



MASTERWALL.



UMBRA

Architectural shadings visually transform building facades and deliver energy efficiency.

TECHNICAL DOCUMENT:

SYSTEM INSTALLATION & CONSTRUCTION DETAILS

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MASTERWALL UMBRA SYSTEM MANUAL 11.12.2020





TABLE OF CONTENTS

UMBRA 3D VIEW DIAGRAM

Artist Impression	2
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SYSTEM SPECIFICATION

INTRODUCTION

Description	4
Umbra Brackets	4
Umbra Shapes	4
Dimensions	4
Substrates	4
Cutting Drilling	4
Bracket Locations	4
Umbra to Masterwall	4
Brick/Concrete/Masonry	4
Alternative Claddings	4
Health & Safety	4
Render	4
Warranty - 7 years	4

CONSTRUCTION DETAILS

Bracket Placement	5
Full Surround and Hood or Sill Only.	
Bracket Placement	6
Blade and Hood/Sill	
Typical Head Detail	7
Masterwall with Timber Window	
Typical Side Jamb Detail	8
Masterwall with Timber Window	
Typical Sill Detail	9
Masterwall with Timber Window	
Typical Sill Detail	10
Masterwall with Aluminium Window	
Typical Head Detail	11
Alternative Cladding with Aluminium Window	
Typical Side Jamb Detail	12
Alternative Cladding with Aluminium Window	
Typical Head Detail	13
Brick Veneer with Aluminium Window	
Typical Side Jamb Detail	14
Brick Veneer with Aluminium Window	
Typical Sill Detail	15
Brick Veneer with Aluminium Window	

INTRODUCTION

Description:

Umbra is a lightweight engineered solution for providing architectural shading for windows or as a feature to form definition to any design. Umbra comprises of stainless steel brackets, fixed to a variety of substrates. The Umbra shapes are custom made to suit desired design and dimensions, which are installed over concealed brackets with a robust adhesive. Umbra is completed with architectural render finishes.

Umbra Brackets:

Brackets are made from grade 316 stainless steel, comprising of 16mm diameter hollow rod with welded mounting plate allowing for two fixing points into the substrate. For fixing to timber frame, use M10 x 50mm coach screws, for steel frame/beam use M10 x 40mm stainless steel bolt/washer/nut. For fixing to masonry substrates select suitable M10 masonry anchor minimum 40mm depth.

Umbra Shapes:

Made from M Grade fire retardant polystyrene to desired dimensions and size. A sloped fall away from the wall is required to the top side of all horizontal surfaces to a minimum of 7° for rain water runoff. All joints of the Umbra shapes are bonded together using compatible PU foam adhesive. The same PU foam adhesive is used to bond the polystyrene shape to all substrates.

Dimensions:

Umbra depth is to be no more than 600mm from base of bracket. Leading edge is a minimum of 80mm. Umbra length is unlimited.

Substrates:

Umbra may be installed over a variety of substrates such as timber & steel frame construction, masonry brick, concrete block and precast concrete panels. The cladding surrounding the Umbra shades may include rendered Masterwall or fibre cement sheeting; alternatively Umbra can be placed with non-rendered facades claddings, such as weatherboard, face brick or feature claddings.

Cutting Drilling:

Use a hand saw when cutting the Umbra shapes and a polystyrene rasp, ensuring to use personal protection equipment at all times. Drill out bracket holes in the Umbra shapes with a timber auger-bit attached to an extension bit.

Bracket Locations:

Brackets to Umbra are to be no more than 1200mm maximum. On hood or sill only the brackets should be 150mm maximum from the ends of the Umbra and 40mm from the front edge. When used in conjunction with vertical Umbra blades, the end brackets may be 300mm from the ends of the hood or sill. (see detail on page 6)

Umbra to Masterwall:

When installing Umbra as a part of the rendered Masterwall system, the umbra brackets are installed to frame over the breather wrap and prior to installation of the Masterwall panels, flashing of all window openings and building penetrations should be installed at this point. The Umbra shapes are adhered to the face of the unrendered Masterwall panel. The junction of the Umbra and Masterwall panel is to be flashed using Skyline renderable membrane. (see detail on pages 7 - 9)

Brick/Concrete/Masonry:

The Umbra system can be directly fixed to brick with the Umbra shape glued to the substrate using a compatible PU foam adhesive.

Alternative Claddings:

When installing Umbra to frame which will be boarded by an alternative cladding, fix brackets over 7.5mm fibre cement sheet, Umbra shapes are then adhered to the fibre cement sheet. Flash the head of the Umbra prior to render with Skyline renderable membrane, which will terminate behind the alternative cladding.

Health & Safety:

