



PROBOARD.

Advanced Cladding Systems Pty Ltd



Member No. 1332198



Firebloc 60/60/60 FRL System Details

Installation Manual For Firebloc 10mm

Index

Building Code of Australia - NCC 2022 (Amdt.2) - Volume 1 & 2 - Class 1 to 10	Page 01
Why use ProBoard Panels	Page 02
Firebloc 10mm 60 /60 /60 FRL System Details	Page 04
ProBoard Panel Sizes	Page 04
Framing Requirements	Page 04
Storage and Handling	Page 05
Safety Instructions	Page 05
Accessories	Page 05
Vertical 10 mm Firebloc 60/60/60 Installation Instructions	Page 07
Horizontal 10 mm Firebloc 60/60/60 Installation Instructions	Page 09
Steel Frame Installation	Page 11
Zero Allotment	Page 13
Zero Allotment Technical Details	Page 16
FRL Technical Drawings	Page 23

Building Code Of Australia

ProBoard panels and ProBoard External Wall Systems have been rigorously tested and deemed to satisfy provisions and performance requirements of the National Construction Code (NCC 2022 Amdt.2) Volume 1 & Volume 2 – Class 1 to 10, BCA, for use in class Class 1 to 10 buildings:

AS/ 1530.4:2014 – Fire-resistance tests for elements of construction. (10 mm ProBoard Panels)

ProBoard's Firebloc External Wall System been tested in a full-scale fire test (as per AS/NZS 1530.4:2005) and satisfied the Fire Performance Requirement by achieving a Fire Resistance Level (FRL) of 60/60/60 (Structural Adequacy for 60 minutes, Integrity for 60 minutes and Insulation for 60 minutes).

AS/NZS 1530.4:2014 – Fire-resistance tests for elements of construction. (14 mm ProBoard Panels)

ProBoard's Firestop External Wall System has been tested in a full-scale fire test (as per AS 1530.4:2005) and satisfied the Fire Performance Requirement by achieving a Fire Resistance Level (FRL) of 90/90/90 (Structural Adequacy for 90 minutes, Integrity for 90 minutes and Insulation for 90 minutes).

AS/ 1530.1 – Non-combustibility.

ProBoard panels have been tested for non-combustibility by an NATA approved testing laboratory and are deemed non-combustible.

AS/NZS 1530.3 – Determination of Early Fire Hazard Properties.

In accordance with AS 1530.3 – Methods for fire tests on building materials components and structures – Part 3: simultaneous determination of Ignitability 0, flame propagation 0, heat 0 and smoke release 0-1.

AS/NZS 4284:2008 – Testing of building facades.

ProBoard External Boundary Wall Systems have been tested by a NATA accredited testing laboratory in accordance with verification method NCC 2022 (+A2) F3V1 & H2V1, and NCC 2025 F1V1 & H2V1 and achieved the weatherproofing performance requirement NCC 2022 (+A2) F3P1 & H2P1, and NCC 2025 F1P1 & H2P1 for up to N3 wind classification.

AS/NZS 4055 – Wind load for housing.

ProBoards External Boundary Wall Systems have been tested by a NATA accredited testing laboratory in accordance with AS/ NZS 1170.2 Structural Design Actions Part 2) and achieved the Classification N1, N2 and N3 for screws installed @ 300 centres or 50mm x 2.5mm stainless steel coil ring nails @ 150 centres. NCC Volume 1 Specification C2D9 and achieved the requirements as an external wall of light weight construction.

Surface Indentation Test.

ProBoard External Boundary Wall Systems has been tested by a NATA approved testing laboratory in accordance with NCC Volume 1. specification C2D9, clause 5 (c) Reported to the requirements of clause (6e)

Sandbag Impact Test ASTM E695.

ProBoard panels have been tested by a NATA approved testing laboratory to the requirements of NCC Volume 1 specification C2D9, clause 5 (c) Reported to the requirements of clauses 6 (b) and (d)

Thermal Transmission 3.12.1.4.

10 mm ProBoard nominally achieves R0.02 m2 K/W, 14 mm nominally achieves R0.03 m2 K/W

Why Use ProBoard Panels

Advanced Cladding Systems was established to provide the Australian residential and commercial building sectors with a cladding that is cost effective and is fully compliant with Australian Standards. With the building industry becoming increasingly compliance focused, we are committed to providing one of the safest and compliant cladding panels in the Australian construction industry. We have called this panel ProBoard.

Highly versatile, our panels can be used in lieu of traditional cement sheeting or plaster. Our signature ProBoard panel is constructed from magnesium, which is a mineral that, when used as part of a cement mixture, can be cast into cement panels. Our panels are further strengthened by sheets of glass fibre mesh.

Your choice of cladding should be based on a careful assessment and prioritisation of each of the claddings following roles.

Cladding's primary objective is to shield the building from the weather and protect the building from fire. It is also a key element in the aesthetic appeal of the home which directly influences both the building costs and property values.

House cladding also has a significant effect on the environmental performance of your home and the initial impacts of the cladding, such as embodied energy, resource depletion and recyclability. These elements must be balanced against maintenance and durability. Other roles should include acoustic performance, thermal insulation and the capacity to deter pests / termites.

ProBoard's panels address all the before mentioned issues.



ProBoard panels are water resistant and have been tested to Australian Standard 4284:2008 Weatherproofing – PASSED.



Non-combustible – Tested to Australian Standard 1530.1 Non-combustibility – PASSED.



Tested to Australian Standard 1530.4. ProBoard's 10 mm panels in our Firebloc System achieved an Fire Resistance Level (FRL) of 60/60/60. ProBoard's 14mm panels in our firestop system achieved a fire rating level (FRL) of 90/90/90.



Building costs – Only standard carpentry tools are required to install ProBoard panels and that, combined with quick installation systems, ensures that our panels are a price competitive cladding solution.



Property values – Can be finished with most external, aesthetically pleasing finishing system that enhances the property's value.



Maintenance – Low maintenance due to the panels rot resistance and longevity.

Why Use ProBoard Panels cont.

- 

Durability – High Impact.
- 

Mould/mildew – ProBoard panels do not support the growth of mildew or mold
- 

Acoustic qualities – Excellent acoustic qualities – ProBoard's Fireless Party Wall System achieves an acoustic rating up to 54 Ctr. ProBoard's 10mm FireBloc has been tested to achieve Rw+Ctr 52
- 

Thermal qualities – ProBoard panels have excellent thermal qualities.
- 

Termite and pest resistant.
- 

Environmentally friendly – Many environmental benefits come with ProBoard panels, one being the mining of the main element, magnesium. Magnesium is found on the earth's surface and requires no chemicals or energy sapping processes when mined.
- 

The curing process of ProBoard panels captures carbon dioxide and is conducted at room temperature which makes the curing of our ProBoard panels an extremely green process. Our panels contain no asbestos or harmful chemicals. Off cuts can be reground and recycled because ProBoard panels are considered "nutritional waste", meaning they can be placed back into the soil as a nutrient.

Firebloc 60 /60 /60 FRL System Details

Our Firebloc External Wall System is a low cost, easy to install system that gives you an FRL of 60/60/60 using ProBoards 10 mm recessed or square edge panels. This system has been designed for use on external walls. The Firebloc Wall System has been tested by way of a full-scale fire test conducted by NATA approved Warringtonfire.

1.

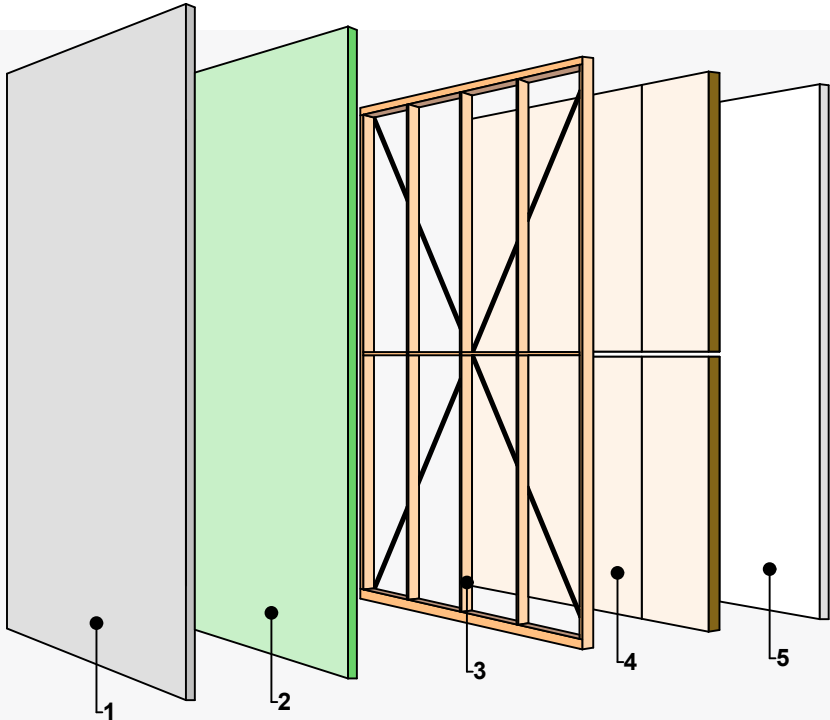
ProBoard 10mm square edged or recessed edge panel.
60/60/60
2.

Vapour permeable wall wrap must be installed in accordance with AS/NZS 4200.2:2017
3.

Timber frame to AS1684.2 or AS1720.1/ Residential and Low-Rise steel framing, Part 1 & 2: Design Criteria as per AS/NZS4600
4.

Glass wool R2.5 batts minimum 20kg per m3.
5.

10mm plaster board.



ProBoard Panel Sizes

Board Name	Thickness	Width	Length	Weight	Edge Finish
ProBoard Panels	10mm	1200mm	2400 mm	31kg	Square Edge
	10mm	1200mm	2700 mm	35kg	Square edge
	10mm	1200mm	3000 mm	38kg	Square Edge

FRAMING REQUIREMENTS

TIMBER FRAME

Timber framing to be designed and constructed in accordance with AS 1684.2 or AS 1720.1 to BCA requirements. Framing is to be used with minimum timber dimensions of 90 mm x 45 mm at 600 mm, or 90 mm x 35 mm at 450 mm maximum stud spacing.

Timber frame is to assume no axial strength contribution from wall linings. Some timber wall systems will have their axial load capabilities reduced due to the loss of section as the timber chars.

STEEL FRAME

The steel framing must be constructed and designed in accordance with AS/NZS 4600 or NASH standard – Residential and Low-Rise Steel Framing Part 1 or Part 2 The building designer must ensure that load bearing walls have been designed:

To resist all applied loads and assume no axial strength contribution form wall linings. Some wall systems will have capacities reduced. For steel, this is due to the steel weakning at temperature.

STORAGE AND HANDLING

When manually moving ProBoard panels carry horizontally. Care should be taken when handling the panels as not to damage the edges and surfaces. Persons moving the panels should have the appropriate Occupational Health & Safety training. All materials must be kept dry, preferably stored inside the building. If being stored outside, ProBoard panels are to be off the ground and protected from the weather. Store on a flat surface or on levelled supports ensuring the support covers the full width of the panel and spaced at the centre point with no more than a 600 mm gap between supports.

SAFETY INSTRUCTIONS

The following safety precautions are recommended when cutting Proboard. Minimise the effects of dust by:

- a) Providing adequate ventilation.
- b) Use mechanical cutting tools fitted with dust extractor and storage bag.
- c) Wear eye protection.
- d) Wear an approved P2 mask.

In addition to the above, observe all Occupational Health and Safety regulations and Safe Work Method Statements.

ACCESSORIES

Screws and fire rated sealants are all available from Advanced Cladding Systems. If not using accessories supplied by Advanced Cladding Systems, the below mentioned accessories must be of an equivalent quality or better.

MECHANICAL FIXING:

Fixing	Purpose
8Gx40mm SS Class 304 or 8Gx40mm GALV	Studs & Perimeter
2.5x50mm SS Coil Ring Nails	Studs & Perimeter
Aluminium Brackets	Available from ACS
Steel L Brackets	Available from ACS
16 x 50mm Stainless steel or Galv RapidClip Staples	Studs & Perimeter

FIRE RATED SEALANTS

Sealants must have a 4-hour fire rating when tested in accordance with AS1530.4 supplemented by AS4072.1 as well as BS476: part 20. Bostik FIREBAN polyurethane 600 ml sausage is our recommended fire rated sealant for this system (Available from Advanced Cladding Systems).

PRIMER/SEALER:

ProBoard panels when put in a Zero-allotment application (uncoated) and are not visible or entirely exposed to the environment, do not require a primer/sealer, because it is in a dry state. However, in an instance where ProBoard panels are exposed to the outdoor elements for longer than 6 months or right away if exposed after 6 months, they are then required to be primer sealed (as per coating manufacturers guidelines) on all edges and face. All Coatings must be installed in accordance with the recommendations of the coating manufacturer. The decision as to what coatings are best for a given project belongs to the builder or other end user(s) (including but not limited to whether to use a shared flashing to enclose the wall or to coat the panel). It is recommended that ProBoard panels are rendered on the rough face and painted on the smooth face (please seek coating manufacturer render and painting specifications).

When installed in a Zero allotment application ProBoards prime/sealer markers are to be placed on the board or in the meter box. If primer/sealer markers are placed onto the board it must be visible on the wall for end user(s).

Important Construction Notes

Notes must be read before installation commences.

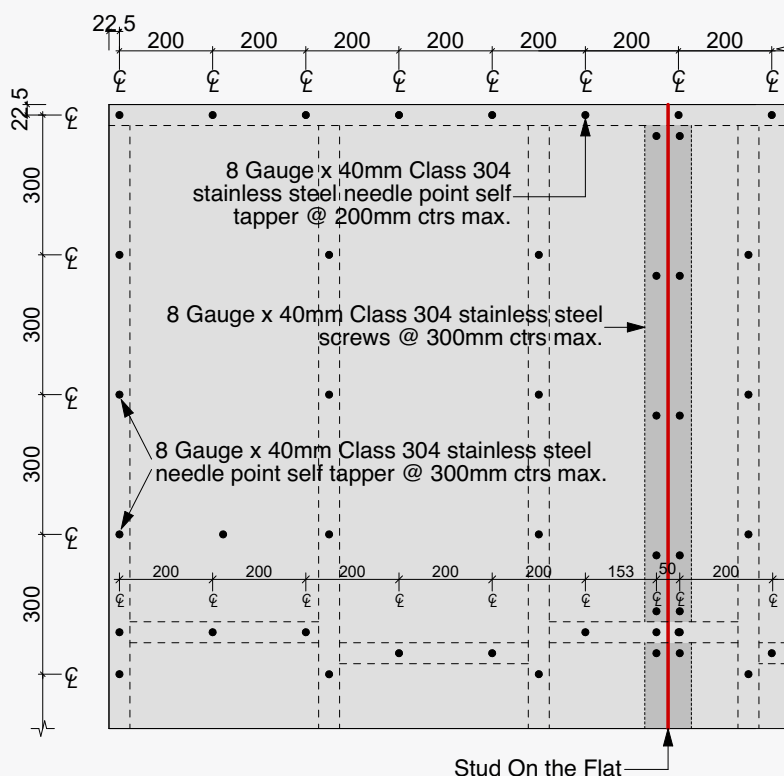
- ✓ Plan the job before commencing. Check the frame to ensure it is straight and plumb. Eaves, windows, doors and flashings should be installed before commencing.
- ✓ When planning out the installation of the ProBoard panels be sure to allow for any overhang at the commencement of the wall and the end of the wall.
- ✓ Always finish the bottom of the ProBoard panel as per ABCB Housing provisions requirement part 7.5.7 Clearance between Cladding and Ground.
- ✓ Expansion joints must be installed at a maximum of every 5 metres or as per working drawings and must be installed on individual studs. Primarily installed when Proboard panels are finished painted or rendered. Install expansion joints vertically above and below windows and doors. On double storey or higher buildings install expansion joints horizontally between floors. For expansion joint details **(see Technical Drawings)**.
- ✓ All warranties will be voided if the system, important notes, or the installation instructions are deviated from in any way.
- ✓ Before any finishing system is commenced, all surfaces must be thoroughly clean and free of all contaminants, dirt and grease. Any surface imperfections and irregularities (screw holes, etc) should be patched with a stopping compound and sanded flush to the surrounding surface.
- ✓ If you are commencing the first ProBoard panel next to another cladding type, leave a 10 mm expansion joint between the ProBoard panel and the other cladding type. Fill all expansion joints with 4-hour fire rated sealant.

Firebloc – Vertical Installation

10 mm ProBoard Panel

FRL 60/60/60

Diagram 1



Installation of First Panel - See Diagram 1

Between all ProBoard panels vertical and horizontal joins run a bead of fire rated sealant.

Fix the first panel approximately 22mm from the corner and 12mm – 15mm from the top sheet perimeter.

Approved screws, 8-gauge x 40 mm Stainless steel Class 304 needle point self-tappers are to be fixed at a maximum of 300mm centres vertically and coil nails. Approved nails, 2.5mm x 50mm Stainless Steel Coil ringed nails are to be fixed at a maximum spacing of 150mm vertically and horizontally.

Approved 16 x 50mm Stainless steel or Galv RapidClip Staples 100mm C/C Studs & Perimeter

Back Blocking - See Diagram 1

If ProBoard panels do not meet vertically on a stud back blocking is required.

Fit back block:

- Tightly to underside of top plate to top of noggin
- Tightly to underside of noggin to the top of the bottom plate
- Screw fix at 300 centres or coil fix at 150 centres

Firebloc – Vertical Installation cont.

10 mm ProBoard Panel

FRL 60/60/60

ProBoard panels when put in a Zero-allotment application (uncoated) and are not visible or entirely exposed to the environment, do not require a primer/sealer, because it is in a dry state. However, in an instance where ProBoard panels are exposed to the outdoor elements for longer than 6 months or right away if exposed after 6 months, they are then required to be primer sealed (as per coating manufacturers guidelines) on all edges and face. All Coatings must be installed in accordance with the recommendations of the coating manufacturer. The decision as to what coatings are best for a given project belongs to the builder or other end user(s) (including but not limited to whether to use a shared flashing to enclose the wall or to coat the panel). It is recommended that ProBoard panels are rendered on the rough face and painted on the smooth face (please seek coating manufacturer render and painting specifications).

