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# *TECHNICAL BULLETIN*

**Code Effective Date:** **October 31, 2017**[1]

**Source Document:** **19NYCRR 1220—Residential Construction**
**19NYCRR 1221—Building Construction**[2]

**Topic:** **Flood Venting in Foundations and Enclosures in Flood Areas**

This document provides clarification on the requirements for flood vents in foundations and enclosures located below the design flood elevation and in flood hazard areas.

Flood hazard areas are established by local jurisdiction as set forth in Table R301.2(1) of the 2015 International Residential Code (2015 IRC), as amended by the 2017 Uniform Code Supplement (the Supplement). Footnote "*g,"* explains the criteria by which municipalities must *"adopt a flood hazard map and supporting data."* The 2015 International Building Code (2015 IBC) includes a similar requirement for the establishment of flood hazard areas under Section 1612.3, also amended by the Supplement.

According to Sections R301.2.4 and R322.1 of the 2015 IRC, new construction, as well as substantial improvements and restoration of substantial damage of buildings and structures in flood hazard areas, "*shall be designed and constructed in accordance with Section R322*."

In turn, Section R322.1.1, as amended by the Supplement, indicates that, as an alternative, buildings are permitted to be designed and constructed in accordance with ASCE 24, and that when ASCE 24 is used, *"all construction requirements and building elevation requirements based on the Design Flood Elevation (DFE) shall be interpreted to mean the DFE plus a freeboard of 2' (610 mm)."* Section 1612.4 of the 2015 IBC is also amended by the Supplement and reads similarly.

Furthermore, per Section R301.2.4 of the 2015 IRC, *"Buildings and structures located in whole or in part in identified floodways shall be designed and constructed in accordance with ASCE 24."*

Similarly, according to exception 5 to Section 1203.4.2 of the 2015 IBC, *"for buildings in flood hazard areas … the openings for under-floor ventilation shall be deemed as meeting the flood opening requirements of ASCE 24 provided that the ventilation openings are designed and installed in accordance with ASCE 24."*

Per Section R322.2.2 of the 2015 IRC:

> *Enclosed areas, including crawl spaces, that are below the design flood elevation shall:*
>
> 1. *Be used solely for parking of vehicles, building access or storage.*
> 2. *Be provided with flood openings that meet the following criteria (…):*
>  - 2.1. *The total net area of openings shall be not less than 1 square inch for each square foot of enclosed area where the enclosed area is measured on the exterior of the enclosure walls, or the openings shall be designed as engineered openings and the construction documents shall include a statement by a registered design professional that the design of the openings will provide for*

[1] The "Code Effective Date" for this Technical Bulletin is October 31, 2017, which is the effective date of the current version of the New York State Uniform Fire Prevention and Building Code (the Uniform Code).

[2] The 2015 International Residential Code (2015 IRC) is a publication incorporated by reference in 19 NYCRR Part 1220, The 2015 International Building Code (2015 IBC) is a publication incorporated by reference in 19 NYCRR Part 1221. The 2017 Uniform Code Supplement is a publication incorporated by reference in 19 NYCRR Parts 1219 through 1228.
The 2015 IRC and the 2015 IBC, as amended by the 2017 Uniform Code Supplement, are all part of the Uniform Code.

*equalization of hydrostatic flood forces on exterior walls by allowing for the automatic entry and exit of floodwaters as specified in Section 2.6.2.2 of ASCE 24.*

*2.2. Openings shall be not less than 3 inches in any direction in the plane of the wall.*

Moreover, per Section R322.2.2.1:

*The walls of enclosed areas shall have opening installed such that:*

1. *There shall be not less than two openings on different sides of each enclosed area ….*
2. *The bottom of each opening shall be not more than 1 foot above the higher of the final interior grade or floor and the finished exterior grade immediately under each opening.*
3. *Openings shall be permitted to be installed in doors and windows …*

The 2015 IRC provides additional requirements regarding the ventilation of *"Under-floor Space"* including the following approved cover materials found in Section 408.2, which states in part:

*…provided that the least dimension of the covering shall not exceed ¼ inch (6.4 mm):*

1. *Perforated sheet metal plates not less than 0.070 inch (1.8 mm) thick.*
2. *Expanded sheet metal plates not less than 0.047 inch (1.2 mm) thick.*
3. *Cast-iron grill or grating.*
4. *Extruded load-bearing brick vents.*
5. *Hardware cloth of 0.035 inch (0.89 mm) wire or heavier.*
6. *Corrosion-resistant wire mesh, with the least dimension being 1/8 inch (3.2 mm) thick.*

The information contained in this bulletin is not intended as a comprehensive listing of all ventilation requirements, nor is it intended to cover all the requirements pertaining to construction in flood hazard areas. Other provisions and requirements of the Uniform Code apply.

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