

FireWALL™

Plasterboard Area Separation Walls



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Introduction

FireWALL™ Area Separation Walls are designed for use in buildings that have a steel roof structure such as warehouses, cinemas and factories. FireWALL™ Area Separation Walls can be utilised in the retail, commercial and industrial sector to provide sub-divisions or fire compartments within a building envelope. These walls can be fire rated up to 4 hours (non-load bearing) and have acoustic ratings up to $R_w = 78\text{dB}$.

This brochure will give the reader an understanding of:

- How a building with a steel roofing system can behave in a fire
- The design issues when specifying FireWALL™ Area Separation Walls
- What systems are available to meet the designer's requirements
- How to detail the plasterboard application to achieve the required performance when installed.

Design Issues

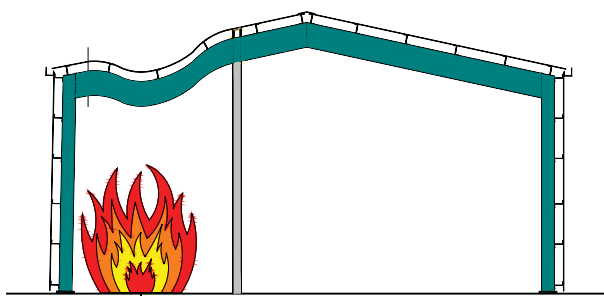
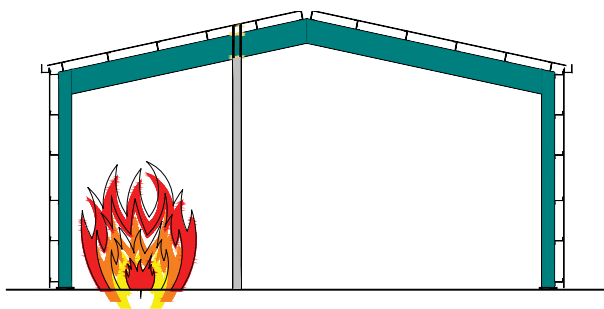
What Happens in a Fire?

When dividing a building having a sheet roof into two or more fire compartments, the fire-rated wall system selected is often assumed to be non-load bearing as the structure is already standing. The fire walls are thought of only as 'infill' walls. This assumption is true before a fire.

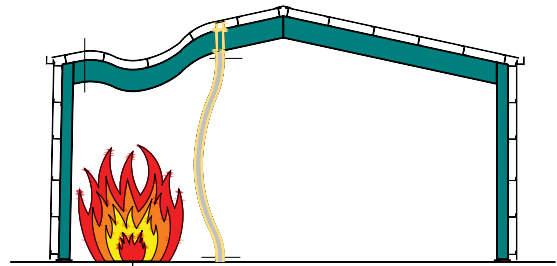
However, if a fire should occur, structural roof components exposed to the fire may lose their strength requiring the adjacent 'non-load bearing' wall to support the dead load of these structural roof components and any loadings generated by structural components on the unaffected side of the fire wall.

As shown in the following diagrams, a fire begins in one of the areas in the steel framed building separated from the adjacent area with a fire rated wall running perpendicular to portal frame.

As the fire continues and temperature increases, it can cause the steel in the portal frame to lose strength and sag under its own weight. As a consequence, the fire rated dividing wall may be required to carry the loads of the collapsing section of the portal and the unaffected part of the portal frame.



If the fire rated wall is unable to carry these imposed loads and were to collapse then the fire would no longer be contained within the fire compartment and spread to the rest of the building.



A similar situation will occur when the fire wall runs parallel to the portal roof beams whereby the dead loads of the fire affected portal frames may be transferred into the fire wall via the roof purlins spanning from portal frame to portal frame.

When designing the wall to support the imposed axial loads during a fire, the Engineer needs to be aware that the fire rated wall may bow out of plane as the heat affects the studs. In steel stud walls the wall tends to bow toward the fire as the stud flange closest to the fire heats up. This may have an impact on the axial load carrying capacity of the stud due to 'P-delta' effects. The presence of the plasterboard insulates the stud flanges slowing the heating process and the amount of bowing in the wall.

A further issue to be considered by the designer is the conduction of heat along steel members that penetrate the fire rated Area Separation Wall. Steel is a very good conductor of heat and precautions need to be taken to ensure that combustible material in contact with the steel member does not catch fire.

Fire testing undertaken at Victoria University of Technology in conjunction with Bluescope Steel and OneSteel examined how heat flows along steel members passing through Boral plasterboard walls and what simple methods could be employed to prevent the steel reaching temperatures that could allow a fire to cross the FireWALL™ Area Separation Wall - refer construction details later.

Design Issues

What About Acoustics?

The acoustic performance of a wall is measured by a term called the Weighted Sound Reduction Index, R_w and is expressed as a single number rating. The higher the R_w the better the wall is in preventing sound passing through it.

The R_w alone is not a good indicator of how well the partition isolates low frequency (bass) sounds which may be an important factor when choosing an appropriate area separation wall system. To choose a wall with improved low frequency performance, the $R_w + C_{tr}$ should be considered. For instance, the Building Code of Australia requires specific walls separating dwellings to have a minimum $R_w + C_{tr} = 50$ dB.

This may be a good starting point for factories where noisy machinery is being used and an area separation wall is required to reduce sound to a level that does not annoy the occupants on the other side.

For walls dividing cinemas, a typical Specification has required the performance of the wall to be a minimum $R_w = 65$ dB with particular emphasis on noise reduction performance in selected octave band centre frequencies. The D-Stud™ system has been successfully used on many Cinema projects.

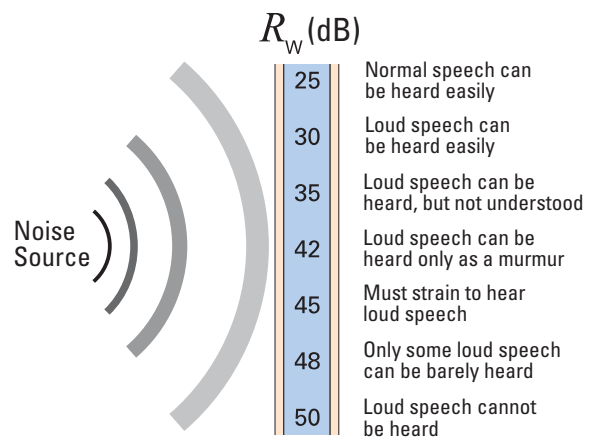
The higher the $R_w + C_{tr}$ value the better the sound isolation performance, particularly in the low frequencies.

The amount of sound isolation a wall provides is a function of:

- Mass of plasterboard on each side
- Size of the wall cavity
- Whether cavity insulation is present
- If there is a connection between the linings from one side to the other.

Sound isolation can be improved by adding more layers of plasterboard, increasing the wall cavity and adding insulation into the wall cavity. For greater performance, it is important that there is no mechanical linkage between the plasterboard leaves from one side of the wall to the other. This can be achieved through using either the Twin Stud wall system or the Boral D-Stud™ wall system.

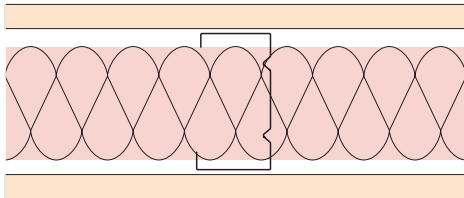
The diagram below provides an indication of the R_w rating as it relates to speech isolation. For example speech will be heard through a partition that has an $R_w = 36$ dB rating.



Typical R_w Ratings
(10mm plasterboard each side of stud wall is approx $R_w = 36$ dB)

FireWALL™ System Types

Single Stud Walls

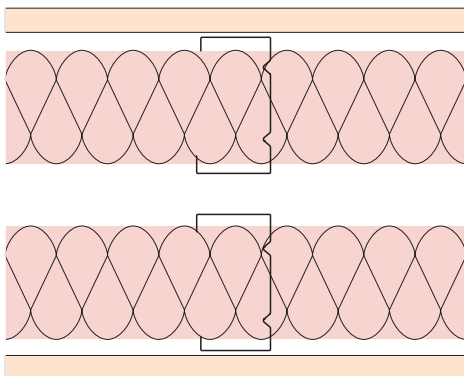


Single stud walls comprise steel studs, lined on both sides of the stud with plasterboard. Rows of noggings or bridging are normally required to provide stability to the stud section.

The fire rating will be dependent upon the number of layers of plasterboard fixed to the studwork.

The walls are usually non load bearing, but can be designed to carry axial loads. The size of the studs will be dependent upon the anticipated design loadings and should be determined by a Structural Engineer. Load bearing members can be installed within the wall cavity and be protected by the plasterboard linings on each side of the wall.

Twin Stud Walls

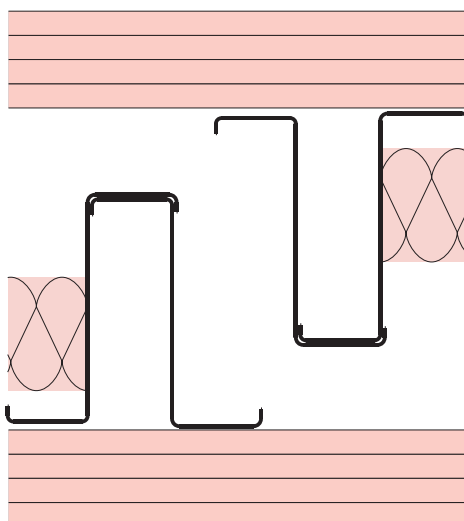


Twin stud walls comprise two sets of steel studs, each one lined on one side only with plasterboard. Rows of noggings or bridging are required to provide stability to the stud section.

Twin stud walls can be used where improved acoustic performance is required or the wall width is dictated by the size of steel columns or other fixtures present within the wall cavity.

The fire rating will be dependent upon the number of layers of plasterboard fixed to the studwork. The size of the studs will be dependent upon the anticipated design loadings and should be determined by a Structural Engineer.

D-Stud™ Walls



D-Stud™ walls are non load bearing and can be used where increased acoustic performance is required, especially in Cinemas.

The D-Stud™ wall system does not need noggings or bridging between the studs and allows stud centres greater than 600mm max centres.

The system with four layers of 16mm Boral FireSTOP™ on each side, cavity insulation and an overall width of 500mm has been used at the Chadstone Cinemas in Victoria.

Note: D-Stud™ systems are subject to Australian Patent Number 697958

Design

Structural Design

When designing FireWALL™ Area Separation Walls, the Engineer shall consider the lateral pressures that may be exerted upon the wall. With most factory/warehouse type buildings, they often have large doorways to facilitate the loading and unloading of trucks. These large or 'dominant' openings allow the air pressure within the building to respond more quickly to the external environment than would occur if the building had small openings or was sealed. The building designer will need to take these loads into account when designing the structure of the building, especially in regards to the lateral loadings that the wall may apply to the bottom chords of roof beams or purlins supporting the top of the walls.

For this reason the connections between the top of area separation wall and the supporting structure have to have a greater capacity than those normally used for fire rated walls where light gauge deflection head tracks are used. Similarly the base connections will also have to be capable of resisting the internal pressures acting on the wall.

