

REFERENCE LOCATION SIGNS

THE LOCATION OF REFERENCE LOCATION SIGNS ON THE PLANS ARE APPROXIMATE AND A MORE PRECISE LOCATION WILL BE PROVIDED BY THE DEPARTMENT. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 30 DAYS IN ADVANCE OF THE PLANNED DATE OF REFERENCE LOCATION SIGN INSTALLATION. THE ENGINEER WILL CONTACT THE OFFICE OF TECHNICAL SERVICES WHICH WILL LOCATE THE LONGITUDINAL POSITION OF REFERENCE LOCATION SIGNS BY MEANS OF A PAINT MARK ON THE PAVEMENT EDGE. ALTERNATE MARKS WILL NOT BE PROVIDED ON DIVIDED HIGHWAYS AND THE CONTRACTOR SHALL SET REFERENCE LOCATION SIGNS FOR THE OPPOSITE ROADWAY ACROSS FROM THE PROVIDED MARK. DELINEATORS WHOSE NORMAL POSITION FALLS WITHIN 50 FEET OF A REFERENCE LOCATION SIGN SHALL BE OMITTED.

SIGN SHOP DRAWINGS

THE CONTRACTOR SHALL SUBMIT A MINIMUM OF 4 WEEKS PRIOR TO THE BEGINNING OF SIGN FABRICATION COMPLETE SET OF SIGN SHOP DRAWINGS TO THE PROJECT ENGINEER FOR APPROVAL BEFORE THE SIGNS ARE FABRICATED. THE PROJECT ENGINEER SHOULD FORWARD THE SIGN SHOP DRAWINGS TO THE DISTRICT PRODUCTION DEPARTMENT C/O FRANK KONOPKA FOR APPROVAL.

LOGO/ TODS SIGNS

PLEASE REFER TO C.M.S. 630.09 FOR THE PROCEDURE NECESSARY TO RELOCATE THE SPECIFIC SERVICE SIGNS. THE CONTRACTOR SHALL NOTIFY OHIO LOGOS (TOLL FREE 1-800-860-LOGO) AT LEAST SIXTY DAYS PRIOR TO THE DATE OF THE DESIRED REMOVAL.

RAISED PAVEMENT MARKERS

THE MAXIMUM RAISED PAVEMENT MARKER SPACING SHALL BE 80 FEET.

625, GROUND ROD, AS PER PLAN

IN ADDITION TO CMS ITEM 625.16, THIS ITEM SHALL CONSIST OF FURNISHING AND RUNNING OF A SEVEN STRAND No.4 COPPER WIRE FROM THE TOP OF THE GROUND ROD AND ATTACHING IT TO THE NEUTRAL BAR IN THE CABINET. PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE PER EACH.

625, CABLE SPLICING KIT

TWO (2) CABLE SPLICE KITS ARE BEING PROVIDED AT LOCATIONS WHERE SIGN LIGHTING AND SIGN SERVICE ARE BEING REMOVED. THEY ARE TO BE USED TO PROPERLY TERMINATE THE POWER FEED FROM THE MAIN CIRCUIT TO THE PULL BOX THAT SUPPLIES POWER TO THE SIGN LOCATION.

ITEM 625 - PLASTIC CAUTION TAPE

THE LOCATION OF UNDERGROUND CONDUIT AND BURIED ELECTRICAL CABLES SHALL BE MARKED BY THE USE OF A 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, ACIDS, OR OTHER CHEMICAL COMPONENTS LIKELY TO BE ENCOUNTERED IN SOILS. THE TAPE SHALL BE BRIGHT RED WITH IDENTIFYING PRINTING "ELECTRIC" IN BLACK LETTERS, ONE SIDE ONLY. TAPE SHALL BE SUPPLIED IN CONTINUOUS ROLLS WITH THE IDENTIFYING LETTERING REPEATED CONTINUOUSLY THE FULL LENGTH OF THE TAPE. IDENTIFYING TAPE SHALL BE BURIED ON THE ELECTRIC TRENCH WITH ONE STRIP APPROXIMATELY 6" TO 10" BELOW THE FINAL 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 INSURE THAT THE TAPE IS NOT PULLED, DISTORTED, OR OTHERWISE MISPLACED IN COMPLETING THE TRENCH BACKFILL. THE TAPE SHALL BE PAID FOR PER FOOT OF ITEM SPECIAL - PLASTIC CAUTION TAPE, COMPLETE AND IN PLACE.

