE OF TRAFFIC SCHEME IS

. DURING THE PROJECT, THE ENGINEER DETERMINES THAT THE ACCEPTED MAINTENANCE OF TRAFFIC PLAN IS NOT PERFORMING AS DESIRED, THE WORK SHALL BE SUSPENDED UNTIL THE PROBLEM IS RESOLVED TO THE SATISFACTION OF THE ENGINEER AND THE MAINTENANCE OF TRAFFIC PLAN REVISED ACCORDINGLY. ANY COSTS OR DELAYS INCURRED AS A RESULT OF THE FAILURE OF THE SATISFACTION OF THE ENGINEER WILL BE THE FULL RESPONSIBILITY OF THE CONTRACTOR.

PAYMENT FOR ALL THE ITEMS REQUIRED TO MAINTAIN TRAFFIC IN ACCORDANCE WITH THESE REQUIREMENTS IS INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 614 - MAINTAINING TRAFFIC.

#### ELECTRICAL NOTE

THE INSTALLATION OF DISTRIBUTION OR DUCT CABLE IN CONDUIT WILL BE INCIDENTAL TO THE PAY ITEM FOR JACKING/BORING CONDUIT. THE INSTALLATION OF CABLE IN TRENCH WILL BE PAID FOR UNDER THE PAY ITEM FOR TRENCHING. THE DISTRIBUTION OR DUCT CABLE MATERIAL WILL BE PROCURED UNDER THE PAY ITEM FOR DISTRIBUTION CABLES OR DUCT CABLE.

A MINIMUM OF 5 FEET SLACK CABLE SHALL BE COILED IN EACH ELECTRICAL PULL BOX. 10 FEET OF CABLE AT ALL TERMINATIONS AND 5 FEET OF CABLE FOR EACH PULL BOX HAS BEEN ACCOUNTED FOR IN THE CABLE OUANTITIES. NO EXTRA QUANTITY SHALL BE PROVIDED FOR UNDER THE DISTRIBUTION OR DUCT CABLE PAY ITEM. EXTRA CABLE NEEDED WILL BE CONSIDERED INCIDENTAL TO THE NECESSARY EQUIPMENT PAY ITEMS.

ALL TRENCHING FOR ELECTRICAL WORK SHALL BE A MINIMUM OF 48" DEEP. THIS ITEM WILL BE PAID SEPARATELY FROM CABLE AS TRENCH, 48" DEEP.

CONDUIT JACKED OR BORED UNDER ROADWAY SHALL BE PERPENDICULAR TO ROADWAY.

THE CLEARANCE FROM THE FACE TO AN OBSTRUCTION SUCH AS A UTILITY POLE OR ELECTRICAL SERVICE POLE SHOULD BE A MINIMUM OF 1.5 FEET. THE MINIMUM A CITED FOR HIGHWAYS WILL BE NO LESS THAN 30 FEET OR AS OTHERWISE ALLOWED PER THE LOCATION AND DESIGN MANUAL, VOLUME ONE ROADWAY DESIGN.

#### POWER SERVICE

THE ELECTRICAL POWER SERVICE SHALL BE ACCORDING TO THE STATE STANDARDS SPECIFICATION 625.15, 725.19 AND THE STATE STANDARD CONSTRUCTION DRAWING HL-40.10 AND HL-40.20 WITH THE EXCEPTIONS AS NOTED:

ALL ELECTRICAL SERVICES PROVIDED UNDER THIS ITEM SHALL BE METERED UNLESS NOTED OTHERWISE, ALL METER SOCKETS SHALL BE A MANUAL BYPASS METER SOCKET TYPE OR AS REQUIRED BY THE UTILITY. THE ELECTRICAL SERVICE SHALL BE PROVIDED BY THE UTILITY COMPANY AS INDICATED ON THE PLANS, AND SHALL BE CLOSELY COORDINATED WITH THE IITILITY'S REQUIREMENTS.

THE FUSIBLE ELECTRICAL DISCONNECT SWITCH IS TO BE UL LISTED FOR USE AS A SERVICE ENTRANCE WITH A FACTORY INSTALLED NEUTRAL ASSEMBLY. THE SWITCH IS TO BE OF THE HEAVY DUTY TYPE, NEMA 3R, SINGLE THROW, 2-POLE, AND RATED FOR 60A OR 100A AT 240V OR AS INDICATED ON THE PLANS. THE LUGS IN THE DISCONNECT SHALL BE SIZED TO TERMINATE THE CABLE SIZES AS SHOWN ON THE PLANS. THE DISCONNECT SWITCHES SHALL INCLUDE WATERTIGHT HUBS AND SHALL BE CAPABLE OF BEING LOCKED IN BOTH THE OFF AND ON POSITION. PROVIDE TWO PADLOCKS FOR EACH SWITCH. PADLOCKS ARE TO BE IN ACCORDANCE WITH THE PADLOCK SPECIAL PROVISIONS AND ARE PAID SEPARATELY. THE FUSES ARE AS INDICATED ON THE PLANS AND SHALL BE EITHER 30A, OR 80A, CLASS R FUSES, WITH CLASS R FUSE CLIPS. THE FUSES ARE CONSIDERED INCIDENTAL TO THE POWER SERVICE. EACH DISCONNECT WILL HAVE THE DEVICE NUMBER THAT IT OPERATES ETCHED INTO IT.

FOR A DUAL SERVICE POINT, A DISTRIBUTION PANEL SHALL BE MOUNTED IN PLACE OF A DISCONNECT. A DUAL SERVICE POINT IS DEFINED AS A SERVICE POINT THAT FEEDS TWO DIFFERENT DEVICES WITH TWO SEPARATE SETS OF FEEDERS. THE PANEL ENCLOSURE SHALL BE RATED NEMA 3R AND SIZED APPROPRIATELY FOR THE CONDUCTORS AS SHOWN ON THE PLANS. THE PANEL AND ENCLOSURE SHALL BE SERVICE ENTRANCE RATED. THE PANEL SHALL BE ABLE TO BE LOCKED WITH A ENCLOSURE SHALL BE SERVICE ENTRANCE RATED. THE PANEL SHALL BE ABLE TO BE LOCKED WITH PADLOCK. THE PADLOCK SHOLALL BE IN ACCORDANCE WITH THE PADLOCK SPECIAL PROVISIONS AND ARE PAID SEPARATELY. THE SERVICE PANEL SHALL HAVE A 100 AMP MAIN BREAKER WITH TWO 2-POLE, 600V BOLT-ON TYPE BRANCH CIRCUIT BREAKERS DESCRIBED IN THE OVERCURRENT PROTECTIVE DEVICES SECTION OF THE SPECIFICATIONS. SITE 27101 SHALL HAVE A 120A MAIN DISCONNECT. THE CIRCUIT BREAKERS SHALL BE SIZED ACCORDING TO PLAN.

FOR THE 480V SERVICE POINT, AN EXTRA NON-FUSIBLE DISCONNECT WILL BE REQUIRED IN ADDITION TO THE PRIMARY AND SECONDARY DISCONNECTS, AS SHOWN IN THE DETAILS. THE TRANSFORMER THAT IS REQUIRED FOR THE 480V SERVICE SHALL BE PAID FOR SEPARATELY.

THE PAY ITEM POWER SERVICE DOES NOT REQUIRE THE FURNISHING OR INSTALLATION OF A LIGHTING CONTACTOR, PHOTOELECTRIC CELL, OR HAND-OFF-AUTOMATIC SWITCH FOR CONTROL OF CONTACTOR, OR OVER CURRENT PROTECTION DEVICES FOR LIGHTING CIRCUITS.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CLEAR AND OR TRIM ANY TREES OR BRUSH FOR THE INSTALLATION OF THE POWER SERVICE AND ALL RELATING MATERIALS, INCLUDING THE AERIAL OR UNDERGROUND FEED FROM THE UTILITY POLE TO THE SERVICE POLE. THE TRIMMING AND CLEARING WILL BE DONE AT THE UTILITIES DISCRETION. NO EXTRA PAYMENT WILL BE MADE FOR TREE OR BRUSH CLEARING AND TRIMMING FOR THE INSTALLATION OF POWER SERVICES.

TERMINATIONS, CONNECTIONS, FITTINGS, SWITCHES, DISCONNECTS, GROUND RODS, WEATHER HEADS, METER SOCKETS, CABLES, CONDUITS DOWN TO FIRST PULL BOX, WOOD POLES, EQUIPMENT STANDS, ALUMINUM CHANNELS, BRACES, AND MOUNTING SURFACES, AND OTHER MISCELLANEOUS ITEMS ETC. SHALL BE INCIDENTAL TO THIS WORK AND NO SEPARATE PAYMENT WILL

## PAYMENT

THE ELECTRICAL POWER SERVICE WILL BE PAID FOR AS:

POWER SERVICE, TYPE A PAID FOR UNDER POWER SERVICE, AS PER PLAN A

POWER SERVICE, TYPE B PAID FOR UNDER POWER SERVICE, AS PER PLAN C

POWER SERVICE, TYPE C PAID FOR UNDER POWER SERVICE, AS PER PLAN D

POWER SERVICE, TYPE A, 480V PAID FOR UNDER POWER SERVICE, AS PER PLAN F

#### SPECIAL PROVISION NOTES

BELOW IS A LIST OF ITEMS FOR WHICH THE DESCRIPTIONS OF WORK CAN BE FOUND IN THE SPECIAL PROVISIONS PROVIDED WITH THIS PLAN SET.

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ITEM 622E23401: CONCRETE BARRIER, SINGLE SLOPE, TYPE B, AS PER PLAN
ITEM 625E23308: DISTRIBUTION CABLE MISC.: NO. 8 AWG 5000 VOLT
ITEM 625E23308: DISTRIBUTION CABLE MISC.: NO. 4/0 AWG 5000 VOLT
ITEM 625E23308: DISTRIBUTION CABLE MISC.: AERIAL CABLE WITH FOUR NO. 8 AWG 5000 VOLT CABLES
ITEM 625E24400: DUCT CABLE MISC.: 1-1/2" DUCT CABLE WITH FOUR NO. 8 AWG 5000 VOLT CABLES
ITEM 625E24400: DUCT CABLE MISC.: 1-1/2" DUCT CABLE WITH FOUR NO. 6 AWG 5000 VOLT CABLES
ITEM 625E24400: DUCT CABLE MISC.: 1-1/2" DUCT CABLE WITH FOUR NO. 2 AWG 5000 VOLT CABLES
ITEM 625E24400: DUCT CABLE MISC.: 2" DUCT CABLE WITH FOUR NO. 3/0 AWG 5000 VOLT CABLES
ITEM 625E24400: DUCT CABLE MISC.: 2-1/2" DUCT CABLE WITH FOUR NO. 3/0 AWG 5000 VOLT CABLES
ITEM 625E24400: DUCT CABLE MISC.: 2-1/2" DUCT CABLE WITH FOUR NO. 3/0 AWG 5000 VOLT CABLES
ITEM 625E24400: DUCT CABLE MISC.: 3" CONDUIT FIBERGLASS REINFORCED ATTACHED TO STRUCTURE
ITEM 625E34001: POWER SERVICE, AS PER PLAN, TYPE A
ITEM 625E34001: POWER SERVICE, AS PER PLAN, TYPE B
ITEM 625E34001: POWER SERVICE, AS PER PLAN, TYPE B
ITEM 625E34001: POWER SERVICE, AS PER PLAN, TYPE D
ITEM 625E34001: POWER SERVICE, AS PER PLAN, TYPE D
ITEM 625E34001: POWER SERVICE, AS PER PLAN, TYPE D
ITEM 625E34001: POWER SERVICE, AS PER PLAN, TYPE D
ITEM 630E76501: OVERHEAD SIGN SUPPORT, AS PER PLAN, TYPE A
ITEM 630E76501: OVERHEAD SIGN SUPPORT, AS PER PLAN, TYPE A
ITEM 630E76501: OVERHEAD SIGN SUPPORT, AS PER PLAN, TYPE A
ITEM 630E765070: CONCRETE MEDIAN BARRIER SIGN SUPPORT FOUNDATION, DMS TRUSS
    ITEM 630E70070: CONCRETE MEDIAN BARRIER SIGN SUPPORT FOUNDATION, DMS TRUSS ITEM 630E70080: RIGHT OF WAY SIGN SUPPORT FOUNDATION, DMS TRUSS ITEM 630E84511: RIGID OVERHEAD SIGN SUPPORT FOUNDATION, APP, DMS PEDESTAL
    ITEM 632E62820: INTERCONNECT MISC.: HIGHWAY ADVISORY RADIO
ITEM 632E62820: INTERCONNECT MISC.: WIRELESS RADIO ASSEMBLY
     ITEM 632E62820: INTERCONNECT MISC.: EXISTING HIGHWAY ADVISORY RADIO TO BE REMOVED FOR
     STORAGE
     ITEM 632E62820: INTERCONNECT MISC.: INNERDUCT 1"
ITEM 632E62820: INTERCONNECT MISC.: INNERDUCT I'
ITEM 632E62810: INTERCONNECT CABLE MISC.: COMPOSITE CABLE
ITEM 632E90400: SIGNALIZATION MISC.: CCTV POLE CAMERA ASSEMBLY
ITEM 632E90400: SIGNALIZATION MISC.: CCTV POLE FOUNDATION, TYPE A (70 FT)
ITEM 632E90400: SIGNALIZATION MISC.: CCTV POLE FOUNDATION, TYPE B (50 FT)
ITEM 632E90400: SIGNALIZATION MISC.: CCTV POLE, TYPE A, 70 FT, WITH LOWERING DEVICE
ITEM 632E90400: SIGNALIZATION MISC.: VEHICLE DETECTION ASSEMBLY
ITEM 632E90400: SIGNALIZATION MISC.: VEHICLE DETECTION ASSEMBLY
ITEM 632E90400: SIGNALIZATION MISC.: VEHICLE DETECTION UNIT
     ITEM 632E90400: SIGNALIZATION MISC: TRANSFORMER, GENERAL PURPOSE 7.5KVA NON-VENTILATED TYPE
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## ITEM 625E25901, CONDUIT, JACKED OR DRILLED UNDER PAVEMENT, AS PER PLAN, 4" SCHEDULE 80

THE DISTRICT HAS STORED 8820 FT. OF THIS ITEM. THIS QUANTITY SHALL BE OBTAINED FROM THE ODOT DISTRICT 4 NORTON OUTPOST LOCATED AT I-76 AND SR-21 AND USED ON THE PROJECT PRIOR TO ANY PURCHASED MATERIAL OF THE SAME TYPE. THE PROJECT ENGINEER WILL NEED AT LEAST 48 HOUR ADVANCED NOTICE TO MAKE ARRANGEMENTS FOR PICK-UP.

ITEM 632E90400: SIGNALIZATION MISC.: TRANSFORMER, GENERAL PURPOSE 25KVA NON-VENTILATED TYPE

## ITEM 625E30701, PULL BOX, 725.08, 18", AS PER PLAN, TYPE A

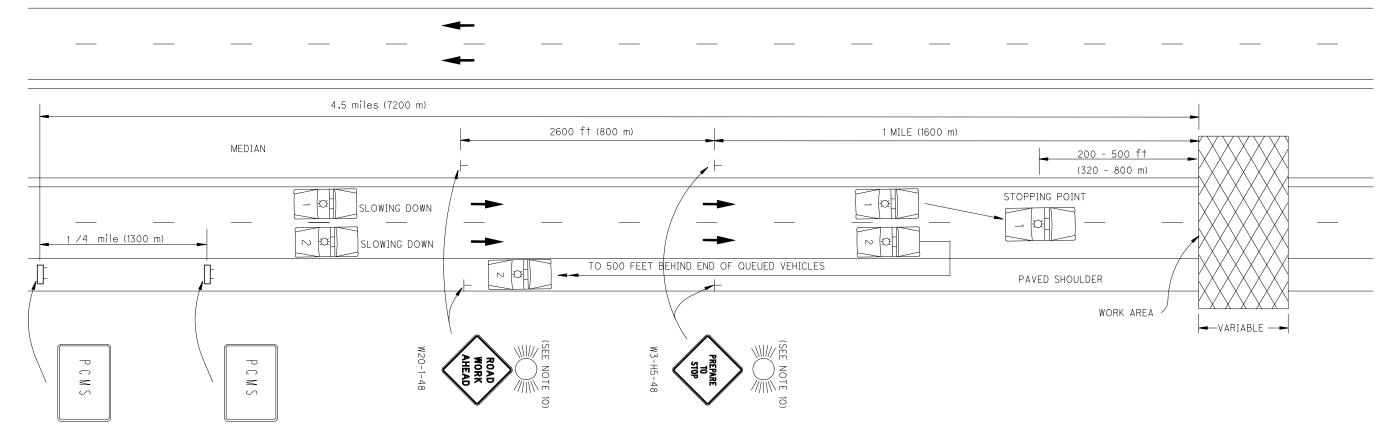
PULL BOX LIDS SHALL BE FABRICATED WITH RAISED LETTERS "ELECTRIC". PULL BOX LOCATIONS MUST BE APPROVED BY THE SENIOR CENTRAL OFFICE ITS ENGINEER.

## ITEM 625E30701, PULL BOX, 725.08, 18", AS PER PLAN, TYPE B

PULL BOX LIDS SHALL BE FABRICATED WITH RAISED LETTERS "TRAFFIC". PULL BOX LOCATIONS MUST BE APPROVED BY THE SENIOR CENTRAL OFFICE ITS ENGINEER.

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# PAVED SHOULDER



SHORT-DURATION CLOSURE OF MULT-LANE DIVIDED HIGHWAY

1. THIS TYPE OF HIGHWAY CLOSURE SHALL BE USED FOR ALL CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS WHEN THE DURATION OF CLOSURE WILL NOT EXCEED 15 MINUTES.

(SEE NOTE 9)

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- 2. A MINIMUM OF TWO LAW ENFORCEMENT OFFICERS (LEO) WITH PATROL CARS PER DIRECTION SHALL BE PROVIDED TO BLOCK TRAFFIC AND PACE MOTORISTS TO A STOP. THE NUMBER OF PATROL CARS SHALL EQUAL THE NUMBER OF LANES CLOSED ON THE HIGHWAY.
- 3. PATROL CARS, WITH LIGHTS FLASHING, SHOULD ENTER THE STREAM OF TRAFFIC AT APPROXIMATELY THREE (3) MILES BEFORE THE POINT OF CLOSURE. AT APPROXIMATELY TWO (2) MILES BEFORE THE POINT OF CLOSURE, THEY SHOULD BEGIN THE GRADUAL SLOW DOWN. TRAFFIC SHALL BE BROUGHT TO A COMPLETE STOP A SAFE DISTANCE, BETWEEN 200 FEET AND 500 FEET, FROM THE WORK AREA. THIS SLOWING OPERATION SHALL TAKE NO MORE THAN TEN (10) MINUTES. AFTER TRAFFIC HAS BEEN STOPPED, ONE PATROL CAR SHALL TRAVEL ALONG THE ROADWAY SHOULDER 500 FEET BEHIND THE END OF THE QUEUED VEHICLES.
- 4. THE CONTRACTOR SHALL NOT BEGIN WORK UNTIL TRAFFIC HAS BEEN BROUGHT TO A COMPLETE STOP.

- 5. ALL ENTRANCE RAMPS LOCATED BETWEEN THE STOPPED TRAFFIC AND THE WORK AREA SHALL BE CLOSED.
- 6. AFTER THE HIGHWAY HAS BEEN CLOSED AND REOPENED VIA THIS PROCEDURE, BOTH OF THE FOLLOWING REQUIREMENTS SHALL HAVE BEEN MET BEFORE IMPLEMENTATION OF ANOTHER SHORT DURATION CLOSURE, EXCEPT WITH THE APPROVAL OF THE ENGINEER: A.A MINIMUM PERIOD OF 15 MINUTES SHALL HAVE ELAPSED B.THE QUEUED TRAFFIC SHALL HAVE DISSIPATED
- 7. THIS TIME FRAME FOR STOPPING TRAFFIC SHALL BE SPECIFIED IN THE PLANS OR BY THE DISTRICT DEPUTY DIRECTOR.
- 8. THE PUBLIC SHALL BE GIVEN ADVANCE NOTICE OF THE UPCOMING CLOSURE BY PROVIDING PORTABLE CHANGEABLE MESSAGE SIGNS AT THE SITE AT LEAST ONE WEEK IN ADVANCE OF THE SCHEDULED CLOSING. CLOSURE INFORMATION SHOULD ALSO BE PROVIDED THROUGH THE NEWS MEDIA.
- 9. TWO ODOT APPROVED PORTABLE CHANGEABLE MESSAGE SIGNS, CLASS 1, SHALL BE PROVIDED.
  THE FIRST MESSAGE SIGN SHALL BE PLACED AT
  APPROXIMATELY 4.5 MILES IN ADVANCE OF THE
  CLOSURE OR AS DIRECTED BY THE ENGINEER.
  THE SECOND MESSAGE SIGN SHALL BE PLACED AT APPROXIMATELY ONE QUARTER MILE BEYOND THE FIRST MESSAGE SIGN. THE FIRST MESSAGE SIGN SHALL READ ROAD CLOSED AHEAD (0.8 SEC.), PREPARE TO STOP (0.8 SEC.), (BLACK SCREEN FOR 0.3 SEC.) THE SECOND MESSAGE SIGN SHALL READ ROAD CLOSED AHEAD (0.8 SEC.), "EXPECT 30 MIN. DELAY" (0.8 SEC.), (BLACK SCREEN FOR 2.5C.) FOR 0.3 SEC.)
- 10. THE CONTRACTOR SHALL ERECT AND MAINTAIN \*\*A8 INCH "ROAD WORK AHEAD" AND PREPARE TO STOP"
  SIGNS ON EACH SIDE OF THE HIGHWAY. DURING
  NIGHT OPERATIONS, EACH SIGH SHALL BE ILLUMINATED
  WITH ONE (1) TYPE A FLASHING WARNING LIGHT OR
  TWO (2) FLARES. THE FLARES SHALL BE REPLACED IF THEY BURN OUT.

## NOTE:

SEE SPECIAL PROVISIONS AND ODOT STANDARD DRAWINGS FOR ADDITIONAL MAINTENANCE OF TRAFFIC NOTES AND DETAILS. S

16	42		S	HEET	NUMB	EK		PARTICIPATIO	ITEM	ITEM Ext.	GRAND TOTAL	UNIT	DESCRIPTION	SEE
46	48	50								EXI.	TOTAL		ROADWAY	NO.
									201	11000	LUMP		CLEARING AND GRUBBING	39
360									202	30700	360	FT	CONCRETE BARRIER REMOVED	
5									202	42207	5	EACH	ANCHOR ASSEMBLY REMOVED, AS PER PLAN	39
37.5									606	13000	2337.5	FT	GUARDRAIL, TYPE 5	
<b>7.</b> 5									606	13050	87.5	FT	GUARDRAIL, TYPE 5A	
,									606	22010	12	EACH	ANCHOR ASSEMBLY, TYPE E-98	
									606	26500	7	EACH	ANCHOR ASSEMBLY, TYPE T	
1									607	50900	34	EACH	GATE, TYPE CL	
)									622	10061	240	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE B, AS PER PLAN	41
									622	10200	6	EACH	BARRIER TRANSITION	
													TRAFFIC SURVEILLANCE	
8									625	23200	3568	FT	NO. 4 AWG 5000 VOLT DISTRIBUTION CABLE	
2									625	23300	2172	FT	NO. 2 AWG 5000 VOLT DISTRIBUTION CABLE	
64									625	23302	22764	FT	NO. 6 AWG 5000 VOLT DISTRIBUTION CABLE	
92									625	23308	57292	FT	DISTRIBUTION CABLE, MISC.: NO. 8 AWG 5000 VOLT	41
64									625	23308	21064	FT	DISTRIBUTION CABLE, MISC.: NO. 4/0 AWG 5000 VOLT	41
,									605	07700	704		DICTRIBUTION CARLE MICC. AFRIM CARLE WITH FOUR NO. 0 AWG FOOD VOLT CARLES	41
4									625	23308	304	FT	DISTRIBUTION CABLE, MISC.: AERIAL CABLE WITH FOUR NO. 8 AWG 5000 VOLT CABLES	41
3 5									625	24350	783	FT	1-1/2" DUCT CABLE WITH FOUR NO. 4 AWG 5000 VOLT CABLES	41
_									625	24400	305	FT FT	DUCT CABLE, MISC.: 1-1/2" DUCT CABLE WITH FOUR NO. 8 AWG 5000 VOLT CABLES	41
$\dashv$									625	24400	91	FT 5.7	DUCT CABLE, MISC.: 1-1/2" DUCT CABLE WITH FOUR NO. 6 AWG 5000 VOLT CABLES	41
<b>'</b>									625	24400	1069	FT	DUCT CABLE, MISC.: 1-1/2" DUCT CABLE WITH FOUR NO. 2 AWG 5000 VOLT CABLES	41
,									625	24400	817	FT	DUCT CABLE, MISC .: 2" DUCT CABLE WITH FOUR NO. 1/0 AWG 5000 VOLT CABLES	41
9									625	24400	979	FT	DUCT CABLE, MISC .: 2-1/2" DUCT CABLE WITH FOUR NO. 3/0 AWG 5000 VOLT CABLES	41
3									625	25400	213	FT	CONDUIT, 2", 725.04	
55									625	25402	34155	FT	CONDUIT, 2", 725.05	
	382								625	25500	382	FT	CONDUIT, 3", 725.04	
	10484								625	25502	10484	FT	CONDUIT, 3", 725.05	
	3285								625	25901	3285	FT	CONDUIT, JACKED OR DRILLED UNDER PAVEMENT, AS PER PLAN	41
	380								625	25920	380	FT	CONDUIT, MISC.: 3", FIBERGLASS REINFORCED, ATTACHED TO STRUCTURE	39
	27618								625	29200	27618	FT	TRENCH, 48" DEEP	
	226								625	30701	226	EACH	PULL BOX, 725.08, 18", AS PER PLAN A	41
	205								625	30701	205	EACH	PULL BOX, 725.08, 18", AS PER PLAN B	41
_	63								625	34001	63	EACH	POWER SERVICE, AS PER PLAN A	13, 4
	4								625	34001	4	EACH	POWER SERVICE, AS PER PLAN C	13, 4
$\dashv$	7								625	34001	7	EACH	POWER SERVICE, AS PER PLAN D	14, 4
	1								625	34001	1	EACH	POWER SERVICE, AS PER PLAN F	15, 4
	4								625	34300	4	EACH	TRANSFORMER PAD, CONCRETE	
	5								630	66501	5	EACH	OVERHEAD SIGN SUPPORT, AS PER PLAN A	12A
	3								630	70070	3	EACH	CONCRETE MEDIAN BARRIER SIGN SUPPORT FOUNDATION, DMS TRUSS	
	14								630	70080	14	EACH	RIGHT OF WAY SIGN SUPPORT FOUNDATION, DMS TRUSS	
	13								630	74500	13	EACH	OVERHEAD SIGN SUPPORT, MISC.: DMS PEDESTAL	12A
	13								630	84511	13	EACH	RIGID OVERHEAD SIGN SUPPORT FOUNDATION, AS PER PLAN, DMS PEDESTAL	
	18								631	90201	18	EACH	CHANGEABLE MESSAGE SIGN, UNLIMITED MESSAGE, AS PER PLAN A	24
	1825			<u> </u>					632	62810	1825	FT	INTERCONNECT CABLE, MISC.: COMPOSITE CABLE	41
	235								632	62810	235	FT	INTERCONNECT CABLE, MISC.: INNERDUCT, 1"	41
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46	48	50								IIEW	EXT.	TOTAL		DESCRIPTION	NO.	CALCULA
														TRAFFIC SURVEILLANCE CONT.		
	2									632	62820	2	FACU	INTERCONNECT, MISC.: HIGHWAY ADVISORY RADIO	12, 18	_
	1									632	62820	2	EACH EACH	INTERCONNECT, MISC.: MIRELESS RADIO ASSEMBLY	20, 23	
	,							+		632	62830	LUMP	EACH	INTERCONNECT, MISC.: MIRCLESS RADIO ASSEMBLY  INTERCONNECT, MISC.: TRAINING	41	-
	3									632	89300	3	EACH	WOOD POLE		-
		64								632	90400	64	EACH	SIGNALIZATION, MISC.: CCTV POLE CAMERA ASSEMBLY	20	1
										032	00700	1	LAON	SIGNIFICATION, MISSING SOFT FOLL STIMETH FISCHINE!	+	1
		64								632	90400	64	EACH	SIGNALIZATION, MISC.: CCTV POLE FOUNDATION, TYPE A (70 FT.)	41	
		15								632	90400	15	EACH	SIGNALIZATION, MISC.: FOUNDATION TEST HOLE	44	1
		64								632	90400	64	EACH	SIGNALIZATION, MISC.: CCTV POLE, TYPE A (70 FT), WITH LOWERING DEVICE	12, 41	1
		2								632	90400	2	EACH	SIGNALIZATION, MISC.: EXISTING HIGHWAY ADVISORY RADIO TO BE REMOVED FOR STORAGE	41	1
		18								632	90400	18	EACH	SIGNALIZATION, MISC.: VEHICLE DETECTION UNIT	21	
		1								632	90400	1	EACH	SIGNALIZATION, MISC.: VEHICLE DETECTION ASSEMBLY	43	<b>&gt;</b>
		1								632	90400	1	EACH	SIGNALIZATION, MISC.: TRANSFORMER, GENERAL PURPOSE, 7.5KVA, NON-VENTILATED TYPE	15	
		2								632	90400	2	EACH	SIGNALIZATION, MISC.: TRANSFORMER, GENERAL PURPOSE, 25KVA, NON-VENTILATED TYPE	15	<b> </b>
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											ļ	1		TRAFFIC CONTROL		SUMMAR
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		32								630	07600	64	FT	GROUND MOUNTED SUPPORT, WIO X 12 BEAM	39	J≥
		-								630	81200	55	SQ FT	SIGN ERECTED, EXTRUSHEET	39	∤∷્ર
		2								630	84500	4	EACH	GROUND MOUNTED BEAM SUPPORT FOUNDATION	39	၂ တ
		1								630	85100	1 1	EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND REGRECTION		┨┙
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		4						+		630	87100	4	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION		ΗZ
		4								630	88800	4	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND STORAGE		GENERAL
		,								030	00000	7	LACIT	NEMOTAL OF OVERHEAD SIGN SOFT ONE AND STOTIAGE		<b>∃</b> ⊌
														MAINTENANCE OF TRAFFIC		
																1
										103	05000	LUMP		PREMIUM FOR CONTRACT PERFORMANCE BOND AND FOR PAYMENT BOND		1
										614	11100	1000	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR	41	1
										614	18510	12	MONTH	PORTABLE CHANGEABLE MESSAGE SIGN	41	1
																1
										614	11000	LUMP		MAINTAINING TRAFFIC		
										619	16001	30	MONTH	FIELD OFFICE, TYPE A, AS PER PLAN		
										623	10000	LUMP		CONSTRUCTION LAYOUT STAKES		
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<b>8</b>	ER	PL	3	: 54	>	<u>_</u>		E BARRIER, OPE, TYPE LAN	NOI	NO. 4 AWG 5000 VOL: DISTRIBUTION CABLE			DISTRIBUTION CABLE, MISC.: NO. 8 AWG 5000 VOLT	DISTRIBUTION CABLE, MISC.: NO. 4/0 AWG 5000 VOLT	DISTRIBUTION CABLE, MISC.: AERIAL CABLE WITH FOUR NO. 8 AWG 5000 VOLT CABLES	1-1/2" DUCT CABLE WITH FOUR NO. 4 AWG 5000 VOLT CABLES	DUCT CABLE, MISC.: 1-1/2 DUCT CABLE WITH FOUR NO. 8 AWG 5000 VOLT CABLES	DUCT CABLE, MISC.: 1-1/2 DUCT CABLE WITH FOUR NO. 6 AWG 5000 VOLT CABLES	DUCT CABLE, MISC.: 1-1/2 DUCT CABLE WITH FOUR NO. 2 AWG 5000 VOLT CABLES	DUCT CABLE, MISC.: 2" DUCT CABLE WITH FOUR NO. 1/0 AWG 5000 VOLT CABLES	DUCT CABLE, MISC.: 2-1/ DUCT CABLE WITH FOUR NO. 3/0 AWG 5000 VOLI CABLES	725.04	725.05	
<u>-</u>	BARRIER	ANCHOR ASSEMBLY REMOVED, AS PER	TYPE	TYPE	ASSEMBL -98	ASSEMBL:	70	4 <i>RRI</i> 1, 7	TRANSITION	000 V CA	NO. 2 AWG 5000 VOL DISTRIBUTION CABLE	NO. 6 AWG 5000 VOL DISTRIBUTION CABLE	V CA	V CA	V CA L CA O. 8	CABL AWG	MIS WITH 000	MIS WITH 000	MIS WITH 000	MIS WITH 500	MIS WITH	725	725	
	E B,	4551 7, 45	,	.	45SI 98	ASSI	TYPE	TE B, SLOP PLAN		VG 5, VTIOI	17101	VG 5, 17101	0177	7101	ERIA, JR N	ICT (	91E, 91E 10 5	91.E, 91.E 10.5	9LE, 9LE 1/6 5	BLE, BLE AWG	BLE, BLE AWG	, 2,,	5,	
HS │	SRE1 OVEL	1OR 2VEL	GUARDRAIL	GUARDRAIL	10R	40R		CRE 1 LE S	RIER	4 AN RIBU	2 AN RIBU	6 AV RIBU	RIBU :- NC	RIBU .: N	RIBU : Al FOU	," 00 5 00 7	CAL B AN	CA1 CA1 6 AV ES	CA1 2 AN	CAL	370 ES	TIUC	TINA	
	CONCRETE	ANCH REM	GUAF	GUAH	ANCHOR TYPE E	ANCHOR	GA TE	CONCRETE SINGLE SLC AS PER PL	BARRIER	VO. DIST	vo.	VO. DIST.	VOL T	VOL 7	NIST, WISC WITH	1-1/2 50UF VOL 1	OUCT OUCT NO.	DUCT DUCT NO.	DUCT DUCT VO.	DUCT DUCT VO.	DUCT DUCT VO.	CONBUIT,	CONE	
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		۸۸				YPE T		В,				7	00	DISTRIBUTION CABLE, MISC.: NO. 4/0 AWG 5000 VOLT	()	HT. O	1-1/2" UR T	1-1/2" UR 1	1-1/2" UR T	2," UR 2L.T	DUCT CABLE, MISC.: 2-1/2" DUCT CABLE WITH FOUR NO. 3/0 AWG 5000 VOLT CABLES			CALCULAT JDF
<b>2</b>	ER	<i>P</i> 1	E 5	54	>	, Y.		CONCRETE BARRIER, SINGLE SLOPE, TYPE I AS PER PLAN	NOI	VOL BLE	NO. 2 AWG 5000 VOL DISTRIBUTION CABLE	NO. 6 AWG 5000 VOL DISTRIBUTION CABLE	DISTRIBUTION CABLE, MISC.: NO. 8 AWG 5000 VOLT	BLE,	DISTRIBUTION CABLE, MISC.: AERIAL CABLE WITH FOUR NO. 8 AWG 5000 VOLT CABLES	1-1/2" DUCT CABLE WITH FOUR NO. 4 AWG 5000 VOLT CABLES	DUCT CABLE, MISC.: 1-1/2 DUCT CABLE WITH FOUR NO. 8 AWG 5000 VOLT CABLES	DUCT CABLE, MISC.: 1-1/2 DUCT CABLE WITH FOUR NO. 6 AWG 5000 VOLT CABLES	DUCT CABLE, MISC.: 1-1/2 DUCT CABLE WITH FOUR NO. 2 AWG 5000 VOLT CABLES	DUCT CABLE, MISC.: 2" DUCT CABLE WITH FOUR NO. 1/0 AWG 5000 VOLT CABLES	C.: 2 4 FOU 20 V	725.04	2.05	
⊢	BARRIER	ANCHOR ASSEMBLY REMOVED, AS PER	TYPL	TYPE	EMBL	ASSEMBL	75	4 <i>RRI</i> 'E, 1	TRANSITION	NO. 4 AWG 5000 DISTRIBUTION CA	000 V CA	000 V CA	V CA AWC	V CA	ν CA L CA 0. δ	CABL AWG	MIS WITH	MIS WITH	MIS WITH 000	MIS WITH 500	MIS WITH		725.	
	E B,	4551 7, 45		•	455l 98	ASSI	TYPE	TE B, SLOP PLAN	TRA	71017	17101	7017	0177	7101	77101 ERIA JR N	ICT (	91E, 91E 16 5	91.E, 91.E 11.C 5,	9LE, 9LE 1/6 5	BLE, BLE AWG	BLE, BLE AWG	, 2",	2,	
₽S	CRET	10R 2VEL	RDRA	GUARDRAIL	10R	10R		CRE 1 LE S	RIER	4 AN RIBU	2 AN RIBU	6 AV RIBU	RIBU :- NC	RIBU .: Ne	RIBU I. AL FOU	, DO	CA1 8 A V ES	CA1 6 AV ES	CA1 2 AN ES	CA 170 ES	370 ES	TIUC	TINC	
	CONCRETE REMOVED	ANCH	GUARDRAIL,	GUAH	ANCHOR TYPE E-	ANCHOR	GA TE,	CONI SING AS F	BARRIER	VO. DIST	vo.	VO.	VOL T	NOL I	VIST, WISC WITH 5000	1-1/2 FOUF VOL J	DUCT DUCT VO.	DUCT DUCT NO.	DUCT DUCT VO.	DUCT DUCT VO.	DUCT DUCT VO.	CONBUIT,	CONDUIT,	
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CONCRETE MEDIAN BARRIER
SIGN SUPPORT FOUNDATION, CHANGEABLE MESSAGE SIGN,
SUNLIMITED MESSAGE,
AS PER PLAN A CONDUIT, JACKED OR DRILLED UNDER PAVEMENT, AS PER PLAN RIGID OVERHEAD SIGN SUPPORT FOUNDATION, AS PER PLAN, DMS PEDESTAL INTERCONNECT, MISC.: WIRELESS RADIO ASSEMBLY CONDUIT, MISC.: 3", FIBERGLASS REINFORCED, ATTACHED TO STRUCTURE OVERHEAD SIGN SUPPORT, AS PER PLAN A OVERHEAD SIGN SUPPORT, MISC.: DMS PEDESTAL INTERCONNECT, MISC.: HIGHWAY ADVISORY RADIO INTERCONNECT CABLE, MISC.: COMPOSITE CABLE RICHT OF WAY SIGN SUPPORT FOUNDATION, DMS TRUSS 18″, 18", O N INTERCONNECT CABLE, MISC.: INNERDUCT 1" 725.04 PULL BOX, 725.08, AS PER PLAN B PULL BOX, 725.08, AS PER PLAN A 725. TRENCH, 48" DEEP POWER SERVICE, AS PER PLAN A POWER SERVICE, AS PER PLAN C POWER SERVICE, AS PER PLAN D POWER SERVICE, AS PER PLAN F TRANSFORMER H CONCRETE SHEET CONDUIT, 3", 3, WOOD POLE FT FT FT EACH FT FT EACH EACH EACH FT FT SUBSUMMARY S S 느 -SUM ⋖  $\vdash$ S SUBTOTALS 

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CONCRETE MEDIAN BARRIER
SIGN SUPPORT FOUNDATION, CHANGEABLE MESSAGE SIGN,
SUNLIMITED MESSAGE,
AS PER PLAN A CONDUIT, JACKED OR DRILLED UNDER PAVEMENT, AS PER PLAN RIGID OVERHEAD SIGN SUPPORT FOUNDATION, AS PER PLAN, DMS PEDESTAL CONDUIT, MISC.: 3", FIBERGLASS REINFORCED, ATTACHED TO STRUCTURE OVERHEAD SIGN SUPPORT, AS PER PLAN A OVERHEAD SIGN SUPPORT, MISC.: DMS PEDESTAL INTERCONNECT, MISC.: HIGHWAY ADVISORY RADIO INTERCONNECT, MISC.: WIRELESS RADIO ASSEMBL INTERCONNECT CABLE, MISC.: COMPOSITE CABLE RICHT OF WAY SIGN SUPPORT FOUNDATION, DMS TRUSS 18", 18″, O N INTERCONNECT CABLE, MISC.: INNERDUCT 1" PULL BOX, 725.08, AS PER PLAN B PULL BOX, 725.08, AS PER PLAN A TRENCH, 48" DEEP POWER SERVICE, AS PER PLAN A POWER SERVICE, AS PER PLAN C POWER SERVICE, AS PER PLAN D POWER SERVICE, AS PER PLAN F TRANSFORMER H CONCRETE SHEET CONDUIT, 3", 3, WOOD POLE FT FT FT EACH FT FT EACH EACH EACH FT FT SUBSUMMARY S S -SUM ⋖  $\vdash$ S SUBTOTALS THIS SHEET SUBTOTALS SHEET 47 TOTALS CARRIED TO THE GENERAL SUMMARY 

