



BUILDING DROPS

A Perfect Solution in Every Drop

Certificate of Authorization: 29578

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Product Evaluation Report *of*

Croft, LLC
**Series 9100 Woodbuck Mullion &
Series 9100 Heavy-Duty Mullion (Vertical)**

for
Florida Product Approval
FL# FL15527

Report No. 3214

5th Edition Florida Building Code
Per Rule 61G20-3

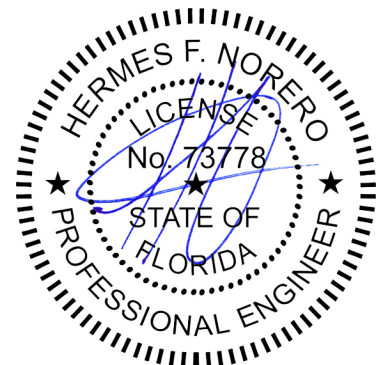
Method: 2 – B (Engineering Evaluation)
Category: Windows
Sub – Category: Mullions

Product: *Series 9100 Woodbuck Mullion & Series 9100
Heavy-Duty Mullions*
Material: Aluminum 6063-T5

Prepared For:
Croft, LLC
P.O. Box 826
McComb, MS 39649

Prepared by:
Hermes F. Norero, P.E.
Florida Professional Engineer # 73778
Date: 09/09/2014

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



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Date: 09/09/2014

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Manufacturer: Croft, LLC

Product Category: Windows

Product Sub-Category: Mullions

Compliance Method: State Product Approval Rule 61G20-3 (2)(b)

Product Name: Series 9100 Woodbuck Mullion & Series 9100 Heavy-Duty Mullion (Vertical)

Scope: This is a Product Evaluation Report issued by Hermes F. Norero, P.E. (FL # 73778) for **Croft, LLC** based on Rule Chapter No. 61G20-3, Method 2b of the State of Florida Product Approval, Florida Department of Business and Professional Regulation - Florida Building Commission.

Hermes F. Norero, P.E. does not have nor will acquire financial interest in the company manufacturing or distributing the product or in any other entity involved in the approval process of the product named herein.

This product has been evaluated for use in locations adhering to the 5th Edition Florida Building Code.

See Installation Instructions **CRF011**, signed and sealed by Hermes F. Norero, P.E. (FL # 73778) for specific use parameters.

Limits of Use:

1. This product has been evaluated and is in compliance with the 5th Edition Florida Building Code, excluding the "High Velocity Hurricane Zone" (HVHZ).
2. Product anchors shall be as listed and spaced as shown on details. Anchor embedment into substrate material shall be beyond wall dressing or stucco.
3. When used in areas requiring wind borne debris protection this product complies with Section 1609.1.2 of the 5th Edition Florida Building Code and **does not require an impact resistant covering when used in Wind Borne Debris Region Zone 3 or less.** Individual window units must be impact rated where applicable.
4. When used in areas requiring wind borne debris protection this product complies with Section 1609.1.2 of the 5th Edition Florida Building Code and **does require an impact resistant covering when used in Wind Borne Debris Region Zone 4.**
5. All configurations shown in installation instructions **CRF011** have been qualified as required by section 1710.5.3 of the 5th Edition FBC.
6. Site conditions that deviate from the details of drawing **CRF011** require further engineering analysis by a licensed engineer or registered architect.
7. See Installation Instructions **CRF011** for size and design pressure limitations.

Hermes F. Norero, P.E.

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Quality Assurance: The manufacturer has demonstrated compliance of manufacture of products in accordance with the Florida Building Code and Rule 61G20-3 for manufacturing under a quality assurance program audited by an approved quality assurance entity through **National Accreditation Management Institute** (FBC Organization #: QUA 1789).

- Installation:**
1. Approved anchor types and substrates are as follows:
 - A. For two by (2X) wood frame substrate, use **(2) #10 Wood Screw** type wood frame anchors per mullion clip of sufficient length to achieve minimum embedment of 1.50" into wood framing.
 - B. For installation directly to concrete or masonry substrate or where one by (1X), non-structural, wood bucking is employed, use **(2) 3/16" diameter ITW Tapcons** type concrete screw anchors per mullion clip of sufficient length to achieve minimum embedment of 1.75" into concrete or masonry. For alternate installation to concrete substrates, see Installation Note C below.
 - C. For installation directly to concrete substrate or where one by (1X), non-structural, wood bucking is employed, use **(1) 1/4" diameter ITW Tapcons** type concrete screw anchor per mullion clip of sufficient length to achieve minimum embedment of 1.75" into concrete or masonry.
 - D. For installation into steel stud substrate, use **(2) #10-16 Self-Drilling** type steel stud anchors of sufficient length to achieve a minimum of 3 threads of penetration beyond steel structure.

Refer to Installation Instructions (**CRF011**) for anchor locations, design load tables, and further details of the installation requirements.

Design Pressure:

See drawing CRF011 for mullion desing pressure tables, mullion assembly profiles, and installation details. Design Pressure Tables are based on guidelines adopted from AAMA 450-06 'Voluntary Performance Rating Method for Muller Fenestration' and Section 1710.5.3 of the 5th Edition FBC.