

HALLMARK BUILDING SUPPLIES, INC. TEST REPORT

SCOPE OF WORK

ASTM E330/E330M, PROCEDURE B TESTING ON LEVANTE 6" INTERLOCKING BOARD, CLADDING OVER 2" RIGID FOAM

REPORT NUMBER

N9173.01-109-40

TEST DATE

08/15/22

ISSUE DATE

09/22/22

RECORD RETENTION END DATE

08/15/26

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TEST REPORT FOR HALLMARK BUILDING SUPPLIES, INC.

Report No.: N9173.01-109-40

Date: 09/22/22

REPORT ISSUED TO

HALLMARK BUILDING SUPPLIES, INC.

901 Northview Road, Suite 100 Waukesha, Wisconsin 53188

SECTION 1

SCOPE

Architectural Testing, Inc. (an Intertek company) dba Intertek Building & Construction (B&C) was contracted by Hallmark Building Supplies, Inc. to perform testing in accordance with ASTM E330/E330M, Procedure B on their Levante 6" Interlocking Board, cladding over 2" rigid foam. Results obtained are tested values and were secured by using the designated test method(s). Testing was conducted at the Intertek B&C test facility in York, Pennsylvania.

SECTION 2

SUMMARY OF TEST RESULTS

09/22/22

DATE:

JRZ:nls

TITLE		TEST SPECIMEN #1		
Negative Design Pressure		-11172 Pa (-233.33 psf)		
Uniform Load Stru	ctural Test Pressure	-16758 Pa (-350.00 psf)		
TITLE		TEST SPECIMEN #2		
Negative Design Pressure		-9895 Pa (-206.67 psf)		
Uniform Load Structural Test Pressure		-14843 Pa (-310.00 psf)		
TITLE		TEST SPECIMEN #3		
Negative Design Pressure		-11172 Pa (-233.33 psf)		
Uniform Load Structural Test Pressure		-16758 Pa (-350.00 psf)		
For INTERTEK B&C:				
COMPLETED BY:	Jason R. Zeller	REVIEWED BY:	Ken R. Stough	
	Technician –		Project Manager –	
TITLE:	Product Testing	TITLE:	Product Testing	
SIGNATURE:		SIGNATURE:		

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TEST METHOD(S)

The specimens were evaluated in accordance with the following:

ASTM E330/E330M-14(2021), Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference

SECTION 4

MATERIAL SOURCE/INSTALLATION

Test specimens were provided by the client. Representative samples of the test specimens will be retained by Intertek B&C for a minimum of four years from the test completion date.

Installation of the tested product was performed by Intertek B&C.

SECTION 5

EQUIPMENT

Tape Measure Verification: 63788

Weather Station: 63316 Control Panel: 005406

Linear Transducers: 62187, 62189, 64460, 64461

SECTION 6

LIST OF OFFICIAL OBSERVERS

NAME	COMPANY	
Ken R. Stough	Intertek B&C	
Jason R. Zeller	Intertek B&C	

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SECTION 7

TEST SPECIMEN DESCRIPTION

Product Type: Cladding over 2" Rigid Foam **Series/Model**: Levante 6" Interlocking Board

Test Specimen #1 - #3:

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OVERALL AREA:	WIDTH		HEIGHT	
2.9 m ² (31.1 ft ²)	millimeters	inches	millimeters	inches
Overall size	1219	48	2372	93-3/8
Panel size (15)	1219	48	187	7-3/8

Test Wall Construction:

The specimens were installed onto a test buck measuring 51" wide by 99" high constructed of #2 Spruce-Pine-Fir nominal 2x6 lumber and wrapped with #2 Spruce-Pine-Fir nominal 2x10 lumber. Two studs were spaced 16" on center (three spans) and were attached to the top and bottom lumber with 3" long flat head screws. Each stud was reinforced with 2" by 2" angle irons secured with four #10 x 1-1/2" pan head screws. A sheet of nominal 15/32" thick plywood, with five 4" diameter holes to allow pressure to transfer to the cladding, was secured to the studs with #8 x 1-5/8" flat head screws. Silicone was utilized on the backside of the test panel to seal the perimeter. A 2 mil thick plastic film was loosely draped over the interior of the cladding to enable attainment of pressure.

Panel Description:

Each 6" interlocking board was constructed of 0.071" thick extruded aluminum and measured 48" wide by 7-3/8" high. Each course utilized a male interlock at the top and female interlock at the bottom and a 0.640" fastener leg below the female interlock.

