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Report Number: SWTL R0067
Report Date: 10 September 2024

All tests reported herein have been performed in accordance with the laboratory's scope of accreditation

Shelby Wright Test Labs
515 Rosebank Road
Avondale, Auckland
New Zealand, 1026

THE BUILDING AGENCY LIMITED – AS/NZS 4284

Shelby Wright Test Report

Report Writer:	Report Date:	SWTL Reference:
Bernard Farrington	10 September 2024	J-24008

Client Information	
Client Name and Address	**The Building Agency Limited 14 Link Drive, Wairau, Auckland.**
Report Administered to	**The Building Agency Limited**
Test Report Number	**SWTL - R0061**
Testing	
Test Location	**Shelby Wright Test Labs – 515 Rosebank Road, Avondale Auckland 1026**
Test Date	**19th August 2024**
Report Date	**10th September 2024**
Project Name	**The Building Agency Limited – AS/NZS 4284**
Test Procedure	**SWTM-1.0 AS_NZS 4284 2008 Test Procedure v2**
Testing Officer	**Bernard Farrington**
Observers	**Vaughan Brown, Josh Cals, Francisco Lobos (The Building Agency Limited)**
Sample	
Sample	**Aliclad V085 & Aliclad S085 vertical weatherboard cladding**
Manufacturer	**The Building Agency Limited**
Specifier	**The Building Agency Limited**
Sample Designer	**The Building Agency Limited**
Sample Installer	**The Building Agency Limited**
IANZ	
IANZ Accredited KTP	**Bernard Farrington**
IANZ Accreditation No	**1438**

REVISION CONTROL

Revision number	Date published	Reviewed by
1	08 September 2024	
2	10 September 2024 – Issued as Final	SM

Contents

List of Tables

1 EXECUTIVE SUMMARY

Testing of The Building Agency Limited's Aliclad V085 & S085 vertical weatherboard cladding system was carried out at Shelby Wright Test Labs (SWTL) Avondale laboratory. The sample was prepared by the client and installed in the test booth by the client in August 2024.

Testing pressures align with NZS 3604 "Extra High" wind zone.

Table 1 Target Building Pressures

Serviceability Pressure
+ 1515 Pa.
- 1515 Pa

The test sample was found to have the following results for AS/NZS 4284:2008 compliance with any modifications as noted in this report:

Table 2 Summary of Results

Test Date	AS/NZS 4284:2008 Test	Result
19th August 2024	*Clause 8.2 – Preliminary tests*	*Pass*
19th August 2024	*Clause 8.3 – Structural test as serviceability limit state*	*Pass*
19th August 2024	*Clause 8.4 – Air infiltration test*	*Pass*
19th August 2024	*Clause 8.5 – Water penetration by static pressure*	*Pass*
19th August 2024	*Clause 8.6 – Water penetration by cyclic pressure*	*Pass*
19th August 2024	*Clause 8.8 – Structural test at ultimate limit state*	*Pass*

2 REQUEST FOR TESTING

The Building Agency Limited requested testing of the sample to AS/NZS 4284:2008 with the test sequences as detailed in section 5 of this report.

3 METHOD

The tests were carried out in accordance with SWTL procedures:

SWTM-1.0 AS_NZS 4284 2008 Test Procedure v2

4 TEST SAMPLE

The test sample is as per the drawings in Appendix B of this report.

4.1 Description

The sample was comprised of an arrangement of vertical Aliclad V085 weatherboards (left hand side of sample as viewed from inside the test booth), & Aliclad S085 weatherboards (right hand side of sample as viewed from inside the test booth).

The Aliclad vertical weatherboard systems were installed over a 45mm x 20mm H3.1 castellated cavity batten fixed to structural timber frame of predominantly 90x45 SG8 H1.2 pine, which was covered with a staple fix building paper.

The sample featured:

- Two windows, (one per weatherboard system)
- Internal corners
- External corners
- A parapet with internal TPO lining and drainage collection to downpipe
- A soffit
- A 200mm pipe penetration,
- A vertical joint in the cladding system.
- An interstory joint in the cladding system.
- Flashing members as detailed in the specification tables and drawings contained within this report.

For the purpose of description in this report:

- Reference to the “Exterior” side of the sample refers to the side of the sample facing inwards to the test booth and would normally represent the external faces of the building.
- Reference to the “Interior” side of the sample refers to the side of the sample facing outwards from the test booth and would normally represent the internal faces of the building.

Client supplied “As Built” drawings are in Appendix B of this report.

Table 3 Test Sample Setup

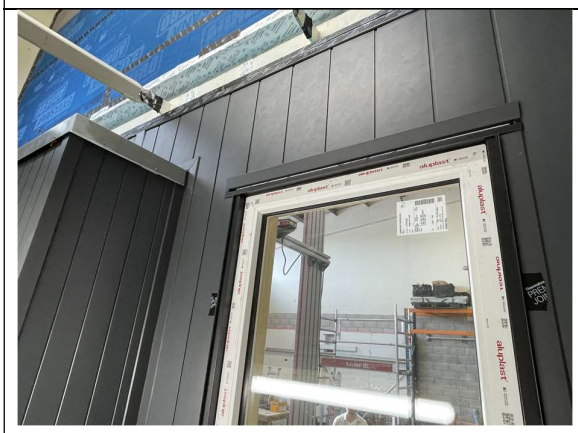
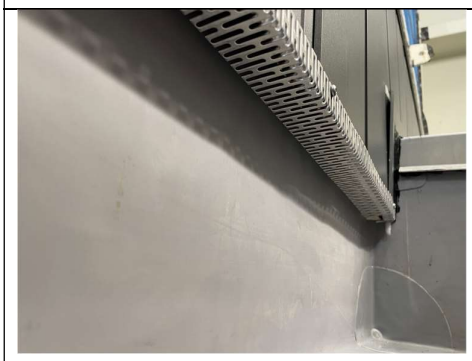
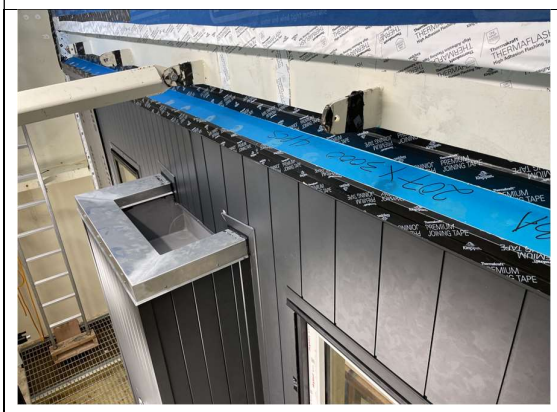
Photo/Figure Reference	Description
	*Figure 1 – Overall view of the sample viewed from outside the booth.* *Note: perspex inspection ports and two different window types.*
	*Figure 2 – Right hand side of sample – Starke 70 UPVC window and flashing system, internal and external corner, and parapet flashing.*
	*Figure 3 – Right hand side of sample – inter-storey joint, and bottom of cladding termination flashing.*

	*Figure 4 – Left hand side of sample – inter-storey joint, and bottom of cladding termination flashing.*
	*Figure 5 – Soffit with vermin strip and dress flahsings, internal corner with dress flashing.*
	*Figure 6 – Soffit with internal drainage downpipe penetration, vermin strip and dress flahsings, soffit to wall dress flashing, vertical joint dress flashing.* *Note: the Aliclad weatherboards installed across the soffit.*
	*Figure 7 – 200mm pipe penetration.*

	*Figure 8 – Fixing penetration.*
	*Figure 9 – Parapet internal TPO guttering with welded cap flashing and cladding cavity closure vermin strip.*
	*Figure 10 – Parapet internal TPO guttering with welded cap flashing and cladding cavity closure vermin strip. (Alternate view)*
	*Figure 11 – Overview from top of sample*

4.2 Client Documentation

Test request and parameters form. Refer to Appendix A

Drawings. Refer to Appendix B

Certificate of Identification. Refer to Appendix E

4.3 Components

The components of the sample are as listed in drawings. Refer to Appendix B

4.4 Modifications of Sample

None.

5 TEST PROCEDURE

The test procedure was carried out following SWTM-1.0 AS_NZS 4284 2008 Test Procedure v2

5.1 Test Sequence

5.2 AS/NZS 4284:2008

(a) Preliminary tests
(b) Structural test at serviceability state
(c) Air infiltration test
(d) Water penetration test by static pressure followed by cyclic pressure test
(e) Seismic test at serviceability limit state displacement: Not carried out
(f) BMU restraint test – Not carried out
(g) Strength test at ultimate limit state
(h) Seismic test at ultimate limit state displacement
(i) Seal degradation test: Not carried out

5.3 Deviation, variation, or exclusion to the test procedure

None.

6 TESTING EQUIPMENT

Table 4 Testing Equipment

Item	Description	ID	Calibration
Manometer	DG 1000	SWTL - 064 (Serial No: 11036)	Date of next calibration: 07 May 2025
Anemometer	FLSchmidt	SWTL - 050 (Serial No: 000011234)	Date of next calibration: 17 January 2025
Anemometer	FLSchmidt	SWTL - 017 (Serial No: 000008907)	Date of next calibration: 26 December 2025
LDS	Bojke BLG-250N-485	SWTL - 113 (Serial No: SWTL-113)	Date of next calibration: 26 February 2025
LDS	Bojke BLG-250N-485	SWTL - 112 (Serial No: SWTL-112)	Date of next calibration: 26 February 2025
LDS	Bojke BLG-250N-485	SWTL - 111 (Serial No: SWTL-111)	Date of next calibration: 26 February 2025

7 ENVIRONMENTAL CONDITIONS

Table 5 Environmental Conditions

19th August 2024			
Temperature °C	Barometric Pressure hPa	Humidity	Calm / Windy
8.0	1001	82%	Breezy / Showers

8 TEST RESULTS

8.1 Results

8.2 AS/NZS 4284:2008

(a) Preliminary tests:

Clause	Test Date	Applied Pressure	Result
8.2	19th August 2024	+/- 1515 Pa	Pass

Comments	No damage noted.

Test	Applied Pressure	Result
Static Pressure	455 Pa	PASS
Cyclic Pressure	227-455 Pa	PASS
Cyclic Pressure	303-606 Pa	PASS
Cyclic Pressure	455-909 Pa	PASS

(b) Structural test at serviceability state:

Clause	Test Date	Applied Pressure	Deflection/Span Result	Successive Member Displacement Result
8.3	19th August 2024	+/- 1515 Pa	Pass	Pass

Criteria	Clause 8.3.5, no framing members shall deflect by an amount greater than span/250 mm.
Comments	No damage noted.

(c) Air infiltration test:

Clause	Test Date	Applied Pressure	Allowable Leakage l/s	Leakage l/s	Leakage l/s/m²	Result
8.4	19th August 2024	+/- 150 Pa	20.40	3.79	0.30	Pass

Criteria	Clause 9.3 Air infiltration for airconditioned buildings shall not exceed 1.6 L/m²s.
Comments	Air leakage area and result values are the combination of both samples.

(d) Water penetration test by static pressure followed by cyclic pressure test:

Clause	Test Date	Applied Pressure	Result
8.5 / 8.6	19th August 2024	See table below	See table below

Criteria	Clause 9.4, Under static and cyclic pressures there shall be no leaks. For both the static and cyclic water tests, a leak is considered to occur when one or more of the following occur: (a) Water appears on any inside surface of the facade and is visible from an occupied space. (b) Uncontrolled water appears on any inside surface of the facade. (c) Water appears that is likely to wet insulation, fixtures and finishes.

