



**MASTERWALL**



UMBRA

**Architectural shadings visually transform building facades and deliver energy efficiency.**

TECHNICAL DOCUMENT:

## **SYSTEM INSTALLATION & CONSTRUCTION DETAILS**

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## INTRODUCTION

### Description:

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

### Umбра 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.

### Umбра 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 Umбра 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:

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

### Substrates:

Umбра 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 Umбра shades may include rendered Masterwall or fibre cement sheeting; alternatively Umбра 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 Umбра shapes and a polystyrene rasp, ensuring to use personal protection equipment at all times. Drill out bracket holes in the Umбра shapes with a timber auger-bit attached to an extension bit.

### Bracket Locations:

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

### Umбра to Masterwall:

When installing Umбра as a part of the rendered Masterwall system, the umбра 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 Umбра shapes are adhered to the face of the unrendered Masterwall panel. The junction of the Umбра and Masterwall panel is to be flashed using Skyline renderable membrane. (see detail on pages 7 - 9)

### Brick/Concrete/Masonry:

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

### Alternative Claddings:

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

### Health & Safety:

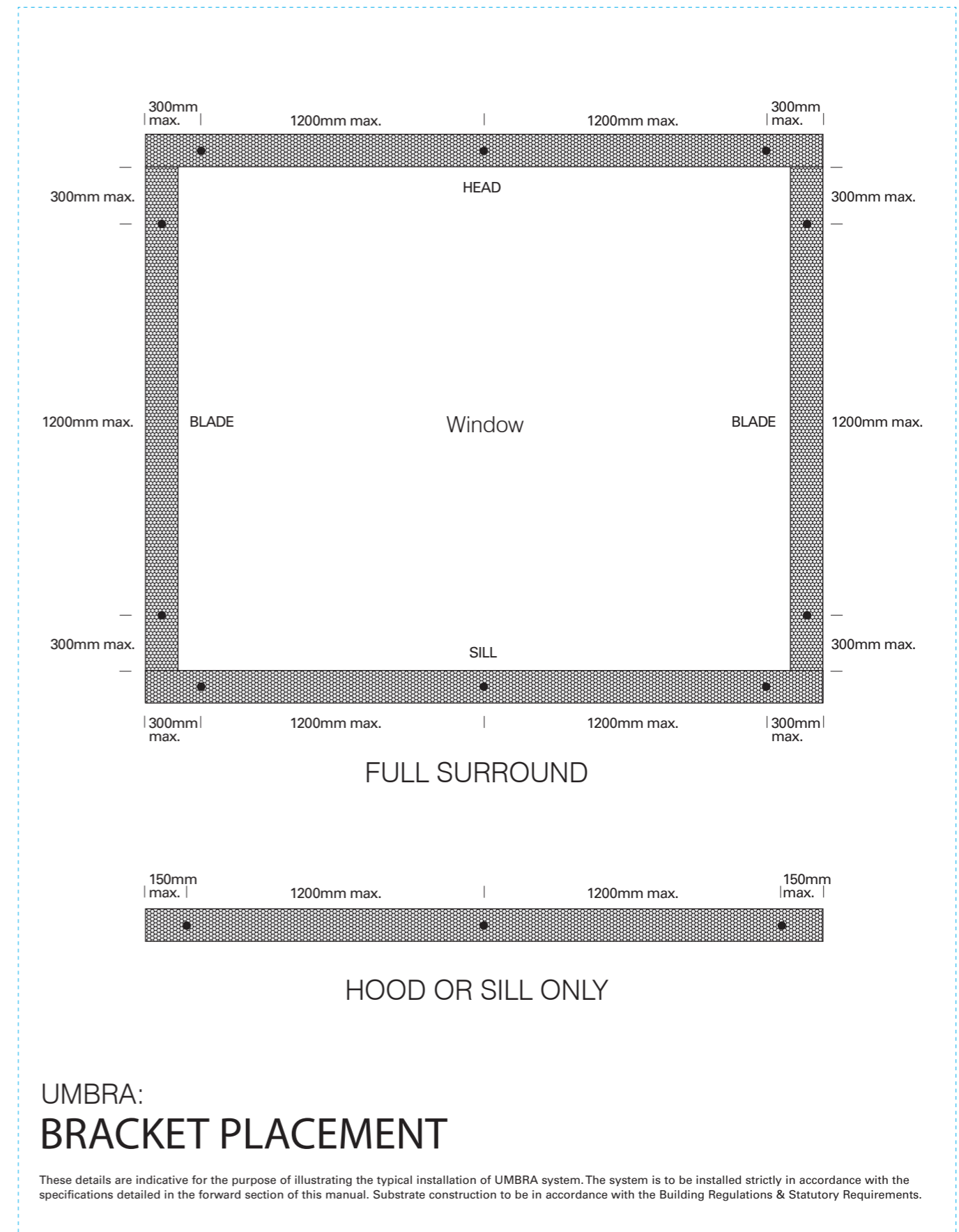
When using PU foam adhesive, protection from skin and eye contact is necessary. Wear certified personal protection equipment (PPE). Dispose all waste off cut material according local refuse regulations.

