CEMINTEL®

TERRITORY™ SERIES

Internal Installation

01

INTRODUCTION

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Introduction

Cemintel Territory™ is a prefinished cladding system that simulates materials such as stone, timber, concrete, metal, and smooth render.

Territory cladding is a 16mm thick cement bonded fibrous wood particle panel that is pressed with surface textures and finished with a high quality paint and UV coating. Panels are 3030mm in length, with an effective cover width of 455mm, and connect seamlessly into each other via a tongue and groove profile.

Territory cladding panels are supported by a proprietary concealed fixing system that enables the panels to be installed on masonry, timber and steel frames, either horizontally or vertically, externally or internally, on both residential and commercial buildings.

This Design and Installation Guide recommends good building practice methodology and has been prepared as a general guide of design considerations, system engineering information and installation procedures for common internal applications.

It assumes that the user has an intermediate knowledge level of building design and construction. In no way does it replace the services of the building professionals required to design projects, nor is it an exhaustive guide of all possible scenarios. It is the responsibility of the architect, designer and various engineering parties to ensure that the details in this Design and Installation Guide are appropriate for the intended application.

This guide refers to **internal installations** only, as components differ depending on the installation.

Refer to the 'Design and Installation Guide for Cemintel® Territory External Vertical Installation' or the 'Design and Installation Guide for Cemintel Territory External Horizontal Installation' for instructions regarding these applications.

02

PRODUCT OVERVIEW

02 PRODUCT OVERVIEW

Panel Information

Cemintel Territory cladding is a 16mm thick cement-bonded fibrous wood particle panel that's pressed with surface textures and finished with a high-quality paint and UV coating. The panels are 3030mm in length with an effective cover width of 455mm and connect seamlessly into each other via a tongue and groove profile.

The Territory cladding panels are supported by a proprietary concealed fixing system that enables the panels to be installed either horizontally or vertically, externally or internally, on both residential and commercial buildings.

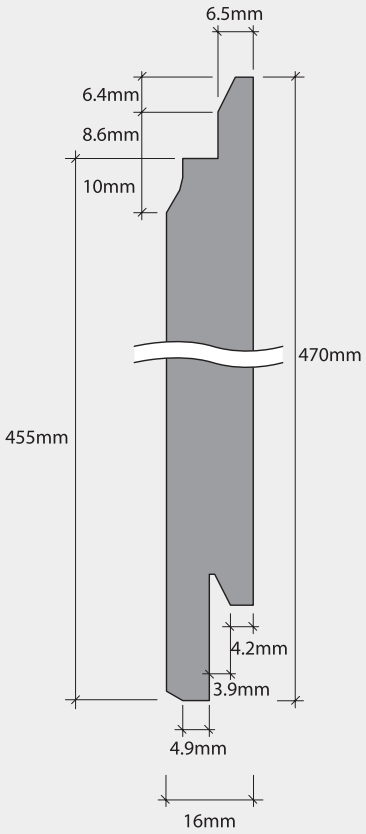
Panels have a special NichiGuard® self cleaning coating* applied during the manufacturing process to Japanese standards. Panels include Platinum Coating technology to protect against UV damage and colour fade.

There is a range of coloured accessories including pre-formed external corner profiles, joint sealants and touch up paint kits to speed up installation and enhance the project finish and appearance.

An alternative aluminium corner can also be used for a more contemporary aesthetic.

Cemintel Territory cladding conforms to the requirements of BS EN 12467:2012 – Fibre-cement flat sheets - Product specification and test methods, Category A, Class 2. The BS EN 12467 bending strength testing demonstrates the Cemintel Territory cladding conforms to the requirements of AS/NZS 2908.2 – Cellulose-cement products, Part: 2 – Flat sheets, Category 3, Type A.

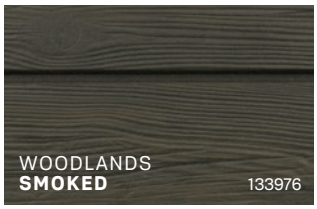
*Note: not all panels have NichiGuard self cleaning coating – check Technical Data Sheet.

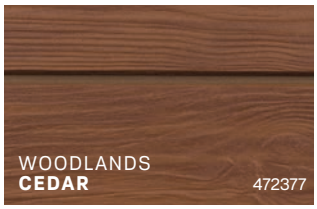


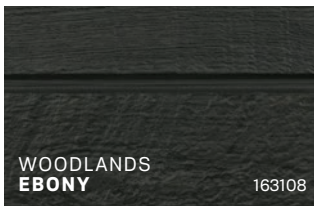
Download Brochure

Colour Palette

WOODLANDS



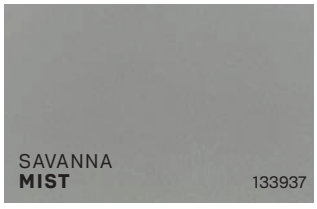


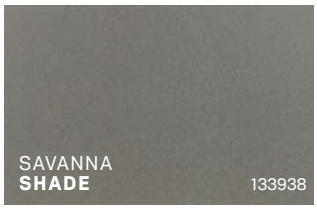


RIDGE

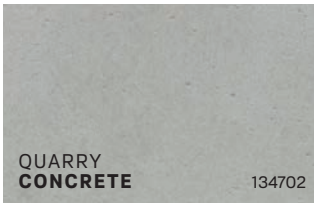
CANYON

SAVANNA





QUARRY



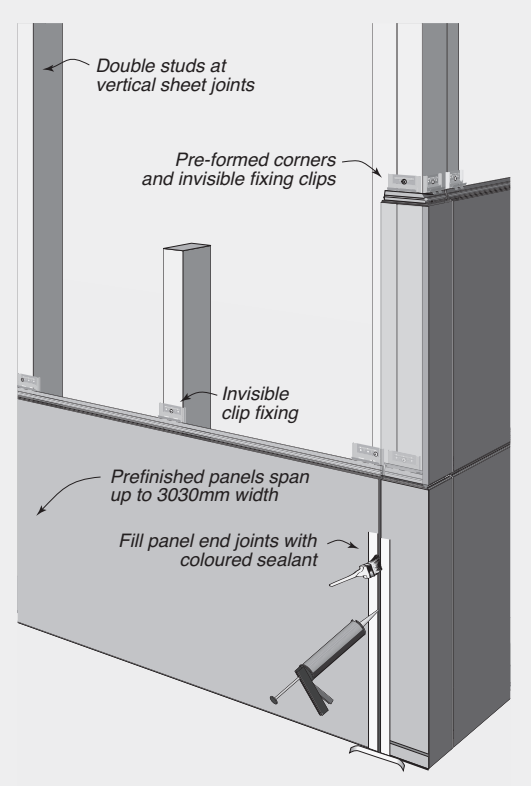
As Territory is a prefinished product, these images may vary from the actual product in regard to colour and surface finish. Panels should be inspected by the owner prior to installation to ensure they meet aesthetic requirements.

03 SYSTEM OVERVIEW

Cemintel Territory panels are installed with the unique Designer Series clip system.
Territory panels can be installed either horizontally or vertically. The clips, together with 5mm spacer strips and base starter strips create a largely concealed fixing system.

Metal corners can be used as an easy alternative to the pre-formed corners shown below.

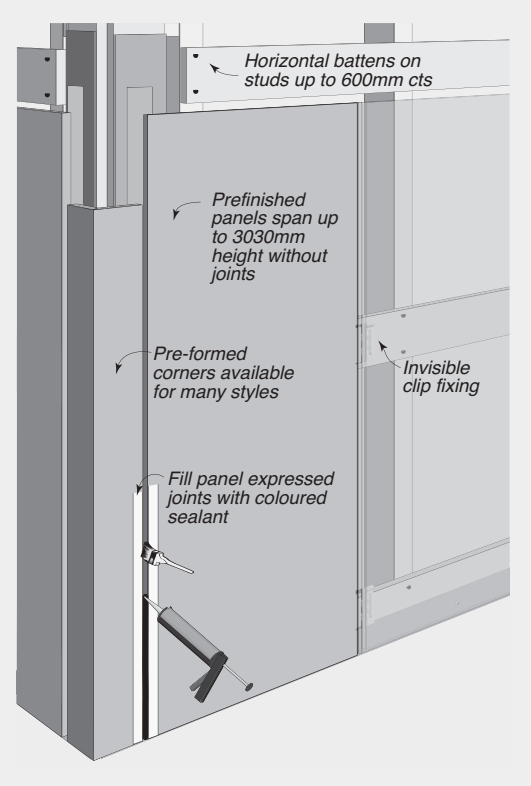
Horizontal Installation



When installed **horizontally**:

- Panels span up to 3030mm width without joints.
- Studs can be at any spacings up to 600mm centres.
- Double studs or blocking are required behind vertical expressed joints to provide for fixing of the clips.

Vertical Installation



When installed **vertically**:

- Panels span up to 3030mm height without joints.
- Studs can be at any spacings up to 600mm centres.
- Horizontal battens are fixed to studs making this system particularly suitable for retro-fit to existing stud framing.
- Additional studs or blocking may be required at wall ends or at junctions with pre-formed corners to provide for fixing.

03

SYSTEM OVERVIEW

Applications

Cemintel Territory can be installed as an internal feature wall solution suitable for all building classes.

CodeMark Australia
Certificate GM-CM 30048

Benefits of the Cemintel Territory System

- Low maintenance.
- No requirement for additional painting costs.
- Potential to speed up the construction process.
- Lightweight panels are designed to be fixed to industry standard timber or steel stud structural frames.
- Panels are easy to cut for openings eg. around windows and doors.
- Group Number 1 for internal lining in accordance with AS 5637.1/ISO9705.

Product Specifications

A Technical Data Sheet can be downloaded from cemintel.com.au

Dimensional/Geometrical Characteristic	Specification	Manufacturing Tolerance	Relevant Standard
Panel Width	470mm (overall width) 455mm (effective coverage)	+ / - 1mm	JIS A 5422
Panel Length	3030mm	+ / - 1mm	JIS A 5422
Panel Thickness	16mm	+ / - 1.2mm	JIS A 5422
Panel Weight (EMC)	Between 24.6kg and 30kg per panel. Weight varies depending on finish. (Note: 2 panels per pack)		

04

DESIGN + AESTHETIC CONSIDERATIONS

04 DESIGN + AESTHETIC CONSIDERATIONS

This section outlines some important areas for consideration in determining whether Cemintel Territory is suitable for the required application. The following points are not exhaustive. It is the responsibility of the Architect/Building Designer to ensure the design conforms to NCC requirements and other relevant building standards that may exist for the location. This guide should be read in conjunction with the NCC.

Face Fixings

Cemintel Territory is installed largely as a concealed fixing system. The panels are held in place by clips that are screwed to the frame. However, in some places, for example, around openings and corners where corner clips cannot be fixed, face fixed nails or screws may be used. A coloured touch up paint is available to cover the nails or screws in this instance.

Window & Door Openings

Cemintel Territory is compatible with industry standard aluminium and timber framed windows.

Where Territory panels are used to line the inside of external walls, consideration needs to be given to the total depth of the wall, taking into account the 16mm thickness of the panel and the 5mm cavity created by the fixing system.

Corners

The system offers the choice of either pre-formed matching corners or metal corners. In many cases the metal corners are considered easier to install.

Coverage

A Cemintel Territory panel has a nominal width coverage of 455mm.

Note that the recommended minimum cut panel size is 100mm in length and 200mm in height. Anything under this will most likely result in cracking. **All cut panels must have edges sealed to protect against moisture penetration**.

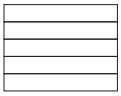


FIGURE 4.01 Panel Coverage Calculator – Horizontal Installation

Territory Panel Rows (Height)	Coverage for Full Panels (mm nominal)
1	455
2	910
3	1365
4	1820
5	2275
6	2730
7	3185
8	3640
9	4095

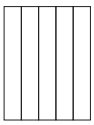


FIGURE 4.02 Panel Coverage Calculator – Vertical Installation

Territory Panel Rows (Width)	Coverage for Full Panels (mm nominal)
1	455
2	910
3	1365
4	1820
5	2275
6	2730
7	3185
8	3640
9	4095
10	4550
11	5005
12	5460
13	5915
14	6370
15	6825
16	7280
17	7735
18	8490
19	8645

Note: For vertical panels, the panels at external corners and wall junctions must be trimmed to form a square edge joint. This will reduce the coverage of the first and last panels in a wall.

DESIGN + AESTHETIC CONSIDERATIONS

04

Control Joints

Movement Control Joints

Control joints provided in the panel layout should be aligned with any movement control joints provided in the framing.

When undertaking building additions, a movement control joint must be installed at the junction of the existing framing and new framing. The cladding systems must be discontinuous at this joint.

When setting out panels, design consideration should be given to the location of joints to ensure that minimum panel lengths and heights are met.

Vertical Control Joints

Vertical sealant filled control joints are required at the end of each panel (at a maximum 3030mm spacings = full length panel), at junctions with pre-formed corners, and at other locations where the Territory wall adjoins another wall type to allow for differential movement (refer to 'Construction Drawings + Details' section). No additional vertical control joints are required.

Vertical joints in panels must be aligned and extend for the full height of continuous panelling, although additional joints may be placed over openings for ease of installation. As the joints are expressed and sealant filled, consideration to the positioning of joints is important for aesthetic reasons. Placing joints at sides or above openings, or the use of full height windows can reduce the visual impact of joints.

The quality of the sealed joints can impact the aesthetic finish, and care needs to be taken when applying the sealant. Refer to installation details for instructions on how to seal joints.

Structural

Framing and Substrate Options

Cemintel Territory can be fixed to timber or steel framing as well as to masonry substrates.

For timber and steel framing, the minimum requirement shall be in accordance with the following standards:

- AS 1684 – Residential Timber-Framed Construction.
- AS/NZS 4600 – Cold-Formed Steel Structures.

It is critical that the frame is true and plumb. Industry best practice for frame tolerance is 5mm misalignment over 3000mm.

Note: depending on the chosen panel layout, double studs may be required in some locations. Refer to 'System Engineering' section.

Structural Bracing

Cemintel Territory panels are indirectly attached to the structural framing via clips and spacers. As a consequence, they are not designed to provide wall bracing.

Bracing must be provided in the structural framing with methods such as sheet or strap bracing. Where sheet bracing is used, the entire wall framing to be clad with Territory panels must be sheeted to maintain a uniform fixing plane. Note: window setout will be affected.

Wind Loading Capacity

The Cemintel Territory panels with Panel Clips at a maximum 600mmm spacing and installed in accordance with the construction details in this guide have a design ultimate wind pressure capacity of 0.50kPa for a minimum MGP10 timber framing and a minimum 0.50mm BMT G2 steel framing.

