

# Intermediate Support Tubes in Rated Elevator Shaft Enclosure Walls

By John H. Jackson, Fire Safety Project Manager

This month's Lessons Learn Bulletin focuses on the interruption of elevator shaft enclosure walls. This is due to the fact they require installation of the intermediate support tubes for mounting of elevator guiderails.



**Lesson Learned Statement:** Elevators ride up and down on guiderails that are located inside the elevator shaft enclosure. The National Fire Protection Association Life Safety Code, Section 8.6.5 requires shaft enclosure walls be constructed of a specific fire resistance rating to limit the travel of fire in a building.

**Discussion:** The elevator manufacturer's require guiderails be mounted to the building structure. The mounting distances can vary, based on elevator's manufacturer specifications. In this case, floor to floor height on several floors exceeded the elevator manufacturer's maximum structural distance for the mounting of the guiderails. As a result, intermediate support tubes were installed between floors to achieve required mounting distances.

The support tube installation interrupted the rated shaft enclosure walls as shown in the picture above. These interruptions create a condition that made the shaft enclosures non-compliant with Section 8.6.5 of the Life Safety Code and the UL wall design detail. One possible solution was to apply fire proofing to the support tube inside the shaft enclosure. After review, this application did not maintain the shaft wall rating and provide two-hour protection for the guiderails. As a result, a third party fire protection engineering firm was hired to provide an equivalency to maintain the shaft rating. After evaluating several options, the best solution is to box around the tube with the gypsum board to maintain the wall rating as an equivalency.

If you have questions concerning this bulletin or need assistance, please contact Environmental Health and Safety's Fire and Life Safety group at 713-792-2888 or email us at [askEHS@mdanderson.org](mailto:askEHS@mdanderson.org).