

SRP™ WALL SYSTEMS

HANDBOOK





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INTRODUCTION



1.1 HISTORY

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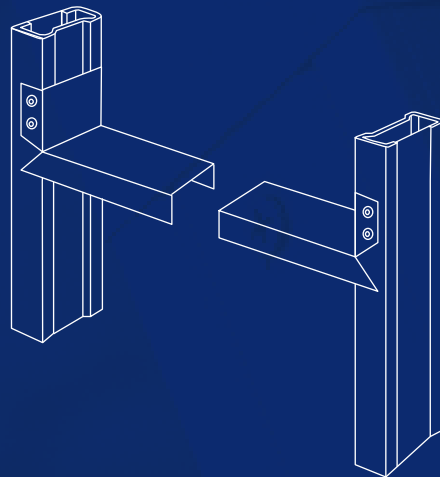
**1.4 WHY
USE STEEL?**

1.1 HISTORY

Founded in 2007 by Mark Bedford, Steel Rollformed Products™ Ltd [SRP™] is a New Zealand owned and operated family business that takes pride in supplying quality steel components to the New Zealand building industry. With over 30 years of rollforming knowledge and industry experience, SRP™ Ltd is a leading choice offering SRP™ Stud, SRP™ Batten, SRP™ Angle, SRP™ Track and SRP™ Acoustic Rated Whisperwall™ Stud. SRP™ has manufactured Steel components since 2007, and developed the industry brand, SRP™ Whisperwall™.

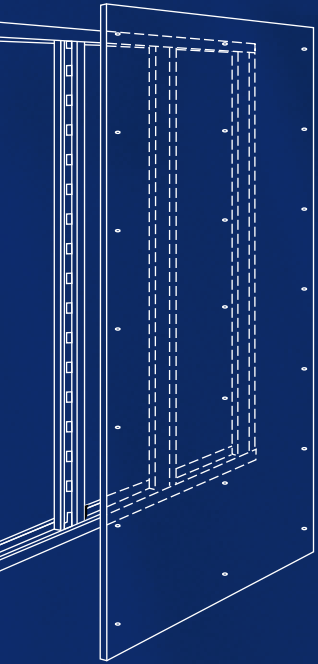
With a fastidious approach to the manufacture of quality products in a short turnaround time, SRP™ prides itself on attention to detail, unbeatable quality, great service and ability to meet customer needs with high quality innovative systems and product solutions. SRP™ is dedicated to meeting market demand for standard stock lines. Also, in consultation with their engineer, can deliver professional engineering and design advice for non-standard wall framing systems where adjustments are required to accommodate challenging construction requirements.

Their bespoke machinery facilitates the manufacture of unique products, giving a distinct market advantage with the ability to have complete say in manufacturing from design to the end product. Not only does this ensure quality throughout all processes but ultimately delivers a top quality product, made in New Zealand by New Zealanders with 100% recyclable steel.



**A FASTIDIOUS APPROACH
TO THE MANUFACTURE OF
QUALITY PRODUCTS IN A SHORT
TURNAROUND TIME, SRP PRIDES
ITSELF ON ATTENTION TO DETAIL,
UNBEATABLE QUALITY AND
GREAT SERVICE.**

1.2 OVERVIEW



SRP™ has gathered independent, leading experts with extensive experience to create this document to ensure professionals like yourself, have a detailed technical handbook for design and installation reference. Information is included on all of SRP™'s systems, including components, standard application details, installation information, design tables and other important material.

All of the information detailed, has been created in accordance with relevant New Zealand/International Standards listed in the **COMPLIANCE SECTION** of this document. In addition SRP™ can provide advice and specific engineering design assistance for the design/installation of non-standard partitions i.e. tall walls, curved walls, challenging installation details and/or partitions subject to specific seismic loading, wind pressure, direct static vertical/lateral loading [i.e. shelf loading] or tight deflection requirements etc.

Please be aware, however, that products, systems, building codes and any third party referenced material may change over time and interpretations could also vary. While every care has been taken to ensure the accuracy of the information, SRP™ cannot accept any responsibility or liability for any economic or consequential losses with respect to

using the information in this SRP™ Product Catalogue as a guide. It is the responsibility of the designer, specifier and/or installer to ensure the correct use and interpretation of the information in this Product Catalogue and ensure it is in accordance with up-to-date industry practice. SRP™ recommends that you ensure you are referring to the latest edition of this Product Catalogue and any referenced third party material prior to design, specification and/or installation. Please check our website www.srpltd.co.nz to ensure you are using the current available information.

It is requested that you respect the copyright laws by not reproducing any of the images or information for commercial purposes without SRP™'s written permission.

If you need further information please contact SRP™ on 09-579 0175.



1.3 PRODUCT INFORMATION

SRP™ is proud to bring you our locally manufactured Steel Stud and Track System. This system is suitable for numerous applications and produces an accurate, sturdy and aesthetically pleasing finish. SRP™ Steel Stud is the preferred method of partitioning in many situations due to its relative low gross weight and quick installation time, reducing both time and cost in this stage of construction. This product is used in, but not limited to, office partitioning, apartment inter-tenancy walls and individual partition walls within apartment and housing complexes.

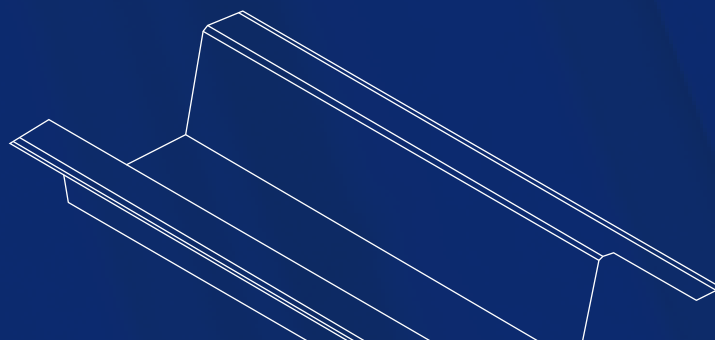
Consisting of cold rolled steel lipped channel sections of various sizes and shapes [see **TABLES 1.1, 1.2** and **FIGURE 1**], the products follow a design criteria and pattern using slit steel from New Zealand Steel GALVSTEEL® product whenever possible. The design criteria encompasses cold rolled channel sections with various leg heights, the ability to box, drawn holes, standard sizes, knurled faces, standard leg height SRP™ Track, Z275 galv coating, and using minimum G250 New Zealand Steel made steel. The thickness of the steel varies from 0.5mm to 1.15mm BMT [Base Metal Thickness] according to engineering requirements. See **DESIGN SECTION** for more information.

The SRP™ Steel Stud and Track System is built on an industry standard design, so everything is familiar to installers, builders, engineers and architects. SRP™ has considerable experience in rollforming, fabricating and manufacturing steel products for the building industry, we are continually making design improvements to our products for the New Zealand market.


The SRP™ Steel Stud simply slides and fastens inside the SRP™ Steel Track using a rotating movement and clicks into position [see **FIGURE 2** and **FIGURE 3**]. This friction fit connection, in most

cases, is sufficient to hold the SRP™ Stud firmly in place. The edge of the SRP™ Stud is knurled to act as a screw guide, leading the head of the fastener easily into the SRP™ Steel Stud making installation very practical. SRP™'s manufacturing processes ensure this knurling is deep enough to provide good assistance for installation as well as superior strength. The knurling also creates an ideal surface for resins and adhesives between the SRP™ Steel Stud and wall surface e.g. plasterboard, panel linings etc. [see **FIGURE 1** and **FIGURE 2**].

The material used for the manufacture of SRP™ wall products complies with all relevant New Zealand/International Standards. SRP™'s preference is to use GALVSTEEL® manufactured by New Zealand Steel, whenever possible. The continuous hot-dip galvanized Zinc coating conforms to the industry standard required for this application; Z275 [275 g/m² total]. New Zealand Steel made GALVSTEEL® is backed by a 50 year Durability Statement to demonstrate compliance with NZBC Clause B2-Durability, when used and maintained as referred to in the current New Zealand Steel Durability Statement.







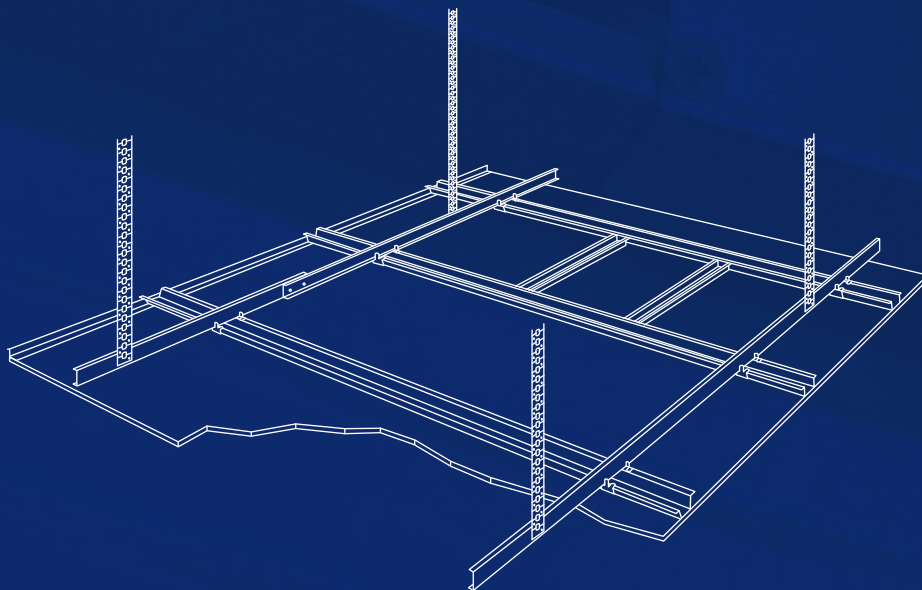
**A PRACTICAL AND
ECONOMICAL SOLUTION
FOR NON-LOAD
BEARING INTERNAL
PLASTERBOARD
PARTITIONS.**

1.4 WHY USE STEEL?

The SRP™ Steel Stud System provides a practical and economical solution for non-load bearing internal plasterboard partitions in various situations with fire rated and acoustic properties. SRP™ uses an industry standard with refinements and proven design along with some 30 years knowledge in the steel manufacturing and rollforming industry, to achieve a product with practicality during installation, durability for a long life, and quality for a strong and aesthetically pleasing finish.

BENEFITS INCLUDE

- » Fast and simple installation, requiring few tools
- » Superior strength and durability; strong but lightweight for easy handling
- » Steel Components cut to/made to length meaning minimal material waste
- » Precise measurements
- » Dimensionally stable; stays very straight, doesn't warp, twist or bow
- » Recyclable raw material
- » Resistance to pests, rot or fungus attack
- » Non-combustibility and suitability for fire protection with a range of fire resistant ratings when combined with suitable plasterboard lining
- » Suitability for areas requiring smooth finish wall planes
- » Flexibility of configuration
- » Suitability for flat or curved situations





2 WALL PRODUCT RANGE

2 SRP™ WALL PRODUCT RANGE

SRP™ has a wide range of easy to install steel wall products. Each SRP™ Wall system is characterized by lightweight handling, a familiar installation process and many durable features for quality building solutions.

TABLE 1.1 and **TABLE 1.2**, in conjunction with **FIGURE 1**, show the available standard Steel SRP™ Stud and SRP™ Track sizes with the corresponding BMT [Base Metal Thickness] range. Other sizes, subject to availability of structural data, are also offered.

SRP™ Standard Tracks are available in 3.0m standard stock lengths for all sizes; other lengths or cut to length are also available on request.

SRP™ Whisperwall™ and Standard SRP™ Studs are available in 2.7m, 3.0m, 3.3m, 3.6m and 4.2m standard stock lengths; cut to length is also available on request.

SRP™ Continuous Nog Track [**FIGURE 1** and **FIGURE 17**] is available in 3.0m standard stock lengths for all standard SRP™ Stud sizes and standard SRP™ Stud centres. SRP™ Continuous Nog Track with other SRP™ Stud centres is also available on request. Contact us to discuss your individual requirements.

Steel Rollformed Products™ Limited reserves the right to adjust, alter, advance or refine the profile without notice. Should you require any further information on this product, please contact the manufacturers, Steel Rollformed Products™ Limited.



TABLE 1.1

SRP™ STUD RANGE				
BMT [mm]	0.5	0.55	0.75	1.15
50.8	•	•		
63.5	•	•	•	•
75		•	•	•
89		•	•	•
92		•	•	•
92 Whisperwall		•		
100		•	•	•
150		•	•	•

TABLE 1.2

SRP™ TRACK RANGE				
BMT [mm]	0.5	0.55	0.75	1.15
50.8 - 30mm leg		•		
50.8 - 50mm leg		•	•	
63.5 - 30mm leg	•	•	•	•
63.5 - 50mm leg		•	•	•
63.5 - 70mm leg			•	•
75 - 30/50/70mm leg		•	•	•
89 - 30/50mm leg		•	•	•
89 - 70mm leg			•	•
92 - 30/50mm leg		•	•	•
92 - 70mm leg			•	•
100 - 30mm leg		•	•	•
100 - 50/70mm leg			•	•
150 - 30mm leg		•	•	•
150 - 50/70mm leg			•	•

• Available

FIGURE 1 SRP™ Wall Product Range

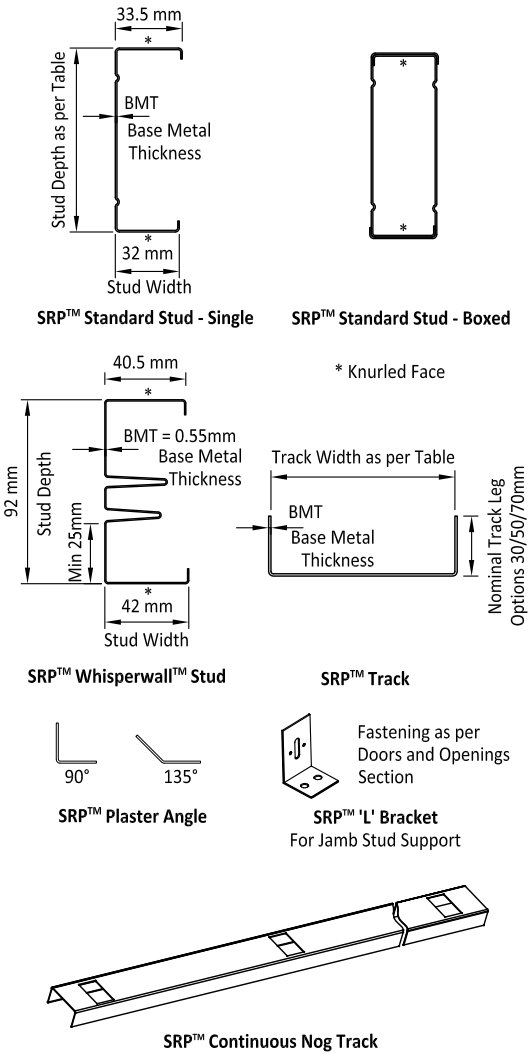
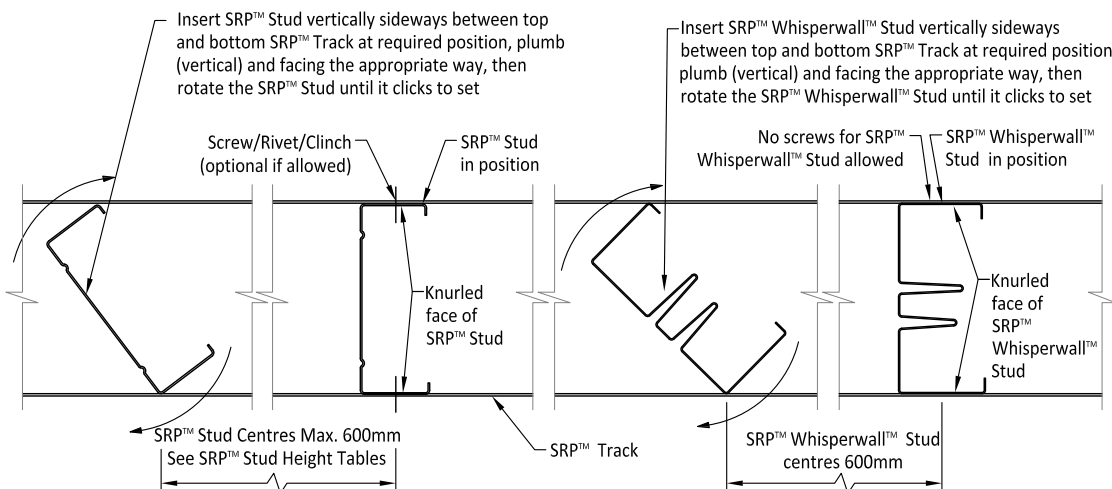


FIGURE 2 SRP™ Stud and SRP™ Whisperwall Installation



SRP™ WALL PRODUCT RANGE

STEEL STUDS

Available in 64, 75, 92, 150mm

Material BMT 0.50, 0.55, 0.75, 1.15

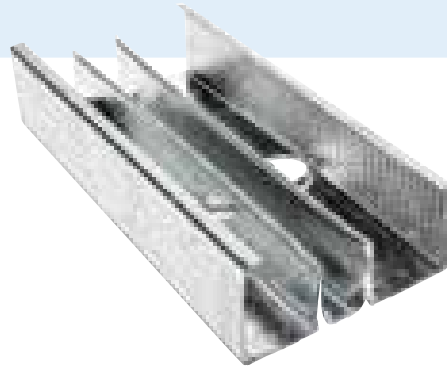


WHISPERWALL ACOUSTIC RATED STUD

Provides superior acoustic properties with additional fire rated properties

Available in 92mm

Material BMT 0.55



BOTTOM TRACK

Available in 64, 75, 92, 150mm

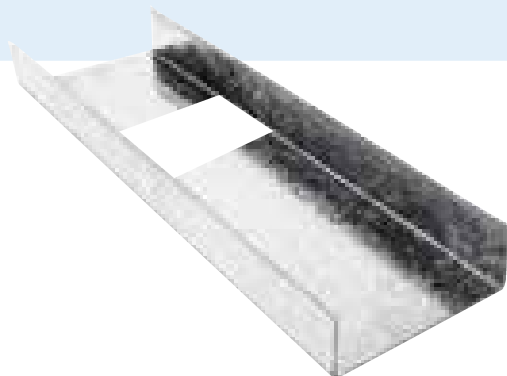
Material BMT 0.50, 0.55, 0.75, 1.15



NOG TRACK

Available in 50.8, 63.5, 75, 89, 92, 100, 150mm

Material BMT 0.55, 0.75, 1.15







3

COMPLIANCE

3 COMPLIANCE

3.1 PRODUCER/DURABILITY STATEMENT SRP™ STUD/TRACK/NOG SECTIONS AND ASSOCIATED COMPONENTRY

This is to certify that SRP™ Wall Products and associated componentry supplied by Steel Rollformed Products™ Ltd [SRP™] are designed to, and manufactured from, a compliant base material, to the relevant New Zealand/International Standards and to the relevant parts of the New Zealand Building Code.

In addition, all wall profiles manufactured by SRP™ meet the required BMT [Base Metal Thickness], strength and durability requirements. All wall component sizes and gauges manufactured by SRP™ are to precise specified requirements as established by design, and will not compromise structural integrity and/or fire/acoustic ratings of a relevant non-load bearing partition. In particular SRP™ products are compliant as a minimum,

with the following Codes, Standards and any referenced third party materials noted in this SRP™ Product Catalogue is current at the time of publication:

- » AS/NZS 4600 Cold-formed steel structures
- » Galvanised Coating Z275 to AS/NZS 1397
- » NZS 3404 Steel Structures Standard
- » NZS 3404.1 Steel Structures Standard – Materials, fabrication, and construction
- » AS/NZS 1397 Steel sheet and strip
- » AS/NZS 1170 Structural design actions
- » NZBC – B1/VM1 and B2





Building Code Clause(s) B1/VM1.....

PRODUCER STATEMENT – PS1 – DESIGN

(Guidance notes on the use of this form are printed on page 2)

ISSUED BY:..... ACH Consulting Engineers.....
(Design Firm)

TO:..... SRP - Steel Rollformed Products Ltd
(Owner/Developer)

TO BE SUPPLIED TO:..... Relevant Consent Authority
(Building Consent Authority)

IN RESPECT OF:.... SRP wall stud range to relevant standards and NZBC.....
(Description of Building Work)

AT:.... All locations throughout NZ
(Address)
..... LOT..... DP..... SO.....

We have been engaged by the owner/developer referred to above to provide ... Structural Engineering calculations for Load Tables as per Calculations ref. 150700 dated December 2015..... services in respect of the requirements of

(Extent of Engagement)

Clause(s) B1/VM1..... of the Building Code for All or Part only (as specified in the attachment to this statement), of the proposed building work.

The design carried out by us has been prepared in accordance with:

- Compliance Documents issued by the Ministry of Business, Innovation & Employment..... B1/VM1..... or (verification method / acceptable solution)
- Alternative solution as per the attached schedule... Calculations Ref. 150700

The proposed building work covered by this producer statement is described on the drawings titled SRP Stud Standard Drawings..

and numbered 1-9 ; together with the specification, and other documents set out in the schedule attached to this statement.

On behalf of the Design Firm, and subject to:

- (i) Site verification of the following design assumptions ... Installed in accordance with the relevant Installation Brochure, steel supplied meets AS1397:2011, products meeting required specifications and tolerances
- (ii) All proprietary products meeting their performance specification requirements;

I believe on reasonable grounds that a) the building, if constructed in accordance with the drawings, specifications, and other documents provided or listed in the attached schedule, will comply with the relevant provisions of the Building Code and that b), the persons who have undertaken the design have the necessary competency to do so. I also recommend the following level of construction monitoring/observation:

CM1 CM2 CM3 CM4 CM5 (Engineering Categories) or as per agreement with owner/developer (Architectural)

I, Peter Alderton..... am: CPEng 87082 #
(Name of Design Professional) Reg Arch #

I am a Member of IPENZ NZIA and hold the following qualifications: MIPENZ CPEng
The Design Firm issuing this statement holds a current policy of Professional Indemnity Insurance no less than \$200,000*.
The Design Firm is a member of ACENZ:

SIGNED BY Peter Alderton ON BEHALF OF ACH Consulting Engineers... (Design Firm)

Date 07/12/2015..... (signature).....
Note: This statement shall only be relied upon by the Building Consent Authority named above. Liability under this statement accrues to the Design Firm only. The total maximum amount of damages payable arising from this statement and all other statements provided to the Building Consent Authority in relation to this building work, whether in contract, tort or otherwise (including negligence), is limited to the sum of \$200,000.*

This form is to accompany **Form 2 of the Building (Forms) Regulations 2004** for the application of a Building Consent.

**Winstone Wallboards Ltd**

Kapiti Office
PO Box 1473
Paraparaumu Beach 5252
DDI 04 298 9631
Mobile 0274 355 780

GIB Information Line
Freephone 0800 100 442

Steel Rollformed Products Ltd
PO Box 12172 Penrose
AUCKLAND 1064

23 August 2015

Attention: Mark Bedford

By email: srfpltd@xtra.co.nz

Dear Mark,

Re: SRPLTD 64mm and 92mm Standard Stud and Track

Thank you for providing me with the SRP Producer Statement dated July 2015.

You have asked me to confirm the suitability of SRPLTD 64mm and 92mm Standard Stud and Track for use in non-loadbearing steel stud applications published in 'GIB® Fire Rated Systems, 2012' and 'GIB® Noise Control Systems, 2006'.

Specification references include; GBS30, GBS60, GBS90, GBS210a, and GBS240 from 'GIB® Fire Rated Systems' and GBSA30b, GBSA30s, GBSA30r, GBSA45, GBSA60c, GBSA60r, GBSA90c, GBSA90d, GBSA90s, and GBSA90r from 'GIB® Noise Control Systems'.

These specifications call up steel stud and track generically and proprietary products, such as SRPLTD 64mm and 92mm Standard Stud and Track, are acceptable provided the manufacturer ensures compliance with relevant standards, including those quoted in the SRP Producer Statement.

I trust this information is of assistance.

Kind regards,

A handwritten signature in black ink, appearing to be "Hans Gerlich", written over a white background.

Hans Gerlich
CPEng, IntPE, MIPENZ
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Winstone Wallboards Ltd

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DDI 04 298 9631
Mobile 0274 355 780

GIB Information Line
Freephone 0800 100 442

Steel Rollformed Products Ltd
PO Box 12172 Penrose
AUCKLAND 1064

11 June 2014

Attention: Mark Bedford

By email: srfpltd@xtra.co.nz

Dear Mark,

Re: SRP Whisperwall™ Acoustic Stud

Thank you for providing me with the SRP Whisperwall™ Acoustic Stud document dated June 2014.

You have asked me to confirm the Fire Resistance Rating (FRR) of the studs lined with GIB Noiseline®.

The SRP Whisperwall™ Acoustic Stud dimensions exceed the minimum requirements for metal studs as specified for GBS 60 from 'GIB® Fire Rated Systems, 2012'. In addition, 13 mm GIB Noiseline® is an acceptable substitute for 13 mm GIB Fyrelite® in GIB® Fire Rated Systems.

A -/60/60 will be achieved provided the inner layer of 13 mm GIB Noiseline® is fixed to the SRP Whisperwall™ Acoustic Studs in accordance with your publication and the GBS 60 specification.

Where an additional layer of 10 mm GIB Noiseline® is specified, the FRR will be maintained and the inner layer of 13 mm GIB Noiseline® does not require plaster stopping.

I trust this information is of assistance.

Kind regards,

A handwritten signature in black ink, appearing to be "Hans Gerlich", written over a white background.

Hans Gerlich
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3.2 SUBSTITUTION SRP™ WALL PRODUCTS

SRP™ STUD/TRACK/NOG SECTIONS AND ASSOCIATED COMPONENTRY

SRP™ Wall configurations as shown in **TABLE 2** using 64mm and 92mm SRP™ Studs and associated componentry manufactured by Steel Rollformed Products™ Ltd are designed not to compromise the structural integrity*, acoustic or fire rating performance, if installed in accordance with non-load bearing GIB® Performance Systems called up in GIB® Fire Rated Systems for FRR walls and GIB® Noise Control Systems for STC walls and SRP™ Product Catalogue for all SRP™ walls. Specification references include:

GIB® Fire Rated Systems:

- » GBS30, GBS60, GBS90, GBS120a – single Stud frame walls
- » GBS240 – double Stud frame wall, with inside Stud flanges, in the middle gap lined with GIB® as well.