04

DESIGN + AESTHETIC CONSIDERATIONS

Other Design Considerations

Services

The Territory system will accommodate services that are run through the framing. Any notches or holes formed must be considered in the framing design.

Renovations

When undertaking building renovations, remove all lining from the original wall framing. Ensure the condition of the framing is in accordance with current requirements and is as true and as plumb as possible (within accepted industry tolerance of 5mm misalignment over 3000mm).

Install additional framing and insulation as required.

Limitations

Territory is not recommended and not warranted for the following applications:

- Wet areas such as bathrooms.
- Fireplace cladding.
- Exposure to temperatures greater than 50°C.
- Fixing of tiles or other materials to the face of the panel.
- The face is painted.

The above listing is not intended to be comprehensive. If in doubt, please contact Cemintel.

Inspection, Repair and Maintenance

Regularly inspect panel surfaces and follow wash-down procedures when required.

It is recommended storing additional panels in case any panels are damaged in the future. Any small chips can be painted over with touch up paint which both hides the underlying panel colour and seals the panel to prevent moisture ingress.

If a whole panel needs to be replaced, the panels which sit above it will need to be removed one by one from the heading, and then reassembled with joints resealed.

Wash Down Process

Panels have been coated with a factory finish which has ‘self cleaning’ properties.

Consequently, ongoing maintenance should be limited to an occasional wipe down with a damp cloth or using a soft brush (like a dust pan brush).

When diluting the neutral detergent, follow the manufacturer’s instructions and use the weakest solution possible.

05

COMPONENTS + ACCESSORIES

05

COMPONENTS + ACCESSORIES

Note: Codes can change from time to time. Refer to the website for the current list of components prior to ordering.

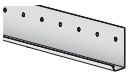
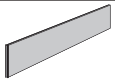
Cemintel Territory Panels and Coloured Accessories

Product Name	Panel (2 Pk)	Touch-Up Paint*	Primer	Coloured Joint Sealant Sausages 500mL	Pre-formed External Corner Horizontal	Pre-formed External Corner Vertical
WOODLANDS Smoked	133976	165354	111616	178928	134409	134415
WOODLANDS Cedar	472377	478268	471983	* Contact CSR	472326	472345
WOODLANDS Teak	133975	165355	111616	178923	140727	140713
WOODLANDS Grey Gum	472376	478226	111616	178921	472325	472344
WOODLANDS Ebony	163108	165356	471983	* Contact CSR	163109	163110
WOODLANDS Birch	472366	478227	471983	* Contact CSR	472327	472346
WOODLANDS Limed	163175	165358	111616	178927	163225	163247
WOODLANDS Oaky Slats	472362	478228	471983	* Contact CSR	472330	472349
WOODLANDS Kwilla Slats	472361	478229	111616	472310	472329	472348
WOODLANDS Jarrah Slats	472360	478300	111616	472269	472328	472347
QUARRY Urban Grey	133977	165372	111616	178922	134410	134416
QUARRY Concrete	134702	165372	111616	178922	134410	134416
RIDGE Black	472373	478301	471983	* Contact CSR	472336	472351
RIDGE White	472374	478302	111616	178848	472337	472352
CANYON Carnarvon	472365	478315	111616	472321	472340	472355
CANYON Kings	472363	478314	111616	472319	472338	472353
SAVANNA Cloud	133935	165368	111616	178848	134391	134392
SAVANNA MIST	133937	165370	111616	178850	140724	140717
SAVANNA SHADE	133938	165371	111616	178921	140725	140715
SAVANNA SHADOW	477863	478303	111616	477867	477866	477865

#Pre-formed External Corners are manufactured to match panels. Internal measurement – 70mm x 70mm. Coverage nominal 86mm x 86mm x 3030mm (vertical corner) / 455mm (horizontal corner). * For coloured sealant options for this panel, plesae contact CSR on 1300 CEMINTEL (1300 236 468).

Other Accessories/Tools

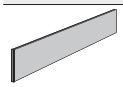
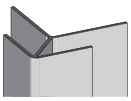
Note: To guarantee performance, only approved fasteners should be used in these systems. Where nominal fasteners are required, Class 3 minimum finish products must be used.used in these systems. Where nominal fasteners are required, Class 3 minimum finish products must be used.

Accessories	Description	Use*	Size/Colour	Quantity	Product Code
* H refers to components for horizontal installation. V refers to components for vertical installation. ALL refers to components for both horizontal and vertical installation.					
	**Screws for Timber Framing** – used to fix starter strip, clips and other components. Stainless steel 410 grade and clear coated.	ALL	35mm	500 per pack	105366
	Nails for Timber Framing – for fixing panels at soffit line and other locations where required. Ribbed shank, flat head, stainless steel 304 grade. Pre-drill panels for all nails.	ALL	75mm	230 per pack	105298
	**Screws for Steel Framing** – for face fixing panels at soffit line and other locations where required. Class 3, self-drilling, CSK self-embedding head, Phillips drive. Suitable for minimum 0.75mm BMT steel framing.	ALL	10g x 55mm	500 per pack	113603
	**Screws for Steel Framing** – for fixing starter strip, clips and other components. Class 3, 8g, self-drilling, button head, Phillips drive.	H	20mm	1000 per pack	113604
	**Internal Horizontal Starter Strip** – steel profile used at the base to locate the first row of panels. Provides 5mm offset from face of studs. Manufactured from 1.2 BMT steel with galvalume AZ150 corrosion resistant coating.	H	3030mm	1 each	136824
	**5mm Panel Clip** – fixed to the framing to retain the tongue and groove edges of panels. Manufactured from SuperDyma corrosion resistant coated steel. Installed horizontally for horizontal applications and vertically for vertical applications.	ALL	60mm x 45mm x 5mm	50 per pack	114913
	**5 x 50mm Horizontal Spacer** – for packing between framing and panels at eaves and soffit trim. Manufactured in extruded plastic.	ALL	5mm x 50mm x 1200mm	1 each	129266

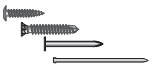
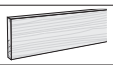
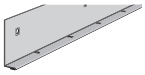
COMPONENTS + ACCESSORIES

05

Note: Codes can change from time to time. Refer to the website for the current list of components prior to ordering.

Accessories	Description	Use*	Size/Colour	Quantity	Product Code
	**5 x 45 x 45mm Self Adhesive Spacer** – for use where small segments of spacer are required.	ALL	5 x 45 x 45mm segments 1000mm	1 each	114912
	**External Metal Corner Trim** – anodised aluminium extrusion used to dress and finish external corners. 60mm x 65mm x 3030mm	ALL	Charcoal Pearl Silver	1 each	126961 135040 135041
	**Backing Rod** – used to enable correct filling of some joints with sealant. The diameter of the backing rod must be appropriate for the width of the gap being filled.		10mm dia. x 50m roll	1 each	11177
	**Sealant Bond Breaker Tape** – used to enable correct filling of some joints with sealant. Tesa Multiform Tape No. 7492, polyethylene closed cell foam tape. Self adhesive back.		48mm x 3mm x 25m	1 each	13172
	**Cemintel Edge Sealer** – for sealing panel edges after on-site cutting.		200ml 2ltr	1 each 1 each	100166 180928

* H refers to components for horizontal installation. V refers to components for vertical installation. ALL refers to components for both horizontal and vertical installation.

For Vertical Installations, the following additional components are required:					
	Nails for Fixing Battens – machine driven D-head nails, galvanised.	V	2.8 x 50mm	3000 per pack	127799
	**Screws for Fixing to Timber Battens** – button head screw used for fixing starter strip, panel clips and other components to battens. Class 3 finish.	V	#8 – 20mm x 15-18 TPI	Supplied by others	
	**Fasteners** – to fix backing strip and other components to framing. - For fixing to timber framing – galvanised clout, 40 x 1.6mm - For fixing starter strip, panel clips and other componenns to timber battens. Button head screw used for fixing Class 3 finish. - For fixing to steel framing – button head screws, Class 3, 6g x 40mm self-drilling, Phillips drive	V		Supplied by others	
	**Timber Batten** – battens are fixed to structural studs to accept fixing clips	V	18-20mm x 90mm	Supplied by others	
	**Internal Vertical Starter Strip** – steel profile used at the base to support the first row of panels. Manufactured from 1.0mm BMT steel with galvalume AZ150 corrosion resistant coating	V	3030mm	1 each	471902
	**5 x 90mm Vertical Spacer** – for packing between battens and panels at corners and other locations where face fixing is required. Manufactured in extruded plastic.	V	5mm x 90mm x 2000mm	1 each	128996

Tools

Product	Description	Size	Quantity	Product Code
	**Makita Plunge Saw Kit (1300W) includes 1400mm guide rail and bonus 165mm fibre cement saw blade** – excellent for cutting cement based sheets	165mm	1	165485
	**Makita 165mm Fibre Cement Saw Blade** – ideal for use with the Makita Plunge saw and other 165mm circular saws fitted with vacuum extraction systems	165mm x 20 x 4T	1	165486
	**Cemintel Power Saw Blade** – specifically designed for cutting pre-finished cement based sheets. Ideal for use with dustless circular saws fitted with vacuum extraction systems. 15000 RPM max.	125mm	1	134449

06

SYSTEM ENGINEERING

Design, Detailing And Performance Responsibilities

Cemintel engages independent testing laboratories to test and report on the performance of a wall in accordance with the relevant Australian Standards. Consultants with relevant experience will use these test reports to provide opinions and assessments that extend the tested arrangement to include various on-site installation configurations and details that meet appropriate criteria performance.

Project Consultants
(Structural, Fire, Acoustic, Etc.)

These consultants are typically responsible for the following:

- Opinions on expected laboratory performance of wall configurations that vary from actual test configuration, such as substitution products and components.
- Judgements about expected field performance using laboratory test reports and practical experience.
- Design, specification and certification of structural, fire, acoustic, durability, weather tightness and any other required performance criteria for individual projects.

This involves the design and selection of building elements, such as wall and floors and their integration into the building considering the following:

- Interface of different building elements and to the structure / substrate.
- Wall and floor junctions.
- Penetrations.
- Flashing issues.
- Room / building geometry.
- Acoustic and water penetration field-testing.

Design Responsibility
Panels, top hats and structural framing are required to resist wind loads that are specific to the building site. Additional 'local pressure factors' can apply to the panels and top hats in accordance with the wind code AS/NZS 1170.2. It is recommended that the Architect/Building Designer assigns the responsibility for the facade design to the Project Engineer. Once wind loads have been determined, top hat spans, fastener spacings, and sheet fixing details may be selected from the appropriate tables in this manual. It is also the responsibility of the Architect/Building Designer to select the appropriate corrosivity category. Refer to appropriate details in this guide.

The performance levels of walls documented in this guide are either what is reported in a test or the documented opinion of consultants. Performance in projects is typically the responsibility of:

Project Certifier and/or Builder
These professionals are typically responsible for:

- Identifying the performance requirements for the project in accordance with the NCC and clearly communicating this to the relevant parties.
- Applicability of any performance characteristics supplied by Cemintel including test and opinions for the project.
- The project consultants' responsibilities detailed above if one is not engaged in the project.

Cemintel does not provide consulting services. Cemintel only provides information that has been prepared by others and therefore shall not be considered experts in the field.

Any party using the information contained in this guide or supplied by Cemintel in the course of a project must satisfy themselves that it is true, current and appropriate for the application, consequently accepting responsibility for its use.

It is the responsibility of the Architect/Building Designer and engineering parties to ensure that the details in this design guide are appropriate for the intended application.

The recommendations in this guide are formulated along the lines of good building practice, but are not intended to be an exhaustive statement of all relevant data.

Cemintel is not responsible for the performance of constructed walls, including field performance, and does not interpret or make judgements about performance requirements in the NCC in a specific project application.

Note: it is the responsibility of the Project Engineer to specify the connection of the top hats to the support structure. It is also the responsibility of the Project Engineer to calculate the wind loads for the cladding of a project.

07 INSTALLATION

CHECKLIST – Prior to Installation

The following pre-install checklist may assist to ensure you have the best possible outcome when using Cemintel Territory.

- ☐ Ensure substrate is straight and plumb. Pack studs to straighten if necessary (timber frames as per AS 1684, steel frames as per AS/NZS 4600. Industry best practice for frame tolerance is 5mm misalignment over 3000mm.
- ☐ Ensure studs are correctly located and of the appropriate thickness.
- ☐ Confirm bracing is in place. Where sheet bracing is used behind panels, the entire wall area needs to be braced or bracing sheet packers fixed to the frame to ensure a uniform fixing plane.
- ☐ Confirm your panel layout to determine the location of joints and identify where additional studs are required at all short edge joints and internal and external corners.
  - If using pre-formed corners, studs need to be located to allow fastening of corner clips to support the corners.
  - Additional studs or blocking may be required for support and fixing of Territory joint backing strips at corners and junctions.
- ☐ Confirm appropriate window detailing to accommodate Territory panel set out (taking into account the 16mm panel thickness and 5mm cavity created by the clips, spacers etc).
- ☐ Where there is no space to use a mounting clip along the bottom and top edge of the window, tack a horizontal green spacer to provide a firm surface for the cladding panel to maintain its position.
- ☐ Confirm the detailing for the base, head and end of wall junctions.
- ☐ Confirm services and insulation have been installed in framing where appropriate.
- ☐ Confirm adequate structural support for fixtures such as shelving, signage etc.

Check quality and quantity of panels and components before installing. If there is any sign of damage or visible defects in panels, or the colour/ finish is not in keeping with the owners aesthetic requirements DO NOT INSTALL. Contact Cemintel to address any issues.

07 INSTALLATION

Horizontal Installations – Clips on Stud Fixing
Installation Set-Out

Timber and Steel Framing

All framing must be in accordance with the following AS 1684 – Residential Timber-Framed Construction and AS/NZS 4600 – Cold-Formed Steel Structures.

Studs are to be installed at 600mm maximum centres. Double studs are required at all panel end joints.

