

## **SECTION 16134**

### **OUTLET BOXES**

#### **PART 1 - GENERAL**

##### **1.01 WORK INCLUDED**

- A. Furnish and install suitable outlet boxes for lighting fixtures, devices, empty raceway devices, small junction boxes, and other locations as required by the installation.

##### **1.02 REFERENCE DOCUMENTS**

- A. The Special Provisions for Electrical Work are hereby made a part of this Section of the Work. Refer to Section 16010.

##### **1.03 SUBMITTALS**

- A. Submit Manufacturers' specification data on each type of box and trim to be furnished to the job.

#### **PART 2 - PRODUCTS**

##### **2.01 MATERIALS**

- A. Outlet boxes, except where otherwise specifically indicated or required, shall be of one-piece or welded assembly construction. Outlet boxes shall be with covers of the same manufacturer as the box and selected to meet the conditions of the installation.
- B. Outlet boxes shall be equal to the following; Appleton, Steel City or RACO types, except that where more conduits enter the boxes, structural conditions interfere, or wiring requires more space, larger boxes of similar construction shall be used. Multi-gang boxes for switches of different voltages shall be provided with interior barriers.
  - 1. In Gypsum Board Walls, for single and two-gang outlets, Type 4S and 4SD with No. 846 and 847 covers not more than 1" thick. Where boxes serve one wiring device, a single gang handy box may be used. All Gypsum Board Wall boxes shall receive far-side box supports and shall be Caddy J-1A.
  - 2. In concrete block or similar masonry walls, No. M1-250, M2-250 or M3-250 for 1, 2, and 3 gang outlets in 4" thick walls, No. M1-350 for 1, 2, and 3 gang outlets in thicker walls and the same series for more gangs in common boxes in similar walls.

3. In poured concrete, plaster and similar masonry walls, No. 4S and 4SD boxes with No. 846 covers for single gang outlets, No. 2G-5075 boxes with No. 2GC-75 covers for 2 gang outlets and corresponding G-5075 boxes and G C-75 covers for 3, 4, 5, and 6 gang outlets. Covers shall be maximum of 1" high.
  4. In concrete ceilings, Type O C R boxes and O C P covers.
  5. In other ceilings, Type 4/0 and 4/0D boxes. Outlet boxes for surface or pendant lighting fixtures shall have 3/8" fixture studs.
  6. In poured concrete floors, Steel City 600 Series cast iron, watertight fully adjustable with threaded conduit openings, expendable cap to prevent ingress of concrete during pour, carpet or tile plate and P-60 DR duplex lift lid with steel seating plate for receptacle.
- C. Exposed outlet boxes mounted in protected areas shall be solid gang switch boxes with flat covers. Boxes shall be of size and number or gang for device requirements, except no box shall be smaller than 4" square.
- D. Outlet boxes exposed on exteriors of buildings, flush in non-waterproofed walls below grade or in wet locations shall be Type FS or FD threaded outlet cast boxes with suitable gasketed cast covers.
- E. Small junction boxes shall be the same as device boxes except shall be provided with blank plates.

## **PART 3 - EXECUTION**

### **3.01 MATERIAL SELECTION**

- A. Outlet boxes shall be of the standard stamped galvanized steel type except for exterior use where they shall be hot-dipped galvanized cast iron with gaskets. Boxes shall be of the proper size to accommodate the wiring and device for which they are provided.
- B. Ceiling outlet boxes shall generally be four inch (4") octagon, and wall outlet boxes shall be switch boxes or be 4" square with covers to suit device to be mounted thereon, except that in masonry walls without applied finish, boxes shall be rectangular masonry boxes.
- C. Through-the-wall type boxes shall not be used.

### **3.02 INSTALLATION**

- A. Install and leave boxes in a neat, clean and workmanlike manner. Set plaster covers to within 1/8" of the finished surface.

- B. Determine exact locations of all outlets from the Architectural Scale Drawings or at the site by the Owner. Modify outlet locations from those shown on the Drawings to accommodate door swings or to fit other construction details without cost to the Owner. Set wall boxes in advance of wall construction and move where required for any outlets, which are displaced during the operation of other trades without expense to the Owner.
  
- C. Unless noted otherwise on the Drawings, indicated on Architect's Drawings, or directed by the Architect at time of installation, place outlet boxes at the locations scaled from the floor plans and at the following heights from the center of box above the finished floor level:
  - 1. Wall Switches: 48" and immediately adjacent to strike side of door.
  - 2. Convenience Receptacles: 16" vertically oriented except 23" for E W C's and 48" when indicated above counters.
  - 3. Telephone Outlets: Unless indicated otherwise 16" vertically oriented except they shall be 54" for wall phones and 4" above backsplash or trim when indicated above counters.
  - 4. Wall Bracket Outlets: 78"
  - 5. Receptacles in the water treatment area and at dialysis counters shall be mounted at heights noted on Drawings.
  
- D. Each recessed lighting fixture shall be independently connected from an above ceiling junction box, which is readily accessible through the lighting fixture opening.

**END OF SECTION**