MiTek Posi-Joist Details Rev 6.2

20171109

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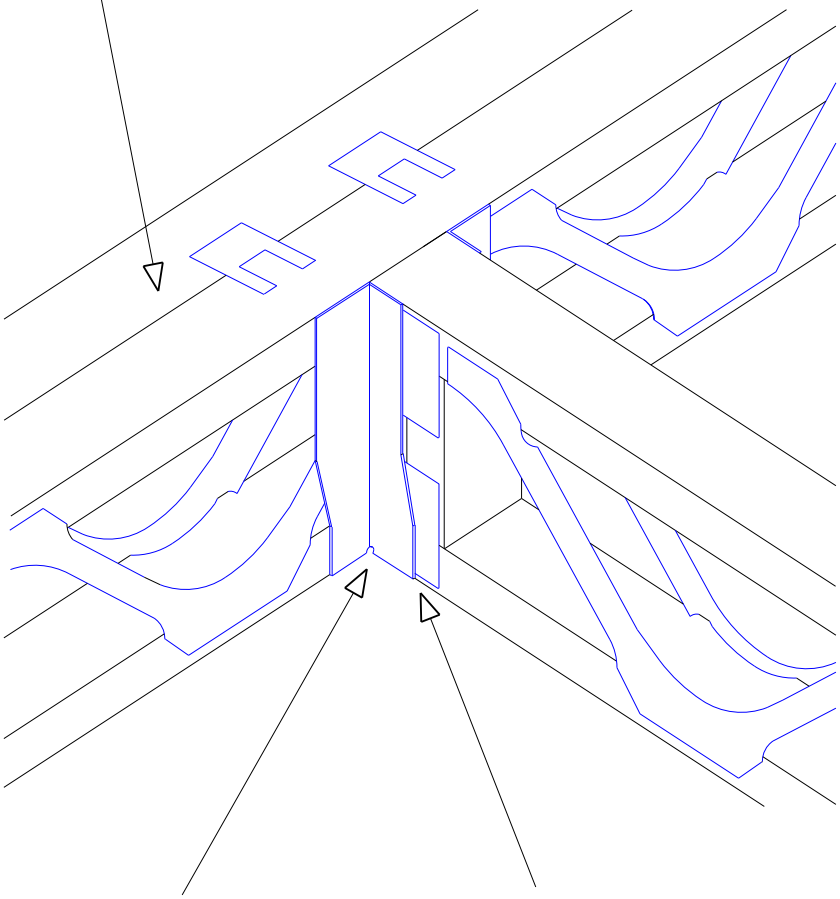
Posi-Joist girder chords fixed together as specified by design.



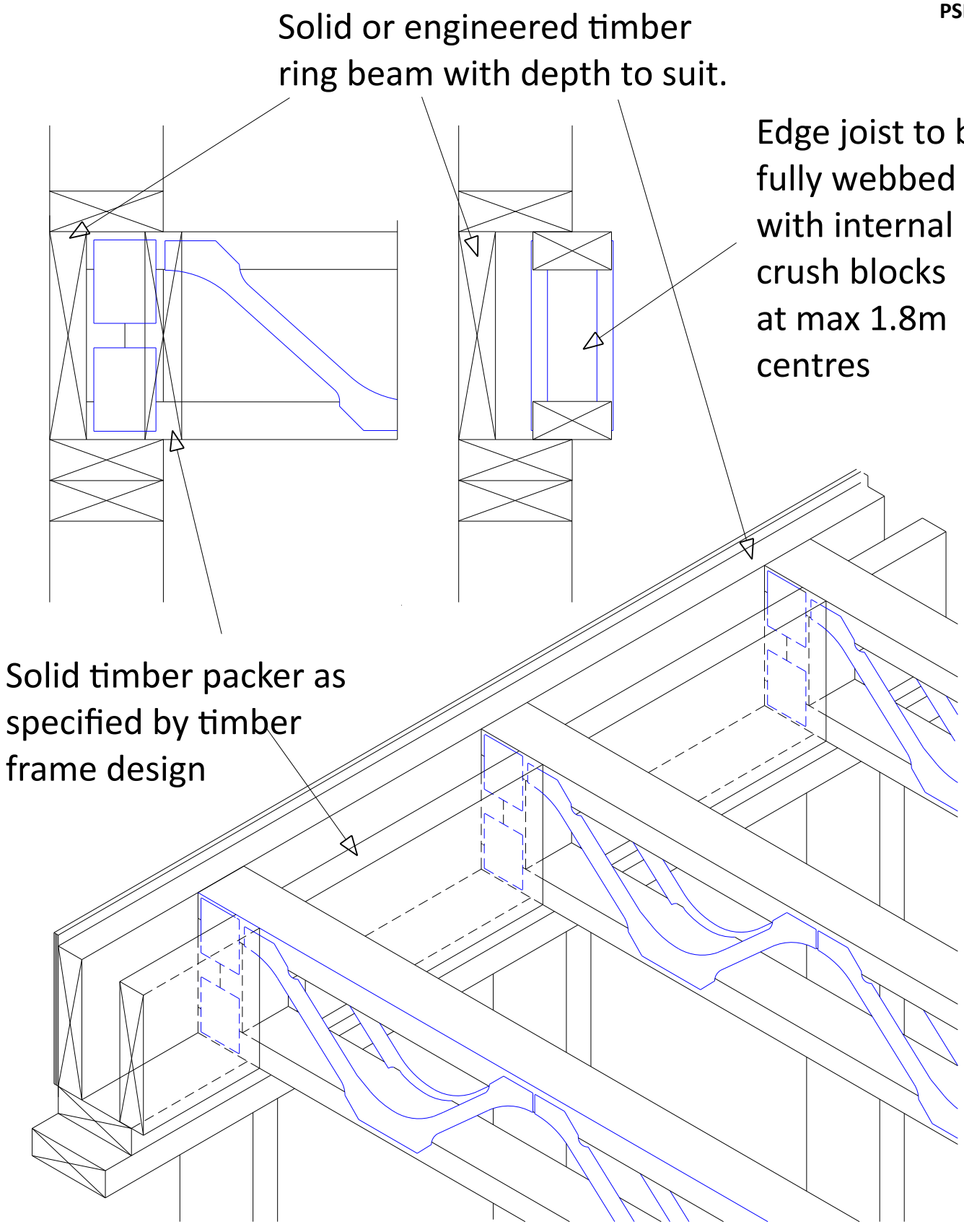
Posi-Joist Hanger

Do not notch bottom chord of Posi-Joist over bottom flange of hanger.