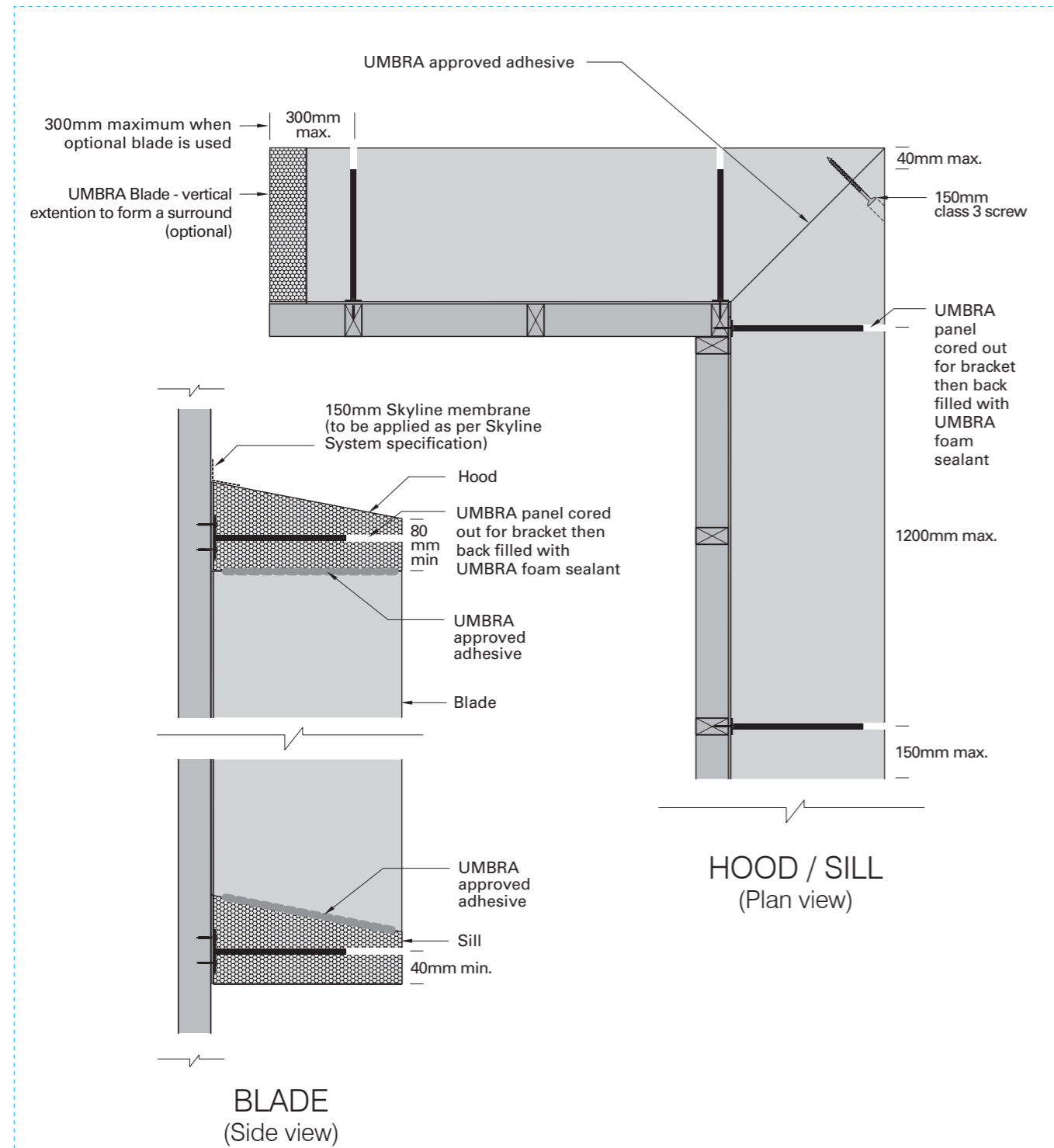
### Render:

A minimum thickness of 5mm polymer modified render should be applied in two coats over entire Umбра system. A single layer of alkali resistant mesh (145–160 g/m<sup>2</sup>) 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:

