DATE:       May 18, 2015
TO:         All Building Officials
FROM:       James DiPietro, Administrative Director

SUBJECT:    Retrofit of Windows, Doors, Garage Doors, Shutters and Skylights
            FBC Existing Building, Alteration Level I

At its meeting of May 14, 2015, the Board approved an interpretation of Retrofit of Windows,
Doors, Garage Doors, Shutters and Skylights, for detached one and two family dwellings,
and multiple single family dwellings, (townhouses) with common roof height < 30 feet.

1. Window or door buck, and mull bar inspections are not required. The buck shall comply
   with Section FBC 1710.10 specifically, unless otherwise tested; buck shall extend beyond the
   interior face of the window or door frame such that full support of the frame is provided.

2. A Florida Professional Engineer or Architect may modify the buck or fasteners as specified
   in a Notice of Acceptance. Such modification must be documented with a signed and sealed
   letter or drawing.

3. To obtain the required design pressure for a specific opening at a specific site, an individual
   must utilize one of the following and submit documentation as indicated.

   a) A site-specific plan (signed and sealed) by a Florida Professional Engineer or
      Architect, indicating the location of all retro openings and the required design
      pressures.

   b) A site-specific plan (not sealed) indicating the location of all retro openings
      accompanied by a worst case design pressure chart (signed and sealed) prepared by a
      Florida P.E. or Architect.

   c) A site-specific plan (not sealed) indicating the location of all openings and
      indicating the required design pressures based on the Broward County Fenestration
      Voluntary Wind Load Chart. (see attached chart).

4. Buildings with a (height) > 30 feet or more shall have a site-specific design (signed and
   sealed) by a Florida Professional Engineer or Architect, indicating the location of all retro
   openings and the required design pressures for each opening.

NOTE: Generic charts, graphs alone, etc. are not acceptable for buildings above 30 feet.

EFFECTIVE DATE: September 12, 2012
RE-ISSUED:      May 9, 2014
RE-ISSUED:      May 14, 2015
EFFECTIVE DATE: June 30, 2015

****PLEASE POST AT YOUR PERMIT COUNTER****
### Broward County Fenestration Voluntary Wind Load Chart*

Per ASCE 7-10 Method 1, Part 1 and FBC 5th Edition (2014) for Retrofitting in Accordance with Formal Interpretation #.. For Detached One-and Two family dwellings and Multiple Single-Family Dwellings (Townhouses) with Mean Roof Height ≤ 30 feet

Wind 170 mph (3-second gust) / Exposure C** / Kd = 0.85 / Kz = 1.0

* Using Allowable Stress Design methodology (P = 0.6w) / ** Exposure shall be determined according to ASCE 7-10 Section 26.7.3 (Exposure Categories)

#### Effective Wind Area

<table>
<thead>
<tr>
<th>Location: Gable or Hip Roof</th>
<th>Mean Roof Height of 15 ft</th>
<th>Mean Roof Height of 20 ft</th>
<th>Mean Roof Height of 25 ft</th>
<th>Mean Roof Height of 30 ft</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 Hip Roof 0 ≤ θ ≤ 7° (0 to 1.5:12)</td>
<td>16.0 -37.8 16.0 -63.4 16.0 -95.4</td>
<td>16.0 -37.8 16.0 -63.4 16.0 -95.4</td>
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</tr>
<tr>
<td>20 Gable Roof 0 ≤ θ ≤ 7° (0 to 1.5:12)</td>
<td>16.0 -37.8 16.0 -63.4 16.0 -95.4</td>
<td>16.0 -37.8 16.0 -63.4 16.0 -95.4</td>
<td>16.0 -37.8 16.0 -63.4 16.0 -95.4</td>
<td>16.0 -37.8 16.0 -63.4 16.0 -95.4</td>
</tr>
<tr>
<td>50 Gable Roof 0 ≤ θ ≤ 7° (0 to 1.5:12)</td>
<td>16.0 -37.8 16.0 -63.4 16.0 -95.4</td>
<td>16.0 -37.8 16.0 -63.4 16.0 -95.4</td>
<td>16.0 -37.8 16.0 -63.4 16.0 -95.4</td>
<td>16.0 -37.8 16.0 -63.4 16.0 -95.4</td>
</tr>
<tr>
<td>100 Gable Roof 0 ≤ θ ≤ 7° (0 to 1.5:12)</td>
<td>16.0 -37.8 16.0 -63.4 16.0 -95.4</td>
<td>16.0 -37.8 16.0 -63.4 16.0 -95.4</td>
<td>16.0 -37.8 16.0 -63.4 16.0 -95.4</td>
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</tr>
</tbody>
</table>

#### Effective Roof Loads

**For Hip Roofs with angle > 7 degrees (1.5:12) and ≤ 25 degrees (5.5:12), Zone 3 shall be treated as Zone 2 (Figure 30.4-2B, Note 7, p. 337)

### Garage Door Wind Loads

For a Building with 30-foot Mean Roof Height

Exposure C

Tables 1609.7(1) & (2), and Section 1609.3.1

#### Effective Wind Area

<table>
<thead>
<tr>
<th>Effective Wind Area (ft²)</th>
<th>Mean Roof Height of 15 ft</th>
<th>Mean Roof Height of 20 ft</th>
<th>Mean Roof Height of 25 ft</th>
<th>Mean Roof Height of 30 ft</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wall</td>
<td>37.8 -41.0 37.8 -50.6</td>
<td>40.2 -43.6 40.2 -53.8</td>
<td>42.1 -45.7 42.1 -56.4</td>
<td>43.7 -47.4 43.7 -58.6</td>
</tr>
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</table>

**For Effective Wind Areas between those given, values may be interpolated. Otherwise use the value associated with the lower Effective Wind Area.

Design is based on the 3-second gust (wind velocity) for Risk Category II (general residential & commercial construction) per FBC 1620.2 Broward. These tables not for use with essential facilities or assembly occupancies.