

P:\216824.01\Production\CD's\GENERAL SUMMARY.dwg 14-Feb-22 12:40 PM

SHEET NUMBER														01/STR/PV	02/STR/OT	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION					
OFFICE CALCS	16	17	18	19	20	21	38	44	59	60	61	73	74												
																				TRAFFIC SIGNAL ALTERNATES (WRIGHT STREET)					
										585					585	632	40700	585	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG - (ALTERNATE 1)					
										1					1	632	80700	1	EACH	SIGNAL SUPPORT, MISC.: TYPE TC-81.22, DESIGN 2, AS PER PLAN - (ALTERNATE 1) (ODOT STD. BLACK)	56				
											2				2	632	81700	2	EACH	COMBINATION SIGNAL SUPPORT, MISC.: TYPE TC-81.22, DESIGN 2, AS PER PLAN (ALTERNATE 1) (ODOT STD. BLACK)	56				
											1				1	632	89601	1	EACH	PEDESTAL, 8', AS PER PLAN - (ALTERNATE 1)	57				
											2				2	625	17901	2	EACH	BRACKET ARM, AS PER PLAN - (ALTERNATE 2) (VALMONT)	55				
															570	632	40700	570	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG - (ALTERNATE 2)					
															1	632	80700	1	EACH	SIGNAL SUPPORT, MISC.: TYPE TC-81.22, DESIGN 2, DECORATIVE, AS PER PLAN - (ALTERNATE 2) (VALMONT)	56				
																2	632	81700	2	EACH	COMBINATION SIGNAL SUPPORT, MISC.: TYPE TC-81.22, DESIGN 2, DECORATIVE - (ALTERNATE 2) (VALMONT)	56			
																1	632	89601	1	EACH	PEDESTAL, 8', AS PER PLAN - (ALTERNATE 2) (VALMONT)	57			
																				RETAINING WALLS					
																		20	530	50020	20	FT	RETAINING WALL, MISC.: 8" BLOCK	46	
																				MAINTENANCE OF TRAFFIC					
																		41	410	12000	41	CY	TRAFFIC COMPACTED SURFACE, TYPE A OR B		
																		3	SPECIAL	61411300	3	EACH	WORK ZONE TRAFFIC SIGNAL	7	
																		LS	614	12420	LS		DETOUR SIGNING	8,9	
																		20	0.43	614	21000	0.43	MILE	WORK ZONE CENTER LINE, CLASS I	
																		20	616	10000	20	MGAL	WATER		
																				INCIDENTALS					
																		LS	108	10000	LS		CPM PROGRESS SCHEDULE		
																		LS	614	11000	LS		MAINTAINING TRAFFIC		
																		8	619	16010	8	MNTH	FIELD OFFICE, TYPE B		
																		LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING		
																		LS	624	10000	LS		MOBILIZATION		

GENERAL SUMMARY

CALCULATED
NKT
CHECKED
BMM

MIA-HIGH STREET
IMPROVEMENTS

MAINTENANCE OF TRAFFIC SIGNAL (CONT.)

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY TRAFFIC SIGNAL COMPONENTS REQUIRED TO BE HANDLED DURING THE RELOCATION OF POLES AND REVISIONS TO THE SIGNAL SYSTEM. WHEN A TRAFFIC SIGNAL MUST BE TAKEN OUT OF SERVICE BY THE CONTRACTOR, DUE TO CONSTRUCTION PROCEDURES, THIS OUTAGE SHALL NOT EXCEED 4 HOURS AND SHALL NOT INCLUDE THE HOURS OF 7 TO 9 AM AND 4 TO 6 PM, ANY SIGNALIZED INTERSECTION, WHERE THE SIGNAL IS OUT OF SERVICE DUE TO CONSTRUCTION PROCEDURES, OR DUE TO AN OUTAGE OR MALFUNCTION OF EQUIPMENT AS DESCRIBED ABOVE, SHALL BE PROTECTED, BY THE CONTRACTOR, BY THE INSTALLATION OF TEMPORARY "STOP" SIGNS.

ANY VEHICULAR TRAFFIC SIGNAL HEAD, EITHER NEW OR EXISTING WHICH WILL BE OUT OF OPERATION SHALL BE COVERED IN THE MANNER DESCRIBED IN 632.25.

THE CONTRACTOR SHALL MAINTAIN COMPLETE RECORDS OF MALFUNCTIONS INCLUDING:

1. TIME OF NOTIFICATION OF MALFUNCTION;
2. TIME OF WORK CREWS ARRIVAL TO CORRECT THE MALFUNCTION;
3. ACTIONS TAKEN TO CORRECT THE MALFUNCTION, INCLUDING A LIST OF PARTS REPAIRED OR REPLACED;
4. A DIAGNOSIS OF REASON FOR THE MALFUNCTION AND PROBABILITY OF REOCCURRENCE;
5. TIME OF COMPLETION OF THE REPAIR AND SYSTEM RESTORED TO FULL SERVICE.

A COPY OF THESE RECORDS SHALL BE PROVIDED TO THE ENGINEER WITHIN THREE (3) WORKING DAYS FOLLOWING COMPLETION OF EACH REPAIR.

ALL COSTS RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC.

ITEM 625 BRACKET ARM, AS PER PLAN - (ALTERNATE 2) (VALMONT)

THIS ITEM OF WORK SHALL CONSIST OF THE WORK AS DESCRIBED IN THE OHIO DEPARTMENT OF TRANSPORTATION ITEM 625 HIGHWAY LIGHTING, EXCEPT AS HERIN MODIFIED.

THE BRACKET ARM SHALL BE THE VALMONT BURNSVILLE BRACKET ARM, 2', AND BE GALVANIZED WITH A BLACK FINISH, PER ODOT SUPPLEMENTAL SPECIFICATION 916.

THE BRACKET ARM SHALL BE WRAPPED TO PROTECT THE FINISH DURING SHIPPING, UNLOADING AND INSTALLATION. THE CONTRACTOR IS TOTALLY RESPONSIBLE TO PROVIDE ADEQUATE PROTECTION FOR THE FINISH OF THE ARMS. IF THE FINISH IS DAMAGED DURING HANDLING, THE CONTRACTOR SHALL REPAIR THE FINISH PER THE MANUFACTURER'S RECOMMENDATIONS.

PAYMENT FOR ITEM 625 BRACKET ARM, AS PER PLAN - (ALTERNATE 2) (VALMONT) FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE AT THE CONTRACT EACH BID PRICE AND SHALL INCLUDE ALL LABOR, MATERIAL AND EQUIPMENT REQUIRED TO COMPLETE THIS ITEM OF WORK.

ITEM 630 SIGN HANGER ASSEMBLY, MAST ARM, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ODOT SPECIFICATIONS ITEM 630 AND 730, THE CONTRACTOR SHALL RIGIDLY ATTACH A SIGN TO THE MAST ARM. THE SIGN HANGER ASSEMBLY SHALL HAVE A BLACK POWDER COAT FINISH AND BE DESIGNED WITHOUT SET SCREWS, PIPE THREADS, RETAINER RINGS, AND SCREW LOCK BUCKLES. THE SADDLE USED TO FASTEN THE SUPPORT MEMBER TO THE MAST ARM SHALL ALSO HAVE A MULTI-TOOTH MOUNTING SURFACE TO INHIBIT MOVEMENT OR ROTATION. THIS ITEM SHALL INCLUDE ALL NECESSARY HARDWARE, FASTENERS, AND ACCESSORIES. ALL NECESSARY HARDWARE, FASTENERS, AND ACCESSORIES SHALL BE STAINLESS STEEL AND HAVE A BLACK FINISH.

PAYMENT FOR ITEM 630 SIGN HANGER ASSEMBLY, MAST ARM, AS PER PLAN SHALL BE AT THE CONTRACT EACH BID PRICE AND SHALL INCLUDE ALL LABOR, MATERIAL AND EQUIPMENT REQUIRED TO COMPLETE THIS ITEM OF WORK.

