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MASTERWALL

TECHNICAL DOCUMENT:

SYSTEM INSTALLATION & CONSTRUCTION DETAILS

02.12.2013

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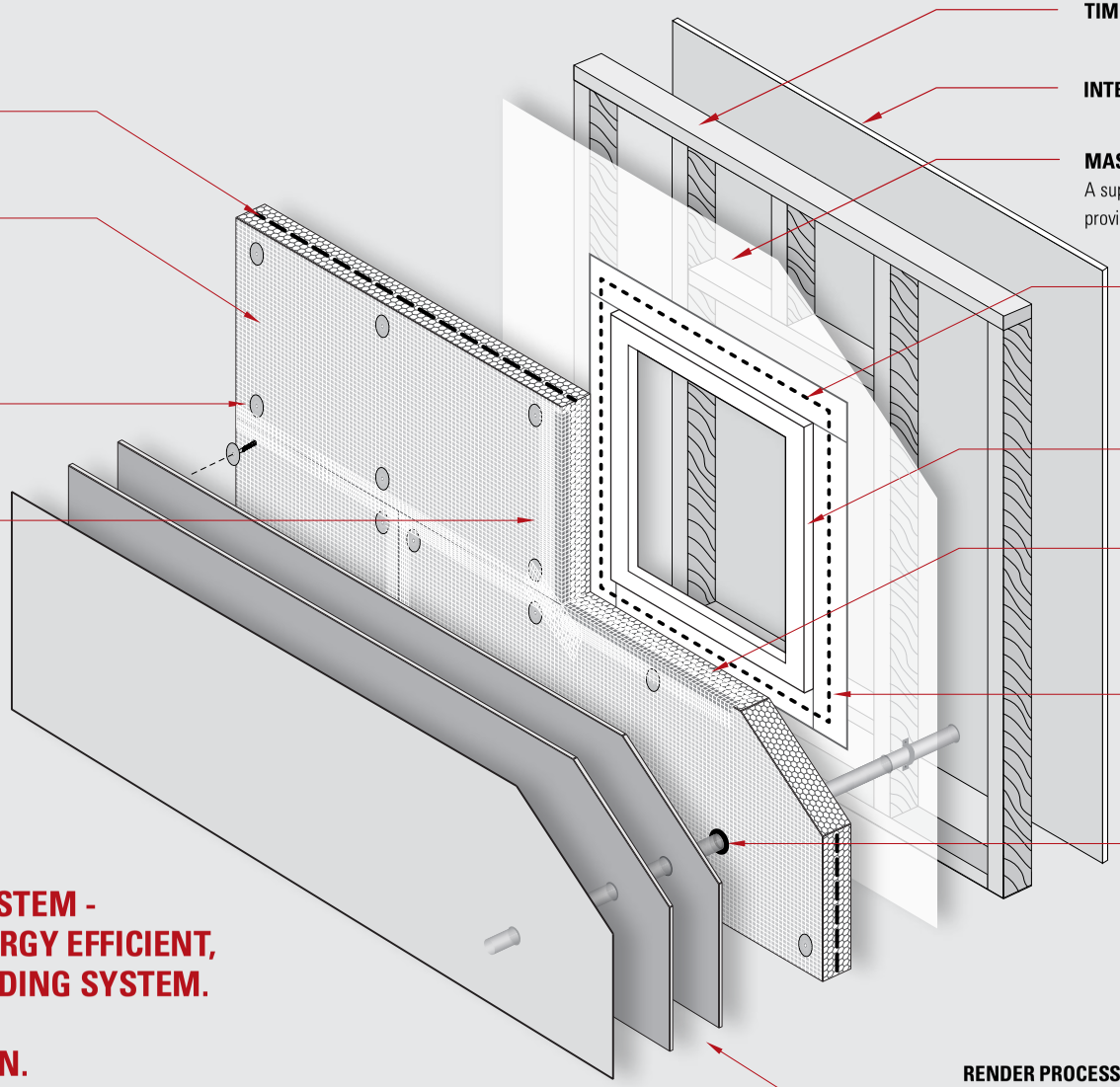
POLYURETHANE FOAM SEALANT:
100% flexibility ensures integrity and weatherproofing of joints.

MESHED & PRIMED MASTERWALL PANELS:
M grade polystyrene, light weight, designed to move with the frame (Thicknesses: 50/75/100/125mm R 1.8/2.5/3.2/3.9).*
* Includes R 0.5 allowance for 90mm frame, 10mm plasterboard and render.

FIXINGS:
Pre-assembled 50mm button and class 3 screw sets provide the right fix for every situation.

ALLOY EXTERNAL CORNERS:
With integrated reinforcing mesh for strength.



TIMBER STUD FRAME.

INTERNAL PLASTERBOARD LINING.

MASTERWALL BREATHER WRAP:
A superior translucent breather frame wrap which provides high performance vapor control.

PREMIUM QUALITY POLYURETHANE LIQUID SEALANT:
Creates a gasket seal between back of panel and the flashing tape.

ALUMINIUM OR TIMBER WINDOW.

NO NEED FOR POST FORM REVEALS:
No need to double frame to achieve brick like reveals.

MASTERWALL SELF ADHERING FLASHING TAPE:
A high performance flashing system uniquely formulated for MasterWall.

POLYURETHANE FOAM SEALANT:
All cavities around penetrations filled with polyurethane sealant.

THE MASTERWALL® SYSTEM - A WEATHER-TIGHT, ENERGY EFFICIENT, INSULATED WALL CLADDING SYSTEM.

FRAMED CONSTRUCTION.

RENDER PROCESS:
Minimum 5mm approved acrylic render system including fiberglass mesh jointing tape to all panels and 45° to all corners of openings - see Construction Details Manual.

Note: Diagram not to scale.

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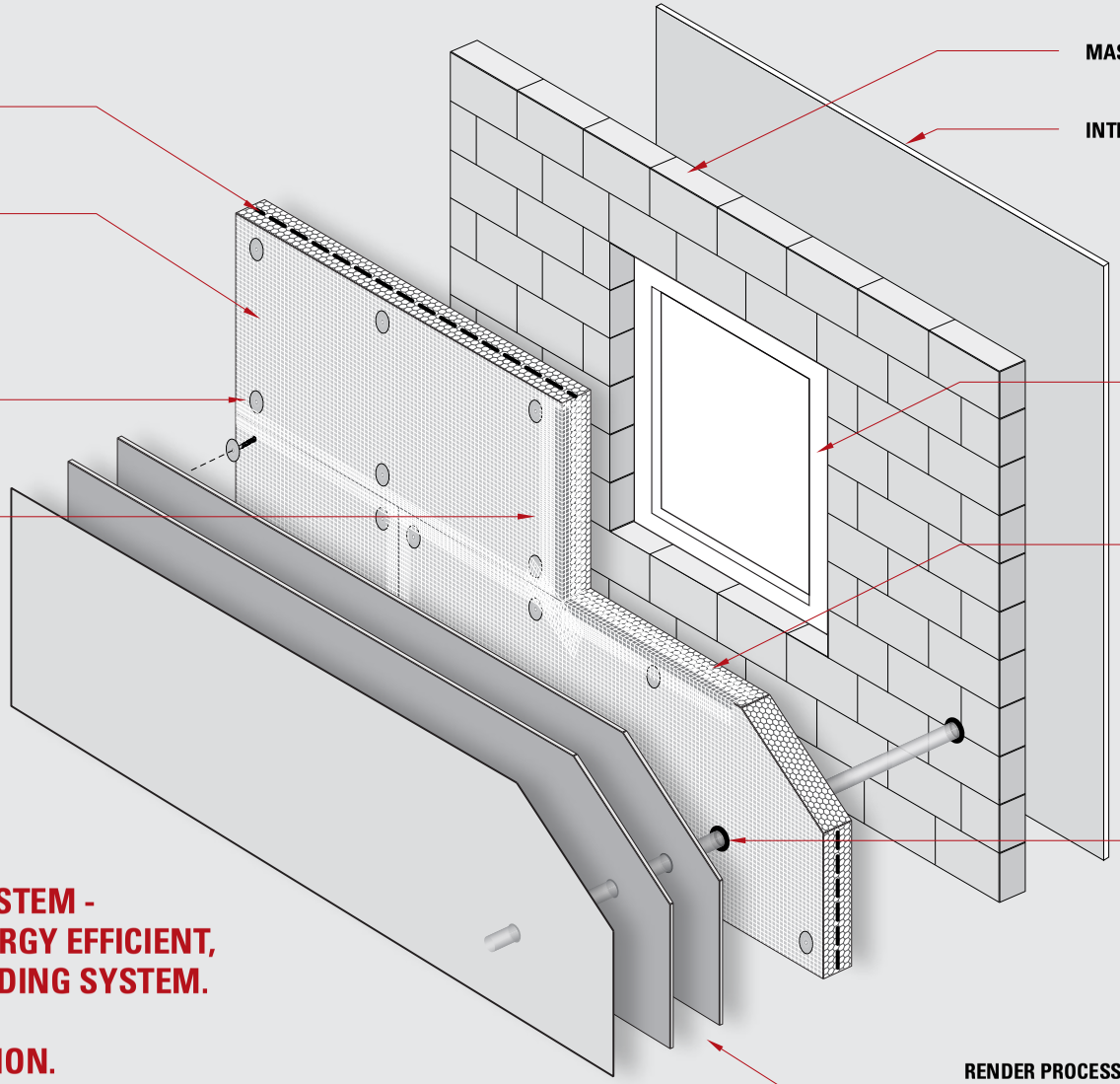

MASONRY SUBSTRATE.

INTERNAL PLASTER OR LINING.

ALUMINIUM OR TIMBER WINDOW.

NO NEED FOR POST FORM REVEALS:
No need to double frame to achieve brick like reveals.

POLYURETHANE FOAM SEALANT:
All cavities around penetrations filled with polyurethane sealant.

RENDER PROCESS:
Minimum 5mm approved acrylic render system including fiberglass mesh jointing tape to all panels and 45˚ to all corners of openings - see Construction Details Manual.

Note: Diagram not to scale.

THE MASTERWALL® SYSTEM - A WEATHER-TIGHT, ENERGY EFFICIENT, INSULATED WALL CLADDING SYSTEM.

MASONRY CONSTRUCTION.

SYSTEM SPECIFICATION

MASTERWALL®

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INTRODUCTION

Description

MasterWall® ready-to-render polystyrene panel is an external lightweight, reinforced, insulating wall panel, mechanically fixed to the outer face of the building. The panels are completed by the application of an approved acrylic render, trims, sealants, opening flashings and decorative and waterproof coatings.

Traditional sand/cement render is not suitable on the **MasterWall®** panels.

The base material is Medium (M) Grade expanded polystyrene (EPS) in sheet form with an applied facing of a cementitious-based material. This facing is reinforced with a fiberglass mesh. The facing is compatible with approved acrylic render and decorative finishes.

EPS (and the combination of EPS and acrylic render) has a 60-year history of use in Europe and North America. **MasterWall®** complies with the Building Code of Australia (2008) - Alternative Solutions.

Application

MasterWall® ready-to-render polystyrene panel is appropriate for use on timber and steel-framed residential and commercial buildings. It may also be applied to concrete and masonry.

The lightweight panels are convenient to install and add minimum weight to the structure.

The product's thermal insulation properties contribute to the energy efficiency of the building.
The ability to accept a range of approved acrylic render and decorative finishes allows a variety of aesthetic styles to be achieved, including traditional, heritage and modern.

The large panels are speedily installed, providing early enclosure and weatherproofing – assisting the achievement of early lock-up stage.

Composition

Panel:	Medium (M) Grade expanded polystyrene (EPS) with included flame retardant.
Facing:	Flexible cementitious material designed for both an excellent mechanical fix and a natural chemical bond with the binders and polymers found in approved acrylic render systems. The finished surface has a light trowel type texture.
Reinforcing:	A layer of alkaline-resistant fiberglass mesh, 145gm/m2 minimum.

Manufacture

The panels are manufactured locally from Australian and imported materials. The reinforced facing is mechanically applied to the previously cured EPS panels.

! As water ingression into timber frame can cause significant movement and thus risk cracking the external render, total frame protection from weather ingression should be implemented prior to the installation of the **MasterWall®**. If for any reason, moisture is apparent in the timber frame after installation, this should be allowed to dry out thoroughly prior to the application of render.

! It is recommended that the installation of internal linings to all external walls should be completed prior to the start of the render process of the **MasterWall®** System. If installing internal linings after the completion of external render, use screw fixings only, as hammering nails will crack external render.

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Sizes & Thicknesses

Standard panel size: 2400mm x 1200mm

Nominal thickness: 50mm, 75mm, 100mm, 125mm

Area: 2.88m^2

Mass:

Thickness	50mm	75mm	100mm	125mm
kg/m2	2.4	2.9	3.4	3.9
Total sheet kg	6.9	8.4	9.8	11.3

If other thicknesses are required, please consult Practica MMC.

Manufacturing Tolerances

Length: 2400mm ± 10mm

Width: 1200mm ± 5mm

Thickness: ± 1.0mm

Density

20kg/m^3 (polystyrene only)

Water Vapour Transmission

520 ug/m2s (AS2498.5)

Panel Fire Performance AS 1530.3

a. Spread of flame = 0
b. Smoke developed = 5
c. Heat evolved = 3

Colour & Packaging

The reinforced facing has a distinctive light colour. The panel is branded **MasterWall®**.
MasterWall® is a registered trademark of Practica MMC Pty Ltd.

Warranty - 7 years

Practica MMC Pty Ltd warrants that its products are free from defects in materials and workmanship for a period of 7 years from the date of purchase. For a full description of the Warranty refer to the Practica MMC website (http://www.practicammc.com.au).

Limitation of Liability

Except as provided for in the warranty above, **Practica MMC Pty Ltd** is not liable for any direct, indirect or consequential loss which any user suffers, incurs or is liable for in connection with the supply of **Practica MMC Pty Ltd's** products, including without limitation, direct, indirect or consequential loss arising from third party claims occasioned by defects in products.

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PROPERTIES

Thermal Performance

MasterWall® panel R Rating Values

Thickness	Rating	R^t*
50mm	1.3	1.8
75mm	2.0	2.5
100mm	2.7	3.2
125mm	3.3	3.9

*An allowance **R 0.5** can be attributed to a standard stud frame internally lined with 10mm plasterboard. R^t - Total Wall System Thermal Rating. **Building Code of Australia (BCA)** states that external walls of residences must demonstrate an R Rating of a minimum of **R 2.8**.

As significant variations occur in both thickness and/or number of layers applied (as well as the types of approved acrylic render used on external walls), an R Rating is not applied to the completed render finish.

The optional thicknesses of the panel provide the opportunity to achieve higher R Ratings without the need to install additional materials.

Although the finished **MasterWall®** panels are water resistant, a breathable frame wrap is required over framing. If a reflective insulation is required for enhanced thermal performance or to achieve other construction characteristics, that material is to be **a breather grade** – to allow for vapour transmission.

Acoustic Performance

The rendered **MasterWall®** system has been tested to AS 1191-2002 for Airbourne Sound Insulation. The STC rating is 35. (note this does not include sound control batts). **MasterWall®** panels can be used as part of a total wall system to achieve various Rw (Weighted Sound Transmission Index) and STC (Sound Transmission Class) ratings. Please contact Practica MMC for further information.

Fire Resistance & Bushfire Attack Level (BAL)

MasterWall® panels are non-fire rated. EPS contains a fire-retardant additive that causes the **MasterWall®** panels to self extinguish when the fire source is removed. The reinforcing face is not combustible. In a fire situation, EPS - in common with timber and other building materials - generates carbon dioxide and carbon monoxide. Contact the manufacturer for further details.

The complete MasterWall BAL 29 (system) has achieved a Bushfire Attack Level rating of BAL29 to AS1530.8.1-2007. This applies to the entire **MasterWall®** system including a specific set of supporting materials and render specification. Consult Practica MMC Pty for further information.

Impact Resistance

When correctly installed, **MasterWall®** panels offer similar resistance to impact and damage as other common non-metallic sheet materials. In addition to this feature, the panels will not shatter or fracture beyond the area of impact. Minor damage will be partly corrected by the self-recovery properties of the EPS.

Moisture Resistance

MasterWall® panels do not absorb water. This a property of EPS that also prevents capillary action. When correctly installed with the properly detailed flashings and material combinations, **MasterWall®** System provides a weatherproof face to the building. This includes the installation of a breathable frame wrap over framing.

M.S.D.S.

A Material Safety Data Sheet (MSDS) is available for **MasterWall®** panels. Please contact **Practica MMC**.

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Substrates

Timber framing must comply with:
AS 1684 - National Timber Framing Code.

Metal framing must comply with:
AS 3623 - Domestic metal framing.

Masonry walls must comply with:
AS 3700 - Masonry Structures.

Precast / Tilt-Up walls must comply with:
AS 3600 / AS 3850 - Precast and Tilt-Up Panel Construction.

Structural bracing is to be integral to the wall frame system.

MasterWall® System does not contribute to the structural integrity of the framing.

The control factors for installation of MasterWall® panels are:

Support Spacing: 450mm & 600mm framing.

Building Classes: 1 to 10

Wind Loadings: N1 to N5 (classes 1 & 10). All loadings engineered to suit building requirements for classes 2 to 9.

Cyclonic: C3 & C4 on 450mm steel or timber stud spacings.
For installation outside these control factors, please contact **Practica MMC**.

BAL 29 (Bushfire Attack Level)

The **MasterWall®** BAL 29 System must be comprised of a precise group of specified materials to meet the Bushfire Attach Level standard as tested (AS1530.8.1-2007). This includes the **MasterWall®** panel with all of the **MasterWall®** ancillaries, i.e. **MasterWall®** breather frame wrap, window flashing tape, fixings, fixing buttons, urethane sealants, foam sealants, external render trims and fibreglass mesh.

The render system applied must strictly follow the render specification of various render system manufacturers for the **MasterWall®** System to achieve a BAL 29 rating (contact **Practica MMC** for further information).

Reinforcing Tape

Alkaline-resistant fiberglass reinforcing mesh (5mm x 5mm), minimum 150mm - 200mm wide, 145gm/m2 must be installed over all panel joints.

Trims

Mesh reinforced alloy corner trims are preferred and are to be applied to all external corners/openings and **exposed** bottom edges of panels if applicable. Galvanised or stainless steel trims are not recommended.

Flashing Tape (Framing Application Only)

Flexible adhesive backed Aluminium **MasterWall®** Flashing Tape typically used around windows, doors and underneath control joints as a high quality adhesive flashing system.

Joint Sealant

A flexible urethane foam sealant should be applied to all butt joints - see page 25.

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Window Flashing Sealant

A long skinning liquid polyurethane elastomeric sealant applied to the face of the window flashing tape. Urethane foam sealants are not to be used in this application.

Screw Fixings

Class (3) screws, 10 gauge fitted with a 40mm diameter **MasterWall®** plastic button. Class (3) screws are specified regardless of the geographic location, as **MasterWall®** panels always contain differing levels of water vapour.

Fixing spacing according to wind load:

Frame & Masonry Substrates		Wind Classification to AS 4055				
Stud spacing	**Location (mm)**	**N1**	**N2**	**N3**	**N4**	**N5**
450	Within 1200 of building edge	400	400	400	300	200
	Elsewhere	400	400	400	400	400
600	Within 1200 of building edge	400	400	400	200	N/A
	Elsewhere	400	400	400	400	N/A

The screws are selected to suit either timber framing or steel framing, and are available in the following lengths.

Length	Type	Gauge	Relevant Panel Thickness	
75mm	Chip	10	50mm	Self Driller
75mm	Chip	10	50mm	Needle Point
100mm	Bugle	10	75mm	Self Driller
100mm	Bugle	10	75mm	Needle Point
130mm	Bugle	10	100mm	Needle Point
150mm	Bugle	10	125mm	Needle Point

- Timber Frame - Screw lengths should always be a minimum of 25mm longer than the thickness of the panel specified.
- Steel Frame - Screw lengths should always be a minimum of 15mm longer than the thickness of the panel specified.

Cyclonic fixing spacing - K-Series pre-coated Cyclonic panels**:**

Frame Stud spacing 450 maximum	**Location (mm)**	**Edge of panel**	**Elsewhere on panel**
C3	Within 1200mm of building edge	300	150
	Elsewhere	300	200
C4	Within 1200mm of building edge	200	100
	Elsewhere	300	150

For all Wind Load test results please contact Practica MMC.

Render System

Typically a minimum 5mm acrylic render system is applied to to entire MasterWall system. Fibreglass mesh tape is to be embedded into the first 3mm layer of acrylic render, followed by a 2mm leveling coat of acrylic render. This is completed with a coloured acrylic texture system. For render system specifications consult **Practica MMC**.

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INSTALLATION

Breather Frame Wrap (Framing Application Only)

Practica MMC recommends use of **MasterWall®** Breather Frame Wrap or similar.
Note: Under no circumstances should a non-breathable paper be used behind **MasterWall®** panels.

Layout

MasterWall® panels may be laid either vertically or horizontally (for either frame or masonry substrates) according to the best fit for the 2400mm x 1200mm sheet - horizontal, staggered joint layout is always the preferred option.

If the wall height is less than or equal to 2400mm, then practicality may dictate that the **MasterWall®** panel be laid vertically - but horizontal layout is the preferred option.

If the wall height is greater than 2400mm, then the panels should always be laid horizontally, in a brickwork or stretcher bond pattern, with each 1200mm vertical joint staggered up through the height of the wall.
A horizontal layout is the preferred option.

Supporting Framework

Edges of the MasterWall® panels may require support on studs, noggings or other intermediate blocking.

MasterWall® panels may be cantilevered or projected beyond supports by the same distance as a given panel's thickness.

Fixed-back blocking techniques are mandatory. Full-stud width (min 90mm) support is required. Back blocking timber must be MGP 10 or greater. Merchant grade is not permitted. Adhesive fixed back blocking is not permitted.

Supports to intermediate joints are required, as shown in this table.

Panel Thickness	**50mm**		**75mm**		**100mm**		**125mm**	
Joint Orientation	V	H	V	H	V	H	V	H
Studs 450 crs	✔	✘	✔	✘	✔	✘	✔	✘
Studs 600 crs	✔	✔	✔	✘	✔	✘	✔	✘

(V = Vertical) (H = Horizontal)

Supports/blocking are required to all edges around openings.

Cutting

(a) Masonry Blade: For 50mm, 75mm, 100mm &125mm **MasterWall®** panels, a diamond-tipped masonry blade is the most accurate, time-efficient and clean way to cut/trim panels (see MSDS).

(b) Hand Saw: A fine-tooth saw is also an efficient way of cutting the **MasterWall®** panel.

MasterWall® panels should be accurately cut to size to produce close butt joints between panels.

Health & Safety

Use of personal protective equipment (face masks and safety goggles) is recommended. The fine dust created by mechanical cutting is hazardous, and protection is recommended, including face masks and safety goggles.
Mechanical cutting should be performed in well-ventilated spaces. Power tools can be fitted with effective dust-extraction systems. Refer to **MasterWall®** Material Safety Data Sheet (MSDS).

