

Owner / Applicant Information

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Project Information

IU Luddy Hall School of Informatics and Computing
Woodland Ave and East Cottage Grove Street

Bloomington IN 47408

County MONROE

Project Type New ☒ Y Addition ☐ Alteration ☐ Existing ☐ Change of Occupancy ☐

Project Status ☒ F F=Filed U or Null=Unfiled

IDHS Issued Correction order? ☒ No Has Violation been Issued? ☒ No

Violation Issued by: NA

Local Building Official

Phone: Email:

Local Fire Official

Phone: Email:

Variance Details

Code Name: Other Code (Not in the list provided)
715.4, 2014 IBC

Conditions: The edge of slab condition in certain locations at each floor level will be provided with a mineral wool in-fill in lieu of a fire containment system tested per ASTM E2307. A listed system is required where floors are fire-rated and do not extend entirely to the exterior curtain wall assembly. As indicated on the attached plans, the locations occur primarily where the floor slab stops short of the curtain wall in the 4 story + basement atrium. Other locations occur at four (4) small bump-out areas on each floor level.
The building will be 4 stories in height, plus a partial basement. The building will be primarily B Occupancy, and will include some A-3 Occupancy areas. The building will be Type IIA Construction.

DEMONSTRATION THAT PUBLIC HEALTH, SAFETY, AND WELFARE ARE PROTECTED:

1=Non-compliance with the rule will not be adverse to the public health, safety or w

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2= Applicant will undertake alternative actions in lieu of compliance with the rule to ensure that granting of the variance will not be adverse to public health, safety, or welfare. Explain why alternative actions would be adequate (be specific).

Facts: 1. The edge of slab condition involves a gap ranging from 1 inch to 2.5 inches, which is significantly less than the typical slab condition addressed by the ASTM E2307 system - which permits up to a 10-inch gap. Compressible mineral wool insulation is considered under the circumstances to be the best application for the described condition.
2. Providing protection beyond that described would have very little benefit given the fact that the atrium inherently has unprotected floor openings for the full height of the building. The atrium is designed with a VESDA (very early smoke detection apparatus) air sampling system, which will shut down the associated air handling systems upon actuation.
3. The building will be protected throughout with a sprinkler system.
4. Based upon the use of enhanced detection, the lack of smoke dampers at the air transfer openings will not be adverse to safety.

DEMONSTRATION OF UNDUE HARDSHIP OR HISTORICALLY SIGNIFICANT STRUCTURE:

☐ Imposition of the rule would result in an undue hardship (unusual difficulty) because of physical limitations of the construction site or its utility services.

☐ Imposition of the rule would result in an undue hardship (unusual difficulty) because of major operational problems in the use of the building or structure.

☒ Y Imposition of the rule would result in an undue hardship (unusual difficulty) because of excessive costs of additional or altered construction elements.

☐ Imposition of the rule would prevent the preservation of an architecturally or a historically significant part of the building or structure

Facts: The edge of slab condition cannot be protected with an ASTM E2307 compliant system due to the fact that in each case for the areas involved the horizontal curtain wall mullions are centered on the floor slabs. Attempts were made to develop a revised method using an engineering judgment, but to no avail due to inherent discrepancies in the as-built condition versus the prototypical assemblies indicated in UL listed assemblies. Imposition of the rule would require extensive demolition and re-construction of exterior wall details that are already in place.

Variance Details

Code Name: 2010 NFPA 13 Installation of Sprinkler Systems (675 IAC 28-1-5)
8.5.5.3.1

Conditions: Sprinklers will not be installed beneath the open stairways which creates an obstruction to the ceiling sprinklers over 4 feet in width.

DEMONSTRATION THAT PUBLIC HEALTH, SAFETY, AND WELFARE ARE PROTECTED:

1=Non-compliance with the rule will not be adverse to the public health, safety or w

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2= Applicant will undertake alternative actions in lieu of compliance with the rule to ensure that granting of the variance will not be adverse to public health, safety, or welfare. Explain why alternative actions would be adequate (be specific).

Facts:

The stairs are non combustibile and located in an open area of the building with limited combustibile materials located below.

Spacing of ceiling sprinklers has been designed to meet the performance objectives of Chapter 8 of NFPA 13. Sprinklers are located so as to minimize obstructions to discharge as defined in 8.8.5.3, and additional sprinklers are provided to ensure adequate coverage of the hazard. The closely spaced floor opening protection sprinklers, side wall sprinklers and draft curtains have been designed with consideration of the obstructed areas.

DEMONSTRATION OF UNDUE HARDSHIP OR HISTORICALLY SIGNIFICANT STRUCTURE:

Y

Imposition of the rule would result in an undue hardship (unusual difficulty) because of physical limitations of the construction site or its utility services.

☐

Imposition of the rule would result in an undue hardship (unusual difficulty) because of major operational problems in the use of the building or structure.

Y

Imposition of the rule would result in an undue hardship (unusual difficulty) because of excessive costs of additional or altered construction elements.

☐

Imposition of the rule would prevent the preservation of an architecturally or a historically significant part of the building or structure

Facts:

Variances have been granted previously for protecting the area below open stairs due to the difficulty of the piping runs and required remote drains and limited hazard.