

**Oregon**  
**Interpretive Ruling 95:3**  
**ELEVATOR SHAFT FIRE PROTECTION**

**Requested by:** PARI PEDERSEN, ARCHITECT, KLAMATH FALLS  
January 24, 1995

**ISSUE OR REQUEST**

Is fire protection required for an elevator shaft in a two-story Group 2, Division 2 Occupancy medical office building of Type V-N Construction?

**APPLICABLE CODE SECTIONS**

Oregon Structural Specialty Code, Section 1706, says in part:

**"Sec. 1706. (a) General.** Openings through floors shall be enclosed in a shaft enclosure of fire-resistive construction having the Lime period set forth in Table No. 17-A for "Shaft Enclosures" except as permitted in Section 1706 (c). See occupancy chapters for special provisions.

(b) **Extent of Enclosures.** Shaft enclosures shall extend from the lowest floor opening through successive floor openings and shall be enclosed at the top and bottom.

**EXCEPTIONS:** 1. Shafts extending through or to the underside of the roof sheathing, deck or slab need not be enclosed at the top.

2. Noncombustible ducts, vents or chimneys used to convey vapors, dusts or combustion products may penetrate the enclosure at the bottom.

3. Shafts need not be enclosed at the bottom when protected by fire dampers conforming to U.B.C. Standard No. 43-7, installed at the lowest floor level within the shaft enclosure. Shaft enclosures shall be constructed to continuously maintain the required fire-resistive integrity.

(c) **Special Provision.** In other than Group I Occupancies, Openings which penetrate only one floor and are not connected with openings communicating with other stories or basements and which are not concealed within building construction assemblies need not be enclosed. (emphasis added)

Section 3305 (j) says:

(j) **Elevators.** Elevators opening into a corridor serving a Group R, Division I or Group I Occupancy having an occupant load of 10 or more, or a corridor serving other occupancies having an occupant load of 30 or more shall be provided with an elevator lobby at each floor containing such a corridor. The lobby shall completely separate the elevators from the corridor by construction conforming to Section 3305 (g) and all openings into the lobby wall contiguous with the corridor shall be protected as required by Section 3305 (h).

**EXCEPTIONS:** 1. In office buildings classed as a Group B, Division 2 Occupancy, separations need not be provided from a street floor lobby, provided the entire street floor is protected with an automatic sprinkler system.

2. Elevators not required to meet the shaft enclosure requirements of Section 1706.

3. When additional doors are provided in accordance with Section 5106.

Elevator lobbies shall comply with Section 5106.

In fully sprinklered office buildings, corridors may lead through enclosed elevator lobbies if all areas of the building have access to at least one required exit without passing through the elevator lobby.

**BACKGROUND**

A difference of opinion has been raised between the local Building Official and the Division's Chief Elevator Inspector regarding the construction of the elevator shaft. The question relates to whether a nonrated elevator shaft is permitted under Section 1706 (c) and 3305 (j) of the OSSC. A key question is whether an elevator shaft is considered a "concealed shaft." There is also a question whether Section 3305 (j) makes an exception in item 2 to not require an elevator lobby if the shaft is not required to be protected or the reverse is true. At the request of the BCSB the Electrical and Elevator Board reviewed this issue and recommended that all shafts be protected by one-hour construction.

**DISCUSSION**

On February 3, 1995, staff talked to Dennis McCreary, Engineer at ICBO, and both of the above code sections were discussed. McCreary interprets Section 3305 (j), Exception 2, that an elevator lobby is not required if the shaft is not required to be protected by Section 1706. This is contrary to the architect and Klamath County Building Official's

positions and agrees with the Chief Elevator Inspector interpretation. On Section 1706 McCreary indicated under the condition described, protection of the shaft is not required. He referenced the second paragraph on Section 1706 (c) of the ICBO Handbook, copyright 1991. The key to this interpretation is the phrase "not concealed within building construction." McCreary says ICBO interprets the intent that if a person may enter the construction, like an elevator car, it is not concealed. The referenced relevant portion of the *Handbook to the Uniform Building Code*, copyright 1991 says:

"For the most part. Section 1706 (c) includes the former exceptions found in the shaft provisions of the 1988 edition of the V.B.C. These are now called special provisions and are easier to understand. The first provision permits two adjacent stories to intercommunicate with each other without protection of the openings between the two stories except in the case of Group I Occupancies.

The language "not concealed within the building construction" is intended to prevent unprotected shafts such as chutes or dumbwaiter shafts which are completely enclosed by partitions or closets. Where the openings are concealed in this manner, they permit a fire within the shaft to burn undetected and distribute products of combustion to the upper floor.

As long as these intercommunicating openings serve only the one adjacent floor, shaft protection is not required. A common use of this exception is where office buildings have a lobby which extends up through the second story so that individuals on the second floor may look down into the lobby. Any building containing an opening similar to that just described which extends through two or more floor levels must be constructed as required for a building containing an atrium, as is discussed in Section 1715." (emphasis added)

ICBO's answer on this code section is contrary to the Chief Elevator Inspector's position and agrees with the architect's and Klamath County Building Official's interpretation.

## **FINDINGS**

Section 3305 (j), Exception 2, is intended to determine where an elevator lobby is not required. It is not intended that, if an elevator lobby is not required, the elevator shaft protection is not required.

Section 1706 (c) provides the Building Official with an opportunity for judgment. ICBO, publisher of the Uniform Building Code, interprets the code to not require the shaft to be rated in a two-story building. It is reasonable to allow the elevator shaft in a two-story building to be unprotected because there is the capability to look into or enter the elevator car, and other similar openings between floors, such as stairways, are not required to be protected. This interpretation is authorized by ORS 455.060, Rulings on Acceptability of Materials, Designs or Methods of Construction and Attorney General's Opinion OP-5208 issued October 1, 1981, which advised the statute permits authoritative interpretations of code requirements.

## **CONCLUSION**

Permitting an unprotected elevator shaft penetrating a single floor and complying with OSSC Section 1706 (c) is consistent with ICBO's model code interpretation, providing a similar level of fire safety as permitted for unprotected stair enclosures.

(signed May 3 1995)

John A. Talbott, P.E., Chair  
Building Codes Structures Board

The recommendations and findings of the Building Codes Structures Board are accepted and adopted.

## **RULING**

Passenger elevator shafts complying with Section 1706 (c) are not required to be fire protected as required in Table 17-A.

(signed September 11, 1995)

Joseph A. Brewer III, Administrator  
Building Codes Division