# ΥΠΟΓΫ́Ο ΜΫ́Χ



## = HORIZONTAL = TIMBER BATTEN

HIGH PERFORMANCE ALUMINIUM WEATHERBOARD SYSTEM



# ΥΠΟΓΫ́Ο ΜΫ́Χ

The Building Agency is the exclusive distributor of a cultivated selection of well-respected brand name cladding and roofing products and systems.

The Building Agency's focus is to ensure correct and comprehensive selections from our product and system ranges and to assist with design, specification and delivery of high performance buildings.

The Building Agency introduces our newly developed - ALICLAD MAX System

Performance and aesthetics find a perfect balance in the latest contemporary aluminium cladding system designed in New Zealand for our local conditions.

The tough New Zealand climate calls for exterior products that can perform in all weather conditions, meet the most stringent code and standards, and bring elegance and architectural integrity.

AliClad Max, designed by The Building Agency, is a premium aluminium weatherboard system that has had every detail and feature designed, tuned and resolved. Backed by decades of local experience and international product knowledge, AliClad Max offers architects, builders and developers a robust and beautifully finished product, supported on an easy-to-install fixing system engineered to perform.

Designed for large-scale commercial projects with a residential application. Designed for:

WEATHER-TIGHTNESS: The system has been designed in line with NZBC Acceptable Solutions. It is tested to be compliant with E2 via NZS4284:2008.

STRUCTURE: The AliClad Max system is designed for buildings in wind zones from Low to over Extra high wind loadings and engineered to be fixed at maximum span distances for easier application and reduced project costs.

FIRE PROTECTION: Aluminium is defined as non-combustible under the NZBC C clause and when correctly specified the support system forms a limited / non-combustible wall assembly. AliClad Max is tested for buildings over 25m in total height by a full-scale system fire performance test to BS8414.

FINISH AND AESTHETICS: Sublimated woodgrains, Flat and matt powdercoat options, Anodised, Anodised-look paint finishes, and horizontal and vertical profile alignments achieve both classic and contemporary designs with ease.





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Detail Number

AC-H-TB-DL.2

Detail List

Version

[V2.1] MATERIALS - SYSTEMS - SOLUTIONS

## 

## COMPLIANCE STATEMENT

AliClad Max is an extruded aluminium cladding system that can be installed horizontally or vertically, comprised of 2.2mm thick interlocking weatherboards in multiple design profile options and an accompanying flashing system. The system has been designed up to extra high wind zone in accordance with NZS3604 and engineered to be fixed at increased span distances to provide simple, strong, and safe installations.

This compliance statement covers AliClad Max Cladding System on 20mm Drained & Ventilated cavities.

Allowance must be made for unhindered thermal expansion and contraction. AliClad Max weatherboards must be cut to length allowing a 1 mm gap per metre of board and the fixing holes must be oversized to accommodate potential movement.

## NZBC Clause B1 Structure

## B1.1a, B1.1b, B1.1c, B1.2, B1.3.1, B1.3.2

AliClad Max weatherboard cladding system structural analysis was undertaken with capacities determined using and theoretical analysis. Span tables for 20mm cavities have been developed to determine the required cladding fixing, batten/rail fixing and screws to main structure fixing spacing.

The AliClad Max cladding system has been designed to withstand up to ±2.40 kPa (ULS). When constructed in accordance with the structural and installation guidelines as per Appendix A, AliClad Max Cladding will meet NZBC Clause B1.

## NZBC Clause E2 External Moisture E2.1, E2.2, E2.3.2, E2.3.3, E2.3.5, E2.3.6, E.2.3.7

AliClad Max weatherboard cladding is intended to be part of a rainscreen cladding system where the panels form the outermost water shedding layer. The cladding line is expected to deflect most of the water hitting the façade. The weather resistant line is located at the back of the rainscreen cavity that is typically constructed with a flexible building wrap or rigid air barrier compliant with NZBC E2/AS1: Table 23.

Where water does penetrate the cladding line, the cavity between the cladding and the structural wall is expected to prevent water being able to migrate onto the structural wall and allow water to drain down. The cavity also allows ventilation which aids in the drying of any residual water and drying of the structural wall.

## NZBC C3 Fire Performance C1a, C1b, C3.1, C3.2, C3.3

AliClad Max weatherboard cladding is manufactured from solid aluminium. As per MBIE Guidance (MBIE 2817 Fire Performance of External Wall Cladding Systems) that for buildings categorised as low risk (<10m high & >1m away from relevant boundary.) There are no requirements for fire testing protocols P1 to P5 and therefore all products are suitable for use in this application.

Where consideration of fire safety is required due to proximity of relevant boundaries, AliClad Max can contribute to a building's performance when specified on one of the applicable non-combustible support systems available.

## NZBC Clause B2 Durability

## B2.1, B2.2, B2.3.1, B2.3.2

AliClad Max weatherboard base material is 6063-T5 grade aluminium and by its nature is inherently durable. Aluminium is a reactive metal that quickly forms a stable oxide layer upon contact with the atmosphere which seals the raw aluminium from further oxidation. Therefore, aluminium is fundamentally durable. Aluminium supports are suitable to be used in all New Zealand exposure/atmospheric zones.

In addition, the AliClad Max weatherboard cladding is finished using premium powder coating systems.

### **Timber and Plastic Battens and Fixings**

On Low-Risk buildings where fire requirements allow, a timber or HDPE cavity packer batten system may be used. Where timber is used it must be at a minimum of H3.1 treatment. If applicable a suitable bond breaker must be utilised to ensure no contact between cladding, flashings, and treated battens. Fixings for AliClad Max must achieve >35mm structural embedment into main structure.

Refer to Appendix A Fixing Table 1

### **Aluminium Battens and Fixings**

Cladding rails and fixings are also manufactured from aluminium and stainless steel, both materials are recognised as sufficiently durable and should remain serviceable throughout the expected serviceability of the cladding system. Fixings of Aluminium rails must achieve >45mm embedment into main structure.

Refer to Appendix A Fixing Tables 2 & 4

### Galvanised Support and Battens

To meet the durability requirements, mild steel support and battens need to be protected against corrosion. Support frames must have a minimum wall thickness of 1.15BMT. Support frames are to be coated with Zincalume steel AZ150. The Building Agency only specify Zincalume coatings for buildings with Exposure Zone of B and C to achieve the durability requirement specified in NZBC Clause B2. In addition, as outlined on NZBC E2/AS1 Table 20, hidden elements coated with AZ150 can achieve 50-year durability. Fixings of galvanised support battens rails must achieve >35mm embedment into main structure. Refer to Appendix A Fixing Tables 3 & 5

## Design Responsibility

It is expected that the architect/specifier's design intent and specifications (including specified materials, & compatibility where items are subject to material run-off affecting durability) where applicable have been reviewed against the New Zealand Building Code. AliClad Max, when correctly specified will comply to or contribute to compliance to the following NZBC Clauses and their listed performance clauses as listed.



## ΔLICLΛD

## **APPENDIX A - SPAN TABLES**

## Table 1: Horizontally Aligned - Installed on Timber or Plastic Batten

			ALICLAD TYPE		
WIND ZONE	V136	V200	S150	S200	S125/75
		MAXIM	IUM ALLOWABLE SPA	N (mm)	
LOW 00m/s-32m/s   <0.6kPa	2200	2200	2200	2200	2200
MEDIUM 32m/s-37m/s   >0.66kPa & <0.88kPa	2000	2000	2000	2000	2000
HIGH 37m/s-44m/s   >0.88kPa & <1.25kPa	1800	1800	1800	1800	1800
VERY HIGH 44m/s-50m/s   >1.25kPa & <1.61kPa	1600	1600	1600	1600	1600
EXTRA HIGH 50m/s-55m/s   >1.61kPa & <1.9kPa	1400	1400	1400	1400	1400
SPECIFIC ENGINEERING DESIGN >55m/s   >1.9kPa	SED	SED	SED	SED	SED

SS304 12g x 65mm HexTek Screw 10mm Hex (35mm minimum embedment), screw fixing at every AliClad board.