FIGURE 7.01 Typical Framing Set-Out with 70mm Timber or Steel Framing and Pre-formed Corner – Plan View

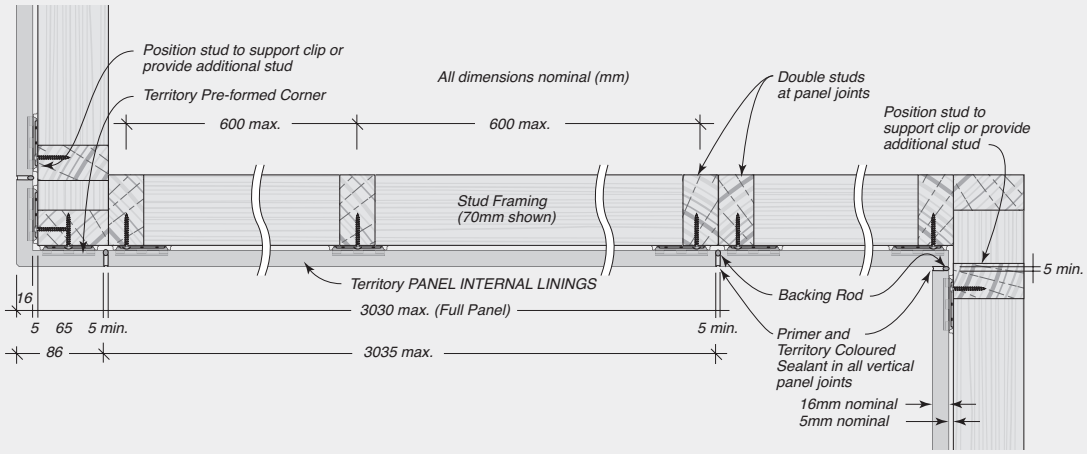
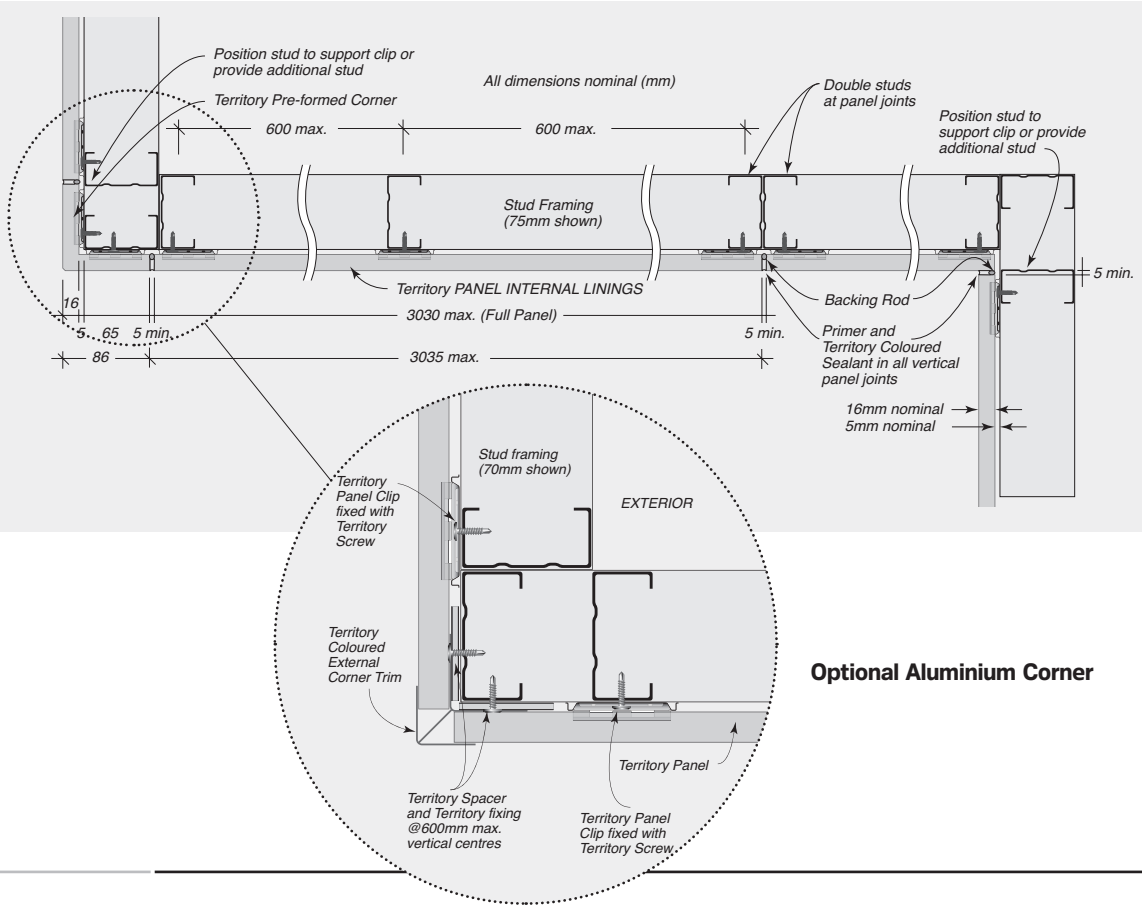


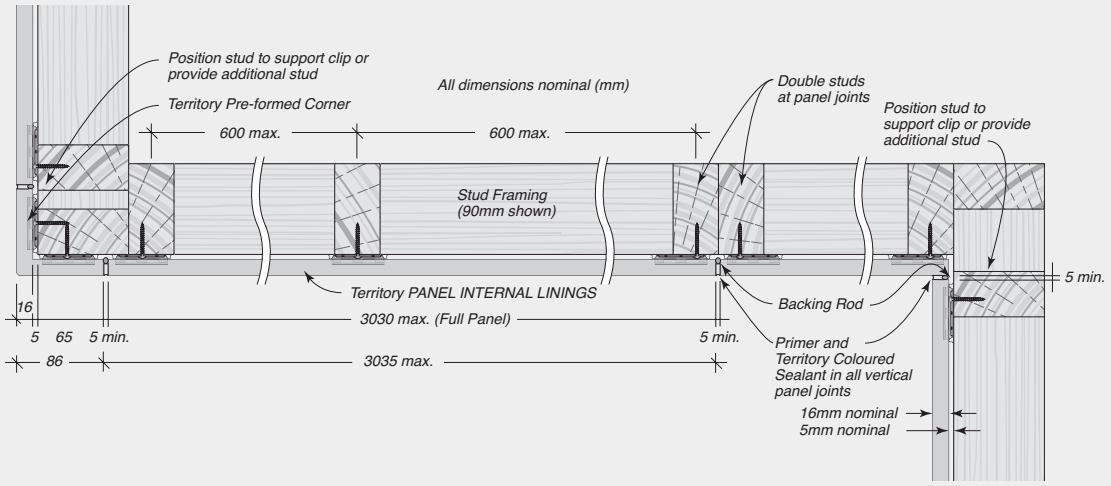
FIGURE 7.02 Typical Framing Set-Out with 75mm Steel Framing and Pre-formed Corner – Plan View



Optional Aluminium Corner

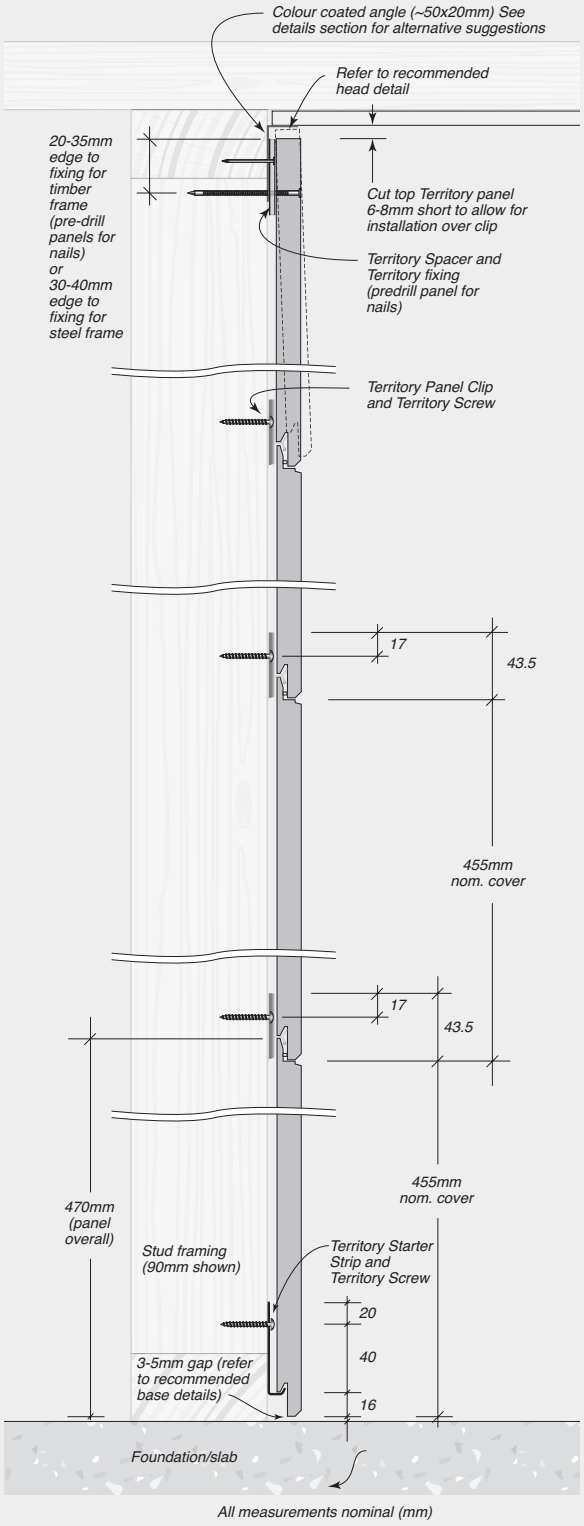
Steel Framing

FIGURE 7.03 Typical Framing Set-Out with 90mm Timber or Steel Framing and Pre-formed Corner – Plan View



07 INSTALLATION

FIGURE 7.04 Typical System Cross Section – Elevation



Horizontal Installation

Step 1 – Install horizontal starter strip to the base of the wall. Measure to allow for the 16mm overhang of the panel when it sits on the starter strip. Screw the starter strip level along the whole length of the strip to the base plate/studs. Because each panel sits on top of the other, any errors in setting the level on the first wall panel will be compounded through each layer. It is therefore critical to ensure the starter strip is fitted level, ready to accept the first panel.

Step 2 – Install Corners (note if no external corner exists start installing panels at one end of the wall).

A. If installing pre-formed corners, slide the first corner piece down the corner and over the starter strip. Then insert a panel clip on each side and screw to the stud. It is important to ensure that each corner piece is square on both sides. If the corners are not square, pack out the clips. To add the next corner piece, slide it on top so that it sits firmly on the clips and tap into position. Secure another set of clips to the top of the panel and screw fix to framing.

B. If installing aluminium corners, cut to length. Notch out to extend over the starter strip. To maintain the 5mm cavity, first tack vertical spacers on each side of the corner stud. Then, ensuring the metal corner is correctly positioned, nail or screw it through the spacer to the frame. The wall panel should fit into the corner trim channel and slide down onto the starter strip.

Step 3 – Install wall panels. Place the first wall panel over the starter strip and slide into place. Position panel clips at every stud and screw into place. Pack out the clips if necessary to ensure a uniform fixing plane. Continue to install the first row of panels horizontally onto the starter strip. Use tile spacers or similar to form a 5mm gap at all panel end vertical joints. Ensure vertical joints are accurately aligned. Continue to secure clips to the top (tongue) of the panel, tap firmly into place and screw fix to framing.

Where face fixing may be required, a strip of horizontal spacer (or cut to a minimum length of 200mm) should be positioned between the panel and the frame thus maintaining the 5mm cavity.

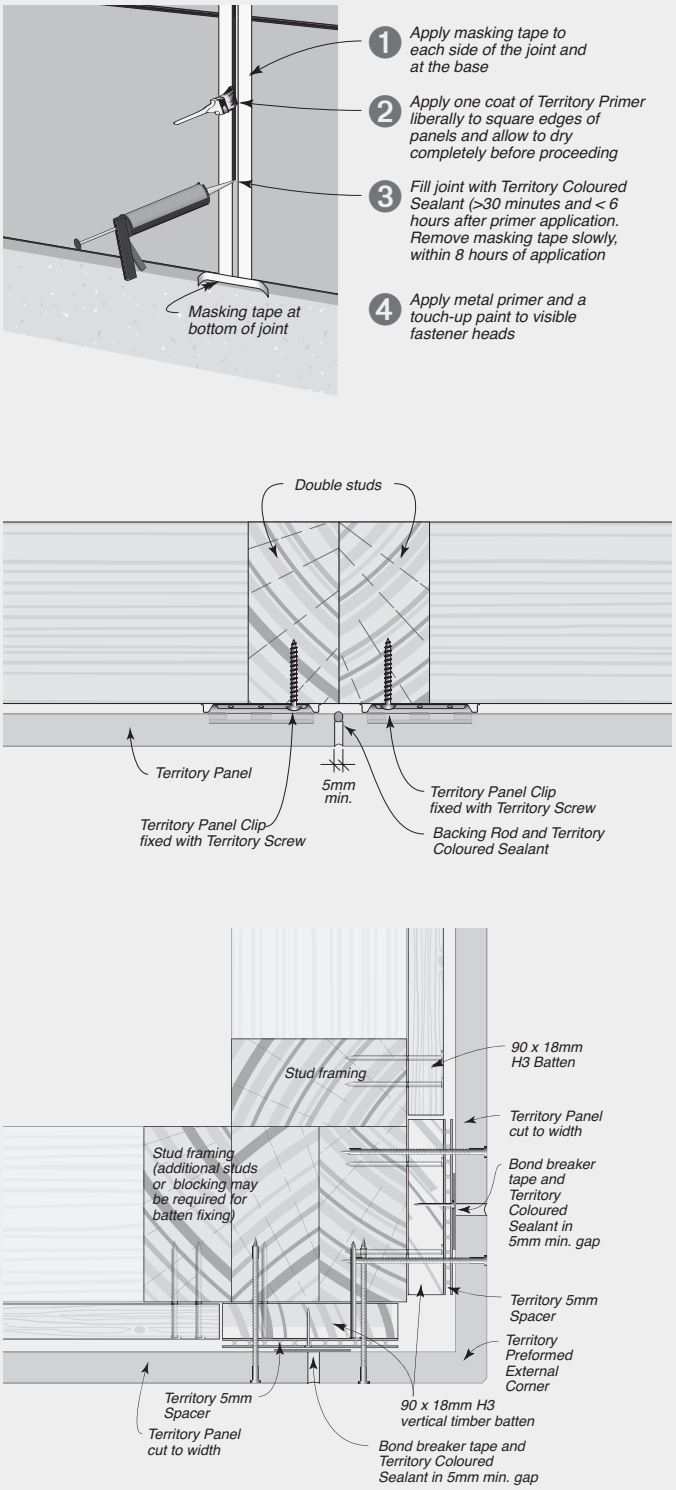
Step 4 – Finishing at the wall head. Determine appropriate head detail. If installing a metal angle, install prior to fixing panel. At the wall head face fixing is required. Install horizontal spacer strip behind all panel fixing points to maintain the 5mm cavity. Cut the top panel/pre-formed corner 6-8mm shorter than the height of the wall to allow lifting of the final panel and dropping into place. Mark the position of the studs to identify fastening points. Predrill fastener holes. Fasteners should be located 20-35mm from panel edges for timber frames or 30-40mm for steel frames.