ITEM 630 SIGN SUPPORT ASSEMBLY, POLE MOUNTED, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ODOT SPECIFICATIONS ITEM 630 AND 730, THE CONTRACTOR SHALL RIGIDLY ATTACH A SIGN TO THE TRAFFIC POLE. THE POLE MOUNTED SUPPORT ASSEMBLY SHALL HAVE A BLACK FINISH. THIS ITEM SHALL INCLUDE ALL NECESSARY HARDWARE, FASTENERS, AND ACCESSORIES. ALL NECESSARY HARDWARE, FASTENERS, AND ACCESSORIES SHALL BE STAINLESS STEEL.

PAYMENT FOR ITEM 630 SIGN SUPPORT ASSEMBLY, POLE MOUNTED, AS PER PLAN SHALL BE AT THE CONTRACT EACH BID PRICE AND SHALL INCLUDE ALL LABOR, MATERIAL AND EQUIPMENT REQUIRED TO COMPLETE THIS ITEM OF WORK.

ITEM 630 SIGN, STREET NAME, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF THE WORK AS DESCRIBED IN OHIO DEPARTMENT OF TRANSPORTATION ITEM 630 TRAFFIC SIGNS AND SIGN SUPPORTS, EXCEPT AS HEREIN MODIFIED.

THE WORK SHALL INCLUDE THE PAINTING OF THE BACK OF THE MAST ARM MOUNTED STREET NAME SIGNS FLAT BLACK. THIS ITEM SHALL ALSO INCLUDE ALL NECESSARY HARDWARE FOR INSTALLATION TO THE MAST ARMS. THE EXPOSED HARDWARE SHALL BE STAINLESS STEEL, THE TYPE OF PAINT SHALL BE APPROVED BY THE ENGINEER PRIOR TO USE AND SHALL BE CAPABLE TO ADHERE TO ALUMINUM AND STAINLESS STEEL.

THE CONTRACTOR TO PROVIDE A MOCK UP OF THE STREET NAME SIGN PRIOR TO MANUFACTURING TO ALLOW THE ENGINEER TO APPROVE THE ACTUAL SIZE, FONT, AND COLORS.

PAYMENT FOR ITEM 630 SIGN, STREET NAME, AS PER PLAN, FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE AT THE CONTRACT EACH BID PRICE AND SHALL INCLUDE ALL LABOR, MATERIAL AND EQUIPMENT REQUIRED TO COMPLETE THIS ITEM OF WORK.

ITEM 630 SIGNING, MISC.: BLACK BACKGROUND, FLAT SHEET

THIS ITEM OF WORK SHALL CONSIST OF THE WORK AS DESCRIBED IN THE OHIO DEPARTMENT OF TRANSPORTATION ITEM 630 TRAFFIC SIGNS AND SIGN SUPPORTS, EXCEPT AS HEREIN MODIFIED.

THE WORK SHALL INCLUDE A BLACK BACKGROUND, FLAT SHEET TO BE MOUNTED TO THE BACK OF ALL R3-5 AND R3-7 SIGNS ONLY. THE BLACK BACKGROUND SHALL BE 2" LARGER ON ALL SIDES (INCLUDING RADIUS CORNERS) THAN THE SIGN PLACED IN THE FRONT, UNLESS OTHERWISE DIMENSIONED ON THE PLANS. THE CONTRACTOR IS TO SUBMIT THE DRAWINGS SHOWING HOW THE BLACK BACKGROUND WILL BE USED FOR EACH SIGN PRIOR TO MANUFACTURING.

PAYMENT FOR ITEM 630 BLACK BACKGROUND, FLAT SHEET, FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE AT THE CONTRACT SQUARE FOOT PRICE AND SHALL INCLUDE ALL LABOR, MATERIAL AND EQUIPMENT REQUIRED TO COMPLETE THIS ITEM OF WORK.

ITEM 632 VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12 INCH LENS, 1-WAY, POLYCARBONATE, AS PER PLAN, BLACK ITEM 632 VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12 INCH LENS, 1-WAY, POLYCARBONATE, AS PER PLAN, BLACK

IN ADDITION TO THE REQUIREMENTS OF C&MS 632 AND 732, THE FOLLOWING REQUIREMENTS SHALL APPLY:

1. SIGNAL HEADS SHALL BE CONSTRUCTED OF BLACK POLYCARBONATE PLASTIC AND VISORS SHALL BE CONSTRUCTED OF BLACK POLYCARBONATE PLASTIC WITH VISORS AS SPECIFIED AND MEET ITE SPECIFICATIONS.
2. PROPER EXTERIOR COLORS SHALL BE OBTAINED BY USE OF COLORED PLASTIC MATERIAL RATHER THAN PAINTING.
3. ALL UPPER SIGNAL SUPPORT HARDWARE AND PIPING UP TO AND INCLUDING THE WIRE INLET FITTING SHALL BE FERROUS METAL.
4. PIPE, SPACERS AND FITTINGS SHOULD BE CONSTRUCTED OF GALVANIZED STEEL, OR ALUMINUM, AND HAVE A BLACK FINISH, INCLUDING THE MAST ARM ATTACHMENT STEEL CABLES.
5. THE ENTRANCE FITTING SHALL BE OF THE TRI-STUD DESIGN WITH SERRATED RINGS IN ORDER TO ACHIEVE POSITIVE LOCKING.

ITEM 632 VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12 INCH LENS, 1-WAY, POLYCARBONATE, AS PER PLAN, BLACK ITEM 632 VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12 INCH LENS, 1-WAY, POLYCARBONATE, AS PER PLAN, BLACK (CONT.)

6. ALL SIGNAL HEADS BE RIGIDLY MOUNTED TO THE MAST ARM WITH THE YELLOW LENS LOCATED IN FRONT OF THE MAST ARM.

7. ALUMINUM BACKPLATES SHALL BE IN ACCORDANCE WITH THE C&MS AND INCLUDE A FLUORESCENT YELLOW REFLECTIVE BORDER.

8. THE LIGHT EMITTING DIODE (LED) SIGNAL LAMP UNITS SHALL MEET THE REQUIREMENTS OF C&MS 732.04-C. THE CONTRACTOR SHALL PROVIDE THE ENGINEER, IN WRITING, WITH THE LED MANUFACTURER NAME, SERIAL NUMBER, PART NUMBER, DESCRIPTION OF LAMP, AND DATE OF MANUFACTURE FOR ALL LED UNITS THAT ARE TO BE USED IN THE SIGNAL HEAD PRIOR TO INSTALLATION, FOR ACCEPTANCE AND WARRANTY PURPOSES.

9. SIGNAL HEADS SHALL HAVE A MINIMUM WALL THICKNESS OF 0.117 INCHES.

10. SIGNAL HEADS SHALL INCLUDE CUTAWAY TYPE VISORS UNLESS OTHERWISE SPECIFIED IN THE PLANS.

11. APPLY A BEAD OF SILICONE TO THE SIGNAL HEAD, WASHER, AND ENTRANCE ADAPTER SERRATIONS TO PREVENT WATER INTRUSION. ALSO, FILL THE SPACE BETWEEN CONCENTRIC SERRATION RINGS ON THE TOP OF THE SIGNAL HEAD TO COMPLETELY EXCLUDE WATER FROM THE SPACE BETWEEN THE CONCENTRIC RINGS.

12. ALL SIGNAL HEADS SHALL BE FIELD LOCATED AND APPROVED BY THE ENGINEER BEFORE FINAL WIRING.

PAYMENT FOR ITEM 632 VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12 INCH, 1-WAY, POLYCARBONATE, AS PER PLAN, BLACK AND ITEM 632 VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12 INCH, 1-WAY, POLYCARBONATE, AS PER PLAN, BLACK SHALL BE MADE FOR COMPLETE SIGNAL HEAD FURNISHED AND INSTALLED, INCLUDING ALL LABOR, EQUIPMENT, MATERIALS, AND NEW ATTACHMENT HARDWARE.

