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-352

Prepared for:

Nana Wall Systems, Inc. 707 Redwood Hwy. Mill Valley, CA 94941 Phone: 800-873-5673

Prepared by:

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

Manufacturer: Nana Wall Systems, Inc.

Product Category: Doors

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

Product model & name: SL-73 Impact In-Swing Folding Panel doors

Documents that must accompany this report:

1. W. W. Schaefer Engineering & Consulting drawing No. 1636

Door size & configuration restrictions and assembly requirements:

See drawing No. 1636

Maximum allowable design pressure:

See drawing No. 1636

Installation requirements:

See drawing No. 1636

Code compliance:

Code section(s) considered with this evaluation:

FBC Chapters 17, 24 & 26

Glass:

All glass meets the current ASTM E1300 standard.

Test Standards applicable to the testing of these windows:

TAS-201, 202 & 203

Test Laboratory: Architectural Testing, Inc. (Now known as Intertek)

Test report numbers: 91081.01-301-18

Note: All HVHZ test reports have been signed & sealed by a Florida PE.

Compliance statement:

This product & its installations have been evaluated as required by the applicable Florida product approval rule and the Florida Building Code (FBC) and are found to be in compliance with each the rule, the Florida Building Code & all code required standards referenced here-in.

General report notes & system limitations:

- 1. All size, configuration & installation conditions shown in this report and the referenced drawing No. 1636 are based off the referenced test reports and/or engineering analysis in accordance with the Florida Building Code.
- 2. Doors 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 per the current ASCE 7 standard).
- 5. These doors 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 are in accordance with ASTM C864, ASTM C509, ASTM C1115 or ASTM E2203 per FBC chapter 24.
- 7. Debridging/thermal breaks are in accordance with ASTM G26, D638, D2843, D635 & D1929 per FBC chapter 26.
- 8. All safety glass requirements must be met per FBC chapter 24.
- 9. When a flush saddle sill is used, these door units are not approved for use where water infiltration resistance is required by the door. Unless units are installed in non-habitable areas where the unit & the area are designed to accept water infiltration, units shall be installed only at locations protected by a canopy or overhang where-by the overhang(oh) ratio is equal to or more than 1.0 per FBC.
- 10. Any change to this product's components and/or assembly without the knowledge & consent of W. W. Schaefer Engineering & Consulting, P.A. and Warren W. Schaefer, P.E. shall void this evaluation/certification and thus the products Florida approval.

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

Disclaimers:

1. The parts, components, assembly & performance of this product, and liability there-of are the sole responsibility of the manufacturer and their quality assurance and shall be as tested unless stated otherwise in this evaluation report or the uploaded approval drawing No. 1636. Neither W. W. Schaefer Engineering & Consulting, P.A. nor Warren W. Schaefer, P.E. claim any responsibility for said parts, components, assembly or performance and shall be deemed responsible only for the evaluation of the product as stated here-in.

JUL 1 2 2019

Warren W. Schaefer, P.E

Florida/P.E. #44135