Tilt the panel out at the bottom, lift panel up and locate the bottom edge of the panel onto the clips already installed. Once firmly in place, fasten panels to the studs using the Cemintel supplied face fix fasteners.

Step 5 – Caulk all expansion joints (ref Fig. 7.05). Ensure panels are dry before applying primer and sealant. Install backing rod into vertical joints. Apply masking tape to each side of the vertical joints and at the base. Paint the edges of the panels with the primer. This helps the sealant adhere to the panels. Wait at least 30 minutes but no more than 6 hours to apply the sealant. Smooth off the finish by removing excess sealant. Carefully remove masking tape in accordance with manufacturer's instructions. CARE NEEDS TO BE TAKEN NOT TO GET SEALANT ON PANELS as this can result in marks and stains. Install sealant to gaps at windows and other penetrations.

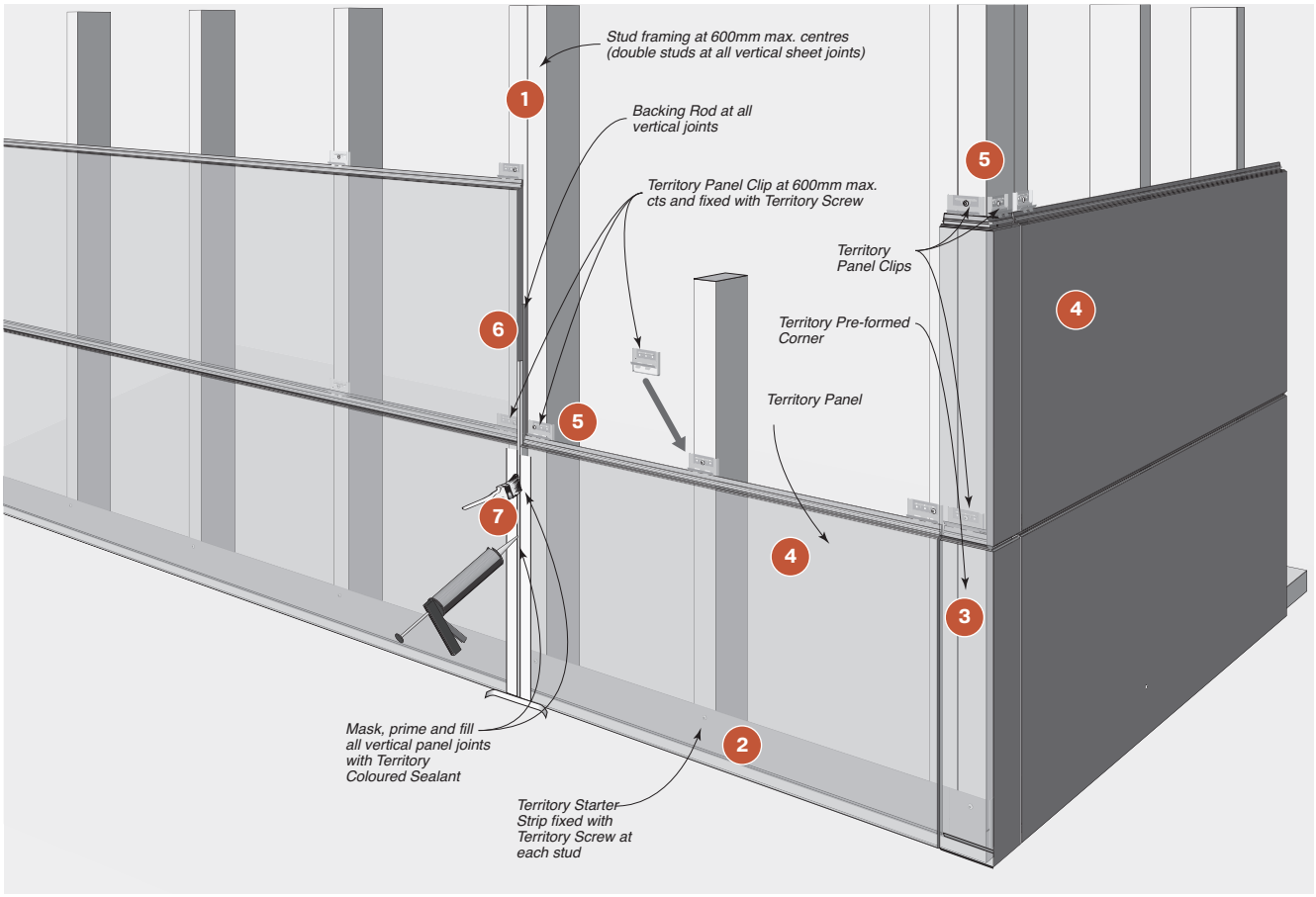
Step 6 – Touch up any exposed fasteners. Wipe panels down with a damp cloth and touch up any exposed nail or screw heads with matching touch up paint.

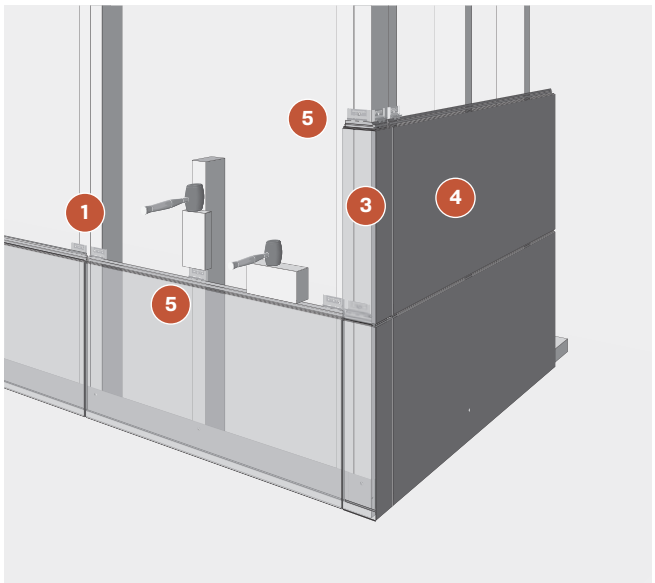
FIGURE 7.05 Typical Method for Sealing Vertical Joints

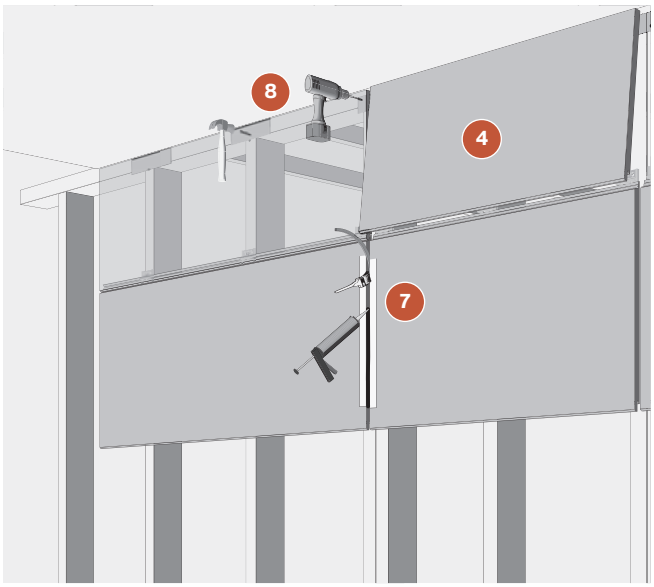


INSTALLATION 07

1. Stud (double for vertical joints)
2. Horizontal Starter Strip
3. Pre-formed horizontal corner
4. Panel
5. Panel clip
6. Backing rod
7. Primer and sealant
8. Horizontal Spacer strip







Vertical Installation – Clips on Batten Fixing
Installation Set-Out

Timber and Steel Framing

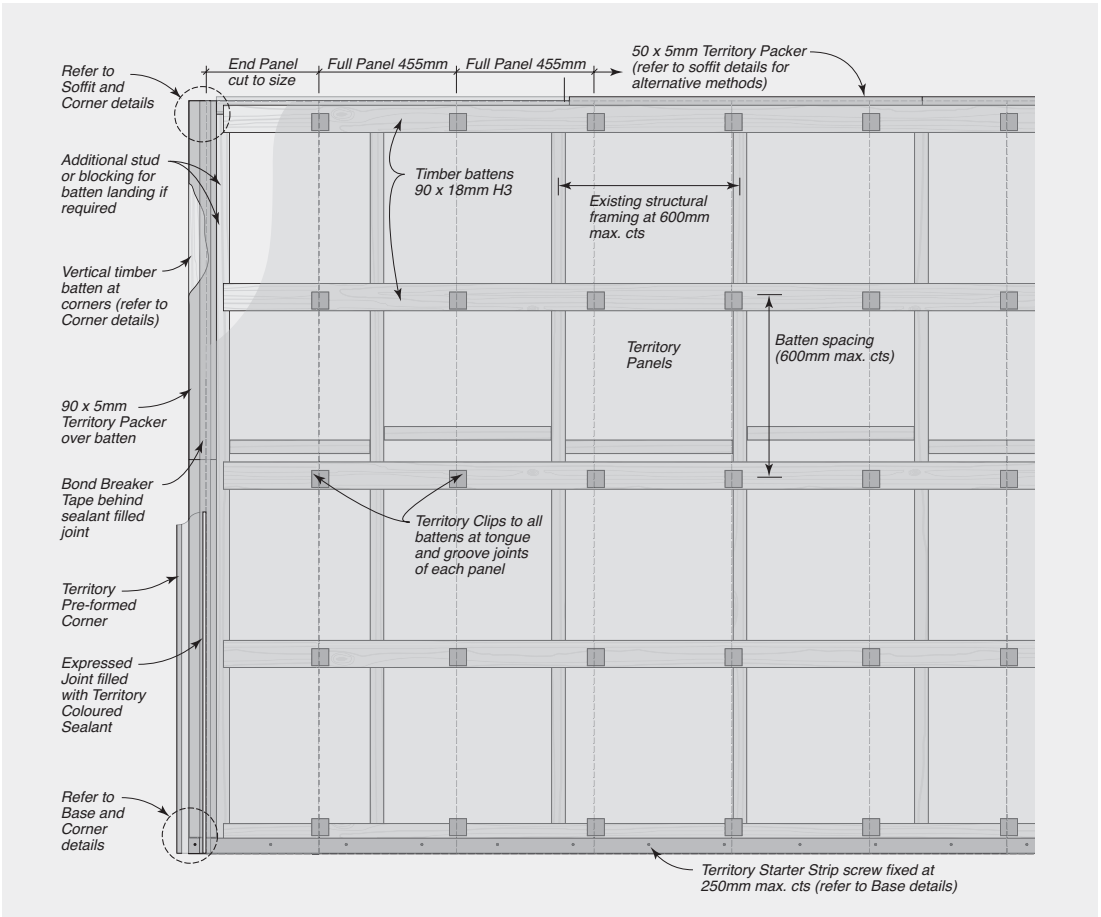
All framing must be in accordance with the following AS 1684 – Residential Timber-Framed Construction.

The Territory Vertical Panel on-batten system is detailed here with 90mm x 18mm timber battens. Battens must be spaced at 600mm maximum centres, and fixed with two nails or one screw to each stud.

Battens may be aligned or offset.

Aligned battens may require additional blocking or studs to allow landing and fixing of batten ends (ref Fig 7.06).

FIGURE 7.06



Panel Layout and Fixing

Vertical panel installation requires a square edge to the panel at junctions with a Territory pre-formed Corner or Metal Corner Trim, at internal corners and at junctions with masonry or other wall systems. This requires removal of the tongue or groove from one edge of the end panels. These panels can be trimmed to between 200mmm and 430mm nominal cover. These panel widths should be considered when panel joint location is important for aesthetics (ref Fig 7.07 and 7.08).

All face fixings must be backed and supported by the Territory vertical spacer.

Panels must be fixed to the structural framing along trimmed edges with 75mm nails at 20-35mm from the panel edge for timber framing (or with Territory 55mm screws at 30-40mm from the panel edge for steel framing) and at spacings aligned with adjacent battens (ref Fig 7.12).

All other panel joints require the factory finished tongue and groove for fixing with panel clips. Clips are to be fixed to battens with 20mm button head screws. One screw may be used in the clips at the wall head and base. Two screws must be used in all other panel clips.

