

## Section 653 Pull Boxes and Junction Boxes

### 653.1 Description

- (1) This section describes providing, adjusting, and removing pull boxes and providing junction boxes.

### 653.2 Materials

#### 653.2.1 Pull Boxes

- (1) Furnish pull boxes made of corrugated steel pipe conforming to the material requirements of [521.2](#) with annular corrugations. Furnish manhole frames and solid lids conforming to [611.2](#). Use locking covers in pavement roadway locations and on 12-inch pull boxes.
- (2) Furnish grounding lugs and mechanical connectors UL or NRTL listed and approved for copper wire. Use stainless steel for mechanical connections to the pull box.

#### 653.2.2 Junction Boxes

- (1) Furnish hot-dipped zinc coated cast iron junction boxes with a recessed cover from the department's approved products list. Ensure that the cover has a seal to prevent water from entering but provides for drainage and is attached with hex-head stainless steel bolts.
- (2) Furnish grounding lugs and mechanical connectors UL or NRTL listed and approved for copper wire. Use stainless steel for mechanical connections to the junction box. Provide engineer-approved protection that totally and permanently seals connections with a silicone or rubberized caulk.

### 653.3 Construction

- (1) Under the Pull Boxes Steel and Pull Boxes Steel Communications bid items, provide pull boxes with manhole frames and solid lids. The contractor may extend pull boxes as the plan details show using the same material as the pull box. Saw extensions parallel to the annular ring and clamp to the pull box using a band manufactured for this purpose. Excavate, place coarse aggregate drain material, and backfill as the plan details show. Dispose of surplus or unsuitable material as specified under [205.3.12](#). Use covers stamped with "WISDOT COMMUNICATIONS" for communications pull boxes or "ELECTRIC" for steel pull boxes.
- (2) Under the Junction Boxes bid items, provide junction boxes mounted and connected as the plans show. Grounding lugs are not required in junction boxes with less than 50 volt AC.
- (3) Under the Adjusting Pull Boxes bid item, move existing pull boxes to grade level. Excavate, adjust subsurface components as required, and backfill as the plan details show. Dispose of surplus or unsuitable material as specified under [205.3.12](#).
- (4) Under the Removing Pull Boxes bid item, excavate and remove existing pull boxes. Backfill with material similar to the material surrounding the removal. Dispose of surplus or unsuitable excavated material as specified under [205.3.12](#).

### 653.4 Measurement

- (1) The department will measure the bid items under this section as each individual box acceptably completed.

### 653.5 Payment

- (1) The department will pay for measured quantities at the contract unit price under the following bid items:

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
653.0100 - 0150	Pull Boxes Steel (inch)	EACH
653.0180 - 0199	Pull Boxes Steel Communications (inch)	EACH
653.0200 - 0299	Junction Boxes (size)	EACH
653.0900	Adjusting Pull Boxes	EACH
653.0905	Removing Pull Boxes	EACH

- (2) Payment for the Pull Boxes Steel and Pull Boxes Steel Communications bid items is full compensation for providing pull boxes; for materials including grounding lugs; for aggregate, manhole frames and covers; for required pull box extensions; conduit extensions less than 10 feet long including fittings; and for excavating, backfilling, and disposing of surplus material. The department will pay separately for engineer-directed pull box drain duct under the Conduit Rigid Nonmetallic bid items as specified in [652.5](#).
- (3) Payment for the Junction Boxes bid items is full compensation for providing materials including grounding lugs and stainless steel mounting hardware, wiring, supports, grout, and temporary asphalt; for any pavement cutting and grouting; and for disposing of surplus material.
- (4) Payment for Adjusting Pull Boxes is full compensation resetting the box elevation; for required materials; and for excavating, backfilling, and disposing of surplus material.

(5) Payment for Removing Pull Boxes is full compensation for removal, and for excavating, backfilling, and disposing of surplus material.