



Miami Beach Fire Department
FIRE PREVENTION DIVISION
STANDARDS



TOPIC: **Open Guards**

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STANDARD NO: EXINSP-S16

Revision 0

This FPS is to provide guidance to the inspectors for code enforcement pertaining to open guardrails in existing buildings.

Many of the existing guardrails have unreasonable openings that present a serious life safety hazard. NFPA 101-2006 Edition, Section 7.2.2.4.5.3 state that open guards shall have intermediate rails or an ornamental pattern such that a 4-inch sphere is not able to pass through any opening up to 34 inches in height. Section 7.2.2.4.5.2 states that guards shall be at least 42 inches in height, except existing guards along the stair can be 30 inches in height.

Recently, a 2-year old boy fell through the opening in the guardrail, falling two stories. Luckily, he was not seriously hurt, but it is an actual experience of the hazard presented by the large openings.

NFPA has confirmed that the intent of the code is to provide a reasonable level of protection even for existing guards. The main purpose of this standard is to address the fall hazard to small children. Therefore, priority of enforcement is given to occupancies where children would be present.

If existing opening is larger than 4-inch diameter, but does not allow a 6-inch sphere to pass through, then the guard is acceptable as is and no corrections are required. If the existing opening is larger and allows a 6-inch sphere to go through, then the following procedure applies. NFPA 101 allowed a 6-inch sphere opening until the 1991 edition of the code, therefore, this type of existing opening is not required to be corrected until the guard is completely replaced.

Educational Occupancy and Day Care Occupancy:

Write a notice of violation to correct deficiencies within 60 days. New establishments seeking a new CU will be denied approval until deficiencies with guardrails are corrected.

Lodging/ rooming Occupancy; Hotel Occupancy; Apartment Occupancy; and Residential Board and Care Occupancy:

Write a notice of violation to correct deficiencies within 3 years, or during the next rehabilitation work for the building (Alteration I/Repair, II/Modification, or III/Reconstruction), whichever occurs first. CU can be approved with the Notice of Violation issued.



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Assembly Occupancy; Business Occupancy; Mercantile Occupancy; Health Care Occupancy; Ambulatory Health Care Occupancy;

Write a notice of violation to correct deficiencies during the next rehabilitation work classified as Modification/Alteration II or Reconstruction/Alteration III of the building.

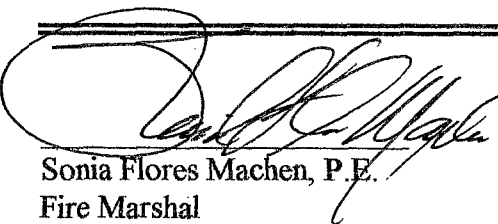
Any change of occupancy for any occupancy would be required to include corrective action before building permit for change of occupancy is approved. This includes certificate of occupancy and certificate of use would not be issued until corrective action is implemented.

Corrective Action Options for occupancies above:

- Height < 42 inches - Add proper feature to top of existing guard
- Opening > 6-inch sphere - Install full barrier or partial barrier as needed to close large openings to where 4-inch sphere does not pass through. May use any noncombustible material such as metal grating or mesh, etc. Plastic material such as plexiglass (*minimum thickness 1/4 inch*) may be used on outside railings. The material must be able to withstand applied load as indicated in Building Code.

Corrective Action when no guard exist or in danger of collapsing:

- If there is no guard where a guard is required (*floor in the means of egress more than 30 inches above floor or grade below*), then a new guard must be installed and must comply with height and openings for new guards. Notice of violation is issued regardless of occupancy. Time to comply is 60 days.
- If the existing guard is in poor condition, and in danger of collapsing, then a new guard must be installed and must comply with height and openings for new guards. Notice of violation is issued regardless of occupancy. Time to comply is 60 days.


Sonia Flores Machen, P.E.
Fire Marshal

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