Test Specimen Installation:

A 48" wide by 96" high by 2" thick sheet of rigid insulation foam was installed to the test buck using #8 x 3" self-drilling flat head screws with 2" plastic washers, spaced 16" on center around the perimeter and field studs. A 48" long by 2-5/8" tall, extruded aluminum starter trim was installed horizontally at the top of the test buck and fastened using 5/16" x 4" rugged structural screws located 3/4" from each end and spaced 16" on center, through the starter trim, 2" foam, and plywood, into the studs. A 6" interlocking board was interlocked to the starter trim and fastened using 5/16" x 4" rugged structural screws located 3/4" from each end and spaced 16" on center, through the fastener leg, 2" foam, and plywood, into the test studs. A total of 15 courses were installed.

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SECTION 8

TEST RESULTS

The temperature range during testing was 26°-28°C (78°-82°F). The results are tabulated as follows:

Test Specimen #1:

rest specimen #1.		
TITLE OF TEST	RESULTS	NOTE
Uniform Load Deflection,		
per ASTM E330		
Deflections taken between fasteners		
-1915 Pa (-40.00 psf)	0.3 mm (0.01")	1, 2
Uniform Load Structural,		
per ASTM E330		
Permanent set taken between fasteners		
-1915 Pa (-40.00 psf)	<0.3 mm (<0.01")	1, 2
Uniform Load Deflection,		
per ASTM E330		
Deflections taken between fasteners		
-10534 Pa (-220.00 psf)	2.0 mm (0.08")	1, 2
Uniform Load Structural,		
per ASTM E330		
Permanent set taken between fasteners		
-10534 Pa (-220.00 psf)	0.3 mm (0.01")	1, 2
Uniform Load Deflection,		
per ASTM E330		
Deflections taken between fasteners		
-13406 Pa (-280.00 psf)	2.5 mm (0.10")	1, 2
Uniform Load Structural,		
per ASTM E330		
Permanent set taken between fasteners		
-13406 Pa (-280.00 psf)	0.5 mm (0.02")	1, 2
Uniform Load Deflection,		
per ASTM E330		
Deflections taken between fasteners		
-16758 Pa (-350.00 psf)	3.3 mm (0.13")	1, 2
Uniform Load Structural,		
per ASTM E330		
Permanent set taken between fasteners		
-16758 Pa (-350.00 psf)	0.5 mm (0.02")	1, 2

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Test Specimen #2:

lest Specimen #2:		
TITLE OF TEST	RESULTS	NOTE
Uniform Load Deflection,		
per ASTM E330		
Deflections taken between fasteners		
-1915 Pa (-40.00 psf)	0.3 mm (0.01")	1, 2
Uniform Load Structural,		
per ASTM E330		
Permanent set taken between fasteners		
-1915 Pa (-40.00 psf)	<0.3 mm (<0.01")	1, 2
Uniform Load Deflection,		
per ASTM E330		
Deflections taken between fasteners		
-10534 Pa (-220.00 psf)	1.8 mm (0.07")	1, 2
Uniform Load Structural,		
per ASTM E330		
Permanent set taken between fasteners		
-10534 Pa (-220.00 psf)	0.3 mm (0.01")	1, 2
Uniform Load Deflection,		
per ASTM E330		
Deflections taken between fasteners		
-13406 Pa (-280.00 psf)	2.3 mm (0.09")	1, 2
Uniform Load Structural,		
per ASTM E330		
Permanent set taken between fasteners		
-13406 Pa (-280.00 psf)	0.5 mm (0.02")	1, 2
Uniform Load Deflection,		
per ASTM E330		
Deflections taken between fasteners		
-14843 Pa (-310.00 psf)	2.5 mm (0.10")	1, 2
Uniform Load Structural,		
per ASTM E330		
Permanent set taken between fasteners		
-14843 Pa (-310.00 psf)	0.3 mm (0.01")	1, 2