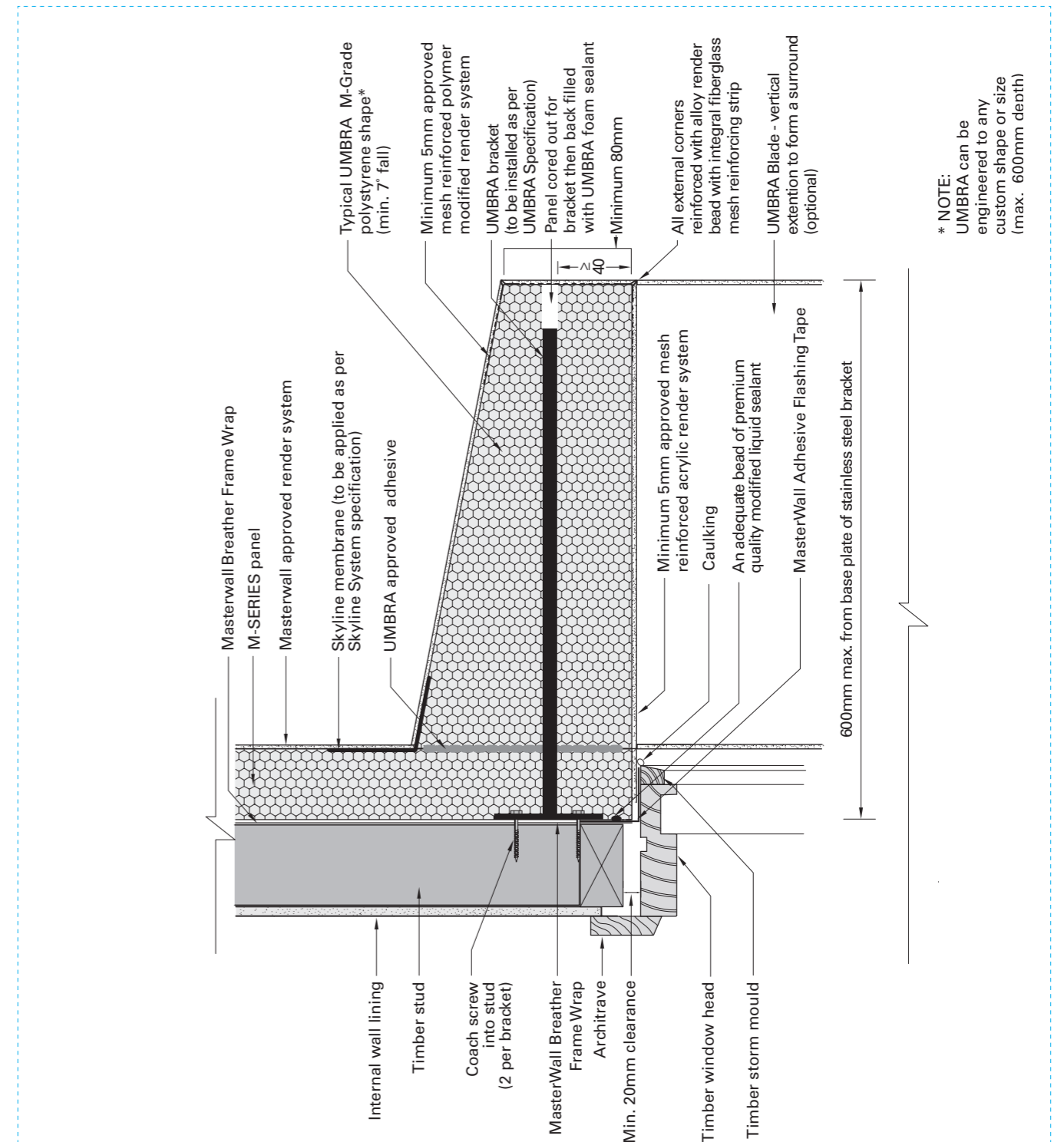
Masterwall Australia Pty Ltd warrants that its products are free from defects in materials and workmanship for a period of 7 years from the date of purchase. For a full description of the Warranty refer to the Masterwall Australia website (<http://www.Masterwall.com.au>).





