

SHEET NUM.										PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
1110	1113		1031	1043						01/IMS/04	02/IMS/03						
			1.82							1.22	0.6	644	30030	1.82	MILE	TRAFFIC CONTROL REMOVAL OF PAVEMENT MARKING	
			0.55	0.14						0.46	0.23	646	10000	0.69	MILE	EDGE LINE, 4"	
			4.8							3.22	1.58	646	10010	4.8	MILE	EDGE LINE, 6"	
				0.06						0.04	0.02	646	10100	0.06	MILE	LANE LINE, 4"	
			4.8							3.22	1.58	646	10110	4.8	MILE	LANE LINE, 6"	
			0.28	0.07						0.23	0.12	646	10200	0.35	MILE	CENTER LINE	
												314	155	469	FT	CHANNELIZING LINE, 8"	
			320							214	106	646	10310	320	FT	CHANNELIZING LINE, 12"	
				68						46	22	646	10400	68	FT	STOP LINE	
				23						15	8	646	20300	23	EACH	LANE ARROW	
				4						3	1	646	20320	4	EACH	WRONG WAY ARROW	
				1						1		646	20350	1	EACH	LANE REDUCTION ARROW	
				348						233	115	646	20502	348	FT	DOTTED LINE, 4"	
			1,200							804	396	646	20504	1,200	FT	DOTTED LINE, 6"	
			0.35							0.23	0.12	646	50300	0.35	MILE	REMOVAL OF PAVEMENT MARKING	
				22.82						15.29	7.53	807	12010	22.82	MILE	WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6"	
				20.58						13.79	6.79	807	12110	20.58	MILE	WET REFLECTIVE EPOXY PAVEMENT MARKING, LANE LINE, 6"	
				8,679						5,815	2,864	807	12310	8,679	FT	WET REFLECTIVE EPOXY PAVEMENT MARKING, CHANNELIZING LINE, 12"	
				9,318						6,243	3,075	807	12410	9,318	FT	WET REFLECTIVE EPOXY PAVEMENT MARKING, DOTTED LINE, 6"	
			1							1		809	65990	1	EACH	ITS DEVICE, MISC.: AUTOMATED TRAFFIC RECORDER (ATR) SYSTEM	1031
				39.85						26.7	13.15	850	10010	39.85	MILE	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT)	
				8,744						5,858	2,886	850	10110	8,744	FT	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT)	
				6,625						4,439	2,186	850	10130	6,625	FT	GROOVING FOR 12" RECESSED PAVEMENT MARKING, (ASPHALT)	
				3.55						2.38	1.17	850	20010	3.55	MILE	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (CONCRETE)	
				574						385	189	850	20110	574	FT	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (CONCRETE)	
				2,054						1,376	678	850	20130	2,054	FT	GROOVING FOR 12" RECESSED PAVEMENT MARKING, (CONCRETE)	
		120								80	40	611	00400	120	FT	TRAFFIC SIGNALS 4" CONDUIT, TYPE E	1110
			53							36	17	625	25400	53	FT	CONDUIT, 2", 725.04	
			198							133	65	625	25500	198	FT	CONDUIT, 3", 725.04	
			54							36	18	625	25600	54	FT	CONDUIT, 4", 725.04	
			281							188	93	625	25902	281	FT	CONDUIT, JACKED OR DRILLED, 725.04, 4"	
			237							159	78	625	29000	237	FT	TRENCH	
			41							27	14	625	29400	41	FT	TRENCH IN PAVED AREA	
			4							3	1	625	30700	4	EACH	PULL BOX, 725.08, 18"	
			2							1	1	625	30706	2	EACH	PULL BOX, 725.08, 24"	
			2							1	1	625	31510	2	EACH	PULL BOX REMOVED	
			8							5	3	625	32000	8	EACH	GROUND ROD	
			278							186	92	625	36011	278	FT	UNDERGROUND WARNING/MARKING TAPE, AS PER PLAN	1110
		2								1	1	625	76000	2	EACH	ARC FLASH CALCULATIONS AND LABEL, TRAFFIC SIGNAL CONTROLLER CABINET	1110
			11							7	4	632	05006	11	EACH	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, BLACK	
			2							1	1	632	05086	2	EACH	VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, BLACK	
			13							9	4	632	25000	13	EACH	COVERING OF VEHICULAR SIGNAL HEAD	
			1,353							907	446	632	40700	1,353	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	
			6							4	2	632	64011	6	EACH	SIGNAL SUPPORT FOUNDATION, AS PER PLAN	1110
			371							249	122	632	69200	371	FT	POWER CABLE, 2 CONDUCTOR, NO. 4 AWG	
			2							1	1	632	70001	2	EACH	POWER SERVICE, AS PER PLAN	1111
			1							1		632	72111	1	EACH	SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 4, AS PER PLAN	1110
			3							2	1	632	72131	3	EACH	SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 12, AS PER PLAN	1110
			1							1		632	72141	1	EACH	SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 13, AS PER PLAN	1110
			1							1		632	72151	1	EACH	SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 14, AS PER PLAN	1110
			2							1	1	632	90101	2	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN	1110