ITEM 632 PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF C&MS 632 AND 732 THE FOLLOWING SHALL APPLY:

1. SIGNAL HEADS AND VISORS SHALL BE CONSTRUCTED OF BLACK POLYCARBONATE PLASTIC AND MEET ITE SPECIFICATIONS.
2. PROPER EXTERIOR COLORS SHALL BE OBTAINED BY USE OF COLORED PLASTIC MATERIAL RATHER THAN PAINTING.
3. PIPE, SPACERS AND FITTINGS SHALL BE CONSTRUCTED OF GALVANIZED STEEL AND SHALL BE PAINTED BLACK PER ODOT SS 916.
4. THE PEDESTRIAN SIGNAL HEAD SHALL BE OF THE LED COUNTDOWN TYPE.
5. NEW ATTACHMENT HARDWARE AND FITTINGS SHALL BE USED.
6. THE LIGHT EMITTING DIODE (LED) SIGNAL LAMP UNITS SHALL MEET THE REQUIREMENTS OF C&MS 732.04-C. THE CONTRACTOR SHALL PROVIDE THE VILLAGE, IN WRITING, WITH THE LED MANUFACTURER NAME, SERIAL NUMBER, PART NUMBER, DESCRIPTION OF LAMP, AND DATE OF MANUFACTURE FOR ALL LED UNITS THAT ARE TO BE USED IN THE SIGNAL HEAD PRIOR TO INSTALLATION, FOR ACCEPTANCE AND WARRANTY PURPOSES.

PAYMENT FOR ITEM 632 PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN SHALL BE MADE FOR THE NUMBER OF COMPLETE SIGNAL HEAD FURNISHED AND INSTALLED, INCLUDING ALL LABOR, EQUIPMENT, MATERIALS AND NEW ATTACHMENT HARDWARE.

ITEM 632 PEDESTRIAN PUSHBUTTON, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ODOT SPECIFICATIONS 632 AND 732, THE FOLLOWING REQUIREMENTS SHALL APPLY:

1. THE BULL DOG PUSHBUTTON ASSEMBLY SHALL A DIE CAST ALUMINUM BODY PAINTED BLACK PER ODOT SS 916 AND A 316 STAINLESS STEEL BUTTON.
2. THE PUSHBUTTON SHALL HAVE PIEZO DRIVEN SOLID STATE SWITCH.
3. THE PUSHBUTTON ASSEMBLY SHALL HAVE AN INTEGRAL INDICATOR LIGHT THAT ILLUMINATES WHEN THE BUTTON IS PUSHED.
4. THE PUSHBUTTON SHALL SOUND A TONE WHEN THE BUTTON IS PUSHED AND SOUND A DIFFERENT TONE WHEN THEN BUTTON IS RELEASED.

PAYMENT FOR ITEM 632 PEDESTRIAN PUSHBUTTON, AS PER PLAN, FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE AT THE CONTRACT EACH BID PRICE AND SHALL INCLUDE ALL LABOR, MATERIAL AND EQUIPMENT REQUIRED TO COMPLETE THIS ITEM OF WORK.

ITEM 632 SIGNAL SUPPORT FOUNDATION, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ODOT SPECIFICATIONS 632 TRAFFIC SIGNAL EQUIPMENT, THE SIGNAL SUPPORT FOUNDATIONS SHALL BE INSTALLED PER 632.14.

PRIOR TO ORDERING THE SIGNAL SUPPORTS, THE CONTRACTOR SHALL CONTACT OUPS TO HAVE ALL THE UTILITIES LOCATED IN THE FIELD. THE CONTRACTOR SHALL HYDRO-EXCAVATE POLE FOUNDATIONS TO ENSURE ABSENCE OF CONFLICTS WITH POLE LOCATIONS. IF THE CONTRACTOR FAILS TO DO THIS PRIOR TO ORDERING, ANY CHANGES TO THE POLES OR MAST ARMS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

PAYMENT WILL BE AT THE CONTRACT UNIT PRICE AND WILL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND OTHER INCIDENTALS NECESSARY FOR EACH SUPPORT FURNISHED, IN PLACE, COMPLETE AND ACCEPTED.

ITEM 632 POWER SERVICE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ODOT SPECIFICATIONS 632 AND 732 AND SCD TC-83.10, THE FOLLOWING REQUIREMENTS SHALL APPLY:

1. THE METER BASE MOUNTING HEIGHT SHALL BE NO MORE THAN 5 FEET HIGH TO THE CENTER OF THE METER BASE FROM THE GROUND.
 2. THE CONTRACTOR SHALL SUPPLY THE NECESSARY METER BASES. THE CONTRACTOR WILL OBTAIN A 120/240 VOLT, 60 AMP SERVICE - 120 VOLT TO THE CONTROLLER CABINET.
 3. ALL POWER SERVICES SHALL BE METERED. THE METER SHALL HAVE A LEVER OPERATED BYPASS.
 4. THE METER AND DISCONNECT SWITCH SHALL BE LOCATED ON THE SIDE OF THE CONTROLLER CABINET.
- DISCONNECT SWITCH ENCLOSURES FURNISHED IN ACCORDANCE WITH CMS ITEM 632, POWER SERVICE, AS PER PLAN, SHALL INCLUDE A PADLOCK EQUAL TO MASTER NO. 4BKA OR WILSON BOHANNON 660, WITH LOCK BODY OF BRONZE OR BRASS AND KEYING SHALL BE TO THE STATE MASTER.

THE CONTRACTOR SHALL CONTACT AES OHIO FOR INFORMATION REGARDING THE METER BASE INSTALLATION PRIOR TO ORDERING POLES AND CABINET. THE VOLTAGE SUPPLIED SHALL BE NOMINALLY 120/240 VOLTS (120 VOLTS FOR THE SIGNAL).

PAYMENT FOR ITEM 632 POWER SERVICE, AS PER PLAN, FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE AT THE CONTRACT EACH BID PRICE AND SHALL INCLUDE ALL LABOR, MATERIAL AND EQUIPMENT REQUIRED TO COMPLETE THIS ITEM OF WORK.

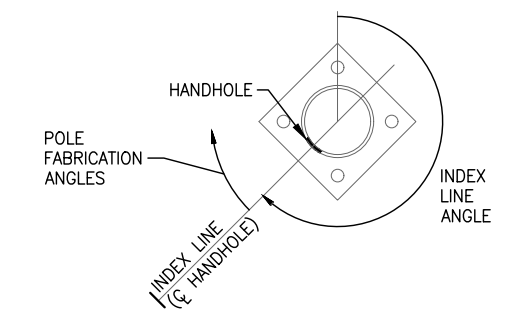
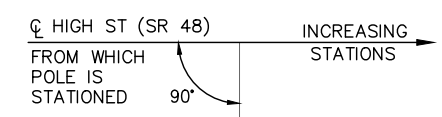
CALCULATED
AJH
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TRAFFIC SIGNAL GENERAL NOTES

