



ACE POLYSTYRENE EXTERNAL CLADDING SYSTEM, TECHNICAL & INSTALLATION MANUAL



WEATHER RESISTANT, SOUND REDUCING,
WATER RESISTANT, STRONG, LIGHTWEIGHT,
FLEXIBLE AND VERY ENERGY EFFICIENT!

BAL29
(AS1530.8.1-2007)

BUSHFIRE ATTACK LEVEL TESTED.

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Version 1	August 2022	Draft printed 16/8/2022
Version 2	July 2023	Updated to NCC 2022, 2 nd August 2023
Version 3	August 2026	Updated to NCC 2025, 10 th August 2026 Updated CM logo, 31/08/26

1 Introduction

1.1 ACE Polystyrene External Cladding System

ACE Polystyrene External Cladding System, developed by ACE Polystyrene , provides a fully CodeMark certified (CM40376) BCA compliant solution that is lightweight and quick to install, energy efficient solution to modern day building requirements.

This manual is provided for use by designers and builders to describe the performance, installation and typical detailing requirements for use of the ACE Polystyrene External Cladding System.

ACE Polystyrene External Cladding System has been tested, appraised and certified to the applicable performance requirements of the NCC 2025, Volume Two, Building Code of Australia & ABCB Housing Provisions Standard, for Building Classes 1 & 10a (Housing):

- Structure: (H1P1 Structural stability and resistance to actions)
Tested and appraised for serviceability and strength under wind actions up to and including AS 4055 Wind Class N4.
- Weatherproofing and Dampness: (H2P2 Weatherproofing, H2P3 Dampness)
Tested and appraised for resistance to moisture from the ground and the penetration of water.
- Condensation Management: (H4D9, 10.8.1) Designed and detailed to meet deemed-to-satisfy requirements.
- Bushfire Attack Level (BAL A-29)
Tested and appraised by Warringtonfire Australia as achieving BAL A29 in accordance with AS1530.8.1-2007 as required by AS 3959:2018.
- Energy Efficiency: (Vol. Two H6D2(1)), Housing Provisions 13.2.5 External Walls)
ACE Polystyrene External Cladding System achieves high Total R-values which may be used to satisfy Part H6D2(1) external wall insulation requirements, or as input to house energy rating software to achieve an energy rating.

2 System Summary

ACE Polystyrene External Cladding System consists of Grade M expanded polystyrene screwed to either steel or timber wall framing through vertical H-Grade EPS battens on-stud & breathable wall wrap.



It is finished on-site with layers of polymer-modified render, alkaline-resistant fiberglass mesh, texture and finish coatings. The system is lightweight making it easy to install. It provides an energy efficient barrier to the elements through its high thermal insulation properties. It is versatile and designed to be able to be installed on all types of wall elements such as parapets and bulkheads to allow the architect to include multiple types of finishes on the same façade. ACE Polystyrene External Cladding System provides the appearance of a rendered brick wall without the limitations of high mass construction.

Product selection, and incorporation into the building design, must be made by a person who is conversant with the application and technical aspects of the product, and has ready access to the relevant technical information related to the product use.

Product installation must be carried out by a competent carpenter or other tradesman under the direction of a Builder, both of whom are conversant with the method of product installation and have access to all relevant technical information on product installation.

2.1 Panel Sizes

Standard Sizes:

(2500 or 5000)mm x 1200mm x 75mm

(2500 or 5000)mm x 1200mm x 100mm

Custom Sizes:

Length up to up to 6000mm to suit project specific requirements.

Width up to 1200mm.

2.2 Other Benefits

ACE Grey Panel EPS other benefits include:

- Energy Efficient construction through excellent thermal properties,
- Versatile to adapt to various architectural styles,
- Lightweight for fast & economical construction,
- Durability to weathering, impact & moisture, and
- A tested and proven system for builders and renderers.

ACE Polystyrene External Cladding System is fully compliant and designed and manufactured in Australia for Australian conditions. With excellent insulation properties, this method has been used successfully in Australia and in Europe for many years. A lightweight system that has design flexibility is easy to install and will give you economy and a peace of mind.

2.3 Sound Reduction Performance

Testing of Airborne Sound Reduction Indices in accordance with AS1191-2002 resulted in $R_w=35$, $C_{tr}=-6$ (for 6mm render, 90mm timber studs at 450mm c/c spacing) in accordance with AS/ISO 717.1:2004 .

3 National Construction Code (NCC) 2025

The performance-based NCC consists of solutions that enable a building to be constructed to achieve minimum levels of compliance. This may be demonstrated through compliance with a Deemed-to-Satisfy Solution, or by a Performance Solution.

Any building system that is not described in the Deemed-to Satisfy provisions can only demonstrate compliance via a Performance Solution.

This applies to External Wall Cladding Systems that are not listed in NCC 2025 Volume Two, Section H2D6.

External Walls are required to comply with performance requirements for structure, fire, weatherproofing, dampness, bushfire, condensation and energy efficiency as applicable. Details of compliance are outlined below.

ACE Polystyrene remains available to assist practitioners with guidance on the preparation of PBDB & PSR Templates suitable for the ACE Polystyrene External Cladding System, which reference CodeMark Certificate CM40376 and this Technical & Installation Manual.

3.1 Structural Performance, H1P1

ACE Polystyrene External Cladding System has been designed and tested for use in AS 4055 Wind Classifications N1 to N4 (excluding AS 4055 Wind Classifications N5, N6, C1, C2, C3 and C4), or Class 1 & 10 buildings with maximum Design Serviceability Limit State Wind Pressures of +0.82 kPa and -1.23 kPa and maximum Design Ultimate Limit State Wind Pressures of +2.01kPa, -3.01kPa calculated in accordance with AS/NZS 1170.2 Structural Design Actions Part 2: Wind Actions.

The design wind loads for any particular building are site specific and are dependent on wind classification & height of the building. The Wind Classification (AS 4055 or AS/NZS 1170.2) for a particular building must be determined by the design professional responsible for the site

ACE Polystyrene External Cladding System is not intended to act as wall bracing. Resistance to the design racking loads must be accommodated by other means prior to installation of the wall wrap.

ACE Polystyrene External Cladding System is not load-bearing and control joints are required at regular intervals to allow for building movement.

In all cases, where ACE Polystyrene External Cladding System is installed on buildings that conform to the requirements of AS 4055, the;

- distance from ground level to the underside of eaves shall not exceed 6.0m,
- distance from ground level to the highest point of the roof, not including chimneys, shall not exceed 8.5m,
- width including roofed verandas, excluding eaves, shall not exceed 16.0m, and the length shall not exceed five times the width, and
- roof pitch shall not exceed 35 degrees pitch.

3.2 Fixing Spacing and Edge Distances

In all cases the maximum vertical fixing spacing shall be 300 mm along studs at maximum 600mm spacing. Fixings must not be placed less than 50 mm or more than the panel thickness the edge or end of a panel.

75mm & 100mm Grey Panel Maximum Fixing Spacing (mm)					
Stud Spacing	Walls	AS 4055 Wind Class			
		N1	N2	N3	N4
450 mm	Within 1200mm of corners	300	300	300	300
	Away from corners	300	300	300	300
600 mm	Within 1200mm of corners	300	300	300	275
	Away from corners	300	300	300	300

3.3 Weatherproofing Performance, H2P2

ACE Polystyrene External Cladding System complies with the NCC performance requirements for weatherproofing and dampness confirmed by testing in accordance with the weatherproofing verification method. In this verification method, a test specimen is required to be constructed and tested that incorporates many of the common details found in normal construction practice.

Weatherproofing performance has been verified for external walls with;

- Serviceability Limit State (SLS) design wind pressures up to AS 4055, Wind Classification N4 (+0.82 kPa and -1.23 kPa); and
- Windows that comply with AS 2047-*Windows and external glazed doors in buildings*; and

ACE Polystyrene External Cladding System

- Has a Risk Score of 20 or less determined in accordance with NCC 2025, Volume Two, Table H2V1a-*Risk factors and scores*, as follows:

Risk factor	Category	Risk severity	Score
Wind region	Region A0-5 (AS/NZS 1170.2)	Low to medium	0
	Region B1-2 (AS/NZS 1170.2)		
	Region C (AS/NZS 1170.2)	High	1
	Region D (AS/NZS 1170.2)	Very high	2
Number of storeys	One storey	Low	0
	Two storeys in part	Medium	1
	Two storeys	High	2
	More than two storeys	Very high	4
Roof/wall junctions	Roof-to-wall junctions fully protected	Low	0
	Roof-to-wall junctions partially exposed	Medium	1
	Roof-to-wall junctions fully exposed	High	3
	Roof elements finishing within the boundaries formed by the external walls	Very high	5
Eaves width	Greater than 600 mm for single storey	Low	0
	451-600 mm for single storey; or	Medium	1
	Greater than 600 mm for two storey		
	101-450 mm for single storey; or	High	2
	451-600 mm for two storey; or		
	Greater than 600 mm for above two storey		
	0-100 mm for single storey; or	Very high	5
	0-450 mm for two storey; or		
	Less than 600 mm for above two storey		
Envelope complexity	Simple shape with single cladding type	Low	0
	Complex shape with no more than two cladding types	Medium	1
	Complex shape with more than two cladding types	High	3
	As for high risk but with fully exposed roof-to-wall junctions	Very high	6
Decks, porches and balconies	None	Low	0
	Timber slat deck or porch at ground level		
	Fully covered in plan view by roof	Medium	2
	Timber slat deck attached at first or second floor level		
	Balcony exposed in plan view at first floor level	High	4
	Balcony cantilevered at first floor level		
	Balcony exposed in plan view at second floor level or above	Very high	6
	Balcony cantilevered at second floor level or above		

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3.4 Condensation Management, H4D9 & 10.8.1

ACE Polystyrene External Cladding System requires breathable wall wrap must achieve minimum Class 3 (vapour permeable) in Climate Zones 1–5, and Class 4 (vapour permeable) in Climate Zones 6–8. The vertical battens create a cavity between the cladding and the external side of the primary insulation layer, unobstructed by any control layer and drained to the exterior. The base of the wall is drained and ventilated by the PVC Starter Channel. The top of each cavity shall be detailed to remain open under windows by stopping the vertical battens short of the penetration, and, at the top of the wall by ensuring the eave lining does not close the cavity. Project specific detailing may be required. Any determination of compliance must be undertaken by a suitably qualified building professional.

3.5 Bushfire Performance, H7D4(2)(a)

The ACE Polystyrene External Cladding Systems with:

- 75 mm ACE Grey Panel fixed with 4.5mmx100mm bugle head coarse thread Class 4, 48 mm dia., washers @ 300mm spacing; and
- MACRENDER HBS 2x2.4mm coats with mesh 5x5x160gsm, MAC Texture Coat, total nominal render thickness 3.2 to 6.4mm thickness,
- Ametalin Silverwrap™ Medium Duty; and
- Bosman PU Glue Foam; and
- PVC Starter Channel, meshed PVC external angle,
- H Grade EPS Battens nominally 40x35mm thick,
- 90x45 timber framing, or 90mm deep steel framing
- 10mm Plasterboard,

have been tested &/or assessed by Warringtonfire to achieve an AS 1530.8.1 BAL rating of A-29 which meets the AS 3959:2018 - Section 7- Construction requirements for BAL-29, and NCC 2025 H7D4(2)(a) requirement to be constructed in accordance with AS 3959.

3.6 Fire Safety Performance, H3

As a combustible external wall system, ACE Polystyrene External Cladding System may not be installed less than 900mm from an allotment boundary and as specified in the NCC. ACE Polystyrene External Cladding System has not been tested for

applications that require an FRL and its performance in this situation cannot be assumed.

ACE Grey Panel EPS External Wall Cladding surfaces should not be exposed to temperatures in excess of 80°C for long periods due to the risk of softening and damage. Appliances that produce heat e.g. Hot Water Services, Flues from Heating Appliances, BBQ's & Patio Heaters, must only be installed in accordance with manufacturers' requirements such that ACE Grey Panel EPS Cladding is not damaged by heat.

3.7 Thermal Performance, H6D2(1) & 13.2.5

ACE Polystyrene External Cladding System incorporating 75mm (R2.00m²K/W) or 100mm (R2.70 m²K/W) thickness panel, breathable non-reflective wall wrap and 10mm plasterboard lining achieves the following Total R-values in accordance with AS/NZS 4859.1:2018 which may be used to satisfy the minimum Total R-value requirements of NCC 2025, Volume Two H6D2(1)(b)(i) & Housing Provisions 13.2.5 external wall insulation requirements, where these values are higher, or as input to house energy rating software to achieve an energy rating.

ACE Grey Panel EPS Exterior Wall Cladding System		Total R-value (m ² .K/W)	
		Winter (Heat flow outwards)	Summer (Heat flow inwards)
75 mm	Timber Frame	2.69	2.56
	Steel Frame	2.65	2.51
100 mm	Timber Frame	3.42	3.25
	Steel Frame	3.37	3.20

Higher Total R-values can be achieved by adding insulation between the wall framing.