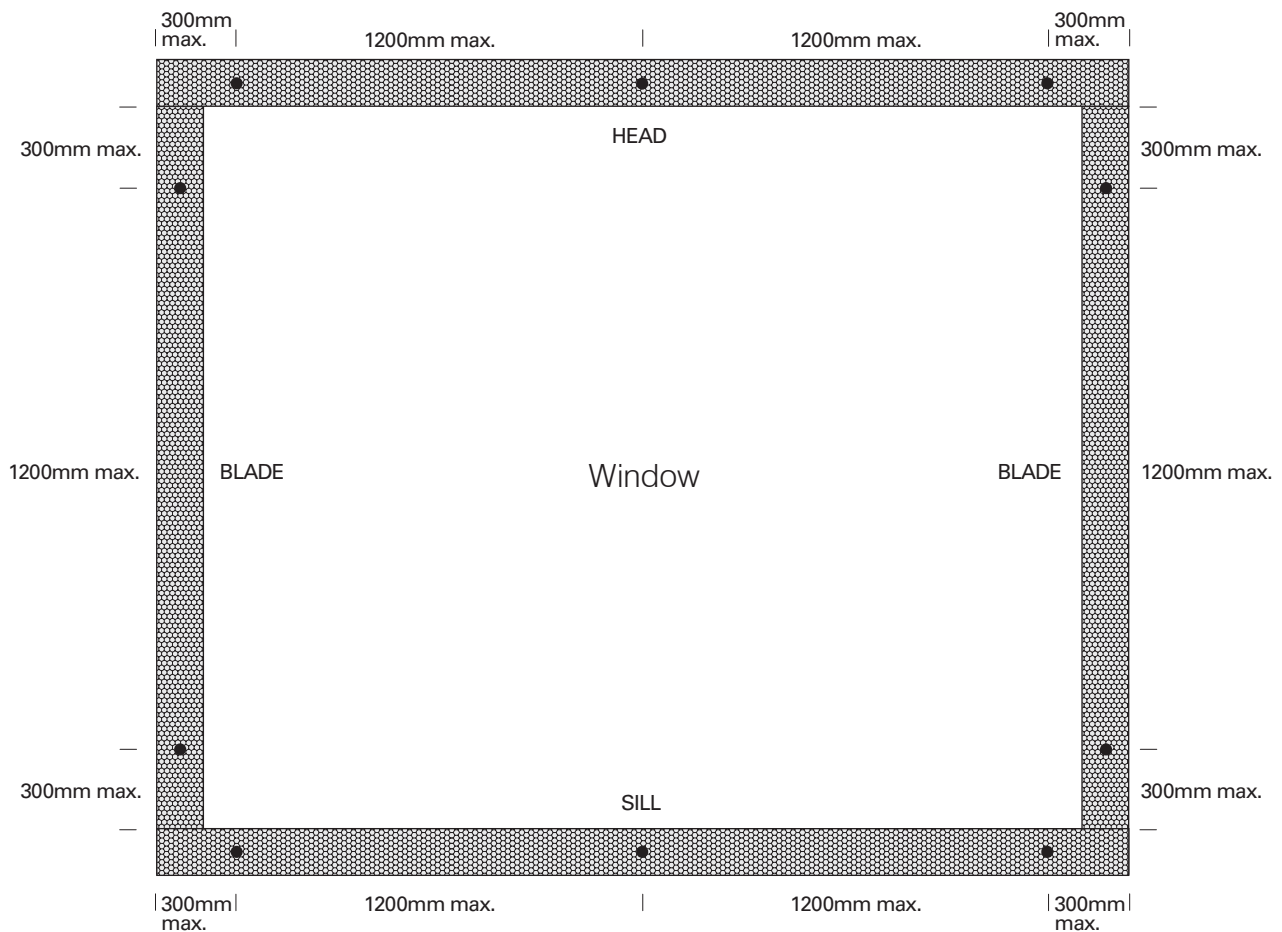
When using PU foam adhesive, protection from skin and eye contact is necessary. Wear certified personal protection equipment (PPE). Dispose all waste off cut material according local refuse regulations.

Render:

A minimum thickness of 5mm polymer modified render should be applied in two coats over entire Umbra system. A single layer of alkali resistant mesh (145–160 g/m²) must be embedded into the first coat of render and should return onto face of render cladding by 100mm. All render trims should be pre-meshed alloy and should be either glued or embedded into first coat of render. A finish texture system to the manufacturer's specification should be applied. It is highly recommended the render system be over coated with an acrylic membrane for added protection and long term durability of the system.

Warranty - 7 years:

Masterwall Australia 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 Masterwall Australia website (<http://www.Masterwall.com.au>).

