TO: Whom it May Concern 6/1/2016

This structure foundation, at 2450 Destrehan Ave in Harvey, will not be constructed at BFE of AE 5.5 or H.E.A.G. of 36". This car wash building is 544 s.f. and designed as a Partial Enclosed building. The northside of the building will be constructed as a cased opening that is 16 ft wide and 16 ft tall. This opening is more than sufficient for flood waters to enter and depart without damage to the structure. This area is not considered to be in a high-velocity wave action area.

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ASCE 24 para 2.7 "The minimum total net area of the required openings in non-breakaway enclosure walls shall be calculated using the equation":

$Ao = 0.033\ (1/c)(R)(Ae)$

where

Ao = the total net area of openings required ($in.^2$);
0.033 = coefficient (in.2 _ h_ft3) corresponding to a factor of safety of 5.0;
c = opening coefficient of discharge given in Table 2-2;
R = worst case rate of rise and fall (ft/h); *In the absence of reliable data on the rates of rise and fall, assume a minimum rate of rise and fall of 5 ft/h;*
Ae = the total enclosed area (ft^2).

Table 2-2. Flood Opening Coefficient of Discharge

Opening Shape and Condition	*c*
Circular, unobstructed during design flood	0.60
Rectangular, long axis horizontal, short axis vertical, unobstructed during design flood	0.40[a]
Square, unobstructed during design flood	0.35
Rectangular, short axis horizontal, long axis vertical, unobstructed during design flood	0.25[b]
Other shapes, unobstructed during design flood	0.30

[a] When the horizontal dimension is twice or more the vertical dimension, use 0.4; as the dimensions approach a square, interpolate from 0.4 to 0.35.
[b] When the horizontal dimension is half or less the vertical dimension, use 0.25; as the dimensions approach a square, interpolate from 0.25 to 0.35.

$Ao = 0.033\ (1/0.4)(5)(544) = 224\ in^2$

IBC 2012 para 1612

1612.5 Flood hazard documentation. The following documentation shall be prepared and sealed by a *registered design professional* and submitted to the *building official:*

1. For construction in *flood hazard areas* not subject to high-velocity wave action:
   1.1. The elevation of the lowest floor, including the basement, as required by the lowest floor elevation inspection in Section 110.3.3.
   1.2. For fully enclosed areas below the design flood elevation where provisions to allow for the automatic entry and exit of floodwaters do not meet the minimum requirements in Section 2.6.2.1 of ASCE 24, *construction documents* shall include a statement that the design will provide for equalization of hydrostatic flood forces in accordance with Section 2.6.2.2 of ASCE 24.
   1.3. For dry floodproofed nonresidential buildings, *construction documents* shall include a statement that the dry floodproofing is designed in accordance with ASCE 24.

2. For construction in flood hazard areas subject to highvelocity wave action:
   2.1. The elevation of the bottom of the lowest horizontal structural member as required by the lowest floor elevation inspection in Section 110.3.3.

2.2. *Construction document:*,· shall include a statement that the building is designed in accordance with ASCE 24, including that the pile or column foundation and building or structure to be attached thereto is designed to be anchored to resist flotation, collapse and lateral movement due to the effects of wind and flood loads acting simultaneously on all building components, and other load requirements of Chapter 16.