Snap-Line 45®
Architectural Panels System

INSTALLATION GUIDE

Snap-Line45®

ARCHITECTURAL PANEL SYSTEMS

no1aps.com.au

Version Two

Snap-Line45®

Snap-Line 45® panel installation

Important Note:

No1 Architectural Panels recommends you refer to the most recent release of this manual, as changes might be made for improvement purposes. If you're unsure which version of the manual you have, please contact No1 Architectural Panel Systems for assistance.

This manual should be read in conjunction with related Australian Standards, and all installation works must be carried out in accordance with National Code of Construction of Australian and following standards:

- AS 1562.1 – design and installation of sheet roof and wall cladding
- SA HB 39:2015 – installation code for metal roof and wall cladding
- AS 2180 – metal rainwater goods – selection and installation
- AS 2179.1 – specification for rainwater goods, accessories, and fasteners metal shape or sheet rainwater goods, and metal accessories and fasteners
- AS 3500.3 – plumbing and drainage stormwater drainage

The installer is fully responsible for the proper interpretation of this manual, and in the eventual need for the adaptation of details provided on this manual to fulfill on site requirements the installer must achieve compliance with above mentioned standards. No1 Architectural Panels Systems is not to be held responsible for any work carried out outside of the recommendations provided on this manual and/or NCC & Australian Standards. For assistance, please contact the No1 APS team.

General

A. Provide components required for a complete metal roof panel assembly including trim, capping, fascia, corner, Z closures, flashings, sealants, gaskets, fillers and similar items. Match material and finish of metal roof panels, unless otherwise indicated.

- Flashing: Provide flashing at eaves, valleys, sidewalls, headwalls, rakes, transitions, hips and ridges fabricated of same metal as metal roof panels.

B. General: Provide metal roof panels of full length from eave to ridge. Anchor metal roof panels and other components of the work securely in place, with provisions for thermal and structural movement.

- Field cutting of metal roof panels by torch, plasma cutter or saw blade is not permitted.
- Mechanically fasten ridge end of metal roof panels and allow eave end free movement due to thermal expansion and contraction.
- Provide metal Z closures at high-side eave, rake edges, rake walls, each side of ridge and hip caps and any other area indicated in the manufacturer's installation details.
- Lap metal flashing over metal roof panels to allow moisture to run over and off the material.

C. Fasteners:

- Panel Clip: it is recommended to use minimum Class 3, 25mm flat top/wafer head fastener.

D. Metal Protection: Where dissimilar metals will contact each other or corrosive substrates, protect against galvanic reaction by painting contact surfaces with bituminous coating, by applying rubberised-asphalt underlayment to each contact surface, or by other permanent separation as recommended by metal roof panel manufacturer. Please use a suitable fastener.

Whilst this will work for the majority of metals, there are instances where incompatibility with coatings/ underlayments can also occur- for example, Zinc (as in pure Zinc) and bitumen are incompatible. If you are unsure, please contact No1 Architectural Panel Systems.

Field- assembled Snap-Line 45® panel installation

A. Metal Roof Panels: Fasten metal roof panels to a solid substrate with concealed clips as per the manufacturer's engineering report or engineer recommendation based on project location and wind load requirements.

- Clip Spacing: Maximum 900mm centres internal span (maximum 600mm for end span). For specific wind load requirements, please consult with our team.
- Install clips to deck with two minimum class 3 by 25mm wafer head fasteners.
- Snap female side of panel over clip and male side interlocking panels.

B. Metal Soffit Panel: Provide metal soffit panels that are the full width of the soffits. Install panels perpendicular to support framing.

- Flash and seal panels with weather closures where metal soffit panels meet walls and at the perimeter of all openings.

C. Installation on plywood requires the following:

- Continuous air gap (20mm for wall, 40mm for roofing) must be incorporated unobstructedly beneath the plywood substrate for ventilation.
- Breathable waterproofing membrane fixed to outer/external side of plywood substrate
- Snap-Line 45® roofing is installed on a minimum 18mm plywood (15mm wall cladding) substrate (For projects in BAL areas, please consult our team for alternative substrate options)
- Concealed fasteners attached directly into plywood substrate.
- Push and click seams together for a snap tight seam.

Snap-Line45®

Delivery, storage, and handling

For the installer to work safely, it is recommended that you wear protective gloves whilst handling metal panels and flashings to avoid personal harm and marks on material (ie.: marks caused by sunscreen). Be aware metal panels have sharp edges and should be treated carefully. Whilst holding a panel, assure even support throughout the length of it (ie.: hold it with arms open, to avoid creating uneven pressure on panels and flashings), and seek help when carrying longer pieces to lower risk of creasing and scratches.

Always inspect delivered items thoroughly to ensure there are no missing items and all goods are in good condition prior to starting installation. When laying metal sheets and flashings on ground, allow the sheet to naturally hang towards the ground with even support and avoid laying goods on hard/rough surfaces that could potentially scratch or damage them.

Goods should be stored in a safe area, off the ground high enough to allow for air circulation underneath and to prevent rising water from contacting products. If covered, allow for air circulation between draped edges of tarpaulin and slightly elevated on one side as to allow for proper drainage until ready for installation. Prolonged storage is not recommended.

Safety on site

Carrying long and heavy panels can be a challenging exercise on a busy job site. Always be aware of safety laws and comply with safety working conditions imposed by each site. Be aware of others whilst carrying panels throughout a site and avoid resting panels in vertical position in case wind could blow them down. Always be extra careful and consider postponing installation in case of bad weather and windy conditions.

Cleaning and protection

A. Unless otherwise indicated in manufacturer's written installation instructions, remove temporary protective coverings and strippable films if applicable as metal roof panels are installed. On completion of metal roof panel installation, clean finished surfaces as recommended by metal roof panel manufacturer. Maintain in a clean condition during construction.

B. To prevent rust staining, remove any fillings caused by drilling or cutting immediately from finished surfaces.

Oil Canning

Whilst usually undesirable, oil canning is a common natural occurrence to all metals and results from the natural movement of the panel caused by its expansion and contraction once exposed to temperature variation.

Snap-Line 45® panels can be manufactured with optional 'Clip relief' and 'Striations' being applied lengthwise to the pan, which aids to reduce the visual effects of oil canning.

No1 Architectural Panel Systems takes all possible measures to manufacture panels with maximum quality control resulting in an aesthetically flat looking panel, and for this reason oil canning on installed panels will not be considered a cause for panel rejection.

Please speak to No1 for assistance on how to mitigate oil canning on your installation.

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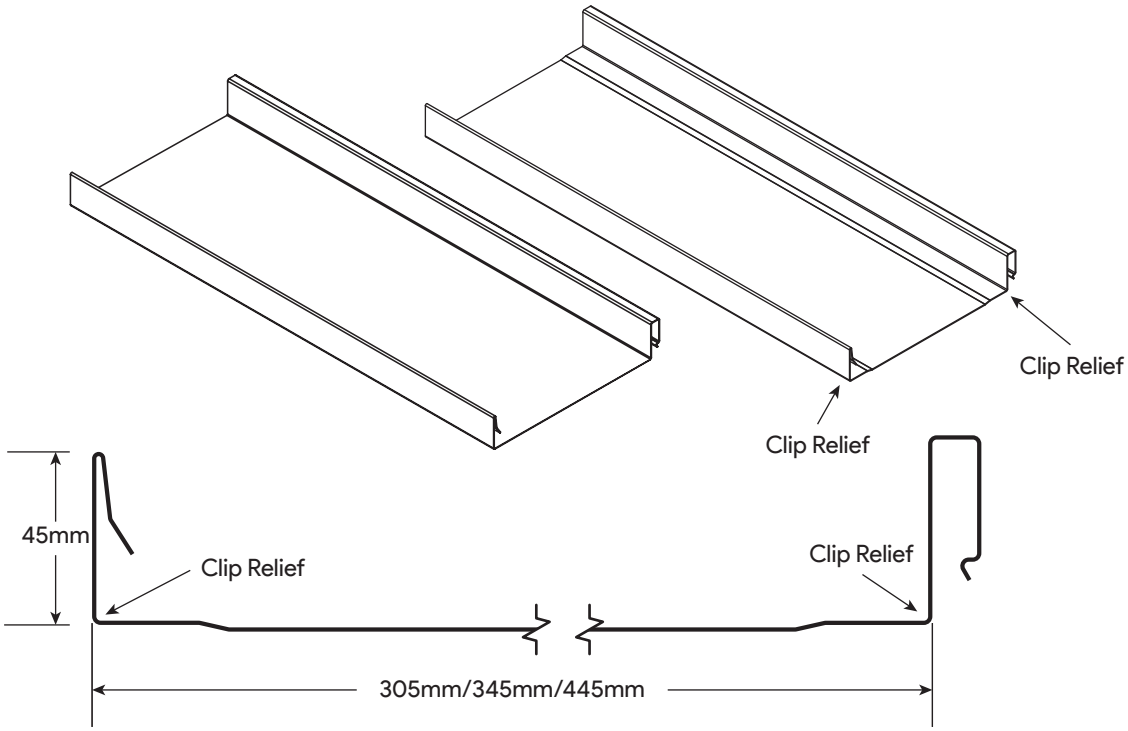
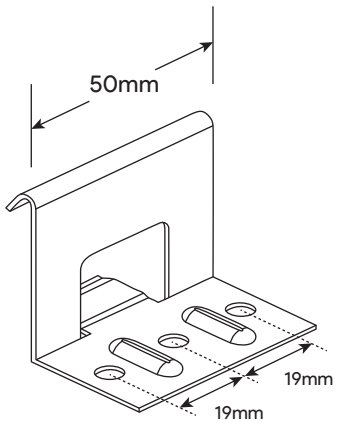
Snap-Line 45® panel



Clip Relief along edge of pans is optional - please consult with our No1 APS team for more details

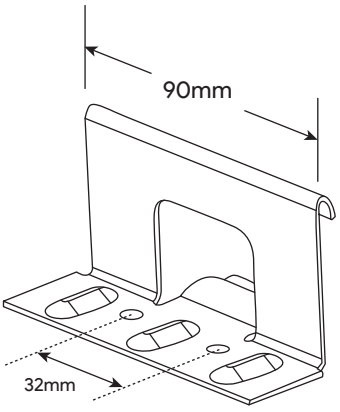
Snap-Line 45®
UL 60 clip wall cladding

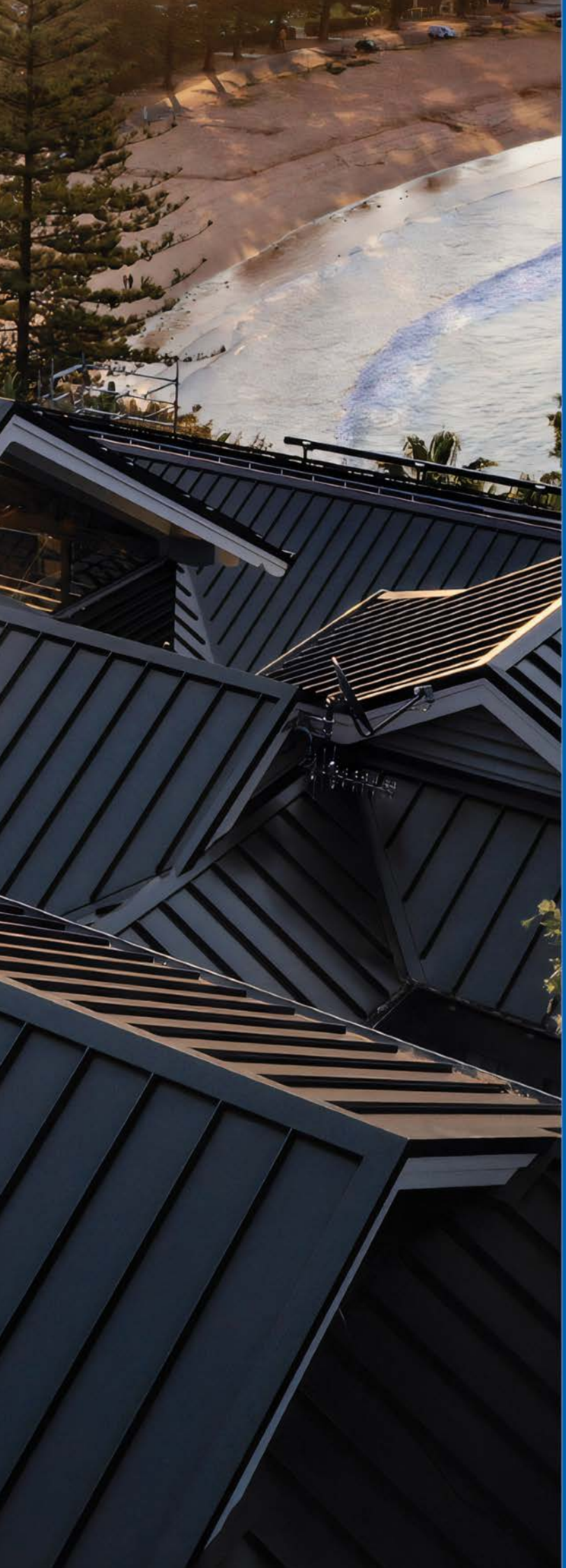
Roof & Wall non cyclonic clip



Snap-Line 45®
UL 90 clip roof cladding

Roof & Wall cyclonic and non cyclonic clip





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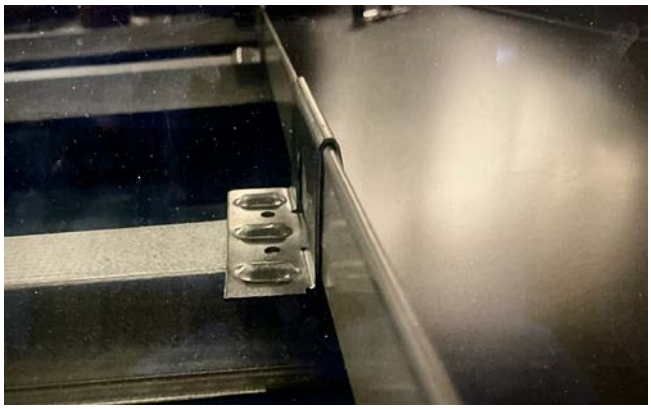
Snap-Line 45®
fixing specification

G550 Steel Battens (Minimum BMT of 0.55)
Fix clips with 2 × 10g-16 × 16 wafer

70×35 Timber
Fix clips with 2 × 10g x 25 bugle

18mm Plywood (Roof application)
Fix clips with 2 × 10g x 25 bugle

15mm Plywood (Wall cladding application)
Fix clips with 2 × 10g x 25 bugle

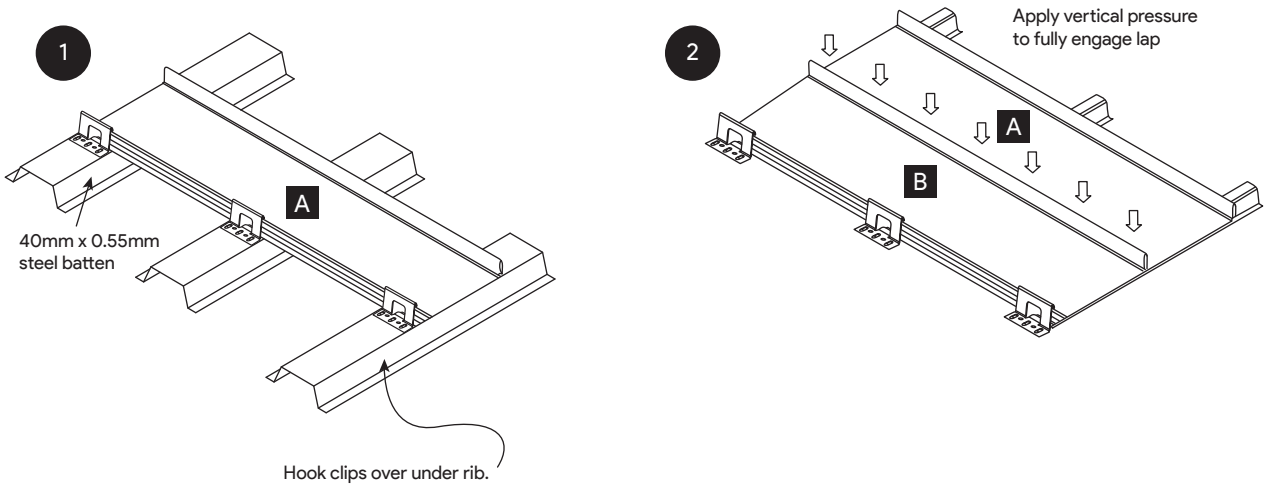


Photograph of the clip engagement with Snap-Line 45

Snap-Line 45®
maximum recommended spacing of clips

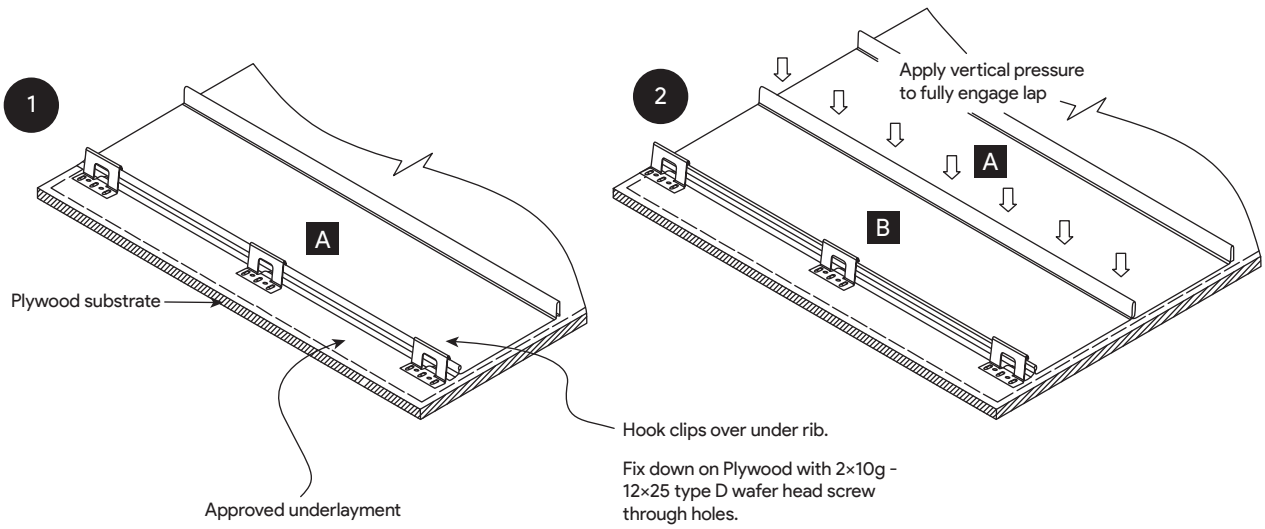
Normal conditions	Roof & wall	
Material	End spans	Internal span
Steel 0.55BMT G300	600mm	900mm
Corten Steel 0.55BMT G300	600mm	900mm
Aluminium 0.7BMT, 0.8BMT	600mm	600mm

Non-cyclonic fixing to steel batten



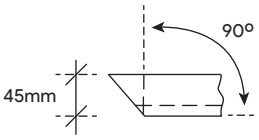
Fix clip down on battens with 2 × 10g - 16×16 Wafer head screws through holes.