Note: Loaded face be clearly marked on Posi-Joist girder.

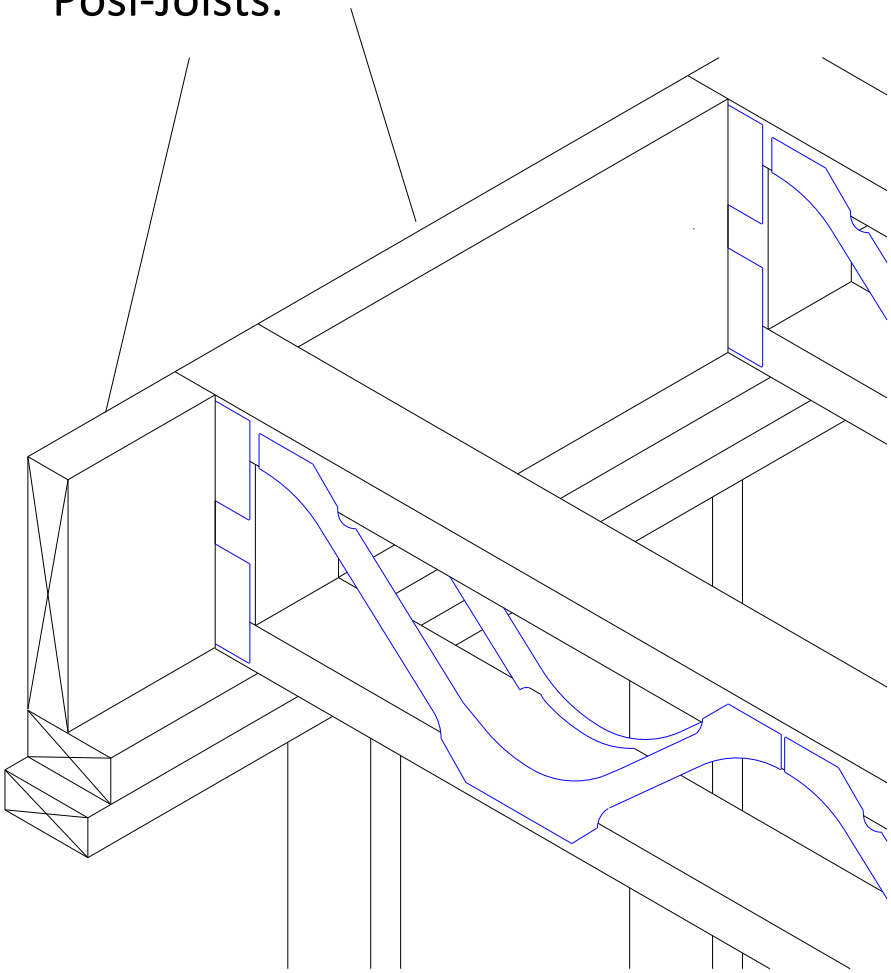
Posi-Joist To Girder Detail

PSD02



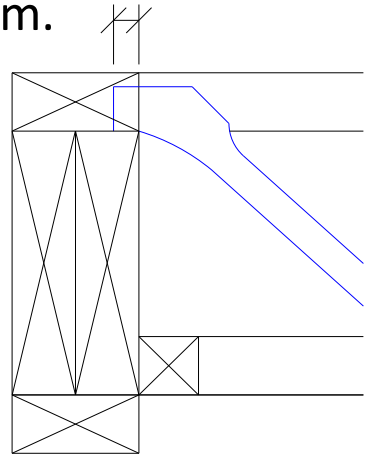
Bottom Chord Support Timber Frame External (With Ring Beam And Packer)

Full depth chord restraint blocking fixed between Posi-Joists.