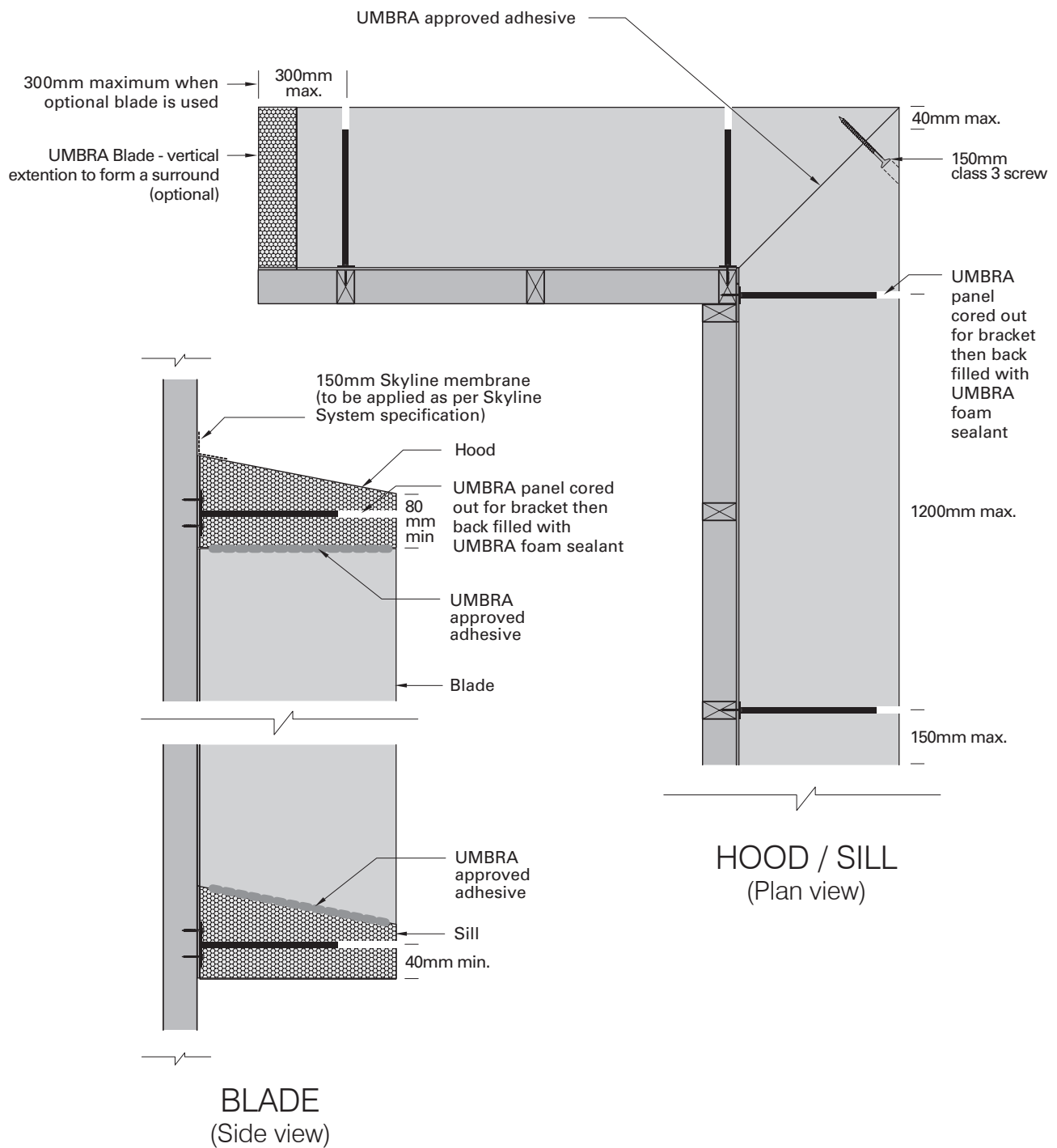


FULL SURROUND

HOOD OR SILL ONLY

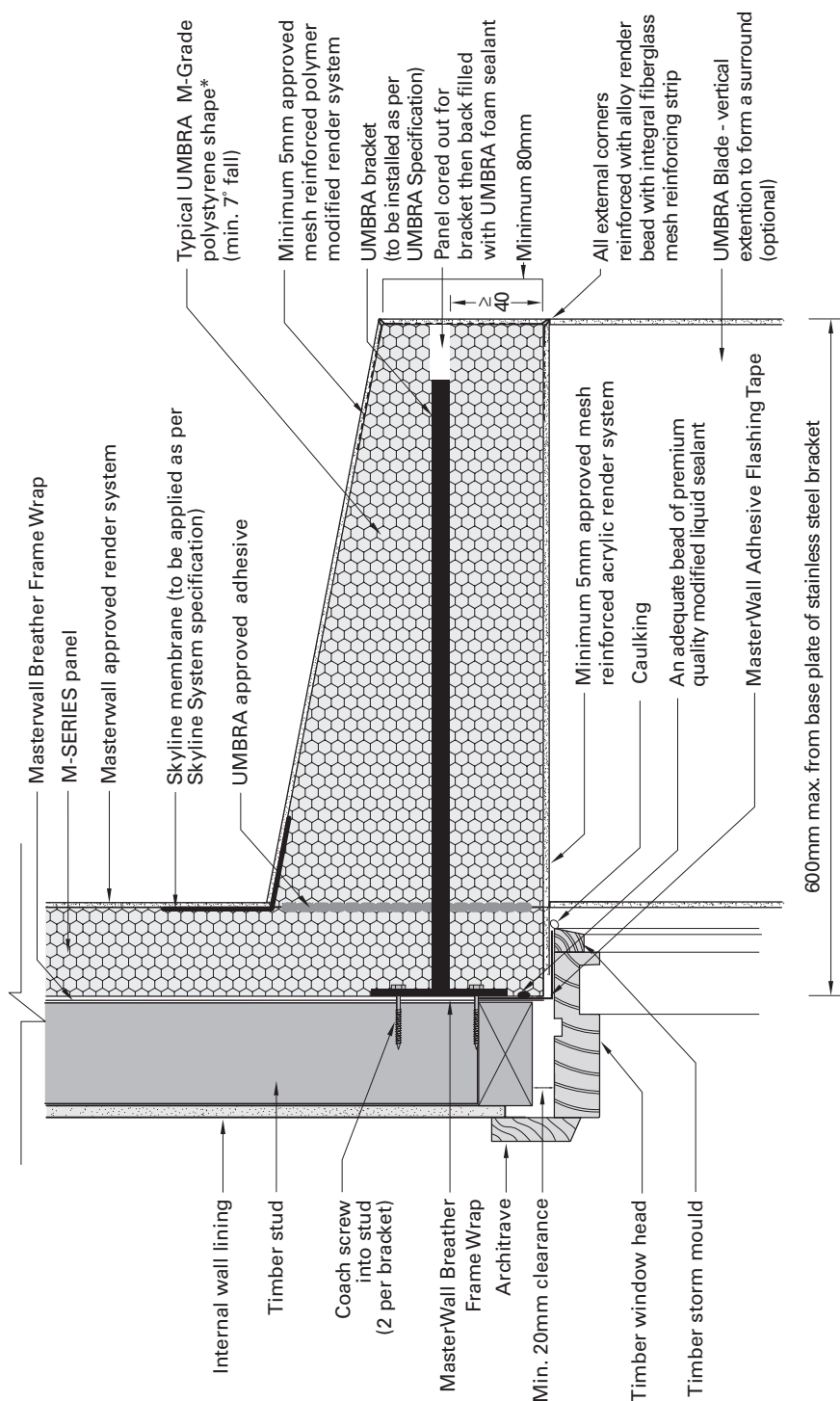
UMBRA: BRACKET PLACEMENT

These details are indicative for the purpose of illustrating the typical installation of UMBRA system. The system is 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.