Paint

A good quality external paint system should be applied as per manufacturer's instructions ensuring a good quality primer/sealer is first applied. ACS recommends Haymes Paints systems..

Stick On Finishes

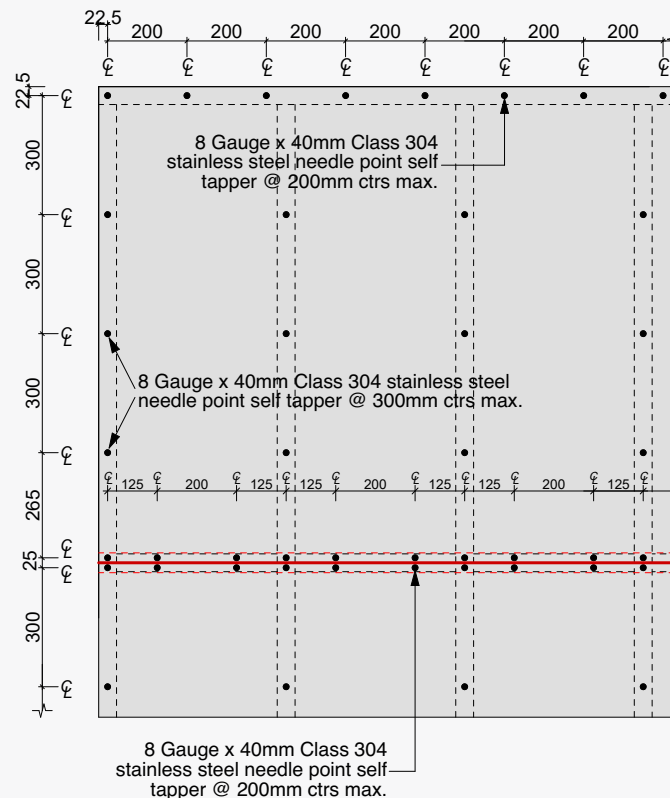
A good quality flexible tile adhesive should be used as per manufactures instructions. Extra screw fixings may be required because of the weight of the tiles. Check with Advanced Cladding Systems before commencing tile fixing.

Solid Render

Advanced Cladding Systems recommends Haymes systems or a good quality render system.

FRL 60/60/60

Diagram 1



Approved 16 x 50mm Stainless steel or Galv RapidClip Staples 100mm C/C Studs & Perimeter

Firebloc – Horizontal Installation cont.

10 mm ProBoard Panel

FRL 60/60/60

Diagram 1

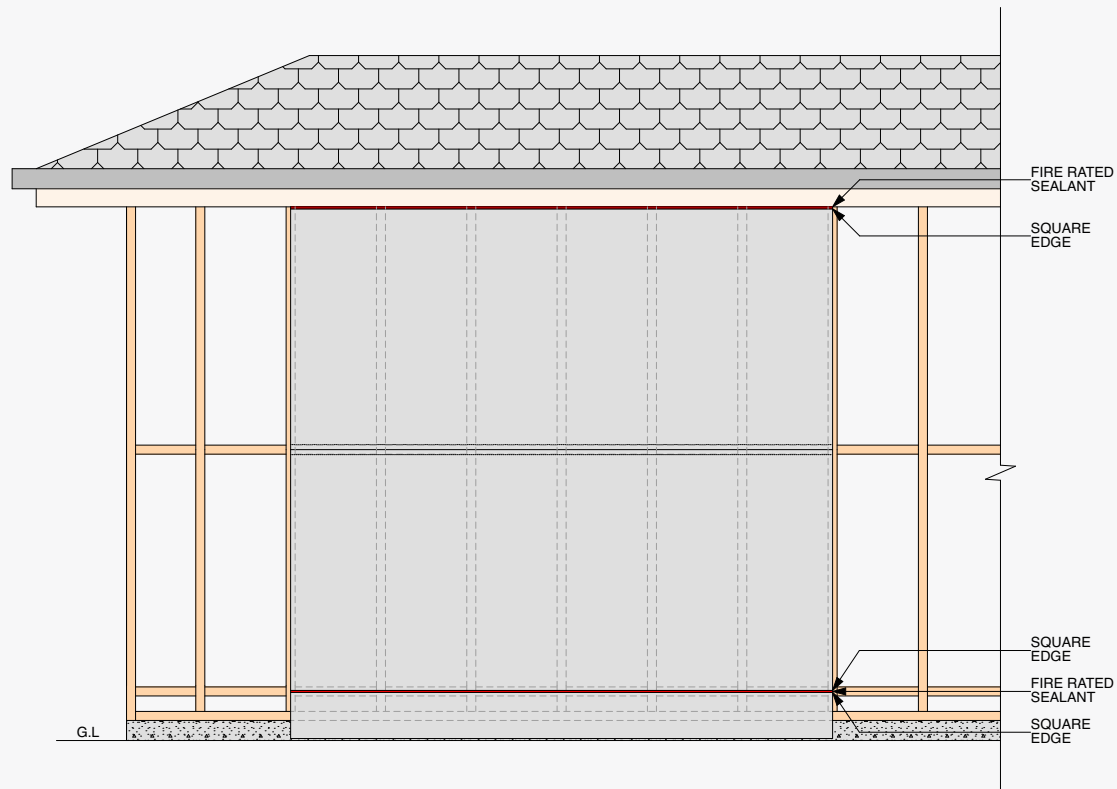


Diagram 1

All fixing on the base panel is to be 200 centres maximum.

Between all ProBoard panels vertical and horizontal joins run a bead of fire rated sealant.

Fix the first panel approximately 22mm from the corner and 12mm – 15mm from the top sheet perimeter.

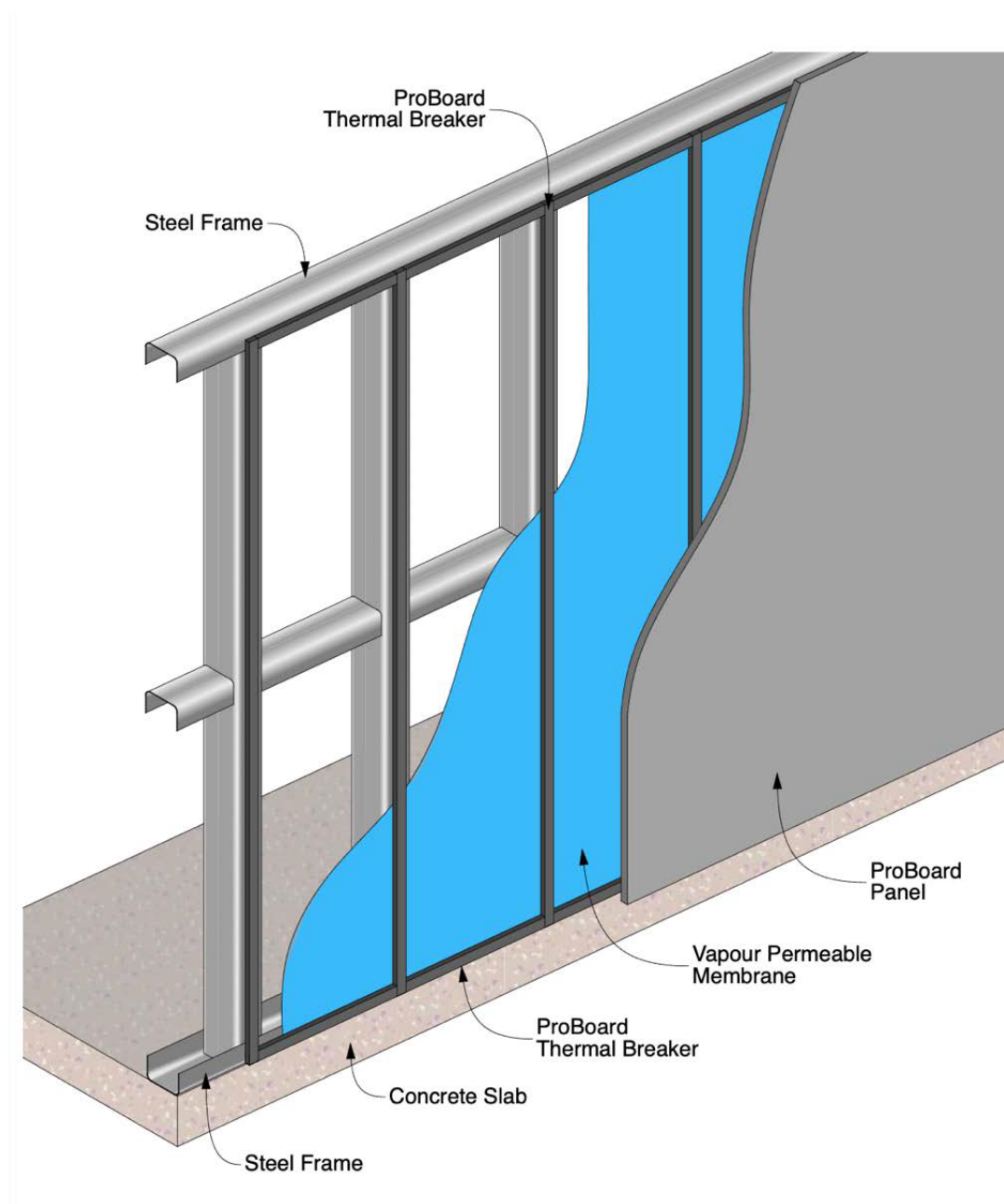
Approved screws, 8-gauge x 40 mm Stainless steel Class 304 needle point self-tappers are to be fixed at a maximum of 300mm centres vertically and coil nails. Approved nails, 2.5mm x 50mm Stainless Steel Coil ringed nails

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Steel Frame installation

ProBoard panels can be installed on steel frames to meet FRL requirements. AS per the National Construction Code (NCC) Volumes 1 & 2, a Thermal breaker of R0.2m2 K/W must be installed between the external cladding and metal frame, due to the higher thermal conductance of metal framed walls.

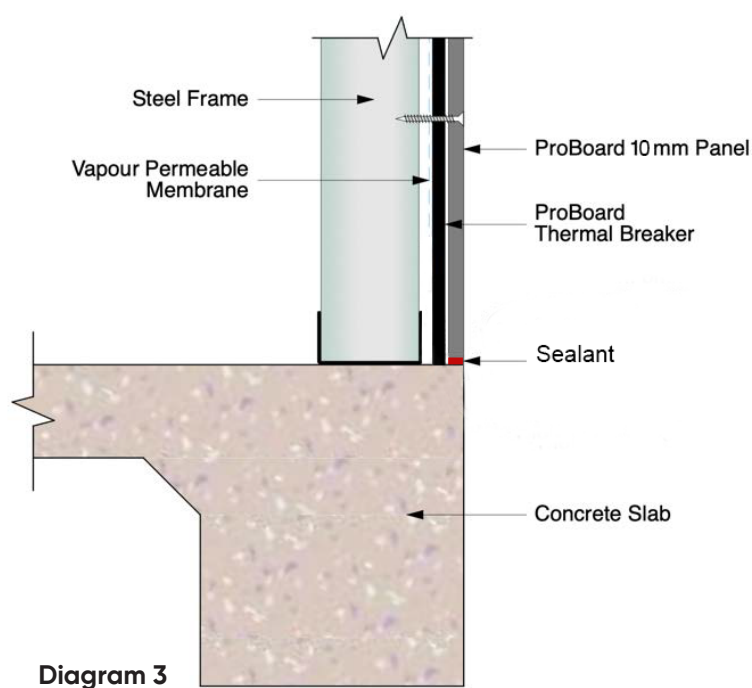
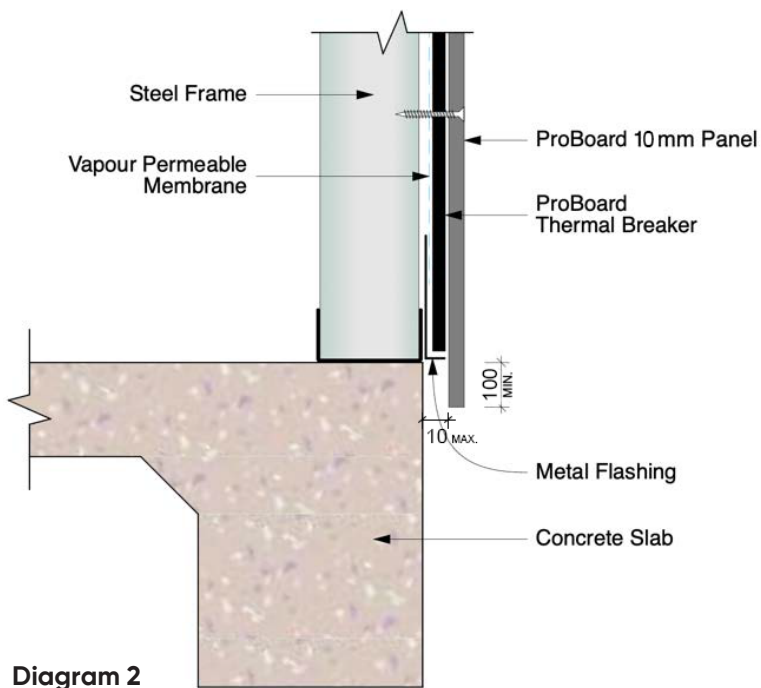
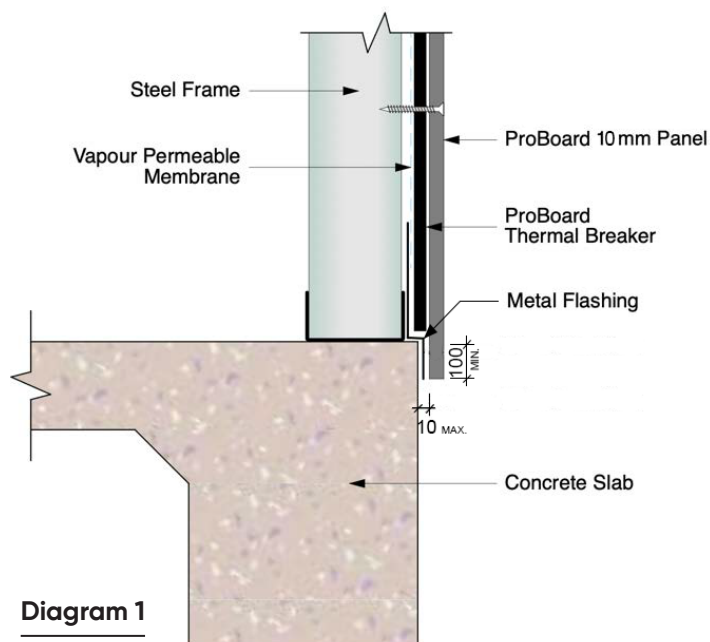
Install ProBoard Thermal Breaker strip continuously across the wall top plate. If there is cladding above the top plate (second storey) the strip is to be installed discontinuously to allow moisture to drain down the wall. Where non-combustible construction is required in the external walls of class 2-9 buildings of type A and B, the installation of the thermal break is required to be installed in accordance with Clause C2D10 (4)(f)(ii) of the NCC Vol.1.



Steel Frame installation

Slab edge details:

The following slab edge details are provided to illustrate a recommended method for different base junctions.



Zero Allotment Floor Truss and Roof Truss Installation

Diagram 1

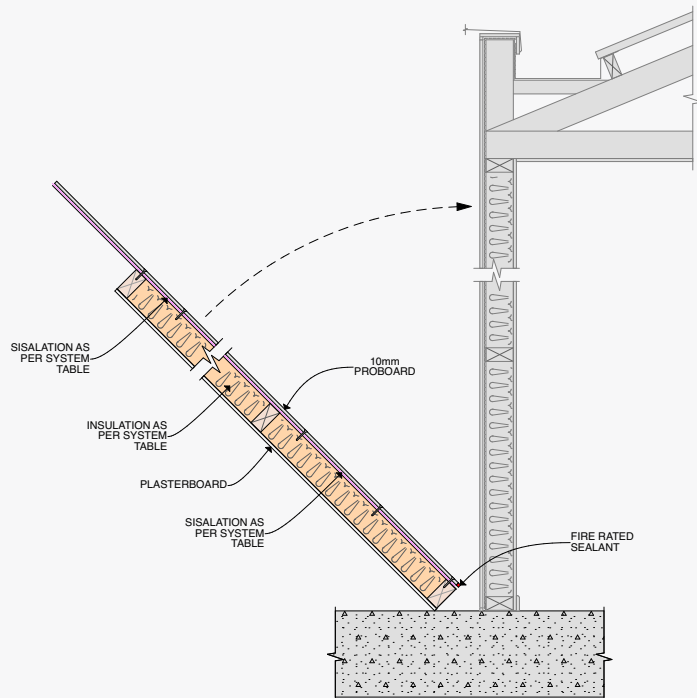
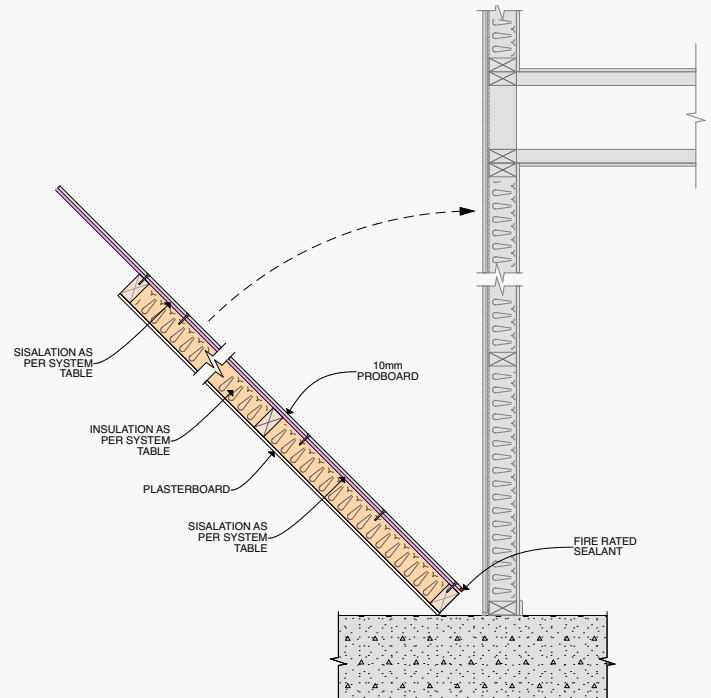


Diagram 2



Panel Installation – See Diagrams 1 and 2

When installing second wall leave enough of the ProBoard panel above the top plate to cover the height of the floor trusses or the roof trusses. If installing the wall in sections, ensure all lifting is as per Occupational Health and Safety requirements. After first section of wall is installed run a thick bead of fire-rated sealant down the side of the installed ProBoard panel. Brace the installed panel as required. Stand the next section of wall and butt up against the installed section and brace.