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Fixing To Framing

(a) Centres: On a stud spacing of either 450mm or 600mm, fixings are to be at a maximum 400mm centres vertically to all perimeter and intermediate supports. Fixings around perimeter of panels should be 50mm in from the edge of the panel. Average 10 fixings per m^2 (see Wind Load Fixing Chart page 12).

(b) Fixings: Fixing screws and buttons should be the type and suitability as set out in this guide.

(c) Appearance: When fastened correctly, the screw head and button should be slightly countersunk in a concave recess on the outer surface of the panel, and located so as to not crush the edge of the panel. The button should always retain its circular shape i.e. if the button begins to flare or fold it has been screwed too far towards the frame.

Fixing To Masonry/Concrete

MasterWall® panels can be fixed to masonry and concrete substrates by either:

(a) Directly fixing to the masonry substrate utilizing a combination of **MasterWall®** approved masonry anchors (spaced at 600mm maximum vertical lines at 600mm spacings) with intermediate daubs of **MasterWall®** approved adhesive between fixings. (See Construction Details on pages 22 & 23).
Note: This method cannot be used in cyclonic zones.

(b) Directly fixing to masonry substrate with **MasterWall®** approved anchors only. **Note: This method must be used for cyclonic zones**, fixing layout is the same as frame fixing method on wind load chart (see page 12).

(c) On timber or metal battens over masonry and concrete substrates spaced at either 450mm or 600mm centers with fixing centres as per frame fixing spacings on page 12.

Note: For more information on appropriate MasterWall masonry anchors please contact Practica MMC.

Sealing - Joints

Prior to closing up of all joints between panels (and between panels and other building elements), a flexible urethane foam is required to the centre the gap between panels.

This forms a mechanical seal for weatherproofing, and converts the many individual panels into a single monolithic, insulated skin.
Foam urethane sealant is therefore required to:

(a) All butt joints

(b) All external corners and butt jointed internal corners

Sealing – Openings (Framing Applications Only)

Prior to the application of the panel, **all** openings must be flashed from the reveal to the frame. This is now a Building Code requirement. **Practica MMC Pty Ltd** recommends and supplies adhesive aluminium **MasterWall®** Flashing Tape for just this purpose, and is suitable for both aluminium and timber windows. This proven flashing method reduces the risk of water penetration. In turn, the panels are then to be sealed with Urethane liquid (not foam) to the face of the flashing tape to form a gasket seal around the opening.

Note: **MasterWall®** panels should not be externally sealed to window/door reveals at this point, post installation and prior to render application. Sealants should never be rendered over, as render systems, with limited movement capabilities, will restrict a sealant's ability to move according to manufacturer's specification. Sealants for openings should be applied after the render system has been applied - never before!

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Sealing – Other Penetrations (including wiring, plumbing, joists, ducting)

Where possible all penetrations through the **MasterWall® System** should be treated as per window detail, incorporating flashing tape and liquid urethane sealant. This is of high importance for floor and pergola joist penetrations, electrical meter boxes, ducting and the like.

It is then recommended that a 10mm minimum clearance gap be left between the **MasterWall®** panel and the penetration and caulked using **MasterWall®** flexible expanding foam urethane sealant prior to render application.

Smaller penetrations such as plumbing or electrical conduit should have a 10mm minimum clearance gap between the **MasterWall®** panel and the pipe and caulked using **MasterWall®** approved flexible expanding foam urethane sealant prior to render application.

Note: Extra mesh tape is required around the penetration for added reinforcing during the render process.
Practica MMC Pty Ltd recommends the use of liquid sealants to all timber windows after the rendering process has been completed. Please note that render systems are not sealants i.e. an opening cannot be sealed by the application of an acrylic render system. Render systems are water-shedding technologies, not weather-proofing technologies.

Control Joints and Articulation Relief Joints

Control joints for expansion should coincide with control joints within the building structure and substrate, and should be placed at all perceived stress points or weak areas of excessive movement within the building structure. Control joints should be placed at a maximum of walls that are over 20 meters long and at all mid-floor breaks. It is recommended that panel area below windows that is less than 300mm in height should be relieved with 'Articulation Relief Joints' of the render coating, at the corners of the opening (see Finishing: page 16). Contact Practica MMC for further information.

Articulation relief joints of the render coating are to be formed by cutting or forming a 'V' groove into the completed base coats, only to 70% depth of the render, not into the **MasterWall®** panel. The applied top coats shall replicate the 'V' groove to leave a visible line.

Where control joints are part of the building construction, the joint is to be expressed in the **MasterWall®** panels as an open joint, free of construction urethane, and finished as for all other open edges (including external corners applied to each edge).

Panel to panel control joints should be located on double studs, which are then to be sealed with flashing tape, which is then sealed to the rear of each panel with the use of a liquid (not foam) polyurethane sealant.

All control joints should feature either Ableflex (or similar) or backer rod as the primary seal, which should be set back in the control joint a minimum of 8mm where it must be caulked by others after the render process has been completed. – See Construction Details Manual. All Control Joints should be free of render products.

Corners, Edges, Openings & Returns

All panels to external corners must be butt joined (square) to give maximum strength to the corner.

Butt joints are required to all internal corners. Foam urethane sealant is required in this butt joint.

To form a total weatherproof face, all joints and abutments require sealing with foam urethane sealant.

MasterWall® Alloy External Corners should be applied to all of the following areas:

(a) All external corners

(b) All openings

(c) All bottom edges of panel

These trims are to be in long lengths and set accurately to be plumb, level and straight.

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Skyline System

The **Skyline System** is an architectural concealed waterproofing detail for use on parapet designs, featuring clean, uninterrupted lines. The **Skyline System** is concealed by the applied render finish and eliminates the need for unsightly pressed metal capping. It is also used as a waterproofing detail for fixing blocks within the **MasterWall** and **K-Series Systems**.

The **Skyline System** membrane is a pressure sensitive self-adhesive butyl tape, 0.75mm in thickness, containing a non-woven polyester fibre face, ready for the application of high polymer render. Able to withstand building movement, it has 35% elongation breaking limit and is serviceable from -10° to 100° Celsius.

Important Note: As the **Skyline System** is a total waterproofing detail, no fixings should ever penetrate the horizontal surface of the completed parapet. All fixings of balustrades and the like should only be mounted on the vertical wall surface only.

Curved Walls

MasterWall® panels can be installed to curved shapes of a single radius. Tight curves can be achieved by utilising 50mm panel, fixed to maximum 300 centred stud frame. Contact Practica MMC for further information.

Soffits

MasterWall® panels can be installed as a soffit. Application and finishing requirements are as for walls.
Contact Practica MMC for details.

Finishing

When all **MasterWall®** panels have been installed (complete with sealants and edge trims) a 5mm minimum thickness of an approved acrylic render system is required. The reinforcing mesh over the panel joints is incorporated in the first skim coat of render.

The approved acrylic render is applied using conventional techniques. The render also flush finishes all mechanical fixings.

Traditional sand/cement renders are not suitable for application to **MasterWall®** panels.

When the skim coats are dry, the selected approved finishing coat can be applied. This coat can be smooth or textured, and coloured as preferred.

A minimum acceptable result can be achieved by the following sequence:

- 3mm skim coat (including Reinforcing Mesh Tape)
- 2mm skim coat
- 1.5mm top coat and/or paint finish
- When applying **MasterWall® System** approved render systems, ensure to follow the render system manufacturer's specifications.

Articulation relief joints of the render coating are to be formed by cutting or forming a 'V' groove into the completed base coats, only to 70% depth of the render, not into the **MasterWall®** panel. The applied top coats shall replicate the 'V' groove to leave a visible line.

Storage, Handling, Protection

MasterWall® panels delivered to site should be stored flat and evenly supported. They should be covered or otherwise protected from damage or soiling.

If stored outside panel stacks are to be covered, a material/canvas cover should be utilized. Under no circumstances should a black plastic cover be used.

During installation, the **MasterWall®** panels should be handled with care to prevent edge damage or fracture.

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Particular care is required during windy conditions, as unsecured panels can be severely damaged.

Continuous exposure may result in deterioration and minor fretting of exposed edges of the panel. This is to be removed prior to proceeding with finishing or sealing. As with all sheet materials, protection from impact damage is required.

The application of the approved acrylic render should, wherever possible, follow the installation of internal services, fittings and linings – when the risk of damage is minimised.

Timely application of the render will complete the wall system - and protect the panels from damage.

Repair

Panels that are fractured or severely damaged (before or after fixing) should be rejected or cut down to size for use.

Minor penetrations, edge fractures or crushed areas may be site-patched with the reinforcing mesh and an approved acrylic patching render.

Waste Management

Being lightweight, the panel material is readily dispersed by the wind. To prevent a nuisance, all off-cuts and residue from cutting should be stored in tied plastic bags for removal to a place of legal disposal. Attention to detail - in particular to spacing of backblocking - will contribute to a reduction in the amount of waste and off-cut materials.

Disclaimer

Whilst every effort has been made to ensure the information in this manual is correct at the time of printing, **Practica MMC Pty Ltd** reserves the right to change the specifications of all products referred to in this manual at any time. All changes made to this manual are uploaded on to our website www.practicammc.com.au.

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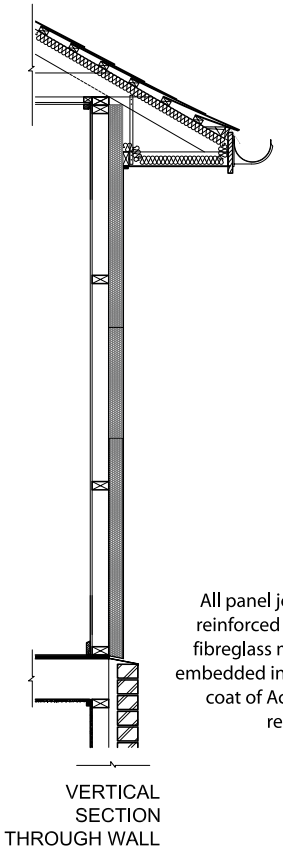
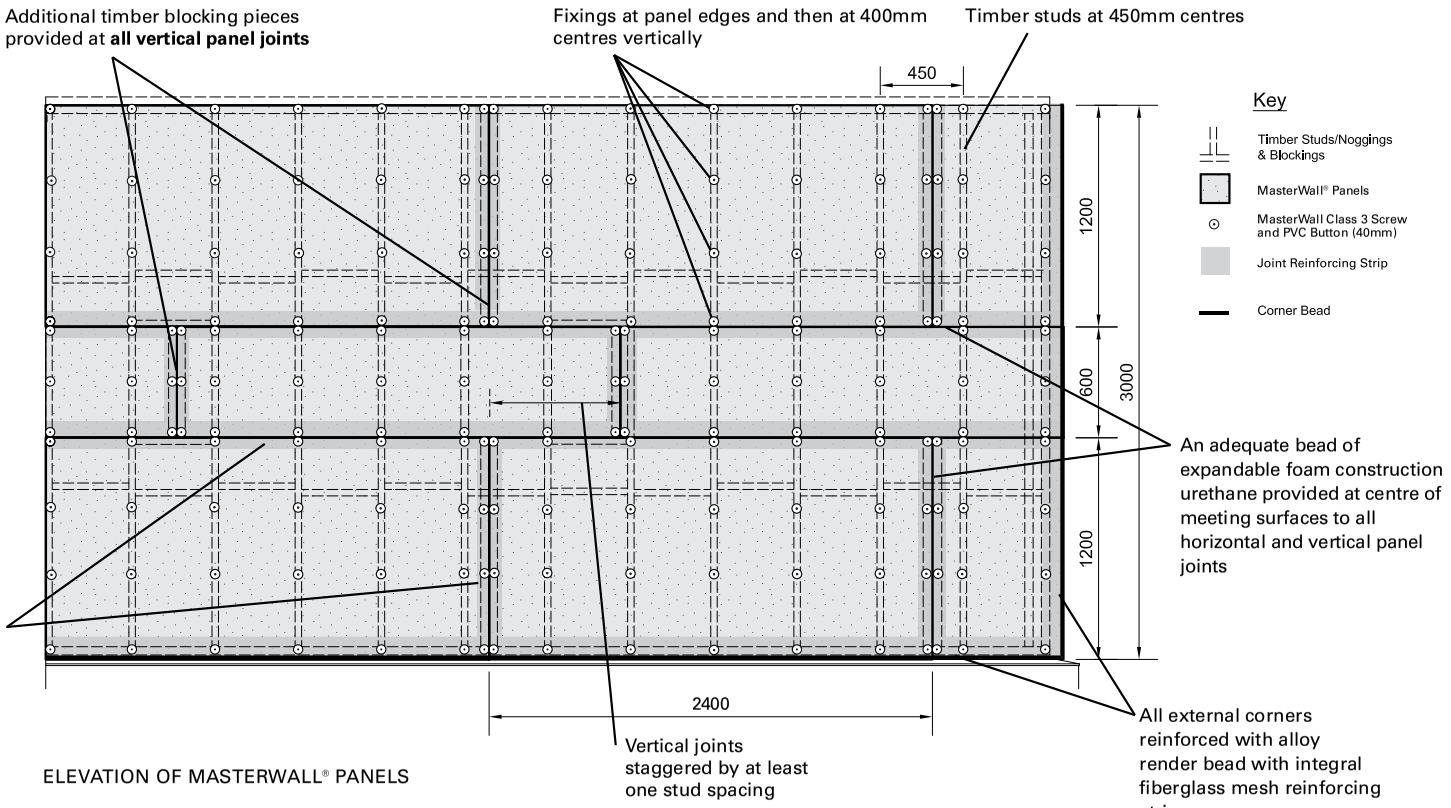
SET OUT ADVICE FOR 450 CENTRED STUD WALL:

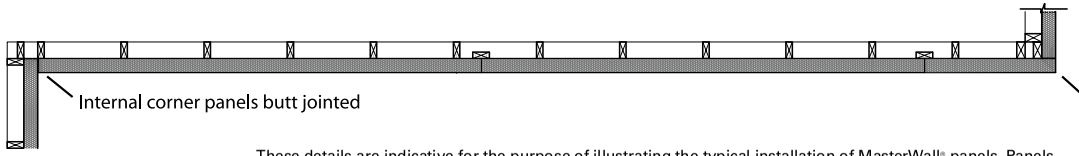
50, 75, 100 & 125mm MASTERWALL®



VERTICAL SECTION THROUGH WALL



ELEVATION OF MASTERWALL® PANELS



PLAN VIEW

These details are indicative for the purpose of illustrating the typical installation of MasterWall® panels. Panels are to be installed strictly in accordance with the specifications detailed in the forward section of this manual. Substrate construction to be in accordance with the Building Regulations & Statutory Requirements.

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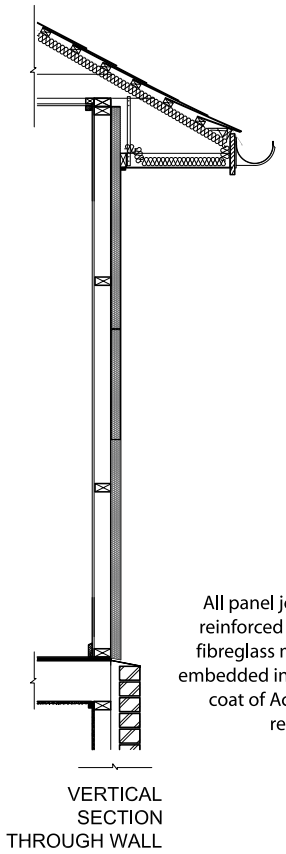
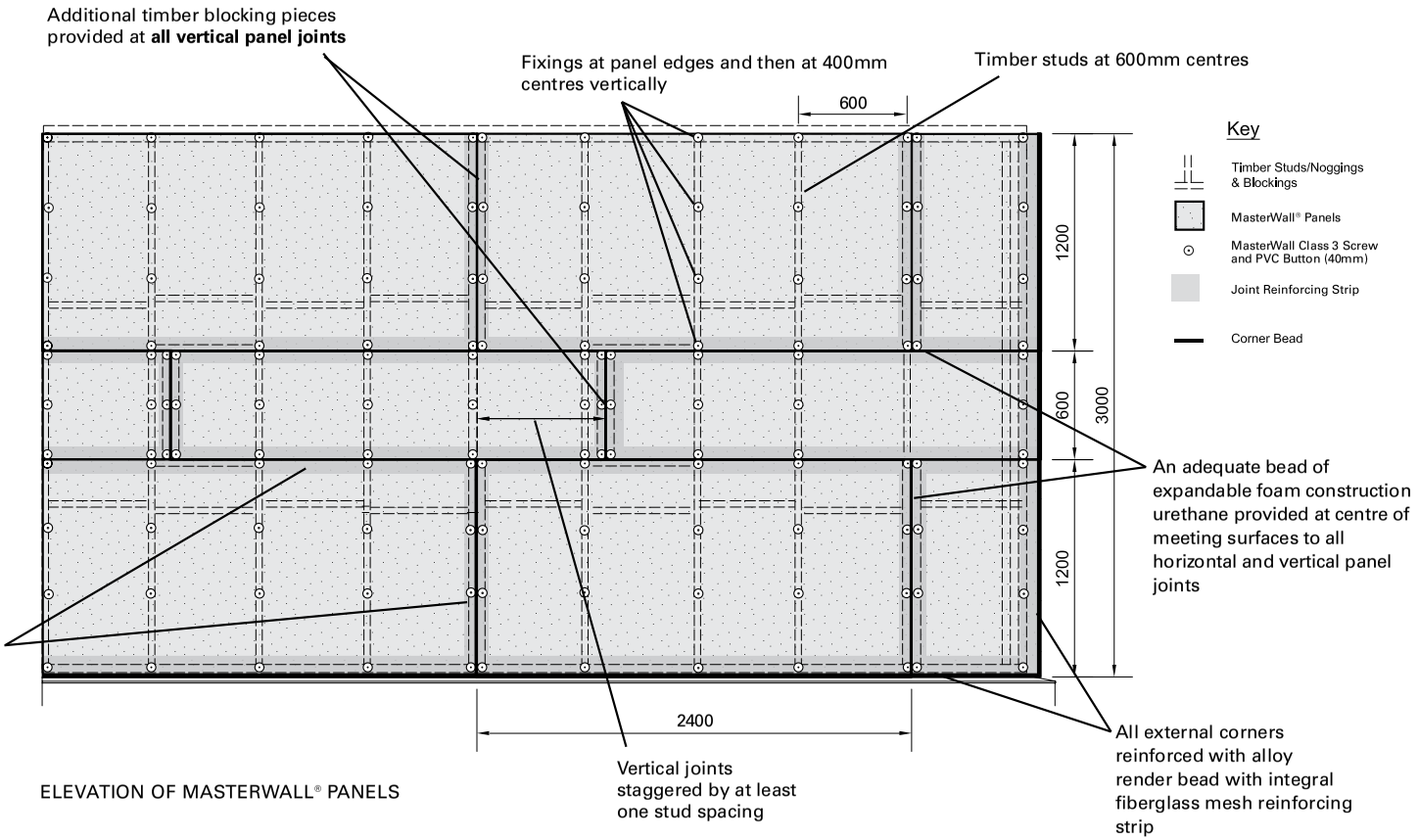
75, 100 & 125mm MASTERWALL®

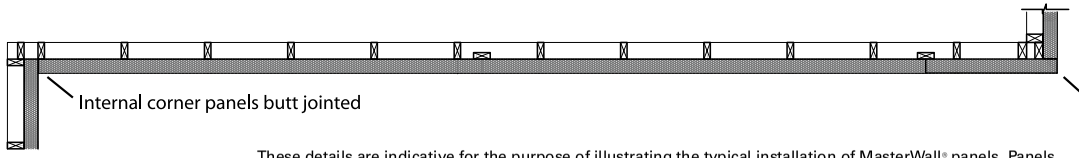
SET OUT ADVICE FOR 600 CENTRED STUD WALL:



VERTICAL SECTION THROUGH WALL



ELEVATION OF MASTERWALL® PANELS



PLAN VIEW

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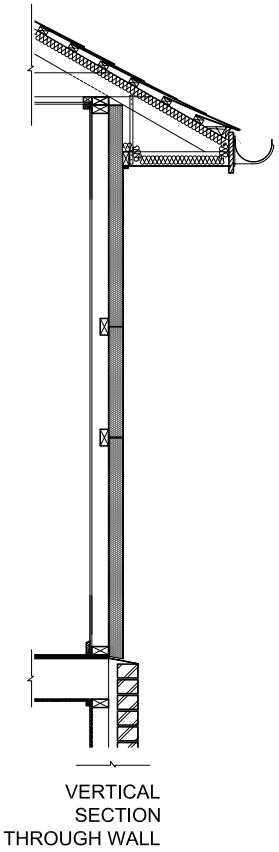
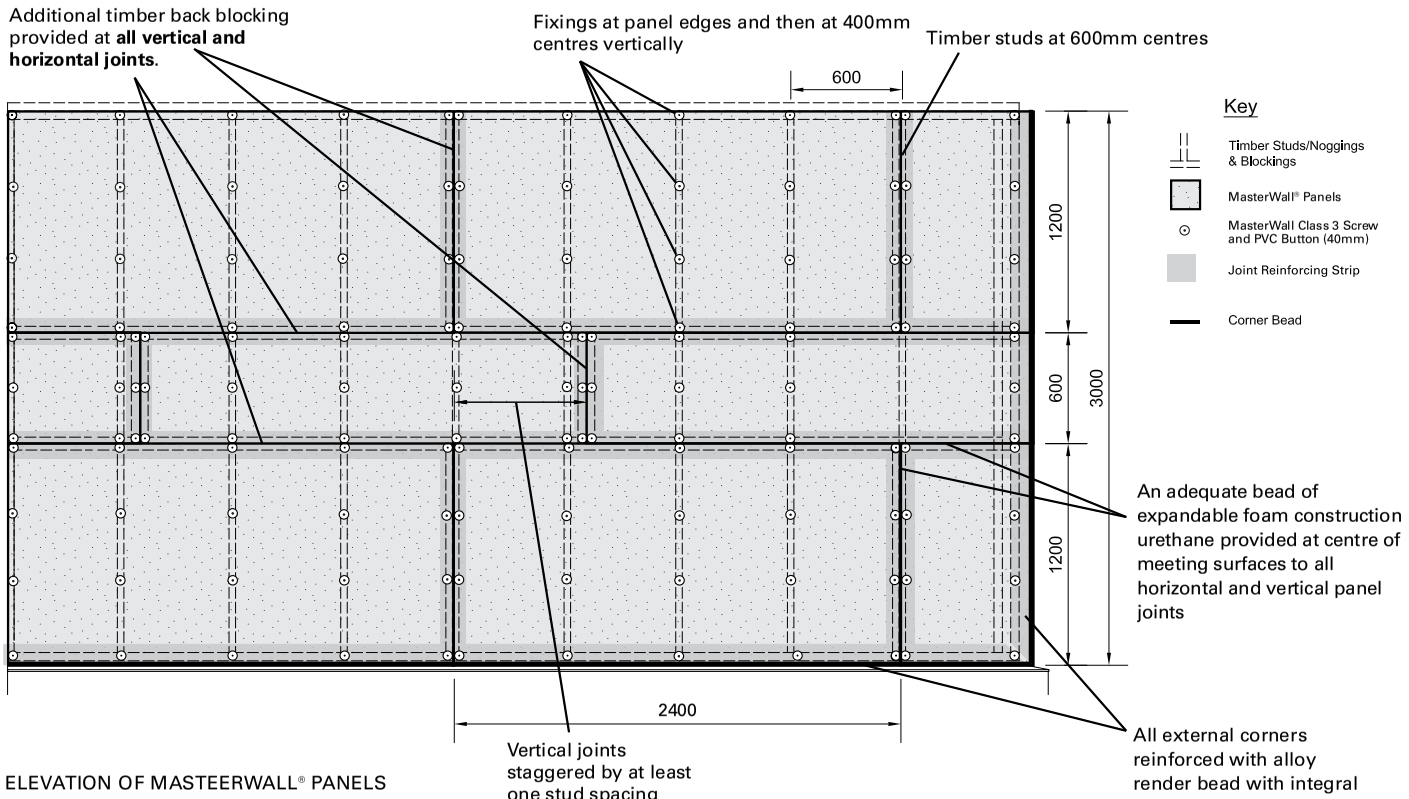
MASTERWALL

