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TAM INDUSTRIES, INC.
TEST REPORT

SCOPE OF WORK
AAMA/WDMA/CSA 101/I.S.2/A440-11 TESTING ON ONE MODEL DTP UNIT SKYLIGHT

REPORT NUMBER
H4567.01-901-44 R0

TEST DATE(S)
08/17/17 - 08/18/17

ISSUE DATE
08/29/17

RECORD RETENTION END DATE
08/18/21

PAGES
7

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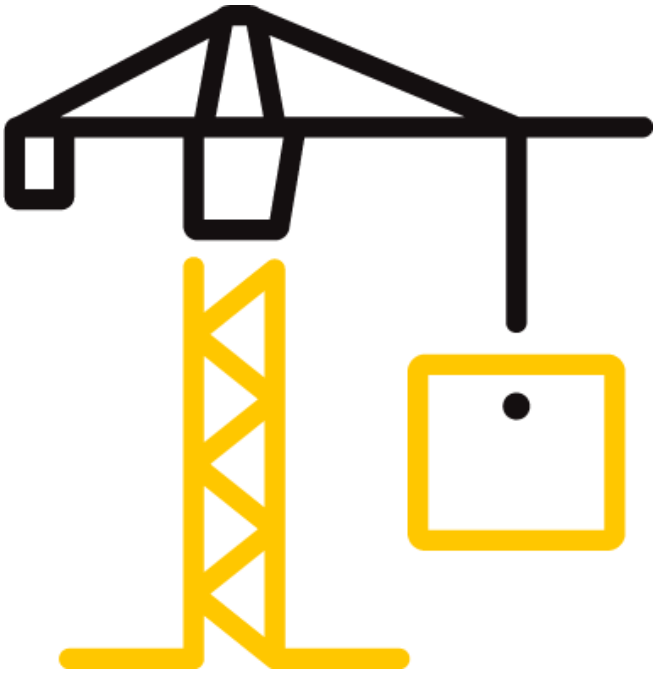


TEST REPORT FOR TAM INDUSTRIES, INC.
Report No.: H4567.01-901-44 R0
Date: 08/29/17

REPORT ISSUED TO

TAM INDUSTRIES, INC.
9420 16th Avenue SW
Seattle, WA 98106

SECTION 1

SCOPE

Intertek Building & Construction (B&C) was contracted by Tam Industries, Inc. to perform testing in accordance with AAMA/WDMA/CSA 101/I.S.2/A440-11, on their Model DTP unit skylight. Results obtained are tested values and were secured by using the designated test methods. Testing was conducted at Intertek test facility in Kent, Washington. This report does not constitute certification of this product nor an opinion or endorsement by this laboratory.

SECTION 2

SUMMARY OF TEST RESULTS

TITLE	RESULTS
AAMA/WDMA/CSA 101/I.S.2/A440-08 and -11	PG100 1278 x 1278 (51 x 51) SKG
Design Pressure	±4800 Pa (±100.25 psf)
Air Infiltration	<0.05 L/s/m^2 (<0.01 cfm/ft^2)
Water Penetration Resistance Test Pressure	720 Pa (15.04 psf)

For INTERTEK B&C:

COMPLETED BY:	Guillermo Silva	**REVIEWED BY:**	Jeffrey Dideon
TITLE:	Technician	**TITLE:**	Regional Manager
SIGNATURE:	Digitally Signed for: Guillermo Silva by Patricia Cain	**SIGNATURE:**	Digitally Signed by: Jeffrey L. Dideon
DATE:	08/29/17	**DATE:**	08/29/17

JLD:pac

SECTION 3
TEST METHODS

The specimen was evaluated in accordance with the following:

AAMA/WDMA/CSA 101/I.S.2/A440-11, *NAFS 2011 - North American Fenestration Standard/Specification for Windows, Doors, and Skylights*

ASTM E283-04(2012), *Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen*

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

ASTM E331-00(2016), *Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference*

ASTM E547-00(2016), *Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Difference*

SECTION 4
MATERIAL SOURCE/INSTALLATION

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

The specimen was installed into a Douglas Fir wood buck. The rough opening allowed for a shim space. The exterior perimeter of the specimen was sealed with urethane.

