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April 13, 2026

C.H.I. Overhead Doors
1485 Sunrise Dr.
Arthur, IL 61911

Re: FL 15012
Evaluation Report for Residential Pan Doors
Models 2x4x, 2x5x, 4x4x, 4x5x, 52xx, 59xx family

To Whom It May Concern:

At the request of C.H.I. Overhead Doors, I have reviewed the drawings and tests listed below and have concluded that the construction shown on these drawings comply with the structural requirements of the 8th Edition (2023) Florida Building Code and IBC/IRC 2018/2021/2024 (Texas). I certify that I meet the requirements of "independence" as detailed in Florida Statutes.

Rational analysis methods have been applied to define psf pressure ratings for some widths. Each "static" pressure was evaluated based on its tested size to take the least of the results of bending moment and end load conditions. Each "impact" pressure was evaluated to be the least of the achieved impact psf (with no change or allowance for width variations) and the rationalized static psf. Widths greater than the impact-tested door width were not included.

This product has been tested and constructed to meet PSF specifications, not MPH. The conversion of MPH to PSF requires site-specific information that is unknown to the manufacturer.

Two drawings are for use in HVHZ. These are also listed as NOA 21-0803.04 and 21-1129.03.

Drawings

These products are for **static** pressure only:

Z3-10-01308	Residential Pan	10'-00" wide @ +19.5 / -22.0 psf
Z3-16-013L8	Residential Pan	16'-00" wide @ +18.7 / -20.8 psf
Z3-16-01308	Residential Pan	16'-00" wide @ +18.7 / -20.8 psf
Z3-18-01308	Residential Pan	18'-00" wide @ +18.7 / -20.8 psf
Z4-09-013L8	Residential Pan	09'-00" wide @ +23.2 / -26.2 psf
Z4-10-01308	Residential Pan	10'-00" wide @ +23.2 / -26.2 psf
Z4-16-01308	Residential Pan	16'-00" wide @ +22.2 / -24.7 psf
Z4-18-01308	Residential Pan	18'-00" wide @ +22.2 / -24.7 psf

Z5-09-013L8	Residential Pan	09'-00" wide @ +27.3 / -30.8 psf
Z5-10-01308	Residential Pan	10'-00" wide @ +27.3 / -30.8 psf
Z5-16-01308	Residential Pan	16'-00" wide @ +26.2 / -29.1 psf
Z6-10-013L8	Residential Pan	10'-00" wide @ +31.4 / -35.5 psf
Z6-10-01308	Residential Pan	10'-00" wide @ +31.4 / -35.5 psf
Z6-16-013L8	Residential Pan	16'-00" wide @ +30.1 / -33.5 psf
Z6-16-01308	Residential Pan	16'-00" wide @ +30.1 / -33.5 psf
Z7-09-013L8	Residential Pan	09'-00" wide @ +36.0 / -40.6 psf
Z7-16-01308	Residential Pan	16'-00" wide @ +34.5 / -38.4 psf
Z7-18-01308	Residential Pan	18'-00" wide @ +34.5 / -38.4 psf
Z8-10-01308	Residential Pan	10'-00" wide @ +38.3 / -43.5 psf
Z8-16-01308	Residential Pan	16'-00" wide @ +39.5 / -44.4 psf
Z8-18-01308	Residential Pan	18'-00" wide @ +39.5 / -44.4 psf
Z9-09-013L8	Residential Pan	09'-00" wide @ +44.3 / -51.5 psf
Z9-16-01308	Residential Pan	16'-00" wide @ +42.1 / -46.9 psf
Z9-18-01308	Residential Pan	18'-00" wide @ +42.1 / -46.9 psf
Z10-10-01308	Residential Pan	10'-00" wide @ +50.7 / -57.5 psf
Z10-16-01308	Residential Pan	16'-00" wide @ +48.2 / -53.7 psf
Z10-18-01308	Residential Pan	18'-00" wide @ +48.2 / -53.7 psf

These products are for **static and impact** (windborne debris):

Z4i-16-01509	Residential Pan	16'-00" wide @ 22.2 / -24.7 psf
Z4i-18-01509	Residential Pan	18'-00" wide @ 22.2 / -24.7 psf
Z6i-09-01509	Residential Pan	09'-00" wide @ +32.0 / -36.2 psf
Z6i-16-01509	Residential Pan	16'-00" wide @ +30.6 / -34.1 psf
Z6i-18-01509	Residential Pan	18'-00" wide @ +30.3 / -33.7 psf
Z7i-18-01509	Residential Pan	18'-00" wide @ +34.5 / -38.4 psf
	thru	10'-07" wide @ +44.0 / -49.0 psf max psf
Z8i-18-01509	Residential Pan	18'-00" wide @ +38.1 / -42.5 psf
	thru	15'-04" wide @ +44.0 / -49.0 psf max psf
Z10i-10-01509	Residential Pan	10'-06" wide @ +44.7 / -51.5 psf
	thru	06'-00" wide @ +49.9 / -56.7 psf max psf

Note: The drawing titles above are simply descriptive, and do not represent any limitation on the sizes and pressures. Each drawing contains a table with additional sizes and psf ratings.