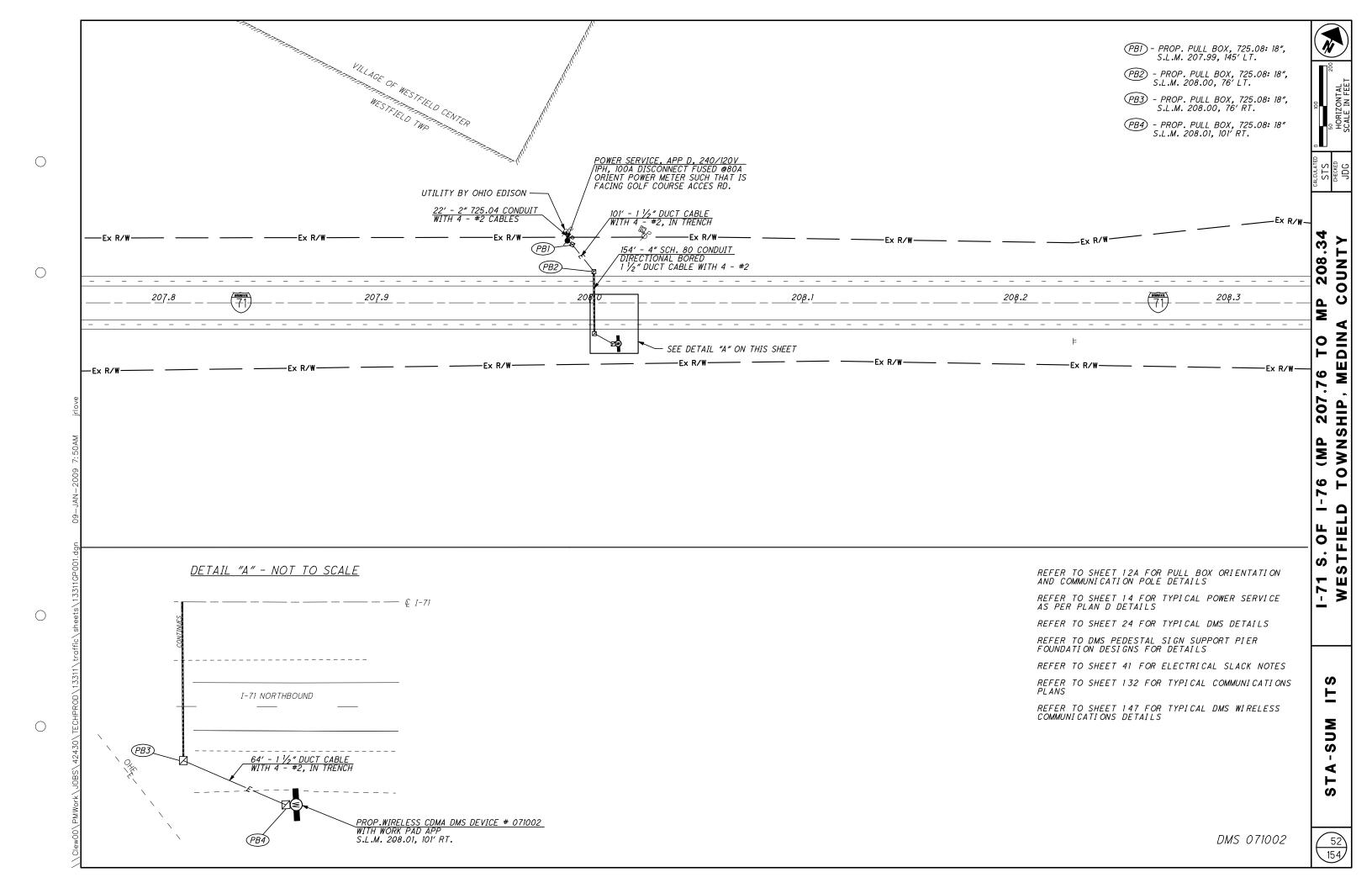
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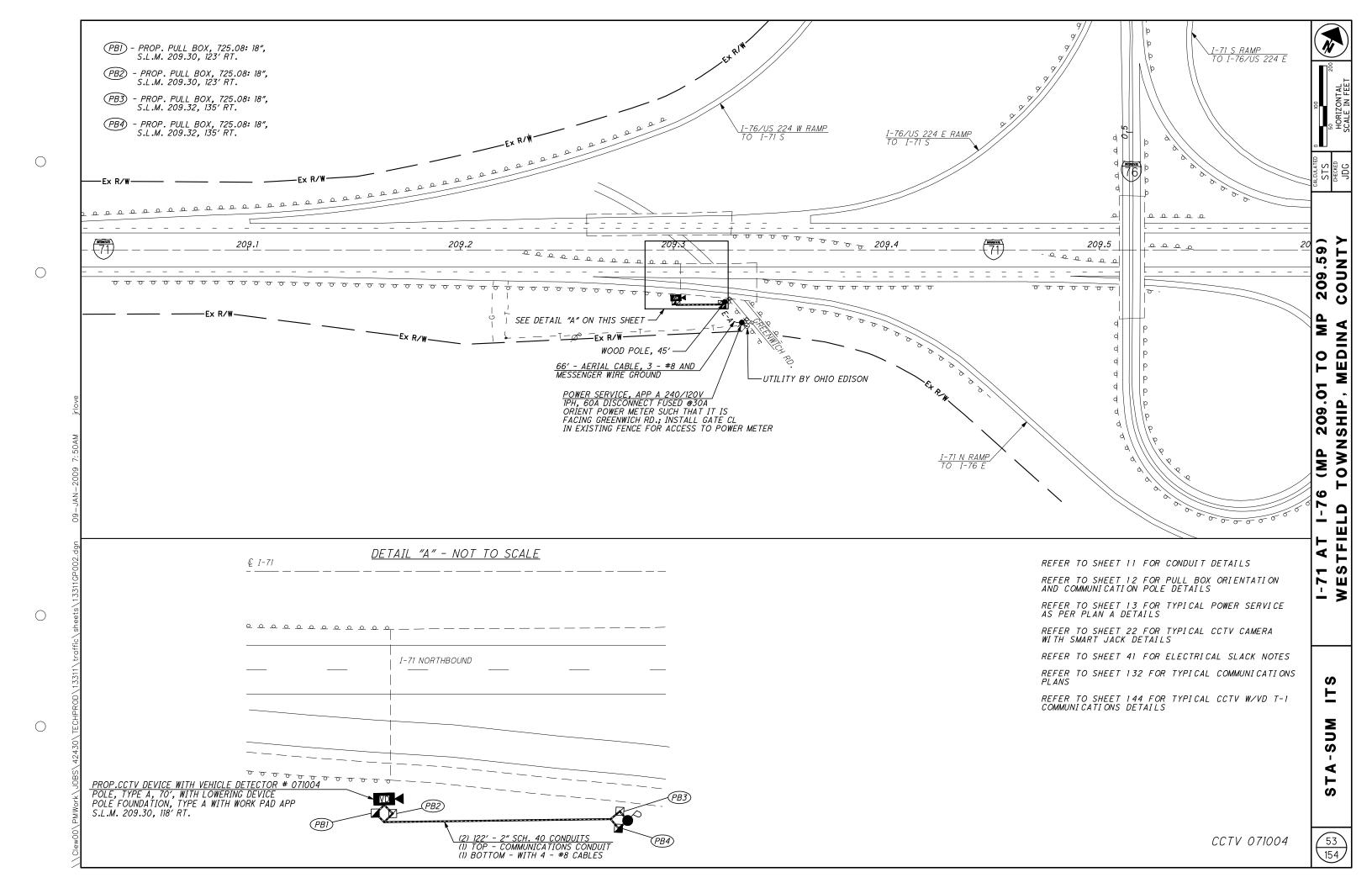
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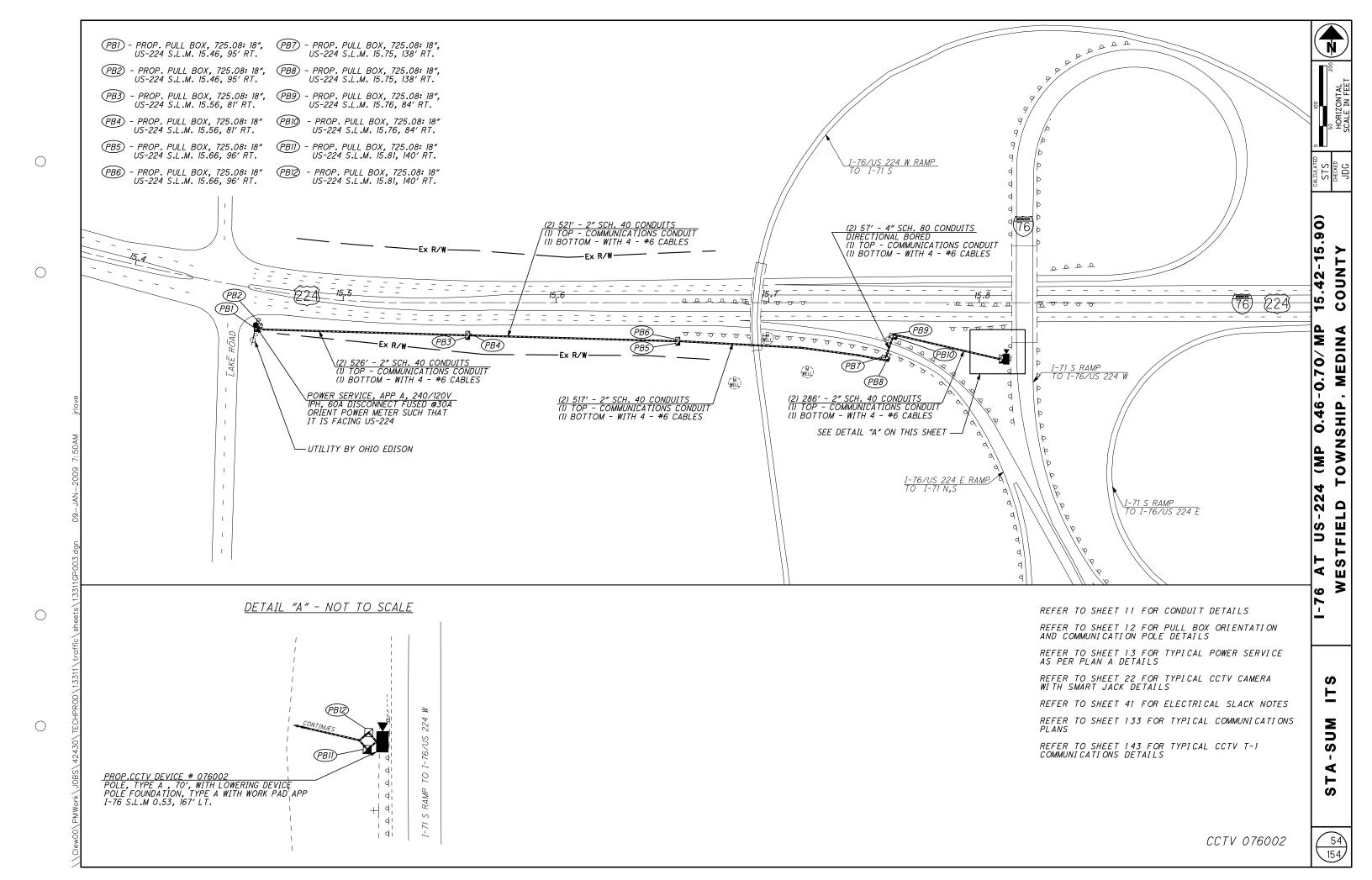
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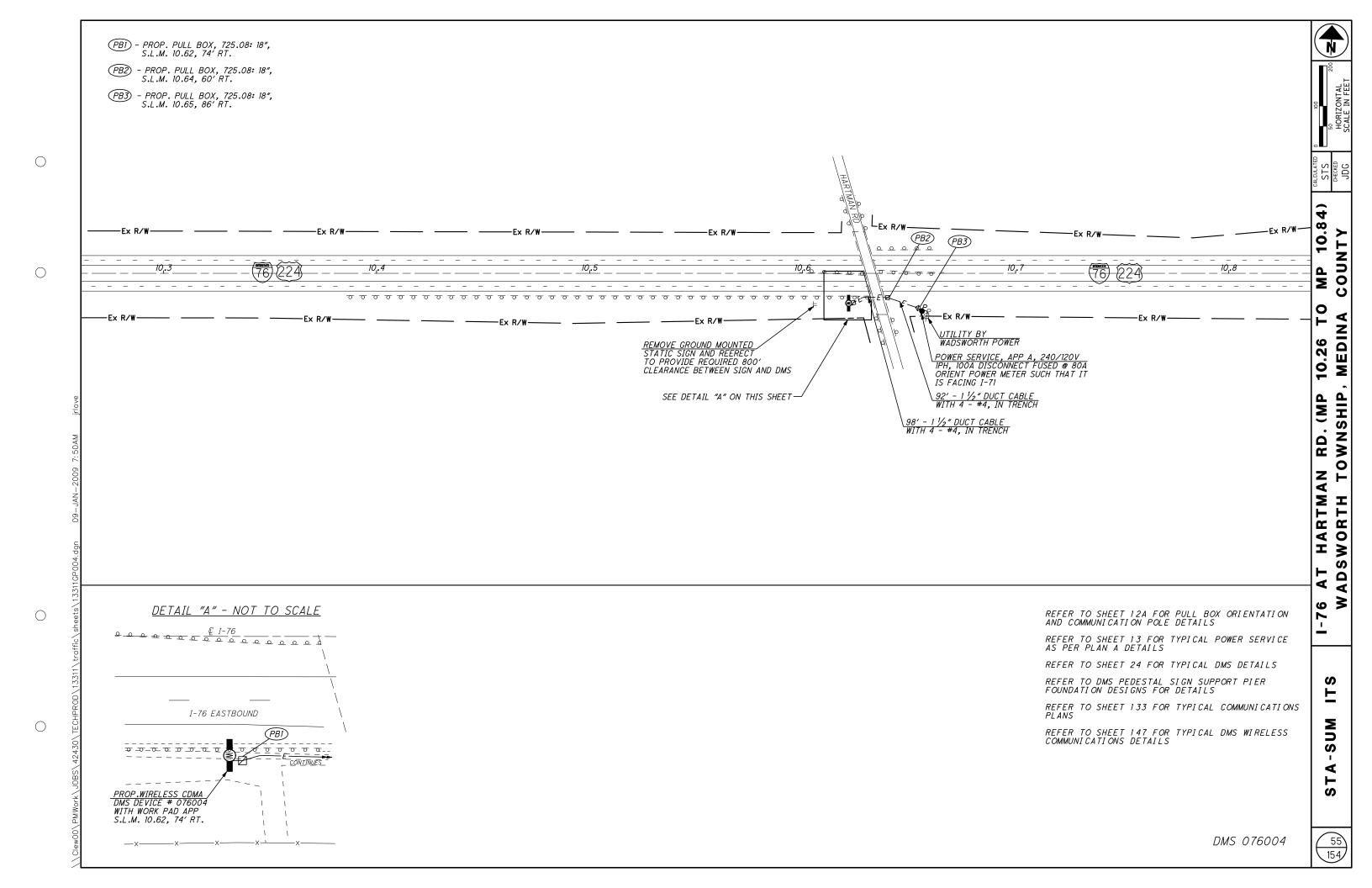
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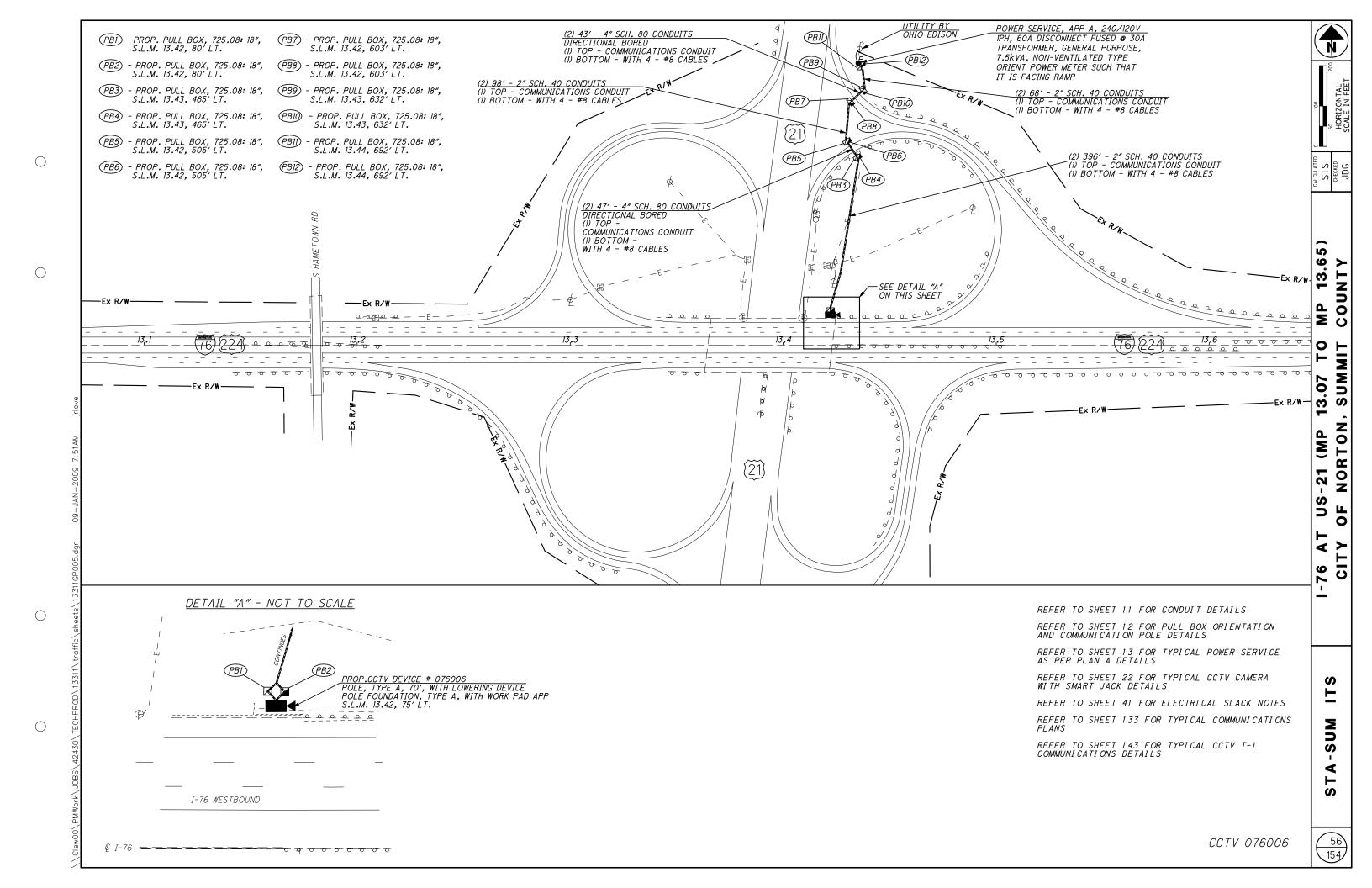
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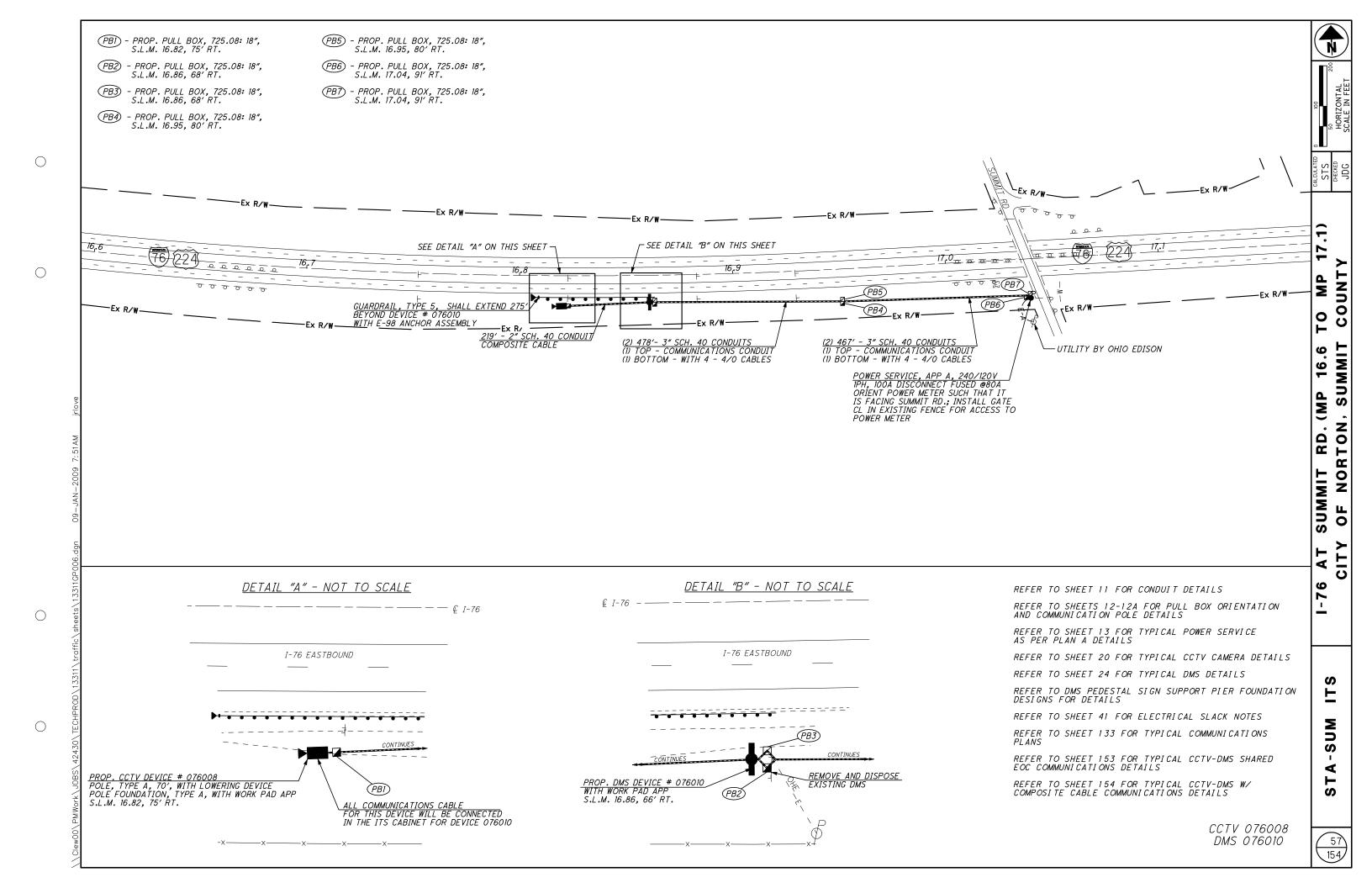


