

SECTION 02733**ELECTRICAL PULL AND JUNCTION BOXES****02733.01 GENERAL****A. Description**

Electrical pull and junction boxes shall include, but not necessarily be limited to, furnishing and installing electrical pull and junction boxes on structures, as shown on the Plans and in accordance with the Contract Documents or as directed by the Engineer.

B. Related Work Included Elsewhere

1. General electrical work; Section 02730.
2. Lighting standards; Sections 02760 and 02761.
3. Trench excavation, backfill, and compaction; Section 02250.
4. Concrete foundations; Section 02734.

C. Quality Assurance

The Engineer will inspect all materials and work to ensure compliance with the Contract Documents.

D. Submittals

Submittals shall be as specified in Section 02730.01.

02733.02 MATERIALS**A. Materials Furnished by the County**

The County will not furnish any materials for electrical pull and junction boxes.

B. Contractor's Options

Pull and junction boxes may be made of sheet metal, cast aluminum, or cast iron unless specifically noted on the Plans. Contractor may utilize signal handboxes listed on the Maryland Department of Transportation's (MDOT) Qualified Product List.

C. Detailed Material Requirements

1. Hot Dipped Galvanized Electrical Pull and Junction Boxes

Hot dipped galvanized electrical pull and junction boxes shall meet the requirements of ASTM A 123.

2. Iron Castings

Gray iron castings shall meet the requirements of ASTM A 48, Class 30B.

3. Aluminum Castings

Aluminum castings shall meet the requirements of ASTM B26 or ASTM B 108, Alloy ANSI 356.0 T6.

4. Box Covers

a. Boxes which are encased in concrete shall be provided with covers extending 1/2 inch beyond the outside dimensions and drilled to match tapped holes in the flange.

b. Boxes which are to be completely exposed shall be provided with covers meeting the outside dimensions of the box.

c. Boxes for exterior underground service shall be furnished with gasketed cover plates.

d. Cover shall be secured in position by round head brass or grade 316 stainless steel machine screws.

5. Pull and junction boxes shall be the sizes and types specified but in no case smaller than required by NEC and shall be UL listed as "Raintight". Exterior above ground boxes shall be NEMA 4, weatherproof. Conduit entrance shall be provided with conduit hubs or bosses of sufficient thickness that five full threads of the conduit shall engage the threaded holes in the box or slip holes of adequate diameter to accommodate the specified conduit sizes. Locknuts and lead washers shall be provided for conduits entering through slip holes. Boxes shall be provided with suitable mounting lugs.

02733.03 EXECUTION

Electrical pull and junction boxes shall be located where and in the manner shown on the Plans. The Contractor shall furnish suitable hardware and accessories to mount the boxes.

Boxes shall be installed so that covers are readily accessible after completion of the installation.

When boxes are set in concrete, they shall be adequately supported to prevent movement during placement of the concrete. The number of unrequired knockouts shall be kept to a minimum. After installation, the boxes shall be cleaned of any splashed concrete.

02733.04 METHOD OF MEASUREMENT

Measurement for electrical pull and junction boxes will be made of the number of each type and size satisfactorily installed where shown on the Plans.

02733.05 BASIS OF PAYMENT

Payment for electrical pull and junction boxes will be made at the price bid each for the size and type installed complete in place. The price bid shall include furnishing and installing pull and junction boxes and for all labor, materials, and equipment necessary to complete this item of work as shown and specified in strict accordance with the Contract Documents.

END OF SECTION