

Table 1: Comparison of Selected 2018 IBC and ASCE 24-14 Requirements with NFIP Requirements (cont.)

Topic	Summary of Selected 2018 IBC / ASCE 24-14 Requirements and Changes from 2015 and 2012 IBC / ASCE 24-05	Comparison with NFIP Requirement
Dry floodproofing (cont.)	<ul style="list-style-type: none"> <li>• Requires walls, floors, and flood shields to resist hydrostatic, hydrodynamic, and other flood loads, including the effects of buoyancy</li> <li>• Specifies that soil or fill adjacent to a structure must be compacted and protected from erosion and scour</li> <li>• Requires that at least one door, window, or other opening for emergency escape and rescue be above the elevation specified in Table 6-1</li> <li>• Specifies several limitations when human intervention is necessary to activate or implement dry floodproofing measures</li> </ul> <p><u>Change from ASCE 24-05:</u> Does not require flood damage-resistant materials on the interior of dry floodproofed portions of buildings.</p>	

### ASCE INTERPRETATION OF ASCE 24-14 FLOOD SHIELD REQUIREMENTS AND FEMA POSITION ON WHETHER A FLOOD SHIELD CONFIGURATION MEETS NFIP DRY FLOODPROOFING REQUIREMENTS

In November 2016, ASCE issued a formal interpretation of whether a specific configuration of flood shields meets the dry floodproofing requirements of ASCE 24-14.<sup>1</sup> The configuration is described as a building that is supported by an impermeable reinforced concrete stem wall (foundation) with permeable exterior walls such as glass curtain walls. The question was whether the use of removable flood shields as a component of the exterior building façade would render the exterior walls impermeable along the entire length of the façade. Diagrams included in the request for the interpretation show flood shields attached at the base to the impermeable foundation stem wall and attached to vertical, structural columns between spans of the glass curtain wall system.

The ASCE interpretation determined that the flood shield configuration described and shown in the request meets the dry floodproofing requirements of ASCE 24-14 provided the building and shields meet all other dry floodproofing requirements, provided the flood shields are “close to and attached to the building façade,” and provided the shield attachment is “via guides, fasteners or supports that are permanent parts of the building façade.”<sup>2</sup>

The FEMA position is that the ASCE interpretation is contrary to the NFIP requirements because exterior wall sections that are neither substantially impermeable nor able to resist flood loads will not meet the intent of 44 CFR § 60.3(c)(3) that walls must be “substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.” Therefore, any temporarily installed means of flood protection that cover such walls would not be considered compliant.

<sup>1</sup> Jonathan C. Esslinger, Director, Technical Advancement and Codes & Standards, ASCE, written communication, November 29, 2016.

<sup>2</sup> Ibid, Page 5.