GIB® Noise Control Systems:

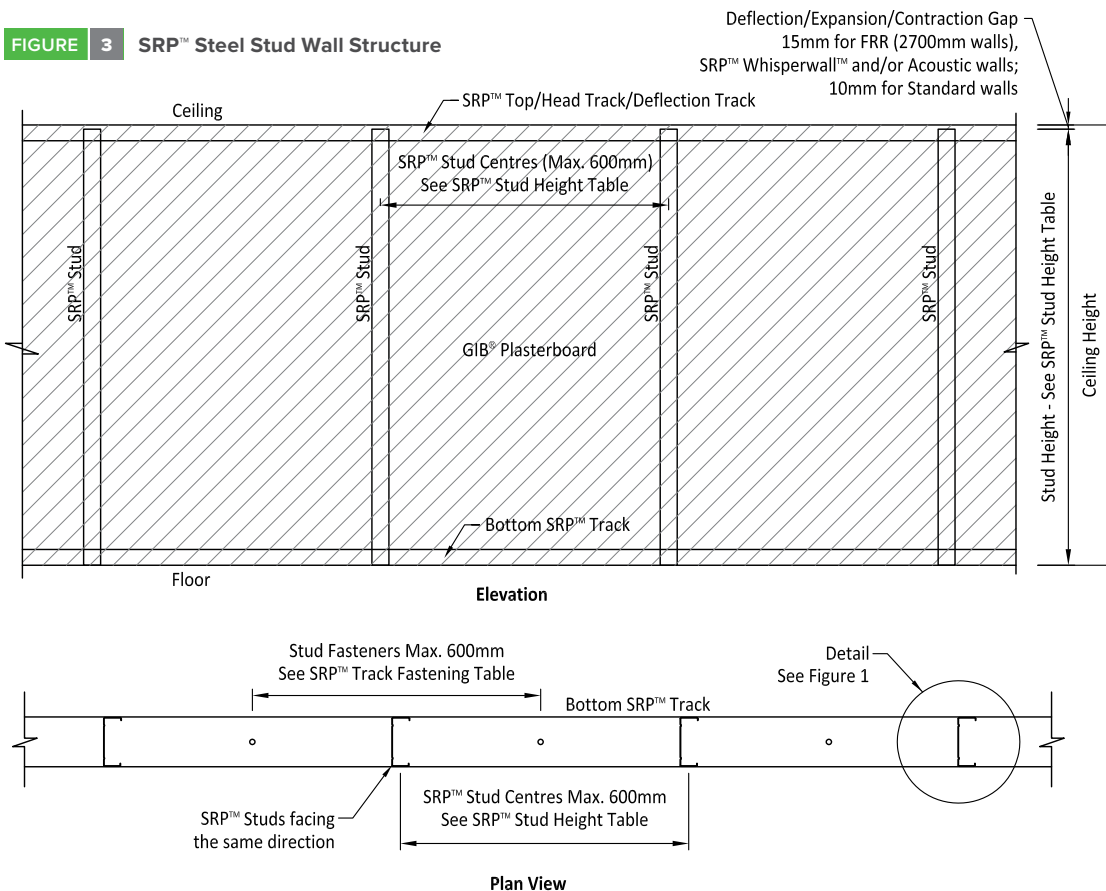
- » GBSA30b, GBSA45, GBSA60c, GBSA90c, GBSA90d – double Stud frame walls
- » GBSA30s, GBSA90s – staggered Stud frame walls
- » GBSA30r, GBSA60r, GBSA90r – single Stud frame walls

[Refer to the letter of endorsement from Winstone Wallboards dated 23rd August 2015.]

In addition to this, SRP™ Whisperwall™ Acoustic SRP™ Stud has been confirmed as an acceptable substitution in GBS 60 from GIB® Fire Rated Systems. Winstone Wallboards, in their letter dated 11th June 2014, confirm the -/60/60 FRR Fire Resistance Rating for SRP™ Whisperwall™ provided that the inner layer of 13mm GIB Noiseline® is fastened to the SRP™ Whisperwall™ Acoustic SRP™ Studs in accordance with the SRP™ Product Catalogue and GBS 60 from GIB® Fire Rated Systems specification. In cases, where an additional layer of 10mm GIB Noiseline® is used, the FRR will be maintained and the inner layer of 13mm GIB Noiseline® does not require plaster stopping.

*Project Design Engineer to ensure project-specific design considers all applied loads on the structure including those imposed by SRP™ products.

FIGURE 3 SRP™ Steel Stud Wall Structure



Notes:

- SRP™ Studs - Fastened onto the SRP™ Track using a rotating movement and clicking into position, generally no additional fastening is required.
- SRP™ Whisperwall™ Stud Wall - No fastening to the Top/Bottom SRP™ Track.
- All other walls - Crimping, 8g Tek screw/Pop rivet is allowed except for deflection tracks.
- SRP™ Track width and SRP™ Stud width same, except for SRP™ Staggered Stud walls.
- Minimum SRP™ Track BMT is the BMT of SRP™ Stud.

TABLE 2

EXPECTED STC AND FRR RATINGS FOR NON LOADBEARING WALLS AS OBTAINED FROM GIB® NOISE CONTROL SYSTEMS AND GIB® FIRE RATED SYSTEMS DOCUMENTS USING SRP™ STEEL 63.5 0.55MM BMT STUDS									
Wall Type	GIB® Specification Number	STC Sound Transmission Class	R _w [dB] Weighted Sound Reduction Index	FRR Fire Resistance Rating	Space Between Frames	Partition Width Including GIB® Plasterboard	GIB® Plasterboard Lining Requirements	Acoustic Insulation	
Double Steel Stud Frame Walls	GBSA30b	59	57	-/30/30	79mm min	244mm	1 x 13mm GIB® Standard Plasterboard one side 2 x 13mm GIB® Standard Plasterboard other side	R1.8 [75mm] Pink® Batts® glasswool insulation installed between the studs on one side of the double frame	
	GBSA45	60	59	-/45/45	25mm min	203mm	2 x 13mm GIB® Standard Plasterboard each side		
	GBSA60c	59	58	-/60/60	79mm min	241mm	1 x 13mm GIB Fyreline® one side 2 x 10mm GIB NoiseLine® other side		
	GBSA90c	61	60	-/90/90	25mm min	203mm	2 x 13mm GIB Fyreline® each side		
	GBSA90d	68	67	-/90/90	79mm min	257mm	2 x 13mm GIB NoiseLine® each side		
	GBSA30s	55	53	-/30/30	N/A	131mm	1 x 13mm GIB® Standard Plasterboard one side 2 x 13mm GIB® Standard Plasterboard other side		
Staggered Steel Stud Frame Walls	GBSA90s	60	59	-/90/90	N/A	138mm	1 x 13mm and 1 x 10mm GIB NoiseLine® each side	R1.8 [75mm] Pink® Batts® glasswool insulation installed between the studs	
	GBSA30r	55	55	-/30/30	N/A	128mm*	2 x 13mm GIB® Standard Plasterboard each side*		
	GBSA60r	55	54	-/60/60	N/A	116mm*	2 x 10mm GIB NoiseLine® each side*		
	GBSA90r	57	56	-/90/90	N/A	128mm*	2 x 13mm GIB Fyreline® each side*		
Single Steel Stud Frame Walls	GBS30	STC 34		-/30/30	N/A	DNA	1 layer 13mm GIB® Standard each side	DNA	
	GBS60	STC 34		-/60/60	N/A	DNA	1 layer 13mm GIB Fyreline® each side		
	GBS90	STC 41		-/90/90	N/A	DNA	1 layer 16mm GIB Fyreline® each side		
	GBS120a	STC 47		-/120/120	N/A	DNA	2 layers 16mm GIB Fyreline® each side		
	GBS240	STC 44 [STC 55 insulated**]		-/240/240	DNA	DNA	4 layers 19mm GIB Fyreline® - All Stud flanges, both row and both (inside and outside-middle gap side) flanges are lined with GIB Fyreline®		
GIB® Noise Control Systems					GIB® Fire Rated Systems				

LEGEND: * with GIB Rail®, ** with one layer 75mm Fibreglass Batts; N/A - Not Applicable; DNA - Data Not Available

4 WALLS

4 WALLS / DESIGN

4.1 SRP™ STUD HEIGHT TABLES [TABLES 6.1 – 6.5]

Internal partition SRP™ Stud height limitations are determined in compliance with loading and design requirements for the relevant Standards, mentioned in the **COMPLIANCE SECTION**. Wind Speeds have been grouped into 5 Wind Zones and are noted on SRP™ Stud Height Tables, where all different Wind Zones are colour coded [single SRP™ Studs lighter, boxed SRP™ Studs darker shade of the same colour] for easy use. The table contains separate values for different internal pressure co-efficient [Cpi] values. If in doubt as to which Cpi value to use in a particular instance, contact SRP™ and/or a structural engineer for confirmation. For values and description refer to SRP™ Stud Height Tables.

To ensure correct SRP™ Stud Selection, the following process must be followed:

1. Determine the Site Specific Wind Zone [Low, Medium, High, Very High or Extra High] using one of the following:
 - a. For structures of one to two storeys, Council supplied Wind Zone information may be used
 - b. For structures greater than two storeys, use SRP™ Wind Zone Table [TABLE 5] in the following way:
 - i. Check if you are outside of the Lee Zone by using the New Zealand Wind Regions map [see FIGURE 4]. If you are within the Lee Zone seek advice from SRP™ and/or a structural engineer.
 - ii. Check if you are outside of the Local Topographic Zone [see FIGURE 5]. If you are within the Local Topographic Zone, seek advice from SRP™ and/or a structural engineer.
2. By using the SRP™ Stud Height Tables [TABLES 6.1 – 6.5], determine the required SRP™ Stud to use. Ensure you use the correct Wind Zone/colour table and within that ensure you are using the relevant Cpi and single/boxed SRP™ Stud sub-table.
 - iii. Select your Importance Level from TABLE 3.
 - iv. Select your Terrain Category from TABLE 4.
 - v. Determine your Wind Region by using the New Zealand Wind Regions map [see FIGURE 4].
 - vi. Determine your reference Height by using FIGURE 6.
 - vii. By using the above parameters, determine the site specific Wind Zone from SRP™ Wind Zone Table [TABLE 5].
- c. Or, seek advice from SRP™ and/or a structural engineer.

NOTE: There could be many feasible SRP™ Stud options for any given situation. Please consider the various combinations of SRP™ Stud size, BMT, SRP™ Stud centre and the use of single/boxed SRP™ Stud scenario and choose the most suitable option for the application, taking into consideration the cost of material, handling and installation, cost of the entire wall including the plasterboard. In addition, potential disturbance due to soft body impact loads should be carefully considered for each given wall type/location. The limit for soft body impact loads is given in the SRP™ Stud Height Tables [Tables 6.1 – 6.5]. It is the responsibility of the specifier to determine requirements in situ.



4.2 SITE SPECIFIC WINDS ZONE TABLE [TABLE 5]

A number of conservative assumptions have been made for the preparation of this table [TABLE 5]. If a more specific design is required, council supplied Wind Zone information may be used for structures of one to two storeys, or seek advice from SRP™ and/or a structural engineer.

1. This table [TABLE 5] can only be used for areas outside of the Lee Zone [see Figure 4] [i.e. $Ml=1.0$].
2. This table [TABLE 5] can only be used for areas outside of the Local Topographic Zone [see FIGURE 5] [i.e. $Mt=1.0$].

3. This table [TABLE 5] does not take the shielding reduction effect of surrounding buildings into consideration.
4. Height is limited to 20m maximum, measured from the ground level [see FIGURE 6].

The use of these tables, [TABLE 3, TABLE 4, TABLE 5 AND TABLES 6.1 – 6.5] is the responsibility of the specifier, and we strongly recommend a structural engineer to review the entire design, including the site specific Wind Speed and the selection of the Steel SRP™ Stud prior to placing an order.

FIGURE 4 New Zealand Wind Regions map

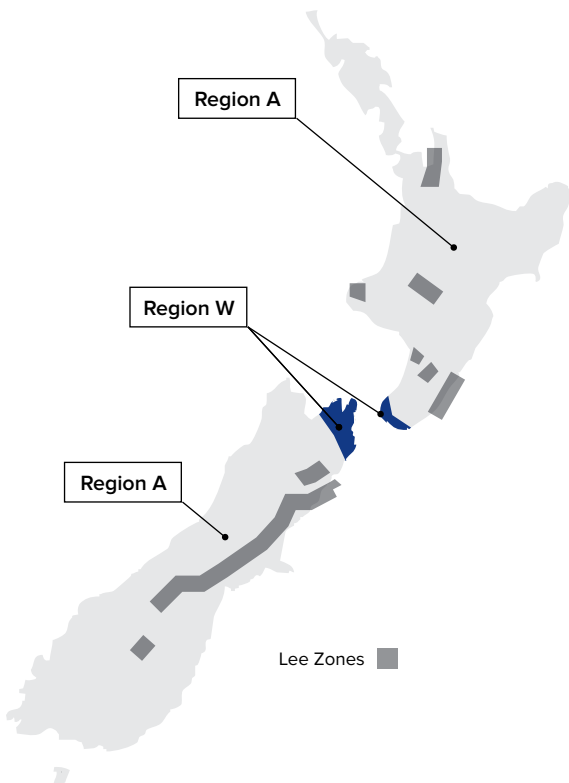


FIGURE 5 Local Topographic Zones

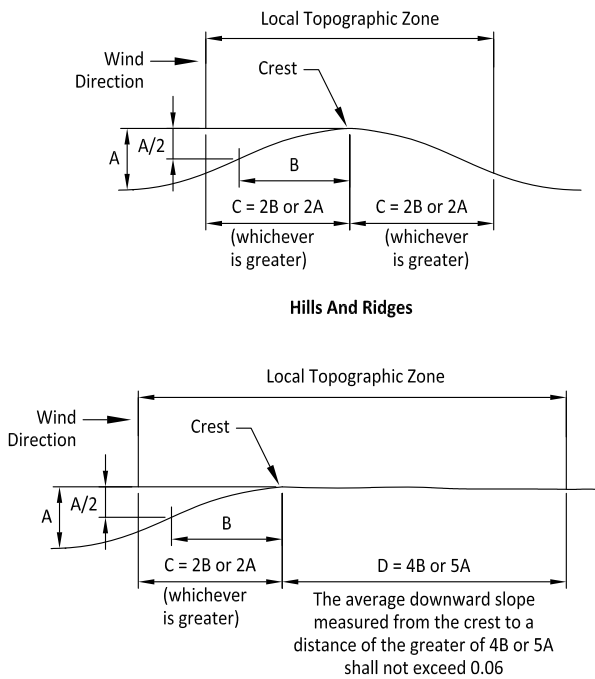


FIGURE 6 Reference Height

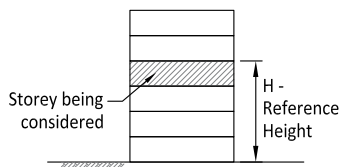


TABLE 3

BUILDING IMPORTANCE LEVEL	
Importance Level	Description
IL 2	Typical structures such as single residential dwellings, car parks, and excluding structures otherwise referenced in IL 2 and IL 4
IL 3	Structures which are not designated as post-disaster, where people may gather in crowds or high community value structures such as schools & day care facilities, health care facilities [with no surgery or emergency treatment facilities], airports, principal railway terminals, Correctional Institutions, Multi-unit residential/commercial/office/retail buildings accommodating >5000 people and with a floor area >10,000 square metres or public assembly buildings with floor area >1000 square metres. Also medium size theatres and cinemas, or buildings which could pose risks to people in crowds, as well as emergency, power generating or public utility buildings not specified as post-disaster and buildings and facilities containing hazardous materials
IL 4 Specific Engineering Design Required	Structures with special post-disaster functions or designated as essential facilities. Here are some examples: Emergency Services facilities as such as Fire, Police and Medical [emergency or surgical], Emergency Shelters, emergency vehicle garages, Buildings containing hazardous material capable of causing great harm to the environment and people.

NOTE: For more detailed description refer to AS/NZS 1170 or seek structural engineering advice or contact SRP™

TABLE 4

TERRAIN CATEGORY	
Terrain Category	Description
TC 2	Open terrain, with well-scattered [1.5m to 5m high] obstructions with no more than two obstructions per hectare such as grassland, farmland, newly established or under construction subdivisions, and airfields, water surfaces.
TC 3	Terrain with numerous closely spaced [3 m to 10 m high] obstructions, with a minimum of the equivalent of 10 residential- sized obstructions per hectare. Example: suburban areas, small industrial areas, well established subdivisions.
TC 4	Terrain with numerous closely spaced large, 10 m to 30 m tall and beyond structures. Example: Large city centres, and large, well developed industrial areas.

NOTE: For more detailed description refer to AS/NZS 1170 or seek structural engineering advice or contact SRP™

TABLE 5

WIND ZONES [WZ] WITH THE WIND SPEED RANGE [WS] [M/S]								
Importance Level IL 2	Terrain Category		TC 4		TC 3		TC 2	
	Wind Region		A	W	A	W	A	W
	Reference Height Ht [m]		Medium WZ WS [32<Vr<37]		High WZ WS [37<Vr<44]		Very High WZ WS [44<Vr<50]	
Importance Level IL 2	Reference Height Ht [m]	3 - 8 incl.	Medium WZ WS [32<Vr<37]		High WZ WS [37<Vr<44]		Very High WZ WS [44<Vr<50]	
		9 - 12 incl.	Medium WZ WS [32<Vr<37]		High WZ WS [37<Vr<44]		Very High WZ WS [44<Vr<50]	
		13 - 15 incl.	Medium WZ WS [32<Vr<37]		High WZ WS [37<Vr<44]		Very High WZ WS [44<Vr<50]	
		16 - 19 incl.	Medium WZ WS [32<Vr<37]		High WZ WS [37<Vr<44]		Very High WZ WS [44<Vr<50]	
		20	Medium WZ WS [32<Vr<37]		High WZ WS [37<Vr<44]		Very High WZ WS [44<Vr<50]	
Importance Level IL 3	Reference Height Ht [m]	3 - 8 incl.	Medium WZ WS [32<Vr<37]		High WZ WS [37<Vr<44]		Very High WZ WS [44<Vr<50]	
		9 - 12 incl.	Medium WZ WS [32<Vr<37]		High WZ WS [37<Vr<44]		Very High WZ WS [44<Vr<50]	
		13 - 15 incl.	Medium WZ WS [32<Vr<37]		High WZ WS [37<Vr<44]		Very High WZ WS [44<Vr<50]	
		16 - 19 incl.	Medium WZ WS [32<Vr<37]		High WZ WS [37<Vr<44]		Very High WZ WS [44<Vr<50]	
		20	Medium WZ WS [32<Vr<37]		High WZ WS [37<Vr<44]		Very High WZ WS [44<Vr<50]	

SRP™ STUD HEIGHT TABLES

WIND ZONES WIND SPEED [M/S]

Low	[Vr<32]
Medium	[32<Vr<37]
High	[37<Vr<44]
Very High	[44<Vr<50]
Extra High	[50<Vr<55]

Specific Engineering Design required for Vr>55 m/s

DESIGN INFORMATION

SLS deflection limit under $W_s \Rightarrow$ L/Plasterboard walls under W_s - 1170.0 table C1	200
Soft body deflection limit [1170.0 table C1] - L/	200
DS	0.7
SLS point load [kN]	0.7
Soft body deflection limit under SLS point load [mm]	12
Wind Zone - Vr - see table	Low

CPI - INTERNAL PRESSURE COEFFICIENT

AS/NZS 1170.2 SECTION 5.3

CPI = 0.20 Fully sealed, no openings

CPI = 0.30 Equal openings on all sides

CPI = 0.60 Openings on one side only

CPI = 0.80 A dominant opening. e.g., large roller door

TABLE 6.1

LOW WIND ZONE | VR<32 M/S

CPI = 0.20	STUD SIZE	50.8					63.5					75					89					92					WW92	100					150												
Single Stud	Stud Centres\BMT	0.50	0.55	0.50	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15					
	300	4.43	4.57	5.24	5.40	5.96	6.81	6.14	6.77	7.74	7.00	7.73	8.84	7.18	7.93	9.07	-	7.67	8.47	9.69	10.58	11.70	13.39																						
	400	4.03	4.15	4.76	4.91	5.42	6.19	5.57	6.15	7.03	6.36	7.02	8.03	6.53	7.21	8.24	-	6.96	7.69	8.80	9.61	10.63	12.16																						
	450	3.87	3.99	4.58	4.72	5.21	5.95	5.36	5.92	6.76	6.12	6.75	7.72	6.27	6.93	7.92	-	6.70	7.40	8.46	9.24	10.22	11.69																						
	600	3.52	3.63	4.16	4.29	4.73	5.40	4.87	5.38	6.14	5.56	6.14	7.02	5.70	6.30	7.20	6.11	6.08	6.72	7.69	8.40	9.28	10.63																						
IMPACT LIMIT		1.64	1.72	2.11	2.21	2.51	2.86	2.58	2.85	3.26	2.95	3.25	3.72	3.02	3.34	3.82	3.24	3.23	3.56	4.08	4.45	4.92	5.63																						
CPI = 0.30	STUD SIZE	50.8					63.5					75					89					92					WW92	100					150												
Single Stud	Stud Centres\BMT	0.50	0.55	0.50	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15					
	300	3.87	3.99	4.58	4.72	5.21	5.95	5.36	5.92	6.76	6.12	6.75	7.72	6.27	6.93	7.92	-	6.70	7.40	8.46	9.24	10.22	11.69																						
	400	3.52	3.63	4.16	4.29	4.73	5.40	4.87	5.38	6.14	5.56	6.14	7.02	5.70	6.30	7.20	-	6.08	6.72	7.69	8.40	9.28	10.63																						
	450	3.38	3.49	4.00	4.12	4.55	5.20	4.68	5.17	5.91	5.34	5.90	6.75	5.48	6.05	6.92	-	5.85	6.46	7.39	8.07	8.93	10.22																						
	600	3.07	3.17	3.63	3.75	4.14	4.72	4.25	4.70	5.37	4.85	5.36	6.13	4.98	5.50	6.29	5.34	5.31	5.87	6.72	7.34	8.11	9.28																						
IMPACT LIMIT		1.64	1.72	2.11	2.21	2.51	2.86	2.58	2.85	3.26	2.95	3.25	3.72	3.02	3.34	3.82	3.24	3.23	3.56	4.08	4.45	4.92	5.63																						
CPI = 0.60	STUD SIZE	50.8					63.5					75					89					92					WW92	100					150												
Single Stud	Stud Centres\BMT	0.50	0.55	0.50	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15					
	300	3.07	3.17	3.63	3.75	4.14	4.72	4.25	4.70	5.37	4.85	5.36	6.13	4.98	5.50	6.29	-	5.31	5.87	6.72	7.34	8.11	9.28																						
	400	2.79	2.88	3.30	3.40	3.76	4.29	3.87	4.27	4.87	4.41	4.87	5.57	4.52	5.00	5.71	-	4.83	5.33	6.10	6.67	7.37	8.43																						
	450	2.68	2.77	3.18	3.27	3.61	4.12	3.72	4.10	4.69	4.24	4.68	5.35	4.35	4.80	5.49	-	4.64	5.13	5.87	6.41	7.08	8.11																						
	600	2.44	2.51	2.88	2.97	3.28	3.75	3.38	3.73	4.26	3.85	4.25	4.86	3.95	4.37	4.99	4.24	4.22	4.66	5.33	5.82	6.44	7.37																						
IMPACT LIMIT		1.64	1.72	2.11	2.21	2.51	2.86	2.58	2.85	3.26	2.95	3.25	3.72	3.02	3.34	3.82	3.24	3.23	3.56	4.08	4.45	4.92	5.63																						
CPI = 0.80	STUD SIZE	50.8					63.5					75					89					92					WW92	100					150												
Single Stud	Stud Centres\BMT	0.50	0.55	0.50	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15					
	300	2.79	2.88	3.30	3.40	3.76	4.29	3.87	4.27	4.87	4.41	4.87	5.57	4.52	5.00	5.71	-	4.83	5.33	6.10	6.67	7.37	8.43																						
	400	2.54	2.61	3.00	3.09	3.41	3.90	3.51	3.88	4.43	4.01	4.42	5.06	4.11	4.54	5.19	-	4.39	4.85	5.54	6.06	6.69	7.66																						
	450	2.44	2.51	2.88	2.97	3.28	3.75	3.38	3.73	4.26	3.85	4.25	4.86	3.95	4.37	4.99	-	4.22	4.66	5.33	5.82	6.44	7.37																						
	600	2.22	2.28	2.62	2.70	2.98	3.40	3.07	3.39	3.87	3.50	3.87	4.42	3.59	3.97	4.54	3.85	3.83	4.23	4.84	5.29	5.85	6.69																						
IMPACT LIMIT		1.64	1.72	2.11	2.21	2.51	2.86	2.58	2.85	3.26	2.95	3.25	3.72	3.02	3.34	3.82	3.24	3.23	3.56	4.08	4.45	4.92	5.63																						
CPI = 0.20	STUD SIZE	50.8					63.5					75					89					92					WW92	100					150												
Boxed Stud	Stud Centres\BMT	0.50	0.55	0.50	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15					
	300	5.58	5.76	6.61	6.81	7.52	8.59	7.73	8.53	9.76	8.82	9.74	11.15	9.05	10.00	11.44	-	9.66	10.67	12.21	13.33	14.74	16.89																						
	400	5.07	5.23	6.00	6.19	6.83	7.80	7.02	7.75	8.87	8.01	8.85	10.13	8.22	9.08	10.39	-	8.78	9.69	11.10	12.11	13.39	15.35																						
	450	4.88	5.03	5.77	5.95	6.57	7.50	6.75	7.46	8.52	7.71	8.51	9.74	7.91	8.73	9.99	-	8.44	9.32	10.67	11.65	12.87	14.76																						
	600	4.43	4.57	5.24	5.41	5.97	6.81	6.14	6.77	7.75	7.00	7.73	8.85	7.18	7.93	9.08	-	7.67	8.47	9.69	10.58	11.70	13.41																						
IMPACT LIMIT		2.33	2.42	2.78	2.87	3.16	3.61	3.25	3.59	4.11	3.71	4.10	4.69	3.81	4.21	4.81	-	4.06	4.49	5.14	5.61	6.20	7.11																						
CPI = 0.30	STUD SIZE	50.8					63.5					75					89					92					WW92	100					150												
Boxed Stud	Stud Centres\BMT	0.50	0.55	0.50	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15					
	300	4.88	5.03	5.77	5.95	6.57	7.50	6.75	7.46	8.52	7.71	8.51	9.74	7.91	8.73	9.99	-	8.44	9.32	10.67	11.65	12.87	14.76																						
	400	4.43	4.57	5.24	5.41	5.97	6.81	6.14	6.77	7.75	7.00	7.73	8.85	7.18	7.93	9.08	-	7.67	8.47	9.69	10.58	11.70	13.41																						
	450	4.26	4.39	5.04	5.20	5.74	6.55	5.90	6.51	7.45	6.73	7.43	8.51	6.91	7.63	8.73	-	7.37	8.14	9.32	10.17	11.25	12.89																						
	600	3.87	3.99	4.58	4.72	5.21	5.95	5.36	5.92	6.77	6.12	6.75	7.73	6.28	6.93	7.93	-	6.70	7.40	8.47	9.24	10.22	11.71																						
IMPACT LIMIT		2.33	2.42	2.78	2.87	3.16	3.61	3.25	3.59	4.11	3.71	4.10	4.69	3.81	4.21	4.81	-	4.06	4.49	5.14	5.61	6.20	7.11																						
CPI = 0.60	STUD SIZE	50.8					63.5					75					89					92					WW92	100					150												
Boxed Stud	Stud Centres\BMT	0.50	0.55	0.50	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55																															