2. Table is applicable for non-]structural H3.1 Timber and Extruded Plastic cavity packer battens either of which form a nominal 20mm cavity

Wind Zone Classifications - ULS From NZS3604, considered in Positive(+) Pressure and Negative(-) Suction B

\* Design Assumptions:

- 1. The wind pressures are for external wind only. Internal pressures will not be applied to the cladding and assumed to be resisted by the internal lining.
- 2. Load on each panel is uniformly distributed.
- The span/deflection limit for SLS wind load is 3 250mm for aluminium battens/zincalume top hats and L/175 for the AliClad boards, with the serviceability wind load equal to 68% of the ULS wind load.
- 4. SS304 12g x 65mm HexTek SD Screw 10mm Hex (AliClad board to Timber Batten)

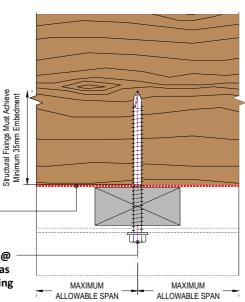
5. Timber is assumed Radiata Pine (Group J4 for withdrawal, group 5 in shear, with a characeristic density in excess of 420kg/m<sup>3</sup>). 5.1. Timber studs at 600mm o/c and

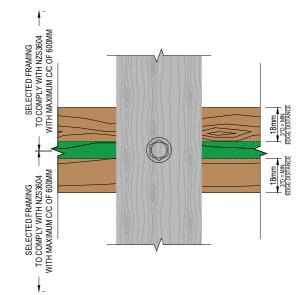
- 5.2. timber nogs/dwangs at 800mm o/c and
- 6. For Edge Distances Framing fixing face thickness is med as 45m

Structural

### Selected Building Flexible Membrane/RAB/RWU must be compliant to E2:Table 23

Fixings for Horizontal Timber Batten @ Each Nog = 800mm MAX C/C or less as appropriate to site wind zone & bracing requirements in accordance with NZS3604







## MATERIALS . SYSTEMS . SOLUTIONS

## PARTS LIST

## **CLADDING PROFILES**

ACV136 - AliClad Max V136, 136x25 V Shiplap Weatherboard, 5.8m. ACV200 - AliClad Max V200, 200x25 V Shiplap Weatherboard, 5.8m. ACS150 - AliClad Max S150, 150x25 Shadow Groove Weatherboard, 5.8m. ACS200 - AliClad Max S200, 200x25 Shadow Groove Weatherboard, 5.8m. ACS125/75 - AliClad Max S200-125/75, 200x25 Shadow Groove Weatherboard with 75mm & 125mm board look, 5.8m.

## **2 PIECE BASE CLIPS**

ACHMDB-58	AliClad Max - H Mould Base, 5.8m.
ACJMDB-58	AliClad Max - J-Mould Base, 5.8m.
ACJMDF-58	AliClad Max - J-Mould Face, 5.8m, Selected Finish.
ACINTB-58	AliClad Max - Internal Corner Base, 5.8m, Selected Finish.
ACEXTB-58	AliClad Max - External Corner Base, 5.8m.
ACJMDBC-58	AliClad Max - Bottom of Cladding Base, 5.8m, Selected Finish.

## 2 PIECE FACES & TRIMS

ACINTF	- AliClad Max - Internal Corner Face, 5.8m.
ACWNS	- AliClad Max - Window Sill Face, - to suit WANZ supported window, 5.8m, Selected Finish.
ACWNSP	- AliClad Max - Window Sill Face - to suit Punched Window, 5.8m, Selected Finish.
ACJMDF	- AliClad Max - J Mould Face, 5.8m, Selected Finish.
ACHMDF	- AliClad Max - H Mould Face, 5.8m, Selected Finish.
ACEXTF	- AliClad Max - External Corner Face, 5.8m, Selected Finish.

## JUNCTION ELEMENTS

ACCLZ-58	AliClad Max - Clamp Zed, 5.8m, Selected Finish.
ACCLC-58	AliClad Max - Clamp Channel, 5.8m, Mill Finish.
ACSTR-58	AliClad Max - Starter Rail, 5.8m, Mill Finish.
ACJMC-58	AliClad Max - Jamb Clip, 5.8m, Mill Finish.
ACJMF-58	AliClad Max - Jamb Flashing, 5.8m, Selected Finish.

## MECHANICAL DRAINAGE SYSTEM

ACJMT-01RIGHT	AliClad Max - Type 1a Jamb Tray Right
ACJMT-01LEFT	AliClad Max - Type 1b Jamb Tray Left
ACJMT-02RIGHT	AliClad Max - Type 2a Jamb Tray Right
ACJMT-02LEFT	AliClad Max - Type 2b Jamb Tray Left

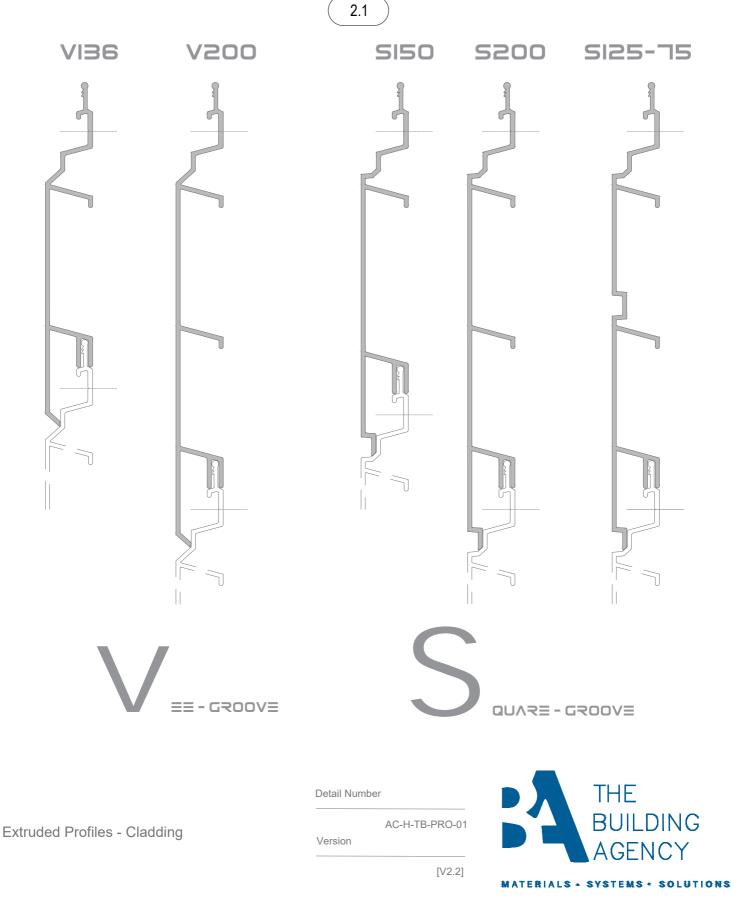
## ALPHA RAIL SUPPORT SYSTEM PROFILES

AR-CLIP100	Alpha Rail Packer Clip 10mm, 50mm.
AR-CLIP50	Alpha Rail Packer Clip 5mm, 50mm.
AR-CLIP30	Alpha Rail Packer Clip 3mm, 50mm.
AR-CLIP16	Alpha Rail Packer Clip 1.6mm, 50mm.
AR-RAIL20H	Alpha Rail Vertical Rail 20mm, 5.8m.
AR-RAIL20V	Alpha Rail Horizontal Rail 20mm, Drained, 5.8m.