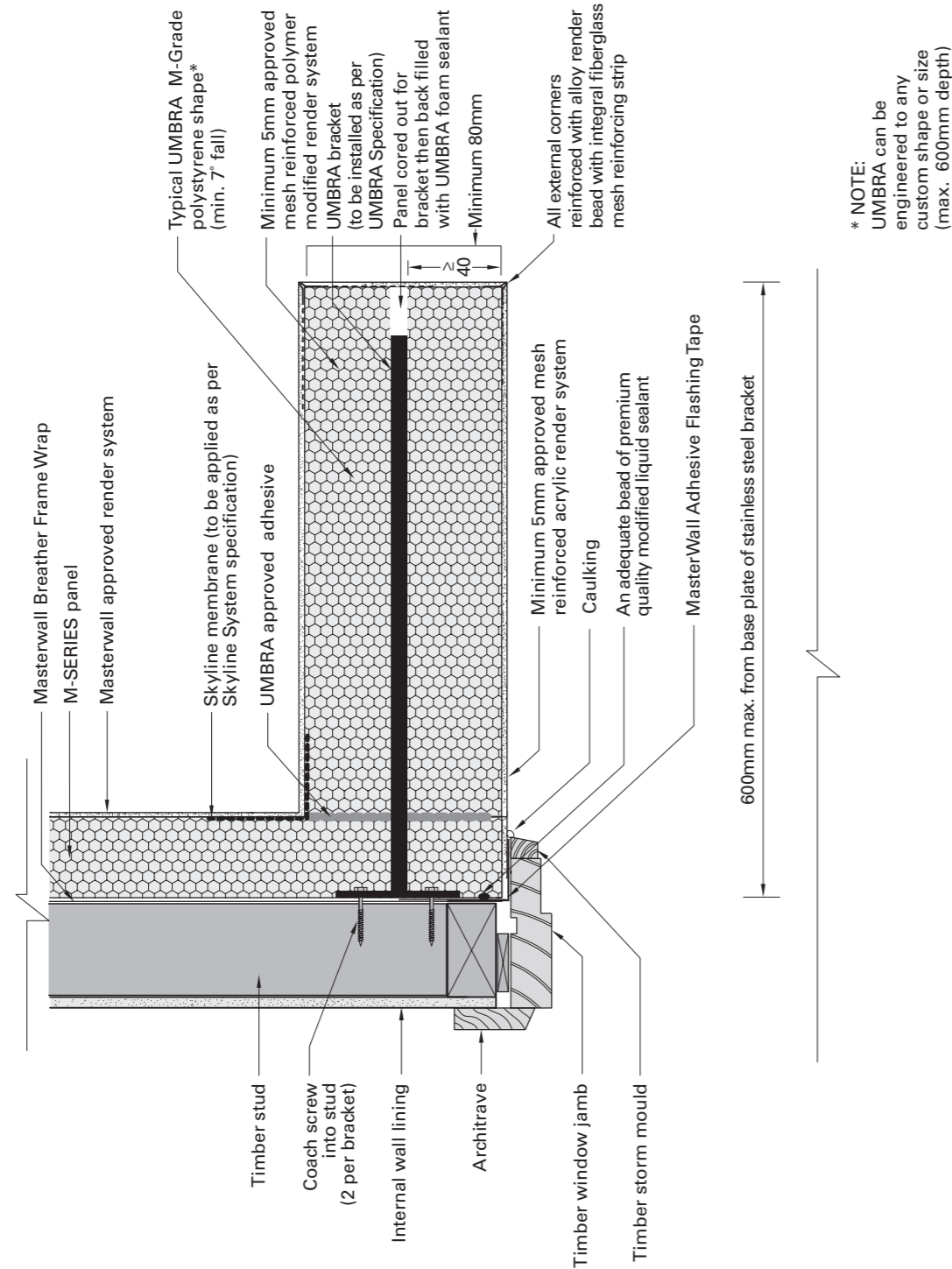
## UMBRA: BRACKET PLACEMENT

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.