	(d) Water appears in other locations specified as unacceptable by the Specifier.
Comments	No leaks evident.

Test	Applied Pressure	Result
Static Pressure	455 Pa	PASS
Cyclic Pressure	227-455 Pa	PASS
Cyclic Pressure	303-606 Pa	PASS
Cyclic Pressure	455-909 Pa	PASS

(e) Seismic test at serviceability limit state displacement: Not carried out.

(f) BMU restraint test: Not carried out.

(g) Strength test at ultimate limit state:

Clause	Test Date	Applied Pressure	Duration	Result
8.8	19th August 2024	+/- 2500 Pa	10 sec.	Pass

Criteria	Clause 9.7 Under structural test at ultimate limit state there shall be no collapse of the test sample. Collapse shall mean any one or any combination of the following: (a) Disengagement or partial disengagement of any framing member, facade panel or any part thereof. (b) Failure of any fixings that connect the façade to the building structure. (c) Failure of any stop, locking device, fastener or support which could allow an opening light to come open. (d) Repeated breakage of glass resulting in loss of chamber pressure. Glass may only be replaced once before the sample is deemed to have collapsed. (e) Repeated cracking of glass which does not result in loss of chamber pressure. Glass may only be replaced twice before the sample is deemed to have collapsed.
Comments	The horizontal inter-storey joint snap-fit cover strip flashing was partially dislodged due to movement of the cladding boards underneath the right hand side window as viewed from inside the test booth after negative ULS pressure application.

(h)Seismic test at ultimate limit state displacement: Not carried out.

(i) Seal degradation test: Not carried out.

8.3 Observations

Table 6 Observations

Obs. No:	Test	Observation	Photo
1	Water testing – All	No leaking or water penetration evident.	
2	Water testing – All	No leaking or water penetration evident.	
3	Post Structural ULS Negative Pressure	Partial dislodgement of the horizontal inter-storey flashing.	

9 DISCLOSURE/QUALIFICATIONS

On instruction of The Building Agency Limited:

- The Building Agency Limited Drawings attached to this report have been provided by the client and SWTL accepts no liability with regards to the accuracy of the drawings.
- SWTL has not be provided with any other test reports from the manufacturer or manufacturing instructions.
- This report has been prepared solely for the party of who it was addressed within the terms of the brief provided to this company. This report may not be used for any other context or for any other purpose without prior agreement.
- This report may not be read or reproduced other than a complete document.

10 IANZ ACCREDITATION

This testing has been produced under IANZ accreditation number: **1438**

11 TESTING OFFICERS

Name: Bernard Farrington Date: 10 September 24

Signature: 

Name: Mark Ashforth Date: 10 September 24

Signature: 

12 REPORT WRITER

Name: Bernard Farrington Date: 10 September 24

Signature: 

13 PEER REVIEWED BY

Name: Shawn McIsaac Date: 10 September 24

Signature: 

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Report Date: 10 September 2024

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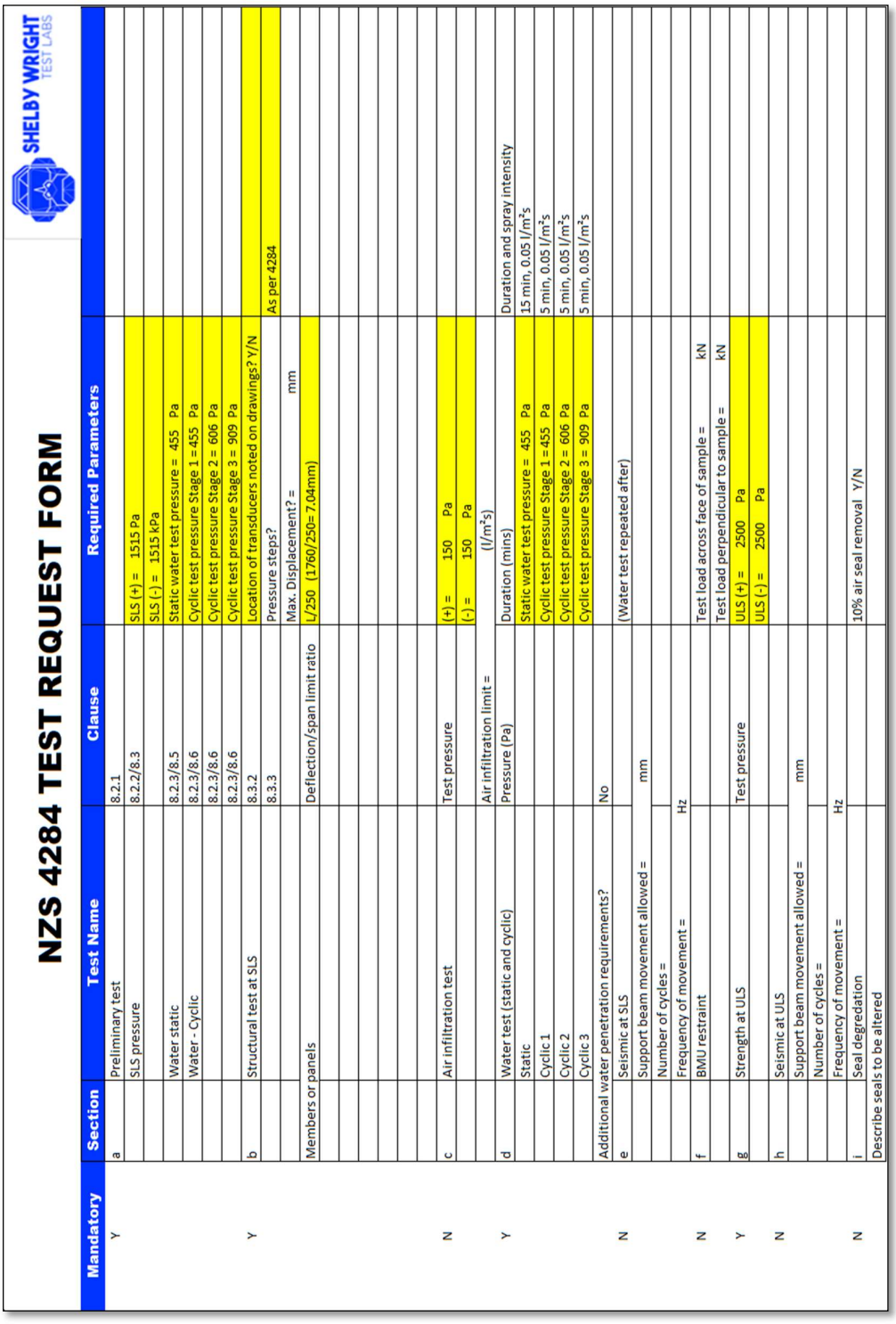
14 Appendix A – Test Request Form



NZS 4284 TEST REQUEST FORM

SHELBY WRIGHT TEST LABS

Mandatory	Section	Test Name	Clause	Required Parameters		
Y	a	Preliminary test	8.2.1			
		SLS pressure	8.2.2/8.3	SLS (+) = 1515 Pa		
				SLS (-) = 1515 kPa		
		Water static	8.2.3/8.5	Static water test pressure = 455 Pa		
		Water - Cyclic	8.2.3/8.6	Cyclic test pressure Stage 1 = 455 Pa		
			8.2.3/8.6	Cyclic test pressure Stage 2 = 606 Pa		
			8.2.3/8.6	Cyclic test pressure Stage 3 = 909 Pa		
Y	b	Structural test at SLS	8.3.2	Location of transducers noted on drawings? Y/N		
			8.3.3	Pressure steps?	As per 4284	
				Max. Displacement? = mm		
		Members or panels	Deflection/span limit ratio	L/250 (1760/250= 7.04mm)		
N	c	Air infiltration test	Test pressure	(+) = 150 Pa		
				(-) = 150 Pa		
			Air infiltration limit =	(l/m²s)		
Y	d	Water test (static and cyclic)	Pressure (Pa)	Duration (mins)	Duration and spray intensity	
		Static		Static water test pressure = 455 Pa	15 min, 0.05 l/m²s	
		Cyclic 1		Cyclic test pressure Stage 1 = 455 Pa	5 min, 0.05 l/m²s	
		Cyclic 2		Cyclic test pressure Stage 2 = 606 Pa	5 min, 0.05 l/m²s	
		Cyclic 3		Cyclic test pressure Stage 3 = 909 Pa	5 min, 0.05 l/m²s	
		Additional water penetration requirements?	No	(Water test repeated after)		
N	e	Seismic at SLS				
		Support beam movement allowed =	mm			
		Number of cycles =				
		Frequency of movement =	Hz			
N	f	BMU restraint		Test load across face of sample = kN		
				Test load perpendicular to sample = kN		
Y	g	Strength at ULS	Test pressure	ULS (+) = 2500 Pa		
				ULS (-) = 2500 Pa		
N	h	Seismic at ULS				
		Support beam movement allowed =	mm			
		Number of cycles =				
		Frequency of movement =	Hz			
N	i	Seal degredation		10% air seal removal Y/N		
		Describe seals to be altered				

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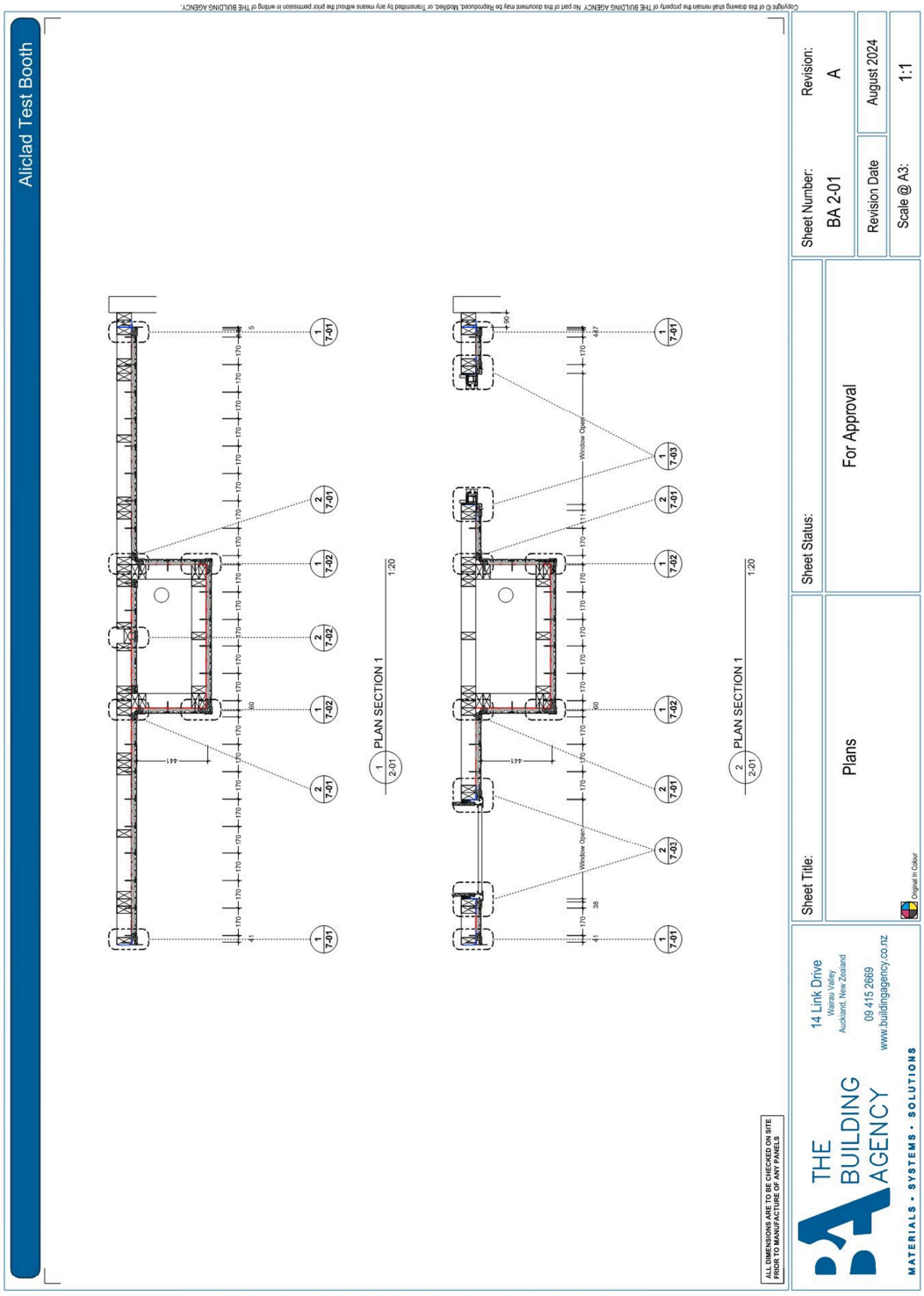
15 Appendix B – Drawings