UMBRA: BRACKET PLACEMENT

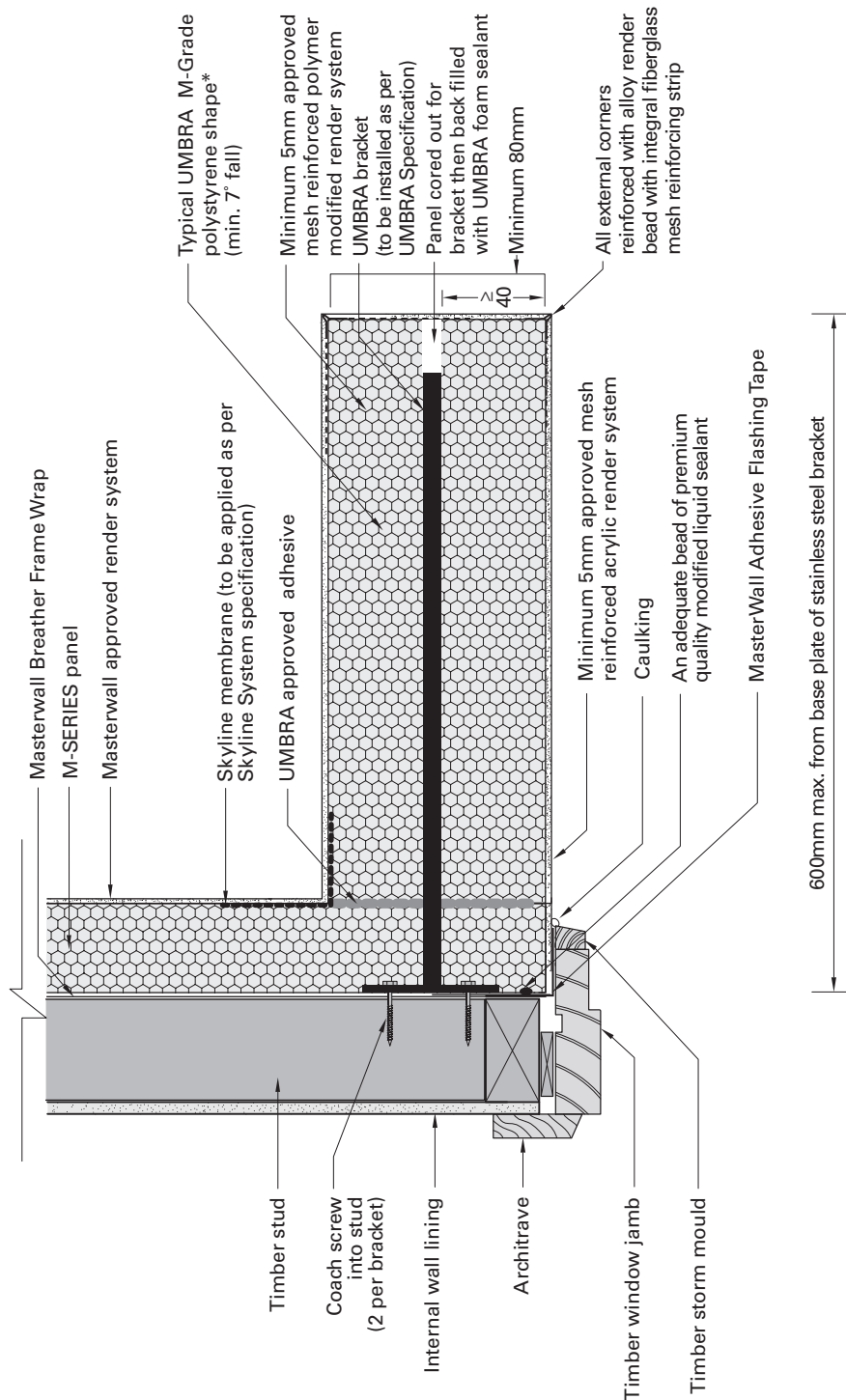
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* NOTE:
UMBRA can be
engineered to any
custom shape or size
(max. 600mm depth)

UMBRA / M-SERIES PANEL / TIMBER WINDOW: MASTERWALL / TYPICAL HEAD DETAIL

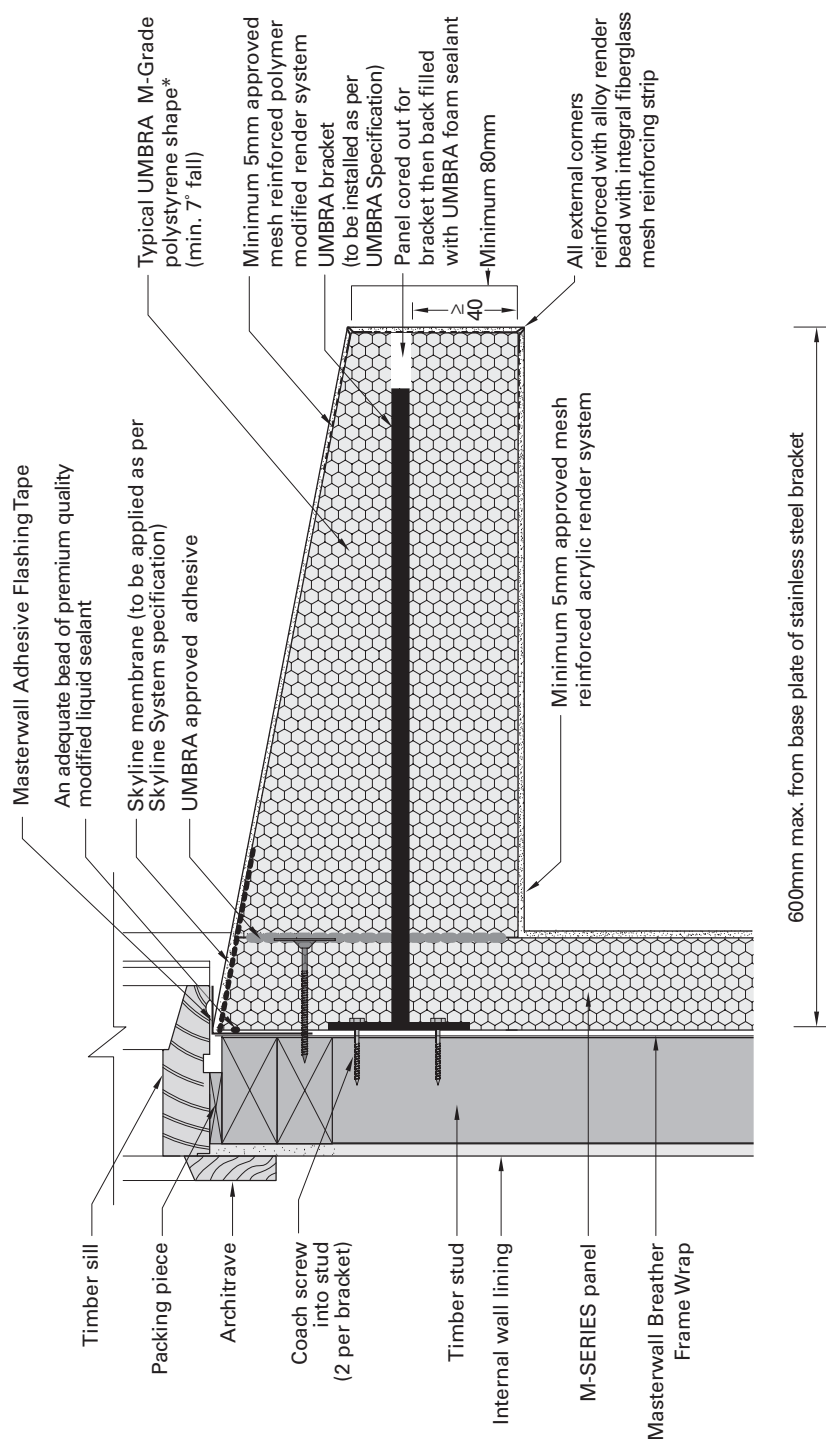
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UMBRA / M-SERIES PANEL / TIMBER WINDOW: M-SERIES / TYPICAL SIDE JAMB DETAIL

