

**Supplemental Specification  
2005 Standard Specification Book**

**SECTION 13554M**

**POLYMER CONCRETE JUNCTION BOX**

**Delete Article 2.2 and replace with the following:**

**2.2 JUNCTION BOXES AND LIDS**

- A. Provide junction boxes and vaults that resist water absorption in accordance with ASTM D 570.
- B. Select Junction Boxes for load rating as defined on AT series Standard Drawings as follows:
  - 1. Load Rating 1: Incidental Vehicular Traffic
    - a. In any paved area immediately adjacent to the mainline, such as shoulders, snow storage areas, or vehicle pullout areas, provide boxes, rings, and lids that sustain a minimum vertical test load of 33,500 lbs over a 10-inch x 20-inch square.
  - 2. Load Rating 2: Non-wheel Loading Accessible
    - a. In area not in traveled way, provide boxes, rings, and lids that sustain a minimum vertical test load of 22,500 lbs over a 10-inch x 20-inch square.
- C. Provide a poured-in-place 1-inch thick grout floor, with a 1-inch diameter drain, for all type I, II, and III-Polymer Concrete Junction Boxes or a box with a prefabricated floor with a 1-inch drain hole. Refer to ASTM C 579 and ASTM C 580 for test methods for grout.
- D. Provide lid for all junction boxes as specified by application.
- E. Provide lids with a non-skid surface with minimum coefficient of friction of 0.50, per ASTM C 1028. Coatings will not be approved.

- F. Manufacture lids with the following markings in the logo area, in 1-inch recessed letters:
  - 1. “Traffic Signal” when the junction box contains cables or wires for traffic signal (Refer to Section 02892), CCTV, VMS, RWIS, WIM, ramp meter, traffic monitoring, or any other ATMS element (Refer to Section 13551).
  - 2. “Electric” when the junction box contains power conductors used for traffic signal, CCTV, VMS, RWIS, WIM, ramp meter, traffic monitoring, or any other ATMS element.
  - 3. “Street Lighting” when the junction box contains street lighting conductors only. Inscribe “High Voltage” below the words “Street Lighting” when the junction box contains voltage above 600 V.
  - 4. “Communication” when the junction box contains multi-duct conduit for future use.
  - 5. “Sprinkler Control” when sprinkler control conduit enters the junction box.
- G. Provide lids with recessed access point to allow removal of cover with a hook or lever. Repair damage to the pulling point in the lid.
- H. Provide lids with vandal-resistant stainless steel recessed bolts.

**Delete Article 3.1 paragraph H through N and replace with the following:**

- H. Install bushings on end of all conduit prior to cable installation.
- I. Do not install conduit in corner of junction box or within 2 inches of corner of junction box. Extend conduit 2 inches beyond the inside wall of the junction box. Refer to AT series Standard Drawings.
- J. Enter conduit through the sides of the junction box and not from the bottom. Place the conduit at least three inches above the floor.
- K. Place the recessed access point in a location that provides both leverage and safety.
- L. Saw cut concrete or other improved surfaces that require removal in the sidewalk area. Remove entire section of sidewalk. Replace with in-kind materials to match the existing grade.
- M. Provide 12 inches deep free draining granular backfill borrow (Refer to Section 02061) directly under junction box.

- N. Install Engineer approved expansion joint material around entire periphery of ring for junction boxes installed in paved surface.