GENERAL SUMMARY

DESIGN AGENCY



DESIGNER
TMT

REVIEWER
CWL 12-18-23

PROJECT ID
111404

SHEET TOTAL
P.533 1240


REV.	DATE	DESCRIPTION
1	1/13/25	PAY ITEM CHANGE

SHEET	LOCATION	625	625	625	625	625	625	625	625	625	625	625	632	632	632	632	632	632	632	632	632	632	633	633
		CONDUIT, 2", 725-04	CONDUIT, 3", 725-04	CONDUIT, 4", 725-04	CONDUIT, JACKED OR DRILLED, 725-04, 4"	TRENCH	TRENCH IN PAVED AREA	PULL BOX, 725.08, 18"	PULL BOX, 725.08, 24"	PULL BOX REMOVED	GROUND ROD	UNDERGROUND WARNING/MARKING TAPE, AS PER PLAN	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, BLACK	VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, BLACK	COVERING OF VEHICULAR SIGNAL HEAD	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	SIGNAL SUPPORT FOUNDATION, AS PER PLAN	POWER CABLE, 2 CONDUCTOR, NO. 4 AWG	POWER SERVICE, AS PER PLAN	SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 11, AS PER PLAN	SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 12, AS PER PLAN	SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 13, AS PER PLAN	SIGNAL SUPPORT, TYPE TC-81.22, DESIGN 14, AS PER PLAN	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN
		FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	FT	EACH	EACH	EACH	FT	EACH	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH
1114	GHENT RD. / NB I-77 RAMPS	19	25	16	207	52	2	1	1	4	52	6	1	7	678	3	245	1	1	1		1	1	1
1118	GHENT RD. / SB I-77 RAMPS	34	173	38	74	185	2	1	1	4	226	5	1	6	675	3	126	1		2	1		1	1
TOTALS CARRIED TO GENERAL SUMMARY		53	198	54	281	237	4	2	2	8	278	11	2	13	1353	6	371	2	1	3	1	1	2	2

REV.	DATE	DESCRIPTION
1	1/13/25	PAY ITEM CHANGE

SHEET	LOCATION	633	633	633	809	809	809																	
		CONTROLLER WORK PAD, AS PER PLAN	UNINTERRUPTIBLE POWER SUPPLY (UPS), 1000 WATT, AS PER PLAN	CONTROLLER ITEM, MISC.: COMMUNICATIONS	ADVANCE RADAR DETECTION, AS PER PLAN	STOP LINE RADAR DETECTION, AS PER PLAN	ATC CONTROLLER, AS PER PLAN (PROGRAM AND INSTALL ONLY)																	
		EACH	EACH	EACH	EACH	EACH	EACH																	
1114	GHENT RD. / NB I-77 RAMPS	1	1	1	2	2	1																	
1118	GHENT RD. / SB I-77 RAMPS	1	1	1	2	2	1																	
TOTALS CARRIED TO GENERAL SUMMARY		2	2	2	4	4	2																	

TRAFFIC SIGNAL DETAIL

DESIGN AGENCY	 GPD GROUP <small>Consulting Engineers, Planners, Architects, Surveyors & Scientists, Inc. 2025</small>
DESIGNER	
REVIEWER	KMG 12-18-23
PROJECT ID	111404
SHEET TOTAL	P.1113 1240

GROUND MOUNTED CONTROLLER WITH WORK PAD AND UNINTERRUPTIBLE POWER SUPPLY
 STA. 89+51.5, 61.1' LT.