LOCATION	ANCHOR DESCRIPTION	ANCHOR LOCATION
Two of the four sides, two per side	#10 x 1-5/8”	Through the aluminium side panel, approx. 135 mm (5-3/8”) from the corners

SECTION 5
LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Irwin Tam	TAM Industries, Inc.
Guillermo Silva	Intertek B&C
Josh Cass	Intertek B&C

SECTION 6
TEST SPECIMEN DESCRIPTION

Product Type: Unit Skylight
Series/Model: DTP

Product Size:

OVERALL AREA:	WIDTH		HEIGHT	
1.63 m² (17.58 ft²)	millimeters	inches	millimeters	inches
Overall Size	1278	50-3/8”	1278	50-3/8”

Frame Construction:

FRAME MEMBER	MATERIAL	DESCRIPTION
Inner frame	PVC	White
Exterior frame	Aluminum	Painted

	JOINERY TYPE	DETAIL
PVC corners	Welded	Miter cut and thermally welded
Aluminum corners	Welded	Miter cut and thermally welded
Assembly	Mechanical	Each side of the PVC inner frame was secured to the aluminum outer frame with five #8 x 1/2” evenly spaced screws

Reinforcement: *No reinforcement was utilized.*

Weatherstripping: *No weatherstripping was utilized.*

Glazing: *No conclusions of any kind regarding the adequacy or inadequacy of the glass in any glazed test specimen(s) can be made.*

GLASS TYPE	SPACER TYPE	INTERIOR LITE	EXTERIOR LITE	GLAZING METHOD
25mm (1)" IG	Steel	3.9 mm (5/32”) tempered	3.9 mm (5/32”) tempered	Glazed with 12.2 mm (1/2”) double side foam glazing tape against the PVC inner frame and aluminum outer frame

Drainage: *No drainage was utilized.*

Hardware: *No hardware was utilized.*

SECTION 7
TEST RESULTS

The temperature during testing was 21°C (70°F). The results are tabulated as follows:

TITLE OF TEST	RESULTS	ALLOWED	NOTE
Air Leakage, Infiltration per ASTM E283 at 75 Pa (1.57 psf)	<0.05 L/s/m² (<0.01 cfm/ft²)	1.5 L/s/m² (0.3 cfm/ft²) max.	1, 2

TITLE OF TEST	RESULTS	ALLOWED	NOTE
Water Penetration	N/A	N/A	3
Uniform Load Deflection	N/A	N/A	3
Uniform Load Structural	N/A	N/A	3
Thermoplastic Corner Weld	Pass	Meets as stated	
OPTIONAL PERFORMANCE			
Water Penetration, per ASTM E547 and ASTM E331 at 720 Pa (15.04 psf)	Pass	No leakage	
Uniform Load Deflection, per ASTM E330 taken at side, between installation fasteners +4800 Pa (+100.25 psf) -4800 Pa (-100.25 psf)	 0.5 mm (0.02") 0.8 mm (0.03")	 5.80 mm (0.23") max. 5.80 mm (0.23") max.	 4, 5, 6
Uniform Load Structural, per ASTM E330 taken at side, between installation fasteners +9600 Pa (+200.5 psf) -7200 Pa (-150.38 psf)	 <0.25 mm (<0.01") <0.25 mm (<0.01")	 3.0 mm (0.12") max. 3.0 mm (0.12") max.	 5, 6

Note 1: The tested specimen meets (or exceeds) the performance levels specified in AAMA/WDMA/CSA 101/I.S.2/A440 for air leakage resistance.

Note 2: Test Date 08/17/17 / Time: 11:30 AM (Air Note Only)

Note 3: The client opted to start at a pressure higher than the minimum required. Test results are reported under Optional Performance.

Note 4: The deflections reported are not limited by AAMA/WDMA/CSA 101/I.S.2/A440 for this product designation. The deflection data is recorded in this report for special code compliance and information only.

Note 5: Loads were held for 10 seconds.