FIGURE 7.07 Non-symmetrical Panel Set-Out

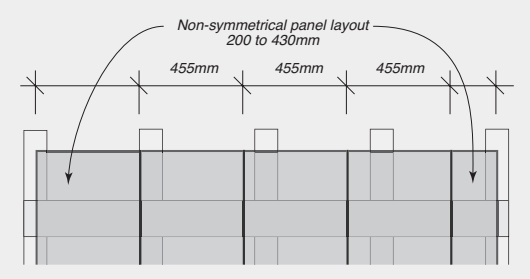


FIGURE 7.08 Symmetrical Panel Set-Out

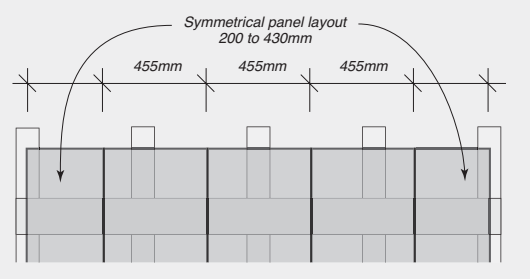


FIGURE 7.09 Typical Framing Set-Out with 90mm Timber or Steel Framing and Pre-formed Corner – Plan View

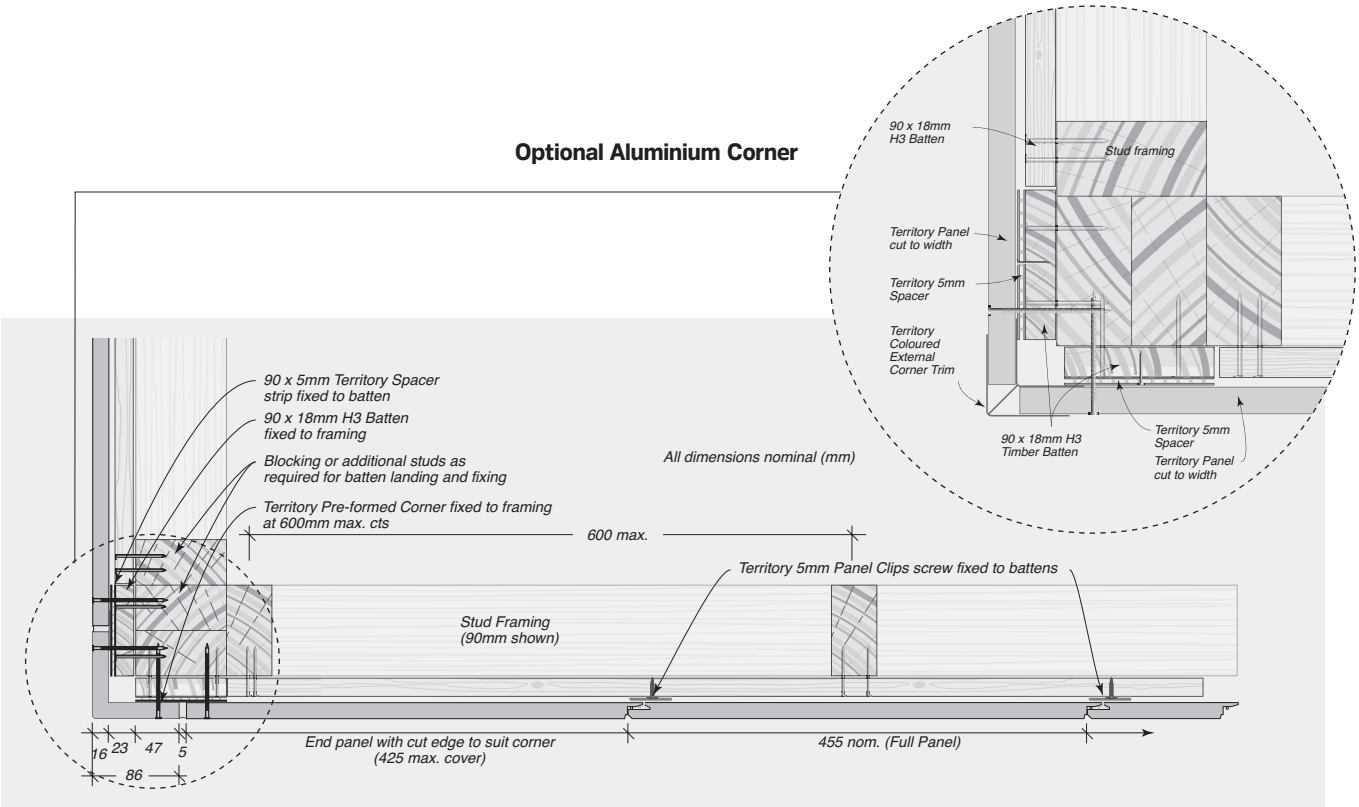


FIGURE 7.10 Typical Framing Set-Out with 70mm Timber Framing and Territory Pre-formed Corners – Plan View

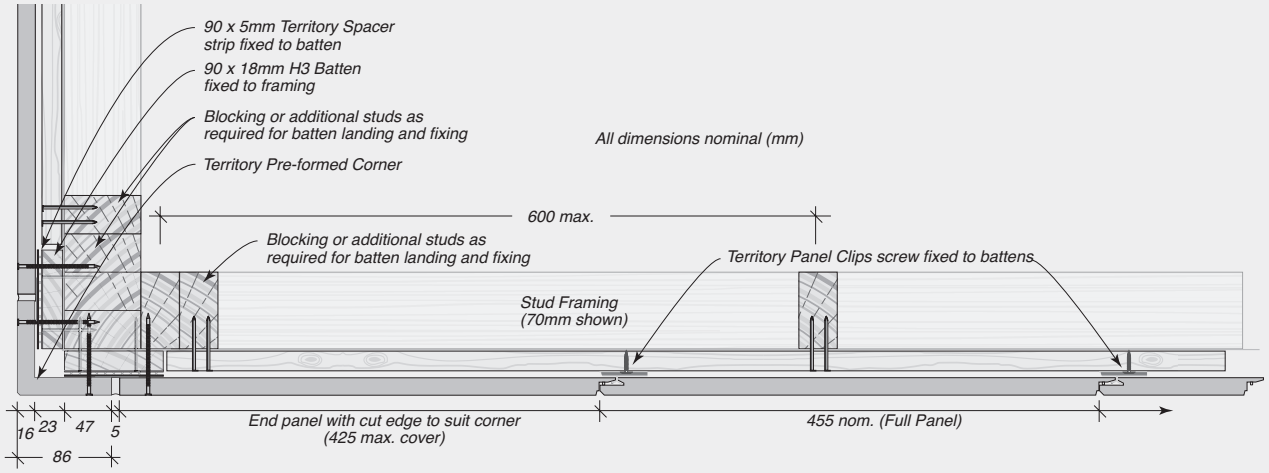
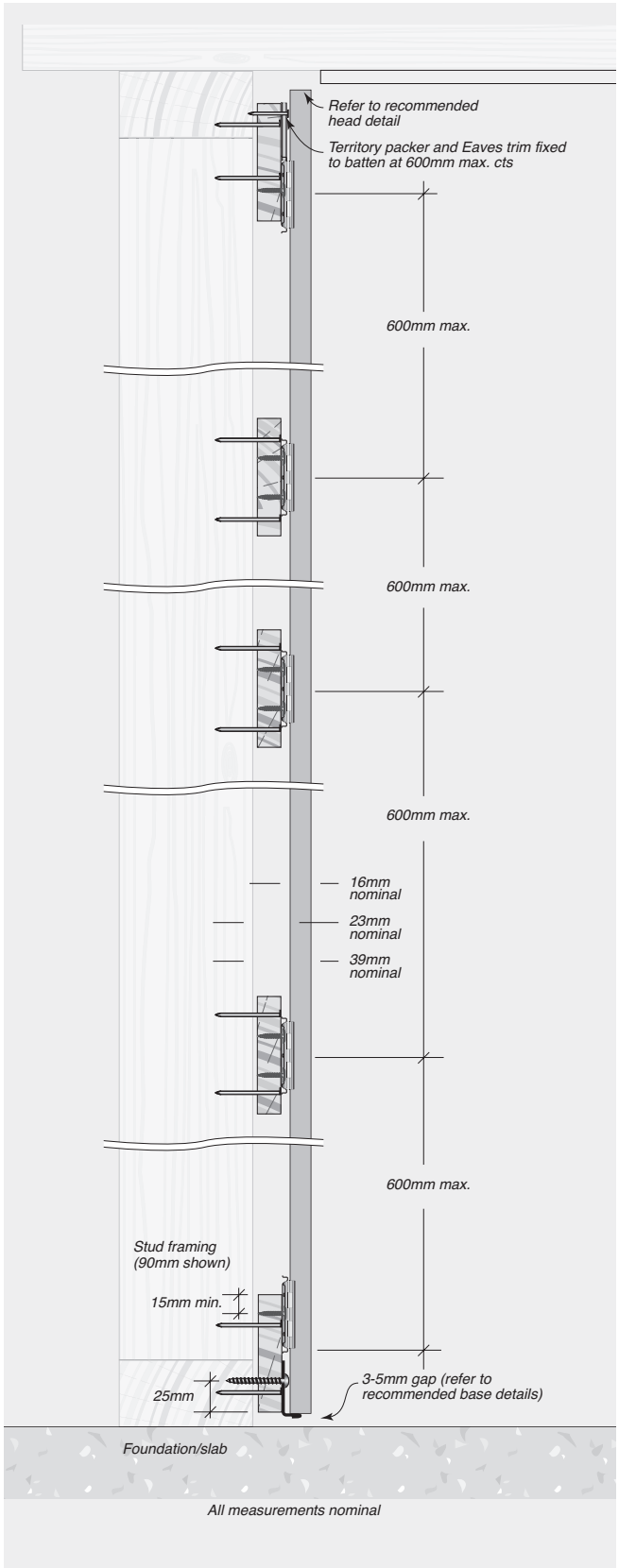
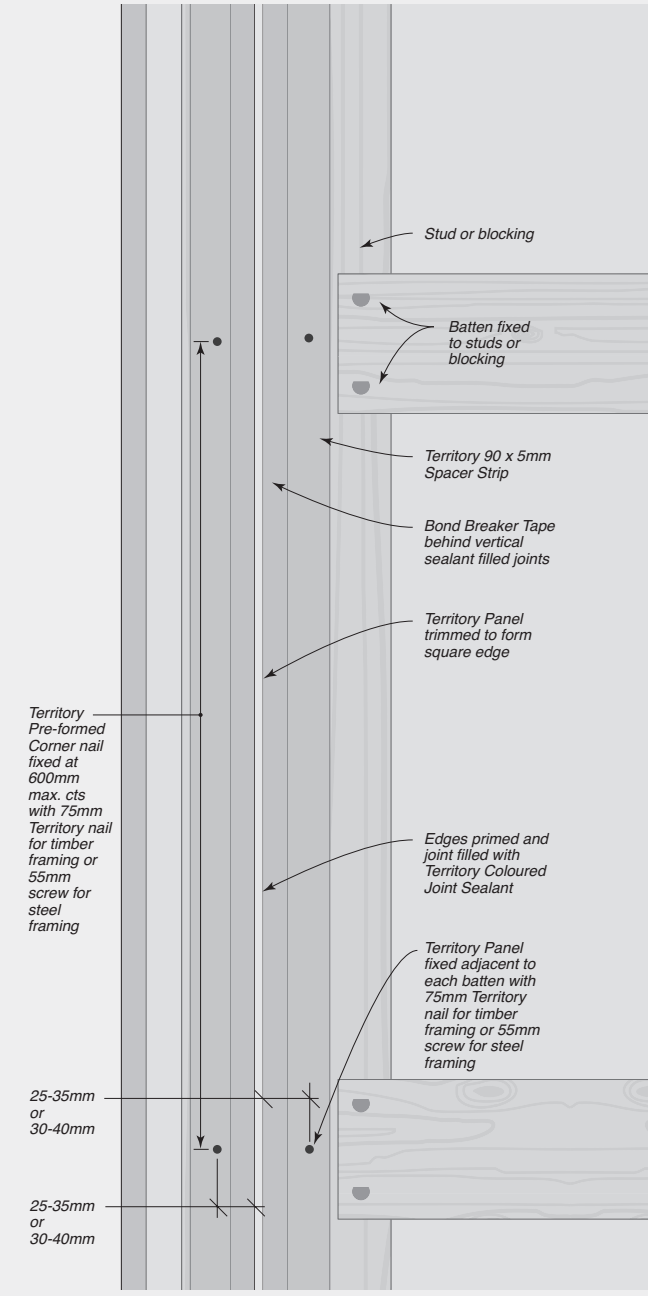


FIGURE 7.11 Typical Territory System Cross Section – Elevation



All measurements nominal

FIGURE 7.12 Typical Face Nailing at Square Edge Joint – Elevation



07 INSTALLATION

Vertical Installation

Step 1 – Install Battens. Install horizontal battens to studs with 2 nails or 1 screw (additional blocking/ studs may be required). Install vertical battens to studs with 2 nails or 1 screw at all corners and where Territory panels abut other wall types.

Step 2 – Install vertical starter strip to the base of the wall. Ensure there will be a minimum 3-5mm clearance between the floor surface and bottom of the panels. Fasten the starter strip level along the whole length of the strip to the bottom plate at 250mm maximum centres.

Step 3 – Prepare corners. Install 5mm vertical spacer strip to vertical corner battens and install bond breaker tape for vertical joints that require sealant filling. The 5mm spacer is required at all face fixing locations (including corner joints). Note that, if backing rod is required, install after panel installation.

Step 4 – Install Corners (note if no external corner exists start installing panels at one end of the wall).

A. If installing pre-formed corners, place the first corner piece at the corner onto the starter strip. It is important to ensure that each corner piece is square on both sides. If the corners are not square, pack out the clips. Predrill holes into the corner piece and the adjoining panel allowing 20-35mm (or 30-40mm for steel) clearance from the edge. Fix through the batten and 5mm spacer with appropriate fasteners.

B. If installing aluminium corners, cut to length. Notch out to extend over the starter strip. To maintain the 5mm cavity, first tack vertical spacers on each side of the corner stud. Then, ensuring the metal corner is correctly positioned, nail or screw it through the spacer to the frame. The wall panel should fit into the corner's channel and slide down onto the starter strip.

Step 5 – Install wall panels. Place the first wall panel onto the starter strip. Position panel clips to tongue and groove edge of panels at every horizontal batten. Tap firmly into place and screw into place using 20mm Territory button head screws. Use 1 screw for head and base clips and 2 screws for all other clips. Pack out the clips if necessary to ensure a uniform fixing plane.