AERIAL POWER CABLE, 53'
 (TO BE INSTALLED BY OTHERS)

EXISTING UTILITY POLE
 STA. 89+17.7, 66.0' LT.

AERIAL POWER CABLE, 121'
 (TO BE INSTALLED BY OTHERS)

PROPOSED POWER SOURCE
 STA. 87+97.8, 57.1' LT

SP-1, TYPE TC-81.22, DESIGN 14 WITH A 63' MAST ARM, A MECHANICAL DAMPER AND CONDUIT RISER
 STA. 89+69.6, 60.2' LT.

(1)-3" CONDUIT WITH (1)-7C & (2)-RADAR
 IN TRENCH = 11'

(1)-2" CONDUIT WITH (1)-POWER CABLE
 IN TRENCH = 19'

PB-1

(2)-4" CONDUITS WITH (3)-7C & (4)-RADAR
 IN TRENCH = 8'

(1)-4" CONDUIT WITH (2)-7C & (2)-RADAR
 JACKED OR DRILLED = 121'

PB-2

(1)-3" CONDUIT WITH (1)-7C
 IN TRENCH = 8'

SP-2, TYPE TC-81.22, DESIGN 14 WITH A 25' MAST ARM
 STA. 89+55.4, 67.1' RT.

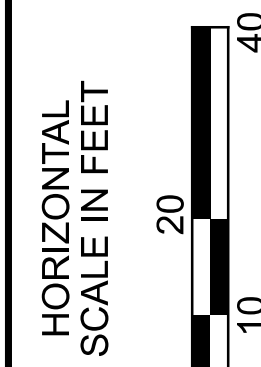
SP-3, TYPE TC-81.22, DESIGN 12 WITH A 48' MAST ARM
 STA. 90+42.7, 55.5' RT.

(1)-3" CONDUIT WITH (1)-7C & (2)-RADAR
 IN TRENCH = 6'

