Remediation Interpretation Bulletin – Sprinkler Systems for Existing Unprotected (Nonrated) Noncombustible Buildings (3.5.3.1)

Scope
This interpretation clarifies the application of requirements governing the installation of automatic fire sprinkler systems in existing unprotected (nonrated) noncombustible buildings governed by the Alliance Fire Safety and Structural Integrity Standard (version 1.1) for factories inspected by the Alliance for Bangladesh Worker Safety, its staff, and designated Qualified Assessment Firms and their employees.

Purpose
This interpretation addresses questions regarding the application of exceptions to Alliance and BNBC fire resistance requirements in buildings constructed in whole or in part of unprotected (nonrated) noncombustible structural elements, including pre-engineered steel frame buildings.

Alliance Requirements
Existing buildings greater than 2 stories with nonrated construction shall not exceed 2000 m² (22,000 sq ft) per floor unless automatic sprinkler protection is provided throughout.

Background
Buildings greater than one story and having occupied levels no more than six stories or 23 m (75 ft) above grade often include floors or sections fabricated using unprotected (nonrated) noncombustible construction. Warehouse and storage buildings for raw materials of finished goods may also use this type of construction. Part 3 of the Bangladesh National Building Code (BNBC) does not recognize unprotected (nonrated) construction for buildings of occupancy group classification G or H.

Discussion
Protecting the structural integrity of these buildings from fire is required to ensure the safe evacuation of building occupants and prevent fire spread from one building or area to another prior to fire service intervention.

Alliance Standard 3.5.3.1 does not REQUIRE automatic fire sprinklers for buildings of unprotected noncombustible construction. Rather, it affords an exception to fire resistance requirements in instances where such protection is provided. As such, this form of protection remains an alternative only, and not a required fire protection feature.

In the absence of automatic fire sprinklers in buildings or portions of buildings having unprotected (nonrated) noncombustible construction, the fire resistance requirements of BNBC Part 3 Table 3.3.1 and Alliance Table 4.4 apply. In addition, these buildings or portions of buildings should comply with the area and height limitations in BNBC Table 3.1.11.

Where automatic fire sprinkler protection is accepted in lieu of compliance with fire resistance and area/height limits, it must be provided throughout all portions of the building, including those portions constructed of Type 1, 2, or 3 construction as defined by BNBC Part 3.
Instructions
1. Determine whether any building or portion of the building is constructed of unprotected (nonrated) noncombustible construction.
2. Determine whether the building if protected throughout by an approved automatic fire sprinkler system installed and maintained in accordance with NFPA 13.
3. Where automatic fire sprinkler protection is not installed throughout buildings constructed in whole or in part of unprotected (nonrated) noncombustible construction, require compliance with the fire resistance requirements of Alliance Table 4.4 and the floor area ratio limits of BNBC Part 3, Table 3.1.11.

Authority

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