



ASTM E330 Performance Test Report

Rendered To:
Barrier Fencing Systems

Report No.:
QCT22-6610.01

Series/Product:
2" Barrier Fence

Test Date(s):
April 11, 2022

Report Date:
April 12, 2022



MANUFACTURER: Barrier Fence
101 Malden Cres,
Saskatoon, SK S7K3J7

DISTRIBUTOR: Barrier Fence
101 Malden Cres,
Saskatoon, SK S7K 3J7, Canada

SERIES/MODEL: 2" Barrier Fence

Summary of Results	
Test Procedure/Standard	Details
Uniform Design Load (ASTM E330-14)	1390 Pa (29.0 psf), PASS
Uniform Proof Load (ASTM E330-14)	2080 Pa (43.5 psf), PASS

Reference Report No. QCT22-6610.01 for complete specimen description and test results.



Project Summary:

Perform uniform load testing per ASTM E330 on a 2" Barrier Fence. The specimen was supplied by Barrier Fence and was tested at a certified testing facility. Test specimen description and test results are reported herein.

Test Standards:

Testing and reporting were conducted in accordance with:

ASTM E330-14	<i>Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference</i>
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Test Specimen Description:

Overall Size: 2438 mm (96.00 in) wide x 2743 mm (108.00 in) high
Fence Panel Size: 2311 mm (91.00 in) wide x 305 mm (12.00 in) high

Frame Construction:

The fence panels consisted of EPS bead board insulation with 24 Ga steel skin. Six panels were interlocked vertically. The perimeter of the fence was captured by 24 Ga steel U-channels attached to the panels on the interior and exterior using #10 x 1-1/2" screws spaced 1" from ends and 30" on center at top and bottom and 1" from ends and at center of each panel at the sides. The side channels were attached to the vertical posts using 1/4-14 x 1-1/4" Teks as shown in Photo #1. The vertical posts were 2 1/2" x 2-1/2" x 0.095" thick steel tubes.

Installation:

The specimen was installed into a 2x10 pine buck with a 1/4" perimeter joint. The vertical posts were restrained 1" below the bottom edge of the fence on both sides using 3" x 3" x 3/16" steel angles attached to the buck using 1/4 x 1-1/2" lag screws. See Photo #1.

Test Procedure:

The pine buck was attached to a rigid wall and the specimen was covered with a 2-mil plastic film to create a pressurizeable volume behind the fence. Loads were applied for 10 seconds. Deflection was measured where shown in Photo #1. The reported net deflection of the horizontal panel member is B2 minus the average of B1 and B3. The reported net deflection of the vertical post is A1 minus A2.

