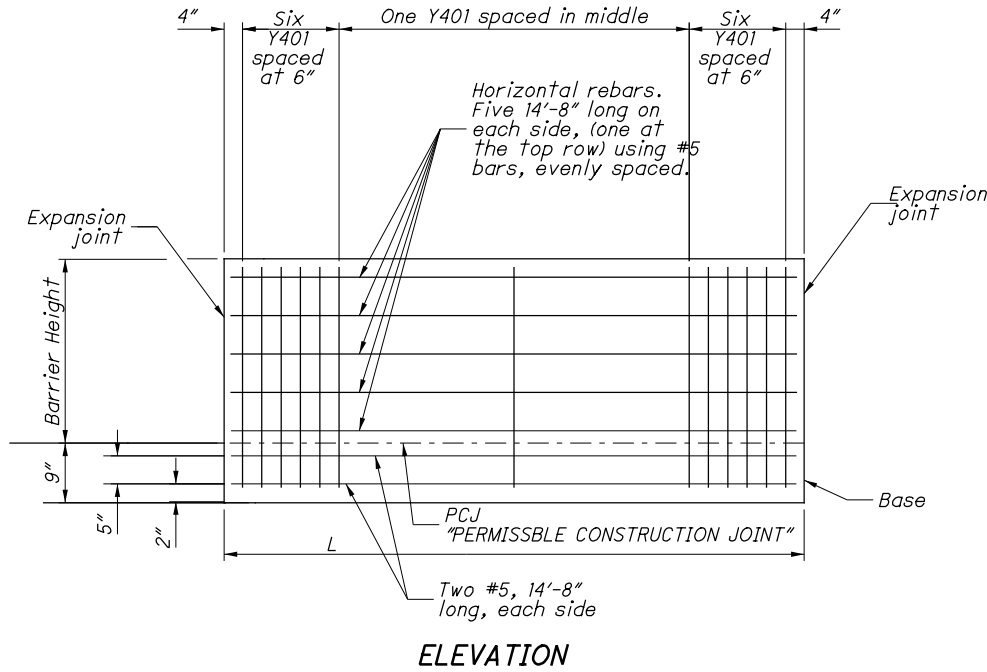


**ROADWAY (CONTINUED)**

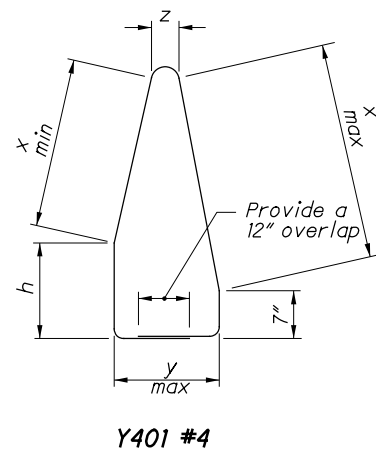
**ITEM 622 - CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1, AS PER PLAN**

THIS ITEM SHALL CONSIST OF CONSTRUCTING REINFORCED END ANCHORAGES AS PER ODOT SCD RM-4.3 AND THE BARRIER DETAIL BELOW. THE Y401 REINFORCEMENT BARS SHALL BE SPACED AS SHOWN IN THE DETAIL. ALL MATERIALS, LABOR AND OTHER INCIDENTALS NECESSARY TO CONSTRUCT THIS ANCHOR SHALL BE INCLUDED IN THE CONTRACT PRICE BID FOR ITEM 622 - CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C1, AS PER PLAN (EACH).