If the wall is to be non-load bearing (except in fire service) then the Engineer has to ensure that an appropriate deflection head is selected that will allow for any upward or downward deflections in the roof so that the wall will not impact upon the existing structure as it was originally designed to perform.

For fire rated walls running perpendicular to portal frames or roof beams, additional structural columns may be required to support the roof structure during a fire event.

Similarly, for fire rated walls running parallel and not to full length of main roof structure additional columns may be required. Refer construction details later.

The Engineer shall consider appropriate wall bracing systems to account for any raking loads exerted on the separation wall, in particular walls running parallel to portal frames. At no time shall the plasterboard be assumed to provide bracing to the separation wall.

The Building Code of Australia sets out minimum deflection criteria in Specification C1.8 for fire rated walls depending upon the purpose of the wall. For 'walls generally' the deflection criteria is height/240 to a maximum of 30mm when the wall is subjected to a design load of 250Pa. This means that all walls over 7.2m in height under this classification have a maximum allowable deflection of 30mm.

If the wall forms part of a fire escape passageway, then the design load is increased to either 350Pa or 1kPa depending upon the use of the building.

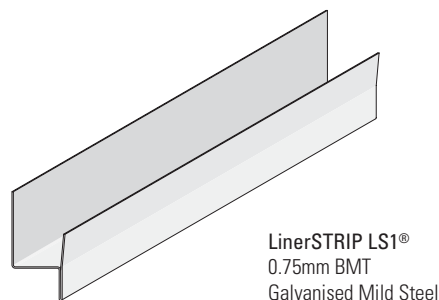
Materials

All materials, unless otherwise indicated, shall be supplied by Boral Plasterboard, and shall be installed in accordance with current printed instructions.

All materials shall be delivered in their original unopened packages where appropriate and stored clear of the ground in an enclosed shelter providing protection from damage and exposure to the elements. Damaged or deteriorated materials shall be removed from site.

The stud sections and fixing details used to build the wall are to be designed by a Structural Engineer to resist the design loads determined to be acting upon the wall before, during and after a fire.

For details of D-Stud™ wall systems refer to current Boral Plasterboard technical literature.



Boral LinerSTRIP LS1® has been developed to provide a cost effective installation method for ShaftLINER™.

Note: LinerSTRIP LS1® sections are subject to Australian Registered Design Numbers 302762, 302763 and 302765 and New Zealand Registered Design Numbers 406256, 406258 and 406259

Single and Twin Stud FireWALL™ Systems

Fire Design

The following board configurations to each side of single stud wall or twin stud wall may be used for load bearing and non load bearing fire rated walls achieving the FRL's stated under the conditions listed in the table below.

Where walls are non load bearing and columns used to support the structure during or after a fire require fire protection, the designer should refer to the Boral Plasterboard Column and Beam Protection Systems brochure.

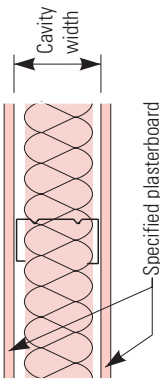
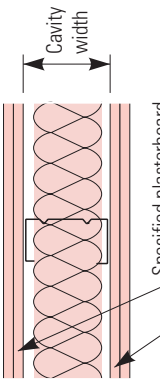
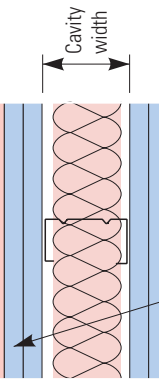
Board Configuration		FRL	Fire Attack Direction
FireSTOP™			
Side 1	Side 2		
1x13	1x13	30/30/30	Both
1x16	1x16	60/60/60	Both
2x13	2x13	90/90/90	Both
2x16	2x16	120/120/120	Both
1x25*	1x25*	120/120/120	Both
1x16	1x16		
1x25*	1x25*	-/180/180	Both
1x16	1x16		
2x25*	2x25*	180/180/180	Both
1x16	1x16		
2x25*	2x25*	-/240/240	Both
1x16	1x16		

* Denotes 25mm thick ShaftLINER™ with LinerSTRIP LS1®

Note:

- For load bearing walls with up to 2 layers of 16mm FireSTOP™ on each side, all joints in the first layer to be backed by noggings or studs. Elsewhere noggings to be provided at 1200mm maximum centres.
- Bracing to be provided within the wall as required by Structural Engineer ignoring plasterboard contribution.
- Cold formed steel wall studs to be designed by a suitably qualified Structural Engineer and shall comply with AS/NZS 4600:1996 Cold Formed Steel Structures.
- Any structure providing support, including lateral support, to the load bearing wall must have an FRL of at least that of the wall (assuming that the particular structure will be required to provide the support whilst being exposed to the fire).
- 25mm ShaftLINER™ sheets fixed to wall studs using LinerSTRIP LS1®.
- Stud splicing not allowed.
- Unless noted otherwise, walls to be lined to standard Boral Plasterboard non load bearing fire rated details.

FireWALL™ Selection Table

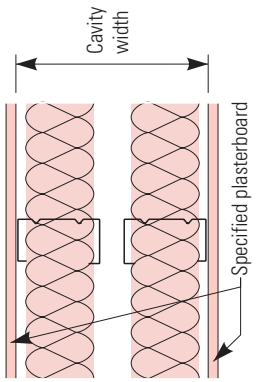
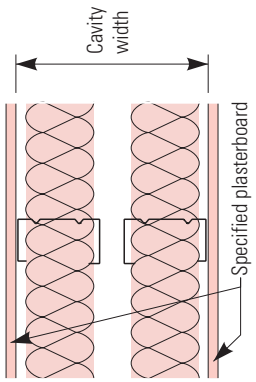
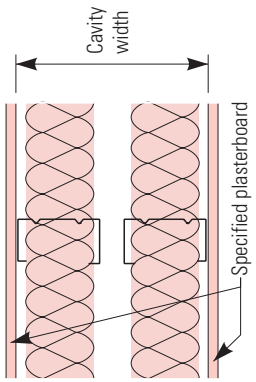
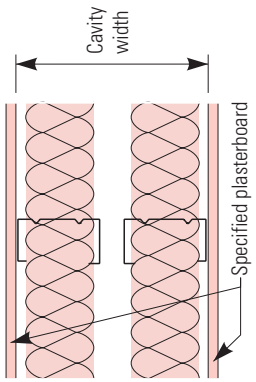
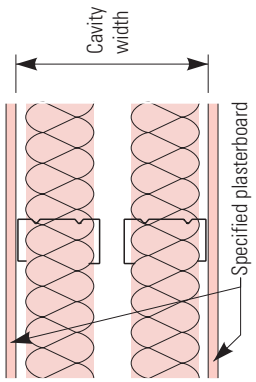
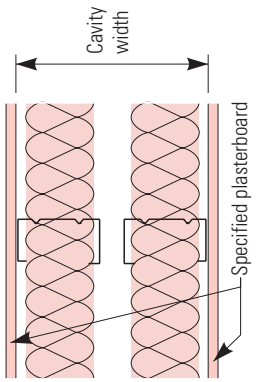
Layout	System Ref	Description	Approx Pbd Mass (kg/m ²)	Fire Resistance		Stud Size (mm)	Nominal Cavity Width (mm)	Acoustic Ratings			
				FRL	Basis			Nil Insul	With Insulation	Insulation Type	
								R_w	R_w	$R_w + C_{tr}$	
 <p>Cavity width</p> <p>Specified plasterboard</p>	S1313F	1 layer 13mm FireSTOP™ each side of frame	21.0	30/30/30 Both sides	FCO-1045	Refer Engineer	150	38	41	33	100G14 100P14
			21.0	30/30/30 Both sides	FCO-1045	Refer Engineer	200	39	42	34	100G14 100P14
			26.0	60/60/60 Both sides	FCO-1045	Refer Engineer	150	39	42	34	100G14 100P14
			26.0	60/60/60 Both sides	FCO-1045	Refer Engineer	200	40	43	35	100G14 100P14
 <p>Cavity width</p> <p>Specified plasterboard</p>	S2626F	2 layers 13mm FireSTOP™ each side of frame	42.0	90/90/90 Both sides	FCO-1360 FCO-1045	Refer Engineer	150	43	47	42	100G14 100P14
			42.0	90/90/90 Both sides	FCO-1360 FCO-1045	Refer Engineer	200	44	48	43	100G14 100P14
			52.0	120/120/120 Both sides	FCO-1360 FCO-1045	Refer Engineer	150	43	47	42	100G14 100P14
			52.0	120/120/120 Both sides	FCO-1360 FCO-1045	Refer Engineer	200	44	48	43	100G14 100P14
 <p>Cavity width</p> <p>Specified plasterboard</p>	S4141F	LinearSTRIP LS1® 1x25 ShaftLINER™ & 1x16 FireSTOP™ each side of frame	67.0	-/180/180 Both sides	FCO-2440	Refer Engineer	150	47	51	46	100G14 100P14
			67.0	-/180/180 Both sides	FCO-2440	Refer Engineer	200	48	52	47	100G14 100P14
			108.5	180/180/180 -/240/240 Both sides	FCO-2440	Refer Engineer	150	50	55	50	100G14 100P14
			108.5	180/180/180 -/240/240 Both sides	FCO-2440	Refer Engineer	200	50	55	50	100G14 100P14

- Wall system thumbnails are for illustrative purposes only • Acoustic ratings based on 2.0mm BMT studs at 600mm centres by Graeme Harding & Associates
- 100G14 denotes 100mm thick glasswool insulation, min density 14kg/m³ • 100P14 denotes 100mm thick polyester insulation, min density 14kg/m³

FireWALL™ Selection Table

Layout	System Ref	Description	Apprx Pbd Mass (kg/m ²)	Fire Resistance		Stud Size (mm)	Nominal Cavity Width (mm)	Acoustic Ratings		
				FRL	Basis			With Insulation		Insulation Type
								R _w	R _w +C _{tr}	

Twin Stud FireWALL™ Systems

	ST1313F	1 layer 13mm FireSTOP™ each side of frame	21.0	30/30/30 Both sides	FCO-1045	Refer Engineer	350	42	55	46	200G14
			21.0					43	56	47	200P14
			21.0					44	56	49	200P14
	ST1616F	1 layer 16mm FireSTOP™ each side of frame	26.0	60/60/60 Both sides	FCO-1045	Refer Engineer	350	45	57	49	200G14
			26.0					46	57	50	200P14
			26.0					47	58	50	200P14
	ST2626F	2 layers 13mm FireSTOP™ each side of frame	42.0	90/90/90 Both sides	FCO-1360 FCO-1045	Refer Engineer	350	51	66	58	200G14
			42.0					52	67	59	200P14
			42.0					53	68	60	200P14
	ST2322F	2 layers 16mm FireSTOP™ each side of frame	52.0	120/120/120 Both sides	FCO-1360 FCO-1045	Refer Engineer	350	55	68	59	200G14
			52.0					56	69	60	200P14
			52.0					57	70	63	200P14
	ST4141F	LinerSTRIP LS1® 1x25 ShaftLINER™ & 1x16 FireSTOP™ each side of frame	67.0	-/180/180 Both sides	FCO-2440	Refer Engineer	350	58	72	63	200G14
			67.0					59	73	64	200P14
			67.0					60	74	65	200P14
	ST6666F	LinerSTRIP LS1® 2x25 ShaftLINER™ & 1x16 FireSTOP™ each side of frame	108.5	180/180/180 -/240/240 Both sides	FCO-2440	Refer Engineer	350	63	76	67	200G14
			108.5					64	77	68	200P14
			108.5					65	78	69	200P14

- Wall System thumbnails are for illustrative purposes only
- Acoustic ratings based on 2.0mm BMT studs at 600mm centres by Graeme Harding & Associates
- 200G14 denotes 200mm thick glasswool insulation, min density 14kg/m³
- 200P14 denotes 200mm thick polyester insulation, min density 14kg/m³

D-Stud™ Wall System

The D-Stud™ wall provides superior acoustic performance, enabling it to be applied in many areas where high acoustic rating is required. D-Stud™ wall also provides up to 3.0 hours fire protection and can achieve wall heights up to 13.40 metres. A popular application for D-Stud™ wall is for walls between two cinemas that require high acoustic performance ($R_w = 65\text{dB}$ or greater), and often are more than 10 metres in height.