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

SIGNS MOUNTED ON SIGNAL MAST ARMS ARE TO BE RIGID MOUNTED PER ODOT STANDARD CONSTRUCTION DRAWING TC-16.20.

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

SIGNS MOUNTED ON POLES ARE TO BE MOUNTED PER PLAN INSERT SHEET 1163.

630, REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL, AS PER PLAN

THE CONTRACTOR SHALL REMOVE SIGN POST REFLECTORS FROM EXISTING DRIVE POSTS AND RE-ERECT THEM ON THE NEW DRIVE POSTS WITH EXISTING HARDWARE AT ALL LOCATIONS THROUGHOUT THIS PROJECT AS A PART OF THIS PAY ITEM.

630, SIGNING MISC.: INVENTORY TAG

WHERE EXISTING SIGNS AND SUPPORTS ARE BEING REPLACED WITH NEW SIGNS AND SUPPORTS AT THE SAME LOCATION, THE CONTRACTOR SHALL TRANSFER THE YELLOW INVENTORY TAG AFFIXED TO THE EXISTING SIGN SUPPORT TO THE NEW SIGN SUPPORT WITH A PLASTIC ZIP-TIE.

WHERE A NEW SUPPORT LOCATION IS BEING ESTABLISHED THE CONTRACTOR SHALL CONTACT TRAVIS BONNETT, DISTRICT 12 TRAFFIC ENGINEER AT EXT. 2220 TO OBTAIN INVENTORY TAGS AND AFFIX IT TO THE NEW LOCATION(S) BY THE ZIP-TIE METHOD. ONCE THIS IS DONE THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER OF THE NEW LOCATION. THE PROJECT ENGINEER SHALL FORWARD THE NEW LOCATION INFORMATION TO THE TRAFFIC OFFICE FOR PROPER DOCUMENTATION.

PAYMENT FOR THIS ITEM OF WORK SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 630-SIGNING, MISC.: INVENTORY TAG.

POWER SUPPLY FOR TRAFFIC SIGNALS

ELECTRIC POWER SHALL BE OBTAINED FROM FIRST ENERGY AT THE LOCATION INDICATED ON THE PLANS. POWER SUPPLIED SHALL BE 120 VOLTS.

REMOVAL OF EXISTING RPM'S & DELINEATORS

THE REMOVAL AND DISPOSAL OF EXISTING RAISED PAVEMENT MARKINGS AND DELINEATORS ARE TO BE INCIDENTAL TO THE COST OF REMOVAL OF THE EXISTING PAVEMENT AND GRADING OPERATIONS. THERE SHALL BE NO ADDITIONAL COMPENSATION FOR THE REMOVAL OF EXISTING RAISED PAVEMENT MARKERS AND DELINEATORS.

631, REMOVAL OF SIGN SERVICE AND DISPOSAL, AS PER PLAN

THIS PAY ITEM IS BEING PROVIDED TO REMOVE THE SIGN SERVICE AND OTHER MISCELLANEOUS COMPONENTS FROM OVERHEAD SIGN SUPPORTS.

IF ANY SUPPORTS RECEIVE POWER FROM A NEARBY UTILITY POLE, THE CONTRACTOR SHALL REMOVE THE POWER DROP OR CONNECTION AND NOTIFY THE UTILITY THAT IT IS BEING DISCONNECTED.

ALSO, AS A PART OF THIS PAY ITEM THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL SIGN LIGHTING COMPONENTS FROM THE LUMINAIRE'S DOWN TO THE DISCONNECT SWITCH (INCLUDING THE DISCONNECT SWITCH). ITEMS REMOVED AND DISPOSED OF SHOULD INCLUDE BUT IS NOT LIMITED TO LUMINAIRE AND SUPPORT ARMS, STRUCTURAL STEEL TUBES, AND SIGN WIRING.