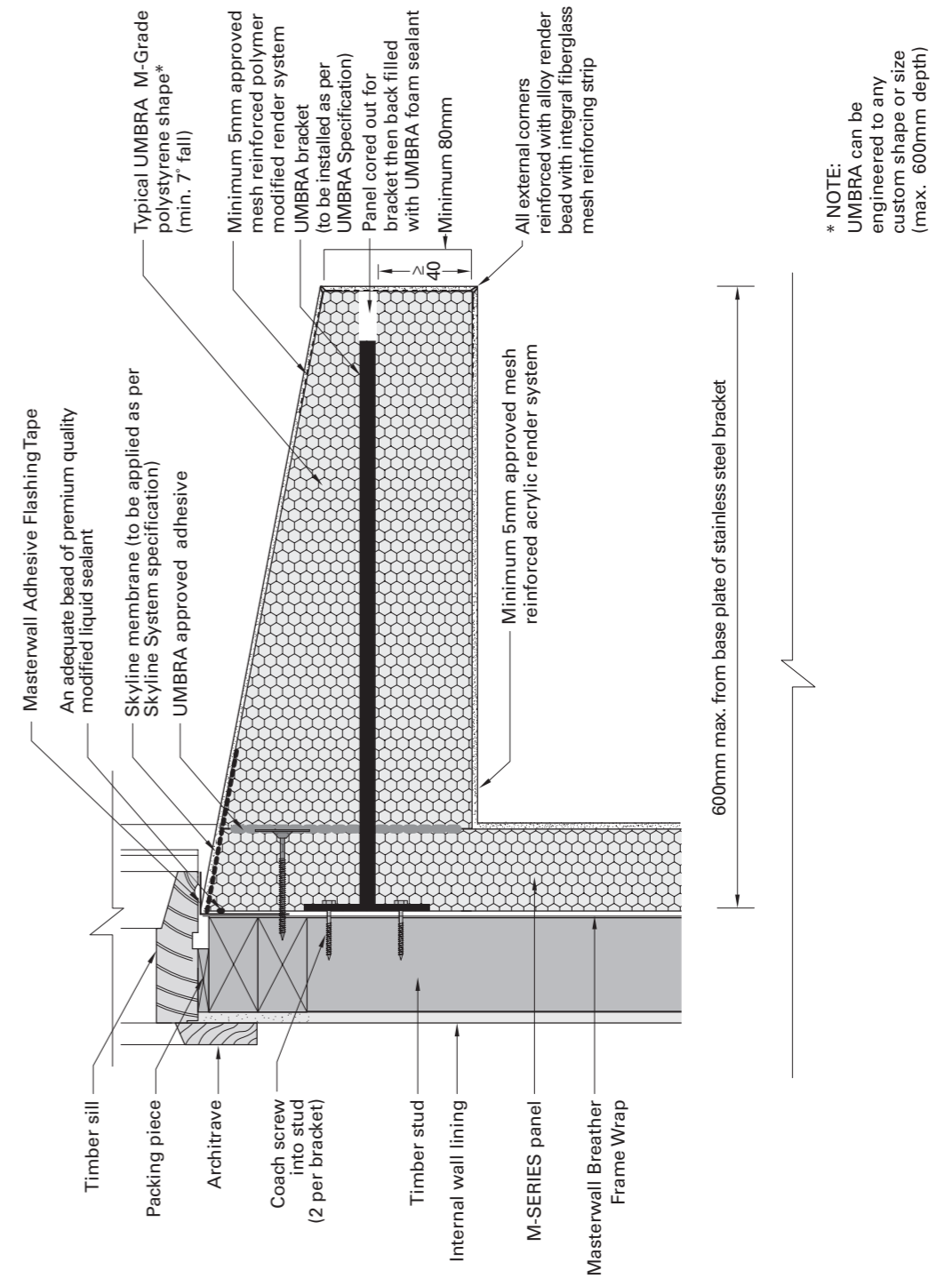
## UMBRA / M-SERIES PANEL / TIMBER WINDOW: MASTERWALL / TYPICAL HEAD DETAIL

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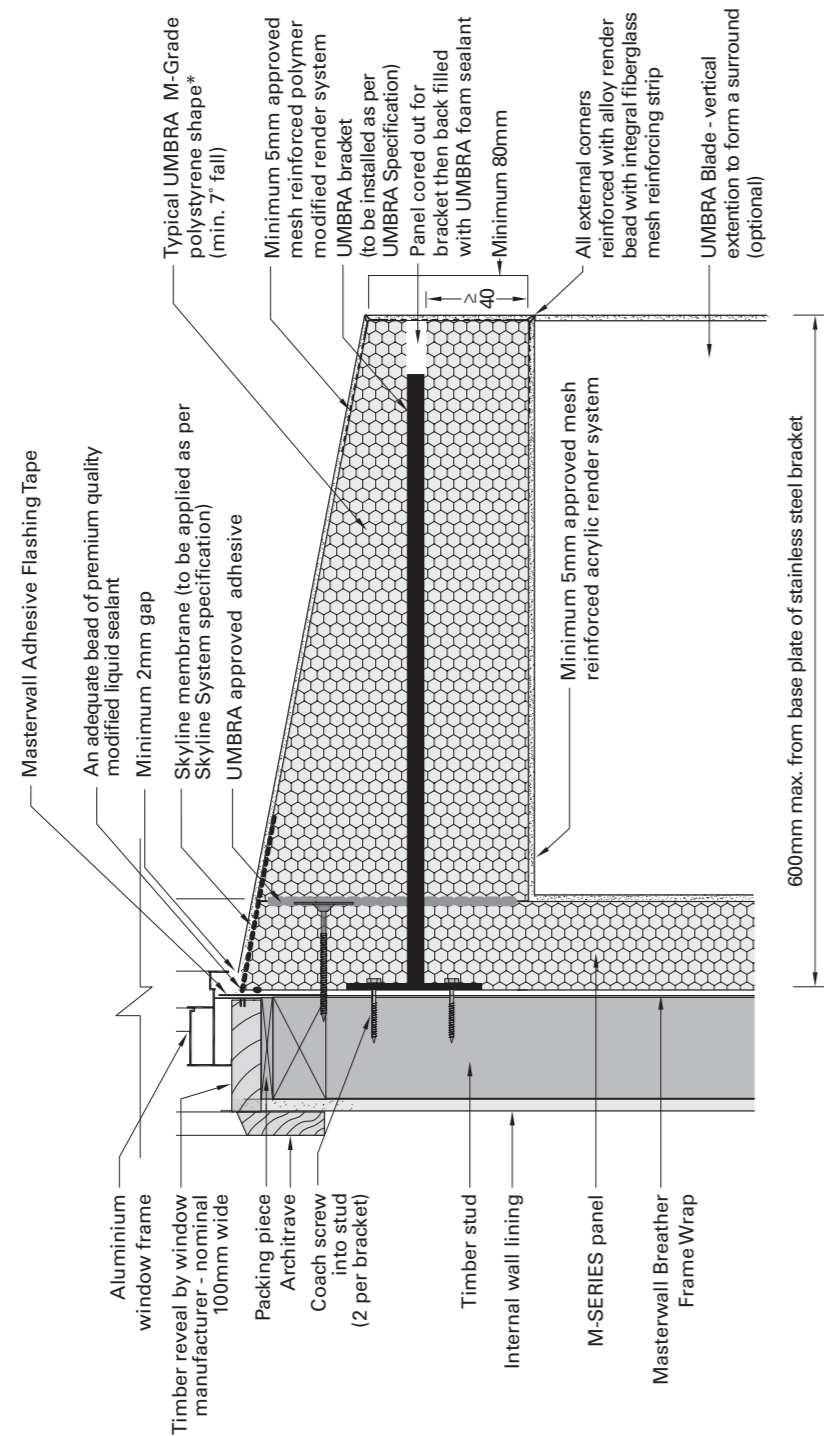
## UMBRA / M-SERIES PANEL / TIMBER WINDOW: M-SERIES / TYPICAL SIDE JAMB DETAIL