TABLE 6.2

MEDIUM WIND ZONE | 32<VR<37 M/S

CPI = 0.2		STUD SIZE		50.8		63.5		75		89		92		WW92	100		150						
Single Stud	Stud Centres\BMT	0.50	0.55	0.50	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.55	0.75	1.15	0.55	0.75	1.15			
	300	4.03	4.15	4.77	4.91	5.42	6.19	5.58	6.16	7.03	6.36	7.03	8.04	6.53	7.21	8.25	-	6.97	7.70	8.80	9.62	10.63	12.17
	400	3.66	3.77	4.33	4.46	4.93	5.62	5.07	5.59	6.39	5.78	6.38	7.30	5.93	6.55	7.49	-	6.33	6.99	8.00	8.74	9.66	11.06
	450	3.52	3.63	4.16	4.29	4.74	5.41	4.87	5.38	6.14	5.56	6.14	7.02	5.70	6.30	7.20	-	6.09	6.72	7.69	8.40	9.29	10.63
	600	3.20	3.30	3.78	3.90	4.30	4.91	4.43	4.89	5.58	5.05	5.58	6.38	5.18	5.72	6.54	5.55	5.53	6.11	6.99	7.63	8.44	9.66
IMPACT LIMIT		1.64	1.72	2.11	2.21	2.51	2.86	2.58	2.85	3.26	2.95	3.25	3.72	3.02	3.34	3.82	3.24	3.23	3.56	4.08	4.45	4.92	5.63
CPI = 0.3		STUD SIZE		50.8		63.5		75		89		92		WW92	100		150						
Single Stud	Stud Centres\BMT	0.50	0.55	0.50	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15
	300	3.52	3.63	4.16	4.29	4.74	5.41	4.87	5.38	6.14	5.56	6.14	7.02	5.70	6.30	7.20	-	6.09	6.72	7.69	8.40	9.29	10.63
	400	3.20	3.30	3.78	3.90	4.30	4.91	4.43	4.89	5.58	5.05	5.58	6.38	5.18	5.72	6.54	-	5.53	6.11	6.99	7.63	8.44	9.66
	450	3.07	3.17	3.64	3.75	4.14	4.72	4.26	4.70	5.37	4.86	5.36	6.13	4.98	5.50	6.29	-	5.32	5.87	6.72	7.34	8.11	9.29
	600	2.79	2.88	3.30	3.41	3.76	4.29	3.87	4.27	4.88	4.41	4.87	5.57	4.53	5.00	5.72	4.85	4.83	5.34	6.10	6.67	7.37	8.44
IMPACT LIMIT		1.64	1.72	2.11	2.21	2.51	2.86	2.58	2.85	3.26	2.95	3.25	3.72	3.02	3.34	3.82	3.24	3.23	3.56	4.08	4.45	4.92	5.63
CPI = 0.6		STUD SIZE		50.8		63.5		75		89		92		WW92	100		150						
Single Stud	Stud Centres\BMT	0.50	0.55	0.50	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15
	300	2.79	2.88	3.30	3.41	3.76	4.29	3.87	4.27	4.88	4.41	4.87	5.57	4.53	5.00	5.72	-	4.83	5.34	6.10	6.67	7.37	8.44
	400	2.54	2.62	3.00	3.10	3.42	3.90	3.51	3.88	4.43	4.01	4.43	5.06	4.11	4.54	5.19	-	4.39	4.85	5.55	6.06	6.70	7.67
	450	2.44	2.52	2.89	2.98	3.28	3.75	3.38	3.73	4.26	3.85	4.26	4.87	3.95	4.37	4.99	-	4.22	4.66	5.33	5.83	6.44	7.37
	600	2.22	2.29	2.62	2.70	2.98	3.41	3.07	3.39	3.87	3.50	3.87	4.42	3.59	3.97	4.54	3.85	3.83	4.24	4.85	5.29	5.85	6.70
IMPACT LIMIT		1.64	1.72	2.11	2.21	2.51	2.86	2.58	2.85	3.26	2.95	3.25	3.72	3.02	3.34	3.82	3.24	3.23	3.56	4.08	4.45	4.92	5.63
CPI = 0.8		STUD SIZE		50.8		63.5		75		89		92		WW92	100		150						
Single Stud	Stud Centres\BMT	0.50	0.55	0.50	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15
	300	2.54	2.62	3.00	3.10	3.42	3.90	3.51	3.88	4.43	4.01	4.43	5.06	4.11	4.54	5.19	-	4.39	4.85	5.55	6.06	6.70	7.67
	400	2.31	2.38	2.73	2.81	3.10	3.54	3.19	3.52	4.03	3.64	4.02	4.60	3.74	4.13	4.72	-	3.99	4.40	5.04	5.50	6.08	6.96
	450	2.22	2.29	2.62	2.70	2.98	3.41	3.07	3.39	3.87	3.50	3.87	4.42	3.59	3.97	4.54	-	3.83	4.24	4.85	5.29	5.85	6.70
	600	2.01	2.08	2.38	2.46	2.71	3.09	2.79	3.08	3.52	3.18	3.51	4.02	3.26	3.61	4.12	3.50	3.48	3.85	4.40	4.81	5.32	6.08
IMPACT LIMIT		1.64	1.72	2.11	2.21	2.51	2.86	2.58	2.85	3.26	2.95	3.25	3.72	3.02	3.34	3.82	3.24	3.23	3.56	4.08	4.45	4.92	5.63
CPI = 0.2		STUD SIZE		50.8		63.5		75		89		92		WW92	100		150						
Single Stud	Stud Centres\BMT	0.50	0.55	0.50	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15
	300	5.08	5.23	6.00	6.19	6.83	7.80	7.03	7.76	8.87	8.02	8.85	10.13	8.23	9.09	10.40	-	8.78	9.70	11.10	12.12	13.40	15.36
	400	4.61	4.75	5.46	5.63	6.21	7.09	6.39	7.05	8.06	7.29	8.05	9.21	7.48	8.26	9.45	-	7.98	8.81	10.09	11.01	12.17	13.95
	450	4.43	4.57	5.25	5.41	5.97	6.82	6.14	6.78	7.75	7.00	7.74	8.85	7.19	7.94	9.08	-	7.67	8.47	9.70	10.59	11.70	13.42
	600	4.03	4.15	4.77	4.91	5.42	6.19	5.58	6.16	7.04	6.36	7.03	8.04	6.53	7.21	8.25	-	6.97	7.70	8.81	9.62	10.63	12.19
IMPACT LIMIT		2.33	2.42	2.78	2.87	3.16	3.61	3.25	3.59	4.11	3.71	4.10	4.69	3.81	4.21	4.81	-	4.06	4.49	5.14	5.61	6.20	7.11
CPI = 0.3		STUD SIZE		50.8		63.5		75		89		92		WW92	100		150						
Single Stud	Stud Centres\BMT	0.50	0.55	0.50	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15
	300	4.43	4.57	5.25	5.41	5.97	6.82	6.14	6.78	7.75	7.00	7.74	8.85	7.19	7.94	9.08	-	7.67	8.47	9.70	10.59	11.70	13.42
	400	4.03	4.15	4.77	4.91	5.42	6.19	5.58	6.16	7.04	6.36	7.03	8.04	6.53	7.21	8.25	-	6.97	7.70	8.81	9.62	10.63	12.19
	450	3.87	3.99	4.58	4.72	5.21	5.96	5.36	5.92	6.77	6.12	6.76	7.73	6.28	6.93	7.93	-	6.70	7.40	8.47	9.25	10.22	11.72
	600	3.52	3.63	4.16	4.29	4.74	5.41	4.87	5.38	6.15	5.56	6.14	7.02	5.70	6.30	7.21	-	6.09	6.72	7.70	8.40	9.29	10.65
IMPACT LIMIT		2.33	2.42	2.78	2.87	3.16	3.61	3.25	3.59	4.11	3.71	4.10	4.69	3.81	4.21	4.81	-	4.06	4.49	5.14	5.61	6.20	7.11
CPI = 0.6		STUD SIZE		50.8		63.5		75		89		92		WW92	100		150						
Single Stud	Stud Centres\BMT	0.50	0.55	0.50	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15
	300	3.52	3.63	4.16	4.29	4.74	5.41	4.87	5.38	6.15	5.56	6.14	7.02	5.70	6.30	7.21	-	6.09	6.72	7.70	8.40	9.29	10.65
	400	3.20	3.30	3.78	3.90	4.30	4.92	4.43	4.89	5.59	5.05	5.58	6.38	5.18	5.72	6.55	-	5.53	6.11	6.99	7.63	8.44	9.67
	450	3.07	3.17	3.64	3.75	4.14	4.73	4.26	4.70	5.37	4.86	5.36	6.14	4.98	5.50	6.30	-	5.32	5.87	6.72	7.34	8.11	9.30
	600	2.79	2.88	3.30	3.41	3.76	4.30	3.87	4.27	4.88	4.41	4.87	5.58	4.53	5.00	5.72	-	4.83	5.34	6.11	6.67	7.37	8.45
IMPACT LIMIT		2.33	2.42	2.78	2.87	3.16	3.61	3.25	3.59	4.11	3.71	4.10	4.69	3.81	4.21	4.81	-	4.06	4.49	5.14	5.61	6.20	7.11
CPI = 0.8		STUD SIZE		50.8		63.5		75		89		92		WW92	100		150						
Single Stud	Stud Centres\BMT	0.50	0.55	0.50	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15
	300	3.20	3.30	3.78	3.90	4.30	4.92	4.43	4.89	5.59	5.05	5.58	6.38	5.18	5.72	6.55	-	5.53	6.11	6.99	7.63	8.44	9.67
	400	2.91	3.00	3.44	3.54	3.91	4.47	4.02	4.44	5.08	4.59	5.07	5.80	4.71	5.20	5.95	-	5.03	5.55	6.35	6.94	7.67	8.79
	450	2.79	2.88	3.30	3.41	3.76	4.30	3.87	4.27	4.88	4.41	4.87	5.58	4.53	5.00	5.72	-	4.83	5.34	6.11	6.67	7.37	8.45
	600	2.54	2.62	3.00	3.10	3.42	3.90	3.51	3.88	4.44	4.01	4.43	5.07	4.11	4.54	5.20	-	4.39	4.85	5.55	6.06	6.70	7.68
IMPACT LIMIT		2.33	2.42	2.78	2.87	3.16	3.61	3.25	3.59	4.11	3.71	4.10	4.69	3.81	4.21	4.81	-	4.06	4.49	5.14	5.61	6.20	7.11

See notes 4.3 SRP™ Stud Height Tables

TABLE 6.3

HIGH Wind Zone | 37<Vr<44 m/s

CPI = 0.20	STUD SIZE	50.8					63.5					75					89					92					WW92	100					150						
Single Stud	Stud Centres\BMT	0.50	0.55	0.50	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.55	0.75	1.15	0.55	0.75	1.15
	300	3.50	3.61	4.14	4.27	4.71	5.38	4.85	5.35	6.12	5.53	6.11	6.99	5.68	6.27	7.17	-	6.06	6.69	7.66	8.36	9.24	10.58	-	6.06	6.69	7.66	8.36	9.24	10.58	6.06	6.69	7.66	8.36	9.24	10.58			
	400	3.18	3.28	3.76	3.88	4.28	4.89	4.41	4.86	5.56	5.03	5.55	6.35	5.16	5.70	6.51	-	5.50	6.08	6.96	7.60	8.40	9.61	-	5.50	6.08	6.96	7.60	8.40	9.61	5.50	6.08	6.96	7.60	8.40	9.61			
	450	3.06	3.15	3.62	3.73	4.12	4.70	4.24	4.68	5.34	4.83	5.34	6.10	4.96	5.48	6.26	-	5.29	5.85	6.69	7.31	8.08	9.24	-	5.29	5.85	6.69	7.31	8.08	9.24	5.29	5.85	6.69	7.31	8.08	9.24			
	600	2.78	2.87	3.29	3.39	3.74	4.27	3.85	4.25	4.85	4.39	4.85	5.55	4.51	4.98	5.69	4.83	4.81	5.31	6.08	6.64	7.34	8.40	4.83	4.81	5.31	6.08	6.64	7.34	8.40	4.83	4.81	5.31	6.08	6.64	7.34	8.40		
IMPACT LIMIT		1.64	1.72	2.11	2.21	2.51	2.86	2.58	2.85	3.26	2.95	3.25	3.72	3.02	3.34	3.82	3.24	3.23	3.56	4.08	4.45	4.92	5.63	3.24	3.23	3.56	4.08	4.45	4.92	5.63	3.24	3.23	3.56	4.08	4.45	4.92	5.63		
CPI = 0.30	STUD SIZE	50.8					63.5					75					89					92					WW92	100					150						
Single Stud	Stud Centres\BMT	0.50	0.55	0.50	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.55	0.75	1.15	0.55	0.75	1.15
	300	3.06	3.15	3.62	3.73	4.12	4.70	4.24	4.68	5.34	4.83	5.34	6.10	4.96	5.48	6.26	-	5.29	5.85	6.69	7.31	8.08	9.24	-	5.29	5.85	6.69	7.31	8.08	9.24	5.29	5.85	6.69	7.31	8.08	9.24			
	400	2.78	2.87	3.29	3.39	3.74	4.27	3.85	4.25	4.85	4.39	4.85	5.55	4.51	4.98	5.69	-	4.81	5.31	6.08	6.64	7.34	8.40	-	4.81	5.31	6.08	6.64	7.34	8.40	4.81	5.31	6.08	6.64	7.34	8.40			
	450	2.67	2.76	3.16	3.26	3.60	4.11	3.70	4.09	4.67	4.22	4.66	5.33	4.33	4.78	5.47	-	4.62	5.11	5.84	6.38	7.05	8.07	-	4.62	5.11	5.84	6.38	7.05	8.07	4.62	5.11	5.84	6.38	7.05	8.07			
	600	2.43	2.50	2.87	2.96	3.27	3.73	3.36	3.71	4.24	3.84	4.24	4.84	3.94	4.35	4.97	4.22	4.20	4.64	5.31	5.80	6.41	7.34	4.22	4.20	4.64	5.31	5.80	6.41	7.34	4.22	4.20	4.64	5.31	5.80	6.41	7.34		
IMPACT LIMIT		1.64	1.72	2.11	2.21	2.51	2.86	2.58	2.85	3.26	2.95	3.25	3.72	3.02	3.34	3.82	3.24	3.23	3.56	4.08	4.45	4.92	5.63	3.24	3.23	3.56	4.08	4.45	4.92	5.63	3.24	3.23	3.56	4.08	4.45	4.92	5.63		
CPI = 0.60	STUD SIZE	50.8					63.5					75					89					92					WW92	100					150						
Single Stud	Stud Centres\BMT	0.50	0.55	0.50	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.55	0.75	1.15	0.55	0.75	1.15
	300	2.43	2.50	2.87	2.96	3.27	3.73	3.36	3.71	4.24	3.84	4.24	4.84	3.94	4.35	4.97	-	4.20	4.64	5.31	5.80	6.41	7.34	-	4.20	4.64	5.31	5.80	6.41	7.34	4.20	4.64	5.31	5.80	6.41	7.34			
	400	2.21	2.27	2.61	2.69	2.97	3.39	3.06	3.37	3.85	3.49	3.85	4.40	3.58	3.95	4.52	-	3.82	4.22	4.82	5.27	5.82	6.67	-	3.82	4.22	4.82	5.27	5.82	6.67	3.82	4.22	4.82	5.27	5.82	6.67			
	450	2.12	2.19	2.51	2.59	2.86	3.26	2.94	3.24	3.70	3.35	3.70	4.23	3.44	3.80	4.34	-	3.67	4.05	4.64	5.07	5.60	6.41	-	3.67	4.05	4.64	5.07	5.60	6.41	3.67	4.05	4.64	5.07	5.60	6.41			
	600	1.93	1.99	2.28	2.35	2.59	2.96	2.67	2.95	3.37	3.05	3.36	3.84	3.12	3.45	3.95	3.35	3.33	3.68	4.21	4.60	5.09	5.82	3.35	3.33	3.68	4.21	4.60	5.09	5.82	3.35	3.33	3.68	4.21	4.60	5.09	5.82		
IMPACT LIMIT		1.64	1.72	2.11	2.21	2.51	2.86	2.58	2.85	3.26	2.95	3.25	3.72	3.02	3.34	3.82	3.24	3.23	3.56	4.08	4.45	4.92	5.63	3.24	3.23	3.56	4.08	4.45	4.92	5.63	3.24	3.23	3.56	4.08	4.45	4.92	5.63		
CPI = 0.80	STUD SIZE	50.8					63.5					75					89					92					WW92	100					150						
Single Stud	Stud Centres\BMT	0.50	0.55	0.50	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.55	0.75	1.15	0.55	0.75	1.15
	300	2.21	2.27	2.61	2.69	2.97	3.39	3.06	3.37	3.85	3.49	3.85	4.40	3.58	3.95	4.52	-	3.82	4.22	4.82	5.27	5.82	6.67	-	3.82	4.22	4.82	5.27	5.82	6.67	3.82	4.22	4.82	5.27	5.82	6.67			
	400	2.00	2.07	2.37	2.45	2.70	3.08	2.78	3.06	3.50	3.17	3.50	4.00	3.25	3.59	4.10	-	3.47	3.83	4.38	4.79	5.29	6.06	-	3.47	3.83	4.38	4.79	5.29	6.06	3.47	3.83	4.38	4.79	5.29	6.06			
	450	1.93	1.99	2.28	2.35	2.59	2.96	2.67	2.95	3.37	3.05	3.36	3.84	3.12	3.45	3.95	-	3.33	3.68	4.21	4.60	5.09	5.82	-	3.33	3.68	4.21	4.60	5.09	5.82	3.33	3.68	4.21	4.60	5.09	5.82			
	600	1.75	1.81	2.07	2.14	2.36	2.69	2.42	2.68	3.06	2.77	3.06	3.49	2.84	3.13	3.59	3.04	3.03	3.35	3.83	4.18	4.62	5.29	3.04	3.03	3.35	3.83	4.18	4.62	5.29	3.04	3.03	3.35	3.83	4.18	4.62	5.29		
IMPACT LIMIT		1.64	1.72	2.11	2.21	2.51	2.86	2.58	2.85	3.26	2.95	3.25	3.72	3.02	3.34	3.82	3.24	3.23	3.56	4.08	4.45	4.92	5.63	3.24	3.23	3.56	4.08	4.45	4.92	5.63	3.24	3.23	3.56	4.08	4.45	4.92	5.63		
CPI = 0.20	STUD SIZE	50.8					63.5					75					89					92					WW92	100					150						
Boxed Stud	Stud Centres\BMT	0.50	0.55	0.50	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.55	0.75	1.15	0.55	0.75	1.15
	300	4.41	4.55	5.22	5.38	5.94	6.79	6.11	6.75	7.71	6.97	7.70	8.81	7.15	7.90	9.04	-	7.63	8.43	9.65	10.54	11.65	13.35	-	7.63	8.43	9.65	10.54	11.65	13.35	7.63	8.43	9.65	10.54	11.65	13.35			
	400	4.01	4.13	4.74	4.89	5.40	6.17	5.55	6.13	7.01	6.33	7.00	8.00	6.50	7.18	8.21	-	6.94	7.66	8.77	9.57	10.58	12.13	-	6.94	7.66	8.77	9.57	10.58	12.13	6.94	7.66	8.77	9.57	10.58	12.13			
	450	3.86	3.98	4.56	4.70	5.19	5.93	5.34	5.89	6.74	6.09	6.73	7.70	6.25	6.90	7.90	-	6.67	7.37	8.43	9.21	10.18	11.66	-	6.67	7.37	8.43	9.21	10.18	11.66	6.67	7.37	8.43	9.21	10.18	11.66			
	600	3.50	3.61	4.14	4.27	4.72	5.39	4.85	5.35	6.12	5.53	6.11	6.99	5.68	6.27	7.18	-	6.06	6.69	7.66	8.36	9.24	10.60	-	6.06	6.69	7.66	8.36	9.24	10.60	6.06	6.69	7.66	8.36	9.24	10.60			
IMPACT LIMIT		2.33	2.42	2.78	2.87	3.16	3.61	3.25	3.59	4.11	3.71	4.10	4.69	3.81	4.21	4.81	-	4.06	4.49	5.14	5.61	6.20	7.11	-	4.06	4.49	5.14	5.61	6.20	7.11	4.06	4.49	5.14	5.61	6.20	7.11			
CPI = 0.30	STUD SIZE	50.8					63.5					75					89					92					WW92	100					150						
Boxed Stud	Stud Centres\BMT	0.50	0.55	0.50	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.55	0.75	1.15	0.55	0.75	1.15
	300	3.86	3.98	4.56	4.70	5.19	5.93	5.34	5.89	6.74	6.09	6.73	7.70	6.25	6.90	7.90	-	6.67	7.37	8.43	9.21	10.18	11.66	-	6.67	7.37	8.43	9.21	10.18	11.66	6.67	7.37	8.43	9.21	10.18	11.66			
	400	3.50	3.61	4.14	4.27	4.72	5.39	4.85	5.35	6.12	5.53	6.11	6.99	5.68	6.27	7.18	-	6.06	6.69	7.66	8.36	9.24	10.60	-	6.06	6.69	7.66	8.36	9.24	10.60	6.06	6.69	7.66	8.36	9.24	10.60			
	450	3.37	3.47	3.98	4.11	4.53	5.18	4.66	5.15	5.89	5.32	5.88	6.72	5.46																									

TABLE 6.4


VERY HIGH Wind Zone | $44 < V_r < 50$ m/s

CPI = 0.20	STUD SIZE	50.8					63.5					75					89					92					WW92	100					150				
	Stud Centres\BMT	0.50	0.55	0.50	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15
Single Stud	300	3.22	3.32	3.81	3.93	4.33	4.95	4.46	4.92	5.62	5.08	5.62	6.42	5.22	5.76	6.59	-	5.57	6.15	7.04	7.69	8.50	9.72														
	400	2.92	3.01	3.46	3.57	3.94	4.49	4.05	4.47	5.11	4.62	5.10	5.83	4.74	5.23	5.99	-	5.06	5.59	6.39	6.98	7.72	8.83														
	450	2.81	2.90	3.33	3.43	3.78	4.32	3.89	4.30	4.91	4.44	4.91	5.61	4.56	5.03	5.76	-	4.86	5.37	6.15	6.71	7.42	8.49														
	600	2.55	2.63	3.02	3.12	3.44	3.92	3.54	3.90	4.46	4.04	4.46	5.10	4.14	4.57	5.23	4.44	4.42	4.88	5.58	6.10	6.74	7.72														
IMPACT LIMIT		1.64	1.72	2.11	2.21	2.51	2.86	2.58	2.85	3.26	2.95	3.25	3.72	3.02	3.34	3.82	3.24	3.23	3.56	4.08	4.45	4.92	5.63														
CPI = 0.30	STUD SIZE	50.8					63.5					75					89					92					WW92	100					150				
	Stud Centres\BMT	0.50	0.55	0.50	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15			
Single Stud	300	2.81	2.90	3.33	3.43	3.78	4.32	3.89	4.30	4.91	4.44	4.91	5.61	4.56	5.03	5.76	-	4.86	5.37	6.15	6.71	7.42	8.49														
	400	2.55	2.63	3.02	3.12	3.44	3.92	3.54	3.90	4.46	4.04	4.46	5.10	4.14	4.57	5.23	-	4.42	4.88	5.58	6.10	6.74	7.72														
	450	2.46	2.53	2.91	3.00	3.31	3.77	3.40	3.75	4.29	3.88	4.29	4.90	3.98	4.40	5.03	-	4.25	4.69	5.37	5.86	6.48	7.42														
	600	2.23	2.30	2.64	2.72	3.00	3.43	3.09	3.41	3.90	3.53	3.89	4.45	3.62	4.00	4.57	3.88	3.86	4.26	4.88	5.33	5.89	6.74														
IMPACT LIMIT		1.64	1.72	2.11	2.21	2.51	2.86	2.58	2.85	3.26	2.95	3.25	3.72	3.02	3.34	3.82	3.24	3.23	3.56	4.08	4.45	4.92	5.63														
CPI = 0.60	STUD SIZE	50.8					63.5					75					89					92					WW92	100					150				
	Stud Centres\BMT	0.50	0.55	0.50	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15			
Single Stud	300	2.23	2.30	2.64	2.72	3.00	3.43	3.09	3.41	3.90	3.53	3.89	4.45	3.62	4.00	4.57	-	3.86	4.26	4.88	5.33	5.89	6.74														
	400	2.03	2.09	2.40	2.47	2.73	3.12	2.81	3.10	3.54	3.20	3.54	4.04	3.29	3.63	4.15	-	3.51	3.87	4.43	4.84	5.35	6.13														
	450	1.95	2.01	2.31	2.38	2.62	3.00	2.70	2.98	3.40	3.08	3.40	3.89	3.16	3.49	3.99	-	3.37	3.72	4.26	4.65	5.15	5.89														
	600	1.77	1.83	2.10	2.16	2.38	2.72	2.45	2.71	3.09	2.80	3.09	3.53	2.87	3.17	3.63	3.08	3.06	3.38	3.87	4.23	4.68	5.35														
IMPACT LIMIT		1.64	1.72	2.11	2.21	2.51	2.86	2.58	2.85	3.26	2.95	3.25	3.72	3.02	3.34	3.82	3.24	3.23	3.56	4.08	4.45	4.92	5.63														
CPI = 0.80	STUD SIZE	50.8					63.5					75					89					92					WW92	100					150				
	Stud Centres\BMT	0.50	0.55	0.50	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15			
Single Stud	300	2.03	2.09	2.40	2.47	2.73	3.12	2.81	3.10	3.54	3.20	3.54	4.04	3.29	3.63	4.15	-	3.51	3.87	4.43	4.84	5.35	6.13														
	400	1.84	1.90	2.18	2.25	2.48	2.83	2.55	2.82	3.22	2.91	3.21	3.67	2.99	3.30	3.77	-	3.19	3.52	4.03	4.40	4.86	5.57														
	450	1.77	1.83	2.10	2.16	2.38	2.72	2.45	2.71	3.09	2.80	3.09	3.53	2.87	3.17	3.63	-	3.06	3.38	3.87	4.23	4.68	5.35														
	600	1.61	1.66	1.90	1.96	2.17	2.47	2.23	2.46	2.81	2.54	2.81	3.21	2.61	2.88	3.29	2.80	2.78	3.07	3.52	3.84	4.25	4.86														
IMPACT LIMIT		1.64	1.72	2.11	2.21	2.51	2.86	2.58	2.85	3.26	2.95	3.25	3.72	3.02	3.34	3.82	3.24	3.23	3.56	4.08	4.45	4.92	5.63														
CPI = 0.20	STUD SIZE	50.8					63.5					75					89					92					WW92	100					150				
	Stud Centres\BMT	0.50	0.55	0.50	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15			
Boxed Stud	300	4.06	4.18	4.80	4.95	5.46	6.24	5.62	6.20	7.09	6.41	7.08	8.10	6.57	7.26	8.31	-	7.02	7.75	8.87	9.68	10.70	12.27														
	400	3.69	3.80	4.36	4.49	4.96	5.67	5.10	5.63	6.44	5.82	6.43	7.36	5.97	6.60	7.55	-	6.37	7.04	8.06	8.80	9.73	11.15														
	450	3.54	3.65	4.19	4.32	4.77	5.45	4.91	5.42	6.19	5.60	6.18	7.07	5.74	6.34	7.26	-	6.13	6.77	7.75	8.46	9.35	10.72														
	600	3.22	3.32	3.81	3.93	4.33	4.95	4.46	4.92	5.63	5.09	5.62	6.43	5.22	5.76	6.59	-	5.57	6.15	7.04	7.69	8.50	9.74														
IMPACT LIMIT		2.33	2.42	2.78	2.87	3.16	3.61	3.25	3.59	4.11	3.71	4.10	4.69	3.81	4.21	4.81	-	4.06	4.49	5.14	5.61	6.20	7.11														
CPI = 0.30	STUD SIZE	50.8					63.5					75					89					92					WW92	100					150				
	Stud Centres\BMT	0.50	0.55	0.50	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15			
Boxed Stud	300	3.54	3.65	4.19	4.32	4.77	5.45	4.91	5.42	6.19	5.60	6.18	7.07	5.74	6.34	7.26	-	6.13	6.77	7.75	8.46	9.35	10.72														
	400	3.22	3.32	3.81	3.93	4.33	4.95	4.46	4.92	5.63	5.09	5.62	6.43	5.22	5.76	6.59	-	5.57	6.15	7.04	7.69	8.50	9.74														
	450	3.10	3.19	3.66	3.78	4.17	4.76	4.29	4.73	5.41	4.89	5.40	6.18	5.02	5.54	6.34	-	5.35	5.91	6.77	7.39	8.17	9.36														
	600	2.81	2.90	3.33	3.43	3.79	4.32	3.89	4.30	4.91	4.44	4.91	5.61	4.56	5.03	5.76	-	4.86	5.37	6.15	6.71	7.42	8.51														
IMPACT LIMIT		2.33	2.42	2.78	2.87	3.16	3.61	3.25	3.59	4.11	3.71	4.10	4.69	3.81	4.21	4.81	-	4.06	4.49	5.14	5.61	6.20	7.11														
CPI = 0.60	STUD SIZE	50.8					63.5					75					89					92					WW92	100					150				
	Stud Centres\BMT	0.50	0.55	0.50	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15			
Boxed Stud	300	2.81	2.90	3.33	3.43	3.79	4.32	3.89	4.30	4.91	4.44	4.91	5.61	4.56	5.03	5.76	-	4.86	5.37	6.15	6.71	7.42	8.51														
	400	2.56	2.63	3.02	3.12	3.44	3.93	3.54	3.91	4.47	4.04	4.46	5.10	4.14	4.57	5.23	-	4.42	4.88	5.59	6.10	6.74	7.73														
	450	2.46	2.53	2.91	3.00	3.31	3.78	3.40	3.75	4.29	3.88	4.29	4.90	3.98	4.40	5.03	-	4.25	4.69	5.37	5.87	6.48	7.43														
	600	2.23	2.30	2.64	2.72	3.00	3.43	3.09	3.41	3.90	3.53	3.89	4.46	3.62	4.00	4.57	-	3.86	4.26	4.88	5.33	5.89	6.75														
IMPACT LIMIT		2.33	2.42	2.78	2.87	3.16	3.61	3.25	3.59	4.11	3.71	4.10	4.69	3.81	4.21	4.81	-	4.06	4.49	5.14	5.61	6.20	7.11														
CPI = 0.80	STUD SIZE	50.8					63.5					75					89					92					WW92	100					150				
	Stud Centres\BMT	0.50	0.55	0.50	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15			
Boxed Stud	300	2.56	2.63	3.02	3.12	3.44	3.93	3.54	3.91	4.47	4.04	4.46	5.10	4.14	4.57	5.23	-	4.42	4.88	5.59	6.10	6.74	7.73														
	400	2.32	2.39	2.75	2.83	3.12	3.57	3.21	3.55	4.06	3.67	4.05	4.63	3.76	4.16	4.76	-	4.02	4.44	5.08	5.54	6.13	7.02														
	450	2.23	2.30	2.64	2.72	3.00	3.43	3.09	3.41	3.90	3.53	3.89	4.46	3.62	4.00	4.57	-	3.86	4.26	4.88	5.33	5.89	6.75														
	600	2.03	2.09	2.40	2.47	2.73	3.12	2.81	3.10	3.54	3.20	3.54	4.05	3.29	3.63	4.15	-	3.51	3.87	4.44	4.84	5.35	6.14														
IMPACT LIMIT		2.33	2.42	2.78	2.87	3.16	3.61	3.25	3.59	4.11	3.71	4.10	4.69	3.81	4.21	4.81	-	4.06	4.49	5.14	5.61	6.20	7.11														

