**Notice**

The Standard Special Provision (SSP) on the following page revises or modifies CDOT’s Standard Specifications for Road and Bridge Construction. The Construction Engineering Services Branch has reviewed, approved, and issued it. Use as written without change. Do not use modified versions of it on CDOT construction projects. Do not use the following special provision on CDOT projects in a manner other than specified in the instructions without approval by CDOT’s Standards and Specifications Unit. The instructions for use appear below.

Other agencies using the Standard Specifications for Road and Bridge Construction to administer construction projects may use this special provision appropriately and at their own risk.

**Instructions for use on CDOT construction projects:**

Use the following standard special provision on all projects that have Lighting Pull Box.

**Revision of Section 613**

**Lighting Pull Box**

**Revise Section 613 of the Standard Specifications for this project as follows:**

**Add new Subsection 613.02 (d) and renumber the existing subsections 613.02 (d) through (n) as follows:**

613.02

1. *Pull box****.*** Pull boxes shall be verified by a 3rd Party Nationally Recognized Independent Testing Laboratory as meeting all test provisions of the American National Standard Institute/Society of Cable Telecommunications Engineers (ANSI/SCTE) 77 Specifications for Underground Enclosure Integrity, including magnesium chloride testing. Pull boxes shall be rated at the Tier 22 level and this rating shall be stenciled or cast on the inside and outside of the box and on the underside of the cover. Pull boxes shall be non-conductive and resistant to ultraviolet (UV) radiation, moisture, and chemicals. Pull boxes shall be Underwriters Laboratories (UL) listed. Certification documents shall be submitted with material submittals.

Type Six pull boxes shall be a water valve stem type pull box made of cast iron or steel. Type six pull boxes shall have the capability of accepting riser rings. A Type Six pull box shall have 3/4-inch to 1-inch diameter holes drilled or torched 3 inches from the top to accept a 4-inch to 6-inch long rubber tube (3/4 inch garden house). The number of holes shall be as per plans or as directed by the engineer.

* 1. Lids**.** Removable pull box lids shall be provided with a skid-resistant surface and have the words “CDOT COMM”, “CDOT ELECT”, or “CDOT TRAFFIC” cast into the surface. Painting of the words shall not be accepted. The removable lid shall be included in the cost of the pull box.

A removable split lid with a removable center support beam shall be provided for pull boxes 24-inches by 36-inches or larger. Lid segment weight shall not exceed 120 pounds.

An Electrical Marker System (EMS) locator disk manufactured into all Type B lids for communication line locating. The locator disk shall be compatible with a CDOT cable locator and utilize the APWA uniform color code standard for visual reference if the disk is observable on the exterior of the Type B lid. The locator disk shall utilize the proper locate frequency for the pull box type. The words “EMS MARKER EMBEDDED IN COVER” shall be cast into the surface. Painting of the words shall not be accepted.

Type B one-piece lids shall have a minimum of two lift slots per lid, while Type B split lids shall have a minimum of one lift slot per lid. Test point locations shall be integrated into the pull box Type B lids to provide attachment of test leads of various connector types for underground conduit tracing. The minimum number of test point locations shall equal the number of conduit banks entering the pull box, up to a maximum of five test points. Pull boxes with Type B split lids shall have test points on one lid section only. Type B lids shall be furnished with 3/8-inch by 1/16-inch-deep recesses at locations adjoining each test point for the application of direction arrow symbols indicating the direction of underground conduit exiting the pull box. Recesses shall be thoroughly cleaned with alcohol prior to applying the arrow symbol.

Type 6 pull box lids shall have “CDOT TRAF” cast into the surface.

* 1. Wire Mesh. When wire mesh is included, it shall be installed in a manner to completely surround the pull box. The wire mesh shall meet the material standard American National Standard Institute/American Society of Testing and Materials (ANSI/ASTM) A555-79 and made of T-304 stainless steel, 0.025-inch wire diameter minimum and shall have a spacing of 4 mesh per inch.
  2. Apron. Pul boxes installed in dirt of landscaped areas shall have a pre-cast polymer concrete apron. Class B concrete shall be in accordance with Section 601. The pre-cast polymer concrete apron shall be skid-resistant, non-metallic, non-conductive, UV resistant, and shall include two lifting slots for placement in the field. The pre-cast polymer concrete apron shall be similar nominal dimensions of the concrete apron shown on the plans. The gap between the pre-cast polymer concrete apron and outer wall of the pull box shall be a maximum of 1/4 inch.
  3. Ground Rod. When a ground rod is provided, it shall be a 5/8-inch by 8-foot long copper-coated steel rod.