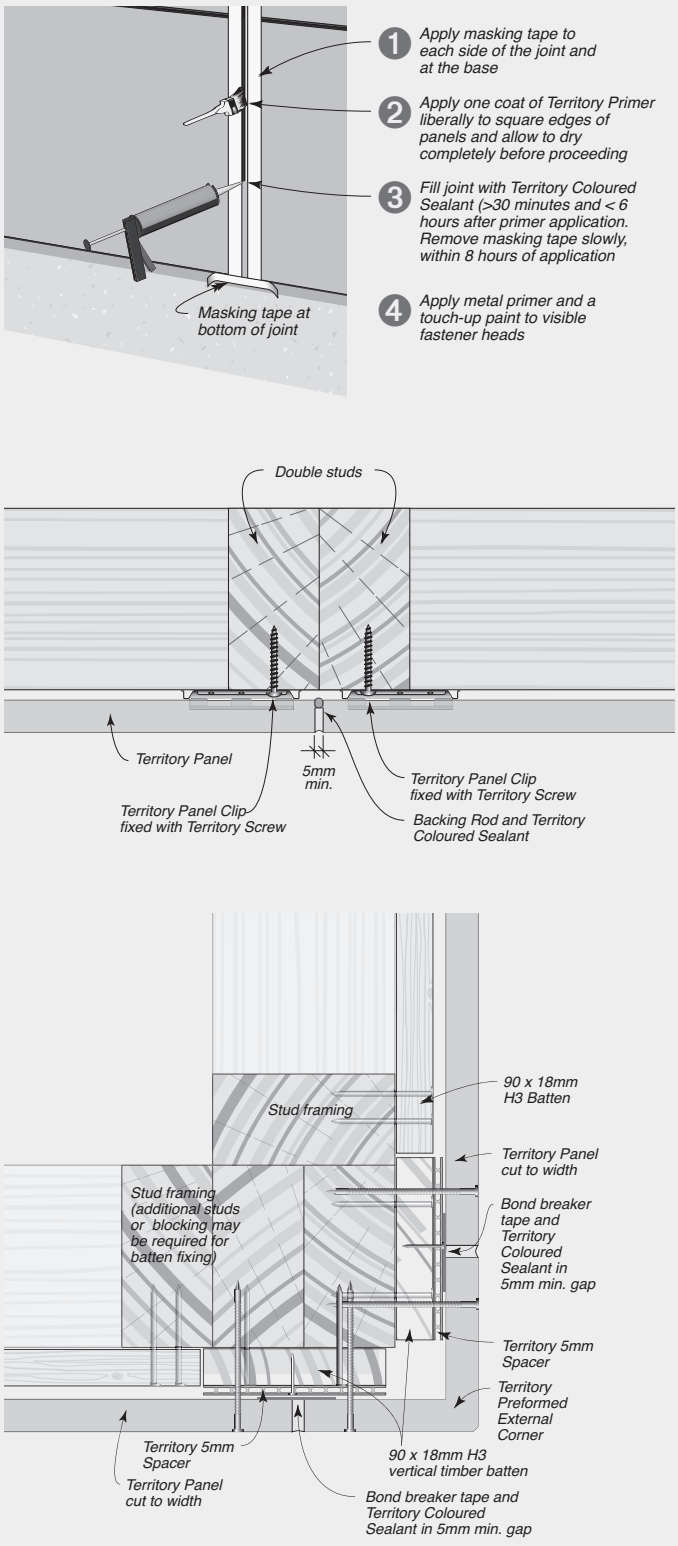
Continue to install the panels onto the starter strip. Continue to secure clips to the tongue of the panel, tap firmly into place and screw fix to battens. Where face fixing may be required, a strip of Spacer (cut to a minimum length of 200mm) should be positioned between the panel and the frame thus maintaining the 5mm cavity.

Step 6 – Finishing at the wall head. Determine appropriate head detail. If installing a metal angle, install prior to fixing panel. Install spacer strip onto the top horizontal batten to maintain the 5mm cavity. Cut the top panel/prefinished corner 6-8mm shorter than the height of the wall to allow lifting of the final panel and dropping into place.

Step 7 – Caulk all expansion joints (ref Fig 7.13). Ensure panels are dry before applying primer and sealant. Ensure bond breaker tape or backing rod is installed at vertical joints. Apply masking tape to each side of the vertical joints and at the base. Paint the edges of the panels with the primer. This helps the sealant adhere to the panels. Wait at least 30 minutes but no more than 6 hours to apply the sealant. Smooth off the finish by removing excess sealant. Carefully remove masking tape in accordance with manufacturer's instructions. CARE NEEDS TO BE TAKEN NOT TO GET SEALANT ON PANELS as this can result in marks and stains. Install sealant to gaps at windows and other penetrations.

Step 8 – Touch up any exposed fasteners. Wipe panels down with a damp cloth and touch up any exposed nail or screw heads with matching touch up paint.

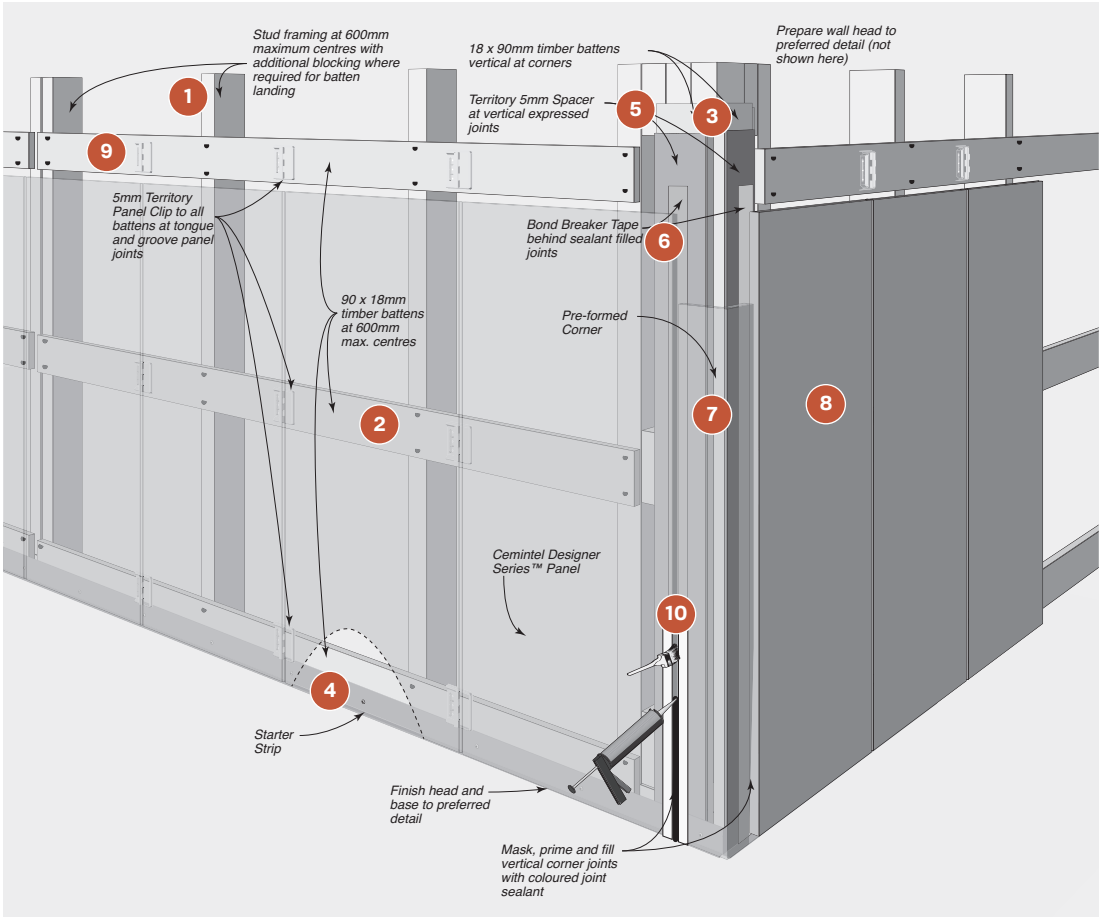
FIGURE 7.13 Typical Method for Sealing Vertical Joints

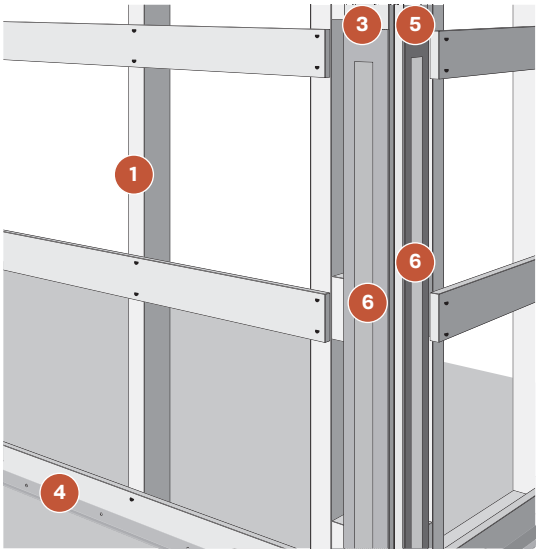


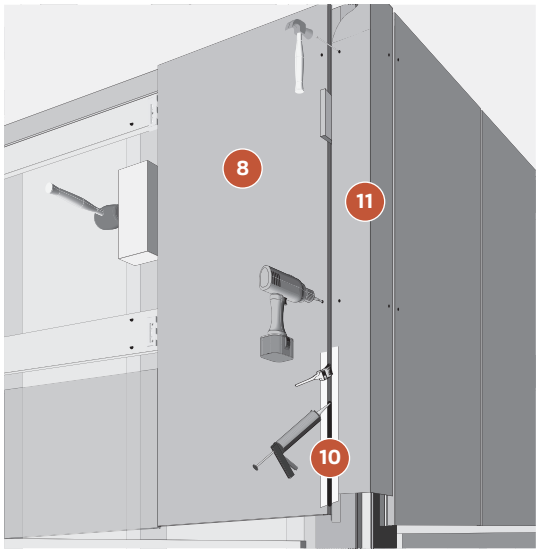
07

INSTALLATION

1. Stud
2. 90x18mm timber horizontal battens
3. 90x18mm timber vertical battens
4. Vertical starter strip
5. Vertical spacer strip
6. Bond breaker tape or backing rod
7. Pre-formed vertical corner
8. Panel
9. Panel clip
10. Primer and sealant
11. Face fixing







08

CONSTRUCTION DRAWINGS + DETAILS

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CONSTRUCTION DRAWINGS AND DETAILS

Note: Drawings are interchangeable for timber or steel substrates with the exception of the fasteners.

Drawings Index

Note: Drawings are interchangeable for timber or steel substrates with the exception of the fasteners.

Horizontal Installation

Base Details

FIGURE 8.01 Base Detail – No Skirting

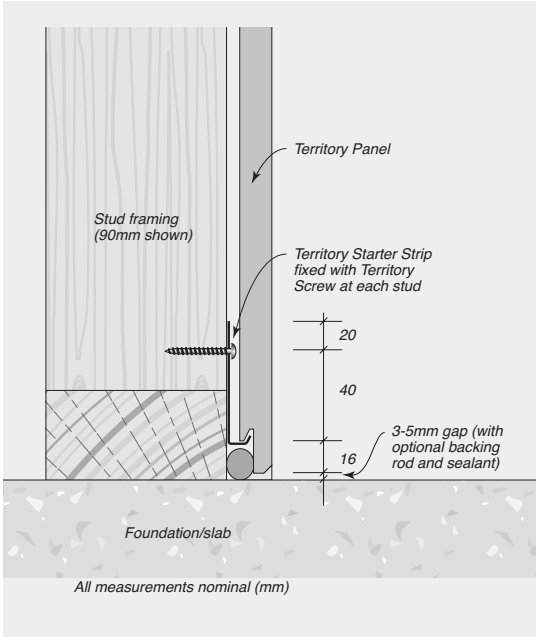
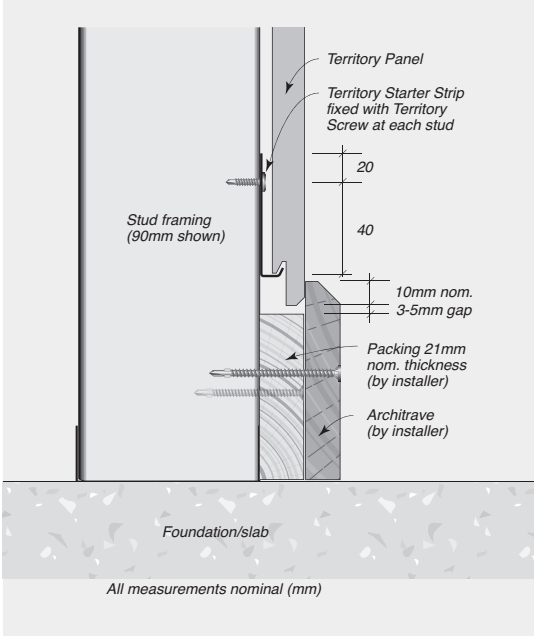


FIGURE 8.02 Base Detail – With Skirting



Corner Details

Additional studs may be required at corners to allow for fixing Territory Panel Clips, other components and to support joint backing rod.

FIGURE 8.03 Performed External Corner – Plan View

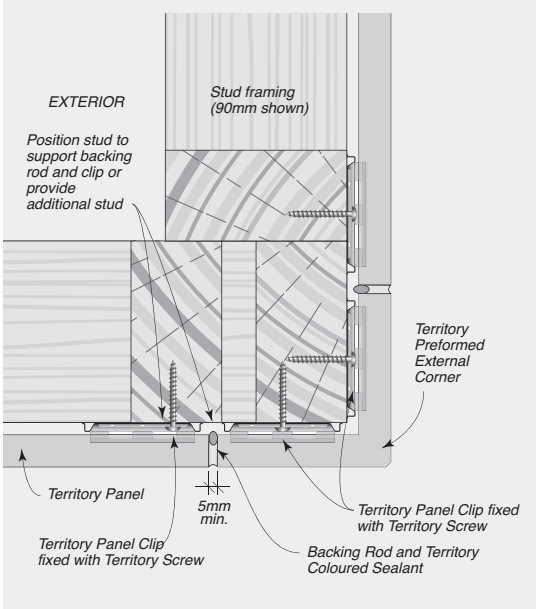
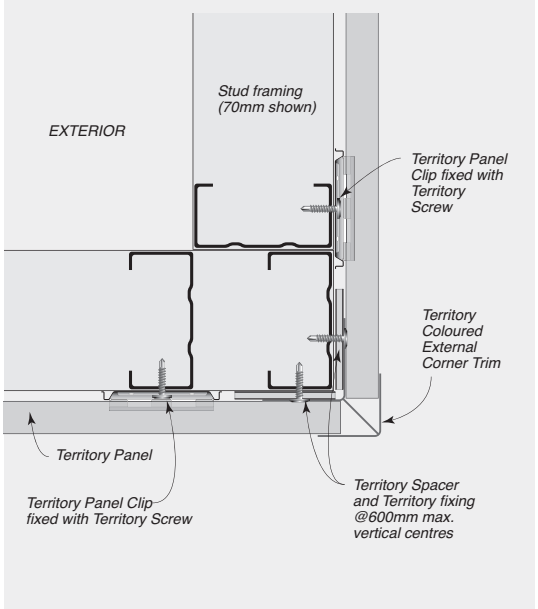


FIGURE 8.04 External Corner with Coloured External Corner Trim – Plan View



08

CONSTRUCTION DRAWINGS AND DETAILS

Note: Drawings are interchangeable for timber or steel substrates with the exception of the fasteners.