MIA HIGH STREET IMPROVEMENTS

55
94

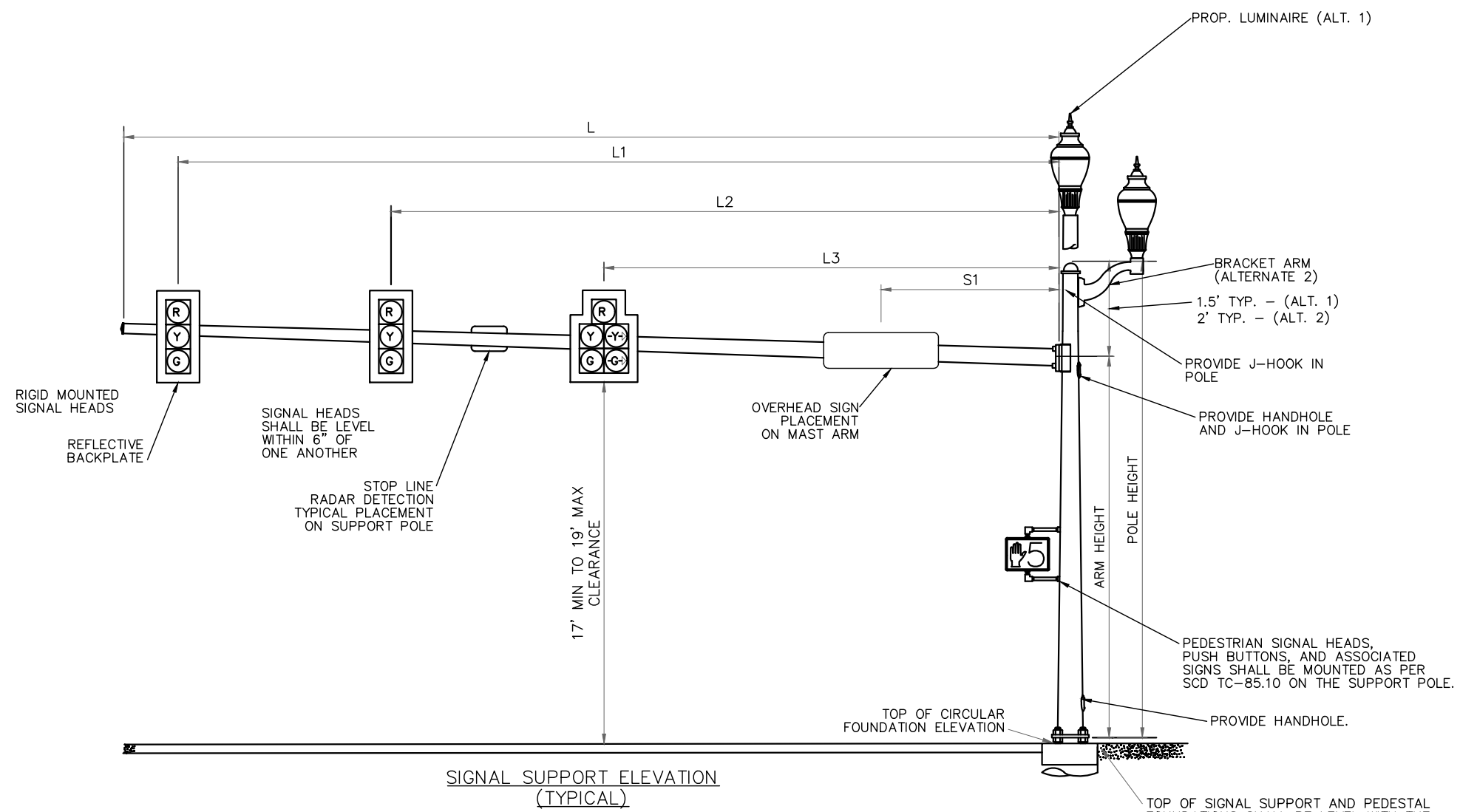
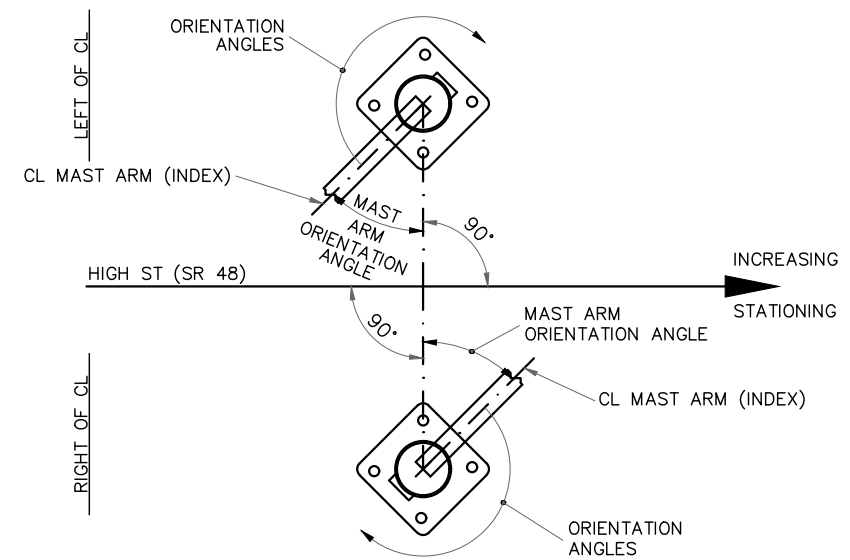
PEDESTRIAN POLE ORIENTATION DETAIL



PEDESTAL POLE DATA

POLE NUMBER	STATION	OFFSET (FEET) AND SIDE	POLE HEIGHT (FT.)	INDEX LINE ANGLE (DEG.)	ANGLES (DEG) FROM INDEX LINE (ALL ANGLES MEASURES CLOCKWISE C)		
					SIGNAL CONDUIT ELL	PEDESTRIAN SIGNAL	PEDESTRIAN PUSHBUTTON
*PS-1	738+31.44	32.51' RT	8'	230	270	130/220	130/220

*PEDESTAL SHALL INCLUDE A DUAL MOUNTING BRACKET FOR THE MOUNTING OF THE PEDESTRIAN PUSHBUTTONS AND PEDESTRIAN SIGNS



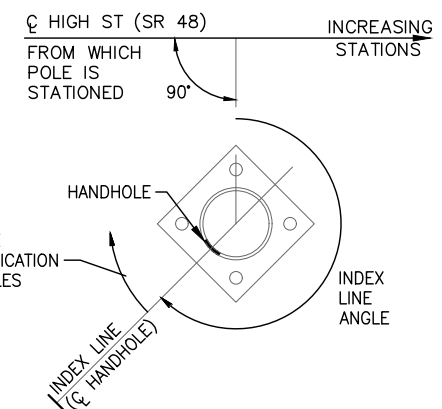
- NOTE:
- ALL BASE BID MAST ARMS SHALL HAVE A 6"-12" RISE AFTER ERECTION.
 - ALL DECORATIVE MAST ARMS (ALTERNATE 2) SHALL HAVE A 60" UPSWEEP.

MAST ARM TABLE

SUPPORT NO.	STATION	OFFSET	TOP OF FOUNDATION ELEVATION	SIGNAL SUPPORT DETAILS - (ALT. 1)			SIGNAL SUPPORT DETAILS (ALT. 2)			SIGNAL SUPPORT DETAILS					ORIENTATION ANGLES FROM MAST ARM										
				DESIGN TYPE	DESIGN NO.	POLE HEIGHT (ALT. 1)	MAST ARM ATTACHMENT HEIGHT (ALT. 1)	LUMINAIRE MOUNTING HEIGHT (ALT. 1)	POLE HEIGHT (ALT. 2)	MAST ARM ATTACHMENT HEIGHT (ALT. 2)	BRACKET ARM ATTACHMENT HEIGHT (ALT. 2)	LUMINAIRE MOUNTING HEIGHT (ALT. 2)	L	L1	L2	L3	S1	MAST ARM A ANGLE	PEDESTRIAN SIGNAL	PEDESTRIAN BUTTON	SIGNAL CONDUIT ELL	LUMINAIRE CONDUIT ELL	BRACKET ARM (ALTERNATE 2)	BASE HANDHOLE	MAST ARM HANDHOLE
SP-1	738+87.91	23.0 LT	926.01	TC-81.22	2	22.5	21	-	*18	*16	-	-	32	29.0	21.0	-	11	90	0/90	0/90	25	-	-	180	180
SP-2	738+25.45	23.0 LT	927.26	TC-81.22	2	21.5	20	21.5	*17	*15	*16	*17	24	20.0	10.0	-	5.0	0	180/270	180/270	255	85	180	180	180
SP-3	738+90.61	23.0 RT	926.81	TC-81.22	2	21.5	20	21.5	*17	*15	*16	*17	24	20.5	10.5	-	5.0	0	180/270	180/270	250	90	180	180	180