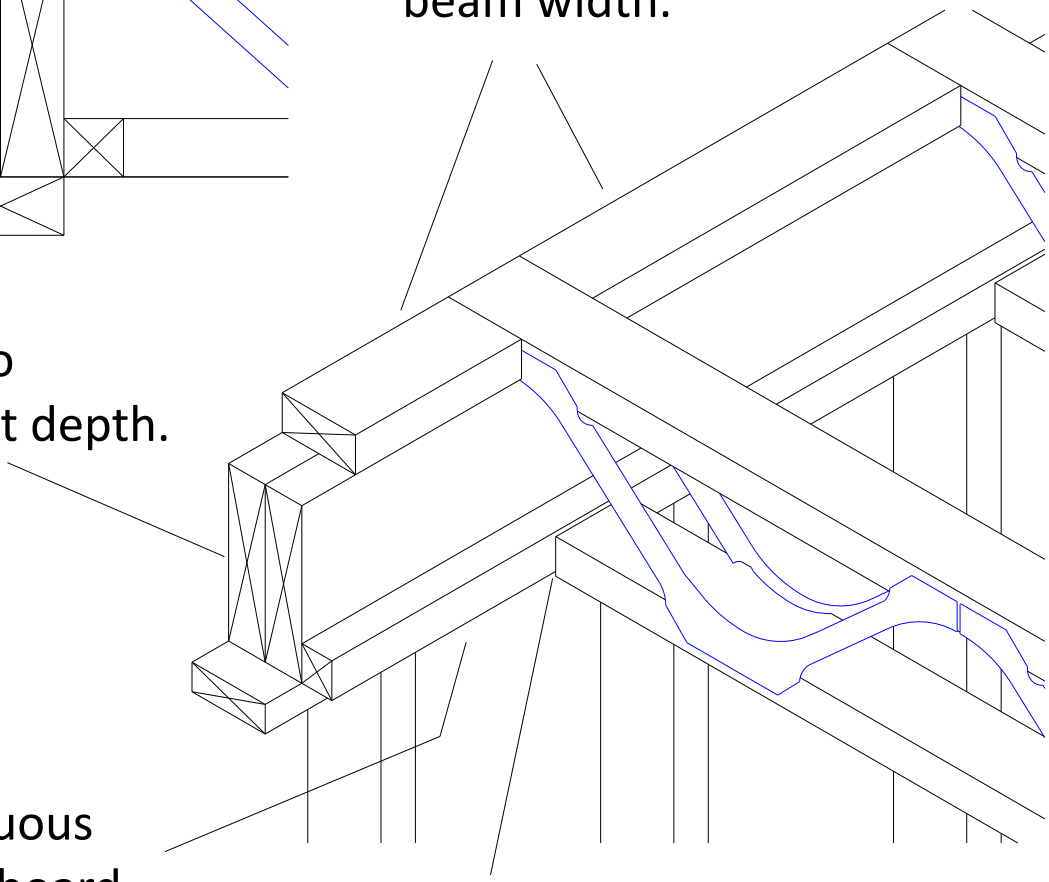
Bottom Chord Support Timber Frame (With Restraint Noggins).

Unless proven by design the Posi-Strut should overhang the bearing by 15mm.



Packing piece to suit Posi-Joist Top Chord flange depth and ring beam width.

Ring beam to suit Posi-Joist depth.

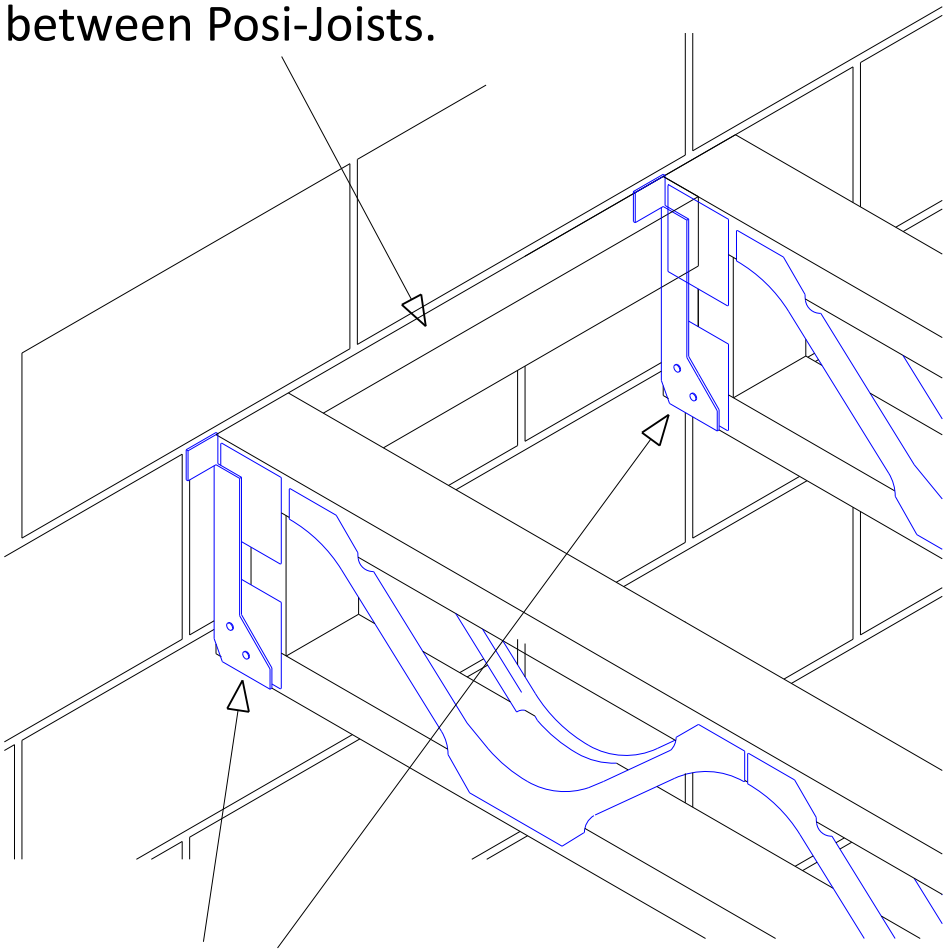


Continuous plasterboard runner.

Gap between end of Bottom Chord of Posi-Joist and plasterboard runner.

Top Chord Support Timber Frame Internal or External

Top restraint noggings fixed between Posi-Joists.