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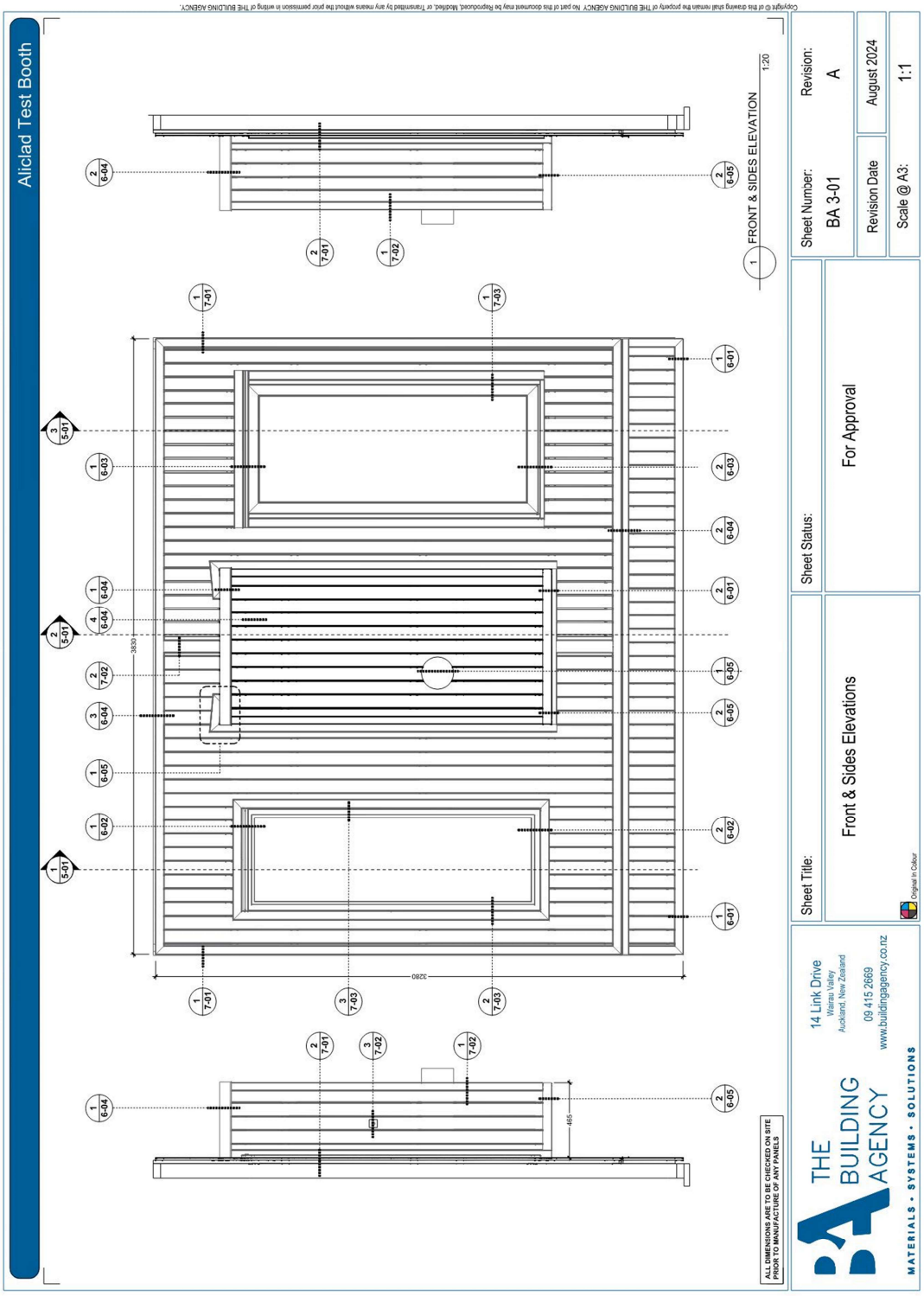

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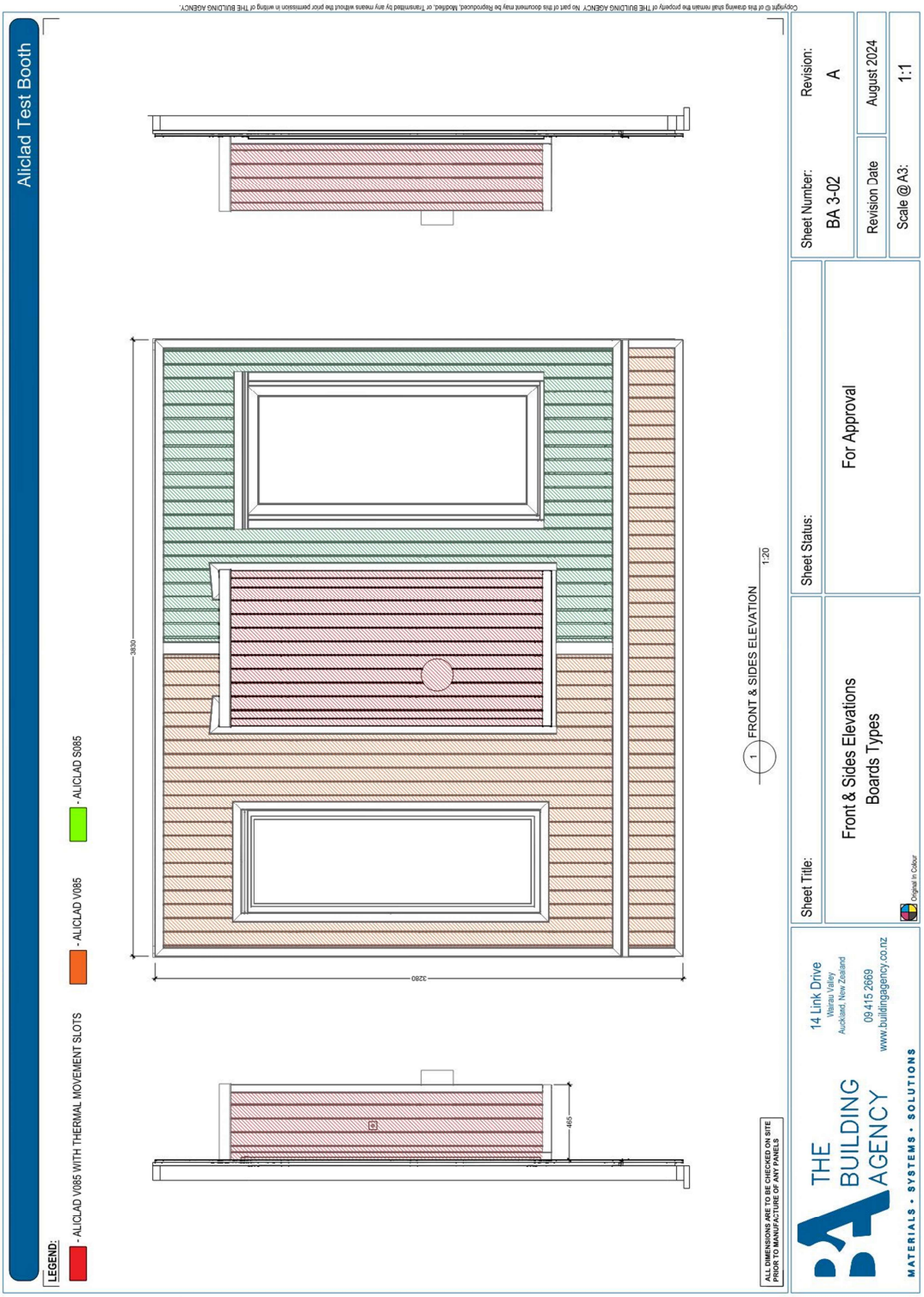

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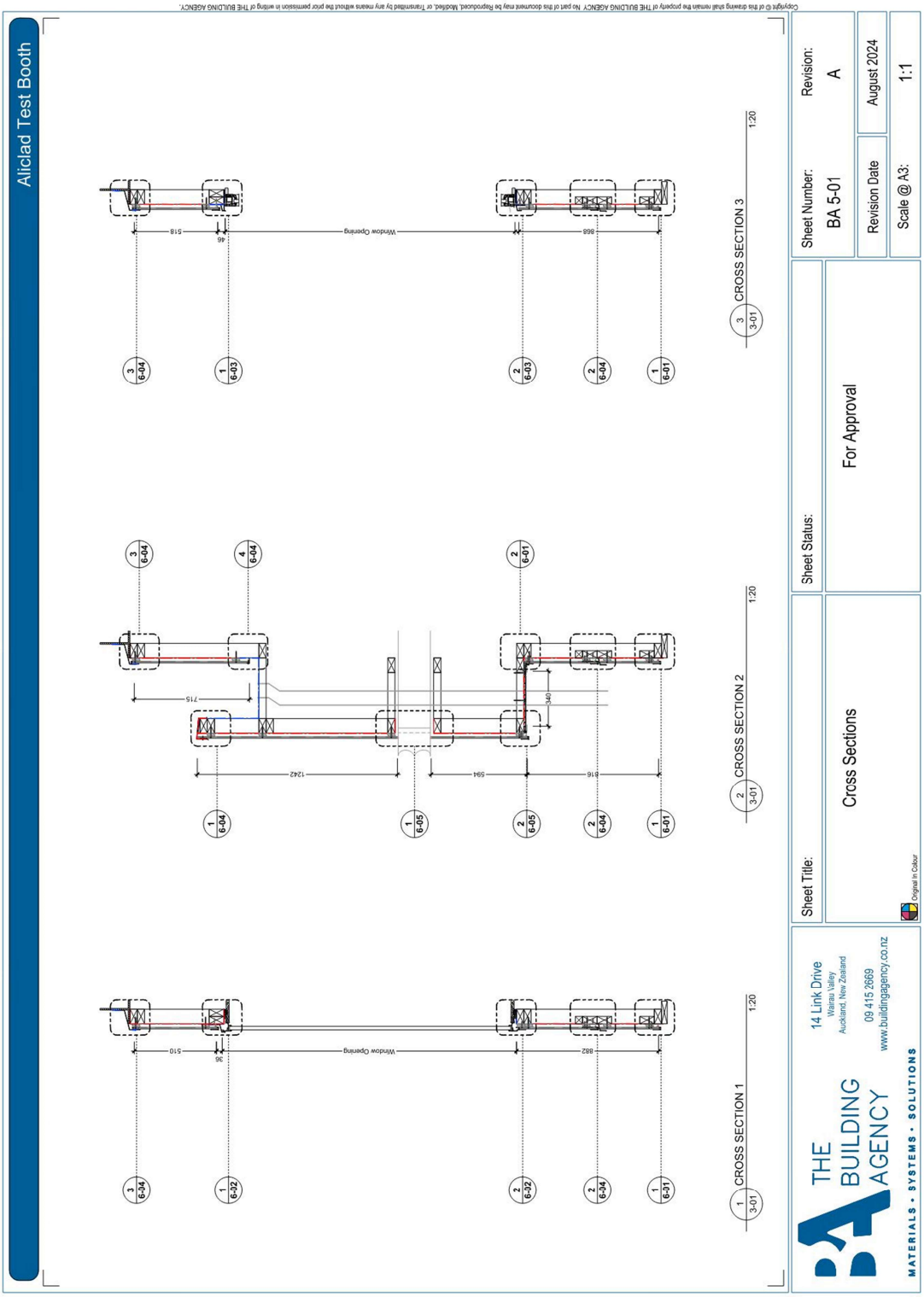

