

**SECTION 16135**

**CABINETS, BOXES AND FITTINGS**

**Part 1 -Design Directives**

Device and junction boxes shall be sized in strict conformance to the NEC articles that pertain to conductor fill.

Junction and pull boxes shall be located and installed in a manner that will render the box and wiring accessible upon project completion. All junction boxes shall be installed at a height that will render them accessible from a standard stepladder that can be raised and opened in the space under the ceiling without the removal of ceiling tiles. Accessible shall be defined as being visible and able to be reached, tested, rewired and worked on from a stepladder erected under it without necessitating removal of any building or MEP equipment or parts. Workers shall not be expected to climb into the space above a ceiling and have to crawl or lay on ductwork or mechanical equipment to reach junction or pull boxes.

The engineer shall be a partner with the electrical contractor in coordinating the location for junction and pull boxes in raceway systems where the conflict was not anticipated in the design phase of the project. At design development and throughout the design process before bidding the engineer shall identify to the architect all special requirements needed to accommodate the accessibility and space criteria detailed in this document.

Junction boxes containing access control, surveillance, and intrusion detection systems (collectively referred to as security systems) shall have covers attached with security screws as specified in DC Standard 13825 SECURITY MANAGEMENT SYSTEMS.

**Part 2 -Products**

No designated manufacturers

**Part 3 -Execution**

All interior outlet boxes shall be made from steel and supported rigidly to the building structure. Raised covers shall be combination square-drawn type manufactured specifically for sheetrock and tile applications. Mud rings shall never be used on sheet rock, paneling or tiled walls.

Exterior junction boxes when surface mounted shall be constructed from PVC or fiberglass.

Outlet boxes shall be securely fastened and set into the framing so that the face of the box is not more than 1/4 inch behind the finished surface of the wall or ceiling into which it is installed. The space between the edges of the box and the finished surface of the wall or ceiling shall not exceed 1/8 inch. The owner will closely monitor this issue.

Junction and pull boxes shall have the covers facing in the direction that maximizes accessibility. When a cover is removed a worker shall not have to reach over or through other conduits and equipment to reach the conductors enclosed in the box.