

Richard A. Baumann, Professional Engineer

Evaluation reports are the opinion of the evaluation entity, based on the findings, and in no way constitute or imply approval by a local building authority. I, Richard A. Baumann have reviewed the data submitted by Raynor Garage Doors and in my opinion, the product, material, system, or method of construction specifically identified in this report, conforms with or is a suitable alternate to that specified in the 2010 Florida Building Code, subject to the limitations in this report.

REPORT NO.: 27-A

SUBMITTED: 10/22/12

CATEGORY: Exterior Doors

SUBMITTED BY:

Raynor Garage Doors
1101 East River Road
Dixon, IL 61021

EVALUATION ENTITY:

Richard A. Baumann P.E.
698 Timber Creek Road
Dixon, IL 61021

EVALUATION TEST STANDARDS:

ANSI/DASMA 108-2005

1. PRODUCT TRADE NAME

1.1 PAN DOORS

- 1.1.1 BuildMark S
- 1.1.2 TradeMark

1.2 SANDWICH DOORS

- 1.2.1 Showcase
- 1.2.2 Masterpiece

1.3 ALUMINUM RAIL AND STILE DOORS

- 1.3.1 Alumaview Optima
- 1.3.2 Styleview Wide Profile
- 1.3.3 Styleview Custom Profile

2. SCOPE OF EVALUATION

2.1 **Structural:** Transverse Wind and Impact/Cyclic loads

3. USES

3.1 Raynor garage doors are used as garage doors with specified allowable transverse wind pressures.

4. MODELS

4.1.1 BuildMark: Sections shall be pan style 2" thick roll formed from 26 ga. (.017 min) hot dipped galvanized steel per ASTM A-525 and A-526. Each door section is wood grain textured with embossed panels and has tongue and-groove section joint.

4.1.2 TradeMark: Sections shall be pan style 2" thick roll formed from 24 ga. (.023 min) hot dipped galvanized steel per ASTM A-525 and A-526. Each door section is wood grain textured with embossed panels and has tongue and-groove section joint.

4.1.3 Decade Showcase, also referred to as Showcase: Sections shall be sandwich-style, 2 inch thick insulated door panels with tongue-and-groove section joint made from minimum 0.015 inch thick galvanized steel roll-formed interior and exterior skins with embossed panels and wood grain texture. The doors are insulated with expanded polystyrene foam that is bonded to the interior and exterior steel skins.

4.1.4 Masterpiece: Same as Showcase except for painted hardware.

4.1.5 Alumaview Optima: Sections shall be 1-15/16" thick 6063T6 aluminum alloy frame with impact resistant panels or impact resistant glass. Stiles and rails to be joined together with 5/16" x 1" self-threading screws. Adhesive is used to attach the glazing channel to the panel and/or glass. An aluminum glazing retainer is screwed around the perimeter of the panel or glass securing it to the section. Alumaview Optima is a commercial type door.

4.1.6 Styleview Wide Profile: Same as Alumaview Optima except Styleview Wide Profile is a residential type door.

4.1.7 Styleview Custom Profile: Same as Alumaview Optima except Styleview Custom Profile is a residential type door with more panel options like; Custom Carriage House, Custom FrenchView and Custom Mixed Panels.

5. REINFORCING

5.1 General: Raynor garage doors sections listed in this report shall be reinforced horizontally with roll-formed galvanized steel U-bars, see 5.1.1.

5.1.1 U-bar: Horizontal reinforcing U-shaped sections, 2-5/8" deep x 2" wide x 18 ga. (.049 inch minimum) galvanized steel, 80 KSI minimum tensile complying with ASTM A-924 hot dipped galvanizing and ASTM A-653 steel specification.

5.1.2 Removable Post: Square Galvanized Tube, 1 3/4" x 1 3/4" x 12 ga (0.105 inch minimum), complying with ASTM A-924 hot dipped galvanizing and ASTM A-653 steel specification. The posts are stored on a wall in the garage close to the garage door and attached to the door vertically when high winds warnings are issued. The posts are anchored to the floor with a 1/2" diameter x 3 1/2" long pin. The top of the posts has a 1/2" diameter x 8" long carriage bolt which engages a bracket that is attached to the header with (4) 5/16" x 1 3/4" long lag screws. The post is attached to the door with u-shaped straps which attach to a bracket on the door with a 5/16" x 2 1/2" clevis pin and hairpin cotter pin. A wind loaded door with a Removable post system also incorporates u-bar trussing.