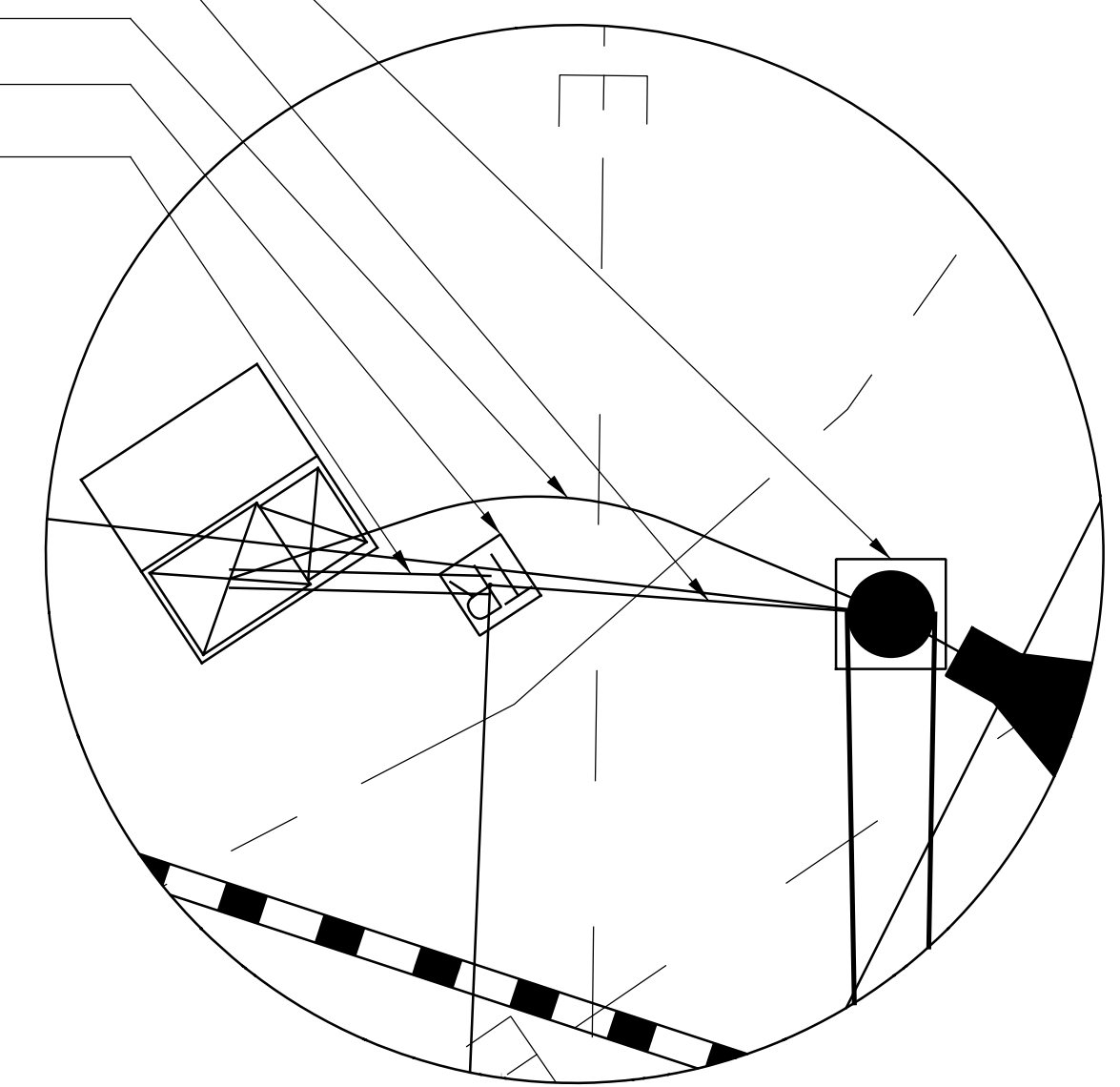
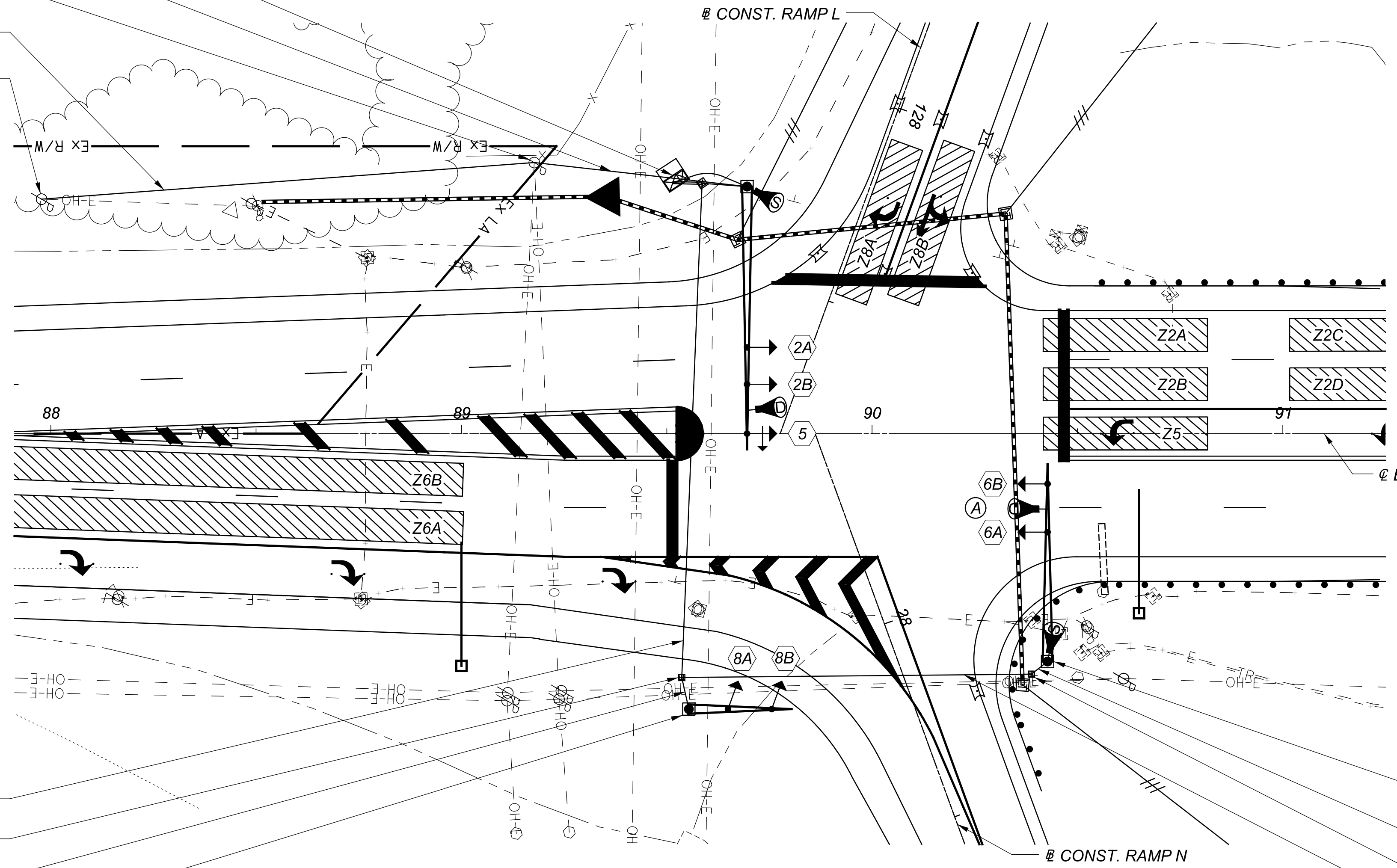
PB-3