FIGURE 8.05 Internal Corner with Backing Rod and Coloured Sealant – Plan View

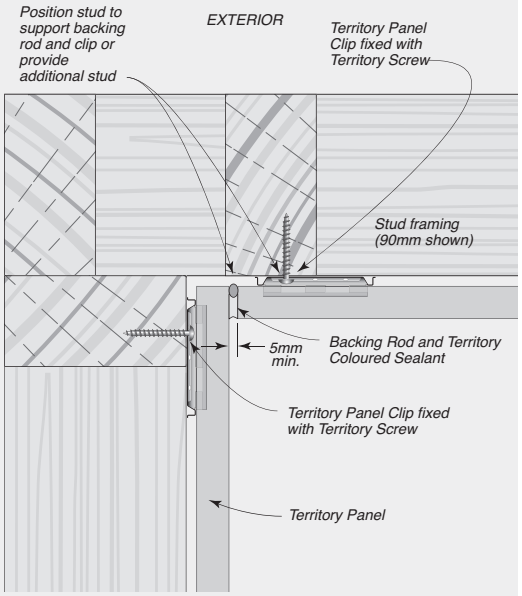
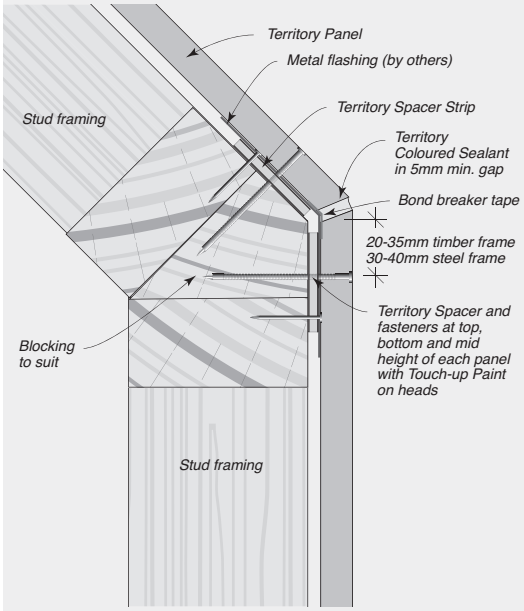


FIGURE 8.06 Obtuse Angle Corner with Metal Flashing and Coloured Sealant – Plan View



Junction Details

FIGURE 8.07 Head Detail – With Coloured Angle

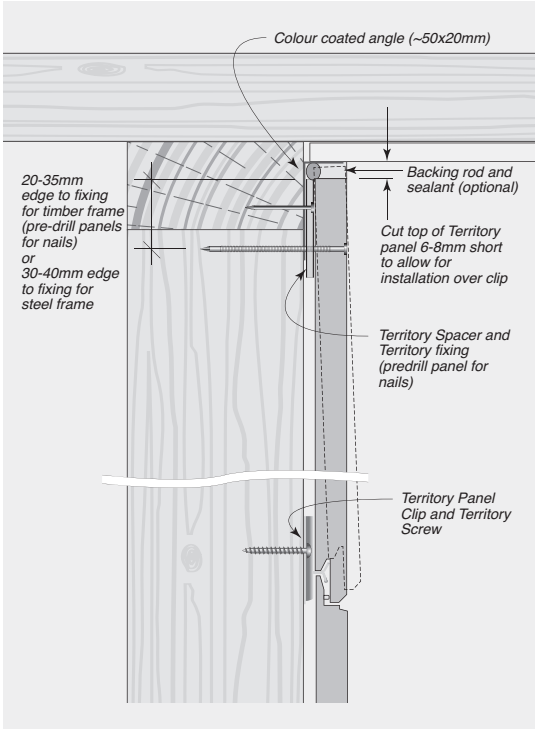
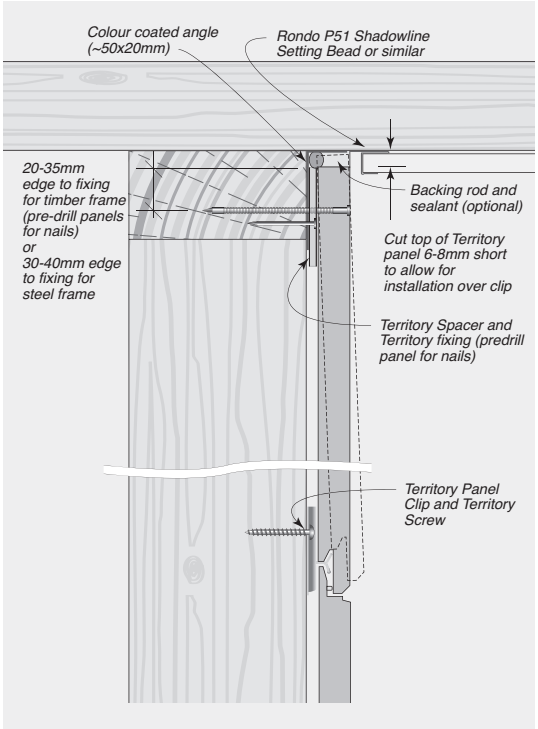


FIGURE 8.08 Head Detail – With Shadowline Trim



CONSTRUCTION DRAWINGS AND DETAILS

Note: Drawings are interchangeable for timber or steel substrates with the exception of the fasteners.

FIGURE 8.09 Head Detail – With Cornice

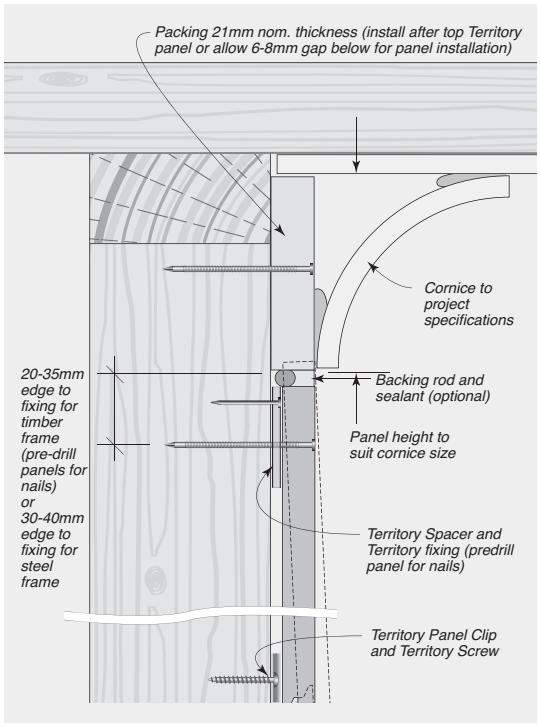


FIGURE 8.10 Typical Junction with Plasterboard Wall – Plan View

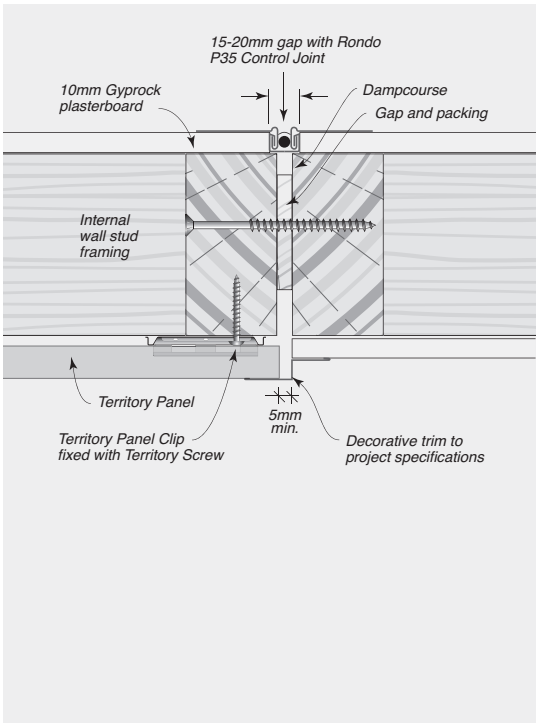


FIGURE 8.11 Typical Junction with Masonry Wall – Plan View

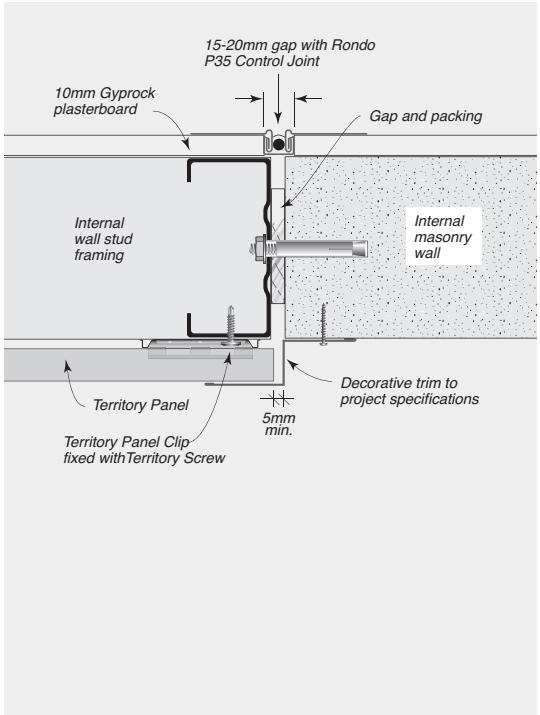
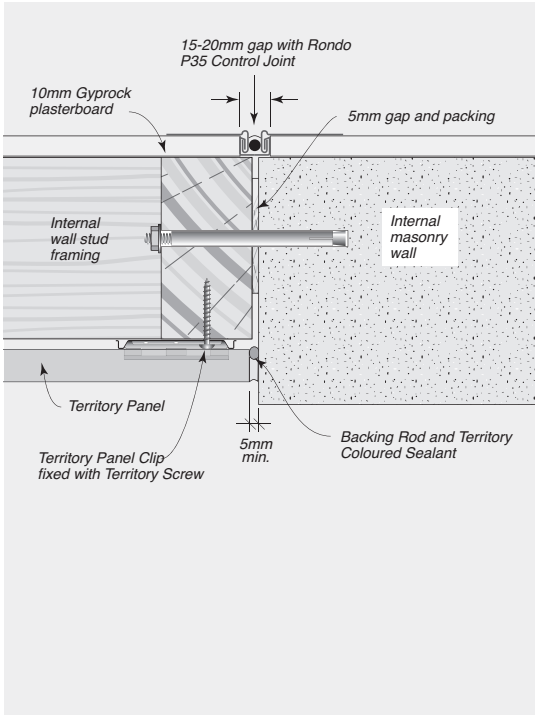


FIGURE 8.12 Typical Junction with Deep Masonry Wall – Plan View



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CONSTRUCTION DRAWINGS AND DETAILS

Note: Drawings are interchangeable for timber or steel substrates with the exception of the fasteners.

Vertical Installation

Base Details

FIGURE 8.13 Base Details – With Sealant

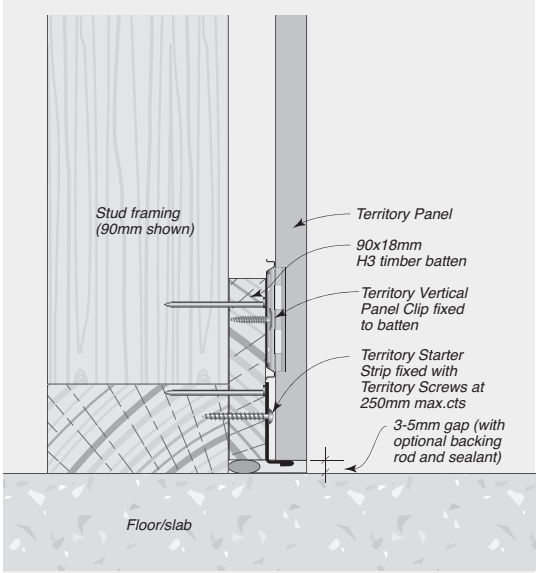
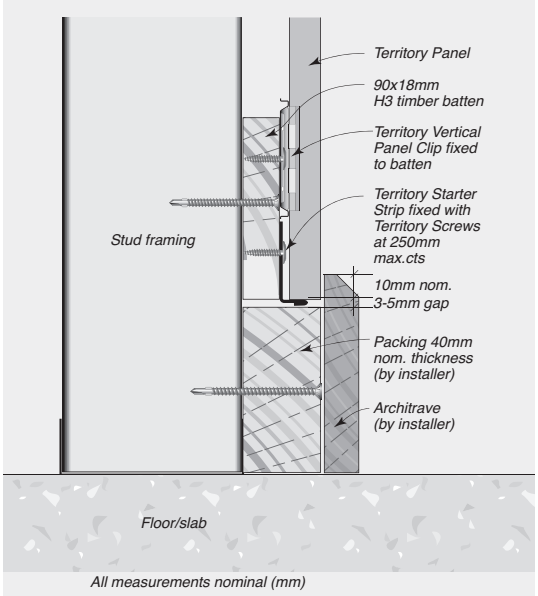


FIGURE 8.14 Base Detail – With Skirting



Corner Details

Additional studs may be required at corners to allow for fixing batterns, Territory Panel Clips, other components.

FIGURE 8.15 External Corner Detail – With Performed Corner – Plan View

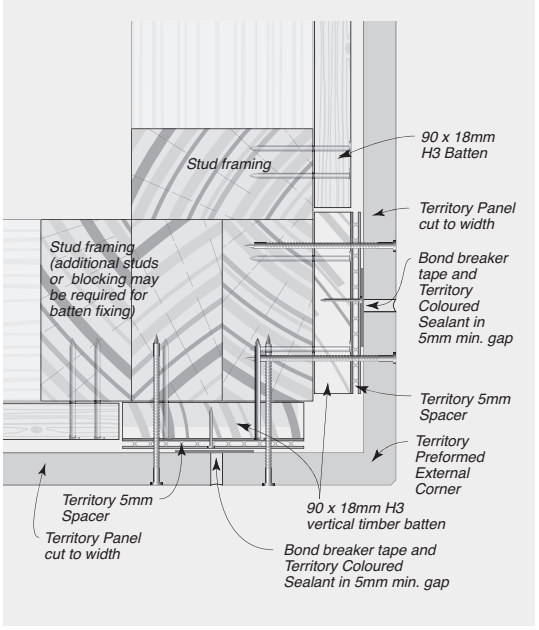
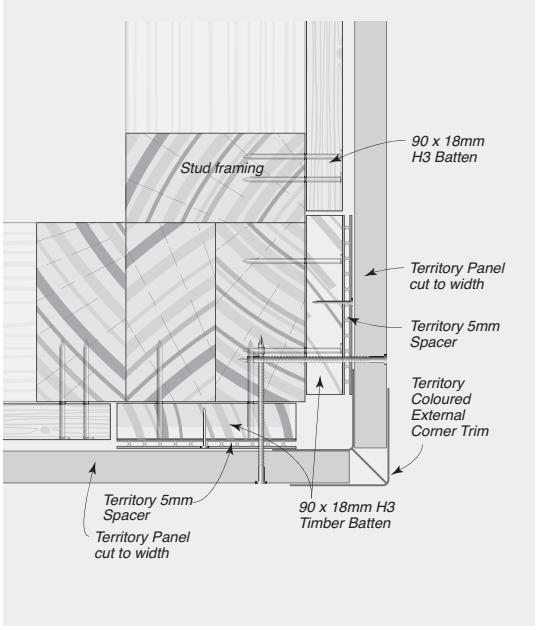


FIGURE 8.16 External Corner Detail – With Coloured External Corner Trim – Plan View



CONSTRUCTION DRAWINGS AND DETAILS

Note: Drawings are interchangeable for timber or steel substrates with the exception of the fasteners.