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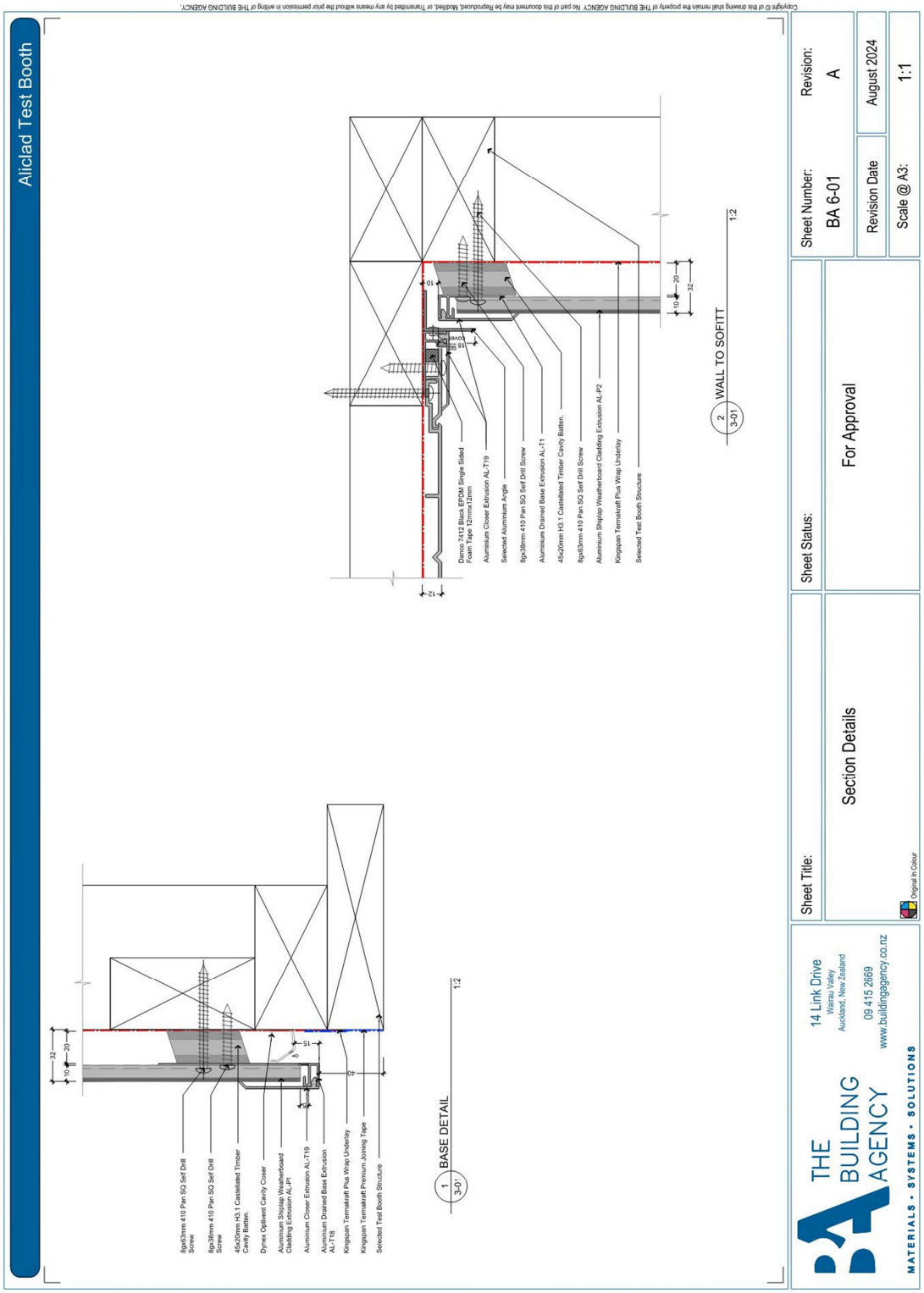

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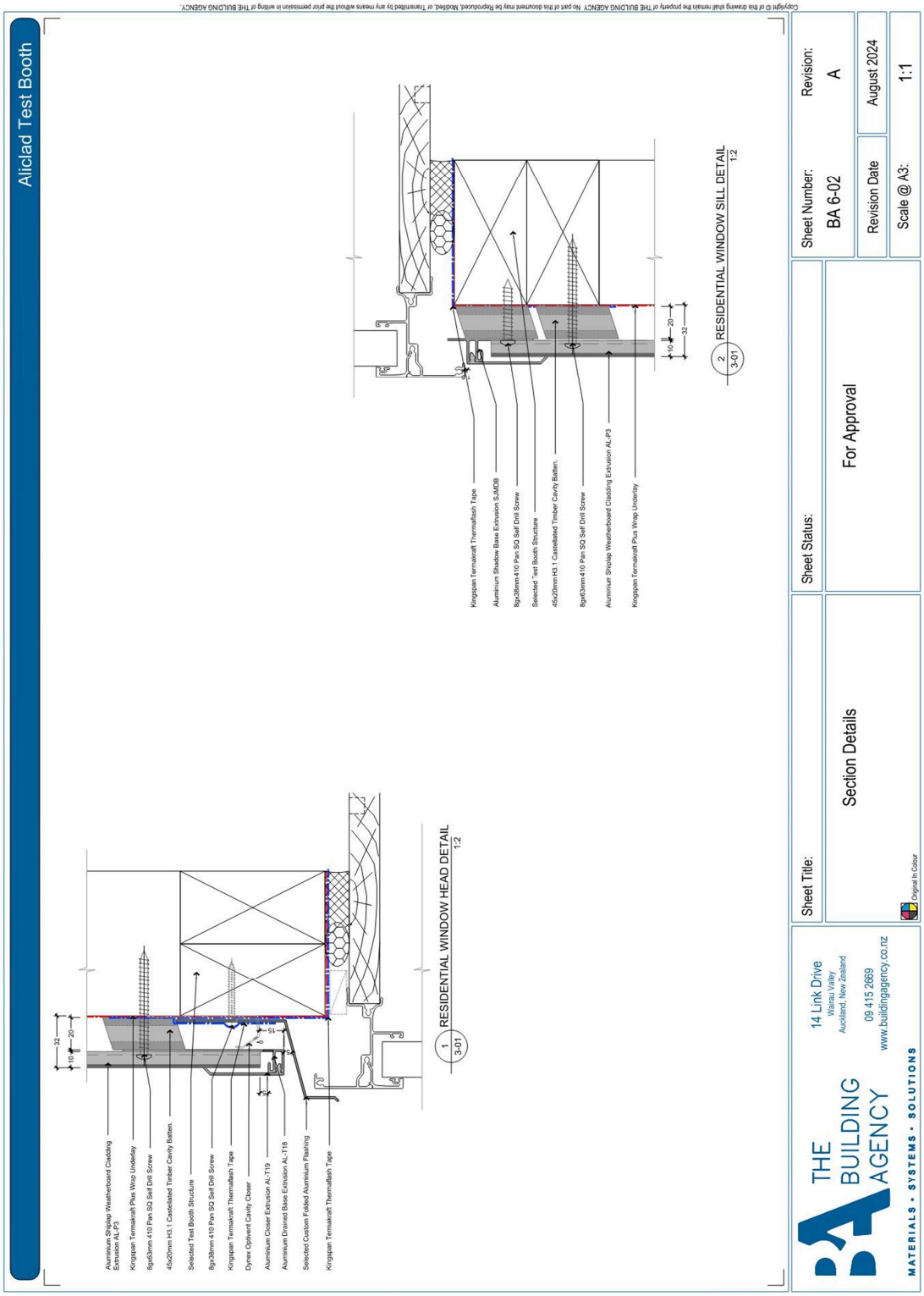

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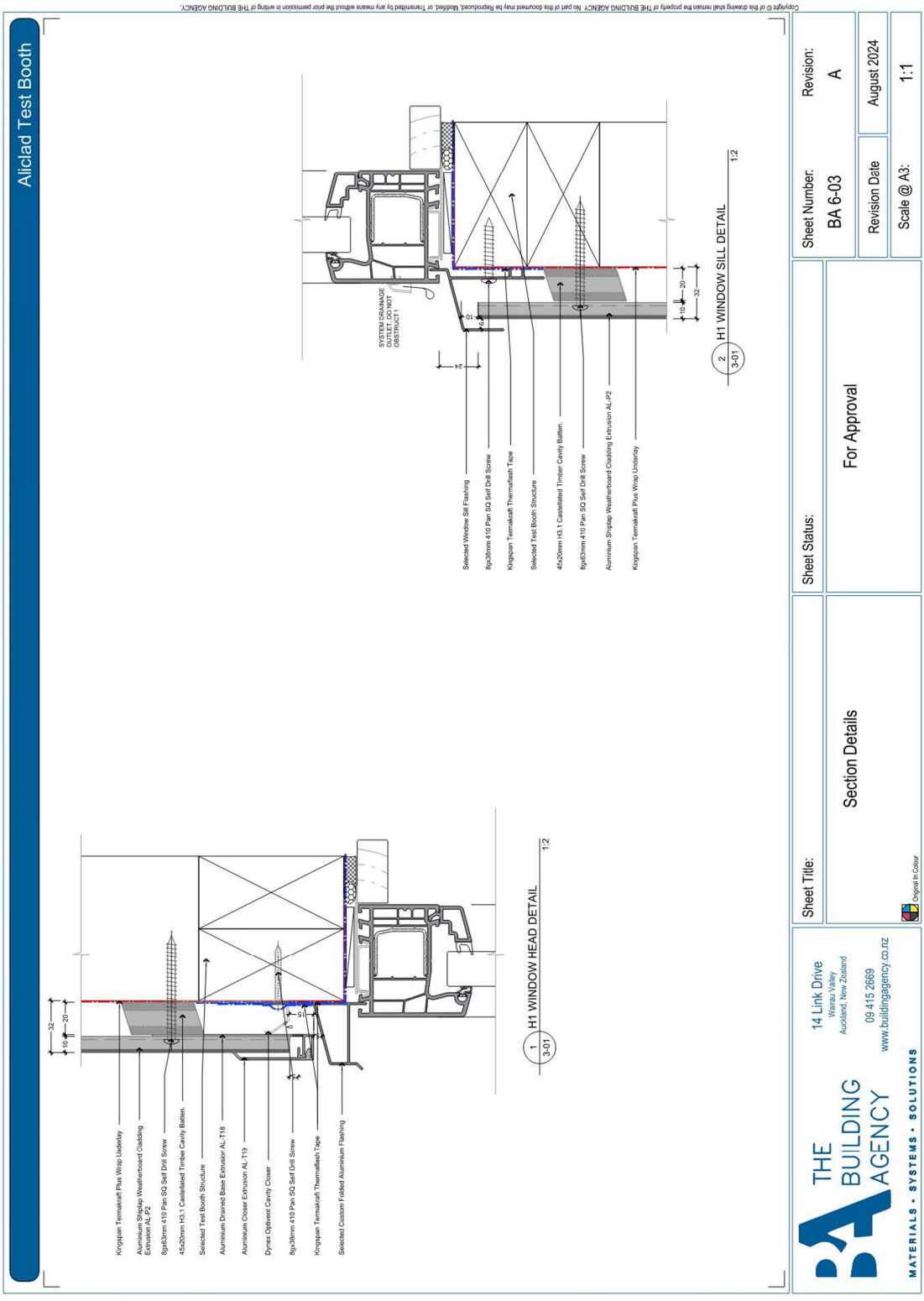