Fixing to plywood detail



Pan turn-up & turn-down details.

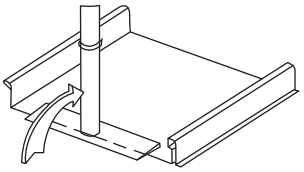
Typical stop end detail



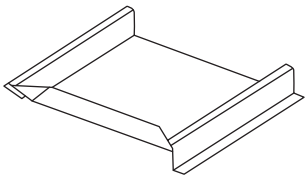
Stop end detail

Stop end procedure:

1. Place plan into the panel stop end tool, the front edge of the tool must rest between the rib.
2. While maintaining pressure against the panel, rotate the stop end tool as close to 90° as possible.
3. Inspect completed bend - check to ensure that no holes/piercings have been made to the panel.

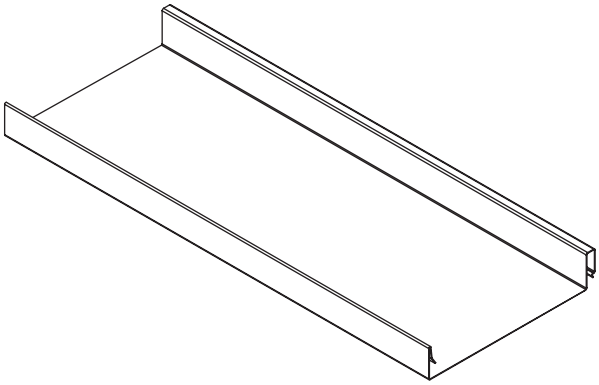


Panel stop end tool

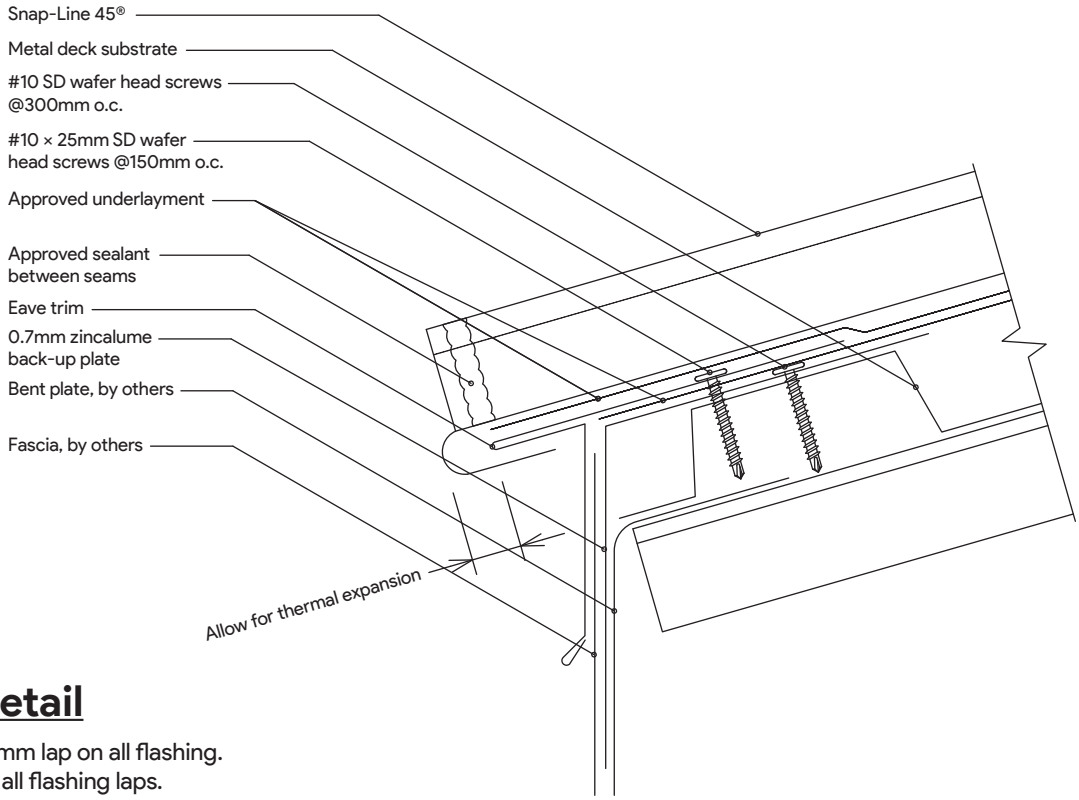


Panel with stop end

Snap-Line45®

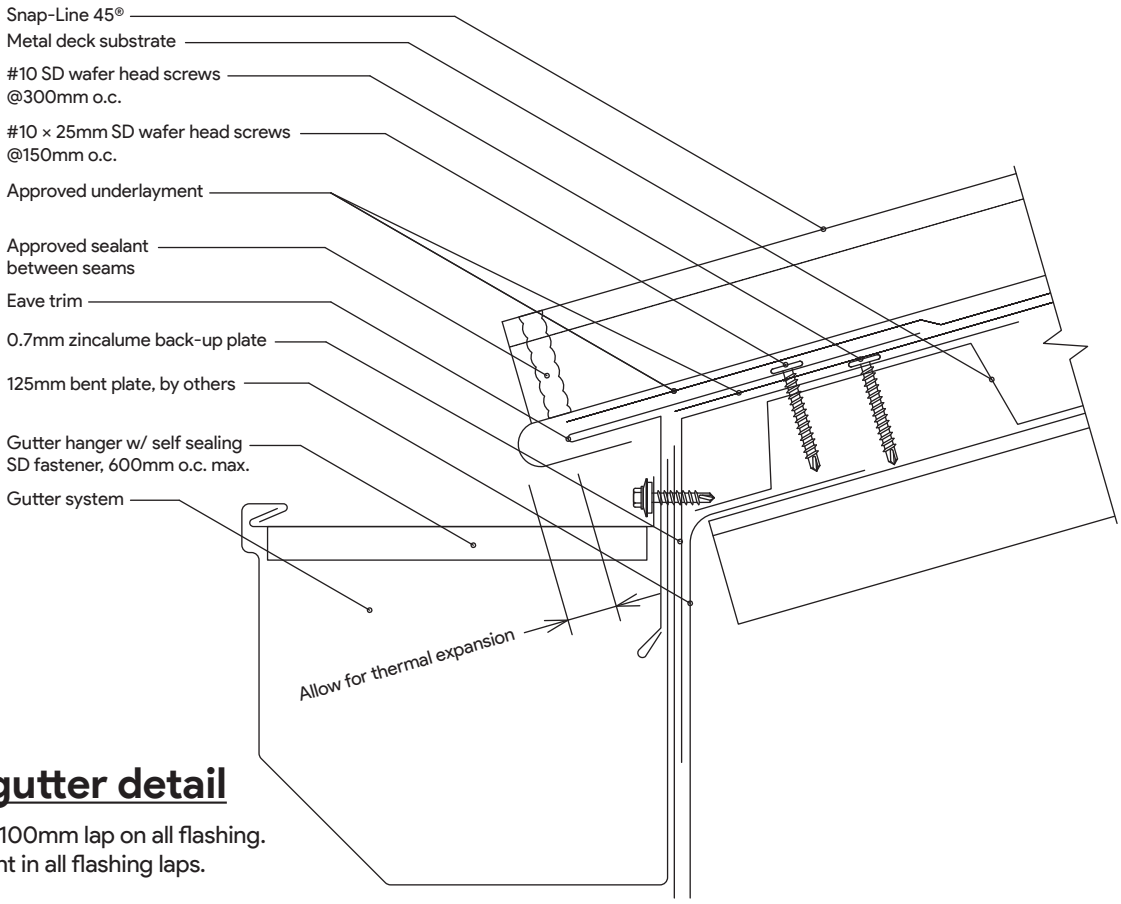


Snap-Line 45® Roof Cladding Flashing Details on Steel Batten



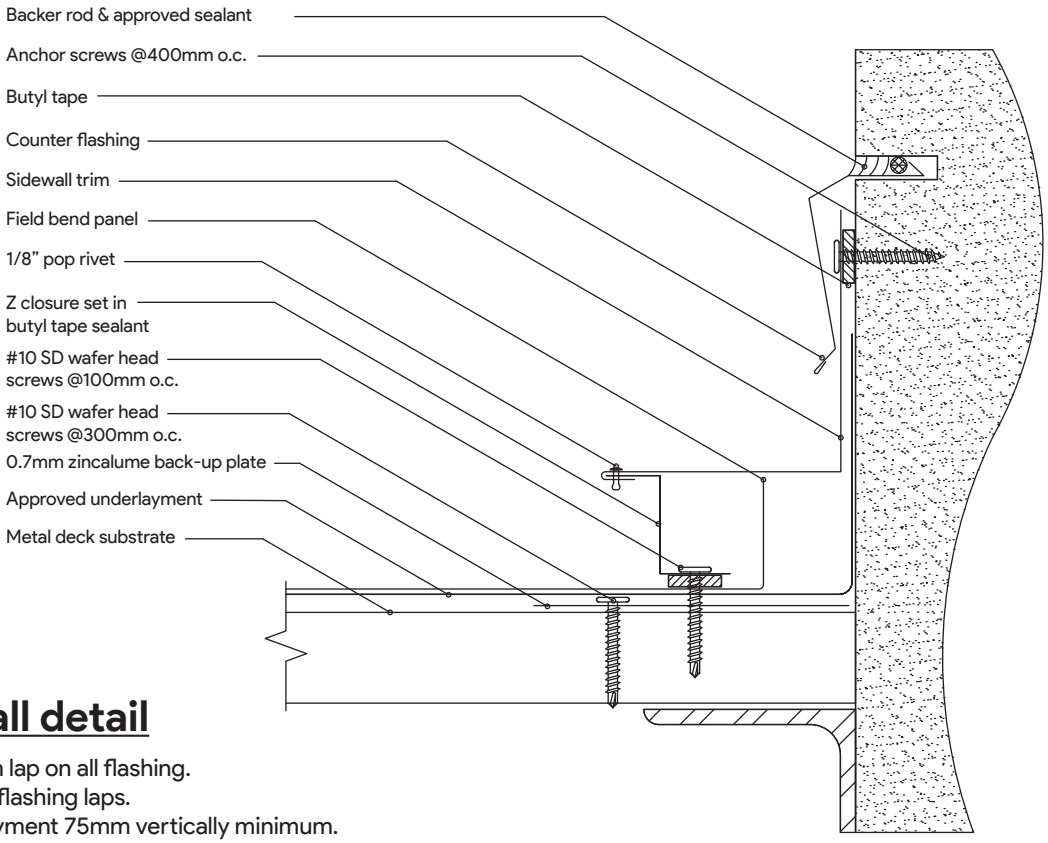
E1 - Eave detail

Note: Minimum 100mm lap on all flashing.
Approved sealant in all flashing laps.



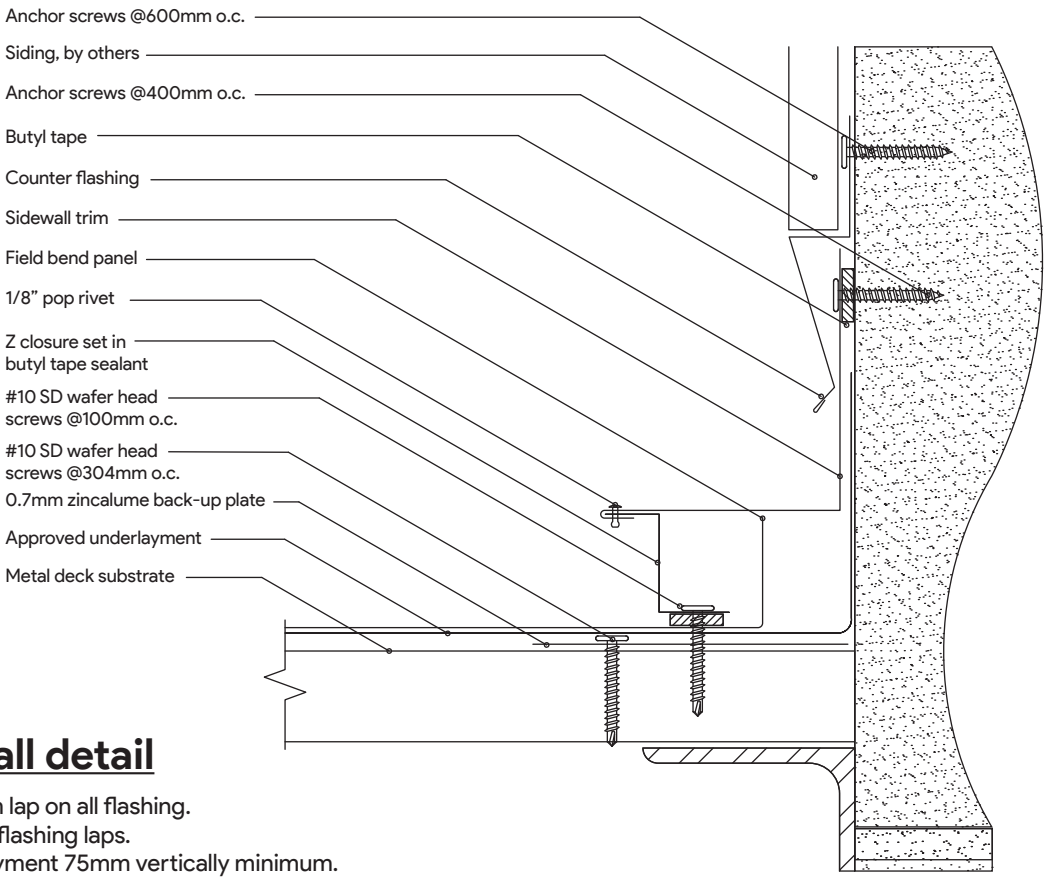
Eave w/gutter detail

Note: Minimum 100mm lap on all flashing.
Approved sealant in all flashing laps.



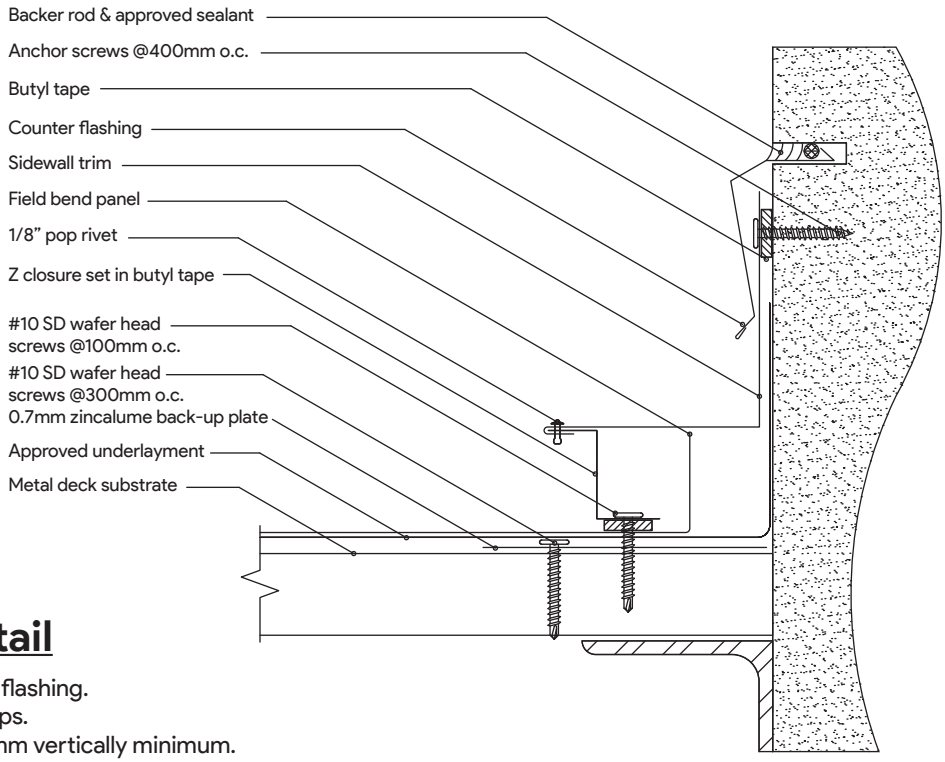
SW1- Sidewall detail

Note: Minimum 100mm lap on all flashing.
Approved sealant in all flashing laps.
Turn approved underlayment 75mm vertically minimum.