4.3 SRP™ STUD HEIGHT TABLES 6.1 – 6.5 NOTES

1. For walls greater than 4m height, contact SRP™ as a specific engineering design may be required. **NOTE: Maximum wall heights may require further design for some structures, and it is the responsibility of the specifier to ensure adequate serviceability considerations are given to higher walls.**
2. Maximum SRP™ Stud Heights for Wind Zone as specified for varying SRP™ Stud sizes, Cpi values and maximum SRP™ Stud centres. Closer SRP™ Stud centres may be used if required.
3. For structural and/or serviceability purposes use SRP™ Continuous Nog Tracks
4. Tables are for internal partition [non-load bearing] walls only, subject to lateral wind pressures. No consideration has been given to any applied horizontal or vertical loads from shelving or other wall-hung/attached objects aside from self-weight of the wall and its linings. Any applied horizontal or vertical load will require specific engineering design.
5. BMT = Base metal thickness, TCT = Total coated thickness.
6. All loads calculated in accordance with the requirements of AS/NZS 1170. Council supplied Wind Zone information may be used for structures of one to two storeys. For structures greater than two storeys, use SRP™ Wind Zone Table [TABLE 5], or seek advice from SRP™ and/or a structural engineer.
7. Calculations for strength and serviceability undertaken to the requirements of AS/NZS4600.
8. Material as per AS1397 G250 Z275 steel [or greater].
9. Serviceability calculations undertaken with a deflection limit of SRP™ Stud height/200 under serviceability wind load in accordance with the requirements of AS/NZS1170.0 – Table C1.
10. Serviceability calculations undertaken for soft body impact load in accordance with AS/NZS1170.0 – Table C1 to a deflection limit of SRP™ Stud height/200 or 12mm, whichever is the lesser.
11. The requirement for potential disturbance due to soft body impact loads should be carefully considered for each given wall type/location. The limit for soft body impact loads are given in the tables and it is the responsibility of the specifier to determine its requirement in the specific design application for each wall structure.
12. Consideration has not been given for fire. Specialist fire engineering will also be required for FRR walls.
13. Specific engineering design required for buildings with IL4 or IL5.
14. Tables are applicable for either single/double steel frame or staggered wall options with minimum 10mm Plasterboard* applied to each external face in accordance with Manufacturers' requirements [see FIGURE 8, FIGURE 9 and FIGURE 10].
15. All walls to be lined both sides to minimum 80% of the floor to soffit height. For one side only lined service shaft walls, other single lined walls or both side lined walls to less than 80% floor to soffit height, double up on the SRP™ Studs by using boxed/back to back SRP™ Studs, or halved SRP™ Stud centre to centre spacing to be used as a minimum.
16. Determination of Cpi should be undertaken by a suitably experienced designer familiar with the requirements of AS/NZS1170.2. If the designer is in doubt as to the selection of this figure, the advice of SRP™ and/or a structural engineer should be sought.
17. Storage and installation should be in strict accordance with the SRP™ Product Catalogue and project specific design documentation.
18. Designers should factor in the effects of temperature and creep when selecting SRP™ Stud size.
19. SRP™ Stud Height Tables assume adequate capacity within overall building structure to withstand design loads applied from Steel SRP™ Stud Framing. This should be confirmed by the project Structural Engineer.
20. Maximum size of additional site created service holes to be max 15mm diameter. All holes must be 300mm centres apart, in all cases. Maximum of two additional holes per SRP™ Stud are allowed.
21. For more information, please contact SRP™ Ltd on 09-579 0175

*Standard GIB® plasterboard is assumed, performance and/or specialty boards may also be used, subject to having equal or better structural properties.





**EACH SRP™ WALL SYSTEM
IS CHARACTERIZED BY
LIGHTWEIGHT HANDLING,
A FAMILIAR INSTALLATION
PROCESS AND MANY
DURABLE FEATURES
FOR QUALITY BUILDING
SOLUTIONS.**

/ INSTALLATION

4.4 PREPARATION AND PLANNING

Thorough planning and preparation is important to achieve a satisfactory result, economical installation and minimal waste.

As a guideline the following steps are suggested:

1. Using the plans, lay out the bottom and top SRP™ Tracks, ensuring they are the correct size, BMT and leg length. Ensure they are positioned perpendicular, or at the specified angle to the neighbouring partition as specified in the drawings.
2. Secure the bottom and top SRP™ Tracks as per the **SRP™ TRACK INSTALLATION SECTION** of this document. Use deflection head SRP™ Tracks where required.
3. Select the required size and BMT SRP™ Stud, using the **DESIGN SECTION** of this document.
4. Cut the SRP™ Studs to the required length and install them as per the **SRP™ STUD INSTALLATION SECTION** of this document.
5. Install SRP™ Nogs and/or SRP™ Continuous Nog Track as and where required. If SRP™ Continuous Nog Track is required, place them in position prior to installing the SRP™ Studs. Installation is as per **SRP™ NOGS SECTION** of this document.
6. Install doors and openings as and where required as per the **DOORS AND OPENINGS SECTION** of this document.
7. Install services in the wall cavity prior to lining.
8. Install acoustic insulation between the SRP™ Studs.
NOTE: If the services are installed after the placement of the acoustic insulation in the wall, to re-enable required acoustic performance, ensure the recovery of the acoustic insulation to its original thickness.
9. Install Ceiling structure as and where required as per the relevant Ceiling documentation.
10. Perform a pre-wall lining check for the following:
 - a. Are all the wall structures installed plumb [vertical], level [horizontal] and square?
 - b. Are all SRP™ Track and SRP™ Stud sizes and spacing installed as required by design?
 - c. Are all SRP™ Nogs installed in position and sizes as required by design?
 - d. Is all framing within required tolerances for the required finish as stated in the relevant GIB® documents?
 - e. Check for damage to SRP™ Studs, SRP™ Tracks and SRP™ Nogs incurred by handling or installation. Remove and replace the items when and where damaged prior to installing the plasterboard.
 - f. Are the position, size and the edge of any site drilled service holes as per **EXISTING AND SITE DRILLED SRP™ STUD SERVICE HOLES SECTION** of this document? Any SRP™ Studs with site created service holes outside of the recommended parameters, are to be removed and replaced when and where applicable, and prior to installing the plasterboard.
 - g. Are all openings and their structural supports installed as and where required by design?
 - h. Are all ceiling elements installed as and where required by design?
 - i. Are all ceiling/wall connection details as per required specification?
 - j. Are all contact surfaces dry and clean from oil, grease, dirt etc?
 - k. Are all services installed as designed? If the services are installed after the placement of the acoustic insulation, to re-enable required acoustic performance, after installing the services ensure the recovery of the acoustic insulation to its original thickness.
 - l. Ensure no SRP™ Nogs or services installed within the wall cavity protrude beyond the framing envelope.
 - m. Ensure the area is weatherproof and all required contact services are separated by a separation barrier as required by design.
11. Install plasterboard to the **SRP™ STUDS AS PER WALL LININGS SECTION** of this document.
12. Install SRP™ Plaster Angles as per **SRP™ PLASTER ANGLE SECTION** as and where required by design.

4.5 SRP™ TRACK INSTALLATION

Choose the relevant SRP™ Stud and SRP™ Track size and BMT using the SRP™ Stud Height Tables, [TABLES 6.1 – 6.5], bearing in mind that for all applications the SRP™ Track BMT must be the same or greater than the SRP™ Stud BMT.

- » For Fire Rated Walls, the use of deflection head SRP™ Track with a minimum of 50mm leg length is required. Installation as per GIB® Fire Rated Wall Systems October 2012.
- » For other walls, including SRP™ Whisperwall™ use the minimum of 30mm leg length SRP™ Track.

Ensure all SRP™ Tracks are level [horizontal], aligned and adjoining SRP™ Tracks are butt jointed with a 2mm expansion gap between them allowing for substrate expansion/shrinkage [see FIGURE 7].

Ensure that all SRP™ Tracks [top and bottom] will remain dry in service and are not subject to water ingress. As per the New Zealand Steel Durability Statement, when in contact with concrete ensure a damp-proof course [DPC] is used as required, which is to be at least 10mm wider than the SRP™ Track, i.e. minimum 5mm either side of the SRP™ Track [see FIGURE 7].

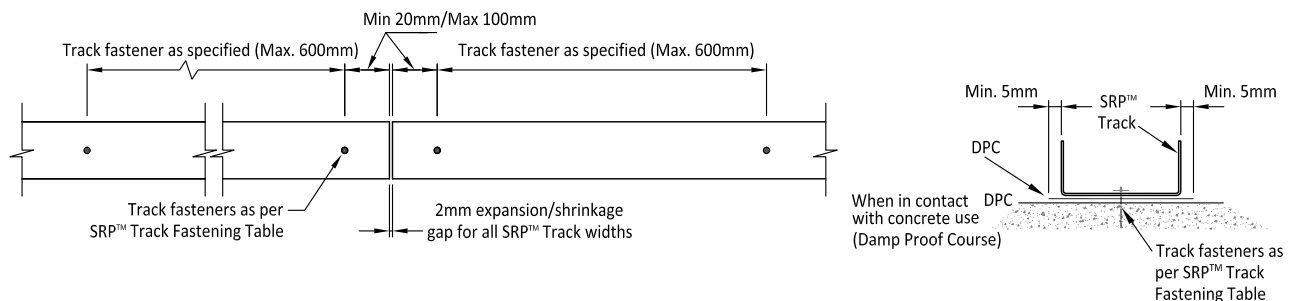
Secure the appropriate SRP™ Track to the floor and ceiling by using approved relevant fastener type for the particular substrate. See TABLES 6.1 – 6.5 for more information. Aluminium fasteners are not permitted as SRP™ Track fastenings in fire rated partitions.

To ensure no loss of structural integrity of the floor, where SRP™ Tracks are to be installed around pre-stressed concrete elements, installation is to be in strict accordance with pre-stressed component manufacturer requirements.

Secure the SRP™ Track to the structural floor and ceiling using fasteners at maximum 600mm centres and within 100mm but not less than 20mm from the end of the SRP™ Track, doorway openings and intersecting or exterior wall connections. See TABLE 7, FIGURE 7, FIGURE 18 and FIGURE 19 for more information.

Installation of SRP™ Whisperwall™ and other acoustic performance walls are to be installed in accordance with GIB® Noise Control Systems March 2006 and relevant sections of the SRP™ Product Catalogue.

FIGURE 7 SRP™ Track installation detail



Single Ramset™ Standard Drive Pin LDU 25 or M8 Ramset™ DynaBolt™ Option

If using Double Ramset™ Standard Drive Pin LDU 25 or M8 Ramset™ DynaBolt™ Option for Construction purposes, use the below details:

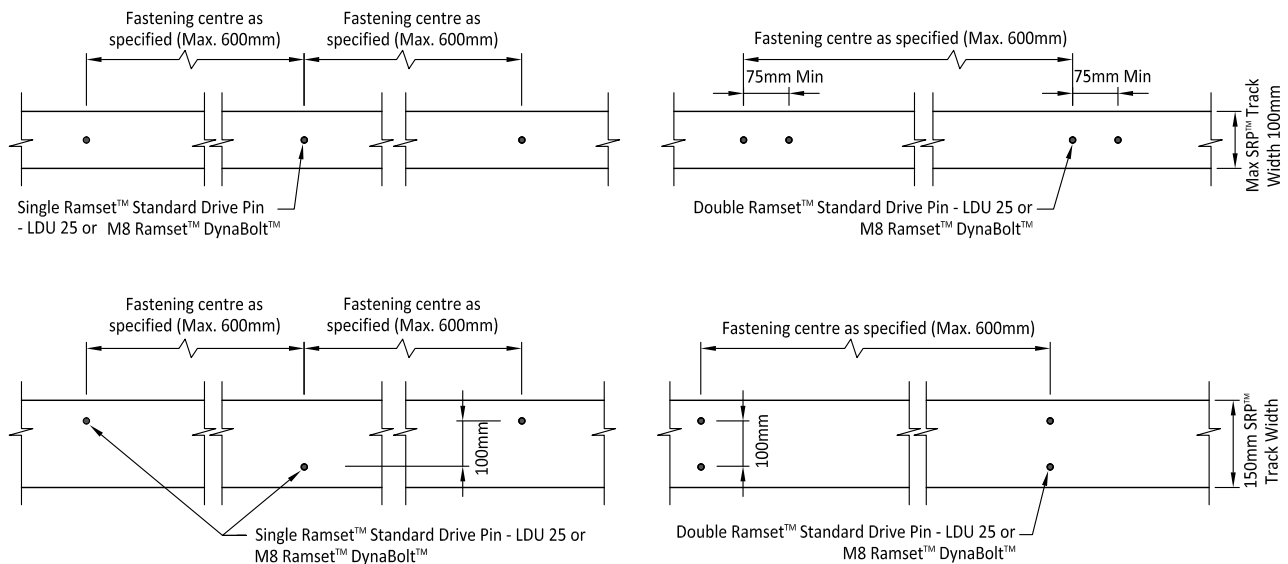


TABLE 7

SRP™ STUD HEIGHT 4M MAX. OR THE RELEVANT MAXIMUM HEIGHT FROM SRP™ STUD HEIGHT TABLE WHICHEVER IS LESSER		SRP™ TRACK FASTENING OPTIONS					
All Standard SRP™ Stud Sizes [BMT Single and Boxed @ 300, 400, 450 and 600mm Stud centres] SRP™ Whisperwall™ Stud @ 600mm Stud centres only		Code	Fastening Description	Number of Fastening	Centre of Fastening [mm]	Minimum Fastener Spacing [mm]	Equivalent Fastening Capacity @ 600 centres [kN]
A	Low Wind Zone Wind Speed [m/s] - [Vr<32]	A	Ramset™ Premium Drive Pin 22mm	1*	600	75	1.75
A	Medium Wind Zone Wind Speed [m/s] - [32<Vr<37]	B	Ramset™ Premium Drive Pin 22mm	1*	300	75	3.5
A	High Wind Zone Wind Speed [m/s] - [37<Vr<44]	C	M8 Ramset™ DynaBolt™	1	600	100	5
B	Very High Wind Zone Wind Speed [m/s] - [44<Vr<50]	D	M8 Ramset™ DynaBolt™	1	300	100	10
B	Extra High Wind Zone - Wind Speed [m/s] - [50<Vr<55]						

NOTES:

- * Table adopts 4m max. height or the relevant maximum height from SRP™ Stud Height Table, whichever is lesser
- ** Fastener spacing @ 600mm maximum
- *** Specific Engineering Design required for Vr>55 m/s

NOTES:

- * For pinned fastening, SRP™ recommends doubling the pins for construction purposes. Fasten double pins along the Track centreline and side by side for 150mm Tracks, with the above minimum fastener spacing centres, [see FIGURE 7].
- For 150mm Tracks and for all fastening options, stagger the fasteners 50mm above/below along the centreline of the Track, [see FIGURE 7].
- Fastening capacity, minimum fastener spacing and installation in strict accordance with Ramset™ product specifications
- Alternative fastening subject to meeting the equivalent fastening capacity indicated above, to be approved by a structural engineer
- Fastening capacity dependent on substrate material – if unsure contact a structural engineer
- For fastening to prestressed elements, care should be taken not to interfere with any prestressing strands – contact the prestressing unit manufacturer to determine locations of fastening to avoid clashes
- Minimum concrete edge distance of 75mm or in accordance with manufacturer requirements for both Ramset™ Premium Drive Pin and Ramset™ M8 DynaBolt™
- Check minimum concrete thickness when specifying anchor depths [Ramset™ Premium Drive Pin – min. thickness 3xPin length, Ramset™ M8 DynaBolt™ DP10040 – min. thickness 70mm [note longer DynaBolts™ may require greater thickness – refer to Ramset™ product specification]
- Additional fastening to those indicated in [TABLE 7] may be required around doors and openings, see [DOORS AND OPENINGS SECTION] of the SRP™ Product Catalogue, or as specified otherwise
- All fastening details noted in [TABLE 7] are minimum requirements only. For alternative design please consult a structural engineer.



SRP™ STUD HEIGHT USING THE RELEVANT MAXIMUM HEIGHT FROM SRP™ STUD HEIGHT TABLE																															
Wind Zone	Wind Speed [m/s]	Stud Size	50.8				63.5				75				89				92				WW 92	100				150			
			BMT	0.50	0.55	0.50	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15	0.55	0.75	1.15				
Low Wind Zone	Single Stud Centres	300	A																				-	A				B			
		400	A																				-	A				B			
		450	A																				-	A				B			
		600	A																				-	A				B			
	Boxed Stud Centres	300	A										B		B				B				-	B							
		400	A										B		B				B				-	B							
		450	A										B		B				B				-	B							
		600	A										B		B				B				-	B							
Medium Wind Zone	Single Stud Centres	300	A										B		B				-	A				B							
		400	A										B		B				-	A				B							
		450	A										B		B				-	A				B							
		600	A										B		B				-	A				B							
	Boxed Stud Centres	300	A										B		B				B				-	B				C			
		400	A										B		B				B				-	B				C			
		450	A										B		B				B				-	B				C			
		600	A										B		B				B				-	A				C			
High Wind Zone	Single Stud Centres	300	A										B		B				-	B				C							
		400	A										B		B				-	B				C							
		450	A										B		B				-	B				C							
		600	A										B		B				-	A				B							
	Boxed Stud Centres	300	A										B		B				B				-	B				C			
		400	A										B		B				B				-	B				C			
		450	A										B		B				B				-	B				C			
		600	A										B		B				B				-	A				C			
Very High Wind Zone	Single Stud Centres	300	A										B		B				-	B				C							
		400	A										B		B				-	B				C							
		450	A										B		B				-	B				C							
		600	A										B		B				-	B				C							
	Boxed Stud Centres	300	A										B		B				B				-	B				C		D	
		400	A										B		B				B				-	B				C		D	
		450	A										B		B				B				-	B				C		D	
		600	A										B		B				B				-	B				C		D	
Extra High Wind Zone	Single Stud Centres	300	A										B		B				-	B				D							
		400	A										B		B				-	B				C							
		450	A										B		B				-	B				C							
		600	A										B		B				-	B				C							
	Boxed Stud Centres	300	A										B		B				B				-	B				C		D	
		400	A										B		B				B				-	B				C		D	
		450	A										B		B				B				-	B				C		D	
		600	A										B		B				B				-	B				C		D	

NOTES: * Table adopts the relevant maximum height from SRP™ Stud Height Table
 ** Fastener spacing @ 600mm maximum
 *** Specific Engineering Design required for Vr>55 m/s

4.6 STUD INSTALLATION

To enable easy installation, SRP™ Studs are equipped with a generously knurled face providing a secure surface for attaching high density wall board products [FIGURE 1 and FIGURE 2].

Ensure Standard SRP™ Stud centres are as per SRP™ Stud Height Tables, [TABLES 6.1 – 6.5]. SRP™ Whisperwall™ Studs are installed exactly at 600mm centres, except end of the wall, doorway openings and intersecting or exterior wall connections. In all above cases SRP™ Stud centres should be no more than 600mm centres apart [see FIGURE 3, FIGURE 18 and FIGURE 19].

Ensure all SRP™ Studs are plumb [vertical], facing the same direction, [FIGURE 3], and the perimeter SRP™ Studs' webs [width, flat back side] are against the connecting wall, opening or free wall ends [FIGURE 18 and FIGURE 19]. This will enable adequate bracing, flat joint surfaces and accessible utility runs to be achieved.

Ensure that all SRP™ Studs remain dry in service and are not subject to water ingress. As per the New Zealand Steel Durability Statement, when in contact with concrete, or when there is the potential of condensation or water ingress through the wall, a damp-proof course [DPC] is used as required, which is to be at least 10mm wider than the SRP™ Stud, i.e. minimum 5mm either side of the SRP™ Stud [see FIGURE 7].

For standard partitions the expansion/contraction gap is 10mm between the top of the SRP™ Studs and the underside of the head SRP™ Track [see FIGURE 3 and FIGURE 28].

Installation of Fire Rated Walls is as per GIB® Fire Rated Wall Systems October 2012. Amongst other important aspects, this GIB® document, calls for a 15mm gap between the top of the SRP™ Studs and the underside of the SRP™ Deflection Track to allow for expansion and contraction to a maximum of 2700mm high partitions [see FIGURE 3 and FIGURE 29]. Partitions above 2700mm are also available however; a specific structural design will be required. Contact SRP™ for assistance if required.

For other Performance Systems, like acoustic walls e.g. SRP™ Whisperwall™ and standard SRP™ Stud acoustic walls, leave a 15mm expansion gap between the top of the SRP™ Studs and the underside of the head SRP™ Track [see FIGURE 3, FIGURE 29, FIGURE 30 and FIGURE 31].

Installation of SRP™ Whisperwall™ and other acoustic performance walls are as per GIB® Noise Control Systems March 2006 and relevant sections of this document.

To install the SRP™ Stud, insert vertically sideways between top and bottom SRP™ Tracks. Ensure the SRP™

Stud is at the required position, plumb [vertical] and facing the appropriate way. Then rotate the SRP™ Stud until it clicks to set. No further mechanical fastener is required, as the friction fit is sufficient to hold the SRP™ Studs in position subject to the building being enclosed [see FIGURE 2 and FIGURE 3].

For added rigidity of standard [non-fire rated, SRP™ Whisperwall™ or non-acoustic] partitions especially in buildings exposed to higher wind speed; additional mechanical fasteners such as 8g Tek screw and/or Pop rivets or crimping between the SRP™ Stud and top and bottom SRP™ Tracks can also be used to secure the SRP™ Stud ends to the SRP™ Track during installation. Please consult with SRP™ and/or a structural engineer re specific design and the position, centres and type of fastener etc. used.

For fire rated walls no screw fastening to the top or bottom SRP™ Track is allowed. As per GIB® Fire Rated Wall Systems™ October 2012 a light locating fastener that fails at high temperatures, such as single aluminium rivets may be used. Otherwise, positive fastening must be avoided.

For SRP™ Whisperwall™ no fastening to the top or bottom SRP™ Track is allowed, as it would compromise the tested STC values. For other acoustic performance walls refer to GIB® Noise Control Systems March 2006.

Corners, junctions in intersecting walls, walls ends, doors [jambs and heads]/openings especially in High Wind Zone areas or areas with direct to wall/cantilevered loading may require extra rigidity. This can be achieved by using a SRP™ Boxed stud [FIGURE 1]. For SRP™ Whisperwall™, use un-punched SRP™ Studs for boxing or add an extra SRP™ Stud. In other than SRP™ Whisperwall™ applications increase the gauge of the SRP™ Stud or use a timber frame for doors and openings. Alternatively, the area can be stiffened by using single or SRP™ Continuous Nog Tracks. Please consult SRP™ re specific design if required.

A common trade practice is to secure only the bottom of the neighbouring SRP™ Studs of door frames, openings, corners and intersections. Securing the SRP™ Studs to the SRP™ Deflection Tracks, especially around concentrated floor live load, has the possibility of restraining the movement and could cause partition cracking. In these cases refer to **DOORS AND OPENINGS SECTION** of this document and consult with SRP™ and/or a structural engineer re specific design.

For more detailed information about corners and door/openings see the **CORNERS, INTERSECTIONS AND WALL ENDS – TERMINATIONS** Section of this document.

5

ACOUSTIC WALL OPTIONS

5 ACOUSTIC WALL OPTIONS

There are three main acoustic wall options available dependent on specific requirements with each offering its own unique benefits [see TABLE 2]:

1. Double Steel SRP™ Stud Walls offer premium acoustic performance
2. SRP™ Whisperwall™ offers superior performance and
3. Staggered Steel SRP™ Stud Walls provide effective resistance to sound transmission and acoustic impact.

5.1 DOUBLE STEEL SRP™ STUD FRAME WALL TWO WAY FRR, ACOUSTIC AND INTER-TENANCY WALLS

[FIGURE 8]

Double SRP™ Stud walls are generally used where two way FRR [Fire Resistance Rating] or superior acoustic performance is required. This is mainly in inter-tenancy walls and corridors.

Install the walls as two separate parallel frames with a specified gap between them, using the relevant GIB® documentation in order to achieve the required STC and FRR rating. Refer to GIB® Noise Control Systems March 2006 and GIB® Fire Rated Systems October 2012 for more information. For building the two frames, use 63.5mm 0.55BMT SRP™ Studs together with 63.5mm 0.55BMT 30mm leg SRP™ Tracks as completely separate structures with no connection between them, especially if they are used for acoustic purposes.