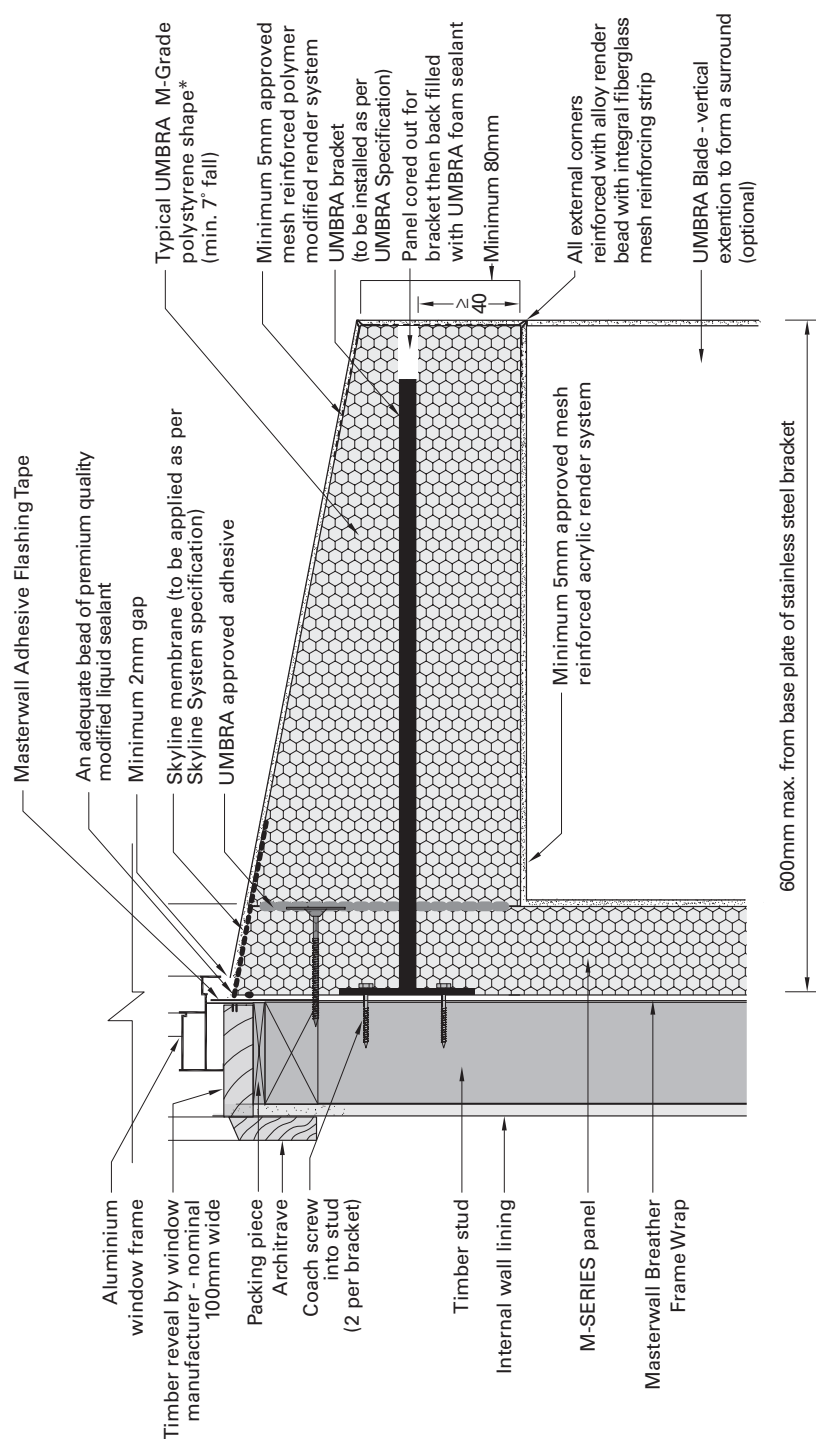
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UMBRA / M-SERIES PANEL / TIMBER WINDOW: M-SERIES / TYPICAL SILL DETAIL