*ALTERNATE 2 DETAILS REPLACES ALTERNATE 1
DETAILS AS SHOWN IN TABLE

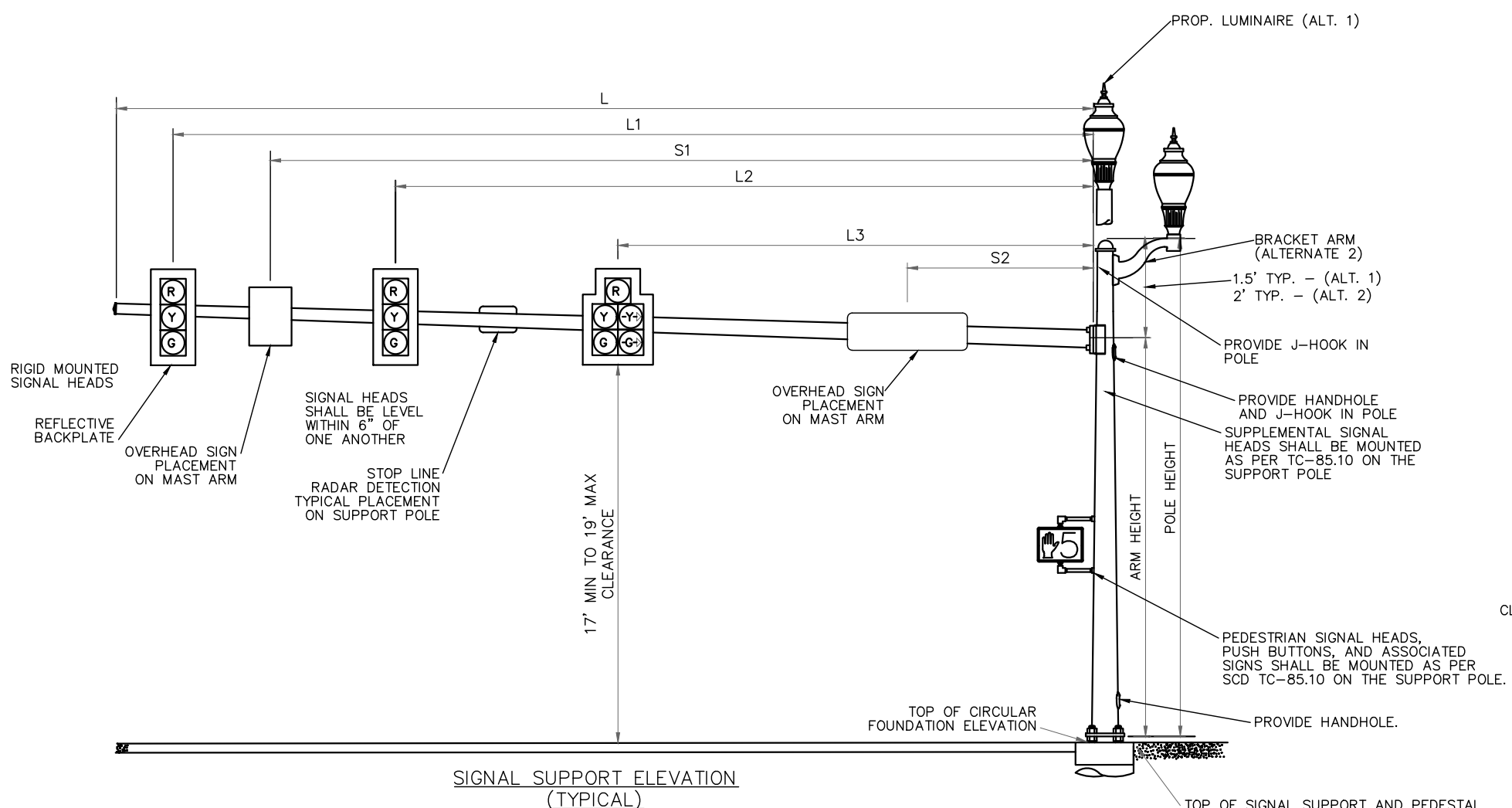
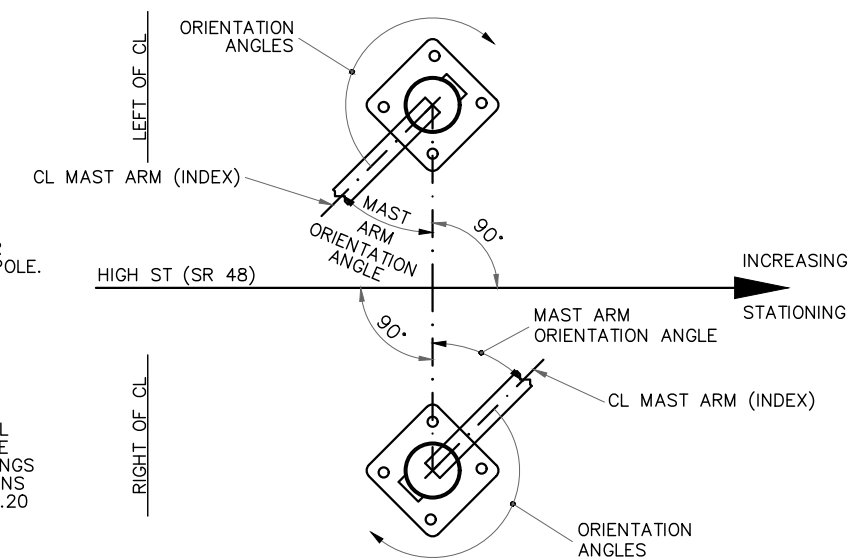
PEDESTRIAN POLE ORIENTATION DETAIL



PEDESTAL POLE DATA

POLE NUMBER	STATION	OFFSET (FEET)	POLE HEIGHT (FT.)	INDEX LINE ANGLE (DEG.)	ANGLES (DEG) FROM INDEX LINE (ALL ANGLES MEASURES CLOCKWISE C)		
					SIGNAL CONDUIT ELL	PEDESTRIAN SIGNAL	PEDESTRIAN PUSHBUTTON
*PS-1	725+68.62	23.49' RT	8'	270	30	180/270	180/270
PS-2	724+90.91	28.51' RT	8'	180	345	180	180
PS-3	723+59.14	28.50' RT	8'	180	280	180	180

*PEDESTAL SHALL INCLUDE A DUAL MOUNTING BRACKET FOR THE MOUNTING OF THE PEDESTRIAN PUSHBUTTONS AND PEDESTRIAN SIGNALS



- NOTE:
- ALL BASE BID MAST ARMS SHALL HAVE A 6"-12" RISE AFTER ERECTION.
 - ALL DECORATIVE MAST ARMS (ALTERNATE 2) SHALL HAVE A 60" UPSWEEP.

