

INTERPRETIVE MEMORANDUM 2000 - 5

To: Licensed Architects and Engineers  
Licensed Sprinkler Contractors  
Jim Scharf, President, LA School Facility Managers Association  
Licensed Sprinkler Contractors  
Mark Gates, Administrator for Inspections/Arson  
Pat Slaughter, Regional Manager of Fire & Safety/Arson  
Stephen Gogreve, Regional Manager of Fire & Safety/Arson  
Pat Day, Supervisor of Health Care Inspections  
Plan Review Staff

From: Jean Carter, Architect Supervisor  
Henry Reed, Architect Supervisor  
Don Zeringue, Architect Supervisor

Approved by: Jerry W. Jones,  
Deputy Assistant Secretary / Chief Architect

Date: January 13, 2000

Re: Sprinkler Protection for Telescopic Seating Twelve (12) Feet and Less in Height

Telescopic seating (e.g. retractable arena seating, retractable bleachers, indoor telescopic grandstands, etc.) present some unique circumstances, with respect to fire protection in sprinklered buildings. Please note the following code excerpts, which pertain to the referenced topic:

NFPA 13:4-5.5.3.1 (1996 edition) Sprinklers shall be installed under fixed obstructions over 4 feet wide such as ducts, decks, cutting tables, and overhead doors. Exception: Obstructions that are not fixed in place such as conference tables.

NFPA 13:4-13.1.11 (1996 edition) All concealed spaces enclosed wholly or partly by exposed combustible construction shall be protected by sprinklers. Exception No. 8: Where rigid materials are used and the exposed surfaces have a flame spread rating of 25 or less and the materials have been demonstrated not to propagate fire in the form in which they are installed in the space.

NFPA 13:5-2.3.1.3(b) 1 (1996 edition) For buildings having un-sprinklered combustible concealed spaces (as described in 4-13.1.1), the minimum area of sprinkler operation shall be 3000 sq. ft. Exception No. 3: Concealed spaces where the exposed surfaces have a flame spread rating of 25 or less and the materials have been demonstrated to not propagate fire in the form in which they are installed in the space.

NFPA 101:8-3.4.2 (1997 edition) In assembly occupancies with occupant loads greater than 300, automatic fire detection shall be provided in all hazardous areas that are not normally occupied. Exception: Areas that are protected throughout by an approved automatic sprinkler system installed in accordance with Section 7-7.

Larger obstructions (over 4 feet in width) have been shown to block spray patterns from ceiling sprinklers, thus allowing fires shielded by the obstruction to continue burning. The intent of NFPA 13:4-5.5.3.1 is to provide an unobstructed path for the sprinkler spray pattern to reach the floor. Also, many types of telescopic seating have full closure panels for the floorboards, seatboards, and kickboards, thus forming a concealed space when the seating is extended. Therefore, while some types of telescopic seating are identified as sprinkler obstructions, other types are acknowledged as an overall concealed space. Concealed spaces must satisfy NFPA 13:4-13.1.1 and 5-2.3.1.3(b).

Please see the following guidelines below, establishing the interpretive policy of this office, regarding sprinkler protection for telescopic seating.

1. Telescopic seating protected by ceiling sprinklers only.

All construction types of telescopic seating (non-combustible, limited combustible, or combustible), whether manual or motorized are allowed to be protected by ceiling sprinklers only, provided the following conditions are met:

- A. No food or drink is allowed within the room containing telescopic seating.
- B. Telescopic seating shall be extended only during assembly events. Prior to, and upon completion of the assembly event, the seating will be retracted to its "closed" position.

If 1.A and 1.B are maintained, then this office will not deem the seating as "fixed in place" and will not deem the area below the extended seating as a greater fuel load potential than the remainder of the room. Thus, sprinkler protection will not be required below the bleachers. Ceiling sprinklers will satisfy the protection requirements for the assembly space. The ceiling hydraulic demand shall be based on Light Hazard design for non-combustible or limited combustible telescopic seating, and Ordinary Hazard Group 2

(pursuant to NFPA 13:5 2.3.2.2, Class III commodity) for combustible seating. The Ordinary Hazard area of protection shall be immediately above the telescopic seating area when the seating is fully extended. The remainder of the assembly space shall be protected pursuant to its use (and the commodities displayed).

2. Telescopic seating protected by ceiling sprinklers and sprinklers below seating.

If 1.A. is not provided (if food and drinks are allowed within the telescopic seating area), then this office will deem the fuel load within and under the seating as greater than the remaining portion of the room. If 1.B. is not provided (if telescopic seating remains extended for long periods of time), then this office will deem the seating as an obstruction to ceiling sprinkler discharge and/or a concealed space. In either case, sprinkler protection below the telescopic seating shall be required and designed per Light Hazard, regardless of seating construction type or manual/motor driven controls. The ceiling hydraulic demand shall match that of Item 1., above.

In addition, pursuant to NFPA 101:6-4.1.1, a motorized operator, located behind closed panels or doors and "isolated" from the assembly room containing the seating, is considered an isolated hazard, and will require special protection in accordance with this section. Most type of motor driven seating operators are located under the first tier of seating, and would not be considered an isolated hazard (sprinkler protection under seating not required in this case).

If proposed telescopic seating differs from descriptions as denoted above, please provide this office with particular seating type and design parameters, so we can make a specific review and determination.

Cc: Marc Reech, Executive Staff Officer