1. *Electrical Warning Tape.*
2. *Luminaire.*
3. *Lighting Control Center.*
4. *Meter Power Pedestal.*
5. *Secondary Service Pedestal.*
6. *Heavy Duty Safety Switch.*
7. *Wiring.*
8. *Material List.*
9. *LED Luminaire Warranty.*
10. *Technical Support.*
11. *Temporary Lighting.*

**Add new Subsection 613.08 and renumber existing Subsections 613.08 through 613.14 as follows:**

**613.08 Pull Box.** A minimum of 12 inches of 3/4-inch angular granite-gravel shall be installed at the base of the pull box. The granite-gravel shall be free of dirt and debris and spread evenly to facilitate a level base for the pull box. The Contractor shall compact to the same density of the in-situ soil prior to the installation of the granite-gravel to alleviate future settling.

When provided, wire mesh shall be installed to complete surround the pull box as shown on the plans. The wire mesh shall be gently cut to allow only the entrance of the conduit at the bottom of the pull box. All openings cut in the wire mesh that are larger than the diameter of the conduit shall be covered with additional wire mesh in a manner to completely surround the pull box with wire mesh.

Tracer wire shall be attached to the trace test points on the underside of the Type B pull box lid. Each tracer wire shall be attached to an individual trace point; no two wires shall be attached to the same point. The Contractor shall coil an additional 6 feet of tracer wire inside the pull box to ensure that the trace wire will not disconnect from the test points when the lid is removed.

Pull boxes shall be installed in areas that are easily accessible by maintenance personnel. The slope around the pull box shall not be steeper than 5:1.

Pull boxes installed with concrete aprons or pre-cast polymer concrete shall not be installed above the grade of the apron. The concrete apron shall have a 1 percent slope away from the top of the pull box to allow for drainage. Pre-cast concrete aprons shall be installed per the manufacturer's recommendations. Unless otherwise shown on the plans, pull and splice boxes shall be installed so that the covers are level with the curb or sidewalk grade. Covers shall be level with the surrounding ground when no grade is established.

Pull or splice boxes shall be installed at a maximum distance of 400 feet or less. Boxes shall be placed at conduit ends, at all wiring splices, at all conduit angle points, and at all other locations shown on the plans. The Contractor may install additional pull or splice boxes to facilitate the work.

Where practical, pull and splice boxes near curbs shall be placed adjacent to the back of the curb. Pull boxes adjacent to light standards shall be placed along the side of the foundations as shown on the plans.

Where a conduit stub-out is called for on the plans, a sweeping elbow shall be installed in the direction indicated. The stub-out shall be terminated in a box. All conduit stub-outs shall be capped.

**613.09 Wiring.**

**613.10 Lighting Control Center, Meter Power Pedestal, and Secondary Service Pedestals.**

**613.11 Heavy Duty Safety Switch.**

**613.12 Temporary Lighting.**

**613.13 Testing.**

**Method of Measurement**

**613.14** Concrete Foundation Pads and Light Standard Foundations will be measured by the actual number installed and accepted.

**Revise Subsection 613.14 as shown (renumbered as 613.15)**

**613.15**

The following items will not be measured and paid for separately, but shall be included in the work:

1. Soil testing for foundations.
2. Junction boxes, pull wire, weatherheads, adaptors, and expansion joints for conduit.
3. Pull boxes installed for overhead lighting.
4. Additional pull or splice boxes installed at the Contractor's option.
5. Saw cutting; trenching; excavation; backfill; jacking; drilling pits; underground electrical warning tape; removal of pavement, sidewalks, gutters, and curbs and their replacement in kind to match existing grade; and all other work necessary to complete conduit and pull box installation.
6. Electrical conductor tagging.
7. Direct burial cable in conduit.
8. Testing of the lighting installation, including temporary power and all required cable connections.