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

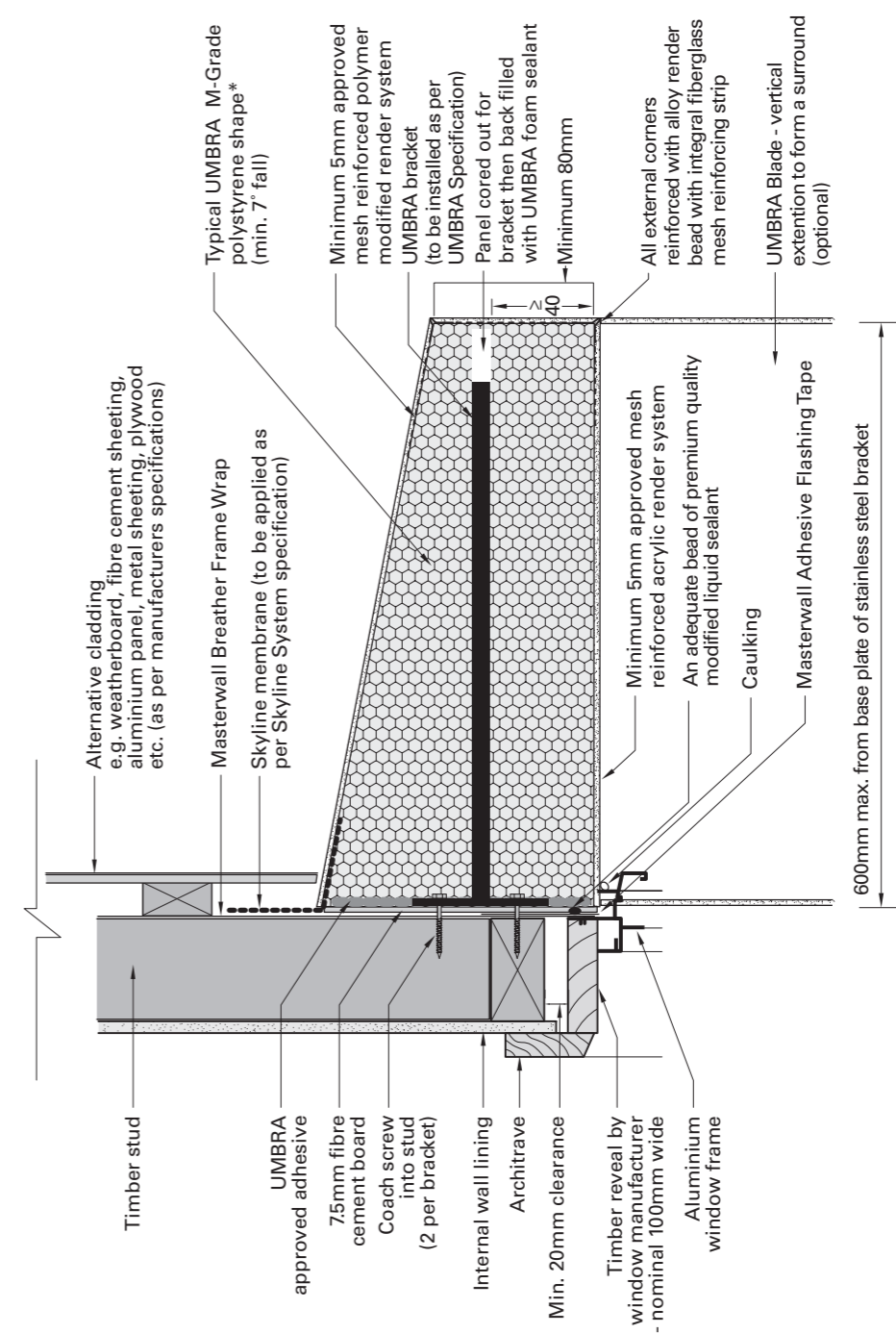
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\* NOTE:  
UMBRA can be engineered to any custom shape or size (max. 600mm depth)