	Detail Number	THE
AliClad Max - Parts List	AC-Part Lis Version	BUILDING AGENCY
	[V2.2]	MATERIALS . SYSTEMS . SOLUTIONS

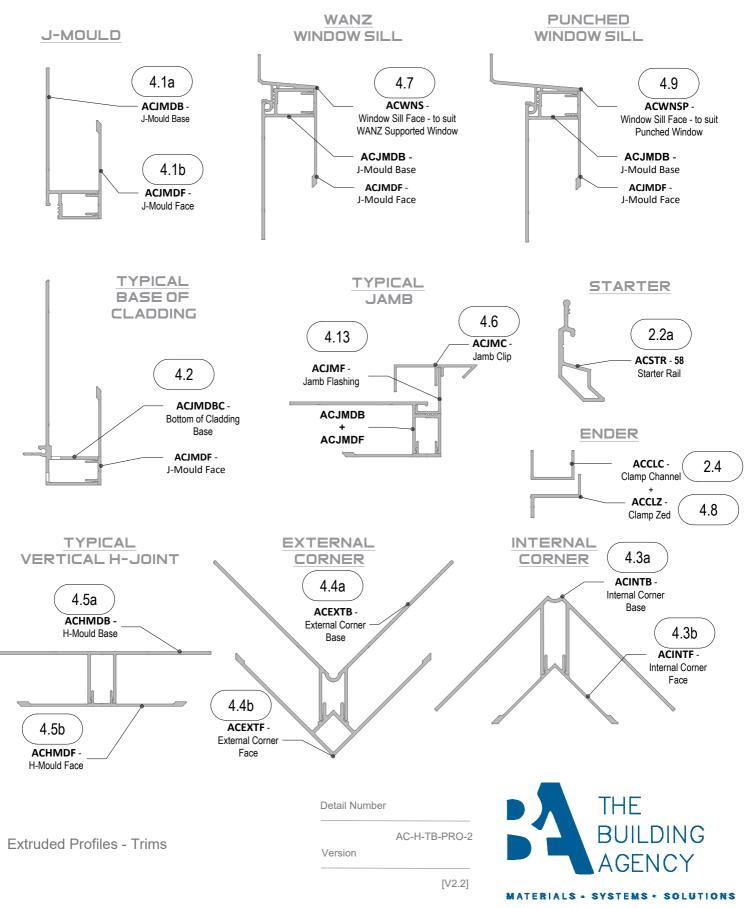
## **CLADDING PROFILES**

HIGH PERFORMANCE ALUMINIUM WEATHERBOARD SYSTEM



## TRIMS - PROFILES

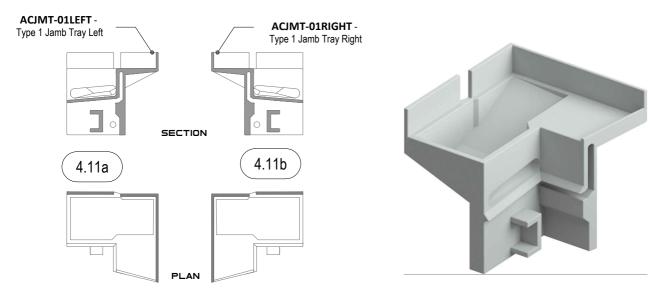
TYPICAL ASSEMBLIES



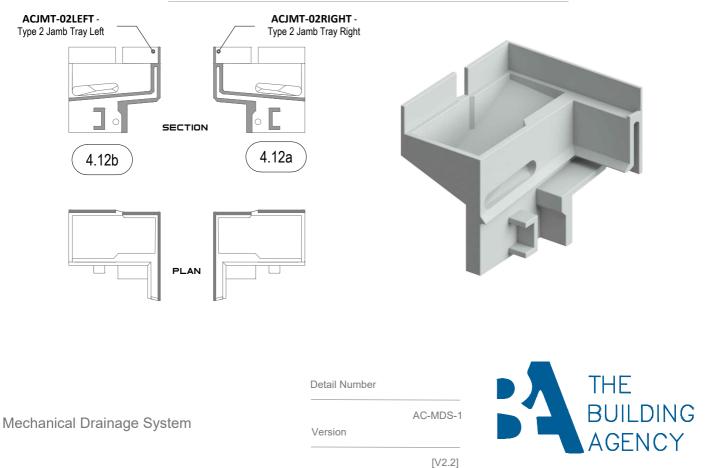
## MECHANICAL DRAINAGE SYSTEM

PROPRIETARY JAMB-TO-SILL DRAINAGE CLIPS - AVAILABLE IN WHITE, GREY AND BLACK.

TYPE I - FOR WINDOWS USING WANZ BAR SUPPORT



TYPE II - FOR PUNCHED OR RECESSED WINDOWS

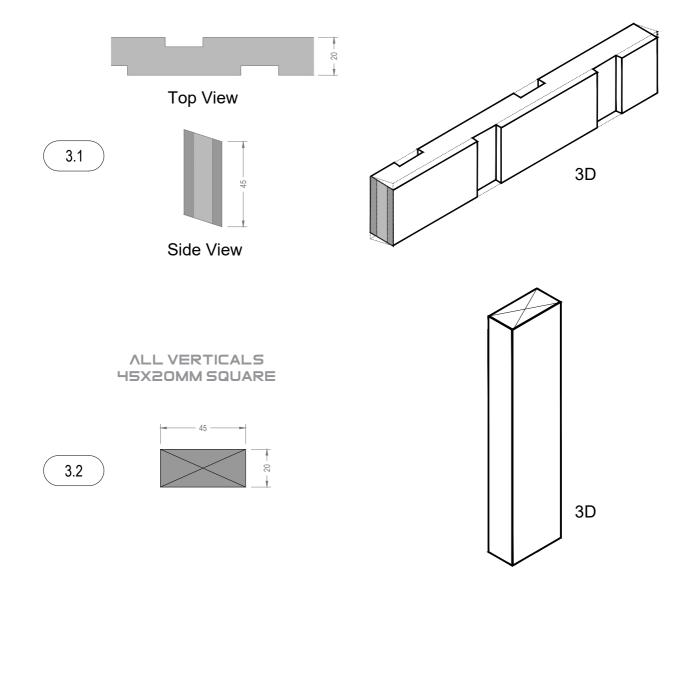


MATERIALS . SYSTEMS . SOLUTIONS



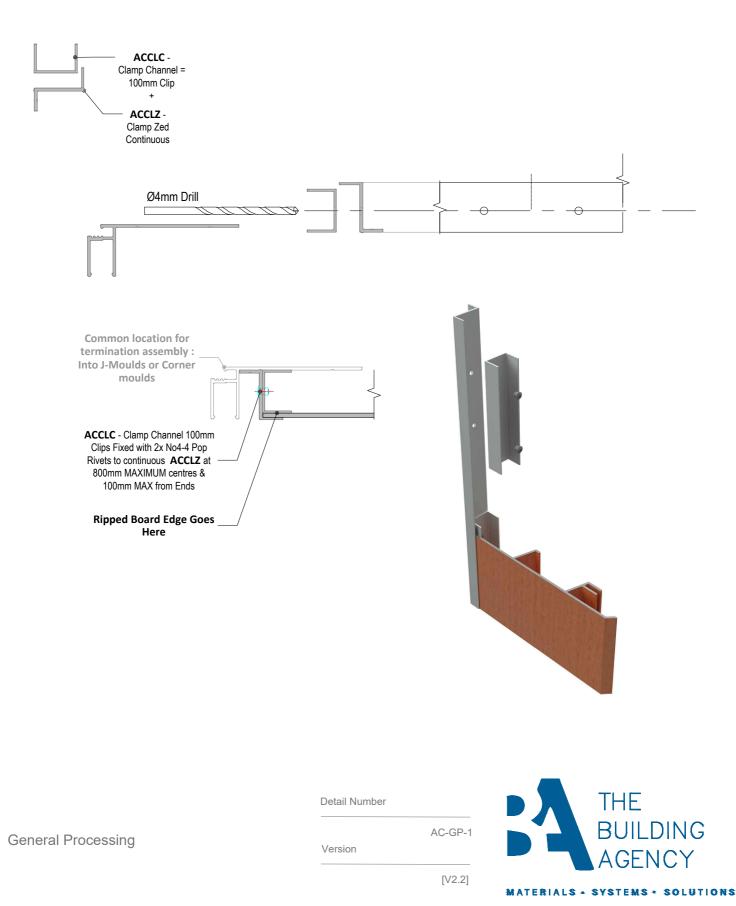
## VENTILATED CAVITY H3.I TIMBER BATTENS