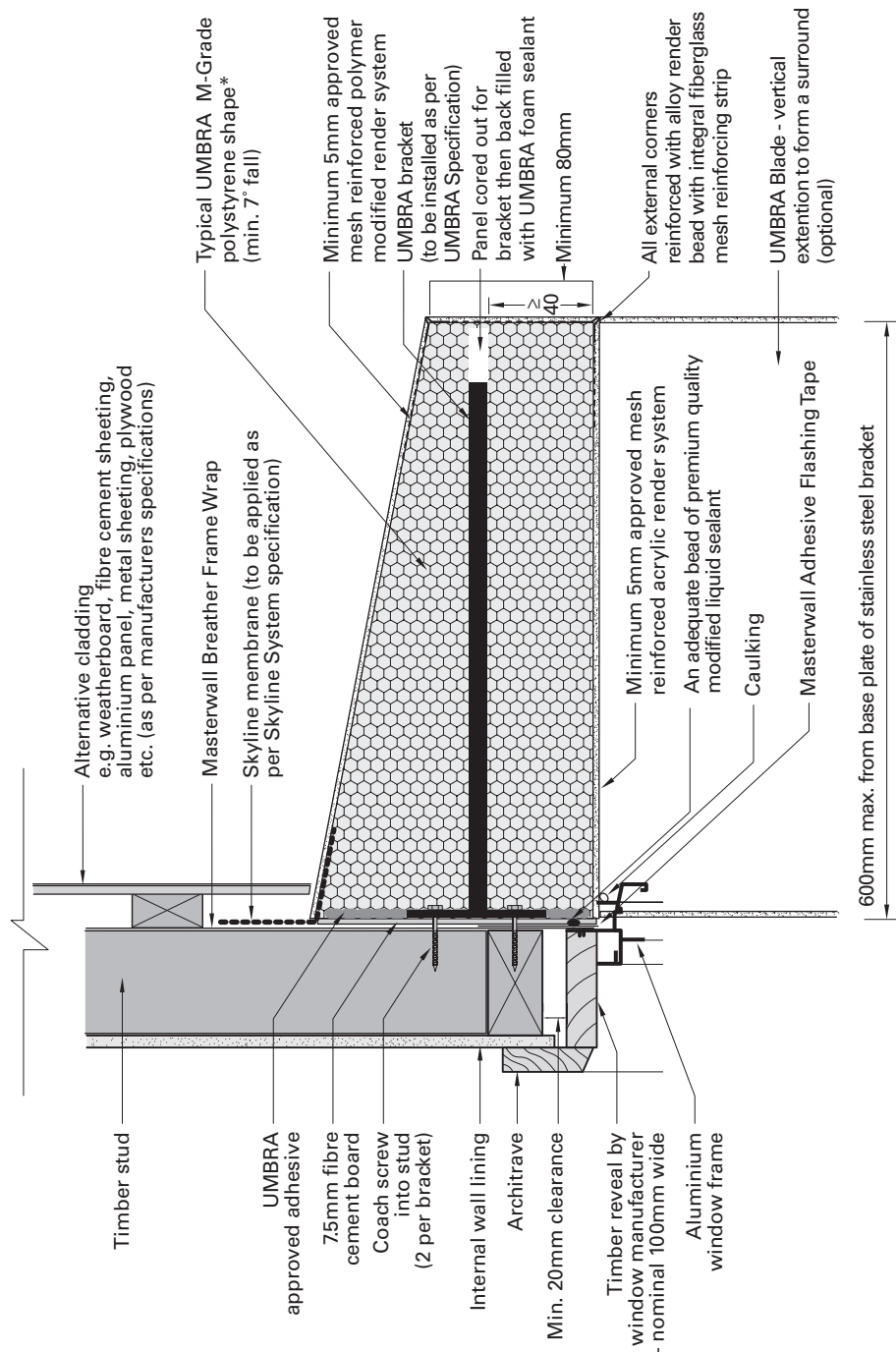
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UMBRA / M-SERIES PANEL / ALUMINIUM WINDOW:
M-SERIES - SILL DETAIL

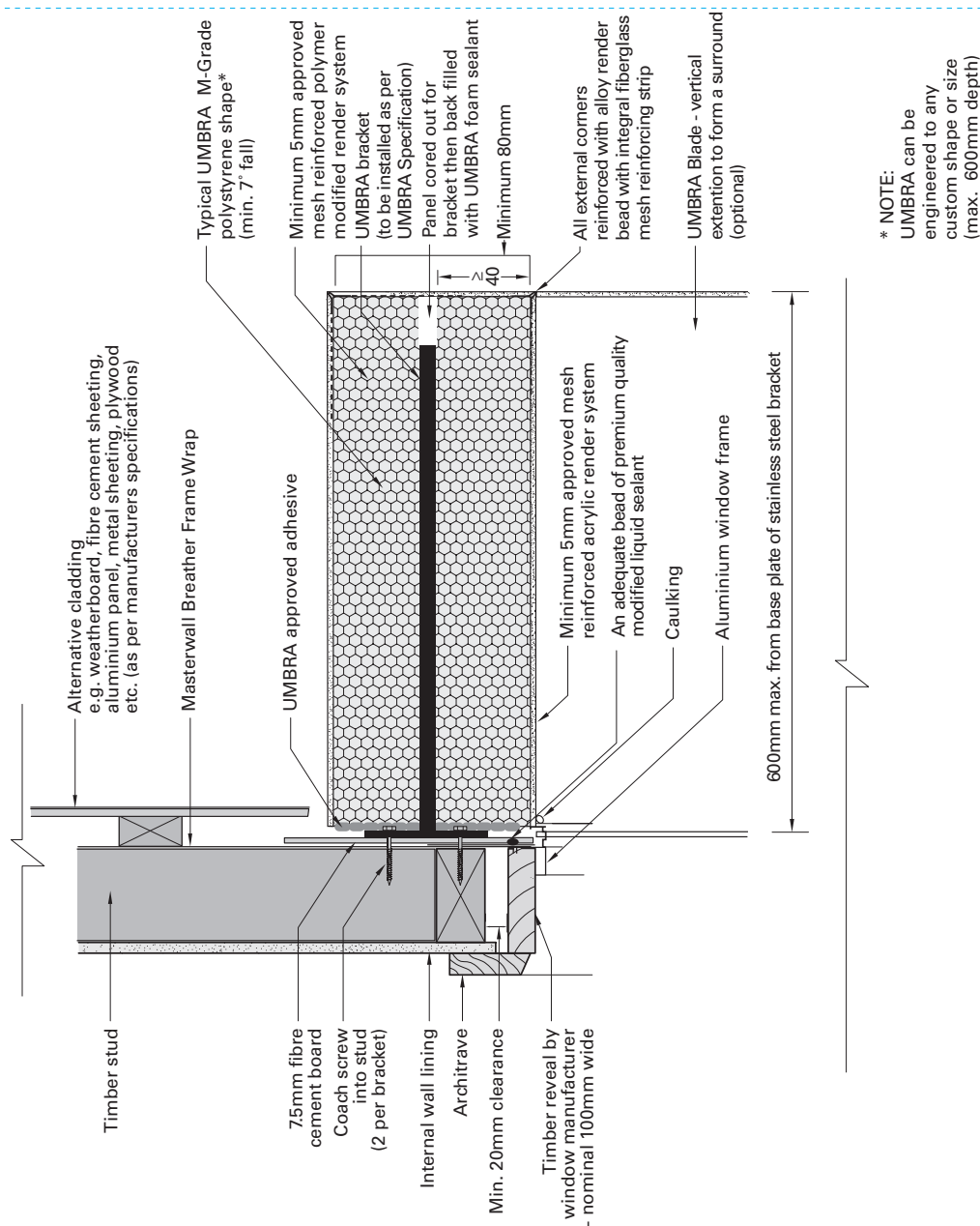
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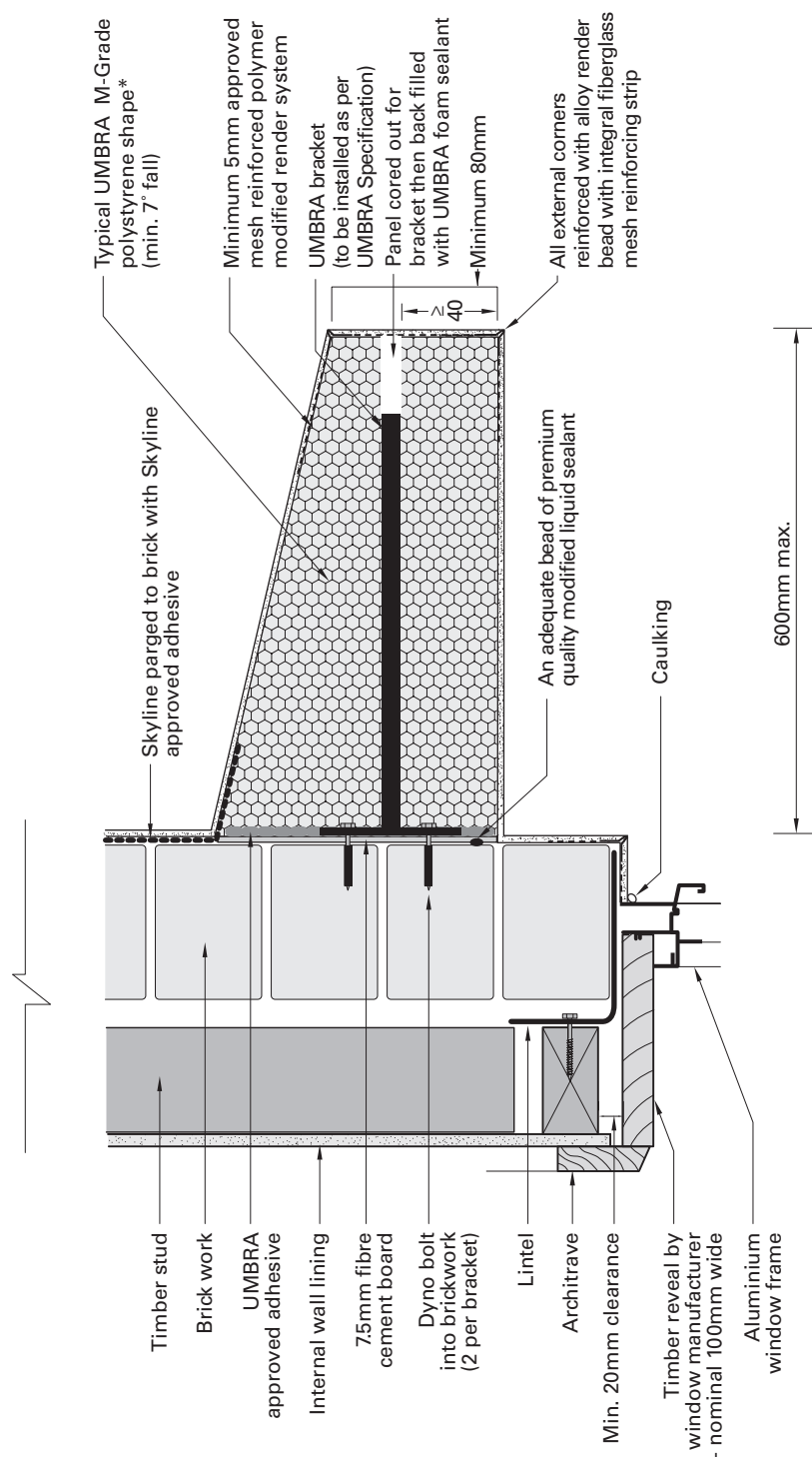
UMBRA / ALTERNATIVE CLADDING / ALUMINIUM WINDOW: ALTERNATIVE CLADDING - HEAD DETAIL