4 Materials

No component substitutions are permitted on any design unless approved in writing by ACE Polystyrene. Installation of any non-standard or non-approved ACE Polystyrene External Cladding System components will void any product warranty or claims in relation to product performance.



4.1 ACE Grey Panel

ACE Polystyrene, M-Grade manufactured in accordance with AS 1366.3.

4.2 Battens

ACE Cavity Batten, H-Grade, 40mm x 25mm, and 40mm x 35mm manufactured in accordance with AS 1366.3.

4.3 Wall Wrap (Breathable)

Breathable Wall Wrap must achieve a minimum *Light Wall* Duty Classification and *Water Barrier* Classification in accordance with AS 4200.1. It must have a "Low" Flammability Index (FI) not greater than 5 in accordance with AS 1530.2. E.g. Ametalin VapourTech® Brane® VHP. (Note: Ametalin Silverwrap™ MD is required for BAL applications.)

4.4 Damp Proof Course

Damp proof course (DPC) must meet the requirements of AS/NZS 2904.

4.5 48mm Flashing Tape

Minimum 48mm wide, wrap-compatible pressure sensitive tape must be used to seal the Wall Wrap along its bottom edge at the base of the wall, at joins, and at openings. E.g. Ametalin Quicktape™.

4.6 Panel Screws

10G Bugle head, square drive, coarse thread Class 4 to suit steel or timber substrate. Compliant with the corrosion protection requirements of AS 4773 (Part 4 and Appendix C). Achieve a minimum of 25mm penetration into timber wall framing (e.g. Length = Panel + Batten + 25 mm), or minimum 3-full threads through steel wall framing (e.g. Length = Panel + Batten + 3-full threads).

4.7 Fixing Washers

ACE Grey Plastic Washer, 48 mm diameter flexible high-density polypropylene washer with holes and slots for adhesion / bonding.

4.8 Starter Channel with weep holes

PVC Starter Channel with weepholes. E.g. PTT Render Starter Trim 3.5mm Build.

4.9 Backing Rod

The 'backing rod' material is a closed-cell polyethylene foam, 10 mm diameter as 'back-blocking' for flexible adhesive sealants placed in joints.

4.10 Fibreglass Reinforcing Mesh

Fibreglass reinforcing mesh, 5 mm x 5 mm, 160g/m² non-adhesive alkali resistant fibreglass mesh.

4.11 PU Expanding Foam

ACE Expansion Foam, single-component polyurethane low-expansion adhesive foam to suit polystyrene, steel & timber.

4.12 Adhesive / Sealant

Paintable flexible adhesive sealant at horizontal and vertical control joints. E.g. Fulaflex 625 flexible sealant, hybrid polymer.

Construction adhesive for Starter Channel-to-Panel connection. E.g. HB Fuller Maxbond Fast Grip Construction Adhesive.

4.13 External Corner Beads & Trims

Meshed External beads and trims by PTT must be installed at all external corners, openings and edges.

4.14 Render Process

Minimum Requirements: Base Coat; Mesh; Base Coat; Acrylic Primer; Texture Coat; Sealant around openings; and either Texture Coat or 2xMembrane Top Coat

Base Coat – shall be a polymer modified cement base render suitable for application to low porosity surfaces including expanded polystyrene. E.g. MACRENDER® HBS.

Acrylic Primer – shall be a tintable acrylic primer formulated to reduce porosity and improve adhesion of acrylic finishes, E.g. MACPRIME.

Texture Coat - shall be an acrylic based texture coating suitable for external application over rendered surfaces. E.g. MAC Crystal Plus textured paint.

Membrane Top Coat – shall be a pure acrylic exterior grade acrylic membrane formulated for application to renders and textured finishes. E.g. MAC SATINFLEX.

5 Specifications

The specification, supply and construction of steel or timber wall framing does not form part of the ACE Polystyrene External Cladding System. The designer and builder must ensure framing has been constructed in accordance with the relevant requirements of either AS 1684.2 Residential Timber Framed Construction – Non-cyclonic areas, or NASH Standard Residential and low-rise steel framing or another appropriate standard. The straightness and squareness of the frames must be checked before commencement of any installation.

In all cases the ACE Polystyrene External Cladding System may only be installed in accordance with this manual on steel or timber wall framing with a maximum stud spacing of 600mm.

Prior to installation of the ACE Polystyrene External Cladding System the building must already be detailed to account for the requirements of foundation movement, dampness, weatherproofing, shrinkage and storm water.

The placement and correct installation of expansion/control joints is the responsibility of the Building Engineer / Builder to determine if the joints are sufficient to accommodate any project specific movement. Good building practice typically requires expansion joints at each floor level, 3m maximum height and & 6m maximum width, and at all weak points (e.g. in line with openings) or where potential cracking may occur (e.g. concrete slab joints), and at all joints to different building construction materials.

All aspects of the design, supply and correct installation of penetrations, e.g. windows, doors etc., are outside the scope of the ACE Polystyrene External Cladding System.

The designer and builder must ensure that the building including all drainage holes and integral flashings in all penetrations will prevent the ingress of rain water behind the EPS panel and will drain to the outside of the building.

5.1 Trade Practices

- All General Construction and Flashing Practices must be taken after in order to maintain water tightness. ACE Polystyrene Products will not be held liable for unprofessional flashing and installation practices.
- Timber frames must have a moisture content of less than 15% in order to commence installation.
- All external surfaces of the frame should be flush and parallel, with no setbacks or inconsistencies. It is also recommended that wherever ply bracing is fixed externally, ply packing should be fixed to the studs prior to fixing ACE Grey EPS Foam Panel.
- Confirm the maximum spacing between studs is 600 mm.
- Ensure panel edges are parallel to the battens/studs are supported by framing so fixings can be applied between 25mm to 50mm from the panel edge.
- Additional supports may be required at vertical edges on both sides of a join.
- All exterior windows, doors and joinery must be fixed in position before the installation of the ACE Grey EPS Foam Panel to ensure water tightness and those components are fixed off plumb and are level.
- Back-blocking must be carried out prior to the installation of wall mounted accessories. Before installing the panel system.
- When using a termite barrier, it is a builder's responsibility to arrange its installation by a licensed qualified professional installer before the installation ACE Grey EPS Foam Panel.
- If the panels have been rendered prior to internal plasterboard installation, all plasterboard panels must be screwed to the internal side of all external wall surfaces. If not done, defects could occur in the external render.
- When selecting an external paint colour, bear in mind that it should have a recommended minimum light reflectance value (LRV) of 40%.

Product Advisory Line – Ph: (02) 9791 1188

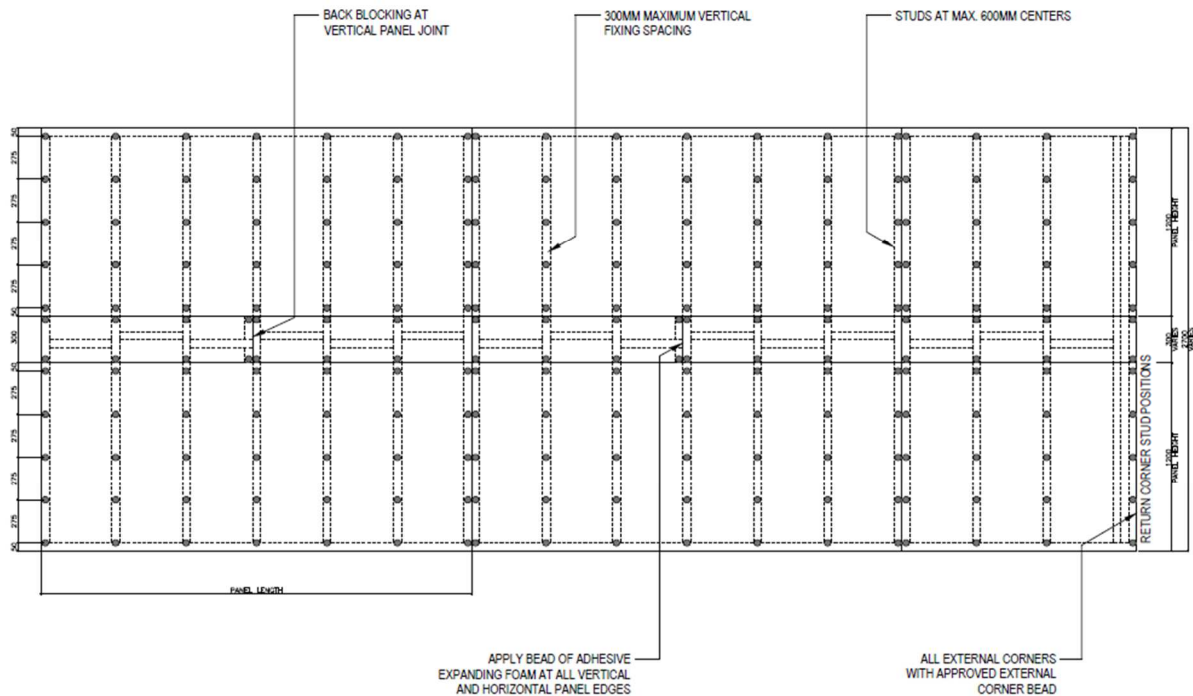
ACE Polystyrene Products happily offers a comprehensive advice service, in all aspects of its product's use.

Product information and assistance is available on request.

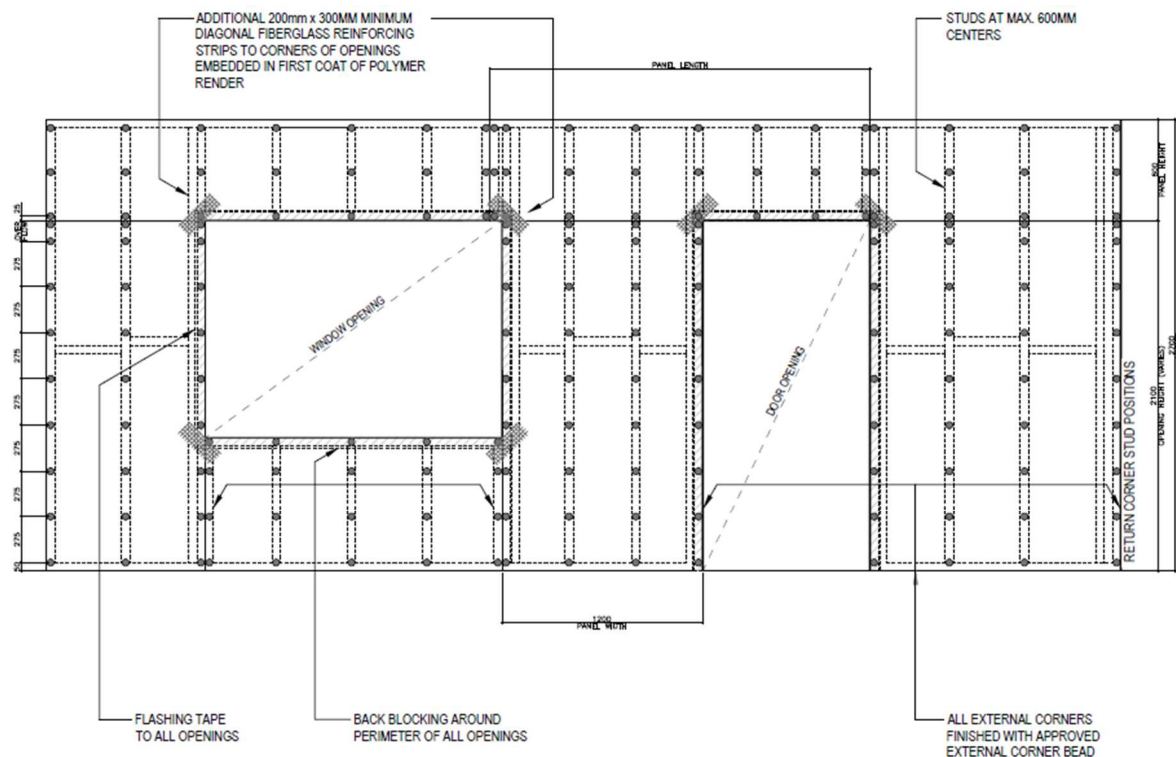
6 Installation

ACE Polystyrene External Cladding System must be installed only by qualified and experienced carpenters or other tradesmen, who are conversant with the installation techniques set out in the ACE Polystyrene External Cladding System Manual.

6.1 Typical Panel Layout for Max. 600mm Stud Wall Detail



6.2 Typical Panel Layout for Openings Detail



6.3 Installation Steps

6.3.1 Accessories Installation:

1. Breathable Wall Wrap - Fix over the studs, and cut around penetrations and openings (e.g. doors, windows) in accordance with AS 4200.2:2017.
2. Install Flashing Tape to seal the breathable wall wrap at all joins, openings and around the perimeter of the wall frame. Flashing Tape must always be applied in accordance with the manufacturers' instructions including:

- surfaces are clean and dry
- pressure is applied to the tape so the adhesive is firm contact with the substrate.

Flashing Tape is not a mechanical joining device, ensure that the materials being are joined mechanically secured. Flapping of wrap joined by flashing tape is likely to cause tape failure.