50mm MASTERWALL®

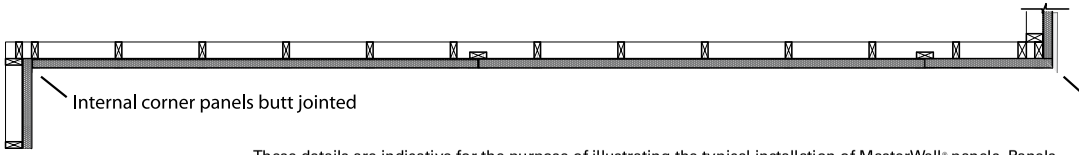
SET OUT ADVICE FOR 600 CENTRED STUD WALL:



VERTICAL SECTION THROUGH WALL



ELEVATION OF MASTEERWALL® PANELS



PLAN VIEW

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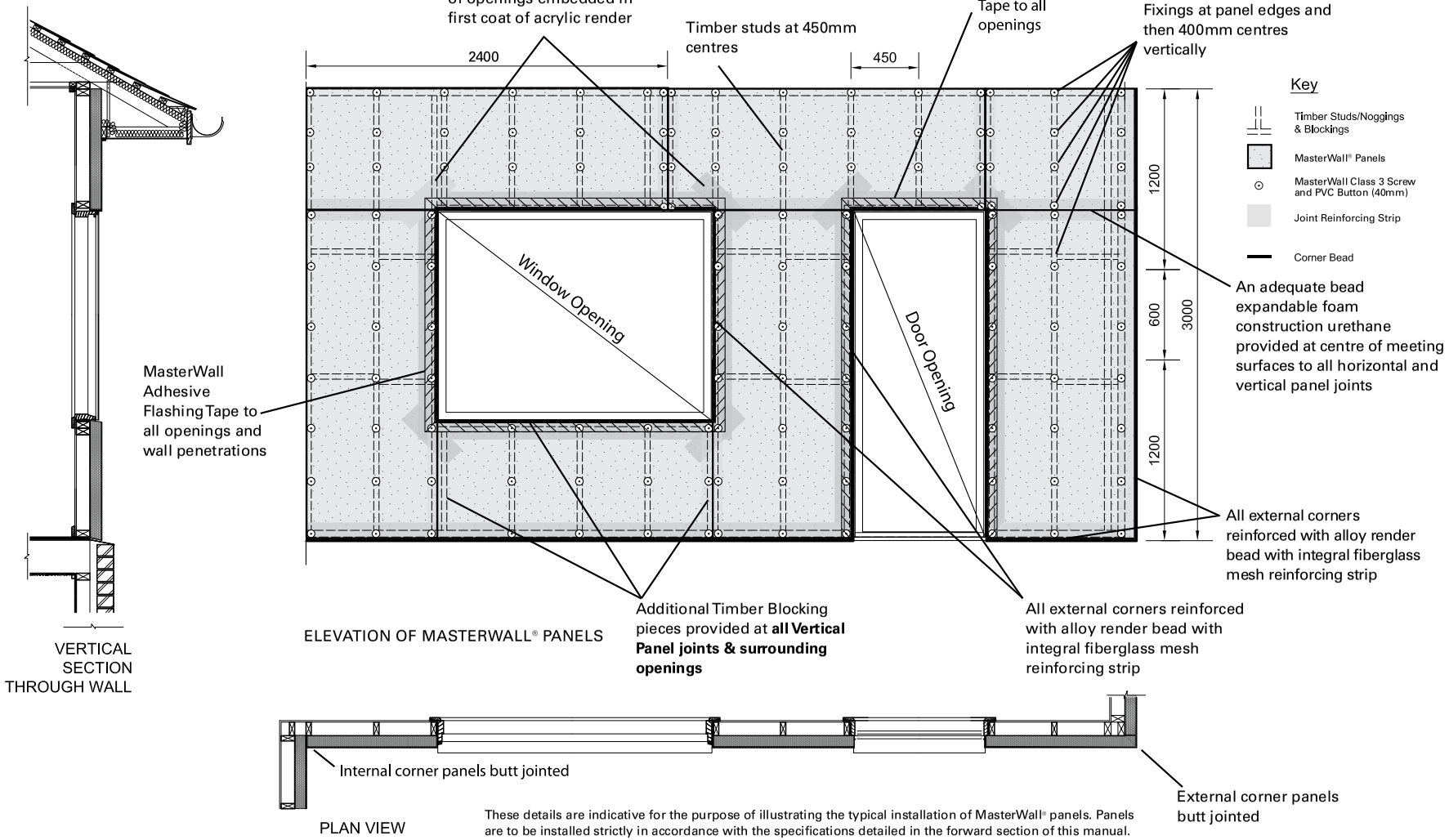
SET OUT ADVICE FOR OPENINGS:

50, 75, 100 & 125mm MASTERWALL®



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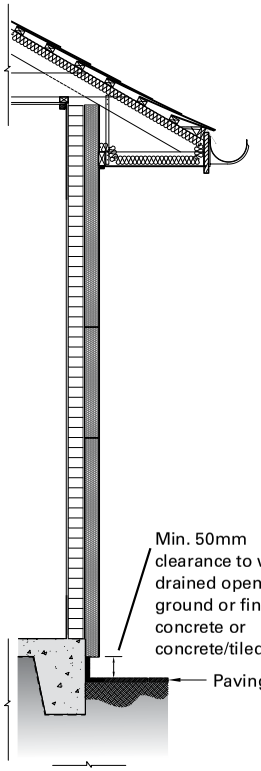
SET OUT ADVICE FOR MASONRY WALL:

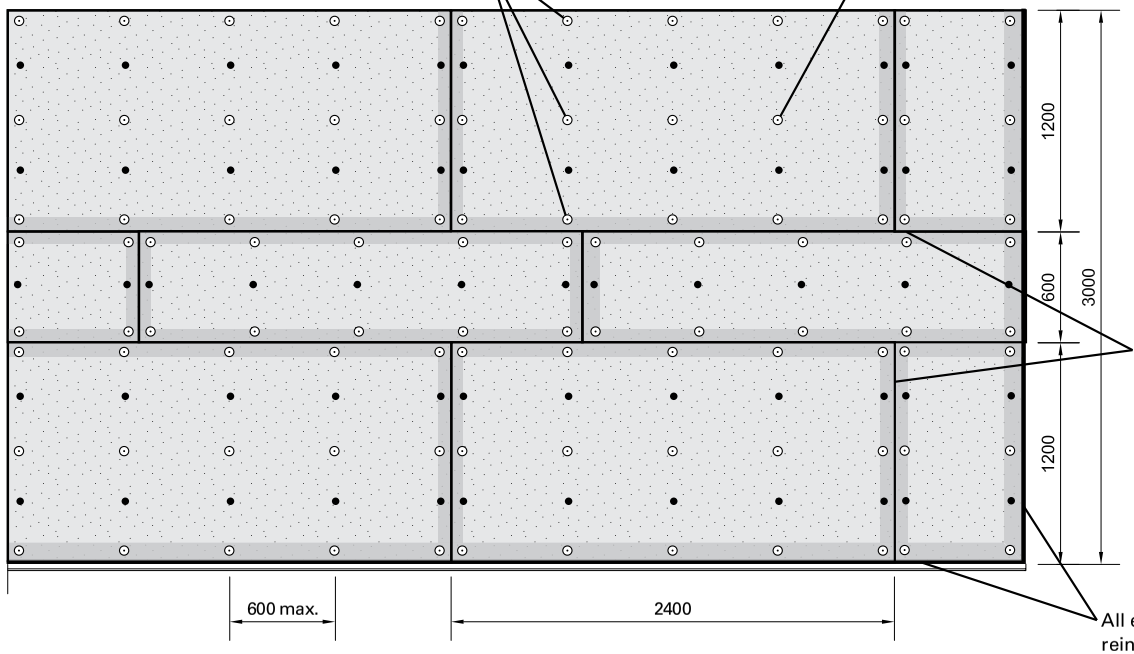
50, 75, 100 & 125mm MASTERWALL®



VERTICAL SECTION THROUGH WALL

Fixings at panel edges and then at 600mm centres vertically with intermediate daubs of approved adhesive. Fixings to be placed minimum 50mm in from edge panel

For Cyclonic Wind Loadings use mechanical fastners only. See page 12.



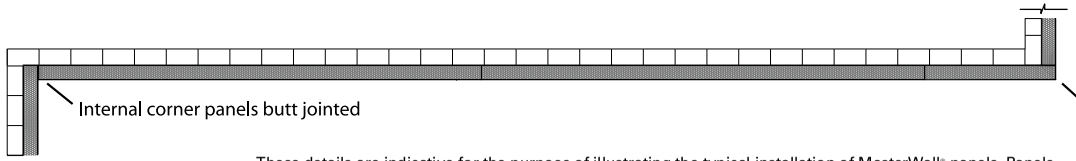
Key

- Masonry substrate
- MasterWall® panels
- MasterWall Approved Masonry Fastner
- Joint Reinforcing Strip
- Daub of MasterWall Approved Adhesive
- Corner Bead

An adequate bead of expandable foam construction urethane provided at centre of meeting surfaces to all horizontal and vertical panel joints

All external corners reinforced with alloy render bead with integral fiberglass mesh reinforcing strip

ELEVATION OF MASTERWALL® PANELS



PLAN VIEW

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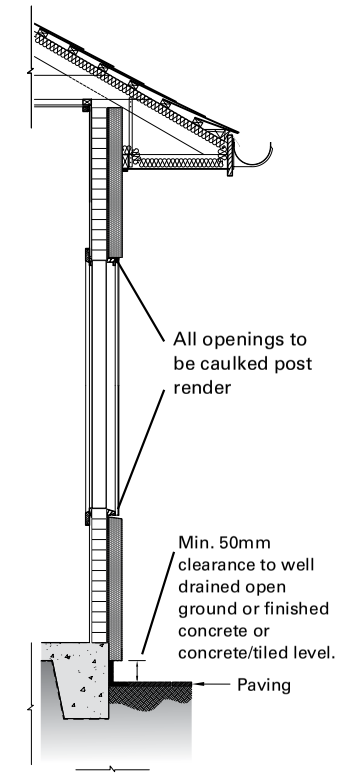
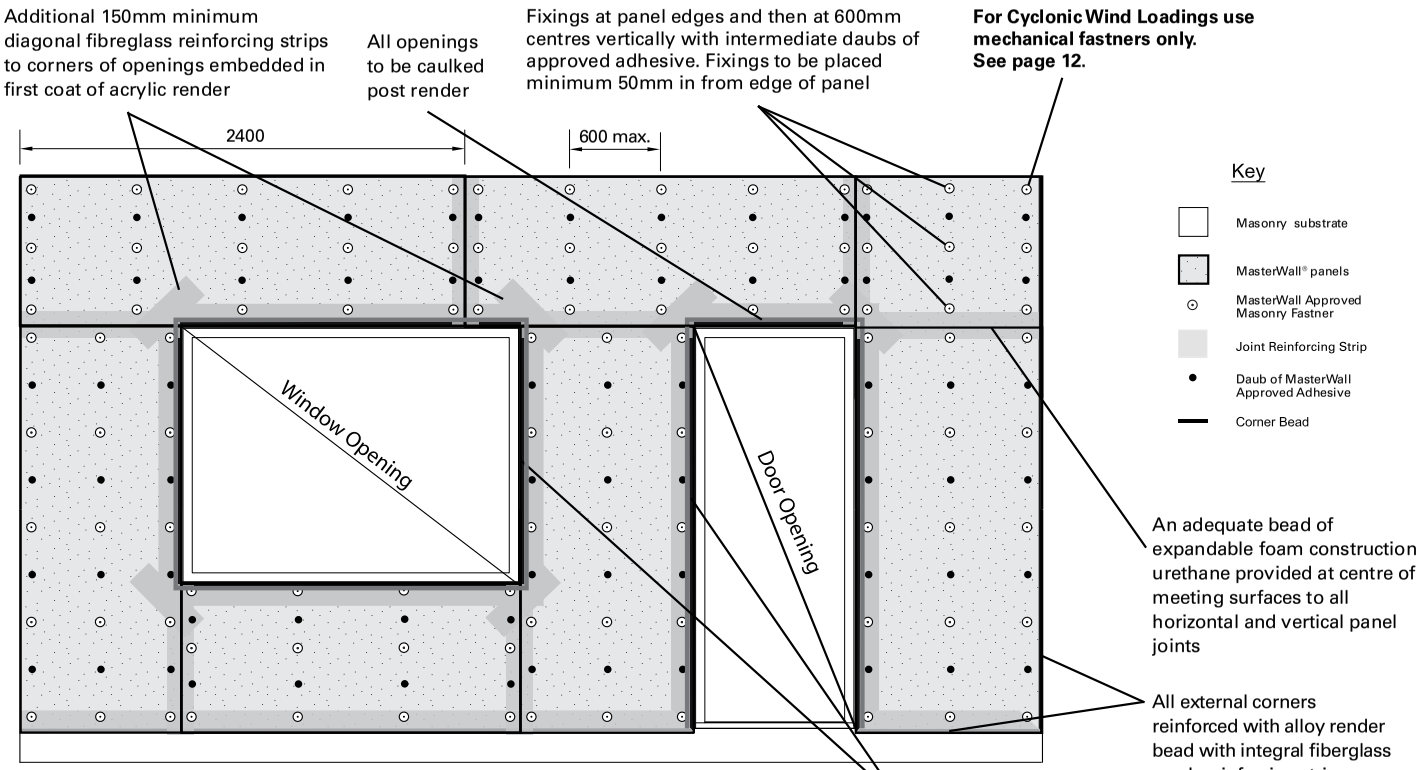
SET OUT ADVICE FOR MASONRY WALL WITH OPENINGS:

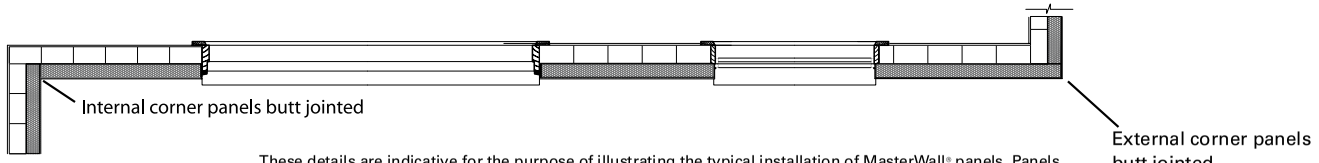
50, 75, 100 & 125mm MASTERWALL®



VERTICAL SECTION THROUGH WALL



ELEVATION OF MASTERWALL® PANELS



PLAN VIEW

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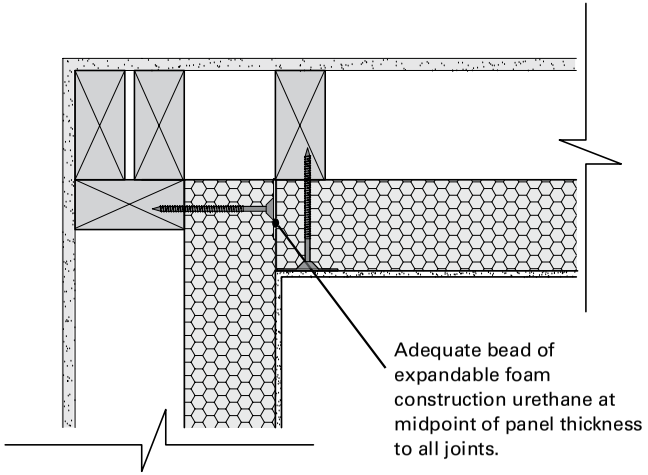
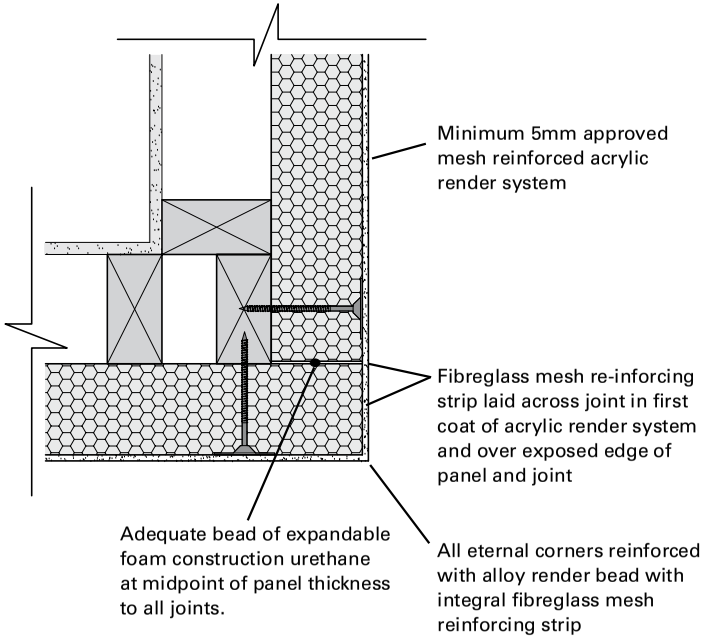
50, 75, 100 & 125mm MASTERWALL®

TYPICAL CORNER JOINTS:



MASTERWALL® Panels Butt Jointed

INTERNAL CORNER - PLAN VIEW



MASTERWALL® Panels Butt Jointed

EXTERNAL CORNER - PLAN VIEW

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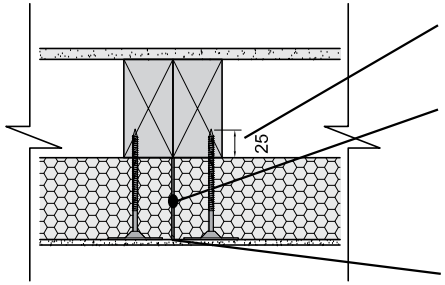
50, 75,100 & 125mm MASTERWALL®

TYPICAL JOINTS BETWEEN PANELS:



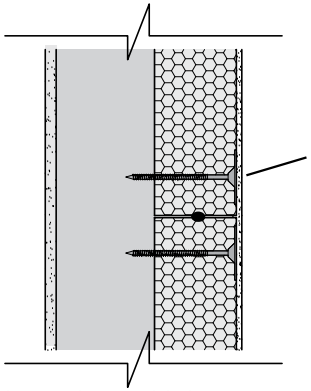
NOTES FOR ALL FIGURES

Screw fixing must be at least 25mm greater in length than thickness of MasterWall® panel

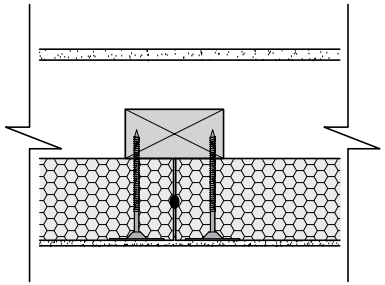
Adequate bead of expandable foam construction urethane at midpoint of panel thickness to all joints

Fibreglass mesh re-inforcing strip laid across joint suspended in first coat of acrylic render

Vertical joint at stud. Double stud required.

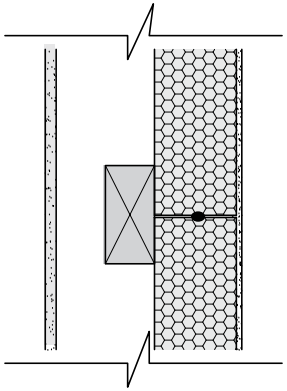


Horizontal panel joints at stud.



Vertical panel joints between studs.
Back blocking required fixed to frame.

VERTICAL JOINTS - PLAN VIEW



Horizontal joints of 50mm panel on 600mm centre studs. Back blocking fixed to frame required between studs.