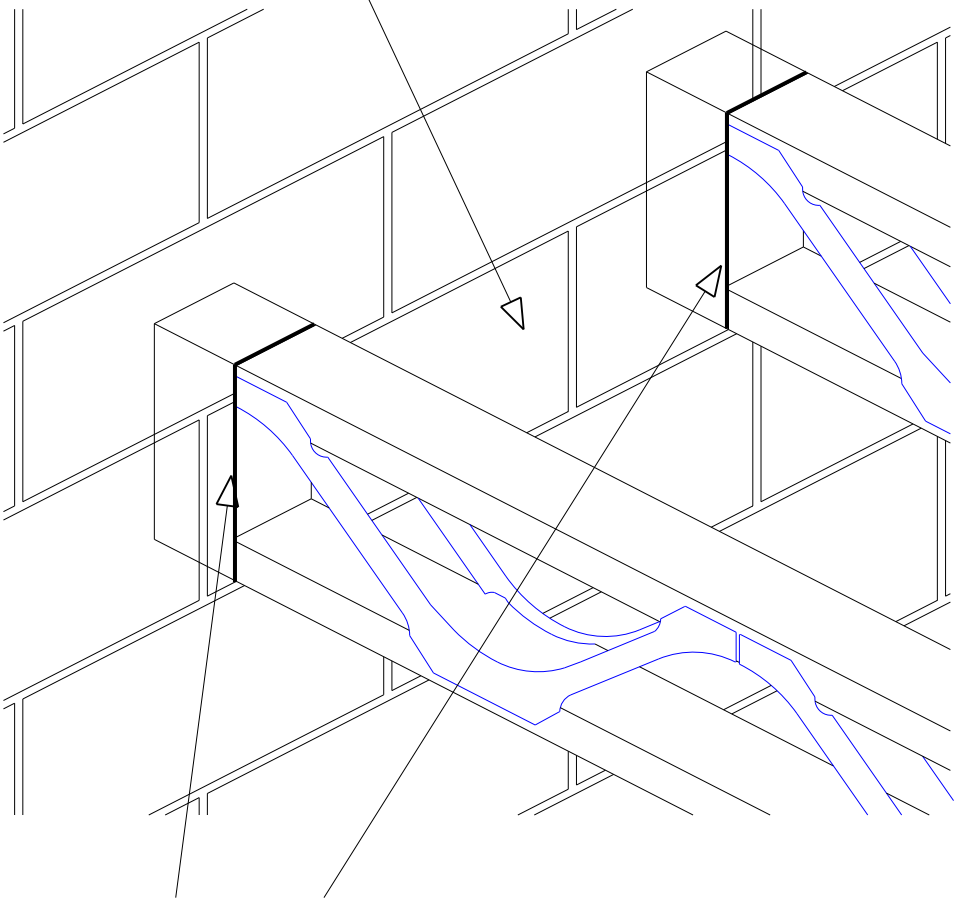


Masonry Joist Hanger.
Do not notch bottom chord of Posi-Joist over bottom flange of hanger.

Minimum bearing determined by design.
Choose correct full depth hanger for coursework, load, bearing width and desired bearing level.

Bottom Chord Support Masonry Hanger with Noggin Restraint

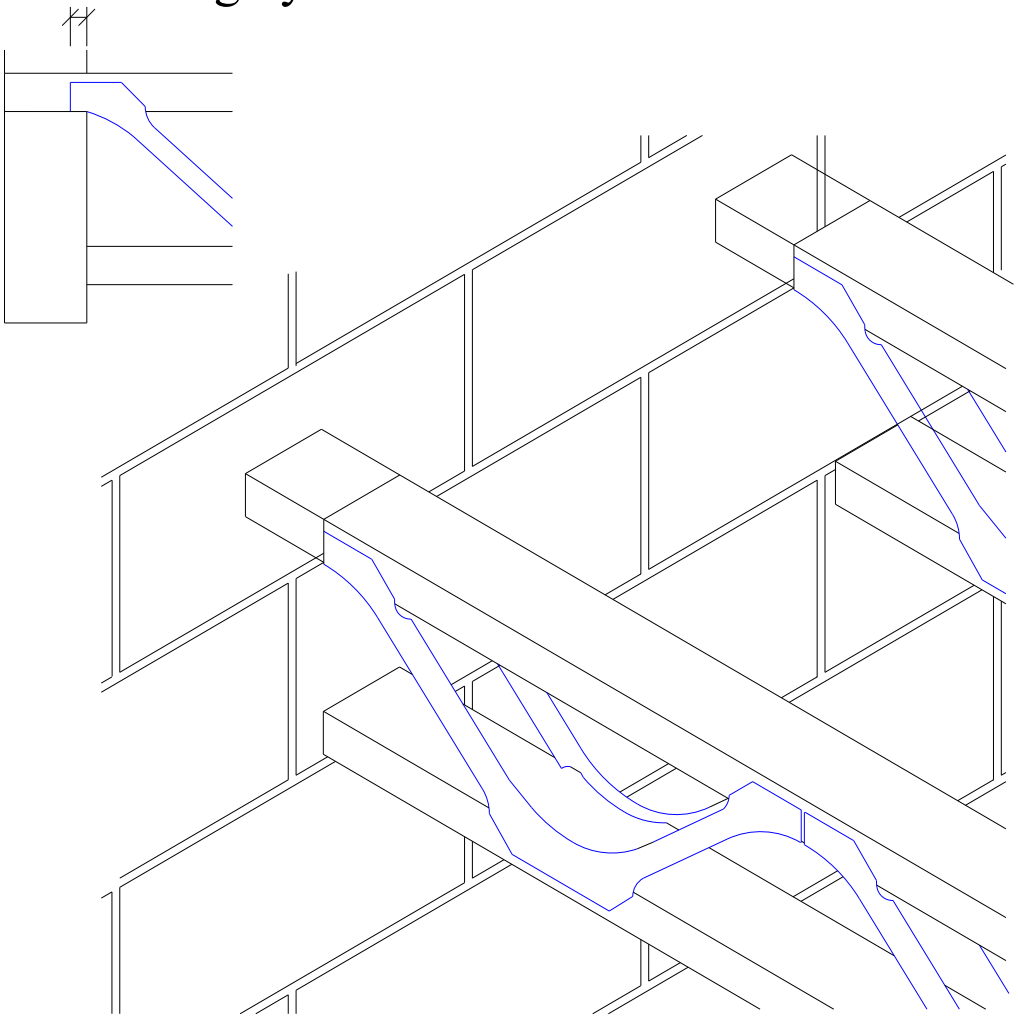
Blockwork to continue between joists to provide restraint.



Fully flexible sealant to provide air tightness.