**ELEVATION**

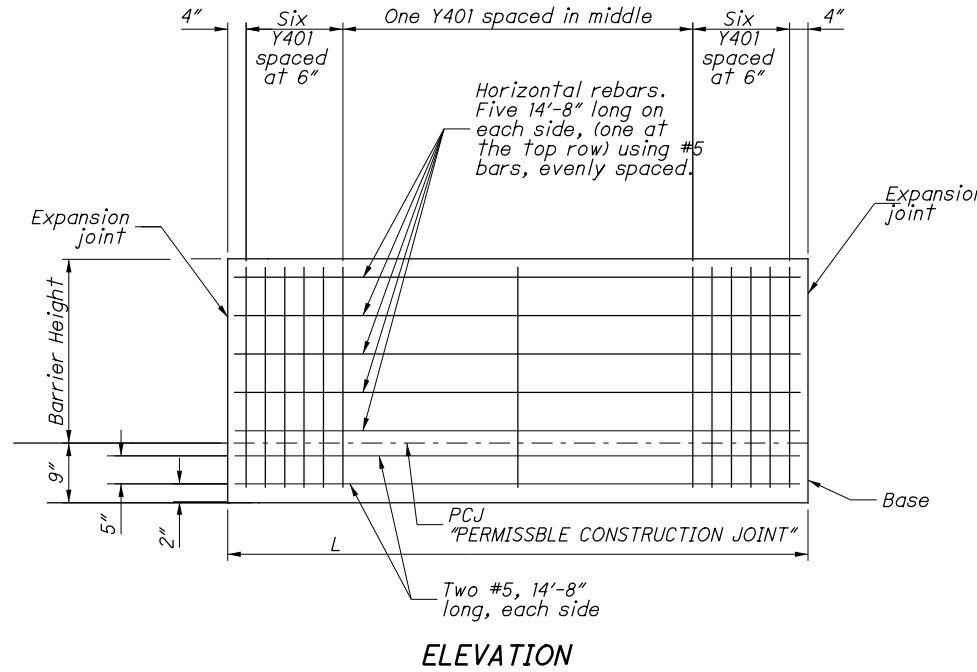
TYPE C1			
STATION	L	h	y
4175+26.35 (I-70 EB)	25.72'	31"	34.25"
4174+95.93 (I-70 EB)	10.42'	31"	34.25"



**Y401 #4**

**ITEM 622 - CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, AS PER PLAN**

THIS ITEM SHALL CONSIST OF CONSTRUCTING REINFORCED END ANCHORAGES AS PER ODOT SCD RM-4.3 AND THE BARRIER DETAIL BELOW. THE Y401 REINFORCEMENT BARS SHALL BE SPACED AS SHOWN IN THE DETAIL. ALL MATERIALS, LABOR AND OTHER INCIDENTALS NECESSARY TO CONSTRUCT THIS ANCHOR SHALL BE INCLUDED IN THE CONTRACT PRICE BID FOR ITEM 622 - CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, AS PER PLAN (EACH).



**ELEVATION**

TYPE D	
STATION	L
4181+17.93 (I-70 EB)	19.56'

**ITEM 623 - PROVIDING ELECTRONIC INSTRUMENTATION**

THE FOLLOWING QUANTITY HAS BEEN PROVIDED AND SHALL BE IN ACCORDANCE WITH ITEM 623:

ITEM 623 - PROVIDING ELECTRONIC INSTRUMENTATION LS

**ITEM 608 - WALKWAY, MISC.: COLUMBUS DETECTABLE WARNING, TYPE A**

THIS ITEM SHALL CONSIST OF DETECTABLE WARNING MEETING THE REQUIREMENTS OF CMSC ITEM 608 AND THE DETAILS ON SHEET 663. ALL LABOR, TOOLS, EQUIPMENT, MATERIALS AND INCIDENTALS SHALL BE INCLUDED IN THE CONTRACT PRICE BID FOR ITEM 608 WALKWAY, MISC.: COLUMBUS DETECTABLE WARNING, TYPE A.