HORIZONTAL JOINTS - SECTION VIEW

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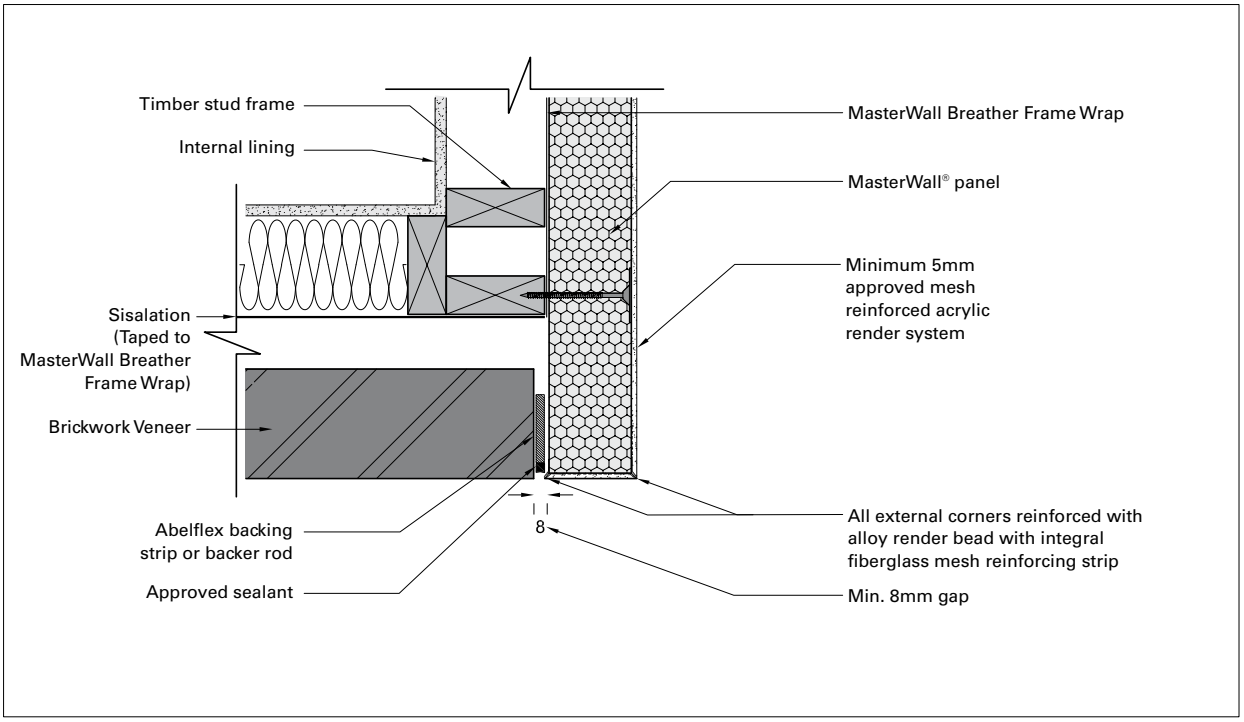
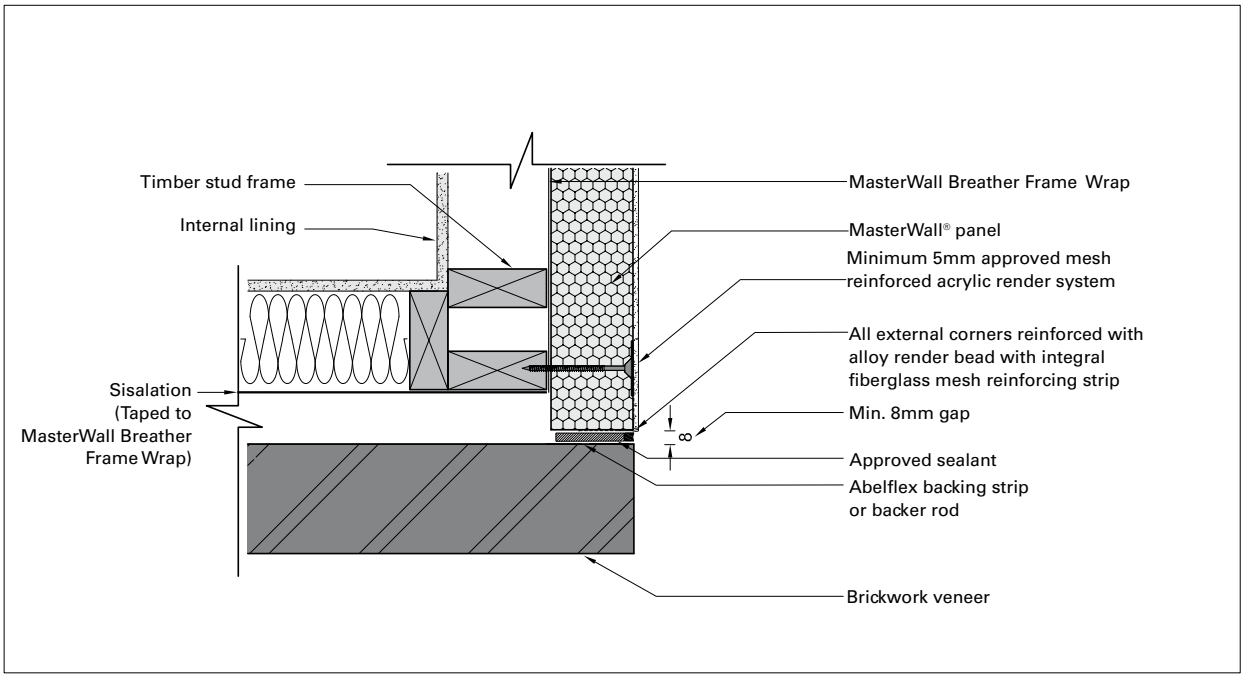
MASTERWALL



MASTERWALL® PANEL / BRICK VENEER EXTERNAL CORNER:
JUNCTION - 1



MASTERWALL® PANEL / BRICK VENEER EXTERNAL CORNER:
JUNCTION - 2

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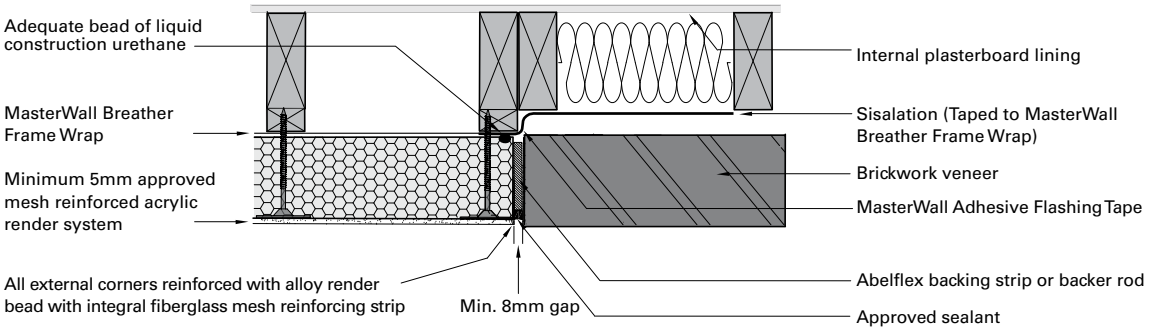
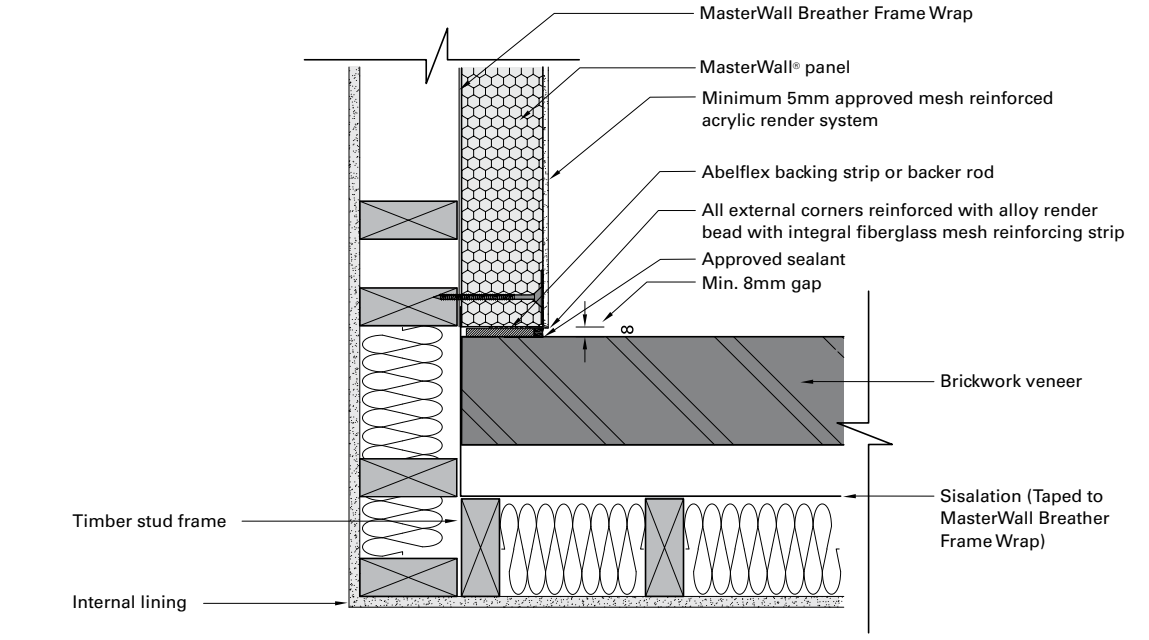


MASTERWALL® PANEL / BRICK VENEER CONSTRUCTION CONTROL JOINT:

JUNCTION - 3



MASTERWALL® PANEL / BRICK VENEER INTERNAL CORNER:

JUNCTION - 4

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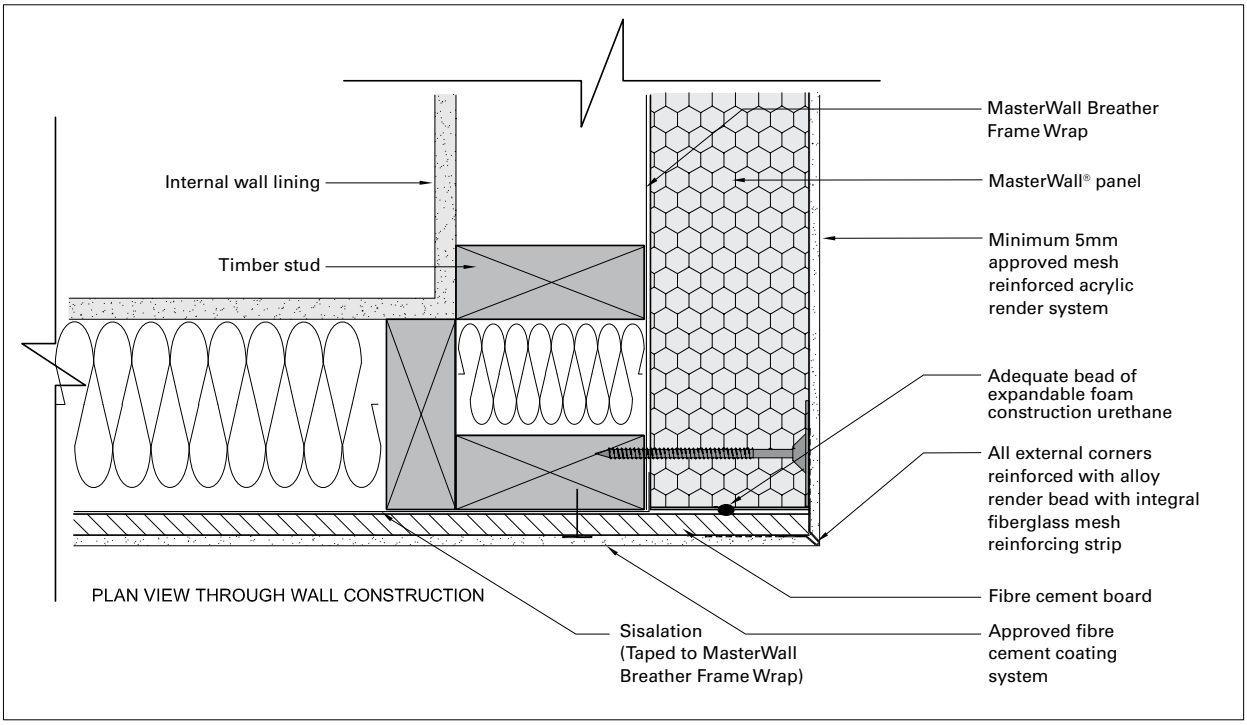
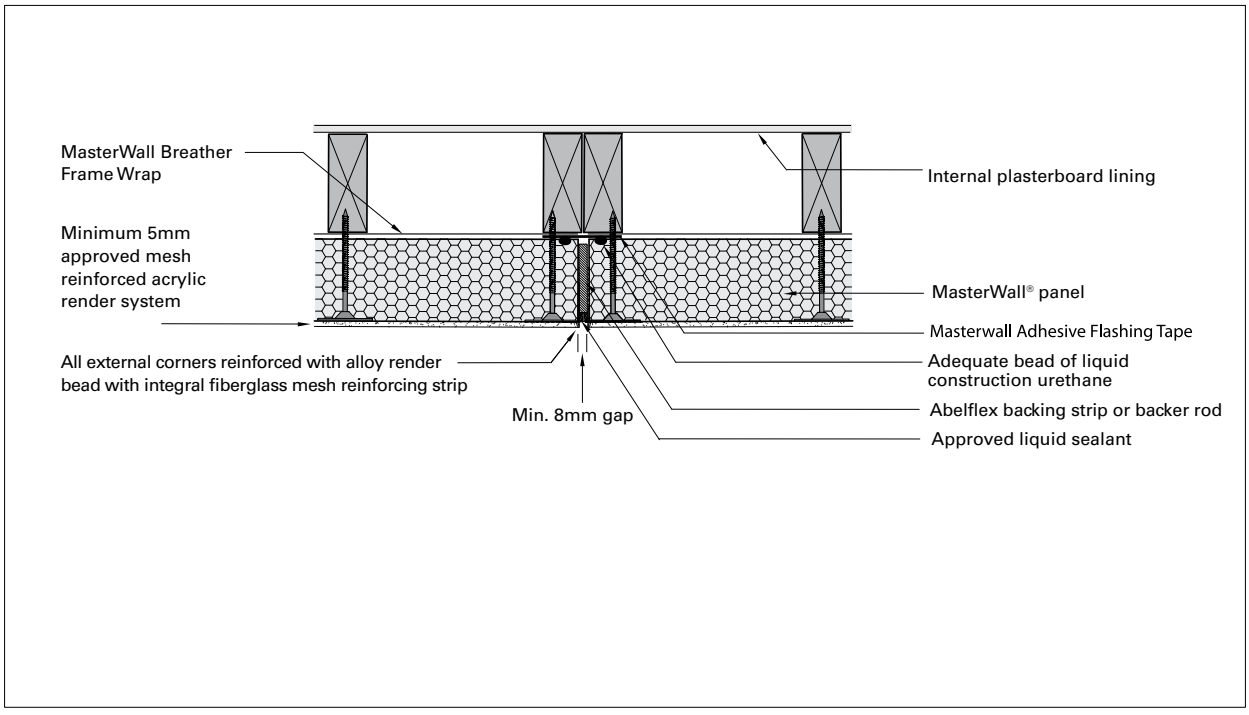


MASTERWALL® PANEL / FIBRE CEMENT BOARD:

JUNCTION



MASTERWALL® PANEL / MASTERWALL® PANEL:

CONSTRUCTION CONTROL JOINT

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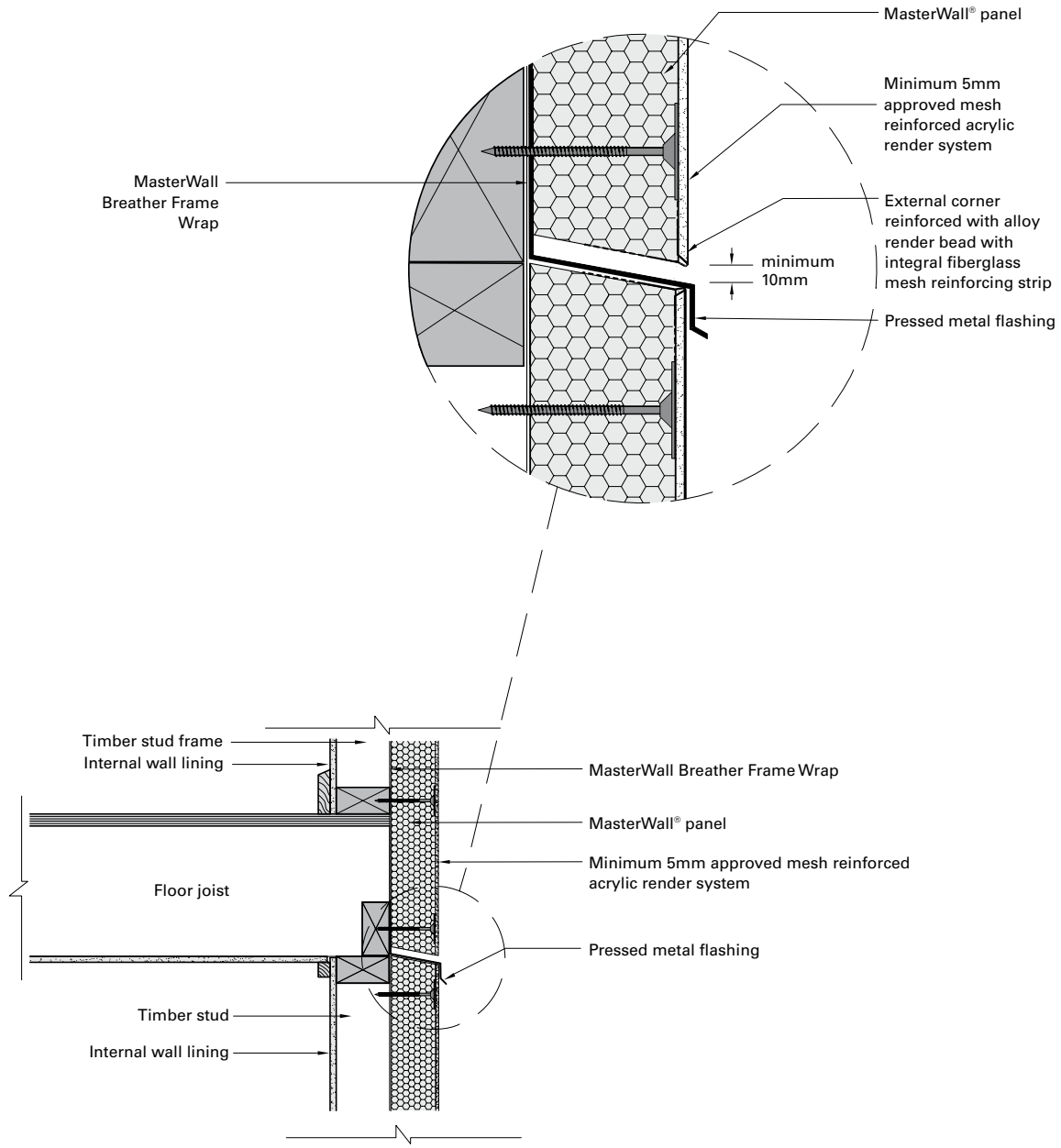

MASTERWALL® PANEL / MASTERWALL® PANEL:

CONSTRUCTION CONTROL JOINT - MID FLOOR BREAK

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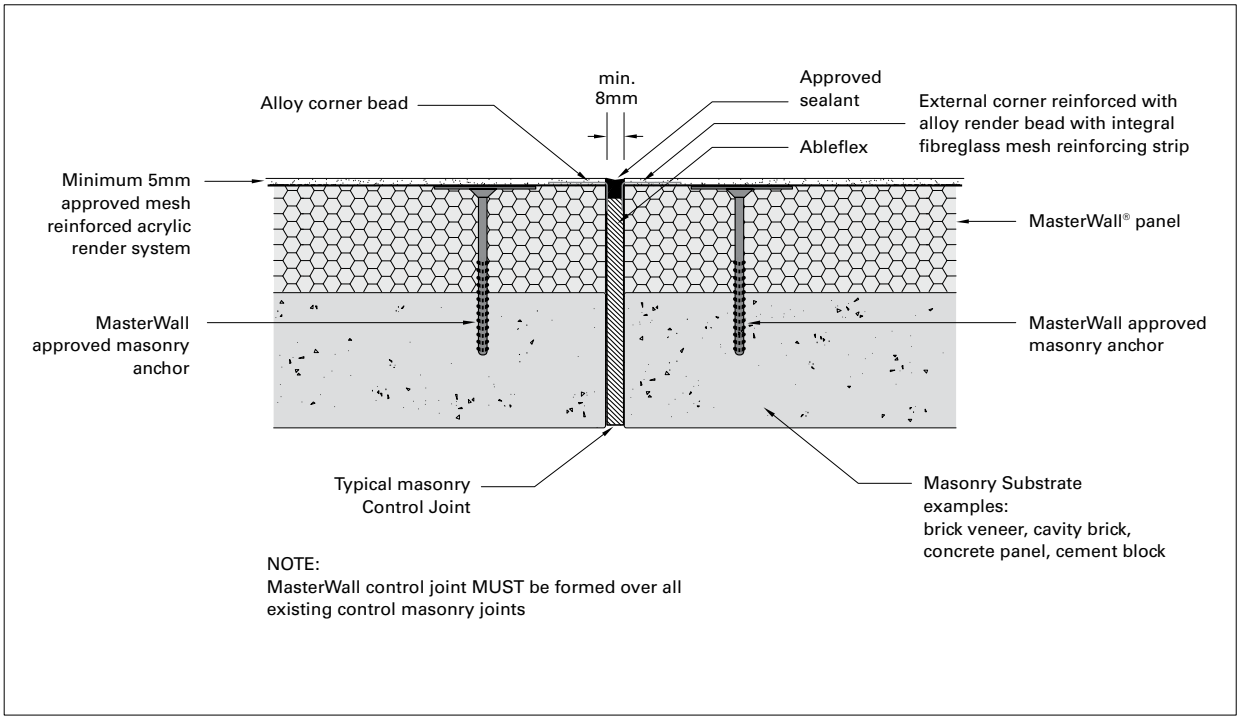
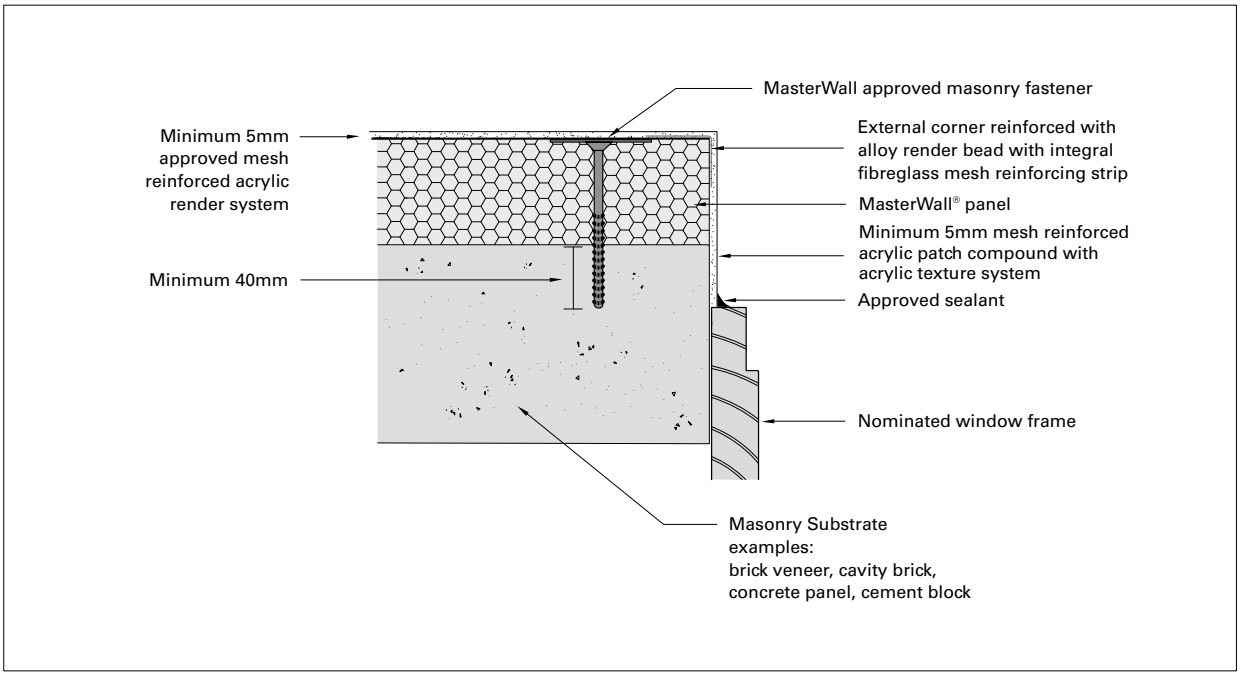


MASTERWALL® PANEL / DIRECT TO MASONRY - CONTROL JOINT:



MASTERWALL® PANEL / DIRECT TO MASONRY - WINDOW REVEAL:

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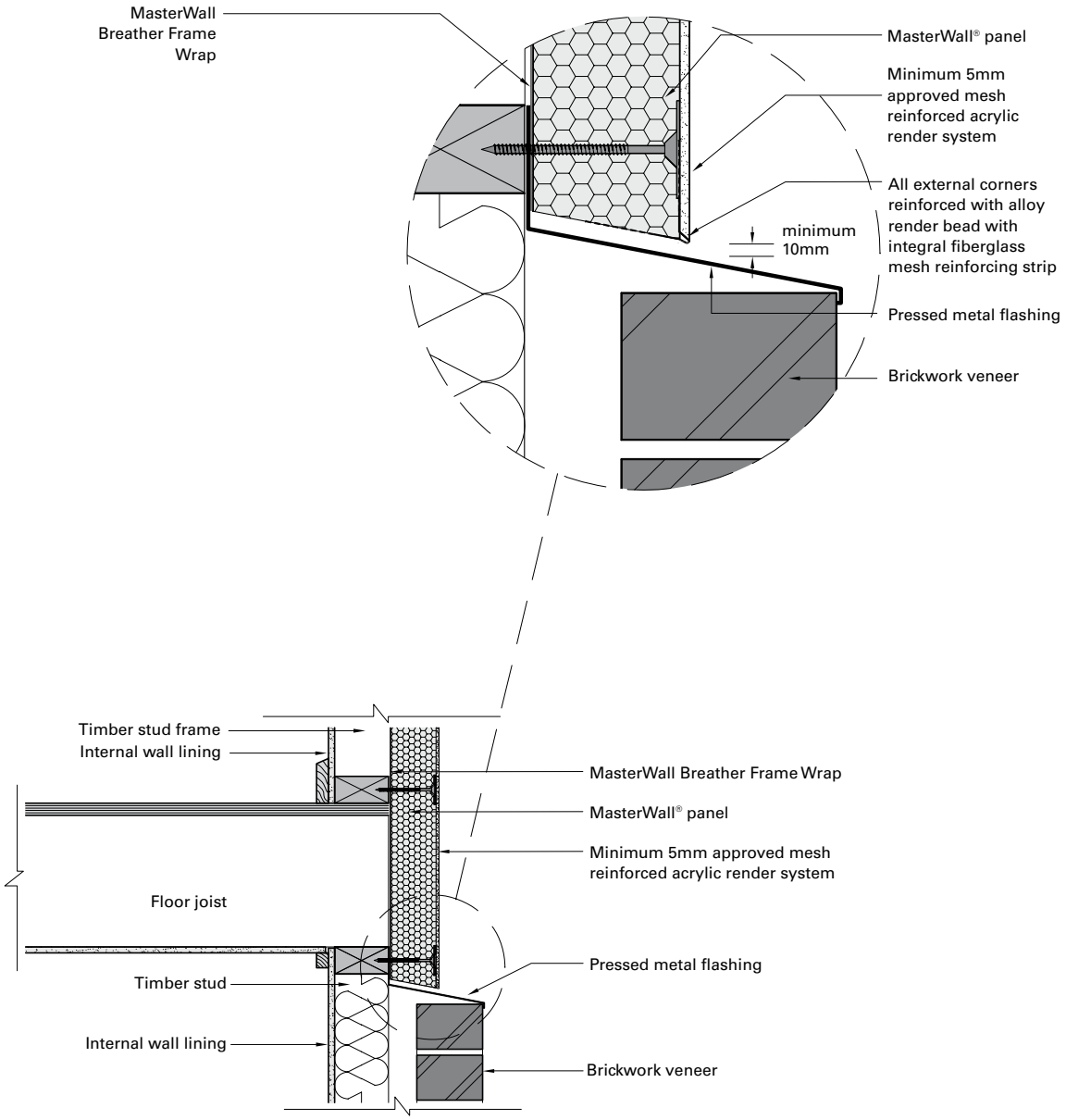

MASTERWALL® PANEL / BRICK VENEER:

JUNCTION - FIRST FLOOR LEVEL STEP OUT

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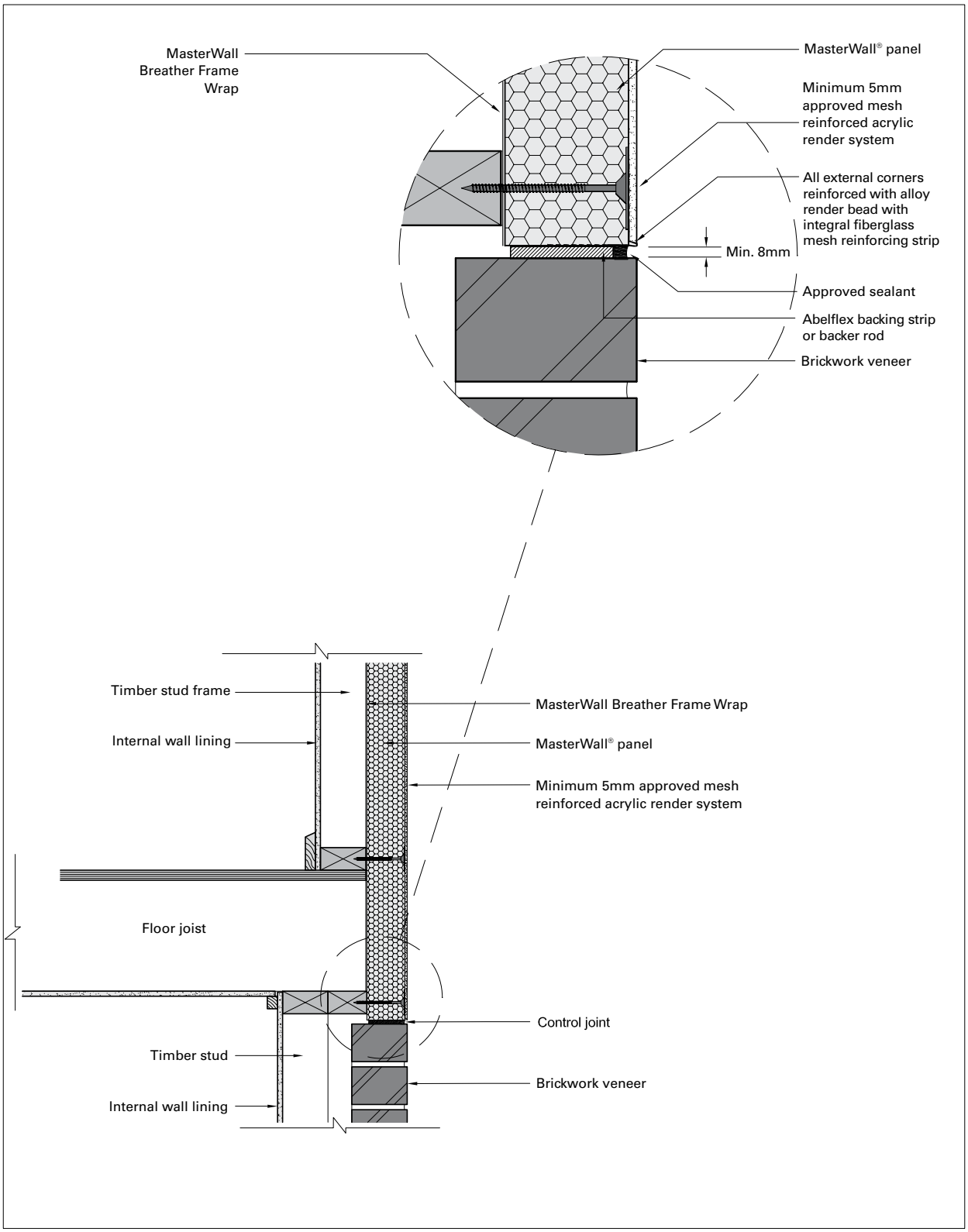

MASTERWALL® PANEL / BRICK VENEER JUNCTION:

FIRST FLOOR LEVEL FLUSH JOINT

These details are indicative for the purpose of illustrating the typical installation of MasterWall® panels. Panels are to be installed strictly in accordance with the specifications detailed in the forward section of this manual. Substrate construction to be in accordance with the Building Regulations & Statutory Requirements.

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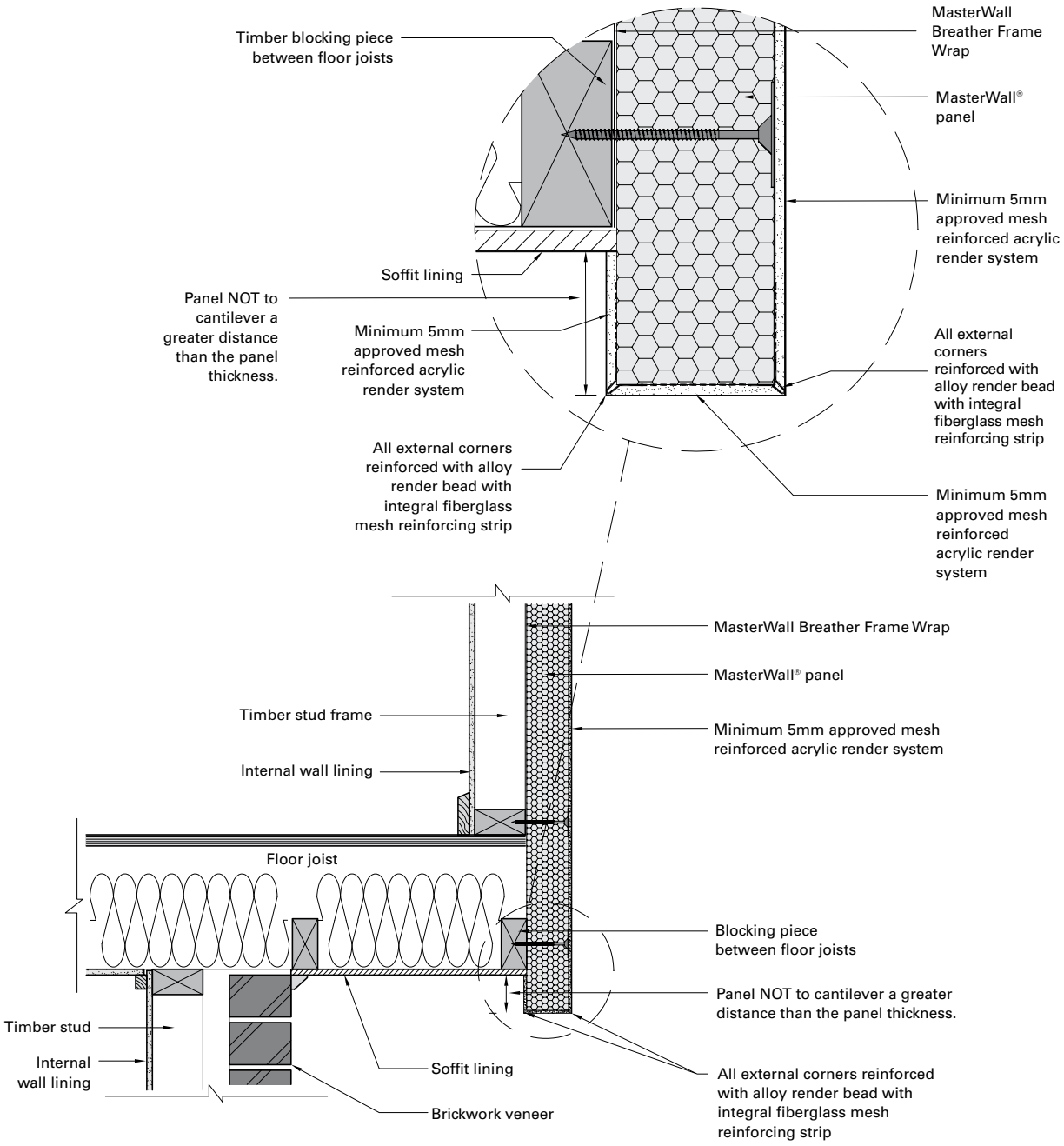

MASTERWALL® PANEL:
OVERHANGING FIRST FLOOR LEVEL

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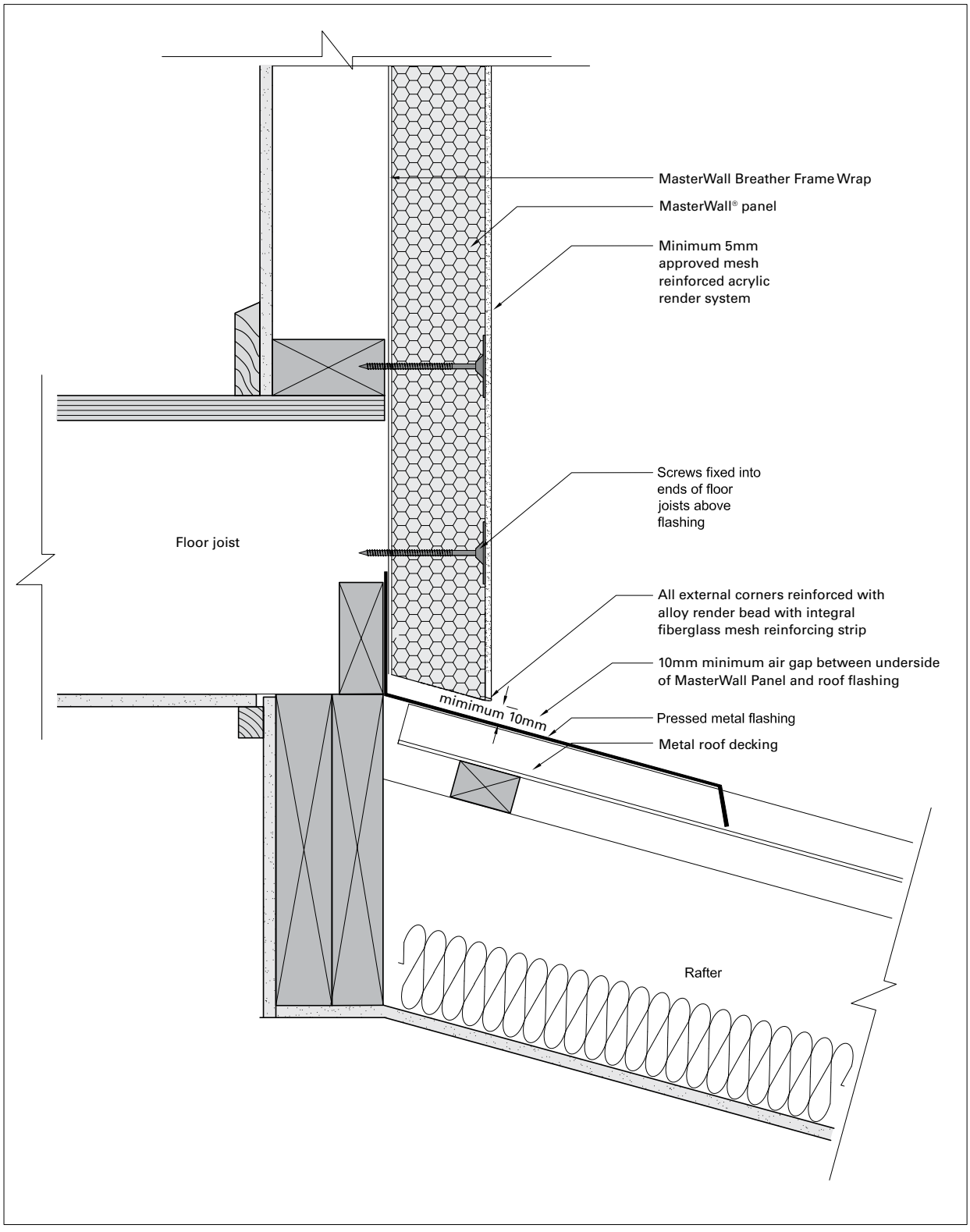

MASTERWALL® PANEL:

LOWER ROOF JUNCTION - REAR FLASHED

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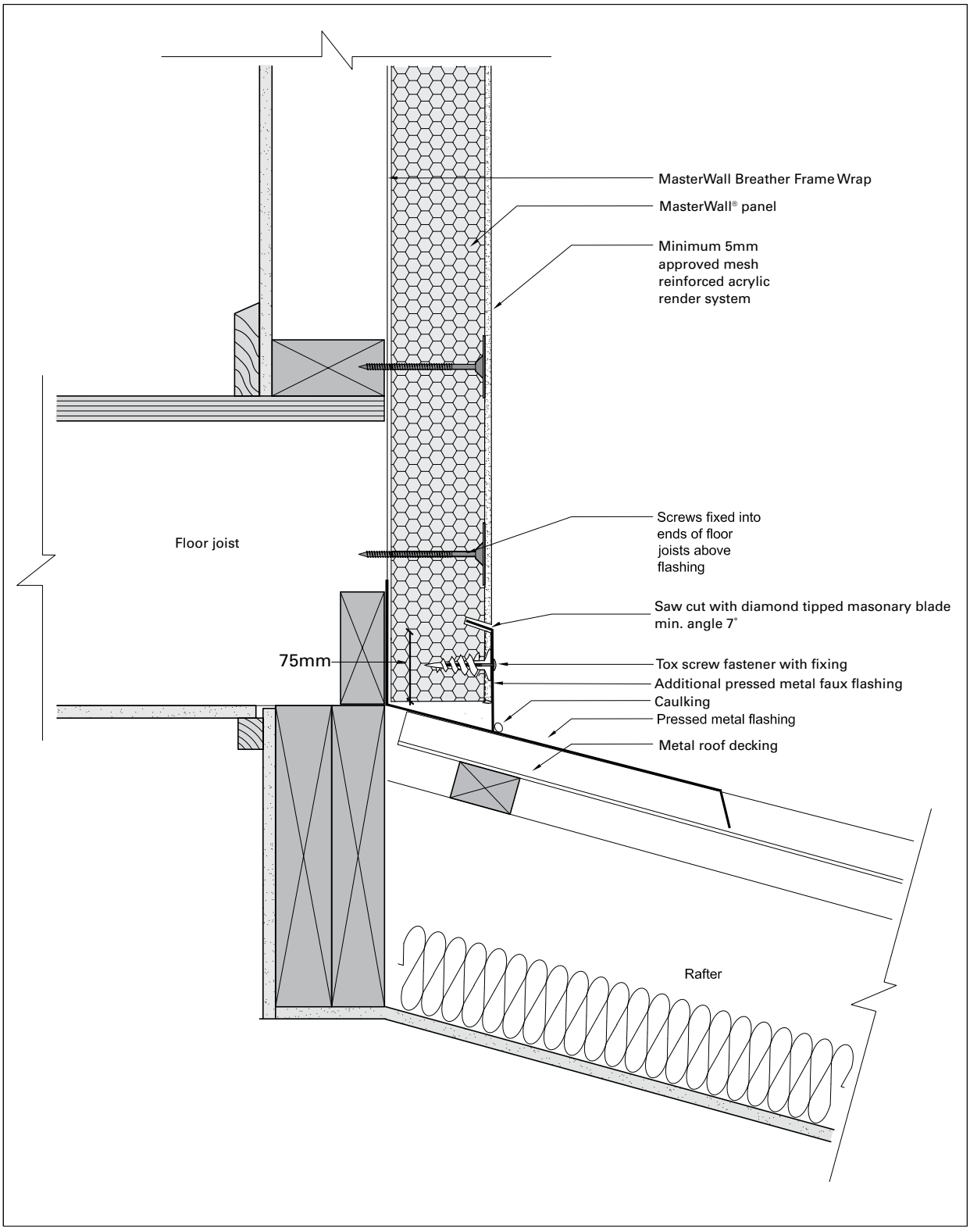

MASTERWALL® PANEL:

LOWER ROOF JUNCTION WITH ADDITIONAL FAUX FLASHING

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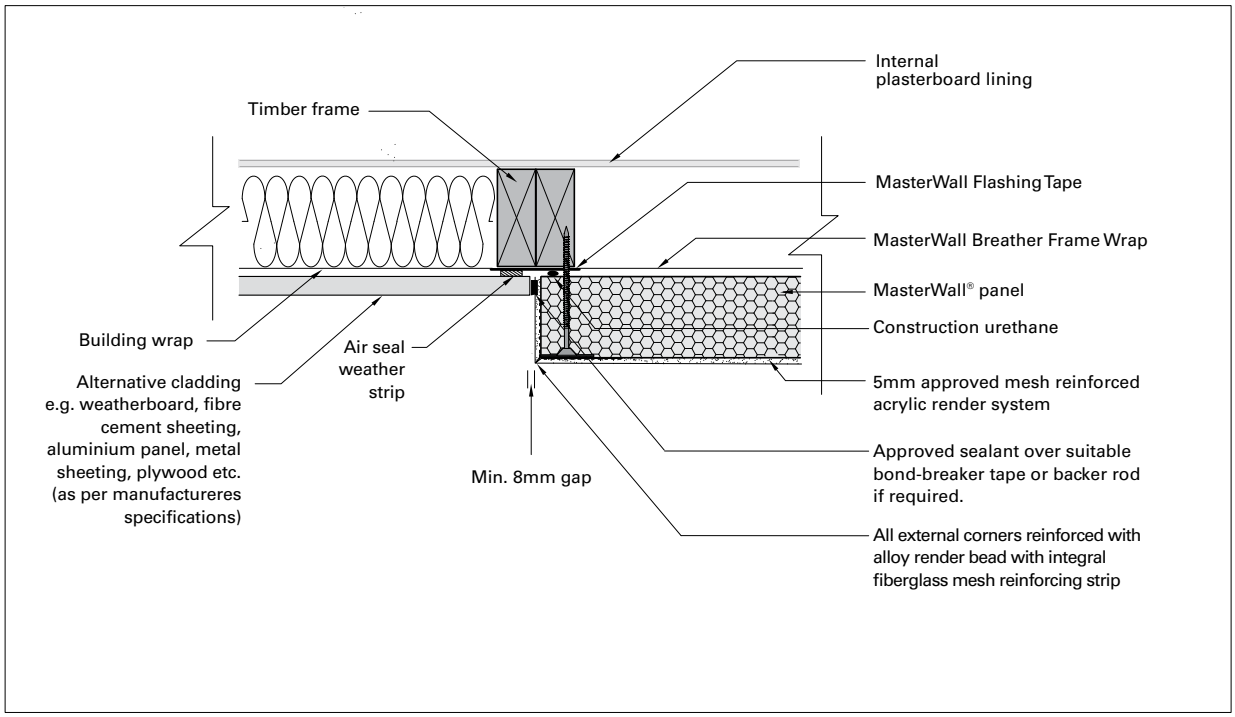
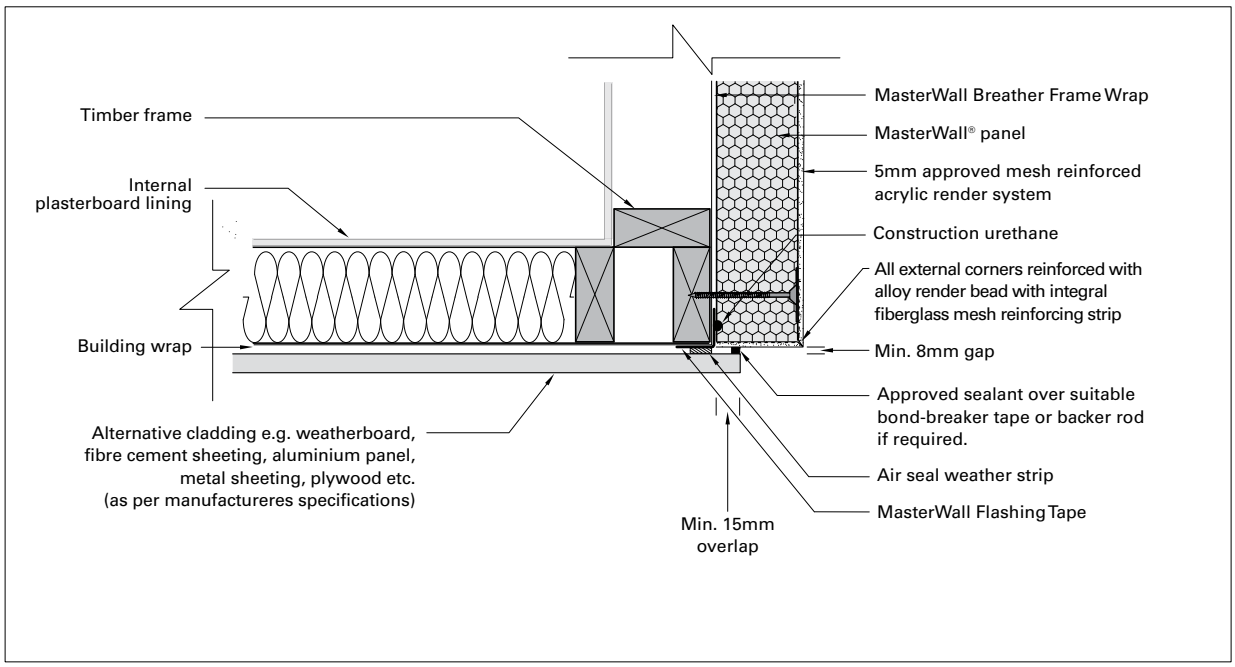