These products are for **static and impact** (**HVHZ** windborne debris):

MD-2140-0907	Residential Pan	9’-2” wide @ +48.8 / -55.4 psf
MD-2140-1607	Residential Pan	16’-2” wide @ +47.6 / -53.5 psf

Test Reports

Tests for Static drawings:

9' wide
ATI 75882.01-602-47
ATI 75884.01-602-47
ATI 75888.01-602-47
ATI 79082.02-602-47
ATI 86784.01-602-78
ATI 82008.01-602-47

10' wide
ATI 75877.01-602-47
ATI 75880.01-602-47
ATI 75883.01-602-47
ATI 75885.01-602-47
ATI 75889.01-602-47
ATI 75893.01-602-47
ATI 82014.01-602-47
ATLNC 0211.01-20

10'-6" wide
ATI 98398.01-602-44

16' wide
ATI 76338.02-602-47
ATI 76339.01-602-47
ATI 76340.01-602-47
ATI 76341.01-602-47
ATI 76343.01-602-47
ATI 76344.01-602-47
ATI 76345.01-602-47
ATI 76346.01-602-47
ATI 82017.01-602.47

18' wide
ATI 77052.01-602-47
ATI 77053.01-602-47
ATI 77056.01-602-47
ATI 77057.01-602-47
ATI 77058.01-602-47
ATI 77059.01-602-47
ATI 82008.01-602-47
ATI 82019.01-602-47
ATLNC 0212.01-20

Tests for Impact drawings:

9' wide
ATI 86495.01-602-78

10' wide
ATLNC 0203.02-20

10'-6" wide
ATI 97308.01-602-44

16' wide
ATI 86494.01-602-78
ATI 91665.03-602-18

18' wide
ATI 86491.01-602-78
ATI 91667.03-602-18
ATI 97309.01-602-44
ATLNC 0205.01-20

Tests for HVHZ (TAS 201/202/203 -94):

9'-2" wide
ATLNC 0322.01-21

16'-2" wide
ATLNC 0913.01-2

Test Facility & Procedures

Tests were conducted at three facilities:

- Architectural Testing of Schofield, WI at the Schofield location.
- Architectural Testing using the accredited C.H.I. test facility in Arthur, IL.
- American Test Lab, Inc., North (ATLNC) located in Brevard, NC.

These test facilities/labs were accredited at the time of testing.

Static pressure testing was conducted in accordance with ANSI/DASMA 108-02 and/or ANSI/DASMA 108-05 and ANSI/DASMA 108-17 (ATLNC) and ASTM E330-14 (ATLNC). The testing also complied with the requirements of ASTM E330-02 and **ANSI/DASMA 108-2017**. All of these standards are equivalent test procedures to meet the requirements of the FBC for garage doors.

Large Missile impact and cycling tests were conducted in accordance with ANSI/DASMA 115-05 as well as ASTM E1886-05/E1996-09. ATLNC testing was per ANSI/DASMA 115-17. All testing also complied with the requirements of **ANSI/DASMA 115-2017**.

HVHZ testing was conducted per **TAS 202(-94)** and **TAS 201/203(-94)**, as well as ANSI/DASMA 108-17 and 115-17.

Only these drawings are intended for the High Velocity Hurricane Zone (HVHZ).
MD-2140-0907 per NOA 21-0803.04
MD-2140-1607 per NOA 21-1129.03

All test reports were signed by a Florida PE.

The designs reflected on the drawings represent the "worst case" construction of the doors if there were slight differences between the DASMA 108 Static and DASMA 115 Impact tested products. The strongest or most reinforced features were incorporated to ensure compliance, as rational engineering analysis.

Glazing

The impact drawings include an impact window option "by C.H.I". The full description of the as-tested product is abbreviated on the drawings since it is factory assembled. Details:

1/4" thick polycarbonate (Makrolon) riveted to the exterior face of the door using 3/16” bulbed rivets. The polycarbonate overlaps the exterior skin by 1-1/4" per side. The daylight opening is 16-3/4" x 10-1/4" (with 12 rivets).

Installation

Anchorage Requirements:

The direct mounting of door track on top of drywall or other non-structural material is outside of the scope of C.H.I. Overhead Doors wind load evaluations. Residential garage door track generally has small metal pads that contact the drywall. The loads generated during high wind events may be concentrated by these pads and damage the drywall. Therefore, C.H.I. Overhead Doors promotes the use of back jambs to effectively absorb and redistribute wind loads.