**ITEM 607 - FENCE, TYPE CLT, AS PER PLAN "B"**

ALL REQUIREMENTS OF SECTION 607 OF THE ODOT CMS AND ODOT SCD F-1.1. SHALL APPLY WITH THE ADDITION THAT THE FENCE SHALL BE 8 FEET TALL WITH MESH FENCE SCREENING. PRIVACY MESH SCREENING SHALL BE ATTACHED TO THE ENTIRE SURFACE OF THE FENCE AND SHALL BE POLYETHYLENE, POLYPROPYLENE OR APPROVED EQUAL AS SUBMITTED TO THE ENGINEER FOR APPROVAL. ALL LABOR, TOOLS, EQUIPMENT, MATERIALS AND INCIDENTALS INCLUDING THE MESH SCREENING SHALL BE INCLUDED IN THE CONTRACT PRICE BID FOR ITEM 607 - FENCE, TYPE CLT, AS PER PLAN "B".

**ITEM 607 - GATE, TYPE CLT, AS PER PLAN "B"**

ALL REQUIREMENTS OF SECTION 607 OF THE ODOT CMS AND ODOT SCD F-1.1. SHALL APPLY WITH THE ADDITION THAT THE GATE SHALL BE 8 FEET TALL AND MINIMUM 24 FEET WIDE WITH MESH FENCE SCREENING. PRIVACY MESH SCREENING SHALL BE ATTACHED TO THE ENTIRE SURFACE OF THE GATE AND SHALL BE POLYETHYLENE, POLYPROPYLENE OR APPROVED EQUAL AS SUBMITTED TO THE ENGINEER FOR APPROVAL. ALL LABOR, TOOLS, EQUIPMENT, MATERIALS AND INCIDENTALS INCLUDING THE MESH SCREENING SHALL BE INCLUDED IN THE CONTRACT PRICE BID FOR ITEM 607 - GATE, TYPE CLT, AS PER PLAN "B".

CALCULATED  
CJC  
CHECKED  
CWL

**GENERAL NOTES**

**FRA - 70 / 71 - 12.68 / 14.86**

58  
1815

NO.	DESCRIPTION	REV. BY	DATE
9	UPDATED FENCE & GATE NOTE	CWL	12-10-2021

QUANTITIES CARRIED TO GENERAL NOTES SUBSUMMARY ON SHEET 69A

**ITEM 625 CONDUIT MISC.: (BY SIZE), FIBERGLASS REINFORCED, ATTACHED TO STRUCTURE**

IN ADDITION TO THE REQUIREMENTS OF 625.12, THIS CONDUIT IS INTENDED FOR ATTACHMENT TO BRIDGES OR STRUCTURE AS INDICATED IN THE PLANS.

THE CONDUIT SHALL BE IRON PIPE SIZE (IPS) REINFORCED THERMOSETTING RESIN CONDUIT (RTRC), LISTED BY UNDERWRITERS LABORATORIES, UL, STANDARD UL 1684, AND SHALL COMPLY WITH NEMA STANDARD NUMBER TC 14-2002. THE CONDUIT SHALL HAVE A NOMINAL WALL THICKNESS OF 0.070 INCHES AND SHALL BE GRAY IN COLOR. THE CONDUIT INSTALLED SHALL BE THREADED, TWENTY (20)-FOOT SECTIONS. EPOXY ADHESIVE SHALL BE APPLIED TO THE CONDUIT ENDS WHEN JOINING SECTIONS OF CONDUIT. CONDUIT EXPANSION JOINTS AND OTHER CONDUIT FITTINGS SHALL BE INSTALLED AS PER THE CONDUIT MANUFACTURER'S RECOMMENDATIONS.

THE CONDUIT SHALL BE ATTACHED BENEATH THE BRIDGE DECK, ATTACHED TO THE CROSS FRAMES, OR ATTACHED TO VERTICAL SURFACES BEHIND THE WALLS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. STANDARD CLAMP TYPE CONDUIT HANGERS SHALL BE USED. STRAP HANGERS ARE NOT ACCEPTABLE. BRIDGE ATTACHMENT HARDWARE AND SUPPORT SPACING USED SHALL CONFORM TO THE CONDUIT MANUFACTURER'S RECOMMENDATIONS. ALL HANGERS AND HANGER HARDWARE SHALL BE GALVANIZED AND ON THE ODOT QPL. ALL HANGER COMPONENT SURFACES IN CONTACT WITH THE CONDUIT SHALL BE MADE FROM FIBERGLASS. 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.