MAST ARM TABLE

SUPPORT NO.	STATION	OFFSET	TOP OF FOUNDATION ELEVATION	SIGNAL SUPPORT DETAILS- (ALT. 1)			SIGNAL SUPPORT DETAILS (ALT. 2)			SIGNAL SUPPORT DETAILS						ORIENTATION ANGLES FROM MAST ARM													
				DESIGN TYPE	POLE DESIGN NO.	MAST ARM DESIGN NO.	POLE HEIGHT (ALT. 1)	MAST ARM ATTACHMENT HEIGHT (ALT. 1)	LUMINAIRE MOUNTING HEIGHT (ALT. 1)	POLE HEIGHT (ALT. 2)	MAST ARM ATTACHMENT HEIGHT (ALT. 2)	BRACKET ARM ATTACHMENT HEIGHT (ALT. 2)	LUMINAIRE MOUNTING HEIGHT (ALT. 2)	L	L1	L2	L3	S1	S2	S3	MAST ARM A ANGLE	MAST ARM B ANGLE	PEDESTRIAN SIGNAL	PEDESTRIAN BUTTON	SIGNAL CONDUIT ELL	LUMINAIRE CONDUIT ELL	BRACKET ARM (ALTERNATE 1)	BASE HANDHOLE	MAST ARM HANDHOLE
1	726+25.94	22.67' LT	924.16	TC-81.22	2	2	21.5	20	-	*17	*15	-	-	30	26	16	-	8	8	8	90	-	0/90	0/90	40	-	180	180	
2	725+74.32	30.50' LT	922.95	TC-81.22	2	2	22.5	21	22.5	*18	*16	*17	*18	30	27	17	-	9	9	9	0	-	0/270	0/270	0	245	*180	180	180
3	726+22.08	33.13' RT	924.25	TC-12.31	6	4	21.5	20	21.5	*17	*15	*16	*17	35	31.5	21.5	-	9.5	9.5	9.5	0	-	0/270	0/270	10	60	*180	180	180
-	-	-	-	-	-	12	-	20	-	-	*15	-	-	40	36	26	-	13	13	13	-	270	-	-	-	-	-	-	
4	724+14.44	22.75' LT	922.41	TC-81.22	12	4	22	20.5	22	*17.5	*15.5	*16.5	*17.5	37	33.5	24.5	15.5	9	9	9	270	-	-	-	0	160	*270	180	180
-	-	-	-	-	-	2	-	20.5	-	-	*15.5	-	-	23	19.5	9.5	-	4.5	4.5	4.5	-	0	-	-	-	-	-	-	
5	724+65.17	50.44' RT	923.87	TC-81.22	13	13	20.5	19	20.5	*18	*14	*17	*18	51	48	38	-	15	15	15	0	-	-	-	90	185	*180	180	180

*ALTERNATE BID 2 DETAILS REPLACES ALTERNATE BID 1 DETAILS AS SHOWN IN TABLE

SYMBOL SCHEDULE

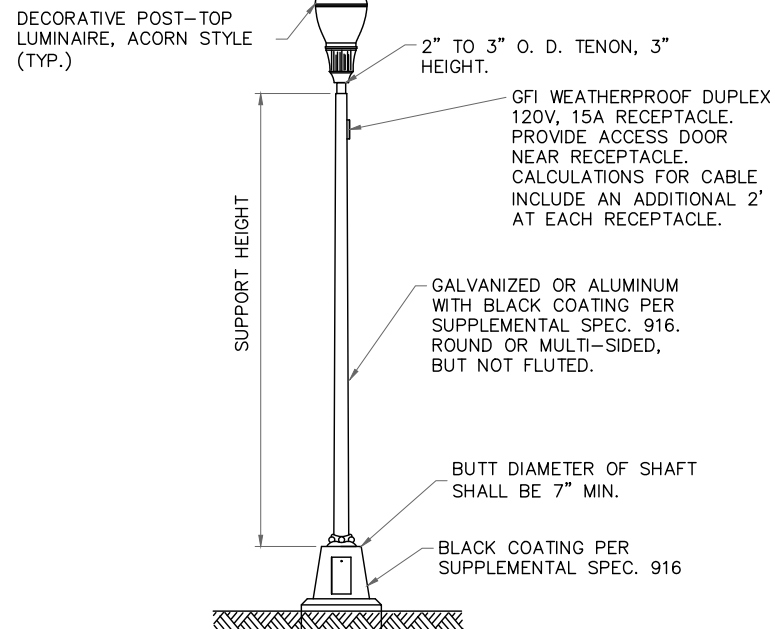
MARK	LAMP TYPE	VOLTS	SOURCE AND WATTAGE BALLAST	DESCRIPTION	MFR. AND CATALOG SERIES
A ●	LED	120-277V	78 WATT	DECORATIVE: GRANVILLE LED III PREMIER POST TOP LUMINAIRE	HOLOPHANE GRANVILLE III LED WITH VALMONT LIGHT POLE OR APPROVED EQUAL PER PLAN NOTE FIXTURE: GPD3 P40 40K MVOLT MS GL3 BK RB BK POLE: 16 SHARP FLUTED 15' POLE-P9-FP/GV-(2)BANNER ARMS-(2) FLAG HOLDERS-FST-HN17AC-1"AB
B ●	LED	120-277V	78 WATT	DECORATIVE: GRANVILLE LED III PREMIER POST TOP LUMINAIRE W/ HOUSE SHIELD	HOLOPHANE GRANVILLE III LED WITH VALMONT LIGHT POLE OR APPROVED EQUAL PER PLAN NOTE FIXTURE: GPD3 P40 40K MVOLT MS GL3 BK RB BK GVDHSS90 POLE: 16 SHARP FLUTED 15' POLE-P9-FP/GV-(2)BANNER ARMS-(2) FLAG HOLDERS-FST-HN17AC-1"AB
□				PC & PG STYLE POLYMER CONCRETE BOX & COVER, OPEN BASE BOX, 36" DEPTH, LIGHTING LOGO	PULL BOX, 725.06 *SIZES LISTED BELOW

ELECTRICAL GENERAL NOTES

1. ALL ELECTRICAL WORK SHALL CONFORM WITH THE REQUIREMENTS OF THE MOST RECENT VERSION OF THE OHIO BUILDING CODE, THE N.E.C. AND N.F.P.A. STANDARD NO. 70, AND IS SUBJECT TO THE APPROVAL OF THE AUTHORITY HAVING JURISDICTION.
2. ALL NOTED MOUNTING HEIGHTS ARE FROM FINISHED GRADE TO CENTER OF DEVICE UNLESS OTHERWISE NOTED.
3. THREE No. 8 AWG. AND NO. 2 AWG. 600 VOLT DISTRIBUTION CABLES SHALL BE USED FOR SUPPLYING POWER TO THE POLES.
4. THREE No. 10 AWG. POLE AND BRACKET CABLES SHALL BE USED TO SUPPLY POWER TO THE LUMINAIRE.
5. THREE No. 10 AWG. POLE AND BRACKET CABLES SHALL BE USED TO SUPPLY POWER TO THE OUTLET.