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

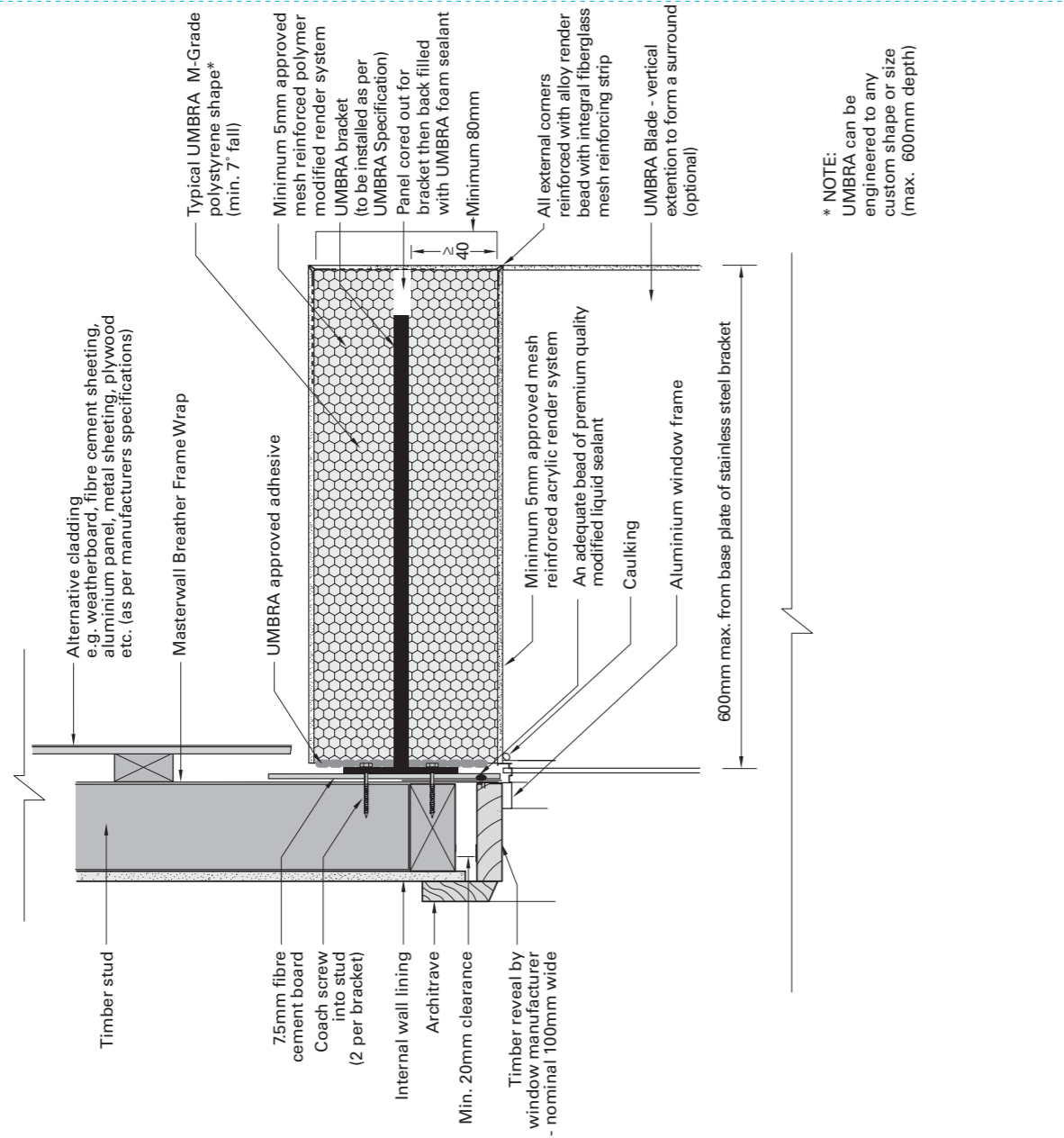
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### UMBRA / ALTERNATIVE CLADDING / ALUMINIUM WINDOW: ALTERNATIVE CLADDING - HEAD DETAIL