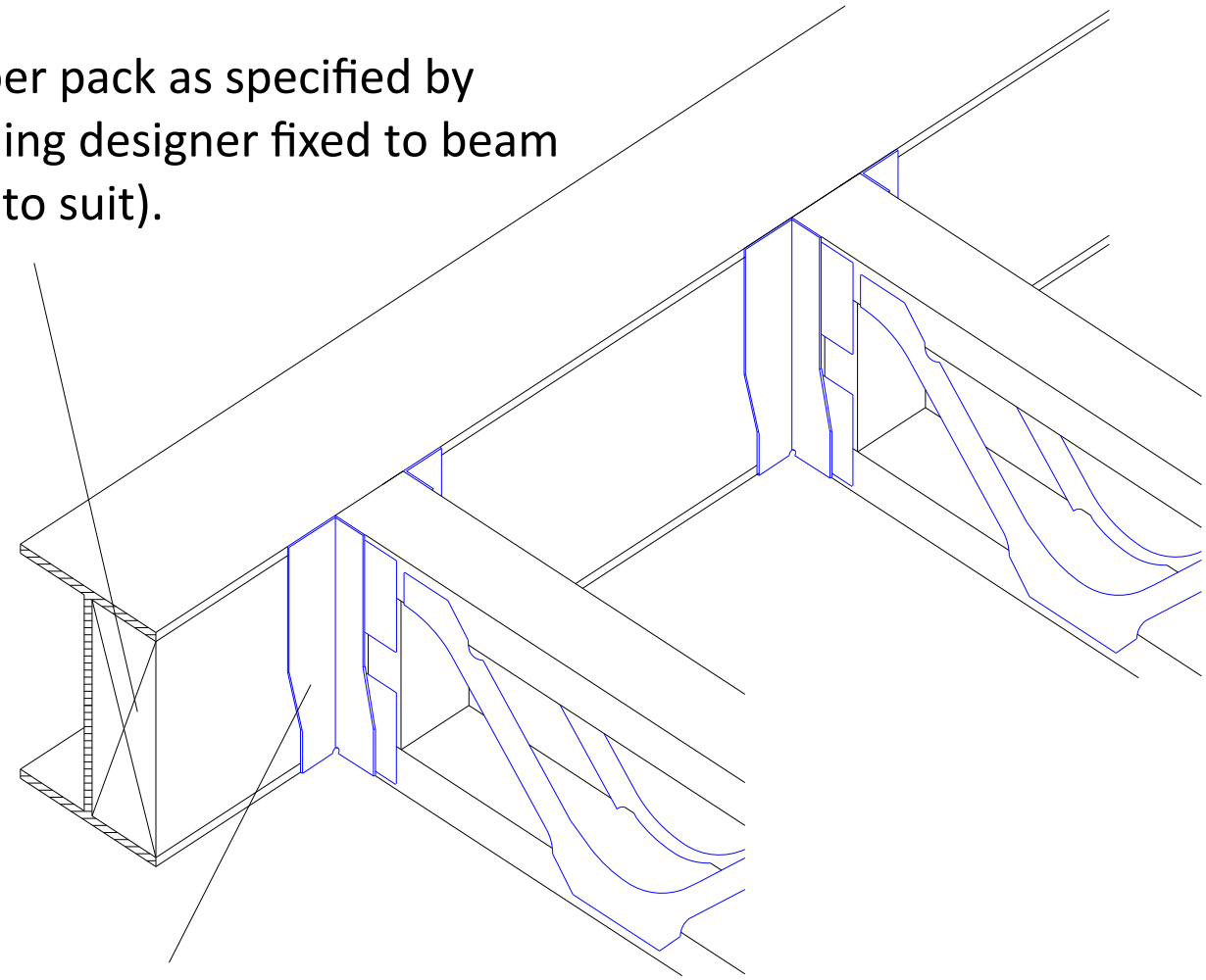
Bottom Chord Support Built into Masonry.

Unless proven by design the
Posi-Strut should overhang
the bearing by 15mm



Top Chord Support
Built into Masonry

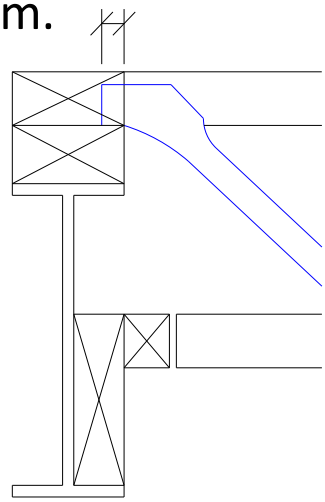
Timber pack as specified by building designer fixed to beam (size to suit).



