

L. Roberto Lomas P.E.

1432 Woodford Rd.
Lewisville, NC 27023
336-945-9695

Engineering Evaluation Report

Report No.: 510102D

Manufacturer: USA Shutter Company, LLC
1450 Rail Head Blvd
Naples, FL 34110

Product Line: Aluminum Maestrosshield Roll-up Shutter in a box with and without storm bars – Non HVHZ.

Compliance:

The above mentioned product has been evaluated for compliance with the requirements of the Florida Department of Community Affairs for Statewide Acceptance per Rule 9N-3.005 method 1(d). The product listed herein complies with requirements of the Florida Building Code.

Product description:

Curtain: Curtain consists of single shutter slats constructed of powder coated 6063-T5 aluminum .552" wide x 2.6" high x full length with a wall thickness of .042" minimum. Slats are interlocked together with no mechanical fasteners utilized. Slats are capped at each end with a vinyl cap.

Side Rails: Rails are constructed of 6063-T5 Powder coated extruded aluminum 1.189" wide x 3.150" high x full length. There are two types of side rails, side rails for regular slats and side rails for slats with end retention system.

End retention system: TPlastic guides installed at each slat end made out of nylon and attached to slots with two 3/16" rivets.

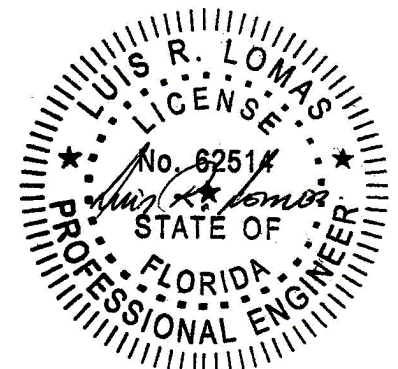
Operating Mechanism: Tone 3 3/8" diameter aluminum shaft with ball bearing gear at the right side and aluminum channel on the left side.

Storm bars: Consist of tubular 6063-T5 aluminum 2.0" wide x 4.0" high x .125" thick and 2.0" wide x 6.0" high x .125" thick

Headers: Consist of tubular 6063-T5 aluminum 2.0" wide x 4.0" high x .125" thick or two 2.0" wide x 6.0" high x .3125" thick channels attached together using #12 TEK screws.

Supporting Technical Documentation:

1. Approval document: drawing number 08-00033 revision F, titled Aluminum Maestrosshield Shutter-In-a-Box, prepared, signed and sealed by Luis Roberto Lomas P.E
2. Test reports:
 - a. Report No.: 0432-0804-06 signed and sealed by Vinu J. Abraham P.E.
Hurricane Test Laboratory, LLC
Aluminum Maestrosshield Roll-up Shutter in a box 54"x68"
TAS 201 and ASTM E 1886-02/E 1996-02, Large Missile Impact test, Level D, Wind Zone 4
TAS 202 and ASTM E 330-02, Uniforms Static Load Test, ±120 psf design pressure
TAS203 and ASTM E 1886-02/E 1996-02, Cyclic Load Test, ±120 psf design pressure
 - b. Report No.: CTLA-1606W signed and sealed by Ramesh Patel P.E.
Certified Testing Laboratories
88 3/8"x84" Aluminum Maestrosshield Roll-up Shutter in a box without storm bars
ASTM E 1886-02/E 1996-02, Large Missile Impact test, Level D, Wind Zone 4
ASTM E 330-02, Uniforms Static Load Test, ±30 psf design pressure
ASTM E 1886-02/E 1996-02, Cyclic Load Test, ±30 psf design pressure



Supporting Technical Documentation (continued):

- c. Report No.: CTLA-1609W signed and sealed by Ramesh Patel P.E.
Certified Testing Laboratories
88 3/8"x84" Aluminum Maestrosshield Roll-up Shutter in a box with storm bars
TAS 201, Large Missile Impact test, Level D, Wind Zone 4
TAS 202, Uniforms Static Load Test, ± 77 psf design pressure
TAS203, Cyclic Load Test, ± 77 psf design pressure
 - d. Report No.: FTL 5278 signed by Manny Sanchez, FTL CEO.
Fenestration Testing Laboratories, Inc.
123"x95 1/2" Aluminum Maestrosshield Roll-up Shutter in a box with end retention system
TAS 201 and ASTM E 1886-05/E 1996-05, Large Missile Impact test, Level D, Wind Zone 4
TAS 202 and ASTM E 330-02, Uniforms Static Load Test, ± 80 psf design pressure
TAS203 and ASTM E 1886-05/E 1996-05, Cyclic Load Test, ± 80 psf design pressure

262 3/4"x120 3/8" Aluminum Maestrosshield Roll-up Shutter in a box with end retention system; with
and without storm bars
TAS 201 and ASTM E 1886-05/E 1996-05, Large Missile Impact test, Level D, Wind Zone 4
TAS 202 and ASTM E 330-02, Uniforms Static Load Test, ± 50 psf design pressure
TAS203 and ASTM E 1886-05/E 1996-05, Cyclic Load Test, ± 50 psf design pressure
3. Comparative analysis, report No.: 510039B and 510241, prepared, signed and sealed by Luis Roberto Lomas P.E
 4. Anchor calculations, report No.: 510065A and 510066, prepared, signed and sealed by Luis Roberto Lomas P.E
 5. Storm bar analysis, report No.: 510067, 510239 and 510240 prepared, signed and sealed by Luis Roberto Lomas P.E
 6. Header bar anchor calculations, report No.: 510068, prepared, signed and sealed by Luis Roberto Lomas P.E

Limitations and Conditions of use:

- Maximum design pressure: Refer to design pressure charts in installation instructions.
- Slats may be installed with either profile facing the exterior.
- For end retention system requirements refer to approval document
- This product is not rated to be used in the HVHZ.
- This product is impact resistant and does not require impact protection in wind borne debris regions.

Installation:

Units must be installed in accordance with installation drawing 08-00033 revision F.

Certification of Independence:

Please note that I don't have nor will acquire a financial interest in any company manufacturing or distributing the product(s) for which this report is being issued. Also, I don't have nor will acquire a financial interest in any other entity involved in the approval process of the listed product(s).

