

W. W. Schaefer Engineering & Consulting, P.A. (CA #6809)

7480 150th Court North
Palm Beach Gardens, FL 33418
Phone (561)744-3424

ENGINEER'S EVALUATION REPORT #WWS-176

Prepared for:

St. Cloud Window, Inc.
390 Industrial Blvd.
Sauk Rapids, MN 56379
Phone: 320-251-9311

Prepared by:

Warren W. Schaefer, P.E.
Florida Professional Engineer #44135

Manufacturer: St. Cloud Window, Inc.

Product Category: Windows

Evaluation Method: 1-D (Engineer's evaluation)

Product model & name: 920 Double Hung Impact Window

Documents that must accompany this report:

1. W. W. Schaefer Engineering & Consulting drawing No. 1718

Window size restrictions and assembly requirements:

See drawing NO. 1718

Maximum allowable design pressure:

Single windows = +/-70 psf; See drawing 1718 for mulled unit pressures.

Installation requirements:

See drawing No. 1718

Code compliance:

Code section(s) considered with this evaluation:

FBC Chapters 17, 24 & 26

Mullions:

Mullion conditions stated in this approval have been tested in accordance with TAS-201, 202 & 203 and meet the requirements of FBC.

Test Standards applicable to the testing of these windows:

TAS-201, 202 & 203

Test Laboratory: Stork Twin City Testing Corporation & Architectural Testing, Inc. (ATI)

Test report number: Stork report No. 113-00836.1 & ATI report No. A1948.01-201-18 (Note that all test reports have been signed & sealed by a Florida P.E.)

General report notes & system limitations:

1. All size & installation conditions shown in this report and the referenced drawing No. 1718 are based off the referenced test reports and/or engineering analysis in accordance with the Florida Building Code.
2. Windows shall be constructed in accordance with the descriptions in this report, and the manufacturer's state approved quality assurance entity specifications.
3. This product is approved for use in & outside of the High Velocity Hurricane Zones (HVHZ).
4. Job required design wind pressure shall be calculated in accordance with the Florida Building Code Chapter 16 and ASCE 7 Minimum Design Loads for Buildings and Other Structures (0.85 directionality factor may apply).
5. These windows are both small & large missile impact rated for use in wind zone 4 & missile level "D" locations and need not be shuttered.
6. Dry glazing gaskets were tested in accordance with ASTM C864 per FBC.
7. Debridging/thermal breaks were tested in accordance with ASTM G26, D638, D2843, D635 & D1929 per FBC.
8. These windows contain an external single glass pane and internal laminated glass, each glazed separately. When windows are to be placed in an area of a building designated for small missile impact, the external pane of glass must be tempered in accordance with FBC. Annealed external glass may only be used in areas designated strictly as non-impact or large missile impact.
9. When applicable, all safety glass requirements must be met per FBC.

Quality Assurance Entity: (ATI) Architectural Testing, Inc., York, PA

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Warren W. Schaefer, P.E.
Florida P.E. #44135