REFER TO ODOT SCD HL-30.32 FOR EXPANSION/DEFLECTION FITTINGS AT THE END OF THE BRIDGE ABUTMENT. EXPANSION/DEFLECTION FITTINGS USED SHALL CONFORM TO THE CONDUIT MANUFACTURER'S RECOMMENDATIONS AND SHALL BE APPROVED BY THE ENGINEER.

THE CONTRACTOR SHALL INSTALL NON-ORGANIC FIBERGLASS PULL TAPE WITH A MINIMUM 1800 FT./LBS. TENSION STRENGTH IN THE CONDUIT. THE COST FOR THE PULL TAPE AND ITS INSTALLATION SHALL BE INCIDENTAL TO THE COST OF THIS PAY ITEM.

FLEXIBLE METAL CONDUIT AND FITTINGS AS MANUFACTURED BY LIQUATITE, DELIKON, OR APPROVED EQUAL SHALL BE USED WHEN DIRECTED BY THE ENGINEER TO CONNECT THE STANDARD FIBERGLASS REINFORCED CONDUIT TO THE STANDARD CONDUIT. THE FLEXIBLE METAL CONDUIT SHALL BE WATERPROOF AND GRAY IN COLOR. THE FLEXIBLE METAL CONDUIT AND FITTINGS SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM.

THE WORK AS DESCRIBED WILL BE MEASURED AS THE NUMBER OF LINEAR FEET OF CONDUIT FURNISHED AND INSTALLED FROM END TO END, AND SHALL INCLUDE FURNISHING ALL MATERIALS, EQUIPMENT, LABOR AND INCIDENTALS, INCLUDING ALL JOINTS, COUPLINGS, FITTINGS, HANGERS, ATTACHMENT HARDWARE, AND ACCESSORIES, NECESSARY TO COMPLETE THE WORK SPECIFIED. 4/19/17

**ITEM 625 LIGHTING, MISC.: LUMINAIRE, 150 W LED, 120 V, TEARDROP, BLACK**

LUMINAIRES INSTALLED ON COMBINATION TRAFFIC SIGNAL SUPPORTS SHALL BE PER CITY OF COLUMBUS MIS-198 EXCEPT THE VOLTAGE SOURCE SHALL BE 120 VAC. THE LUMINAIRE HOUSING SHALL BE COATED TO MATCH THEIR RESPECTIVE COMBINATION SIGNAL SUPPORT.

PAYMENT SHALL BE AS PER ITEM 625. 9/1/15

**ITEM 625 LIGHTING, MISC.: PHOTO CELL**

THE CONTRACTOR SHALL INSTALL PHOTO CELLS AS SHOWN IN THE PLANS AND PER CITY OF COLUMBUS ITEM 1001, MIS-600, MIS-601, AND MIS-602.

PAYMENT SHALL BE AT THE CONTRACT BID PRICE FOR EACH ITEM 625 LIGHTING, MISC.: PHOTO CELL AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, CABLE, WIRING, CONNECTIONS, APPURTENANCES, TESTED AND ACCEPTED. 7/6/18

**ITEM 625 BRACKET ARM, (BY LENGTH), AS PER PLAN**

BRACKET ARMS SHALL BE AS DETAILED ON THE MAST ARM ORIENTATION AND POLE FABRICATION DETAILS SHEET AND SHALL MEET THE REQUIREMENTS SPECIFIED IN THE CITY OF COLUMBUS MIS-104 DRAWING EXCEPT AS MODIFIED WITHIN.

THE 25' BRACKET ARM SHALL BE PER SCD 4110.