Anchorage requirements for the HVHZ drawings are part of the door drawings.

For all other doors, attachment drawings provided by C.H.I. Overhead Doors detail how to fasten back jambs equivalent in strength to southern pine or spruce pine fir to the structure. Fasteners used to secure the back jambs must be long enough to achieve the minimum embedment as specified.

The wood species of the 2x6 is specified as Southern Pine (aka Southern Yellow Pine) on the door drawings.

Mounting of 2x6 wood "Back Jamb" or "bucks" to the building structure as a surface to secure the track brackets are detailed on these C.H.I. attachment drawings, depending upon the type of wall construction:

BJA-101 using Concrete Anchors
BJA-102 using Lag Screws

If mounting of the track directly to building jambs is desired, more fasteners and track brackets may be necessary in addition to those shown on the drawings to obtain sufficient track attachment. These C.H.I. attachment drawings provide guidelines:

BJA-103 Steel Attachment Detail
BJA-104 CMU Filled Attachment Detail
BJA-105 Concrete Attachment Detail
BJA-106 Attachment Detail for Wood

This Evaluation Report does not address design of the wall/jambs themselves. These attachment drawings only illustrate common means to attach the jambs to the wall. Walls and Jambs should be designed (by others) to withstand the loads imposed by door onto the building.

Model Descriptions

All doors in this evaluation are 2" thick overall. In each family of doors, the weakest or thinnest skin product was tested to prove the entire family line. Thus, all of these door model variations are approved for each family of the drawings:

<u>2X4X models include:</u>
2140 - Flush panel, 24 gage pan - uninsulated
2141 - Flush panel, 24 gage pan - insulated
2240 - 24 gage pan with standard emboss - insulated
2241 - 24 gage pan with standard emboss w/ insulation

<u>2X5X models include:</u>
2150 - Flush panel, 25 gage pan - uninsulated
2151 - Flush panel, 25 gage pan - insulated
2250 - 25 gage pan with standard emboss - uninsulated
2251 - 25 gage pan with standard emboss w/ insulation
2540 - Shaker panel emboss, 24 gage pan - uninsulated
2550 - Shaker panel emboss, 25 gage pan - uninsulated
2551 - Shaker panel emboss, 25 gage pan - insulated

<u>4X4X models include:</u>
4140 - Flush panel, 24 gage pan - uninsulated
4141 - Flush panel, 24 gage pan - insulated
4240 - Wide standard emboss, 24 gage pan - uninsulated
4241 - Wide standard emboss, 24 gage pan - insulated

<u>4X5X models include:</u>
4150 - Flush panel, 25 gage pan - uninsulated
4151 - Flush panel, 25 gage pan - insulated
4250 - Wide standard emboss, 25 gage pan - uninsulated
4251 - Wide standard emboss, 25 gage pan - insulated

<u>52XX models include:</u>
5240 - Carriage House emboss, 24 gage pan - uninsulated
5241 - Carriage House emboss, 24 gage pan - insulated
5250 - Carriage House emboss, 25 gage pan - uninsulated
5251 - Carriage House emboss, 25 gage pan - insulated

<u>59XX models include:</u>
5940 - Wide Carriage House emboss, 24 gage pan - uninsulated
5941 - Wide Carriage House emboss, 24 gage pan - insulated
5950 - Wide Carriage House emboss, 25 gage pan - uninsulated
5951 - Wide Carriage House emboss, 25 gage pan - insulated

Additional Limitations

The drawings cited above are an explicit part of this evaluation report. The text of this report does not attempt to address all design details but relies upon the illustrations and text of these drawings and instructions as well.

Each door should be chosen based on the "psf" requirements determined for a specific installation or locale.

Low Headroom track may be used in lieu of the Standard Lift track. The horizontal track may be reinforced with an angle as needed to support the door weight. The construction of the horizontal track, including the track thickness and additional support when needed, is determined by C.H.I. Overhead Doors and does not affect this windload evaluation.

The rated pressures may not be achieved unless the door is held closed during the wind event. Both vertical tracks must be engaged with a lock (right and left side), or alternately an electric drawbar operator attached to the door prior to the wind event.

Certain doors have been tested to Large Missile Impact requirements of the wind-borne debris regions, designated with an "i" in the drawing name. In addition, steel doors not tested for wind-borne debris may qualify for use in wind-borne debris regions according the FBC if they do not contain glazing.

Only drawings MD-2140-0907 and MD-2140-1507 are intended for HVHZ.
All other products are *not* intended for the Florida High Velocity Hurricane Zone (HVHZ).

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