(1)-4" CONDUIT WITH (1)-7C & (2)-RADAR
 JACKED OR DRILLED = 86'

SOUTHEAST CORNER (N.T.S.)



TRAFFIC SIGNAL PLAN
 GHENT RD. / NB I-77 RAMPS



REV.	DATE	DESCRIPTION
1	1/13/25	PAY ITEM CHANGE

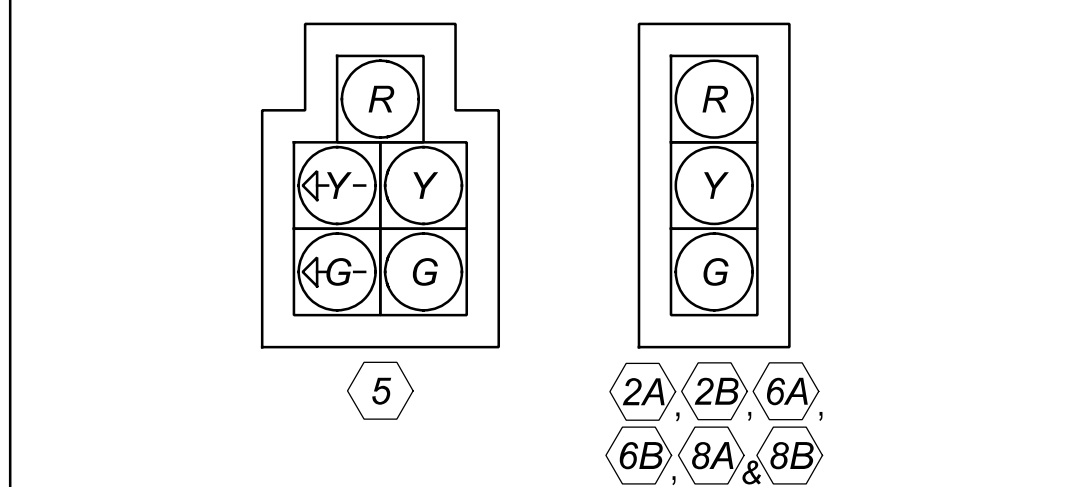
PULL BOX TABLE

PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN.)
PB-1	89+58.6	LT	61.0'	24 X 24
PB-2	89+53.7	RT	59.4'	18 X 18
PB-3	90+38.8	RT	58.6'	18 X 18