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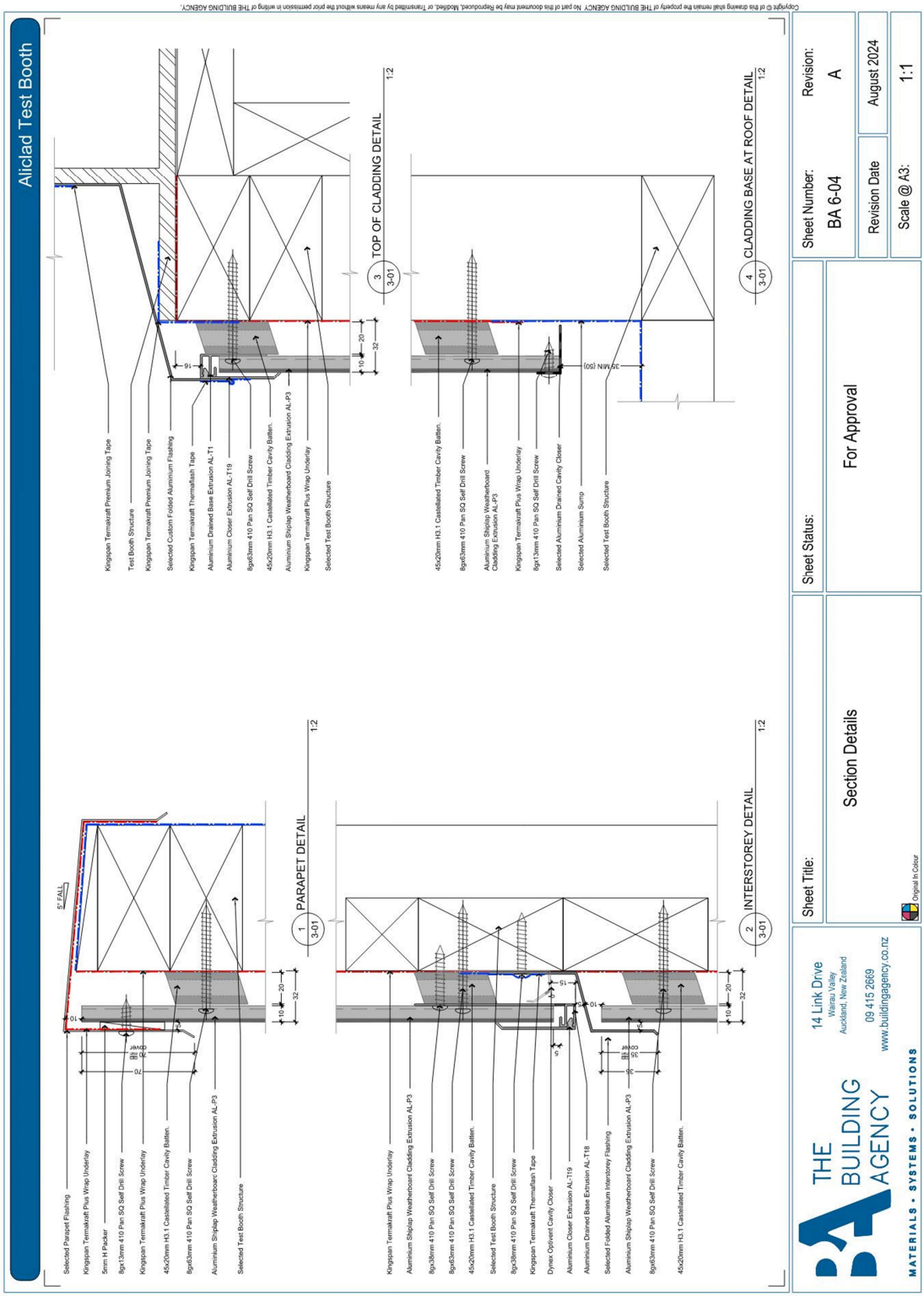

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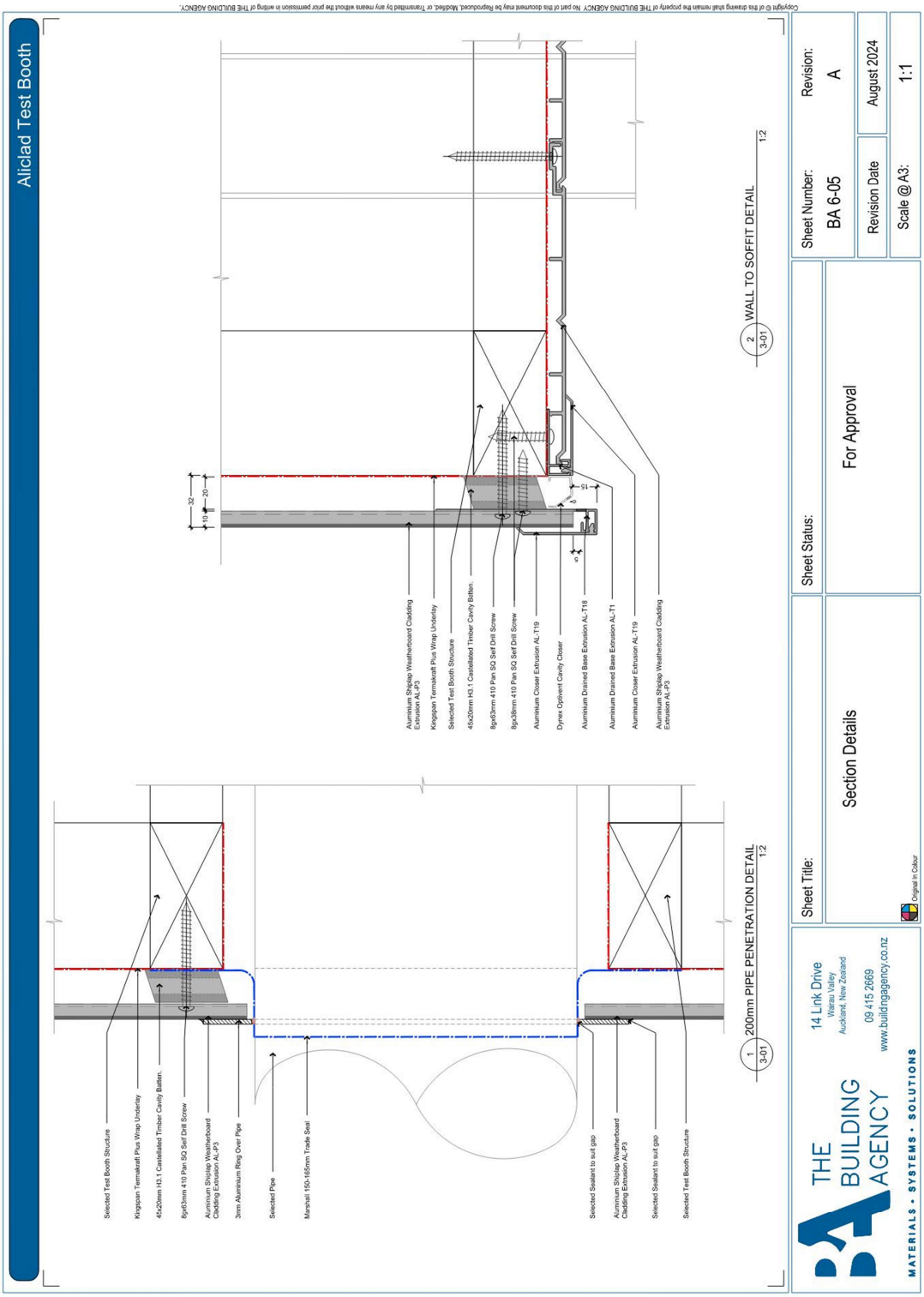

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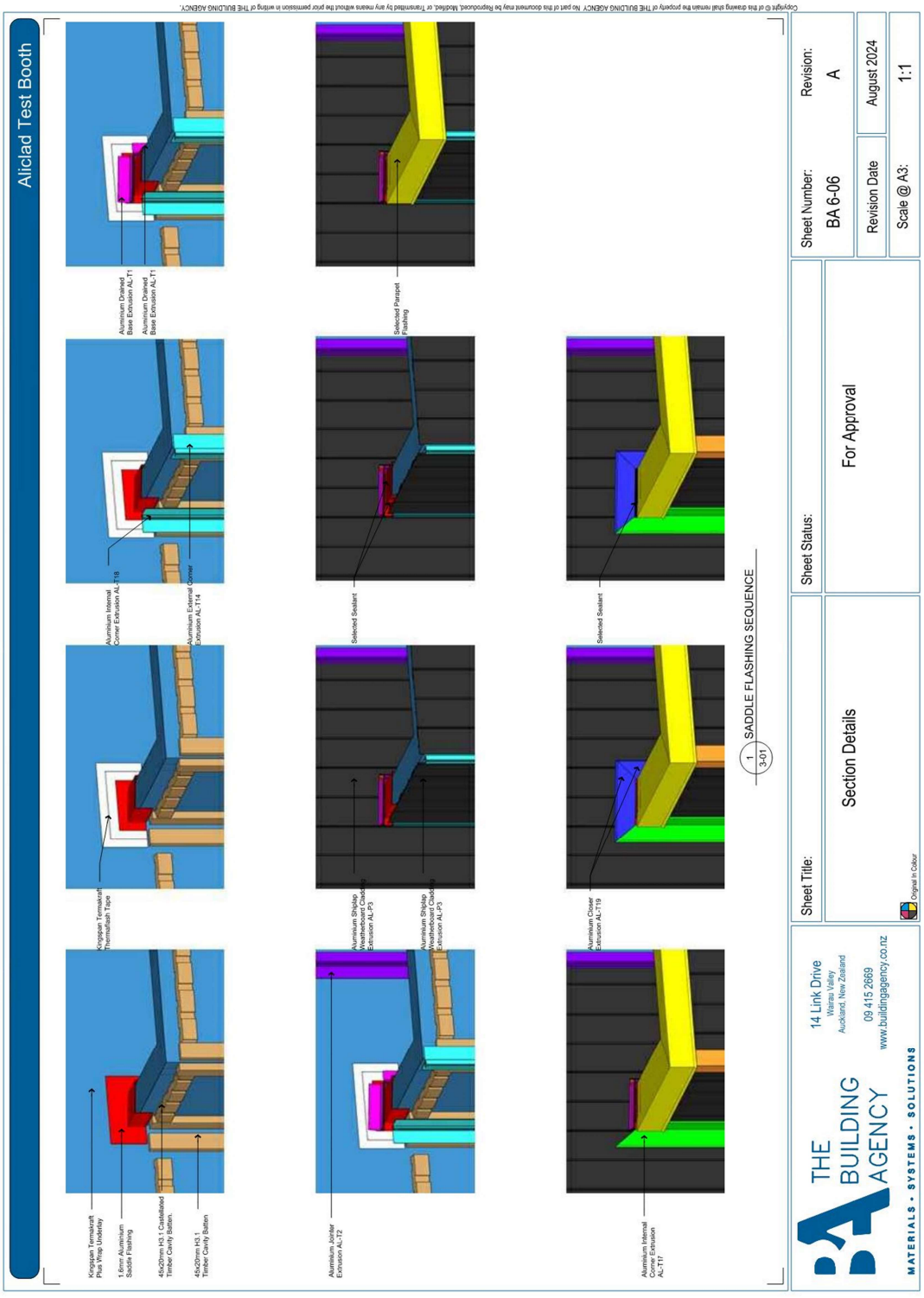