3. Starter Channel with weepholes - Install to the frame at the required level by "tacking" with either screws or nails at each stud.
4. Vertical battens must be fixed on every stud spaced at maximum 600 mm.

6.3.2 Panel Installation:

1. Measure and then cut ACE Grey EPS Foam Panels using a straight edge and diamond blade in a power saw or a hot knife cutter.
2. Fix washers and screws to every stud at maximum 300mm spacings vertically.
3. When making a vertical butt join, ensure each sheet is fixed individually to the back-blocking or stud.
4. When working around windows, doors or fixtures, you can cut a panel to shape in order to fit around any obstacles, in order to reduce infill.
5. Allow a 3mm gap between ACE Grey EPS Foam Panel and any openings for beading and sealing.
6. Glue both horizontal and vertical ACE Grey EPS Foam Panel sheet edges to each adjoining sheet using PU Expanding Foam Adhesive/Sealant.
7. For external corners - ACE Grey EPS Foam Panel sheets are overlapped using the full thickness of the sheet and then fixed using construction adhesive.
8. Screw fix to the stud through the washers and screws. Screws must penetrate minimum 25mm into timber framing, or minimum 3-full-threads into steel framing, and driven only until the washer just sinks into the EPS panel.
9. The Backing Rod is a closed-cell polyethylene foam. This used as back-blocking for sealant placed in joints,
10. Horizontal Control Joints - Provide horizontal control joints at all locations as noted for the specific project. Horizontal control joints consist of a 10 mm gap with backing rod for the sealant to be placed in the joint. Note that as a minimum, horizontal control joints must be made at vertical spacing not greater than 3.0 m, typically corresponding to a storey height. In all cases horizontal control joints must be made at all construction joints and at the junctions of dissimilar substrates where the potential for differential movement exists.
11. Vertical Control Joints – Provide vertical control joints, at all locations as noted for the specific project. Vertical control joints consist of a 10 mm gap with backing rod for the sealant to be placed in the joint. Note that as a minimum, vertical control joints must be made at horizontal spacing not greater than 9m, and should typically coincide with penetrations such as doors, windows etc. In all cases vertical control joints must be made at all construction joints and at the junctions of dissimilar substrates where the potential for differential movement exists.

6.3.3 Beading Installation:

1. Ensure the installation of all PVC beading, and polyurethane joint sealing around window and door openings is carried out correctly. This is an extremely important part of using ACE Grey EPS Foam Panel, to ensure the building has a complete exterior weather resistant and insulation system.
2. External and internal edges must be precise to make sure the finish is uniform and ready for sealing and rendering.
3. Take care to ensure all beads are plumb and level.
4. Priming and sealing requires much attention to detail to maximise water tightness of windows, doors and openings.
5. Use the primer, and a clean rag, to clean the internal joinery which requires sealing (Perform only for 40mm reveal beads)
6. Use masking tape, to stick with precision to frame of joinery, 4mm from the edge to create a neat line, ready to apply the sealant.
7. Apply the sealant using a coving tool to precisely create an internal cove finish. (Only a high-grade UV polyurethane sealant)
8. Remove the masking tape from the join to leave a water proof seal.

EXTERNAL CORNER -Install external corner angle beads to external corner edges by applying a large bead of construction adhesive to both sides of the internal corner of the bead, press bead into position. Make sure the bead is straight, and then scrape off any excess glue.

WINDOW AND DOOR REVEALS - Render reveals to windows and doors.

REVEAL BEADS/RENDER REVEAL TRIMS - Allow a 3mm gap between the panel and any openings.

RENDER REVEAL TRIM (SILL) – 40MM - Allow a 3mm gap between the panel and any openings.

EXPANSION JOINT - Install 'reveal bead' to one edge of ACE Grey EPS Foam Panel by using a large bead of Construction Adhesive allowing a 10mm gap between sheets. Install an expansion joint between both ACE Grey EPS Foam Panel surfaces (leaving required gap). Applying two beads of Construction Adhesive to either side of the internal corner will be sufficient if you allow the

glue to penetrate the perforated edges. Scrape away any excess. Apply a primer before applying the sealant to create an expressed joint.

6.3.4 Install Render / Textured Paint

Texture Finish render application on ACE Polystyrene External Wall Cladding System Using Melbourne Acrylic Coating **or equivalent** (only for non BAL-rated applications).

Product Used		Method of Application	Spreading Rate	Coat Thickness	Curing Time
1 st Coat	MAC HBS & Fiberglass Mesh	Trowel On	2m ² / 20kg bag	2 – 4mm	48 – 72 hours
2 nd Coat	MAC HBS	Trowel On	2m ² / 20kg bag	2 – 4mm	48 – 72 hours
3 rd Coat	MAC Prime	Roll On	5-6m ² / L		4 – 6 hours
4 th Coat	MAC Crystal Plus	Trowel On	8 – 10m ² / L	1 – 2mm	24 – 48 hours

Sponge Finish render application on ACE Polystyrene External Wall Cladding System Using Melbourne Acrylic Coating **or equivalent** (only for non BAL-rated applications).

Product Used		Method of Application	Spreading Rate	Coat Thickness	Curing Time
1 st Coat	MAC HBS & Fiberglass Mesh	Trowel On	2m ² / 20kg bag	3 – 5mm	48 – 72 hours
2 nd Coat	MAC Supaskim	Trowel On	2m ² / 20kg bag	2 – 4mm	48 – 72 hours
3 rd Coat	MAC Prime	Roll On	5-6m ² / L		4 – 6 hours
4 th Coat	2-coats Membrane	Roll On	8 – 10m ² / L		24 – 48 hours

Please refer to the ACE Polystyrene Products website www.acepolystyrene.com.au for further information on all our specifications.

7 Construction Details

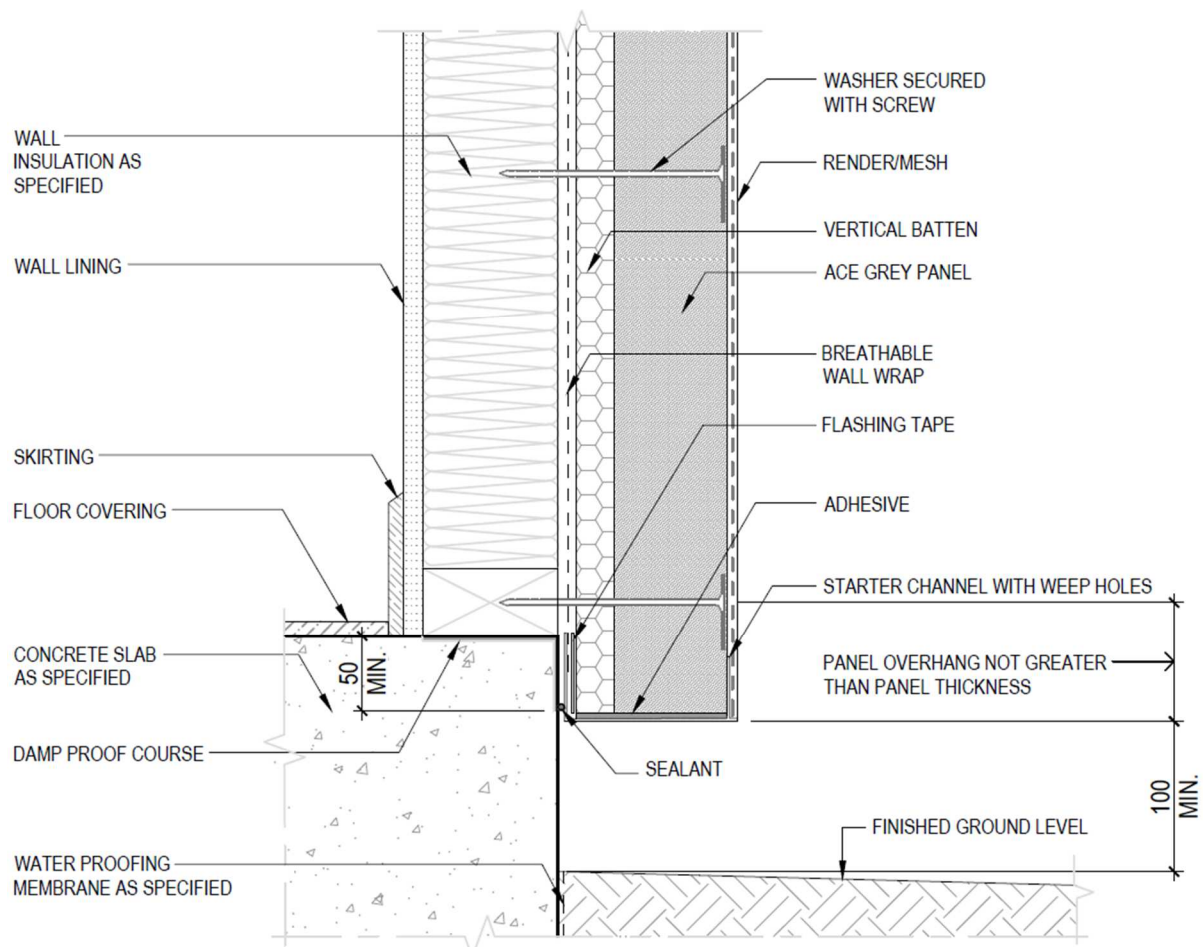
ACE Polystyrene External Cladding System must be installed in strict accordance with this Technical and Installation Manual and comply with all relevant building codes and local government regulations.

These typical construction details are provided as a guide for construction industry professionals. These typical construction details do not constitute a project specific specification and should only be used within the context of project specifications.

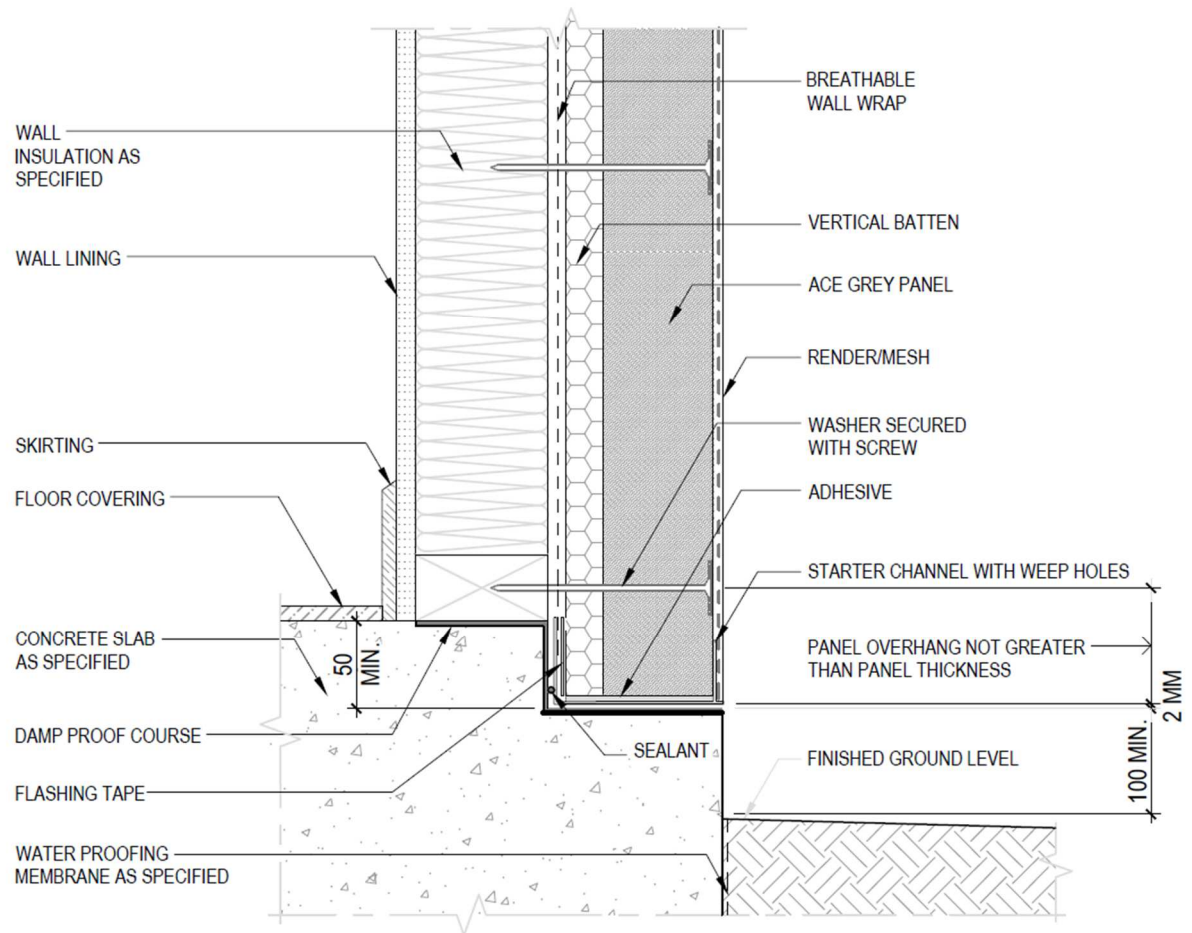
Modifications to these drawings shall not be made without the approval of ACE Polystyrene.