ALL PAINTED ITEMS SHALL BE COATED TO MATCH THE MAST ARM TRAFFIC SIGNAL SUPPORTS. THE COATING COLOR ON BOTH STEEL AND ALUMINUM PRODUCTS SHALL MATCH EACH OTHER. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT BOTH THE PRODUCT MANUFACTURES MATCH COATING COLORS SO THAT AN EXCELLENT LOOKING END PRODUCT IS ACHIEVED.

PAYMENT SHALL BE AS PER ITEM 625. 9/1/15

**ITEM 630 SIGNING MISC.: TRAFFIC SIGNAL SIGNS**

WHEN USED, THE CONTRACTOR SHALL INSTALL W3-3-36 "SIGNAL AHEAD" SIGNS WITH W16-15P-24 "NEW" SUPPLEMENTAL PLACARDS AND POSTS IF REQUIRED JUST PRIOR TO THE SIGNAL BEING PLACED ON FLASH. THE "NEW SIGNAL" AND "SIGNAL AHEAD" SIGNS SHALL BE COVERED UNTIL THE SIGNAL IS PLACED ON REGULAR OPERATION AT WHICH TIME THE CONTRACTOR SHALL UNCOVER THEM.11

WHEN USED, THE CONTRACTOR SHALL INSTALL THE W23-H2B-30 "SIGNAL OPERATION CHANGED" SIGN JUST PRIOR TO ACTIVATING THE CHANGE IN SIGNAL OPERATION. THE "SIGNAL OPERATION CHANGED" SIGN SHALL BE COVERED UNTIL THE SIGNAL OPERATION CHANGE IS IN EFFECT AT WHICH TIME THE CONTRACTOR SHALL UNCOVER IT. IN ORDER TO INSTALL THE "SIGNAL OPERATION CHANGED" SIGN AS SHOWN IN THE PLANS, THE CONTRACTOR SHALL SHIFT AN ADJACENT PERMANENT SIGN, WHEN NECESSARY, TO CREATE ENOUGH SPACE TO INSTALL THE "SIGNAL OPERATION CHANGED" SIGN IN THE LOCATION SHOWN IN THE PLANS.

THE CONTRACTOR SHALL REMOVE THESE ITEMS 3 WEEKS AFTER THEY ARE UNCOVERED. AT THE SAME TIME, THE CONTRACTOR SHALL RETURN ANY PERMANENT SIGN, WHICH HAS BEEN TEMPORARILY SHIFTED IN ORDER TO ACCOMMODATE THE "SIGNAL OPERATION CHANGED" SIGN, TO THE LOCATION SPECIFIED IN THE PLANS. FAILURE TO REMOVE THESE ITEMS AND RELOCATE PERMANENT SIGNS SHALL RESULT IN THE CITY REMOVING THEM, ALONG WITH RELOCATING PERMANENT SIGNS, AND BILLING THE CONTRACTOR FOR ALL COSTS INVOLVED. ALL REMOVED MATERIAL SHALL BE CONSIDERED FORFEITED TO THE CITY.

MOUNTING HARDWARE AND POSTS SHALL BE INCIDENTAL TO THIS BID ITEM.

PAYMENT SHALL BE PER THE UNIT PRICE BID TO INSTALL AND REMOVE ALL NECESSARY SIGNS AT EACH INTERSECTION. 11/5/15

**ITEM 632 POWER SERVICE, AS PER PLAN**

IN ADDITION TO THE REQUIREMENTS OF 632.24, THE CONTRACTOR SHALL CONTACT THE SERVICE PROVIDER AND MAKE ARRANGEMENTS FOR THE CONNECTION OF POWER FOR THE TRAFFIC SIGNAL CONTROLLER CABINET. THE CONTRACTOR SHALL CONTACT THE POWER SERVICE PROVIDER A MINIMUM OF 120 CALENDAR DAYS IN ADVANCE OF THE NEED FOR POWER WITH THE ADDRESS(ES) OF THE TRAFFIC SIGNAL CONTROLLER CABINET(S) AS PROVIDED IN THE PLANS.