REMOVAL CHART

QUANTITY	REMOVAL ITEM DISCRIPTION	DELIVERED	DISPOSED
6	VEHICULAR SIGNAL HEADS	X	
1	POLE MOUNTED CONTROLLER CABINET	X	
1	CONTROLLER CABINET AND COMPONENTS	X	
1	UPS CABINET AND COMPONENTS	X	
1	METER BASE	X	
1	DISCONNECT SWITCH	X	
2	STRAIN POLE SUPPORTS		X
LUMP	SIGNAL CABLES		X

SIGNAL TYPES



- ALL SIGNAL HEADS SHALL HAVE 12" LED LENSES.
- ALL SIGNAL HEADS SHALL BE BLACK IN COLOR AND HAVE BACKPLATES.
- ALL SIGNAL HEAD VISORS SHALL BE CUTAWAY TYPE.

LEGEND

	PROP	EXIST
TRAFFIC SIGNAL, 2 UNIT, 3 UNIT, OR PHB HEAD, 12"		
TRAFFIC SIGNAL, 3 UNIT HEAD, 12" WITH ARROWS		
TRAFFIC SIGNAL, 4 OR 5 UNIT HEAD, 12"		
SIGNAL SUPPORT POLE		
CONTROLLER CABINET AND WORK PAD (TS-2)		
STOP-LINE RADAR DETECTION UNIT		
ADVANCED RADAR DETECTION UNIT		
DETECTION ZONE		

- NOTE:
- THE CONTRACTOR SHALL ENSURE THAT ALL SIGNAL FACES ARE CLEARLY VISIBLE TO ALL ONCOMING VEHICLES; CLEAR OF ANY OBSTRUCTION ONCE MOUNTED TO THE MAST ARMS.
 - THE CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO EXCAVATION.
 - FOR REFERENCE TO SIGN (A), SEE SHEET 1085.