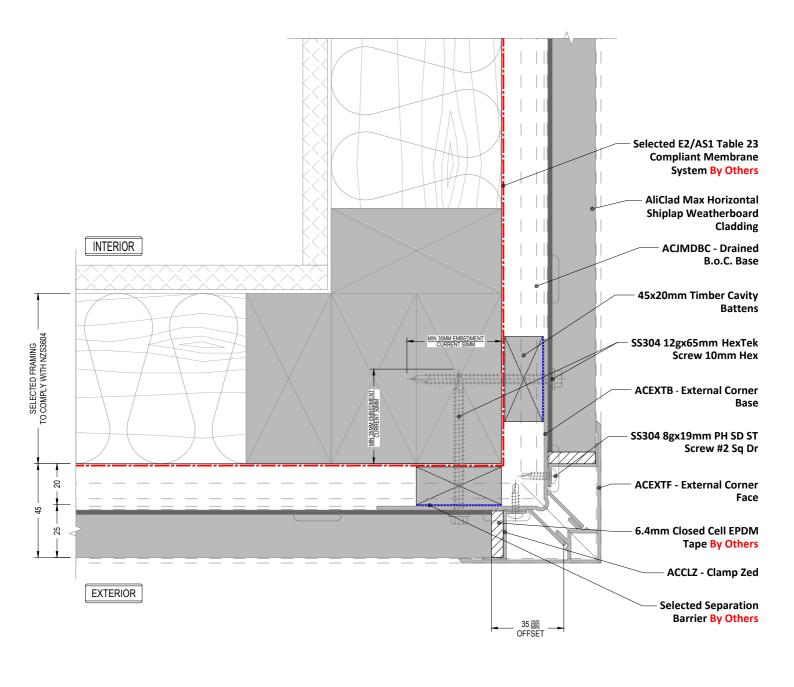
ALL HORIZONTALS 45X20MM DUAL BEVEL/DUAL CASTELLATION



Timber Cavity Batten System
Detail Number
ARS-ACC-01
Version
[V2.1]

## **PROCESSING - RIPPED WEATHERBOARD TERMINATION**





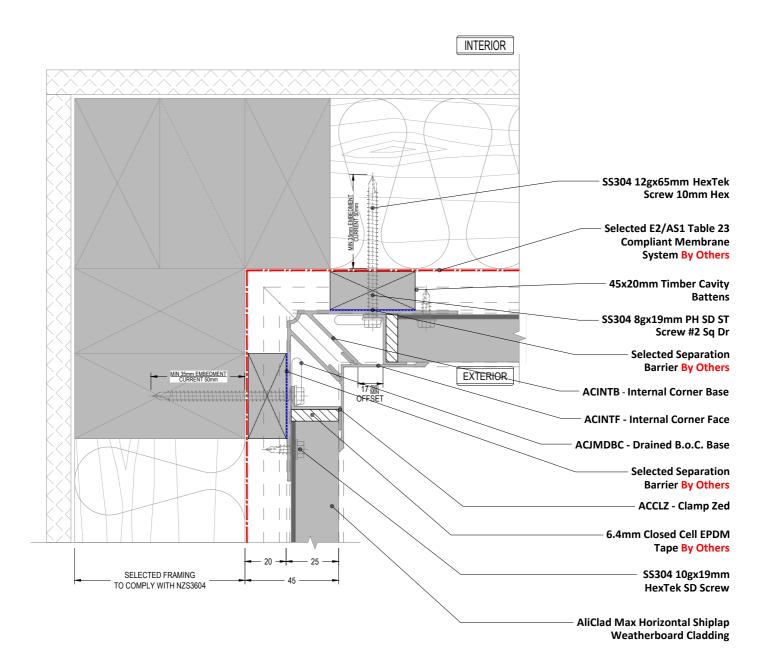


Detail Number

Version

External Corner

ACJMDBC - Drained B.O.C. Base Shown in dashed lines





Detail Number

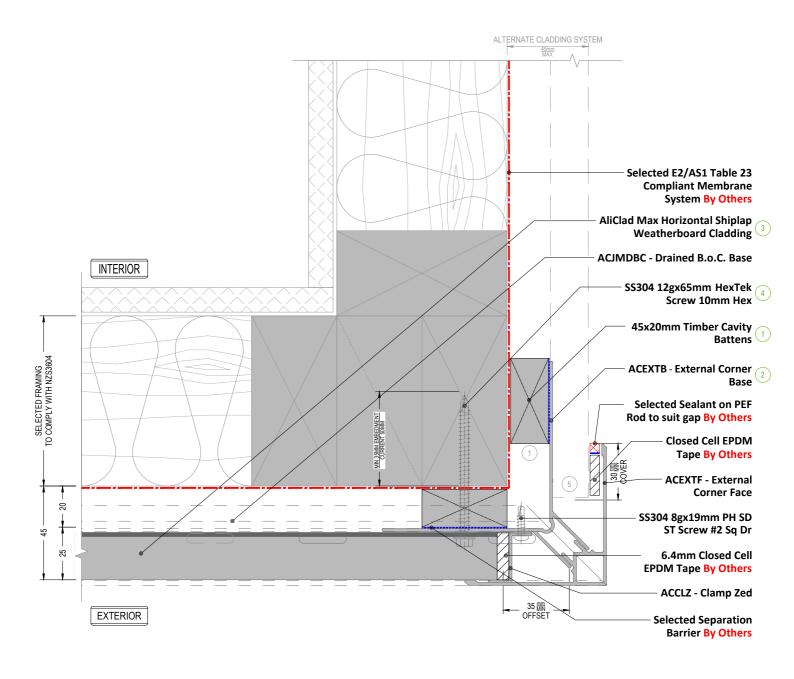
AC-H-TB-1.2

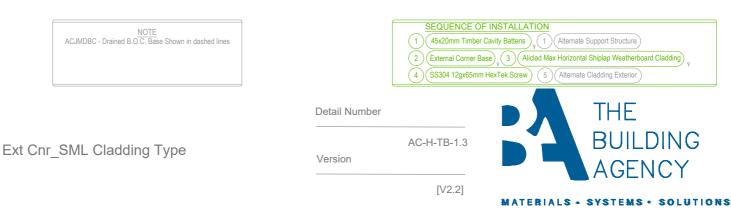
[V2.2]

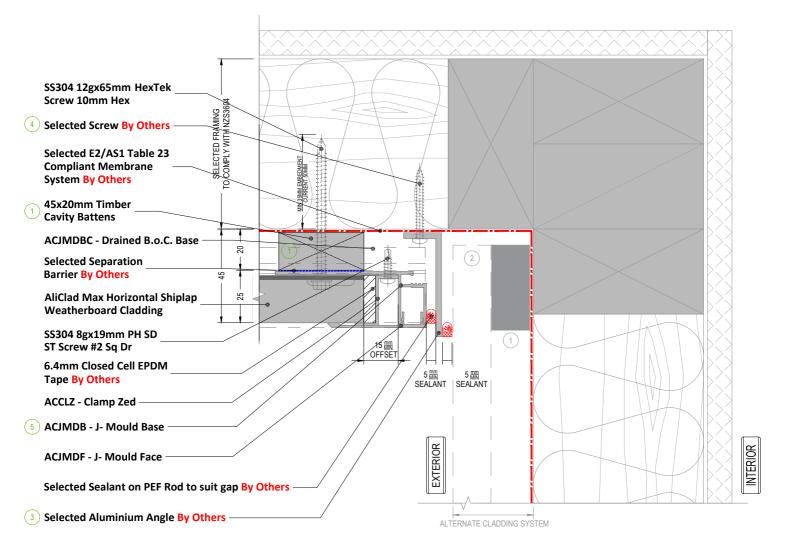
Version

Internal Corner

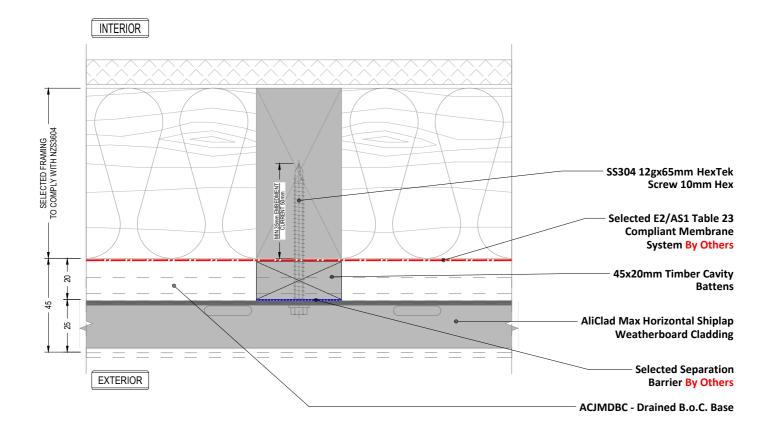
ACJMDBC - Drained B.O.C. Base Shown in dashed lines







	<u>NOTE 1</u> ACJMDBC - Drained B.O.C. Base Shown in dashed lines <u>NOTE 2</u> Flashings and Angles are not included in the system			SEQUENCE OF INSTALLATION         45x20mm Timber Cavity Battens
		Detail Number		
Int Cnr_SML Cladding Type		Version	AC-H-TB-1.4	
			[V2.2]	MATERIALS - SYSTEMS - SOLUTIONS