POWER SHALL BE SUPPLIED BY COLUMBUS DIVISION OF POWER. POWER SUPPLIED BY COLUMBUS DIVISION OF POWER SHALL BE 120 VAC. POWER SERVICE SHALL BE FROM THE APPROXIMATE LOCATION(S) AS SHOWN ON THE PLANS. CONTACT COLUMBUS DIVISION OF POWER BUSINESS MANAGER (614-645-7216). 7/22/16

INTERSECTION	INTERSECTION NUMBER	TRAFFIC SIGNAL CONTROLLER CABINET ADDRESS
S. FRONT ST. AT RAMP C5 / W. FULTON ST.	#0134	417 S. FRONT ST.
S. FRONT ST. AT W. LIVINGSTON AVE.	#0090	N/A

**ITEM 632 REUSE OF TRAFFIC CONTROL ITEM: VIDEO DETECTION CAMERA AND BRACKET ARM**

WHILE CONSTRUCTING THE SIGNAL MODIFICATIONS AT THE SIGNALIZED INTERSECTION OF S. FRONT ST. AT W. MOUND ST., THE CONTRACTOR SHALL TAKE GREAT CARE AS TO NOT DAMAGE ANY EXISTING SIGNAL EQUIPMENT DESIGNATED FOR RELOCATION AS IT IS THE DESIGNER'S INTENT TO REUSE THE BRACKET ARM AND VIDEO DETECTION CAMERA FROM THE COMBINATION SIGNAL SUPPORT LOCATED ON THE SOUTHWEST CORNER OF THE INTERSECTION. THE CONTRACTOR SHALL SUPPLY ALL NECESSARY MOUNTING BRACKETS AND CABLES NECESSARY TO RELOCATE THE SPECIFIED EQUIPMENT AND RESTORE THE CAMERA TO WORKING ORDER.

THE CONTRACTOR SHALL DOCUMENT, IN WRITING, ANY MALFUNCTIONING EQUIPMENT PRIOR TO EQUIPMENT REMOVAL AND RELOCATION.

IF THE CITY OF COLUMBUS HAS DETERMINED ANY EQUIPMENT THAT IS PROPOSED FOR REUSE HAS BEEN DAMAGED BY CONTRACTOR NEGLIGENCE, THEN THE CONTRACTOR SHALL REPLACE THE EQUIPMENT IN LIKE KIND AS APPROVED BY THE CITY OF COLUMBUS, AT THE CONTRACTOR'S COST.

ANY REMAINING HOLES IN THE EXISTING SIGNAL SUPPORT POLE SHALL BE PLUGGED IN THEIR ENTIRETY AND PAINTED TO MATCH THE FINISH OF THE POLE.

PAYMENT FOR ITEM 632 REUSE OF TRAFFIC CONTROL ITEM: VIDEO DETECTION CAMERA AND BRACKET ARM SHALL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH AND SHALL INCLUDE ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO RELOCATE THE SPECIFIED EQUIPMENT AND RETURN THE SIGNAL TO FULLY OPERATIONAL STATUS.

NO.	DESCRIPTION	REV. BY	DATE
9	NOTE MODIFICATION	KMG	12-10-2021

**ITEM 632 REUSE OF VEHICULAR SIGNAL HEAD, AS PER PLAN**

IN ADDITION TO COLUMBUS CMS ITEM 632.06, 632.23, AND 632.26, THE FOLLOWING SHALL APPLY:

DISCONNECT THE EXISTING SIGNAL CABLE FROM THE VEHICULAR SIGNAL HEADS IN ACCORDANCE WITH THE PLANS AND INSTALL NEW SIGNAL CABLE, IF NECESSARY, TO THE RELOCATED SIGNAL HEADS. SIGNAL CABLE IS PAID FOR UNDER ITS SEPERATE PAY ITEM. THE PROJECT ENGINEER SHALL DETERMINE IF THE SIGNAL CABLE IS NEEDED FOR THE RELOCATED SIGNAL HEADS.