DESIGN AGENCY

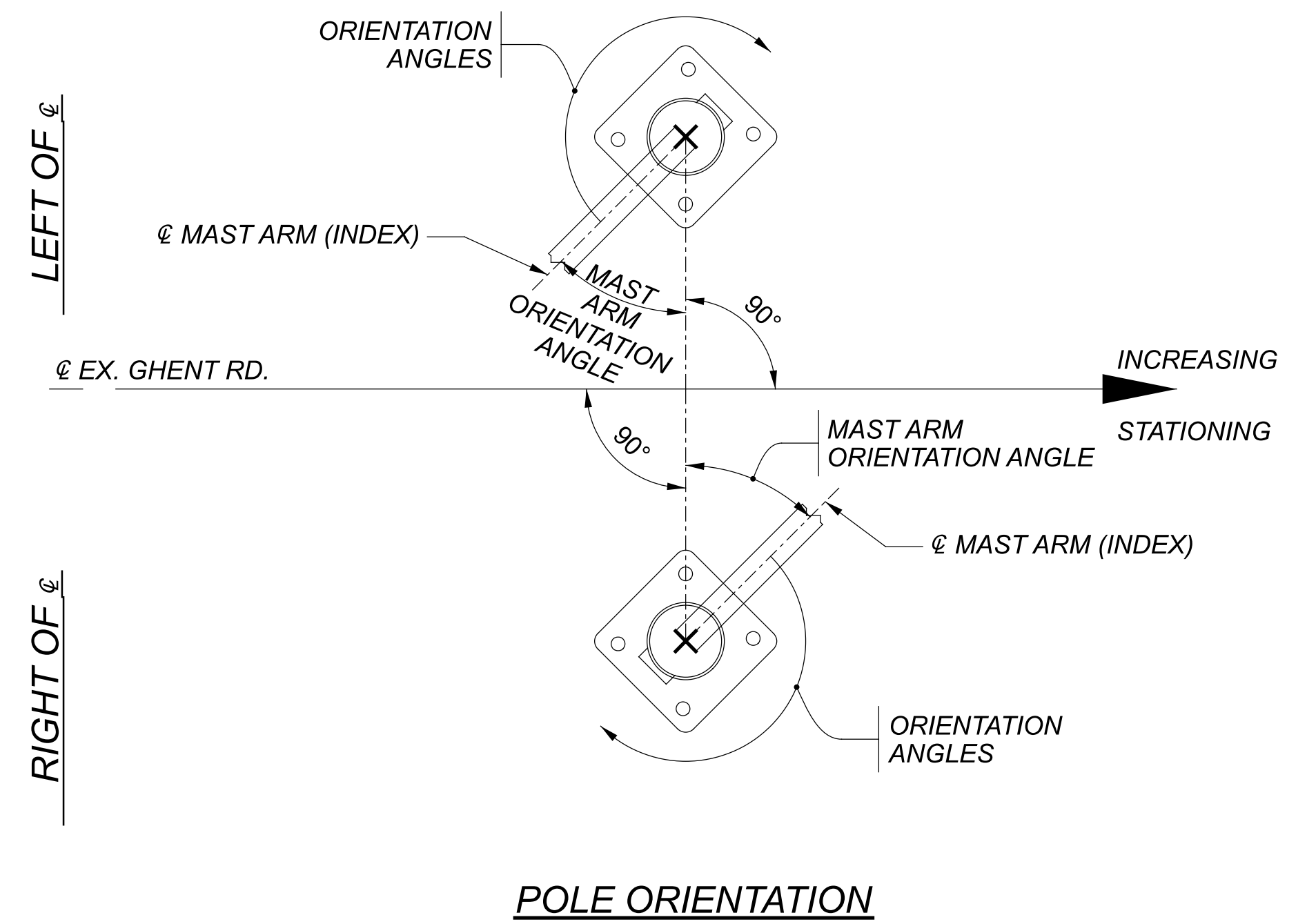
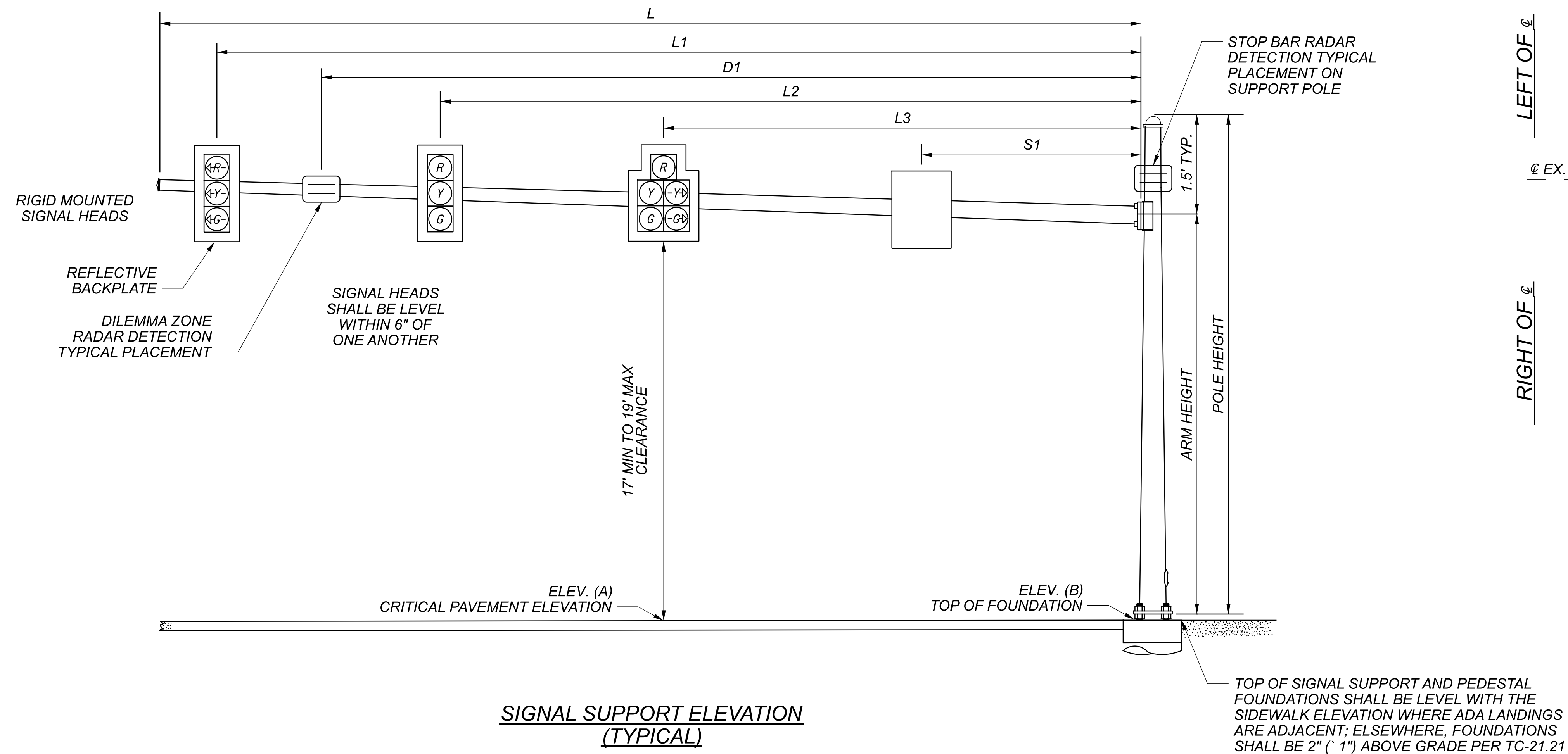