ALL EQUIPMENT, MATERIALS, AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID OF EACH ITEM 631 - REMOVAL OF SIGN SERVICE AND DISPOSAL, AS PER PLAN.

632, COMBINATION SIGNAL SUPPORT MISC.: LOST NATION P2-1

THE SIGNAL SUPPORT SHALL BE IN ACCORDANCE WITH C.M.S. SECTION 630 AND 632. THE POLE SHALL INCLUDE A LUMINAIRE EXTENSION. SIGNAL SUPPORT DATA SHALL BE AS PER SHEET 1188. THE POLE SHALL BE A TC-12.30 DESIGN NO. 6 WITH A TC-81.20 DESIGN NO. 1 ARM AND A SPECIAL DESIGN ARM AS STATED BELOW. THE SPECIAL DESIGN ARM SHALL BE IN ACCORDANCE WITH C.M.S. 632 AND STANDARD CONSTRUCTION DRAWING TC-81.20 WITH THE FOLLOWING ADDITIONS OR EXCEPTIONS:
TUBE 1: 0.250 IN. WALL x 12.5 IN. O.D. x 8.34 IN. O.D. x 29.75 FT. LENGTH
TUBE 2: 0.179 IN. WALL x 8.98 IN. O.D. x 4.64 IN. O.D. x 31 FT. LENGTH W/ 1.75 FT. SLIP JOINT SPLICE
BOLT DIA.: 1.50 IN.
HORZ. BOLT SPACING: 9 IN.
VERT. BOLT SPACING: 15 IN.
OUTSIDE FILLET WELD: 0.375 IN.
INSIDE FILLET WELD: .250 IN.
PLATE WIDTH: 15 IN.
PLATE HEIGHT: 19 IN.
ARM PLATE THICKNESS: 1.50 IN.
POLE PLATE THICKNESS: 1.50 IN.
WIDTH OF TOP AND BOTTOM GUSSETS: 10.91 IN.
GUSSET THICKNESS: 0.250 IN.
GUSSET WELD SIZE: 0.250 IN. (SIDE OF POLE PLATE 0.312 IN.)

PAYMENT FOR ITEM 632 - COMBINATION SIGNAL SUPPORT MISC.: LOST NATION P2-1 SHALL BE MADE AT THE CONTRACT UNIT PRICE PER EACH AND SHALL INCLUDE ALL ITEMS AS PER C.M.S. 630 AND C.M.S. 632. FINAL DESIGN OF THE SIGNAL SUPPORT SHALL BE APPROVED BY THE ENGINEER.

632, REMOVAL OF TRAFFIC SIGNAL INSTALLATION

TRAFFIC SIGNAL INSTALLATIONS, INCLUDING SIGNAL HEADS, CABLE, MESSENGER WIRE, STRAIN POLES, CABINET, CONTROLLER, ETC., SHALL BE REMOVED IN ACCORDANCE WITH CMS 632.26 AND AS INDICATED ON THE PLANS. REMOVED ITEMS SHALL BE STORED ON THE PROJECT FOR SALVAGE BY OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 12, THE CITY OF EASTLAKE, THE CITY OF WILLOUGHBY, OR THE CITY OF MENTOR IN ACCORDANCE WITH THE LISTING GIVEN HEREIN.

SIGNAL HEADS	CABLE
MESSENGER WIRE	PEDESTRIAN SIGNAL HEADS
STRAIN POLE	PEDESTRIAN PUSH BUTTONS
CABINET	PEDESTALS
CONTROLLER	SIGNS

IN THE EVENT THE ITEMS STORED ON THE PROJECT FOR SALVAGE BY THE LOCAL AGENCY ARE NOT REMOVED, THE CONTRACTOR SHALL, WHEN DIRECTED BY THE ENGINEER IN WRITING, REMOVE AND DISPOSE OF THE ITEMS AT NO ADDITIONAL COST TO THE PROJECT.