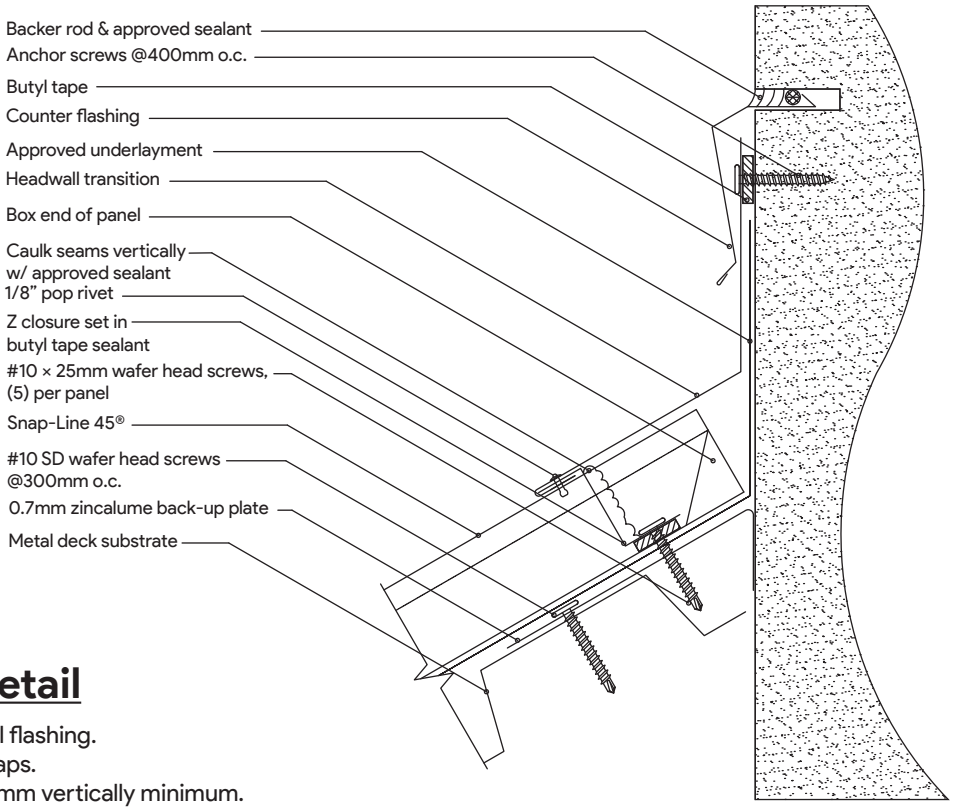
SW2- Sidewall detail

Note: Minimum 100mm lap on all flashing.
Approved sealant in all flashing laps.
Turn approved underlayment 75mm vertically minimum.



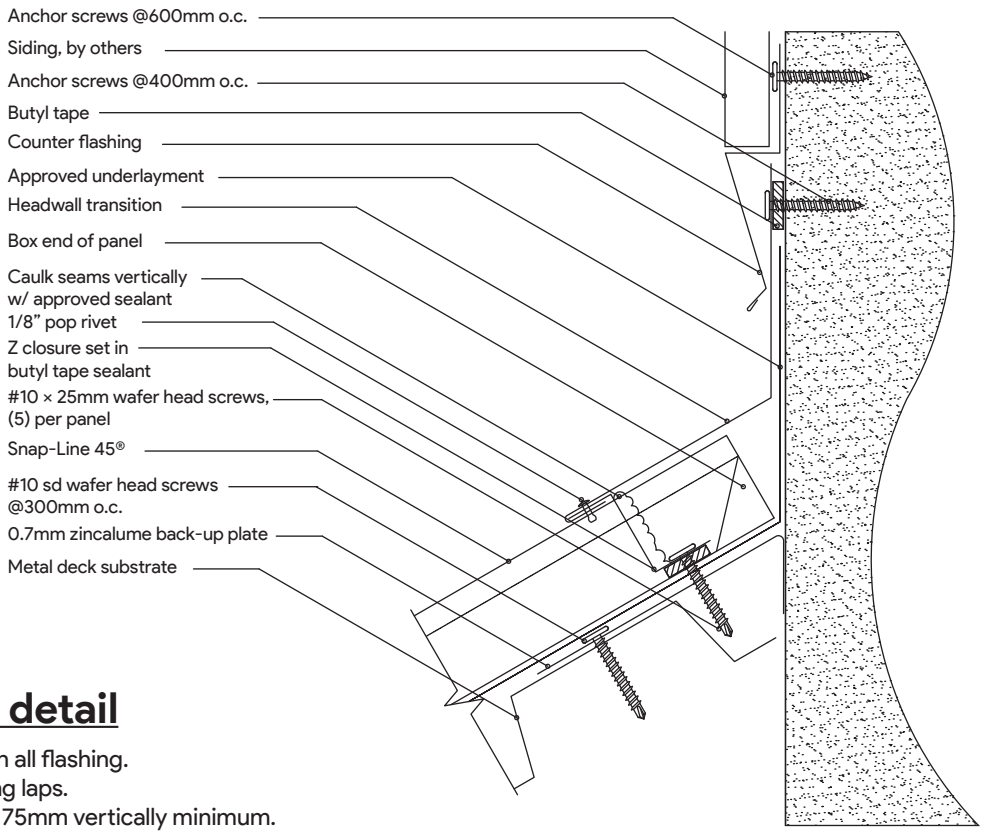
SW3- Sidewall detail

Note: Minimum 100mm lap on all flashing.
Approved sealant in all flashing laps.
Turn approved underlayment 75mm vertically minimum.



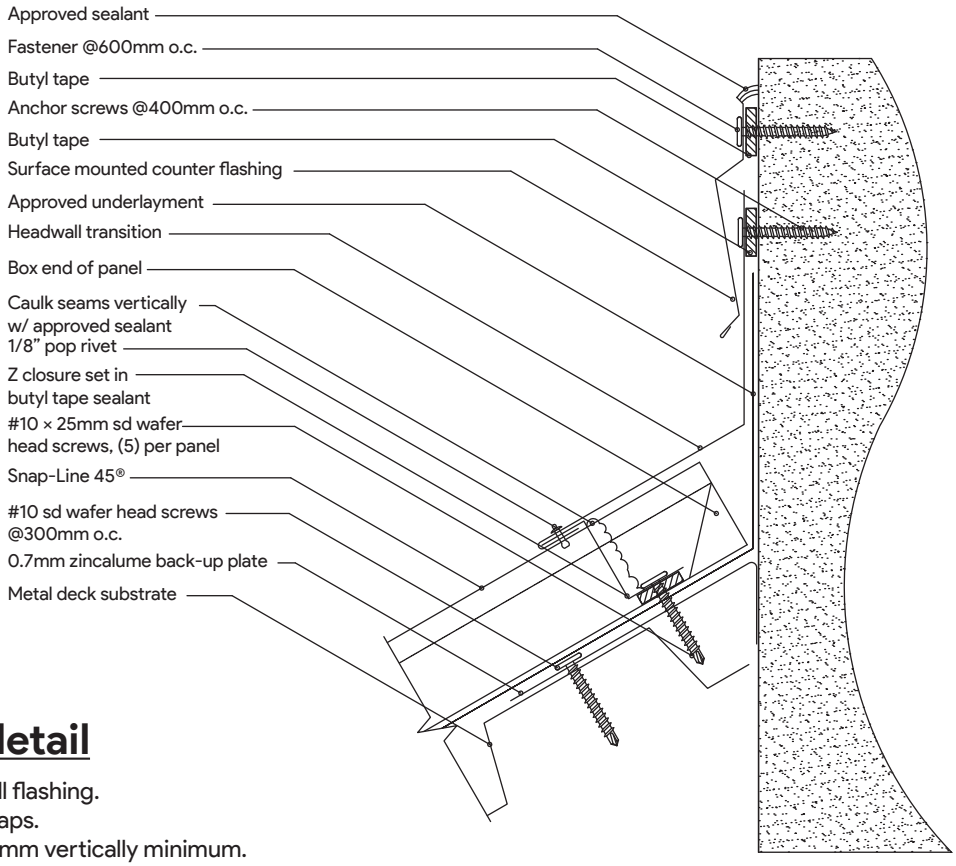
HW1- Headwall detail

Note: Minimum 100mm lap on all flashing.
Approved sealant in all flashing laps.
Turn approved underlayment 75mm vertically minimum.



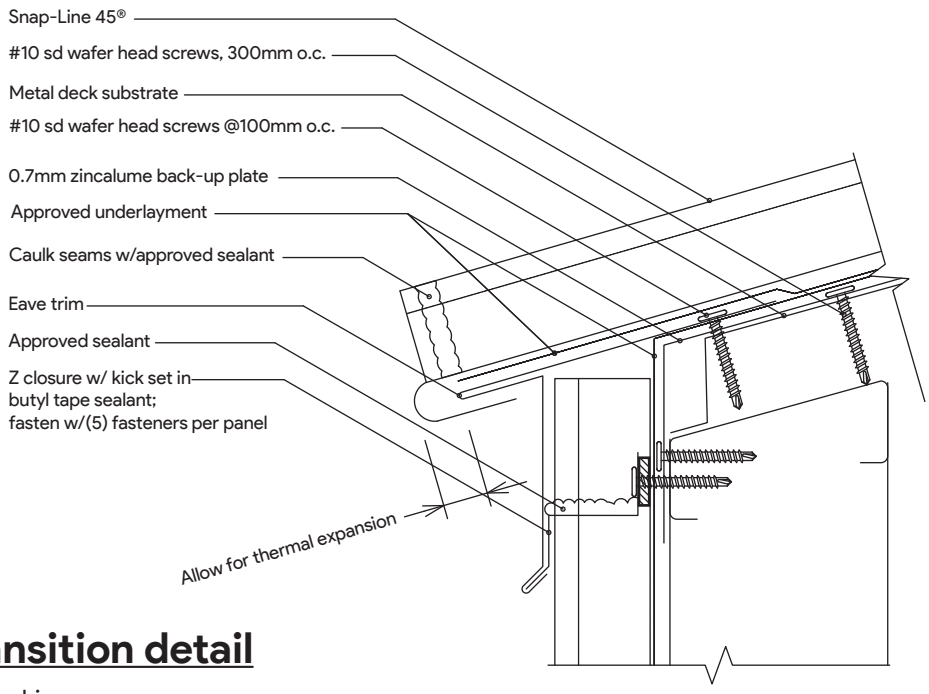
HW2- Headwall detail

Note: Minimum 100mm lap on all flashing.
Approved sealant in all flashing laps.
Turn approved underlayment 75mm vertically minimum.



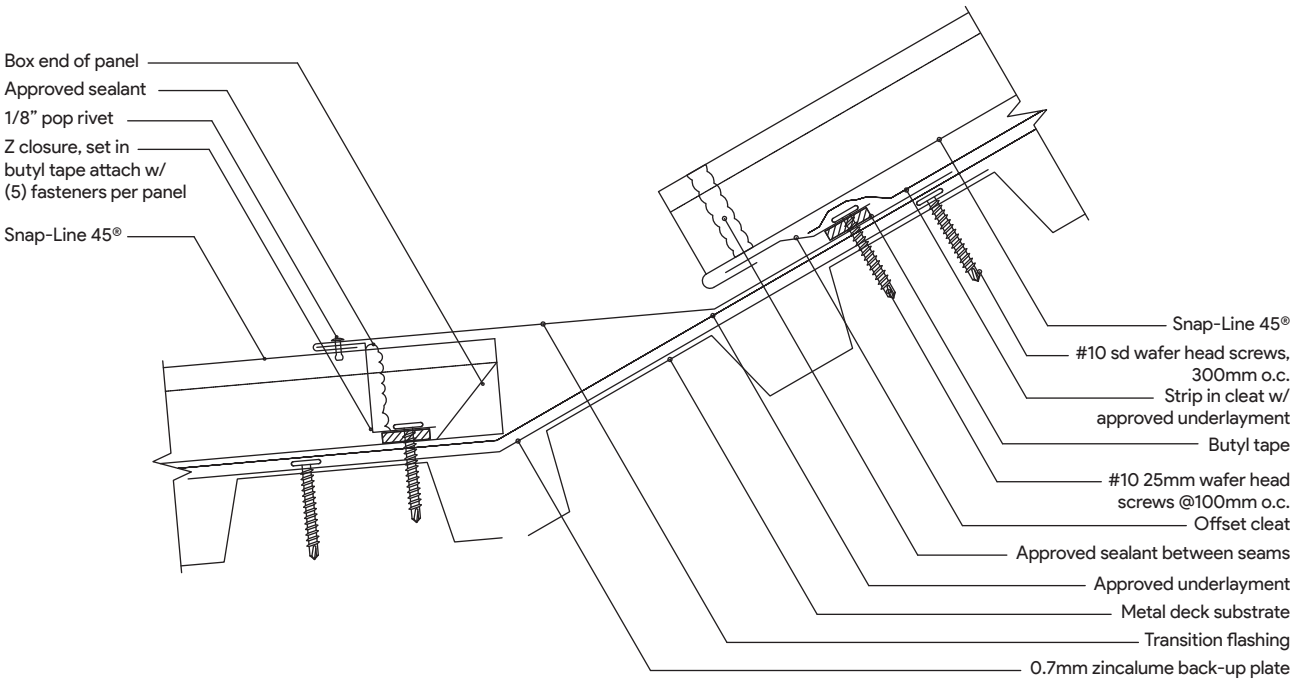
HW3- Headwall detail

Note: Minimum 100mm lap on all flashing.
Approved sealant in all flashing laps.
Turn approved underlayment 75mm vertically minimum.



T1- Roof/fascia transition detail

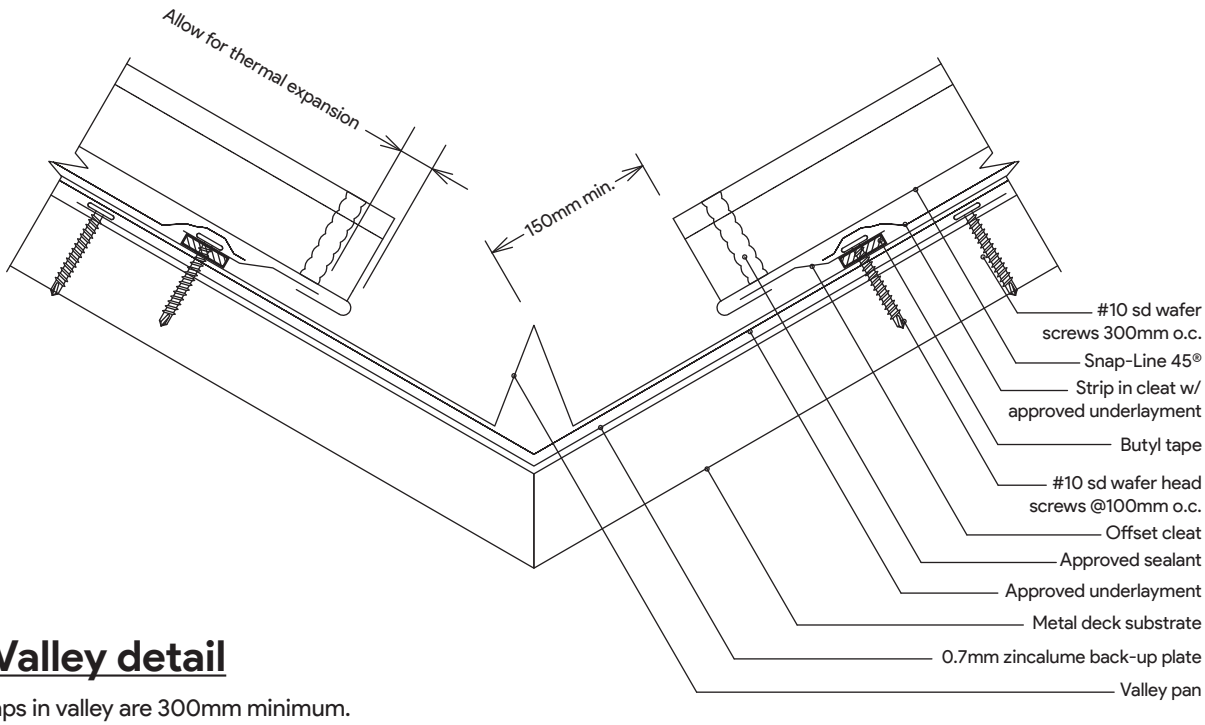
Note: Minimum 100mm lap on all flashing.
Approved sealant in all flashing laps.



