
FIRE PREVENTION AND BUILDING SAFETY COMMISSION
Department of Homeland Security**Written Interpretation of the State Building Commissioner****Interpretation #:** CEB-2019-05-2014 IMC-306.5**Building or Fire Safety Law Interpreted**

675 IAC 18-1.6 Indiana Mechanical Code, Section 306.5 Equipment and appliances on roofs or elevated structures. Where **equipment** requiring access or appliances are located on an elevated structure or the roof of a building such that personnel will have to climb higher than 16 feet (4,877 mm) above grade to access such equipment or appliances, an interior or exterior means of access shall be provided. Such access shall not require climbing over obstructions greater than 30 inches (762 mm) in height or walking on roofs having a slope greater than 4 units vertical in 12 units horizontal (33-percent slope). Such access shall not require the use of portable ladders. Where access involves climbing over parapet walls, the height shall be measured to the top of the parapet wall.

Issue

The interested person has stated that the local building official has cited the subject structure for violation of this code section, while the interested person maintains the section does not apply to the subject structure due to the design height of its parapets.

Interpretation of the State Building Commissioner

The requirement of IMC 306.5 is clear. Permanently installed means of access to rooftop or elevated equipment or appliances must be provided if the location of such equipment or appliances require climbing higher than 16 feet above grade. If access can be achieved by climbing 16 feet or fewer above grade, permanently installed access is not required.

Rationale

As stated above, if access can be obtained by climbing to a height of 16 feet or fewer above grade, permanent means of access such as a fixed ladder is not required. However, it is important to understand several key components of this issue in order to determine how it affects the subject structure.

The interested person states that the subject structure has a variety of parapets, at heights of 12'-0", 15'-0", and 18'-0", and that the roof surface itself is less than 16'-0" high. He has provided an elevation drawing that shows the parapets located at 12'-0", 15'-0", and 18'-0" above the first floor elevation. He has also stated in the interpretation request that the subject building was approved by both state plan review and Crown Point, through the issuing of a Construction Design Release and Building Permit, respectively.

The first matter that must be considered is the fact that the code requires these heights to be measured from grade, not from first floor elevation. Whether the parapet that appears in the drawing as 15'-0" above first floor was actually constructed at that height, and whether that height above floor elevation actually measures at or below 16 feet above grade, must all be determined in the field. The submitted construction drawings are not adequate evidence to determine the actual constructed height of the walls, as distance from the first floor elevation to final grade was not provided on the drawings, and design and details are frequently altered during actual construction.

The second consideration is that if the 15'-0" parapet were to measure more than 16 feet above grade in the field, the presence of the 12'-0" high parapet is immaterial, if further climbing is required once on top of that lower portion of the roof. The height stated in the code is, again, from grade, and not from the bottom of any particular portable ladder as it is set in place on top of a lower roof. Climbing a series of lower roofs to access a higher one is not an acceptable alternative to a required fixed means of access, if the climber eventually exceeds the threshold of 16 feet **above grade**.

The third consideration is that the elevation of the roof itself is not the issue when parapets surround it. The code clearly states in the final sentence of the section that the 16 foot threshold must include the parapet, if present. For example, a roof at 15 feet above grade is clearly less than the 16 foot threshold, but if it is surrounded by a 24" high parapet, it will require a permanently fixed means of access because it requires climbing 17 feet above grade.

The final consideration is in reference to the "approval" thought to be implied by the plan review and permitting

processes. The possession of a Construction Design Release from the state is not a certification that the project is 100% code-compliant. Such a certification is impractical, if not impossible, given the limited resources of time and information available during the review process, and the vagaries of site-built construction. The owner is always responsible for compliance with the rules of the commission.

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