7.1 Typical Details

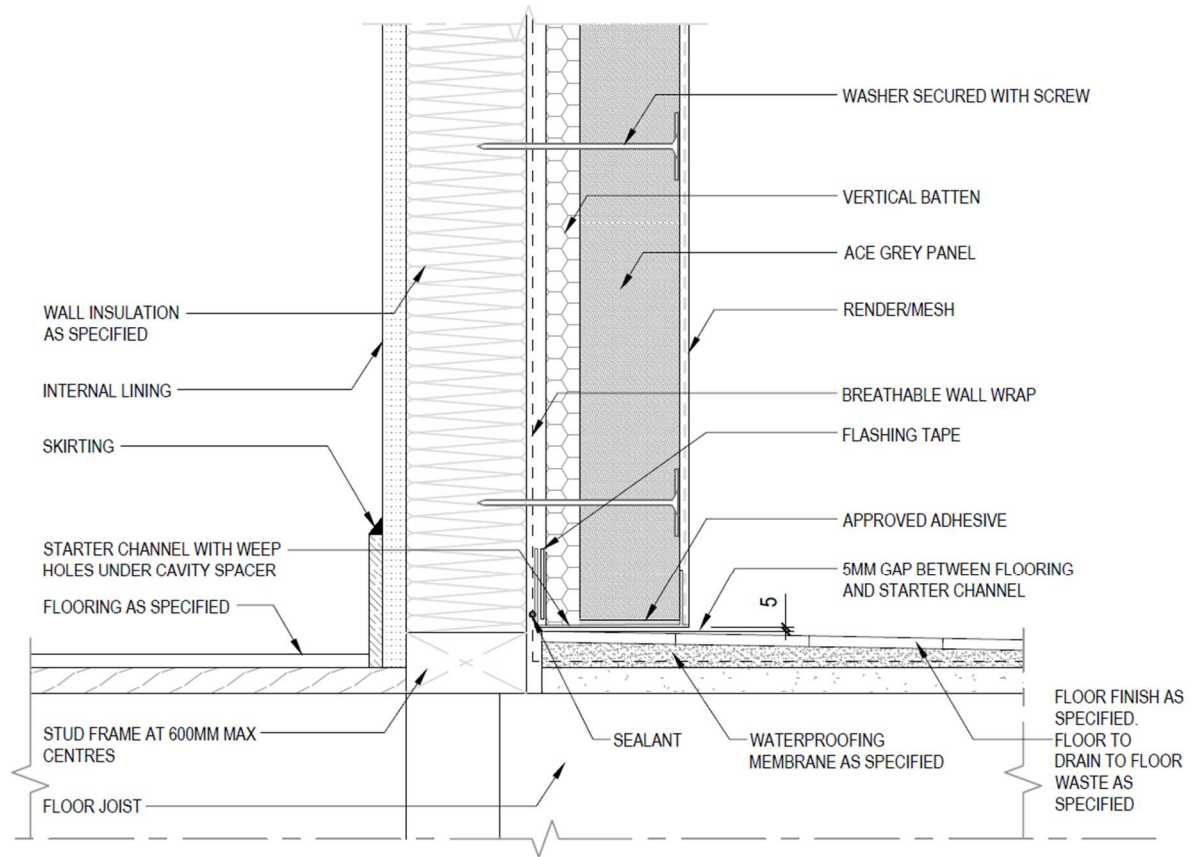
7.1.1 Concrete Slab Over Edge



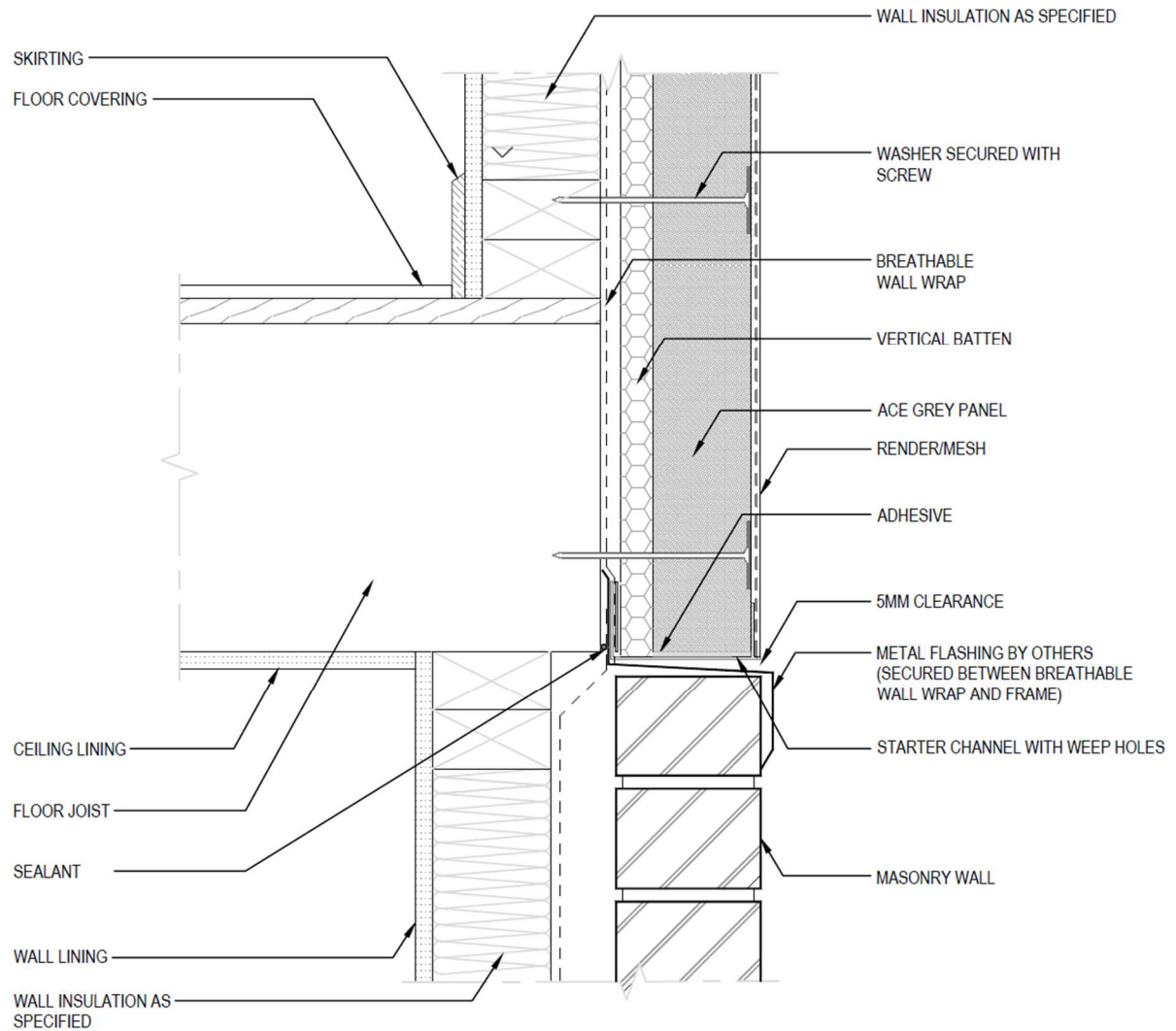
7.1.2 Concrete Slab Rebate Edge



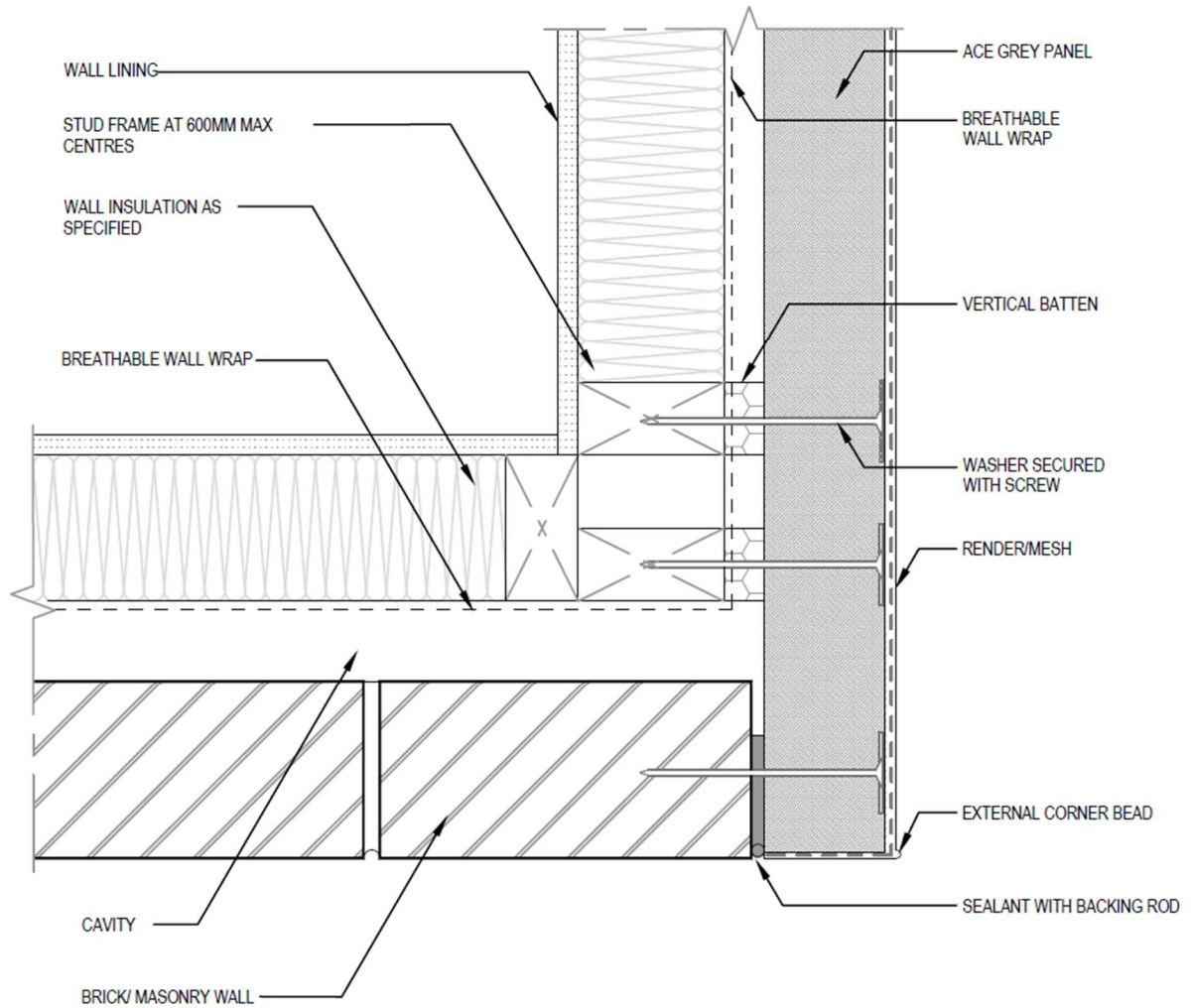
7.1.3 Wall to Balcony



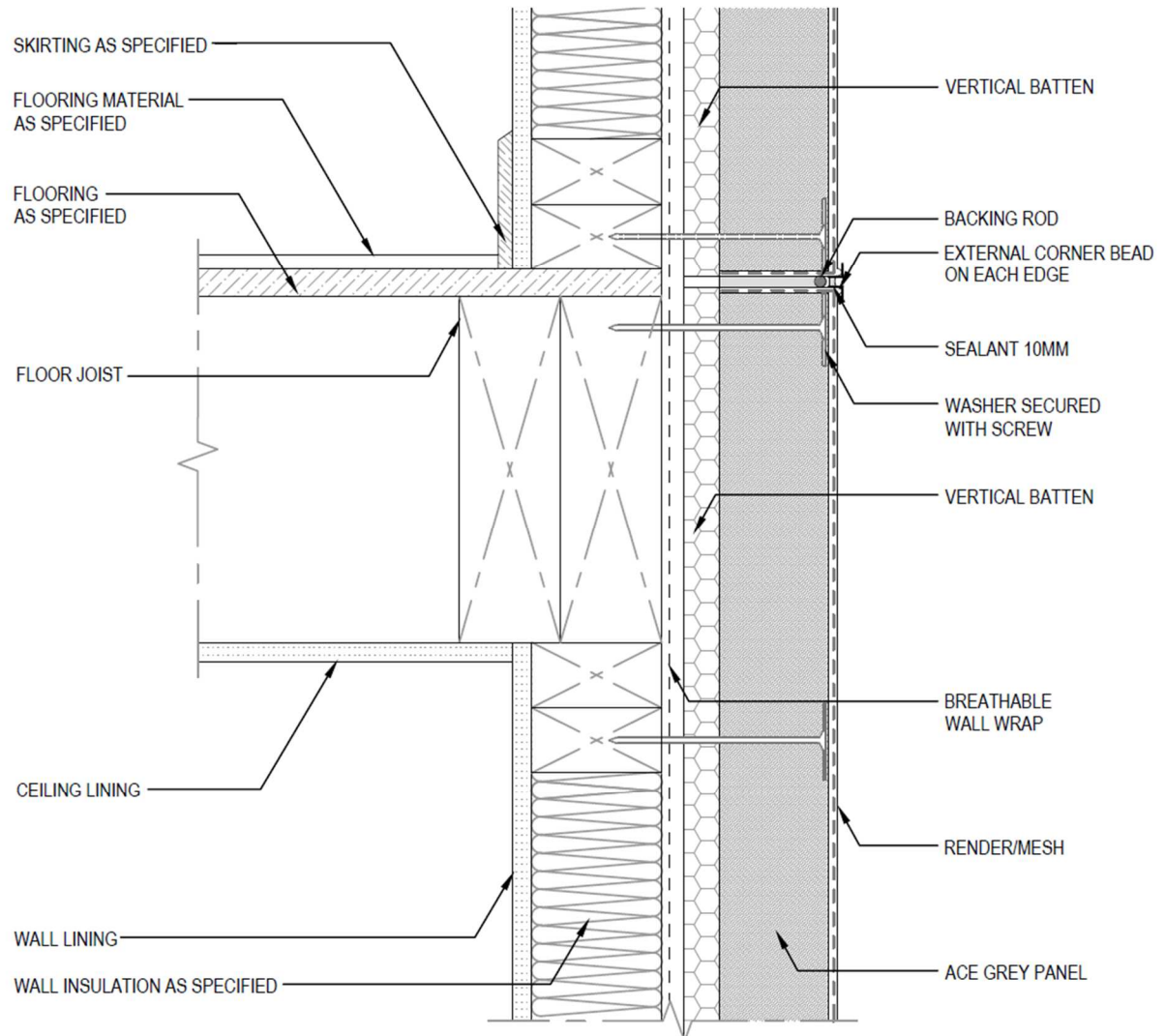