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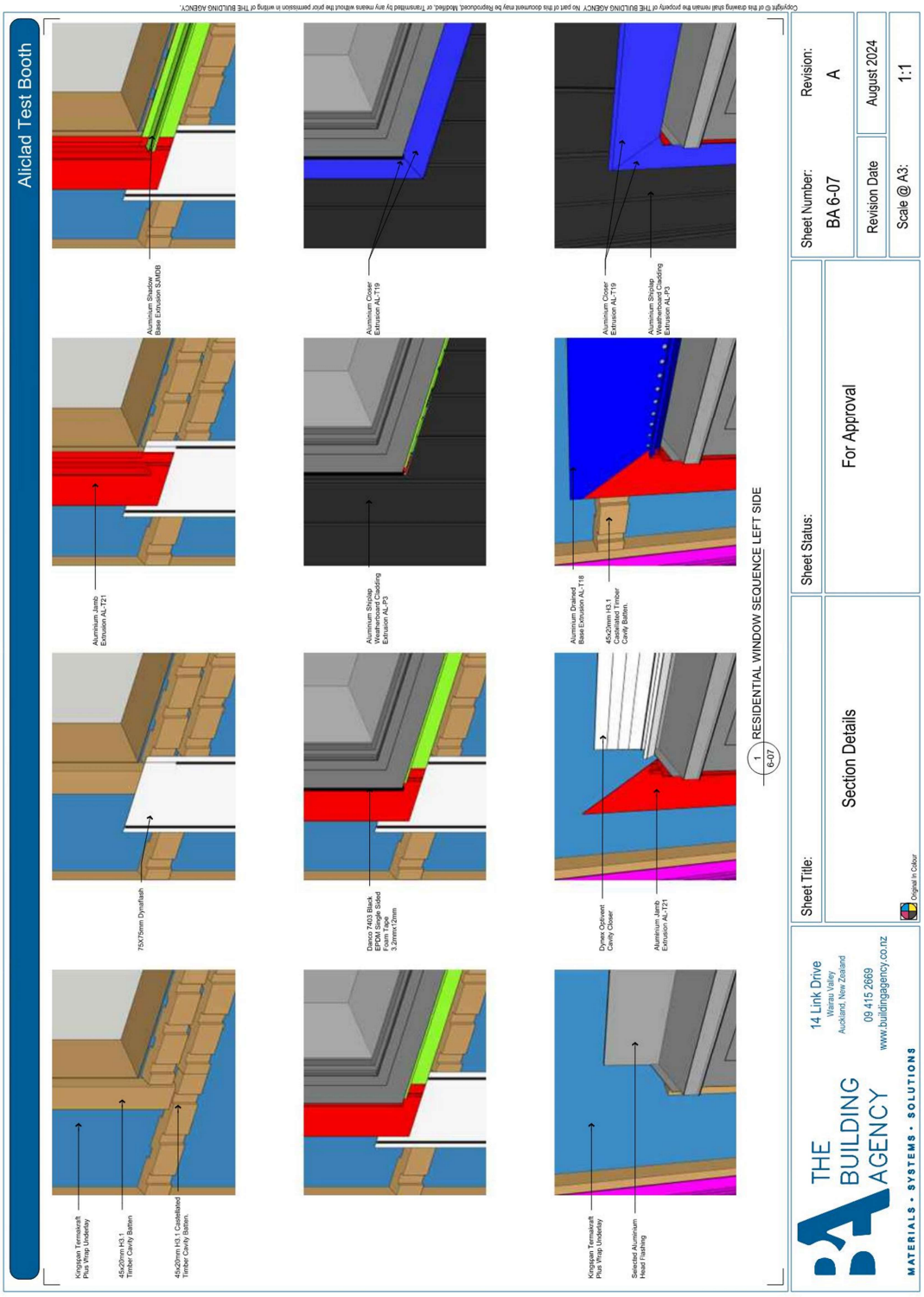

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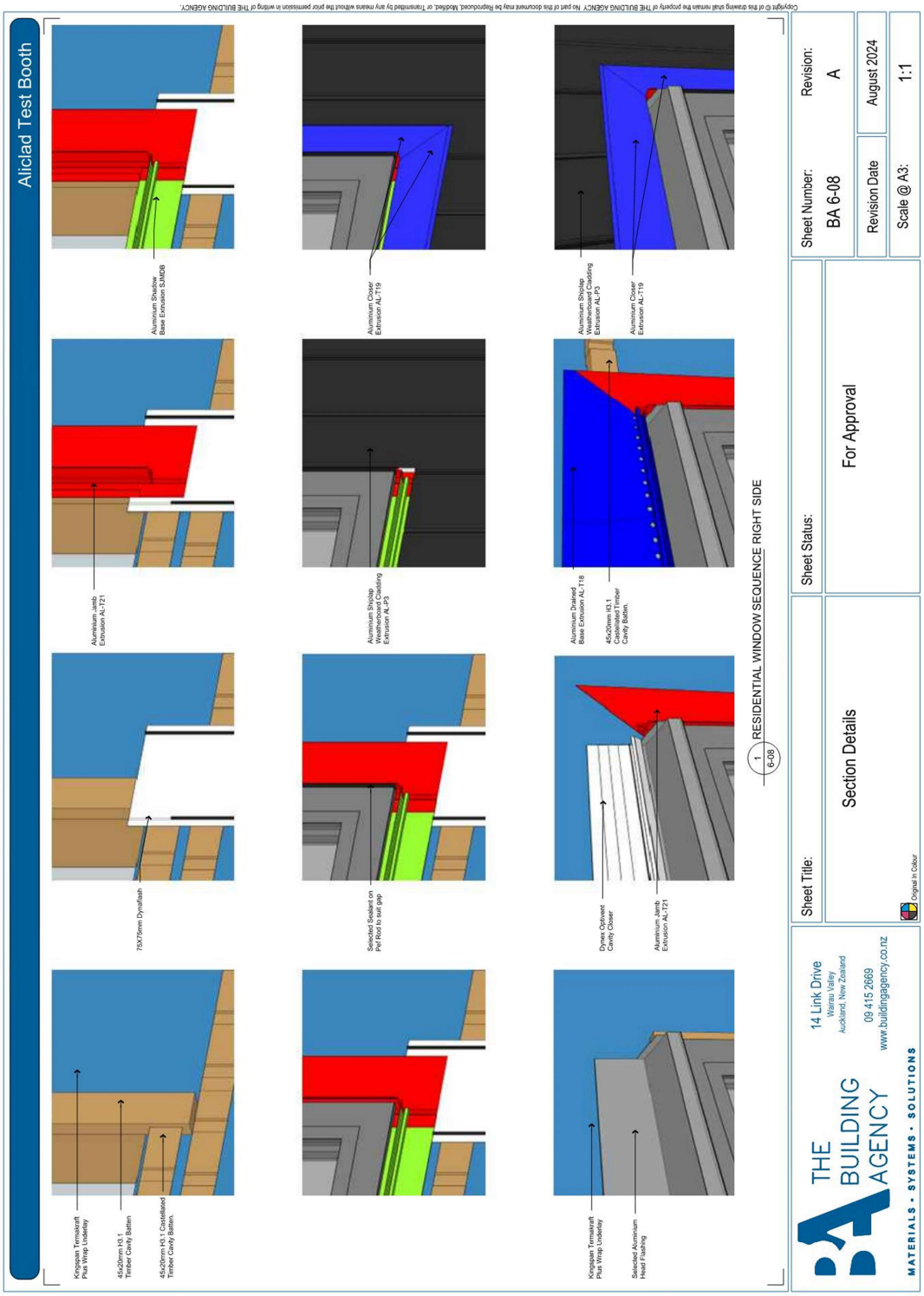

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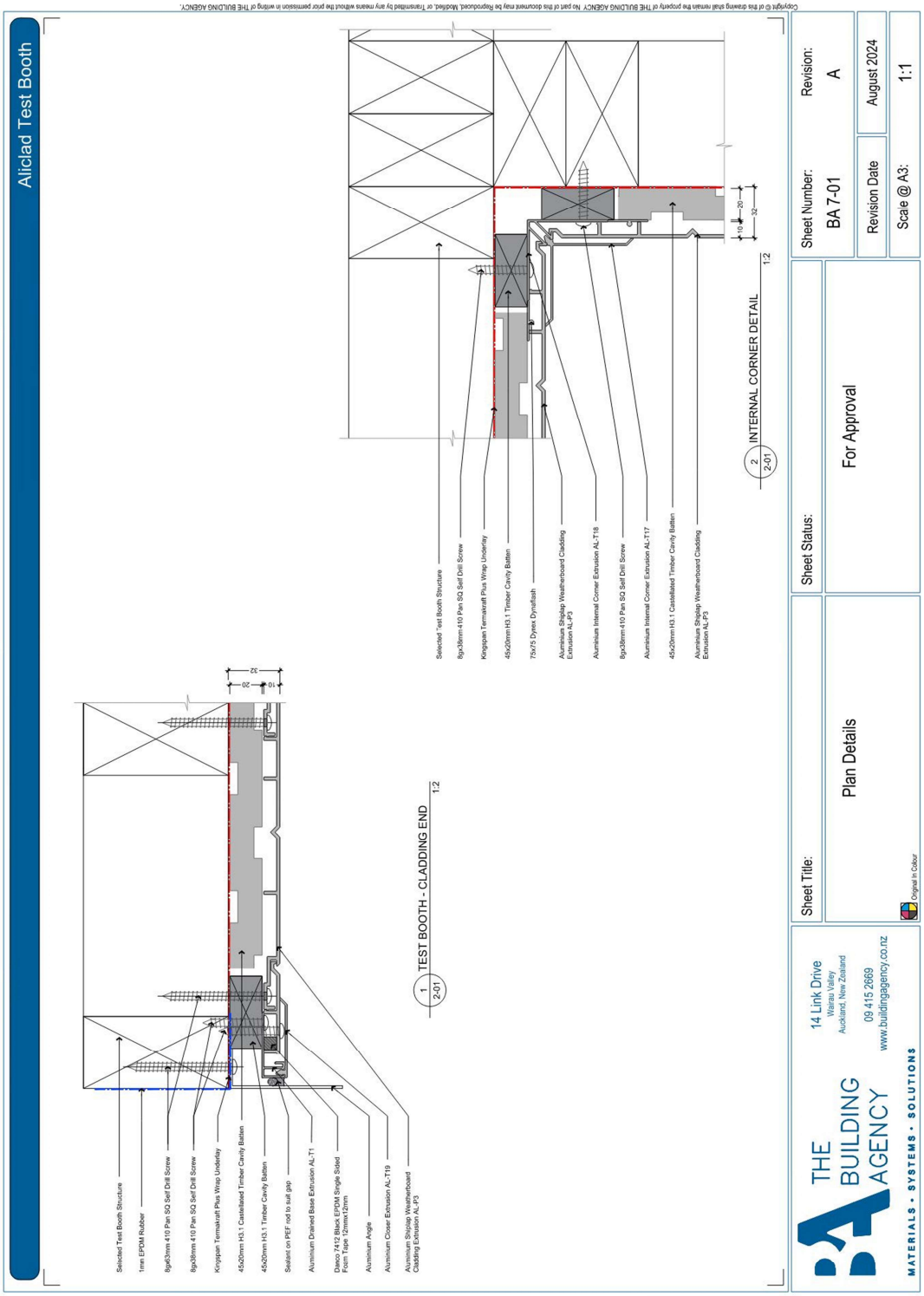