632, LOOP DETECTOR UNITS, BY TYPE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS ITEM 632 AND CMS 732.07 OR 732.08, LOOP DETECTOR UNITS SHALL HAVE THE FOLLOWING REQUIREMENTS OR FEATURES:

THE OUTPUT DEVICE SHALL BE A RELAY, AND ALL CONTACTS SHALL BE IN THE WIRING HARNESS.

THE UNIT SHALL BE SELF TUNING.

THE UNIT'S ELECTRICAL CONNECTION PLUGS OR WIRING HARNESS

SHALL ALLOW READY REPLACEMENT WITH A SINGLE CHANNEL AMPLIFIER AS DESCRIBED IN CMS 732.07.

EACH UNIT SHALL BE LABELED TO CORRESPOND TO ITS PHASE AND DIRECTION.

DELAY INHIBIT SHALL BE CONNECTED ON ALL DETECTOR HARNESSSES FOR THEIR RESPECTIVE PHASE GREENS.

632, COMBINATION SIGNAL SUPPORT, TYPE TC-81.20 AND SIGN SUPPORT, TC-12.30 (WITH LIGHT POLE EXTENSION)

THIS SUPPORT SHALL CONSIST OF A TC-12.30 DESIGN 4,5,6 POLES WITH A TC-81.20 DESIGN 1,4,11 SIGNAL ARMS AND A TC-12.30 DESIGN 4,5,6 SIGN SUPPORT ARMS (WITH LIGHT POLE EXTENSION). ALL SIGNAL SUPPORT ITEMS REQUIRED BY CMS ITEM 632 AND ALL SIGN SUPPORT ITEMS REQUIRED BY CMS ITEM 630 SHALL BE INCLUDED AS PART OF THIS SUPPORT.

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.

632, VEHICULAR SIGNAL HEAD WITH LED LAMP UNITS, BY TYPE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS 632 AND 732, THE FOLLOWING REQUIREMENTS SHALL ALSO APPLY:

LAMPS:
LED, LIGHT EMITTING DIODE, SIGNAL LAMP UNITS SHALL MEET THE REQUIREMENTS OF SUPPLEMENTAL SPECIFICATION 872. ALL LAMP UNITS SHALL BE THE 12 INCH SIZE. LED SIGNAL LAMP UNITS SHALL BE PROVIDED FOR ALL SIGNAL LENS TYPES.

SIGNAL SECTIONS:

1. SIGNAL HEADS AND VISORS SHALL BE CONSTRUCTED OF POLYCARBONATE PLASTIC AND MEET ITE SPECIFICATIONS.
2. PIPE, SPACERS AND FITTINGS CONSTRUCTED OF POLYCARBONATE PLASTIC MAY BE USED IN LIEU OF GALVANIZED STEEL OR ALUMINUM.
3. PROPER EXTERIOR COLORS SHALL BE OBTAINED BY USE OF COLORED PLASTIC MATERIAL RATHER THAN PAINTING.

MOUNTING HARDWARE:

4. ALL SIGNAL HEADS SHALL BE RIGIDLY MOUNTED TO THE MAST ARM WITH THE RED LENS LOCATED IN FRONT OF THE MAST ARM.
5. ALL UPPER SIGNAL SUPPORT HARDWARE AND PIPING UP TO AND INCLUDING THE WIRE INLET FITTING SHALL BE FERROUS METAL FOR SIGNAL DISPLAYS OF TWO OR MORE SECTIONS.
6. THE ENTRANCE FITTING SHALL BE OF THE TRI-STUD DESIGN WITH SERRATED RINGS IN ORDER TO ACHIEVE POSITIVE LOCKING.
7. ALL BALANCE ADJUSTERS SHALL HAVE A MINIMUM THREE-QUARTER INCH EYE BOLT AND THREE-QUARTER INCH WIDE SLOT. EYE BOLTS ARE CAST FROM 316 STAINLESS STEEL AND PROVIDED WITH A SATIN FINISH. THREE-QUARTER INCH BODY HALVES ARE CAST FROM AN MINIMUM 65-45-12 DUCTILE IRON AND PROVIDED WITH A BRIGHT ZINC FINISH (ZNI).

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TRAFFIC CONTROL GENERAL NOTES

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