GENERAL NOTES

1. CONDUIT PLACEMENT IN ELECTRICAL DRAWINGS ARE DRAWN FOR CLARITY. ACTUAL CONDUIT SHOULD BE INSTALLED IN EXISTING RIGHT-OF-WAYS. COORDINATE EXACT CONDUIT ROUTES WITH THE ENGINEER TO AVOID CONFLICT WITH WATER SERVICE VALVES, SIGNAGE, CURBS, TREES AND OTHER LANDSCAPING.
2. CONTRACTOR SHALL LOCATE ALL EXISTING UNDERGROUND UTILITIES AND MISCELLANEOUS CONDUIT AND PIPES PRIOR TO DIGGING. ANY DAMAGE TO UNDERGROUND UTILITIES WHEN DIGGING MUST BE REPAIRED BY THIS CONTRACTOR. NOTE: ALL REPAIRS AND MODIFICATIONS SHALL BE CLOSELY COORDINATED WITH OWNING UTILITIES OFFICIALS.
3. STUB CONDUIT THROUGH PULL BOX SIDEWALLS. USE A MANUFACTURER'S RECOMMENDED WALL PUNCH AS NECESSARY FOR CONDUIT KNOCKOUTS. SIZE KNOCKOUT ONE TRADE SIZE LARGER THAN CONDUIT TO ALLOW FOR CONDUIT MOVEMENT. COORDINATE WITH THE ENGINEER FOR LOCATIONS. MOUNT BOX SUCH THAT THE TOP OF THE BOX WILL BE FLUSH WITH THE TOP OF FINISH SURFACE.
4. CONTRACTOR TO SUPPLY/INSTALL/WIRE ELECTRIC SERVICE ENCLOSURE WITH CONTENTS AND FOUNDATION.
5. THE LOCATION OF UNDERGROUND CONDUIT, SHALL BE MARKED BY USE OF CONTINUOUS IDENTIFYING TAPE BURIED IN THE TRENCH ABOVE THE LINE. THE IDENTIFYING TAPE SHALL BE AN INERT MATERIAL, APPROXIMATELY 6" WIDE, COMPOSED OF POLYETHYLENE PLASTIC, HIGHLY RESISTANT TO ALKALIS, ACID OR OTHER CHEMICAL COMPONENTS LIKELY TO BE ENCOUNTERED IN SOILS. THE TAPE SHALL BE BRIGHT YELLOW WITH IDENTIFYING PRINTING "ELECTRIC" IN BLACK LETTERS, ONE SIDE ONLY. TAPES SHALL BE SUPPLIED IN CONTINUOUS ROLLS WITH IDENTIFYING LETTERING REPEATED THE FULL LENGTH OF THE TAPE. IDENTIFYING TAPES SHALL BE BURIED IN THE ELECTRIC LINE TRENCH WITH ONE STRIP PLACED APPROXIMATELY DOWN THE CENTERLINE AND LOCATED APPROXIMATELY 8" TO 12" BELOW FINISHED GRADE. THE TAPE SHALL BE PLACED IN THE TRENCH WITH THE PRINTED SIDE UP AND SHALL BE ESSENTIALLY PARALLEL WITH THE FINISHED SURFACE. THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO ENSURE THAT THE TAPE IS NOT PULLED, DISTORTED OR OTHERWISE MISPLACED IN COMPLETING THE TRENCH BACKFILL. TAPE SHALL BE ALLEN SYSTEM'S TERRA TAPE, TECTA TAPE OR EQUAL AS APPROVED BY THE ENGINEER.



LIGHT POLE, DECORATIVE – (ALTERNATE 1) (ATON15)

PULLBOX TABLE

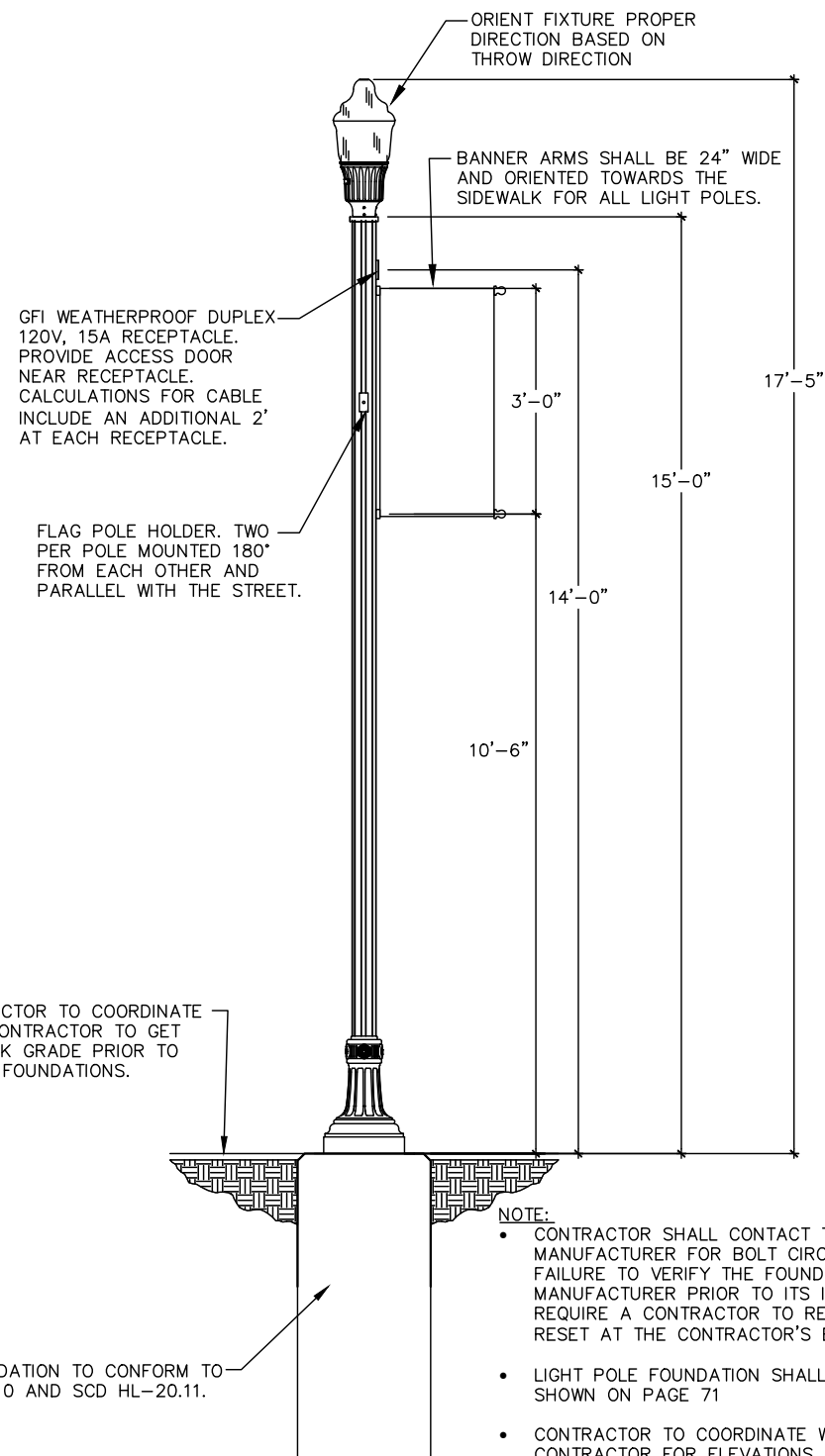
PULL BOX #	STATION	SIDE	OFFSET	SIZE* (725.06)
PBx1	724+10.43	LT	21.75'	7
PBx2	724+65.00	RT	54.68'	7
PBx3	725+78.27	LT	31.80"	7
PBx4	726+25.50	RT	30.69'	7
PBx5	734+52.72	RT	22.00'	7
PBx6	735+00.33	LT	29.50'	18
PBx7	735+24.54	RT	22.00'	7
PBx8	738+21.43	LT	22.72'	7
PBx9	738+94.50	RT	23.07'	7

*ALL PULL BOXES SHALL BE ODOT SCD HL-30.11.

LUMINAIRES NOTES:

1A-7, 1A-9, 1A-13 TO 1A-17
1A-21 TO 1A-27, 1A-31 TO 1A-34 "A" FIXTURES
1D-3, 1D-4, 1D-5, 1D-8, 1D-14,
1D-20 TO 1D-26, 1D-30

1D-1, 1D-6, 1D-10, 1D-12,
1D-16, 1D-18, 1D-28, 1D-32 "B" FIXTURES
1A-2, 1A-5, 1A-11, 1A-19, 1A-29



LIGHT POLE, DECORATIVE – (ALTERNATE 2) (VALMONT)

NOTE:

- CONTRACTOR SHALL CONTACT THE POLE MANUFACTURER FOR BOLT CIRCLE DIMENSIONS. FAILURE TO VERIFY THE FOUNDATION WITH THE MANUFACTURER PRIOR TO ITS INSTALLATION WILL REQUIRE A CONTRACTOR TO RECONSTRUCT, OR RESET AT THE CONTRACTOR'S EXPENSE.
- LIGHT POLE FOUNDATION SHALL FOLLOW THE DETAIL SHOWN ON PAGE 71
- CONTRACTOR TO COORDINATE WITH ROADWAY CONTRACTOR FOR ELEVATIONS OF SIDEWALK TO ENSURE THE FOUNDATION WILL BE FLUSH WITH THE SIDEWALK.