T2- Roof transition detail

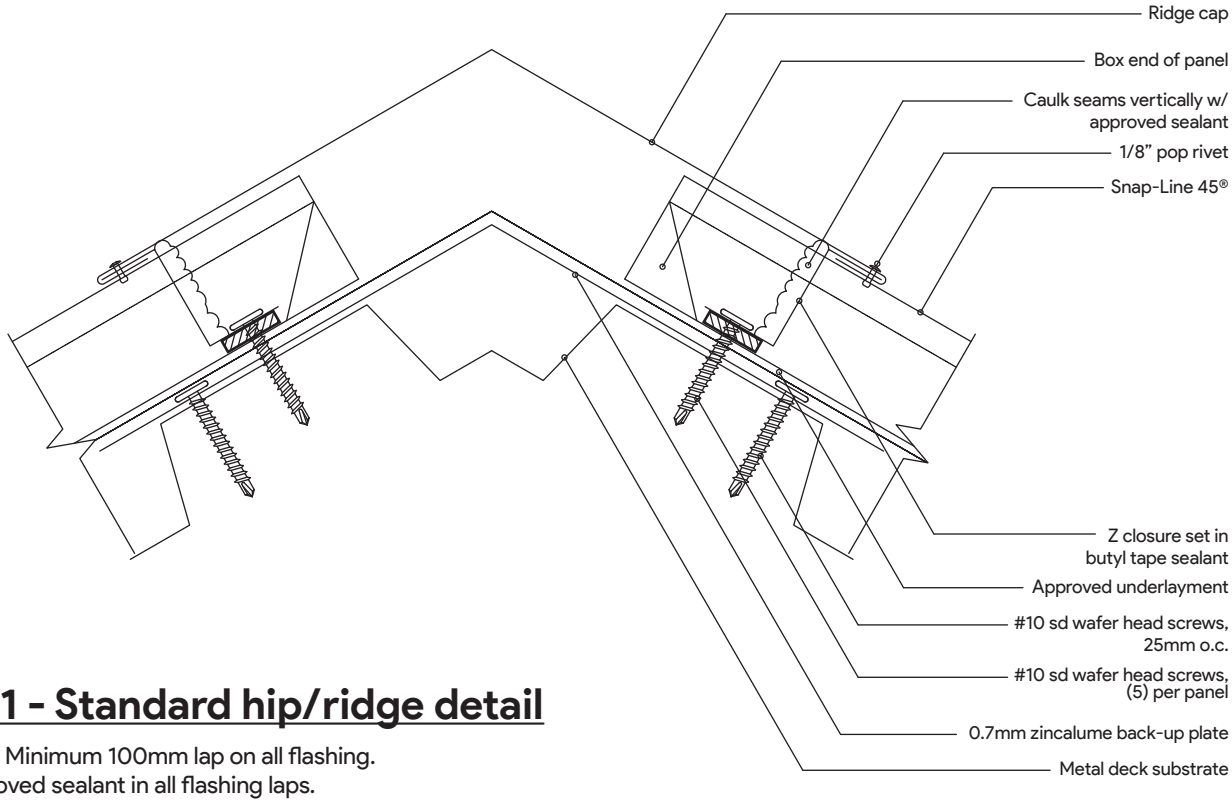
Note: Minimum 100mm lap on all flashing.
Approved sealant in all flashing laps.

Roof Cladding
Flashing Details on Steel Batten



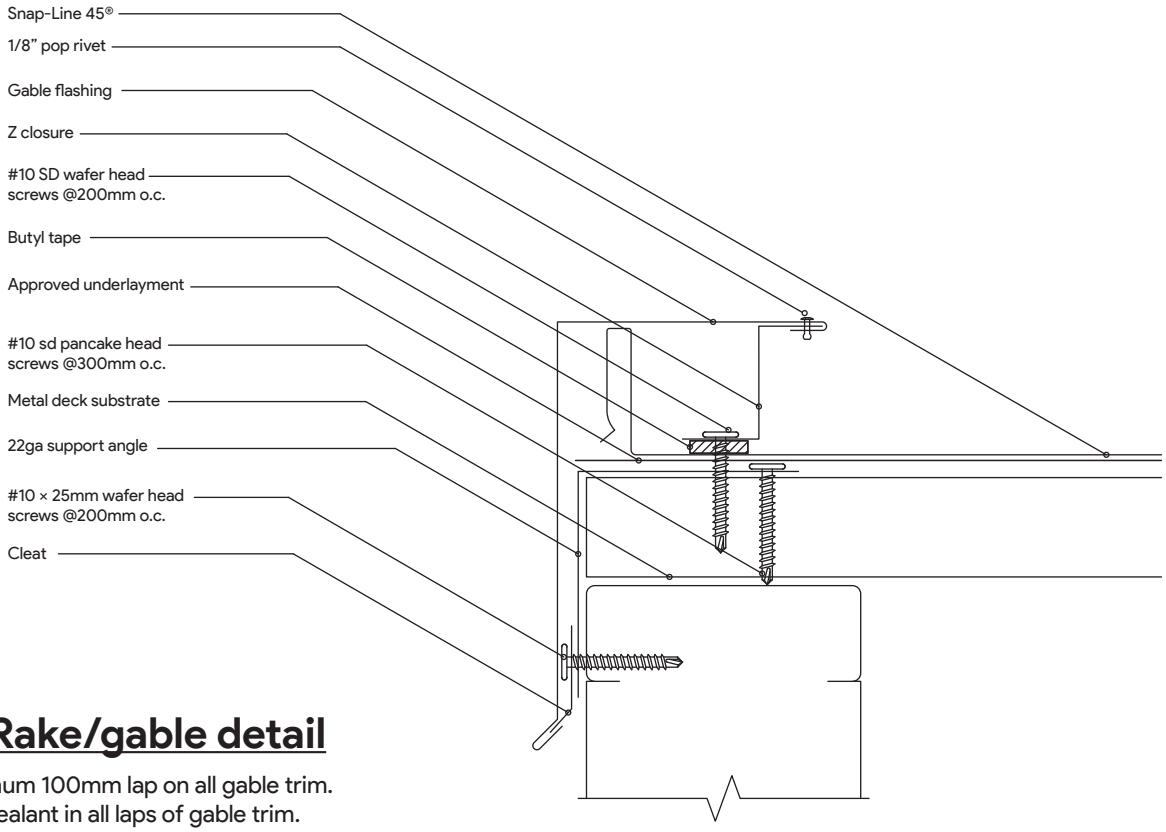
V1- Valley detail

Note: Laps in valley are 300mm minimum.
Approved sealant in all laps in valley.
Two rows of sealant between valley laps, 100mm up from lap.



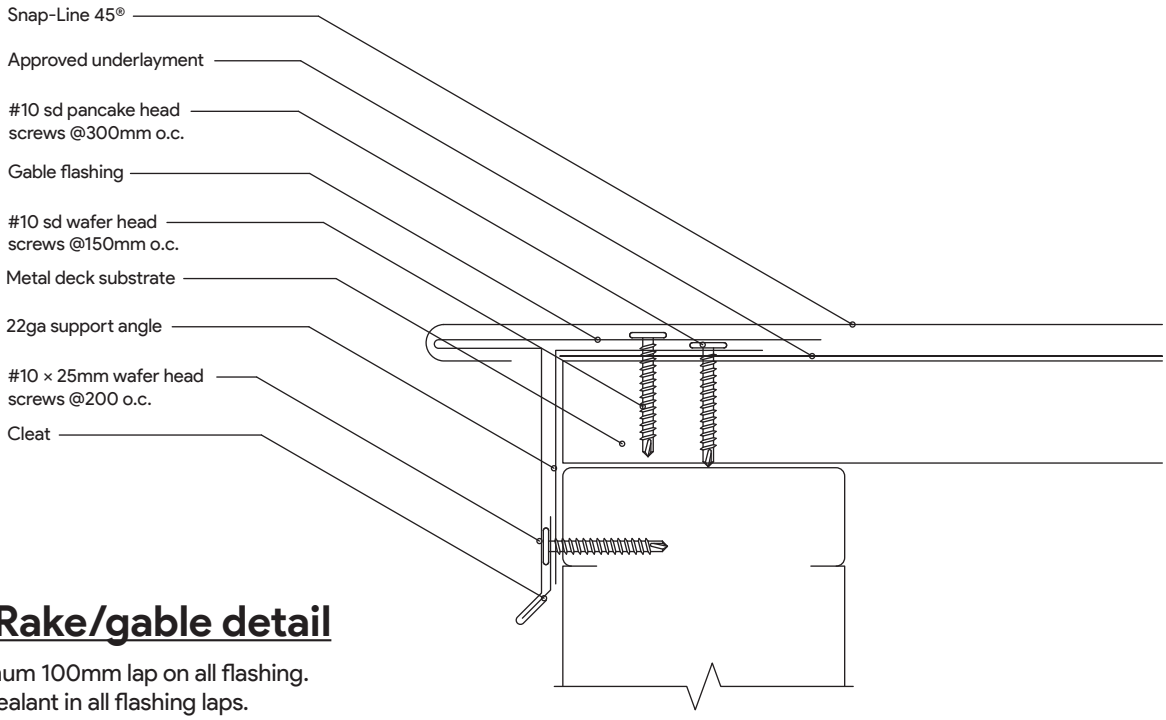
HR1 - Standard hip/ridge detail

Note: Minimum 100mm lap on all flashing.
Approved sealant in all flashing laps.



RK1 - Rake/gable detail

Note: Minimum 100mm lap on all gable trim.
Approved sealant in all laps of gable trim.



RK2 - Rake/gable detail

Note: Minimum 100mm lap on all flashing.
Approved sealant in all flashing laps.

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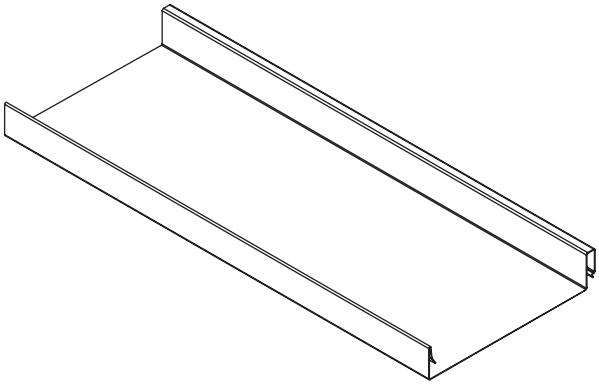
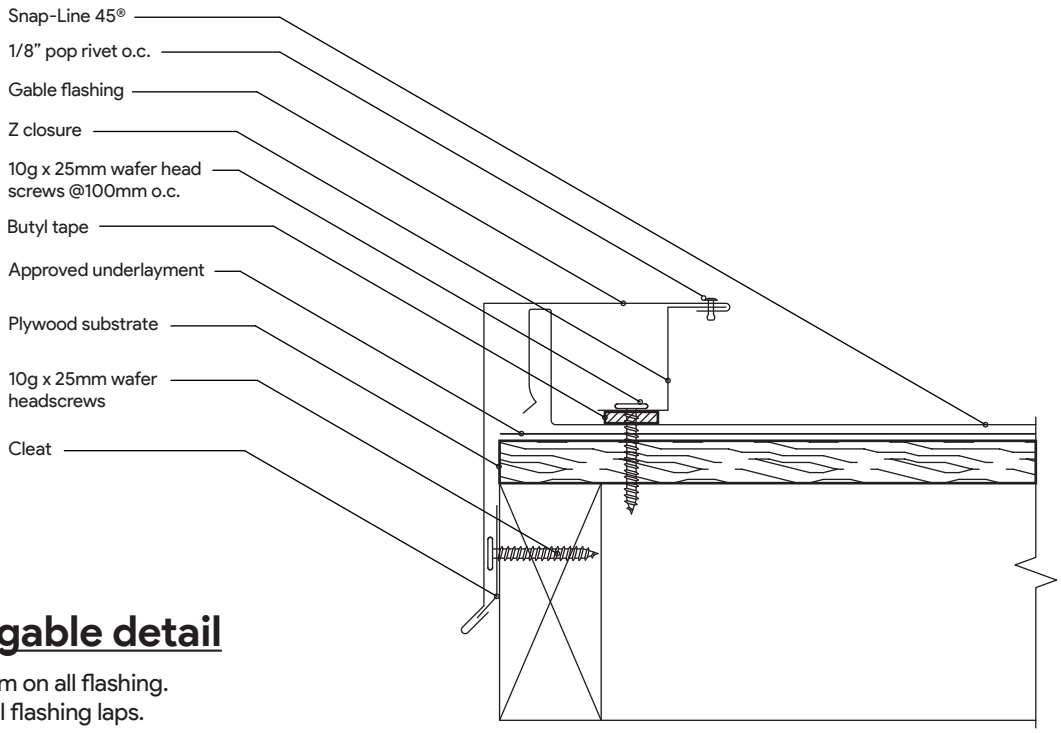
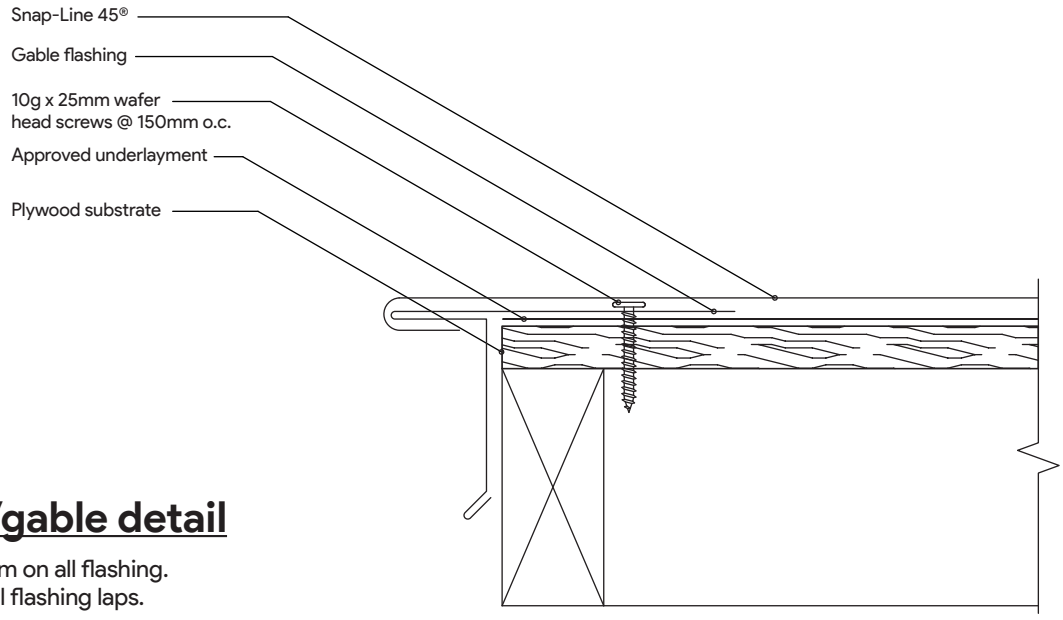


Snap-Line 45® Roof Cladding Flashing Details on Plywood



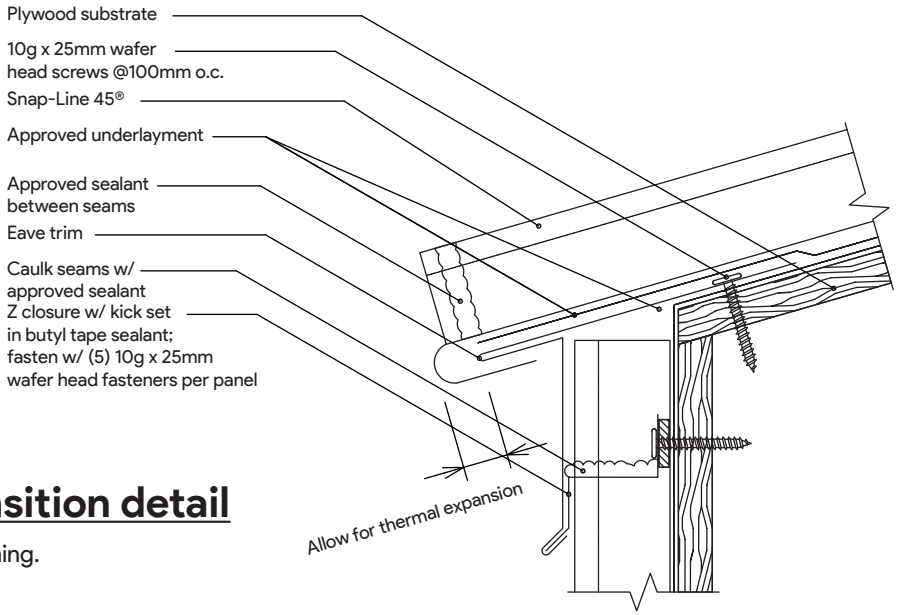
RK1 - Rake/gable detail

Note: Minimum 100mm on all flashing.
Approved sealant in all flashing laps.