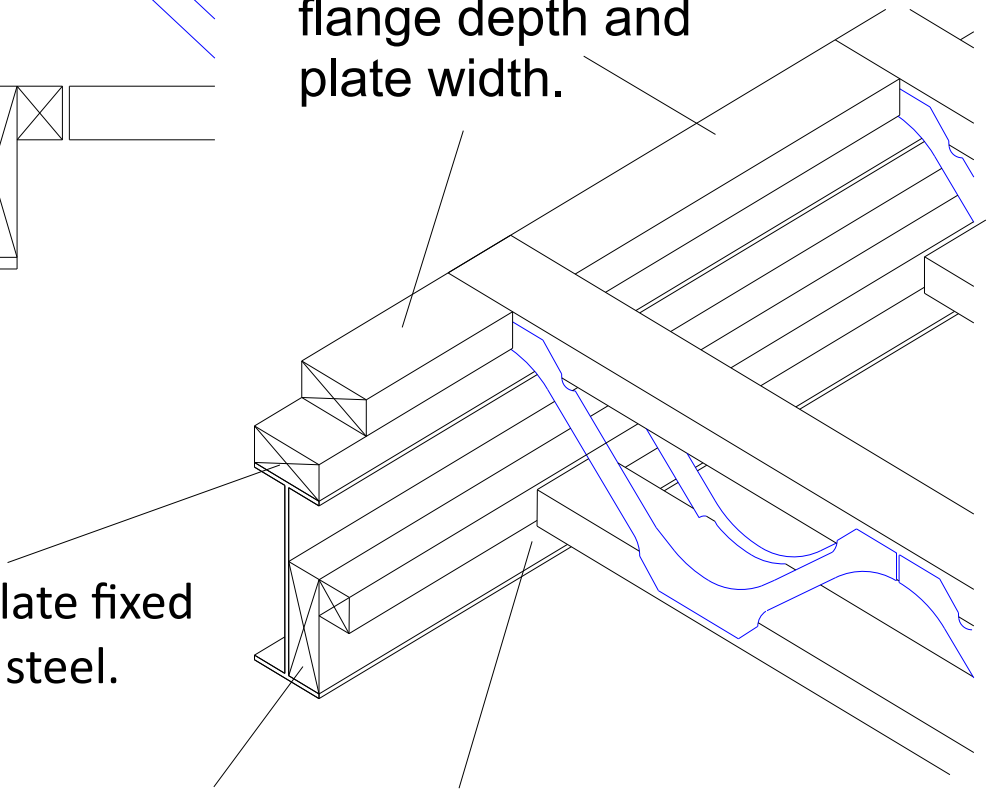
Face fix
Posi-Joist hanger

Bottom Chord Support to Steel Beam

Unless proven by design the Posi-Strut should overhang the bearing by 15mm.



Packing piece to suit Posi-Joist Top Chord flange depth and plate width.

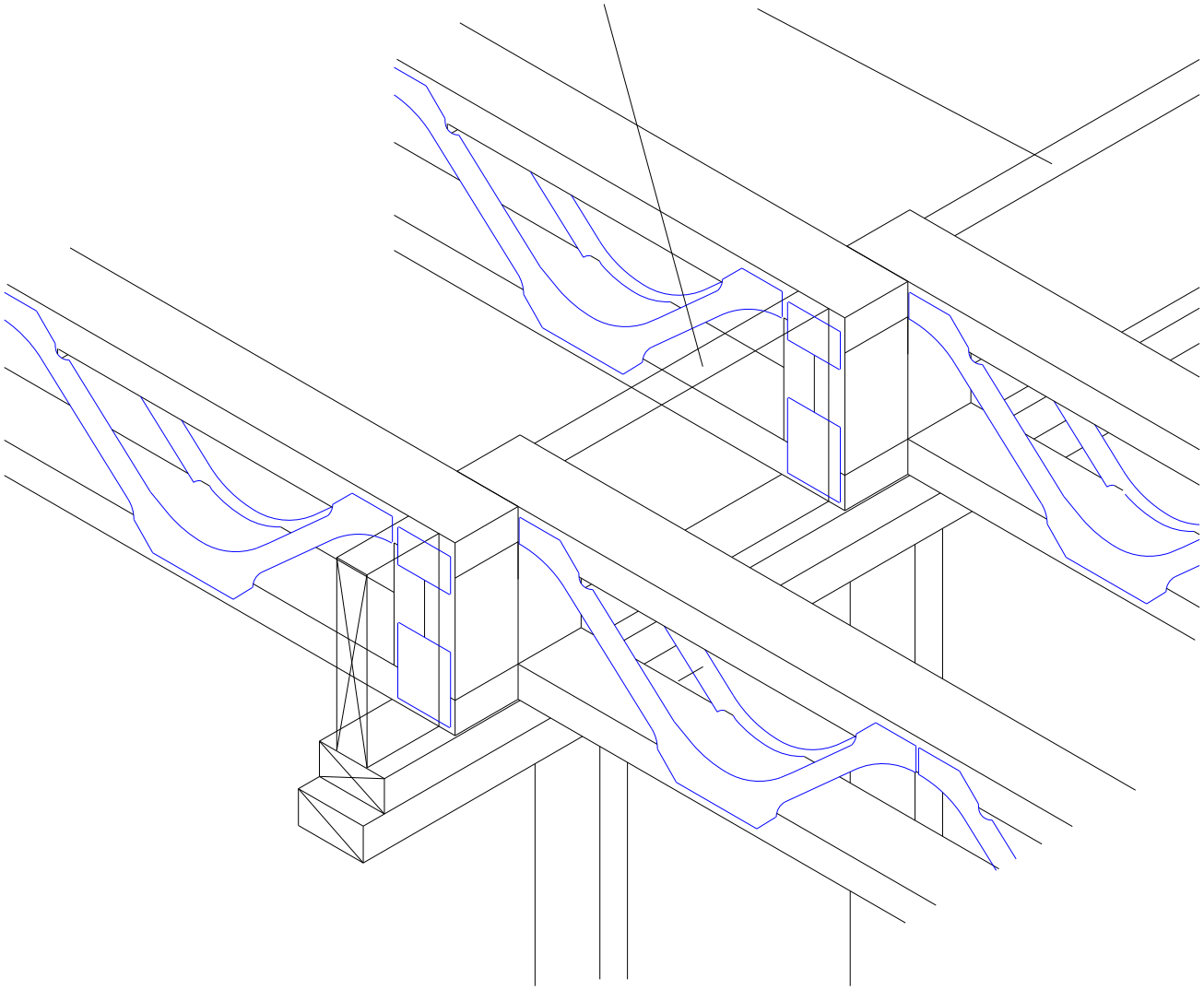


Timber plate fixed to top of steel.

Timber pack fixed to beam (size to suit)

Gap between end of Bottom Chord of Posi-Joist and plasterboard runner.