The structural and acoustic performance of D-Stud™ wall provides many design and construction advantages to a variety of building projects including auditoriums, theatres, sporting stadium and warehouse conversions.

Below are D-Stud™ wall specifications that may be used for area separation applications at the building designer's discretion.

Note that the lateral pressure on the wall is to be determined by Structural Engineer prior to selecting a D-stud™ wall as an Area Separation Wall.

Non Load Bearing D-Stud™ Walls

Max Wall Heights (mm)

(Max Wall Pressure: 0.25kPa)

Stud Size	Stud ctrs (mm)		
	900	1000	1200
2xZ15012	8500	8300	8000
2xZ15015	9000	8800	8400
2xZ15019	9500	9300	8900
2xZ20015	11000	10700	10200
2xZ20019	11700	11400	10900
2xZ25019	13400	13000	12500

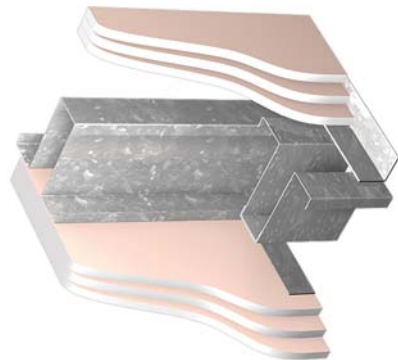
Note:

- Deflection limit is height/240 to a maximum of 30mm.
- Wall heights tabled are for non load bearing walls and not for axial loads, but include self weight and lateral pressures stated.
- Shelf loading is not permitted for the tabulated maximum wall heights. Refer Boral Plasterboard for maximum heights with shelf loadings.
- The maximum heights tabulated are based on testing performed using Boral FireSTOP™ plasterboard.
- Minimum yield stress of steel sections to be 450MPa UNO.
- Walls to be constructed with 13mm or 16mm Boral FireSTOP™ or Wet Area FireSTOP™ or 10mm Boral Standard Core plasterboard to standard Boral Plasterboard fire rated D-Stud™ wall details.
- 50Pa pressure assumed for fire design. Where greater pressures and fire loadings are likely to be coincident Boral should be consulted.
- For construction details refer Boral Plasterboard publication 'D-Stud™ High Performance Wall Systems'.
- Structural Engineer to verify D-Stud™ wall construction details are appropriate for specific projects.

Note: D-Stud™ systems are subject to Australian Patent Number 697958

FireWALL™ Selection Table

Layout	System Ref	Description	Approx Pbd Mass (kg/m ²)	Fire Resistance		Stud Size (mm)	Nom Width (mm)	Acoustic Ratings			
				FRL	Basis			With Insulation		Insulation Type	
								R _w	R _w +C _{tr}		
D-Stud™ Walls	D4848F	3x16mm FireSTOP™ pbd layers to each side of frame	78.0	-/180/180	FSV 1073	as required	500	63	74	65	200G14 200P14
	D4864F	3x16mm FireSTOP™ pbd layers to one side of frame 4x16mm FireSTOP™ pbd layers to other side	91.0	-/180/180	FSV 1073	as required	500	64	76	67	200G14 200P14
	D6464F	4x16mm FireSTOP™ pbd layers to each side of frame	104.0	-/180/180	FSV 1073	as required	500	64	77	68	200G14 200P14

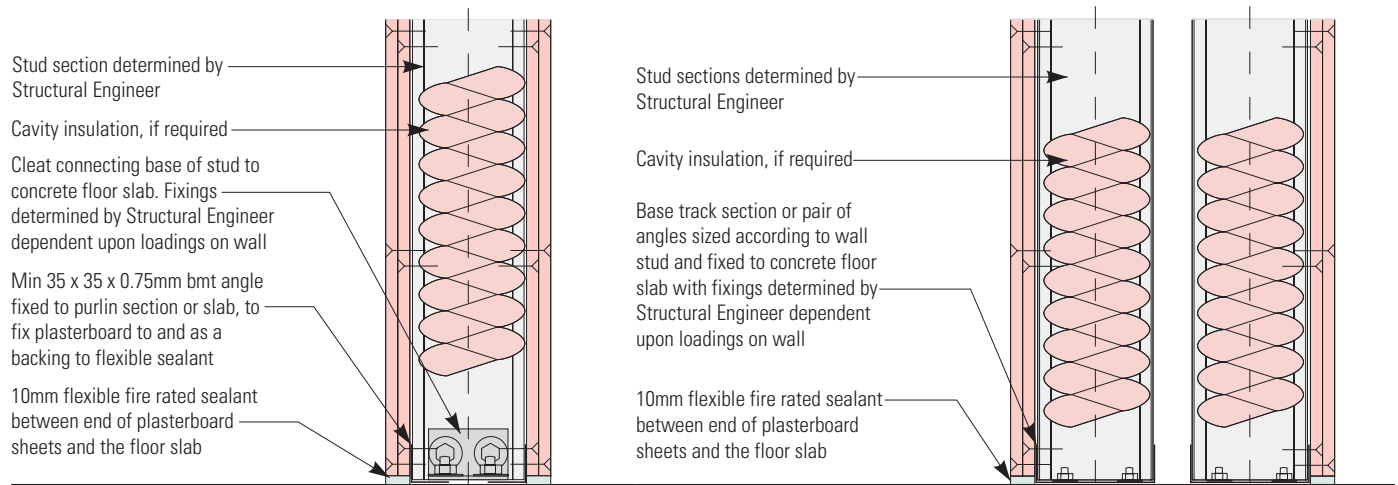


System D4848F illustrated

Note: D-Stud™ systems are subject to Australian Patent Number 697958

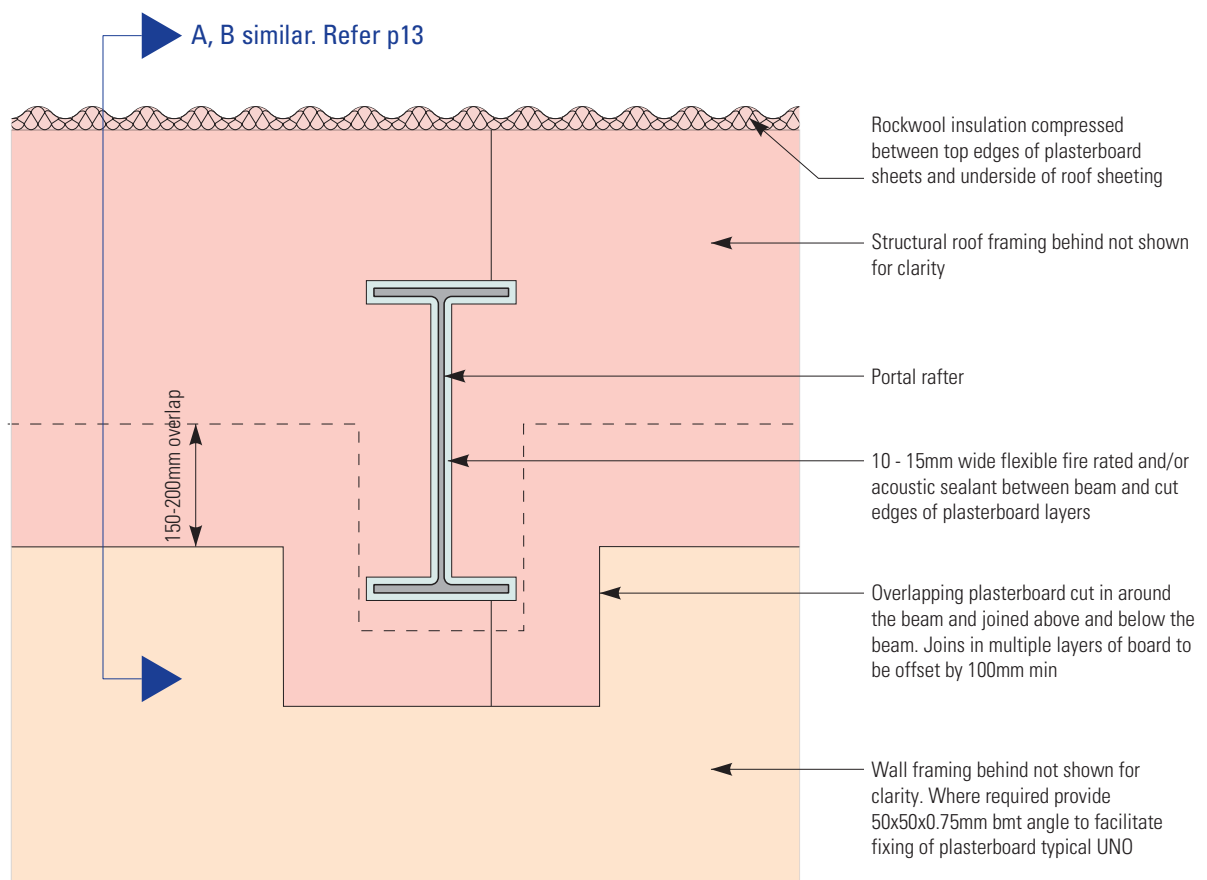
• 200G14 denotes 200mm thick glasswool insulation, min density 14kg/m³ • 200P14 denotes 200mm thick polyester insulation, min density 14kg/m³