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Test Specimen #3:

rest Specimen #3:		
TITLE OF TEST	RESULTS	NOTE
Uniform Load Deflection,		
per ASTM E330		
Deflections taken between fasteners		
-1915 Pa (-40.00 psf)	0.3 mm (0.01")	1, 2
Uniform Load Structural,		
per ASTM E330		
Permanent set taken between fasteners		
-1915 Pa (-40.00 psf)	<0.3 mm (<0.01")	1, 2
Uniform Load Deflection,		
per ASTM E330		
Deflections taken between fasteners		
-10534 Pa (-220.00 psf)	2.0 mm (0.08")	1, 2
Uniform Load Structural,		
per ASTM E330		
Permanent set taken between fasteners		
-10534 Pa (-220.00 psf)	0.5 mm (0.02")	1, 2
Uniform Load Deflection,		
per ASTM E330		
Deflections taken between fasteners		
-13406 Pa (-280.00 psf)	2.8 mm (0.11")	1, 2
Uniform Load Structural,		
per ASTM E330		
Permanent set taken between fasteners		
-13406 Pa (-280.00 psf)	0.5 mm (0.02")	1, 2
Uniform Load Deflection,		
per ASTM E330		
Deflections taken between fasteners		
-16758 Pa (-350.00 psf)	3.3 mm (0.13")	1, 2
Uniform Load Structural,		
per ASTM E330		
Permanent set taken between fasteners		
-16758 Pa (-350.00 psf)	0.5 mm (0.02")	1, 2

General Note: All testing was performed in accordance with the referenced standard(s).

Note 1: Loads were held for 10 seconds.

Note 2: 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.

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CONCLUSION

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. Intertek B&C will service this report for the entire test record retention period. The test record retention period ends four years after the test date. Test records, such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation, will be retained for the entire test record retention period.

Unless differently required, Intertek reports apply the "Simple Acceptance" rule, also called "Shared Risk approach," of ILAC-G8:09/2019, Guidelines on Decision Rules and Statements of Conformity.

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SECTION 10

PHOTOGRAPHS



Photo No. 1 Specimen #1 Prior to Testing

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Photo No. 2 Specimen #2 Prior to Testing

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Photo No. 3
Specimen #3 Prior to Testing

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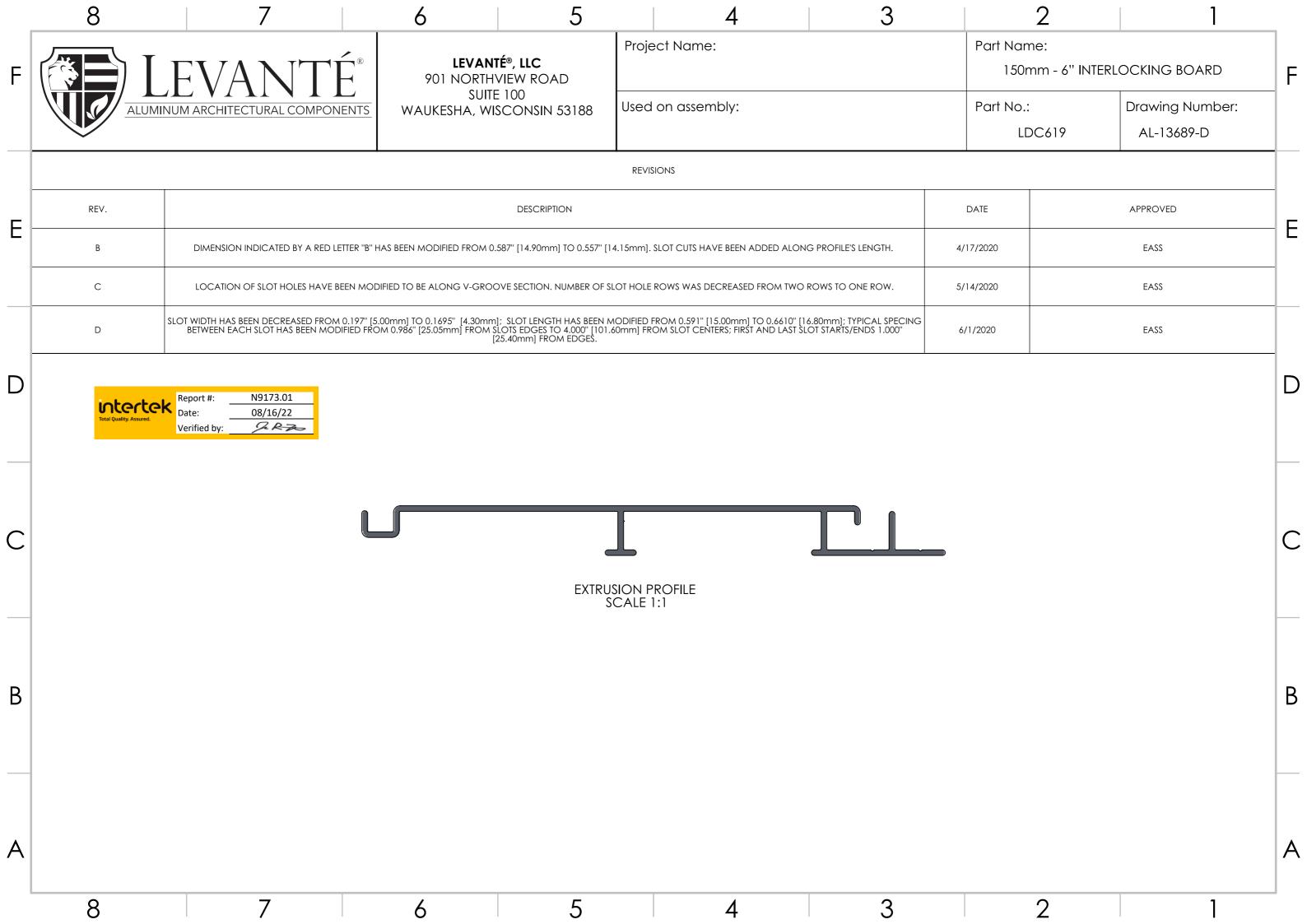
Date: 09/22/22

