

SECTION 16130

BOXES

1. PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Wall and Ceiling Outlet Boxes.
- B. Pull and Junction Boxes.

1.2 RELATED SECTIONS

- A. Section 16160 - Cabinets and Enclosures.

1.3 REFERENCES

- A. ANSI/NEMA FB 1 - Fittings and Supports for Conduit and Cable Assemblies.
- B. ANSI/NEMA OS 1 - Sheet-steel Outlet Boxes, Device Boxes, Covers and Box Supports.
- C. ANSI/NEMA OS 2 - Nonmetallic Outlet Boxes, Device Boxes, Covers and Box Supports.
- D. ANSI/NFPA 70 - National Electrical Code.
- E. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum).

1.4 PROJECT RECORD DOCUMENTS

- A. Accurately record actual locations and mounting heights of outlet, pull, and junction boxes.

1.5 REGULATORY REQUIREMENTS

- A. Conform to requirements of ANSI/NFPA 70.
- B. Furnish products listed and classified by Underwriters Laboratories, Inc., or testing firm acceptable to authority having jurisdiction as suitable for purpose specified and shown.

1.6 PROJECT CONDITIONS

- A. Verify field measurements are as shown on plans.
- B. Electrical boxes are shown on plans in approximate locations unless dimensioned. Install at location required for box to serve intended purpose.

2. PART 2 PRODUCTS

2.1 OUTLET BOXES

- A. Sheet Metal Outlet Boxes: ANSI/NEMA OS 1, galvanized steel.
 - 1. Luminaire and equipment supporting boxes: Rated for weight of equipment supported; include ½ inch male fixture studs where required.
 - 2. Concrete ceiling boxes: concrete type.
- B. Nonmetallic Outlet Boxes: ANSI/NEMA OS 2.
- C. Cast Boxes: NEMA FB 1, Type FD. Provide gasketed cover by box manufacturer. Provide threaded hubs.

2.2 PULL AND JUNCTION BOXES

- A. Sheet Metal Boxes: NEMA OS 1, galvanized steel.
- B. Surface-Mounted Cast Metal Box: NEMA 250, Type 4; flat-flanged, surface-mounted junction box.
 - 1. Material: Galvanized cast iron.
 - 2. Cover: Furnish with ground flange, neoprene gasket, and stainless steel cover and screws.
- C. Empty conduits shall terminate in waterproof box mounted so top is flush with ground.

3. PART 3 EXECUTION

3.1 INSTALLATION

- A. Install electrical boxes as shown on plans, and as required for splices, taps, wire pulling, equipment connections and compliance with regulatory requirements.
- B. Install electrical boxes to maintain headroom and to present neat mechanical appearance.
- C. Install pull and junction boxes above accessible ceilings in unfinished areas only.
- D. Align adjacent wall-mounted outlet boxes for switches, thermostats, and similar devices with each other.
- E. Use flush mounting outlet boxes in finished areas.
- F. Secure flush mounting box to interior wall and partition studs. Accurately position to allow for surface finish thickness.
- G. Install flush mounting box without damaging wall insulation or reducing its effectiveness.
- H. Use adjustable steel channel fasteners for hung ceiling outlet box.
- I. Support boxes independently of conduit.
- J. Use gang box where more than one device is mounted together. Do not use sectional box.

- K. Use cast outlet box in all locations.
- L. Large Pull Boxes: If boxes are larger than 100 cubic inches in volume or 12 inches in any dimension, use a surface-mounted cast metal box.

3.2 INTERFACE WITH OTHER PRODUCTS

- A. Place flush mounting box in masonry wall so that only masonry unit corner requires cutting. Coordinate masonry cutting to achieve neat opening.
- B. Coordinate mounting heights and locations of outlets mounted above counters, benches, and backsplashes.

3.3 ADJUSTING

- A. Adjust flush-mounting outlets to make front flush with finished wall material.
- B. Install knockout closure in unused box opening.

END OF SECTION