The recommended maximum wall height is 2700mm. **NOTE: For other size SRP™ Studs, SRP™ Tracks or for taller partitions, specific engineering design verification of the performance is required.**

Leave a 15mm expansion gap between the top of the SRP™ Studs and the underside of the head SRP™ Tracks.

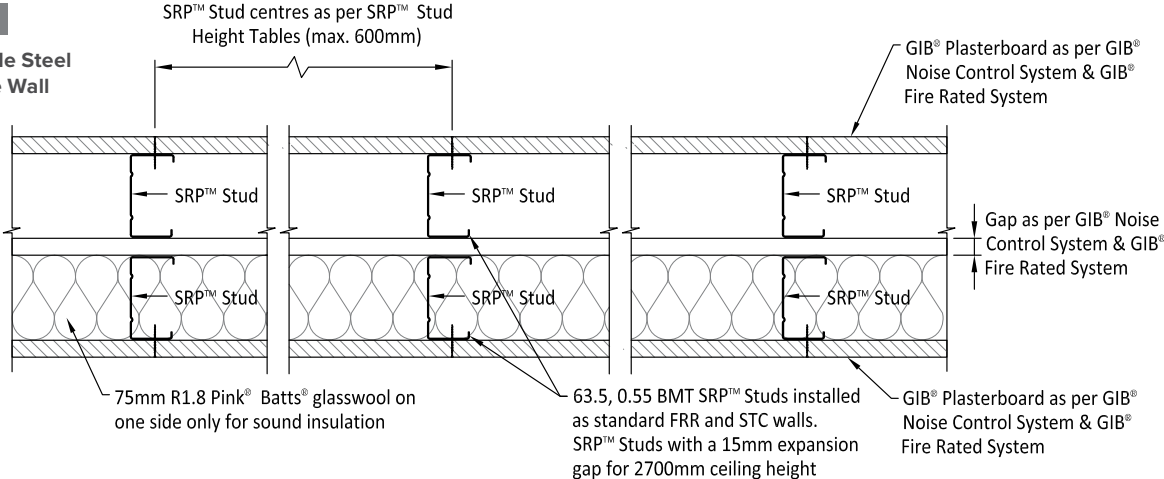
Installation of the two separate parallel frames is exactly as per single walls installation, with one exception being that the internal side of both parallel SRP™ Stud wall frames are not lined. In both walls' external surfaces, ensure there is no fastening of the SRP™ Studs or the lining onto the top head SRP™ Track. Use SRP™ Continuous Nog Track for the wall structures to provide extra stability and rigidity of the walls if required.

For sound control infill, use 75mm thick R1.8 Pink® Batts® glasswool insulation as a minimum, between the SRP™ Studs on one side of the double frame.

For plasterboard lining, fastening, acoustic sealant and jointing [stopping] details refer to GIB® Noise Control Systems March 2006, GIB® Fire Rated Systems October 2012.

FIGURE 8

SRP™ Double Steel Stud Frame Wall



5.2 SRP™ WHISPERWALL™ INFORMATION AND SPECIFICATIONS

The SRP™ Whisperwall™ Stud wall [FIGURE 9] has been developed and manufactured to provide superior acoustic properties with additional fire rated properties in interior wall construction. It provides significant advantage over staggered SRP™ Stud walls [FIGURE 10] in installation and is test verified for superior acoustic results. For more information refer to the **SRP™ WHISPERWALL™ SECTION** and the relevant detail in each section of this Product Catalogue, as applicable.

SRP™ Whisperwall™ is configured in 92mm x 42mm from 0.55mm BMT GALVSTEEL® coil manufactured by New Zealand Steel, whenever possible. SRP™ Whisperwall™ Stud is backed by a 50 year Durability Statement to demonstrate compliance with NZBC Clause B2-Durability, when used and maintained as described in the current New Zealand Steel Durability Statement.

In laboratory testing the SRP™ Whisperwall™ Stud Wall achieved an STC 52, STC 58 and STC 62 rating. Refer to **TABLE 8** for relevant GIB Noiseline® configurations.

To enable easy installation, SRP™ Whisperwall™ Studs are equipped with a generously knurled face providing a secure surface for attaching high density wall board products [see **FIGURE 1** and **FIGURE 2**].

To achieve the tested STC values for SRP™ Whisperwall™, install Pink® Batts® Silencer glasswool acoustic insulation R1.8 [75mm]* between the SRP™ Whisperwall™ Studs. Cut the width of the Pink® Batts® to suit SRP™ Whisperwall™ Stud centres and ensure the insulation is expanded to fill the cavity.

No SRP™ Continuous Nog Tracks or spliced SRP™ Studs are to be used in SRP™ Whisperwall™ Stud Walls, as doing so will compromise the tested STC values.

For plasterboard lining, fastening, acoustic sealant and/or jointing [stopping] details refer to GIB® Noise Control Systems March 2006, GIB® Fire Rated Systems October 2012 and this SRP™ Design Handbook.

*SRP™ Whisperwall™ has been tested using Pink® Batts® Silencer glasswool acoustic insulation R1.8 [75mm], other acoustic insulation with properties equal or better may also be used once verified by an acoustic engineer.

TABLE 8

SRP™ WHISPERWALL™ SOUND TRANSMISSION CLASS [STC] AND FIRE RESISTANCE RATINGS [FRR]			
STC*	Rw [dB]	FRR**	Material used
Sound Transmission Class	Weighted Sound Reduction Index	Fire Resistance Rating	GIB Noiseline® Wall Lining – see specification below 75mm Pink® Batts® Silencer GIB® Soundseal for joint filler and perimeter sealant
STC 52	Rw 51	-/60/60	One layer of 13mm GIB Noiseline® on both sides
STC 58	Rw 57	-/60/60	One outer layer of 10mm GIB Noiseline® on one side only One inner layer of 13mm GIB Noiseline® on both sides
STC 62	Rw 61	-/60/60	One outer layer of 10mm GIB Noiseline® and One inner layer of 13mm GIB Noiseline® on both sides

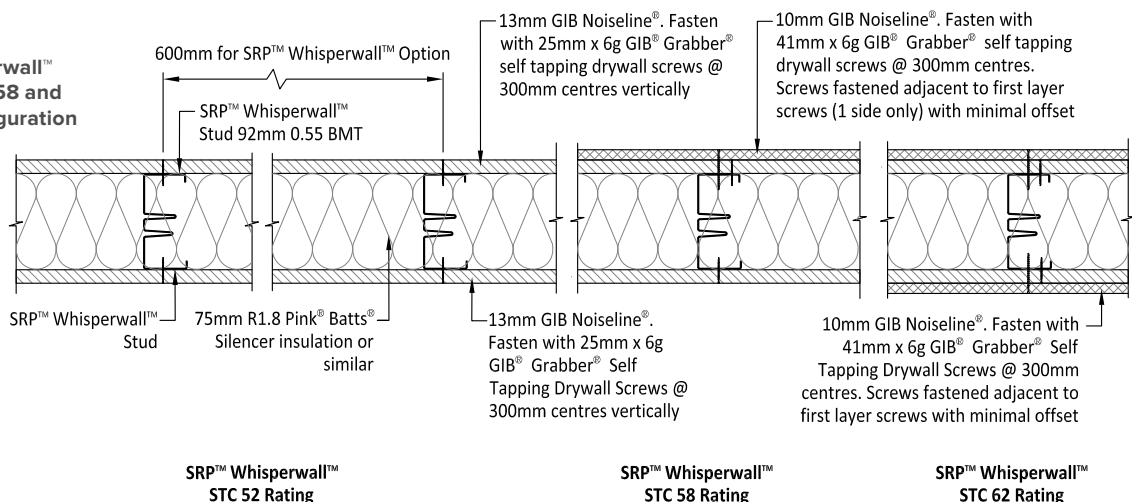
NOTES: Values obtained by Laboratory Measurement of Airborne Sound insulation of building elements carried out by an Independent Laboratory: Acoustic Testing Services of Auckland UniServices Ltd. **Test Report T1406** dated 21st March 2014 using the specified materials and installed in accordance with:

* GIB® Noise Control Systems March 2006 and relevant SRP™ Design Handbook and

** GIB® Fire Rated Systems Oct 2012. Also see Winstone Wallboards confirmation letter dated 11th June 2014 in the **COMPLIANCE SECTION** of SRP™ Design Handbook.

FIGURE 9

SRP™ Whisperwall™
STC 52, STC 58 and
STC 62 Configuration



5.3 STAGGERED STEEL SRP™ STUD FRAME WALL

TWO WAY FRR, ACOUSTIC AND INTER-TENANCY WALLS [FIGURE 10]

Walls using the SRP™ Staggered Stud System are commonly used to provide effective resistance to sound transmission and acoustic impact. These walls are constructed with the SRP™ Studs being alternately positioned to each leg of a wider SRP™ Track, where only every second SRP™ Stud is positioned on the same side of the SRP™ Track leg providing support for the plasterboard.

Most commonly, SRP™ Staggered Walls are installed using SRP™ 92mm 0.55BMT 30mm leg SRP™ Tracks with SRP™ 63.5 0.55BMT SRP™ Studs staggered at 300mm centre [see FIGURE 10].

The recommended maximum wall height is 2700mm. Leave a 15mm expansion gap between the top of the SRP™ Studs and the underside of the head SRP™ Tracks.

For other SRP™ Stud and SRP™ Track size configurations or for taller partitions, use the SRP™ Stud Height Tables [see TABLES 6.1 – 6.5] and please note that in these cases specific engineering design verification of the performance is required.

SRP™ Studs are held in position by both a SRP™ N Clip [as an installation aid] and a packer or by using a packer only,

positioned at the top and bottom of the SRP™ Stud. If using the SRP™ N Clip method, place the SRP™ N Clips on the top and bottom of the SRP™ Studs, tilt insert the SRP™ Studs in-between the SRP™ Tracks then slide the SRP™ Studs with the SRP™ N Clips to vertical position at required centres, before installing the packers. If using the packer method, pack the SRP™ Studs at the required position and centres [see FIGURE 11].

Installation of the staggered wall frame is exactly as per single wall installation, with the difference being the staggered position of the SRP™ Studs described above and that the internal side of the staggered SRP™ Studs does not get lined. Ensure there is no fastening of the SRP™ Studs or the lining into the bottom or the top head SRP™ Track. No SRP™ Continuous Nog Track is to be used in staggered walls.

For sound control infill, use 75mm thick R1.8 Pink® Batts® glasswool insulation between the SRP™ Studs. Completely fill the cavity space with the insulation.

For plasterboard lining, fastening, acoustic sealant and jointing [stopping] details refer to GIB® Noise Control Systems March 2006, GIB® Fire Rated Systems October 2012 and GIB® Site Guide.

FIGURE 10

SRP™ Staggered Steel Stud Frame Wall

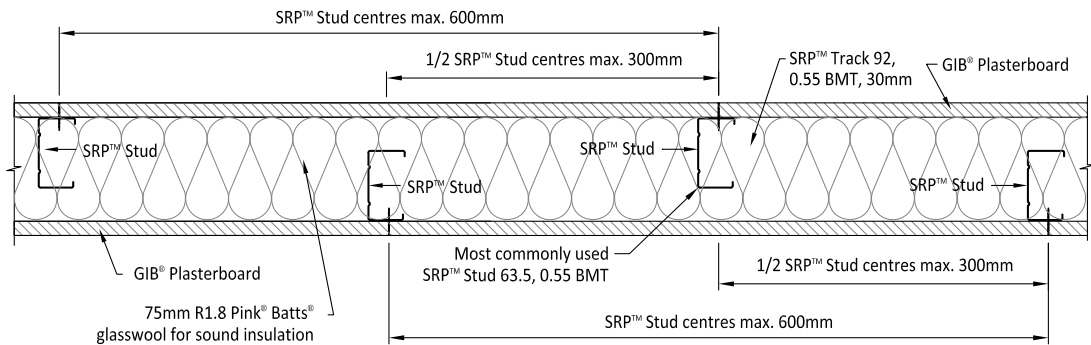
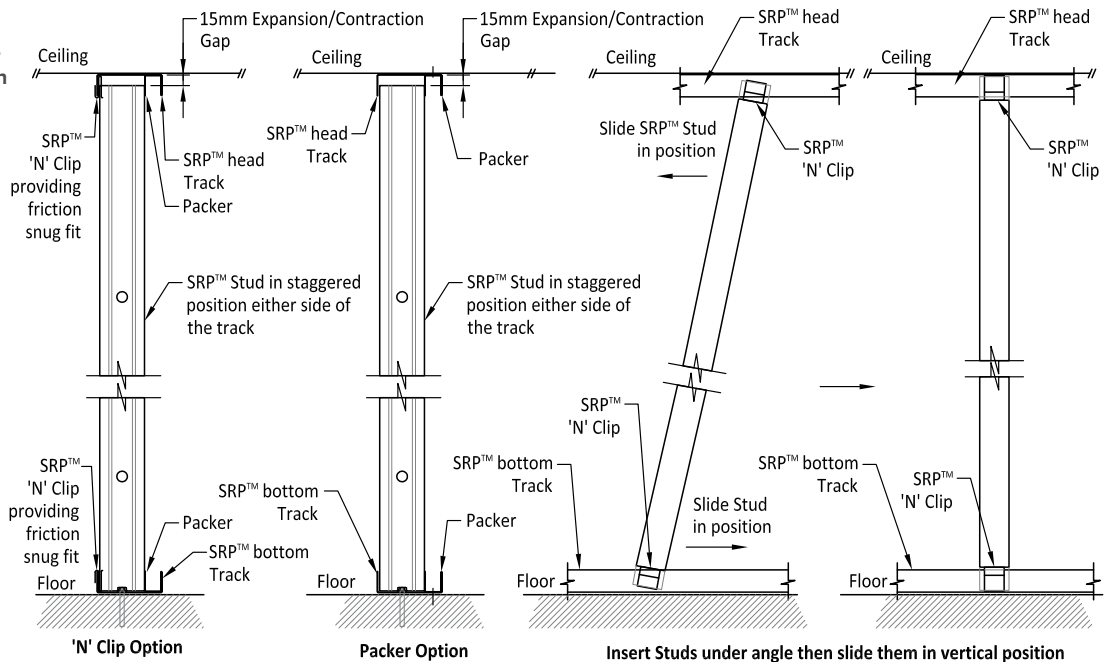


FIGURE 11

SRP™ Staggered Steel Stud Frame Wall – Installation Details



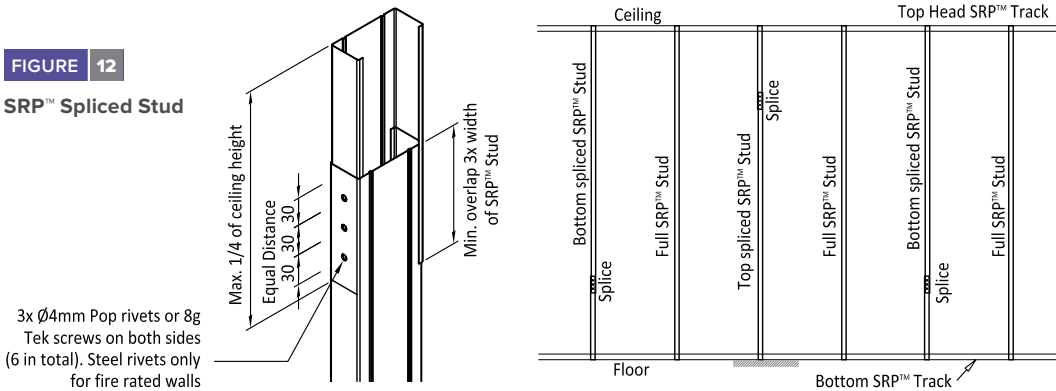
5.4 SPLICED SRP™ STUDS

The standard SRP™ Stud length may be extended by splicing if required, where the minimum overlap is 3x the depth of the SRP™ Stud [e.g. 75mm SRP™ Stud – 225mm]. The maximum length of the extension piece [splice] is 1/4 of the ceiling height. Attach the splice to the SRP™ Stud by boxing it with the required overlap using 3 x 4mm

diameter steel pop rivets or 8g Tek screws on each side of the SRP™ Stud [6 in total], as per **FIGURE 12**. Splices must alternate as follows: top spliced SRP™ Stud, full SRP™ Stud, bottom spliced SRP™ Stud, full SRP™ Stud, top spliced SRP™ Stud and so on. For fire rated walls, spliced SRP™ Studs with steel rivets only, may be used [see **FIGURE 12**].

FIGURE 12

SRP™ Spliced Stud



5.5 EXISTING AND SITE DRILLED SRP™ STUD SERVICE HOLES

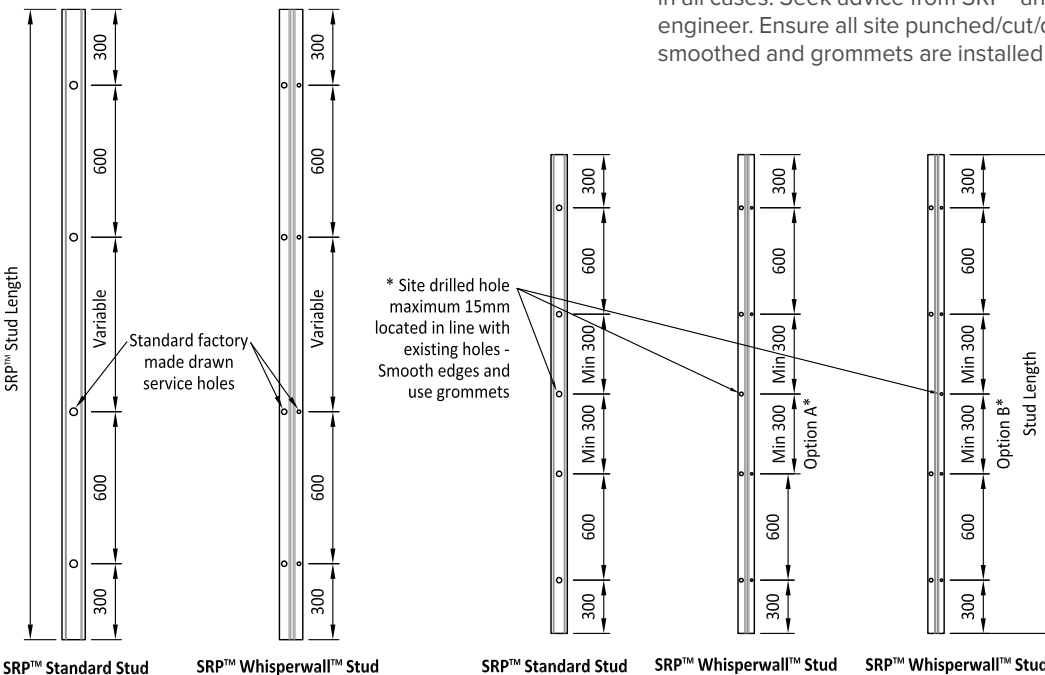
SRP™ Whisperwall™ Studs come with 4 twin drawn service holes [8 in total per SRP™ Stud], while Standard SRP™ Studs have 4 single [4 in total per SRP™ Stud] drawn service holes with rounded edges at 300mm and 900mm distance measured from both ends, as shown in **FIGURE 13**.

Extra service holes, if required, can be created in all SRP™ Studs on site, by punching, cutting or drilling them using

a hole saw or similar. Holes to be a maximum of 15mm diameter located in line with existing holes and positioned adjacent to a SRP™ Continuous Nog Track in conventional SRP™ Stud whenever possible. Maximum of two additional holes per SRP™ Stud are allowed. All holes [site punched/cut/drilled and/or existing] must be a minimum of 300mm centres apart in all cases, as shown in **FIGURE 13**; [i.e. no holes to be drilled for SRP™ Whisperwall™ in both sides of the web at the same location and for all SRP™ Studs within 300mm of each other]. Holes greater than 15mm diameter or closer than 300mm centres require structural assessment in all cases. Seek advice from SRP™ and/or a structural engineer. Ensure all site punched/cut/drilled hole edges are smoothed and grommets are installed for edge protection.

FIGURE 13

SRP™ Studs - Standard Drawn and Site Drilled Service Holes



5.6 SRP™ NOGS

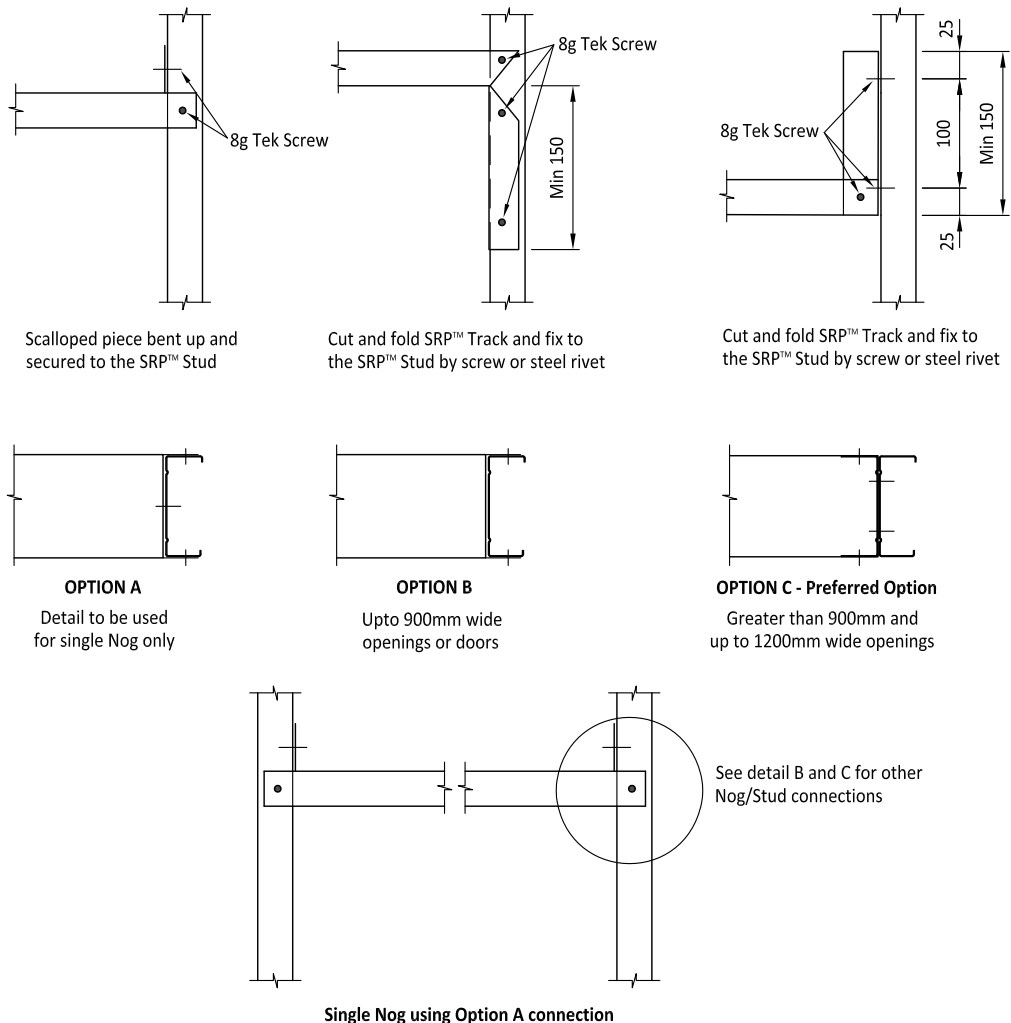
Single and/or SRP™ Continuous Nog Track is commonly used to stop SRP™ Stud twisting during service and to provide additional support to the wall from SRP™ Studs during and after the plasterboard installation. It also ties the wall together enabling the wall to behave more as a unit, rather than individual SRP™ Studs.

- » SRP™ Continuous Steel Nog Track [FIGURE 1 and FIGURE 17] is designed to be used mainly for taller or single side lined walls to provide additional mid-height rigidity and more strength for greater wind load, while
- » Single SRP™ Nogs constructed using Steel SRP™ Stud and SRP™ Track profiles notch fitted between SRP™ Studs [FIGURE 14], or made out of untreated [UT] timber or plywood [FIGURE 15] are generally used for light specific localized load. This type of SRP™ Nog is also used to provide support for plumbing and electrical services, or where sheet edges require more fastening points and/or for additional rigidity.

For heavier load applications as such as TVs, bookshelves, cantilevered benches, basins, toilets etc. either customised single SRP™ Nog or a SRP™ Continuous Nog Track tying SRP™ Studs together will be required. Please consult with SRP™ and/or a structural engineer regarding specific design and the position, centres and type of SRP™ Nogs used.

FIGURE 14

SRP™ Single Steel Nog Track Details



5.7 SRP™ CONTINUOUS NOG TRACK [TABLE 9]

To determine the number and position of SRP™ Continuous Nog Track use the SRP™ Nog Track table, [TABLE 9]. SRP™ Continuous Nog Track is stocked in 0.75BMT or 1.15BMT steel, with 30mm legs and the appropriate cut-out size for all standard SRP™ Stud sizes, at standard 300, 400, 450 and 600mm centres [see FIGURE 1 and FIGURE 17]. SRP™ Continuous Nog Track is available in 3m standard stock lengths. SRP™ Continuous Nog Track with alternate SRP™ Stud centre cut-outs is also available on request.

Using SRP™ Continuous Nog Track at SRP™ Stud mid-height will enhance the serviceability deflection of the wall. From structural design aspects, no SRP™ Continuous Nog Track is required for walls up to 4m height, and for walls up to 8m height a single SRP™ Continuous Nog Track is required at mid stud height. For walls greater than 8m, specific engineering design is required [see TABLE 9].

In consideration of the design deflection aspect, SRP™ wall products are designed for L/200 deflection limit, which is up to 20mm for a 4m wall and up to 40mm for an 8m wall. Reduction of this deflection can be achieved by installing SRP™ Continuous Nog Track at mid stud height for walls of maximum 4m high, and maximum 2m centres for taller walls equally spaced over the height of the SRP™ Studs, as noted in TABLE 9. In addition, use SRP™ Continuous Nog Track with the top deflection SRP™ Track as indicated in this document [see FIGURE 16].

If using SRP™ Continuous Nog Track, place the correct amount of SRP™ Nog Track over the bottom SRP™ Track, with flanges facing down and all SRP™ Stud hole cut-outs aligned at the required position. Then slide the SRP™ Studs through all the SRP™ Nog Track holes at each position before, by a rotating movement, clicking them in position between the top and the bottom SRP™ Tracks as described earlier. SRP™ Continuous Nog Track, as and where required, is to be positioned equally spaced over the height of the SRP™ Stud, or as specified [see TABLE 9 for more information]. Once all SRP™ Studs are installed,

lift and secure all SRP™ Nog Tracks in position using 4mm pop rivet or 8g wafer head Tek screws to both flanges of the SRP™ Steel Stud.

SRP™ Continuous Nog Track is to be joined centrally between SRP™ Studs using an appropriate length of standard 0.75mm BMT [minimum] SRP™ Track. Minimum length of the connecting SRP™ Nog Track is to be stud centres spacing minus 40mm. Each overlap is to be secured using two 10g Tek screws in the web and two plus two into each leg of the SRP™ Track [6 screws in total for each overlap side] in accordance with the details provided in FIGURE 17. The entire SRP™ Continuous Nog Track connection is to be in-between two adjoining SRP™ Studs and no SRP™ Stud or other cut-outs are allowed through any part of the connection.

For unlined, partially lined or one side only lined SRP™ Studs with a SRP™ Deflection Head Track, use an additional SRP™ Continuous Nog Track installed facing downwards with the top of the SRP™ Continuous Nog Track being positioned 100mm below the SRP™ Deflection Head Track, as per FIGURE 16.

