

August 31, 2022

City of Madison  
Building Code Variance Committee  
215 Martin Luther King, Jr. Blvd. Suite 017  
Madison, WI 53703

Project Address: 2206 University Avenue  
Variance Petition for: 1028.4

**2. The rule being petitioned cannot be entirely satisfied because:**

Our project site has existing underground infrastructure with an access easement along the east side, and drive aisle access to underground parking is located on the east as well, which required us to locate the building closer to the property line along the west.

We are petitioning the committee to provide operable, single hung windows with horizontal sashes along the west side of our building to allow the occupants the ability to open the windows for fresh air. The entire building is protected by an NFPA 13 sprinkler system.

With standard vinyl fixed windows, our building design currently complies with the requirements of the exception in 705.8.2, which allows the openings to be protected by a water curtain in compliance with Section 903.3.1.1.

**3. The following alternatives and supporting information are proposed as a means of providing an equivalent degree of health, safety, and welfare as addressed by the rule:**

The intent of the code requiring rated opening protection, in a less than 10 foot wide egress court, is to contain a fire within the building for a time period to allow occupants to travel past the openings to get to a public way.

- a. Sprinkler head inside at each window adjacent to the egress court to protect the window opening per exception noted in 705.8.2: "Opening protectives are not required where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 and the exterior openings are protected by a water curtain using automatic sprinklers approved for that use.

The sprinkling of the openings will provide an additional means of containing the fire, and assuring that the window assembly will remain in place for a period of time. The sprinkling will also reduce the likelihood of fire generating a large quantity of smoke/heat that could pass through the window if opened. The reduced heat/smoke through the window makes it less likely that the heat/smoke that could pass out a openable window and block an occupant from being able to travel past the window to get to a public way.

- b. 90 minute doors provided at stairs and unit entries within 10' of property line.  
The exterior stair doors location would typically be required to have a fire rating of 45 minutes. The use of 90 minute door assemblies will provided extra protection for the 2 hour interior exit stairs; from a fire from the exterior. The 90 minute door assembly is consistent with the fire rating required for an interior exit door

6515 Grand Teton Plaza, Suite 120  
Madison, Wisconsin 53719  
p 608.829.4444  
f 608.829.4445

into the stair enclosure. The rated doors will also provide additional time for occupants to use the interior exit if for some reason the court is not available as an egress path.

- c. Providing a second exit discharge route at west side of building that travels north to tot lot, with non-locking gate and exterior exit stair that complies with IBC 1027.6, exception 2, out of the east side of the tot lot. There is an additional gate at north end of the tot lot for access out to Campus Drive.

Egress courts are allowed to have a single direction of exiting form the court, which may require an occupant to travel past an opening in the wall to reach a public way.

This second direction of exit travel will allow occupants a means of egress to a public way that will not have to pass by the openable window.

- d. Providing (2) additional exits, from the building's interior, above the required (2) exits, for a total of (4) direct exits to exterior.

The additional exits from the building will provide additional travel paths to a public way that will not have to pass by the exit court windows being protected by a sprinkler system.

The 90 minute rated exterior doors will provide additional time for occupants to use the interior exits if, for some reason, the egress court is not available as an egress path.

- e) In addition, the following life-safety features are code-re quired and included in this proposed building:

- i) NFPA 13 sprinklers throughout entire building
- ii) Two-way fire fighter communications
- iii) Emergency voice/alarm system to be installed throughout the building; within apartments a voice speaker will be provided in lieu of mini-horn only; common areas to use voice speaker with strobe
- iv) 4' x 4' roof access with permanent ladder at Stair A and Stair B
- v) Elevator with stand-by power from roof-mounted generator
- vi) First floor is non-combustible/type IA construction
- vii) Exterior bearing walls are two-hour rated; first floor exterior non-bearing walls along west side of building are two-hour rated
- viii) All first floor apartments and three second floor units have direct access/egress doors from units to exterior.

Respectfully submitted,  
Tracey Mac Murchy  
Principal/Project Architect  
Dimension IV Madison