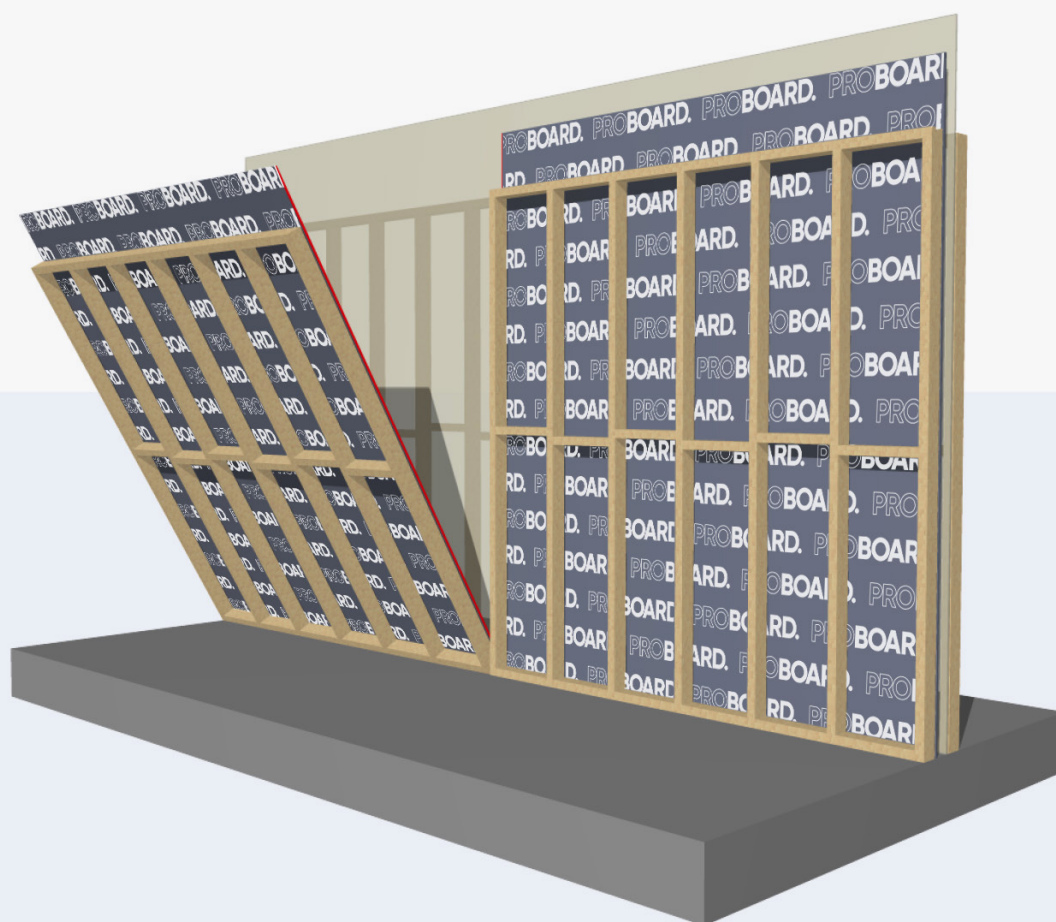
Acoustic Qualities

The above diagram has been illustrated to depict a typical Zero allotment installation. ProBoard recommends a 20mm cavity between zero lot boundary walls. ProBoard's 10mm FireBloc system achieves an RW 51 result as per the below wall buildup.

FireBloc 10 mm Wall System: RW 51

- One layer of 10 mm Plasterboard (5.7 kg/m²).
- 90 mm timber or steel studs at 450 mm centres.
- 90 mm, R2.5 wall batts in wall cavity.
- Vapour permeable wall wrap.
- One layer of 10 mm ProBoard panel (11 kg/m³).
- Minimum 20 mm air gap.
- Identical (mirrored) wall build-up on other side. No mechanical connections between wall systems (i.e. fully detached).

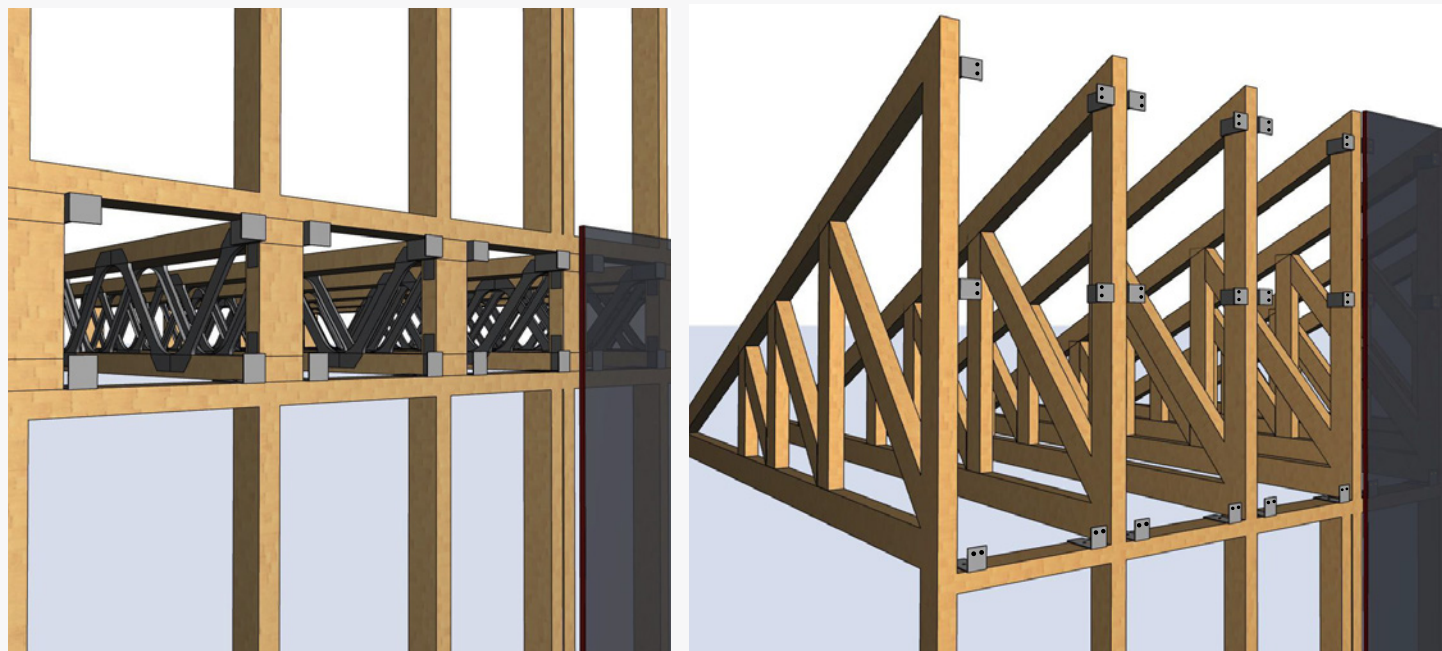
Zero Allotment Floor Truss and Roof Truss Installation



If the wall is a Firebloc Horizontal system (10 mm ProBoard panel) and the length of the wall is 2700 mm, the weight is approximately 140 kg.

Once the second section of wall is up and in place, fix the studs, bottom and top plates as per AS1684.4 Section 2.3, 2.4 and 2.5. Before fixing of frame to frame confirm these fixing methods with your engineer and/or building surveyor.

Diagram 3



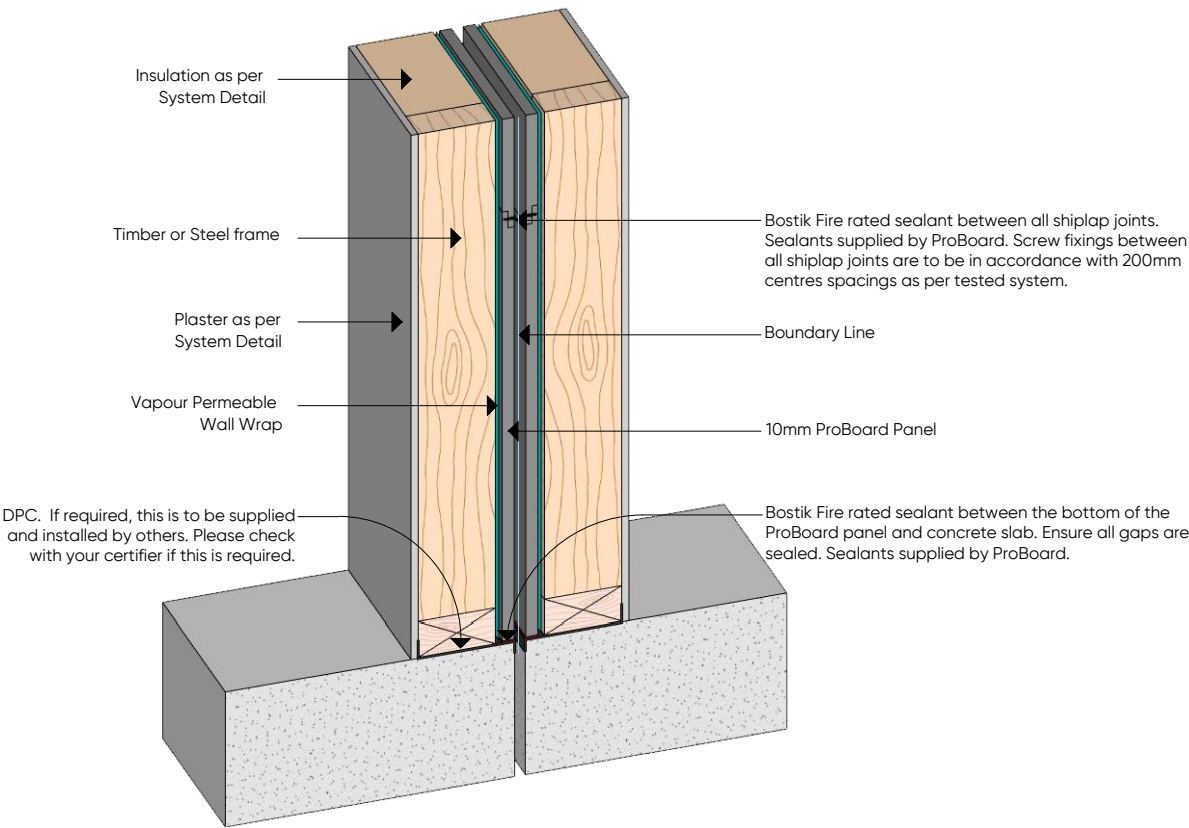
Bracket Layout and Fixing - See Diagram 3

Fix the first row of brackets to the top of the plate either side of the floor truss or roof truss at a maximum of 450 mm centres. Fix to the plates using Class 304 20 mm x 8-gauge stainless steel self-tapping screws.

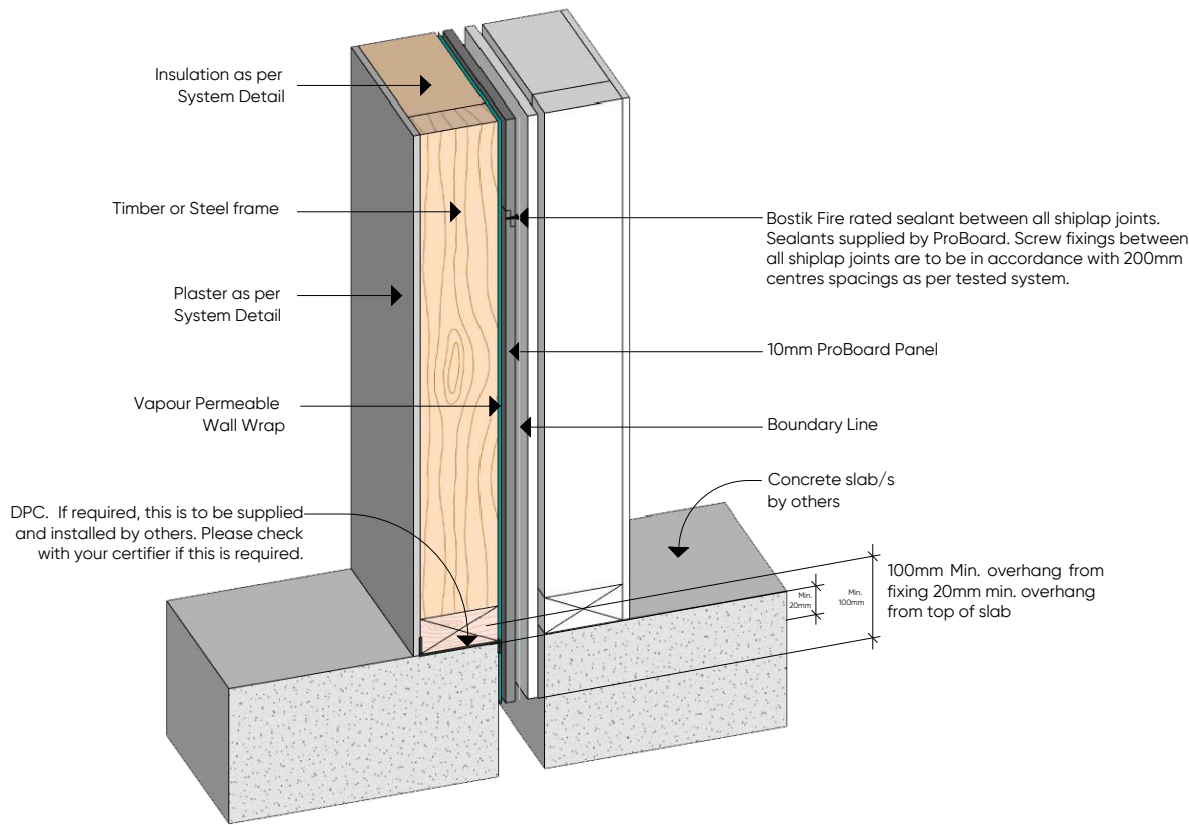
Fix the upper row of brackets to the sides of every floor truss or roof truss at a maximum vertical distance of 300 mm from the bottom bracket. Fix to plates using Class 304 20 mm x 8-gauge stainless steel self-tapping screws.

Fix all the brackets to the ProBoard panels using Class 304 20 mm x 8-gauge stainless steel self-tapping screws. Ensure there are two screws per bracket fixed to the ProBoard panel.