TABLE 9

SRP™ CONTINUOUS NOG TRACKS		
Wall Height [m]	Structural Design Requirements	Tighter Deflection Considerations
0 - 4	No Nogs are required	1 Nog at mid height
4 - 6	1 Nog at Stud mid height	2 Nogs at maximum 2m centres equally spaced over the height of the Studs
6 - 8	1 Nog at Stud mid height	3 Nogs at maximum 2m centres equally spaced over the height of the Studs
> 8	Specific engineering design	Specific engineering design

5.8 SINGLE TIMBER NOGS

Timber nogs using untreated timber for mounting taps and other features such as kitchen/bathroom accessories are best positioned using two SRP™ Nog brackets. Place the untreated timber nogs between the nog brackets and fix securely. Ensure dissimilar metals are isolated and pipes are grommetted through the studs. See FIGURE 15 for timer nog details.

NOTE: Only untreated timber Nogs shall be used in direct contact with any galvanized SRP™ products. If it is unavoidable to use treated timber a separation barrier between the galvanized SRP™ product and the treated timber shall be used.

Single SRP™ Nogs constructed from ex SRP™ Tracks can also be used [see FIGURE 14, option A, B and C for details].

FIGURE 15 SRP™ Single Timber Nog Track Details

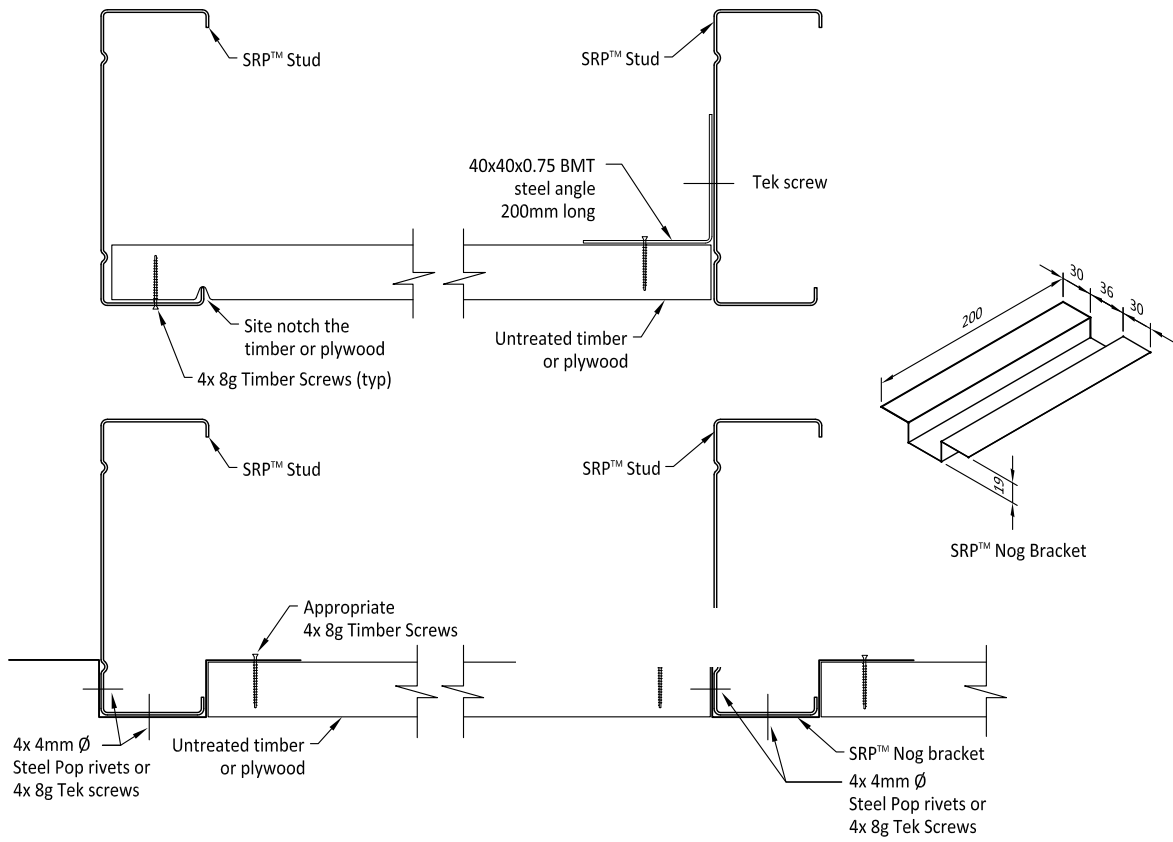
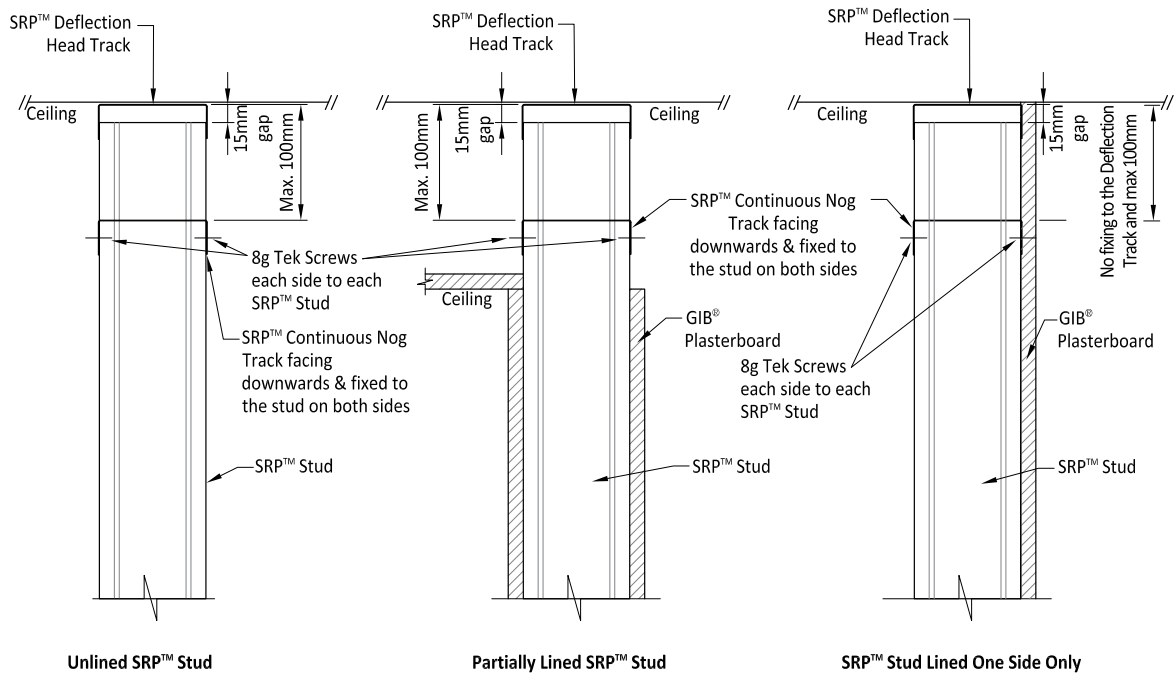


FIGURE 16 SRP™ Continuous Nog Track – Deflection Track



5.9 CORNERS, INTERSECTIONS AND WALL ENDS – TERMINATIONS

Corners, partition intersections and wall end structural stability is achieved by using additional SRP™ Stud in either two or three SRP™ Stud connection in a set

arrangement. See **FIGURE 18** for Standard SRP™ Stud wall details and **FIGURE 19** for SRP™ Whisperwall™ Stud wall details.

FIGURE 18 PART 1 | Standard SRP™ Stud Connections – Corners and Intersections

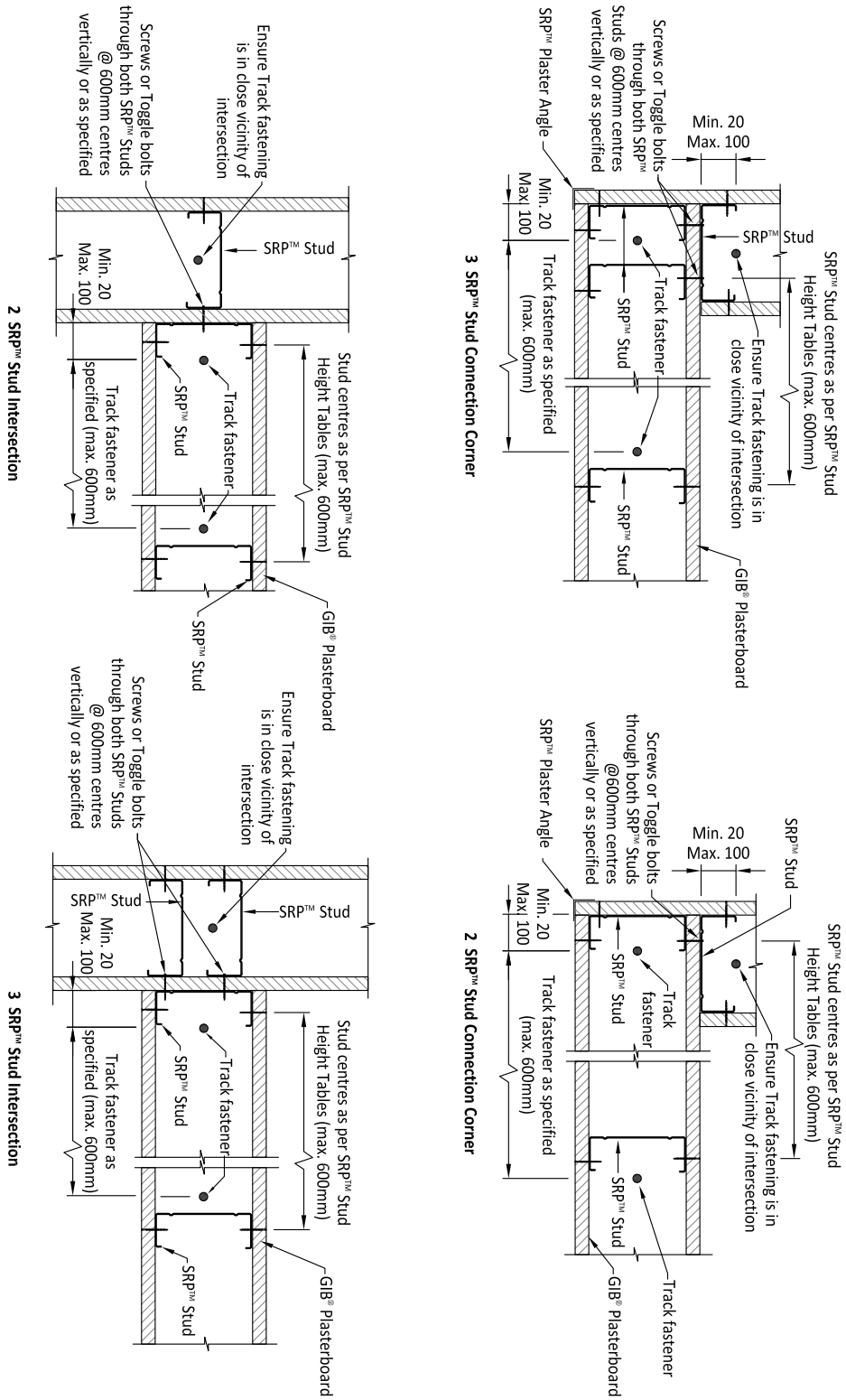


FIGURE 18 PART 2 | Standard SRP™ Stud Connections – Wall Ends and Open Ends

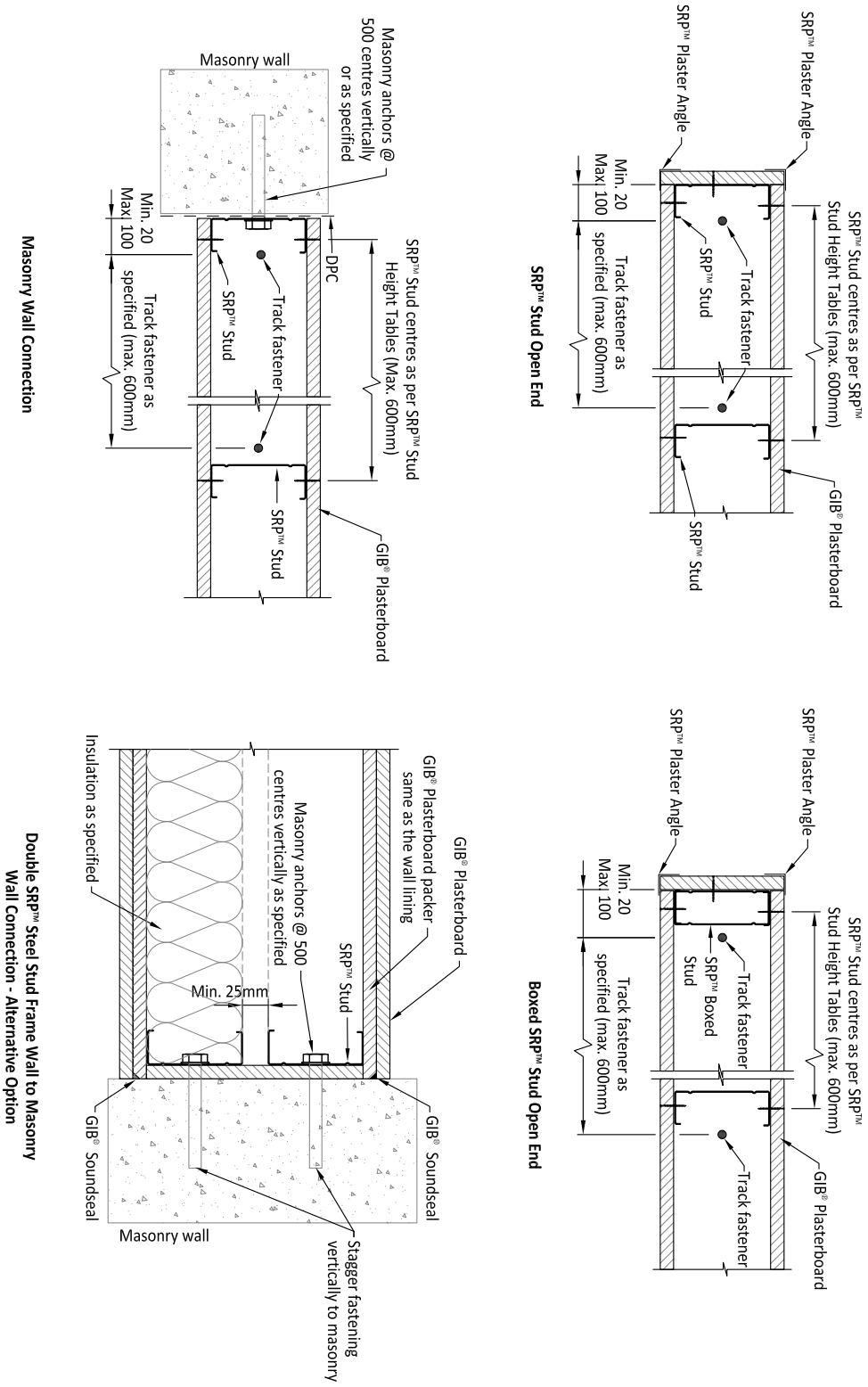


FIGURE 19 PART 1 | Standard SRP™ Whisperwall™ Stud Connections – Corners and Intersections

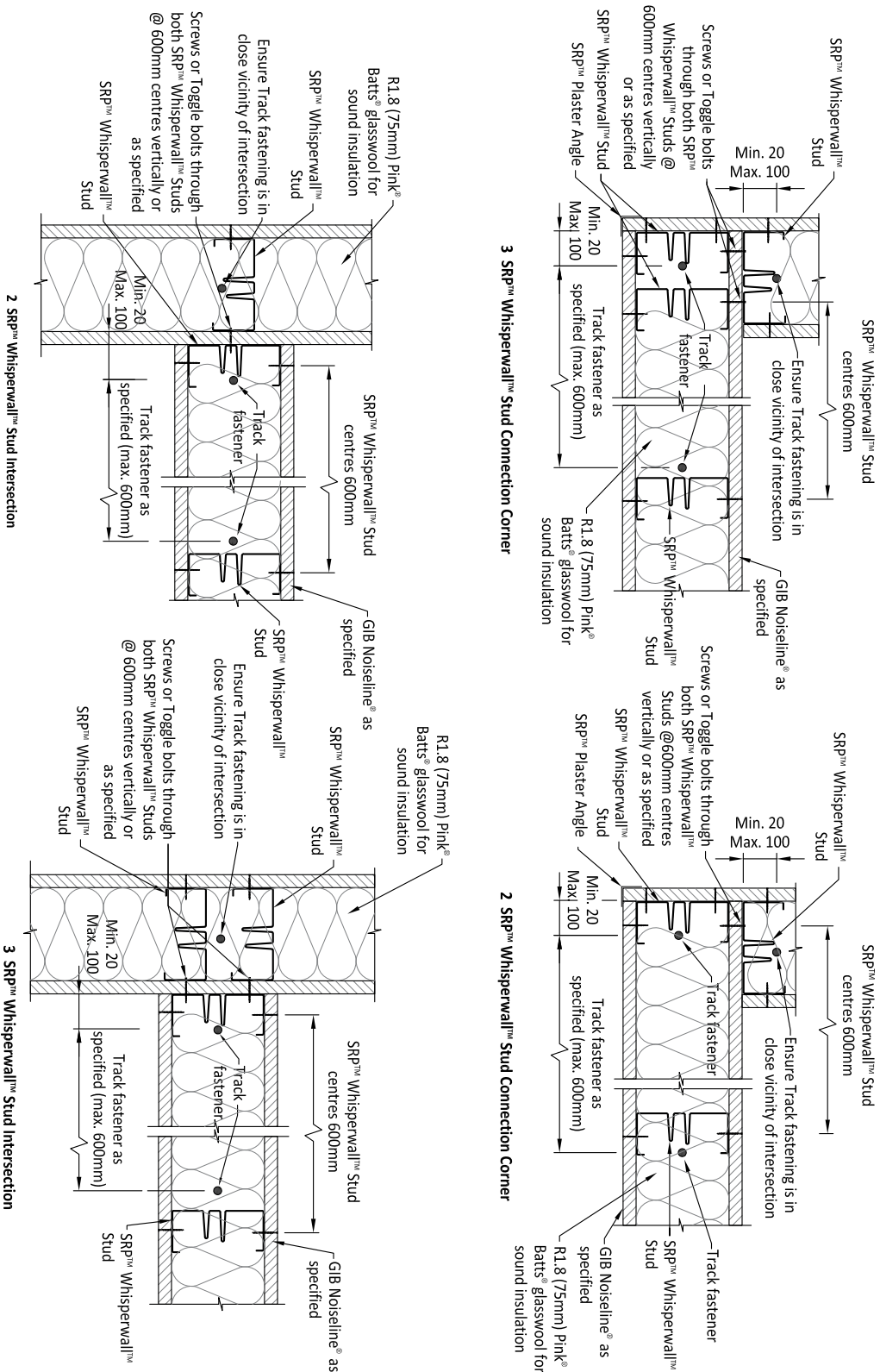
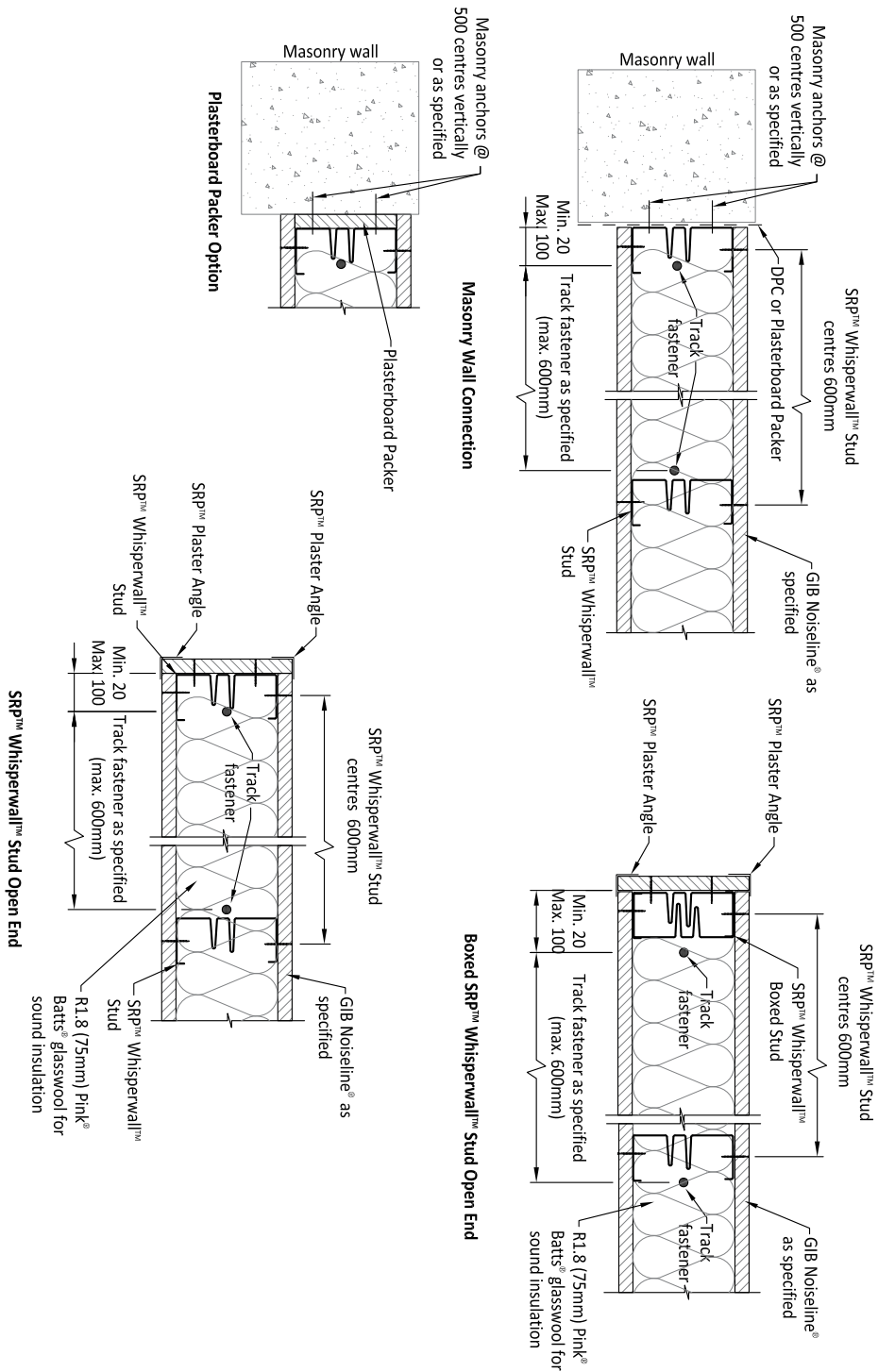


FIGURE 19 PART 2 | Standard SRP™ Whisperwall™ Stud Connections – Wall Ends and Open Ends



6

DOORS & OPENINGS

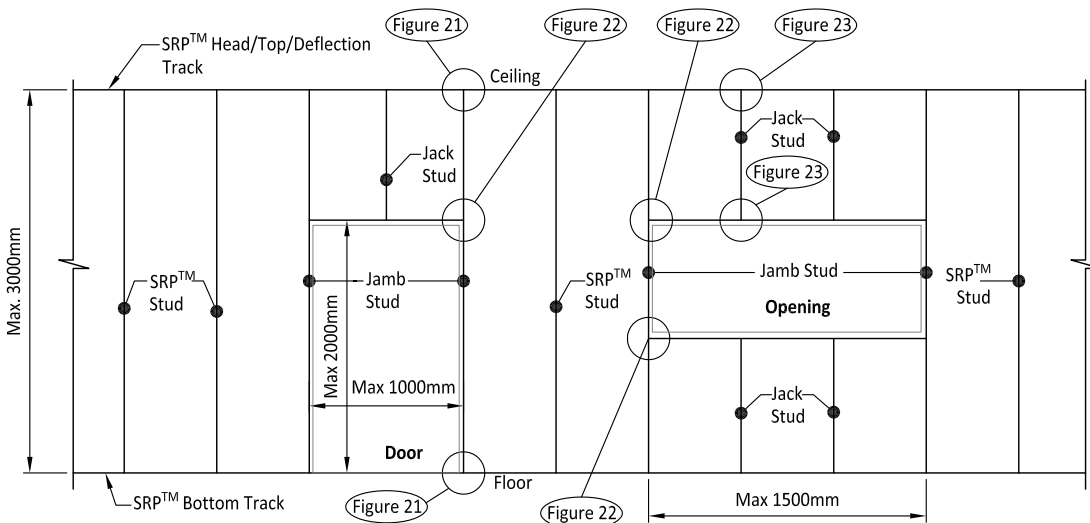
6 DOORS & OPENINGS

The structural integrity of doors and openings is achieved by placing additional fastening and reinforced framing around them. This framing is typically made by using boxed SRP™ Stud, extra SRP™ Stud, higher BMT SRP™ Stud, un-punched SRP™ Whisperwall™ Stud for SRP™ Whisperwall™ and/or timber framing.

NOTE: Only untreated timber framing shall be used in direct contact with any galvanized SRP™ products. If it is unavoidable to use treated timber, a separation barrier between the galvanized SRP™ product and the treated timber shall be used.

The standard details, noted below in any combination [see examples in **FIGURE 23**] are applicable, for door openings max 1000mm wide [max door size 900x2000 45kg] and internal partition window openings up to 1500mm wide, used in maximum of 3m tall partitions [**FIGURE 20**] constructed using minimum 63.5mm SRP™ Studs. Ensure that opening size allows for timber or aluminium joinery dimensions. Doors or openings in taller partitions or with sizes outside of the above dimensions or top hung doors/openings require specific design. Please consult SRP™ and/or a structural engineer where required.

FIGURE 20 Standard Wall – General Layout



6.1 METHODS OF MOUNTING DOOR JAMBS

For vertical reinforcement, also referred to as SRP™ Jamb Studs, the most commonly used and recommended practices to use are:

DOORS OR OPENINGS UP TO 1000MM WIDE

- V1. Steel SRP™ Stud with a timber Stud [FIGURE 21] or
- V2. Two Steel SRP™ Studs with a timber insert [FIGURE 21].

OPENINGS WIDER THAN 1000MM

- V3. Use two SRP™ Steel Studs together with a timber Stud, fastening the timber and the first adjacent stud with L Brackets top and bottom [see FIGURE 21].

The timber width should match the stud width and height.

The timber insert height matches the door jamb height. Where necessary use the L bracket to allow for vertical movement.

The timber and/or steel SRP™ Studs are secured to the top SRP™ Tracks using the permanent fastening holes of the SRP™ L Bracket [FIGURE 1]. For 150mm SRP™ Studs always use two SRP™ L Brackets side by side. If there is significant localized point load above the opening, the fastening of these SRP™ Studs to the top SRP™ Track may need to be avoided, or the use of the slotted hole of the SRP™ L Bracket can be used to allow for movement [see FIGURE 1]. Consult SRP™ and/or a structural engineer for specific design for these situations.

NOTE: Only untreated timber framing should be used in direct contact with any galvanized SRP™ products. If it is unavoidable to use treated timber, a separation barrier between the galvanized SRP™ product and the treated timber should be used.

6.2 LINTEL DETAIL FOR OPENINGS 1000MM WIDE OR LESS

Using untreated timber, follow the detail as shown in FIGURE 22.

For horizontal reinforcement of doors or openings wider than 150mm and up to 1000mm, use a frame constructed from minimum 0.75mm BMT SRP™ Track, depth the same as the SRP™ Stud depth, with a minimum of 150mm bent ends.