7.1.4 Panel Over Masonry Wall



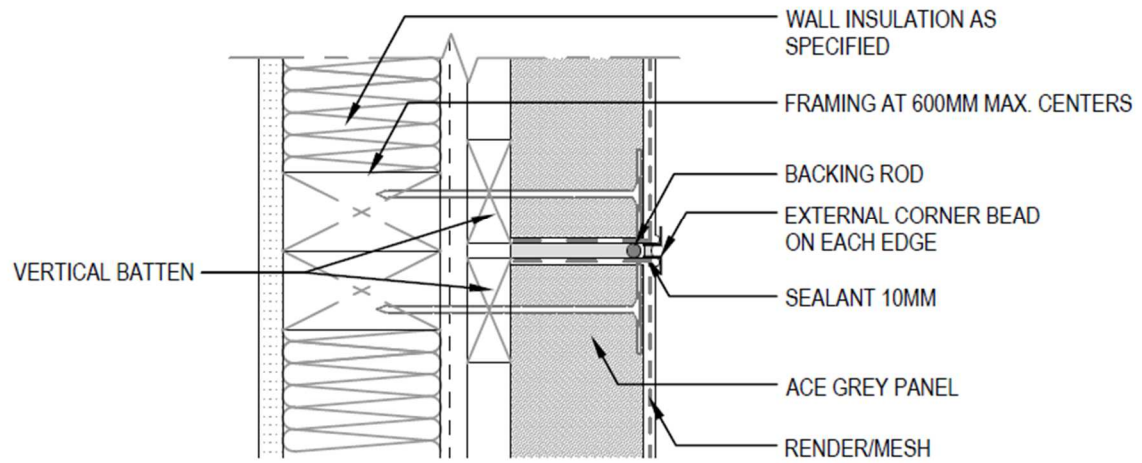
7.1.5 Junction to Masonry Wall



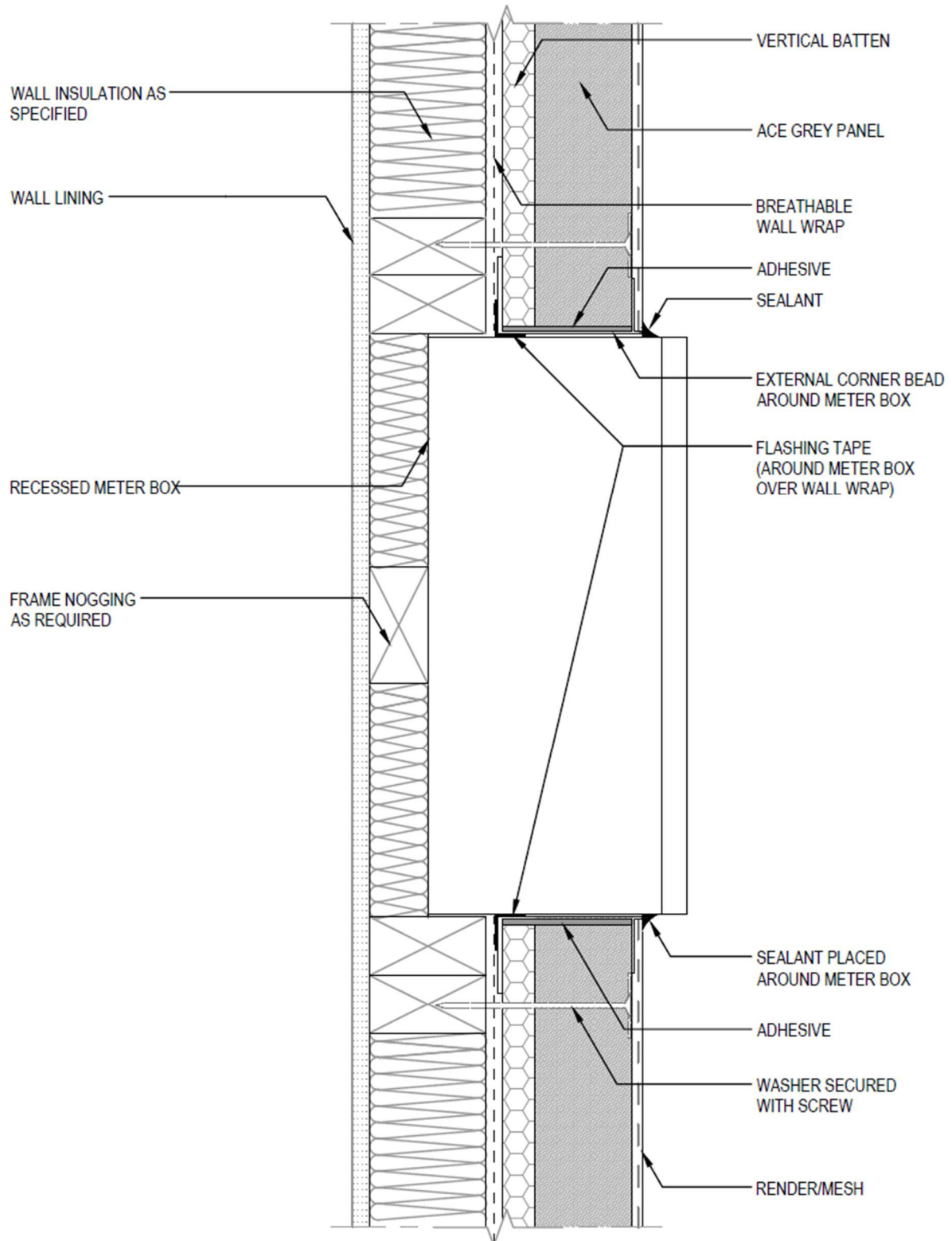
7.1.6 Horizontal Expansion Joint



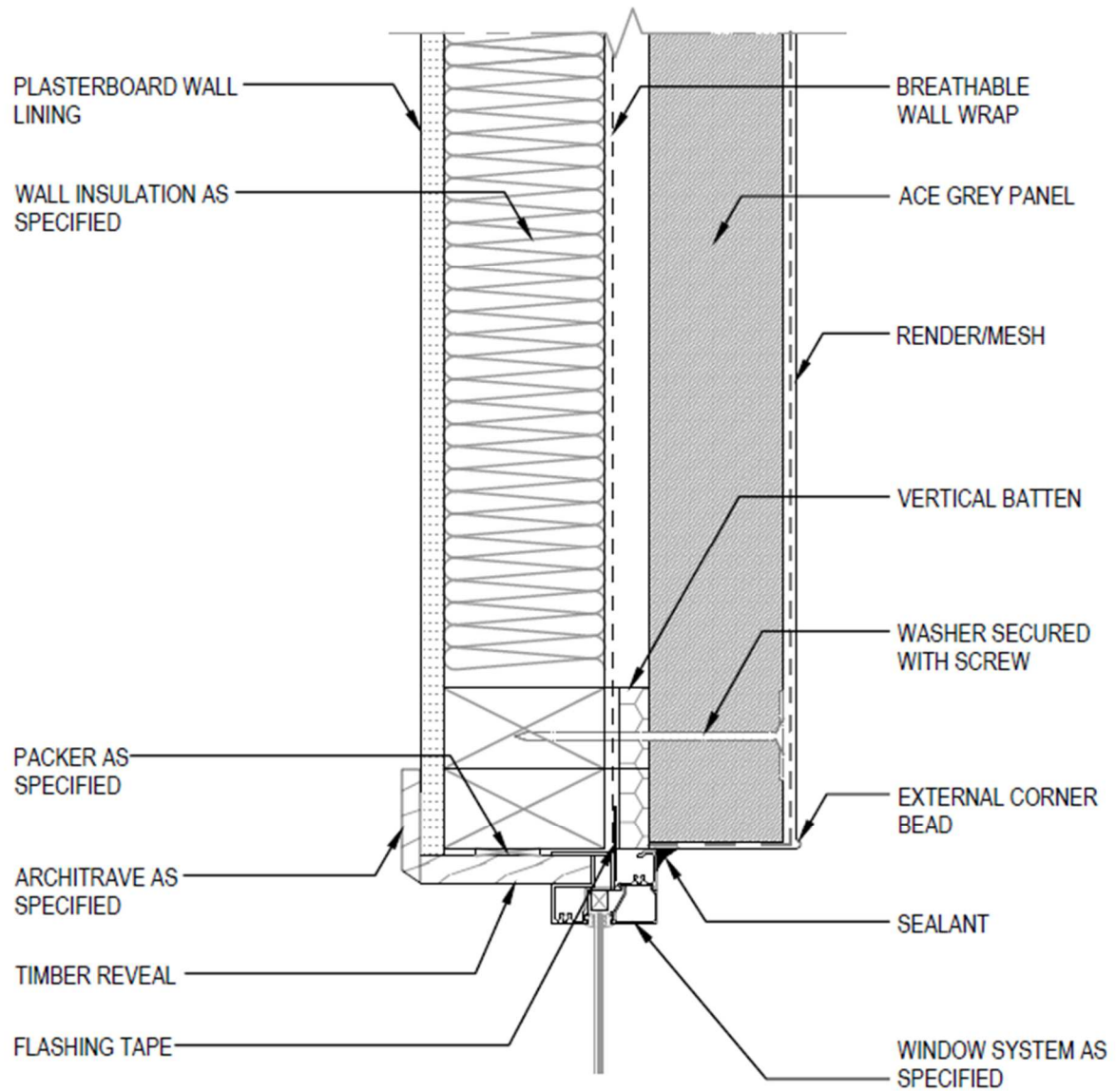
7.1.7 Vertical Expansion Joint



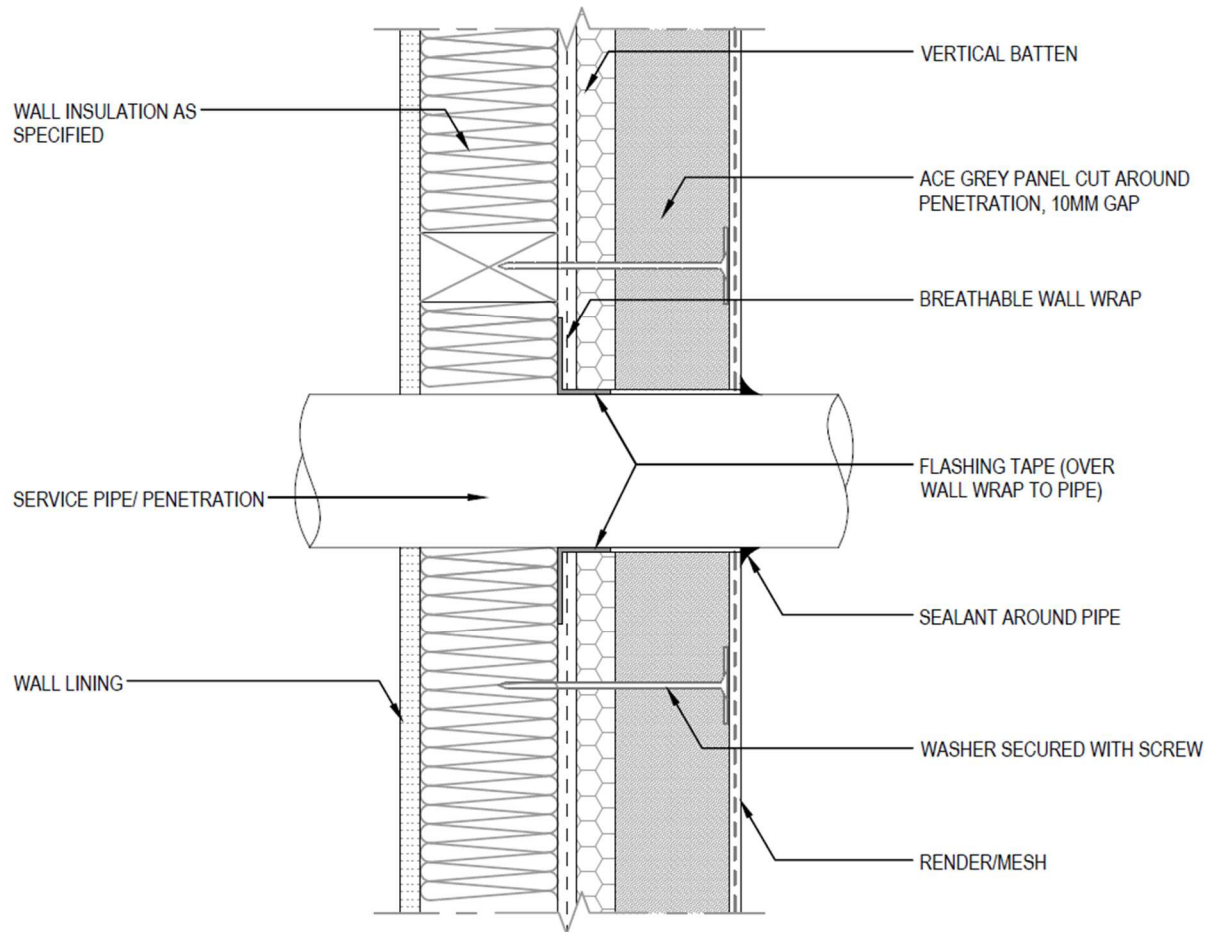