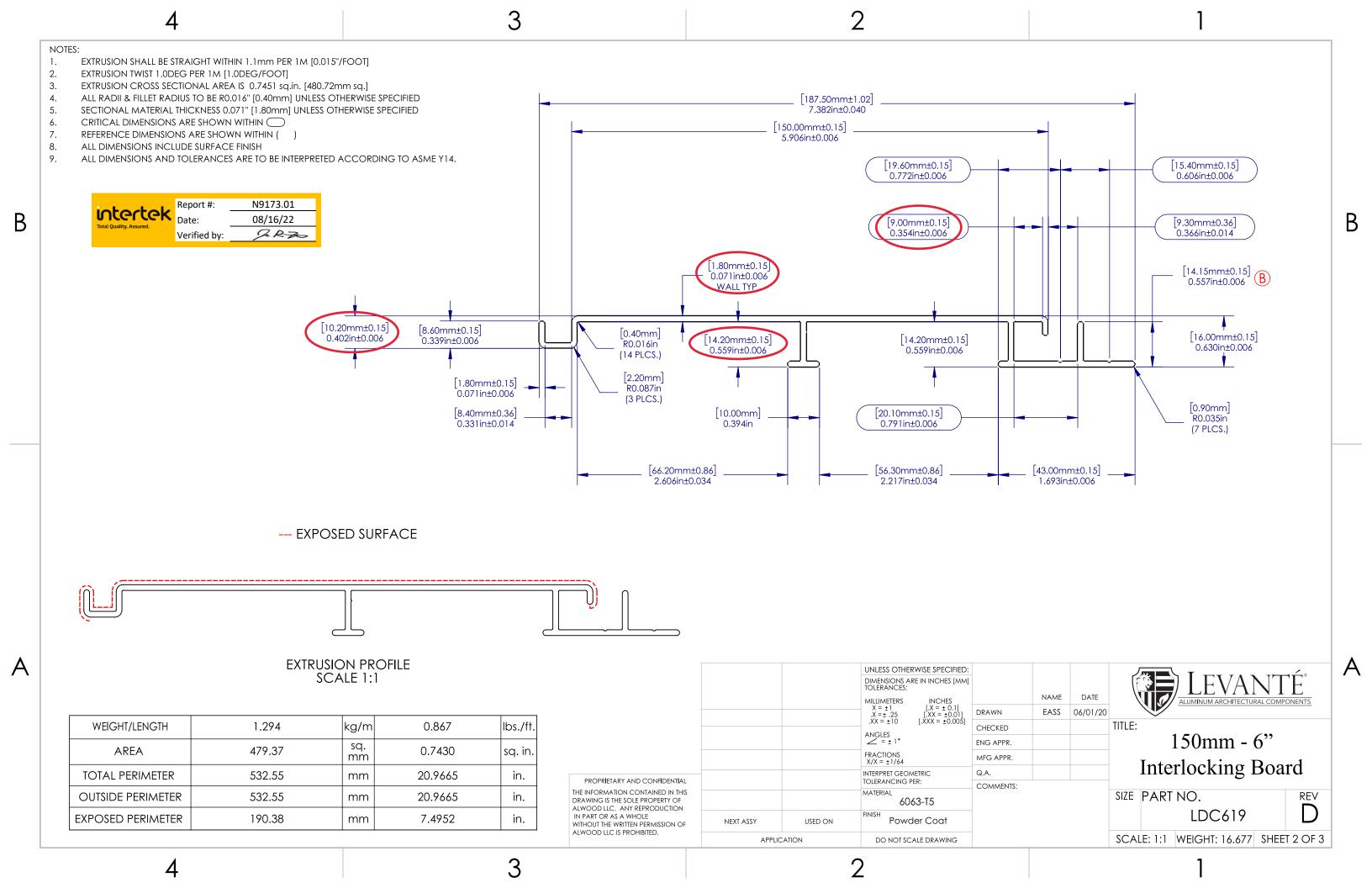
SECTION 11

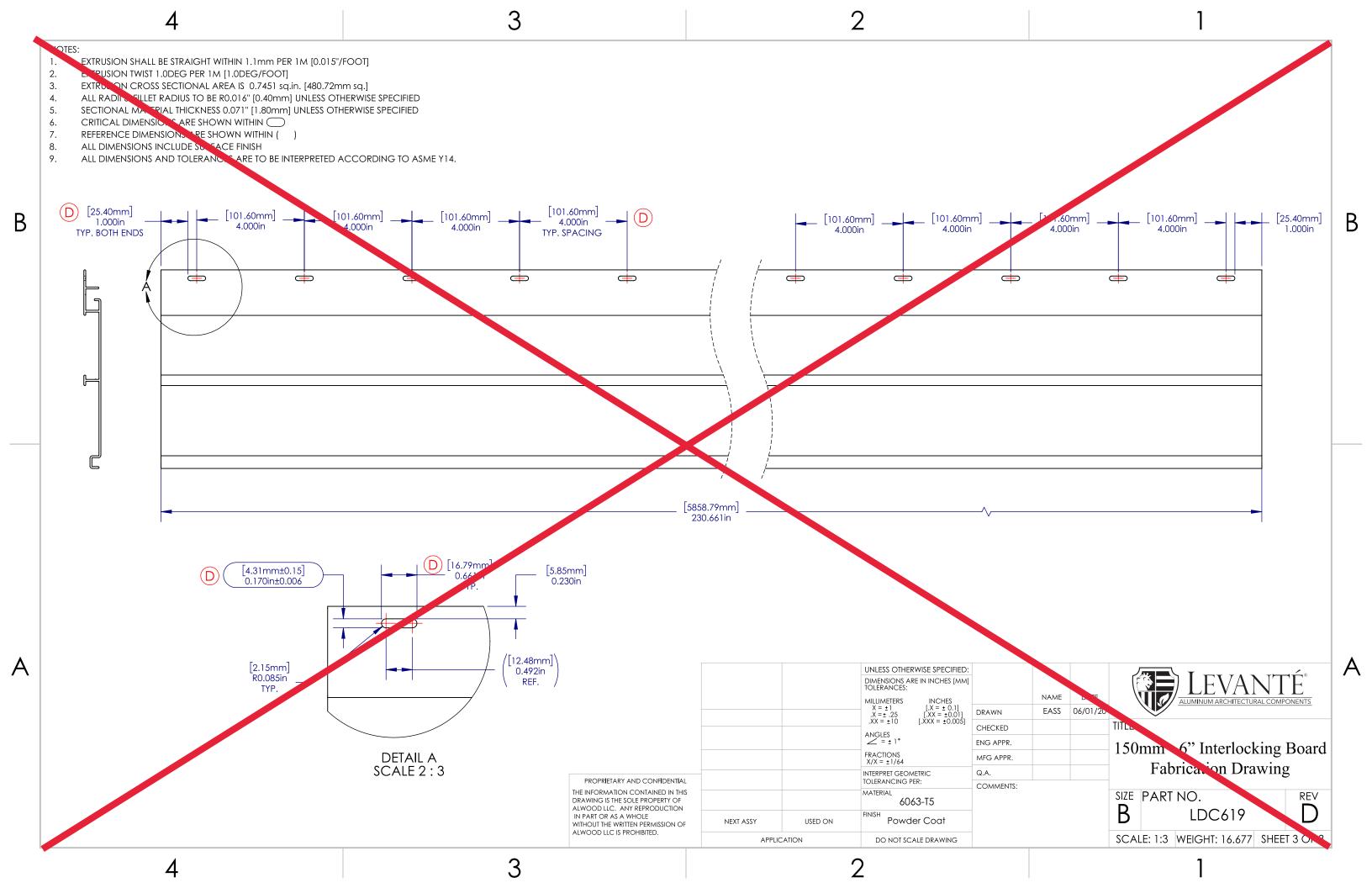
DRAWINGS

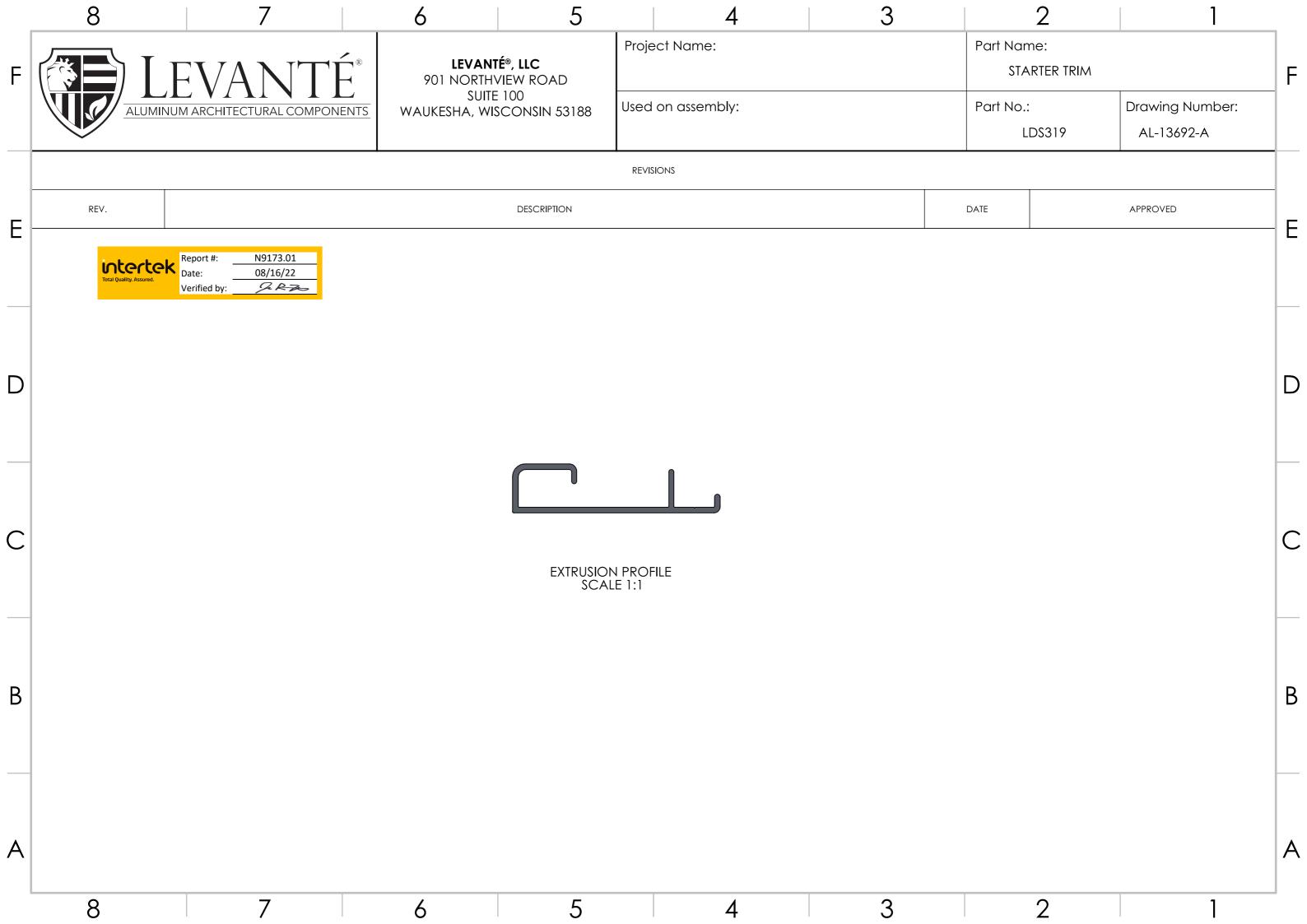
The test specimen drawings have been reviewed by Intertek B&C and are representative of the test specimen(s) reported herein. Test specimen construction was verified by Intertek B&C per the drawings included in this report. Any deviations are documented herein or on the drawings.

