Petition for Declaratory Statement
Before the Florida Building Commission
July 5, 2016

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DS 2016-048

Statue(s), Agency Order(s), and/or Code Sections on which this Declaratory Statement is sought:

1609.1.2 Protection of openings.
In *wind-borne debris regions*, glazed openings in buildings shall be impact resistant or protected with an impact-resistant covering meeting the requirements of SSTD 12, ANSI/DASMA 115 (for garage doors and rolling doors) or TAS 201, 202 and 203, AAMA 506. ASTM E 1996 and ASTM E 1886 referenced herein, or an *approved* impact-resistant standard as follows:

1. Glazed openings located within 30 feet (9144 mm) of grade shall meet the requirements of the large missile test of ASTM E 1996.

2. Glazed openings located more than 30 feet (9144 mm) above grade shall meet the provisions of the small missile test of ASTM E 1996.

3. Storage sheds that are not designed for human habitation and that have a floor area of 720 square feet (67 m^2) or less are not required to comply with the mandatory windborne debris impact standards of this code.

4. Openings in sunrooms, balconies or enclosed porches constructed under existing roofs or decks are not required to be protected provided the spaces are separated from the building interior by a wall and all openings in the separating wall are protected in accordance with Section 1609.1.2 above. Such spaces shall be permitted to be designed as either partially enclosed or enclosed structures.

Exceptions:

1. Wood structural panels with a minimum thickness of $^{7}/_{16}$ inch (11.1 mm) and maximum panel span of 8 feet (2438 mm) shall be permitted for opening protection in one- and two-story buildings classified as Group R-3 or R-4 occupancy. Panels shall be

precut so that they shall be attached to the framing surrounding the opening containing the product with the glazed opening. Panels shall be predrilled as required for the anchorage method and shall be secured with the attachment hardware provided. Attachments shall be designed to resist the components and cladding loads determined in accordance with the provisions of ASCE 7, with corrosion-resistant attachment hardware provided and anchors permanently installed on the building. Attachment in accordance with Table 1609.1.2 with corrosion-resistant attachment hardware provided and anchors permanently installed on the building is permitted for buildings with a mean roof height of 45 feet (13 716 mm) or less where V_{asd} determined in accordance with Section 1609.3.1 does not exceed 140 mph (63 m/s).

2. Glazing in *Risk Category* I buildings as defined in Section 1604.5, including greenhouses that are occupied for growing plants on a production or research basis, without public access shall be permitted to be unprotected.

3. Glazing in *Risk Category* II, III or IV buildings located over 60 feet (18 288 mm) above the ground and over 30 feet (9144 mm) above aggregate surface roofs located within 1,500 feet (458 m) of the building shall be permitted to be unprotected.

TABLE 1609.1.2 WIND-BORNE DEBRIS PROTECTION FASTENING SCHEDULE FOR WOOD STRUCTURAL PANELS[a, b, c, d]

FASTENER TYPE	FASTENER SPACING (inches)		
	Panel Span ≤ 4 feet	4 feet < Panel Span ≤ 6 feet	6 feet < Panel Span ≤ 8 feet
No. 8 wood-screw-based anchor with 2-inch embedment length	16	10	8
No. 10 wood-screw-based anchor with 2-inch embedment length	16	12	9
$^1/_4$-inch diameter lag-screw-based anchor with 2-inch embedment length	16	16	16

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound = 4.448 N,
1 mile per hour = 0.447 m/s.

a. This table is based on a V_{asd} determined in accordance with Section 1609.3.1 of 140 mph and a 45-foot mean roof height.

b. Fasteners shall be installed at opposing ends of the wood structural panel. Fasteners shall be located a minimum of 1 inch from the edge of the panel.

c. Anchors shall penetrate through the exterior wall covering with an embedment length of 2 inches minimum into the building frame. Fasteners shall be located a minimum of $2^1/_2$ inches from the edge of concrete block or concrete.

d. Where panels are attached to masonry or masonry/stucco, they shall be attached using vibration-resistant anchors having a minimum ultimate withdrawal capacity of 1,500 po

Background

Ted Berman and Associates LLC is a consulting engineering firms with extensive Experience In the field of product approval. A client of the firm Eye Protect 2, LLC, located at 339 Spectrum Rd, Summerville, SC 29486 is seeking a Florida product approval for their Plysnap hurricane protection system to be used for protection of openings.

The Plysnap hurricane protection system consists of 7/16" wood panels attached to the structure with screws that support a wedge that keep the wood panels in position. The system would enclose the opening to be protected and is considered a non-porous system in accordance with ASTM E1996.

The Plysnap hurricane protection system has been tested in accordance with TAS 202 (load test) and TAS 203 (cyclic test). The system has not been tested to an impact test.

The product approval is being applied for with the following limits of use:

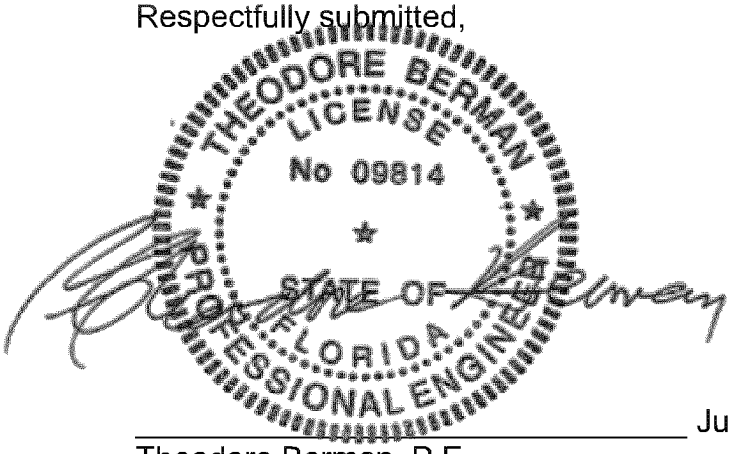
a. Minimum thickness of wood panels $^{7}/_{16}$ inch.
b. Maximum panel span of 8 feet.
c. Permitted use in one- and two-story buildings classified as Group R-3 or R-4 occupancy.
d. Panels shall be precut so that they shall be attached to the framing surrounding the opening containing the product with the glazed opening.
e. Panels shall be predrilled as required for the anchorage method
f. Panels shall be secured with the attachment hardware provided.
g. Attachments shall be designed to resist the components and cladding loads determined in accordance with the provisions of ASCE 7
h. Anchors shall be corrosion resistant permanently installed on the building.
i. Buildings shall have a mean roof height of 45 feet or less.
j. Wind velocity shall be less than 140 mph.
k. Not to be used on essential facilities

Question: Would a opening protection system that is tested and analyzed for load resistance,Is non-porous in accordance with ASTM E1996, has been tested for cycling and is used in accordance with the aforesaid limits of use a. through k. be within the **exemption** requirements of Section **1609.1.2 Protection of openings** and not required to be tested to an impact test?

Analysis.

Petitioner respectfully believes that the answer is yes. Section **1609.1.2 Protection of Openings** is clear in requiring the impact tests on numerals 1 and 2, but the **Exemption** is added and the Plysnap hurricane protection system when tested and analyzed for loads, subject to a cycle test, and non-porous in accordance with ASTM E1996 and limit its use in accordance with the aforesaid limita a. through k. complies with the exemption requirements of Section 1609.1.2. Therefore the product has complied with all the requirements of the Florida Building Code, 5th Edition (2014) and a Florida product approval may be granted.

Respectfully submitted,



_____ July 5, 2016
Theodore Berman, P.E.