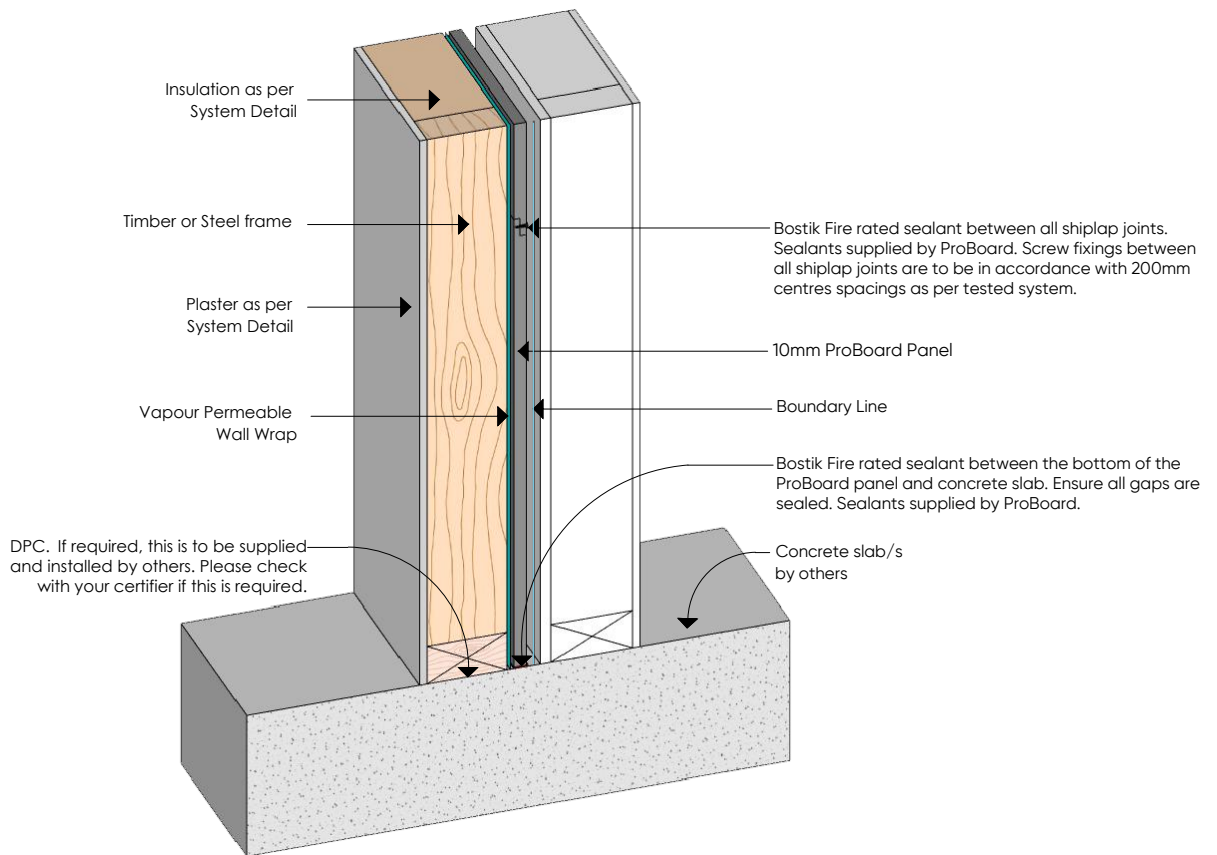
Zero Allotment Technical Details



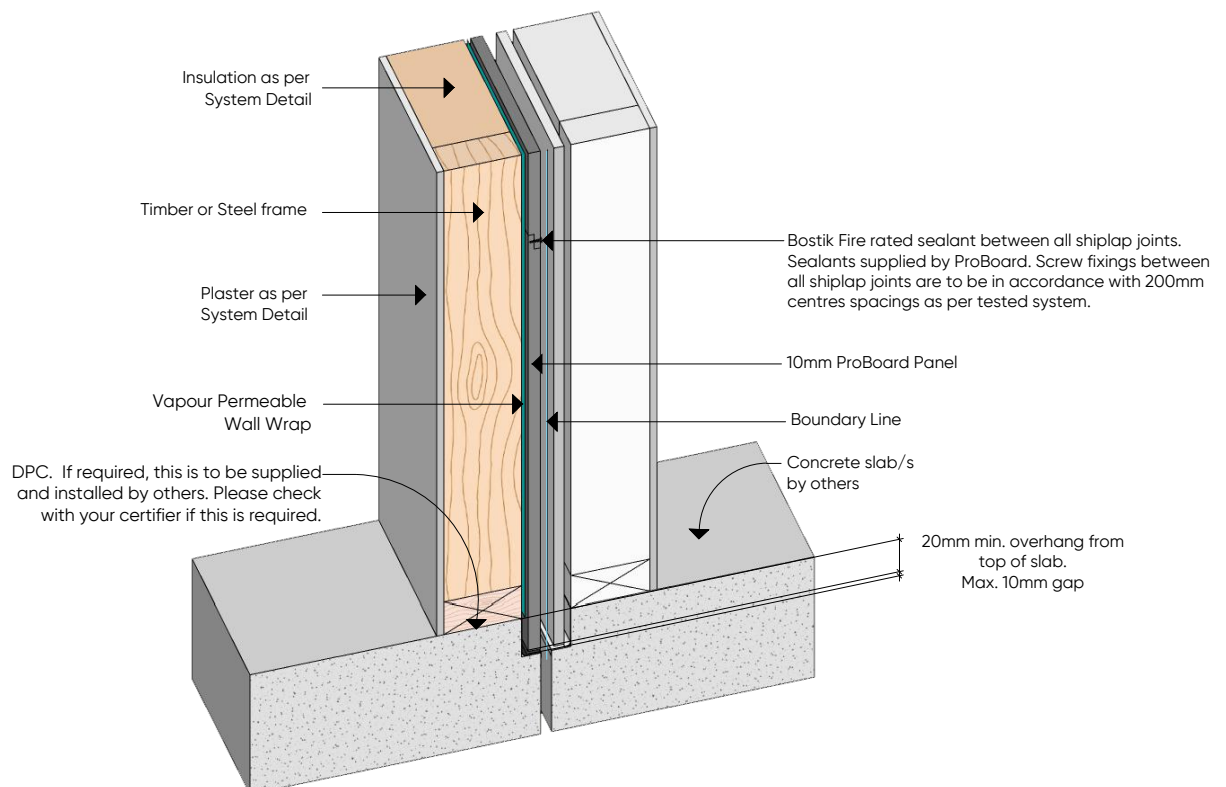
(D.01) PROBOARD BASE JUNCTION



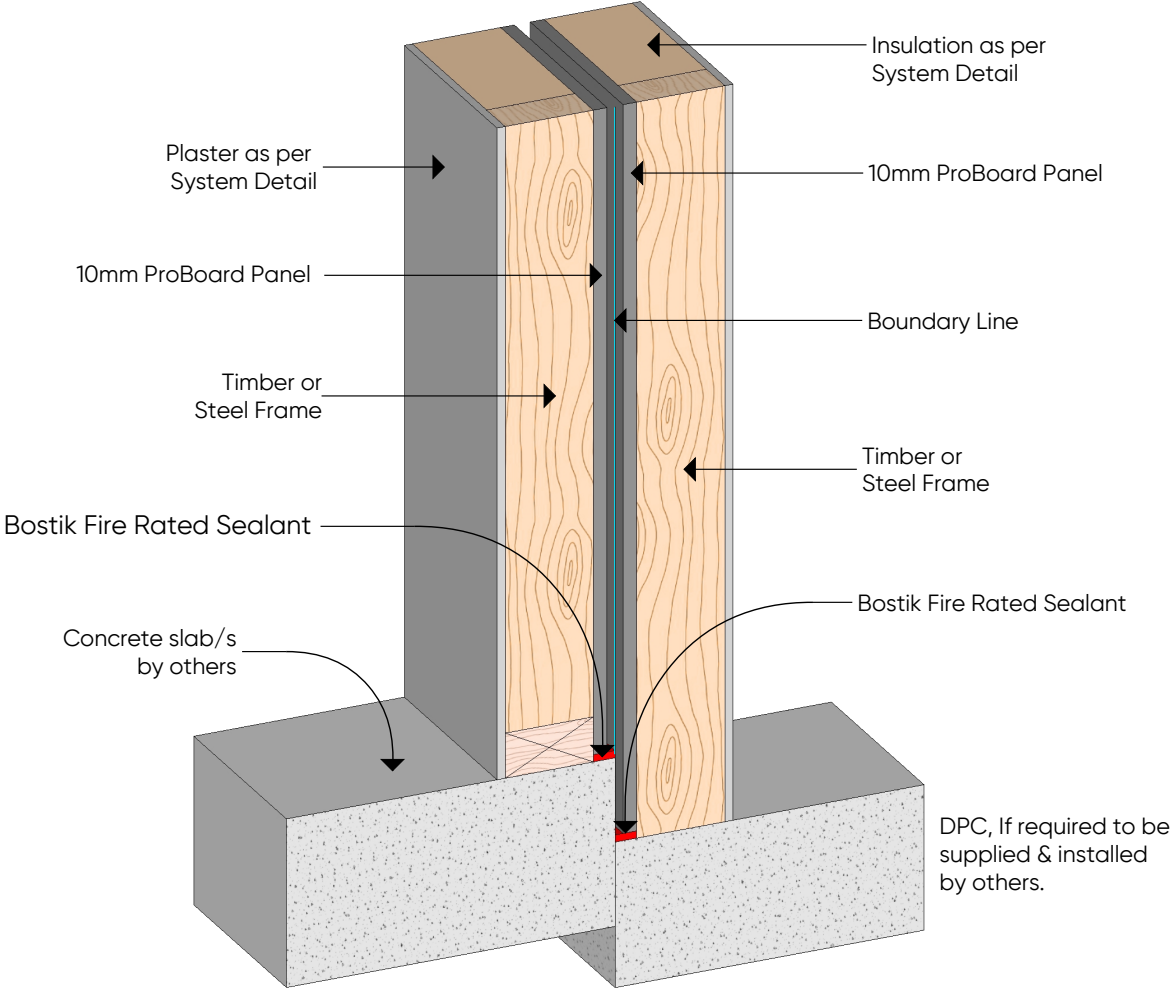
(D.02) PROBOARD BASE JUNCTION



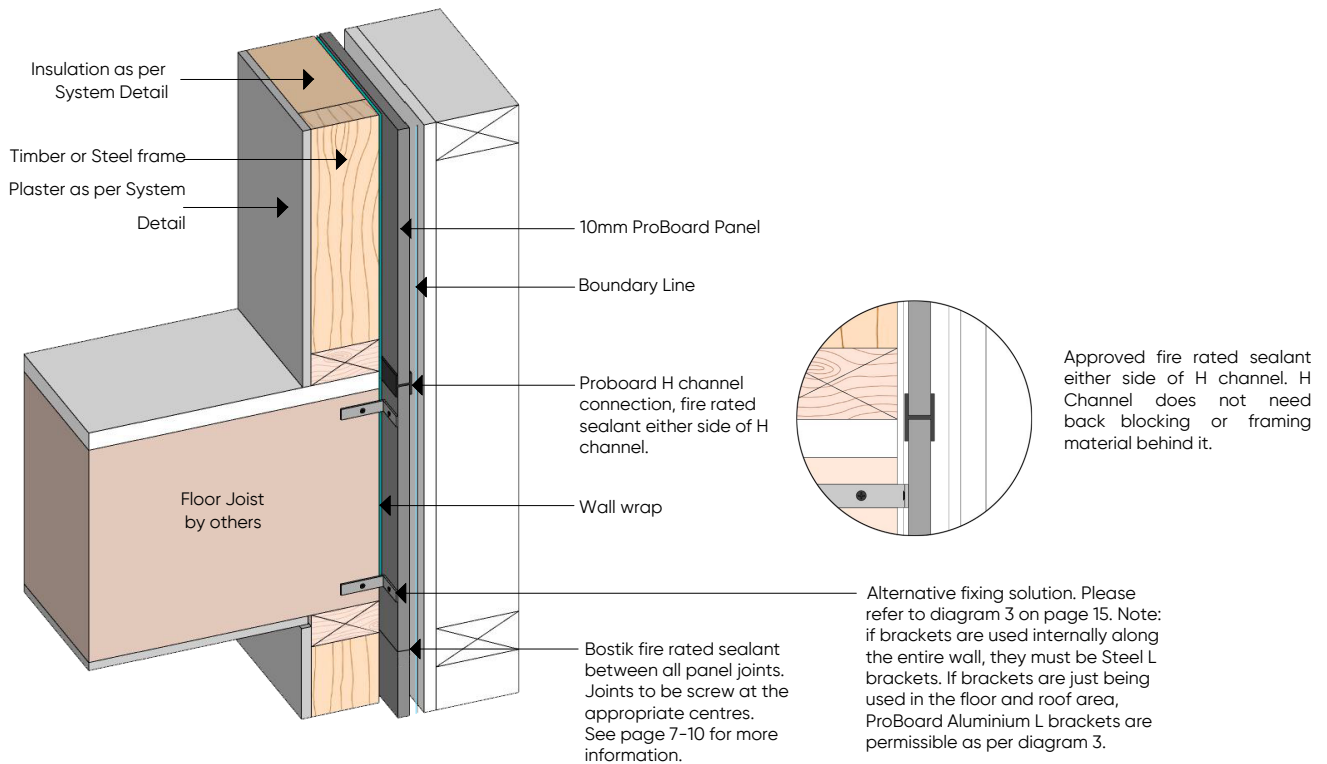
(D.03) PROBOARD BASE JUNCTION



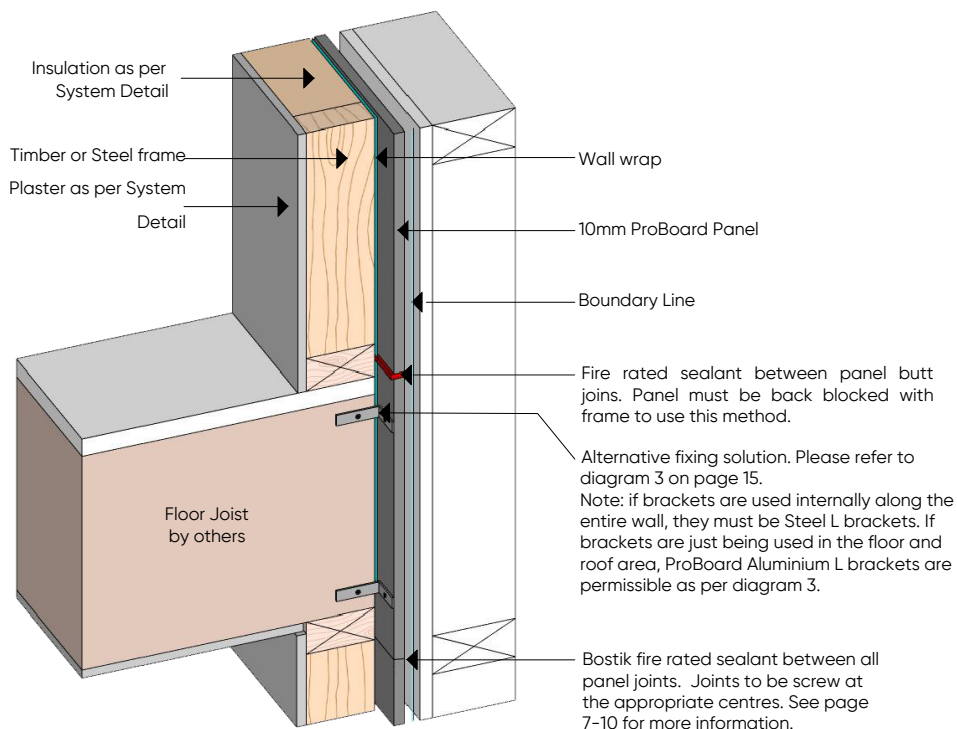
(D.04) PROBOARD BASE JUNCTION



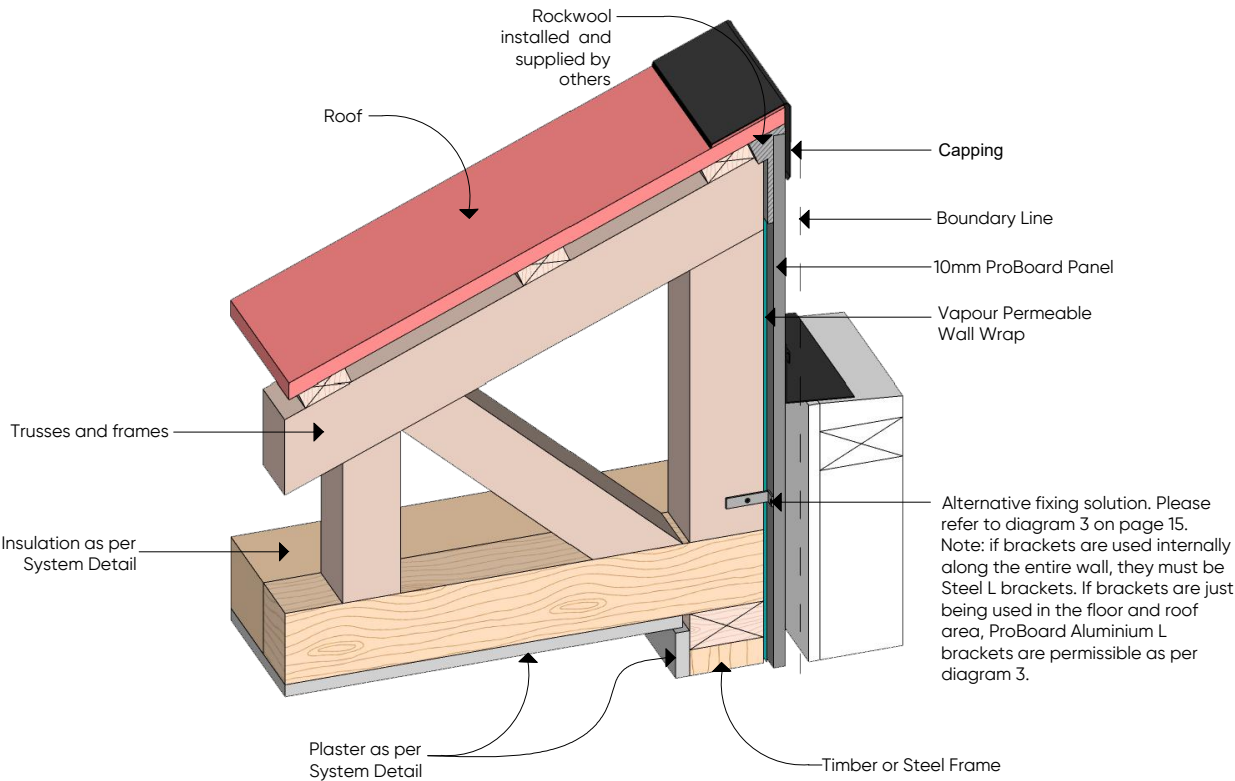
(D.05) PROBOARD BASE JUNCTION



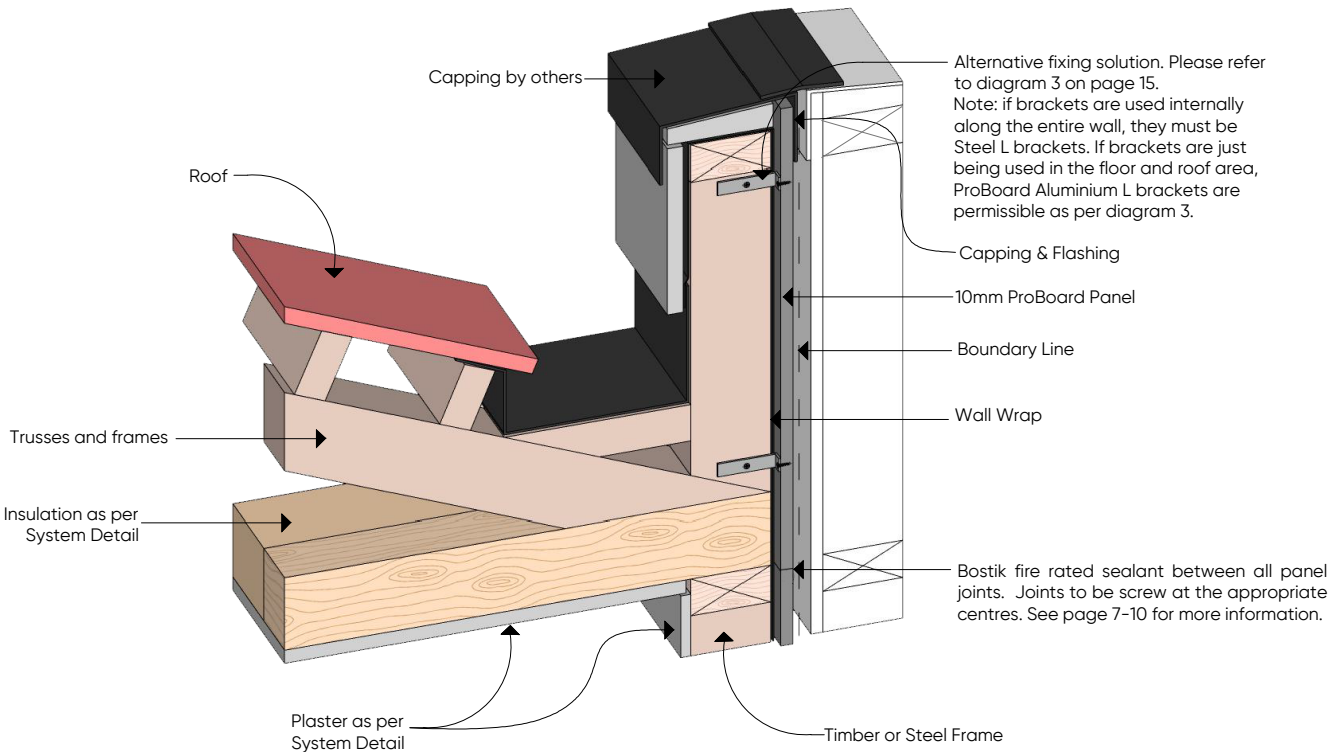
(D.06) PROBOARD FLOOR LEVEL DETAIL



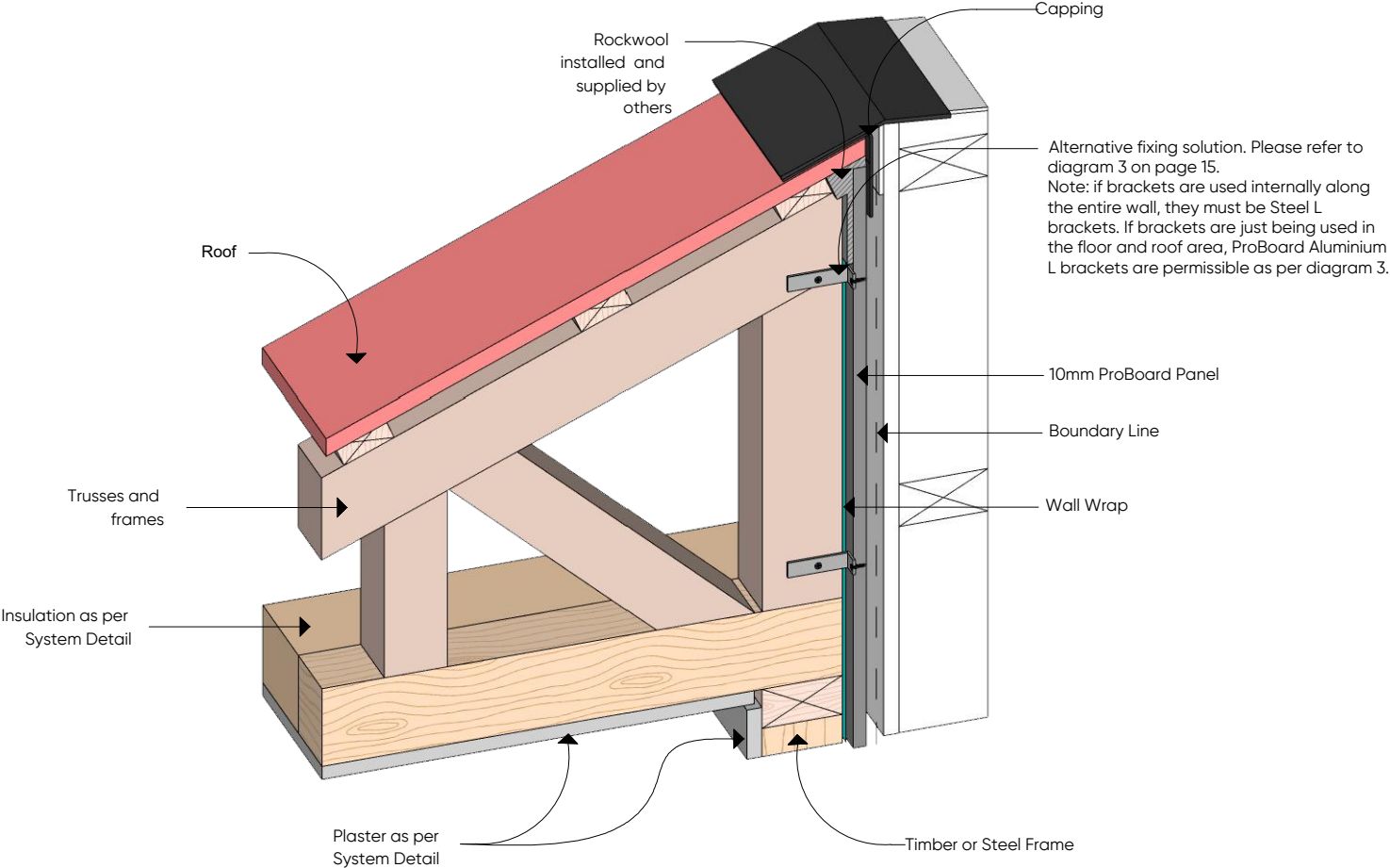