PAYMENT SHALL BE AS PER EACH ITEM 632 REUSE OF VEHICULAR SIGNAL HEAD, AS PER PLAN AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, CONNECTIONS AND INCIDENTALS REQUIRED TO RELOCATE THE SIGNAL HEADS AND RETURN THE INTERSECTION TO A FULLY OPERATIONAL STATUS.

**ITEM 632 VEHICULAR SIGNAL HEAD, (LED), (BY TYPE), 12" LENS, 1 WAY, ALUMINUM, AS PER PLAN**

THE CIRCULAR LIGHT EMITTING DIODE (LED) TRAFFIC SIGNAL MODULES SHALL BE DIALIGHT MODEL NUMBERS 433-1210-003XL (12" RED), 433-3230-901 XL (12"YELLOW), 433-2270-001 XL (12" GREEN) OR GE LUMINATION MODEL NUMBERS DR6-RTFB-17 A (12" RED), DR6-YTFB-17 A-YX (12" YELLOW), DR6-GCFB-17A (12" GREEN), OR APPROVED EQUAL. TURN ARROWS SHALL BE DIALIGHT MODEL NUMBERS 432-1314-001 XOD (12", 3 ROW RED), 431-3334-901 XOD (12", 3 ROW YELLOW) AND 432-2374-001 XOD (12", 3 ROW GREEN) OR GE LUMINATION DR6-RTAAN-VLA (12", 3 ROW RED), DR6-YTAA-17A-YX (12", 3 ROW YELLOW) AND DR6-GCAAN-17A (12", 3 ROW GREEN), OR APPROVED EQUAL. ALL MODULES SHALL HAVE SPADE TYPE TERMINALS SECURELY ATTACHED TO THE UNIT'S LEAD WIRES.

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

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.

FOR MAST ARM STRUCTURES, A 90 DEGREE 3/4" CLEVIS HANGER WITH PINS SIMILAR TO PELCO PART SE-0467 OR ENGINEERED CASTINGS PART EC-6S SHALL BE USED TO ALLOW THE SIGNAL HEAD TO FREELY SWING ON THE ARM. THE CLEVIS HANGER SHALL BE COATED IN THE SAME COLOR AS THE MAST ARM STRUCTURE. THE BUSHING SHALL BE STAINLESS STEEL.

IN ADDITION TO THE REQUIREMENTS OF 732.01 FOR ALUMINUM HEADS, ALL EXTERIOR SURFACES, AS LISTED BELOW, SHALL BE PAINTED USING AN APPROVED LIQUID OR THERMOSET POWDER MATERIAL PROCESS. ALL VISIBLE ELEMENT OF THE SIGNAL MOUNTING HARDWARE SHALL BE PROPERLY PREPARED, PRIMED, AND PAINTED ACCORDING TO THIS SPECIFICATION. ALL PAINTING SHALL BE PERFORMED UNDER CONTROLLED ENVIRONMENTAL CONDITIONS, AND IN ACCORDANCE WITH ALL MANUFACTURERS RECOMMENDATIONS PERTAINING TO SURFACE PREPARATION, MATERIAL HANDLING, AND APPLICATION. THE ENTIRE SIGNAL FACE, INCLUDING THE TOP SURFACE OF THE VISOR SHALL BE PAINTED YELLOW MATCHING THE FEDERAL STANDARD 595B, COLOR #13655 SPECIFICATIONS, IN ACCORDANCE WITH ITEM 632. THE INTERIOR SURFACE OF THE VISOR SHALL BE PAINTED FLAT BLACK IN ACCORDANCE WITH ITEM 632. THE BACK OF THE SIGNAL HOUSING AND ALL WIRE ENTRANCE DEVICES AND CLEVIS HANGERS SHALL BE PAINTED BLACK TO MATCH THE SIGNAL SUPPORTS-FEDERAL STANDARD 595B COLOR #27038.