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UMBRA / ALTERNATIVE CLADDING / ALUMINIUM WINDOW:
ALTERNATIVE CLADDING - SIDE JAMB DETAIL

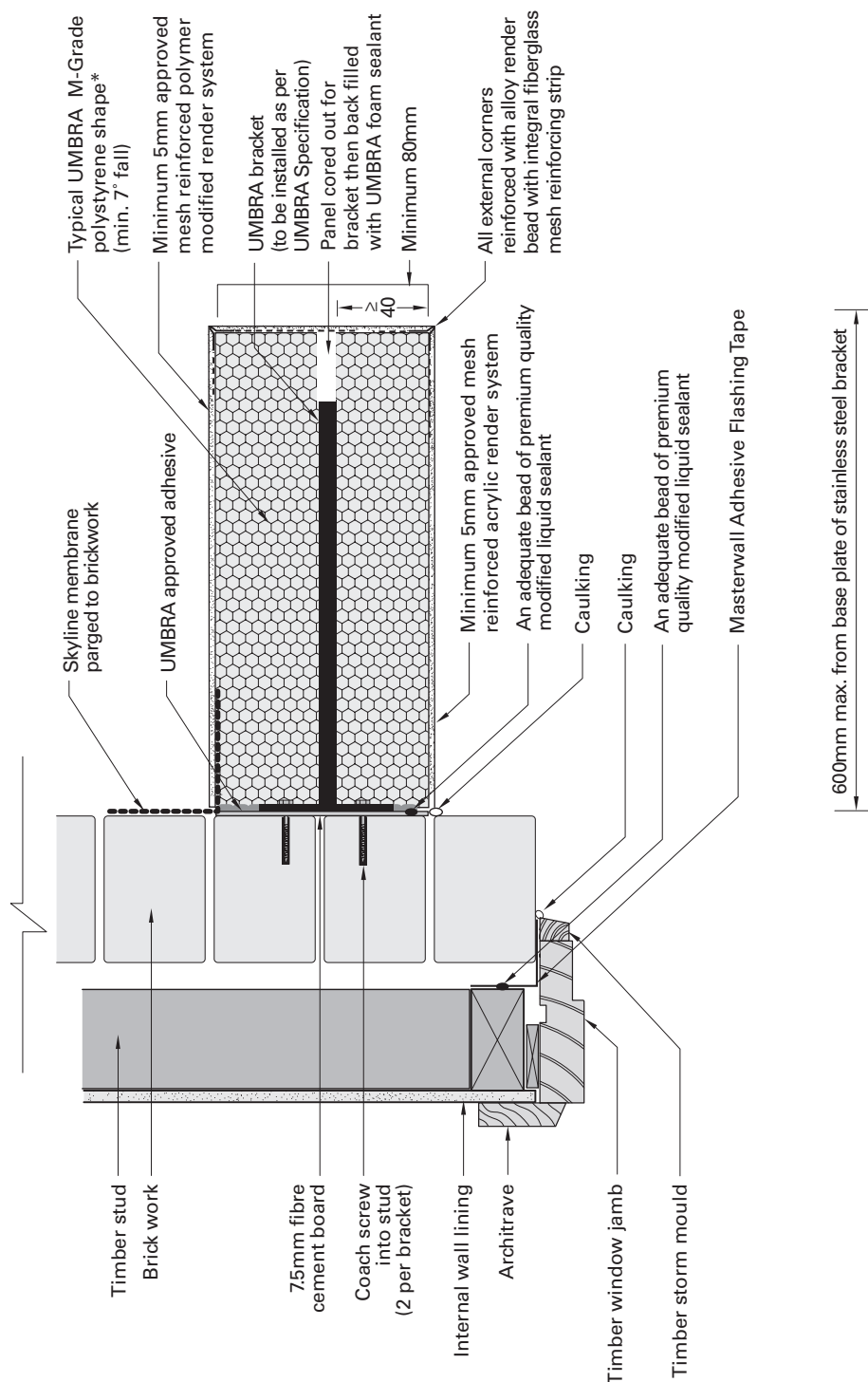
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UMBRA / BRICK VENEER / ALUMINIUM WINDOW:
BRICK VENEER - HEAD DETAIL