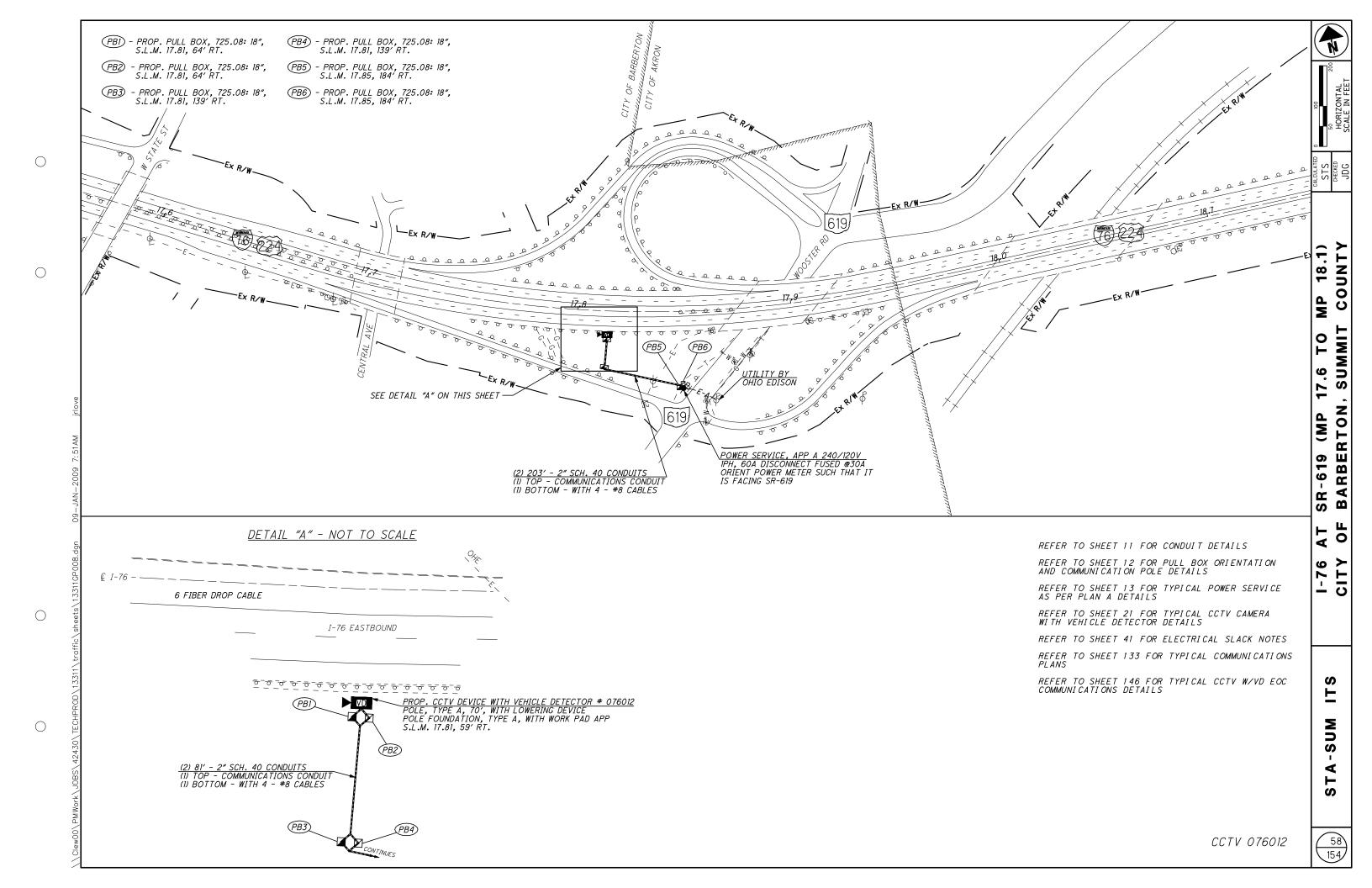


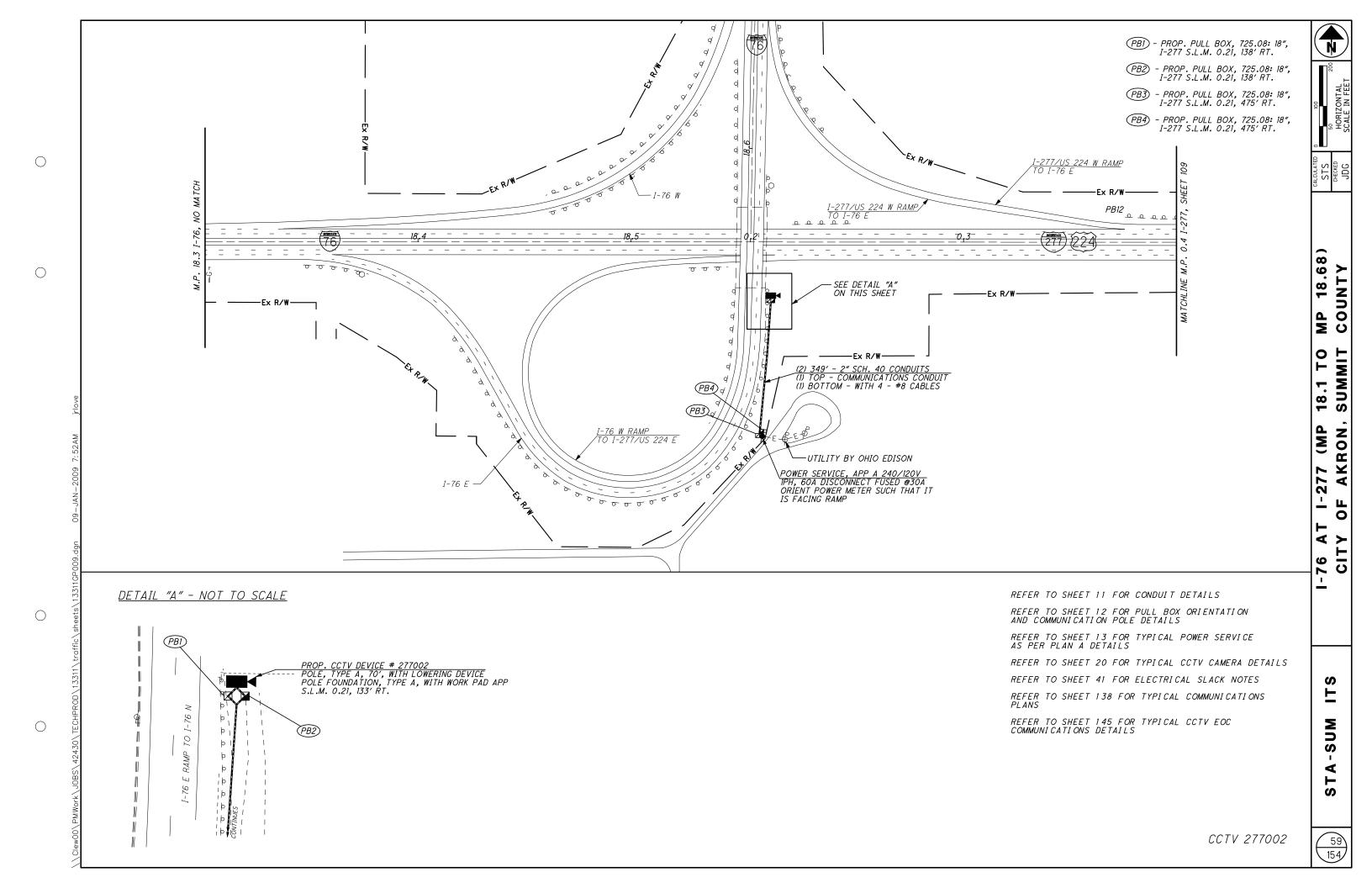


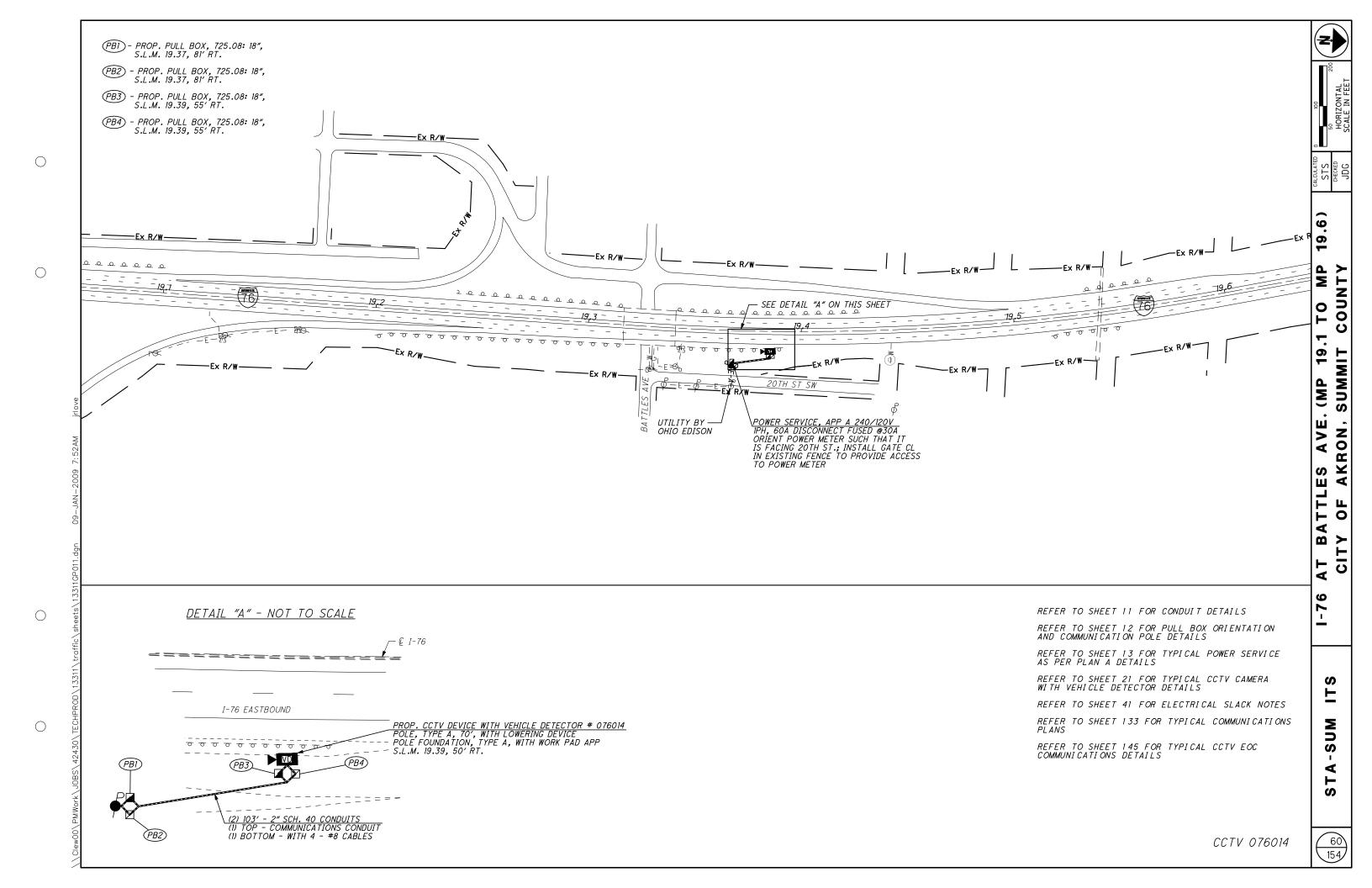


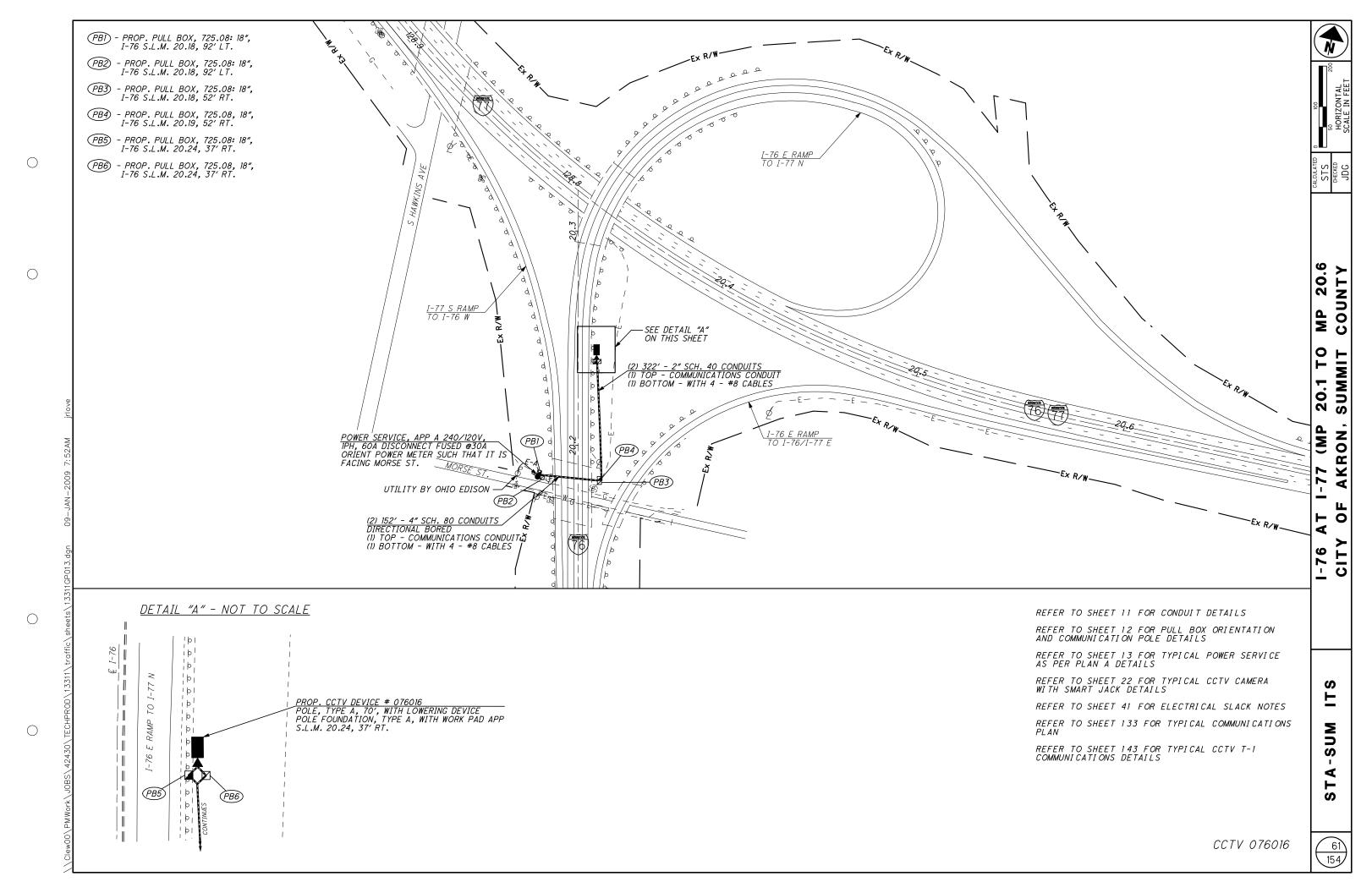


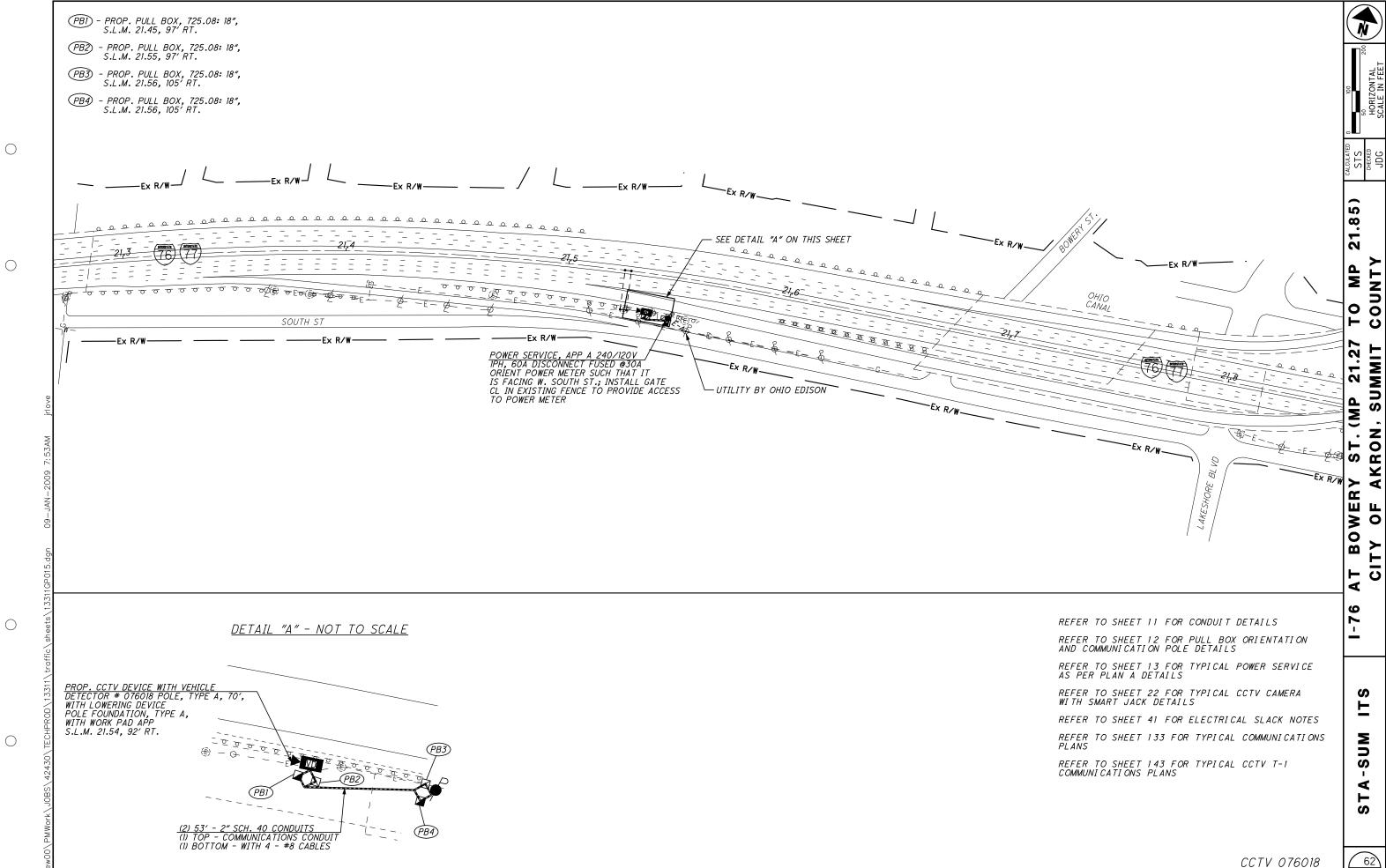


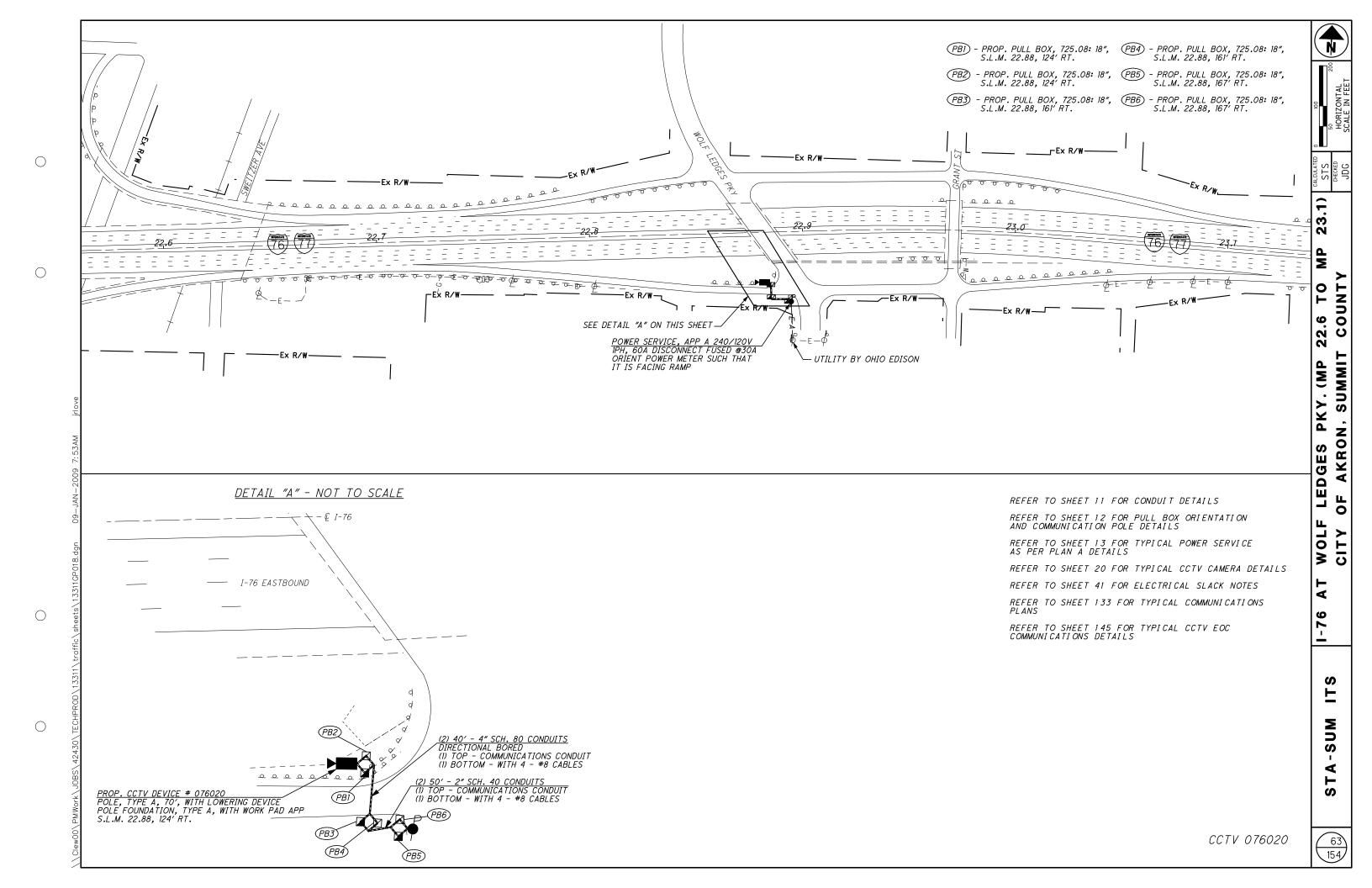


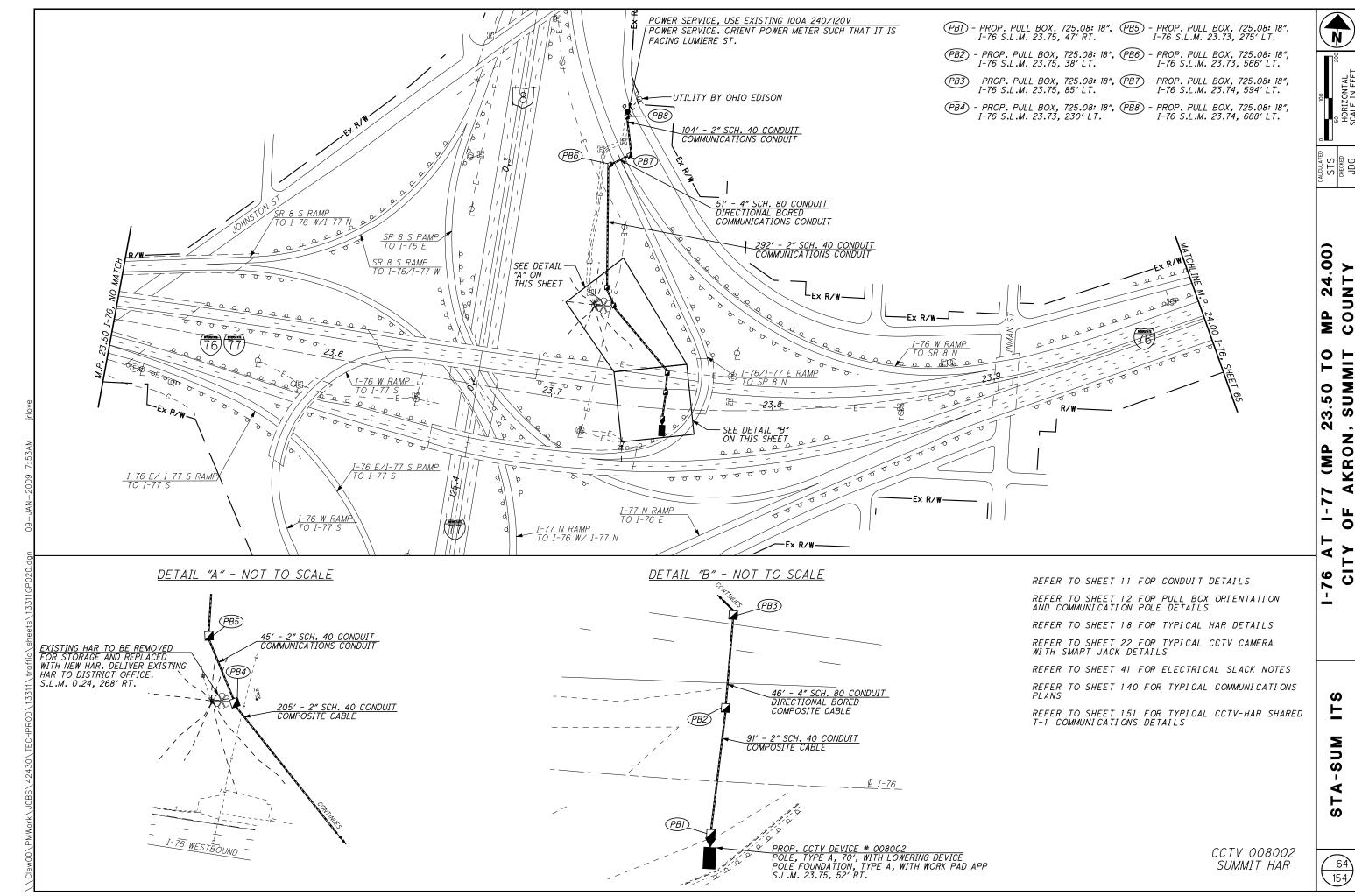










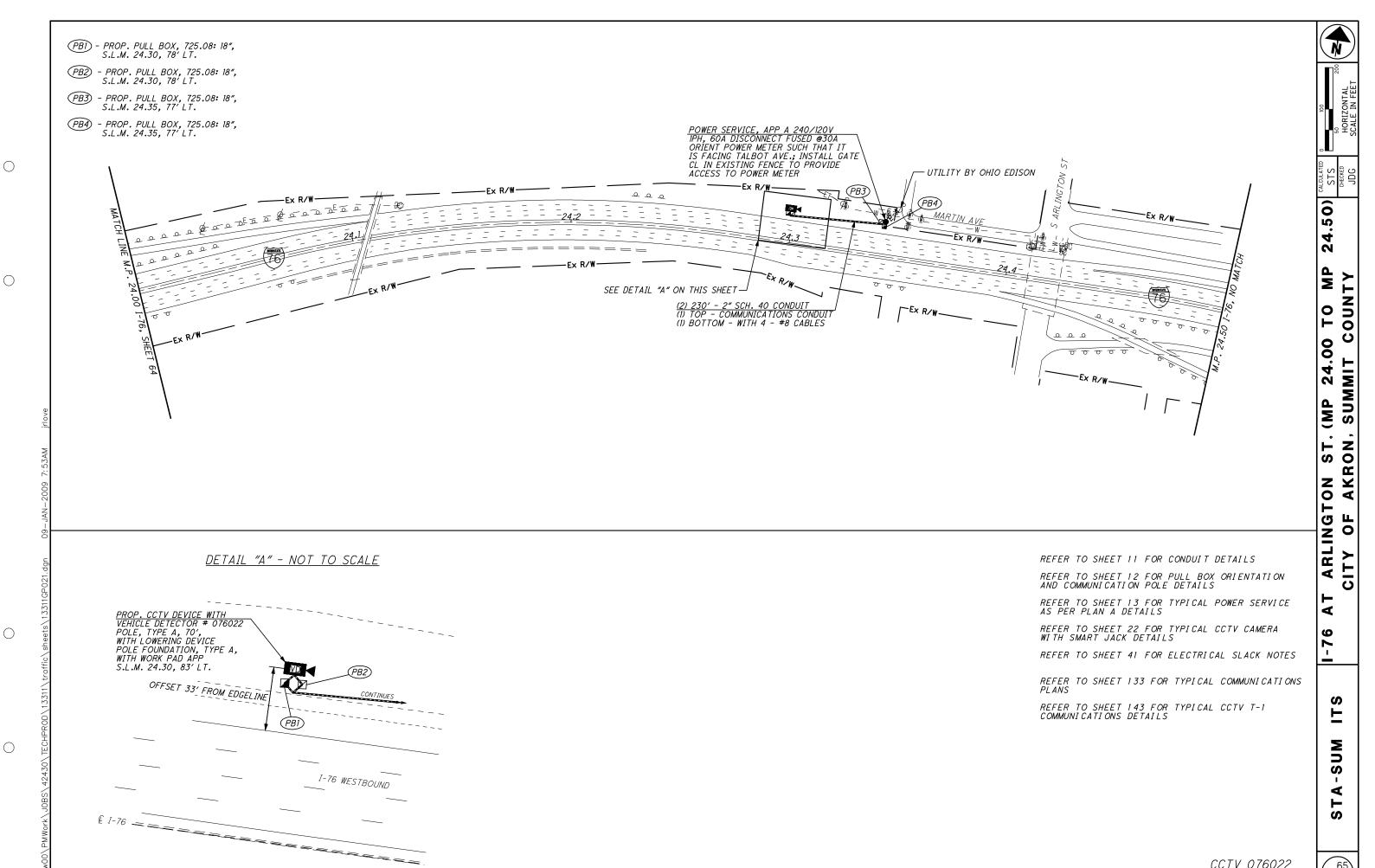


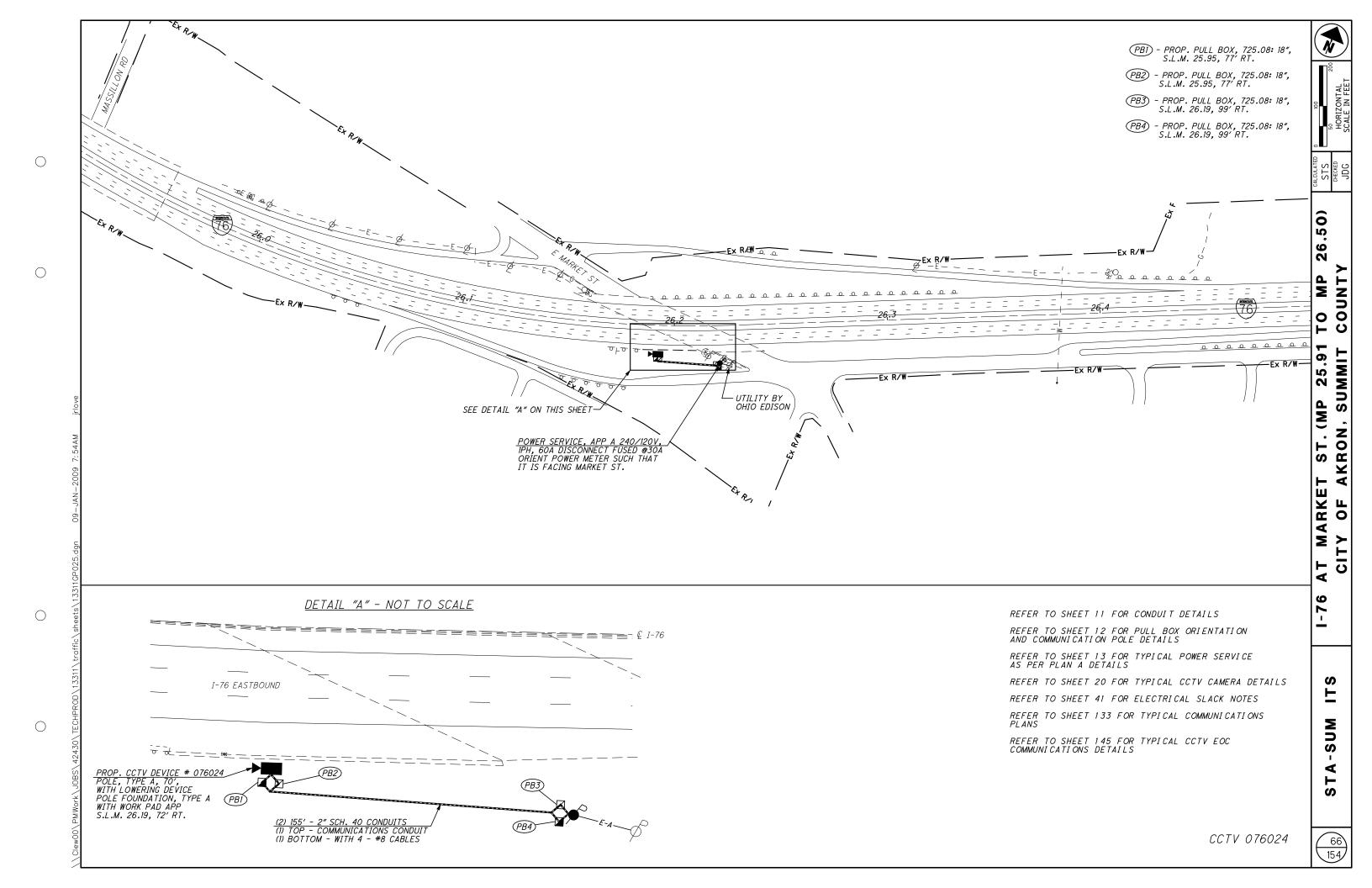
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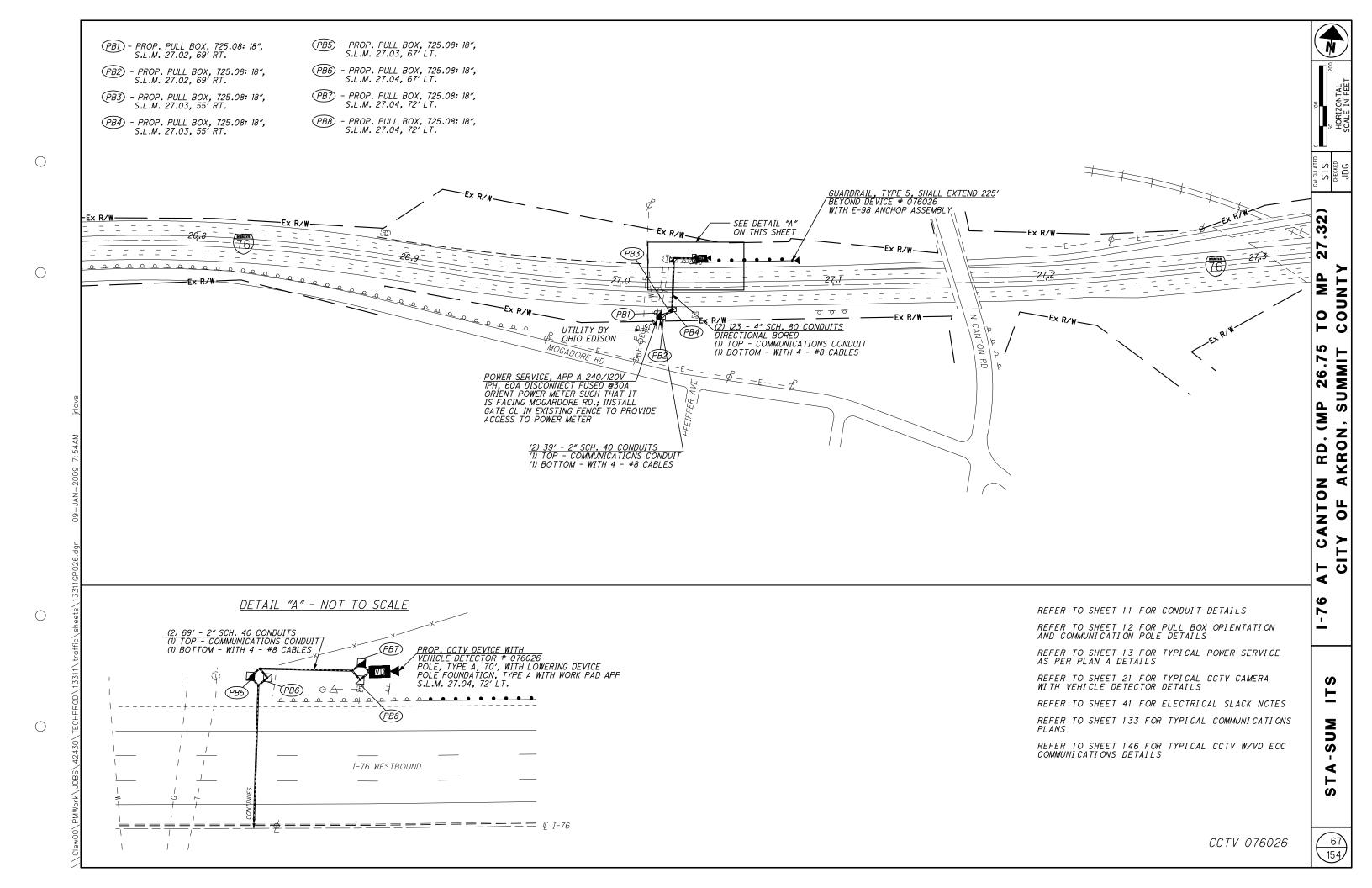
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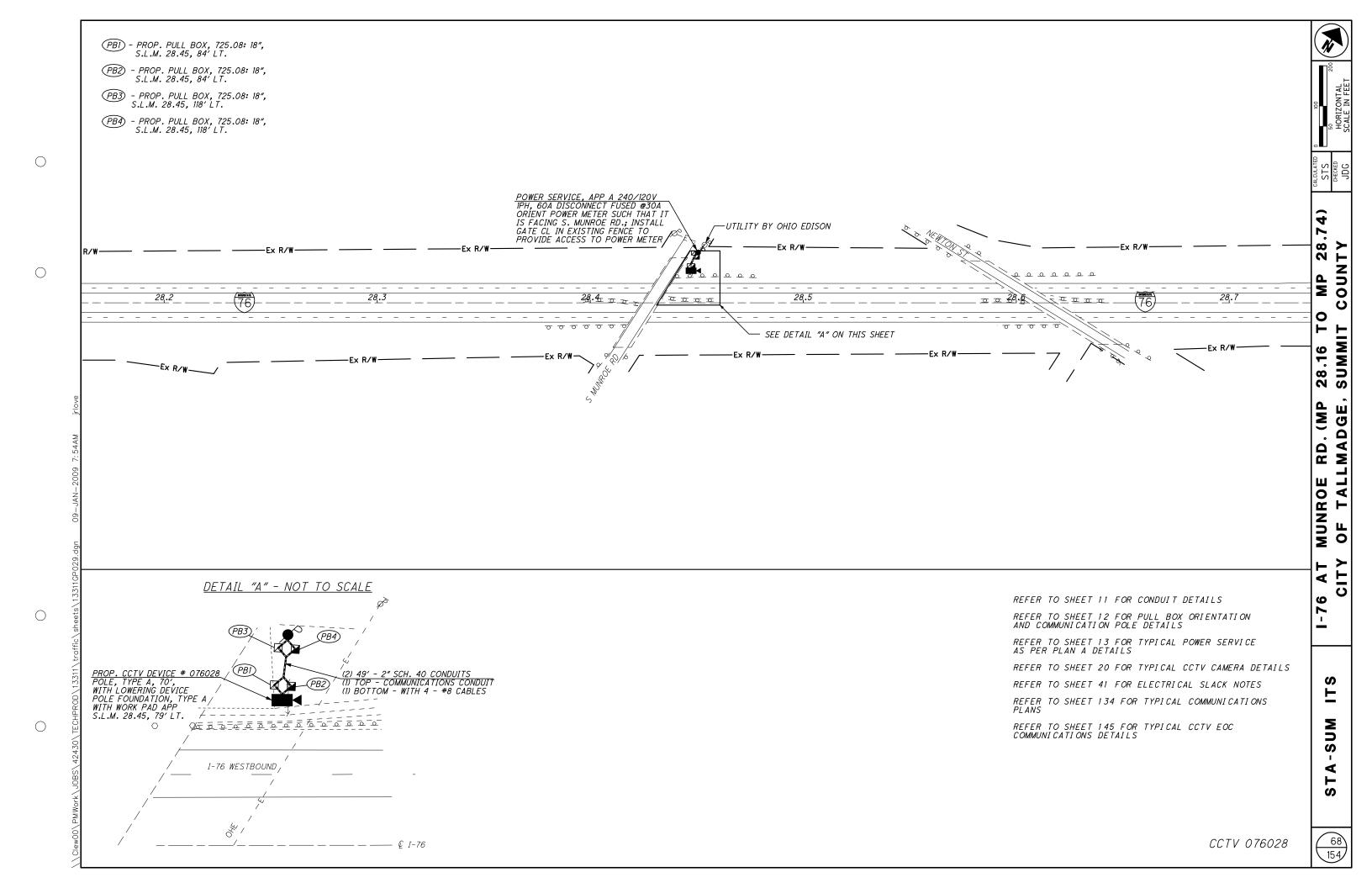
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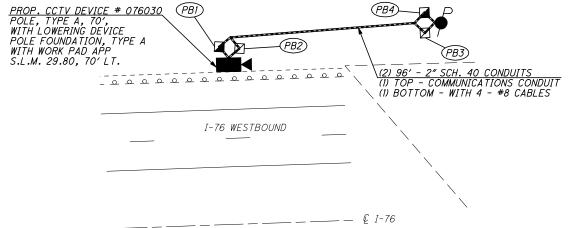
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REFER TO SHEET 15 FOR TYPICAL POWER SERVICE AS PER PLAN F DETAILS

REFER TO SHEET 20 FOR TYPICAL CCTV CAMERA DETAILS

REFER TO SHEET 41 FOR ELECTRICAL SLACK NOTES

REFER TO SHEET 134 FOR TYPICAL COMMUNICATONS PLANS

REFER TO SHEET 145 FOR TYPICAL CCTV EOC COMMUNICATIONS DETAILS

CCTV 076030



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(PB7) - PROP. PULL BOX, 725.08: 18", S.L.M. 30.42, 84' LT.

- PROP. PULL BOX, 725.08: 18", S.L.M. 30.42, 84' LT.

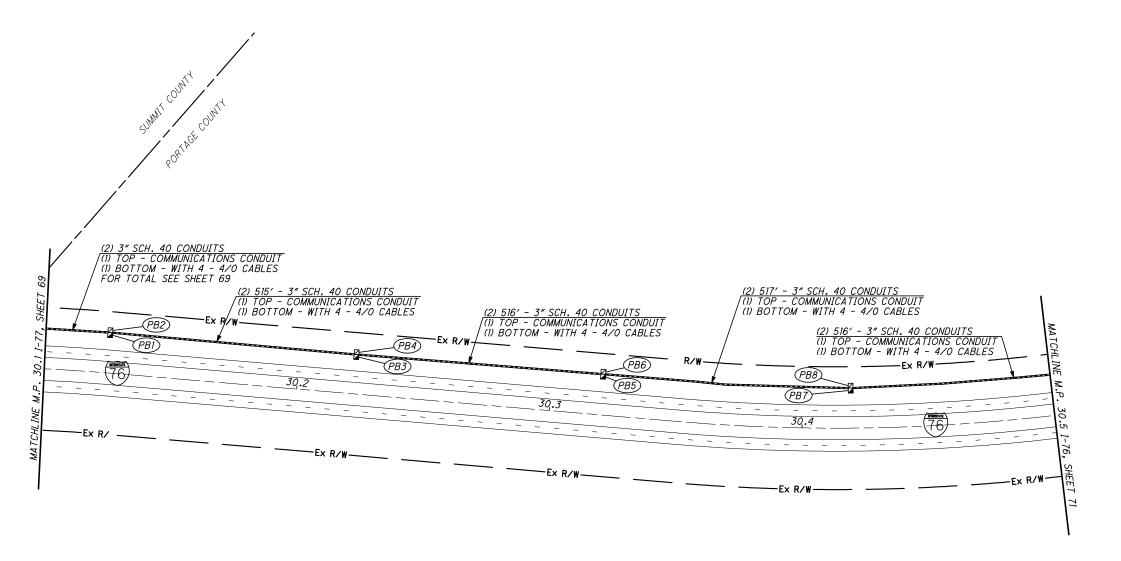
(PB1) - PROP. PULL BOX, 725.08: 18", S.L.M. 30.12, 84' LT.

PB2) - PROP. PULL BOX, 725.08: 18", S.L.M. 30.12, 84' LT.

(PB3) - PROP. PULL BOX, 725.08: 18", S.L.M. 30.22, 84' LT.

(PB4)

- PROP. PULL BOX, 725.08: 18", S.L.M. 30.22, 84' LT. (PB8)



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(PBI) - PROP. PULL BOX, 725.08: 18", S.L.M. 30.52, 82' LT.

- PROP. PULL BOX, 725.08: 18", S.L.M. 30.52, 82' LT.

- PROP. PULL BOX, 725.08: 18", S.L.M. 30.68, 85' LT.

- PROP. PULL BOX, 725.08: 18", S.L.M. 30.62, 74' LT.



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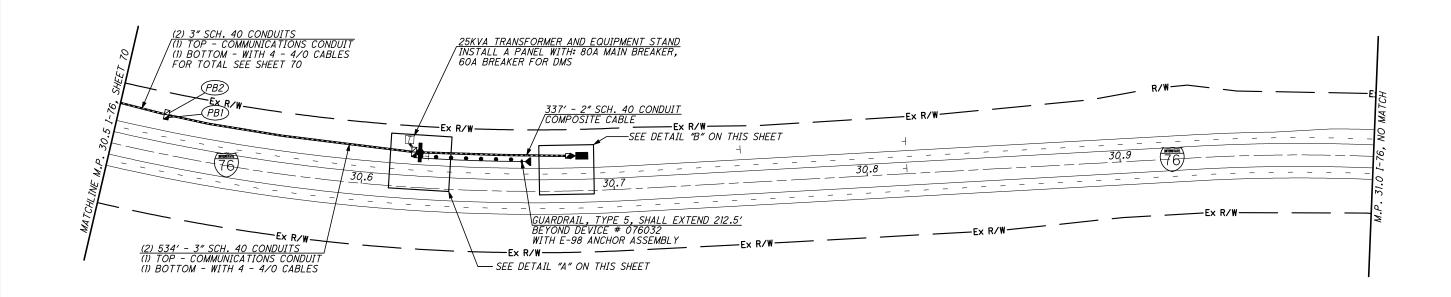
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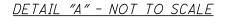
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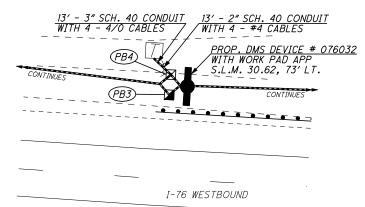
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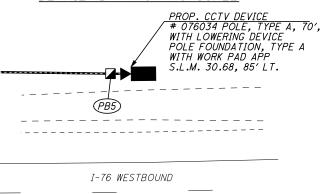


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## DETAIL "B" - NOT TO SCALE

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REFER TO DMS PEDESTAL SIGN SUPPORT PIER FOUNDATION DESIGNS FOR DETAILS

REFER TO SHEET 24 FOR TYPICAL DMS DETAILS

REFER TO SHEETS 12-12A FOR PULL BOX ORIENTATION AND COMMUNICATION POLE DETAILS

REFER TO SHEET 20 FOR TYPICAL CCTV CAMERA DETAILS

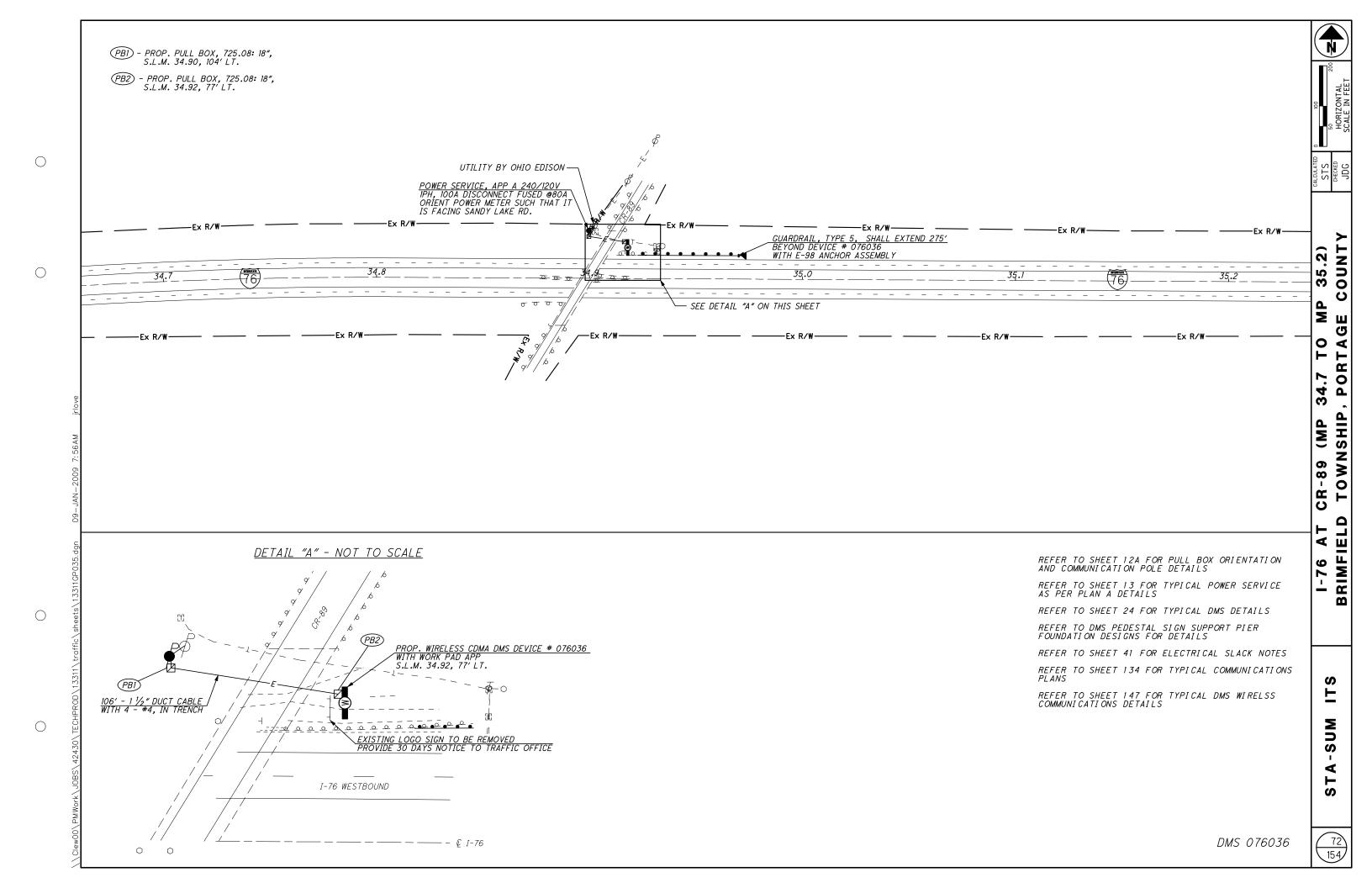
REFER TO SHEET 11 FOR CONDUIT DETAILS

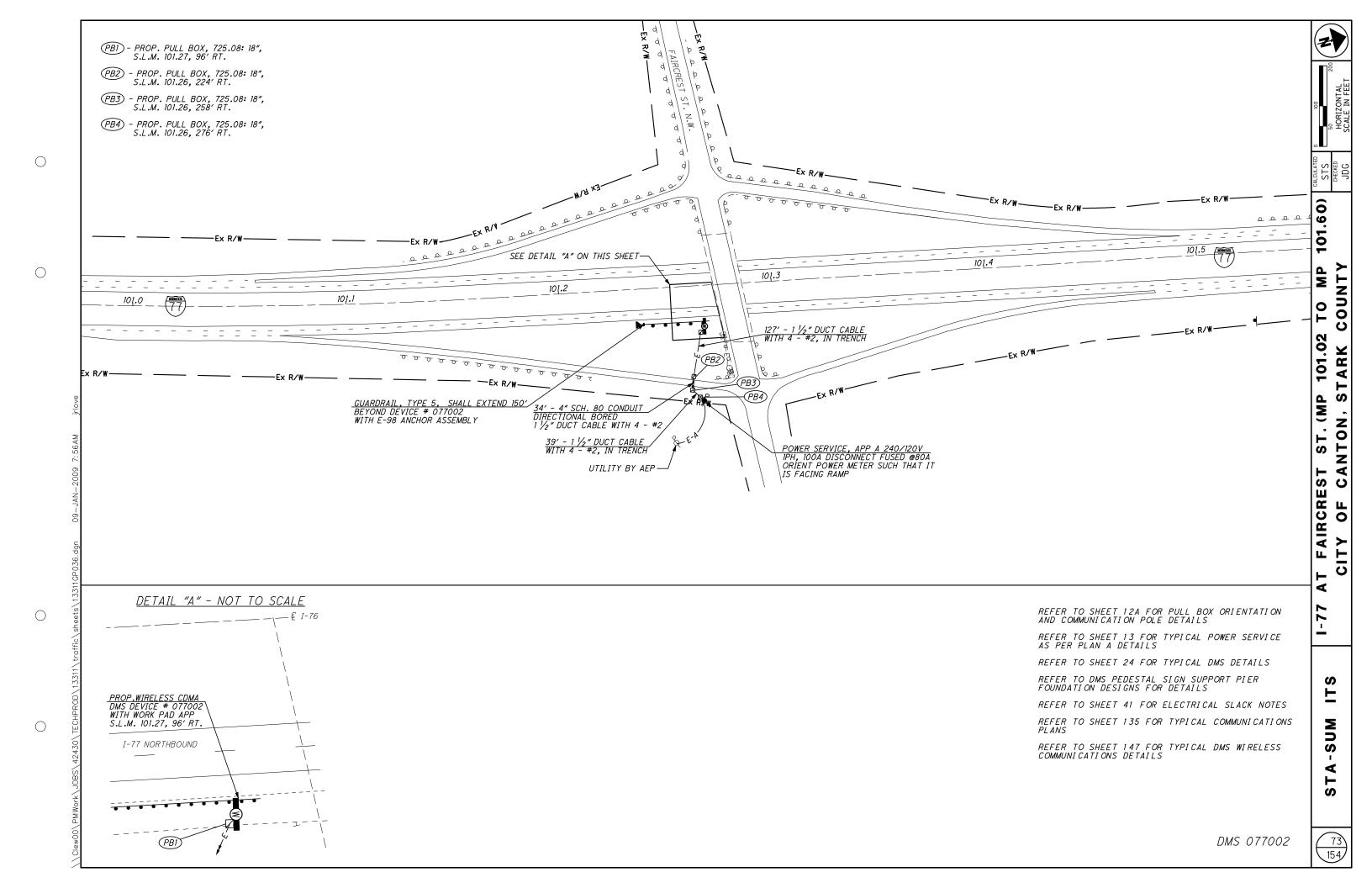
REFER TO SHEET 41 FOR ELECTRICAL SLACK NOTES REFER TO SHEET 134 FOR TYPICAL COMMUNICATIONS PLANS