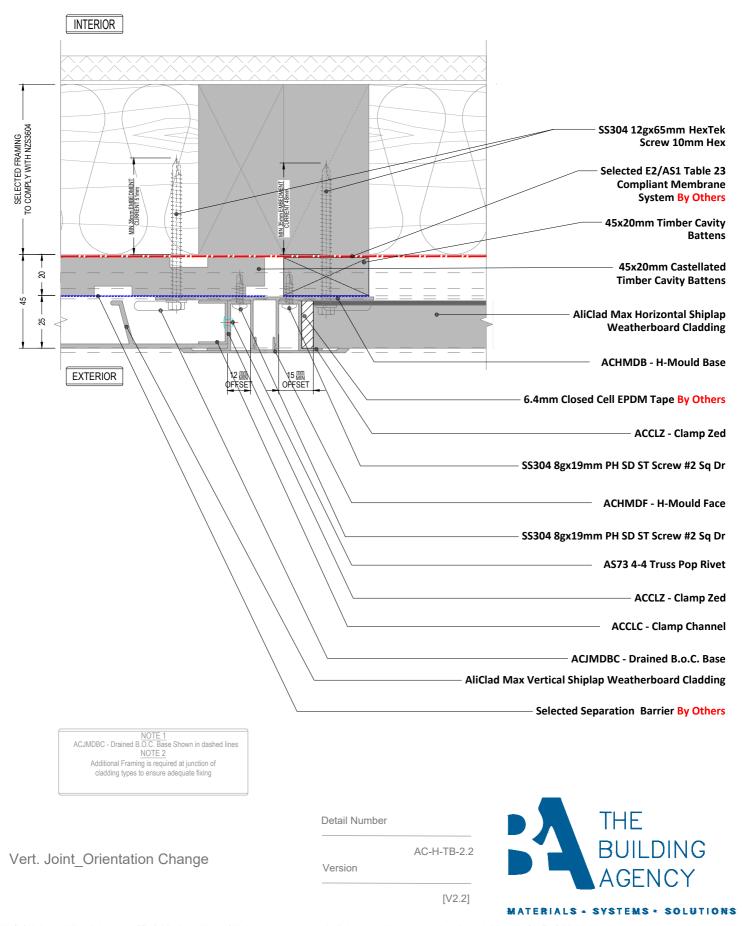


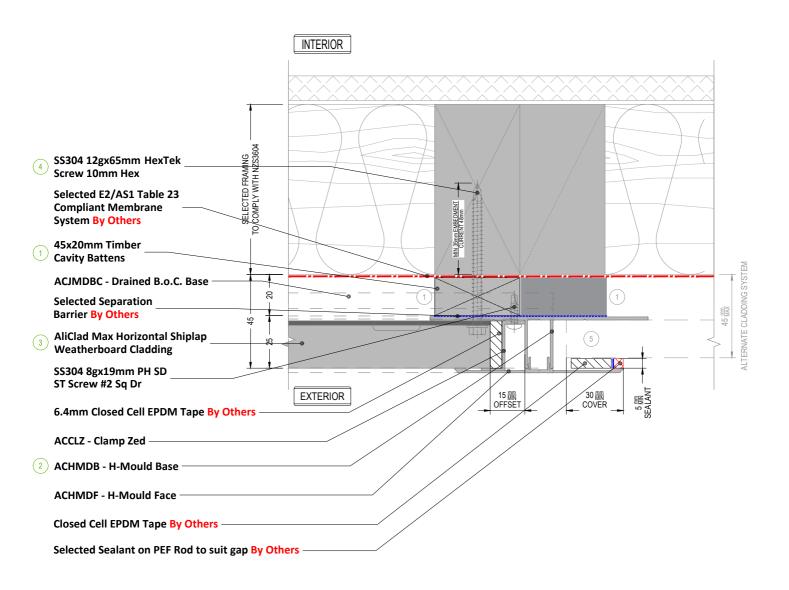
Detail Number

Version

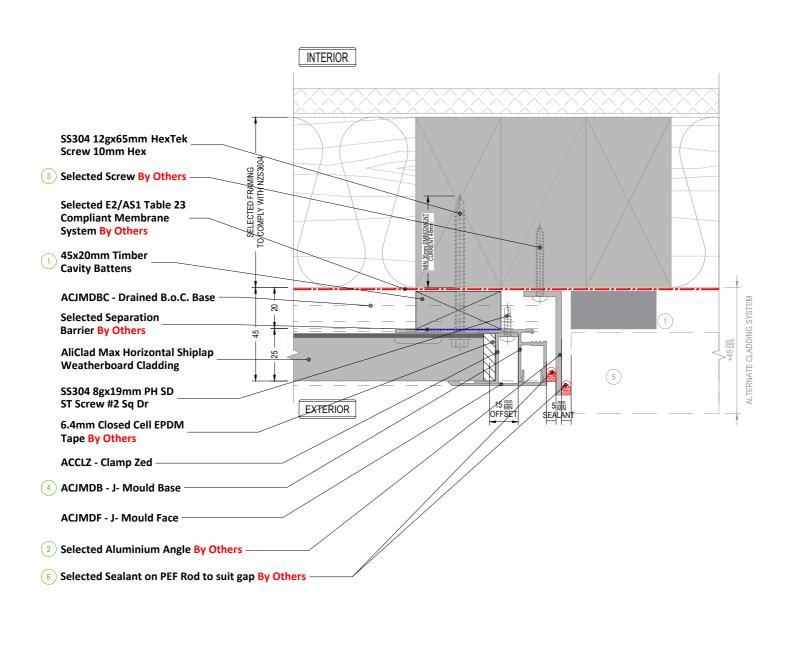
Vertical Joint - Typical

ACJMDBC - Drained B.O.C. Base Shown in dashed lines

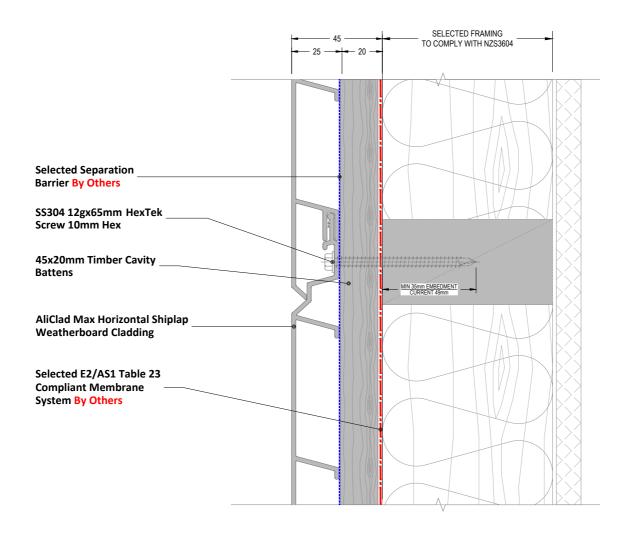




	NOTE 1 ACJMDBC - Drained B.O.C. Base Shown in dashed lines NOTE 2 Additional Framing is required at junction of cladding types to ensure adequate fixing		SEQUENCE OI (1) (45x20mm Timber (2) (ACHMDB - H-Mo (4) (SS304 12gx65mm	uld Base , 3 Aliclad Max Horizontal Shiplap Weatherboard Cladding ,
Vort la	int SML Cladding Type	Detail Number	AC-H-TB-2.3	
ven. Ju		Version	[V2.2]	AGENCY MATERIALS - SYSTEMS - SOLUTIONS



	NOTE 1           ACJMDBC - Drained B.O.C. Base Shown in dashed lines           NOTE 2           Additional Framing is required at junction of           cladding types to ensure adequate fixing           NOTE 3           Flashings and Angles are not included in the system		SEQUENCE OF INSTALL 1 45x20mm Timber Cavity Batter 2 Selected Aluminium Angle By C 4 ACJMDB - J-Mould Base	ns (1) Alternate Support	crew <b>By Others</b>	
Vert. Jo	int_LRG Cladding Type	Detail Nu  Version	AC-H-TB-2.4	MATERIALS	THE BUILDING AGENCY	NS