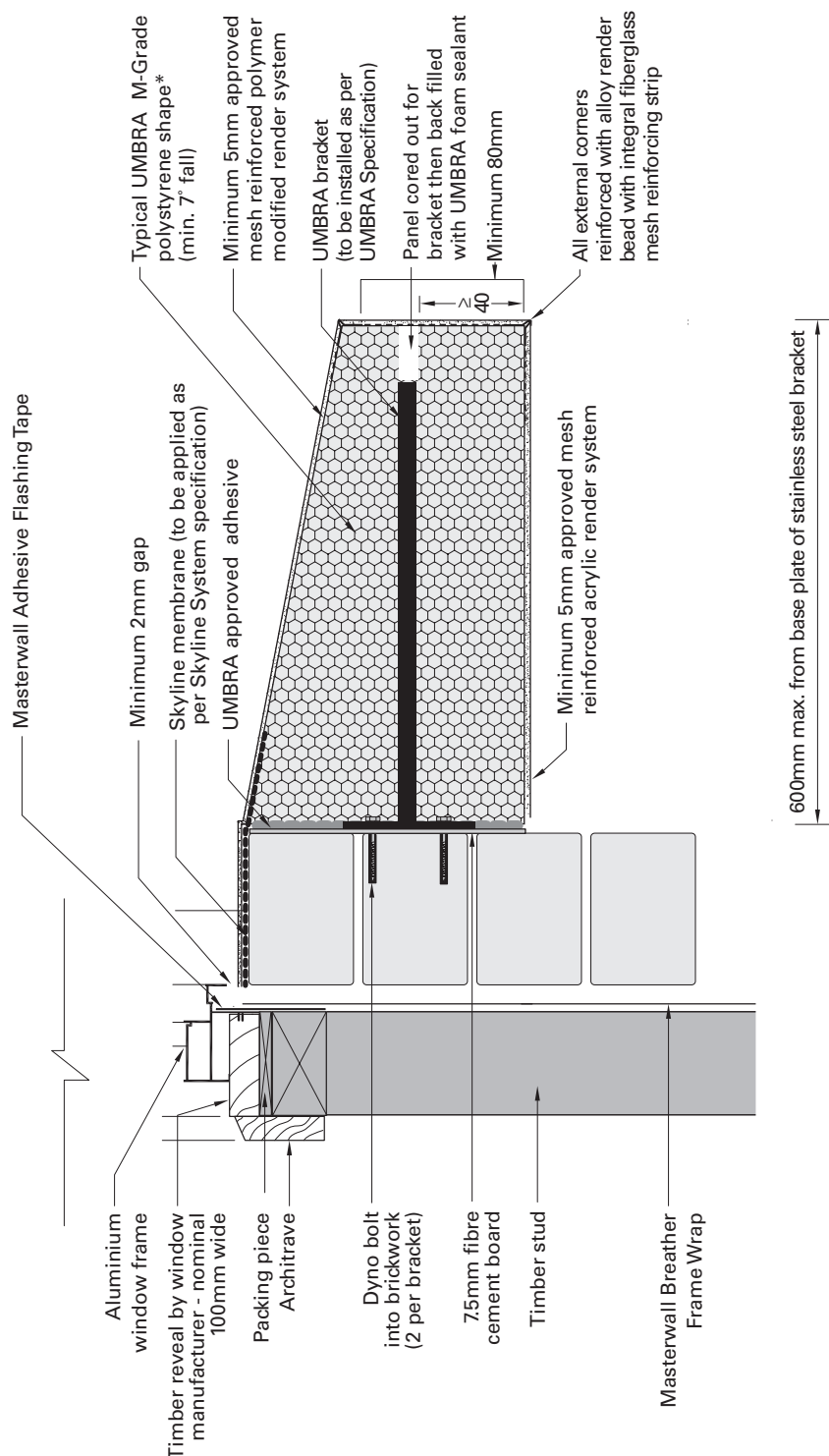
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UMBRA / BRICK VENEER / TIMBER WINDOW:
BRICK VENEER - SIDE JAMB DETAIL

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UMBRA / BRICK VENEER / ALUMINIUM WINDOW: BRICK VENEER - SILL DETAIL

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TECHNICAL ADVICE / DESIGN

Masterwall Australia 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 Masterwall Australia 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.

CONTACT Masterwall Australia

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Email: sales@Masterwall.com.au
Web: Masterwall.com.au



Masterwall manufactures and distributes high performance exterior insulation, render and coating systems.

M-TEX	M-SERIES	M	SKYLINE	M	H ₂ O DRAINAGE WRAP
	X-SERIES	M	UMBRA	M	MASTERFLOOR
	K-SERIES	M	MATRIX		