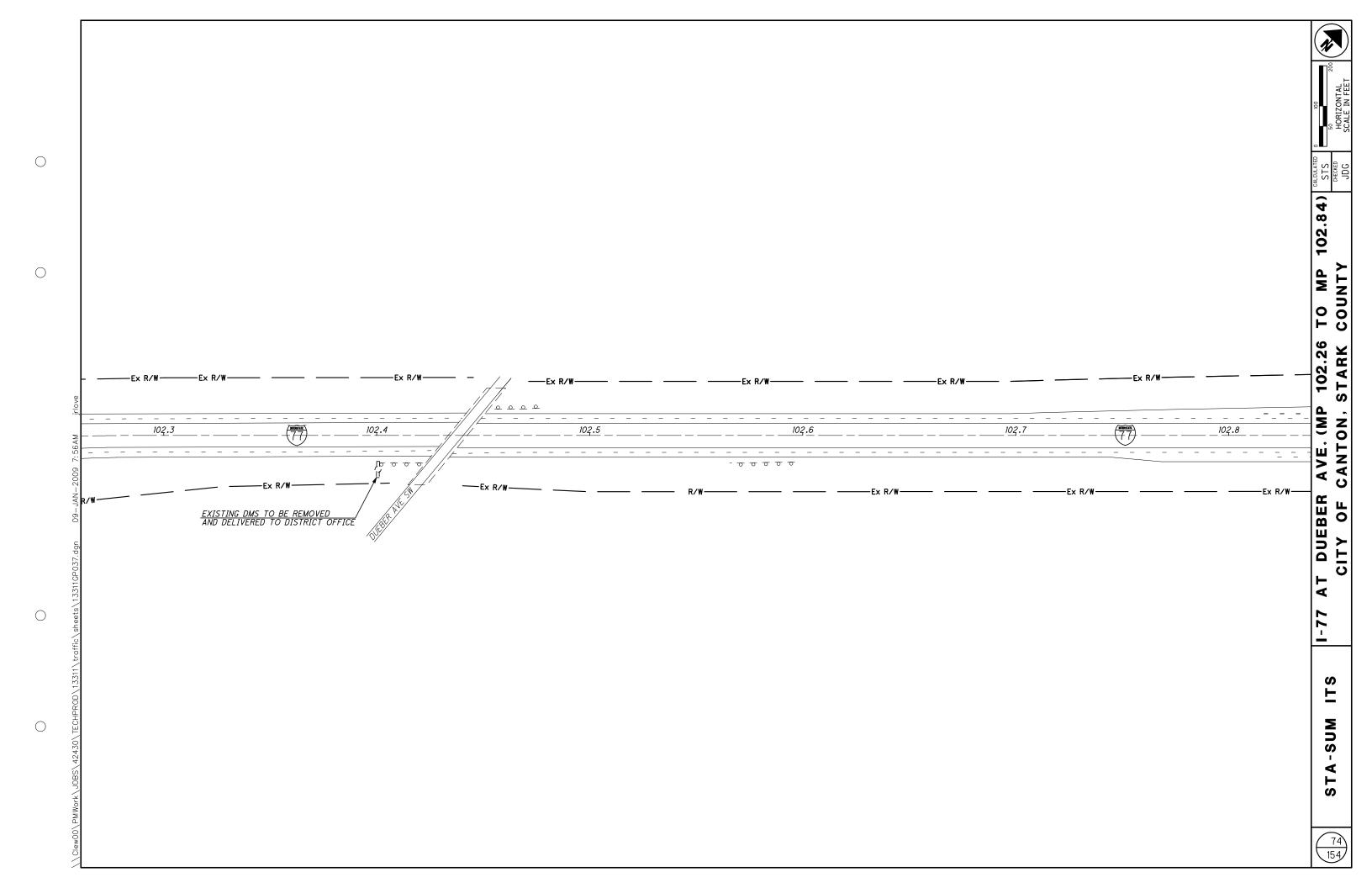
REFER TO SHEET 151 FOR TYPICAL CCTV-DMS SHARED EOC COMMUNICATIONS DETAILS

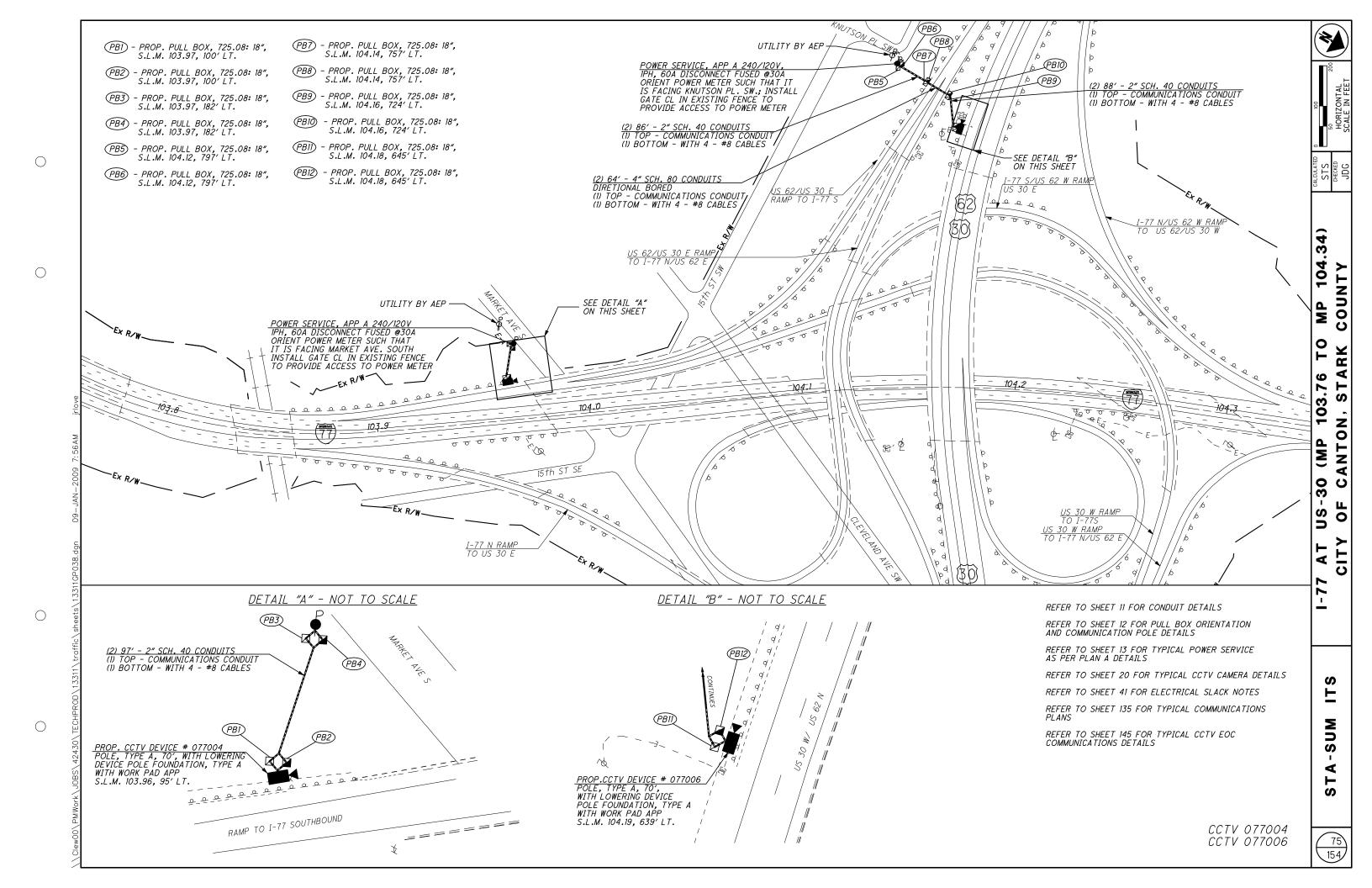
REFER TO SHEET 154 FOR TYPICALCCTY-DMS W/COMPOSITE CABLE COMMUNICATIONS DETAILS

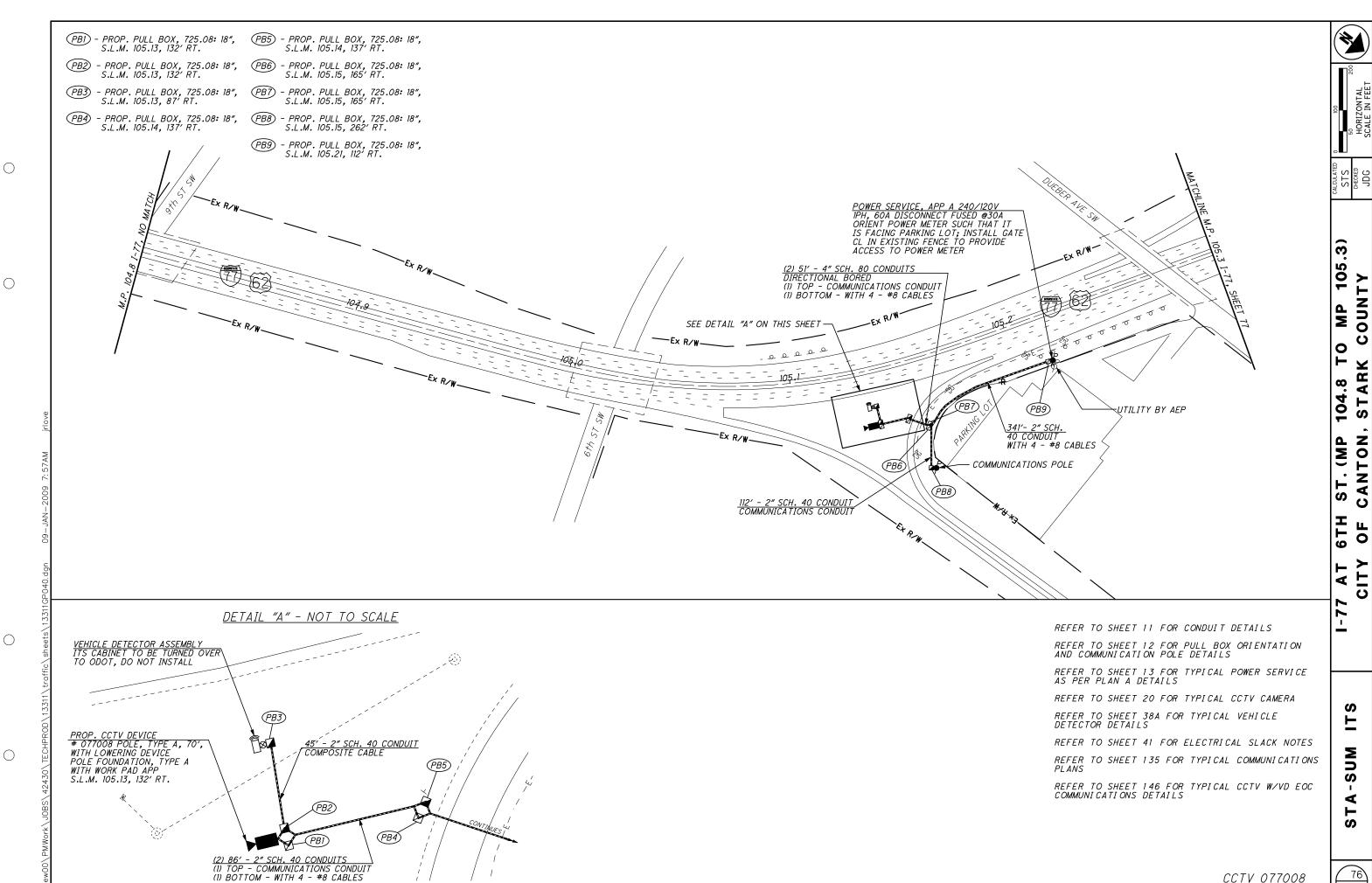
DMS 076032 CCTV 076034



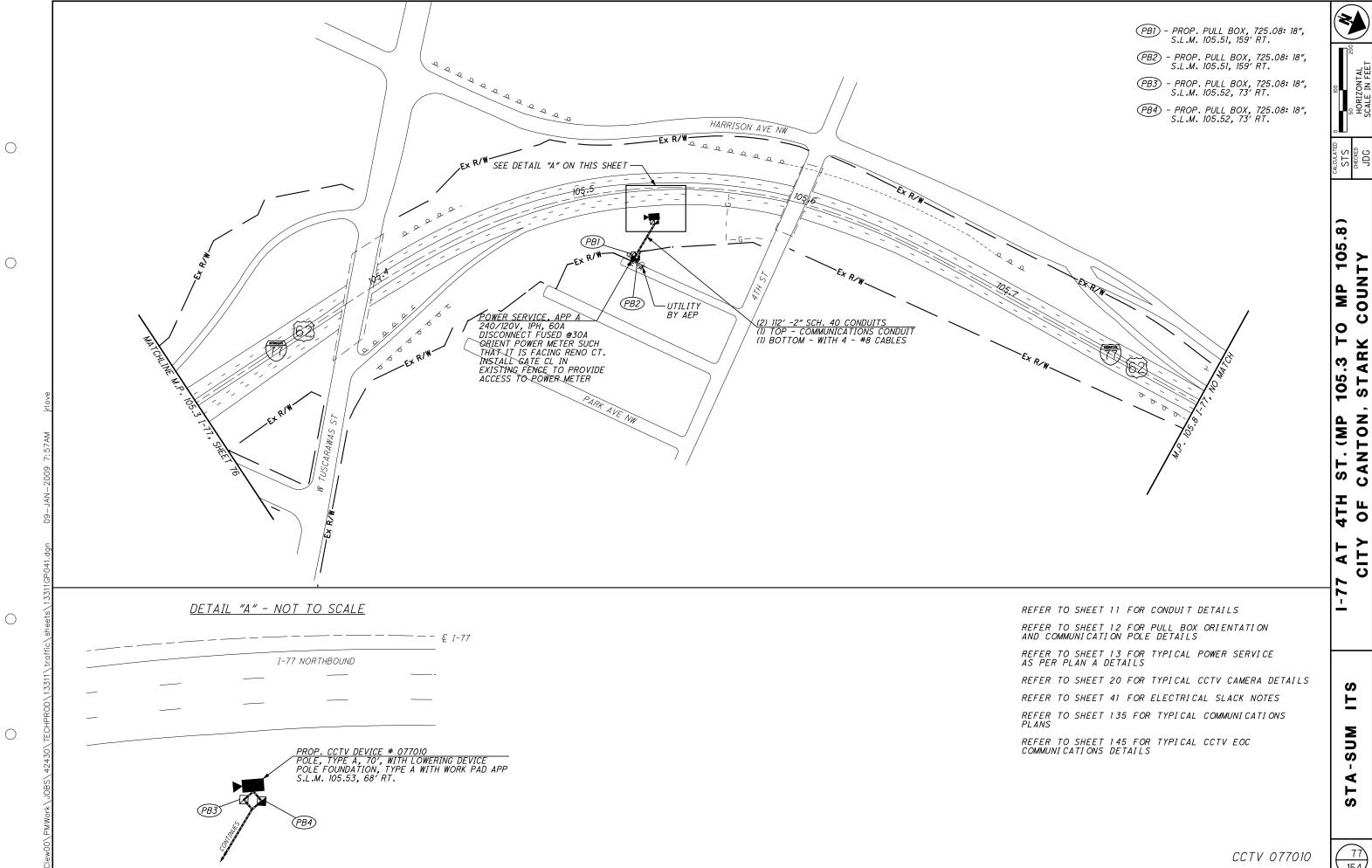








CCTV 077008



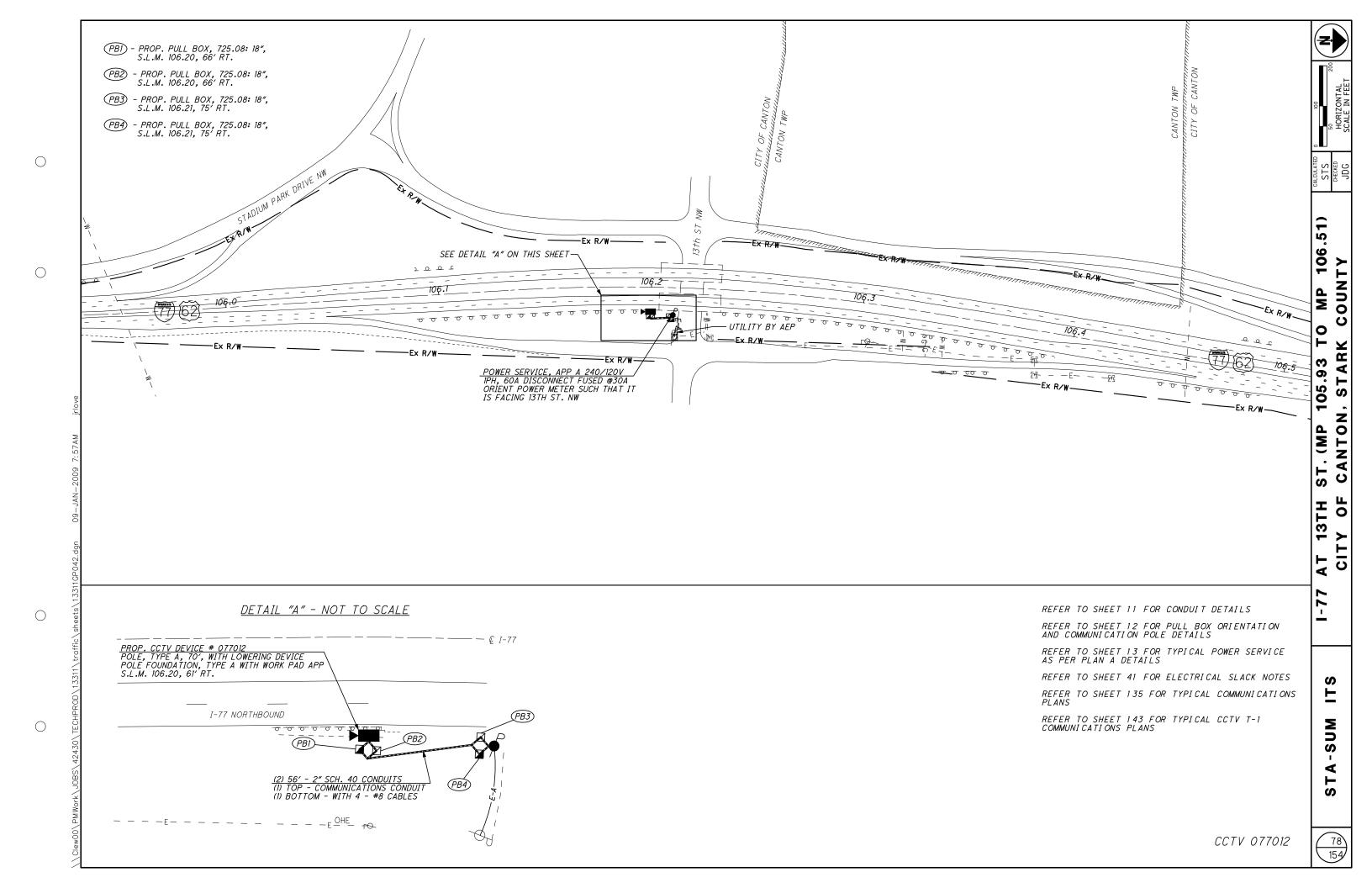
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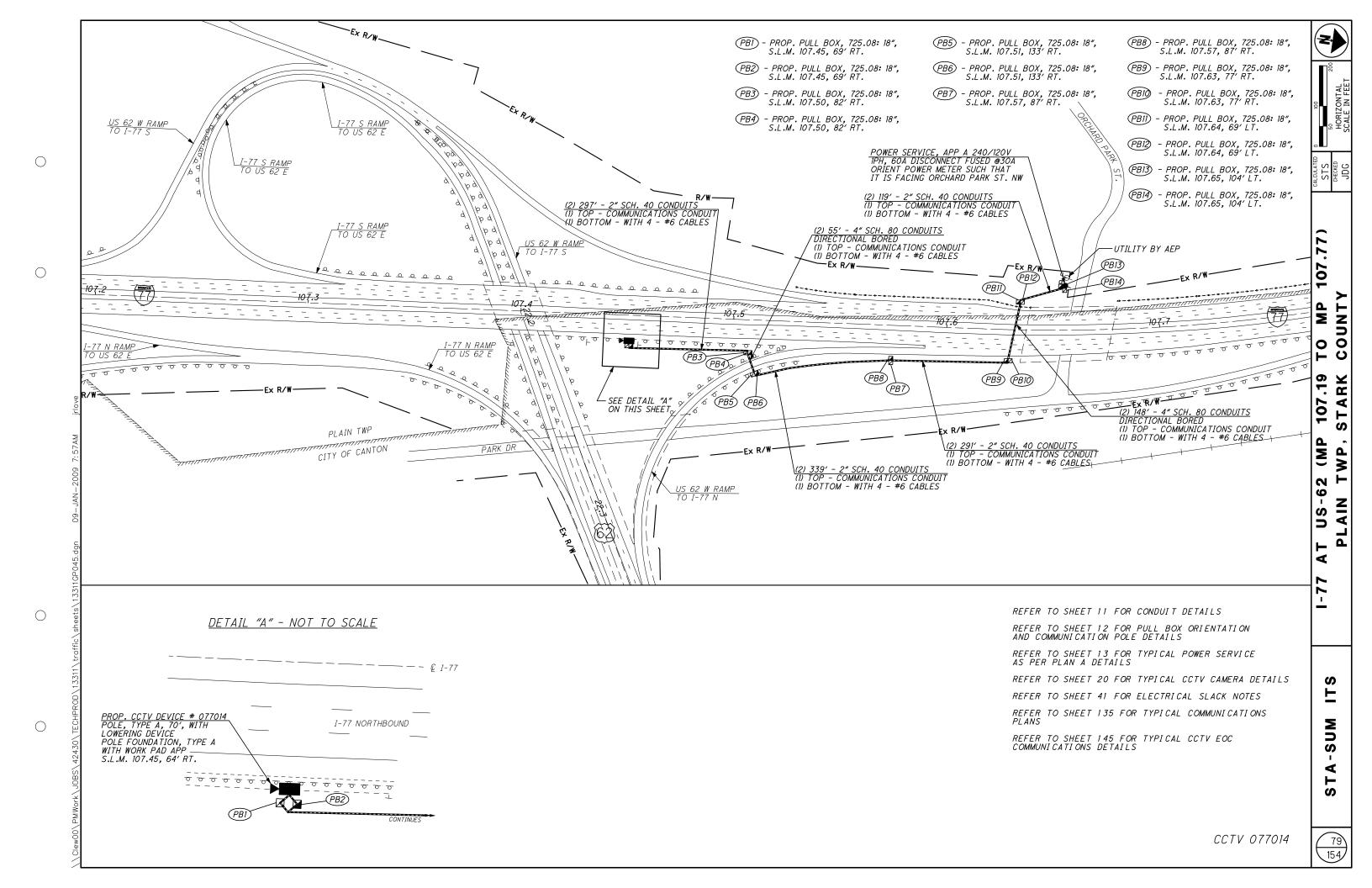
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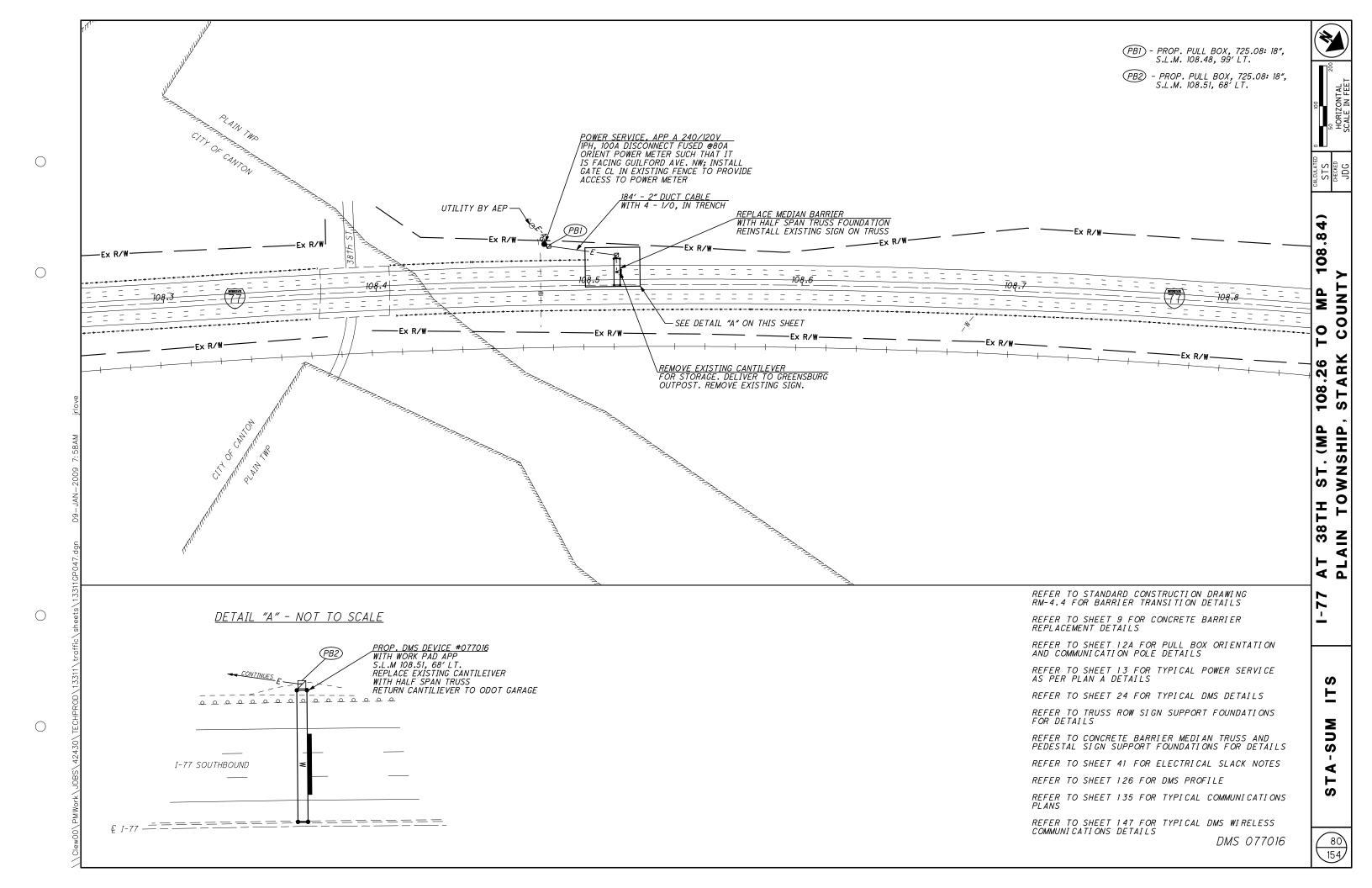
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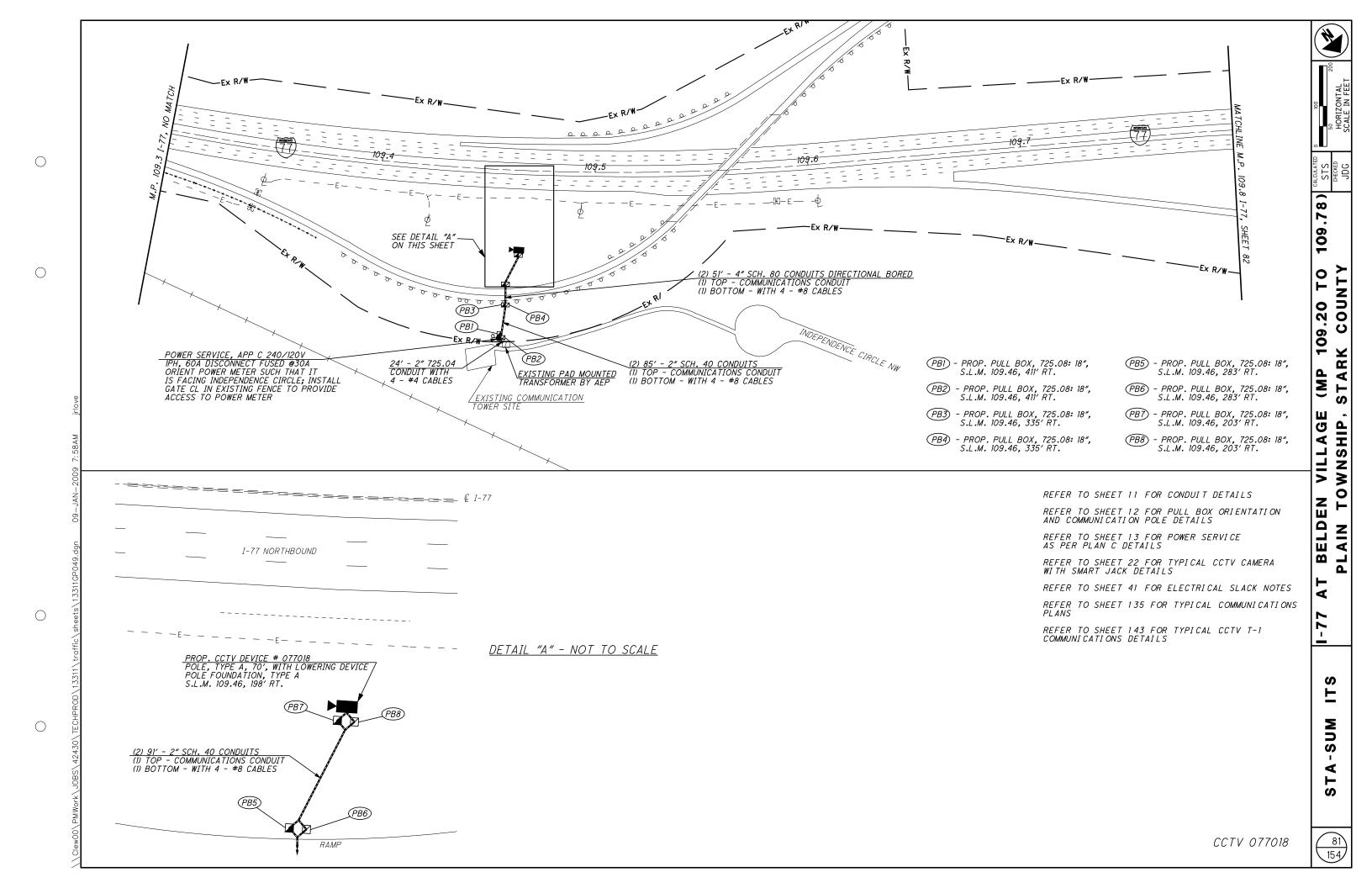
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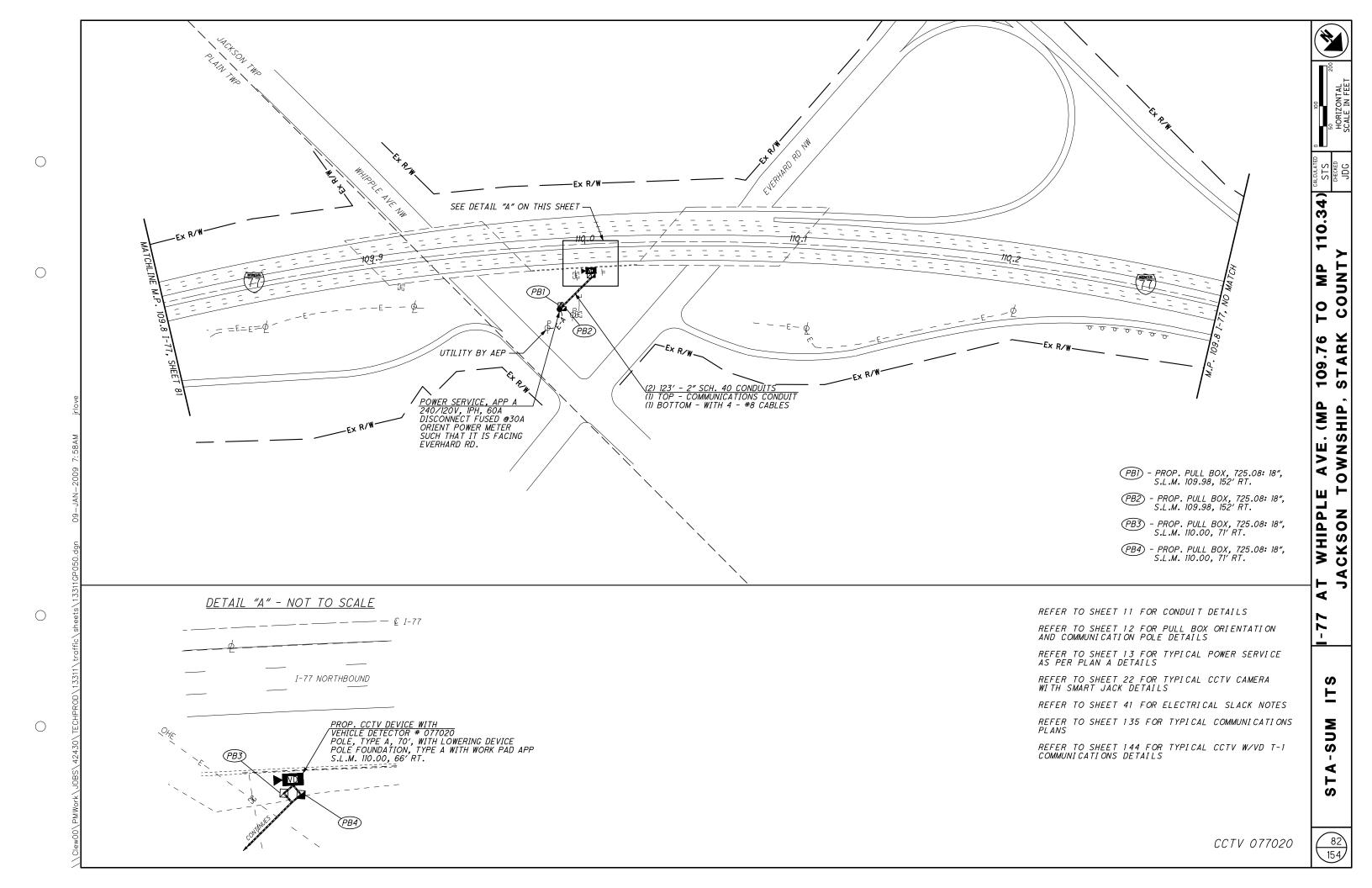
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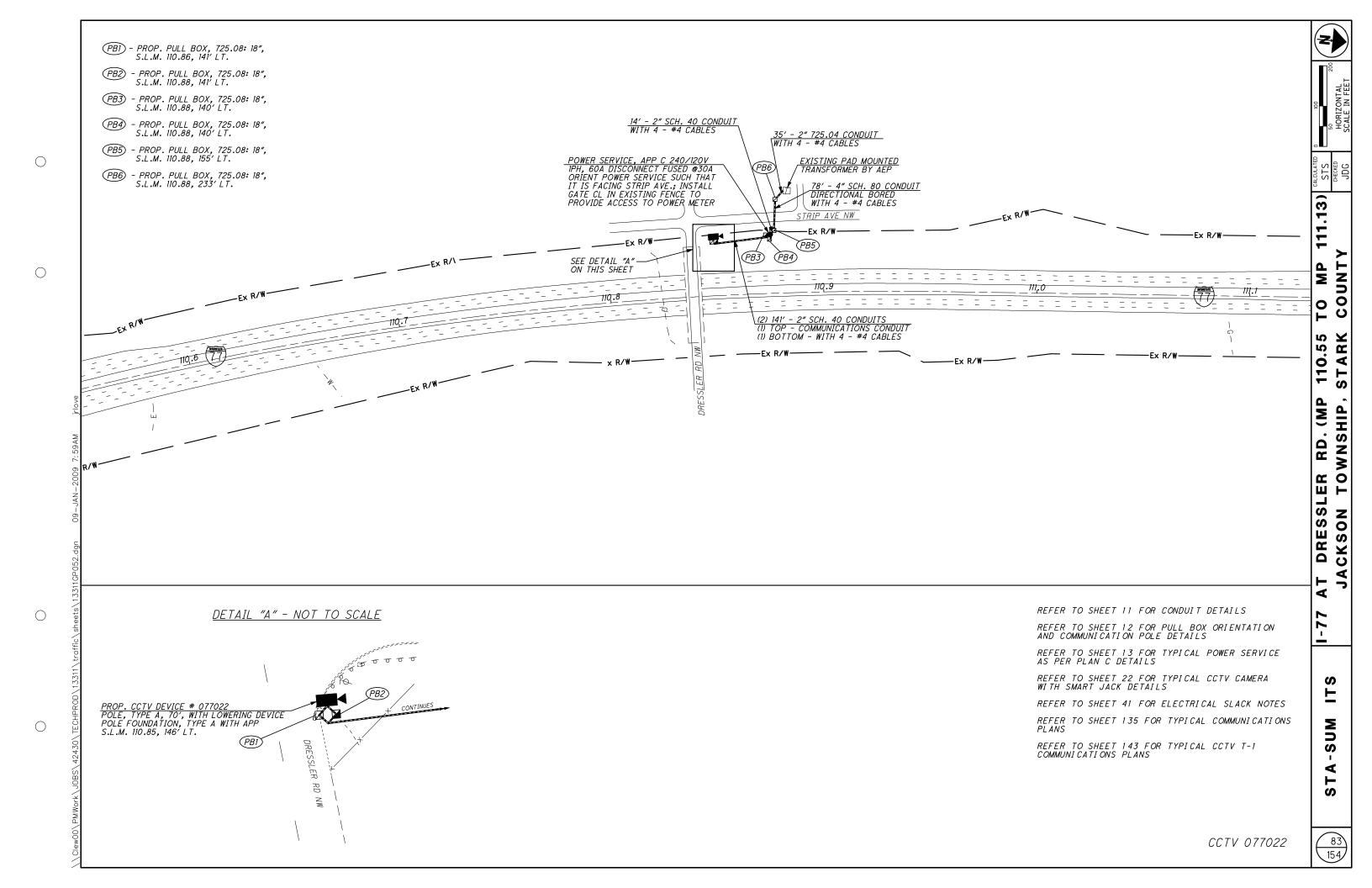