Details



Base Detail of Single Stud Wall

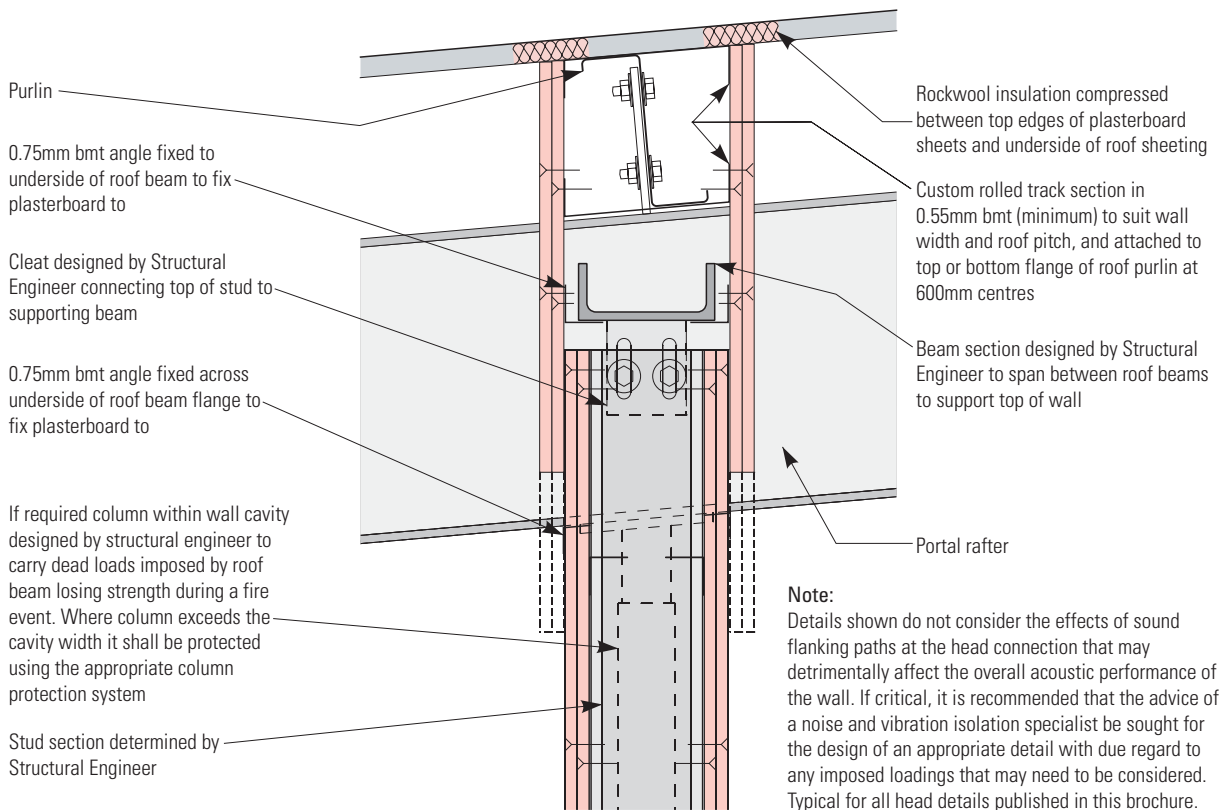
Base Detail of Twin Stud Wall



Note: Refer page 23 for construction notes

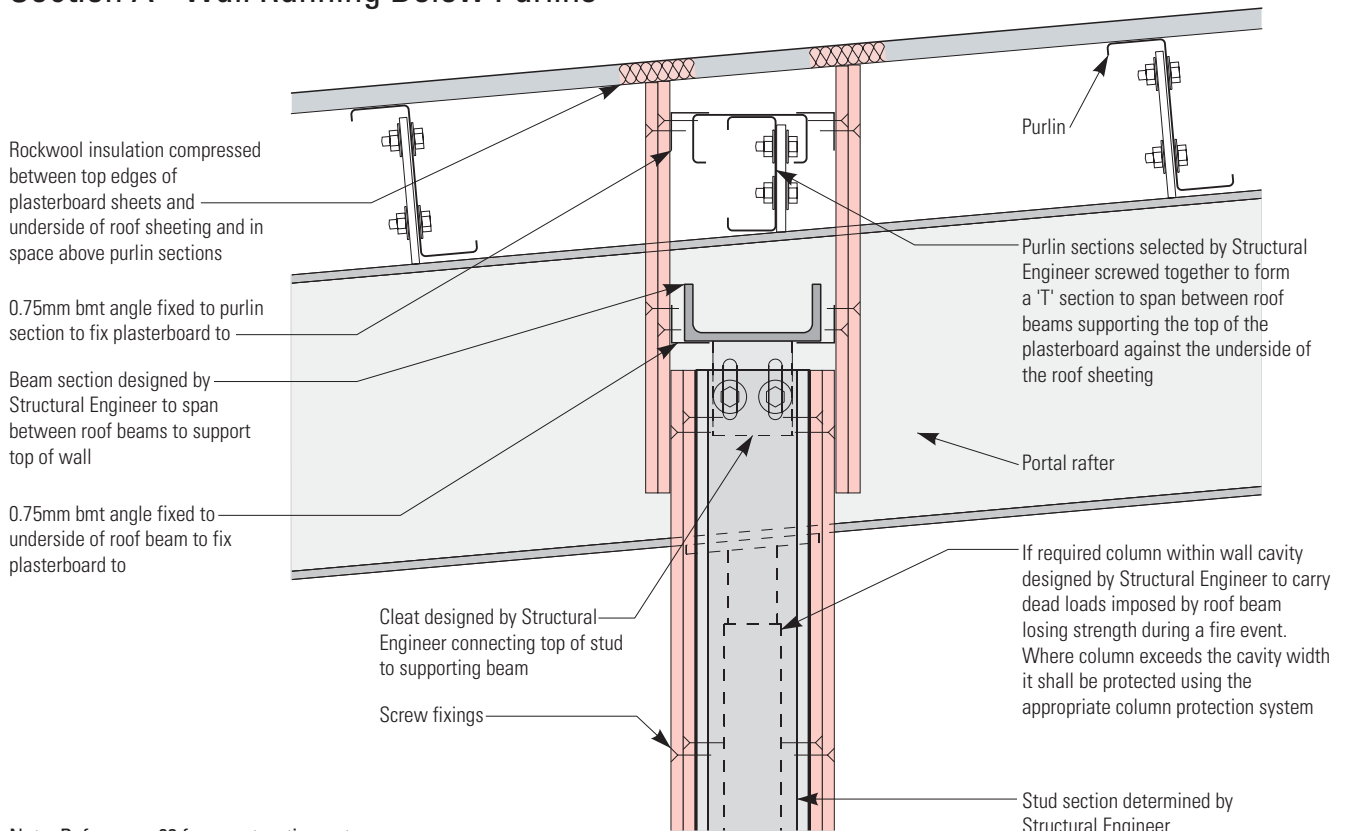
Single Stud Wall Head Elevation - Perpendicular to Portal Frame

Details



Note: Refer page 23 for construction notes

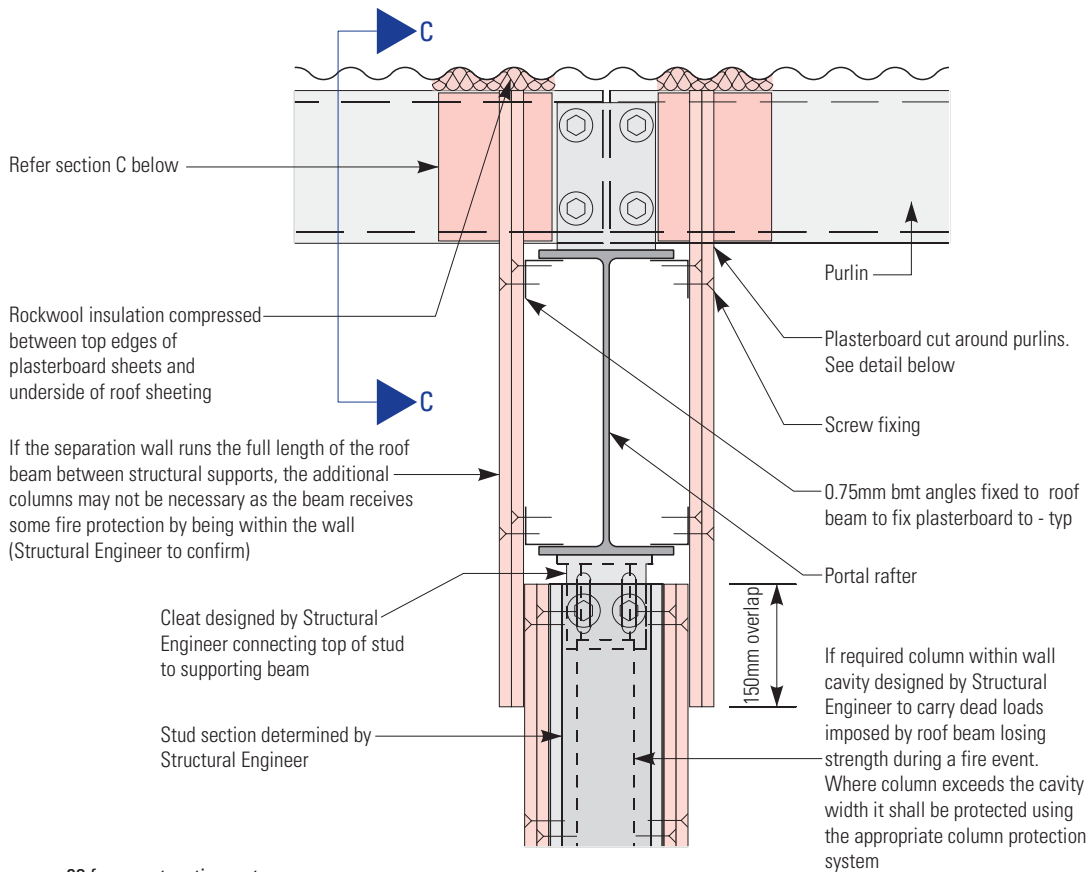
Section A - Wall Running Below Purlins



Note: Refer page 23 for construction notes

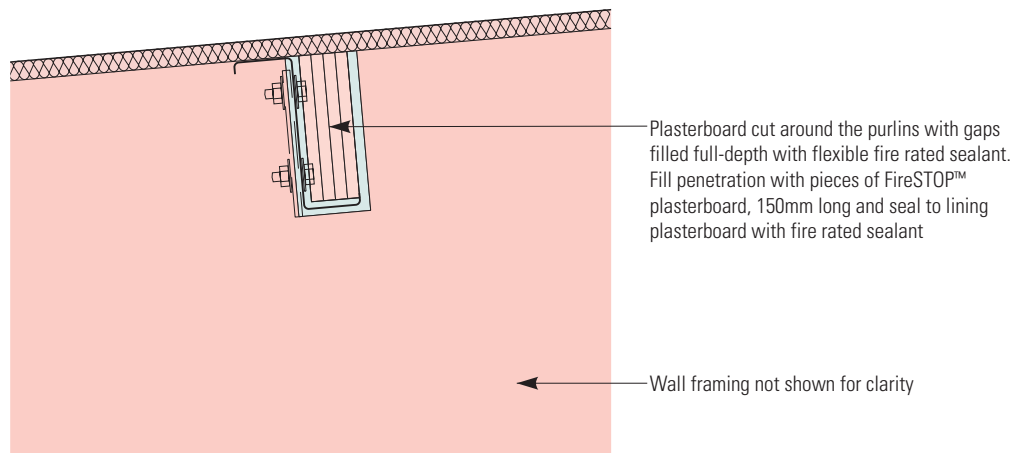
Section B - Wall Running Between Purlins

