

## Chapter E 358

## CELLULAR CONCRETE FLOOR RACEWAYS

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**E 358.01 Scope.** Approved precast cellular concrete floor raceways shall comply with the applicable requirements of chapter E 300, and shall also comply with the provisions of sections E 358.02 to E 358.11 inclusive. For the purpose of this chapter, "precast cellular concrete floor raceways" shall be defined as the hollow spaces in floors constructed of precast cellular concrete slabs, together with suitable metal fittings designed to provide access to the floor cells in an approved manner. A "cell" shall be defined as a single, enclosed tubular space in a floor made of precast cellular concrete slabs, the direction of the cell being parallel to the direction of the floor member. "Header ducts" shall be defined as transverse metal raceways for electrical conductors, furnishing access to predetermined cells of a precast cellular concrete floor, thus providing for the installation of electrical conductors from a distribution center to the floor cells.

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

**E 358.02 Use.** Conductors shall not be installed in precast cellular concrete floor raceways (1) where subject to corrosive vapor; (2) in hazardous locations; nor (3) in commercial garages, except for supplying ceiling outlets or extensions to the area below the floor but not above. No electrical conductor shall be installed in any cell or header which contains a pipe for steam, water, air, gas, drainage, or any service other than electrical.

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

**E 358.03 Header duct.** The header duct shall be installed in a straight line, at right angles to the cells. The header duct shall be mechanically secured to the top of the precast cellular concrete floor. The end joints shall be closed by metallic closure fittings and sealed against the penetration of water. The header duct shall be electrically continuous throughout its entire length and shall be electrically bonded to the enclosure of the distribution center.

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

**E 358.04 Connection to cabinets and other enclosures.** Connection from header duct to cabinets and other enclosures shall be made by means of metallic duct and fittings approved for the purpose.

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

**E 358.05 Junction boxes.** Junction boxes shall be levelled to the floor grade and sealed against the entrance of water. Junction boxes shall be of metal and shall be mechanically and electrically continuous with the header ducts.

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

**E 358.06 Markers.** Each hidden access point between a header and a cell intended for future use shall be provided with a marker extending through the floor covering. A suitable number of markers shall be installed, extending through the floor covering, to locate the cells and to provide system identification.

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

**E 358.07 Inserts.** Inserts shall be levelled to the floor grade and sealed against the entrance of water. Inserts shall be of metal and shall be fitted with receptacles of the grounded type. A ground conductor shall connect the insert receptacles to a positive ground connection provided on the header duct. In cutting through the cell wall for setting inserts or other purposes (such as providing access openings between header duct and cells) chips and other dirt shall not be allowed to fall into the raceway, and the tool used shall be so designed as to prevent the tool from entering the cell and injuring the conductors.

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

**E 358.08 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 358.09 Number of conductors in raceway.** The combined cross sectional area of all conductors in any header shall not exceed 40% of the interior cross-sectional area of such header; except that where the header contains only armored cable or non-metallic sheathed cable, or both, this limitation shall not apply.

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

**E 358.10 Splices and taps.** Splices and taps shall be made only in header duct access units or junction boxes.

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

**E 358.11 Discontinued outlets.** When an outlet is discontinued, the conductors supplying the outlet shall be removed from the header and cell.

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