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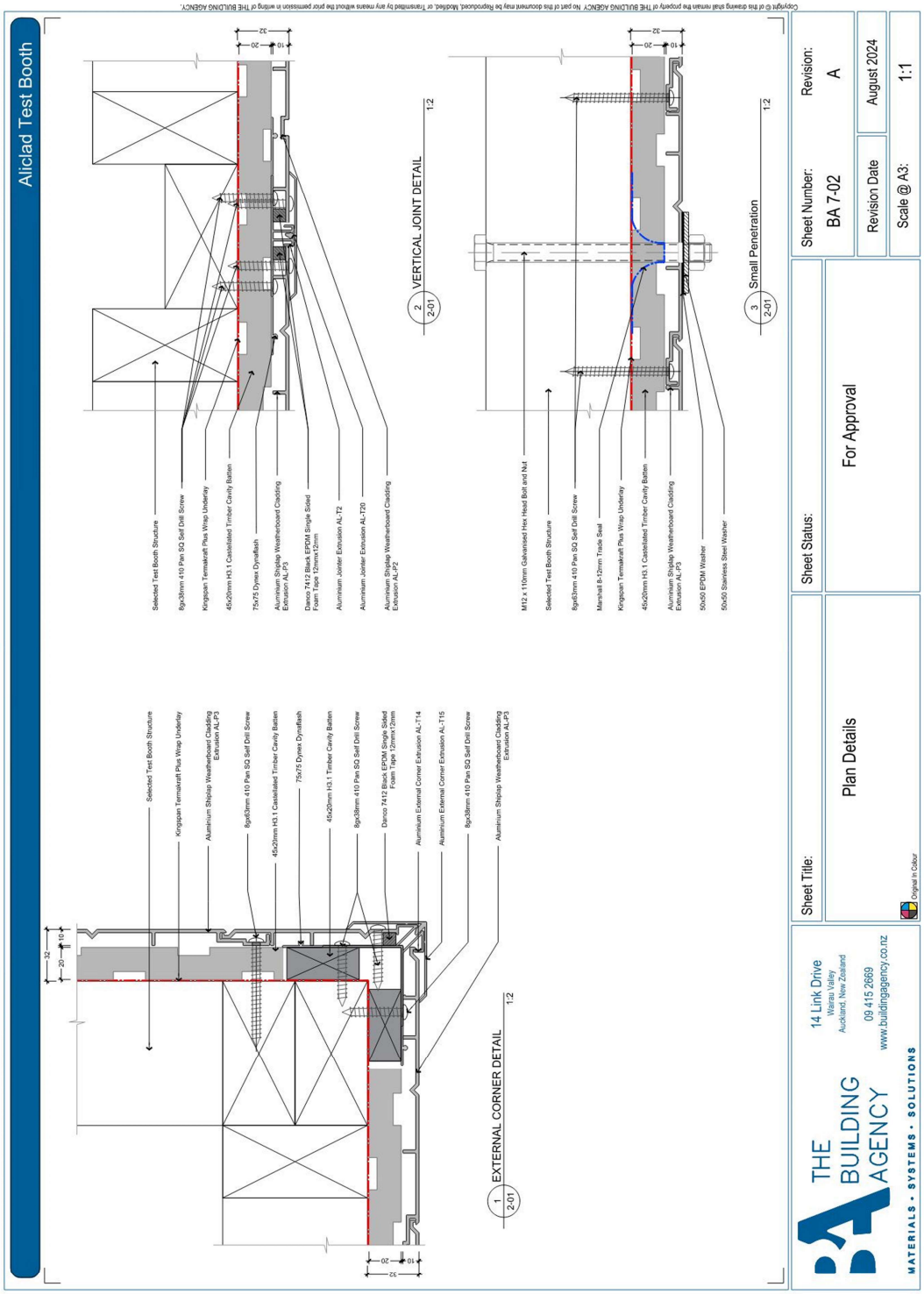

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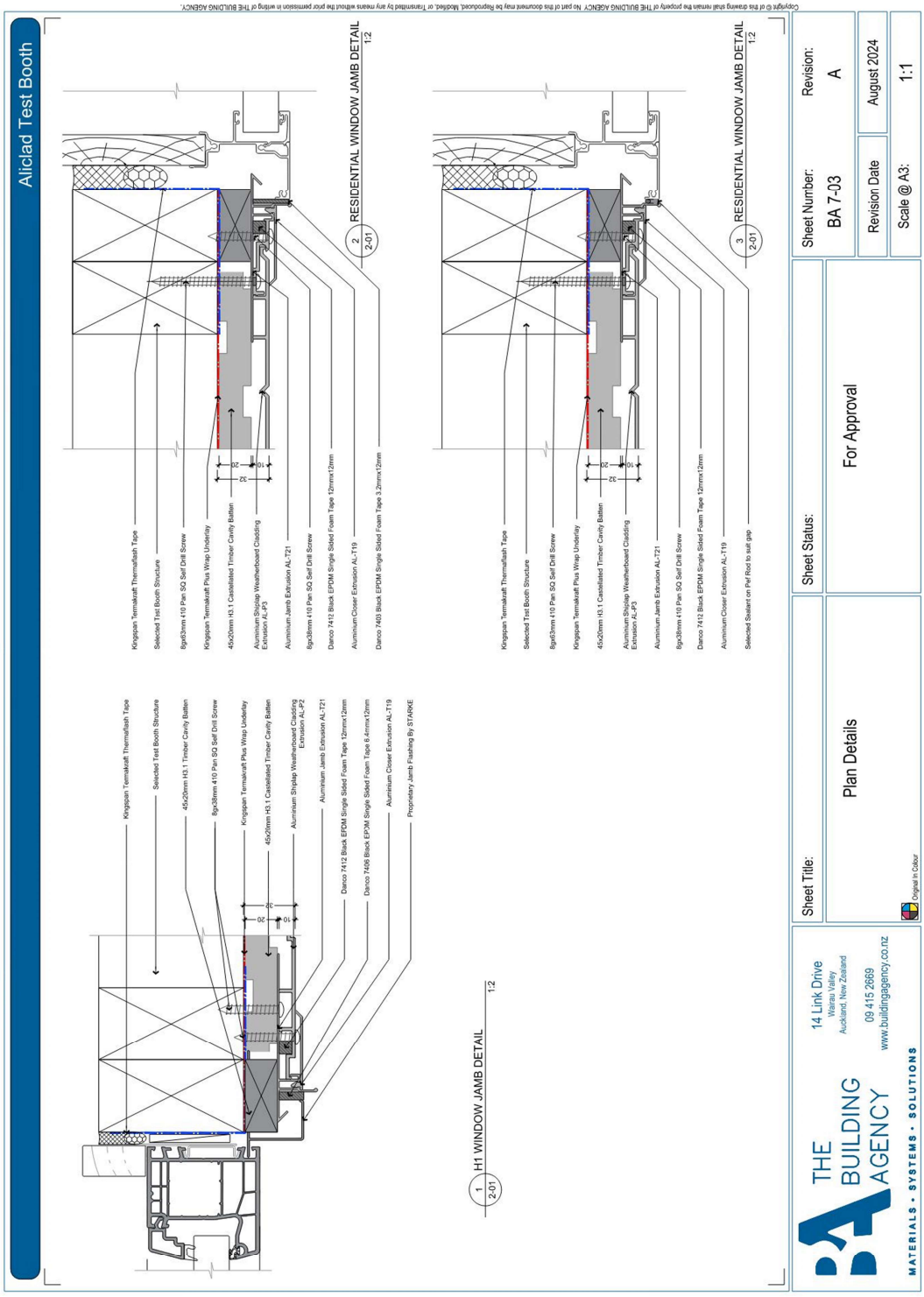

Tested By Bernard Farrington

Report Writer Bernard Farrington

Authorised by Shawn McIsaac

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16 Appendix C – Worksheets

SWTM-1.1 AS_NZS4284 Worksheet Preliminary Testing v2

G:\Shared drives\Shelby Wright Test Labs\Technical Records\2.0 Testing Procedures, Worksheets and Logs\Test Methods Worksheets

Version	2			TEST No: SWTL T-	225
Date Created	4-Apr-24 BF			Sheet #	1
Date Checked	23-Apr-24 BF			of sheets	6

SERVICEABILITY LIMIT	+	1515 Pa	10 sec	Comments	
STATE TEST PRESSURE	-	1515 Pa	10 sec	Comments	

STATIC PRESSURE TEST AS/NZS 4284:2008

Specified Test Pressure	455 Pa	or
Test Pressure: 0.3 x SLS Pressure	455 Pa	

Pressure	Time	Comments
0 Pa	5 min.	No leaks evident
455 Pa	15 min.	No leaks evident
0 Pa	5 min.	No leaks evident

CYCLIC PRESSURE TEST AS/NZS 4284:2008

5 MINS @ 0.15 - 0.30 +ve SLS Test Pressure Pa	Based on minimum +ve SLS of 1000 Pa. 2 minutes zero pressure between each stage.
5 MINS @ 0.20 - 0.40 +ve SLS Test Pressure Pa	
5 MINS @ 0.30 - 0.60 +ve SLS Test Pressure Pa	

Note: If Cyclic test is more than 30 minutes after Static test, then water must be turned on for 5 minutes prior to cyclic pressure.

