Architectural Testing

TEST REPORT

Report No.: C8080.01-201-44

Rendered to:

AMERICAN GARAGE DOOR SUPPLY, INC.
Bemidji, Minnesota

PRODUCT TYPE: Polycarbonate Section Overhead Garage Door
SERIES/MODEL: 12'2" x 8'0"
DESIGN PRESSURE: +31.9/-31.9 psf

SPECIFICATIONS: ANSI/DASMA 108-2005, *Standard Method for Testing Sectional Garage Doors and Rolling Doors: Determination of Structural Performance Under Uniform Static Air Pressure Difference*

AND

ASTM E 330-02, *Test Method for Structural Performance of Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference*

This report contains in its entirety:
Cover Page: 1 page
Report Body: 5 pages
Alteration Addendum: 1 page
Drawings: 1 page

Test Date: 05/20/13
Original Report Date: 06/19/13
Revised Report Date: 01/27/14
Test Record Retention Date: 06/19/17

1.0 Report Issued To: American Garage Door Supply, Inc.
1225 Industrial Park Drive SE
Bemidji, Minnesota 56601

2.0 Test laboratory: Architectural Testing, Inc.
849 Western Avenue North
St. Paul, Minnesota 55117
651-636-3835

3.0 Project Summary:

3.1 Product Type: Polycarbonate Section Overhead Garage Door

3.2 Series/Model: 12'2" x 8'0"

3.3 Compliance Statement: Results obtained are tested values and were secured by using the designated test methods. The specimen tested successfully met the performance requirements for +31.9/-31.9 psf. The test specimen was subjected to the ANSI/DASMA 108-2005 guidelines for structural performance testing.

3.4 Test Dates: 05/20/13

3.5 Test Location: Architectural Testing, Inc. test facility in St. Paul, Minnesota.

3.6 Test Sample Source: The test specimen was provided by the client. Representative samples of the test specimen will be retained by Architectural Testing for a minimum of four years from the test completion date.

3.7 Drawing Reference: The test specimen drawings have been reviewed by Architectural Testing and are representative of the test specimen reported herein. Test specimen construction was verified by Architectural Testing per the drawings located in Appendix B. Any deviations are documented herein or on the drawings.

3.8 List of Official Observers:

Name	Company
Larry Baumgartner	American Garage Door Supply, Inc.
Greg Johnson	American Garage Door Supply, Inc.
Tony D. Gavin	Architectural Testing, Inc.
Eric J. Schoenthaler	Architectural Testing, Inc.

4.0 Test Specifications:

ANSI/DASMA 108-2005, *Standard Method for Testing Sectional Garage Doors and Rolling Doors: Determination of Structural Performance Under Uniform Static Air Pressure Difference.*

ASTM E 330-02, *Test Method for Structural Performance of Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference.*

5.0 Test Specimen Description: (See attached Drawing)

5.1 Product Sizes:

Overall Area: 97.3 ft²	**Width (inches)**	**Height (inches)**
Overall size	146	96
Panel size	146	24

5.2 Panel Construction:

Panel Member	**Material**	**Description**
Frame	Aluminum	
Infill	Polycarbonate	Five wall polycarbonate.
Intermediate stiles	Aluminum	

	Joinery Type	**Detail**
Frame corners	Butt	Secured with three #8 x 1/2" screws and one #14 x 3/4" thread cutting screw.
Intermediate stiles to frame	Butt	Secured with four #8 x 1/2" screws.

5.0 Test Specimen Description: (Continued)

5.3 Weatherstripping: No weatherstripping was utilized.

5.4 Glazing: No glazing was utilized.

5.5 Panel Hardware:

Description	Quantity	Location
Galvanized steel garage door hinges	12	Panel meeting edges, one per panel end and one at each intermediate panel stile location.
Galvanized steel garage door top bracket.	2	One per top panel top corner.
Galvanized steel garage door bottom bracket.	2	One per bottom panel bottom corner.
Intermediate stiles	8	Two per panel. 46" from panel edges.
3" steel roller	10	One per each hinge location and one per each top and bottom bracket location.
3" aluminum Z-strut	3	1" from the top of the top panel. 4" from the top of the second panel from the bottom. 4" from the top of the bottom panel. Struts were attached to the panel at each frame stile and intermediate stile with one two 1/4 x 1" self-tapping screw.

5.6 Track Hardware:

Description	Quantity	Location
Galvanized steel 3" roller track	2	Attached to the buck adjacent to the garaged door.

6.0 Installation:

The door was installed into a test chamber by representatives of American Garage Door Supply, Inc. according to the printed installation instructions. The specimen was installed into a Spruce-Pine-Fir wood buck.

Location	Anchor Description	Anchor Location
Roller track assembly	5/16" x 1-5/8" lag bolts	10" from the bottom and 24" on center.