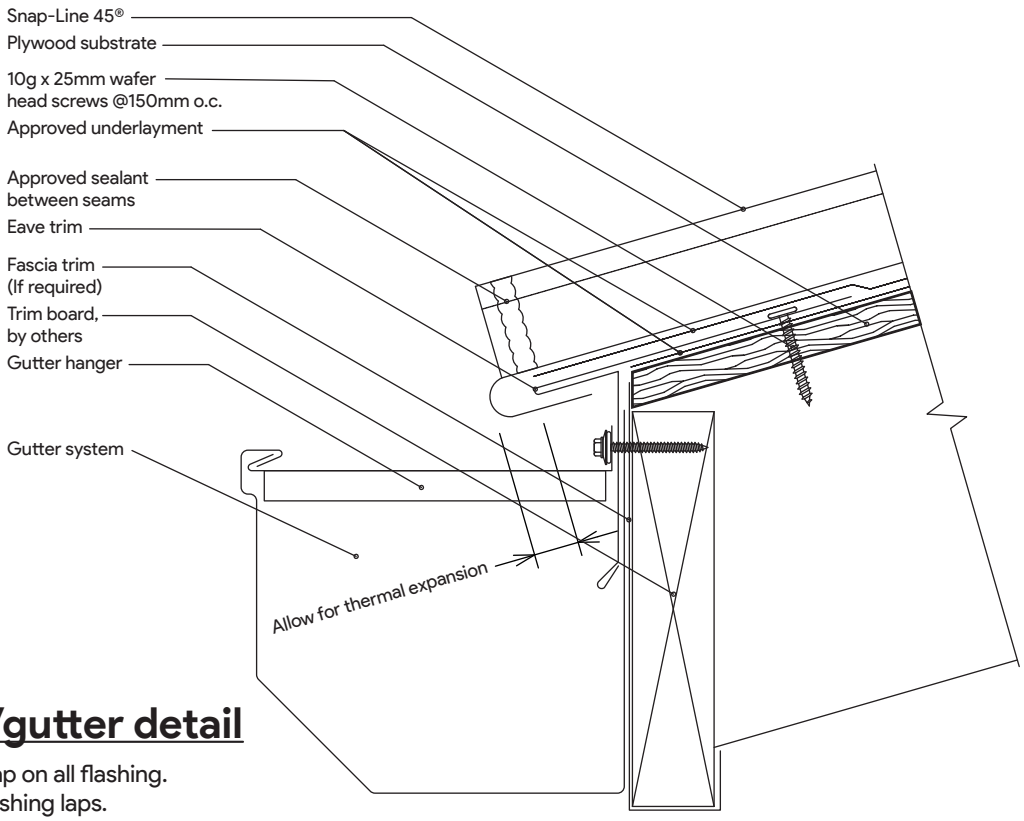
RK2 - Rake/gable detail

Note: Minimum 100mm on all flashing.
Approved sealant in all flashing laps.



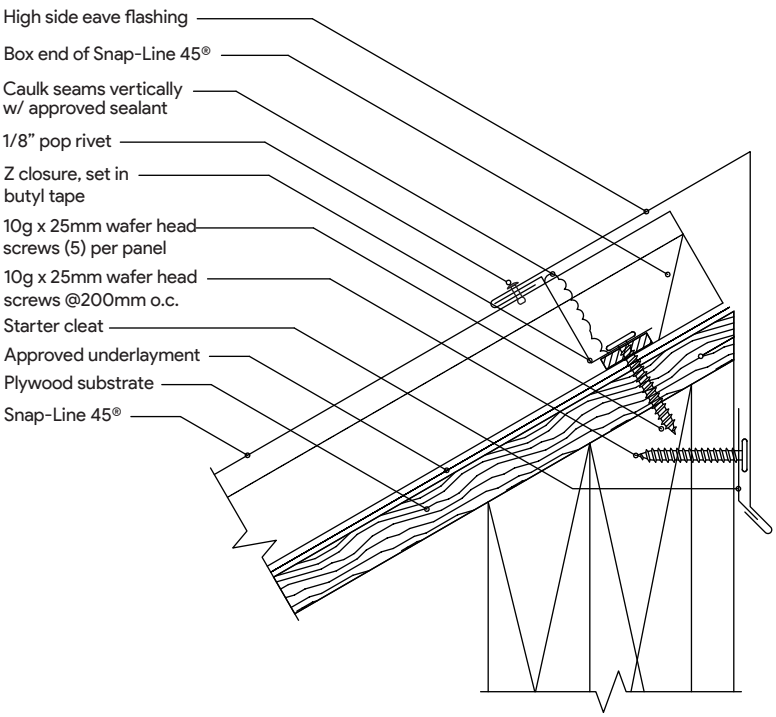
T1 - Roof/fascia transition detail

Note: Minimum 100mm lap on all flashing.
Approved sealant in all flashing laps.



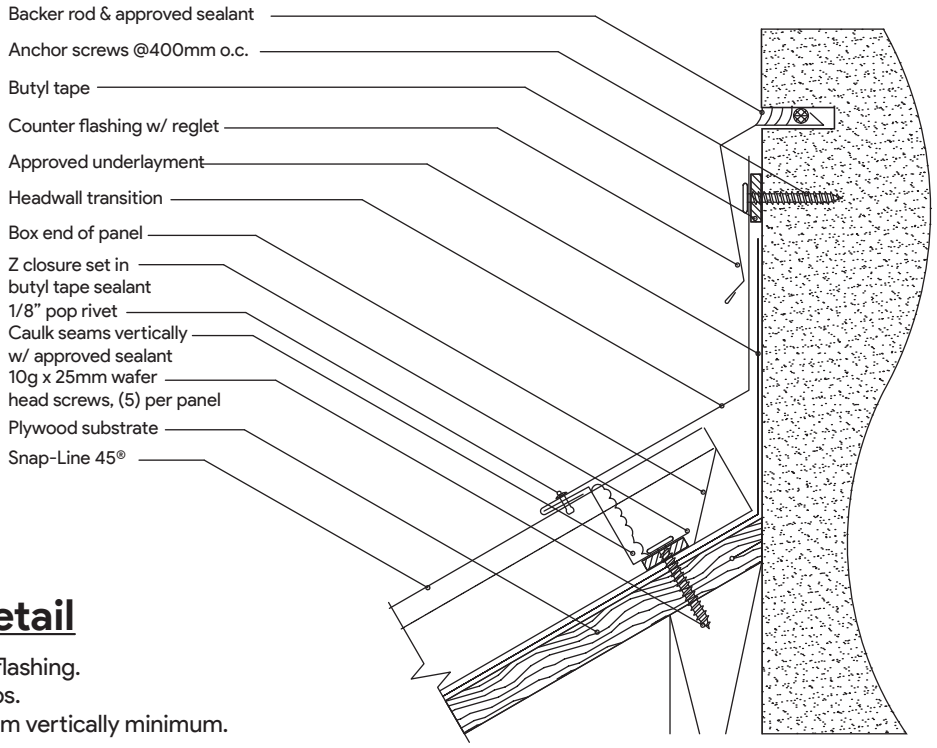
EG1 - Eave w/gutter detail

Note: Minimum 100mm lap on all flashing.
Approved sealant in all flashing laps.



PK1 - High side eave detail

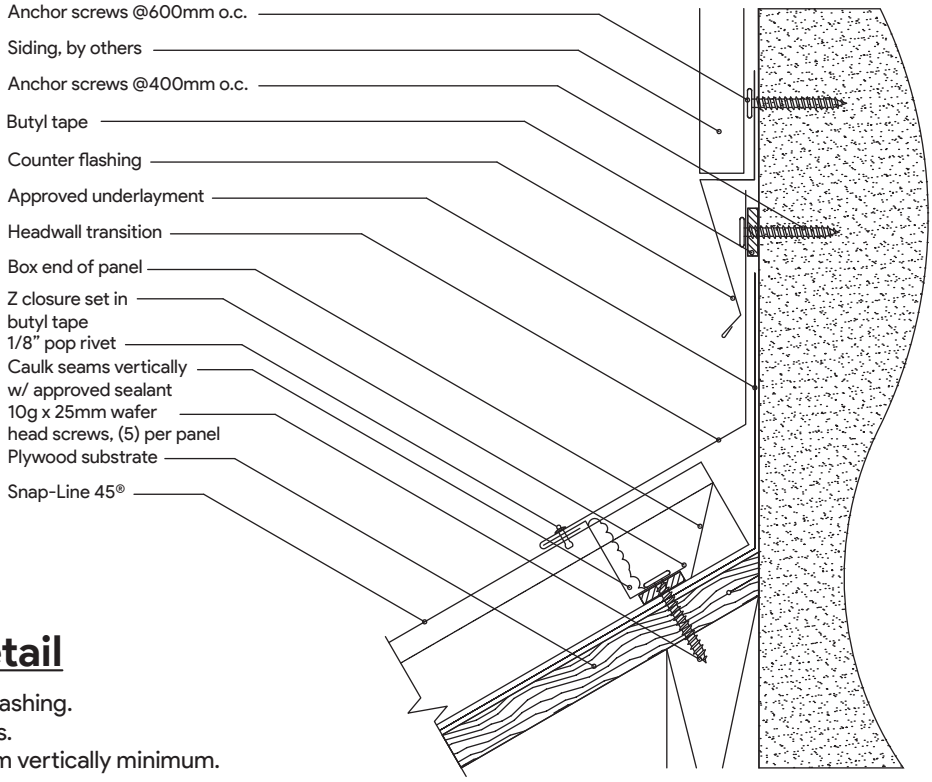
Note: Minimum 100mm lap on all flashing.
Approved sealant in all flashing laps.



HW1 - Headwall detail

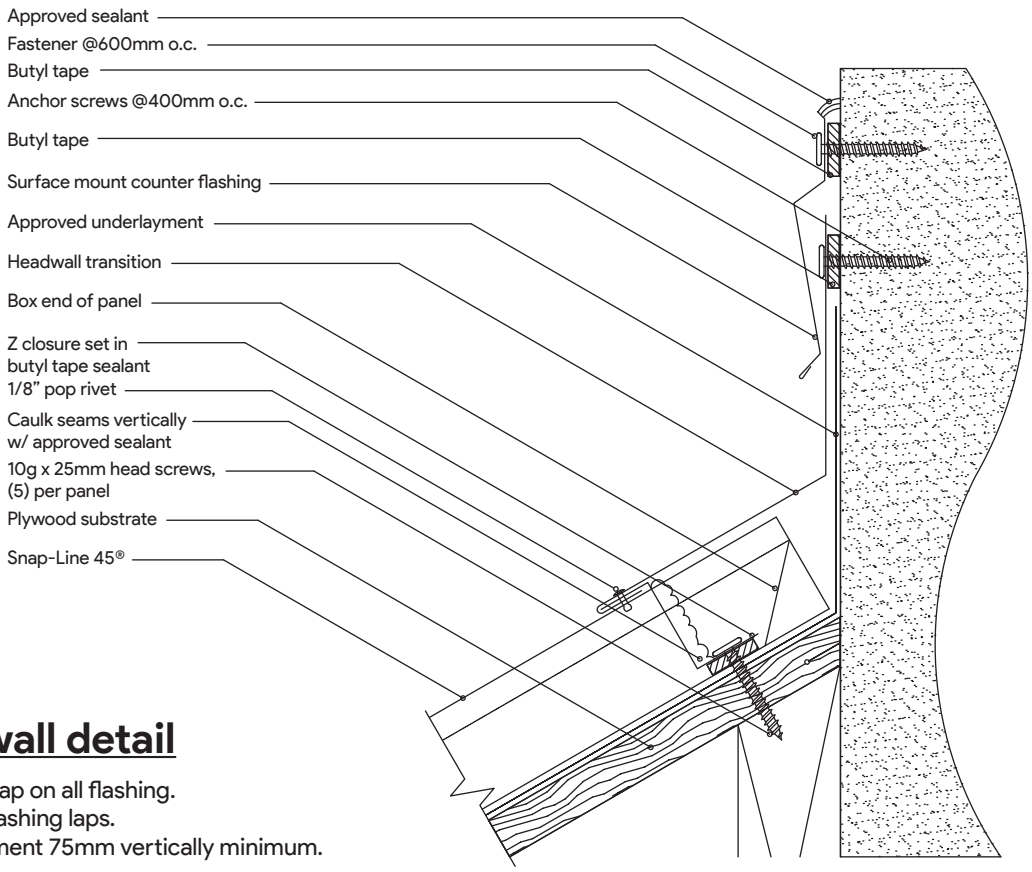
Note: Minimum 100mm lap on all flashing.
Approved sealant in all flashing laps.
Turn approved underlayment 75mm vertically minimum.

Roof Cladding
Flashing Details on Plywood



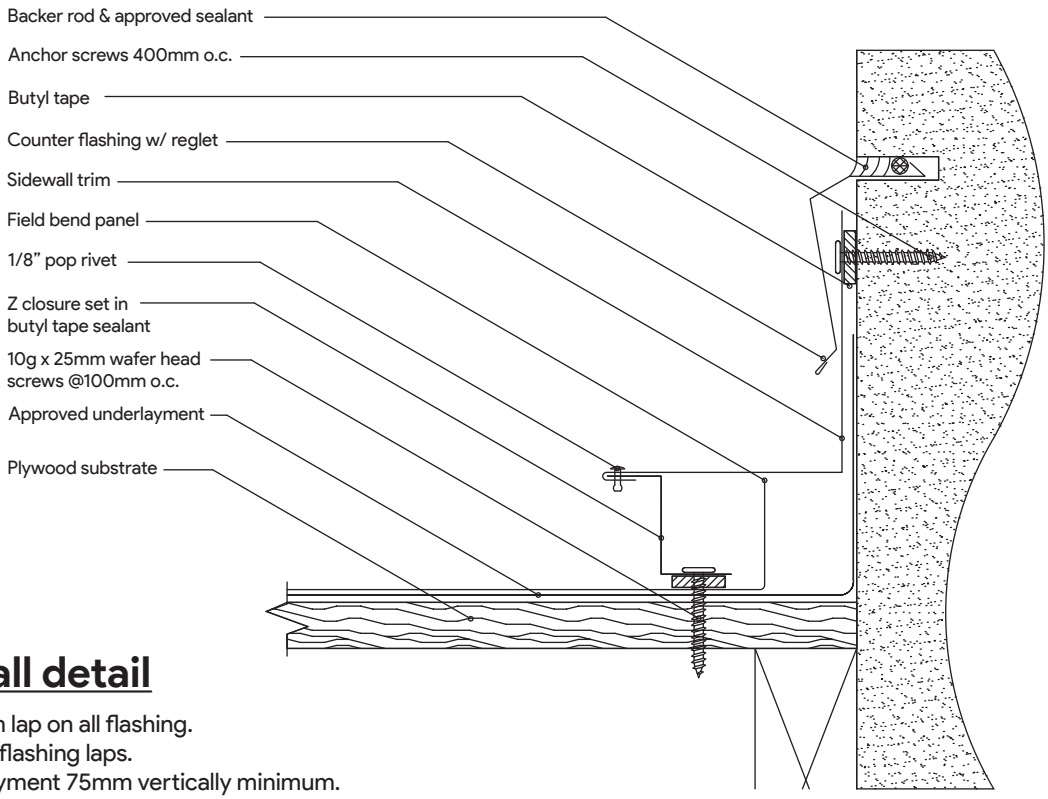
HW2- Headwall detail

Note: Minimum 100mm lap on all flashing.
Approved sealant in all flashing laps.
Turn approved underlayment 75mm vertically minimum.



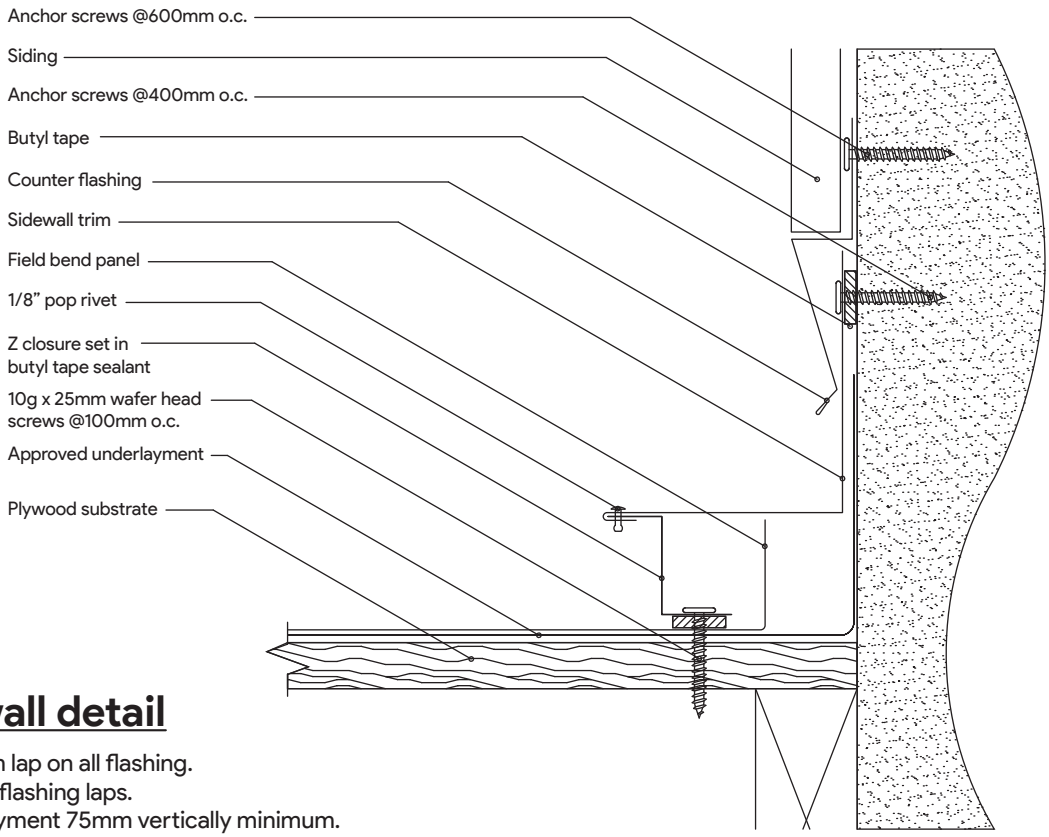
HW3 - Headwall detail

Note: Minimum 100mm lap on all flashing.
Approved sealant in all flashing laps.
Turn approved underlayment 75mm vertically minimum.