6. INSTALLATION

6.1 General: Raynor garage doors are to be installed in accordance with the manufacturer's published installation instructions, engineering drawings and this report. The manufacturer's published installation instructions and this report shall be strictly adhered to and a copy of these instructions shall be available at all times on the job site during installation. The information within this report governs if there are any conflicts between the manufacturer's instructions and this report.

7. ALLOWABLE WIND LOADS:

The doors shown in Table 1 were tested to ANSI/DASMA 108-2005 for static air pressure.

Table 1

DOOR MODEL(S)	MAXIMUM DOOR WIDTH	DRAWING NUMBER	DESIGN LOAD	LARGE MISSILE IMPACT RESISTANT	TEST REPORT NUMBER	TEST DATE
BUILDMARK S	16' - 0"	P-2416-A	+ 29.3	NO	1565	10/4/12
			- 32.6			
BUILDMARK S	16' - 0"	P-2419-A	+ 29.3	NO	1566	10/9/12
			- 32.6			
BUILDMARK S	18' - 0"	P-2417-A	+ 16.0	NO	1567	10/18/12
			- 18.0			
SHOWCASE	18' - 0"	P-2418-A	+18.0	NO	1568	10/23/12
			-20.0			
ALUMAVIEW OPTIMA	16' - 2"	P-2420-A	+ 27.5	NO	1564	9/26/12
			- 34.7			

8. SUBSTANTIATING DATA

8.1 Test Reports: Testing for doors shown in Table 1 was done at Raynor Garage Doors test lab in Dixon Illinois which is accredited by Laboratory Accreditation Bureau (LAB), scope of accreditation can be found at www.l-a-b.com. Testing was witnessed by an independent third party Florida Registered Professional Engineer, Richard A. Baumann P.E. Test reports were prepared by Raynor Garage Doors and signed and sealed by Richard A. Baumann P.E., see Table 1 for report numbers and test dates.

8.2 Engineering Drawings: Drawings were prepared by Raynor Garage Doors under the direction of Richard A. Baumann and then reviewed, signed, sealed and dated by Richard A. Baumann, P.E. See Table 1 for drawing numbers.

8.3 Calculations: Calculations on jamb attachment, the results are shown on drawings listed in this report.

9. REPORT SUMMARY

9.1 Upon review of the data submitted by Raynor Garage Doors, I find that, in my opinion, the models as described in this report conform with or are a suitable alternative to that specified in the 2010 Florida Building Code, subject to the limitations in this report.

10. LIMITATIONS

10.1 The doors shall be installed in accordance with the manufacturer's published installation instructions in this report and the manufacturer's published installation instructions, engineering drawings and this report.

10.2 The structural elements supporting the door track brackets shall be designed by a registered professional engineer for the wind loads shown on the drawings listed in this evaluation.

10.3 The doors shall not be installed in areas where the transverse wind loads exceed the allowable loads shown in Table 1.

10.4 Doors listed in this report do not address the requirements of the High Velocity Hurricane Zone (HVHZ).

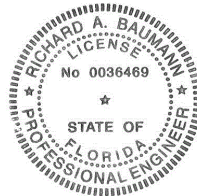
11. IDENTIFICATION

11.1 Each Raynor Garage Door covered by this report shall be labeled with the manufacturer's name, drawing number and Florida approval number for field identification.

12. FURTHER INFORMATION

12.1 For more information on this report contact Richard A. Baumann, P.E. 815/288-2261.

12.2 Richard A. Baumann F.P.E. #36469 does not have, nor intend to acquire a financial interest in Raynor Mfg. or any other company manufacturing or distributing products for which this report is being issued; Richard A. Baumann F.P.E. #36469 is not controlled by Raynor Mfg. or any other company manufacturing or distributing any portion of the product being tested, evaluated or approved by this report.



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