(D.07) PROBOARD FLOOR LEVEL DETAIL



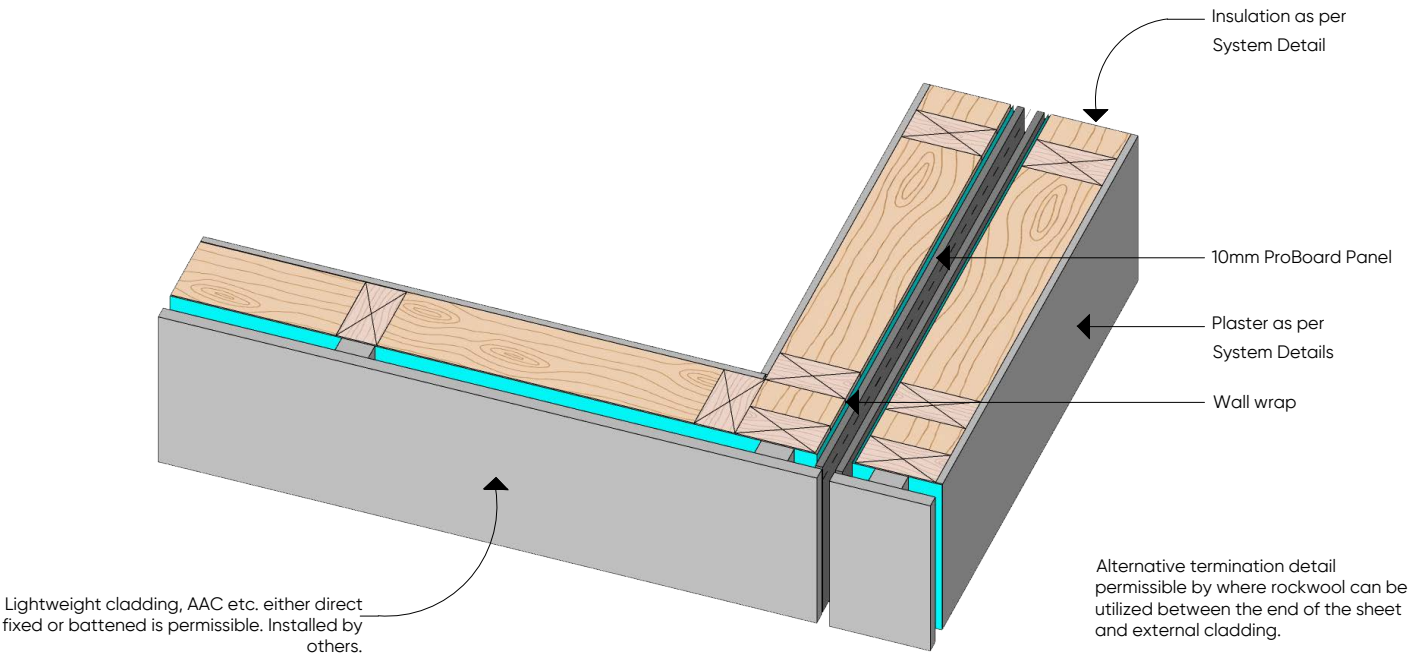
(D.08) PROBOARD ROOF DETAIL



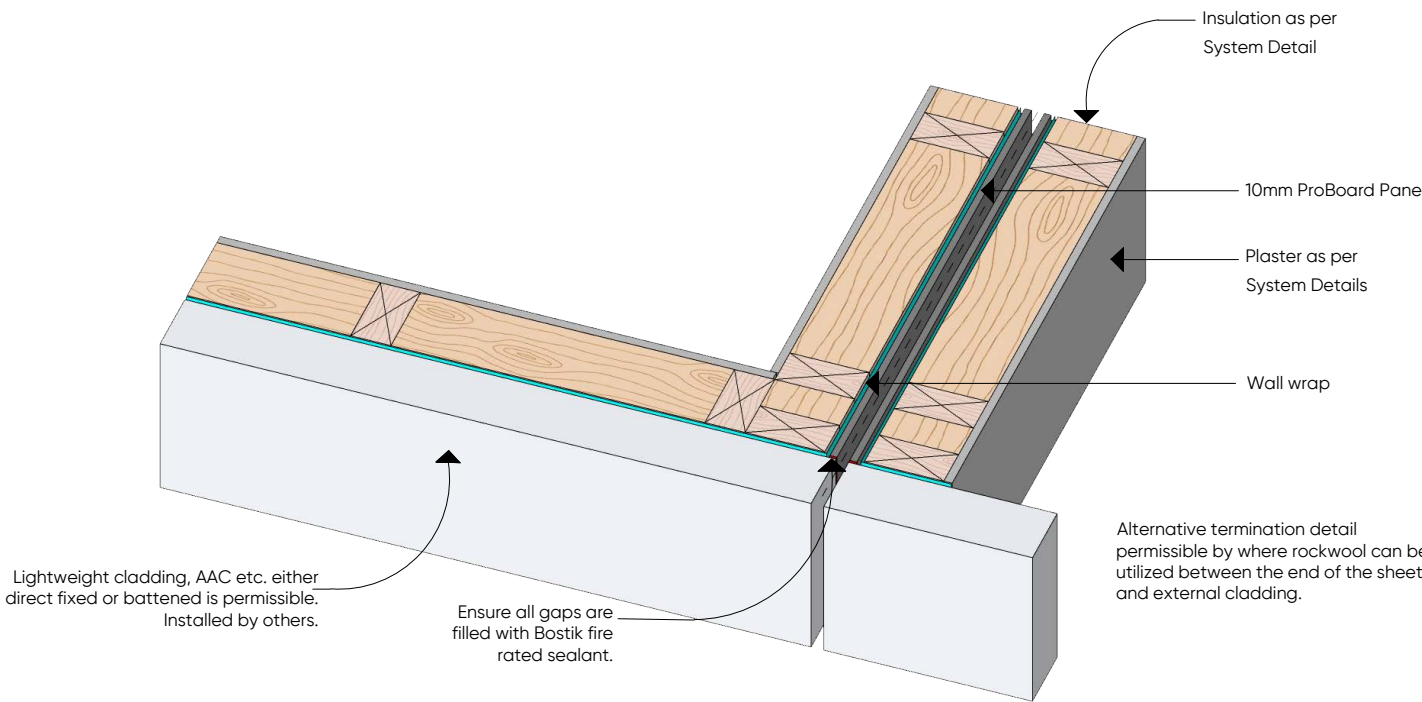
(D.09) PROBOARD ROOF DETAIL



(D.10) PROBOARD ROOF DETAIL

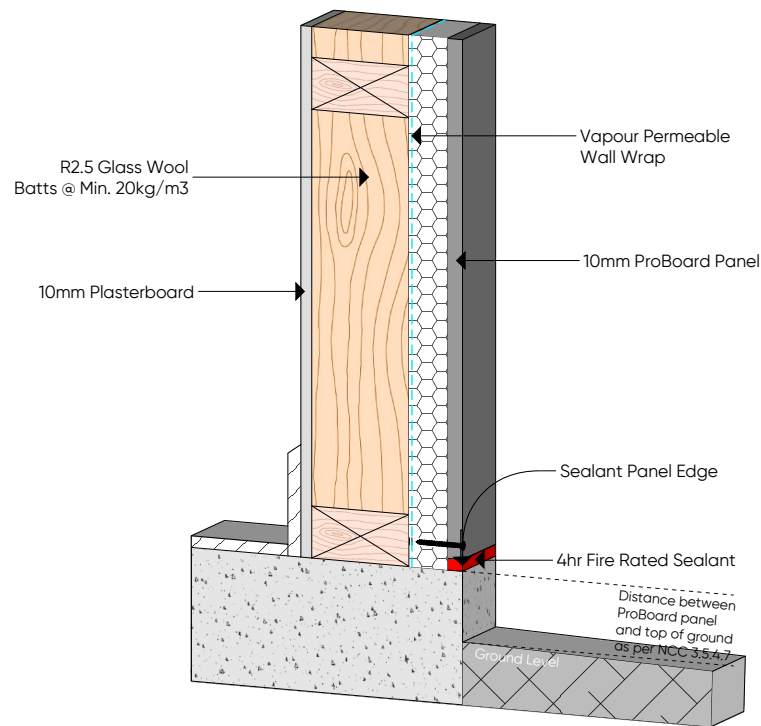


(D.11) PROBOARD JUNCTION DETAIL

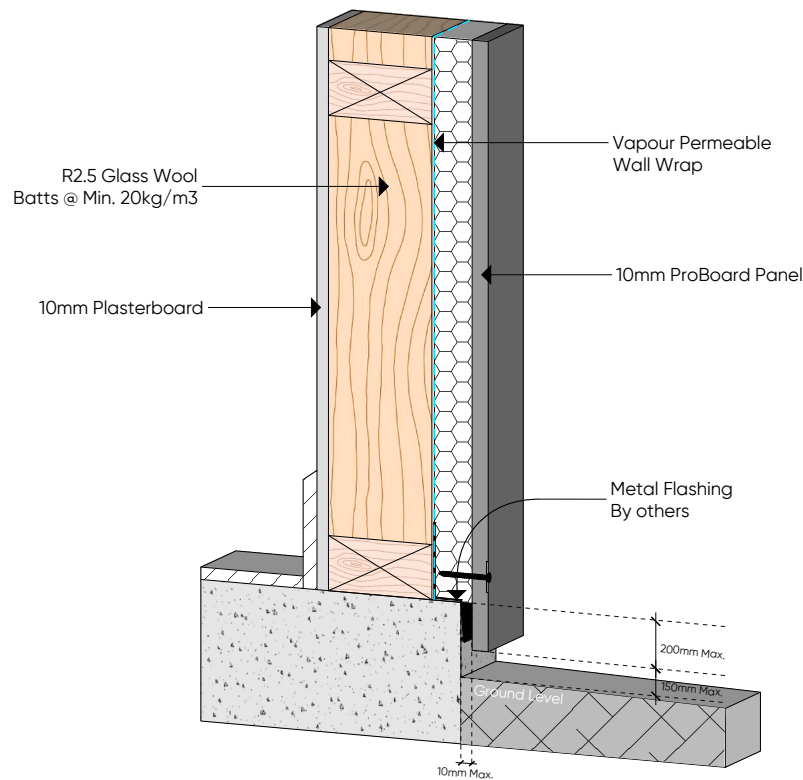


(D.12) PROBOARD JUNCTION DETAIL

Typical Batten Technical Drawings

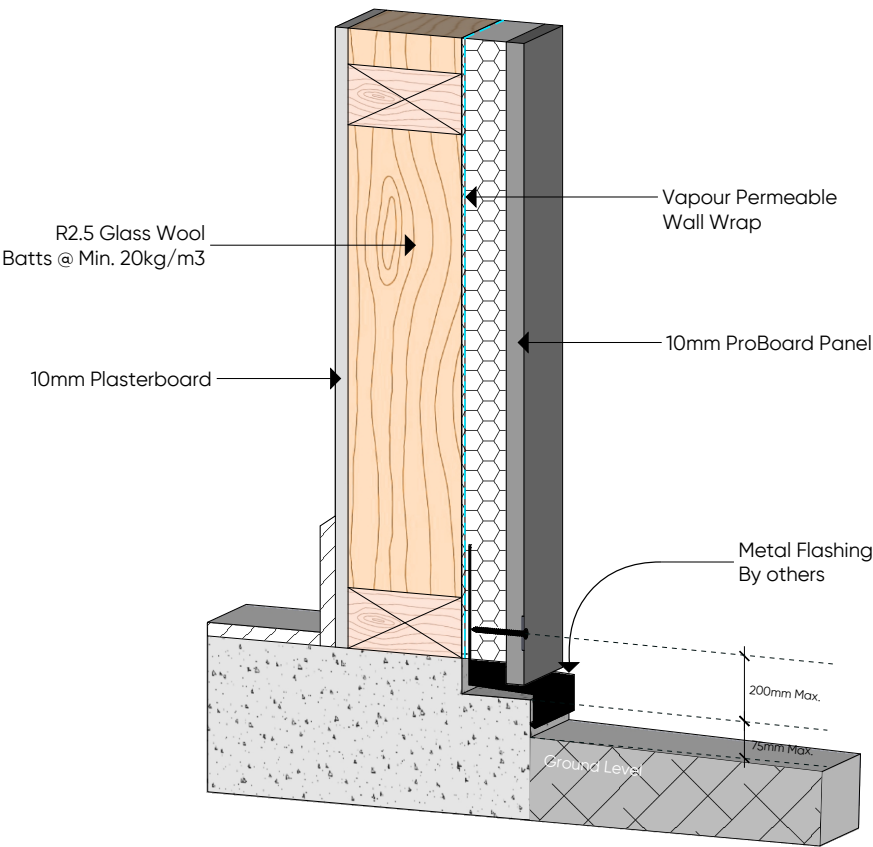


(D.13) PROBOARD PANEL ON SLAB

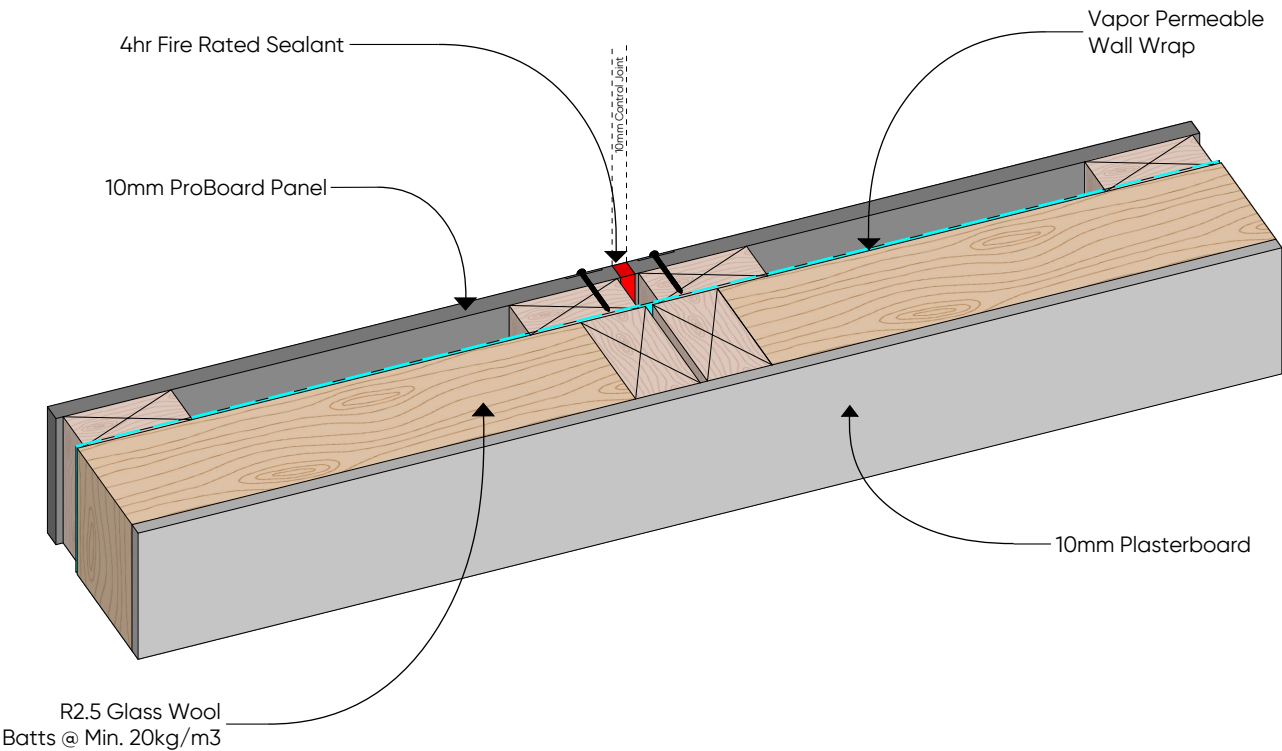


(D.14) PROBOARD SLAB OVER EDGE

Typical Batten Technical Drawings

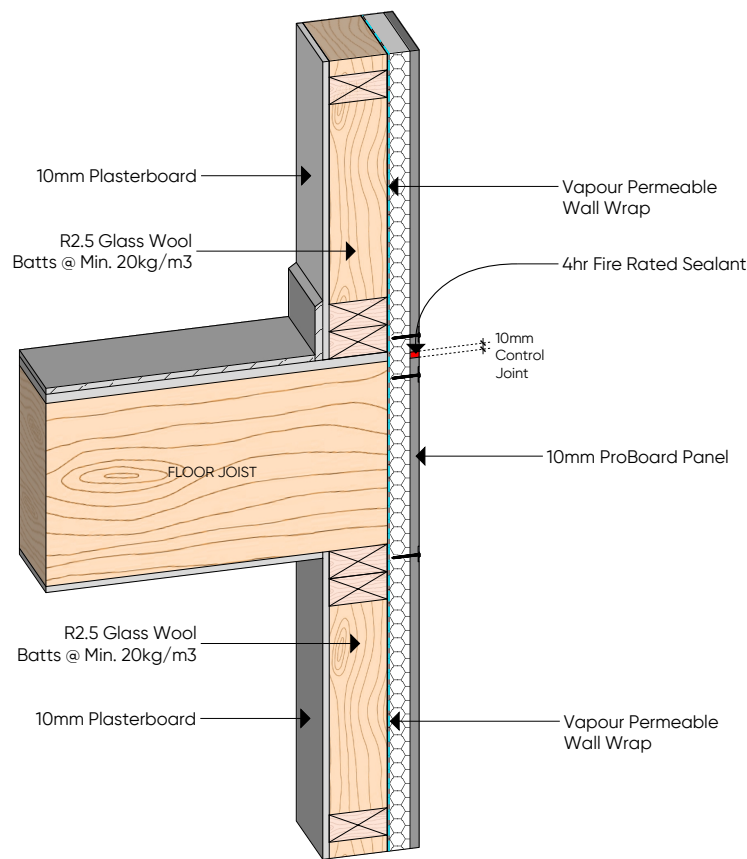