7.1.8 Meter Box Penetration



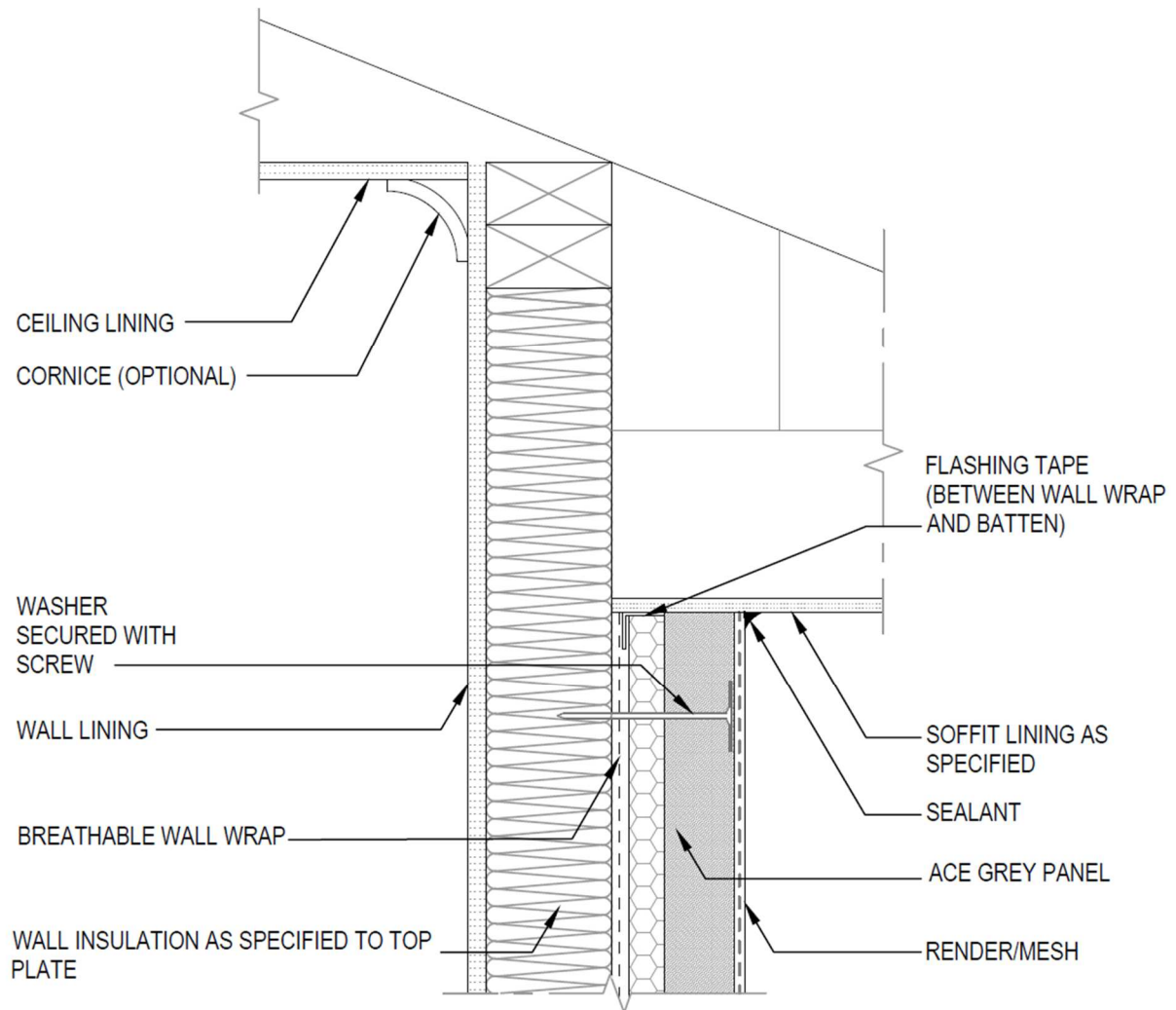
7.1.9 Window Jamb



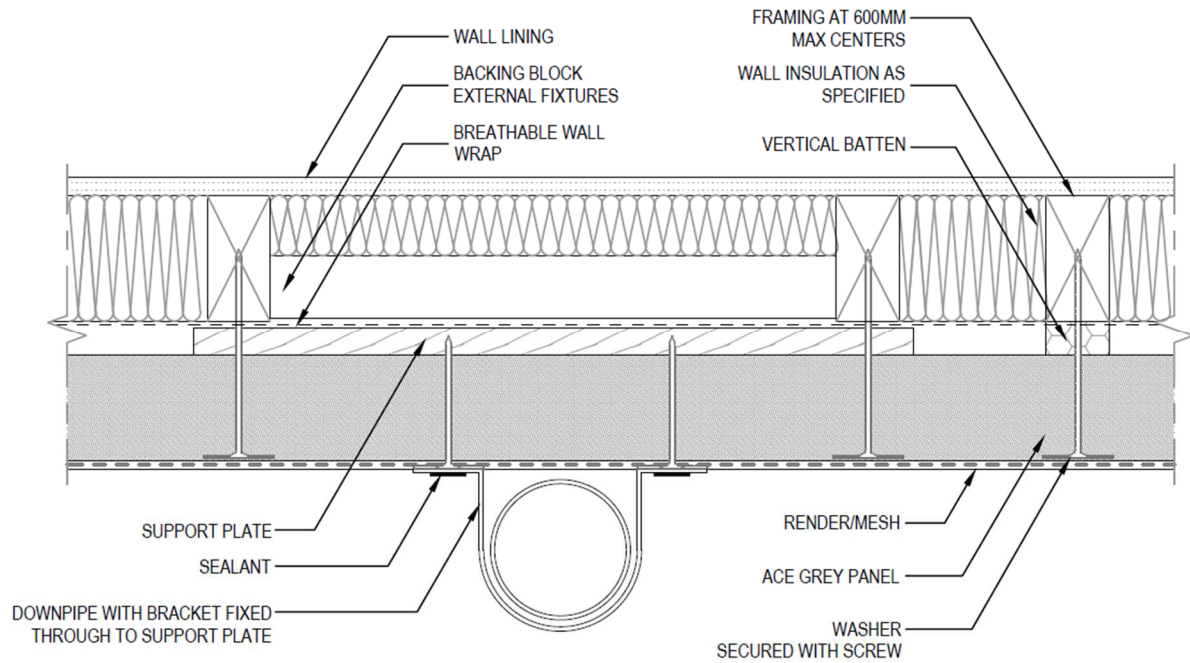
7.1.10 Service Penetration



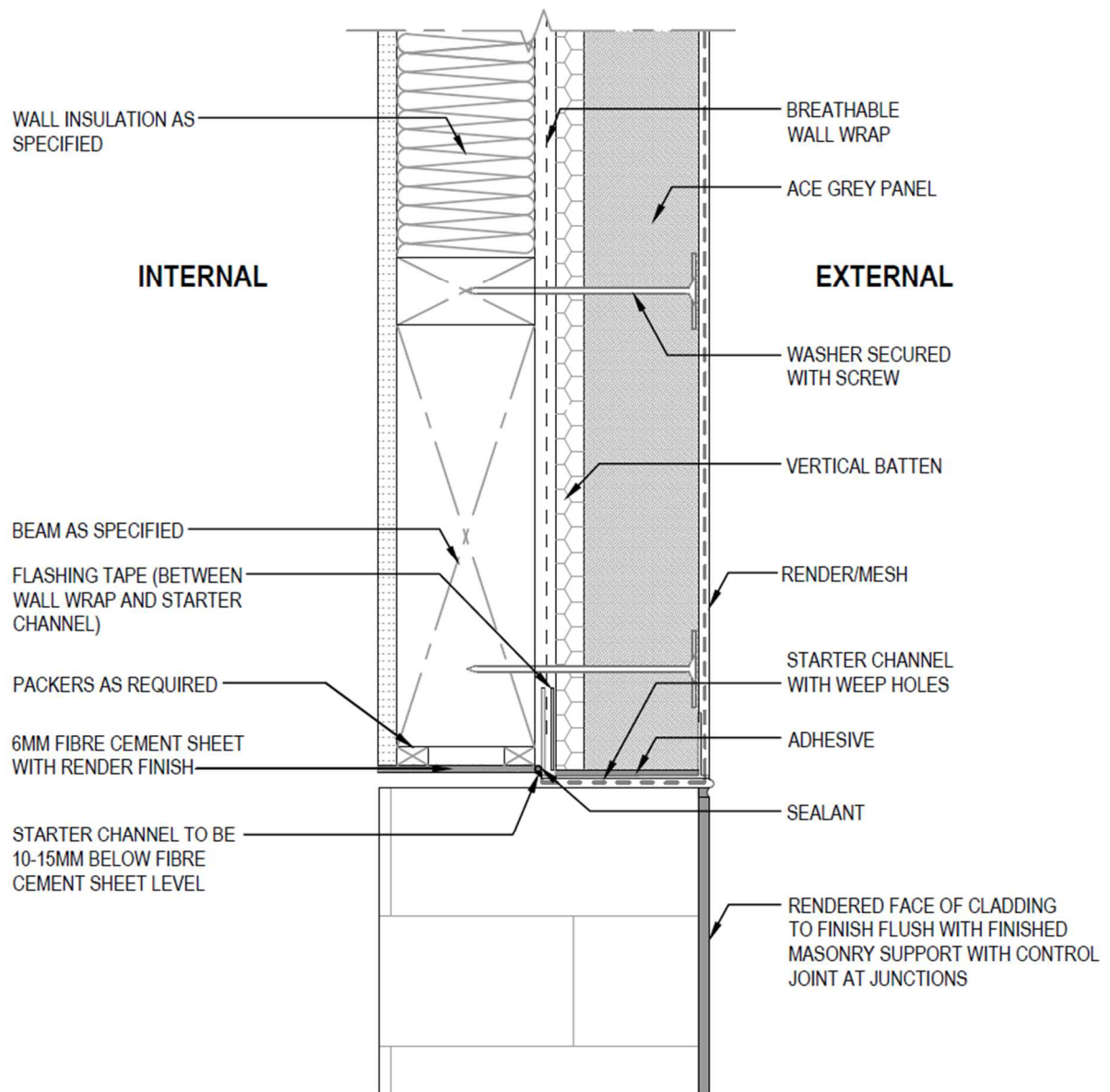
7.1.11 Eave Soffit



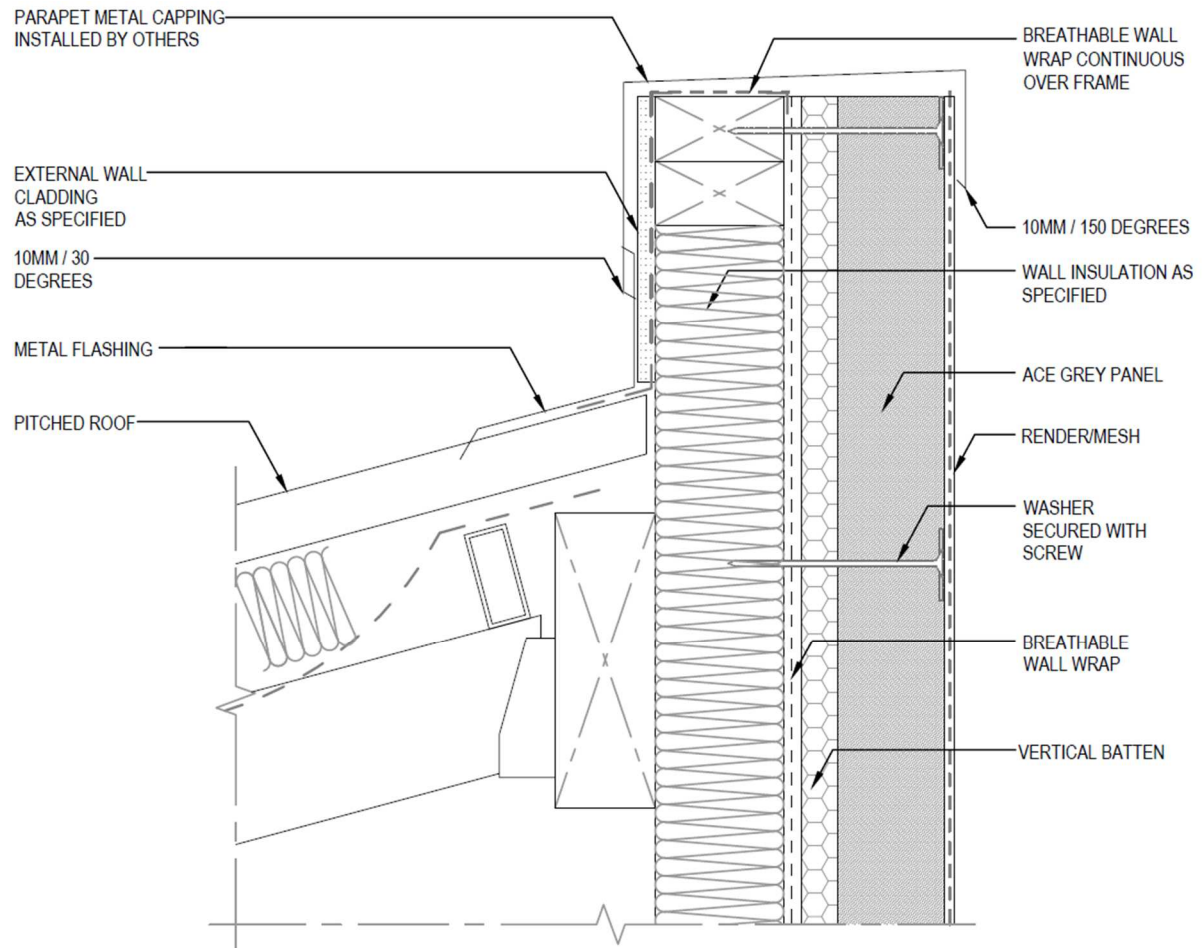