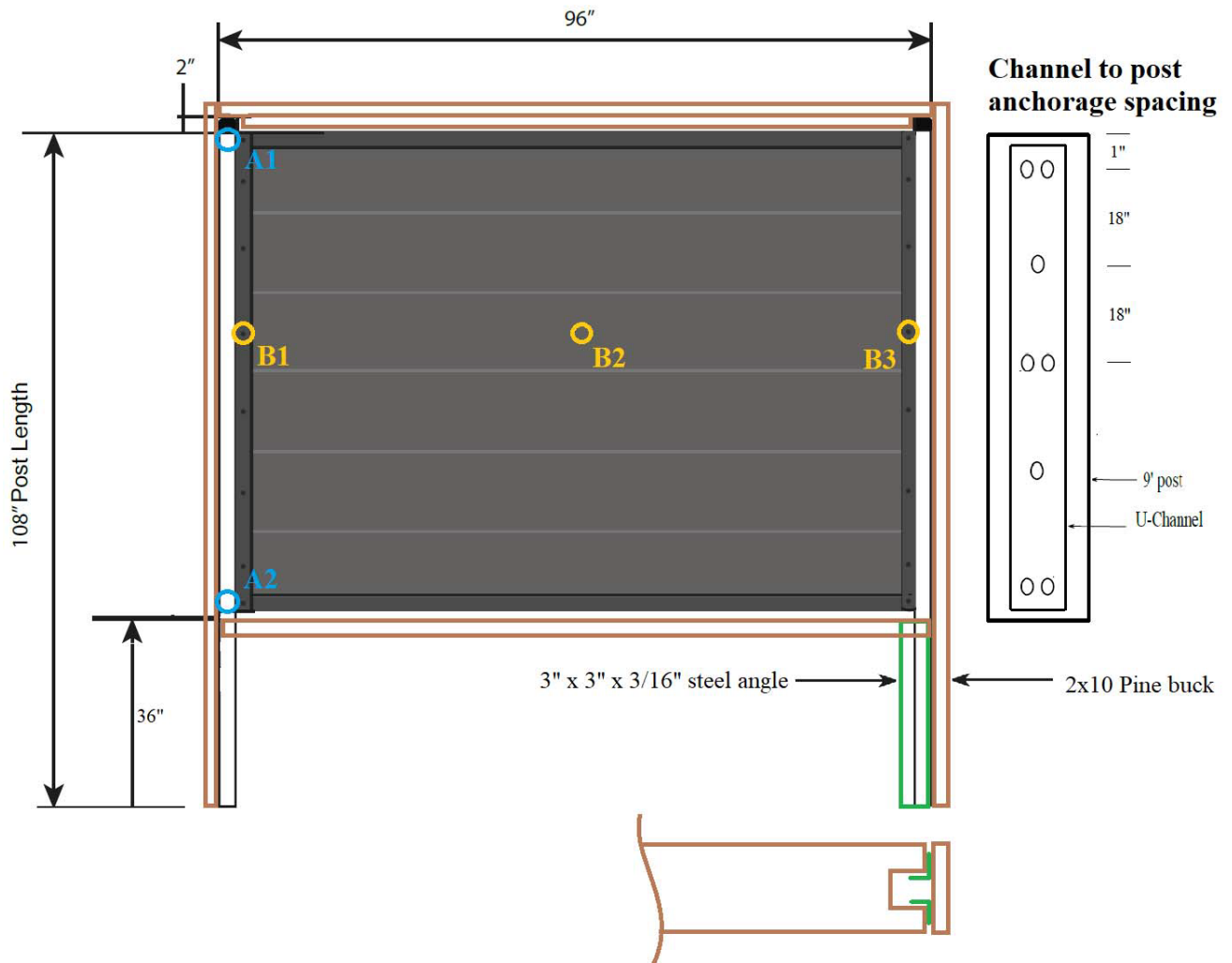


Photo #1: Specimen Diagram



Test Results:

<u>NAFS §</u>	<u>Title of Test</u>	<u>Results</u>	<u>Allowed</u>
9.3.4.2	Uniform Design Load per ASTM E330-14 2-mil plastic film was used to prevent air leakage during testing. It is the opinion of the test technician that this film did not influence the results of the test		
	Specimen #1		
	Applied Load:	1390 Pa (29.0 psf)	
	Vertical Post Above Anchorage	PASS	
	Span (L):	1905 mm (75 in)	No permanent damage
	Net Deflection:	68.1 mm (2.68 in)	damage
	Horizontal Panel Member	PASS	
	Span (L):	2261 mm (89 in)	No permanent damage
	Net Deflection:	7.7 mm (0.31 in)	damage
9.3.4.2	Uniform Proof Load per ASTM E330-14 2-mil plastic film was used to prevent air leakage during testing. It is the opinion of the test technician that this film did not influence the results of the test		
	Specimen #1		
	Applied Load:	2080 Pa (43.5 psf)*	
	Vertical Post Above Anchorage	PASS	
	Span (L):	1905 mm (75 in)	
	Net Deflection:	119.4 mm (4.70 in)	No permanent damage
	Net Permanent Set:	16.3 mm (0.64 in)	damage
	Horizontal Panel Member	PASS	
	Span (L):	2261 mm (89 in)	
	Net Deflection:	12.6 mm (0.50 in)	No permanent damage
	Net Permanent Set:	0.4 mm (0.02 in)	damage

***The specimen passed a 44 psf load. Failure occurred during a 48 psf load. The vertical posts yielded at the anchorage interface. See Photos #3 and #4**



Photo #2: Test Setup



Photo #3: Post Yielding



Photo #4: Permanent Set after 48 psf Load



The reported results were secured using the designated test methods. Test results relate only to the specimen tested. Statements of conformity are determined using the simple acceptance decision rule per ILAC-G8:09-2019. This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. This report is the exclusive property of the client so named herein and may not be reproduced, except in full, without the written approval of Barrier Fence.

Electronic records of data sheets, drawings, correspondence, this report, or other pertinent project documentation will be retained for a period of 10 years from the test completion date. Physical representative samples of the test specimen will be retained for a period of 2 years from the test completion date. At the end of this retention period, such material shall be discarded without notice and the service life of this report will expire.

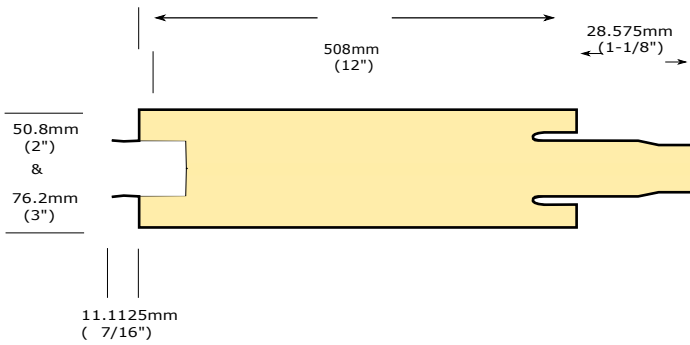
Attachments: This report is complete only when all attachments listed are included.

Appendix A: Product Data (1 Page)



BARRIER FENCE™

2" & 3" Thick x 12" W x 96" L Fence horizontal Panel



Black

Walnut

Grey

Standard Features

Core Thickness	Steel Specks	Sound Reduction	Weight
50.8 mm (2")	G90-gr33	Approx 8.3 db per 25.4 mm (1" Thick)	2" @ 9.75 kg
76.2 mm (3")	26 gauge		3" @ 10 kg
(Custom Available)	24 gauge Galvanize Galvanneal Aluminum-Zinc Alloy		

Classifications / Configuration

Horizontal	805mm (20") x 2438.4mm (96") 1.24 sq/meters (13.3 sq/ft) 1 side
Vertical	805mm (20") x 1828.8mm (72") .93 sq/meters (10 sq/ft) 1 side

Steel Cladding	26 gauge Galvanized steel G90 gr33 24-26 gauge 55% Aluminum-Zinc alloy coated Steel
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Insulation	EPS bead board
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Coatings/Trim	Water-borne Acrylic Polyurethane Enamel (Variable Substrate Technology) SMP Coated Tex Steel AZ150 substrate ASTM 792 PVDF Wood Grain Steel 24ga AZ50 Substrate
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Install	Horizontal / Vertical
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Classifications	CAN/ULC-S701 CCMC 12424-L CCMC 12425-L CCMC 12426-L ICC-ES ESR-1587
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