SW1- Sidewall detail

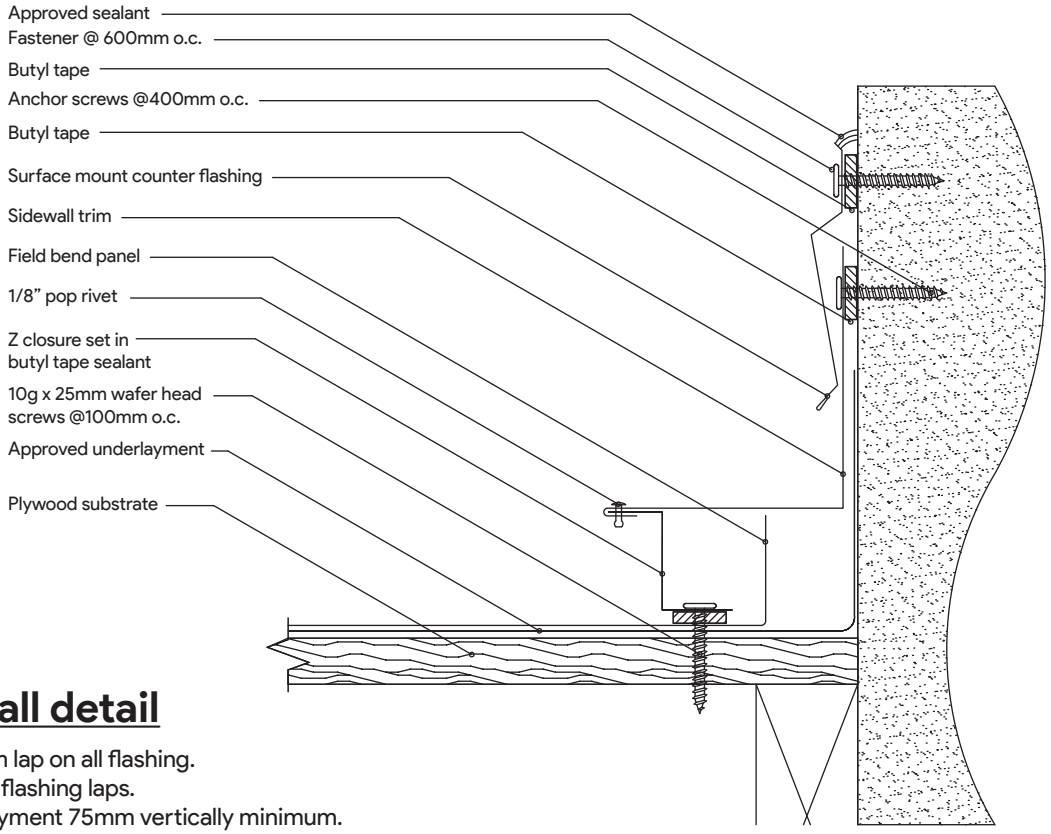
Note: Minimum 100mm lap on all flashing.
Approved sealant in all flashing laps.
Turn approved underlayment 75mm vertically minimum.



SW2 - Sidewall detail

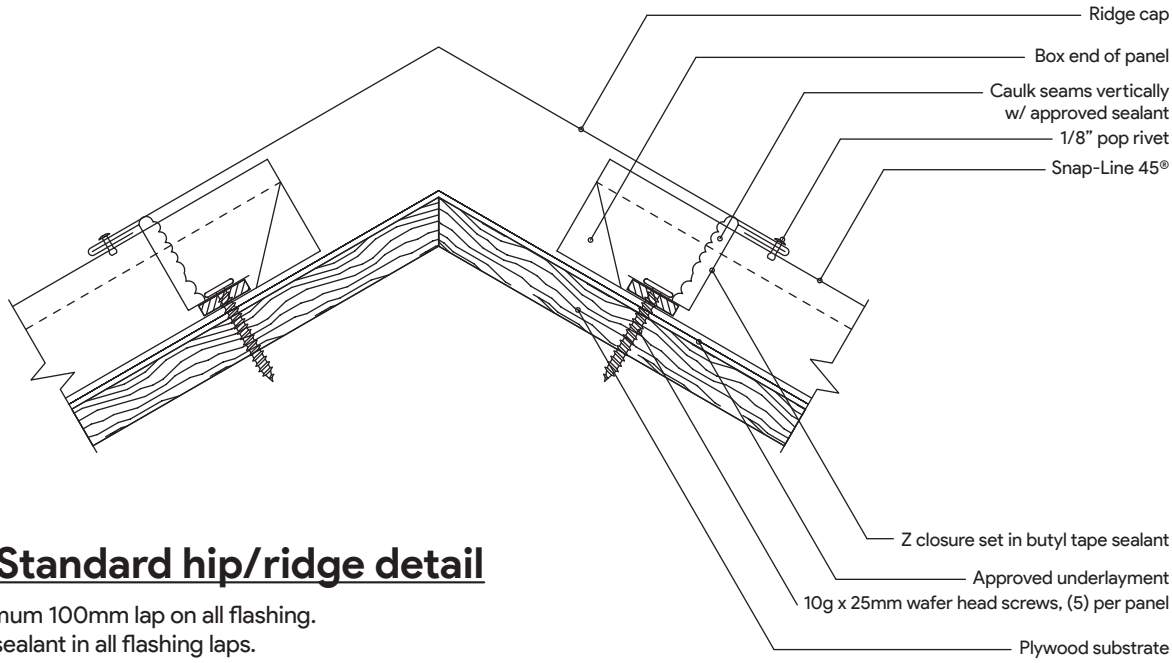
Note: Minimum 100mm lap on all flashing.
Approved sealant in all flashing laps.
Turn approved underlayment 75mm vertically minimum.

Roof Cladding
Flashing Details on Plywood



SW3- Sidewall detail

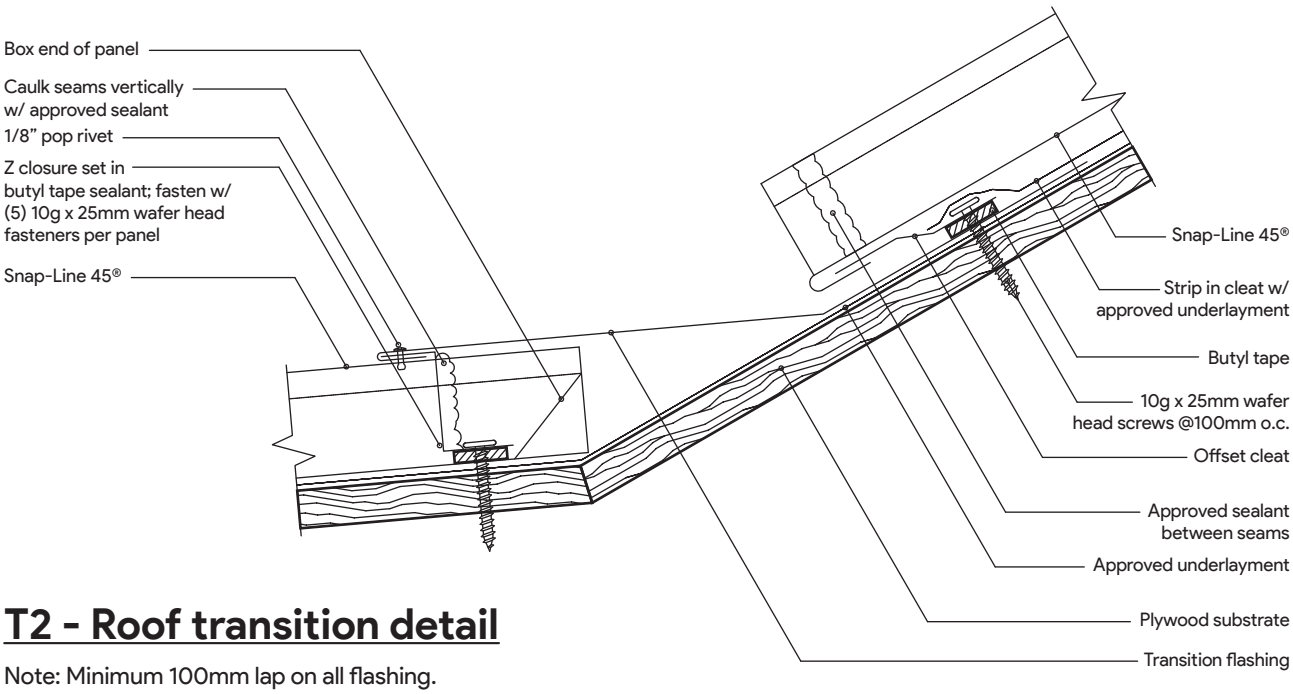
Note: Minimum 100mm lap on all flashing.
Approved sealant in all flashing laps.
Turn approved underlayment 75mm vertically minimum.



HR1 - Standard hip/ridge detail

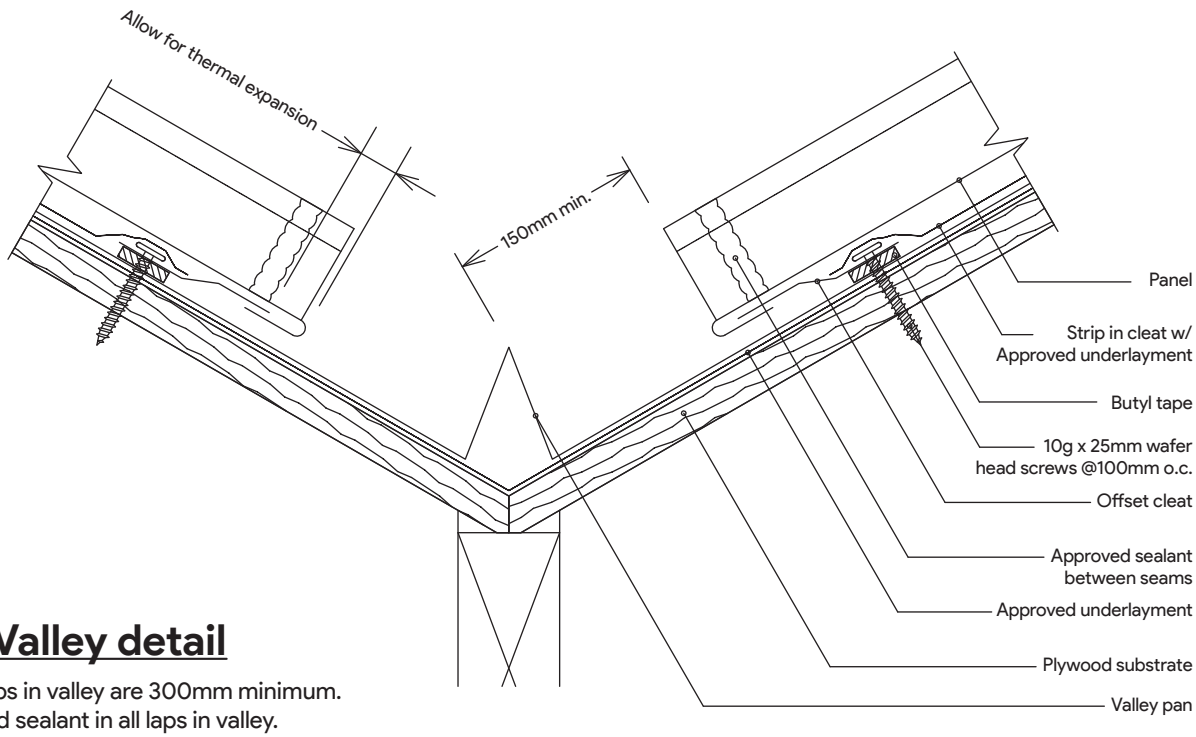
Note: Minimum 100mm lap on all flashing.
Approved sealant in all flashing laps.

Roof Cladding
Flashing Details on Plywood



T2 - Roof transition detail

Note: Minimum 100mm lap on all flashing.
Approved sealant in all flashing laps.



V1 - Valley detail

Note: Laps in valley are 300mm minimum.
Approved sealant in all laps in valley.
Two rows of sealant between valley laps, 100mm up from lap.

Snap-Line45®

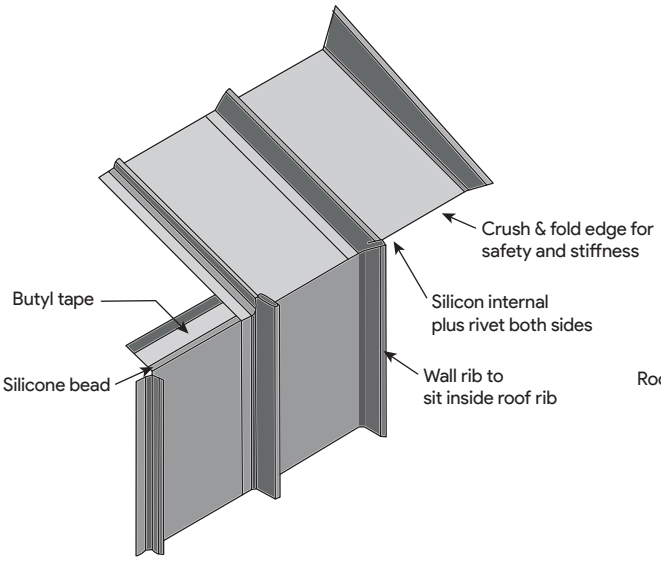
Snap-Line 45®
Cladding Roof to Wall Detail (Mansard Detail)

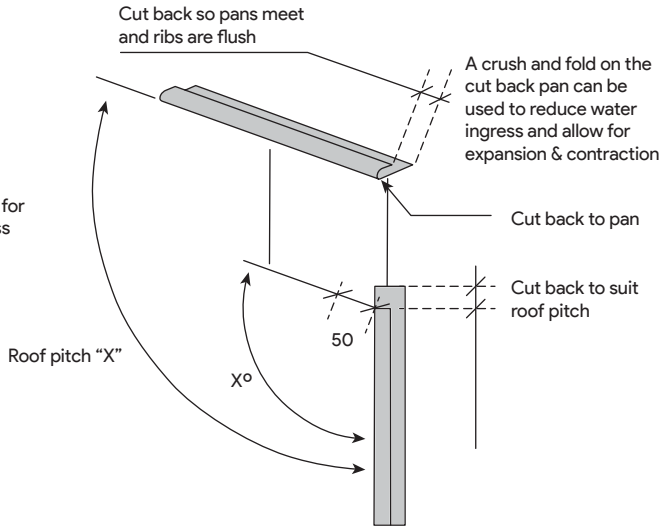
This common architectural detail requires the wall sheet to be cut 50mm longer than the wall height.

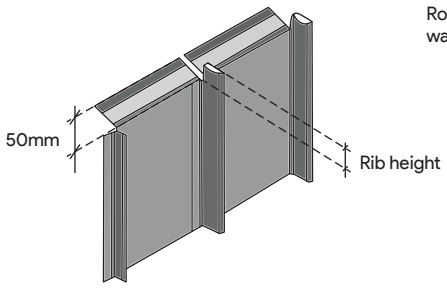
The top end of the wall sheet is notched and a 50mm fold created to sit below the roof sheet.

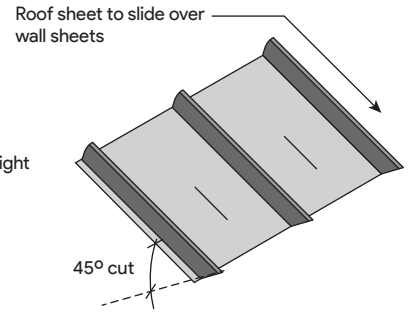
The roof sheet is also notched at the bottom end to match the wall rib height, the ribs are cut back to the pans.

Use butyl tape and silicone to make the joint weathertight.

