

CHAPTER 7

FIRE-RESISTANCE-RATED CONSTRUCTION

SECTION 701 GENERAL

701.1 Scope. The provisions of this chapter shall specify the requirements for and the maintenance of fire-resistance-rated construction and requirements for enclosing floor openings and shafts in existing buildings. New construction shall comply with the *International Building Code*.

SECTION 702 DEFINITIONS

702.1 Terms defined in Chapter 2. Words and terms used in this chapter and defined in Chapter 2 shall have the meanings ascribed to them as defined therein.

SECTION 703 FIRE-RESISTANCE-RATED CONSTRUCTION

703.1 Maintenance. The required fire-resistance rating of fire-resistance-rated construction (including walls, firestops, shaft enclosures, partitions, smoke barriers, floors, fire-resistant coatings and sprayed fire-resistant materials applied to structural members and fire-resistant joint systems) shall be maintained. Such elements shall be properly repaired, restored or replaced when damaged, altered, breached or penetrated. Openings made therein for the passage of pipes, electrical conduit, wires, ducts, air transfer openings and holes made for any reason shall be protected with approved methods capable of resisting the passage of smoke and fire. Openings through fire-resistance-rated assemblies shall be protected by self- or automatic-closing doors of approved construction meeting the fire protection requirements for the assembly.

703.1.1 Fireblocking and draftstopping. Required fireblocking and draftstopping in combustibles concealed spaces shall be maintained to provide continuity and integrity of the construction.

703.1.2 Smoke barriers. Required smoke barriers shall be maintained to prevent the passage of smoke and all openings protected with approved smoke barrier doors or smoke dampers.

703.2 Opening protectives. Opening protectives shall be maintained in an operative condition in accordance with NFPA 80. Fire doors and smoke barrier doors shall not be blocked or obstructed or otherwise made inoperable. Fusible links shall be replaced promptly whenever fused or damaged. Fire door assemblies shall not be modified.

703.2.1 Signs. Where required by the fire code official, a sign shall be permanently displayed on or near each fire door in letters not less than 1 inch (25 mm) high to read as follows:

1. For doors designed to be kept normally open: FIRE DOOR—DO NOT BLOCK.

2. For doors designed to be kept normally closed: FIRE DOOR—KEEP CLOSED.

703.2.2 Hold-open devices and closers. Hold-open devices and automatic door closers, where provided, shall be maintained. During the period that such device is out of service for repairs, the door it operates shall remain in the closed position.

703.2.3 Door operation. Swinging fire doors shall close from the full-open position and latch automatically. The door closer shall exert enough force to close and latch the door from any partially open position.

703.3 Ceilings. The hanging and displaying of salable goods and other decorative materials from acoustical ceiling systems that are part of a fire-resistance-rated floor/ceiling or roof/ceiling assembly, shall be prohibited.

703.4 Testing. Horizontal and vertical sliding and rolling fire doors shall be inspected and tested annually to confirm proper operation and full closure. A written record shall be maintained and be available to the fire code official.

SECTION 704 FLOOR OPENINGS AND SHAFTS

704.1 Enclosure. Interior vertical shafts, including but not limited to stairways, elevator hoistways, service and utility shafts, that connect two or more stories of a building shall be enclosed or protected as specified in Table 704.1.

704.2 Opening protectives. When openings are required to be protected, opening protectives shall be maintained self-closing or automatic-closing by smoke detection. Existing fusible-link-type automatic door-closing devices are permitted if the fusible link rating does not exceed 135°F (57°C).

FIRE-RESISTANCE-RATED CONSTRUCTION

**TABLE 704.1
VERTICAL OPENING PROTECTION REQUIRED**

| OCCUPANCY CLASSIFICATION | CONDITIONS | PROTECTION REQUIRED |
|---------------------------------|--|---|
| Group I | Vertical openings connecting two or more stories | 1-hour protection |
| All, other than Group I | Vertical openings connecting two stories | No protection required ^{a,b} |
| All, other than Group I | Vertical openings connecting three to five stories | 1-hour protection or automatic sprinklers throughout ^{a,b} |
| All, other than Group I | Vertical openings connecting more than five stories | 1-hour protection ^{a,b} |
| All | Mezzanines open to the floor below | No protection required ^{a,b} |
| All, other than Group I | Atriums and covered mall buildings | 1-hour protection or automatic sprinklers throughout |
| All, other than Groups B and M | Escalator openings connecting four or less stories in a sprinklered building. Openings must be protected by a draft curtain and closely spaced sprinklers in accordance with NFPA 13 | No protection required |
| Group B and M | Escalator openings in a sprinklered building protected by a draft curtain and closely spaced sprinklers in accordance with NFPA 13 | No protection required |

- a. Vertical opening protection is not required for Group R-3 occupancies.
- b. Vertical opening protection is not required for open parking garages and ramps.