

ADVISORY COMMITTEE COMMENT FORM FOR PROPOSED CODE CHANGES

(This form must be submitted electronically)

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1346 IMC #32

Proposed Code Change – Language

2012 IMC 607.6.1 Through penetrations: taken from the IBC committee (J Norman)

IBC Sec. 717.6.1 Through penetrations. In occupancies other than Group I-2 and I-3, a duct constructed of *approved* materials in accordance with the *International Mechanical Code* that penetrates a fire-resistance-rated floor or floor/ceiling assembly that connects not more than two *stories* is permitted without a shaft enclosure protection, provided a *listed fire damper* is installed at the floor line or the duct is protected in accordance with Section 714.4. For air transfer openings, see Section 712.1.8.

Exceptions: 1. A duct is permitted to penetrate three floors or less without a *fire damper* at each floor, provided such duct meets all of the following requirements:

- a.1- The duct shall be contained and located within the cavity of a wall and shall be constructed of steel having a minimum wall thickness of 0.0187 inches (0.4712 mm) (No. 26 gage).
- b.2- The duct shall open into only one *dwelling or sleeping unit* and the duct system shall be continuous from the unit to the exterior of the building.
- c.3- The duct shall not exceed 4-inch (102 mm) nominal diameter and the total area of such ducts shall not exceed 100 square inches (0.065 m²) in any 100 square feet (9.3 m²) of floor area.
- d.4- The *annular space* around the duct is protected with materials that prevent the passage of flame and hot gases sufficient to ignite cotton waste where subjected to ASTM E 119 or UL 263 time temperature conditions under a minimum positive pressure differential of 0.01 inch (2.49 Pa) of water at the location of the penetration for the time period equivalent to the *fire-resistance rating* of the construction penetrated.
- e.5- Grille openings located in a ceiling of a fire-resistance-rated floor/ceiling or roof/ceiling assembly shall be protected with a *listed ceiling radiation damper* installed in accordance with Section 717.6.2.1.

2. In Group I-2 and I-3 occupancies, a duct constructed of *approved* materials in accordance with the *International Mechanical Code* that penetrates a fire-resistance-rated floor or floor/ceiling assembly that connects not more than two *stories* is permitted without a shaft enclosure protection, provided a *listed smoke/fire damper* is installed at the floor line.

Proposed Code Change – Need and Reason

The code change is necessary because without it building officials would be required to require two smoke fire dampers for a duct that only connects two stories in group I-2 and I-3 occupancies. This is an overkill, especially in an occupancy that is required to be fully sprinkled, alarmed and in the case of a group I-3, provided with standpipes. CCLD has allowed this as a policies for several years with no know detrimental effect. We are also required to put our policies into the code to ensure that it has went through the rule making process.

Proposed Code Change – Cost/Benefit Analysis

The proposed code change reduces the cost of construction as the designer is no longer required to construct a fire-resistance-rated shaft and install two smoke/fire dampers. There is a minimal risk by eliminating the additional smoke/fire damper as these buildings are required to be sprinkled. For ducts that connect more than two stories a shaft and multiple dampers would still be required.

Other Factors to Consider Related to Proposed Code Change

1. Is this proposed code change meant to:

change language contained in a published code book? If so, list section(s).
IBC Sec.717.6.1

change language contained in an existing amendment in Minnesota Rule? If so, list Rule part(s).

delete language contained in a published code book? If so, list section(s).

delete language contained in an existing amendment in Minnesota Rule? If so, list Rule part(s).

neither; this language will be new language, not found in the code book or in Minnesota Rule.

2. Is this proposed code change required by a Minnesota Statute or new legislation? If so, please provide the citation to the Statute or legislation.
No

3. Will this proposed code change impact other sections of a published code book or of an amendment in Minnesota Rule? If so, please list the affected sections or rule parts.
Yes, IMC

4. Will this proposed code change impact other parts of the Minnesota State Building Code? If so, please list the affected parts of the Minnesota State Building Code.
Yes, MN Mechanical Code

5. Who are the parties affected or segments of industry affected by this proposed code change?
Architects, health care providers, mechanical contractors

6. Can you think of other means or methods to achieve the purpose of the proposed code change? If so, please explain what they are and why your proposed change is the preferred method or means to achieve the desired result.
No.

7. Are you aware of any federal requirement or regulation related to this proposed code change? If so, please list the regulation or requirement.
No