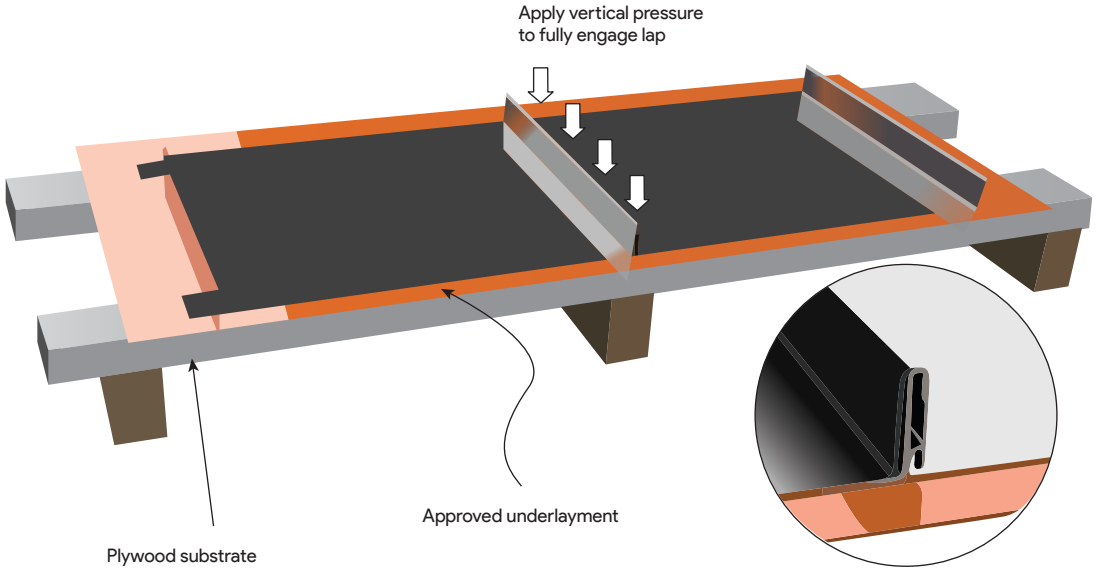


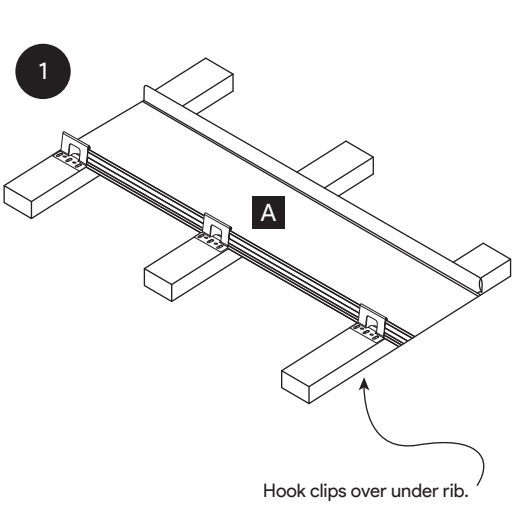


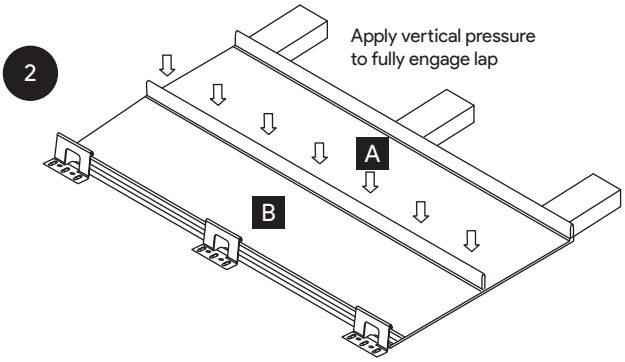




Ensure that the anti-capillary drain on the roof is allowed to drain before the roof/wall joint.

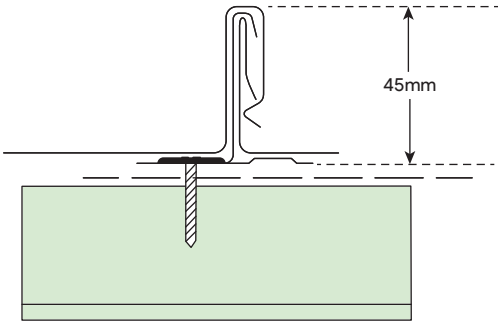


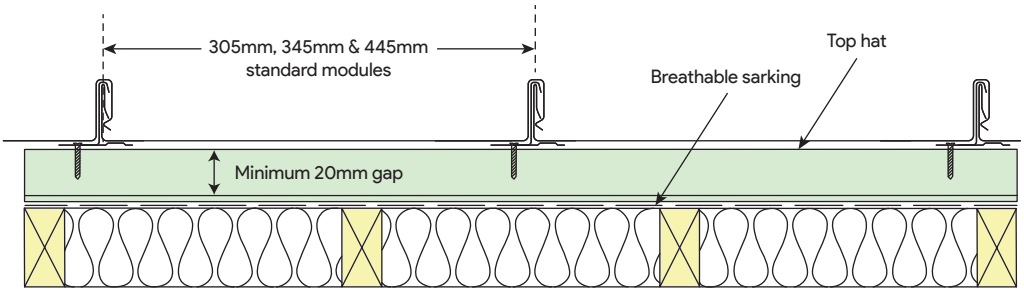




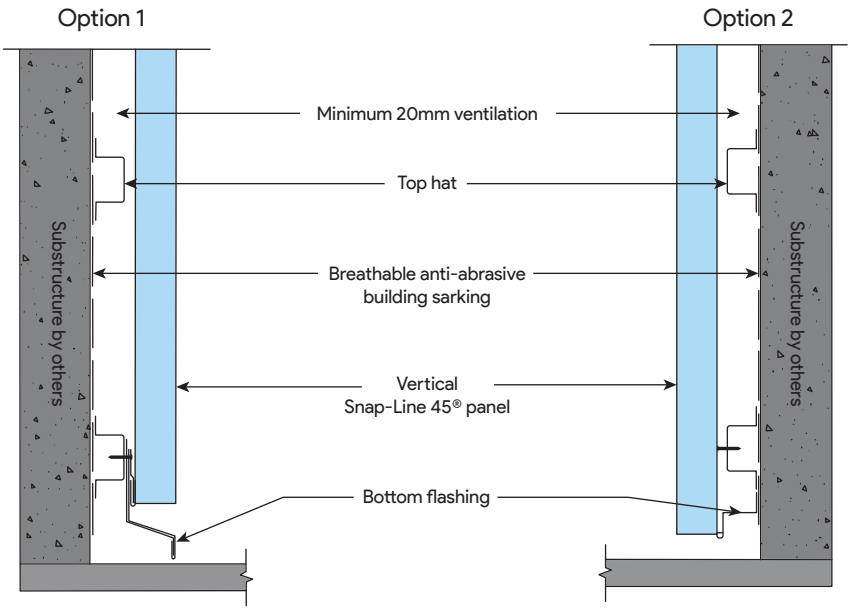
Fix clip down on ply with 2 × 10g - 16×16 Wafer head screws through holes.

Snap-Line 45® Roof Cladding Flashing Details on Steel Batten



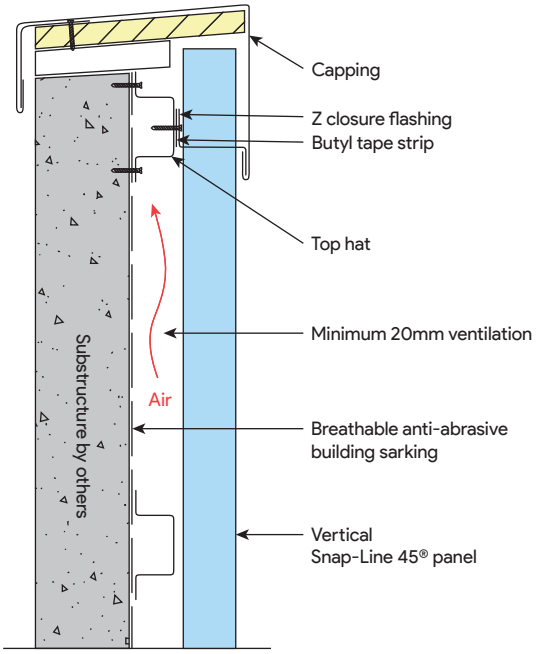


General cross section

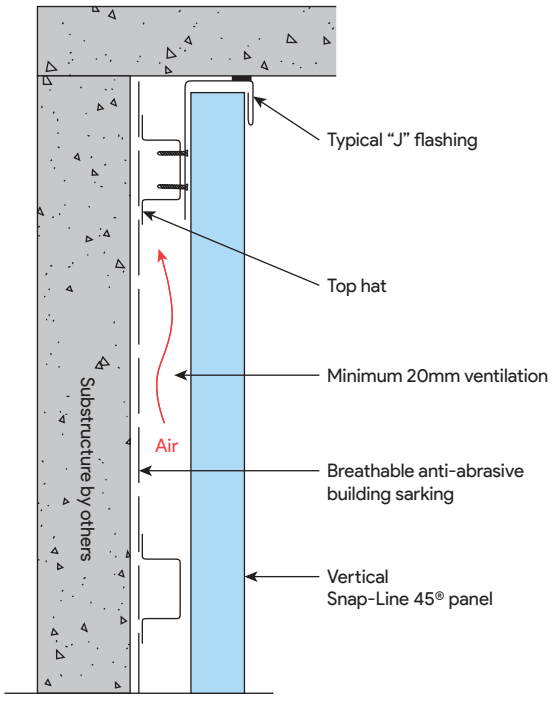


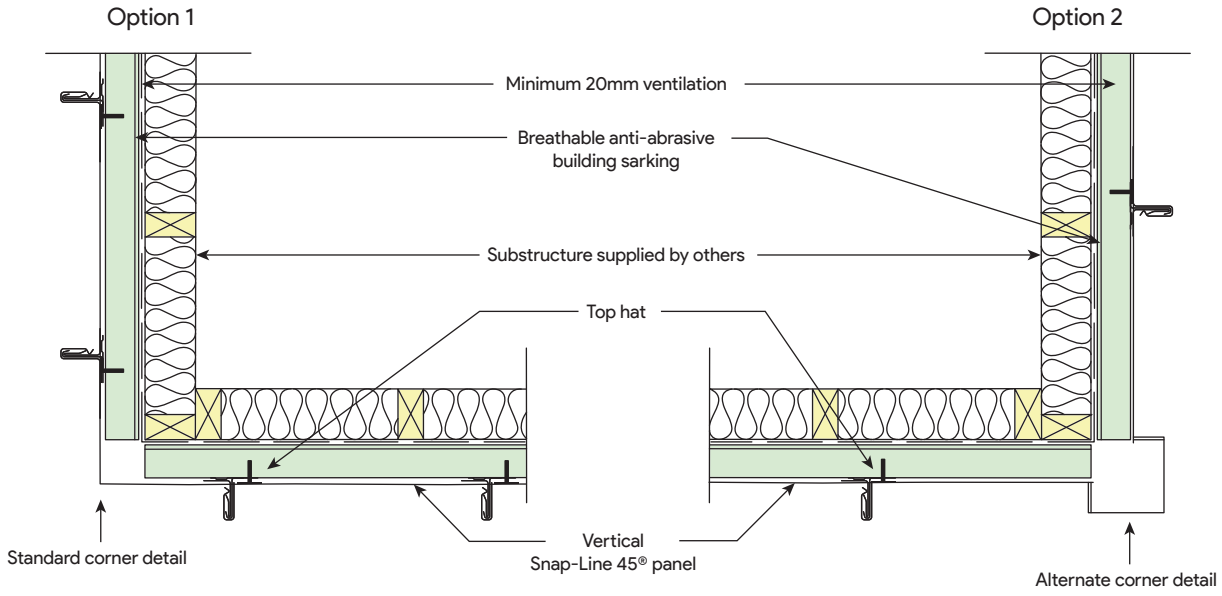
Typical bottom flashing detail

Typical parapet detail

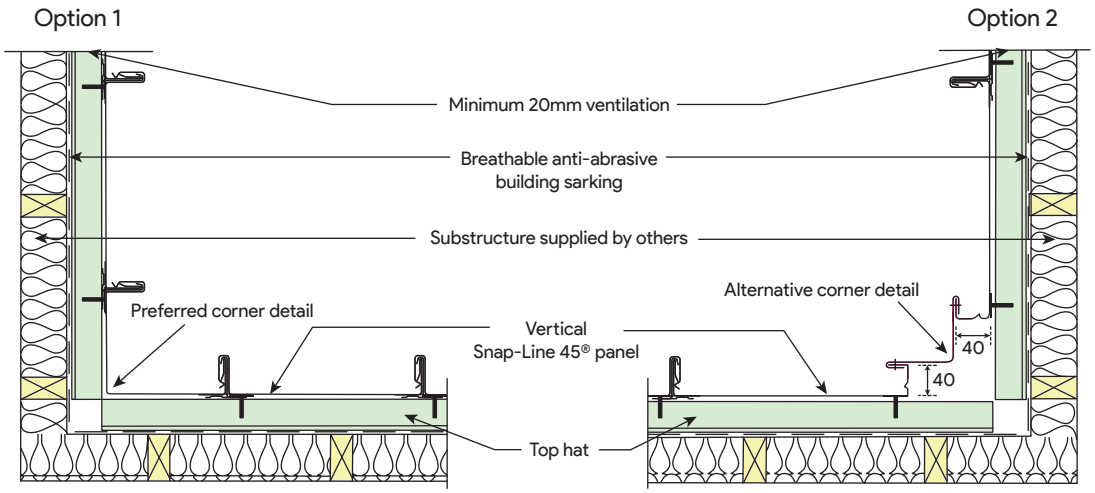


Typical top of wall detail



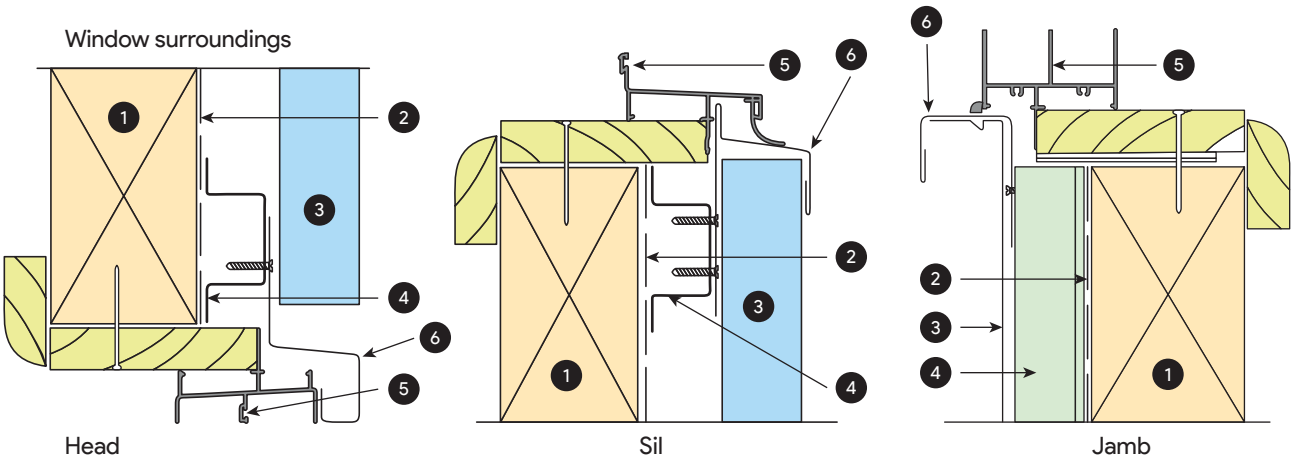


Typical external corner detail



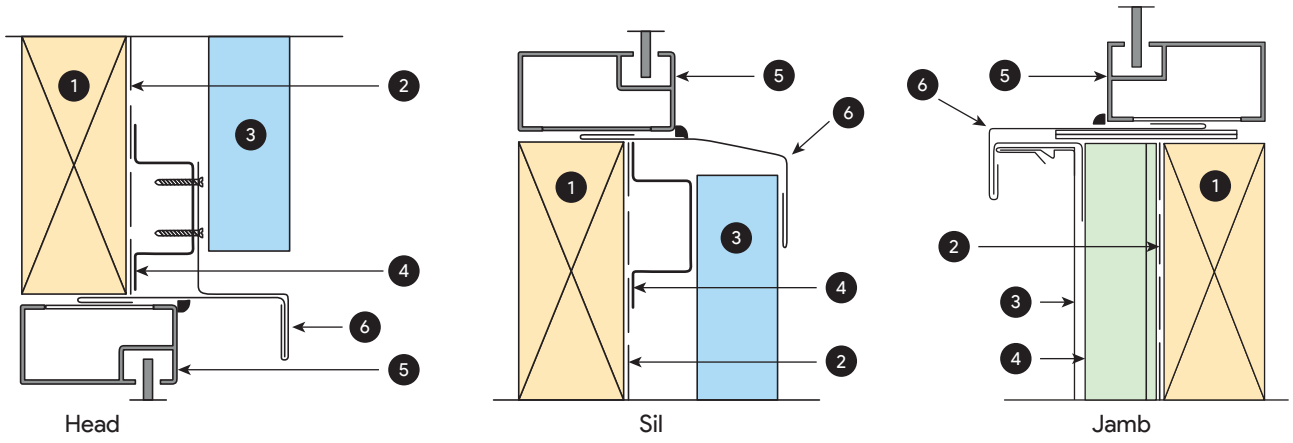
Typical internal corner detail

Wall Cladding
Flashing Details on Steel Batten



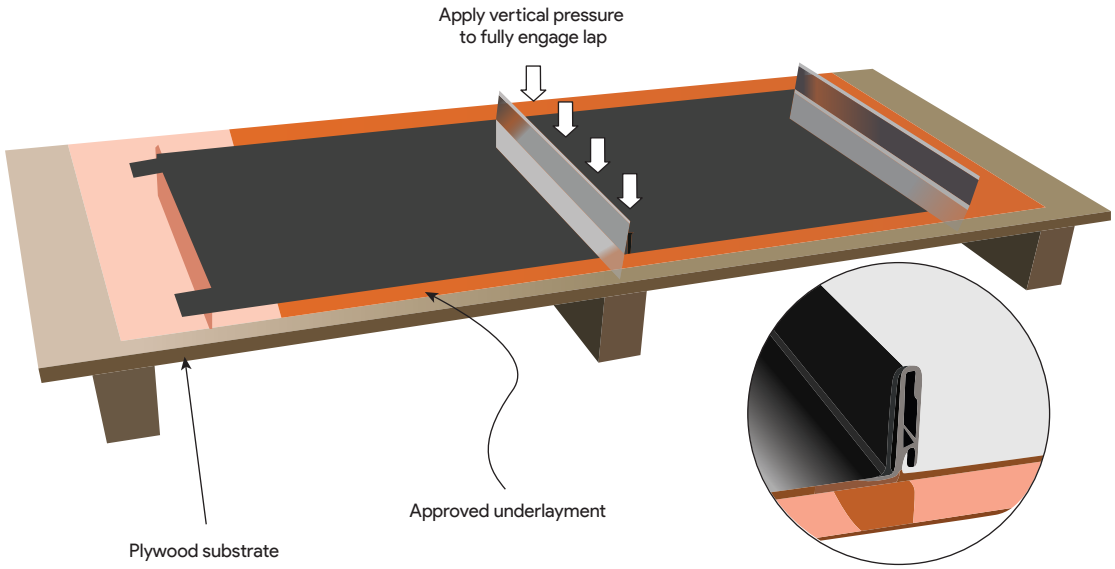
1 Substructure supplied by others
2 Breathable anti-abrasive building sarking
3 Vertical Snap-Line 45® panel
4 Top hat
5 Window supplied by others
6 Flashing