MASTERWALL® PANEL:
UNIVERSAL JUNCTION



MASTERWALL® PANEL / EXTERNAL CORNER:
UNIVERSAL JUNCTION

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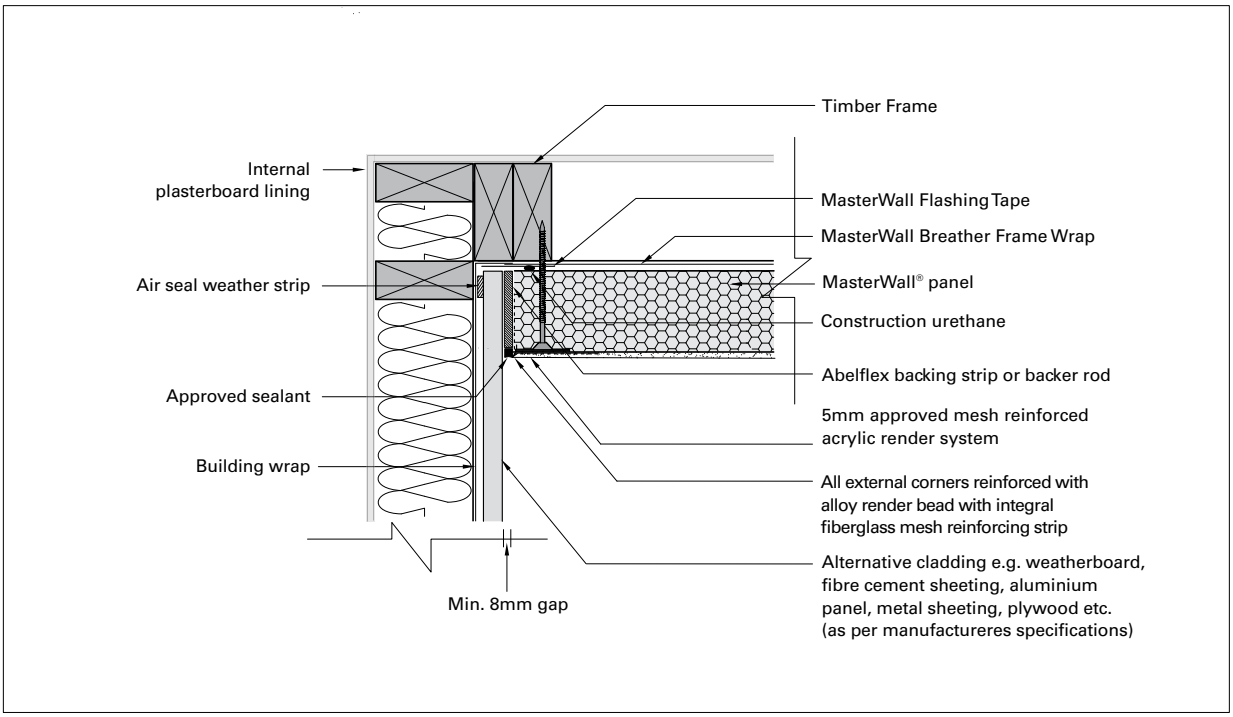
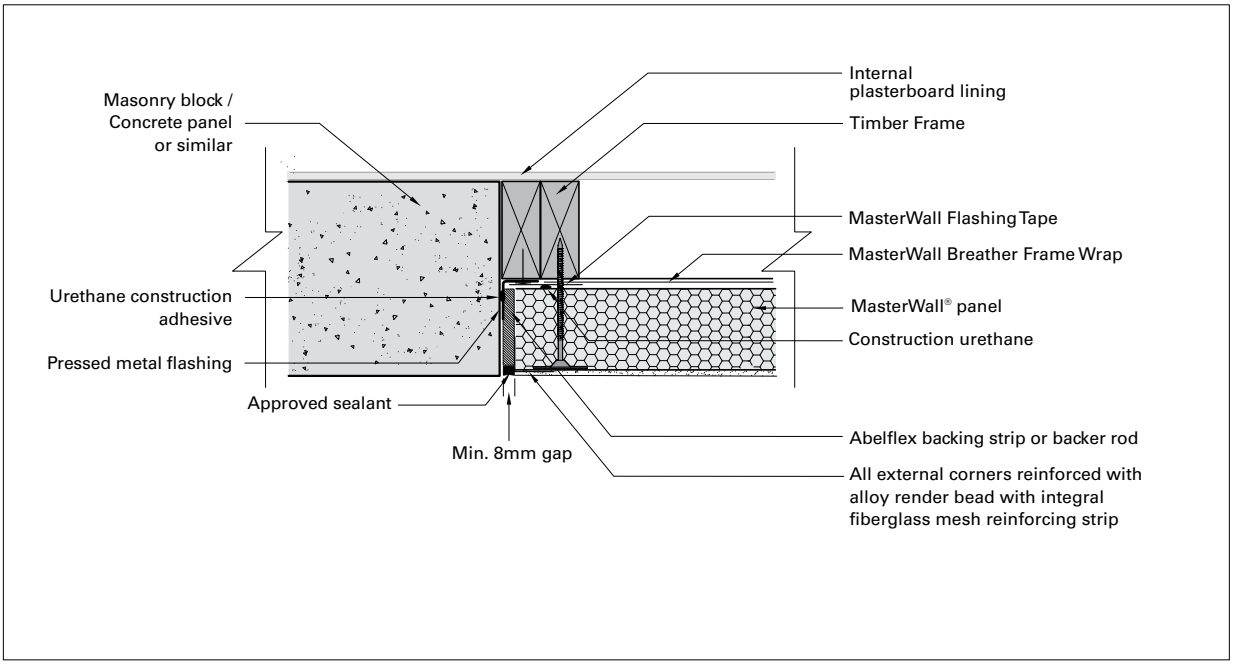


MASTERWALL® PANEL / INTERNAL CORNER:
UNIVERSAL JUNCTION



MASTERWALL® PANEL / SOLID MASONRY:
UNIVERSAL JUNCTION

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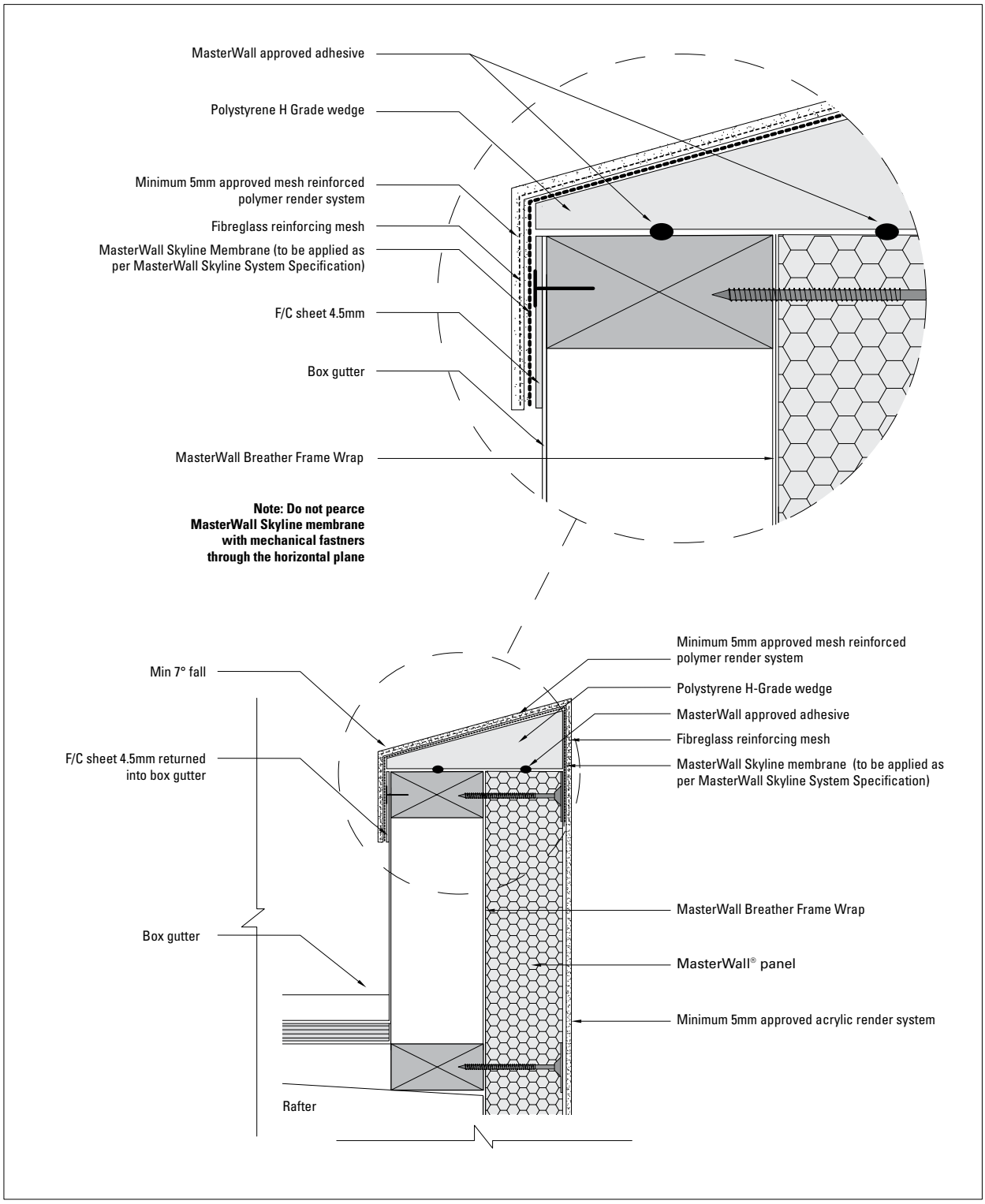

MASTERWALL® PANEL:

RENDERED PARAPET WALL WITH SKYLINE SYSTEM WATER PROOFING

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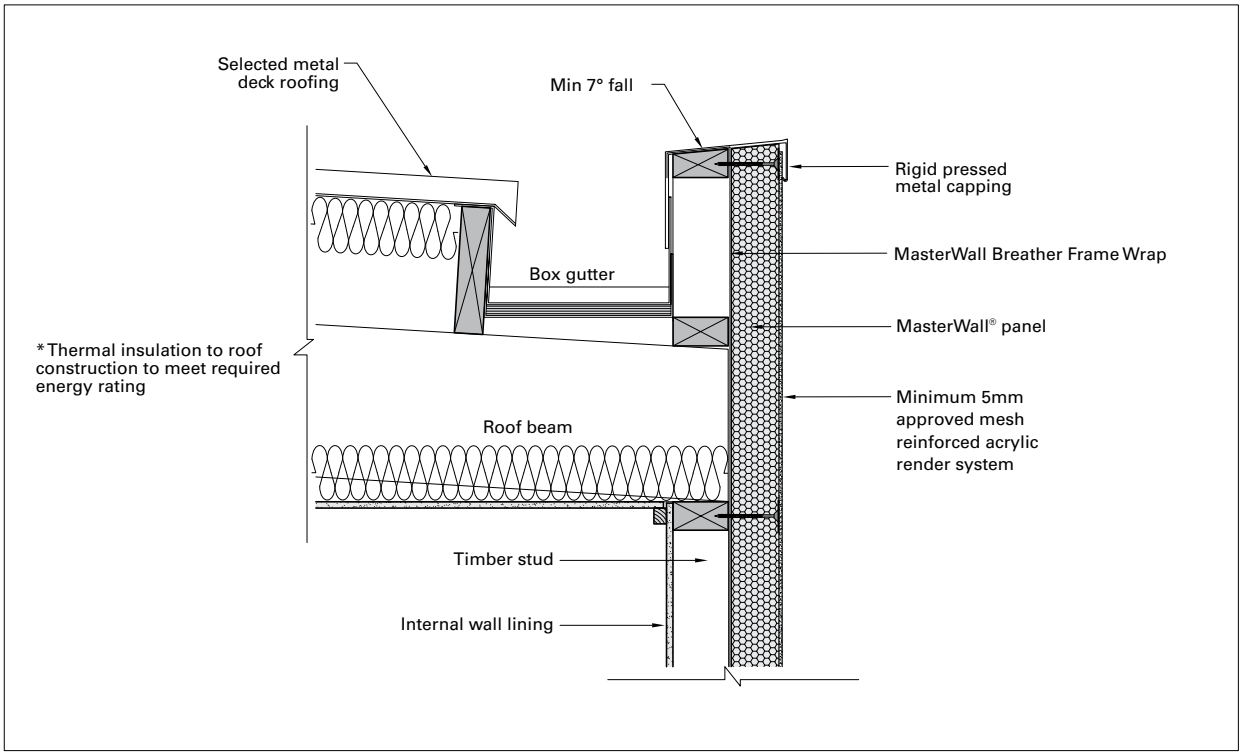
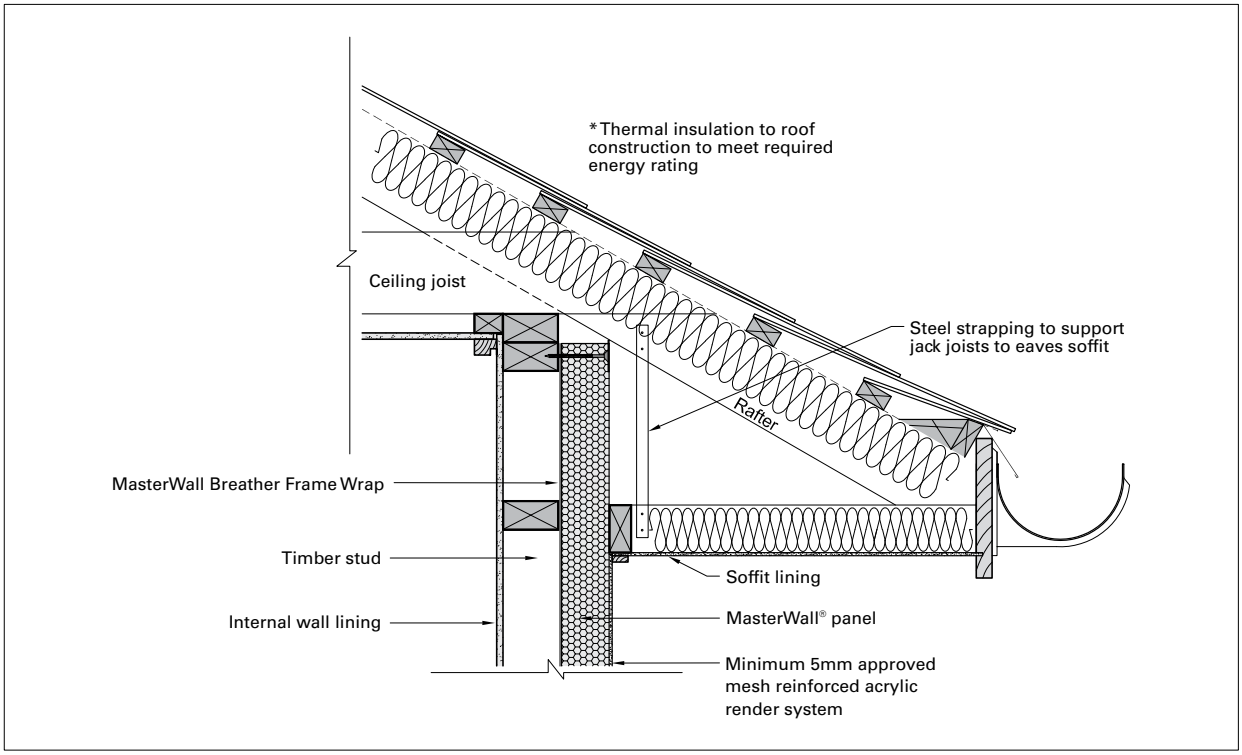


MASTERWALL® PANEL / ROOF JUNCTION:

PARAPET WALL



MASTERWALL® PANEL / ROOF JUNCTION:

PITCHED ROOF WITH SOFFIT LINING

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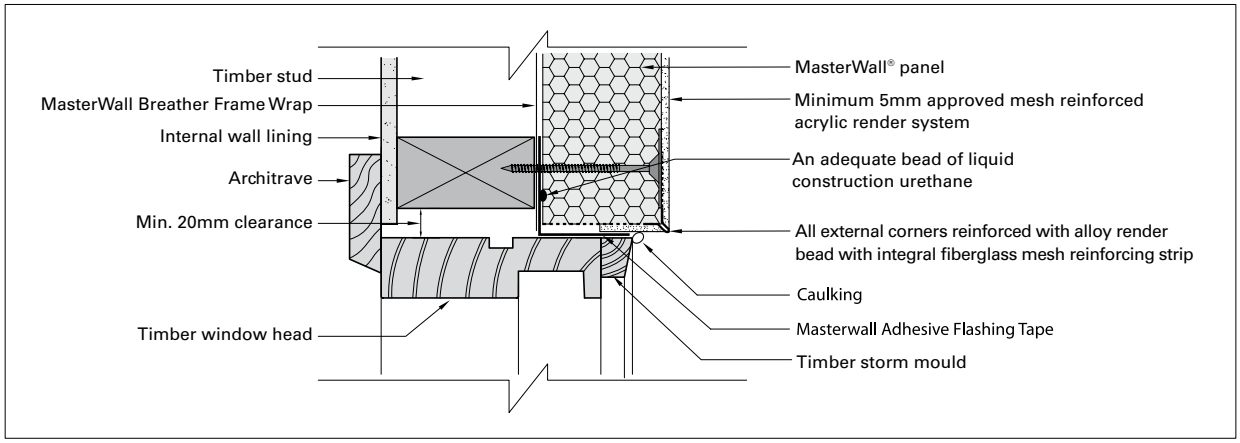
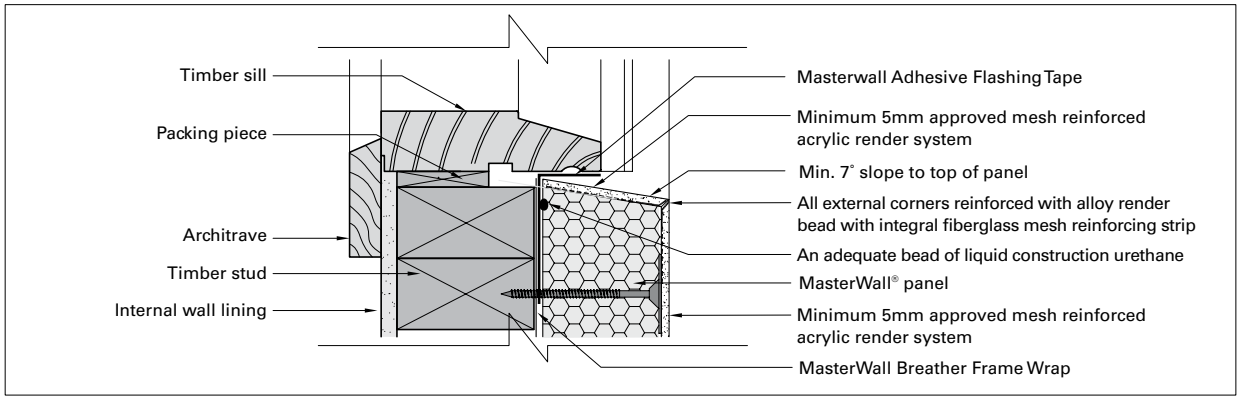


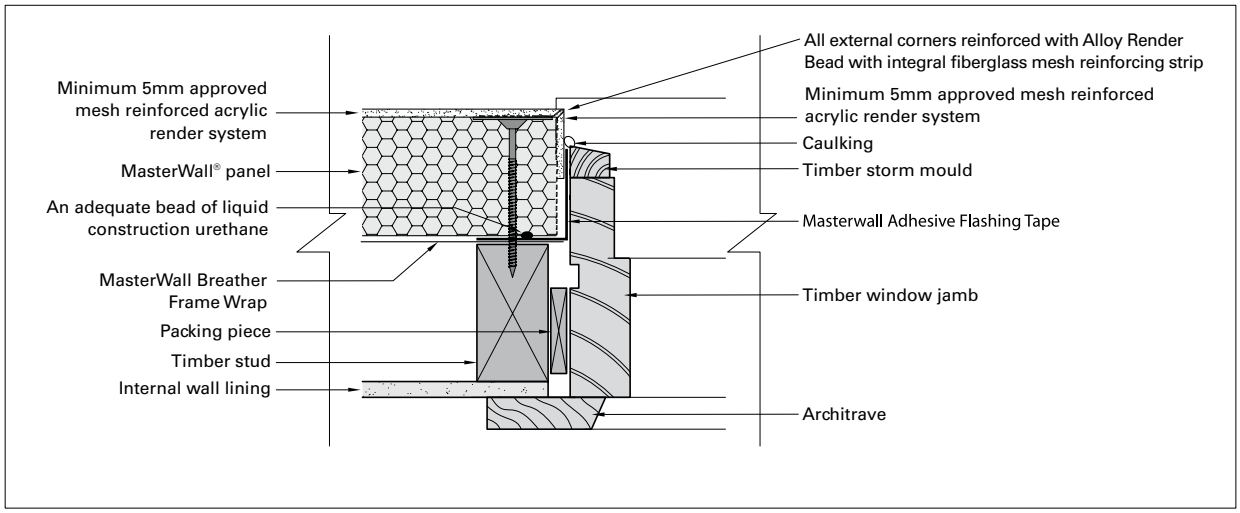
MASTERWALL® PANEL / TIMBER WINDOW:

TYPICAL HEAD DETAIL



MASTERWALL® PANEL / TIMBER WINDOW:

TYPICAL SILL DETAIL



MASTERWALL® PANEL / TIMBER WINDOW:

TYPICAL SIDE JAMB DETAIL

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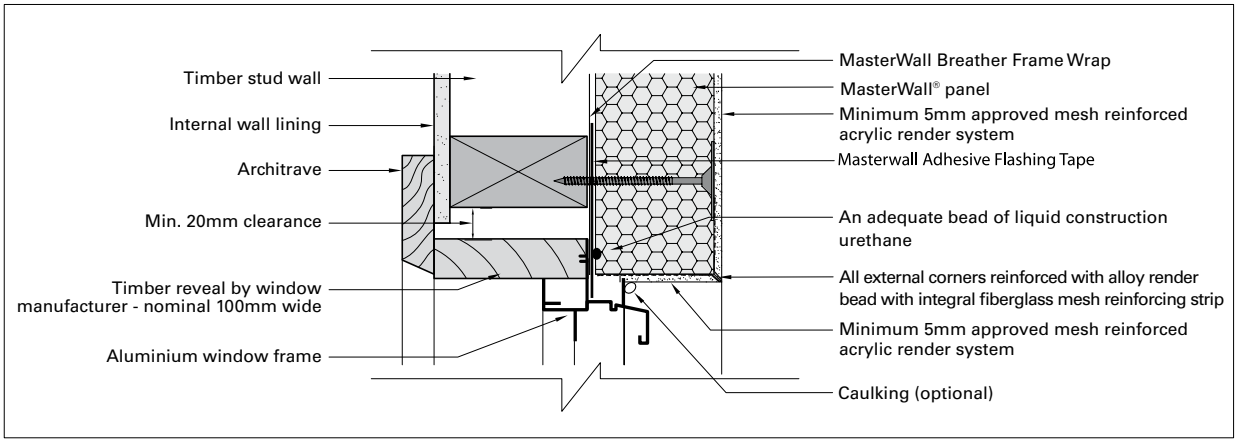
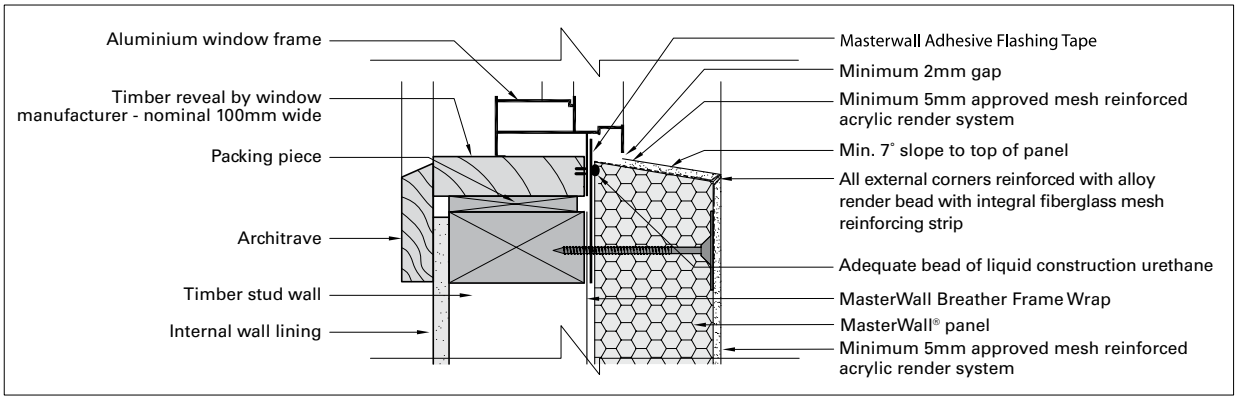


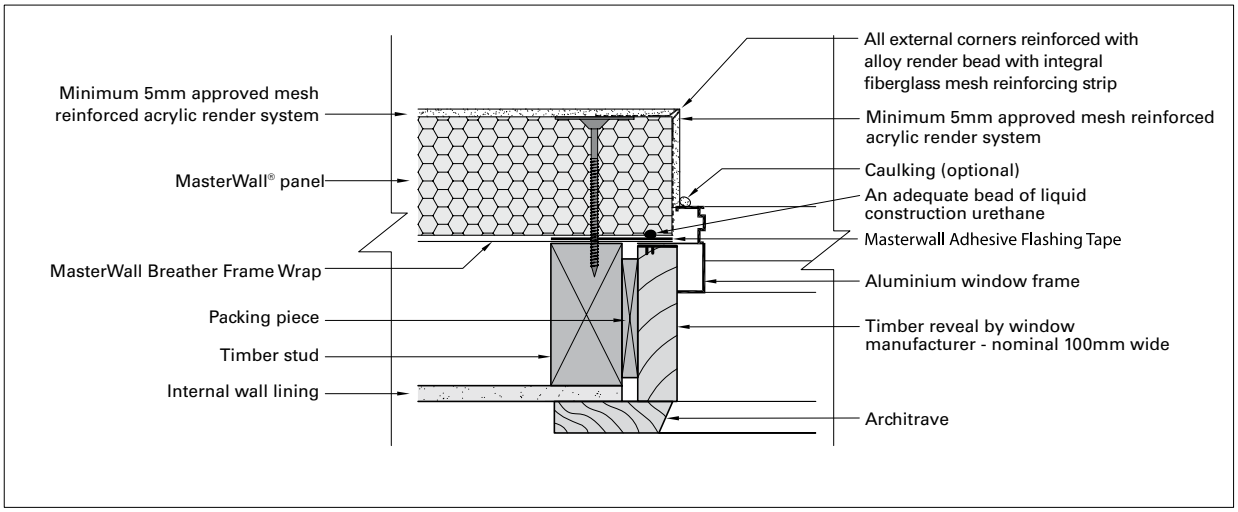
MASTERWALL® PANEL / ALUMINIUM WINDOW:

TYPICAL HEAD DETAIL



MASTERWALL® PANEL / ALUMINIUM WINDOW:

TYPICAL SILL DETAIL



MASTERWALL® PANEL / ALUMINIUM WINDOW:

TYPICAL SIDE JAMB DETAIL

Note: Window system to be self draining.

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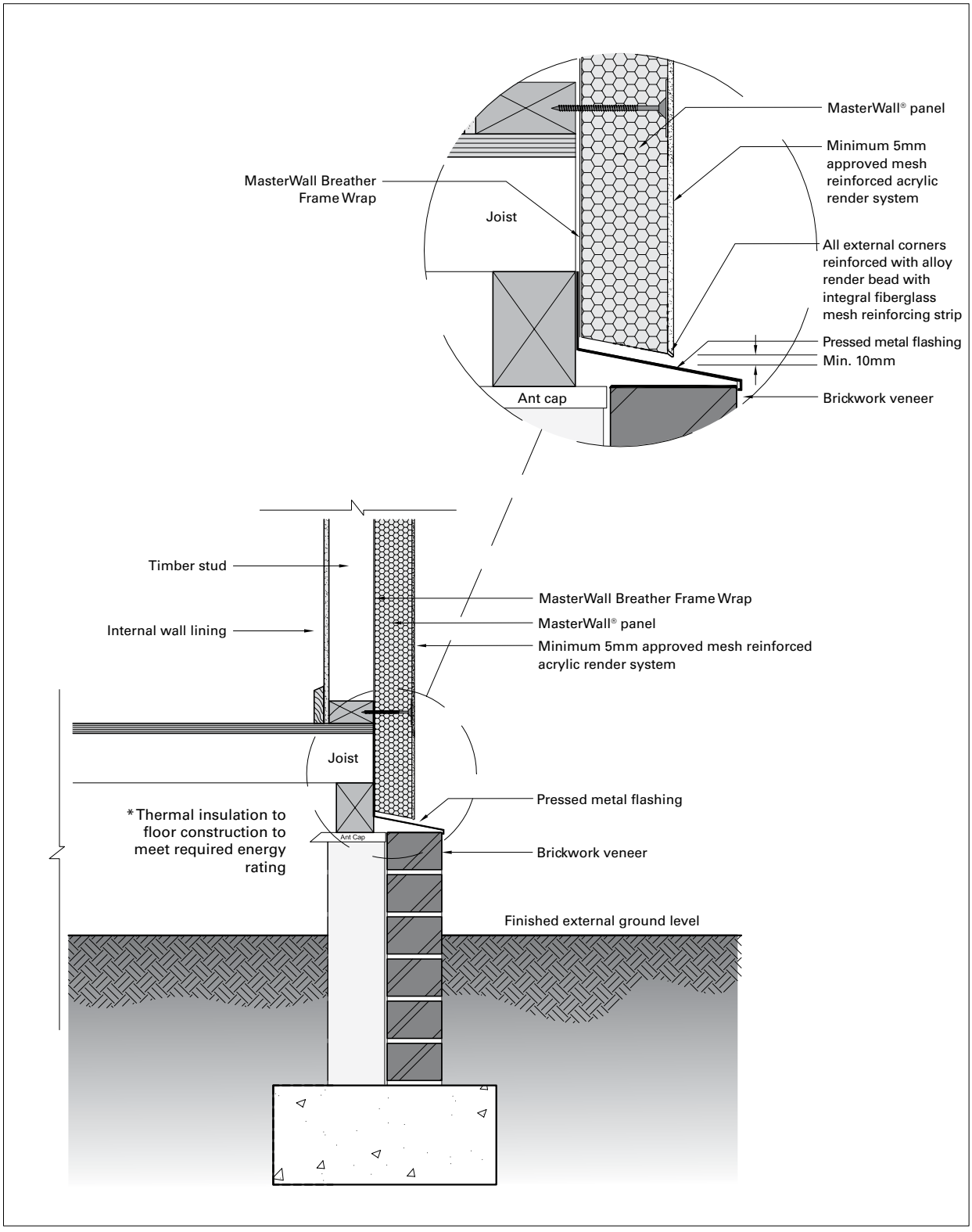

MASTERWALL® PANEL & BRICKWORK JUNCTION:
GROUND LEVEL

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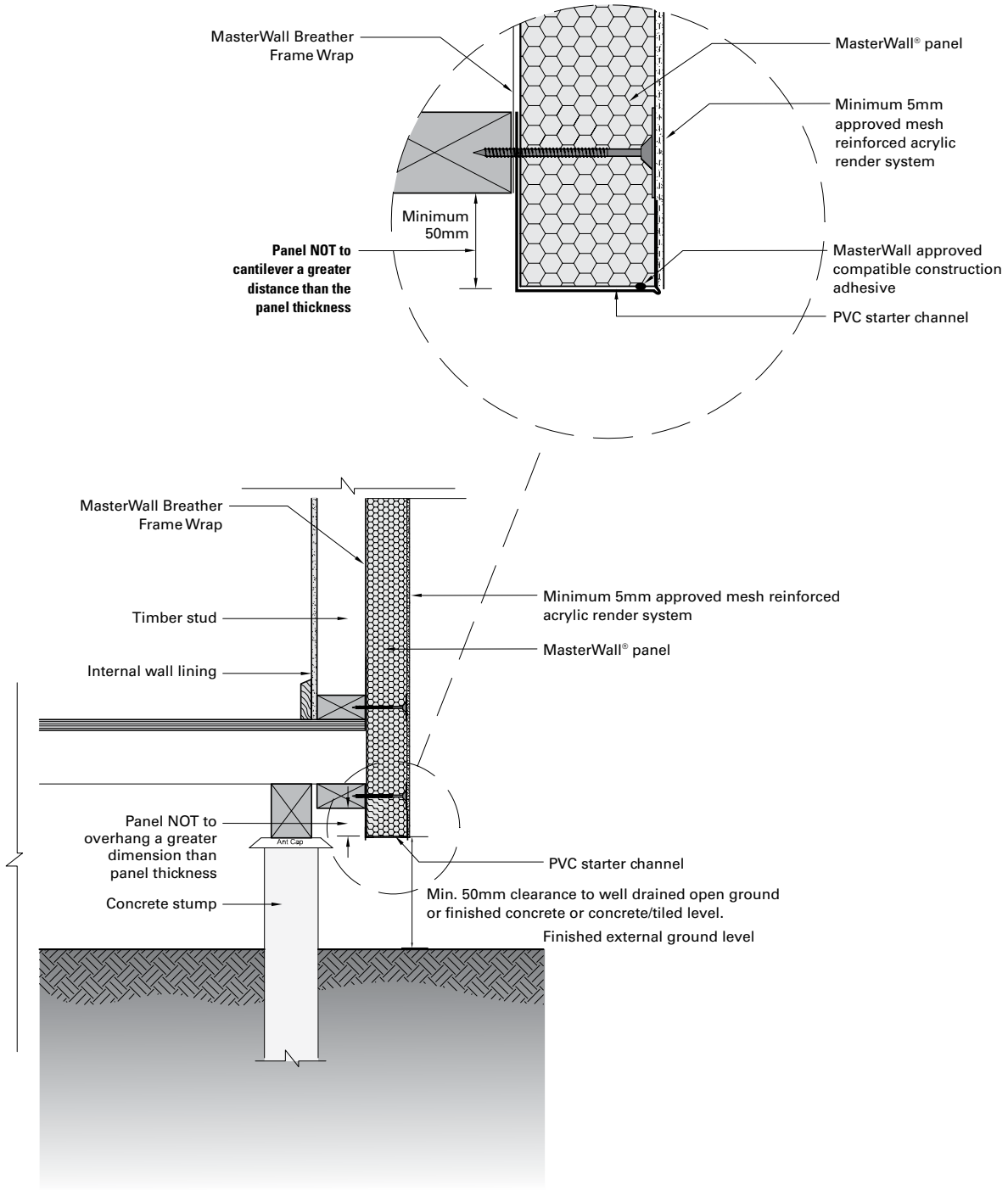

MASTERWALL® PANEL & CONCRETE STUMP CONSTRUCTION:

PROTRUDING PANEL

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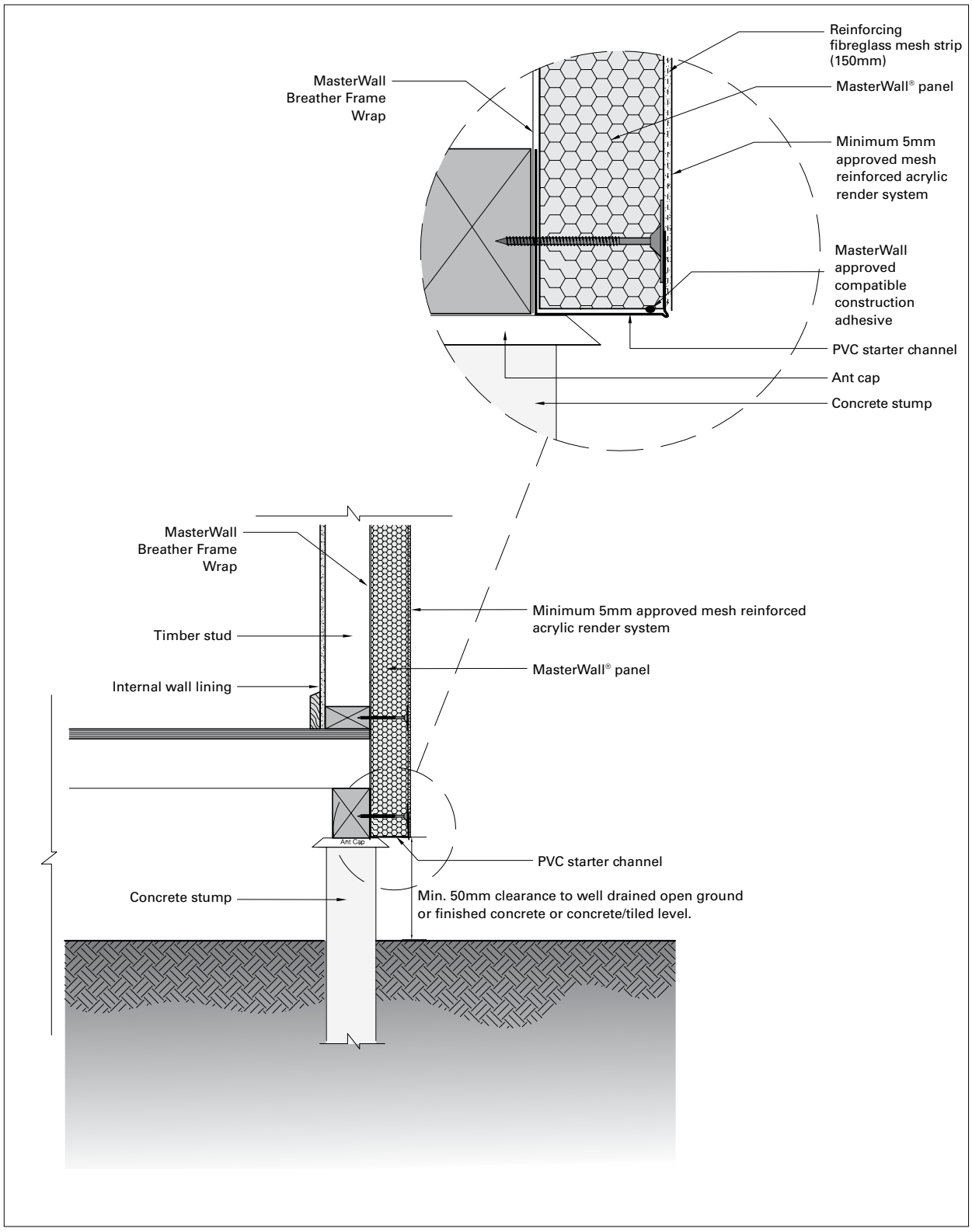

MASTERWALL® PANEL & CONCRETE STUMP CONSTRUCTION

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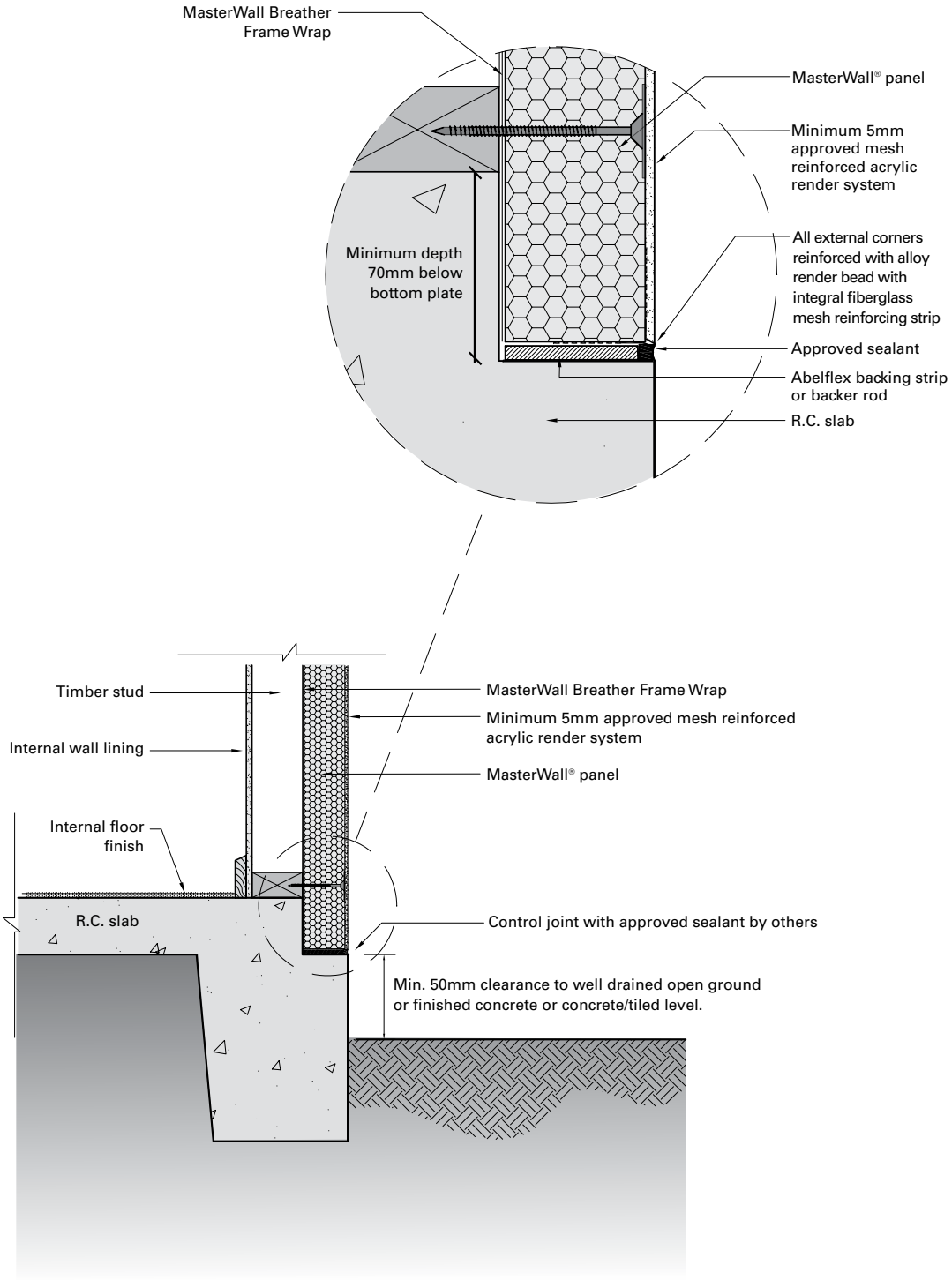

MASTERWALL® PANEL & GROUND SLAB JUNCTION
WITHIN REBATE

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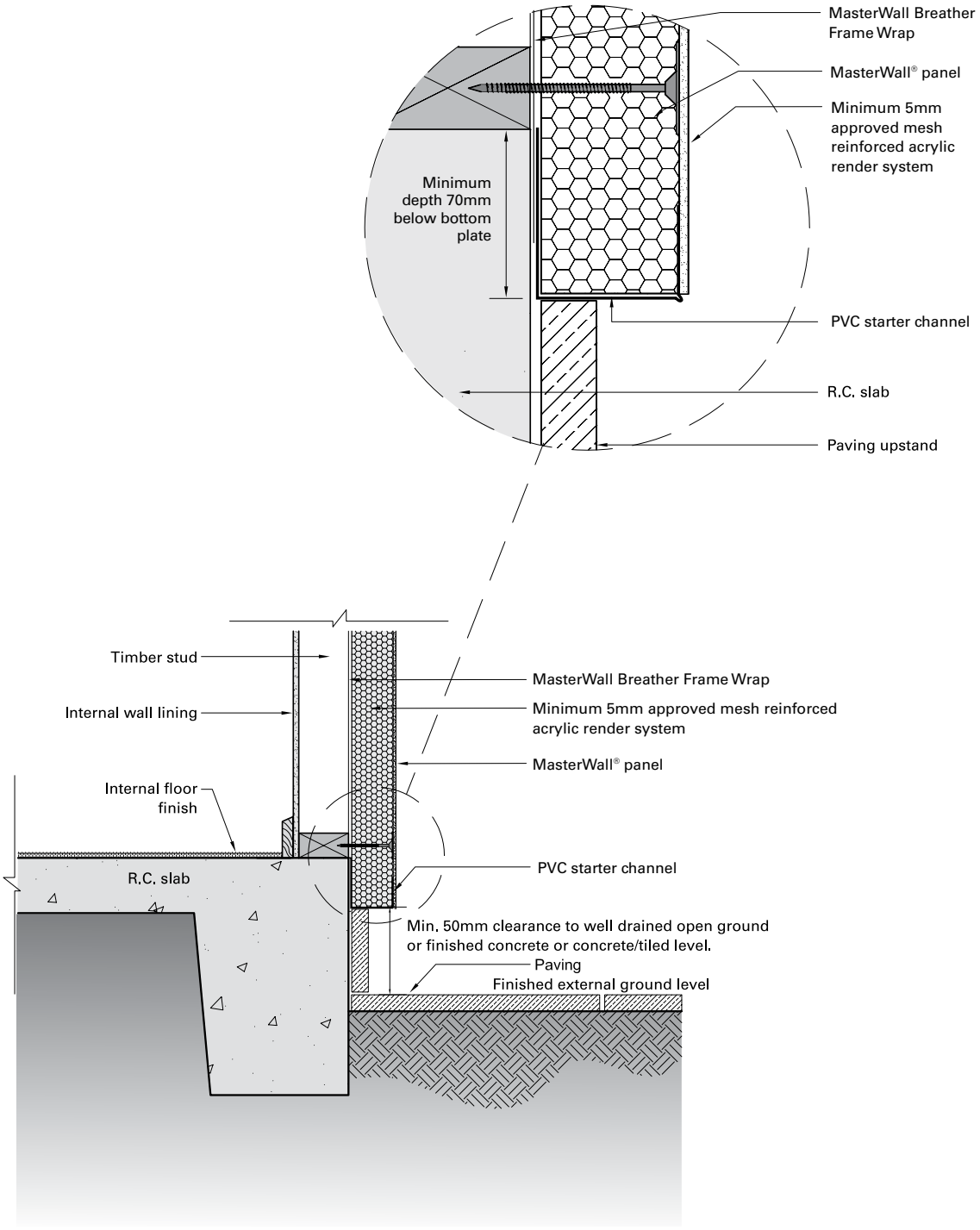