7.0 Test Results: The temperature during testing was 74°F. Deflection and permanent sets were measured at top and middle strut locations. The results are tabulated as follows:

Title of Test	Deflection (inches)	Permanent Set (inches)	Note
Preload (50% of design load) 15.95 psf (positive)	0.94	0.14	1, 4
Design Load 31.90 psf (positive)	3.38	0.26	2, 4
Test Load 47.85 psf (positive)	4.87	0.88	3, 4, 5
Preload (50% of design load) 15.95 psf (negative)	2.26	0.19	1, 4
Design Load 31.90 psf (negative)	7.44	0.89	2, 4
Test Load 47.85 ps f (negative)	11.61	3.84	3, 4, 5
Test Results: Pass			

Note 1: Preloads were held for 10 seconds.

Note 2: Design loads were held for 10 seconds.

Note 3: Test loads were held for 10 seconds.

Note 4: Tape and film were used to seal against air leakage during structural testing. In our opinion, the tape and film did not influence the results of the test.

Note 5: Observations: The door remained in the opening for all loads and was operable at the completion of testing.

***General Note**: All testing was performed in accordance with the referenced standard.*

8.0 Laboratory Compliance Statements:

The service life of this report will expire on the stated Test Record Retention End Date, at which time such materials as drawings, data sheets, samples of test specimens, copies of this report, and any other pertinent project documentation, shall be discarded without notice.

If test specimen contains glazing, no conclusions of any kind regarding the adequacy or inadequacy of the glass in any glazed test specimen can be made. This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client so named herein and relates only to the specimen tested. This report may not be reproduced, except in full, without the written approval of Architectural Testing, Inc.

For ARCHITECTURAL TESTING, Inc.

Digitally Signed by: Eric Schoenthaler

Eric J. Schoenthaler
Project Manager

Digitally Signed by: Daniel A. Johnson

Daniel A. Johnson
Director - Regional Operations

EJS/jb

Attachments (pages): This report is complete only when all attachments listed are included.
Appendix-A: Alteration Addendum (1)
Appendix-B: Drawings (1)

Revision Log

Rev. #	Date	Page(s)	Revision(s)
1	01/27/14	Cover, 1	Correct Series/Model
		2	Correct screw size in panel construction
		3	Correct panel hardware sections
		4	Corrected installation anchors and locations