Details



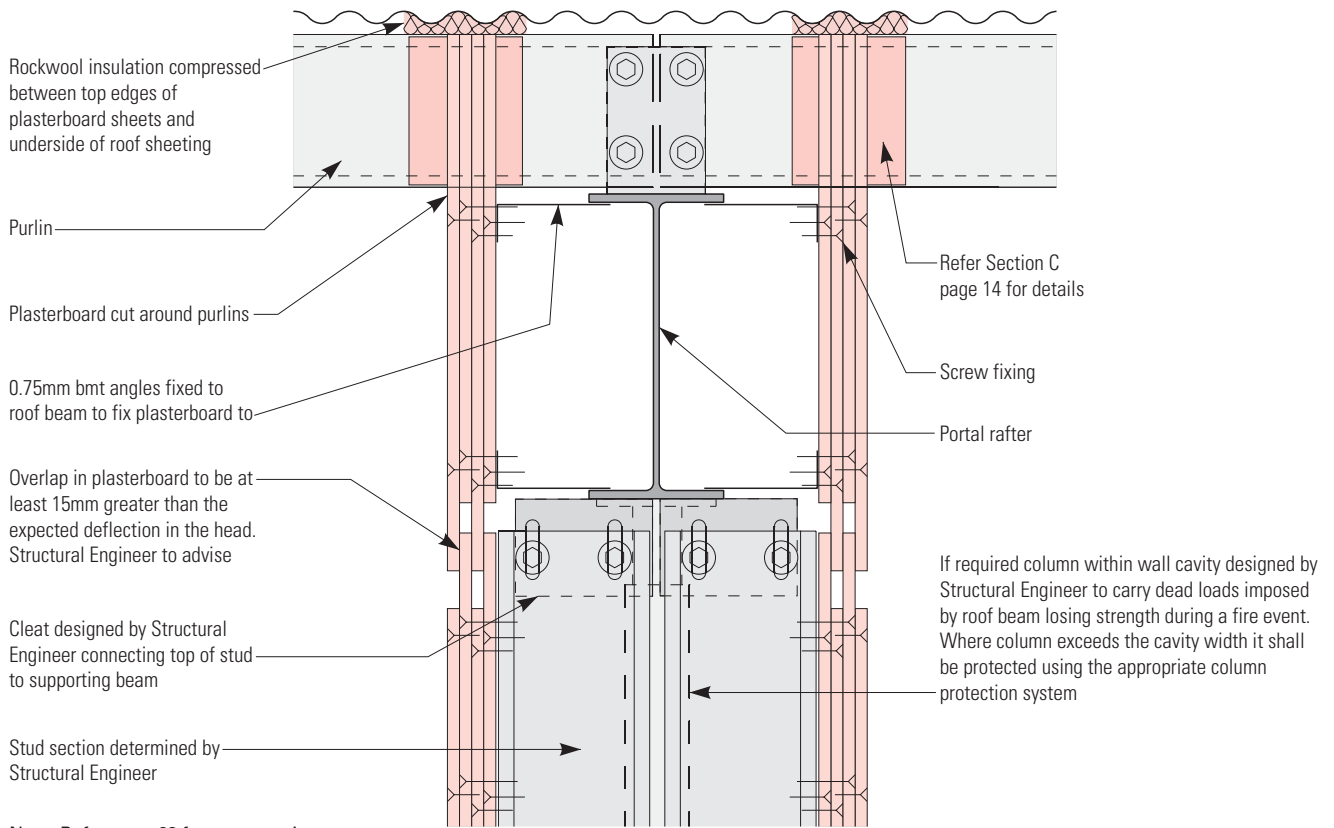
Note: Refer page 23 for construction notes

Single Stud Wall Head Section Parallel to Portal



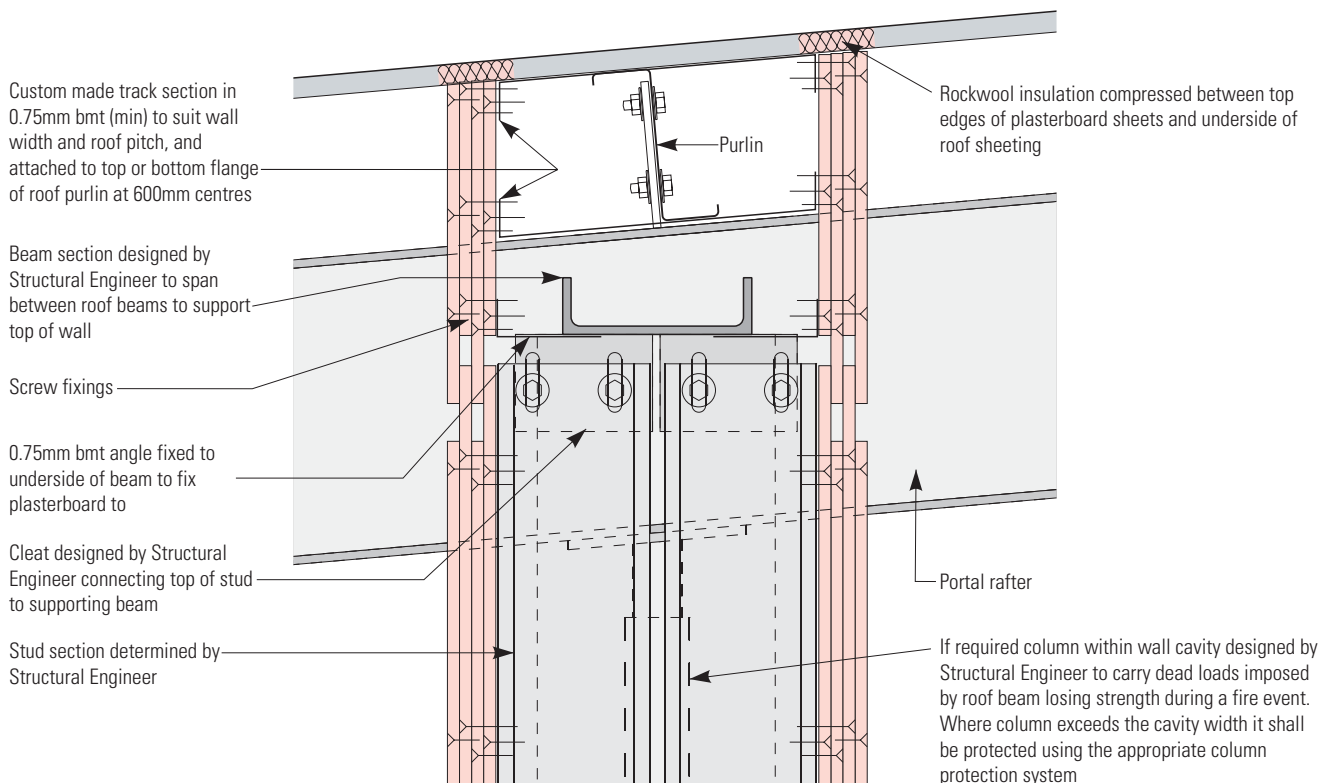
Section C - Single Stud Wall Head Elevation Parallel to Portal

Details



Note: Refer page 23 for construction notes

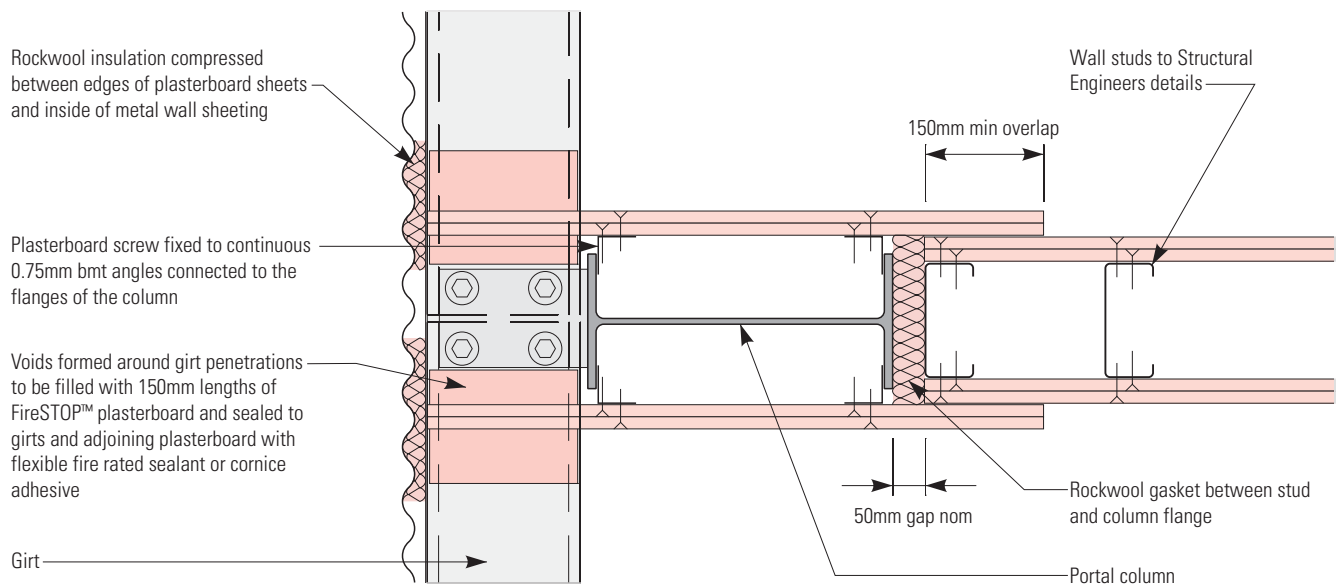
Twin Stud Wall Head Section Parallel to Portal



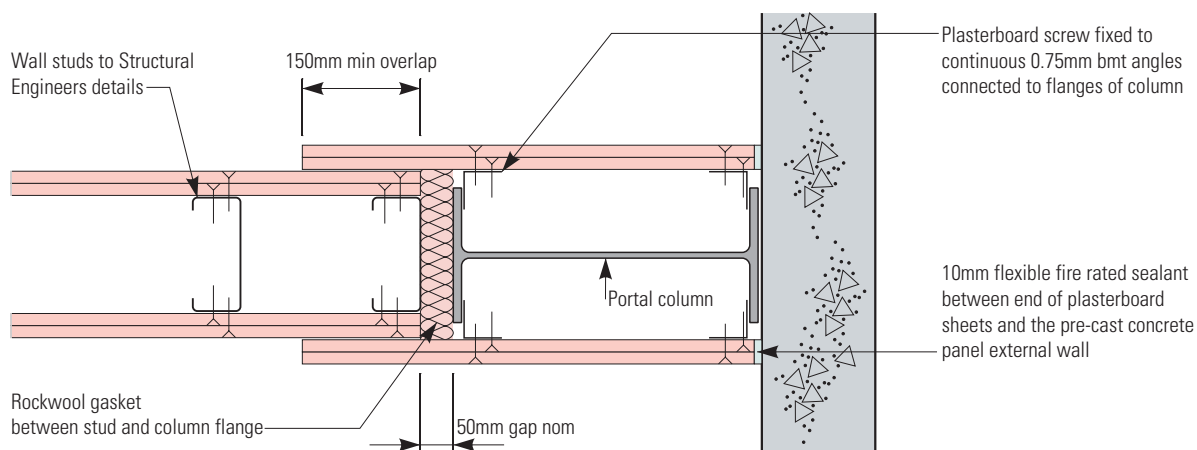
Note: Refer page 23 for construction notes