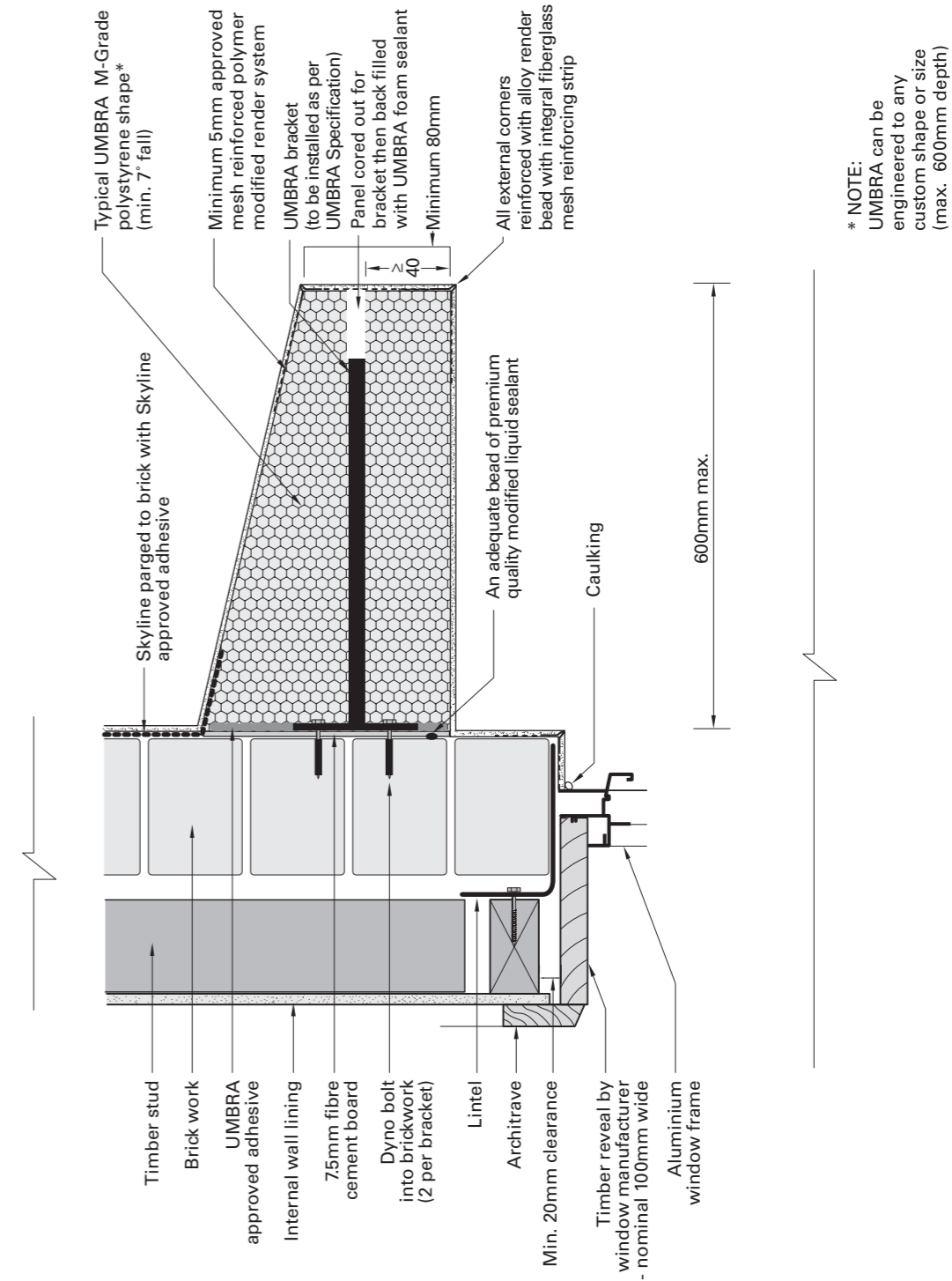
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\* NOTE:  
UMBRA can be engineered to any custom shape or size (max. 600mm depth)

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

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.



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

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

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.



# 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 (R<sub>t</sub>) System Thermal Value so that the correct insulation thicknesses can be determined for any given project.

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MASTERWALL

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

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SKYLINE



H<sub>2</sub>O DRAINAGE WRAP

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UMBRA



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