Pressure			Water On/Off	Time	Comments
227.25	454.5	Pa	On	5 min.	No leaks evident
0		Pa	On	2 min.	No leaks evident
303	606	Pa	On	5 min.	No leaks evident
0		Pa	On	2 min.	No leaks evident
454.5	909	Pa	On	5 min.	No leaks evident
0		Pa	Off	5 min.	No leaks evident

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Report Number: SWTL R0067
Report Date: 10 September 2024

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SWTM-1.2.1 AS_NZS4284 Worksheet Deflection Measurements v2

G:\Shared drives\Shelby Wright Test Labs\Technical Records\2.0 Testing Procedures, Worksheets and Logs\Test Methods Worksheets

Version	2	TEST No: SWTL T-	226
Date Created	4-Apr-24 BF	Sheet #	2
Date Checked	23-Apr-24 BF	of sheets	6

Note: This worksheet is for use with laser distance measurement

CLIENT	The Building Agency 19 August 2024
TEST OPERATOR	Bernard Farrington
DESCRIPTION OF SAMPLE	Alliclad V085 & S085 Vertical Weatherboard System
CLIENT DRAWING REF(S)	BA 2-01, BA 3-01, BA 3-02, BA 5-01, BA 6-01: BA 6-08, BA 7-01: BA 7-03 (All Revision A)
MEMBER TESTED	

SERVICEABILITY LIMIT	+	1515 Pa	Overall length	1740	mm
STATE TEST PRESSURE	-	1515 Pa	Gauge length	1760	mm
*Specified maximum deflection ratio			Max defl. (1/	250	)
			Max defl. Specified	7.04	mm
SNZ TS 4284 default = span/250			Max defl. Default	7.04	mm
Atmospheric Conditions			Temperature	8	ºC
			Barometric Pressure	1001	hPa
			Relative Humidity	82	%

	Bottom	Middle	Top
Gauge #	111	112	113

	SLS test pressure			Input Values (Direct Displacement			Net centre deflection mm	Default Ratio Check	Specified Ratio Check		Successive Member Displacement		
Stage	Time	%	Pa							Mode	Value	Limit Δ	Check
	POSITIVE PRESSURE												
	0 min	0%	0	164.76	163.69	166.56							
	2 min	100%	1515	153.96	150.47	155.62	-2.35			Take Up			
Z1	2 min	0%	0	164.22	163.15	165.81	2.455	<= Zero Ref			2.46	3	
	1 min	20%	303	162.58	160.45	163.93	-0.94	-13%	-13%	Mode 1			
	1 min	40%	606	160.48	158.35	161.84	-0.945	-13%	-13%				
	1 min	60%	909	158.21	155.42	159.68	-1.66	-24%	-24%				
	1 min	80%	1212	155.82	152.78	157.46	-1.995	-28%	-28%				
	1 min	100%	1515	153.61	150.15	155.37	-2.475	-35%	-35%				
Z2	2 min	0%	0	164.13	162.90	165.60	-0.1	-1%	-1%		-0.1		-0.1
	1 min	100%	1515	153.69	150.26	155.45	-2.445	-35%	-35%				
	1 min	80%	1212	155.25	152.01	156.88	-2.19	-31%	-31%				
	1 min	60%	909	156.10	153.97	158.32	-1.375	-20%	-20%				
	1 min	40%	606	159.01	156.52	160.41	-1.325	-19%	-19%				
	1 min	20%	303	161.38	158.85	162.59	-1.27	-18%	-18%				
Z3	2 min	0%	0	163.99	162.77	165.45	-0.085	-1%	-1%		-0.1		-0.1
	NEGATIVE PRESSURE												
	2 min	-100%	-1515	178.2	183.6	186.1	3.275	47%	47%	Mode 2			
Z4	2 min	0%	0	166.94	167.68	170.82	0.75	<= Zero Ref			0.75	3	
	1 min	-20%	-303	168.83	170.26	173.43	0.33	5%	5%				
	1 min	-40%	-606	171.12	174.20	176.88	1.4	20%	20%				
	1 min	-60%	-909	173.68	177.45	180.00	1.81	26%	26%				
	1 min	-80%	-1212	176.08	180.72	183.21	2.275	32%	32%				
	1 min	-100%	-1515	178.31	183.71	186.28	2.615	37%	37%				
Z5	2 min	0%	0	167.28	168.25	171.54	0.04	1%	1%		0.04		0.04
	1 min	-100%	-1515	178.38	183.84	186.42	2.64	38%	38%				
	1 min	-80%	-1212	176.81	181.85	184.49	2.4	34%	34%				
	1 min	-60%	-909	175.13	179.53	182.35	1.99	28%	28%				
	1 min	-40%	-606	172.84	176.53	179.52	1.55	22%	22%				
	1 min	-20%	-303	170.51	173.25	176.71	0.84	12%	12%				
Z6	2 min	0%	0	167.61	168.78	172.18	0.085	1%	1%		0.08		0.08
	POSITIVE PRESSURE												
	2 min	100%	1515	153.87	150.38	155.49	-2.435	-35%	-35%	Mode 3			
Z7	2 min	0%	0	164.40	163.59	166.04	0.235	3%	3%		0.23		0.23

Result Pass Checked BF

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SWTM-1.3 AS_NZS4284 Worksheet Air Infiltration Measurements v4

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Version	4	TEST No: SWTL T-	227
Date Created	4-Apr-24 BF	Sheet #	3
Date Checked	23-Apr-24 BF	of sheets	6
CLIENT		The Building Agency 19 August 2024	
TEST OPERATOR		Bernard Farrington	
DESCRIPTION OF SAMPLE		Aliclad V085 & S085 Vertical Weatherboard System	
CLIENT DRAWING REF(S)		BA 2-01, BA 3-01, BA 3-02, BA 5-01, BA 6-01: BA 6-08, BA 7-01: BA 7-03 (All Revision A)	

Sample Width	3.935	m	Sample Perimeter Length	30.55 m
Sample Height	3.24	m		
Sample Area	12.75	m^2		

AS/NZS 4284:2008 Maximum permitted air flow, l/s at	150	Pa booth pressure	
Overall Sample Area x 1.6	=	20.40	l/s
Sample Perimeter Length x 0.6	=	18.33	l/s

Atmospheric Conditions	Temperature	8	ºC
	Barometric Pressure	1001	hPa
	Relative Humidity	82	%

POSITIVE PRESSURE

	Sample Unsealed			Sample Sealed		
	Δ P, Pa	Flow, m^3/hr	Flow l/s	Δ P, Pa	Flow, m^3/hr	Flow l/s
Reading 1	150	13.05	3.63	150		0
Reading 2		14.54	4.04			0
Reading 3		13.39	3.72			0
Average Air Flow			3.79			0
Net Air Leakage	3.79	l/s				

NEGATIVE PRESSURE

	Sample Unsealed			Sample Sealed		
	Δ P, Pa	Flow, m^3/hr	Flow l/s	Δ P, Pa	Flow, m^3/hr	Flow l/s
Reading 1	150	11.96	3.32	150		0
Reading 2		12.67	3.52			0
Reading 3		13.83	3.84			0
Average Air Flow			3.56			0
Net Air Leakage	3.56	l/s				

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SWTM-1.4.1 AS_NZS4284 Static Water Penetration v1

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Version	1	TEST No: SWTL T-	228
Date Created	4-Apr-24 BF	Sheet #	4
Date Checked	23-Apr-24 BF	of sheets	6

CLIENT	The Building Agency 19 August 2024
TEST OPERATOR	Bernard Farrington
DESCRIPTION OF SAMPLE	Aliclad V085 & S085 Vertical Weatherboard System
CLIENT DRAWING REF(S)	BA 2-01, BA 3-01, BA 3-02, BA 5-01, BA 6-01: BA 6-08, BA 7-01: BA 7-03 (All Revision A)

STATIC PRESSURE TEST AS/NZS 4284:2008

Specified Test Pressure 455 Pa or

Test Pressure: 0.3 x SLS Press 455 Pa

Pressure	Time	Comments
0 Pa	5 min.	No leaks evident
455 Pa	15 min.	No leaks evident
0 Pa	5 min.	No leaks evident

Result Pass Checked BF

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Report Date: 10 September 2024

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SWTM-1.4.2 AS_NZS4284 Cyclic Water Penetration v1

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Version	1	TEST No: SWTL T-	229
Date Created	4-Apr-24 BF	Sheet #	5
Date Checked	23-Apr-24 BF	of sheets	6

CLIENT	The Building Agency 19 August 2024
TEST OPERATOR	Bernard Farrington
DESCRIPTION OF SAMPLE	Aliclad V085 & S085 Vertical Weatherboard System
CLIENT DRAWING REF(S)	BA 2-01, BA 3-01, BA 3-02, BA 5-01, BA 6-01: BA 6-08, BA 7-01: BA 7-03 (All Revision A)

CYCLIC PRESSURE TEST AS/NZS 4284:2008

5 MINS @ 0.15 - 0.30 +ve SLS Test Pressure Pa	Based on minimum +ve SLS of 1000 Pa. 2 minutes zero pressure between each stage.
5 MINS @ 0.20 - 0.40 +ve SLS Test Pressure Pa	
5 MINS @ 0.30 - 0.60 +ve SLS Test Pressure Pa	

Note: If Cyclic test is more than 30 minutes after Static test, then water must be turned on for 5 minutes prior to cyclic pressure.

Pressure			Water On/Off	Time	Comments
227	455	Pa	On	5 min.	No leaks evident
0		Pa	On	2 min.	No leaks evident
303	606	Pa	On	5 min.	No leaks evident
0		Pa	On	2 min.	No leaks evident
455	909	Pa	On	5 min.	No leaks evident
0		Pa	Off	5 min.	No leaks evident

227	455	Result	Pass	Checked	BF
303	606	Result	Pass	Checked	BF
455	909	Result	Pass	Checked	BF

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SWTM-1.2.1 AS_NZS4284 Worksheet Deflection Measurements v2

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Version	2	TEST No: SWTL T-	230
Date Created	4-Apr-24 BF	Sheet #	6
Date Checked	23-Apr-24 BF	of sheets	6

Note: This worksheet is for use with laser distance measurement

CLIENT	The Building Agency 19 August 2024
TEST OPERATOR	Bernard Farrington
DESCRIPTION OF SAMPLE	Aliclad V085 & S085 Vertical Weatherboard System
CLIENT DRAWING REF(S)	

ULTIMATE LIMIT STATE TEST PRESSURE	+	2500	Pa
	-	2500	Pa

Atmospheric Conditions	Temperature	11.9	°C
	Barometric Pressure	1002	hPa
	Relative Humidity	79	%

Result Pass Checked BF

Note: Minor dislodgement of the horizontal inter-storey clip on flashing strip

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17 Appendix D – Uncertainty of Measurement

SWTM-16.0 V1 Uncertainty of Measurement - Air Infiltration
Date Created: 4-Dec-23 BF
Date Checked: 12-Dec-23 BF
G:\Shared drives\Shelby Wright Test Labs\Technical Records\12. Error Budget

Client	The Building Agency
Test Sample	Aliclad V085 & S085 Vertical Weatherboard System
Date	19-Aug-24
Operator	Bernard Farrington

FLOW COMPENSATION FOR ATMOSPHERIC PRESSURE AND TEMPERATURE

PARAMETER	UNITS	INPUTS
Flow Reading	m³/h	13.24
Temperature Actual	Degrees Celcius	8
Pressure Actual (Metservice)	Hectapascals	1001
Air Infiltration Pressure	Pascals	150
Specimen Dimensions	Width (m)	3.935
	Height (m)	3.24
	Area (m²)	12.749

RESULTS

Flow Compensated
281
100100 m³/h 13.448

Actual Flow per m²
l/m²/s 0.293

UNCERTAINTY OF SAMPLE SIZE

		Dimension measured in (m)	Tape Calibration UoM (%)	Reading Accuracy +/- 0.001 m		UoM of Sample Size %
Dimension (mm)	X-X (U_a)	3.935	0.5%	0.001	U_a	1.942%
Dimension (mm)	Y-Y (U_b)	3.24	0.5%	0.001	U_b	1.589%

$$U\ m^2 = \sqrt{\left[\left[\frac{U(A)}{A}\right]^2 + \left[\frac{U(B)}{B}\right]^2\right]}$$ 0.007 %

UNCERTAINTY OF AIR INFILTRATION FLOW RATE

Daaks Certificate UoM for Schmidt SS.20.260 1.3%

$$U^2\,[Flow] = \left[\frac{L}{S}\right]^2 U^2\, m^2 + [m^2]^2\, U^2 \left[\frac{L}{S}\right]$$ 3.036%

UoM Air Infiltration 17.425%

18 Appendix E – Certificate of Identification