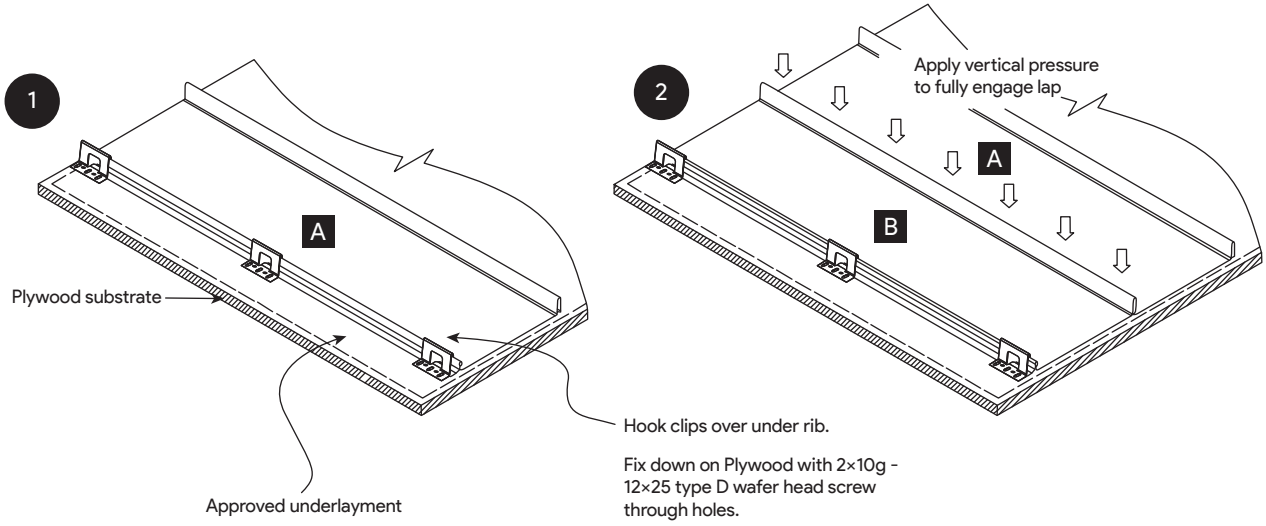
Typical timber reveal window detail



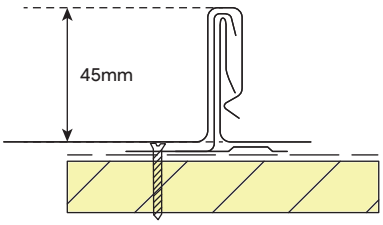
1 Substructure supplied by others
2 Breathable anti-abrasive building sarking
3 Vertical Snap-Line 45® panel
4 Top hat
5 Window supplied by others
6 Flashing

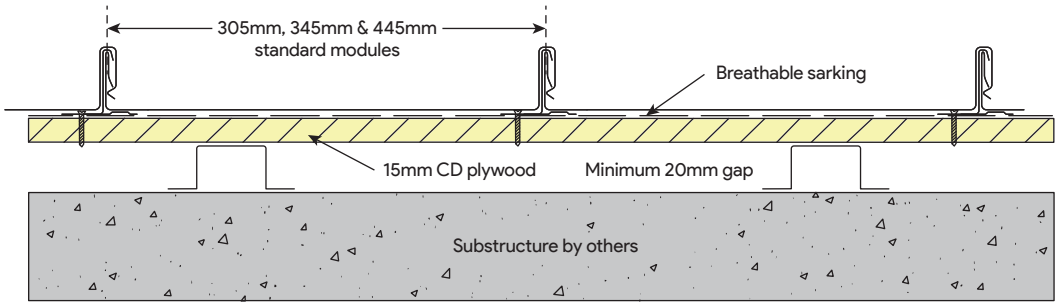
Typical window detail



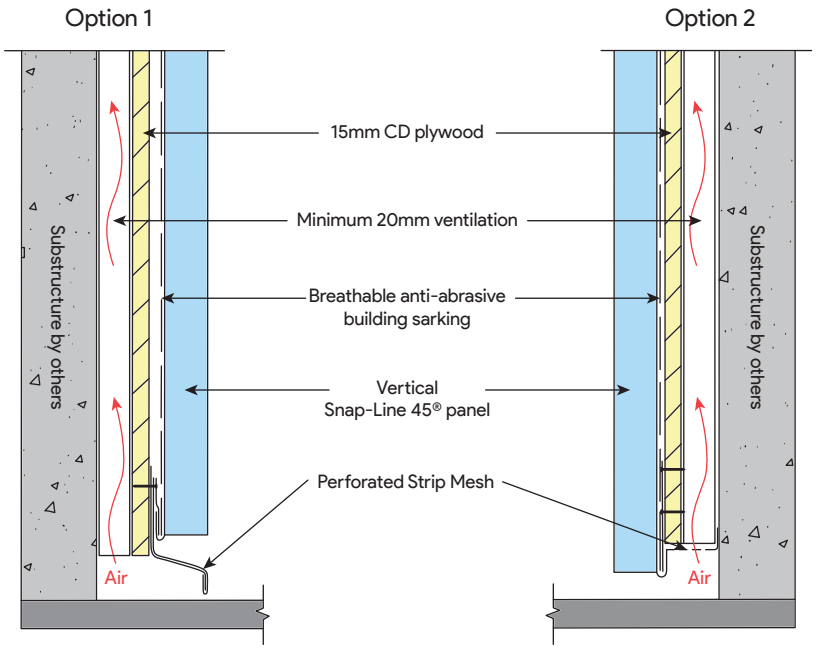


Snap-Line 45® Wall Cladding Flashing Details on Plywood



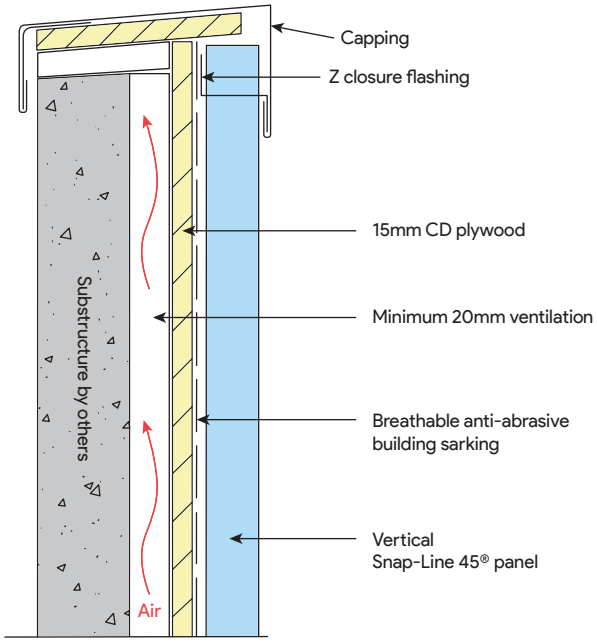


General plan section

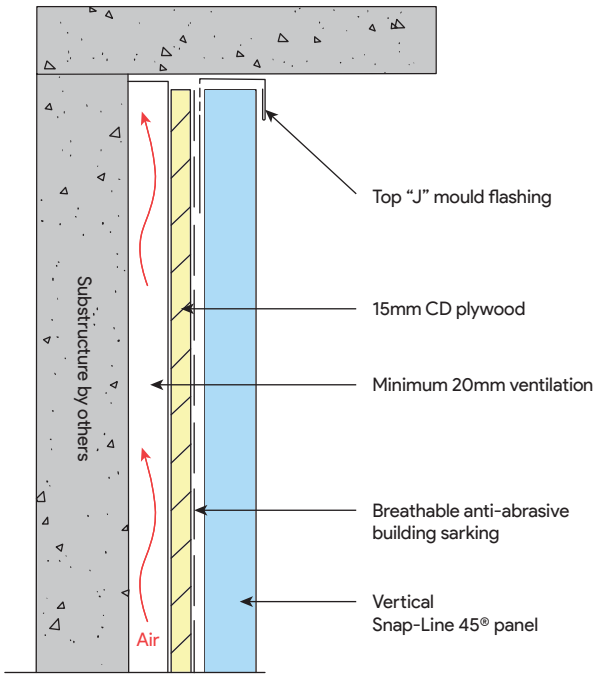


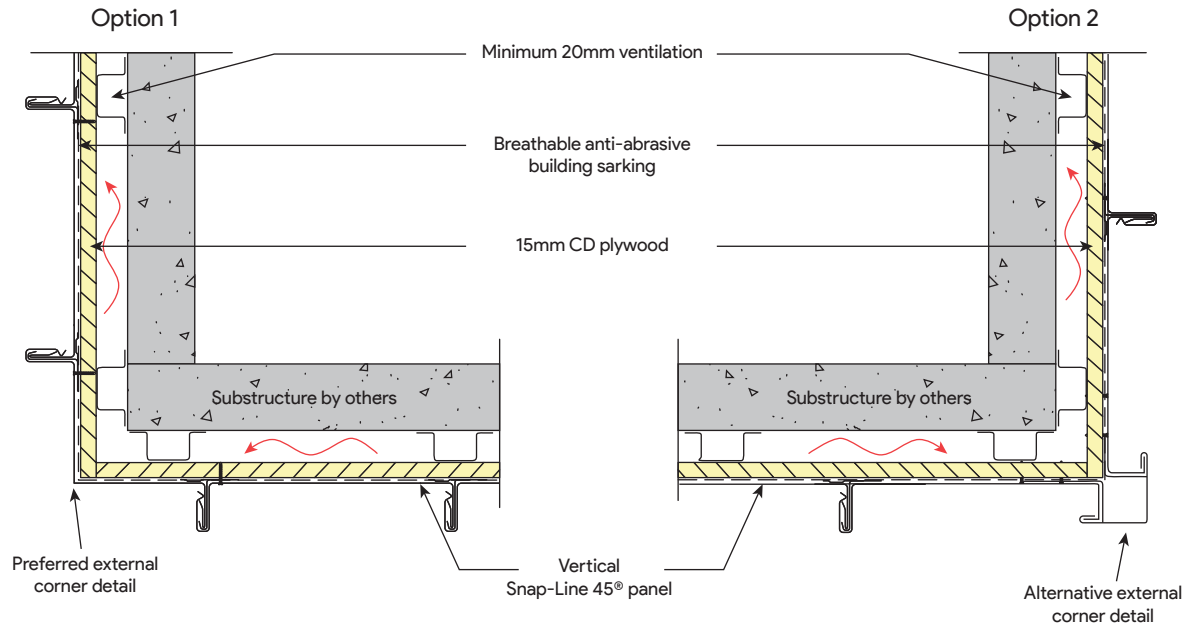
Typical bottom flashing detail

Typical parapet detail

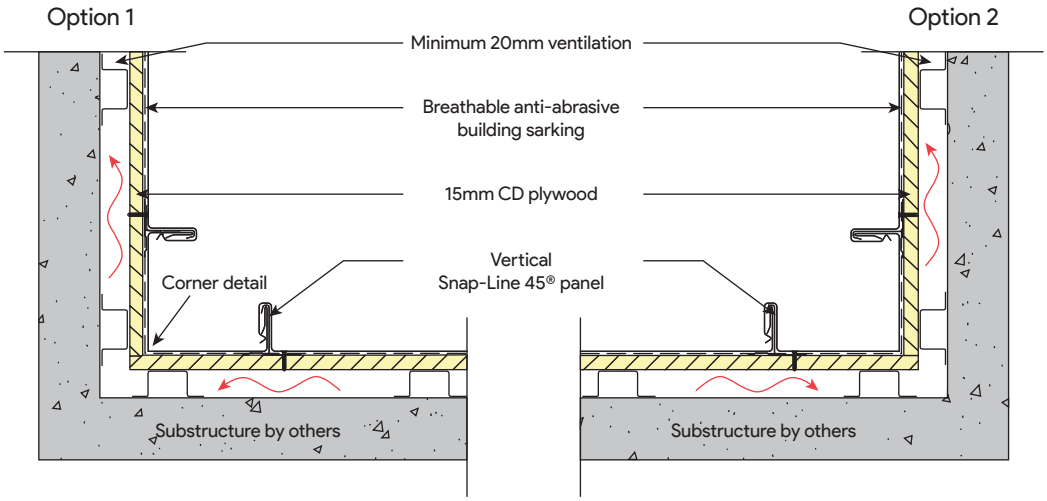


Typical top of wall detail



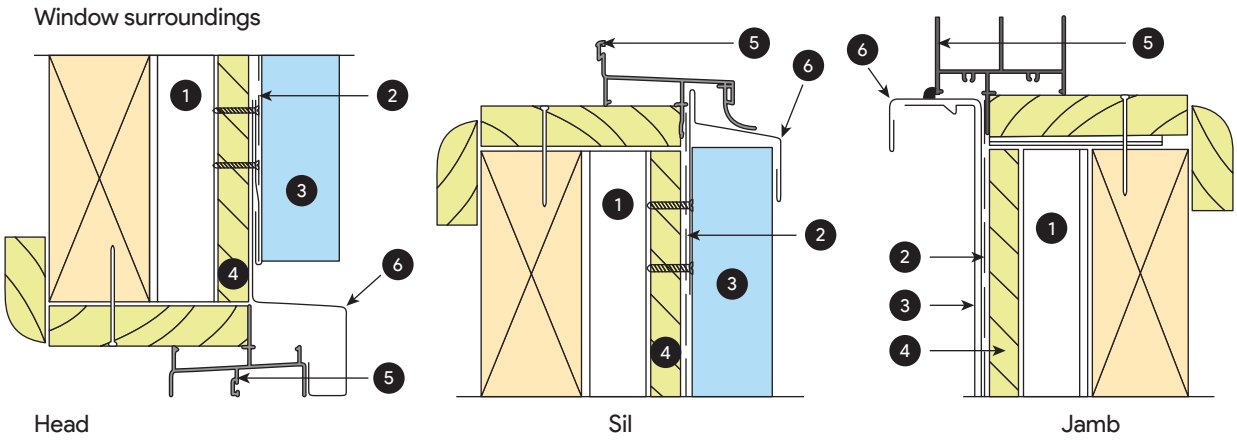


Typical external corner detail



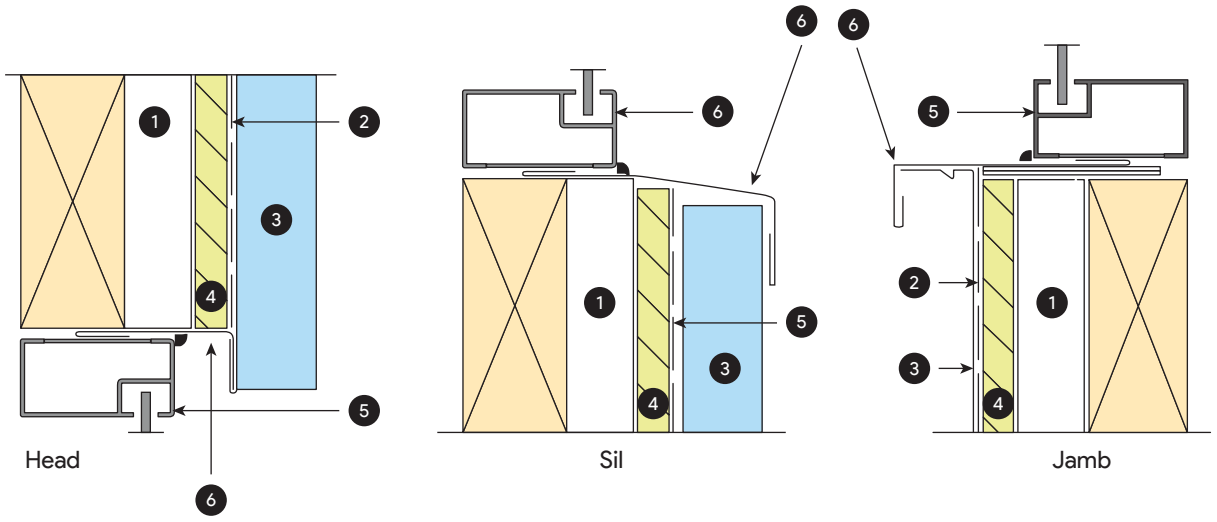
Typical internal corner detail

Wall Cladding
Flashing Details on Plywood



1 Minimum 20mm ventilation
2 Breathable anti-abrasive building sarking
3 Vertical Snap-Line 45® panel
4 15mm CD plywood
5 Window supplied by others
6 Flashing

Typical timber reveal window detail



1 Minimum 20mm ventilation
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Typical window detail

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Version Two