7.1.12 Downpipe Fixing



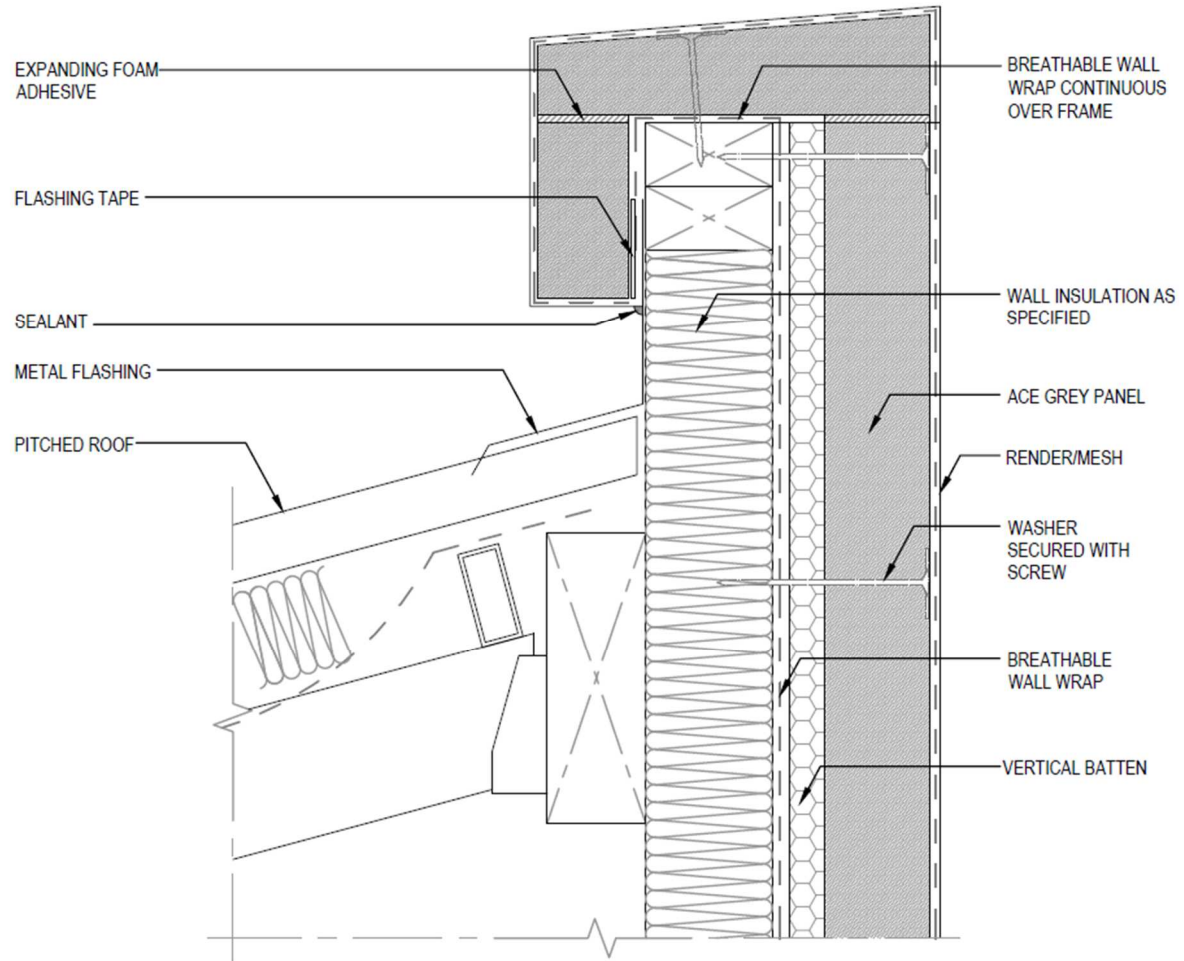
7.1.13 Garage / Bulkhead / Overhang / Drip



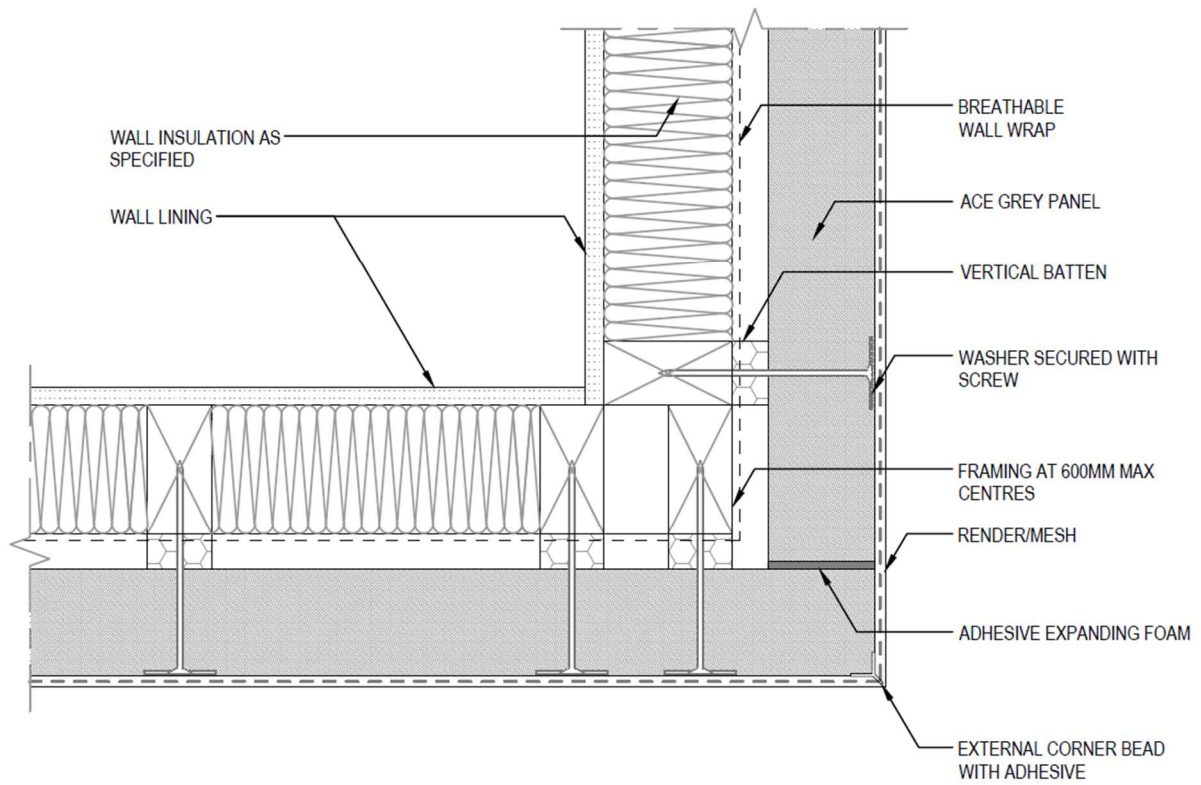
7.1.14 Metal Capping Parapet Wall to Roof



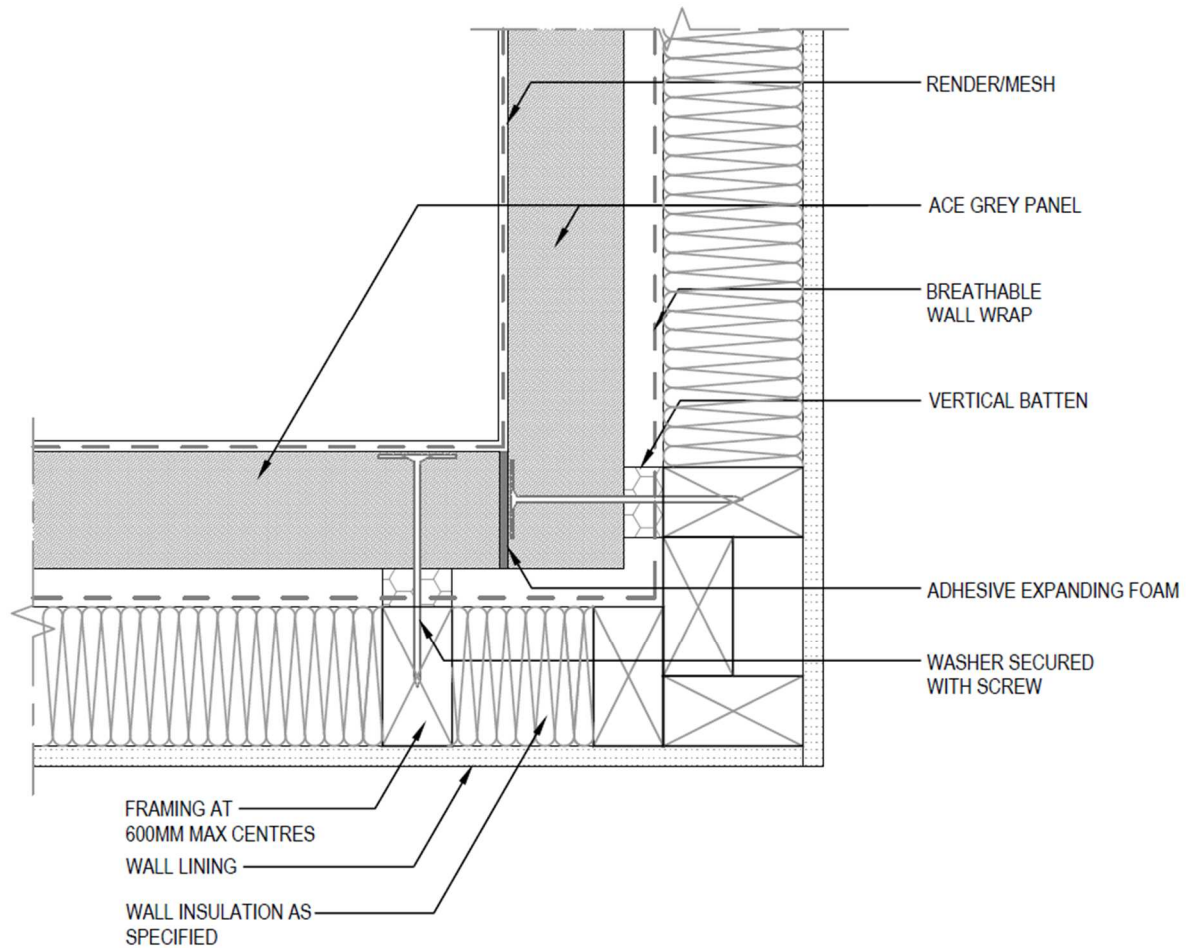
7.1.15 Continuous Cladding Parapet Wall to Roof