Detail Number

AC-H-TB-3.1

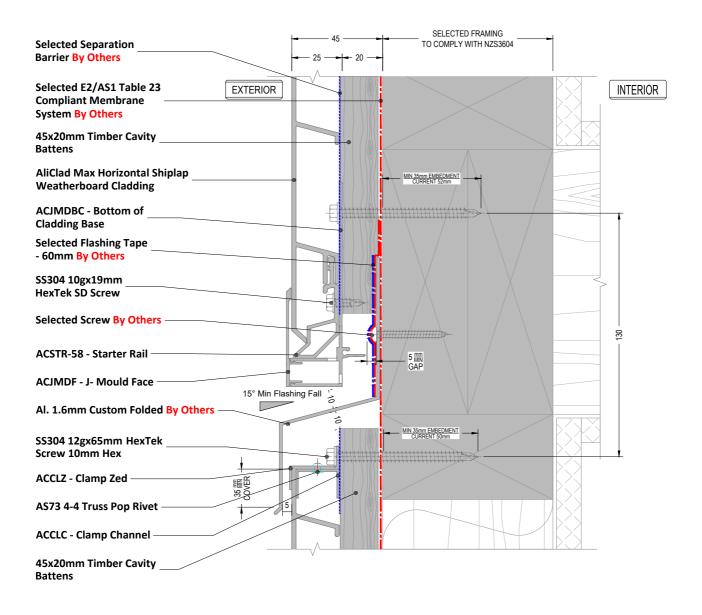
[V2.2]

Hori. Joint\_Typical

THE BUILDING AGENCY

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<u>NOTE</u> Flashings and Angles are not included in the system

Detail Number

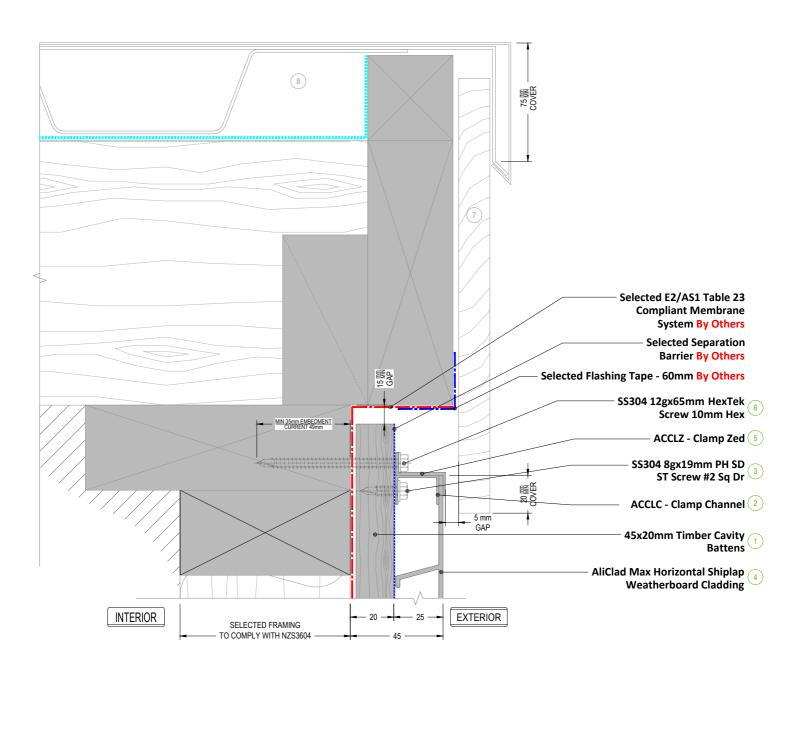
AC-H-TB-3.2

[V2.2]

Interstorey Joint

Version







[V2.2]

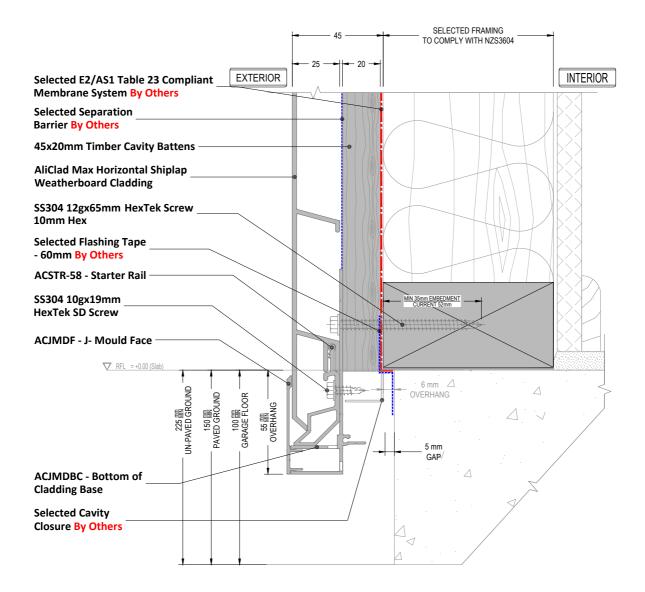
AGENCY

MATERIALS . SYSTEMS . SOLUTIONS

TOP Cladding\_Parapet

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Version



<u>NOTE</u> Cavity Closure are not included in the system

Detail Number

Version

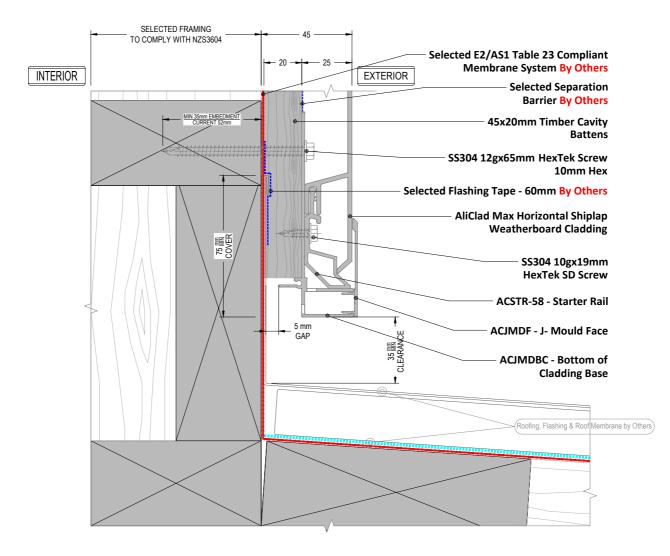


АС-Н-ТВ-4.2

[V2.2]



MATERIALS . SYSTEMS . SOLUTIONS





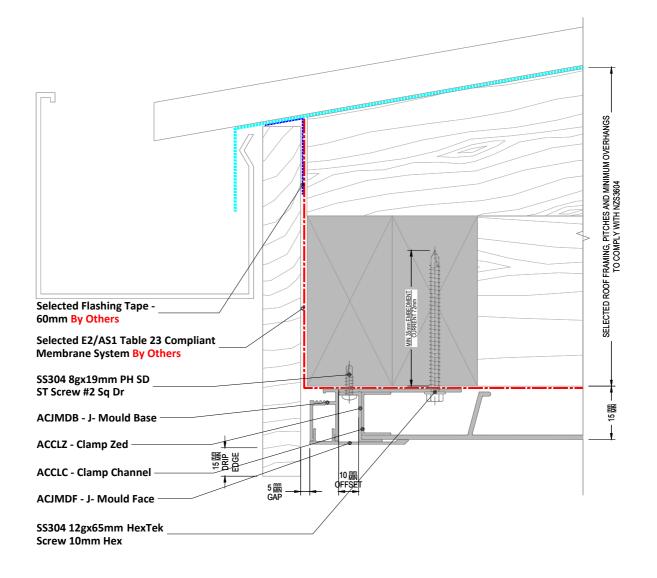
Detail Number

Version

AC-H-TB-4.4

[V2.2]

BTM Cladding\_ Apron Roof



<u>NOTE</u> Weathering membrane under soffit is not required, but is recommendable for air barrier performance when a rigid wind barrier is not in use. -By Others