6.3 LINTEL DETAIL FOR OPENINGS WIDER THAN 1000MM – OPTION H3

For Lintel detail for openings wider than 1000mm, use the following structure:

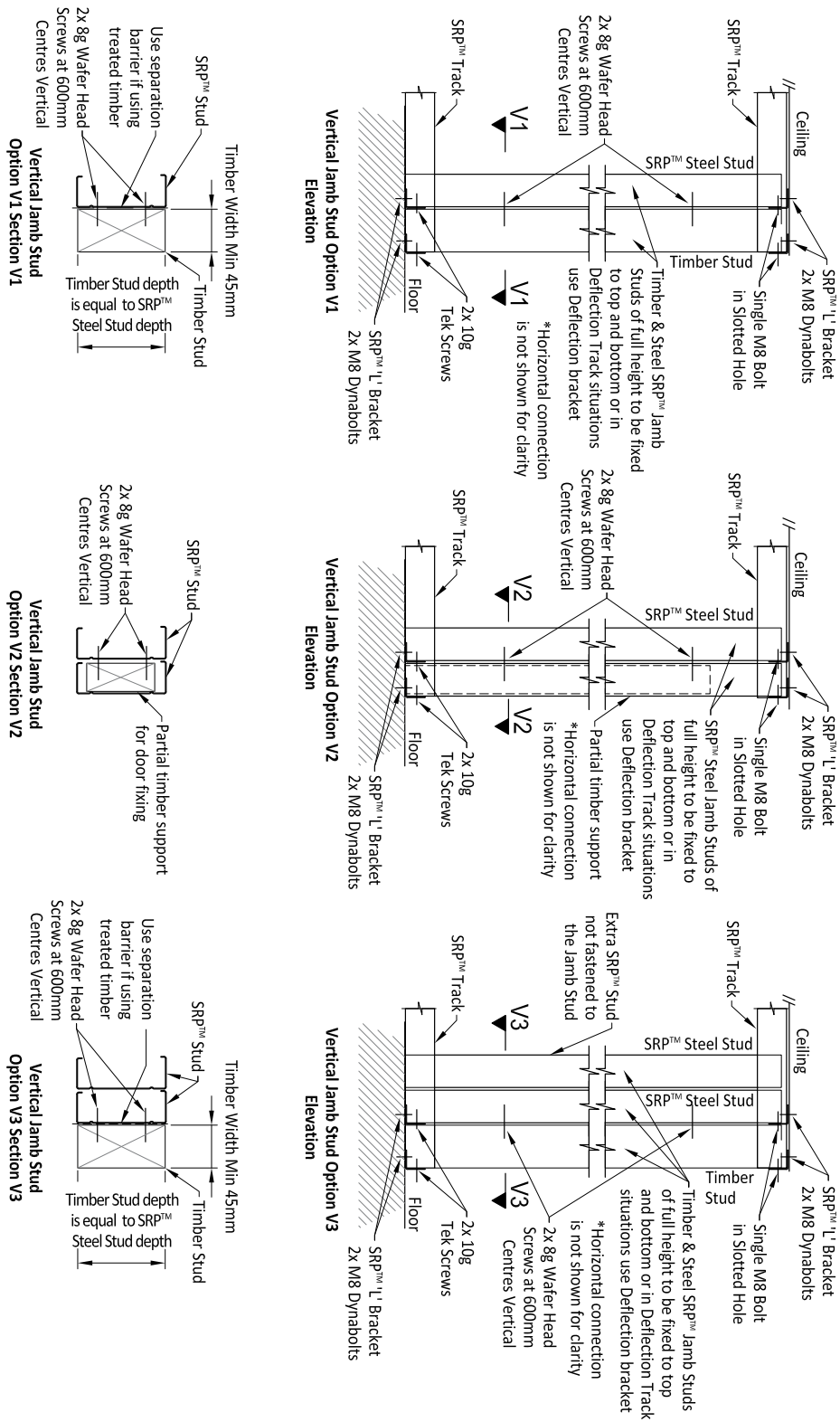
1. As a base, use a frame constructed from minimum 0.75mm BMT SRP™ Track as described above, using option V1 detail only [see FIGURE 22].
2. Then place a timber beam with a minimum width of 45mm and depth the same as the depth of the SRP™ Stud inside the “mini SRP™ Track” [see FIGURE 22].
3. Fasten the timber beam to the SRP™ Track as per FIGURE 22 and skew nail to fasten the timber beam to the timber Jamb Stud if applicable.
4. Place and secure a straight piece of SRP™ Track, the same size as used previously over the top of the timber beam. Position it accordingly as noted above for the doors and openings narrower than 1000mm. Secure them as per FIGURE 22 and install Jamb Studs as appropriate, as noted above.

NOTE: Only untreated timber framing shall be used in direct contact with any galvanized SRP™ products. If it is unavoidable to use treated timber, a separation barrier between the galvanized SRP™ product and the treated timber shall be used.

The maximum dimension of any unframed opening in any walls should not exceed 150mm in any direction. In addition to this, fire rated wall openings are to be installed in accordance with GIB® Fire Rated Systems October 2012 where applicable.

For securing plasterboard around doors or openings refer to relevant GIB® or other plasterboard manufacturer's specifications.

FIGURE 21 Vertical Support for Doors and Openings



Option V1 And V2
Door And Openings 900mm wide or less for walls less than 2700mm,
Larger Doors or Openings Special Engineering Design is required

Option V3
Openings wider than 900mm for walls less than 2700mm,
Larger Openings Special Engineering Design is required

FIGURE 22 Lintel Detail for Doors and Openings

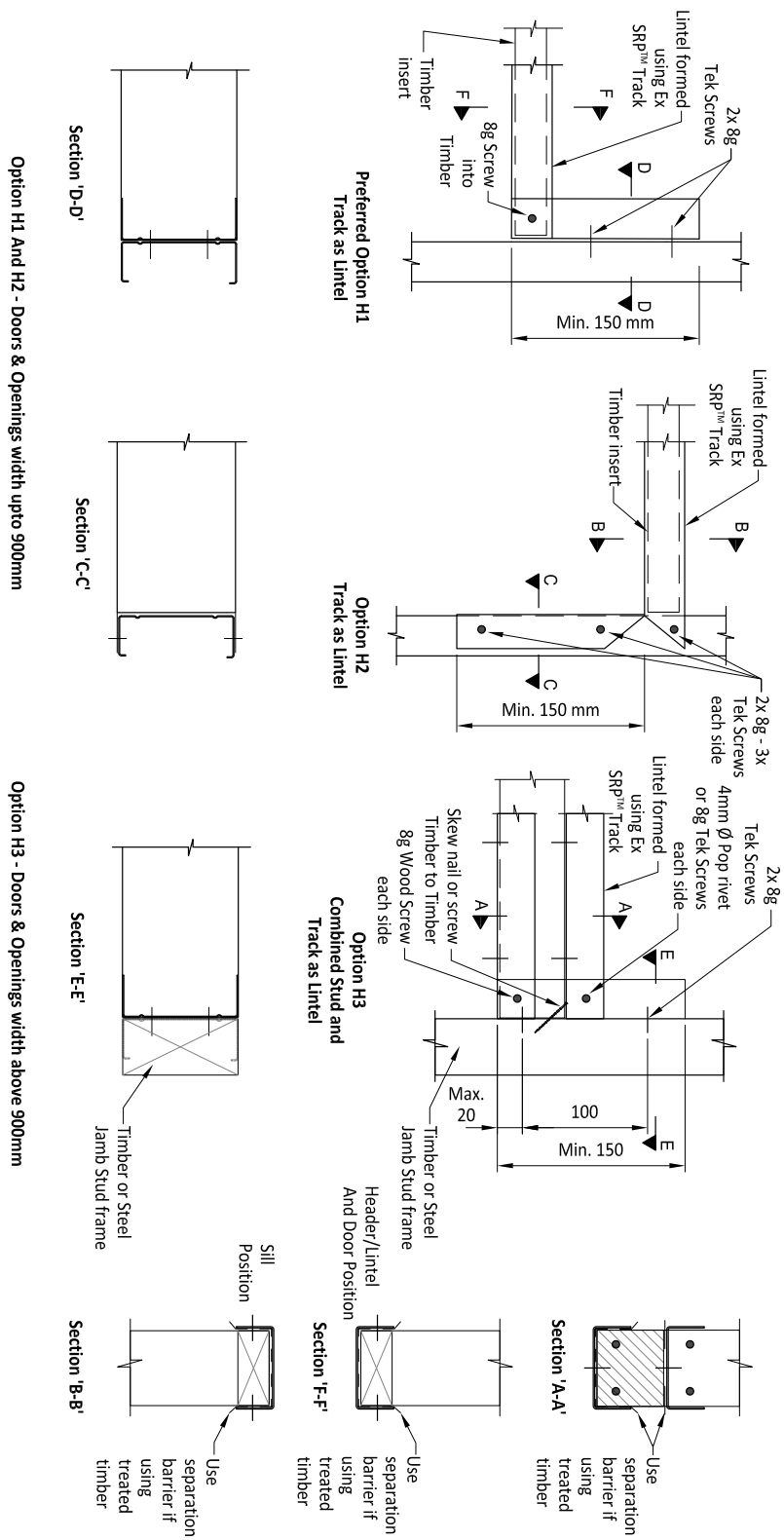
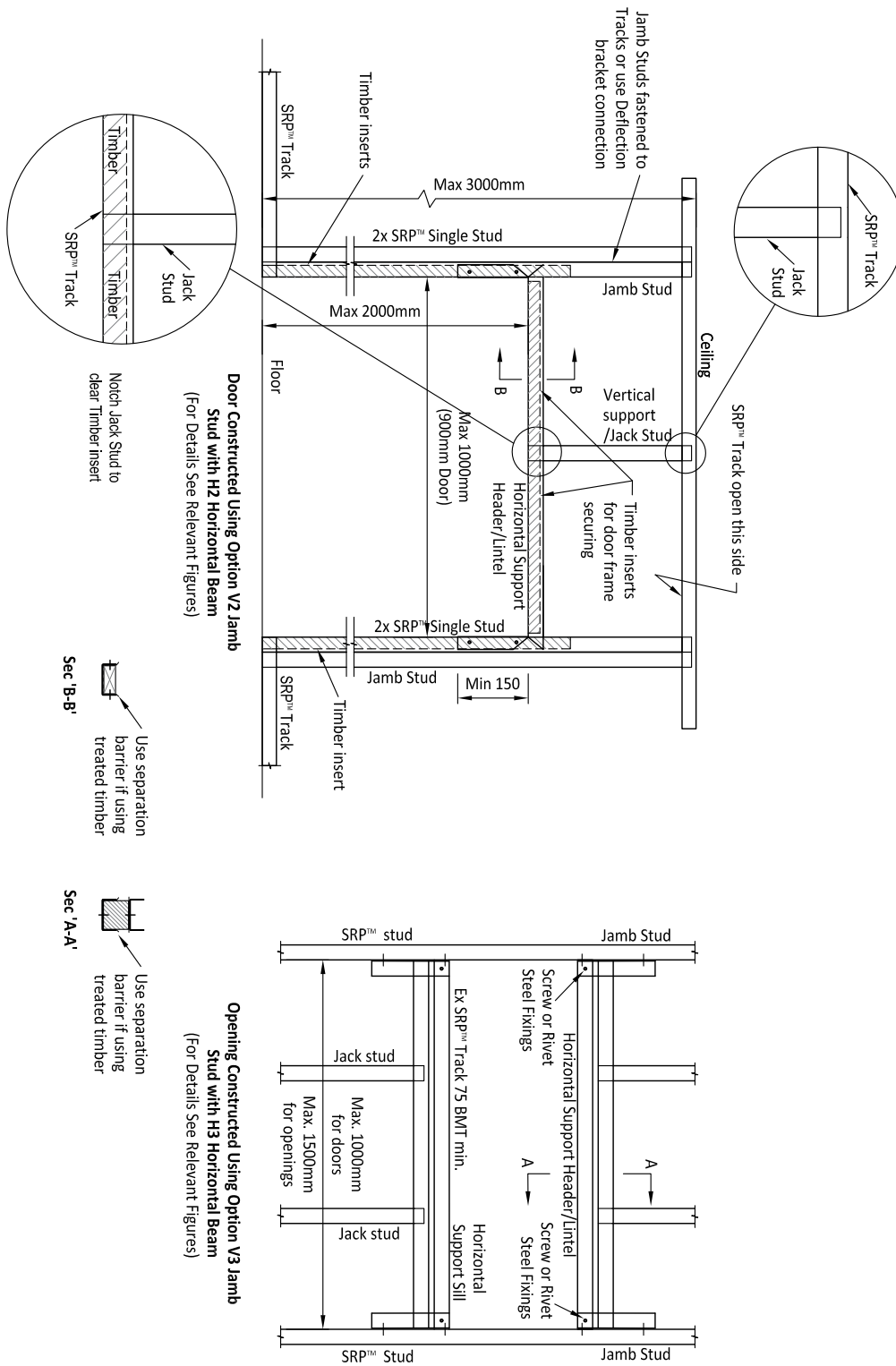


FIGURE 23 Door and Opening Support Structure Example





7

WALL LININGS

7 WALL LININGS

All Gib® Plasterboard linings to be installed as detailed in GIB® Site Guide December 2014, GIB® Noise Control Systems March 2006, GIB® Fire Rated Systems October 2012, other plasterboards, or boards in conjunction with relevant manufacturer's specification. For the installation of the SRP™ Whisperwall™ system please refer to the relevant section of this document.

Before installing the plasterboard to the SRP™ wall system, use the Preparation and Planning Checklist of the **INSTALLATION SECTION** to ensure structural integrity of the wall, satisfactory result, economical installation and minimal waste. Close attention must be paid when checking for damage to SRP™ Studs, SRP™ Tracks and SRP™ Nogs incurred by handling or installation, and the size, spacing and edge distance of any site drilled service holes. Any damaged items, or SRP™ Studs with

additional site drilled service holes which are outside the requirements of this document [i.e. they may be larger than 15mm diameter, closer than 300mm centres, or not drilled in line with existing holes] should be removed and replaced when and where applicable, prior to installing the plasterboard.

Install all plasterboards for all applications, including SRP™ Whisperwall™ vertically only, and use full height sheets of the correct GIB® specification for all applications whenever possible.

When selecting fasteners, ensure you choose an adequate length and type of fastener taking into consideration the lining/linings thickness and support structure material you are fastening to.

7.1 PROCESS TO ATTACH THE PLASTERBOARD TO SRP™ STUDS

The correct sequence of attaching the board is important to avoid permanent distortion of the SRP™ Studs during plasterboard installation, and to minimise joint misalignment in vertical applications. Follow the steps below:

1. Attach the middle of the board, at the appropriate position to the open side of the SRP™ Stud. Working alternately from the middle of the board up and down, fully secure the board to this SRP™ Stud before next step [see **FIGURE 24** and **FIGURE 26**]. A minor temporary bending of the SRP™ Stud could occur during fastening, which will disappear as soon as the plasterboard is fully secured. Supporting the SRP™ Stud will avoid SRP™ Stud twisting during fastening.
2. Fully attach the neighbouring plasterboard to the closed side of the same SRP™ Stud in the same manner starting in the middle and then working your way out up and down. The previously secured board will support the forming of a flat joint.

NOTE: Securing the plasterboard to the SRP™ Stud's closed side first, could by stiffening the SRP™ Stud restrain the SRP™ Stud's open side from moving during the installation of the neighbouring sheet, and could cause a permanently deformed SRP™ Stud and a stepped wall joint [Figure 25]. Not a recommended method.

3. Use the A, B, C, D sequence to attach the Plasterboards to the SRP™ Studs [see **FIGURE 27**].
4. Using the above sequence use the 1, 2, 3, 4, 5, 6 etc. order of fastening for securing the boards to the SRP™ Studs [**FIGURE 27**]. Fasten the edges first on one side, then the opposite side of the offset board, before locating the alternate SRP™ Studs and fastening the boards to them.

NOTE: For performance fire rated and acoustic walls, especially for SRP™ Whisperwall™ no glue is allowed between the SRP™ Stud and the plasterboard, as it will compromise the performance of the walls. For other walls no additional glue fastening in addition to the screw fastening is required.

FIGURE 24 Correct Plasterboard Fastening Order

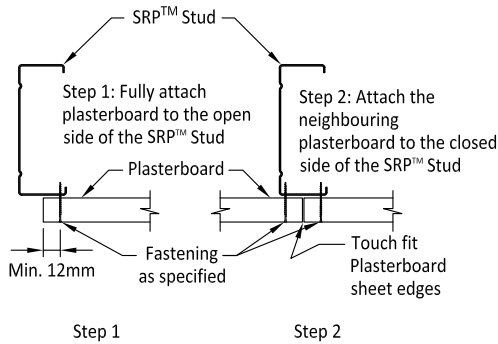
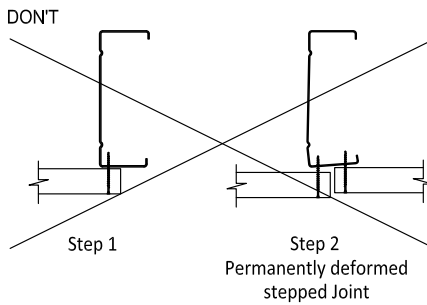


FIGURE 25 Fastening the Lining – Don't



Using the reverse fastening direction as indicated on previous figure could cause permanently deformed Stud and stepped joint. **Not recommended method.**

FIGURE 26 Fastening the Linings – Vertical Plasterboard Position Only

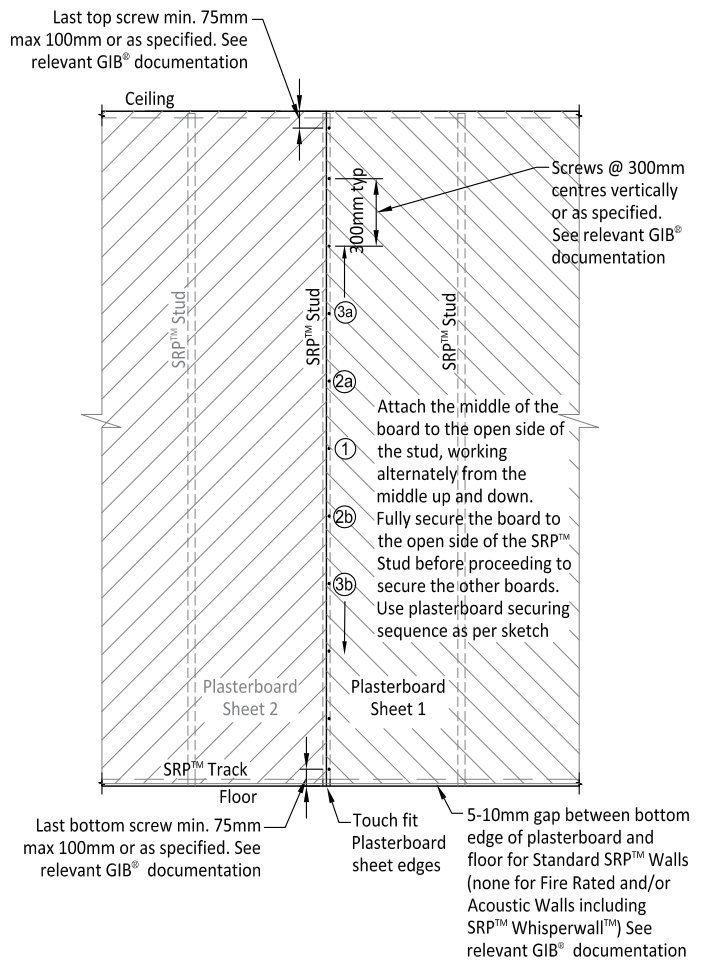
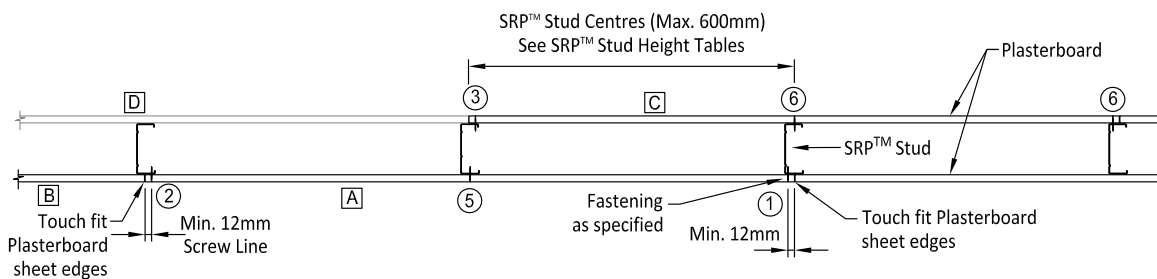


FIGURE 27 Plasterboard Fastening Sequence



7.2 STANDARD SRP™ STUD

- » Use full height sheets only, where possible.
- » Vertical sheet joints are touch fitted and must occur over SRP™ Studs.
- » Stagger vertical sheet joints within layers by minimum of 300mm against the inner layer and on opposite sides of the frame by 600mm [see **FIGURE 32**].
- » If horizontal sheet end joints are unavoidable they must be over SRP™ Nogs. Stagger sheet joints within layers and on opposite sides of the frame.
- » For fastening use the appropriate size GIB® Grabber® Drywall Self Tapping Screws at 300mm centres vertically or as specified in the appropriate GIB® specifications referenced above. Sheet end and edge distances: minimum 75mm, maximum 100mm from sheet top and bottom ends and 12mm from sheet vertical edges [see **FIGURE 28** and **FIGURE 29**].
- » For Standard SRP™ Stud partitions install the plasterboard lifted by 10mm from the floor level. A 10mm packer to temporarily hold the plasterboard in position is an option to aid installation [see Figure 28].
- » For Some Fire Rated and Acoustic walls fastening the plasterboard to the top or bottom SRP™ Track is not allowed. For more information see GIB® Fire Rated Systems October 2012, GIB® Noise Control Systems March 2006 and also refer to deflection and/or seismic separation note below.
- » For some Fire Rated Standard SRP™ Stud partitions, fastening the linings to top and bottom SRP™ Tracks is permitted as long as the lining fasteners do not connect the SRP™ Studs and SRP™ Tracks. Refer to GIB® Fire Rated Systems October 2012 for particular application.
- » For Non Fire Rated/Non Acoustic Standard SRP™ Stud partitions for single level building applications, fastening the linings to top and bottom SRP™ Tracks at 300mm centres is an option as long as the fasteners do not connect any of the SRP™ Studs to the top and bottom SRP™ Tracks.
- » For deflection and/or seismic separation to allow for unrestrained movement of the wall structure, do not screw the board to the top or bottom SRP™ Track. The minimum top bottom end distance of 75mm will need to be adjusted, if required, especially for longer leg length SRP™ Tracks.
- » As per the relevant GIB® documentations, the main points for GIB® plasterboard installation are:
 - During fastening, hold plasterboard firmly against framing.
 - To allow for stopping, slightly sink the fastener, without breaking the gypsum face paper.
 - For easy installation use an electric drywall screwgun with an adjustable depth control head and an appropriate bit for the screw head.
 - In case of any accidentally overdriven screw, where the GIB® plasterboard core and/or face paper is damaged, insert a new screw approximately 50mm from the overdriven screw and then remove the overdriven screw.
 - Do not screw within 200mm of any glue daubs as this can lead to screw popping.
 - **For more information refer to the relevant GIB® Plasterboard installation documentation.**
- » For double layer standard partitions, leave the inner layer unstopped and for the outer layers all fastener heads stopped and all sheet joints tape reinforced and stopped in accordance with GIB® Site Guide.