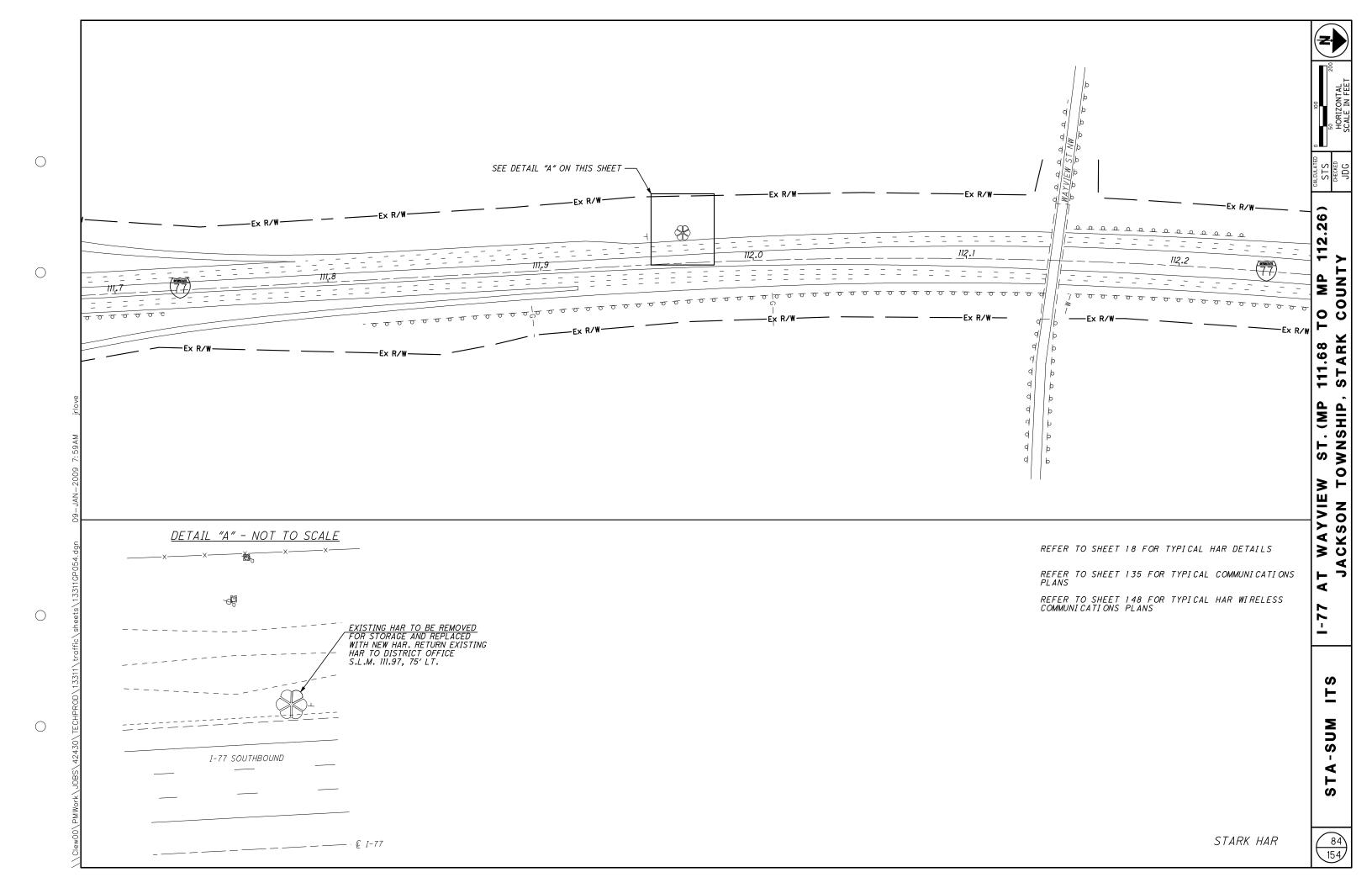


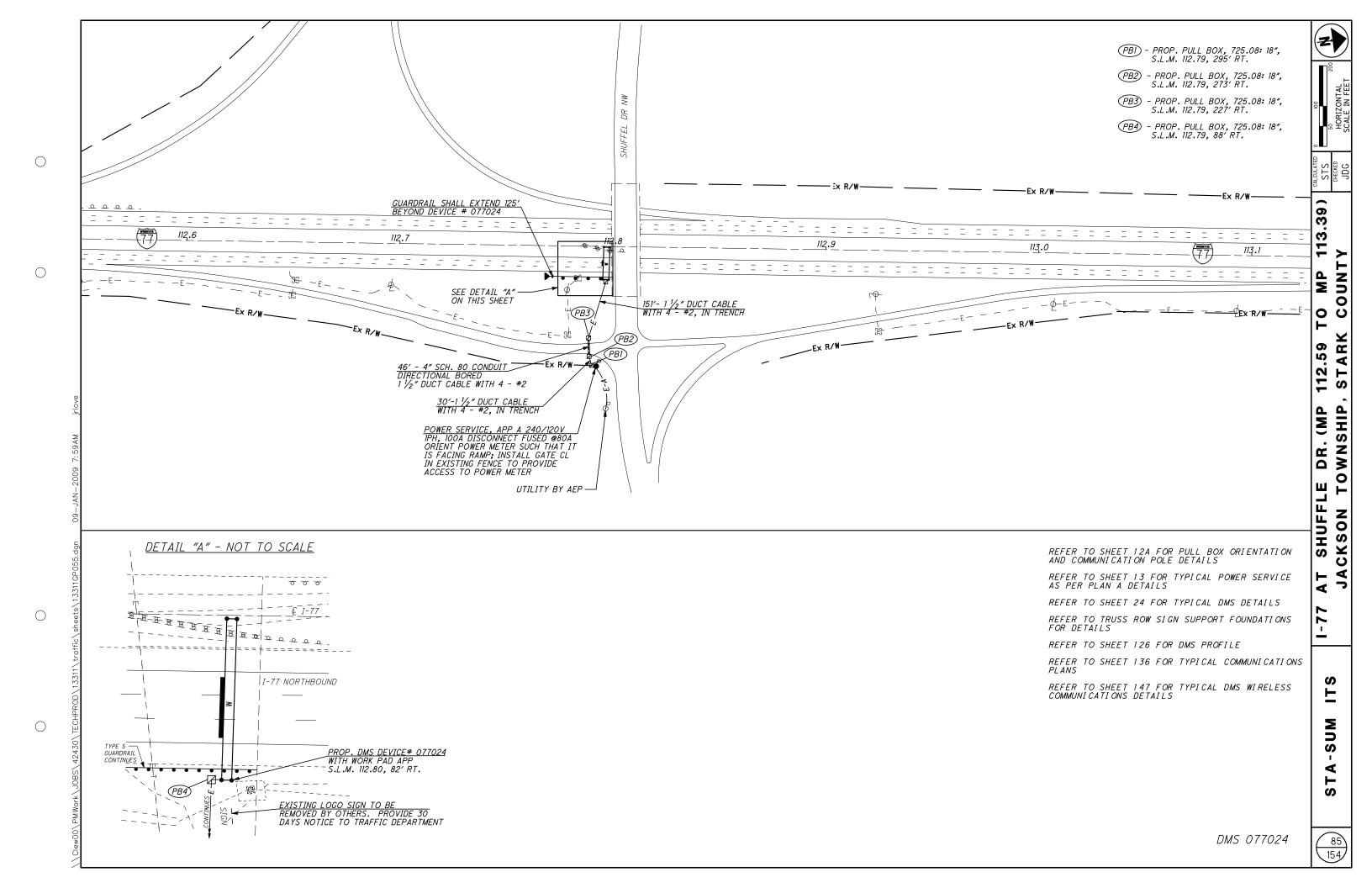


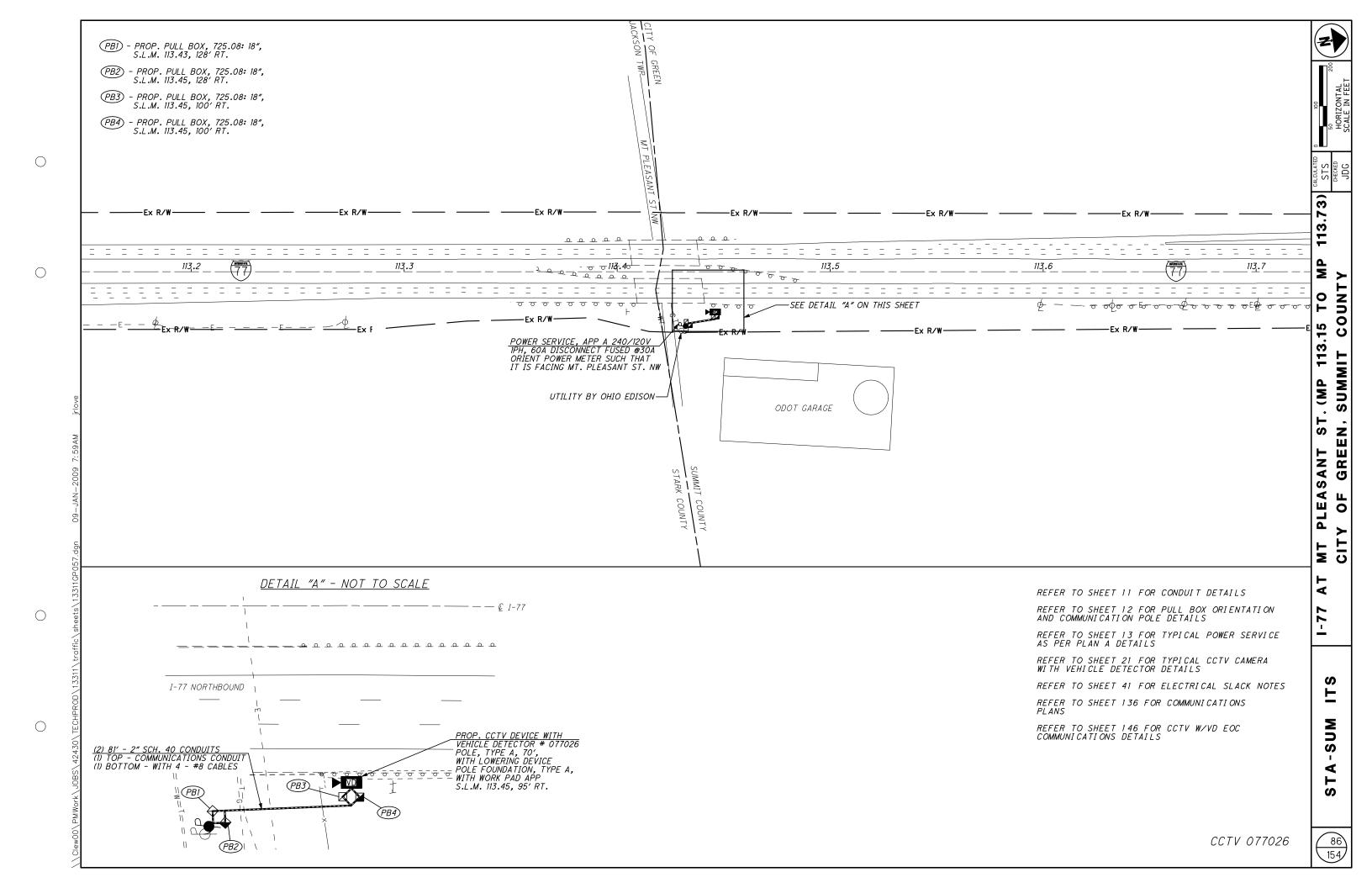


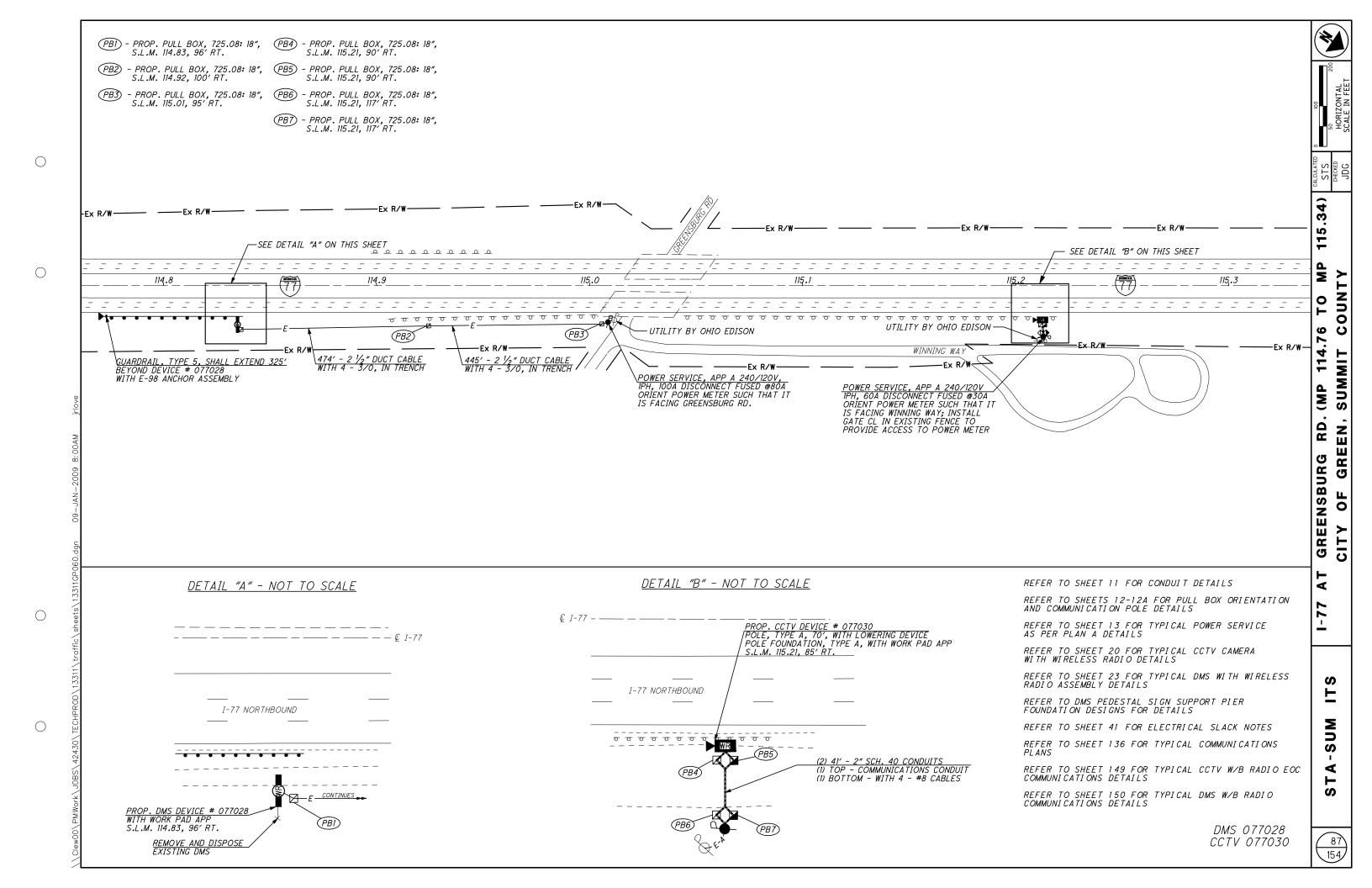


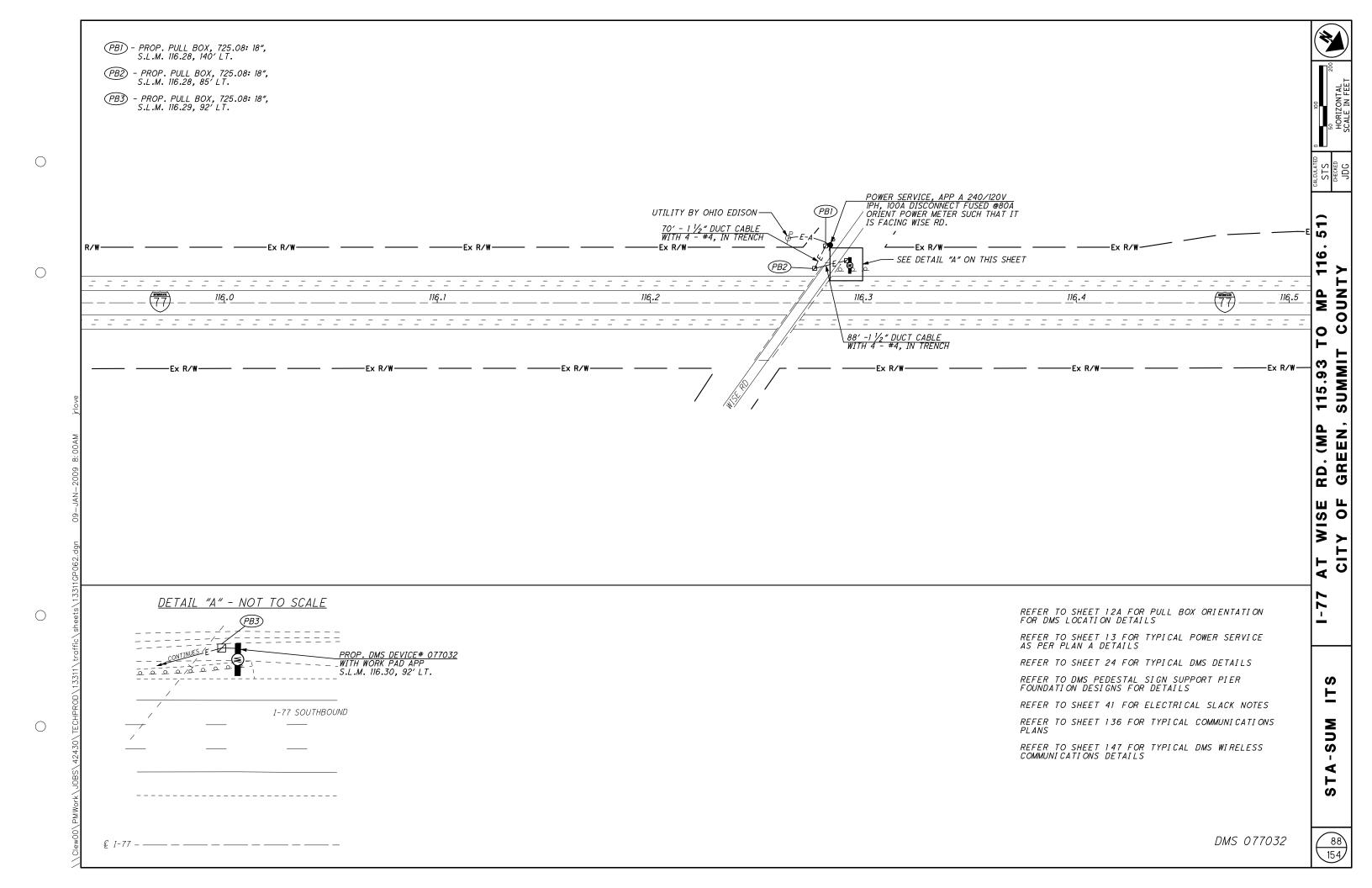


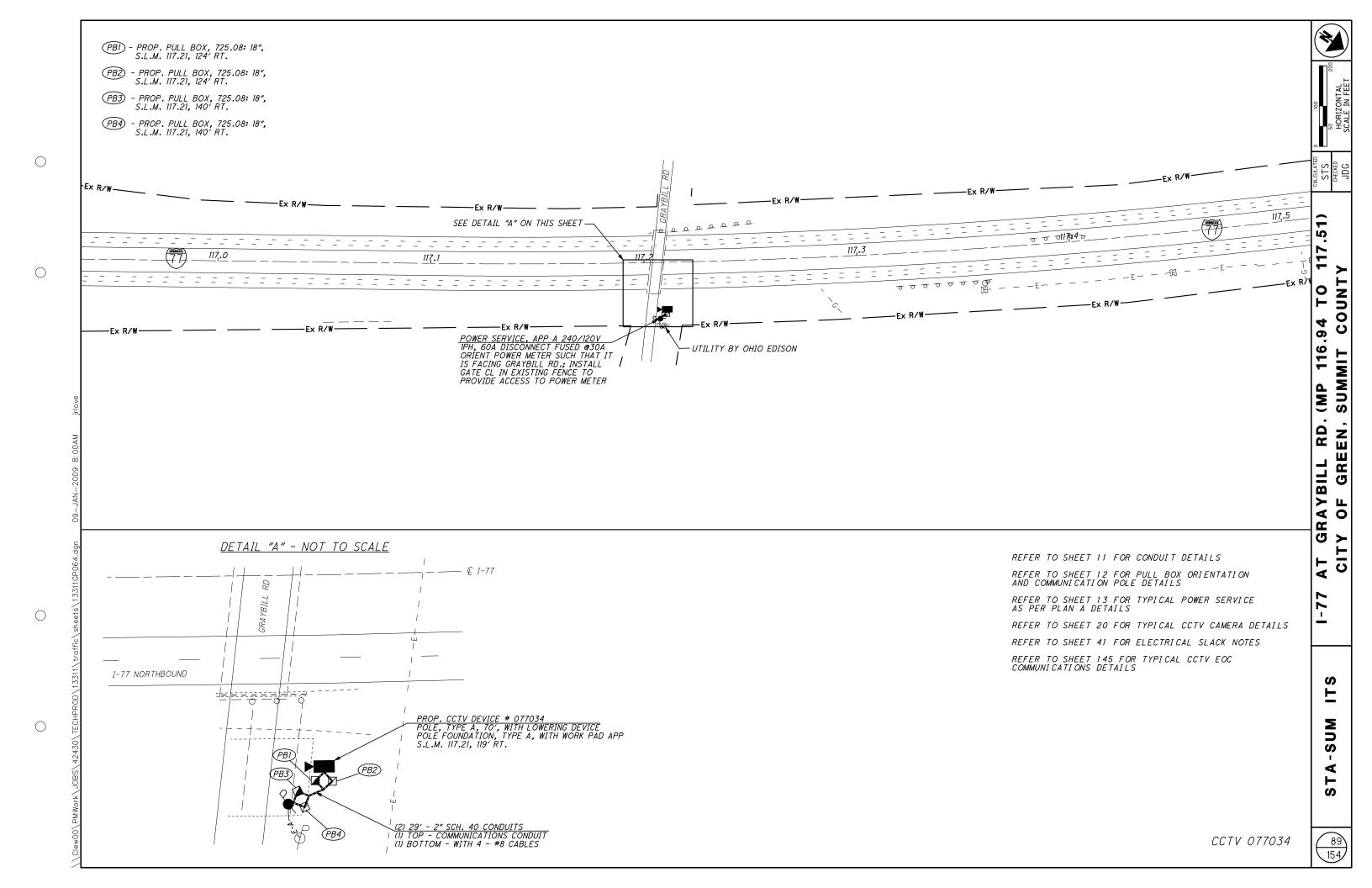


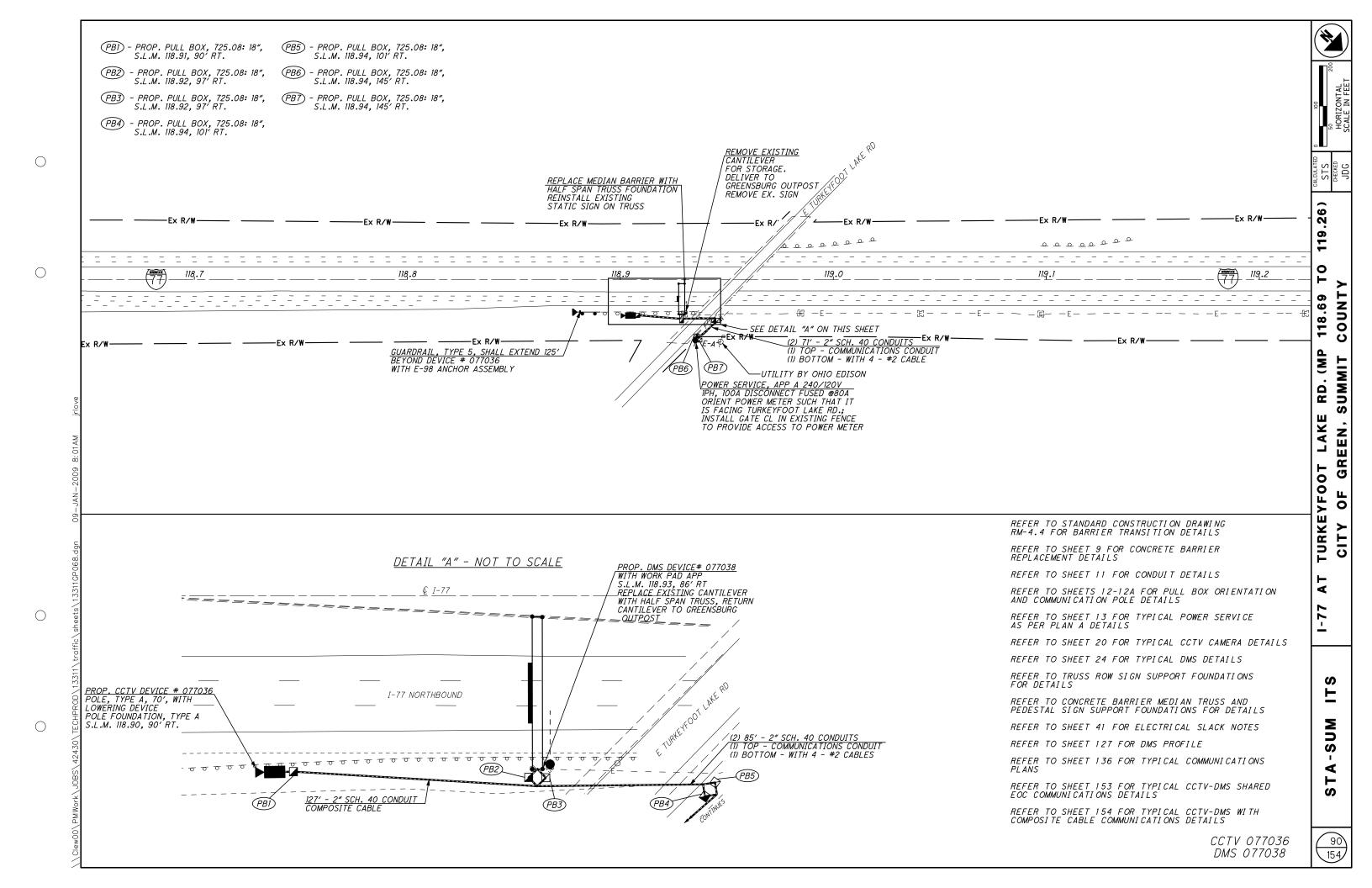


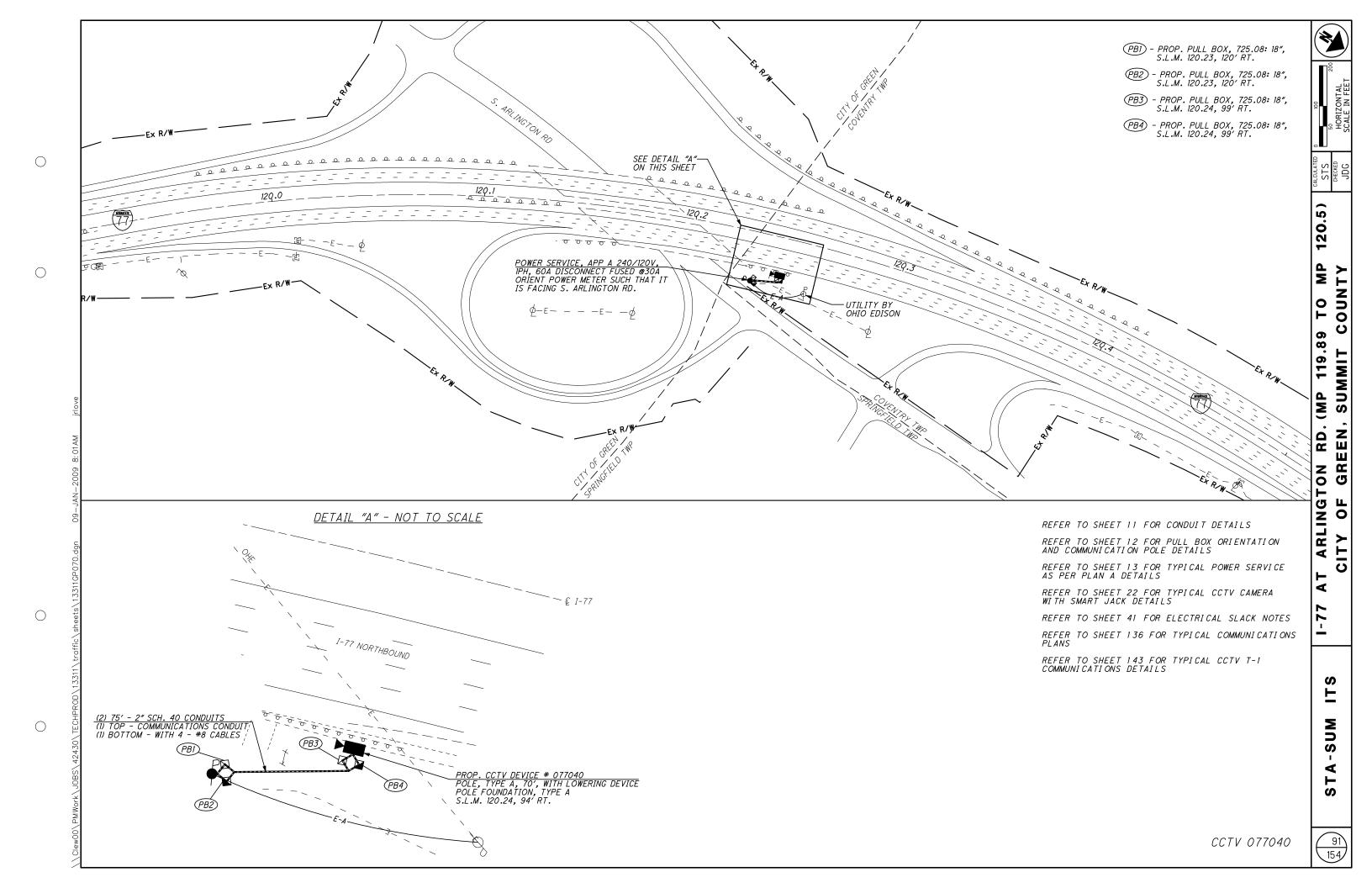


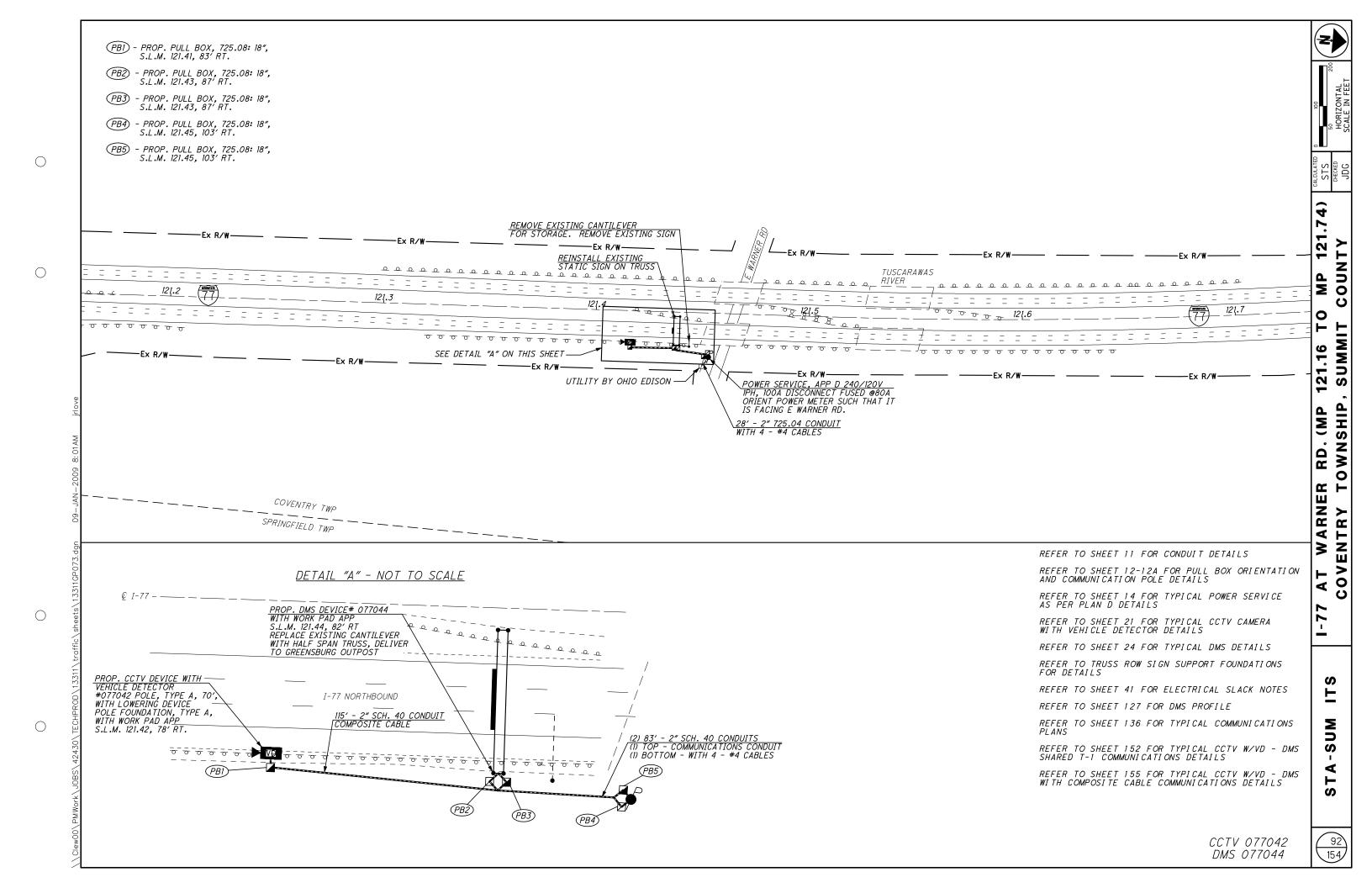


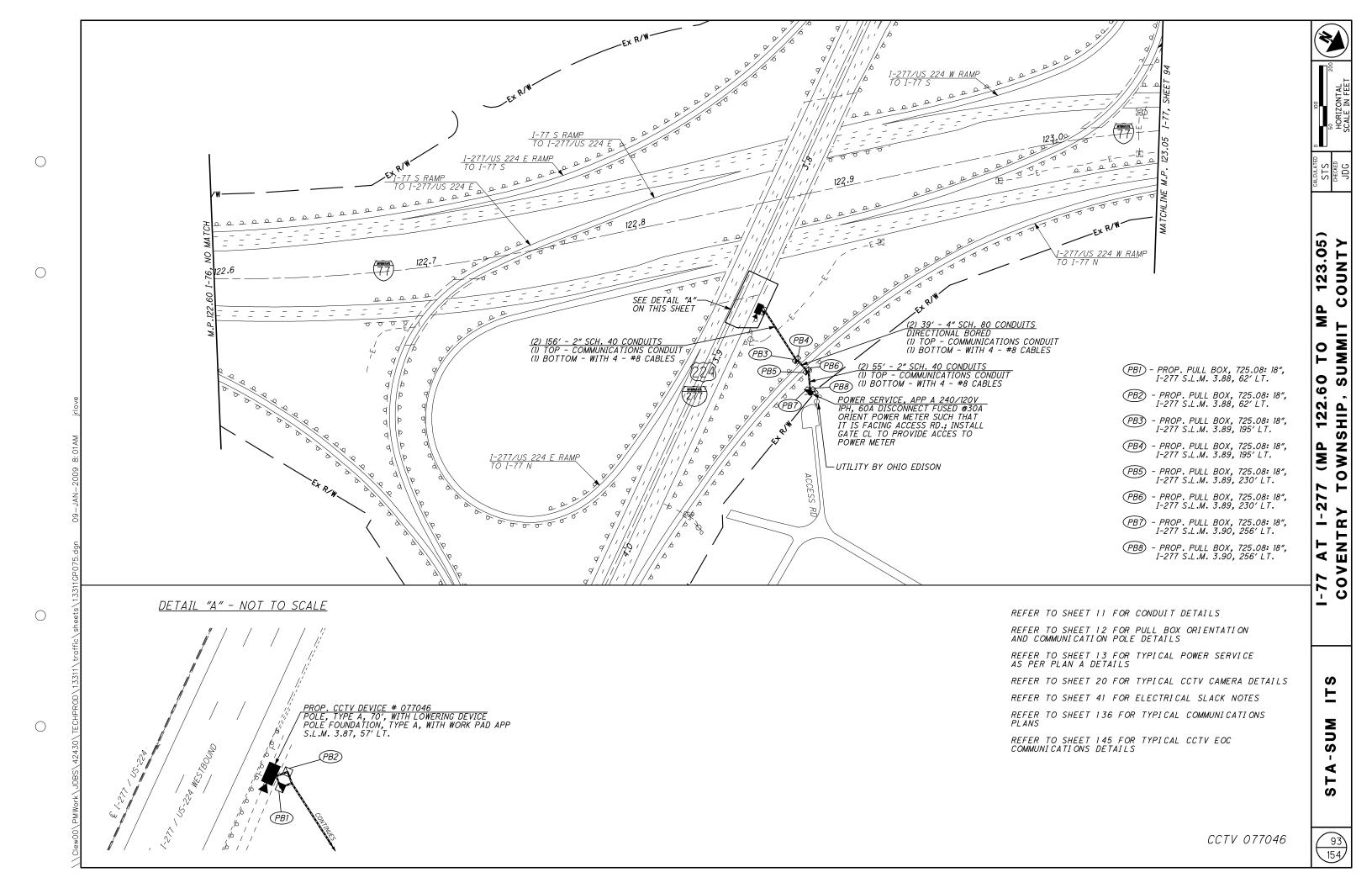


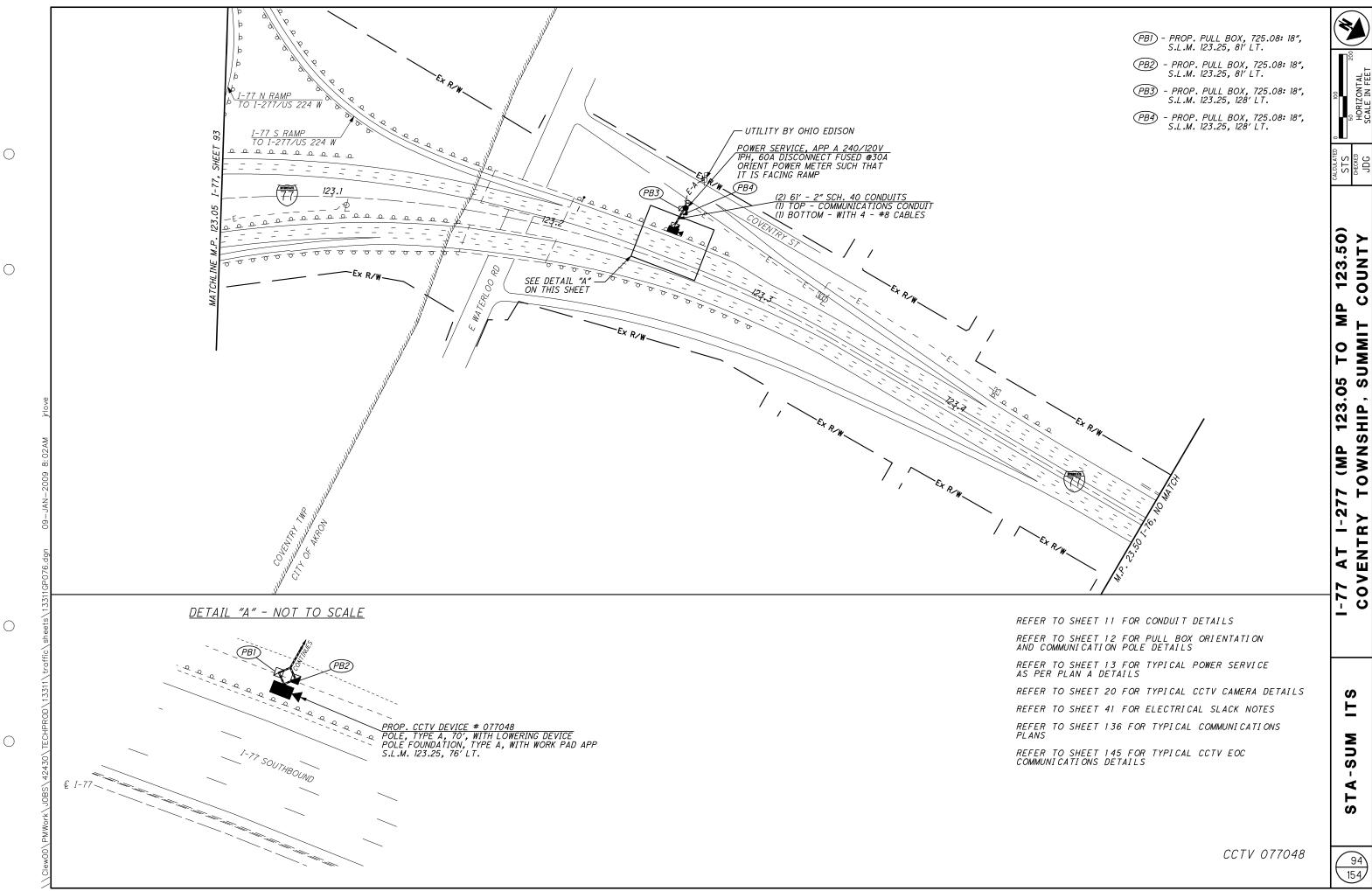








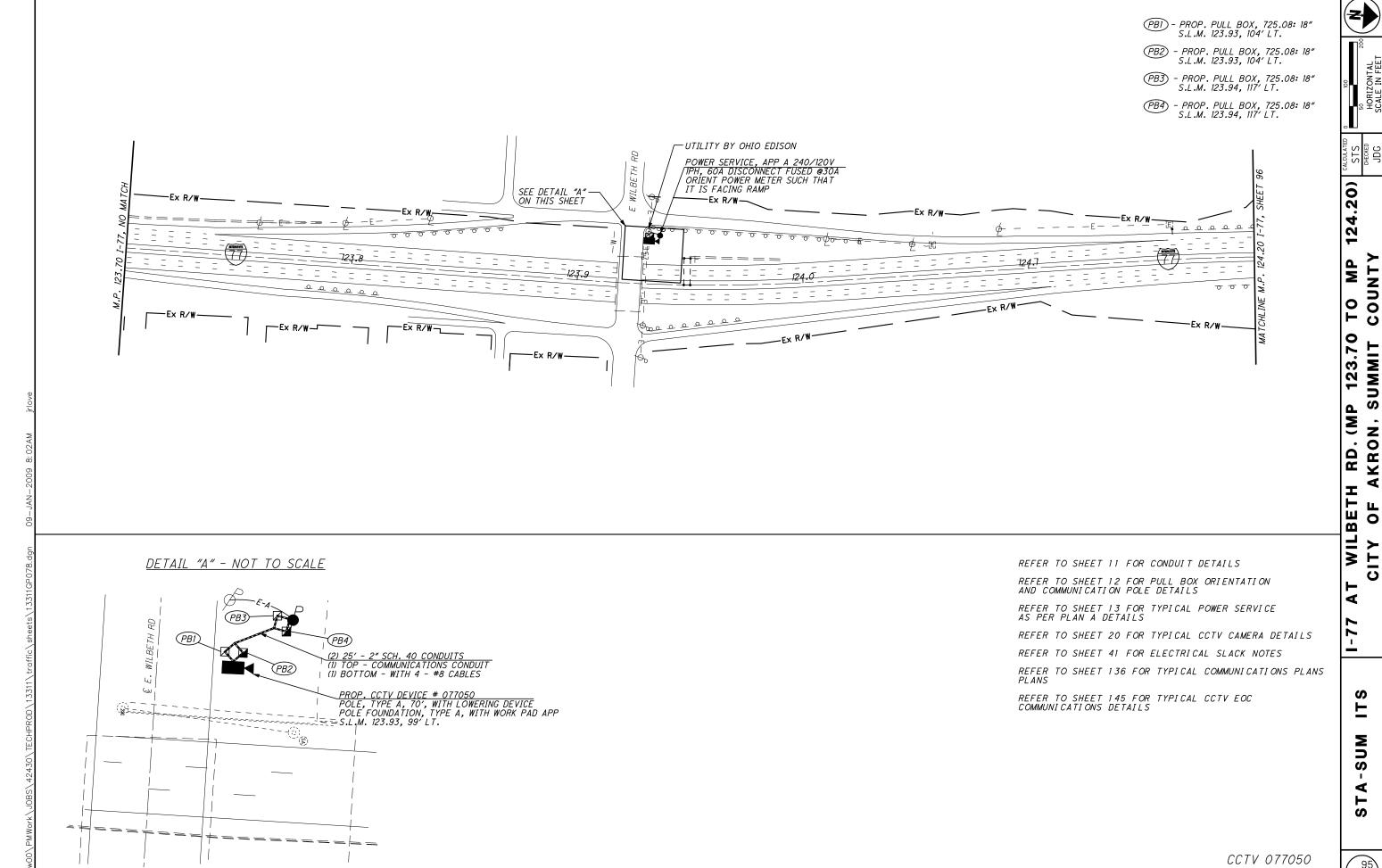




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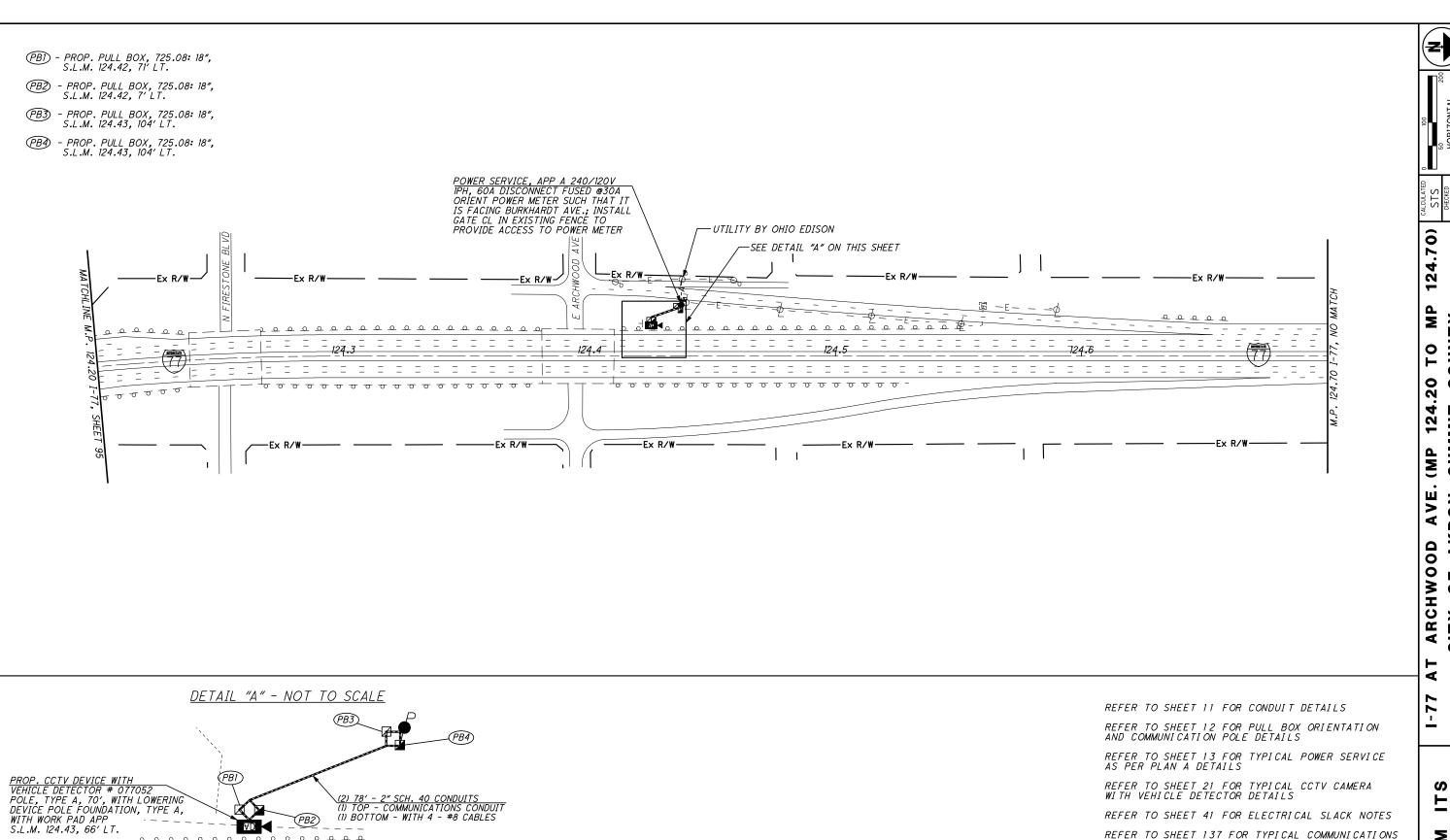


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I-77 SOUTHBOUND

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REFER TO SHEET 41 FOR ELECTRICAL SLACK NOTES REFER TO SHEET 137 FOR TYPICAL COMMUNICATIONS