FIGURE 8.17 Internal Corner Detail – With Backing Strip and Coloured Sealant – Plan View

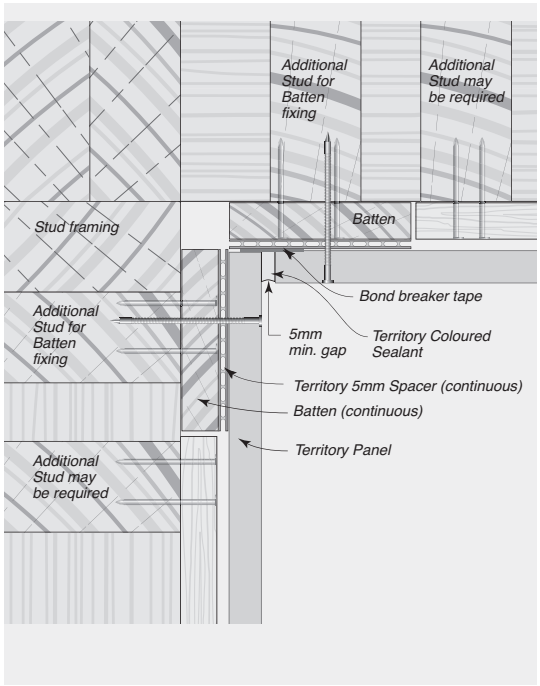
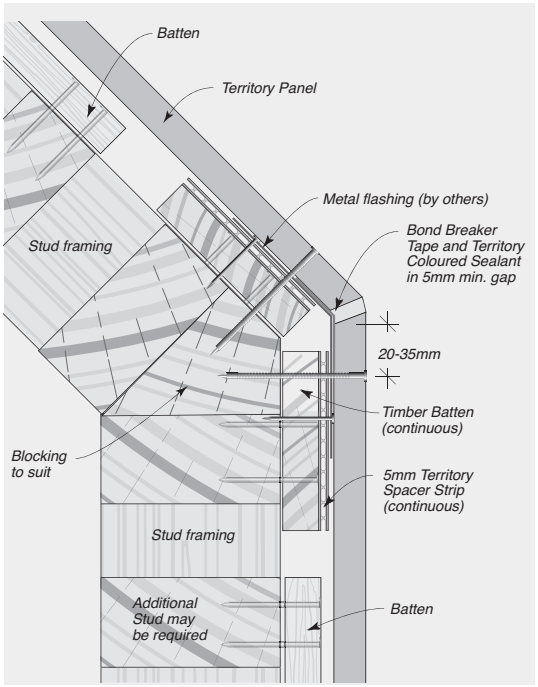


FIGURE 8.18 Obtuse Angle Corner Detail – With Metal Flashing and Coloured Sealant – Plan View



Junction Details

FIGURE 8.19 Head Detail – With Sealant

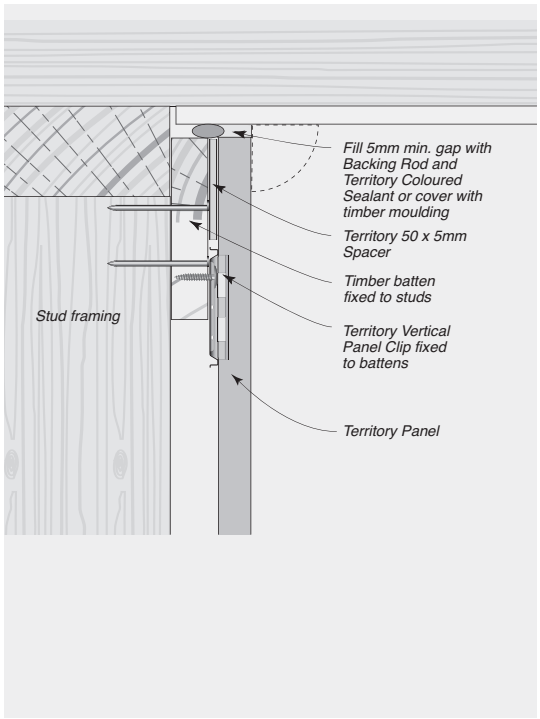
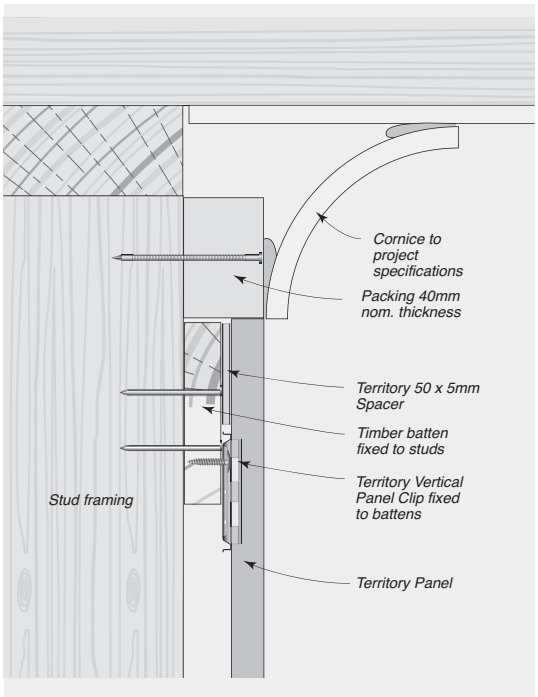


FIGURE 8.20 Head Detail – With Cornice



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CONSTRUCTION DRAWINGS AND DETAILS

Note: Drawings are interchangeable for timber or steel substrates with the exception of the fasteners.

FIGURE 8.21 Junction In-line Masonry Wall – Plan View

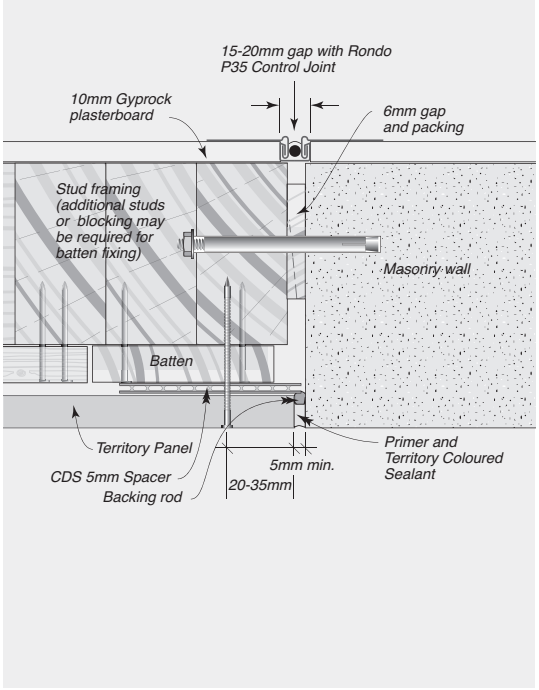


FIGURE 8.22 Junction Offset Masonry Wall – Plan View

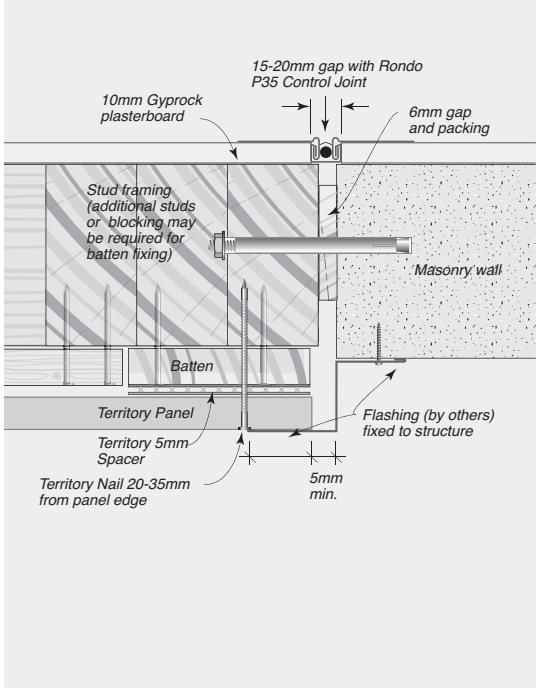
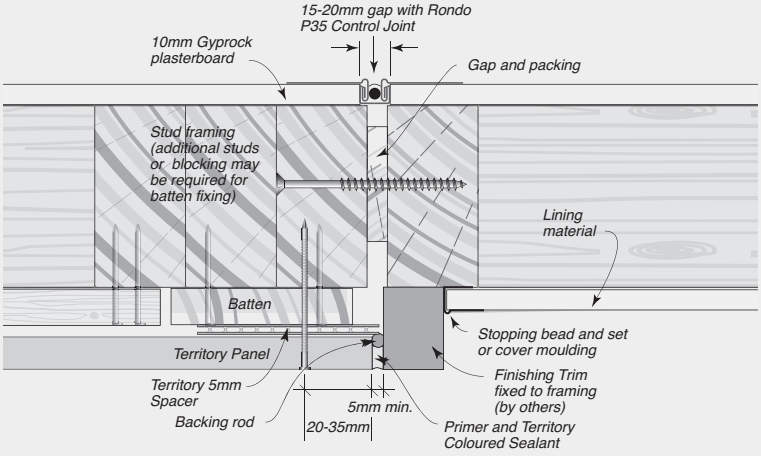


FIGURE 8.23 Typical Detail Junction with Fibre Cement Cladding System – Plan View



09

SAFETY, HANDLING, GENERAL CARE + WARRANTY

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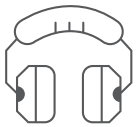
SAFETY, HANDLING, GENERAL CARE + WARRANTY



Health, Safety and Personal Protection Equipment (PPE)

Fibre Cement contain silicas that are harmful if inhaled. Protective clothing and breathing equipment should be worn when cutting products.
When cutting, drilling or grinding fibre cement panels using power tools, always ensure the work area is properly ventilated.

An approved dust mask (AS/NZS 1715 and AS/NZS 1716) and safety glasses (AS/NZS 1337) must be worn. Cemintel recommends that hearing protection also be worn.

Safety Data Sheet information is available at www.cemintel.com.au

Managing Respirable Crystalline Silica Dust

Crystalline Silica is everywhere. It is found naturally in stone, rocks, sand, gravel and clay. Sand is one of the raw materials in Fibre Cement. Respirable Crystalline Silica dust is the fine dust that's created when you use power tools to cut, drill, grind, chip or sand materials and products that contain crystalline silica. This dust is of concern due to its size as it gets caught deep in your lungs and can cause long term damage.

IF YOU USE THE CORRECT SAFETY EQUIPMENT AND PPE, FIBRE CEMENT IS SAFE TO USE.

Cemintel Safety Requirements	
1 - Cut Outdoors*	The ventilation outdoors is greater than that indoors, and therefore should reduce exposure.
2 - Use On-Tool Dust Extraction	Use on-tool dust extraction when using power tools to drill and cut Fibre Cement, with a vacuum that contains a HEPA M Class filter.
3 - Correct Saw and Blade	Use a plunge saw with a specifically designed Fibre Cement blade.
4 - Don't Sweep, Vacuum instead	When completing your work vacuum with a HEPA M Class filter, rather than a broom as sweeping creates more dust.
5 - Use Correct Respirator	Use a half face P1 or P2 respirator. It is essential that the respirators are Fit Tested and workers are cleanly shaven to obtain a good seal.

* Even though not recommended, indoor cutting can be completed when using an onsite cutting room with exhaust ventilation and a M class filter at a minimum, on-tool dust extraction with a vacuum with a HEPA M Class filter, a Full Face P2 respirator and conducting local occupational and static air monitoring to validate effectiveness of control measures.

Safety, Handling and Maintenance

Storage

All Cemintel panels must be stacked flat, clear of the ground and supported at 300mm maximum centres on a level platform. Panels must be kept dry, preferably stored inside the building. Panels must be dry prior to fixing, hence if it is necessary to store outside, the product must be protected from the weather.

Handling

Prefinished products and must be treated with care during handling to avoid damage to edges, ends and prefinished surface. Panels should be carried horizontally on edge by at least two people.

Consideration should be given to planning the order of other trades that might stain or damage the panels.

Any splashings of mud, cement, mortar and the like should be removed immediately.

Cutting

Panels should be fully supported and cut from the back using a power saw. Cemintel recommends using the Makita Plunge Cut Saw with guide rail and appropriate blade, together with the appropriate dust extraction system. All exposed cut edges MUST BE SEALED WITH CEMINTEL EDGE SEALER TO PREVENT MOISTURE ABSORPTION.

Mitres

It is not recommended to mitre panel edges as this can cause delamination of the face.

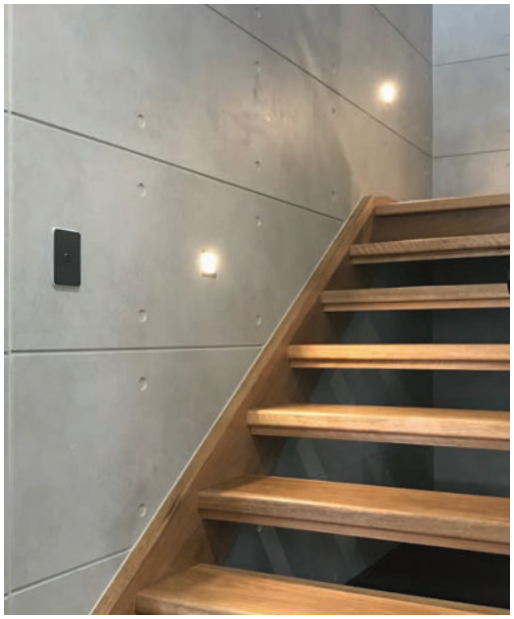
Penetrations

Penetrations in panels may be cut or drilled prior to installation. Cut from the back or drill from the front. Mask, prime and fill gaps with sealant in accordance with recommended methods and products.

Warranty

Territory panels have a product warranty of 10 years.

The full product warranty is available for download at www.**cemintel.com.au**



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