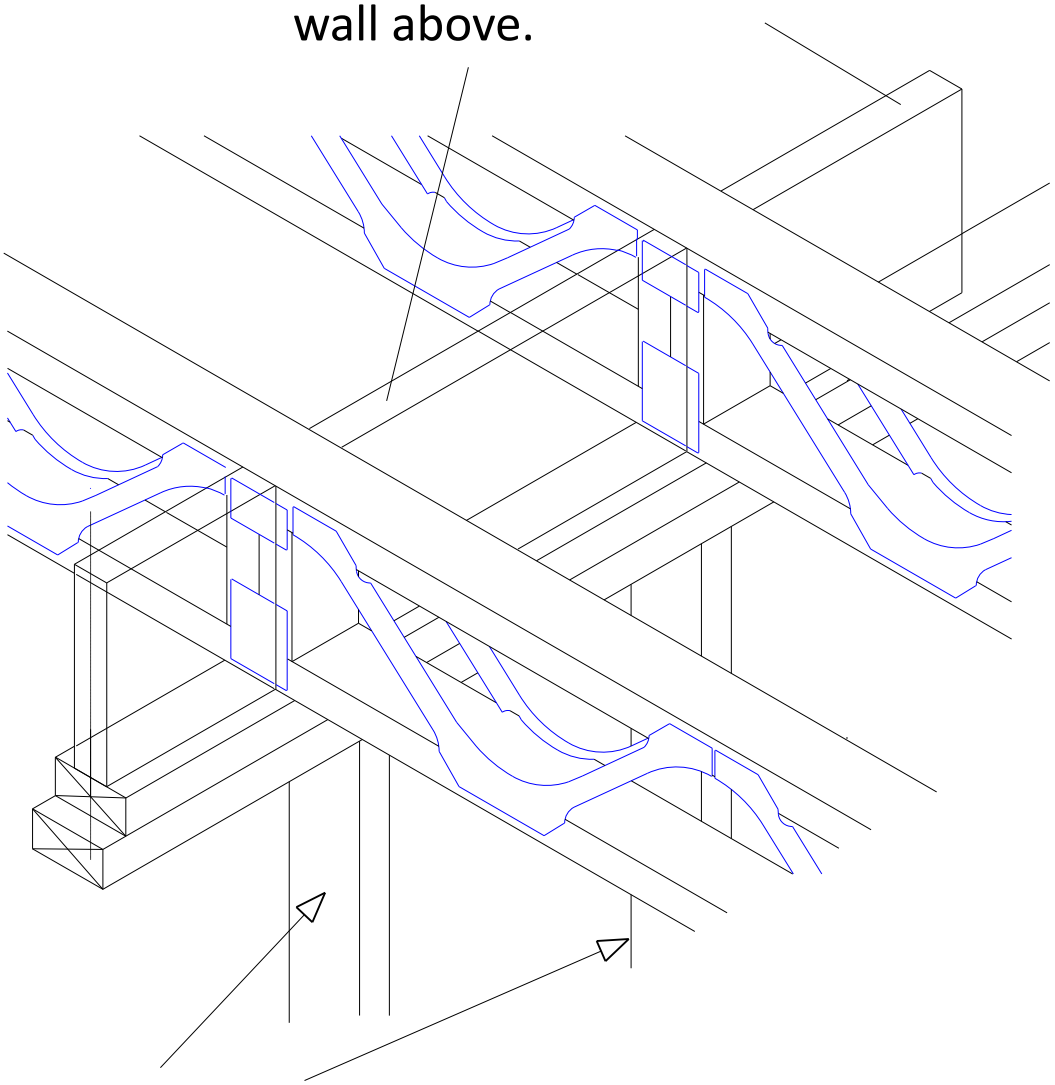
Top Chord Support Fixing To Downstand Steel Beam



Posi-Joists lapped over wall.

Bottom Chord Support
Timber Frame Internal Lapped
(With Full Depth Strutting)

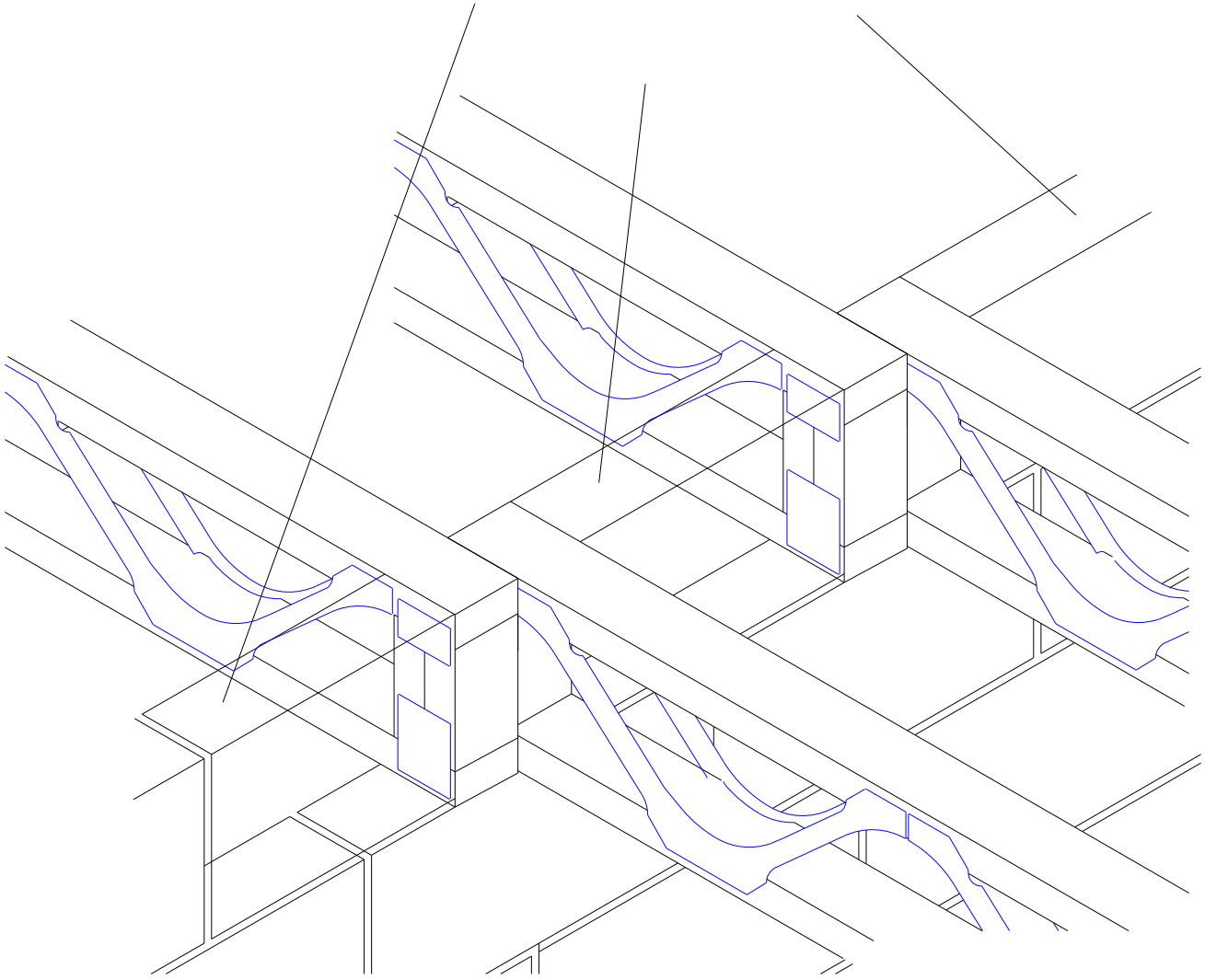
Solid or EWP full depth blocking required between Posi-Joists only if there is a load bearing wall above.