(D.15) PROBOARD SLAB REBATE

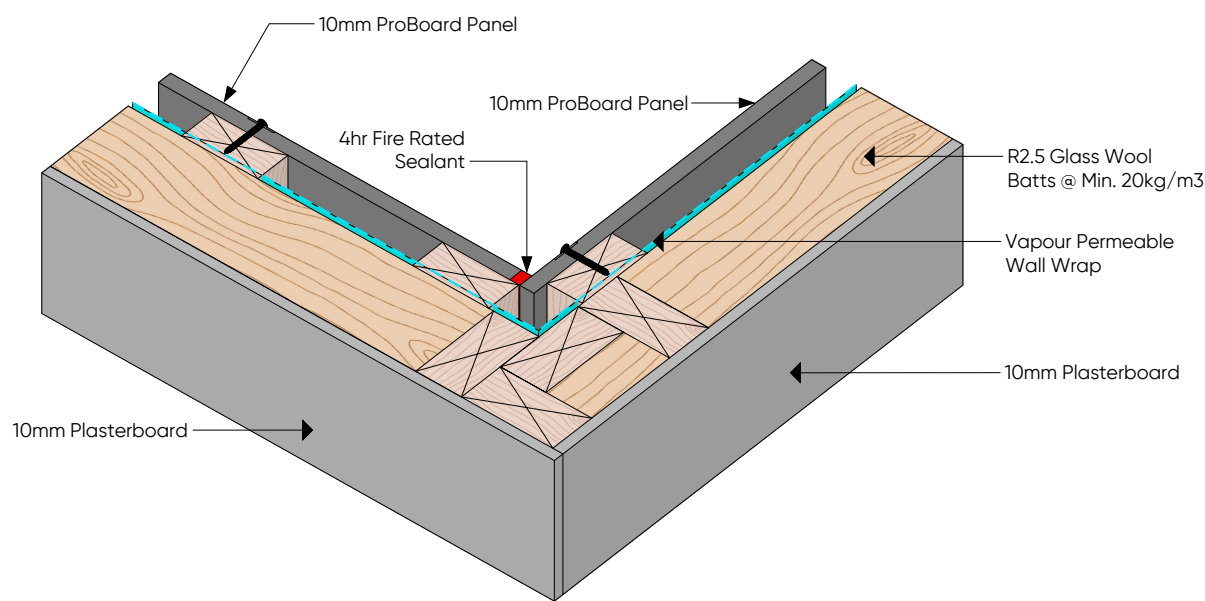


(D.16) PROBOARD VERTICAL CONTROL JOINT

Typical Batten Technical Drawings

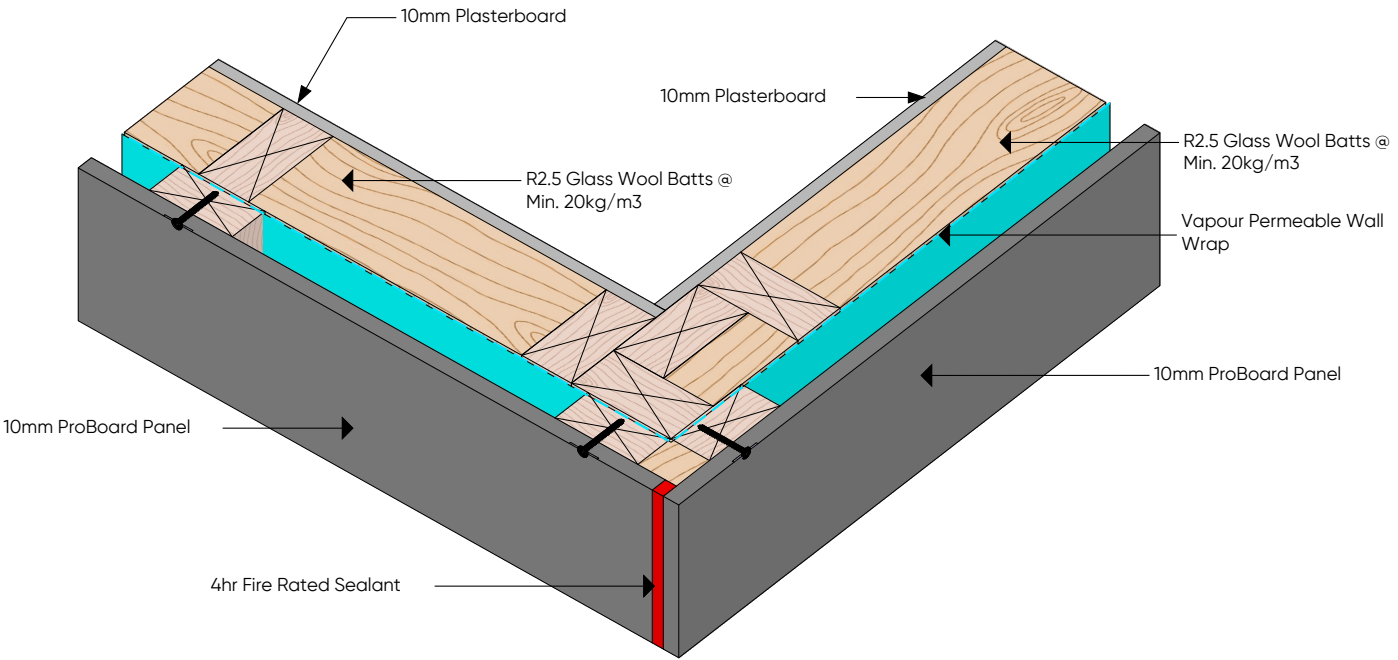


(D.17) PROBOARD HORIZONTAL CONTROL JOINT

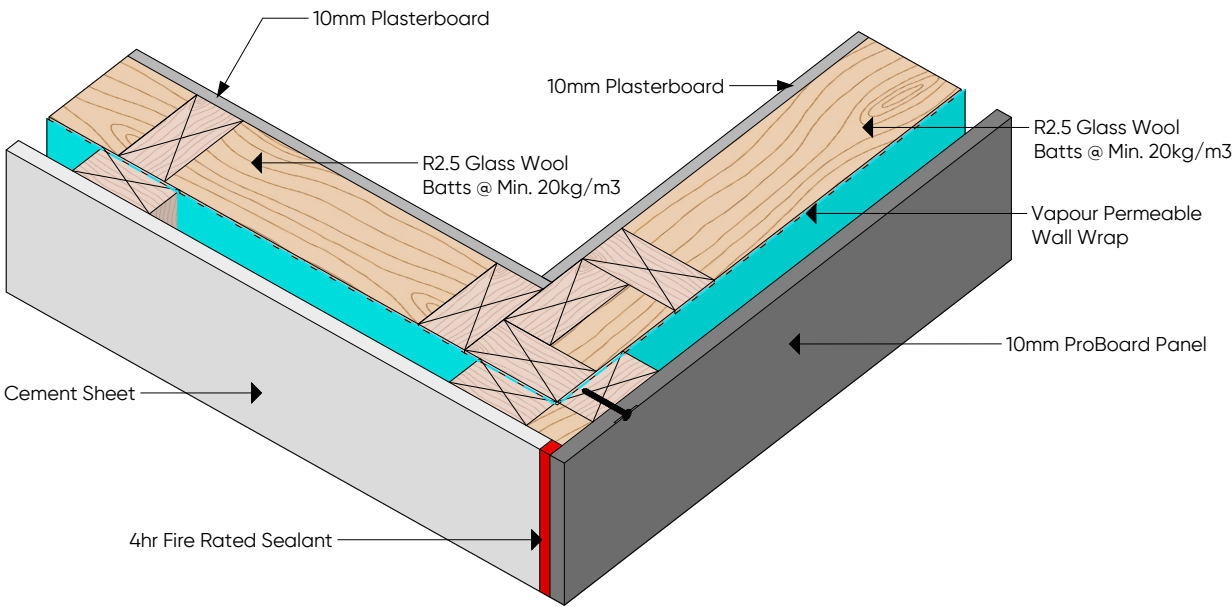


(D.18) PROBOARD INTERNAL CORNER

Typical Batten Technical Drawings

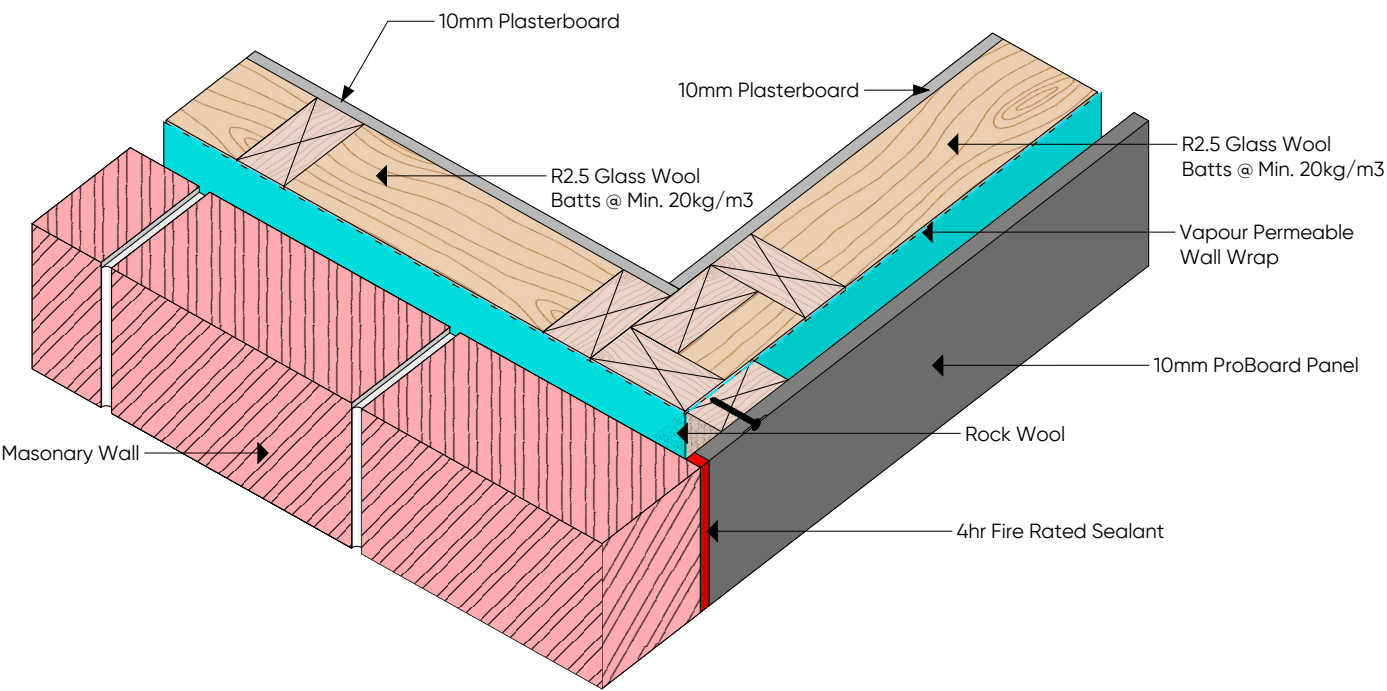


(D.19) PROBOARD EXTERNAL CORNER

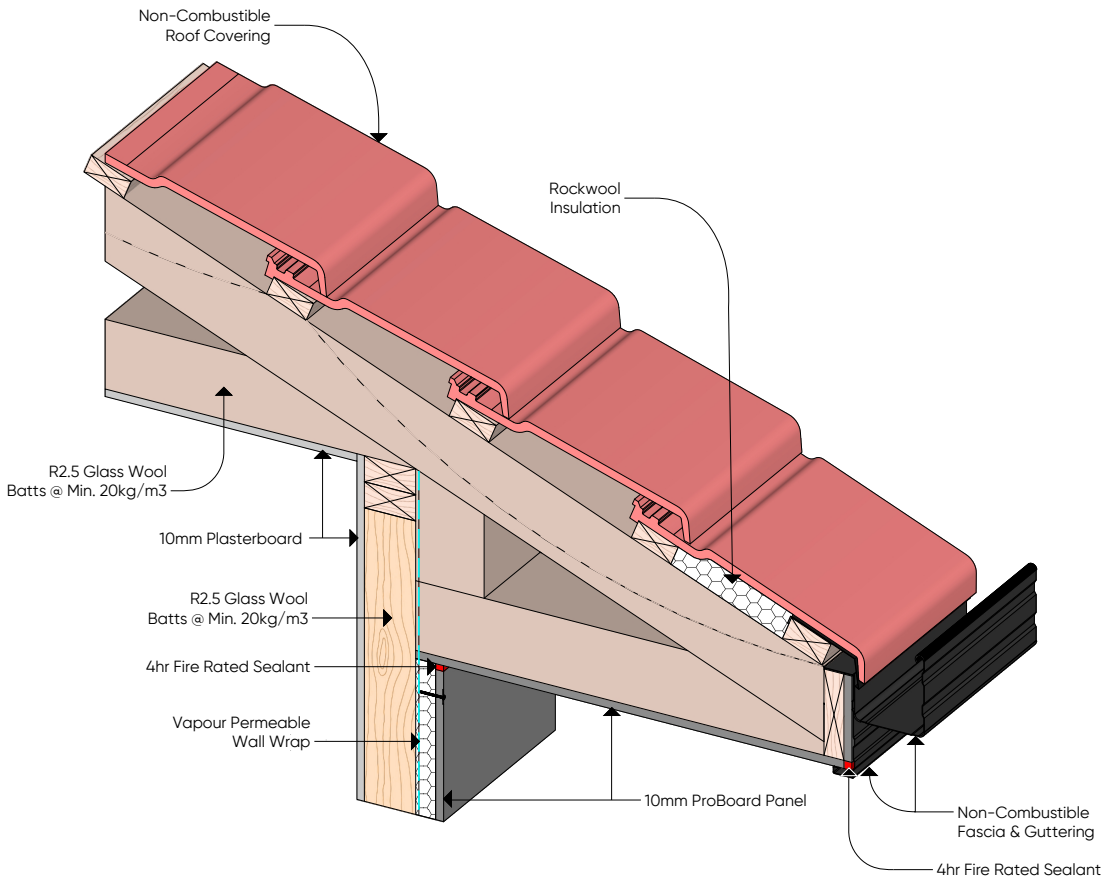


(D.20) PROBOARD EXTERNAL CLADDING CORNER

Typical Batten Technical Drawings

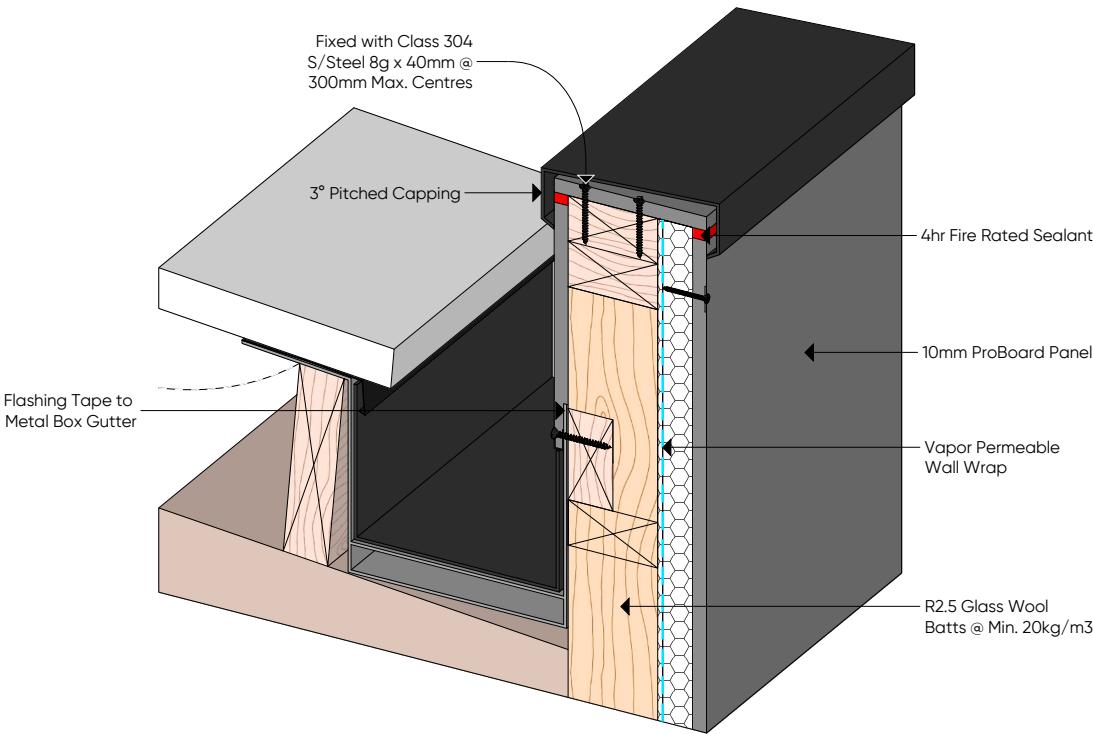