Detail Number

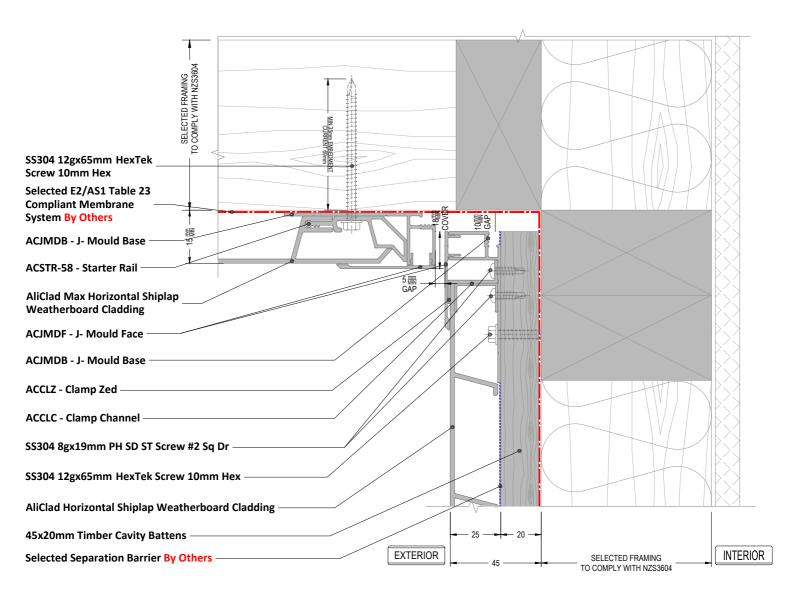
AC-H-TB-4.8

[V2.2]

Top Cladding\_Barge/Fascia Board

Version



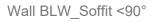


NOTE	
Weathering membrane under soffit is not required, but is recommendable for air barrier performance when a rigid wind barrier is not in use. -By Others	

Detail Number

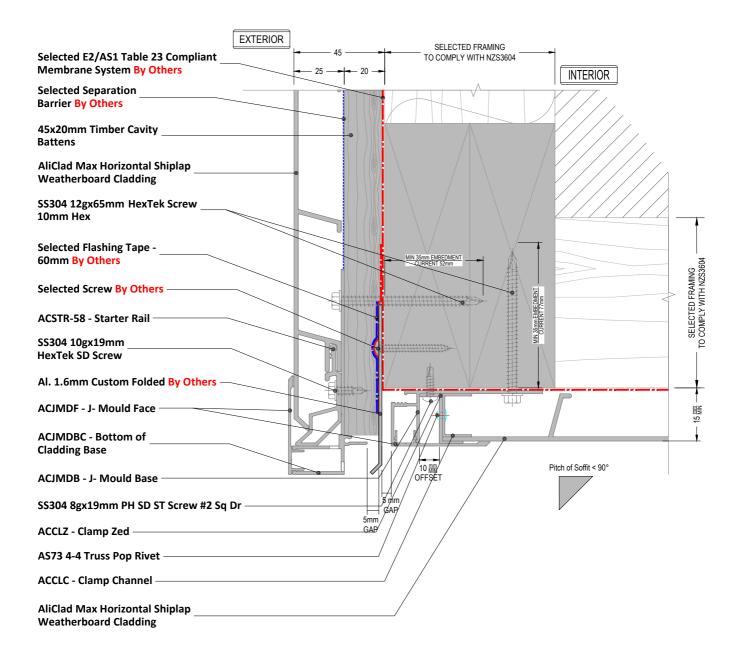
AC-H-TB-5.1

[V2.2]



Version





<u>NOTE</u> Weathering membrane under soffit is not required, but is recommendable for air barrier performance when a rigid wind barrier is not in use. -By Others <u>NOTE 2</u> Flashings and Angles are not included in the system

Detail Number

AC-H-TB-5.2

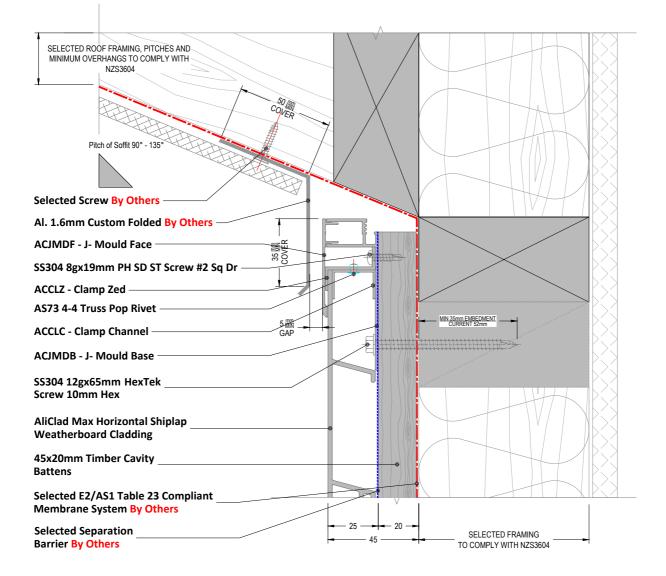
[V2.2]



Version



SELECTED ROOF FRAMING, PITCHES AND MINIMUM OVERHANGS TO COMPLY WITH NZS3604 Pitch of Soffit < 90°	
Selected Screw By Others Selected Aluminium Angle By Others ACJMDF - J- Mould Face ACJMDB - J- Mould Base ACCLZ - Clamp Zed AS73 4-4 Truss Pop Rivet SS304 8gx19mm PH SD ST Screw #2 Sq Dr ACCLC - Clamp Channel	
SS304 8gx19mm PH SD ST Screw #2 Sq Dr SS304 12gx65mm HexTek Screw 10mm Hex AliClad Max Horizontal Shiplap Weatherboard Cladding Selected E2/AS1 Table 23 Compliant Membrane System By Others 45x20mm Timber Cavity Battens SS304 12gx65mm HexTek	
Selected Aluminium Angle By Others	Selected Aluminium Angle By Others
	NOTE         Weathering membrane under soffit is not required, but is recommendable for air barrier performance when a rigid wind barrier is not in useBy Others         NOTE 2         Flashings and Angles are not included in the system
Wall BLW_Flat Sheet Soffit <90°	Detail Number AC-H-TB-5.6 Version [V2.2]



<u>NOTE</u> Weathering membrane under soffit is not required, but is recommendable for air barrier performance when a rigid wind barrier is not in use. -By Others <u>NOTE 2</u> Flashings and Angles are not included in the system

Detail Number

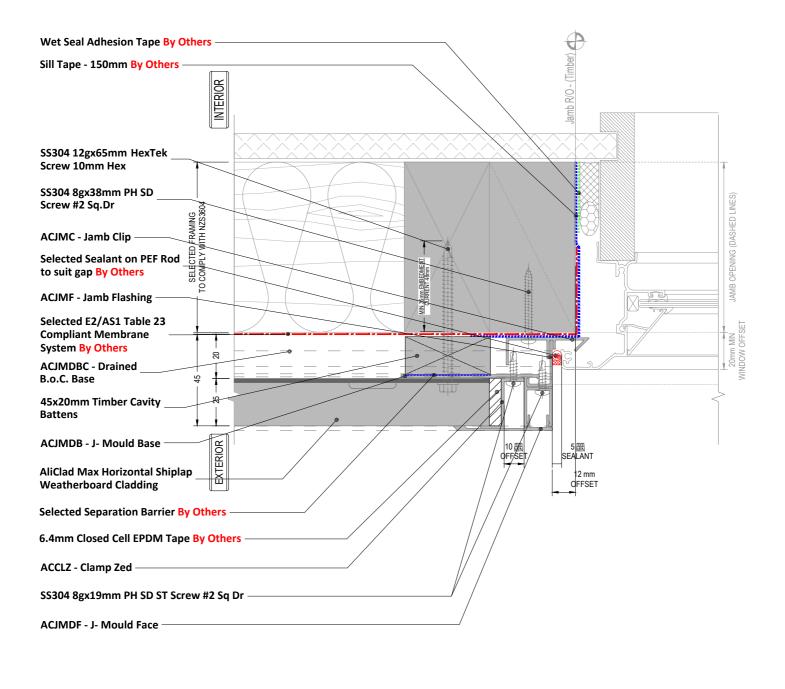
AC-H-TB-5.8

[V2.2]