DESIGNER
 JAK

REVIEWER
 KMG 12-18-23

PROJECT ID
 11404

SHEET TOTAL
 P.1114 1240



SIGNAL SUPPORT ELEVATION (TYPICAL)

TOP OF SIGNAL SUPPORT AND PEDESTAL FOUNDATIONS SHALL BE LEVEL WITH THE SIDEWALK ELEVATION WHERE ADA LANDINGS ARE ADJACENT; ELSEWHERE, FOUNDATIONS SHALL BE 2" (1") ABOVE GRADE PER TC-21.21

MAST ARM TABLE

SUPPORT NO.	STATION	OFFSET	ELEVATION		SIGNAL SUPPORT DETAILS											MAST ARM A ANGLE DEG	ORIENTATION ANGLES FROM MAST ARM A	
			A (Pavt. Elev.)	B (Top of Found.)	DESIGN TYPE	DESIGN NO.	POLE HEIGHT FT	ARM HEIGHT FT	L FT	L1 FT	L2 FT	L3 FT	S1 FT	D1 FT	HANDHOLE DEG			
																	HANDHOLE DEG	
SP-1	89+69.6	60.2' LT.	1010.36	1010.56	TC-81.22	14	22	20.5	63	60	48	39	-	54.5	0	135		
SP-2	89+55.4	67.1' RT.	1009.04	1008.23	TC-81.22	4	22	20.5	25	20	9.5	-	-	-	90	135		
SP-3	90+42.7	55.5' RT.	1011.46	1009.59	TC-81.22	12	23	21.5	48	43	31.5	-	40	37	0	135		

REV.	DATE	DESCRIPTION
1	1/13/25	PAY ITEM CHANGE

DESIGN AGENCY

 DESIGNER
 JAK
 REVIEWER
 KMG 12-18-23
 PROJECT ID
 111404
 SUBSET TOTAL
 - -
 SHEET TOTAL
 P.1116 1240