(D.21) PROBOARD EXTERNAL MASONRY CORNER

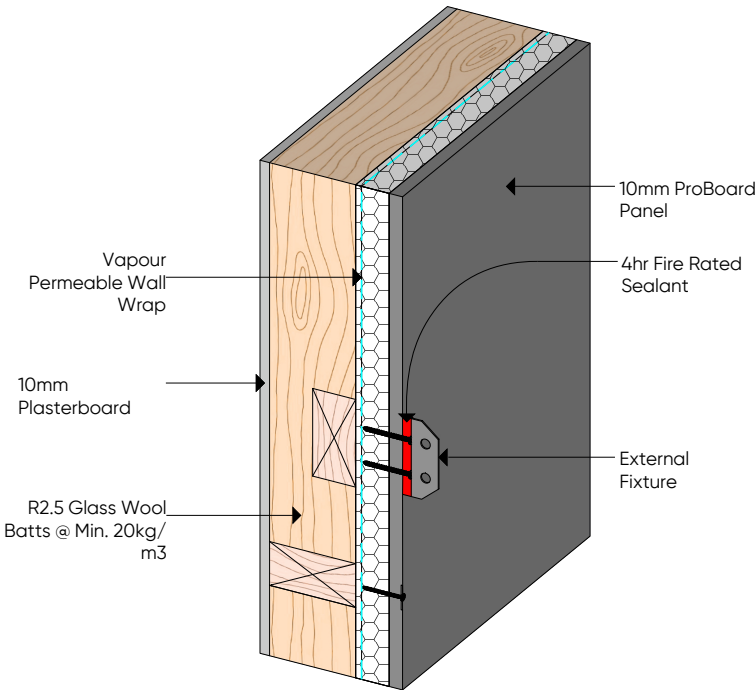


(D.22) PROBOARD EAVE

Typical Batten Technical Drawings

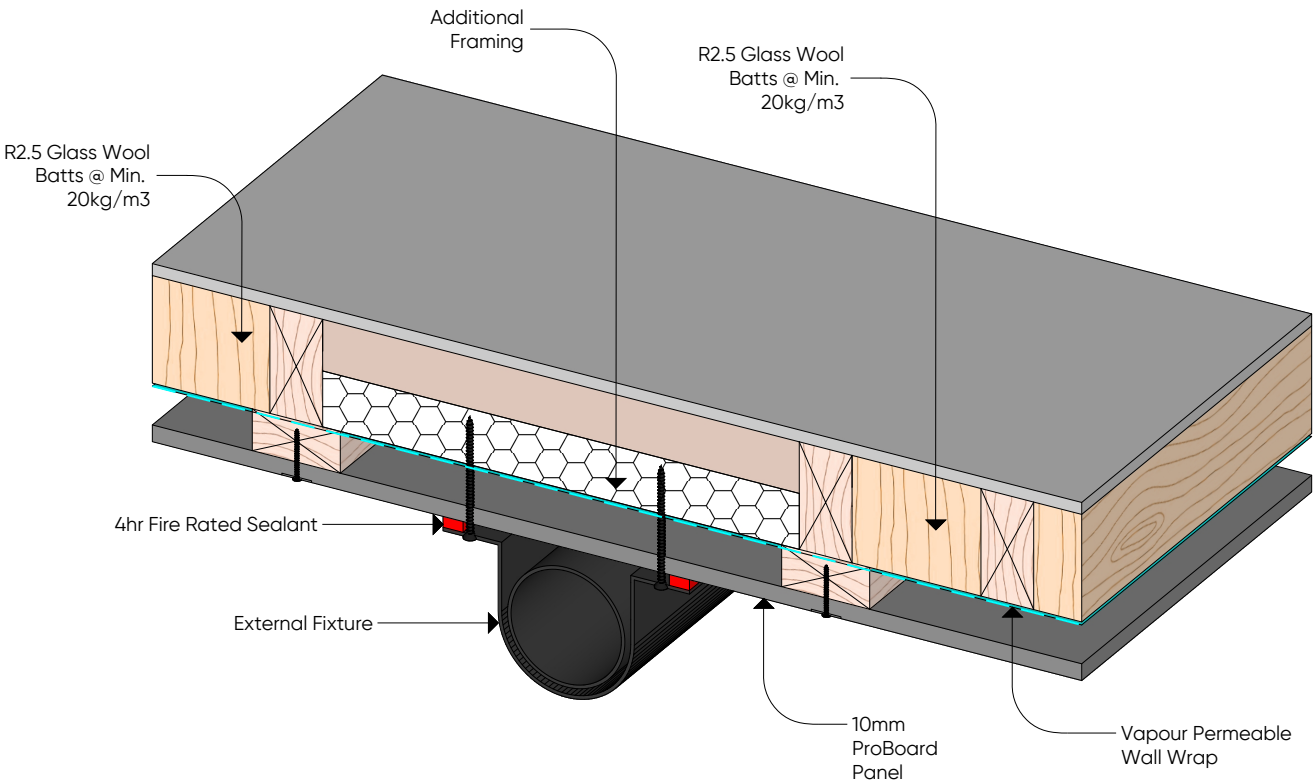


(D.23) PROBOARD BOX GUTTER



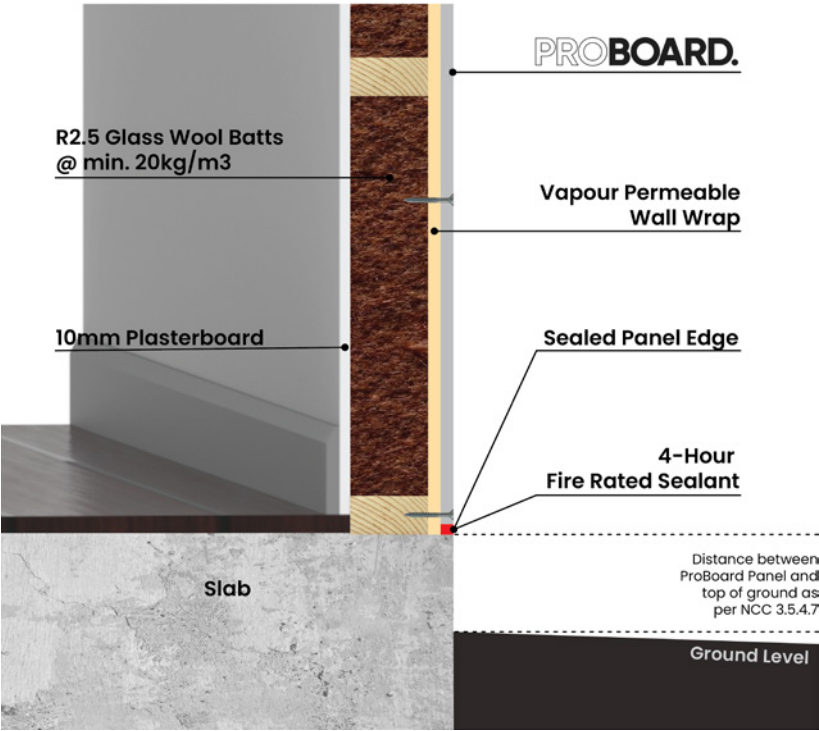
(D.24) PROBOARD EXTERNAL FIXING

Typical Batten Technical Drawings

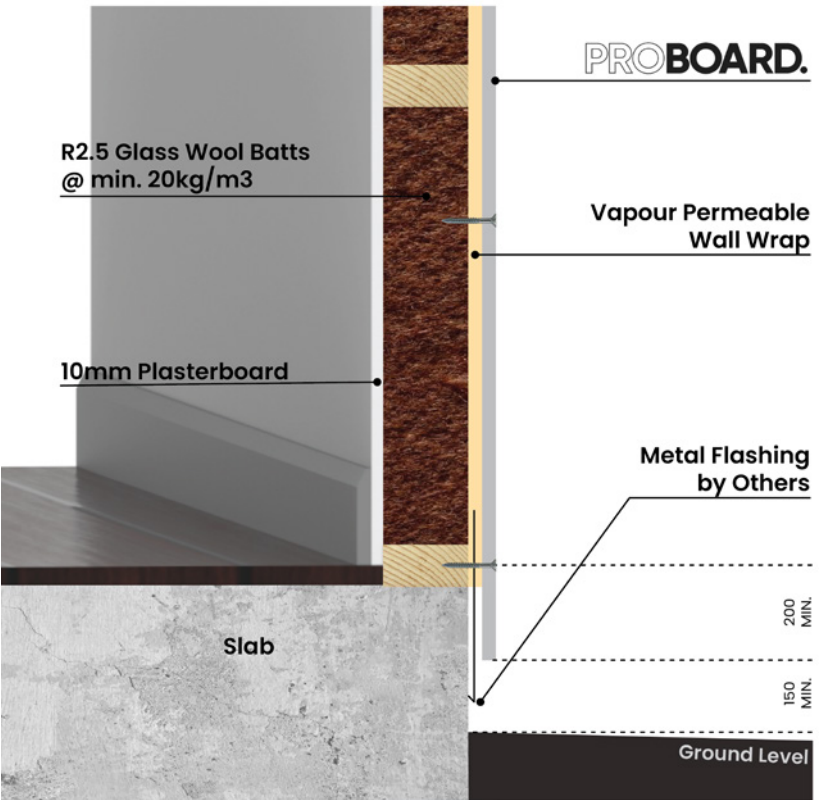


(D.25) PROBOARD DOWN PIPE

Typical Technical Drawings

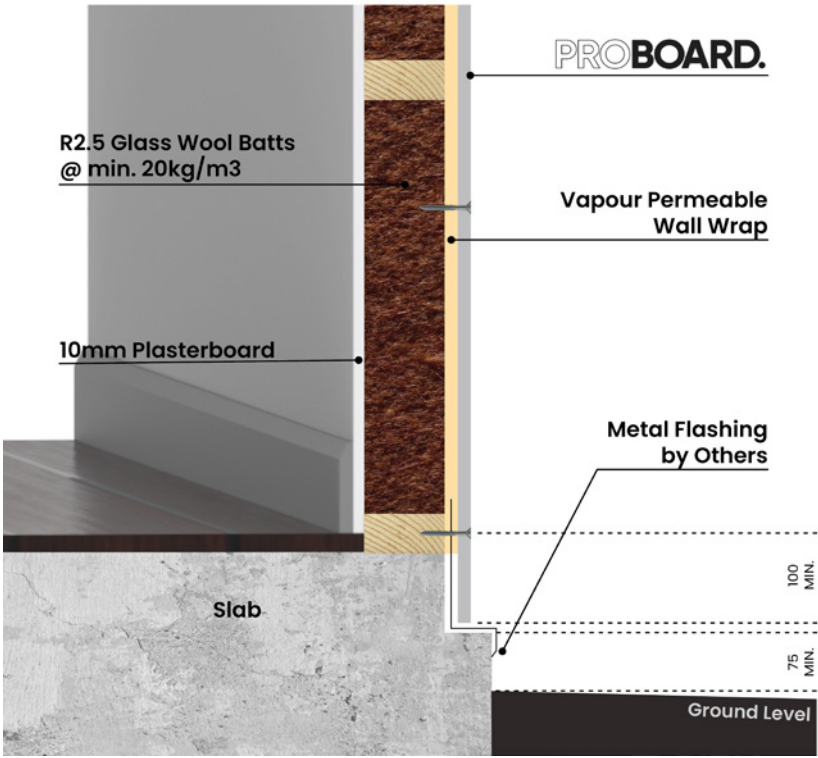


ProBoard Panel
On Slab
(D.26)

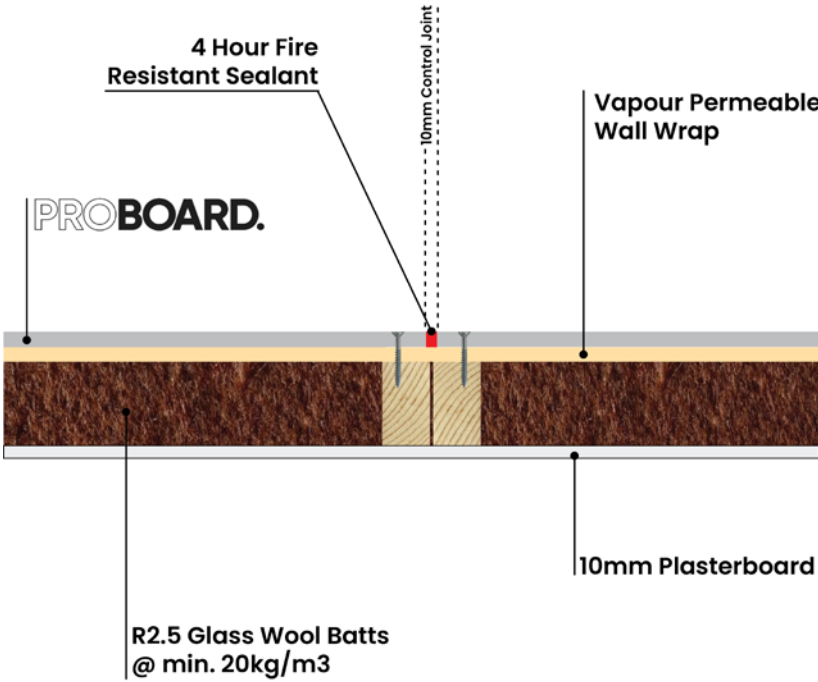


ProBoard
Slab Over
Edge
(D.27)