MASTERWALL® PANEL & GROUND SLAB JUNCTION

PROTRUDING

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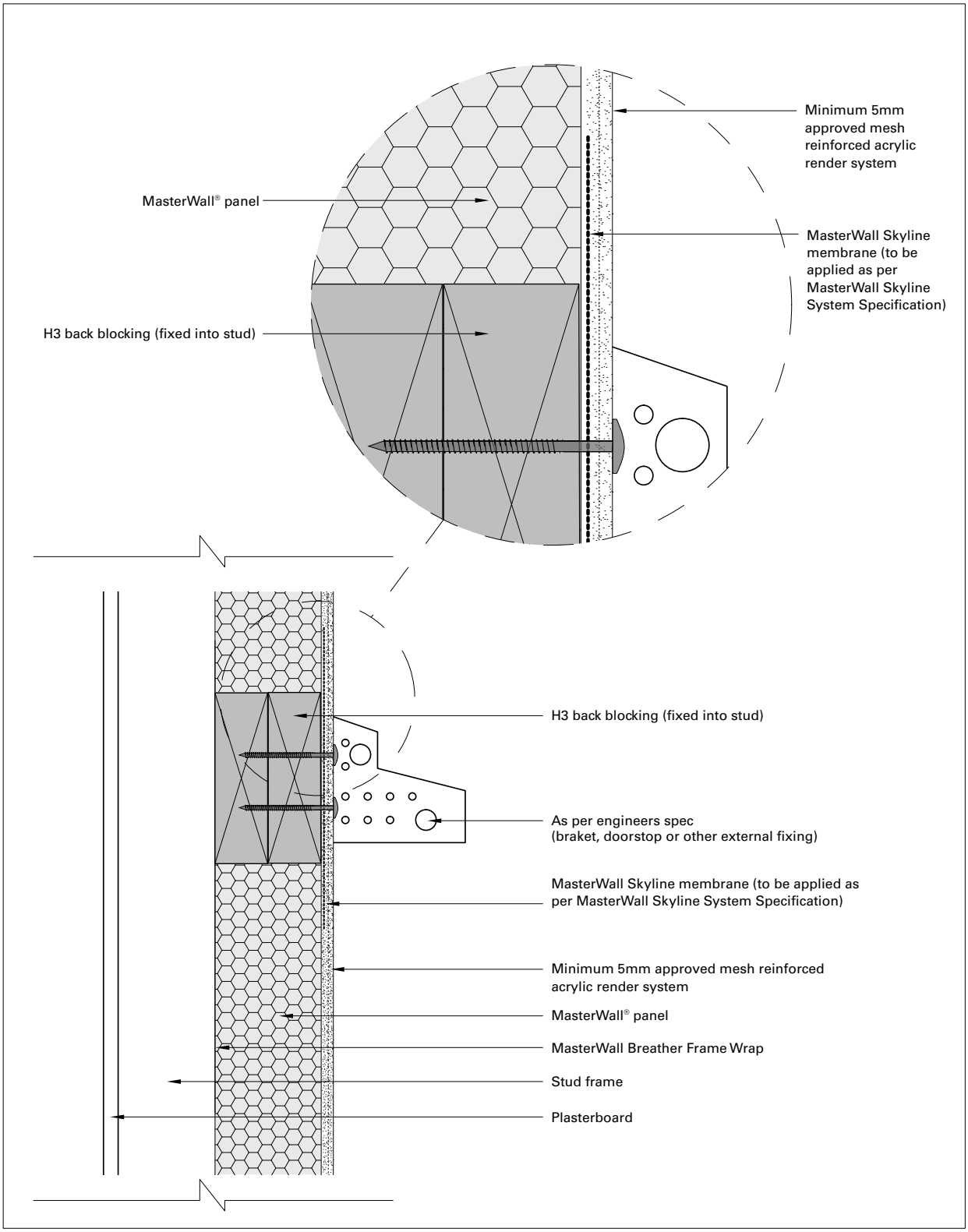

MASTERWALL® PANEL / EXTERNAL WALL:

EXTERNAL SUPPORT WITH SKYLINE SYSTEM WATER PROOFING

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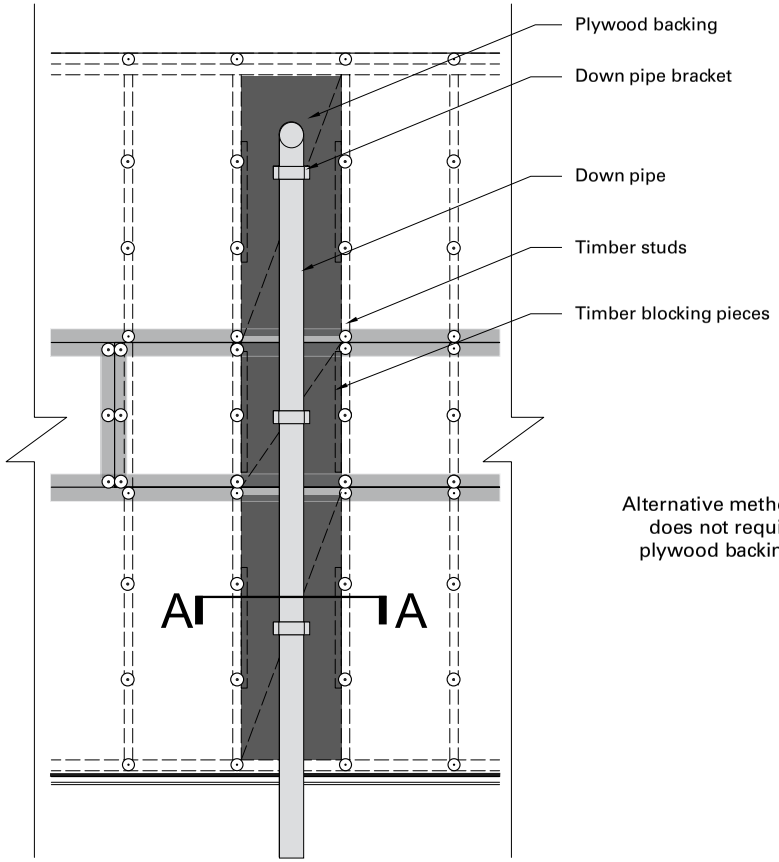
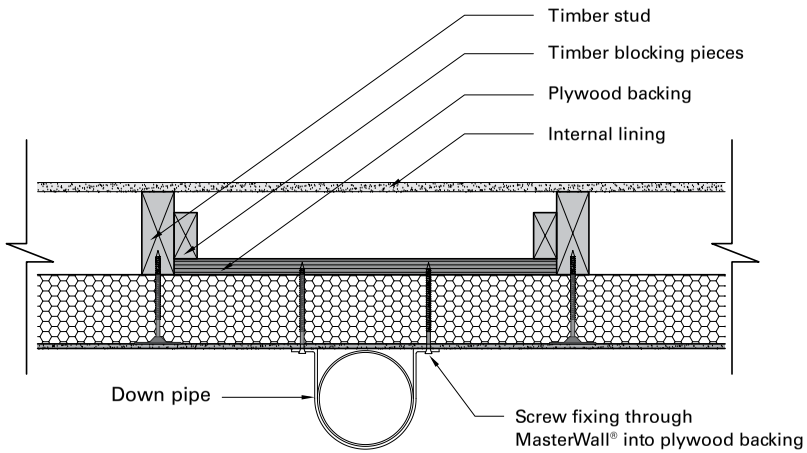
TYPICAL FIXING SUPPORT FOR DOWN PIPE:

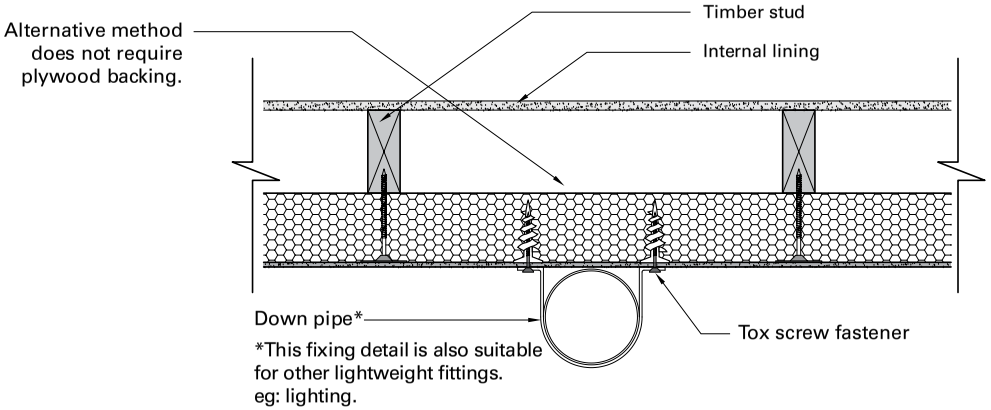
50, 75, 100 & 125mm MASTERWALL®



DOWN PIPE - ELEVATION VIEW



DOWN PIPE - SECTION VIEW A`A



DOWN PIPE - ALTERNATIVE USING TOX SCREW FASTNERS

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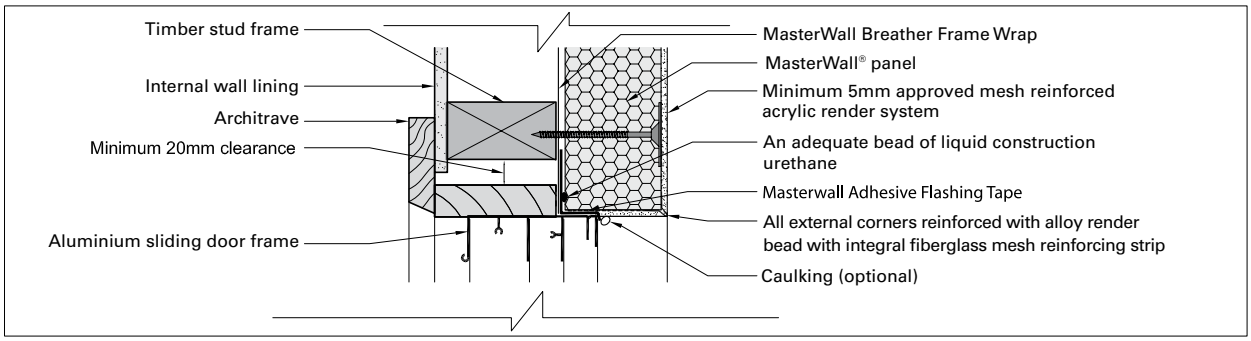
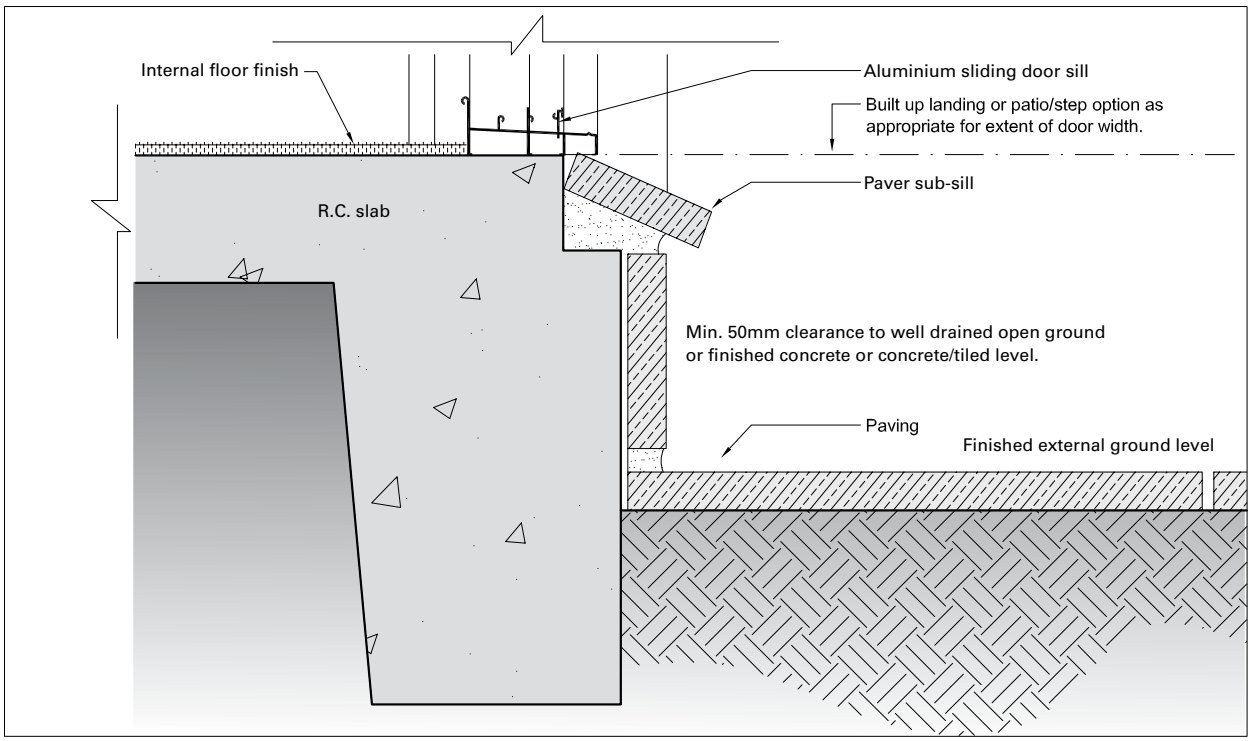
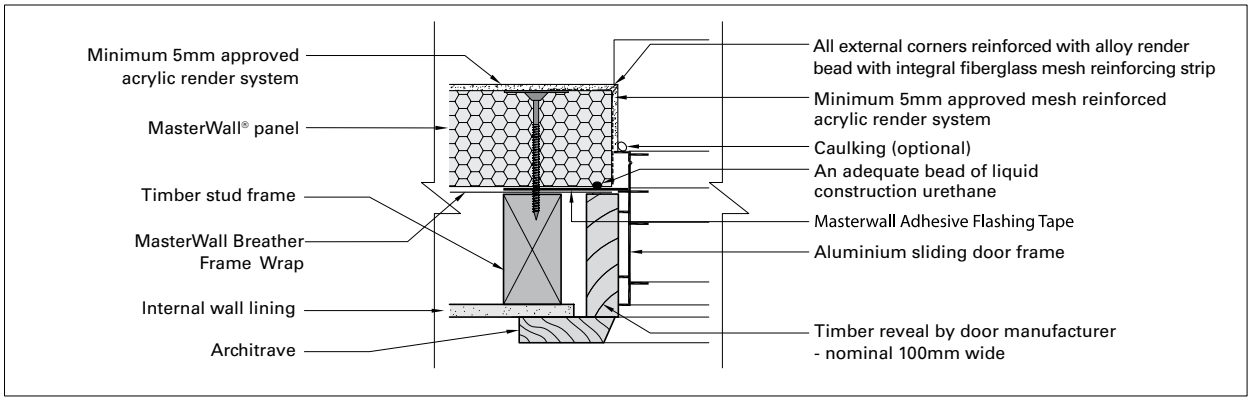


MASTERWALL® PANEL / ALUMINIUM SLIDING DOOR - TYPICAL HEAD DETAIL



MASTERWALL® PANEL / ALUMINIUM SLIDING DOOR - TYPICAL SILL DETAIL



MASTERWALL® PANEL / ALUMINIUM SLIDING DOOR - TYPICAL JAMB DETAIL

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CODEMARK™

CERTIFICATE OF CONFORMITY

This is to certify that

practica MMC

CertMark Australasia

MasterWall™ Insulated Facade System

Product description

The MasterWall™ Insulated Facade System is an integrated weather tight facade system for external walls.

Product purpose or use

A Cladding external wall system that provides:

Thermal insulation;
Sound insulation and;
A Weather tight Building Envelope

Certificate holder

PRACTICA MMC
4 Fiveways Boulevard
KEYSBOROUGH VIC 3173
http://www.practicammc.com.au/

CodeMark certification body

CertMark Australasia Pty Ltd
(ACN 154 3036 804)
JAS-ANZ Accreditation No. Z4450210AK
Address: PO Box 7144, Sippy Downs, QLD, 4556
Website: www.certmark.com.au

Complies with the Building Code of Australia:

1. BCA Volume One 2013: J1.5, (a), (b) Energy Efficiency.
2. BCA Volume One 2013: J1.2 (a) Weatherproofing.
3. BCA Volume One 2013: FP1.4 Damp and Weatherproofing.
4. BCA Volume Two 2013: P2.1 (a), (b) and (c) as applicable to nominal bracing lateral wind loading and fastening pull outs. Structural Performance to Wind Rating C4.
5. BCA Volume Two 2013: P2.2.2 Weatherproofing.
6. BCA Volume Two 2013: P2.6.1 (Energy Efficiency).
7. BCA Volume Two 2013: P2.1 and P2.2.2 (Wall Cladding).
8. BCA Volume Two 2013: Part 3.7.4 Bushfire Areas (BAL29) (External walls). Including NSW, SA and TAS Amendments.
9. BCA Volume Two 2013: Part 3.8.6 Sound Insulation, as per notes below
10. BCA Volume Two 2013: Part 3.12.1.1 (a) (Energy Efficiency), as per notes below.
11. BCA Volume Two 2013: Part 3.12.1.4 (a) External Walls.

Subject to the following conditions and limitations:

1. The MasterWall™ Thermal Facade System comprises a number of proprietary components.
2. No substitution of any component part of the MasterWall™ Insulated Facade System is permissible without the express written approval of the certificate holder.
3. The MasterWall™ Insulated Facade System is for use in C4 cyclonic regions.
4. Any proposed applications of the MasterWall™ System that fall outside of the scope of the MasterWall™ Product Information Manual and MasterWall™ Installation Manual date 6/11/2013 either in design or class of structure should be referred to the certificate holder for evaluation and approval.
5. Thermal resistance as calculated on the MasterWall™ Insulated Facade System as installed per the Installation Manual. The builder must ensure that any other insulating component required for the building envelope is installed in accordance with the manufacturer's instructions.
6. For further description of the system and components refer CertMark Assessment Brief # CMD40023 and MasterWall™ Installation Manual dated 6/11/2013.

Notes: Energy Efficiency: 50mm Thick Panel = R 1.3, 75mm Thick Panel = R 2.0, 100mm Thick Panel = R2.7, 125 mm Thick Panel = R3.4. 75mm System Sound Insulation RW 35 (-1;-5).

ABCB

JAS-ANZ

John Thorpe	Luke Owen-Jones	23/10/2012	23/10/2015	CMA-CM40023 (Rev 1)
Director	**Unrestricted**	**Date of issue**	**Date of expiry**	**Certificate Number**
CertMark Australasia Pty Ltd	**Building Certifier**			**Reviewed May 2013**

This Certificate of Conformity is issued by an accredited certification body under arrangement with JAS-ANZ. The ABCB does not in any way warrant, guarantee or represent that the Product the subject of this Certificate of Conformity conforms with the BCA, nor accepts any liability arising out of the use of the Product. The ABCB disclaims to the extent permitted by law, all liability (including negligence) for claims of losses, expenses, damages and costs arising as a result of the use of the product(s) referred to in this Certificate.
It is advised to check that this Certificate of Conformity is currently valid and not withdrawn, suspended or superseded by a later issue by referring to the ABCB website, www.abcb.gov.au.

SYSTEM CHECKLIST:

PRODUCT	DESCRIPTION	SIZES	COVERAGE	✓
MasterWall Panel	Precoated Polystyrene Panel (ready to render)	50mm, 75mm, 100mm & 125mm	1.2m x 2.4m (2.88m²)	
MasterWall Fixings	Screw Button Sets 100 p/box	75mm, 100mm, 130mm	30 per panel	
MasterWall Breather Frame Wrap	Vapour Permeable Sarking	1350mm or 2700mm	82m²	
MasterWall Flashing Tape	Self Adhesive Aluminium Tape (flashing windows & doors etc)	75mm width	25m length	
Liquid Urethane Sealant	Liquid Urethane Sealant (gasket sealant for flashing tape)	600ml sausage	2 per roll of flashing tape	
Expandable Elastic Foam	Expandable Urethane Flexible Foam (joint sealant)	700ml can	65m² of MasterWall Panel	
PVC Starter Channel	U Channel for bottom of panel (on ground floor)	50mm, 75mm, 100mm & 125mm	3.0m lengths	
Ableflex	Foam strip for rebated slab detail & expansion joints	75mm width	25m roll	

NOTES:

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TECHNICAL ADVICE / DESIGN

Practica MMC supports all of its products and systems with a comprehensive Technical Advisory Service for specifiers, stockists and contractors.

This includes a software-powered service designed to give fast, accurate technical advice. Simply phone the Practica MMC Technical Service Department with your project specifications. Calculations can be carried out to provide a Condensation (Dew Point) Risk Analysis, and/or a Total Wall (RT) System Thermal Value so that the correct insulation thicknesses can be determined for any given project.

NATSPEC

MasterWall is now available as a NATSPEC worksection, a comprehensive national specification system endorsed by government and professional bodies.

CONTACT PRACTICA MMC

For national Technical and Sales contact Practica MMC:

National phone: 1300 791 003
Email: sales@practicammc.com.au
Web: www.practicammc.com.au

practica MMC | MASTERWALL MASTERFLOOR SKYLINE K-SERIES

PracticaMMC is an Australian company offering a unique range of modern, insulating wall and floor construction solutions for residential & commercial projects. www.practicammc.com.au