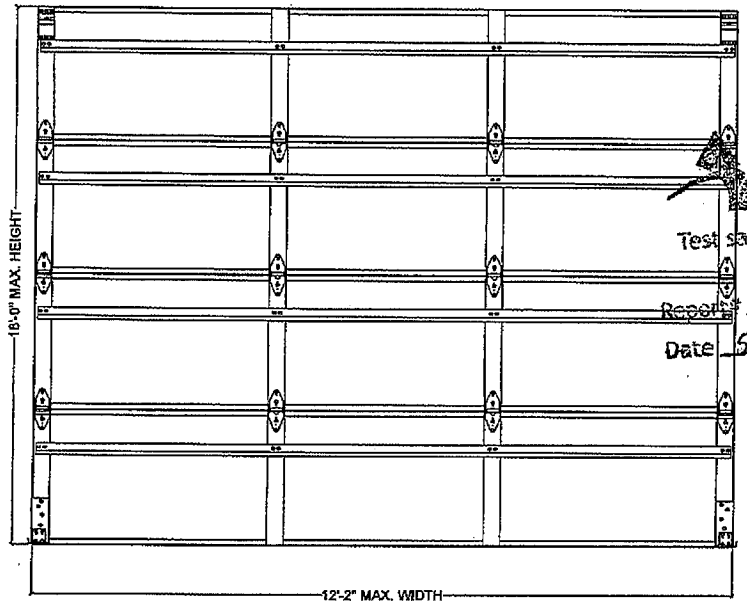
Appendix A

Alteration Addendum

***Note**: No alterations were required.*

Appendix B

Drawings

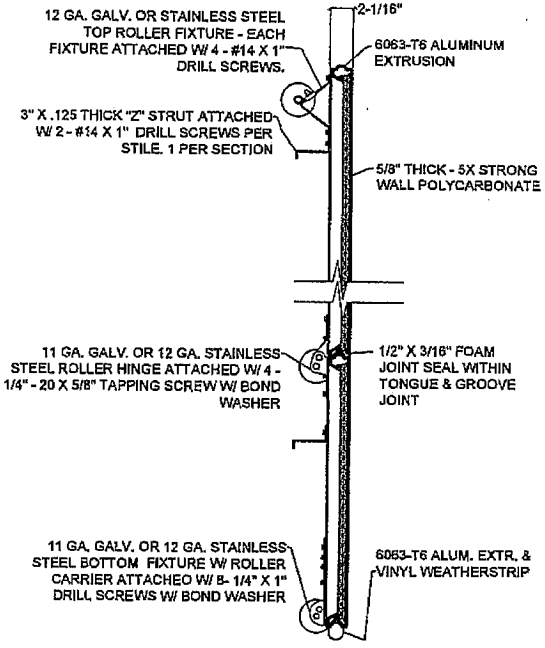


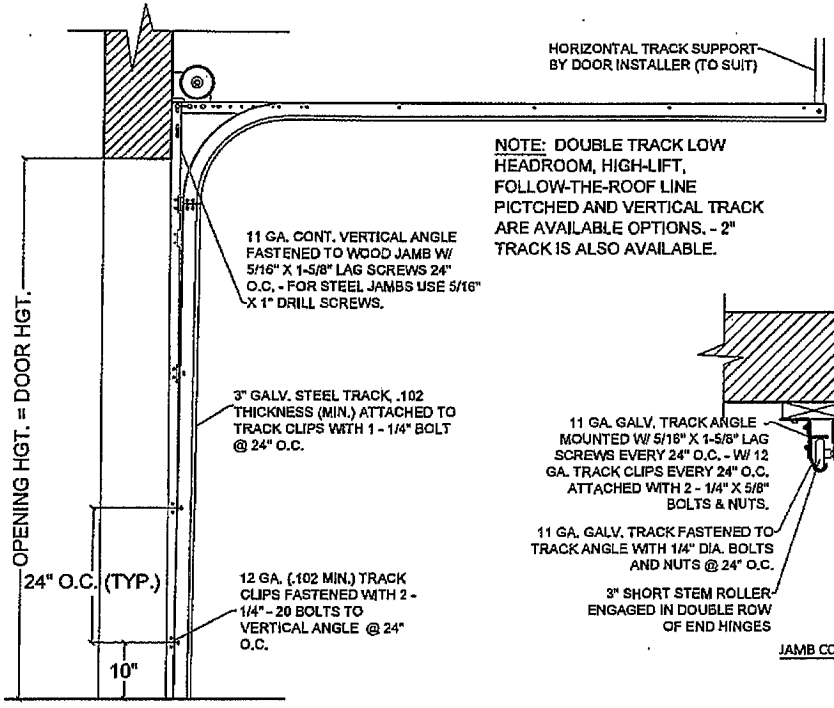
Architectural Testing

Test sample complies with these details.
Deviations are noted.

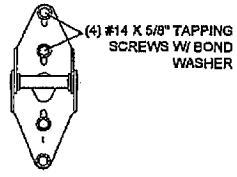
Report # L8080

Date 5/24/13 Tech SA

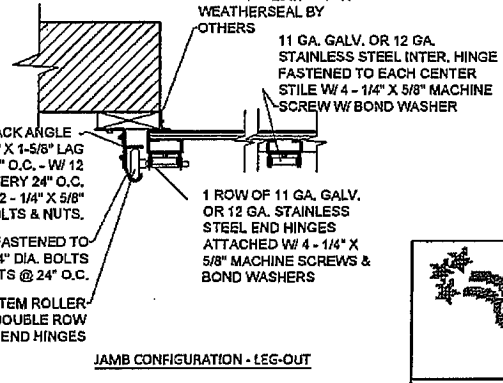




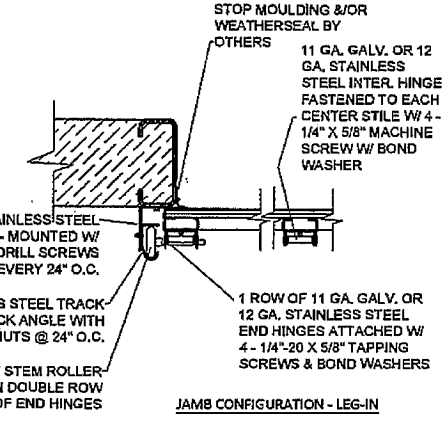
NOTE: DOUBLE TRACK LOW HEADROOM, HIGH-LIFT, FOLLOW-THE-ROOF LINE PICTCHED AND VERTICAL TRACK ARE AVAILABLE OPTIONS. - 2" TRACK IS ALSO AVAILABLE.



11 GA. GALV. OR 12 GA. STAINLESS STEEL HINGE



JAMB CONFIGURATION - LEG-OUT



JAMB CONFIGURATION - LEG-IN

THE SUPPORTING STRUCTURAL ELEMENTS ARE TO BE DESIGNED BY THE BUILDING ARCHITECT OR ENGINNEER OF RECORD FOR THE LOADS SHOWN ON THIS DRAWING.

American garage door supply inc.
1225 Industrial Park Dr.
Bemidji, MN 56601
Tel: 800-233-1487
Fax: 218-751-6551

WINDLOAD RATING

Description:			
Drawn By: PEB	Date: 08/06/13	Scale: None	Dwg. Size A
Checked By:	Date:	Sheet 1 of 1	
DWG. No.		Rev. No. 01	