REFER TO SHEET 146 FOR TYPICAL CCTV W/VD EOC COMMUNICATIONS DETAILS

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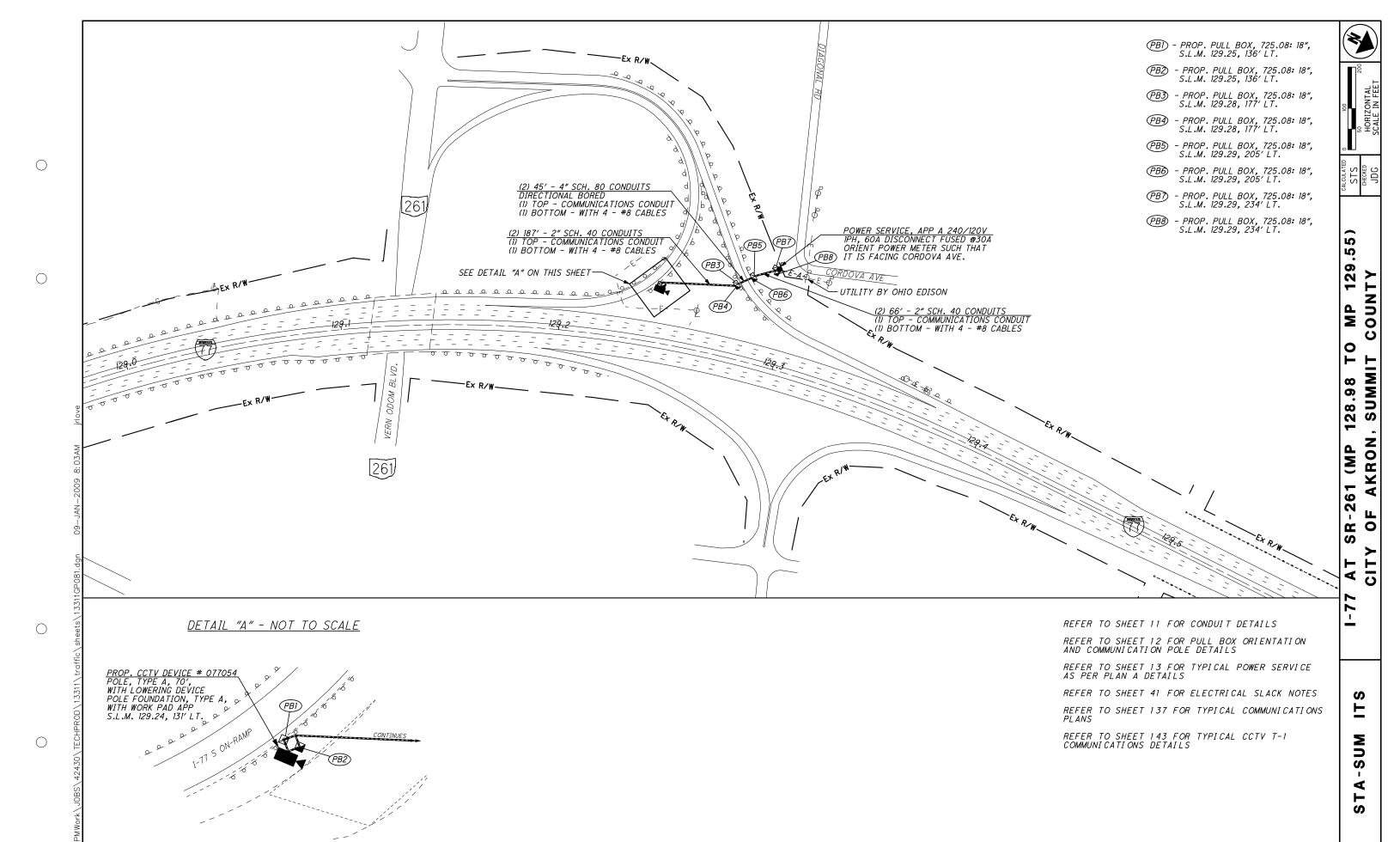
O

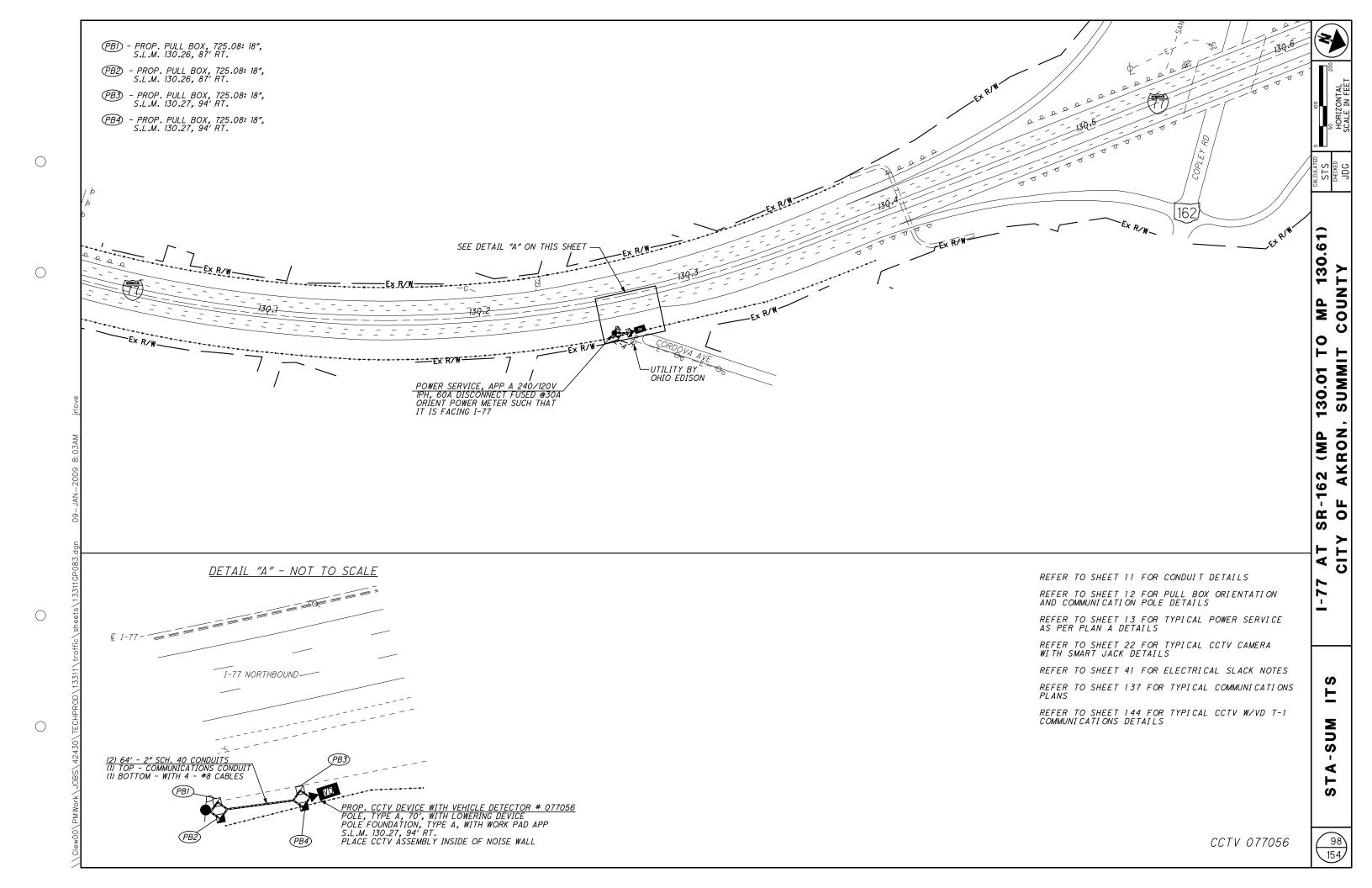
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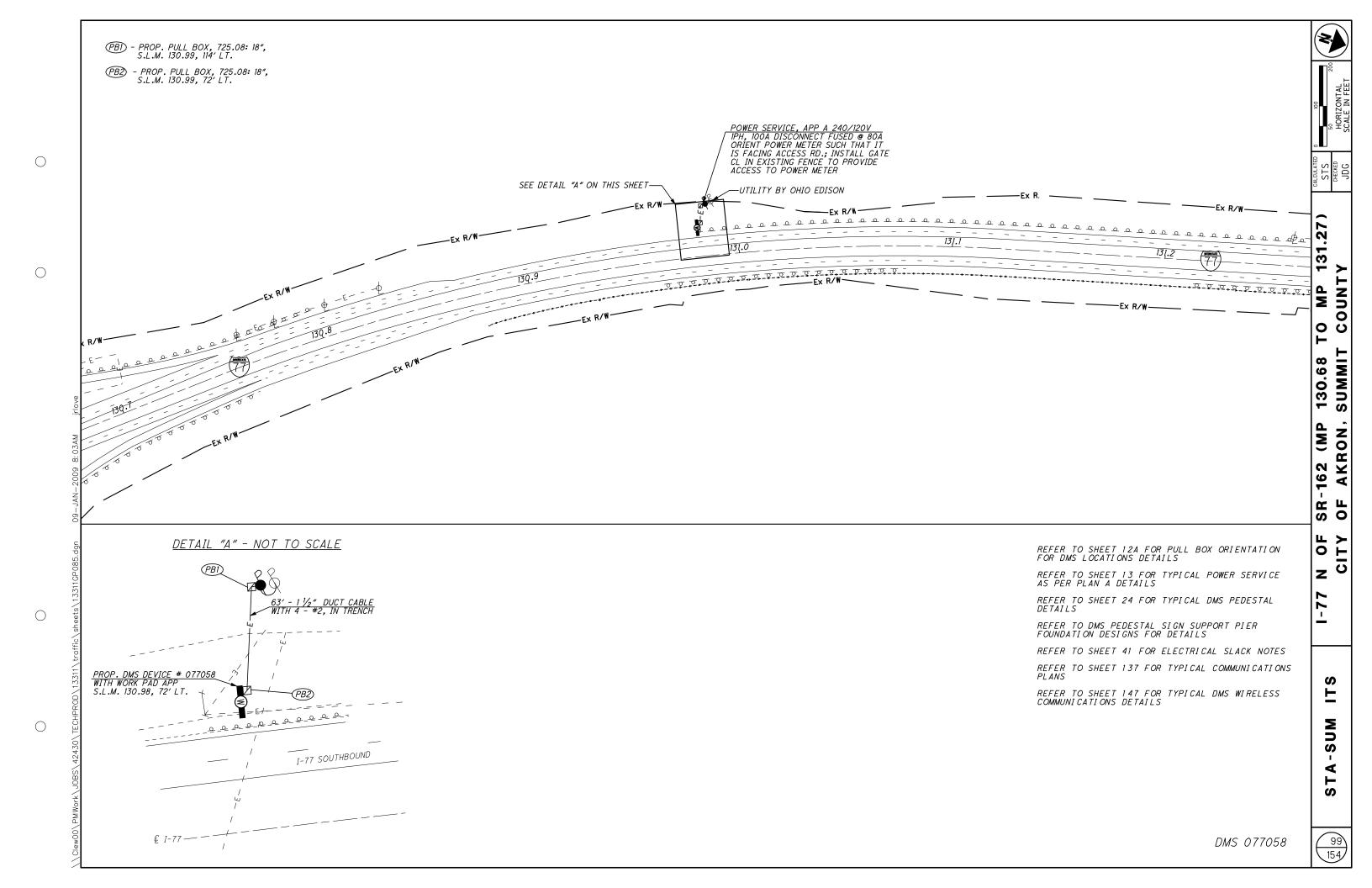
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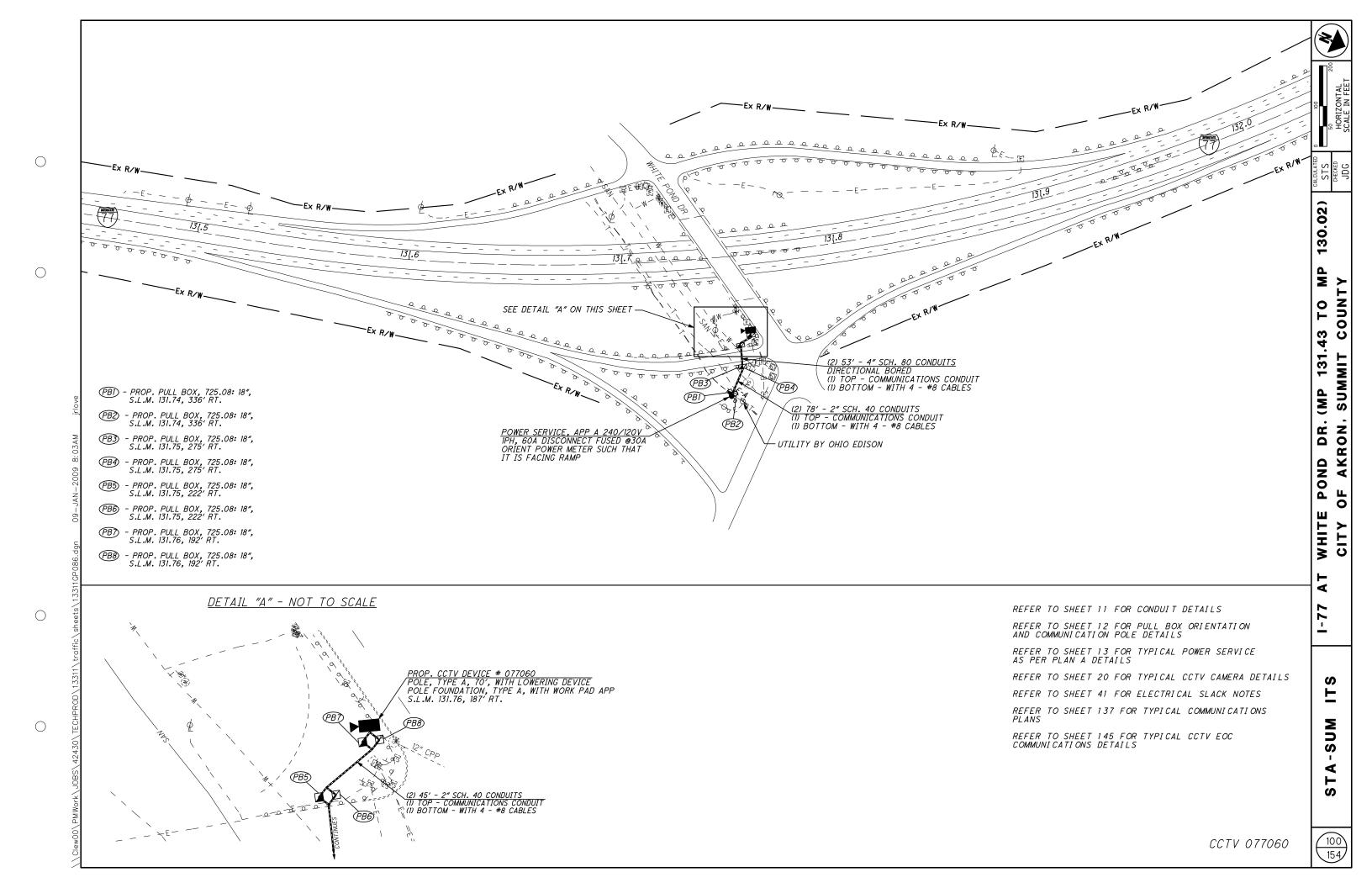
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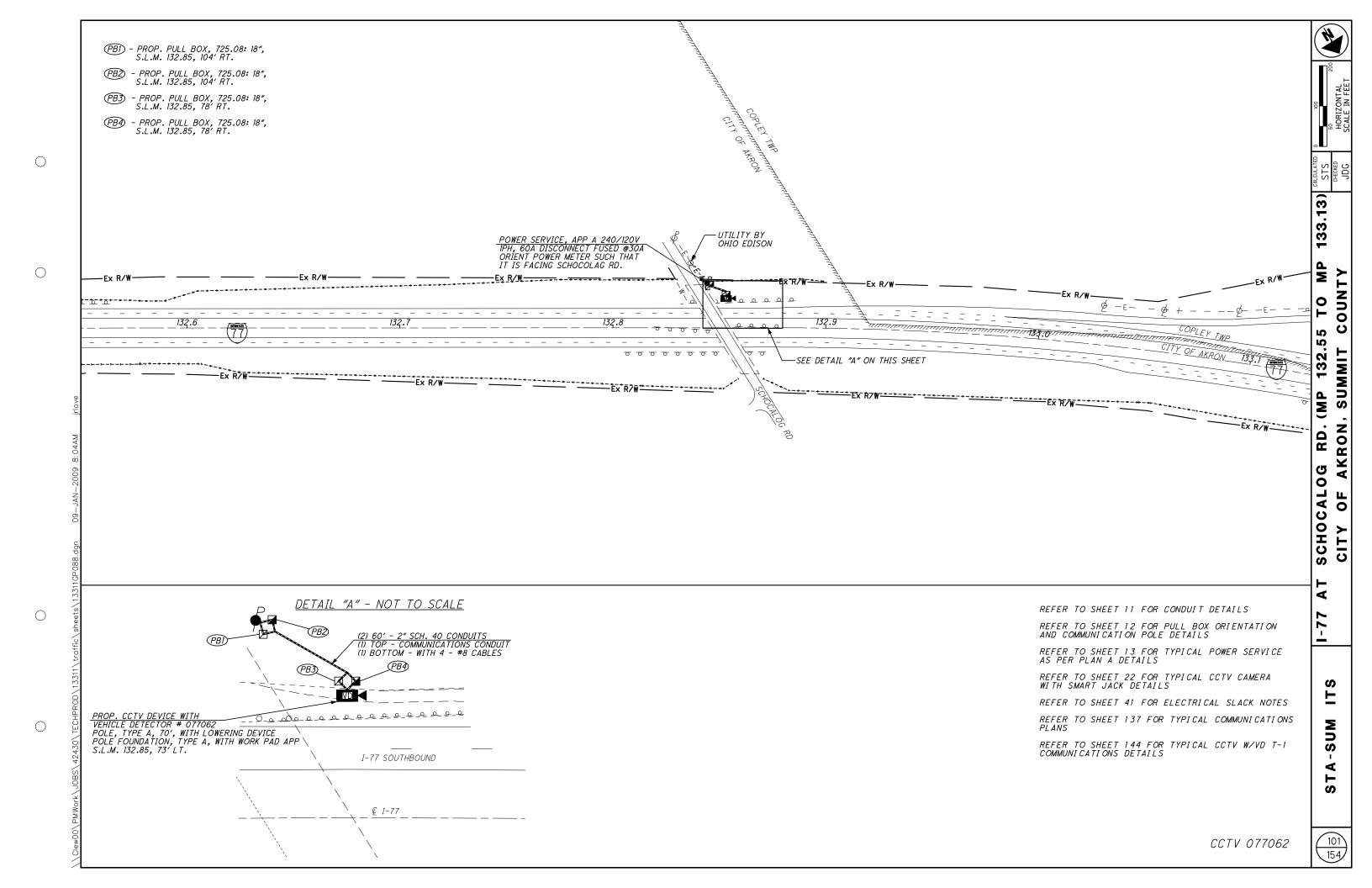
**OF** 

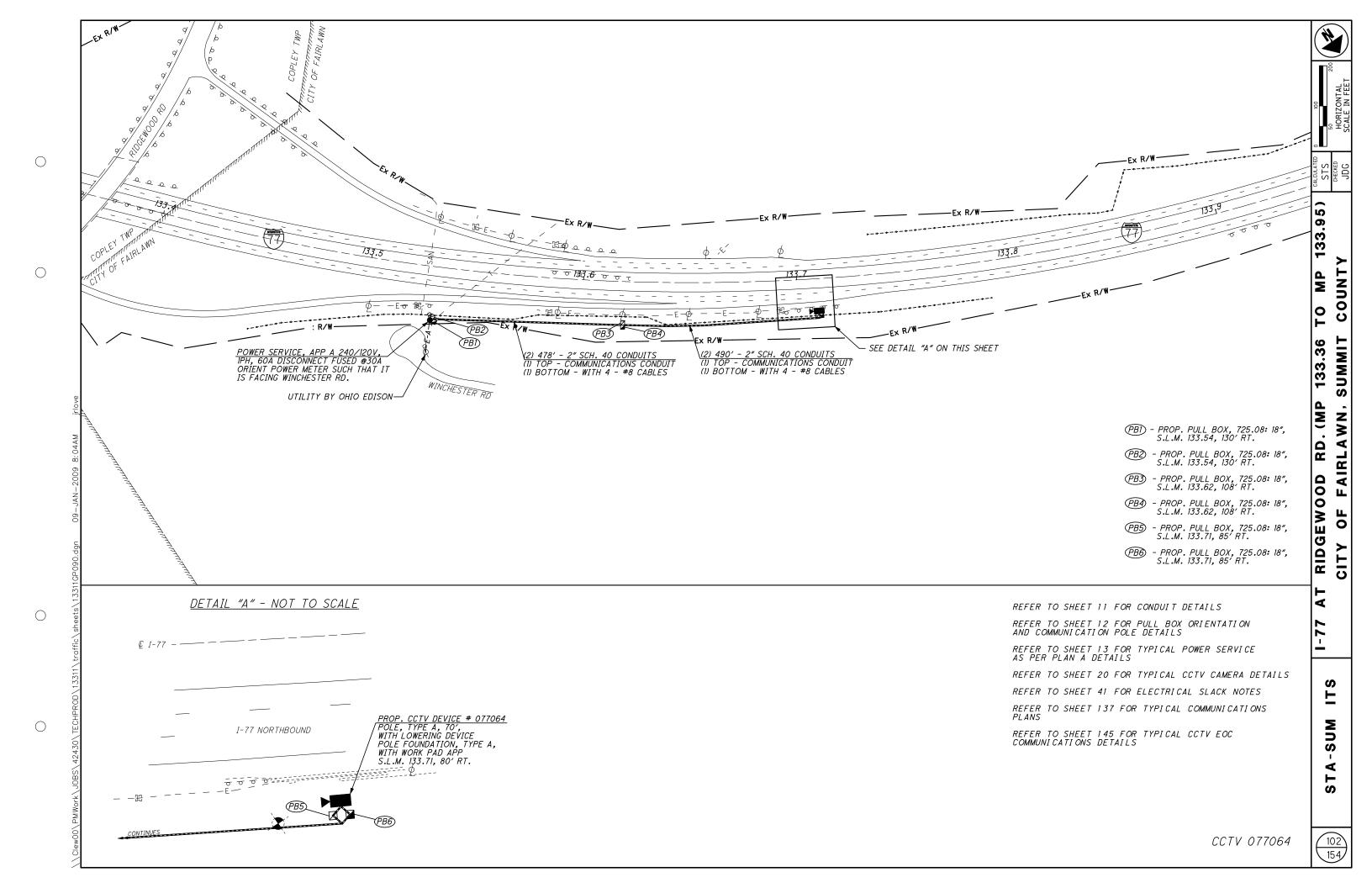


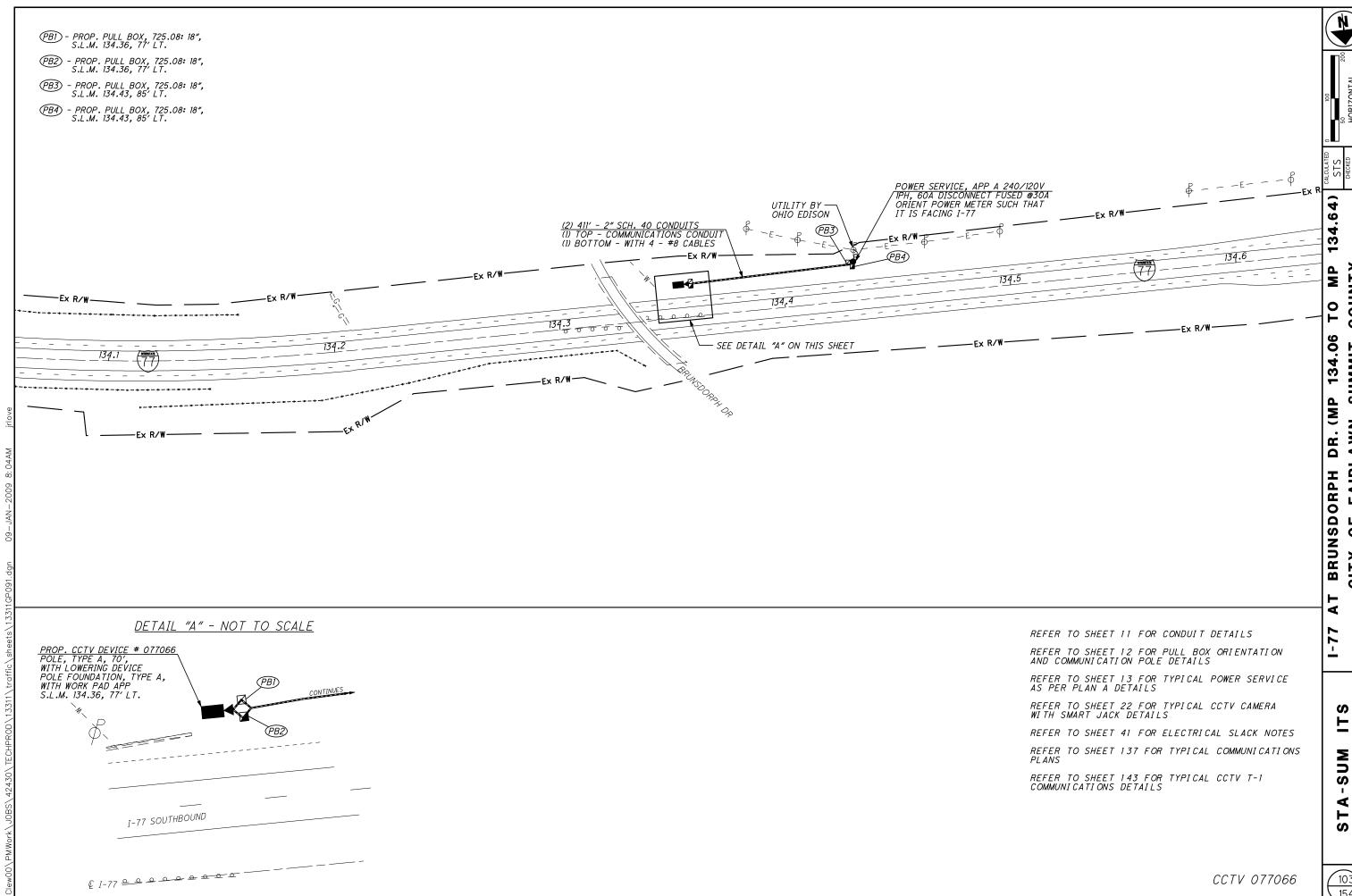












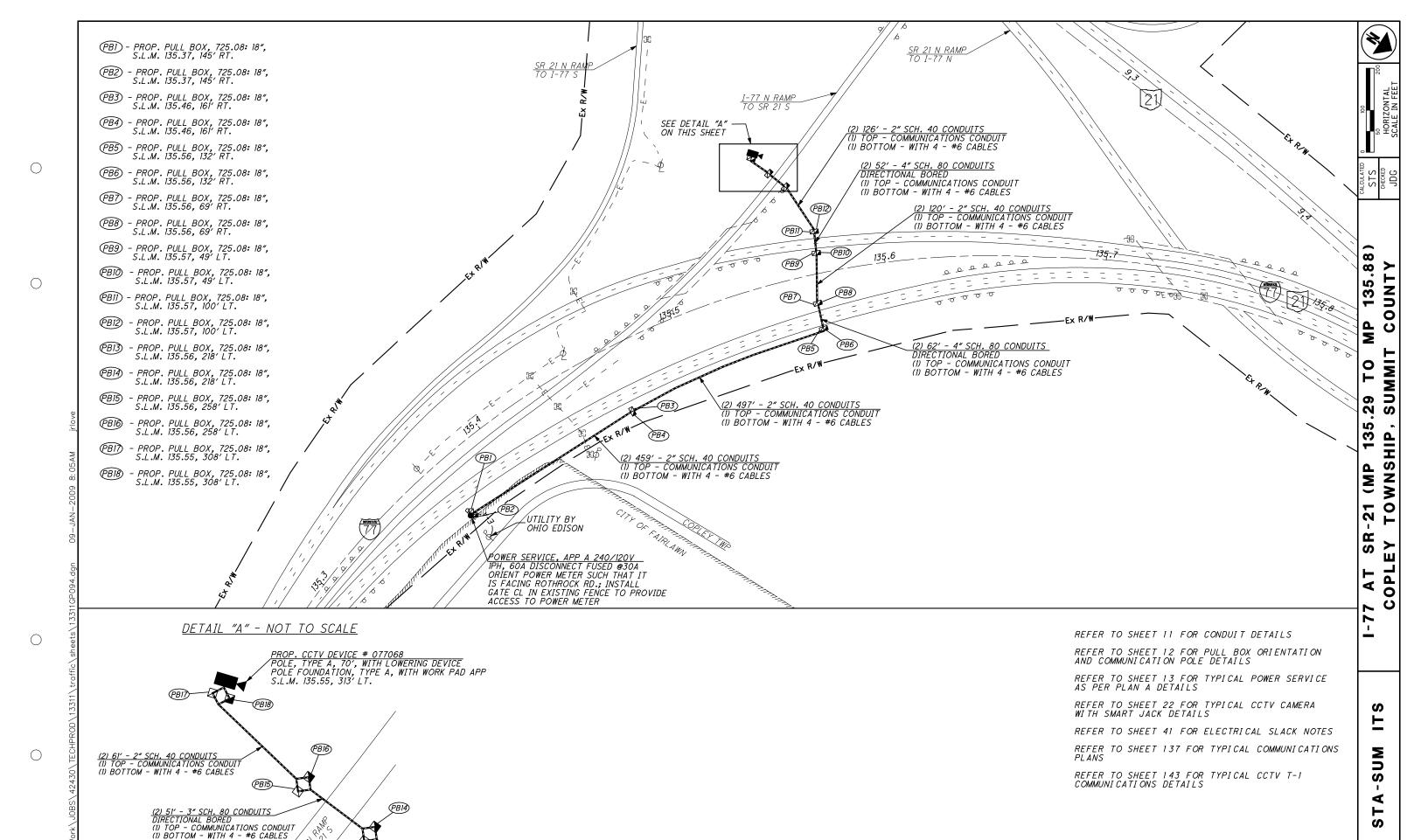
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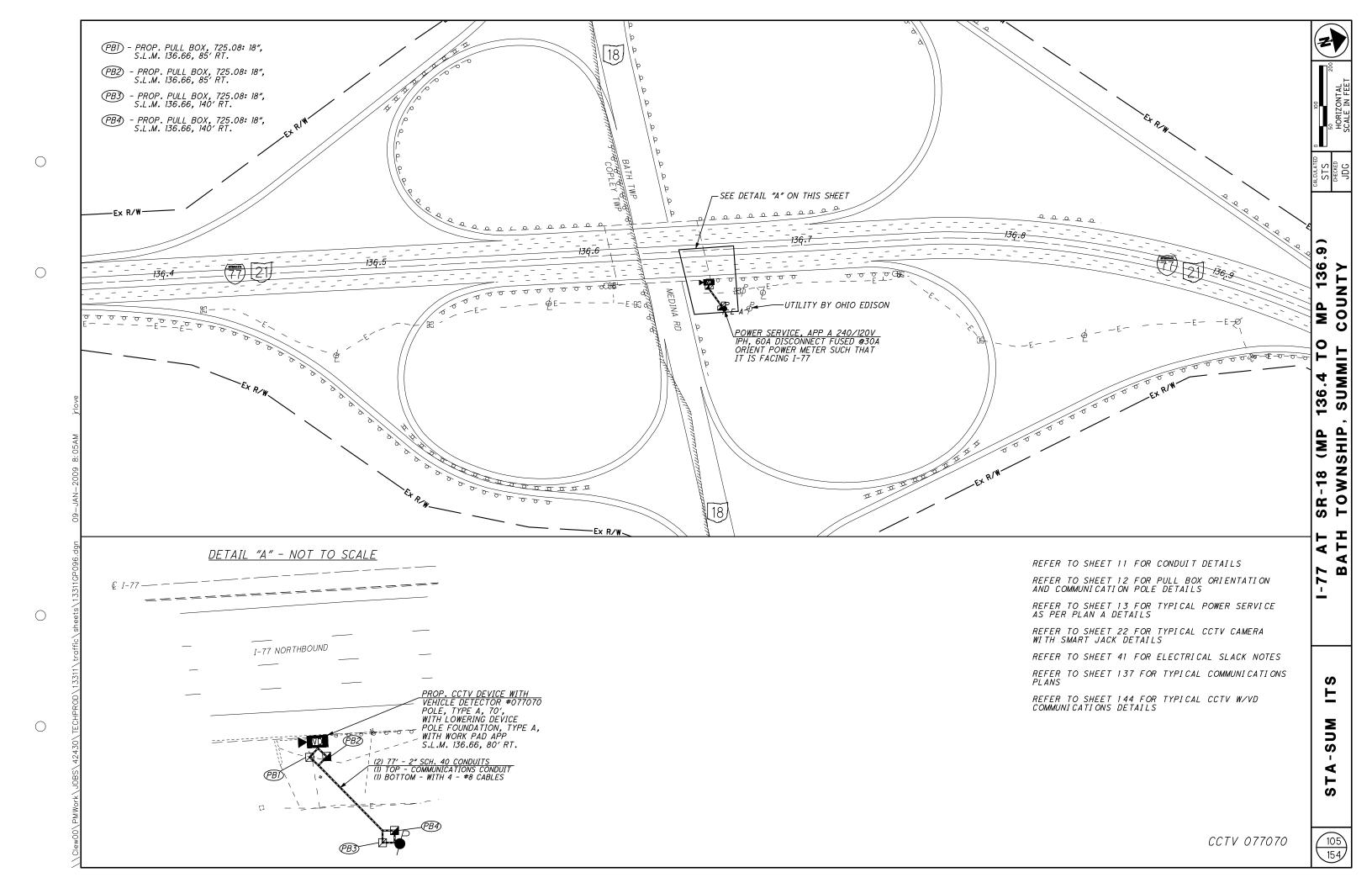
134.06 SUMMIT W A W N, DR FAIRL **0**F CITY

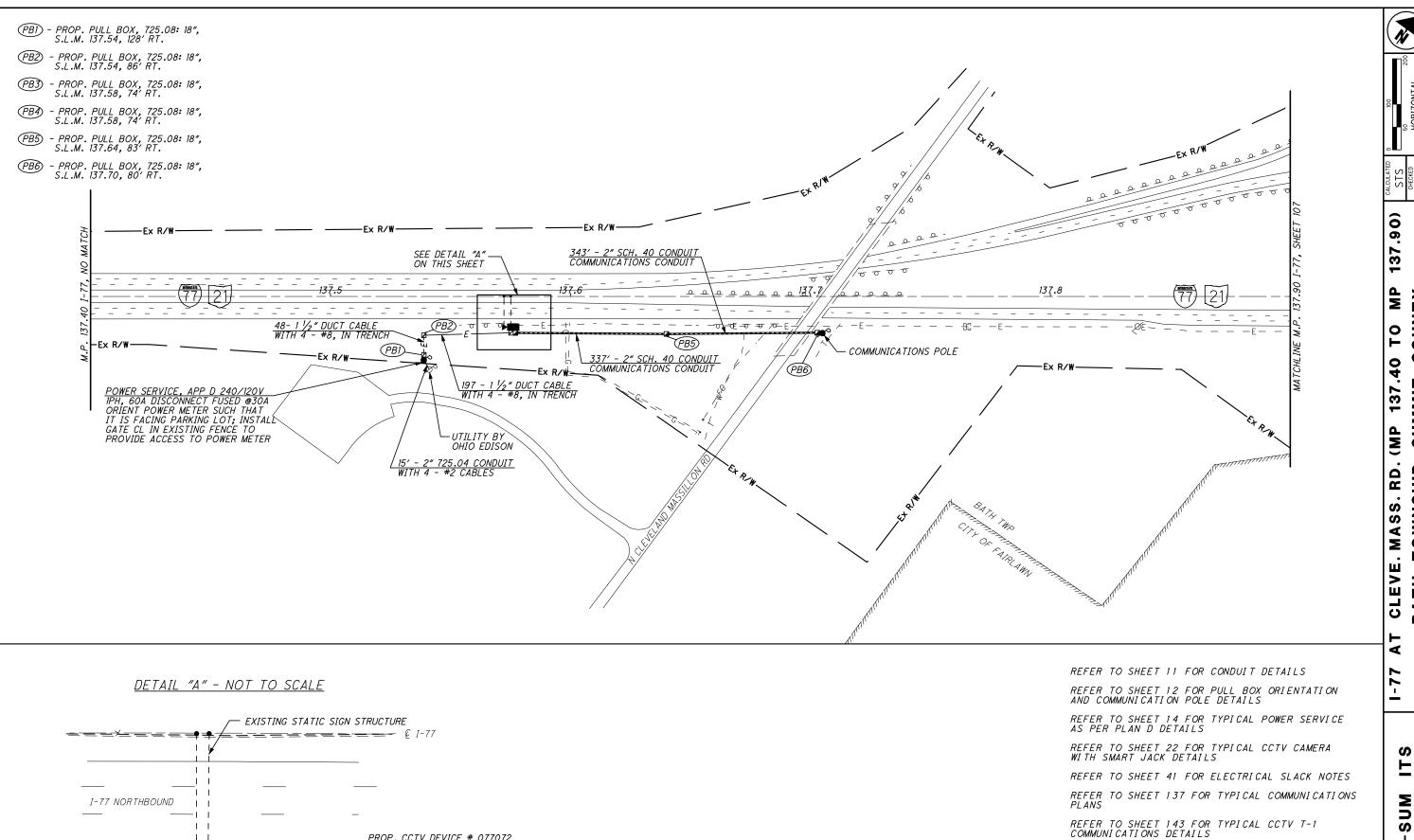
> S SUM



(PB13)

CCTV 077068





PROP. CCTV DEVICE # 077072

POLE, TYPE A, 70', WITH LOWERING DEVICE
POLE FOUNDATION, TYPE A, WITH WORK PAD APP
S.L.M. 137.58, 69' RT.