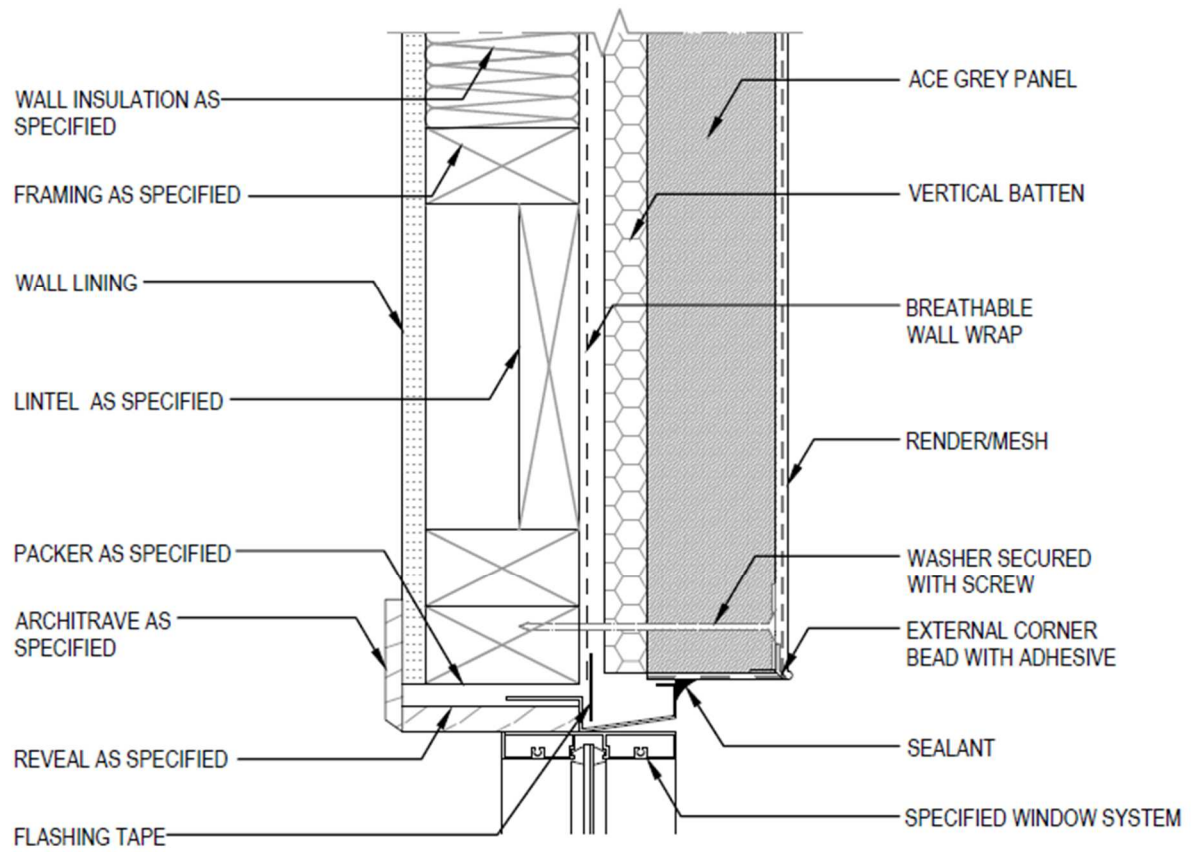
7.1.16 External Corner



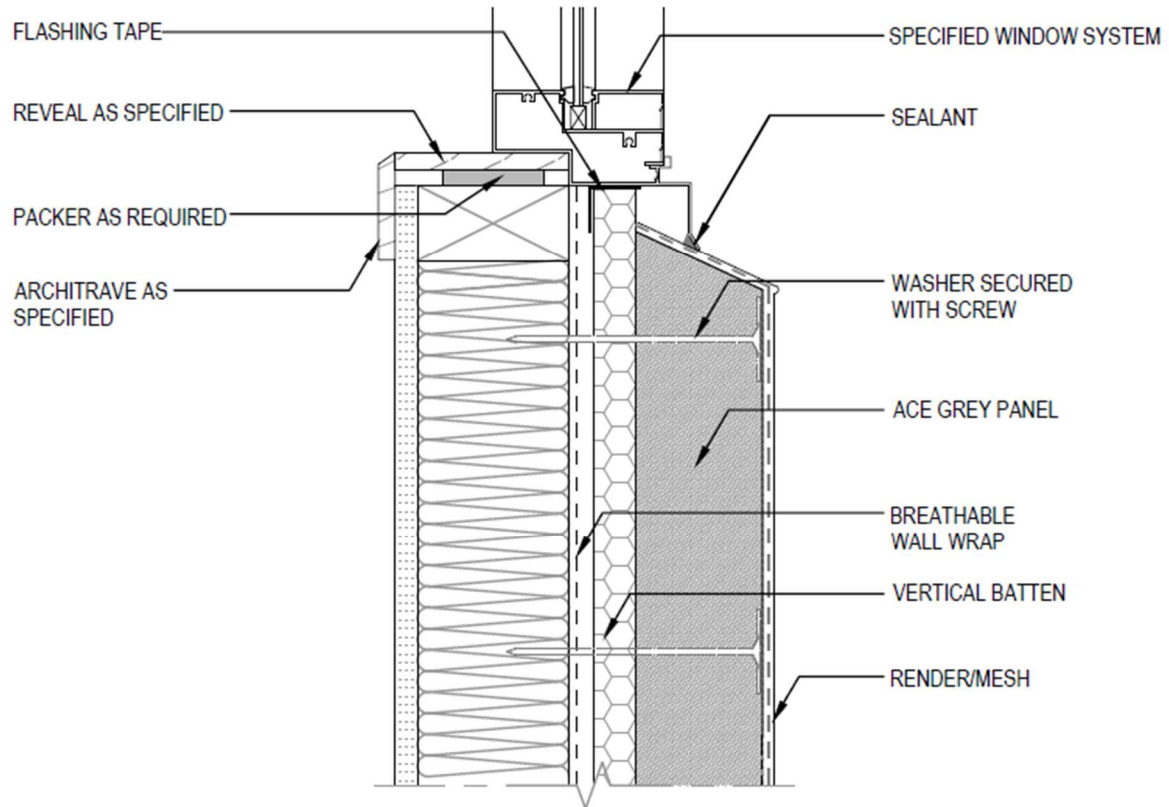
7.1.17 Internal Corner



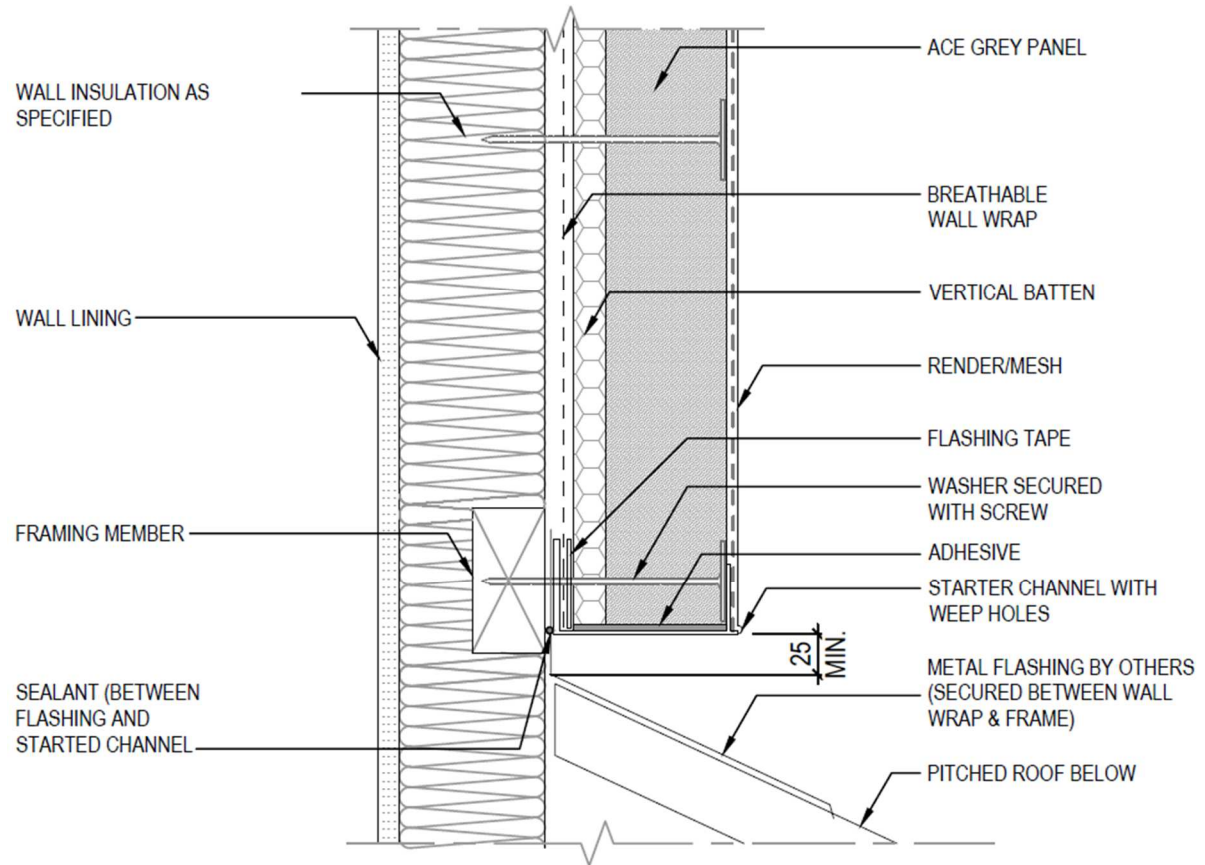
7.1.18 Window Head



7.1.19 Window Sill



7.1.20 Wall Over Roof



8 Warranty

ACE Polystyrene Products warrants to the purchaser of the Product and the last purchaser prior to the installation of the Product for a period of 10 years from the date of purchase that ACE Grey EPS Foam Panel sheets (the "Product") will be free from defects due to defective factory workmanship or materials and, subject to compliance with the conditions below, will be resistant to cracking, rotting, damage from termite attacks to the extent set out in ACE's relevant published Specifications current at the time of installation. Nothing in this document shall exclude or modify any legal rights a customer may have under the Trade Practices Act or otherwise which cannot be excluded or modified at law.

CONDITIONS OF WARRANTY

The warranty is strictly subject to the following conditions:

- i)** ACE will not be liable for breach of warranty unless the claimant provides proof of purchase and makes a written claim either within 30 days after the defect would have become reasonably apparent or, if the defect was reasonably apparent prior to installation, then the claim must be made prior to installation;
- ii)** this warranty is transferable;
- iii)** the Product must be installed and maintained strictly in accordance with the relevant ACE Specifications current at the time of installation and must be installed in conjunction with the components or products specified in the specifications; Further, all other products, including coating and jointing systems, applied to or used in conjunction with the Product must be applied or installed and maintained strictly in accordance with the relevant manufacturer's instructions and good trade practice;
- iv)** the project must be designed and constructed in strict compliance with all relevant provisions of the current Building Code of Australia, regulations and standards;
- v)** the claimant's sole remedy for breach of warranty is (at ACE's option) that ACE will either supply replacement product, rectify the affected product or pay for the cost of the replacement or rectification of the affected product;
- vi)** ACE will not be liable for any losses or damages (whether direct or indirect) including property damage or personal injury, consequential loss, economic loss or loss of profits, arising in contract or negligence or howsoever arising. Without limiting the foregoing, ACE will not be liable for any claims, damages or defects arising from or in any way attributable to poor workmanship, poor design or detailing, settlement or structural movement and/or movement of materials to which the Product is attached, incorrect design of the structure, acts of God including but not limited to earthquakes, cyclones, floods or other severe weather conditions or unusual climatic conditions, efflorescence or performance of paint/coatings applied

to the Product, normal wear and tear, growth of mould, mildew, fungi, bacteria, or any organism on any Product surface or Product (whether on the exposed or unexposed surfaces);

vii) all warranties, conditions, liabilities and obligations other than those specified in this warranty are excluded to the fullest extent allowed by law;

viii) if meeting a claim under this warranty involves re-coating of Products, there may be slight colour differences between the original and replacement products due to the effects of weathering and variations in materials over time.

ix) to claim a warranty, photographic evidence is required to approve work and product conditions throughout the build. Ensure that each stage is well documented: before, during and after installation.

DISCLAIMER

The recommendations in ACE's specifications manual are based on good building practice, but are not an exhaustive statement of all relevant information and are subject to conditions (iii), (iv), (vi) and (vii) above. Further, as the successful performance of the relevant system depends on numerous factors outside the control of ACE (e.g. quality of workmanship and design), ACE shall not be liable for the recommendations in that literature and the performance of the relevant system, including its suitability for any purpose or ability to satisfy the relevant provisions of the Building Code of Australia, regulations and standards.

Information on ACE Polystyrene Grey Panel External Wall Cladding System can be found at:

www.acepolystyrene.com.au

ACE Polystyrene

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