ELECTRIC CONTRACTOR TO COORDINATE WITH ROADWAY CONTRACTOR TO GET FINISHED SIDEWALK GRADE PRIOR TO INSTALLING POLE FOUNDATIONS.

LIGHT POLE FOUNDATION TO CONFORM TO ODOT C&MS 625.10 AND SCD HL-20.11.

STREET LIGHTING NOTES AND DETAILS

MIA HIGH STREET IMPROVEMENTS

CALCULATED
AJH
CHECKED
CCE

CALCULATED
AJH
CHECKED
CCE

REF NO.	SHEET NO.	SIDE	ROADWAY	STATION TO STATION	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	
					CONNECTION, FUSED PULL APART, AS PER PLAN	CONNECTION, UNFUSED PULL APART	CONNECTION, UNFUSED PERMANENT	LIGHT POLE, DECORATIVE, AS PER PLAN - (ALTERNATE 1) (ODOT STD.)	LIGHT POLE, DECORATIVE, AS PER PLAN - (ALTERNATE 2) (VALMONT)	LIGHT POLE FOUNDATION, 24" X 6" DEEP, AS PER PLAN	NO. 2 AWG 600 VOLT DISTRIBUTION CABLE	NO. 8 AWG 600 VOLT DISTRIBUTION CABLE	NO. 10 AWG POLE AND BRACKET CABLE - (ALTERNATE 1) (ODOT STD.)	NO. 10 AWG POLE AND BRACKET CABLE - (ALTERNATE 2) (VALMONT)	CONDUIT, 2", 725.051	CONDUIT, 3", 725.051	LUMINAIRE, POST TOP, SOLID STATE (LED), AS PER PLAN. ACORN STYLE, REFRACTIVE GLASS, 4000K, BLACK FINISH - (ALTERNATE 1) (ODOT STD.)	LUMINAIRE, DECORATIVE, AS PER PLAN - (ALTERNATE 2) (HOLOPHANE)	TRENCH	PULL BOX, 725.06, SIZE 7	PULL BOX, 725.06, SIZE 18	GROUND ROD	POWER SERVICE, AS PER PLAN
1A-2	76	LT	HIGH STREET (SR 48)	724+14.44	3																		
C-2A	76	LT	HIGH STREET (SR 48)	724+10.43 TO 725+78.27							36			96	90	4			1	1	4		4
PBx1	76	LT	HIGH STREET (SR 48)	724+10.43																	1		
C-2B	76	LT	HIGH STREET (SR 48)	724+10.43 TO 725+78.27							534					173							173
1A-5	76	LT	HIGH STREET (SR 48)	725+74.32	3																		
C-10	76	LT	HIGH STREET (SR 48)	725+74.32 TO 725+78.27										36							4		4
PBx3	76	LT	HIGH STREET (SR 48)	725+78.27			3																1
C-11	76	LT	HIGH STREET (SR 48)	725+78.27 TO 727+04.90								420											127
1A-7	76	LT	HIGH STREET (SR 48)	727+04.90	3	1		1	1	1				138	138				1	1		1	
C-12	76	LT	HIGH STREET (SR 48)	727+04.90 TO 729.03.69										645	645								199
1A-9	76	LT	HIGH STREET (SR 48)	729.03.69	3	1		1	1	1													1
C-13	76, 77	LT	HIGH STREET (SR 48)	729.03.69 TO 730+54.80										504	504								152
1A-11	77	LT	HIGH STREET (SR 48)	730+54.80	3	1		1	1	1													1
C-14	77	LT	HIGH STREET (SR 48)	730+54.80 TO 731+99.74										483	483								145
1A-13	77	LT	HIGH STREET (SR 48)	731+99.74	3	1		1	1	1													1
C-15	77	LT	HIGH STREET (SR 48)	731+99.74 TO 733+27.18										432	432								128
1A-15	77	LT	HIGH STREET (SR 48)	733+27.18	3	1		1	1	1													1
C-16	77	LT	HIGH STREET (SR 48)	733+27.18 TO 734+64.76										480	480								144
1A-17	77	LT	HIGH STREET (SR 48)	734+64.76	3	1		1	1	1													1
C-17	77	LT	HIGH STREET (SR 48)	734+70.76 TO 735+00.33										117	117								31
1D-1	76	RT	HIGH STREET (SR 48)	723+45.98	3	1		1	1	1													1
C-1	76	RT	HIGH STREET (SR 48)	723+45.98 TO 724+65.00										402	402								126
1D-3	76	RT	HIGH STREET (SR 48)	724+65.17	3																		1
C-3	76	RT	HIGH STREET (SR 48)	724+65.17 TO 724+65.00										36									4
PBx2	76	RT	HIGH STREET (SR 48)	724+65.00			3																1
C-4	76	RT	HIGH STREET (SR 48)	724+65.00 TO 725+08.46										207	207								56
1D-4	76	RT	HIGH STREET (SR 48)	725+08.46	3	1		1	1	1													1
C-5	76	RT	HIGH STREET (SR 48)	725+08.46 TO 726+25.50										405	405								119
1D-6	76	RT	HIGH STREET (SR 48)	726+22.08	3																		1
C-6	76	RT	HIGH STREET (SR 48)	726+22.08 TO 726+25.50																			4
PBx4	76	RT	HIGH STREET (SR 48)	726+25.50			3																1
C-7	76	RT	HIGH STREET (SR 48)	726+25.50 TO 727+96.04										558	558								173
1D-8	76	RT	HIGH STREET (SR 48)	727+96.04	3	1		1	1	1													1
C-8	76	RT	HIGH STREET (SR 48)	727+96.04 TO 729+72.25										579	579								177
1D-10	76	RT	HIGH STREET (SR 48)	729+72.25	3	1		1	1	1													1
C-9	76, 77	RT	HIGH STREET (SR 48)	729+72.25 TO 731+19.06										489	489								147
1D-12	77	RT	HIGH STREET (SR 48)	731+19.06	3	1		1	1	1													1
C-19	77	RT	HIGH STREET (SR 48)	731+19.06 TO 732+50.60										444	444								132
1D-14	77	RT	HIGH STREET (SR 48)	732+50.60	3	1		1	1	1													1
C-20	77	RT	HIGH STREET (SR 48)	732+50.60 TO 733+94.34										483	483								145
1D-16	77	RT	HIGH STREET (SR 48)	733+94.34	3	1		1	1	1													1
C-21	77	RT	HIGH STREET (SR 48)	733+94.34 TO 734+52.72										198	198								58
PBx5	77	RT	HIGH STREET (SR 48)	734+52.72																			1
C-22	77	RT, LT	HIGH STREET (SR 48)	734+52.72 TO 735+00.33										225	225								70
PBx6	77	LT	HIGH STREET (SR 48)	735+00.33			6																1
C-18	77	LT	HIGH STREET (SR 48)	735+00.33 TO 735+00.44										168	84								18
PS-1	77	LT	HIGH STREET (SR 48)	735+00.44										1200	600								1
C-23	77	LT	HIGH STREET (SR 48)	735+00.44 TO 735+00.33										168	84								1
C-24	77	LT	HIGH STREET (SR 48)	735+00.33 TO 736+51.27										492	492								152
1A-19	77	LT	HIGH STREET (SR 48)	736+51.27	3	1		1	1	1													1
C-25	77	LT	HIGH STREET (SR 48)	736+51.27 TO 738+21.43										549	549								170
PBx8	77	LT	HIGH STREET (SR 48)	738+21.43			3																1

TOTALS CARRIED TO GENERAL SUMMARY

54 14 18 14 14 14 9228 9558 2313 2286 2640 36 18 18 2676 6 1 15 1 2676

SUBSUMMARY - LIGHTING

MIA HIGH STREET IMPROVEMENTS

