TURNER
ENGINEERING &
CONSULTING, INC.

2428 Old Natchez Trace Trail
Camden, TN 38320
Ph. 941-380-1574

Evaluation Report 431F
October 7, 2026

Product Description: PVC 4" Mullion H-1759

Manufacturer: Custom Window Systems, Inc. 1900 SW 44th Ave, Ocala, FL 34474

Statement of Compliance: This report evaluates the above-listed product per the requirements of FAC Product Approval Rule Chapter 61G20-3.005 (4). This product complies with the requirements of the 9th Edition (2026) Florida Building Code including the High Velocity Hurricane Zone. The product testing standards performed are outlined below.

Technical Documentation:

1) This report, prepared by Lucas A. Turner, PE, at 2428 Old Natchez Trc Trl, Camden, TN
2) Approval drawing CWS-431F, signed and sealed by Lucas A. Turner, P.E.
3) Test Reports NCTL-210-3424-1, -1A, -2, -2A, -3, -3A, -4, and -4A, and NCTL-210-3426-1, -1A, -2, -2A, -3, -3A, -4, and -4A, from National Certified Testing Laboratories, Orlando, FL signed and sealed by Gerard J. Ferrara, P.E., with testing performed with equivalency to: TAS 202-94, AAMA/WDMA/CSA 101/I.S.2/A440-11/17, and AAMA 450-10/20
4) Supplemental Calcs. to support CWS-431F, signed and sealed by Lucas A. Turner, P.E.

Installation: Units must be installed according to approval document CWS-431F.

Limitations of Use: This product:

- May be used up to the sizes and design pressures as shown in CWS-431F, using clips as shown in CWS-431F
- Is non-impact and requires the use of shutters in windborne debris regions
- May be used in the High Velocity Hurricane Zone
- May only be used with Custom Window System, Inc. PVC windows, please see separate individual window unit approvals for applicable design pressures and for more details. The lower of the individual window design pressures and the mullion design pressures shall apply to the entire assembly.
- Requires 6063-T6 aluminum mullion and clip extrusions.

Coastal Compliance:

- Fastener criteria other than described below shall be in accordance with CWS-431F.
- Fasteners used in locations less than or equal to 300 ft from a saltwater coastline, where

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Lucas Turner
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Lucas A. Turner, P.E.
FL PE #58201

any portion of the fastener is located to the exterior of the Water-Resistive Barrier (WRB) of the wall construction, or is a Weather-Exposed Surface, or as otherwise required by the Authority Having Jurisdiction (AHJ), shall meet the criteria of FBC Sect. 1711.1.1.1 or RBC Section R332.1.1.1 as applicable.

- For wood and metal installation substrates, requires stainless steel, 100 ksi min. ult. (cold worked).
- For concrete/masonry substrates requires 1/4" Simpson Strong-Tie Type 316 Stainless-Steel Titen Turbo or 1/4" Dewalt Aggre-Gator 300 Series SS fasteners.
  - In solid concrete 2.67 ksi min. (replacing 3/16" masonry fasteners in solid concrete per approval), requires 1-3/4" min. embedment and 2-1/2" min. edge distance.
  - In grout-filled CMU applications, ASTM C-90 (replacing 1/4" Ultracon+ fasteners in CMU per approval). requires 2" min. embedment and 2" min. edge distance.

- Fasteners used in locations less than or equal to 300 ft from a saltwater coastline, where the entire fastener is located to the interior of the WRB of the wall construction, or determined by the Registered Design Professional or AHJ for the project to be located within the Unconditioned Interior of the wall construction, or as otherwise required by the AHJ, shall meet the criteria of FBC Sect. 1711.1.1.2 or RBC Section R332.1.1.2 as applicable[††].
- Fasteners used in locations greater than 300 ft and up to 3000 ft from a saltwater coastline, in any Exterior/Interior location of the wall construction, or as otherwise required by the AHJ, shall meet the criteria of FBC Sect. 1711.1.1.2 or RBC Section R332.1.1.2 as applicable[††]

[††] ITW Tapcon and Dewalt Ultracon+ carbon steel fasteners as listed in Table 1 meet these criteria with coatings provided by the manufacturer. Kwik-Cote on Hilti Kwik-Flex and Climaseal on ITW TEKS fasteners also meet these corrosion resistance criteria. Other fasteners must be galvanized or otherwise coated in accordance with one of the standards provided in FBC Sect. 1711.1.1.2 or RBC Sect. R332.1.1.2.

Certification of Independence: I do not have, nor do I intend to acquire, nor will I acquire, a financial interest in Custom Window Systems or in any company manufacturing or distributing products for which this report is being issued. I do not have, nor do I intend to acquire, nor will I acquire, a financial interest in any other entity involved in the testing or approval process of this product.

10/7/2026
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