FIGURE 28 Standard SRP™ Stud – Non Fire rated, Non Acoustic

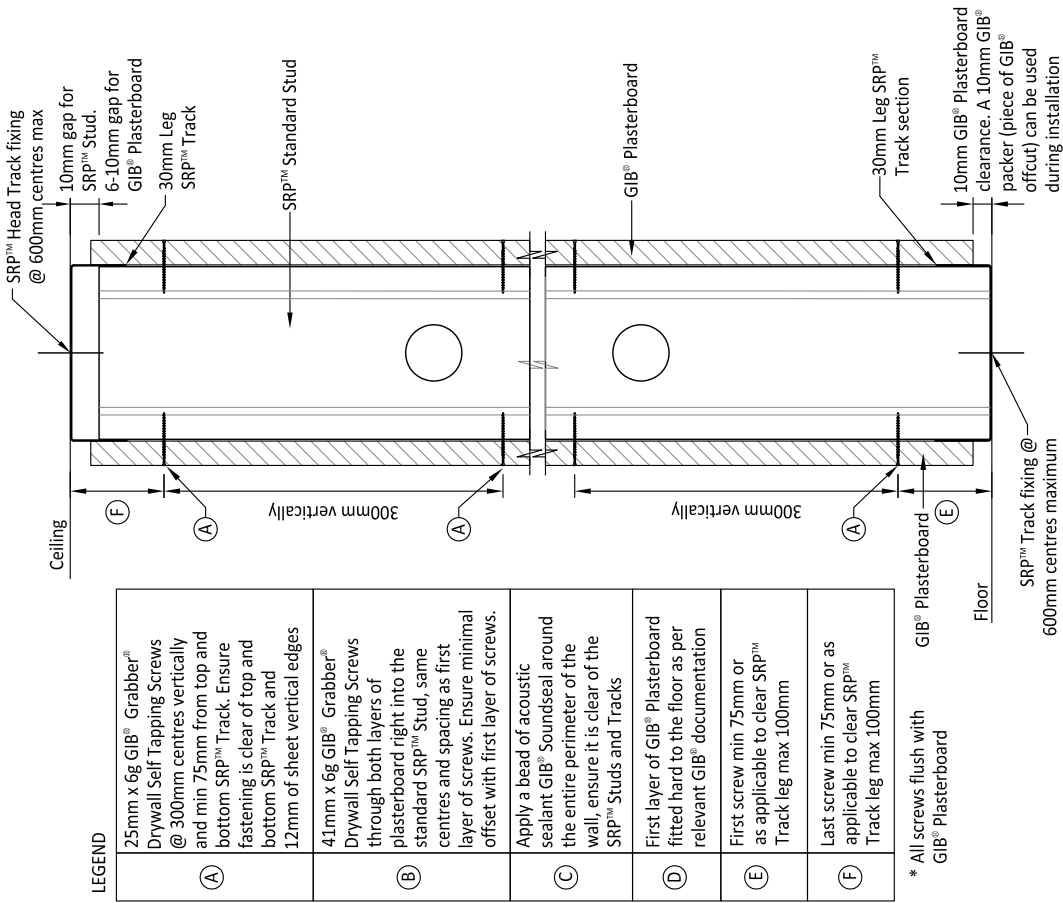


FIGURE 29 Standard SRP™ Stud – Fire rated or Acoustic

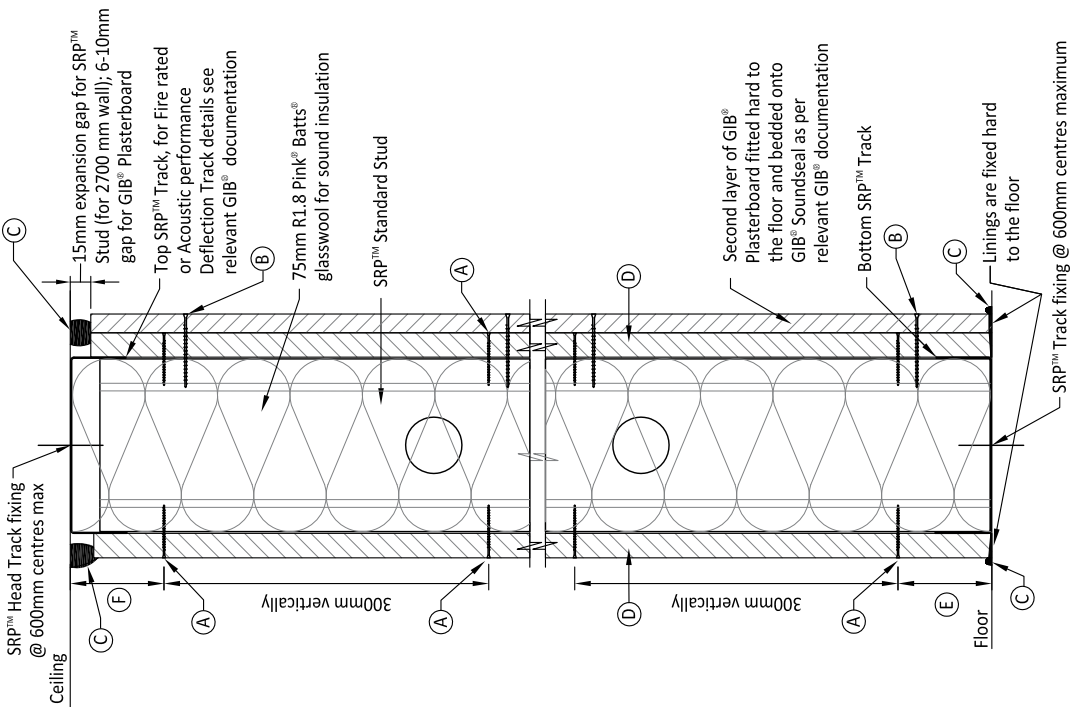


FIGURE 30 SRP™ Whisperwall™ – STC52 Rating Both Side Single Lined

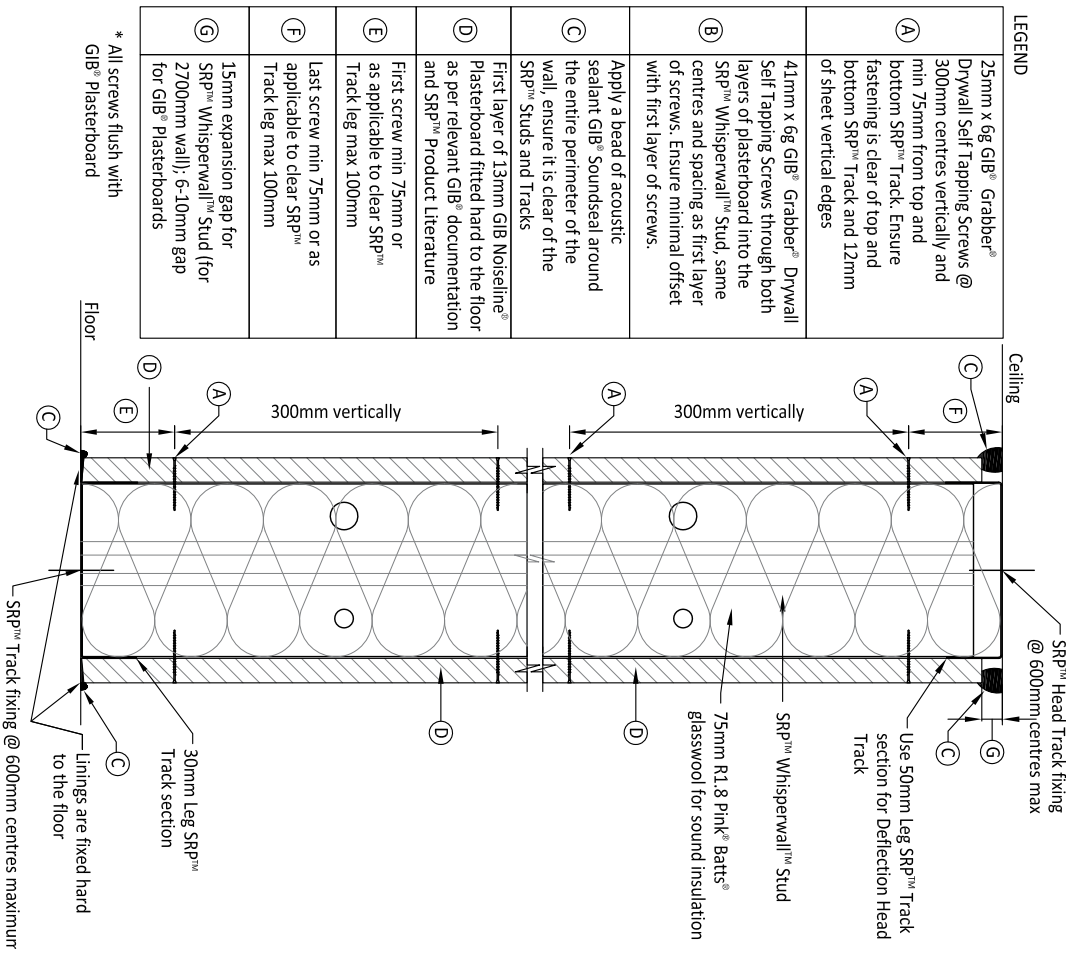
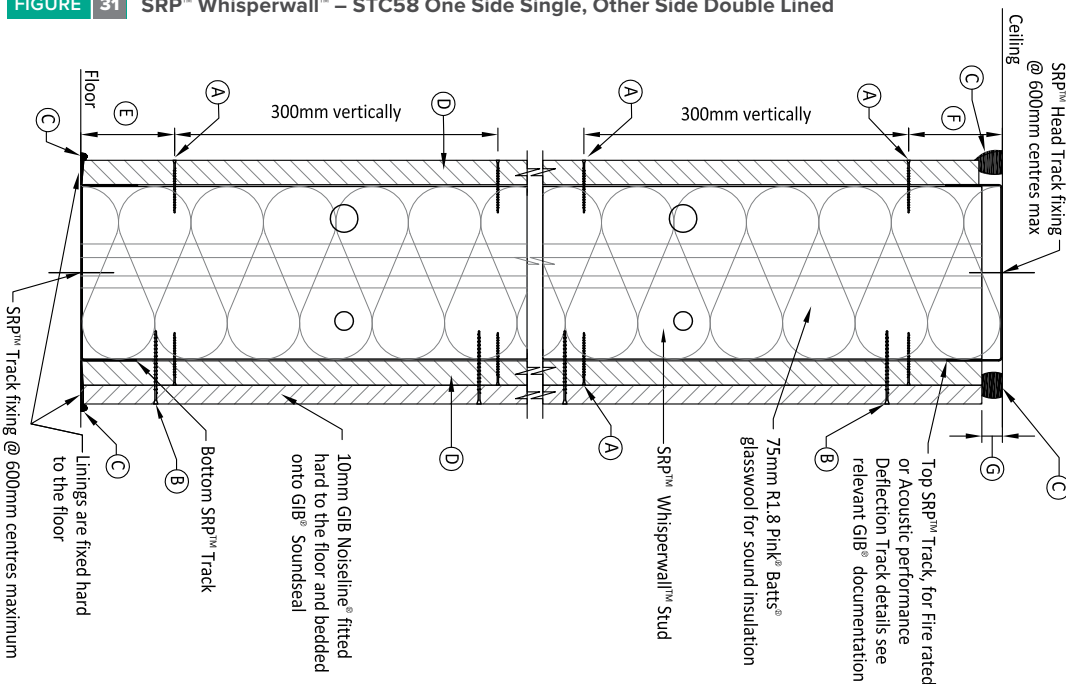


FIGURE 31 SRP™ Whisperwall™ – STC58 One Side Single, Other Side Double Lined

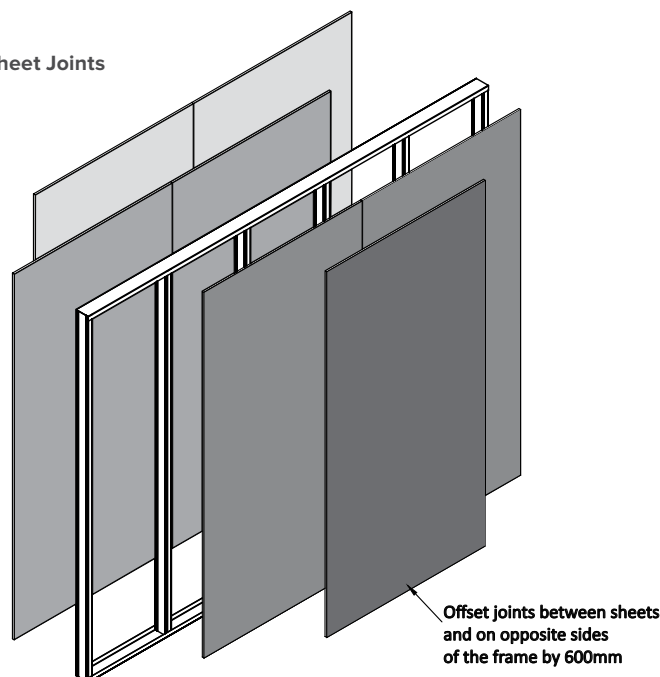


7.3 SRP™ WHISPERWALL™

- » To achieve the required STC rating wall, use full height sheets only as specified in SRP™ STC and FRR specification [TABLE 8].
 - » Vertical sheet joints are touch fitted and must occur over framing. Stagger vertical sheet joints on opposite sides of the frame by 600mm [see FIGURE 32].
 - » Where horizontal sheet end joints are unavoidable they must be over SRP™ Nogs and offset outer layer joints from those in the inner layer.
 - » The inner layer of 13mm GIB Noiseline® must be fitted hard to the floor [see FIGURE 30 and FIGURE 31].
 - » For fastening use 25mm x 6g GIB® Grabber® Drywall Self Tapping Screws at 300mm centres vertically, 75mm from sheet top and bottom ends ensuring all screws are clear of the top and bottom SRP™ Track and 12mm from sheet vertical edges as per FIGURE 30 and FIGURE 31. Also ensure that all screws are clear of the SRP™ Whisperwall™ internal “flutes”, as it could compromise the tested STC rating of the wall.
- NOTE: Maximum distance for the screw measured from the outside edge of the SRP™ Whisperwall™ Stud profile is 25mm. Please check the length of the screw used, to ensure it is well clear of the SRP™ Whisperwall™ internal flutes [see Figure 1].**
- » Apply a bead of acoustic sealant GIB® Soundseal* around the entire perimeter of the inner lining, ensuring it is clear of the steel frame and SRP™ Tracks. Before the set off time of the acoustic sealant, install the outer lining if applicable, by bedding it into the bead.
- » The outer layer of 10mm GIB Noiseline®, if applicable, is fitted hard to the floor and bedded onto GIB® Soundseal acoustic sealant applied around the inner layer before the set off time of the acoustic sealant. Offset the sheet joints between layers by 600mm [see FIGURE 32]. Fasten the second layer of 10mm GIB Noiseline® using 41mm x 6g GIB® Grabber® Drywall Self Tapping Screws through the first layer of plasterboard right through the SRP™ Whisperwall™ Stud. Screws at 300mm centres vertically, minimum 75mm from sheet top and bottom ends and 12mm from sheet vertical edges along each SRP™ Stud ensuring minimal offset with first layer screws [see FIGURE 30 and FIGURE 31]. Ensure the second layer of screws is clear of SRP™ Whisperwall™ Stud internal “flutes” as well.
 - » Apply insulation R1.8 [75mm]* between the SRP™ Studs. Split the width of the insulation to suit SRP™ Stud centres as and if required. For other acoustic partition’s acoustic insulation details refer to GIB® Noise Control Systems March 2006.
 - » For double layer acoustic performance SRP™ Whisperwall™, leave the inner layer unstopped and for the outer layers all fastener heads stopped and all sheet joints tape reinforced and stopped in accordance with GIB® Site Guide.
 - » All care should be exercised in securing the wallboard around service cable routes.
- *SRP™ Whisperwall™ was tested using Pink® Batts® Silencer glasswool acoustic insulation R1.8 [75mm], other acoustic insulation, with properties equal or better may also be used once verified by an acoustic engineer.

*SRP™ Whisperwall™ was tested using GIB® Soundseal; other acoustic sealants, with properties equal or better may also be used once verified by an acoustic engineer.

FIGURE 32 Offset Vertical Sheet Joints



7.4 PENETRATIONS IN NOISE CONTROL WALLS

Any penetrations in Noise Control systems, like door openings, recessed light fittings to the walls or ceilings, power outlets, pipes, or any HVAC [heating, ventilating, and air conditioning] systems, could possibly degrade the airborne or impact sound acoustic performance of the Noise Control systems. For more information and installation details refer to GIB® Noise Control System.

NOTE: Where a Fire Resistance Rating is required, refer to relevant details in this document, Gib® Fire Rated Systems October 2012 and Penetrations in GIB® Fire Rated Systems.

It is to be remembered that the acoustic data referenced in this document were obtained in a controlled environment during laboratory testing. Even with the greatest attention to detail during installation, it should be noted that the laboratory values could be degraded by various on-site conditions such as number and type of penetrations, as described earlier.

Some possible causes of STC rating degradation could be:

- » Minute air gaps, leaks between the wall and the penetrating items, such as power outlets, light switches, recessed light fitting in the walls, door jambs, penetrating pipes etc. Minute air gaps for leaking sound are similar to cracks in a water tank.
- » Replacing part of the higher acoustic properties Noise Control system, with a lower acoustic properties item, e.g. doors, openings, power outlets, light switches, lights etc.
- » Using rigid structural connections between parts of the system, e.g. penetrating pipe fastened to both sides of the wall.

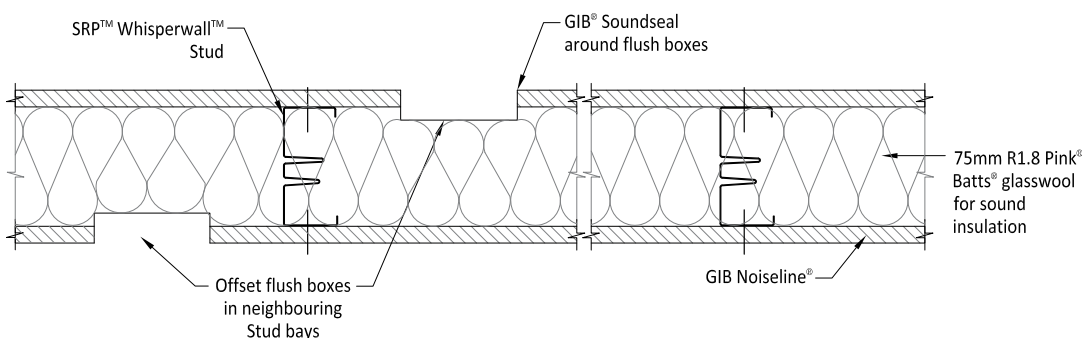
- » Introducing a sound or vibration source within the Noise Control system, like water pipes in the wall cavity etc. For example pipes not fastened correctly could cause the pipes to hammer in the wall.

The key to maximise acoustic performance is thorough and accurate implementation of all details with the use of high quality materials as specified.

Maximising Acoustic Performance could be achieved by:

- » Sealing all minute air gaps around penetrations, the perimeter of the wall and ceiling with GIB® Soundseal acoustic sealant.
- » Install insulation to fill the wall cavity, as and where specified.
- » Avoid back to back penetrations in the wall, stagger them instead whenever possible.
- » Offset flush boxes in neighbouring SRP™ Stud bays. Use GIB® Soundseal acoustic sealant around the perimeter of the box, and ensure insulation is uninterrupted behind the box [see FIGURE 33]. If this is not possible, use the option of a surface mounted box.
- » Install as high STC rating doors as possible if available, as the noise control rating of the entire wall is usually heavily degraded by the STC rating of the door.

FIGURE 33 Penetration in Noise Control Walls



7.5 PENETRATIONS IN FIRE RESISTANCE RATED WALLS

Penetrations through a fire rated wall could also degrade the FRR rating of the wall. Their effect is related to the specific fire rated system, type of penetration and materials used. Where a Fire Resistance Rating is required, it must be assessed by a suitable fire wall design professional. For reference use GIB® Fire Rated Systems October 2012 and Penetrations in GIB® Fire Rated Systems





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MISCELLANEOUS

8 MISCELLANEOUS

8.1 SRP™ PLASTER ANGLE

[FIGURE 34]

Steel Rollformed Products™ Ltd. [SRP™] produces external plaster angle bead in 90° and 135° angles with 30mm legs to use in internal walls. The product is perforated and rolled from continuous hot-dip galvanized GALVSTEEL® manufactured by New Zealand Steel, whenever possible.

There are 3mm diameter edge perforations at nominal 125mm centres to provide a securing point ensuring fastening will be below the troweling surface during installation. The stiff back rib provides both a troweling surface and a strengthened corner in service. The product is produced with an internal angle of less than 90° or 135° allowing the plaster compounds to key through the perforations achieving the 90° or 135° finished plastered angle. The angle is rolled true, during manufacturing, to aid the fastening and to assist in achieving straight clean corners [see FIGURE 34].

For easy transport, handling and storage, SRP™ Plaster Angles are supplied in boxed bundles. It is recommended that the boxed bundles be stored in a clean dry environment prior to installation. To enable good adhesion, the product should be wiped clean immediately prior to application of the plaster compound.

SRP™ Plaster Angle is supplied in stock lengths of 2.4m, 2.7m, 3.0m and 3.6m.

8.2 CEILING AND WALL CONNECTIONS

For Ceiling and Wall connections ensure all ceiling/wall connection details are installed as per required specification for the combination.

8.3 WALL ATTACHMENTS

Attaching heavyweight and/or sound or vibration producing items [such as TV, speakers etc.] could compromise the acoustic and structural performance of the Standard SRP™ walls, SRP™ Whisperwall™ and SRP™ Acoustic walls. If this is unavoidable, contact SRP™ for specific design.

8.4 CONTROL JOINTS

Control joints are designed to relieve the stresses imposed by structural movements, temperature fluctuation, change of humidity etc. The place and position of control joints is to be determined by design and is usually required at 9m centres in long continuous partitions. They are also required at the position of a control joint in the primary structure. Refer to GIB® Site Guide and to other relevant GIB® plasterboard documentation for position and construction of control joints.

8.5 WALL STRAPPING

A selection of SRP™ Battens and Clips are available for strapping of the walls. Contact SRP™ for more details.

8.6 PERFORMANCE

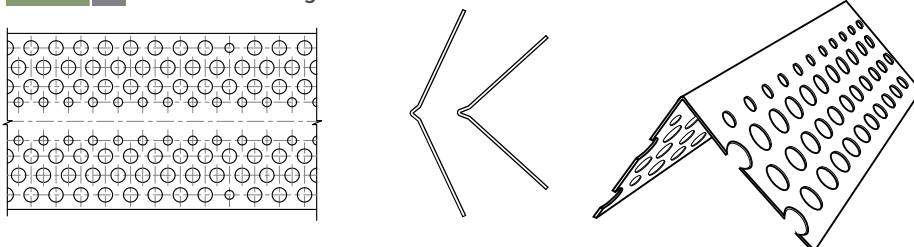
SRP™ Studs/Tracks/Nogs will perform as specified, provided the design, specification, fabrication and erection procedures are in accordance with this document, relevant Standards and good trade practice. It is therefore critical that SRP™ Products be installed by a skilled tradesperson in accordance with all relevant Standards, Codes, Installation Instructions and common trade and building practices to achieve the required result and ensure quality workmanship.

If any defects are found to the installed SRP™ Studs/Tracks/Nogs, the relevant item must be removed and replaced prior to fastening of the wall linings.

8.7 DURABILITY

SRP™'s Steel Stud and Track products are proudly New Zealand made. Our preference is to use GALVSTEEL® manufactured by New Zealand Steel, whenever possible. New Zealand Steel made GALVSTEEL® is backed by a 50 year Durability Statement to demonstrate compliance with NZBC Clause B2-Durability, when used and maintained as referred to in the current New Zealand Steel Durability Statement.

FIGURE 34 SRP™ Plaster Angle



8.8 DELIVERY, HANDLING AND STORAGE

Store in a dry flat area to avoid distortion and/or moisture damage. Exercise care and use appropriate safety equipment during installation.

SRP™ Steel products are not to be installed in a corrosive atmosphere, or come in direct contact with tanned timber, copper or chemically treated materials. If it is unavoidable, a separation barrier between the galvanized SRP™ product and the potentially corrosive surface should be used. In addition, SRP™ recommends that SRP™ Steel Products not be installed before the building envelope is enclosed. SRP™ also recommends that all electrical wiring regulations must be strictly adhered to.

Store and install the partitions using SRP™ Steel Studs and Tracks in accordance with the New Zealand Steel GALVSTEEL® 50 year Durability Statement document.

Noted below are some additional relevant references and publications:

8.9 FASTENING HANDLING AND MAINTENANCE

ACCORDING TO THE FOLLOWING PUBLICATIONS AS NOTED IN NEW ZEALAND STEEL DURABILITY STATEMENT:

- a. New Zealand Steel Limited, Specifiers and Builders Guide, and Installers Guide [refer www.nzsteel.co.nz for most current version].
- b. NZ Metal Roof and Wall Cladding, Code of Practice, [refer www.metalroofing.org.nz for most current version and updates].
- c. AS/NZS 2312:2002 [Incorporating Amendment No. 1] Guide to the protection of structural steel against atmospheric corrosion by the use of protective coatings.
- d. Instructions and literature published by individual purlin and steel framing manufacturers.
- e. NASH Handbook Best Practice for Design and Construction of Residential and Low-Rise Steel Framing [refer www.nashnz.org.nz for most current version].
- f. NASH N11 House Insulation Guide [refer www.nashnz.org.nz for most current version].

8.10 ADDITIONAL FASTENING, HANDLING AND DESIGN REQUIREMENTS

AS NOTED IN NEW ZEALAND STEEL DURABILITY STATEMENT

- a. Bottom plate details must ensure that the bottom plate remains dry in service and is not subject to water ingress from internal or external sources. Damp-proof course [DPC] must be used and be at least 10mm wider than the building element.
- b. Separation methods as described within NZMRM Code of Practice 2.7 are required between any steel structural building element and incompatible materials which include, but are not limited to, timber treated with copper based preservatives, concrete, copper and other dissimilar metals and also materials which may be moisture bearing during the life of the building.
- c. Site storage conditions must ensure that GALVSTEEL® is kept dry when in a stacked condition.
- d. Prior to installation of external and internal lining GALVSTEEL® must be clean, dry, free of corrosion, clear of debris and swarf.
- e. During storage and erection GALVSTEEL® should be kept as dry as possible and the building closed in as soon as practicable to limit exposure to the elements. As a guide, this should be within 3 weeks in marine or geothermal environments and within 12 weeks in moderate environments from the delivery of the GALVSTEEL® material to site.
- f. GALVSTEEL® must be carried and not dragged when being moved.
- g. GALVSTEEL® must not be exposed to spatter from any welding activities.
- h. Wall wraps and roof underlays must comply with the requirements of NZ52295:2006 Pliable, permeable building underlays for use with steel framing.

For Delivery, Handling and Storage requirements of plasterboard and other products used in conjunction with SRP™ Steel Studs and Tracks, refer to relevant product manufacturer's documentation.

8.11 HEALTH AND SAFETY

Although the composition of the SRP™ product is not a health hazard, all reasonable care should be taken to avoid injury from sharp edges or surface treatments. Appropriate training is required and protective clothing, hand and eyewear, as a minimum, should be worn during handling and installation, especially during cutting, drilling and securing of SRP™ products. Installation and use of powder actuated fastening to be in strict accordance with manufacturer's specification and Health and Safety requirements. If in doubt, ask.

8.12 DISCLAIMER

This SRP™ document is a guide to be used for standard non-load bearing partitions. Please consult the manufacturer for project specific design assistance relative to suitable wall types and heights/wind loadings for your project.

In line with SRP™ policy of product improvement, as technology advances we reserve the right to change specifications without prior notice.

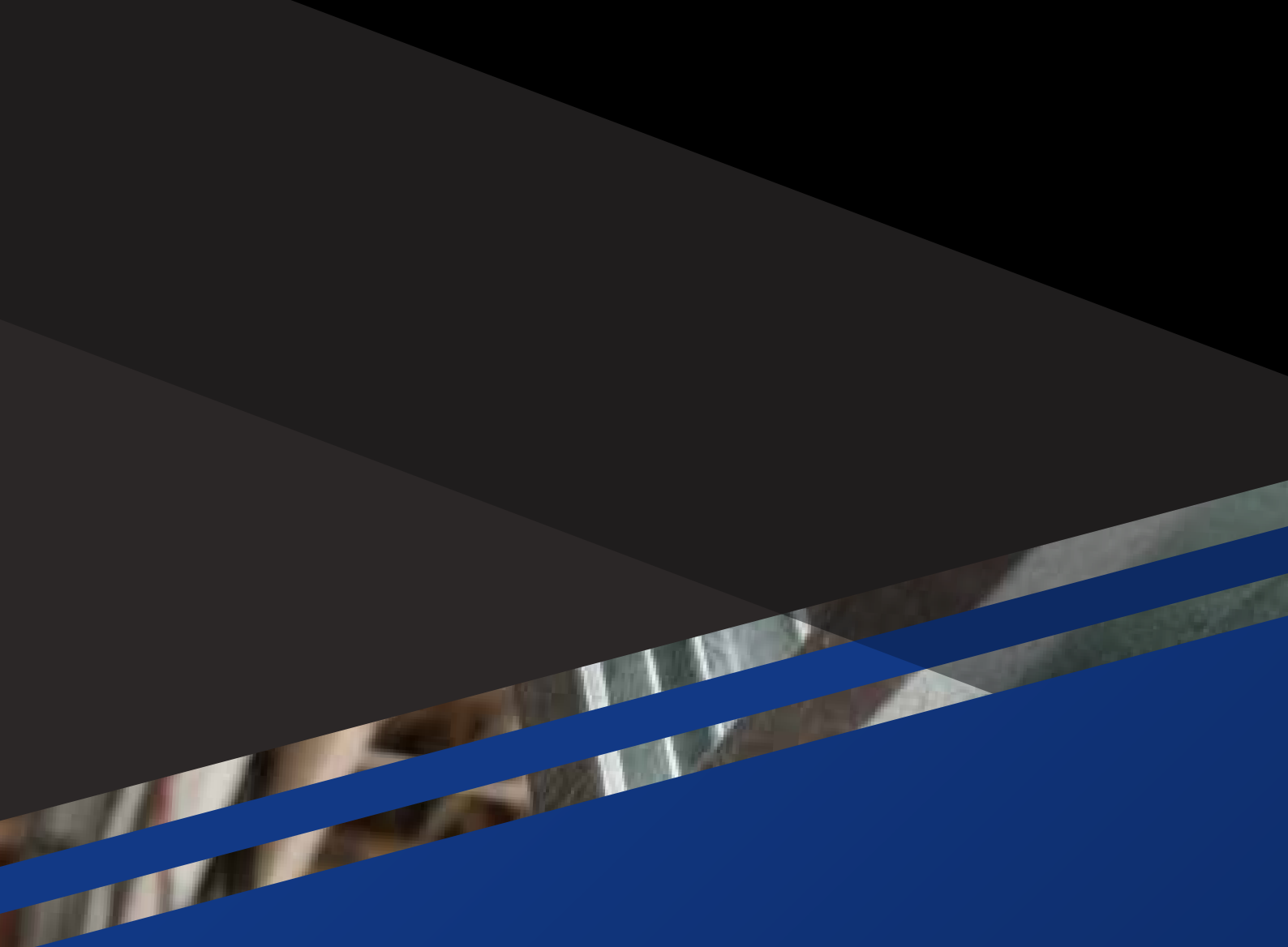
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