Version





NOTE ACJMDBC - Drained B.O.C. Base Shown in dashed lines

Detail Number

Version

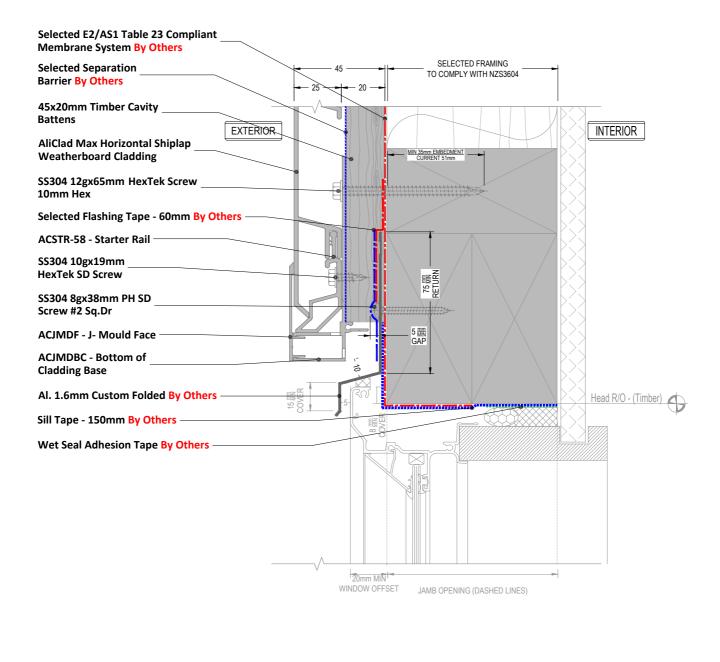
AC-H-TB-7.1

[V2.2]

Window Jamb Recessed

THE BUILDING AGENCY

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<u>NOTE</u> Refer to drawing "7.1" for Sill/Jamb Junction <u>NOTE 2</u> Flashings and Angles are not included in the system

Detail Number

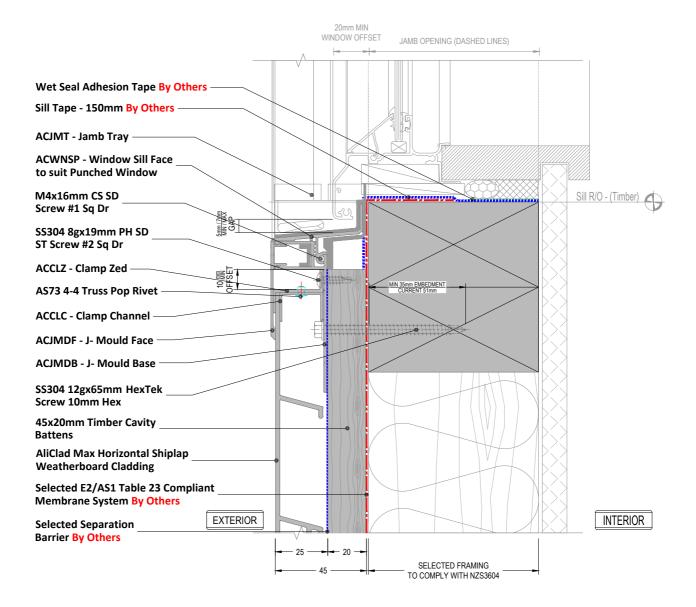
AC-H-TB-7.2

[V2.2]

Window Head\_Recessed

Version





NOTE Refer to drawing "7.1" for Sill/Jamb Junction

Detail Number

AC-H-TB-7.3

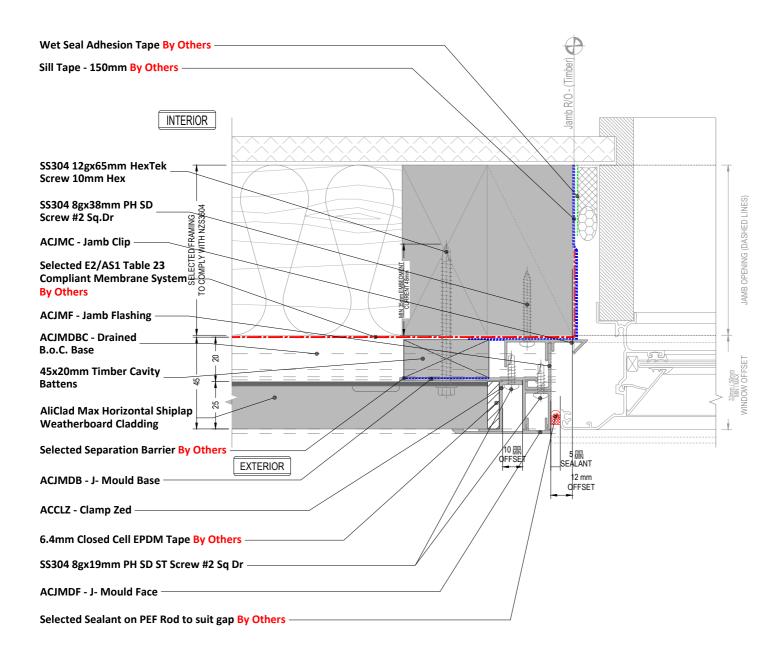
[V2.2]



Version



## ΫΓΙΟΓΫΟ ΜΫΧ





Detail Number

Version

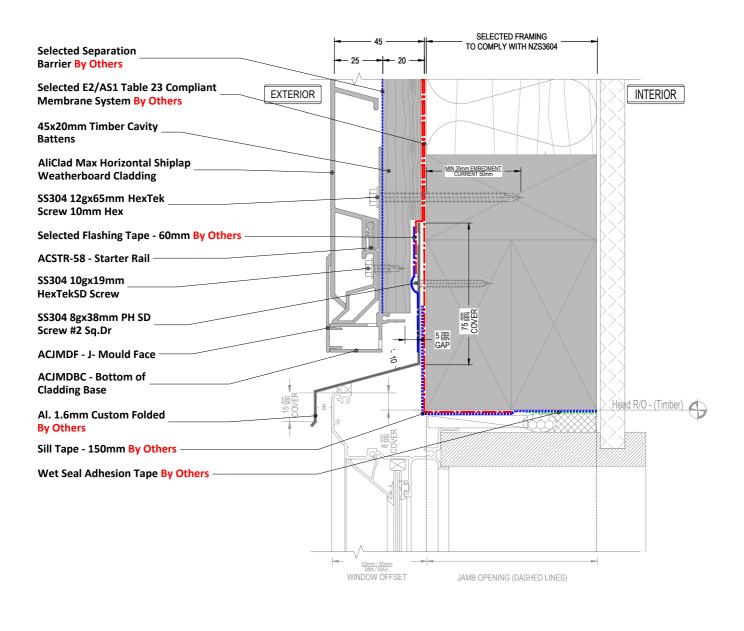
AC-H-TB-7.4

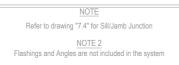
[V2.2]

Window Jamb\_WANZ/Supported

THE BUILDING AGENCY

MATERIALS . SYSTEMS . SOLUTIONS





Detail Number

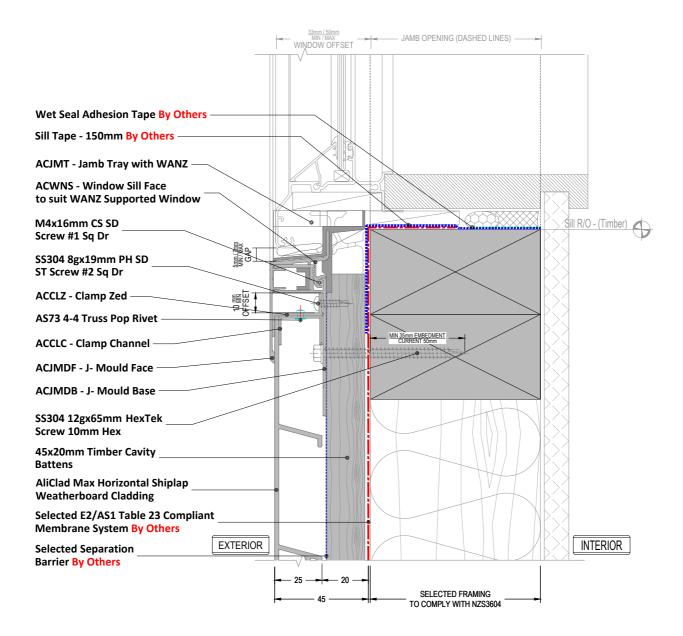
AC-H-TB-7.5

[V2.2]

## Window Head\_WANZ/Supported

Version





NOTE Refer to drawing "7.4" for Sill/Jamb Junction

Detail Number

AC-H-TB-7.6

[V2.2]

Window Sill\_WANZ/Supported

Version