Typical Technical Drawings

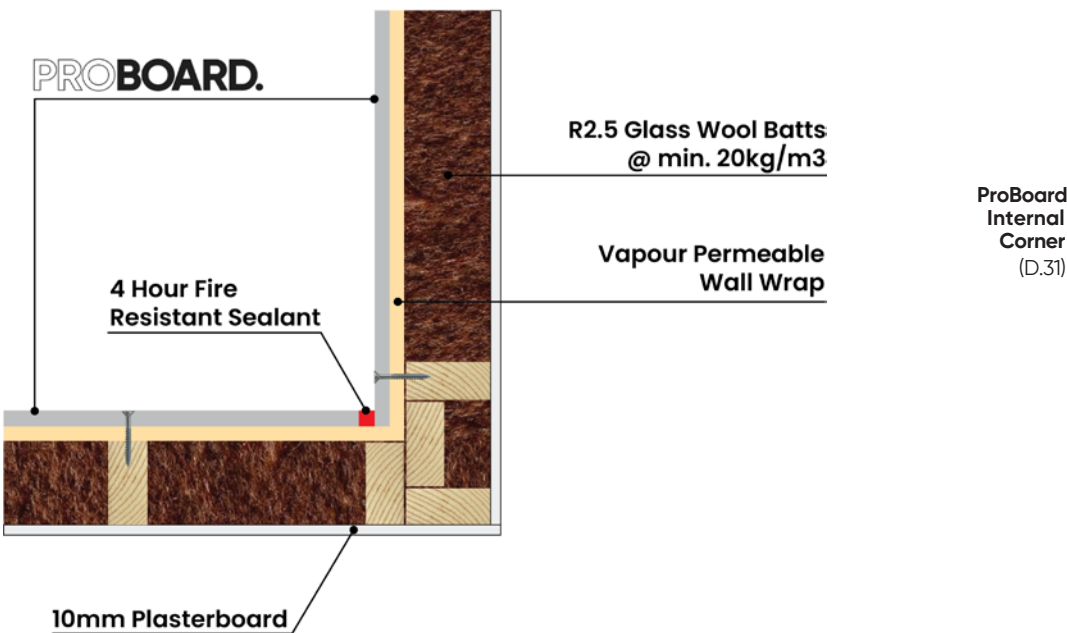
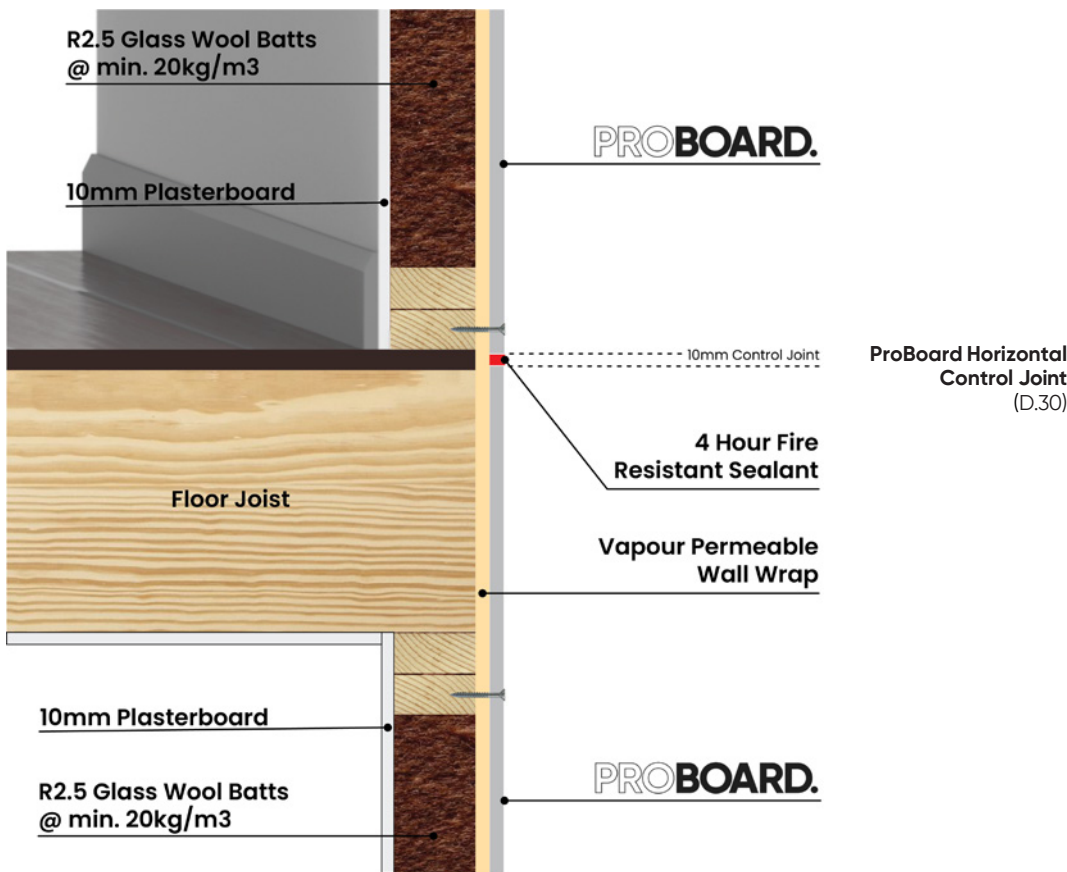


ProBoard
Slab
Rebate
(D.28)

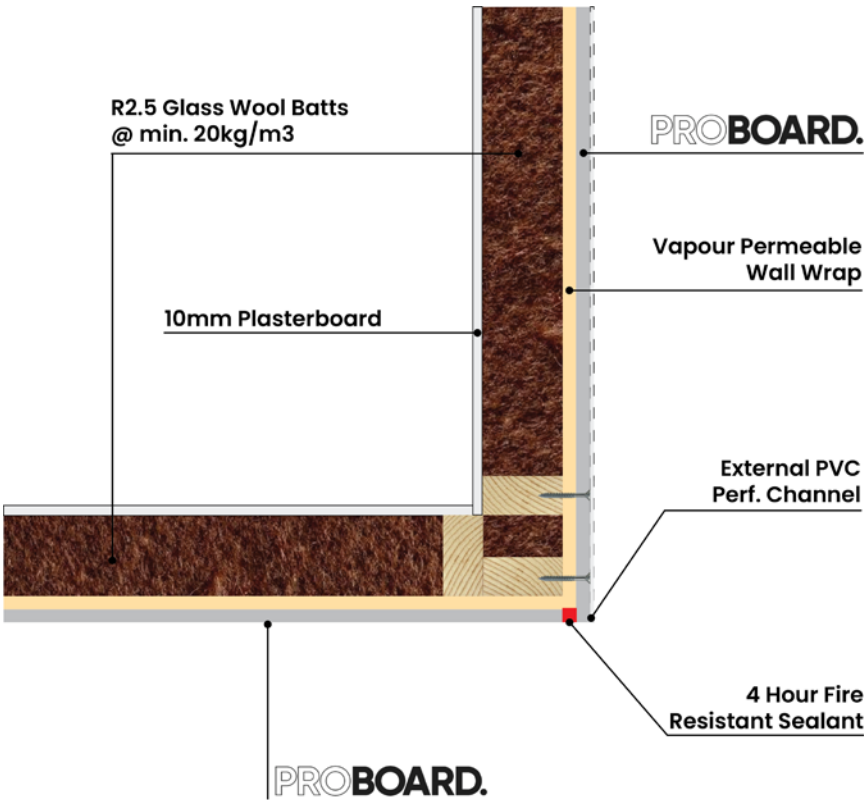


ProBoard Vertical
Control Joint
(D.29)

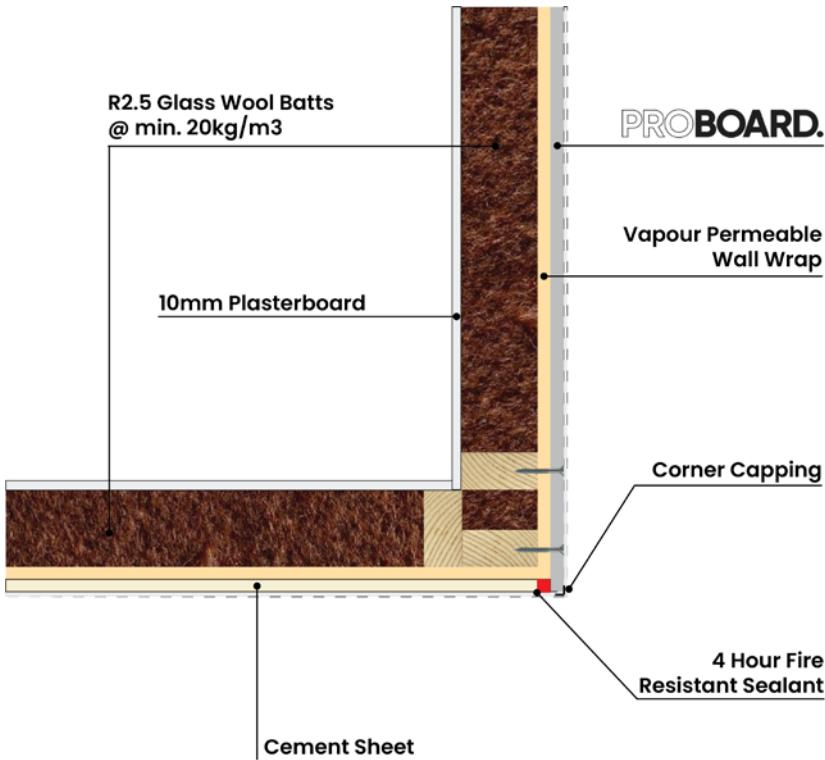
Typical Technical Drawings



Typical Technical Drawings

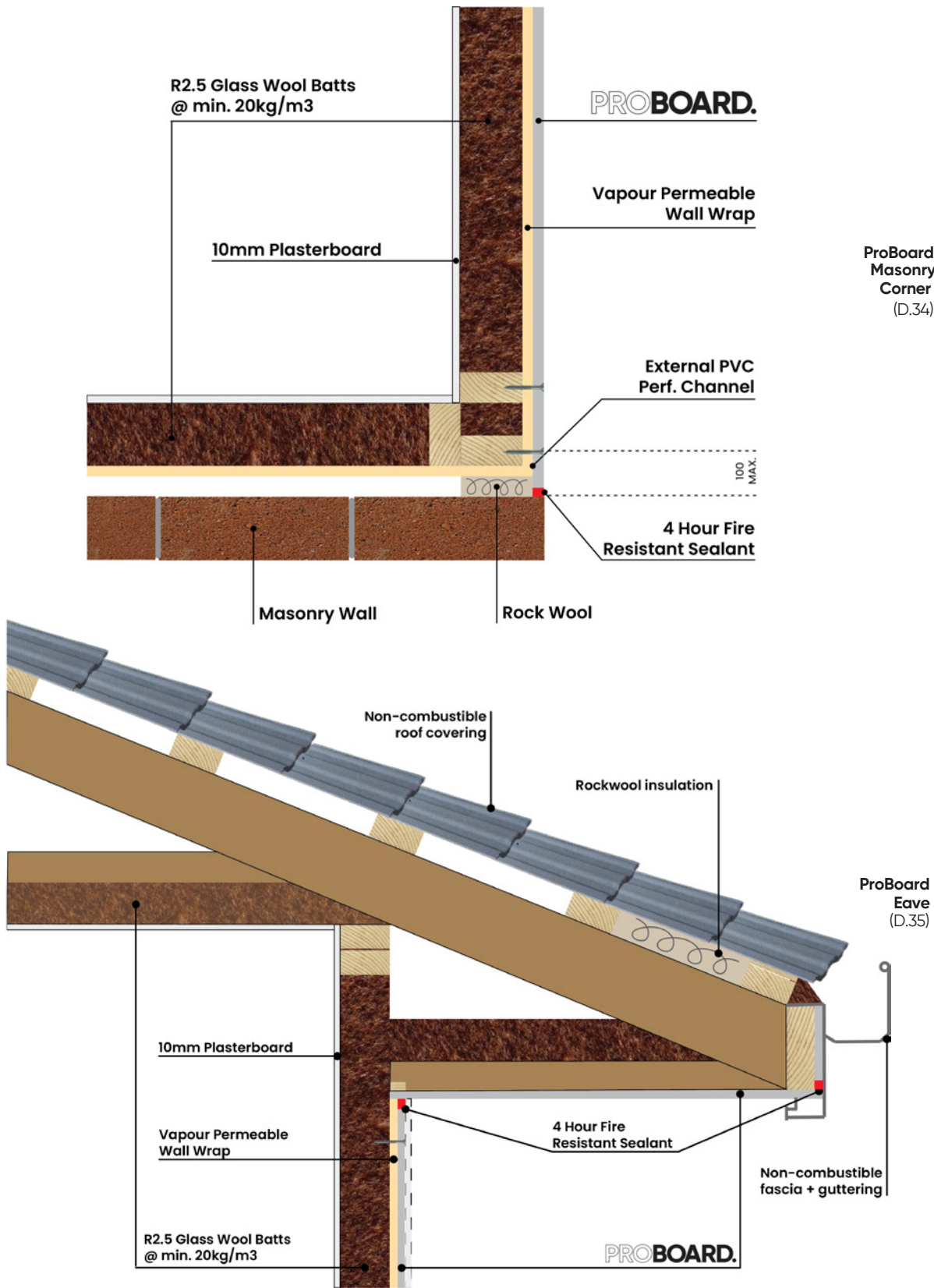


ProBoard
External
Corner
(D.32)

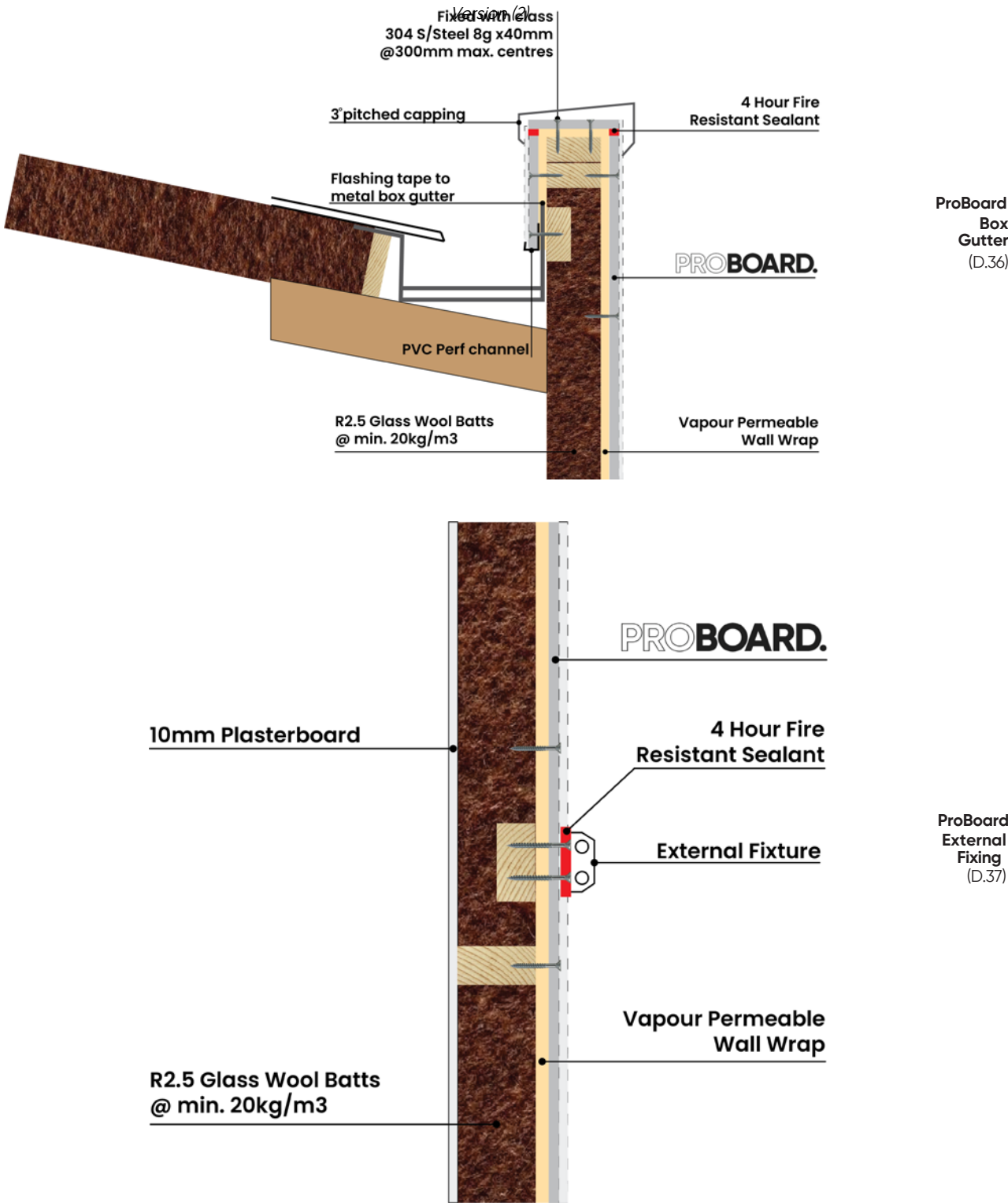


ProBoard External
Cladding Corner
(D.33)

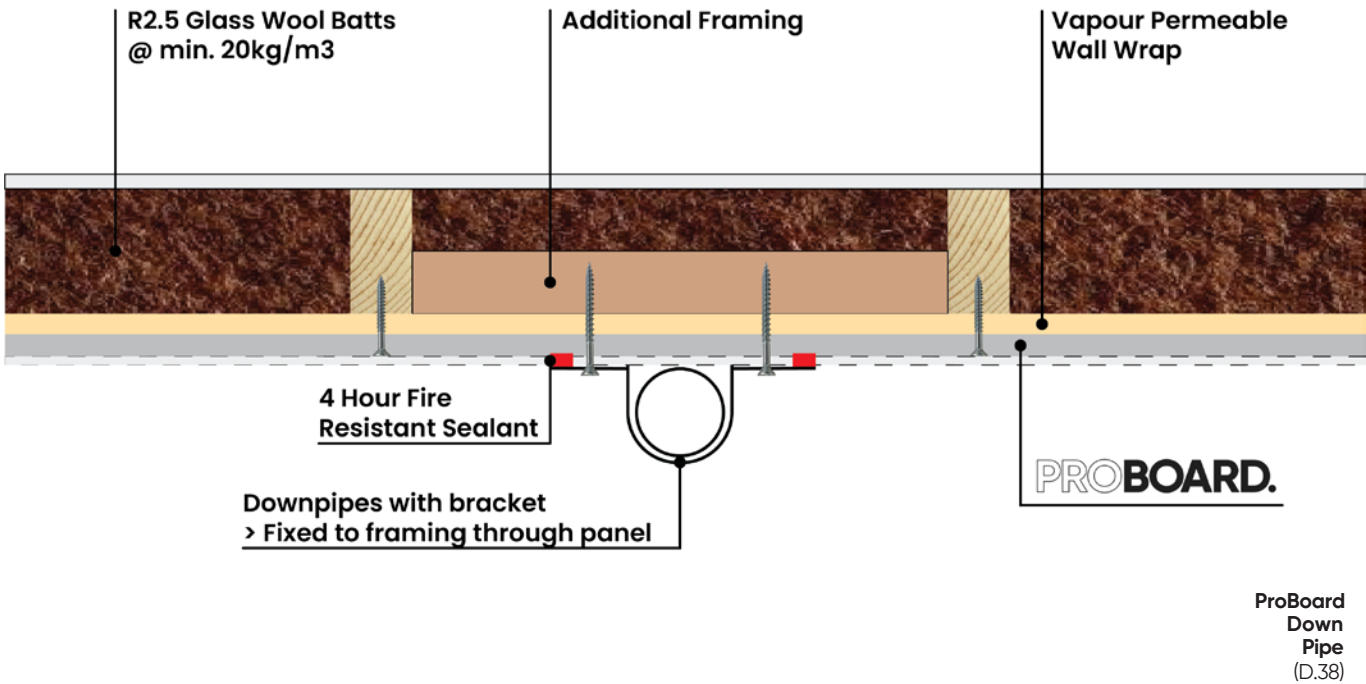
Typical Technical Drawings



Typical Technical Drawings



Typical Technical Drawings



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