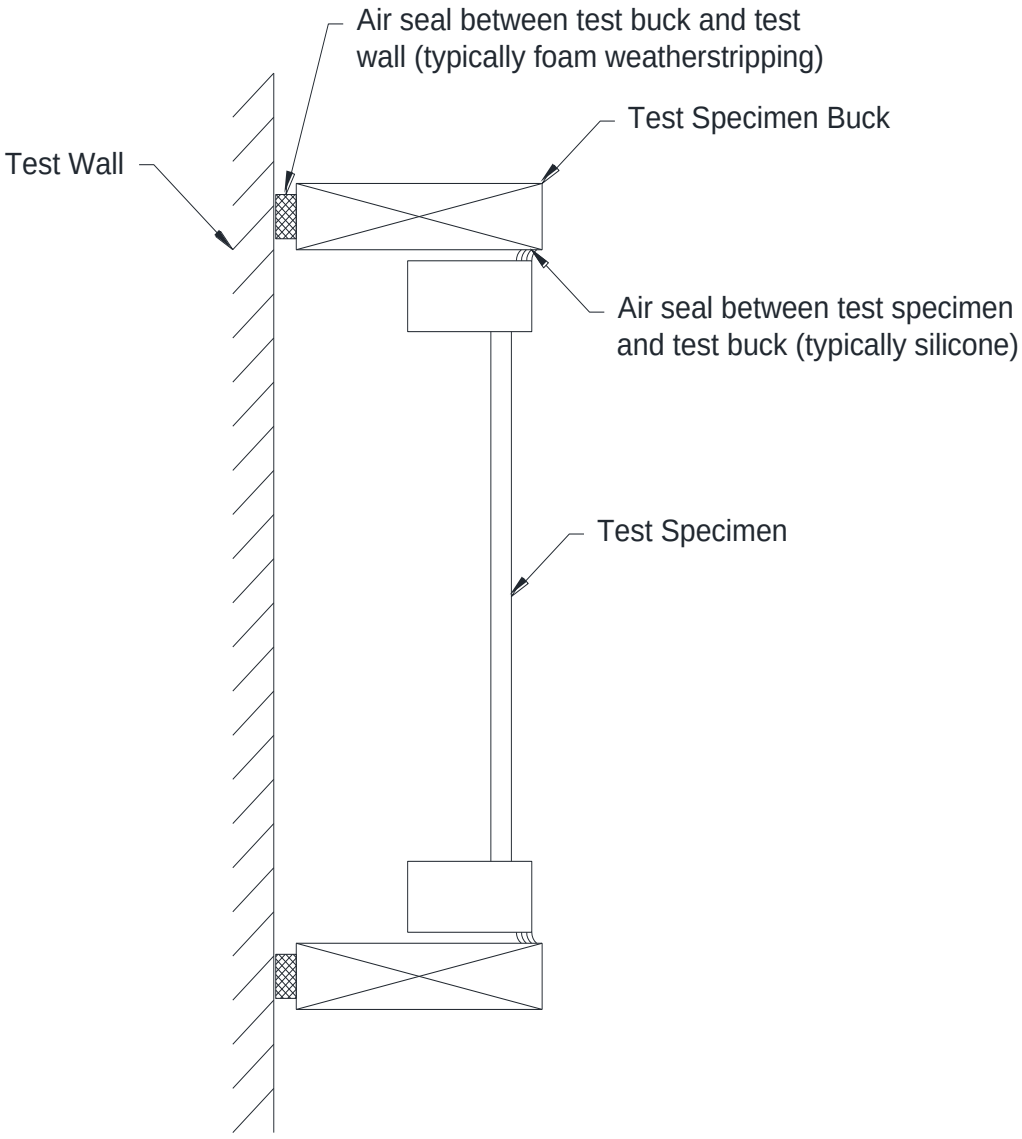
Note 6: Tape and film were not used to seal against air leakage during structural testing. In our opinion, the tape and film did not influence the results of the test.

SECTION 8
ALTERATIONS

No alterations were required.

SECTION 9
LOCATION OF AIR SEAL

The air seal between the test specimen and the test wall is detailed below. The seal is made of foam weatherstripping and is attached to the edge of the test specimen buck. The test specimen buck is placed against the test wall and clamped in place, compressing the weatherstripping and creating a seal.



SECTION 10
CONCLUSION

The specimen tested successfully met the performance requirements for a PG100 1278 x 1278 (51 x 51) SKG rating.

Reference Intertek-ATI Report No. H4567.01-901-44, dated 08/29/17 for complete *Gateway* test specimen description and test results.