CONTINUES

(PB4)

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CCTV 077072

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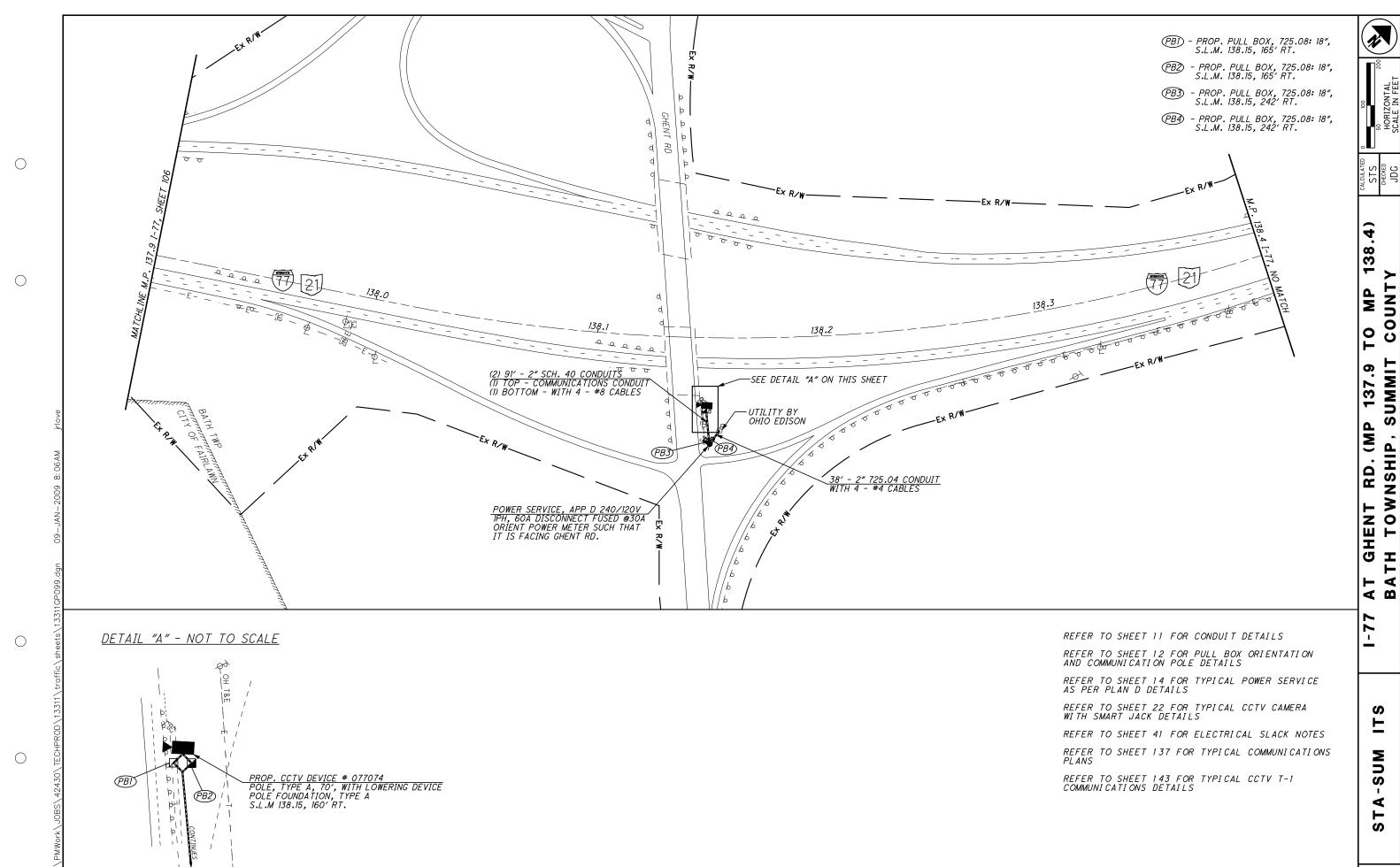
SUMMIT W) RD. OWNSHIP MASS. CLEVE. ATH m

NOO

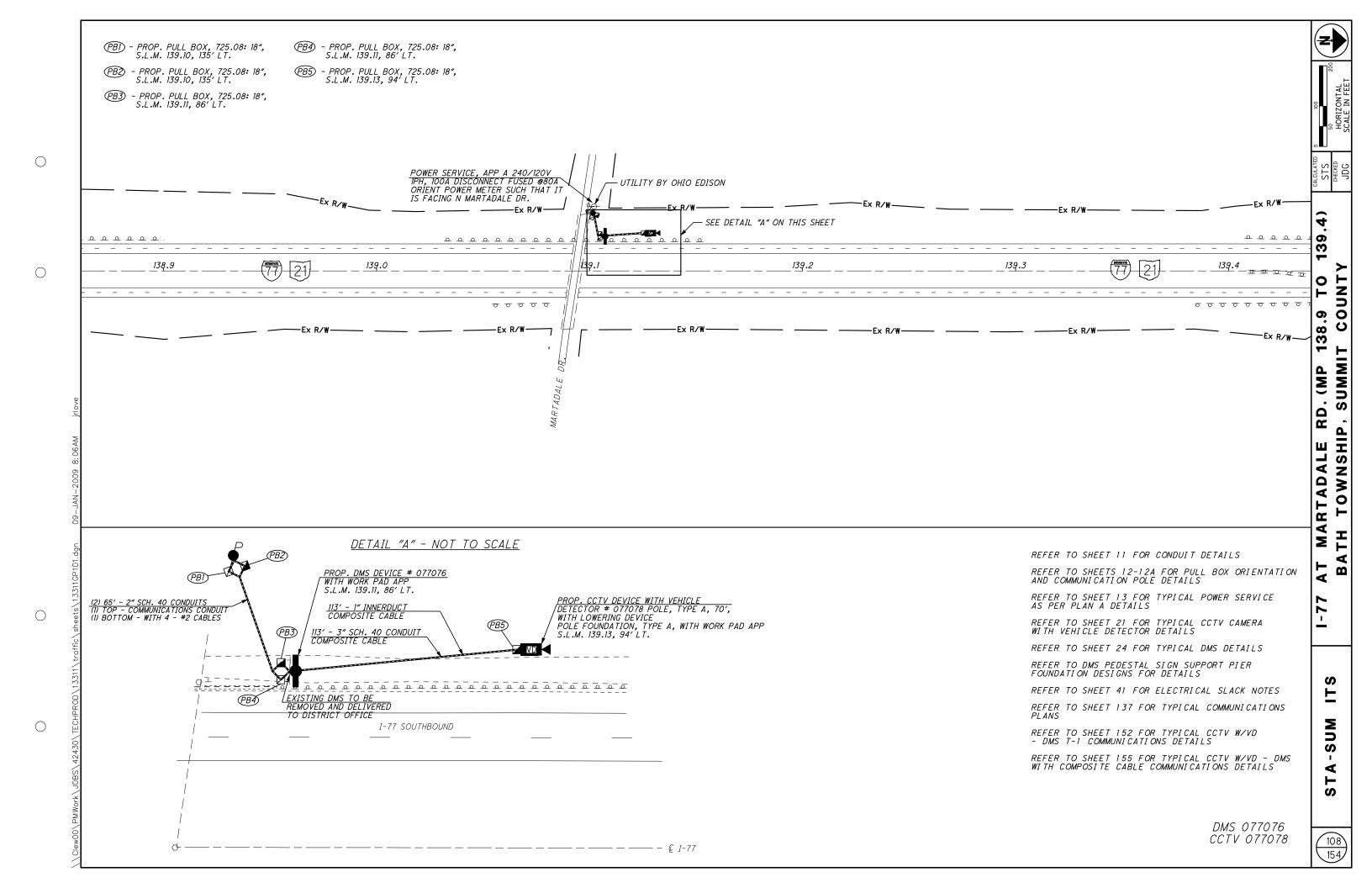
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CCTV 077074



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REFER TO SHEET 41 FOR ELECTRICAL SLACK NOTES

(PBI) - PROP. PULL BOX, 725.08: 18", S.L.M. 0.73, 102' LT.

- PROP. PULL BOX, 725.08: 18", S.L.M. 0.73, 102' LT.

PB3 - PROP. PULL BOX, 725.08: 18", S.L.M. 0.73, 59' RT.

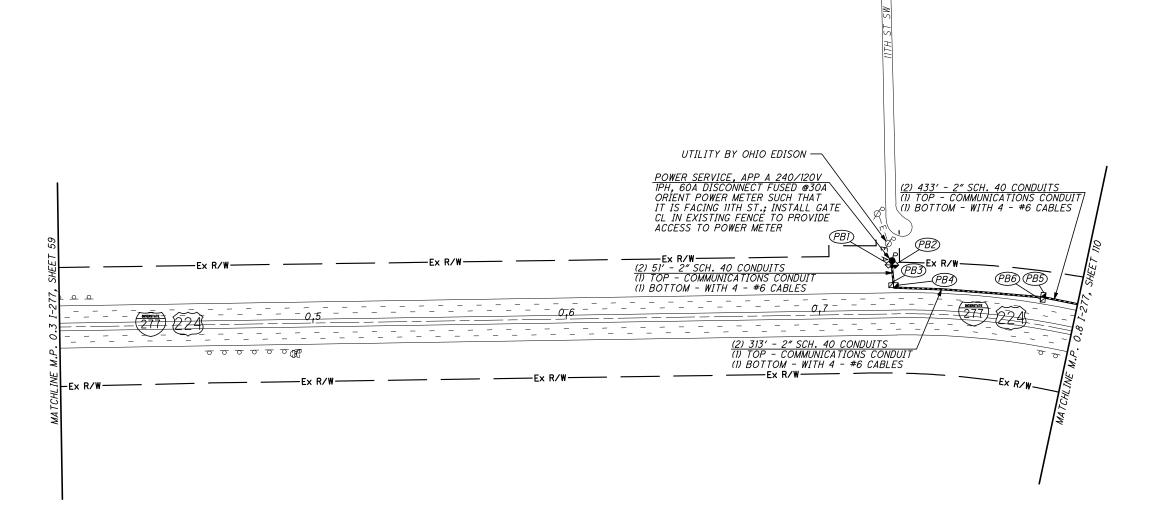
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PB4) - PROP. PULL BOX, 725.08: 18", S.L.M. 0.73, 59' LT.

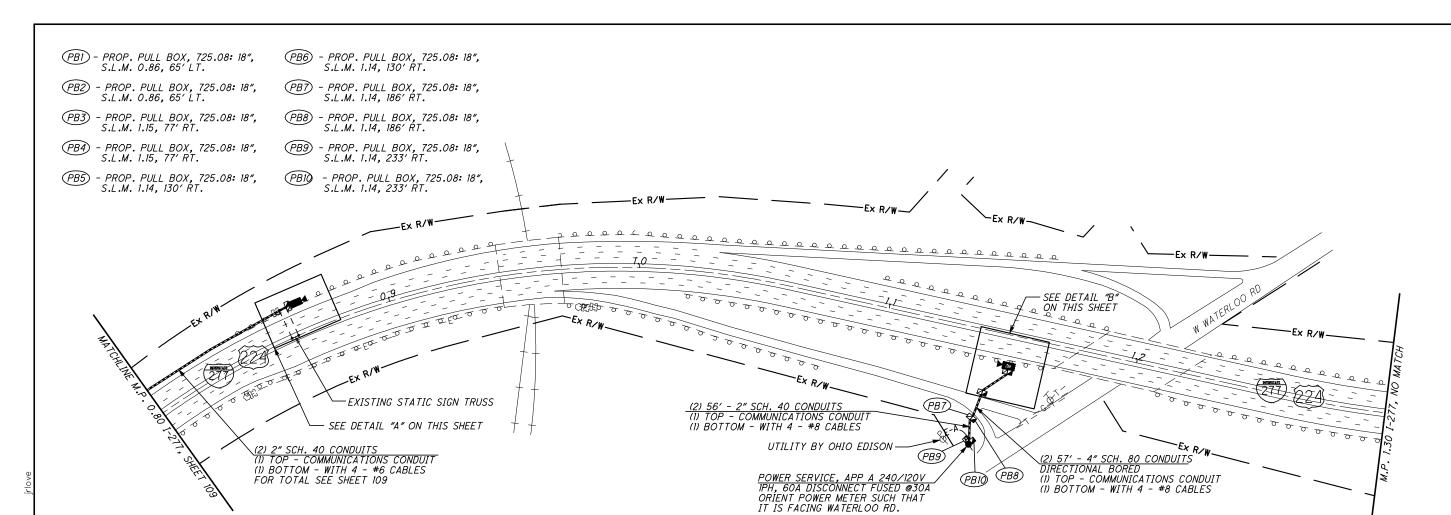
(PB5) - PROP. PULL BOX, 725.08: 18", S.L.M. 0.79, 58' LT.

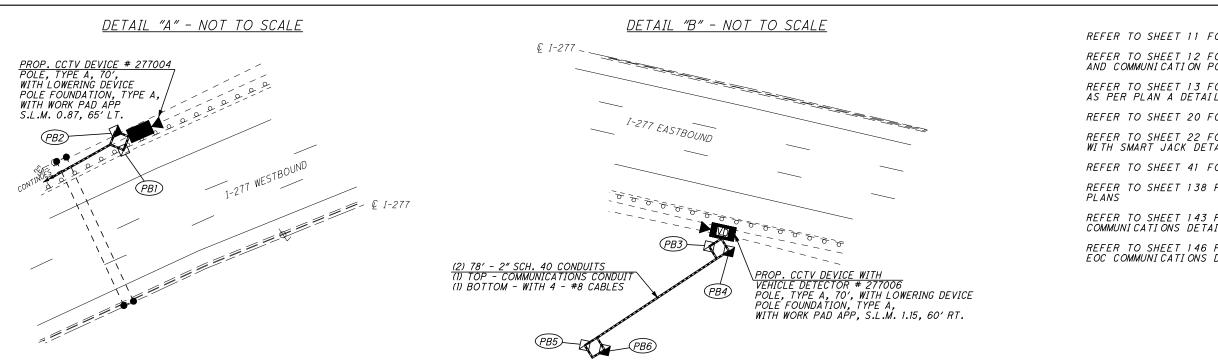
PB6 - PROP. PULL BOX, 725.08: 18", S.L.M. 0.79, 58' RT.



REFER TO SHEET 12 FOR PULL BOX ORIENTATION AND COMMUNICATION POLE DETAILS

REFER TO SHEET 13 FOR TYPICAL POWER SERVICE AS PER PLAN A DETAILS





REFER TO SHEET 11 FOR CONDUIT DETAILS

REFER TO SHEET 12 FOR PULL BOX ORIENTATION AND COMMUNICATION POLE DETAILS

REFER TO SHEET 13 FOR TYPICAL POWER SERVICE AS PER PLAN A DETAILS

REFER TO SHEET 20 FOR TYPICAL CCTV CAMERA DETAILS

REFER TO SHEET 22 FOR TYPICAL CCTV CAMERA WITH SMART JACK DETAILS

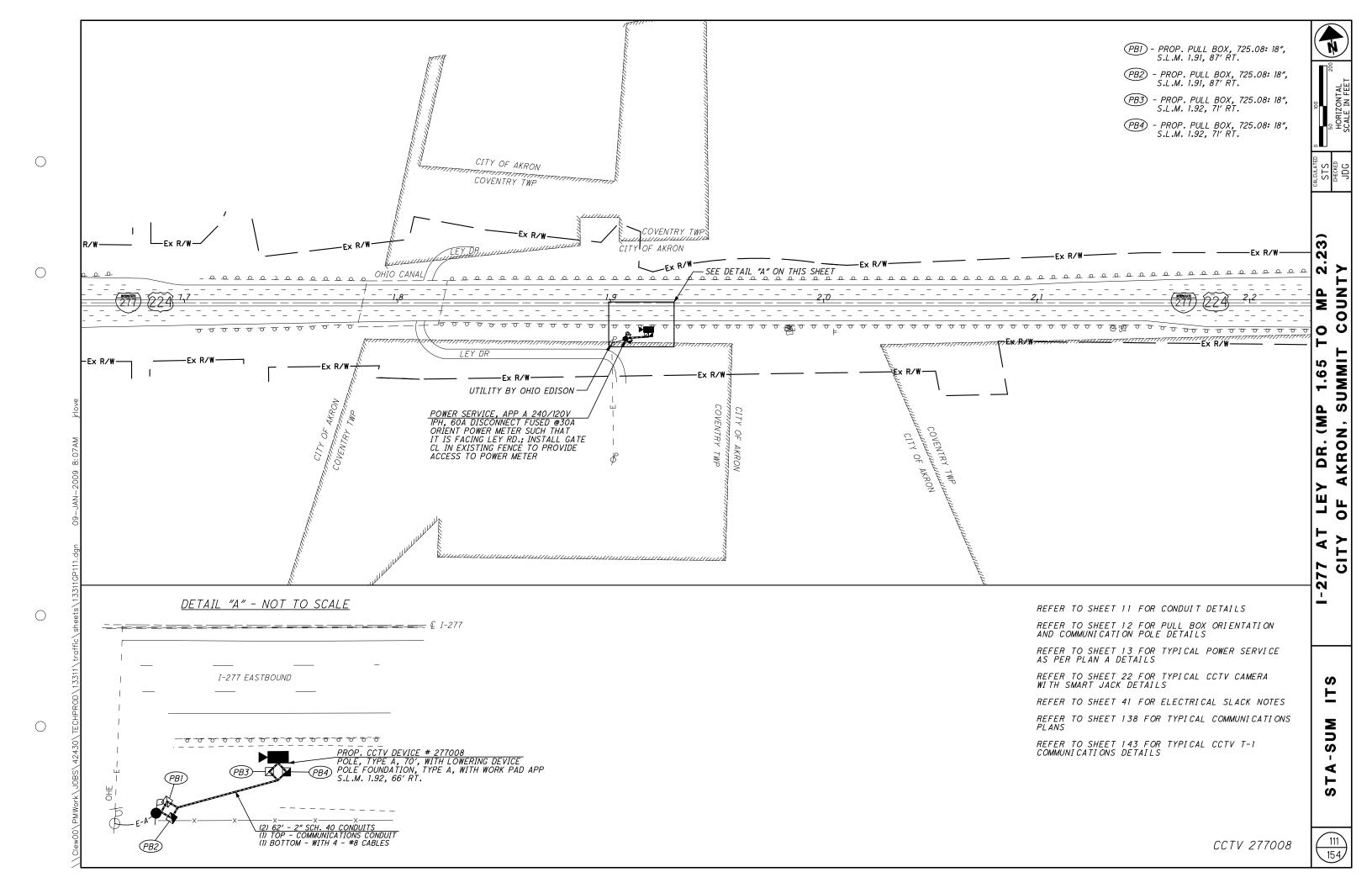
REFER TO SHEET 41 FOR ELECTRICAL SLACK NOTES REFER TO SHEET 138 FOR TYPICAL COMMUNICATIONS

REFER TO SHEET 143 FOR TYPICAL CCTV T-1 COMMUNICATIONS DETAILS

REFER TO SHEET 146 FOR TYPICAL CCTV W/VD EOC COMMUNICATIONS DETAILS

> CCTV 277004 CCTV 277006





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PB1) - PROP. PULL BOX, 725.08: 18", S.L.M. 0.94, 97' LT.

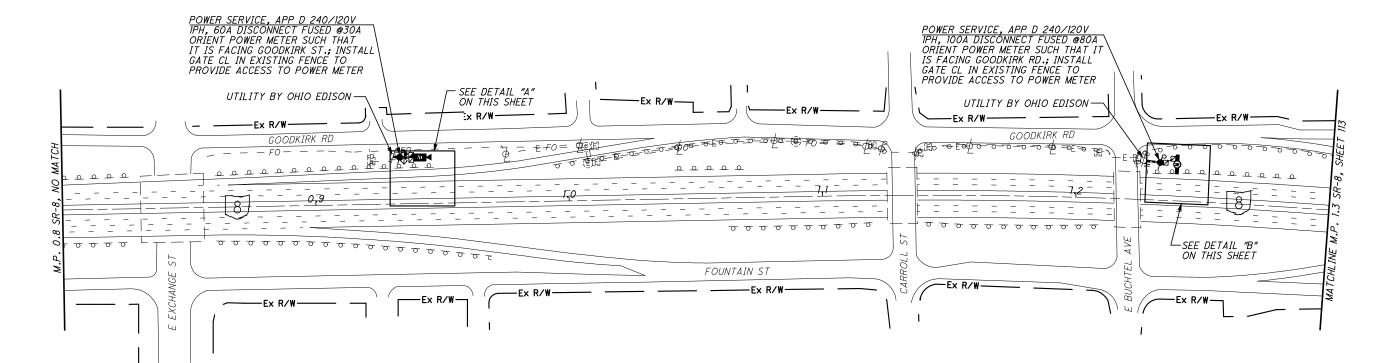
- PROP. PULL BOX, 725.08: 18", S.L.M. 0.94, 97' LT. (PB4) PROP. PULL BOX, 725.08: 18", S.L.M. 1.23, 79' LT.

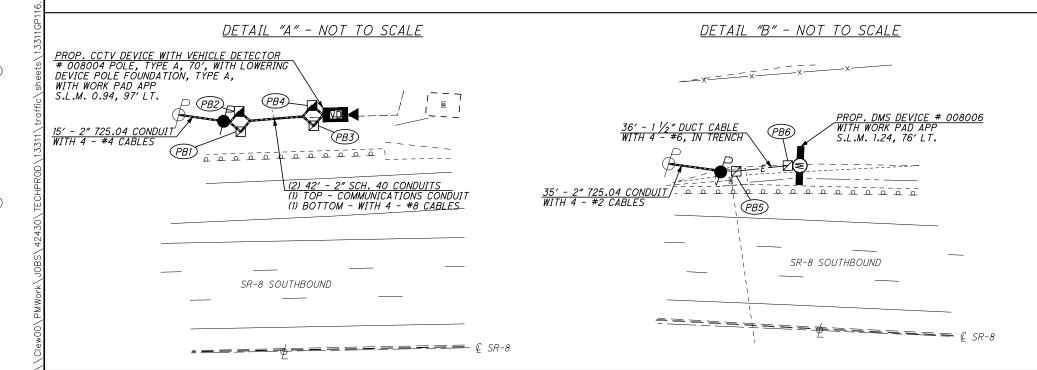
S.L.M. 0.94, 97' LT. PB3) - PROP. PULL BOX, 725.08: 18", S.L.M. 0.94, 97' LT.

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(PB2) - PROP. PULL BOX, 725.08: 18",

- PROP. PULL BOX, 725.08: 18", S.L.M. 1.24, 76' LT.





REFER TO SHEET 11 FOR CONDUIT DETAILS REFER TO SHEETS 12-12A FOR PULL BOX ORIENTATION AND COMMUNICATION POLE DETAILS REFER TO SHEET 14 FOR TYPICAL POWER SERVICE AS PER PLAN D DETAILS

REFER TO SHEET 21 FOR TYPICAL CCTV CAMERA WITH VEHICLE DETECTOR DETAILS

REFER TO SHEET 24 FOR TYPICAL DMS DETAILS REFER TO DMS PEDESTAL SIGN SUPPORT PIER FOUNDATION DESIGNS FOR DETAILS

REFER TO SHEET 41 FOR ELECTRICAL SLACK NOTES REFER TO SHEET 140 FOR TYPICAL COMMUNICATIONS PLANS

REFER TO SHEET 145 FOR TYPICAL CCTV EOC COMMUNICATIONS DETAILS

REFER TO SHEET 147 FOR TYPICAL DMS WIRELESS COMMUNICATIONS DETAILS

> CCTV 008004 DMS 008006



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PBI) - PROP. PULL BOX, 725.08: 18", S.L.M. 1.43, 84' LT.

- PROP. PULL BOX, 725.08: 18", S.L.M. 1.43, 84' LT.

- PROP. PULL BOX, 725.08: 18", S.L.M. 1.44, 81' LT.

- PROP. PULL BOX, 725.08: 18", S.L.M. 1.44, 81' LT.

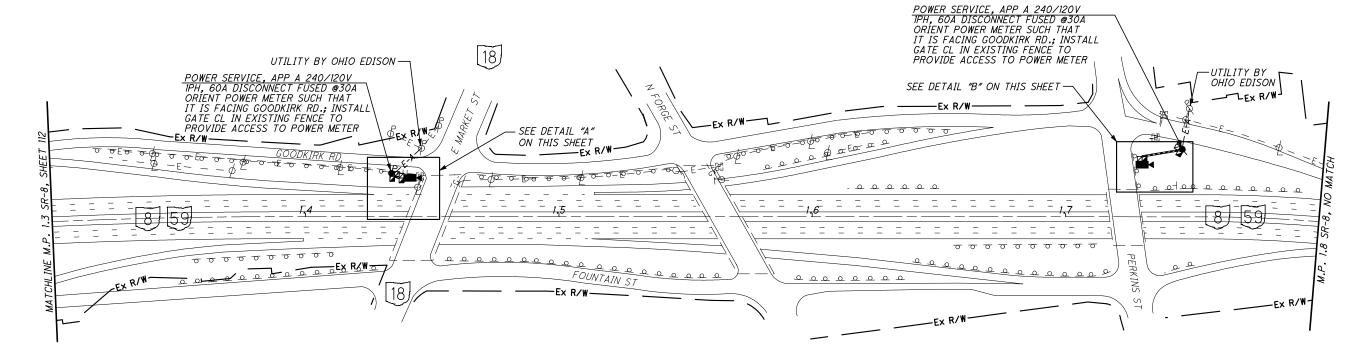
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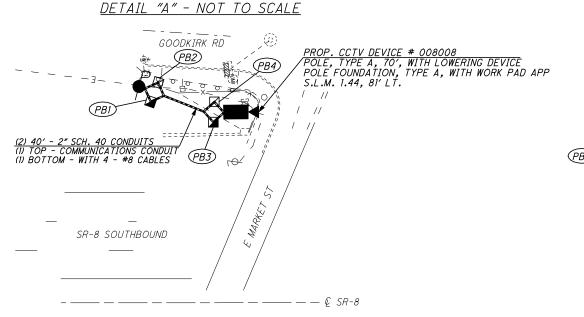
- PROP. PULL BOX, 725.08: 18", S.L.M. 1.73, 114' LT. (PB5)

- PROP. PULL BOX, 725.08: 18", S.L.M. 1.73, 114' LT.

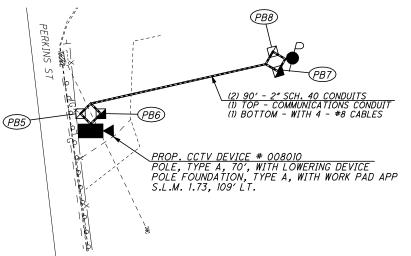
- PROP. PULL BOX, 725.08: 18", S.L.M. 1.74, 138' LT.

(PB8) - PROP. PULL BOX, 725.08: 18", S.L.M. 1.74, 138' LT.





## DETAIL "B" - NOT TO SCALE



REFER TO SHEET 11 FOR CONDUIT DETAILS REFER TO SHEET 12 FOR PULL BOX ORIENTATION AND COMMUNICATION POLE DETAILS

REFER TO SHEET 13 FOR TYPICAL POWER SERVICE AS PER PLAN A DETAILS

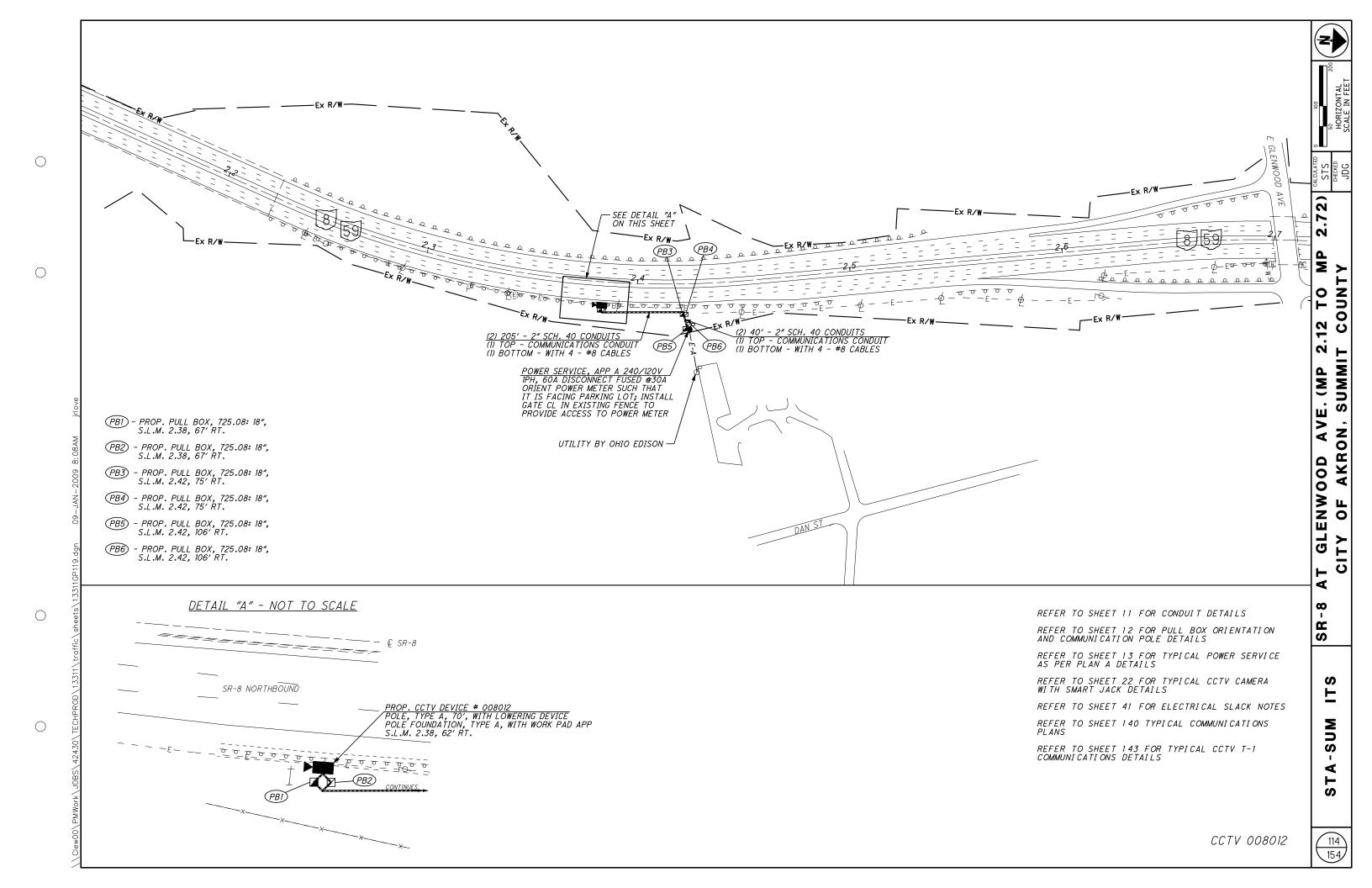
REFER TO SHEET 20 FOR TYPICAL CCTV CAMERA DETAILS REFER TO SHEET 41 FOR ELECTRICAL SLACK NOTES

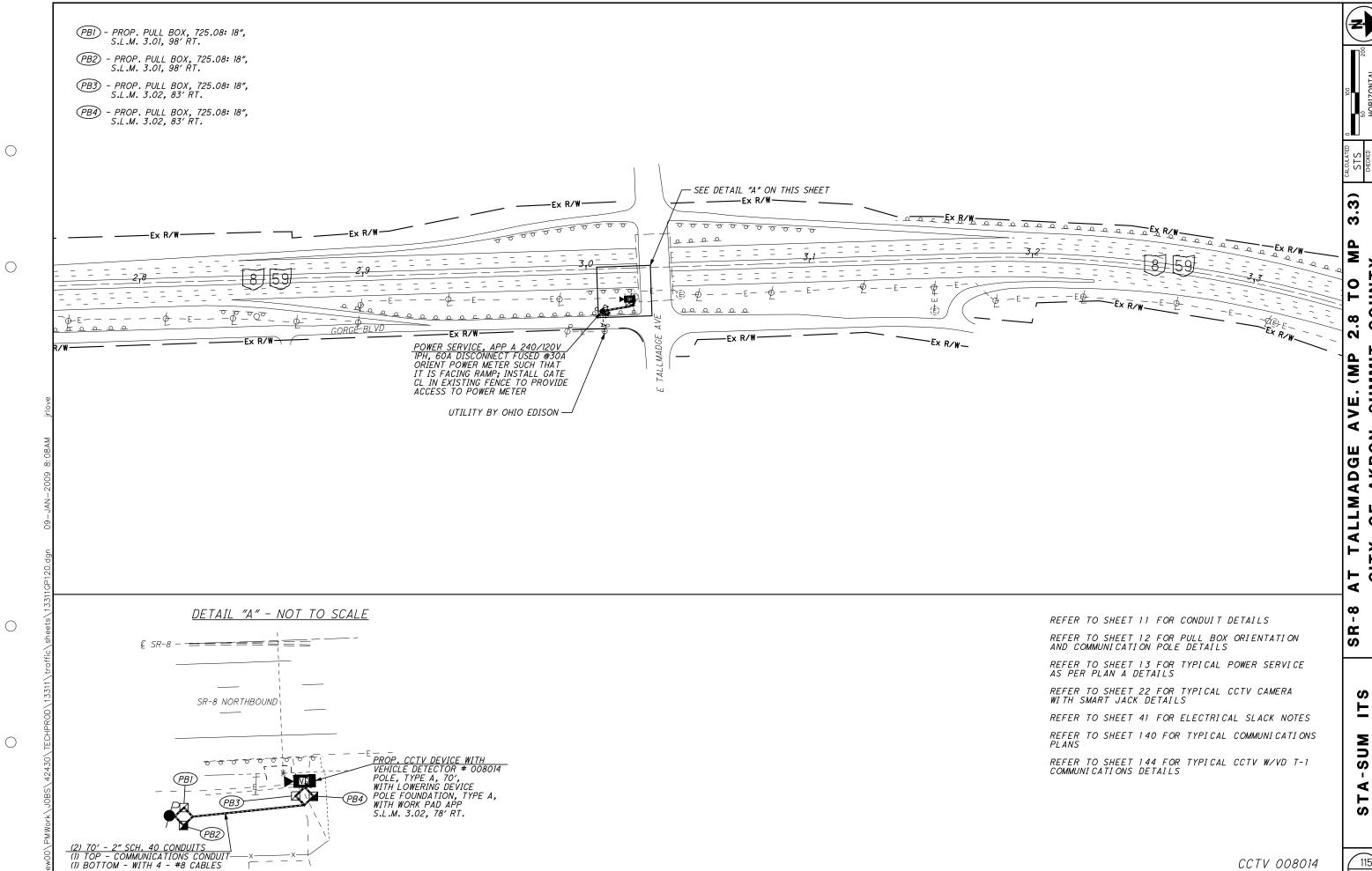
REFER TO SHEET 140 FOR TYPICAL COMMUNICATIONS PLANS

REFER TO SHEET 145 FOR TYPICAL CCTV EOC COMMUNICATIONS DETAILS

> CCTV 008008 CCTV 008010







CCTV 008014

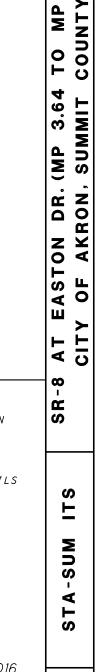
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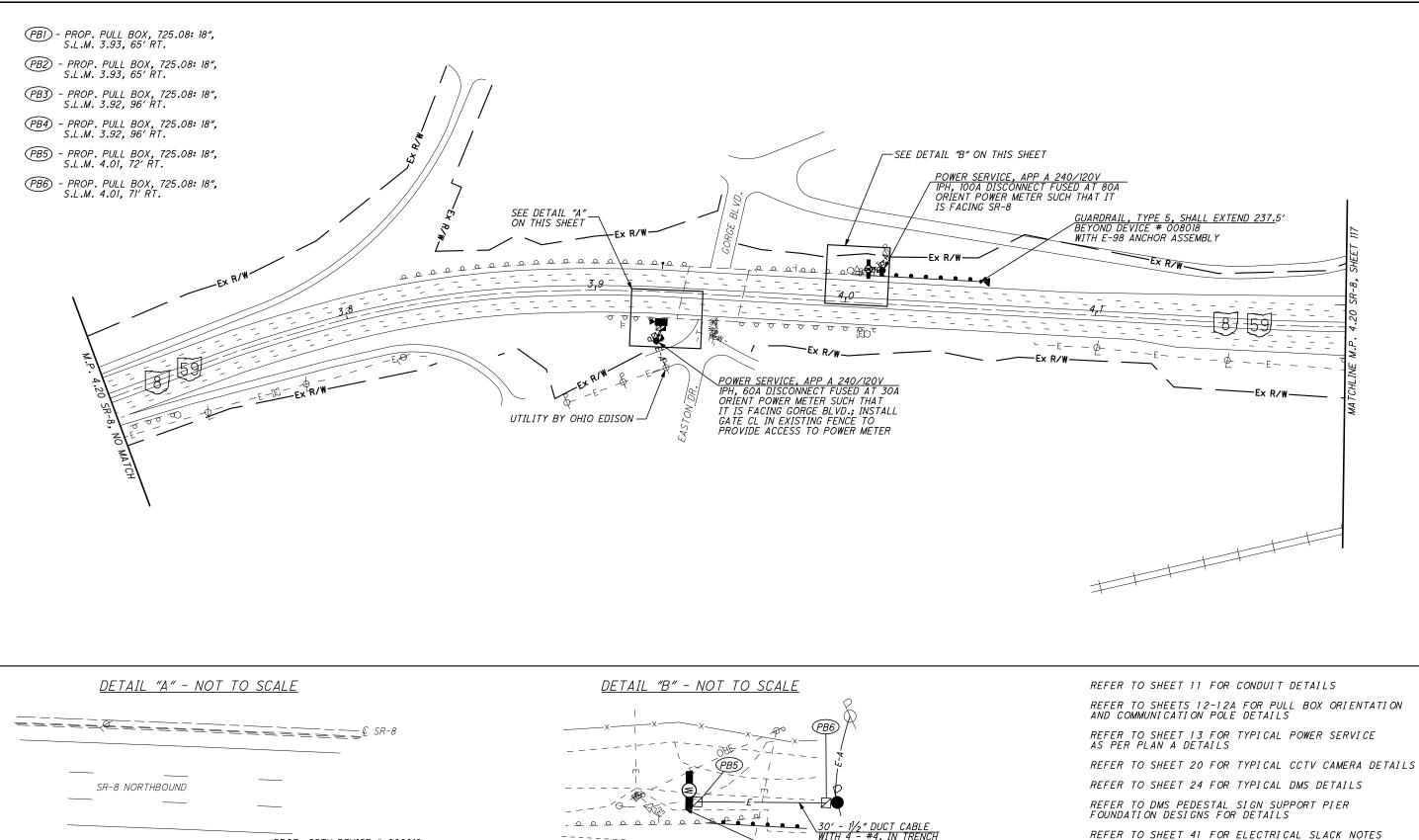
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SR-8 SOUTHBOUND

PROP. DMS DEVICE # 008018 WITH WORK PAD APP

S.L.M. 4.01, 72' LT.

PROP. CCTV DEVICE # 008016
POLE, TYPE A, 70',
WITH-LOWERING DEVICE

POLE FOUNDATION, TYPE A, WITH WORK PAD APP

S.L.M. 3.93, 60' RT.

(2) 41' - 2" SCH. 40 CONDUITS (1) TOP - COMMUNICATIONS CONDUIT (1) BOTTOM - WITH 4 - #8 CABLES

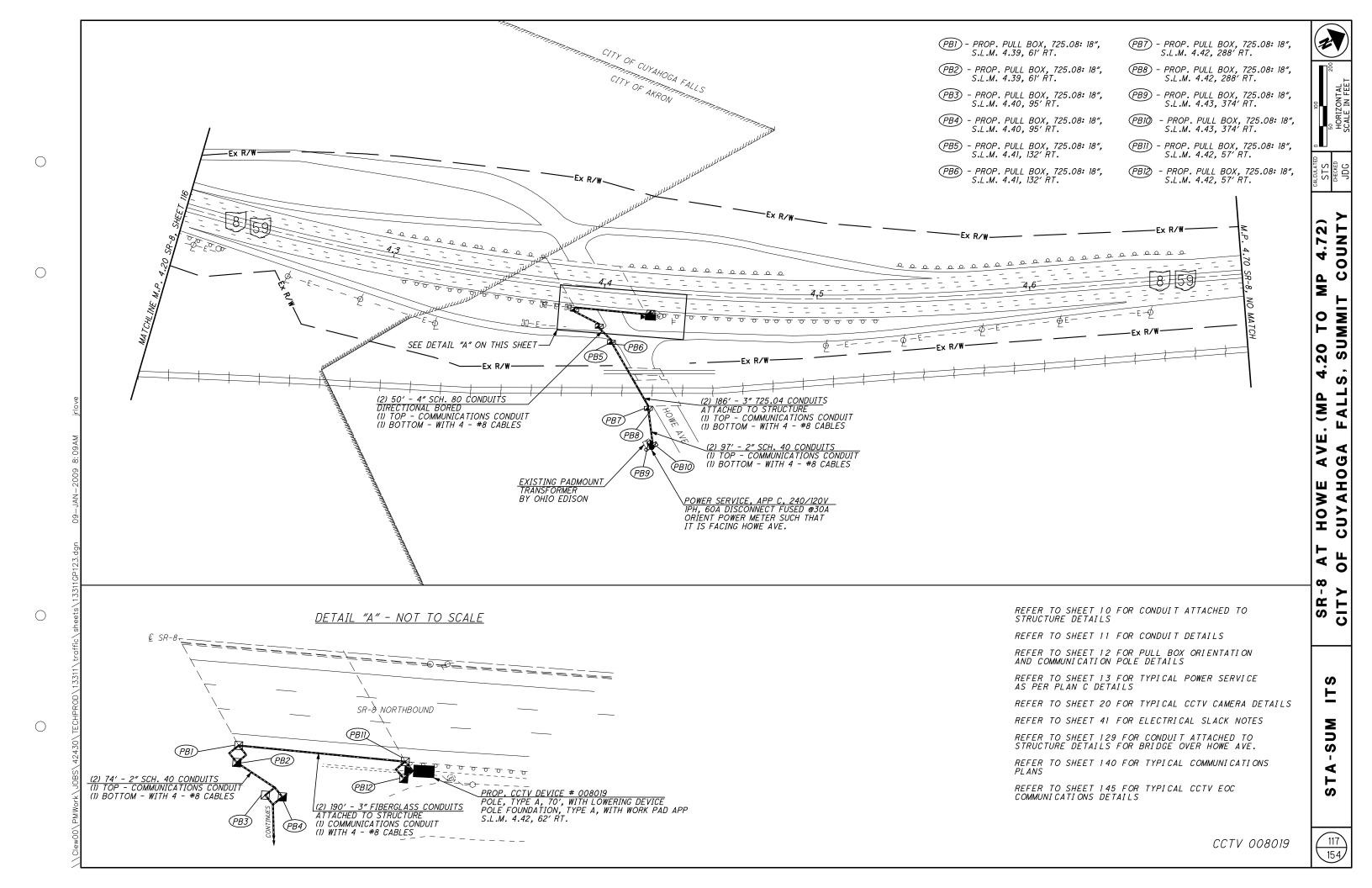
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REFER TO SHEET 147 FOR TYPICAL DMS WIRELESS COMMUNICATIONS DETAILS

CCTV 008016
DMS 008018

REFER TO SHEET 140 FOR TYPICAL COMMUNICATIONS

REFER TO SHEET 145 FOR TYPICAL CCTV EOC COMMUNICATIONS DETAILS



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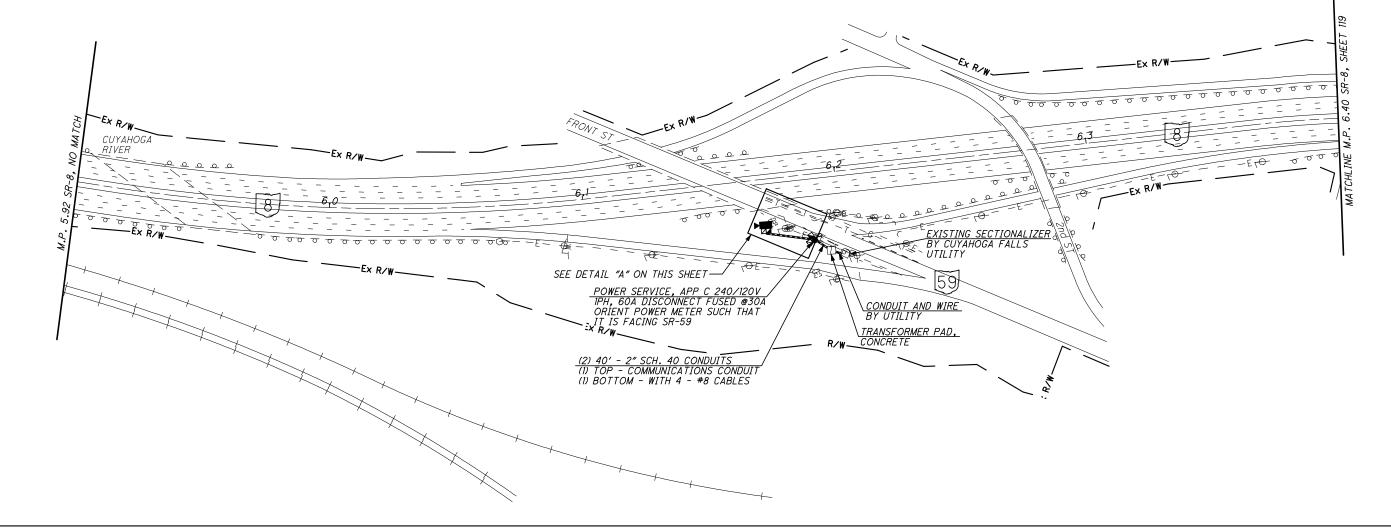
PBI) - PROP. PULL BOX, 725.08: 18", S.L.M. 6.17, 100' RT.