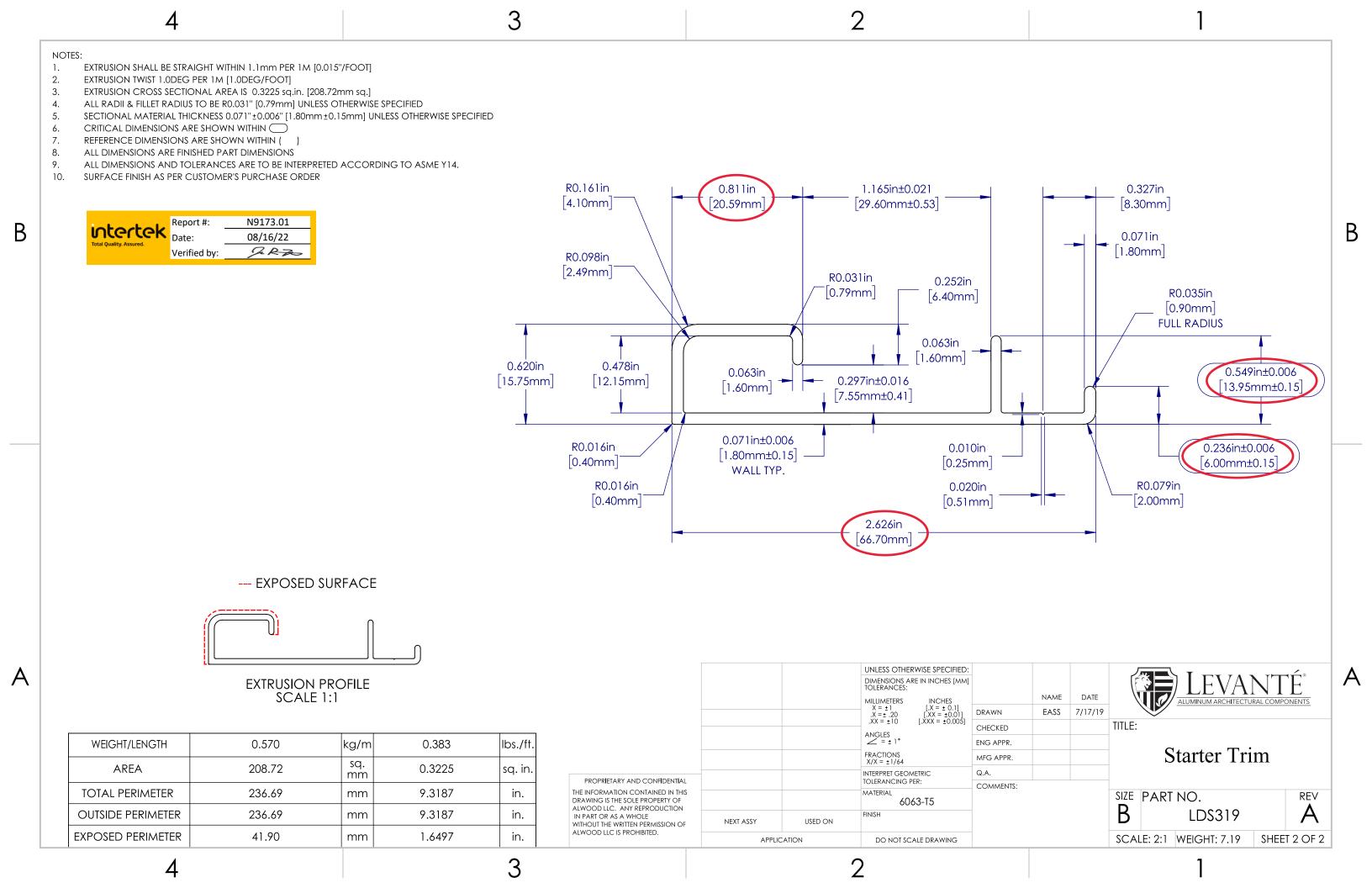
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SECTION 12

REVISION LOG

REVISION #	DATE	PAGES	REVISION
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