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.

Attachment: Drawings (4 pages)

SECTION 12
REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	08/29/17	N/A	Original Report Issue

Bill of Materials

8/18/2017

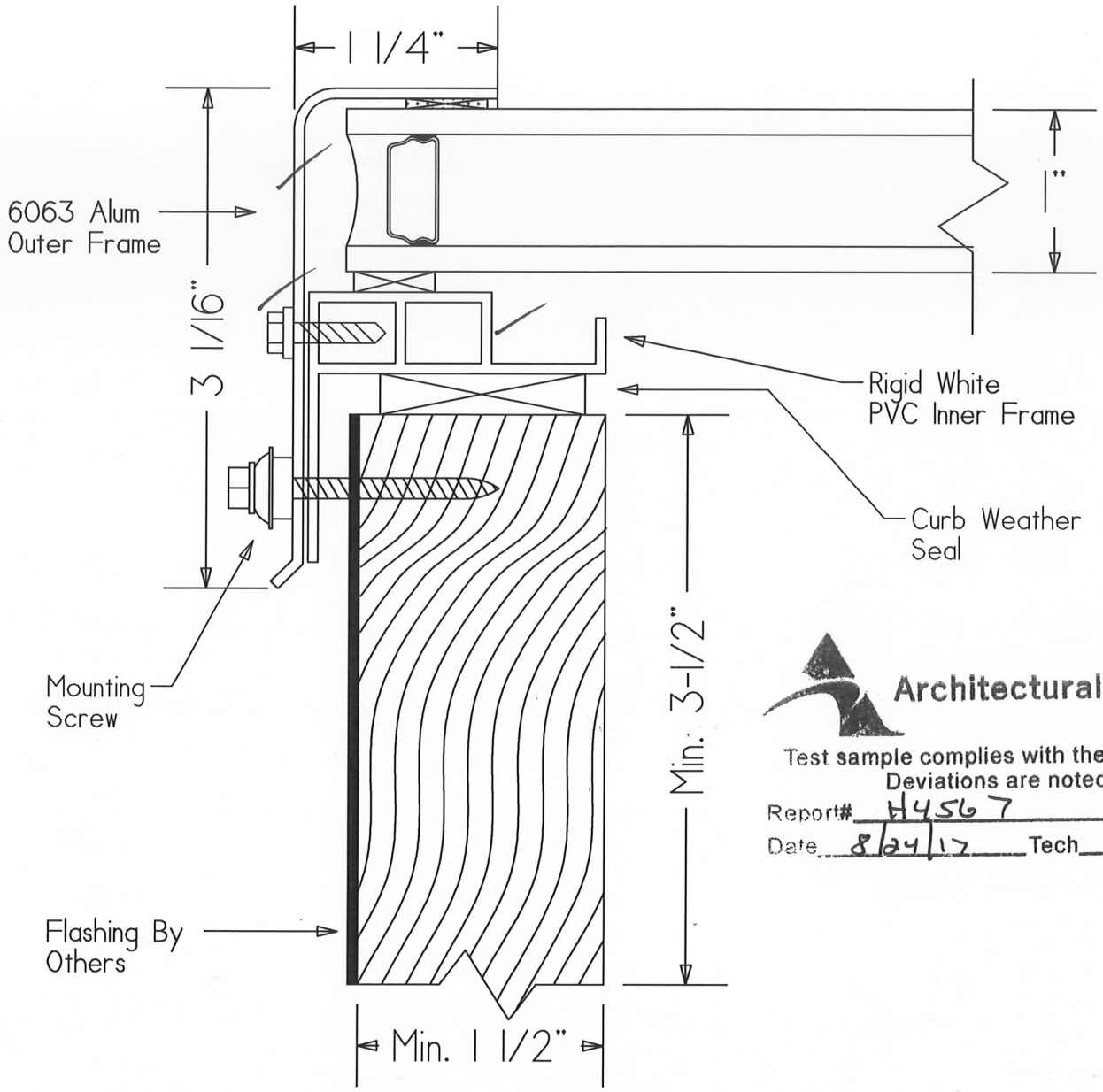
Model DTP - Fixed Glass Skylight			
Part#	Description	Material	Finish
AC88 ✓	Glass Cap	6063-T5 Aluminum	Bronze and Clear Anodized
VB88 ✓	PVC Inner Base	Rigid PVC	White
SST 21 ✓	1/2" wide x 1/8" Glazing Tape	Polyethylene	Black
V748	1-1/4" wide x 1/4" Weather Seal Tape	PVC	Black
A520	MOUNTING SCREW	Steel	Silver
TEK ✓	#8-1/2 Tek Screw	Steel	Black Zinc

Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# H4567

Date 8/24/17 Tech QAD



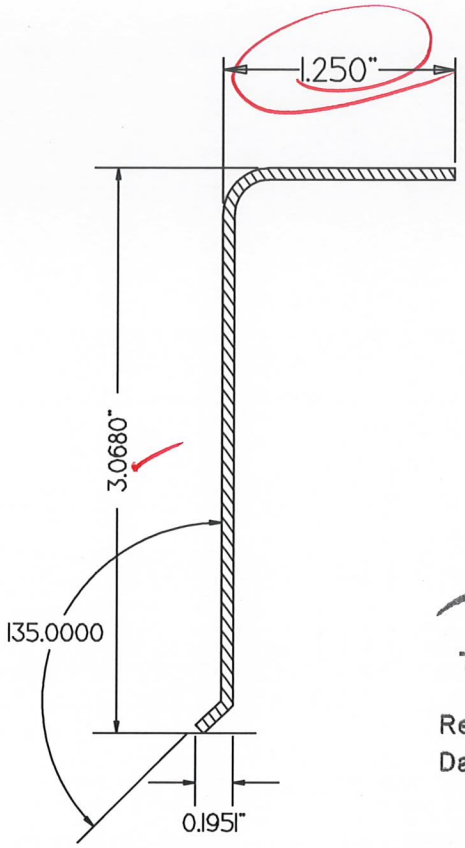
Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# H4567

Date 8/24/17 Tech QJD

TAM SKYLIGHTS 9420 16th Ave SW Seattle, WA 98106 (800) SKY-LITE - FAX (206) 768-0327		
JOB:		SHEET
ARCH.		OF
CONTR.		DWG NO.
SUB. CONTR.		
DRAWN BY	DATE / /	



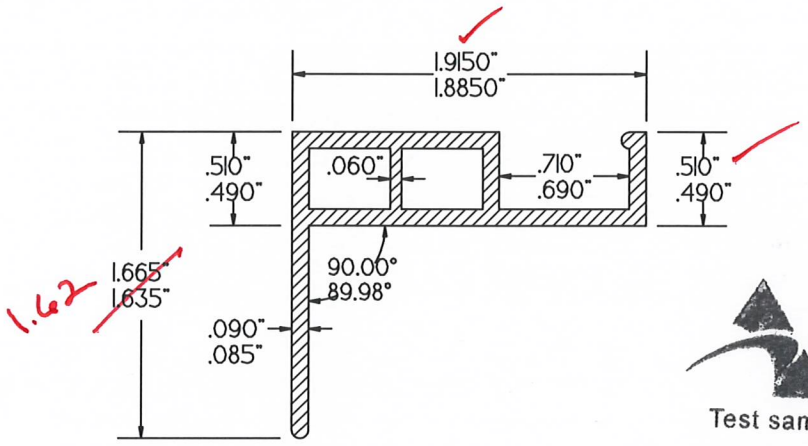
Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# H4567

Date 8/24/17 Tech 940

TAM SKYLIGHTS 9420 16th Ave SW Seattle. WA 98106 (800) SKY-LITE - FAX (206) 768-0327		
PART NAME: ALUMINUM OUTER CAP		SHEET
PART #: AC88		
MATERIAL: 6063 ANODIZED ALUMINUM		SCALE:
TEST LAB: INTERTEK		| : |
DRAWN BY: IRWIN	DATE 08/18/17	



Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# H4567

Date 8/24/17 Tech GMD

TAM SKYLIGHTS

9420 16th Ave SW
Seattle, WA 98106
(800) SKY-LITE - FAX (206) 768-0327

PART NAME: PVC INNER BASE	SHEET
PART #: VB 88	
MATERIAL: RIGID WHITE PVC	SCALE:
DRAWN BY: IRWIN — DATE / /		:	