

## Chapter E 356

## CELLULAR METAL FLOOR RACEWAYS

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**E 356.01 Definitions.** For the purposes of this chapter, a "cellular metal floor raceway" shall be defined as the hollow spaces of cellular metal floors, together with suitable fittings, which may be approved as enclosures for electrical conductors; a "cell" shall be defined as a single, enclosed tubular space in a cellular metal floor member, the axis of the cell being parallel to the axis of the metal floor member; a "header" shall be defined as a transverse raceway for electrical conductors, providing access to predetermined cells of a cellular metal floor, thereby permitting the installation of electrical conductors from a distribution center to the cells.

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.

**E 356.02 Use.** Conductors shall not be installed in cellular metal floor raceways (1) where subject to corrosive vapor; (2) in any hazardous location; nor (3) in commercial garages, except for supplying ceiling outlets or extensions to the area below the floor but not above. No electric conductors shall be installed in any cell or header which contains a pipe for steam, water, air, gas, drainage, or other service than electrical.

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.

**E 356.03 Other chapters.** Installations of conductors in the raceways of cellular metal floor shall comply with the applicable provisions of chapter E 300.

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.

## A. INSTALLATION

**E 356.04 Size of conductors.** No conductor larger than No. 0 shall be installed, except by special permission.

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.

**E 356.05 Number of conductors in raceway.** The combined cross-sectional area of all conductors shall not exceed 40% of the interior area of the header feeding the individual cells; except that where the raceway contains only armored cable or non-metallic sheathed cable, these requirements shall not apply.

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.

**E 356.06 Splices and taps.** Splices and taps shall be made only in header access units or junction boxes.

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.

**E 356.07 Discontinued outlets.** When an outlet is discontinued, the conductors supplying the outlet shall be removed from the raceway.

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.

**E 356.08 Markers.** A suitable number of markers shall be installed extending through the floor for the future locating of cells and for system identification.

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.

**E 356.09 Junction boxes.** Junction boxes shall be levelled to the floor grade and sealed against the entrance of water. Junction boxes used with these raceways shall be of metal and shall be electrically continuous with the raceway.

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.

**E 356.10 Inserts.** Inserts shall be levelled to the floor grade and sealed against the entrance of water. Inserts shall be of metal and shall be electrically continuous with the raceway. In cutting through the cell wall and setting inserts, chips and other dirt shall not be allowed to fall into the raceway, and tools shall be used which are designed to prevent the tool from entering the cell and injuring the conductors.

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.

**E 356.11 Connection to cabinets and extensions from cells.** Connections to cabinets and extensions from cells to outlets shall be made by means of rigid or flexible conduit or by means of fittings approved for the purpose.

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.

## B. CONSTRUCTION SPECIFICATIONS

**E 356.12 General.** Cellular metal floor raceways shall be so constructed that adequate electrical and mechanical continuity of the complete system will be secured. They shall provide a complete enclosure for the conductors. The interior surfaces shall be free from burrs and sharp edges, and surfaces over which conductors are drawn shall be smooth. Suitable bushings or fittings having smooth rounded edges shall be provided where conductors pass.

**History:** Cr. Register, April, 1964, No. 100, eff. 5-1-64.