OFFICE OF UNIVERSITY BUILDING OFFICIAL
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Fire Safety Review Tips

1. **Table of Fire Resistance Ratings:** HECOM requires that a table of all fire resistance ratings be provided. This assists reviewers and, more importantly, contractors and inspectors in ensuring fire resistance assemblies are installed where required and in accordance with the design.

ELEMENT	RATING	DESIGN REFERENCE	DETAIL LOCATION
Columns	2 hours	UL# XXXX	3/S-2
Floor-Ceiling Assembly	2 hours	IBC Table XXX, Item X.x	4/S-7
Elevator Shaft	2 hours	UL# XXXX	Partition Type 2/A-4.2
Top of Elevator Shaft	2 hours	UL# XXXX	5/S-7
Use Group Separation	1 hour	IBC Table XXX, Item X.x	Partition Type 4/A-4.2

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4. **Design References for Fire Resistance Ratings:** Provide specific designs that will achieve fire ratings. Designs may be from third-party testing agencies such as UL or accepted engineering practice such as designs from the Gypsum Association or the International Building Code.

5. **Interior Finishes:** Specifications must include the required fire test response characteristics (flame spread index, smoke developed index, critical radiant flux, etc.) for all interior finishes. This is particularly problematic for wood wall finishes but is achievable when proper specifications are provided. *(USBC Chapter 8)*

6. **Through-Penetration Firestop Systems:** When penetrating a fire resistance-rated assembly a fire rated penetration assembly is required. When penetrating a floor assembly, the through penetration assembly generally requires both F-ratings and T-ratings (limited exception). A table of typical listed assembly(ies) for the project is required to be provided with construction drawings with deferred submittal required in the specifications. A non-

capital projects can provide typical firestop assembly details with further detail provided in specification and required deferred submission. (See USBC Chapter 7 for requirements and for exceptions). Engineering Judgments should be limited and be identified as early in the project as possible to eliminate issues near the completion of the project. Refer to specific guidelines for submission of Engineering Judgments (EJs).

7. **Mixed Use Occupancies:** The Building Code provides several alternatives to designers related to mixed uses including non-separated, separated with fire barriers, and separation of buildings. The code summary should specify method chosen by designers.

8. **Spray-Applied Fire Resistive Material (SFRM):** SFRM is used to provide fire resistance ratings of structural members and roof/floor assemblies. Installation of hangers, relocation of partitions and/or penetrations will disturb the existing SFRM. Disturbed SFRM is required to be repaired. The statement repair to “same as before” will not be sufficient. Provide repair details. Identification of existing SFRM material will be required and a patching material that is compatible shall be chosen. Identify the maximum area to be repaired consistent with patching material instructions.

9. **Fire Pump Rooms:** Fire ratings for fire pump room are to be 1-hour or 2-hour based on building and fire sprinkler system characteristics. Fire pump rooms must be physically located with direct access to the outside, unless provided with an approved passageway or enclosed stair equivalent in fire resistance rating to fire pump room rating. Access to pump room to be labeled with identification of 2-in letter height and 3/8-in. letter stroke. Coordination with multiple disciplines is necessary to verify that normal and emergency lighting, proper ventilation, and heating, along with adequate drainage are afforded within the pump room enclosure. Circuits supplying fire pumps to be designed with survivability protection.

10. **Fire Doors:** Fire protection doors and window openings to meet the requirements of NFPA 80 and to meet the rating requirements of the USBC. Glazing marking as designated in in the USBC must be designated on construction documents for all rated fire protection openings.