Twin Stud Wall Head Section Perpendicular to Portal

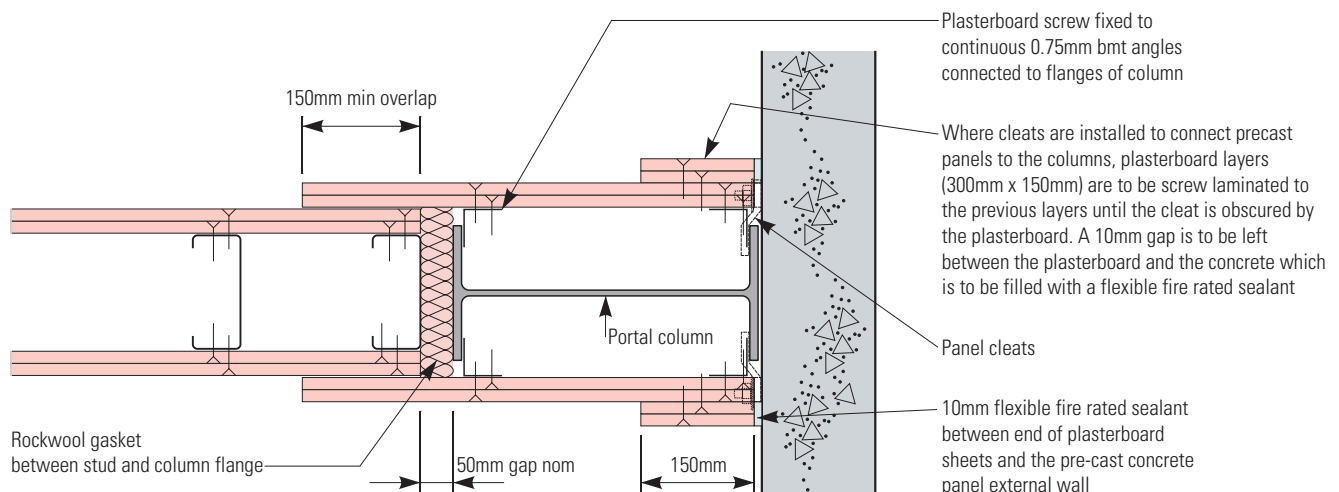
Details



Wall Junction With External Metal Clad Non Fire Rated Wall

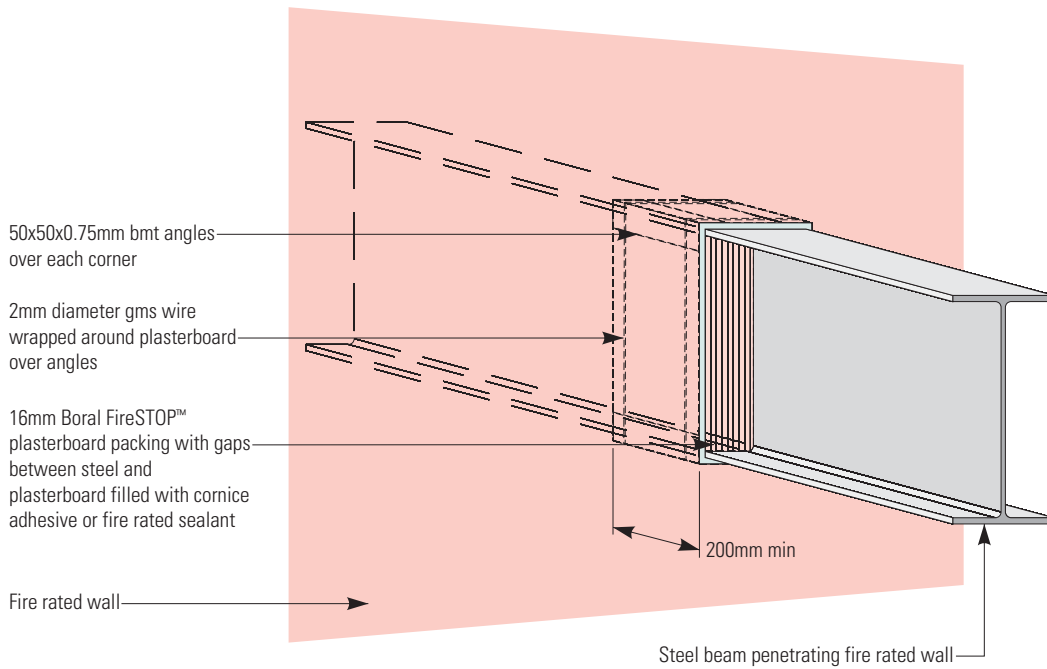


Wall Junction With External Pre-cast Concrete Panel Wall - No Cleats

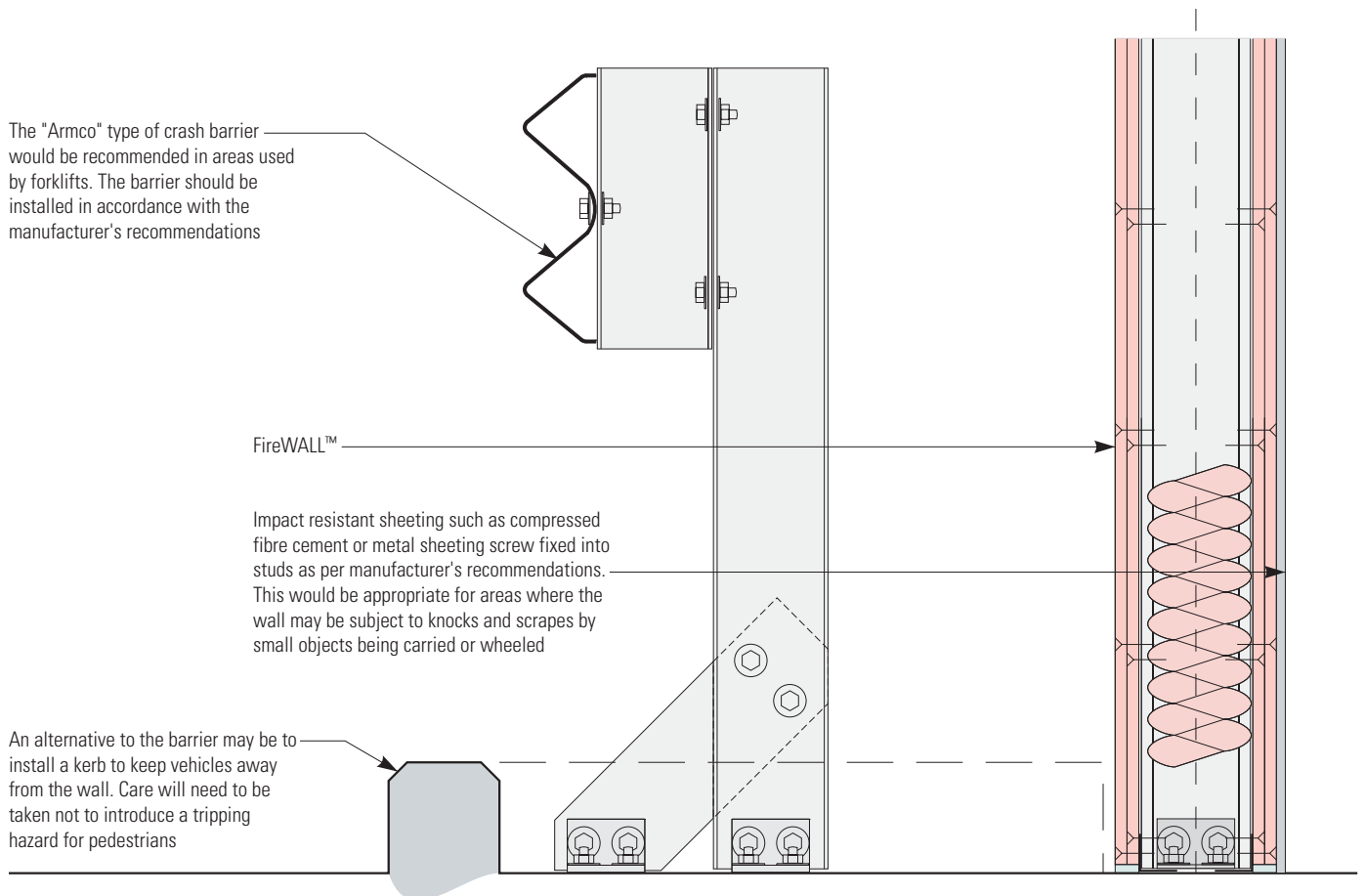


Wall Junction With External Pre-cast Concrete Panel Wall - Using Cleats

Details

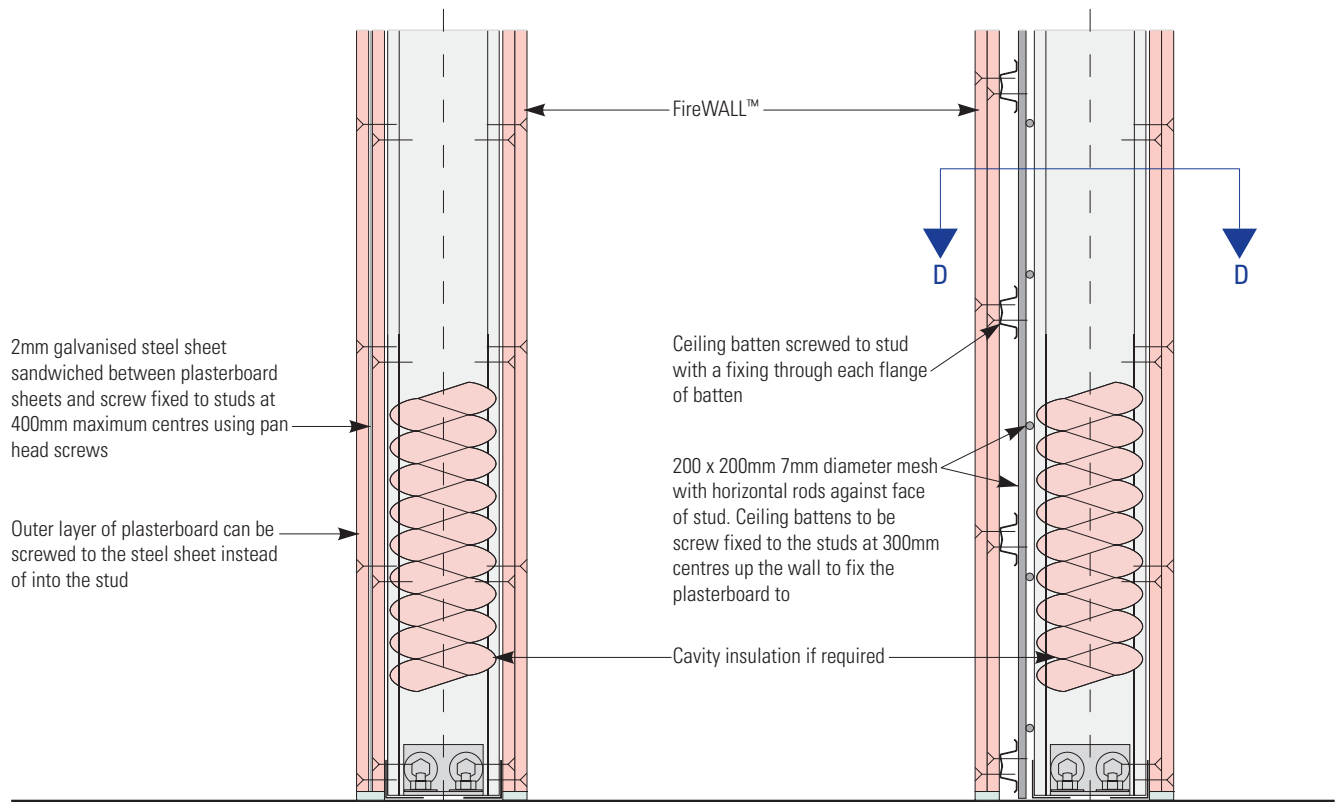


Treatment of Steel Members Penetrating FireWALL™



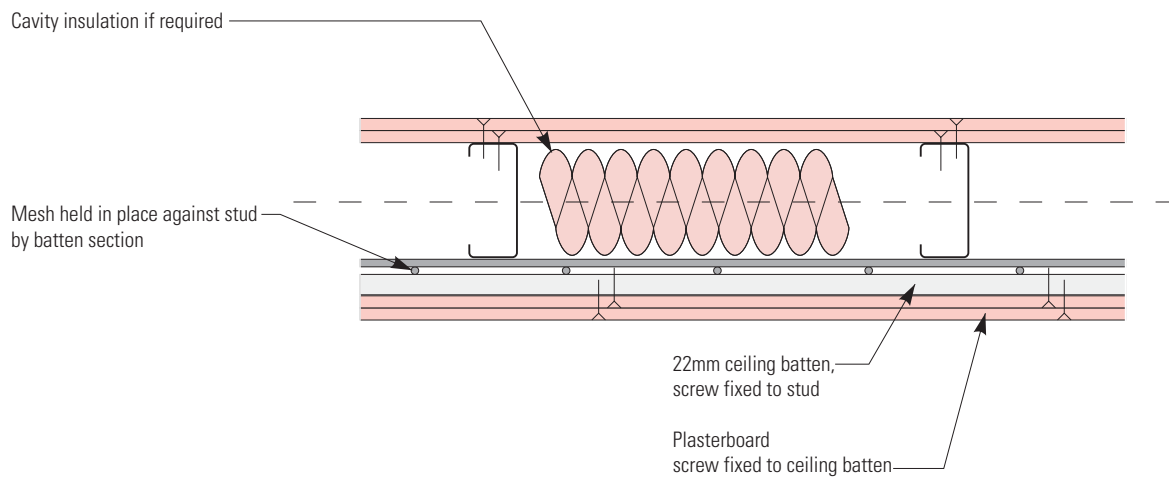
Impact Protection

Details



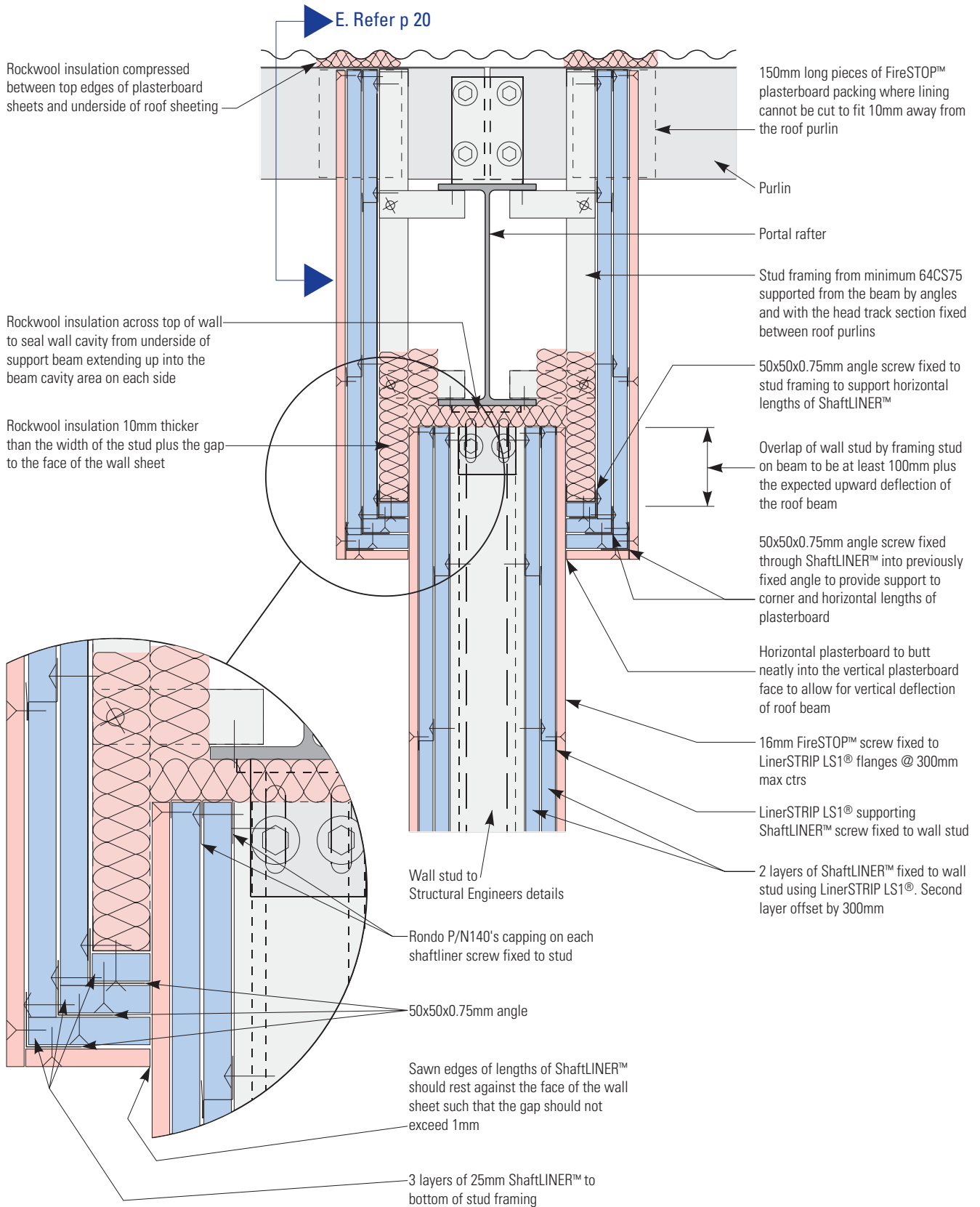
Wall With Steel Sheet Between Plasterboard Layers