(PB2) - PROP. PULL BOX, 725.08: 18", S.L.M. 6.17, 100' RT. (PB3) - PROP. PULL BOX, 725.08: 18", S.L.M. 6.19, 135' RT.

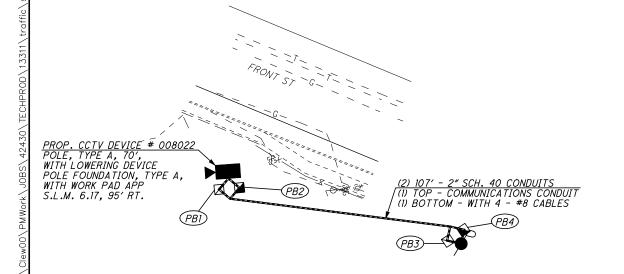
PB4) - PROP. PULL BOX, 725.08: 18", S.L.M. 6.19, 135' RT.

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## DETAIL "A" - NOT TO SCALE



REFER TO SHEET 11 FOR CONDUIT DETAILS

REFER TO SHEET 12 FOR PULL BOX ORIENTATION AND COMMUNICATION POLE DETAILS

REFER TO SHEET 13 FOR TYPICAL POWER SERVICE AS PER PLAN C DETAILS

REFER TO SHEET 20 FOR TYPICAL CCTV CAMERA DETAILS REFER TO SHEET 41 FOR ELECTRICAL SLACK NOTES

REFER TO SHEET 140 FOR TYPICAL COMMUNICATIONS PLANS

REFER TO SHEET 145 FOR TYPICAL CCTV EOC COMMUNICATIONS DETAILS

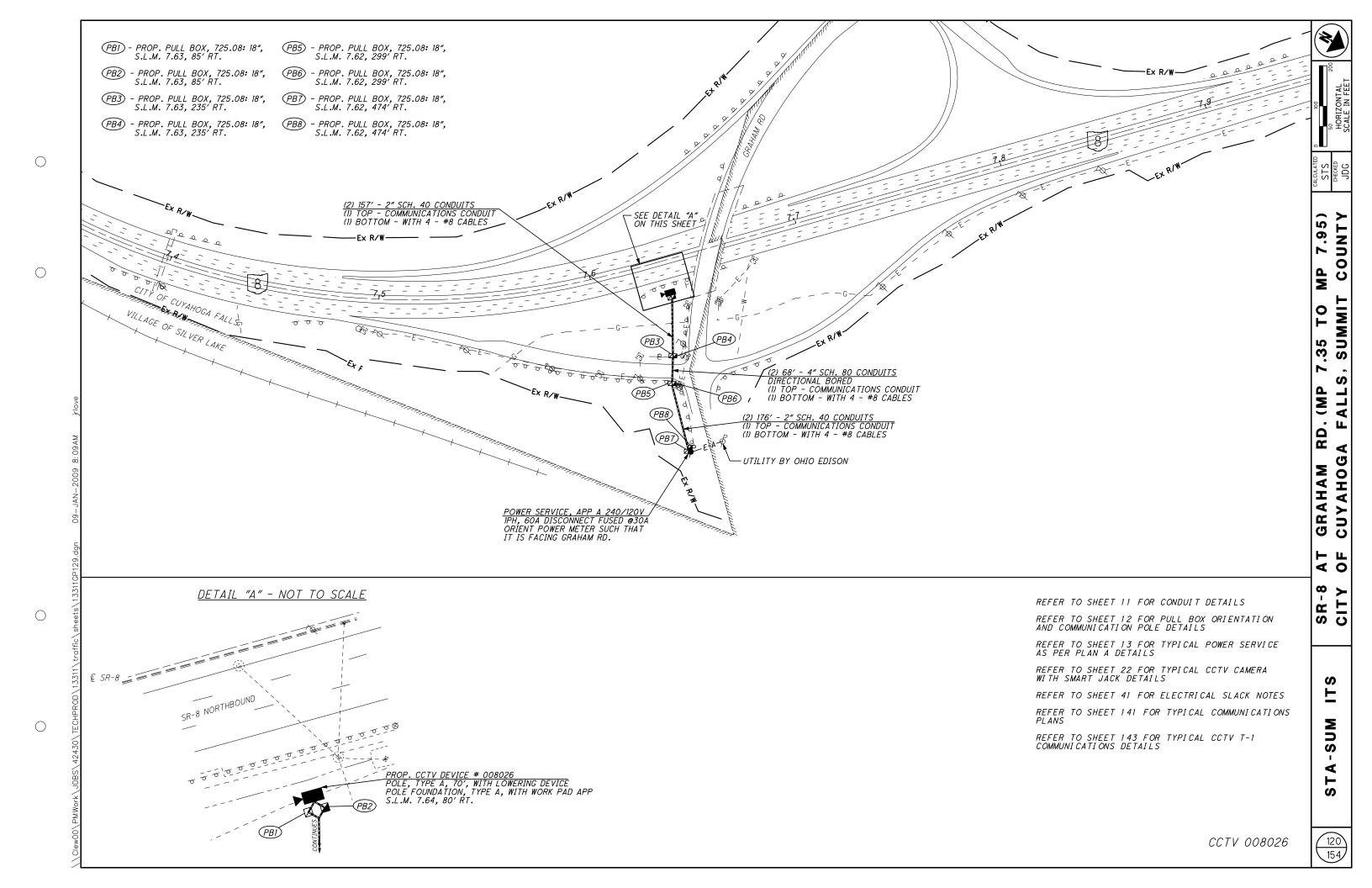
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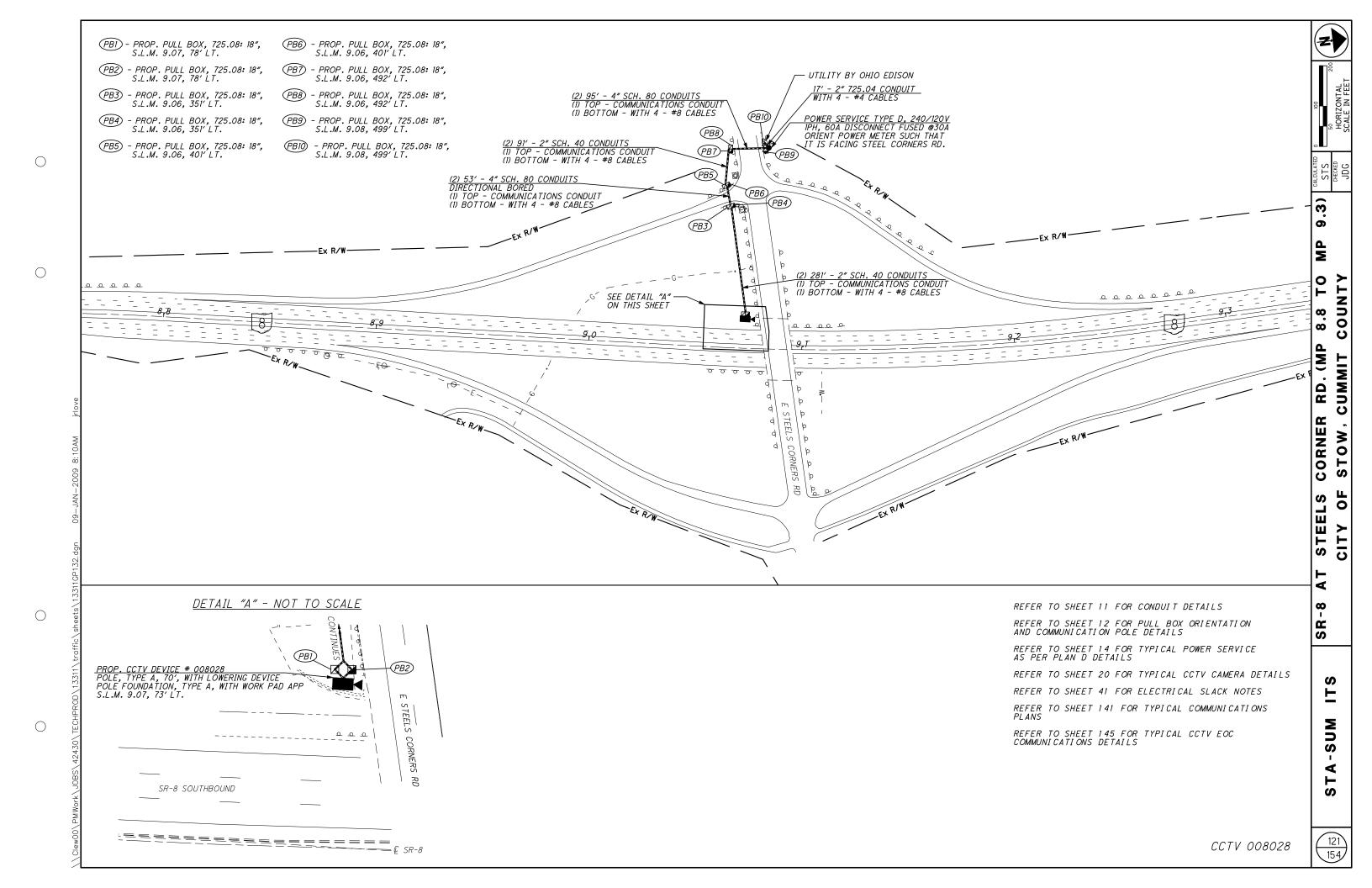
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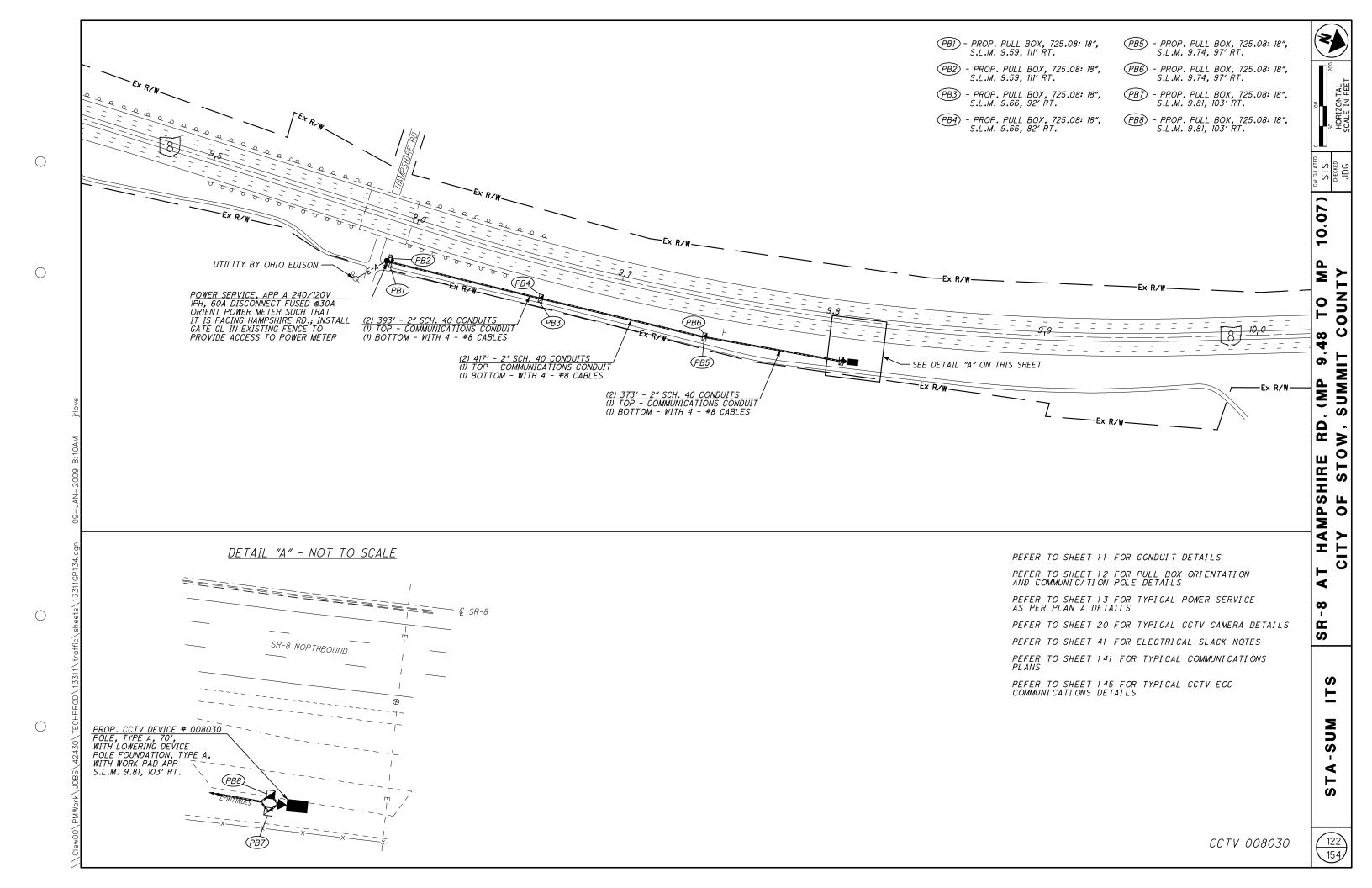
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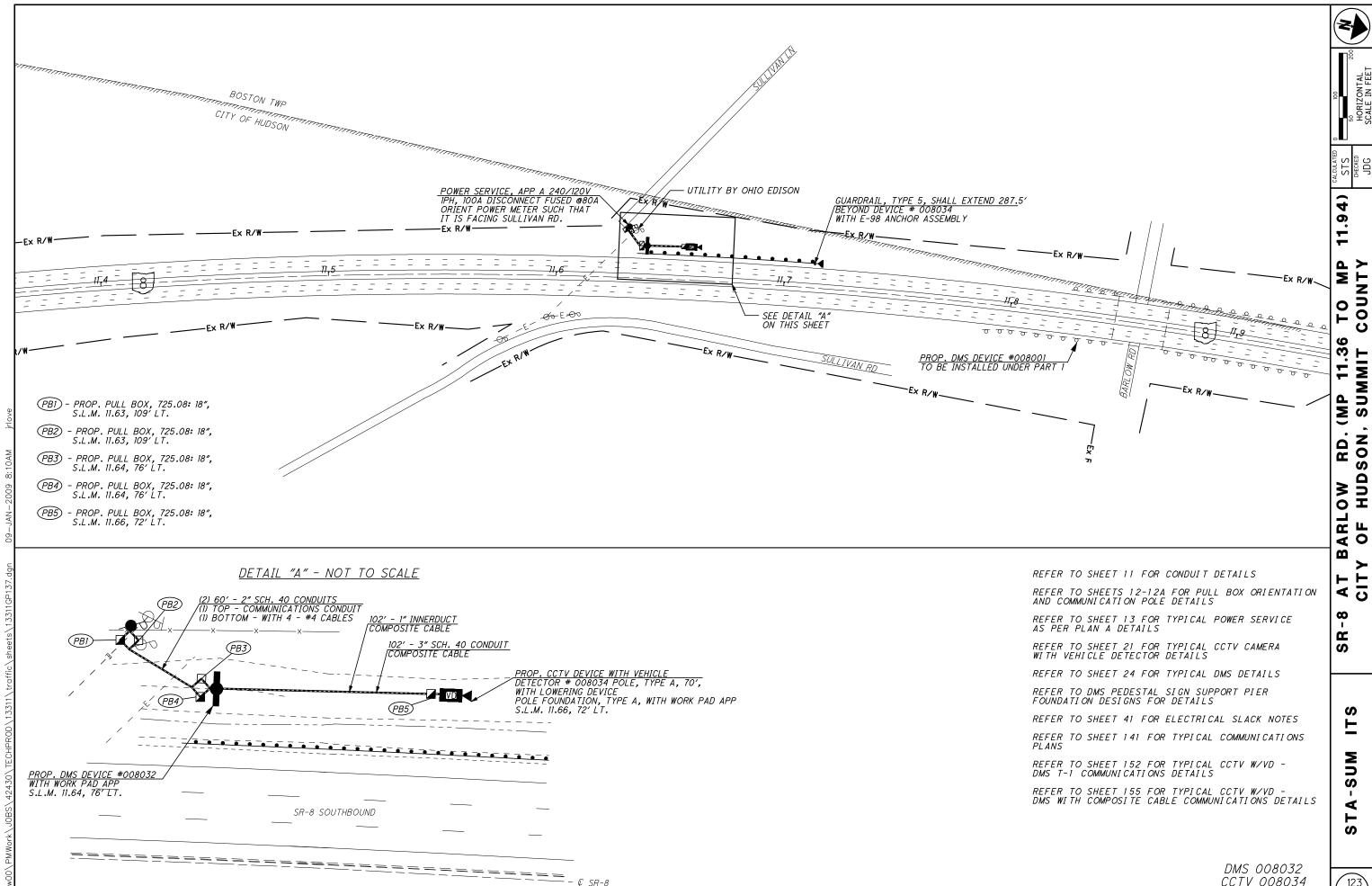
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CCTV 008024









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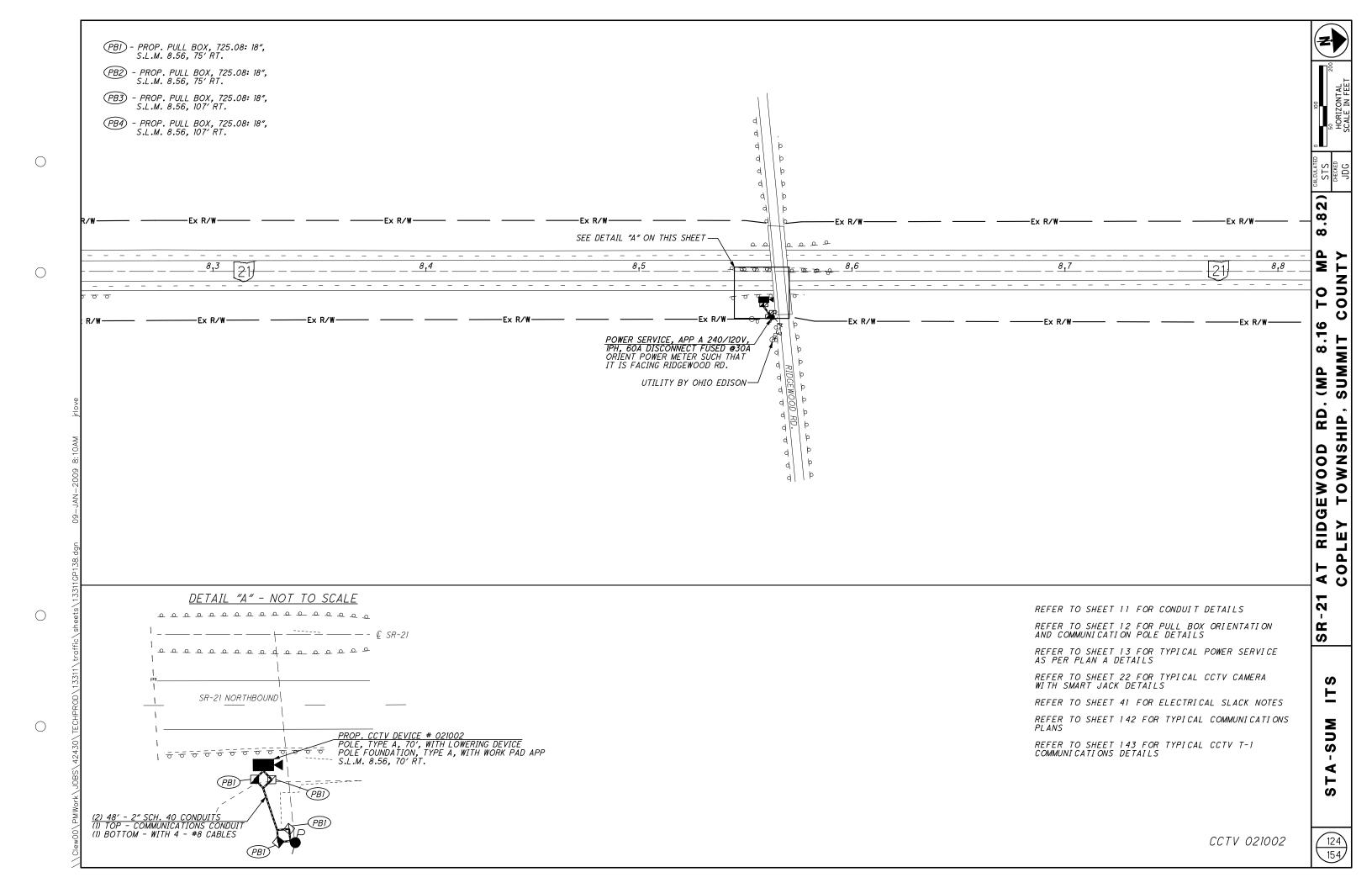
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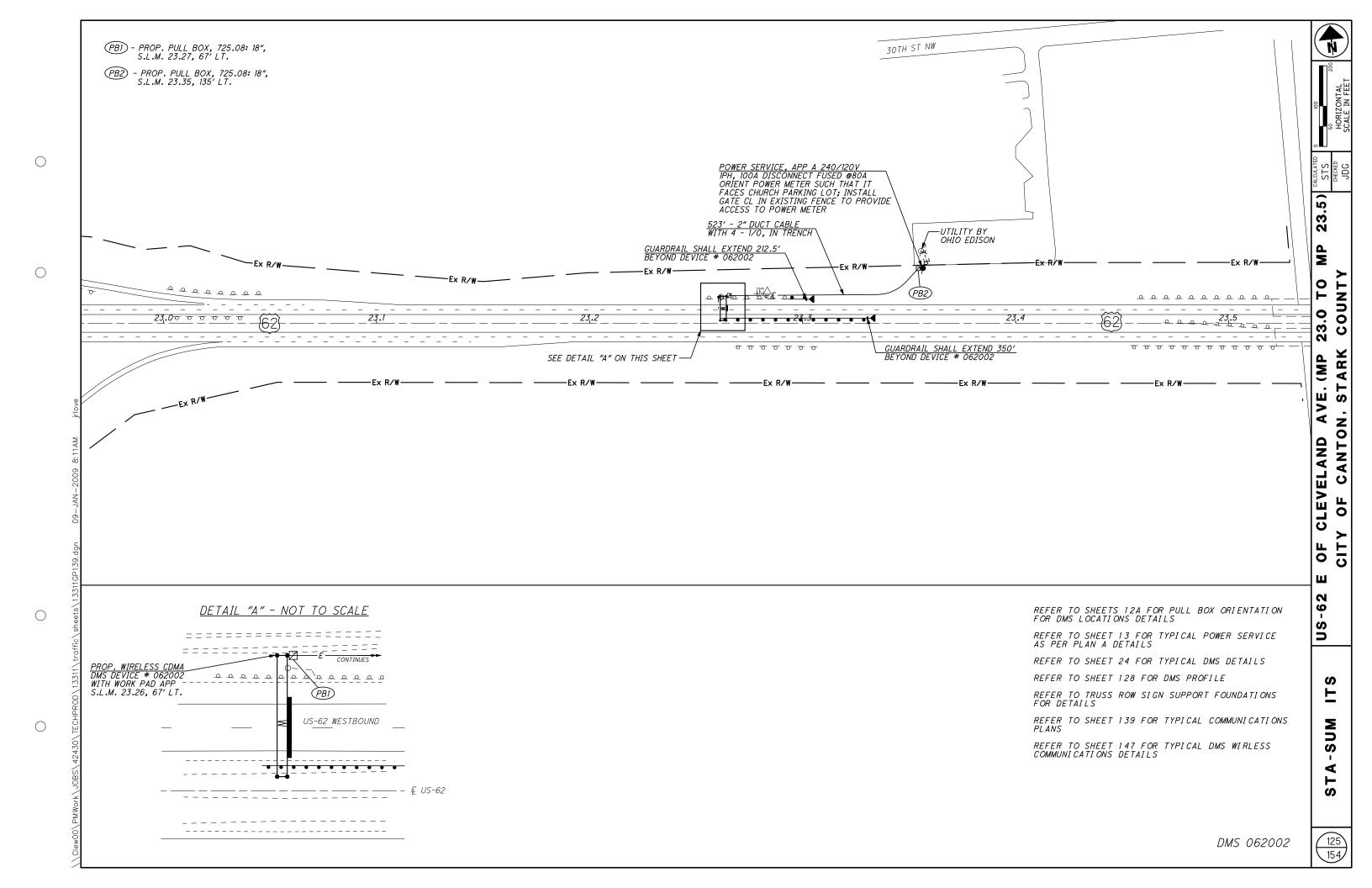
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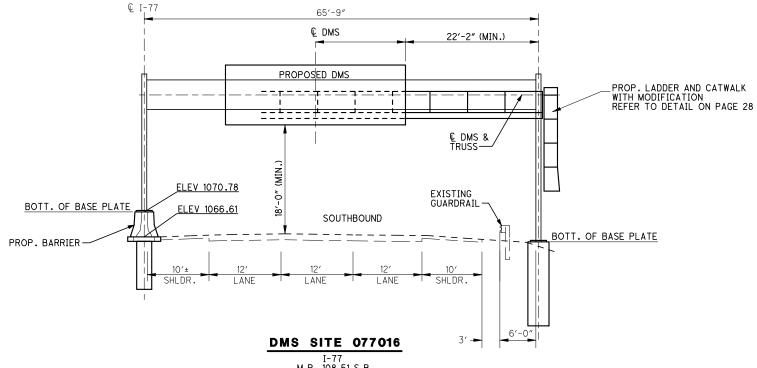
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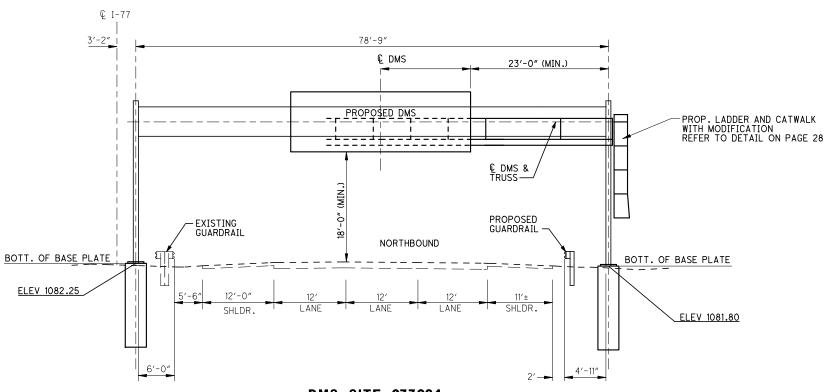
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I-77
M.P. 108.51 S.B.
EXIST. SIGN AREA = 150 S.F.
PROP. STRUCTURE: ODOT DETAIL SHEET DMS SPAN - 80'
OVERHEAD SIGN SUPPORT, AS PER PLAN A
COLOCATE EXISTING STATIC SIGN ON DMS TRUSS
REFER TO SHEET 80 FOR PLAN SHEET



## DMS SITE 077024

I-77
S.L.M. 112.80 N.B.
EXIST. SIGN AREA = N/A
PROP. STRUCTURE: ODOT DETAIL SHEET DMS SPAN - 80'
OVERHEAD SIGN SUPPORT, AS PER PLAN A
REFER TO SHEET 85 FOR PLAN SHEET

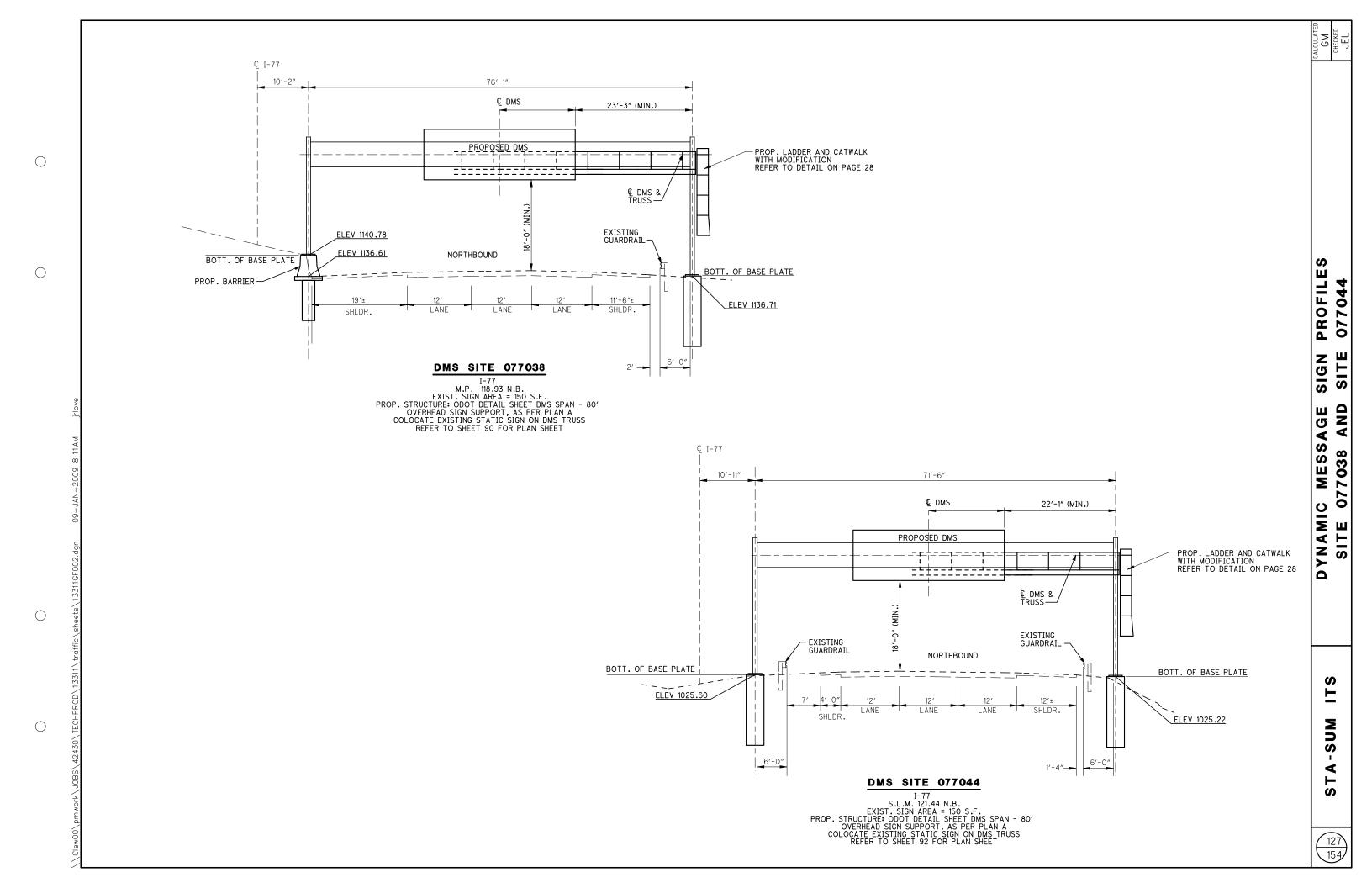
NEED A MIN. OF 6' CLEARANCE, REPLACE GR. WITH TYPE 5A

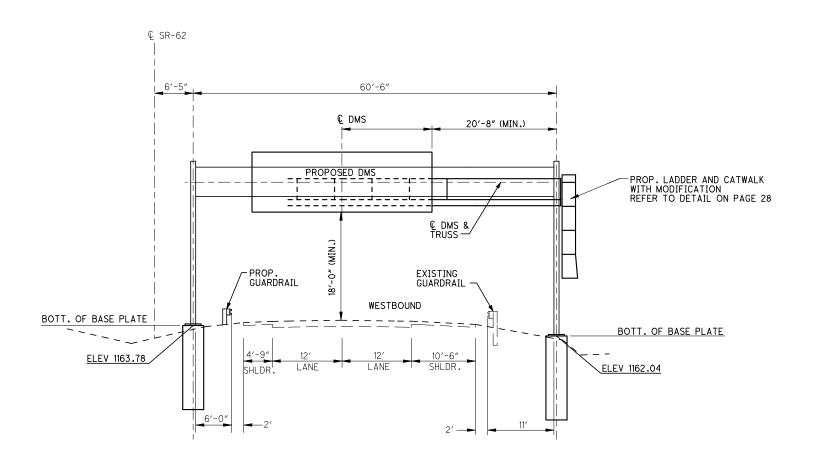


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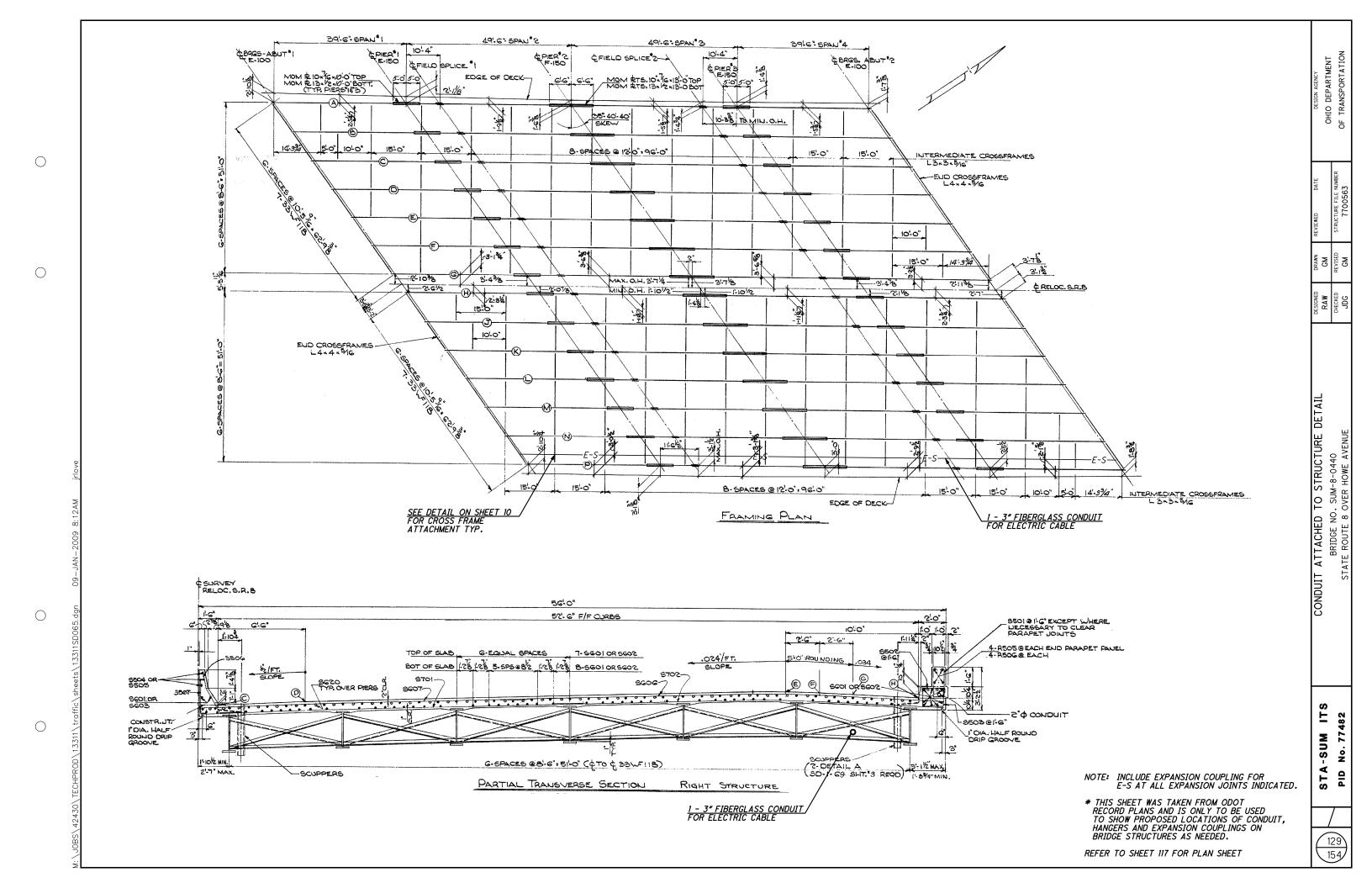


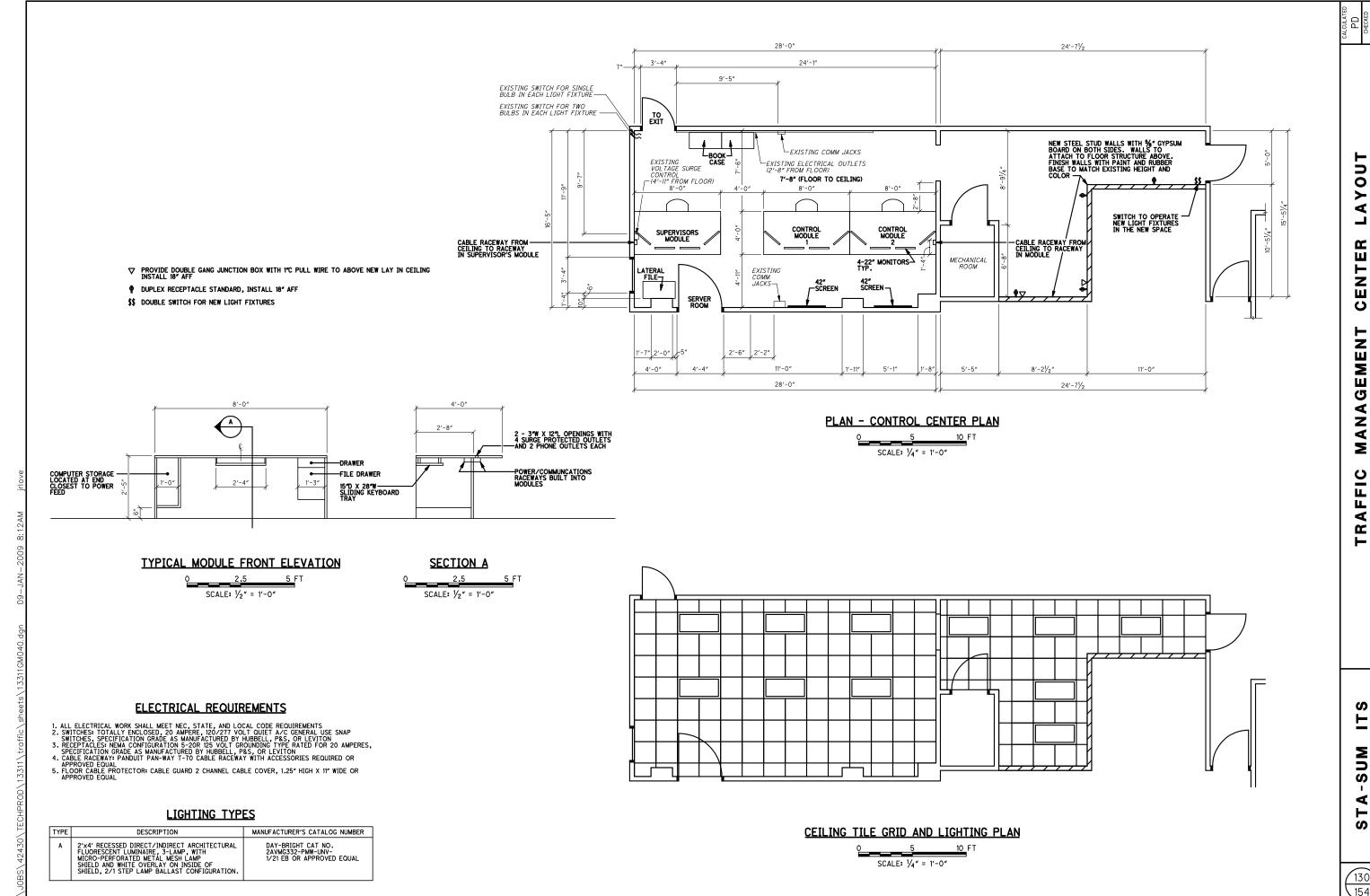
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## DMS SITE 062002

SR-62
M.P. 23.26 W.B.
EXIST. SIGN AREA = 150 S.F.
PROP. STRUCTURE: ODOT DETAIL SHEET DMS SPAN - 80'
OVERHEAD SIGN SUPPORT, AS PER PLAN A
COLOCATE EXISTING STATIC SIGN ON DMS TRUSS
REFER TO SHEET 125 FOR PLAN SHEET





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