

John E. Scates, Professional Engineer

October 6, 2023

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

Re: FL 15058
**Evaluation Report for Commercial Pan Doors
Model 322x, 324xx, 325x 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. 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.

Drawings

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

Z2-06-61317	06'-00" - 08'-08" wide
Z3-20-61317	14'-02" - 22'-02" wide
Z4-14-61317	10'-06" - 18'-02" wide
Z4-16-61317	08'-02" - 20'-02" wide
Z5-10-61317	06'-00" - 12'-11" wide
Z5-18-61317	12'-02" - 24'-02" wide
Z8-18-61317	16'-08" - 28'-02" wide
Z9-09-61317	06'-00" - 10'-06" wide
Z9-16-61317	12'-02" - 16'-06" wide

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

Z7i-18-61517	16'-02" - 24'-02" wide
Z8i-10-61517	06'-00" - 10'-08" wide
Z8i-12-61517	10'-02" - 14'-06" wide
Z8i-18-61517	15'-02" - 20'-02" wide
Z11i-09-61517	06'-00" - 10'-08" wide

Test Reports

Static tests:

ATI 78626.01-602-47 Model 3250, 08'-02" wide +12.1 / -13.5 psf
 ATI 78631.01-602-47 Model 3250, 08'-02" wide +47.2 / -53.1 psf
 ATI 78632.01-602-47 Model 3250, 08'-02" wide +64.9 / -73.2 psf
 ATI 78641.01-602-47 Model 3250, 09'-02" wide +57.5 / -68.9 psf
 ATI 78644.01-602-47 Model 3250, 10'-02" wide +24.1 / -36.7 psf
 ATI 78645.01-602-47 Model 3250, 10'-02" wide +33.9 / -41.9 psf
 ATI 79085.01-602-47 Model 3250, 12'-02" wide +17.3 / -22.9 psf
 ATI 79086.01-602-47 Model 3250, 12'-02" wide +28.1 / -34.0 psf
 ATI 79087.01-602-47 Model 3250, 12'-02" wide +36.7 / -45.1 psf
 ATI 79089.01-602-47 Model 3250, 14'-02" wide +51.3 / -65.9 psf
 ATI 79091.01-602-47 Model 3250, 14'-02" wide +28.8 / -35.4 psf
 ATI 81984.01-602-47 Model 3250, 16'-02" wide +33.3 / -41.6 psf
 ATI 81985.01-602-47 Model 3250, 16'-02" wide +45.1 / -46.5 psf
 ATI 81988.01-602-47 Model 3250, 18'-02" wide +21.5 / -28.1 psf
 ATI 81990.01-602-47 Model 3250, 16'-02" wide +37.8 / -37.8 psf

Impact tests:

ATI 97298.01-602-44 Model 3250, 20'-02" wide +37.3 / -41.9 psf
 ATI 99675.01-602-18 Model 3250, 24'-02" wide +35.9 / -40.0 psf
 ATI 99678.01-602-18 Model 3250, 10'-08" wide +50.7 / -57.5 psf

Test Facility & Procedures

Impact, cyclic and static tests were conducted by Architectural Testing of Schofield, WI at the Schofield location. Static tests were also conducted by ATI at the C.H.I. Overhead Doors "in house" test facility in Arthur, IL. These test facilities were accredited at the time of testing.

Static testing was conducted in accordance with **ANSI/DASMA 108-2017**.

Large Missile impact and cycling tests were conducted in accordance with **ANSI/DASMA 115-2017** as well as ASTM E1886-05/E1996-09 (noted here for historical purposes).

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.

Installation Instructions

The drawings provide installation instructions peculiar to windload reinforcement. "Supplemental Instructions Rib Doors: Commercial" include additional details.

Anchorage Requirements:

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 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.

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:

- 3250 - a 25-gauge pan commercial pan door.
- 3251 - a 3250 pan w/ non-structural insulation, vinyl back
- 3252 - a 3250 pan w/ non-structural insulation, steel back
- 3240 - a 3250 but 24-gauge pan.
- 3241 - a 3251 but 24-gauge pan.
- 3242 - a 3252 but 24-gauge pan.
- 3220 - a 3250 but 20-gauge pan.
- 3221 - a 3251 but 20-gauge pan.
- 3222 - a 3252 but 20-gauge pan.

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" requirement determined for a specific installation or locale.

The maximum door height approved with this report is 24' nominal.

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.

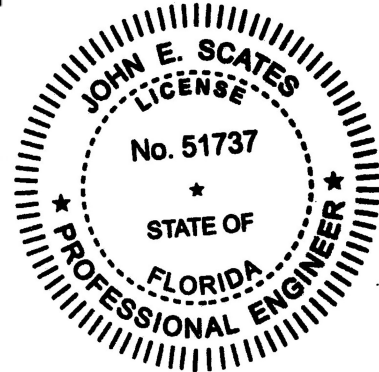
The rated pressures may not be achieved unless the door is held closed during the wind event. Both vertical tracks must be engaged with a lock (right and left side), or alternately an electric drawbar operator attached to the door prior to the wind event.

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.

These products are *not* intended for the Florida High Velocity Hurricane Zone (HVHZ).

Digitally signed by John E Scates
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John E. Scates, P.E.
Florida PE # 51737

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