



398 E DANIA BEACH BLVD. SUITE 338, DANIA BEACH, FL 33004

August 14, 2023

TO: Mr. Mike Graham
President
Smart Vent Products, Inc.
19 Mantua Road
Mount Royal, NJ 08061

FROM: Hermes F. Norero, P.E.
Building Drops, Inc.

RE: FloodVent – Impact Requirements

Dear Mr. Graham,

The purpose of this letter is to evaluate the impact (wind-borne debris) requirements for your FloodVENT product, according to the 8th Edition Florida Building Code (FBC), 2021 International Building Code (IBC), 2021 International Residential Code (IRC), and ASCE 7 engineering standards.

According to the FBC Section 1626.1(c), all parts of the building envelope protection shall meet impact test criteria except for vents in a garage with four or fewer cars. The size of the vent is not to exceed the minimum required design area by more than 25%.

The typical FloodVENT opening size, as indicated by the manufacturer, is 15.25" x 5", or 0.53 square feet (sf). Typically two vents are installed per wall, which provides a total net open area of 1.06 sf per installation. The total net open area provided by the vents is regarded as insignificant such that the openings do not compromise the enclosure category of the structure.

An enclosed building is one defined as not partially enclosed and not open. An open building is defined as a building with each wall being at least 80% open. A garage with flood vents does not fall within the definition of an open building.

A partially enclosed building is defined as a building that complies with both of the following:

1. The total area of openings in a wall that receives positive external pressure exceeds the sum of the areas of openings in the balance of the building envelope (walls and roof) by more than 10%.
2. The total area of openings in a wall that receives positive external pressure exceeds 4 sf or 1% of the area of that wall, whichever is smaller, and the percentage of openings in the balance of the building envelope does not exceed 20 percent.

Hermes F. Norero, P.E.
Florida P.E. No. 73778



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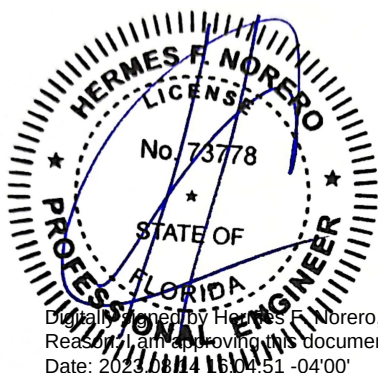
A standard garage wall is approximately 25 feet long by 8 feet tall. This equals an approximate wall area of 200 sf. The typical net open area for two flood vents, as described above, is 1.06 sf, which is less than 4 sf and less than 1% of the wall area. It can also be assumed that 1.06 sf does not exceed more than 10% of the remaining open areas of the garage. Therefore, a garage with flood vents cannot be considered a partially enclosed building.

In my professional opinion, the flood vents manufactured by Smart Vent Products, Inc. do not require additional impact (wind-borne debris) protection devices to be placed over them so that they can continue functioning as flood vents. The vents do not increase the amount of openings in a wall or building such that the building classification changes from enclosed to partially enclosed.

In addition, the 8th Edition FBC has specified applicable governing authorities to establish special flood hazard areas as per FEMA specification under 8th Edition FBC section 1612.3. This product has been evaluated, dependent to specific site conditions, to meet the minimum requirements of the National Flood Insurance Program (NFIP) flood plain management requirements (44 CFR) with respect to flood openings for enclosed areas for the purpose of equalizing hydrostatic pressure resulting from flooding. The product has been evaluated to conform to design principles noted in Section 2.6.2.2 of ASCE 24 for a maximum rate of rise and fall of 5.0 feet per hour by the ICC-ES under evaluation report ESR-2074. Thus, the product may be used in wall construction to comply with 8th Edition FBC Section 1612.5(1)(1.2).

Please feel free to contact me should you have any questions regarding this evaluation.

Best Regards,



Digital Signature by Hermes F. Norero, P.E.
Reason: I am approving this document
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