Wall With Mesh Reinforcement



Section D - Wall With Mesh Reinforcement

Details



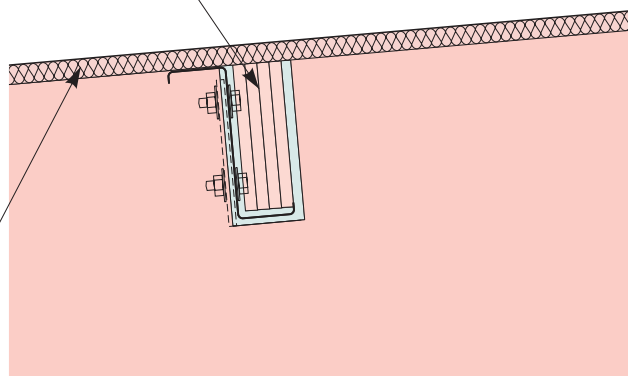
Head Detail for Non Load Bearing 4 Hour Wall

Note: Systems utilising LinerSTRIP LS1® sections are subject to Australian Patent Application Number 2006203282

Details

Plasterboard cut around purlins, with gaps filled full depth with flexible fire and/or acoustic rated sealant. Fill the void with pieces of FireSTOP™ plasterboard 150mm long and seal to lining plasterboard with fire rated sealant

Rockwool compressed between the top of the stud wall and plasterboard and the underside of the roof sheeting

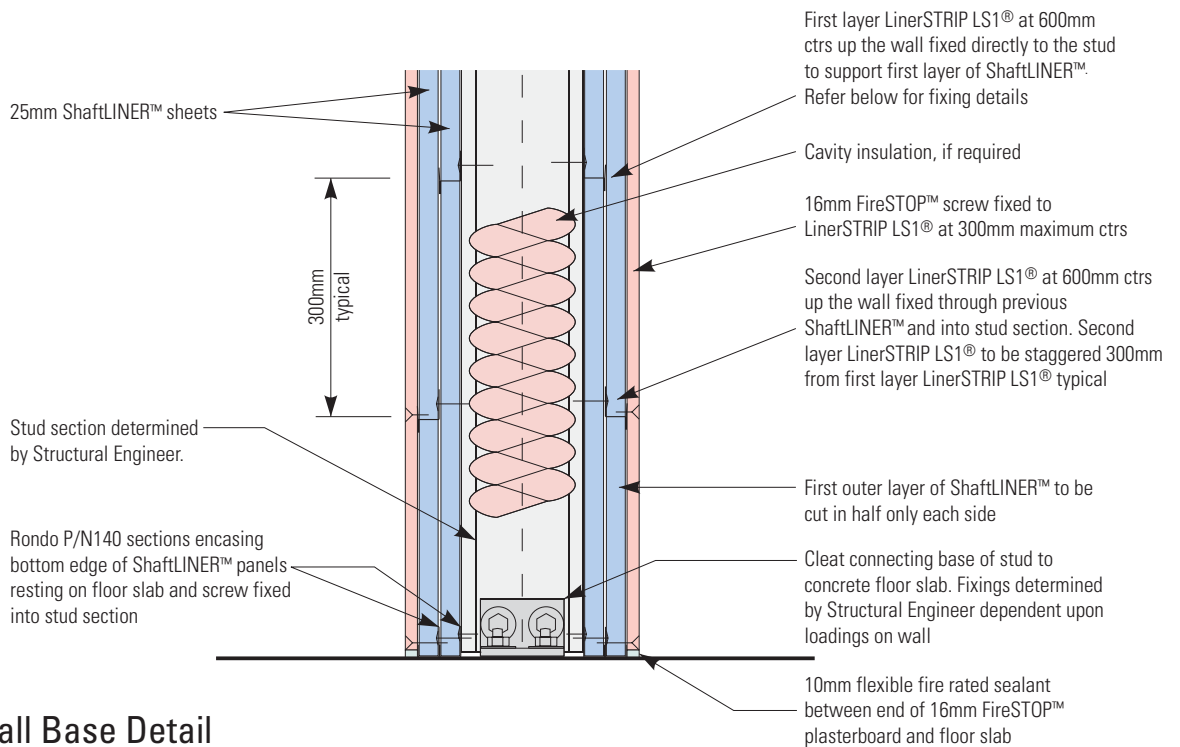


Notes:

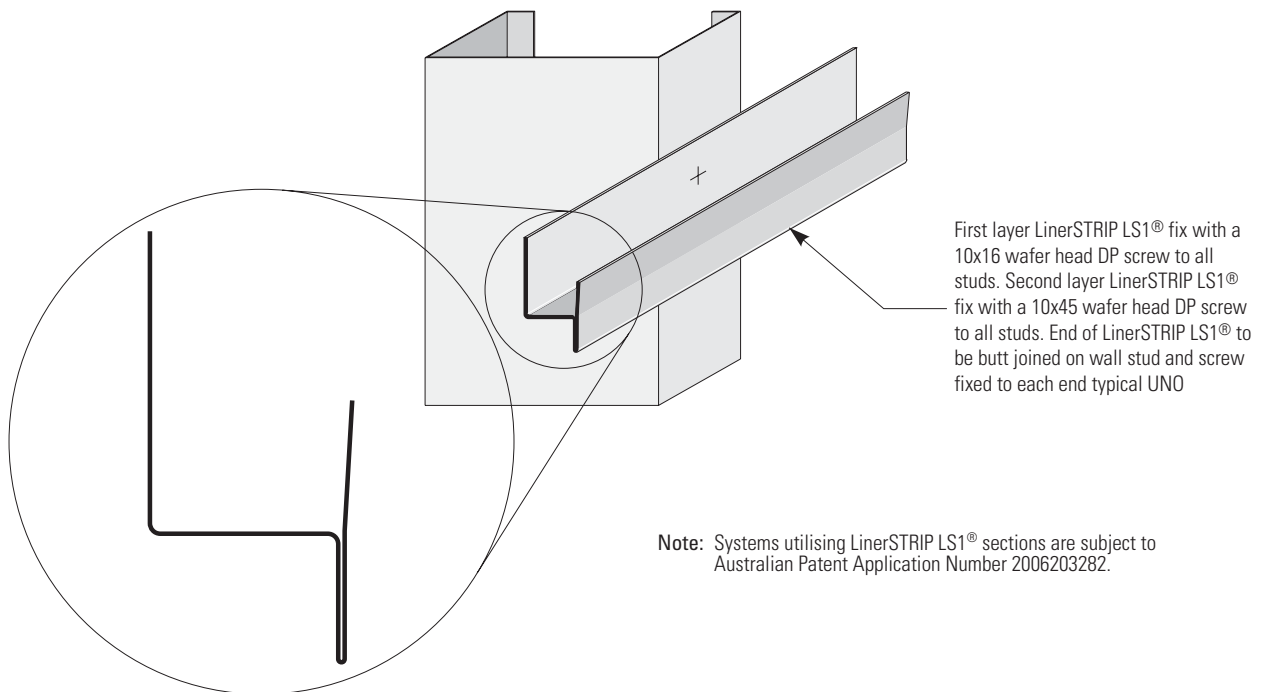
1. The wall studs should be sized by the Structural Engineer designing the structure and be capable of withstanding lateral pressure loads and axial forces that will act on the wall before and after a fire event.
2. For a four hour non load bearing wall (-/240/240), 2 layers of ShaftLINER™ supported by LinerSTRIP LS1® with a single layer of 16mm FireSTOP™ screw fixed to the LinerSTRIP LS1® supporting the outer layer of ShaftLINER™ on each side of the wall.
3. The width that the higher plasterboard overlaps the lower plasterboard to be 100mm plus the expected deflection due to uplift of the roof beam.
4. The plasterboard should be installed in accordance with Boral Plasterboard's standard requirements for fire rated wall.
5. The wall studs to be installed at 600mm maximum centres.

Section E - Non Load Bearing 4 Hour Wall

Details

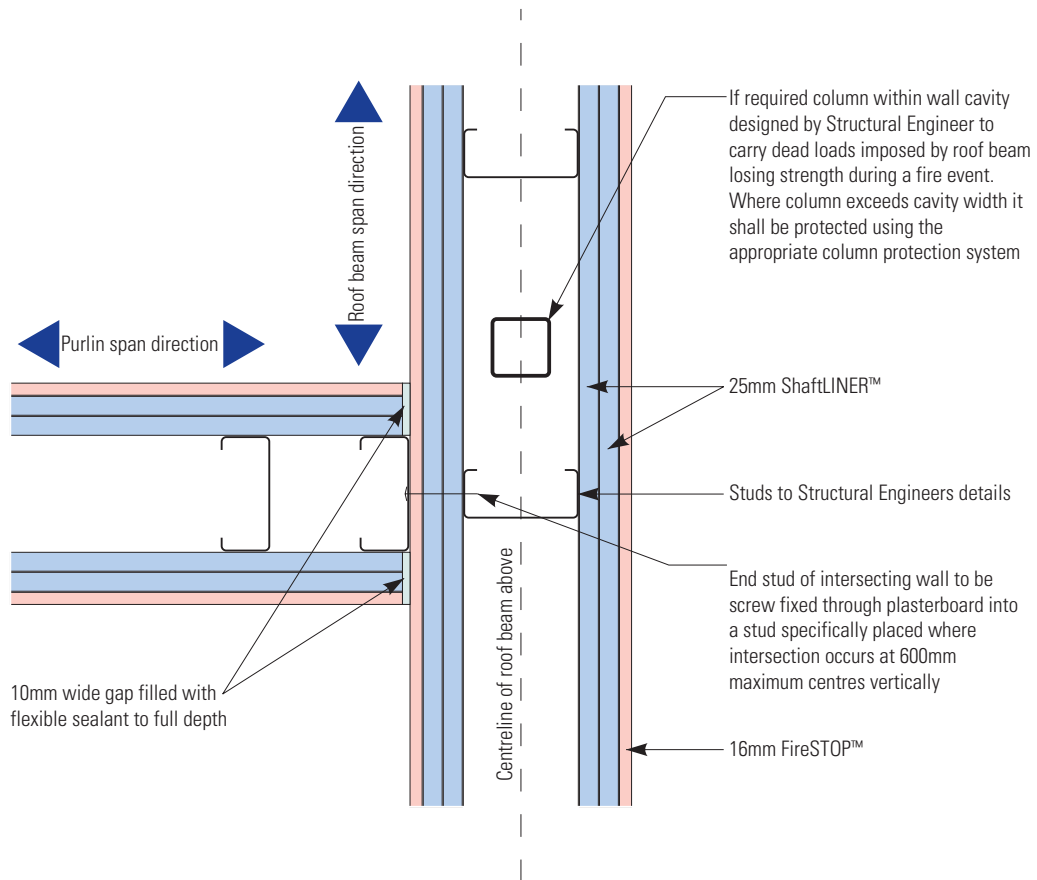


4 Hour Wall Base Detail



LinerSTRIP LS1® Fixing Detail

Details



Wall "T" Intersection - Non Load Bearing 4 Hour Wall

Construction Notes

- The slotted holes in the cleats supporting wall studs and the spigot connection on the beam supporting column to allow the roof system to deflect without applying axial loading onto the wall. The length of the slots in the cleats and the spigot will be subject to +ve and –ve deflections in the structure and should be sized by project Structural Engineer.
- The number of layers and type of plasterboard used will be dependent upon the fire or acoustic performance required from the system.
- The width that the higher plasterboard overlaps the lower plasterboard to be 150mm minimum.
- The plasterboard shall be installed in accordance with Boral Plasterboard's standard requirements for fire rated walls.
- The wall studs to be installed at 600mm maximum centres unless approved otherwise by Boral Plasterboard.
- Unless detailed herein, penetrations in FireWALL™ Area Separation Walls to be referred to Boral Plasterboard for assessment prior to commencement of work.
- Control joints should be provided in long continuous runs of area separation walls at 12 metre centres maximum and wherever structural expansion joints are located. Control joints to be verified by Structural Engineer prior to commencement of work. Refer to standard Boral Plasterboard fire rated wall systems for details.

Approved Sealants

The following fire grade sealants can be used in the installation of the FireWALL™ Area Separation Wall systems:

Approved Fire Grade Sealants

Product Name	Manufacturer
Fyreflex sealant	Grinnel
Promaseal Mastic	Promat
Lorient Fire Sealant	Lorient
Multiflex	Pyropanel
Fireban 1	Bostik
FireSound	HB Fuller

Technical Enquiries

TecASSIST
add a valuable member to your team
1800 811 222

Through TecASSIST Boral Plasterboard is demonstrating its commitment to providing excellent technical service and support to design, building and construction professionals Australia wide.

A free-call architectural support line, TecASSIST is available to provide sound advice on all matters relating to drywall plasterboard construction.

Combining years of professional experience with the latest design information and technology, the TecASSIST team has the skills to help you.

Boral Plasterboard TecASSIST phone line is open to receive calls from 8.30am to 4.30pm Monday to Friday, Melbourne time (Victorian public holidays excluded).

Fax: (03) 9645 1812

Email: tecassist@boral.com.au

State Sales Offices

ACT

7 Barrier Street Fyshwick 2609
Telephone (02) 6280 4243
Facsimile (02) 6280 5816

New South Wales

3 Thackeray Street Camellia 2142
Telephone (02) 9638 0571
Facsimile (02) 9638 5557

Northern Territory

Cnr Coonawarra Rd & Mataram Street
(PO Box 38245) Winnellie 0820
Telephone (08) 8984 4484
Facsimile (08) 8984 3778

Queensland

733 Nudgee Road Northgate 4013
Telephone (07) 3215 2244
Facsimile (07) 3215 2299

South Australia

113-117 Bedford Street Gillman 5013
Telephone (08) 8240 8888
Facsimile (08) 8341 1004

Tasmania

93 Albert Road Moonah 7009
Telephone (03) 6278 9966
Facsimile (03) 6278 9865

Victoria

676 Lorimer Street Port Melbourne 3207
Telephone (03) 9214 2138
Facsimile (03) 9646 1912

Western Australia

Unit 7A/132 Bannister Road Canning Vale 6155
Telephone (08) 9256 0908
Facsimile (08) 9455 4377

Export Department

676 Lorimer Street Port Melbourne 3207
Telephone (03) 9214 2138
Facsimile (03) 9645 2351

www.boral.com.au

Guarantee

Products manufactured and supplied by Boral Australian Gypsum Limited (BAGL) A.C.N. 004 231 976 (trading as Boral Plasterboard) are guaranteed to be of consistent quality and free from any defects.

Boral Plasterboard may limit its liability under this guarantee to, at its option, the replacement or payment of the cost of replacing OR supplying equivalent or payment of the cost of supplying equivalent OR the repair or payment of the cost of repairing products found to be defective.

Health and Safety

For information regarding the safe use of Boral Plasterboard products and accessories please refer to instructions on the product packaging or contact your local Boral Plasterboard Sales Office or TecASSIST for a current copy of the Material Safety Data Sheet.

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The technical information contained in this manual was correct at the time of printing. Building systems and details are, however, subject to change. To ensure the information you are using is current, Boral recommends you review the latest building information available on the Boral website, contact TecASSIST or your nearest Boral Plasterboard Sales Office.