Studs positioned beneath Posi-Joists.

Bottom Chord Support
Timber Frame Internal Continuous
(With Full Depth Strutting If Required)

Masonry built up to underside of floor to provide restraint.

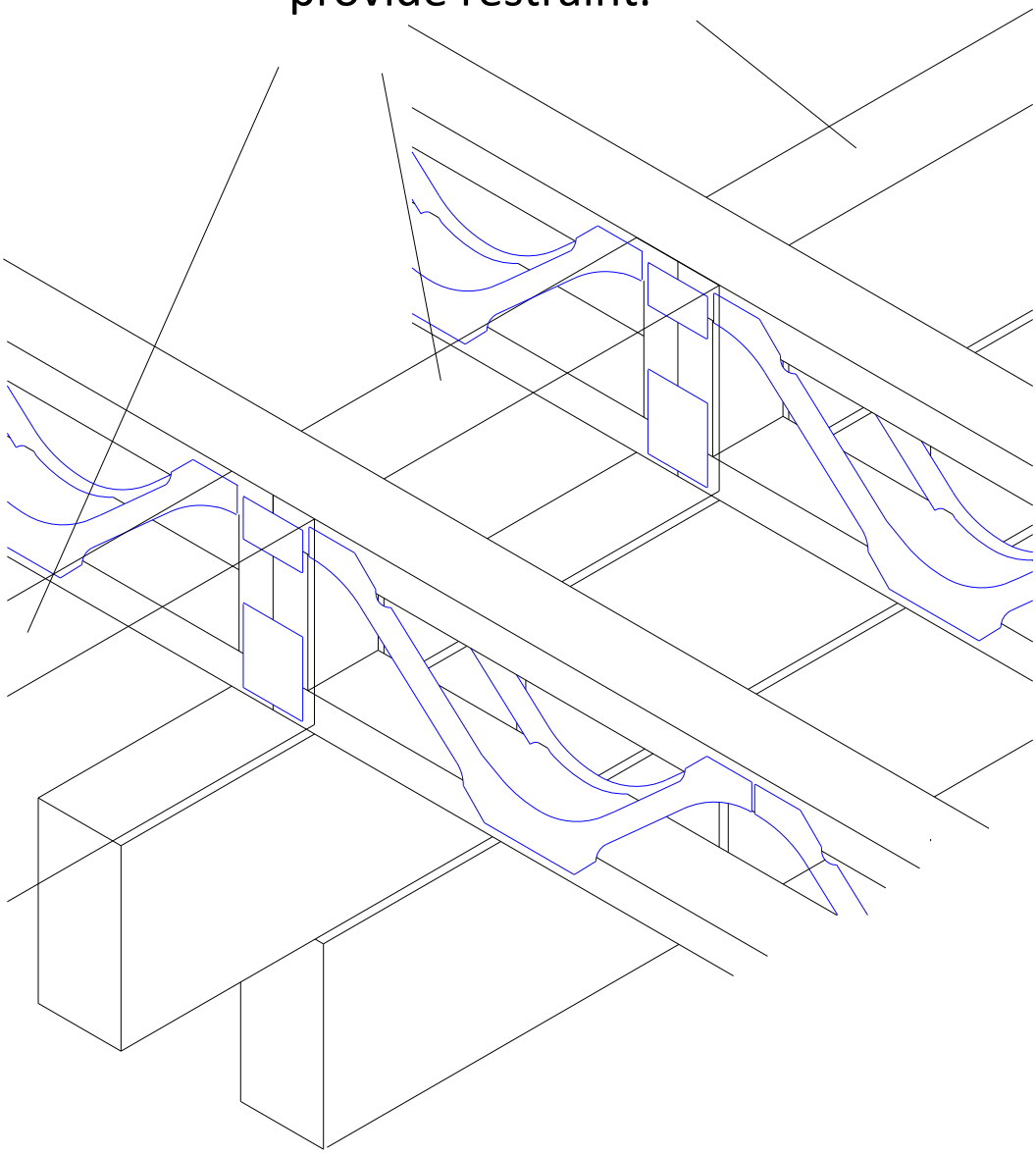


Posi-Joists lapped over wall.

Note: Use on internal load bearing internal walls (not fire walls).

Bottom Chord Support Internal Masonry Lapped

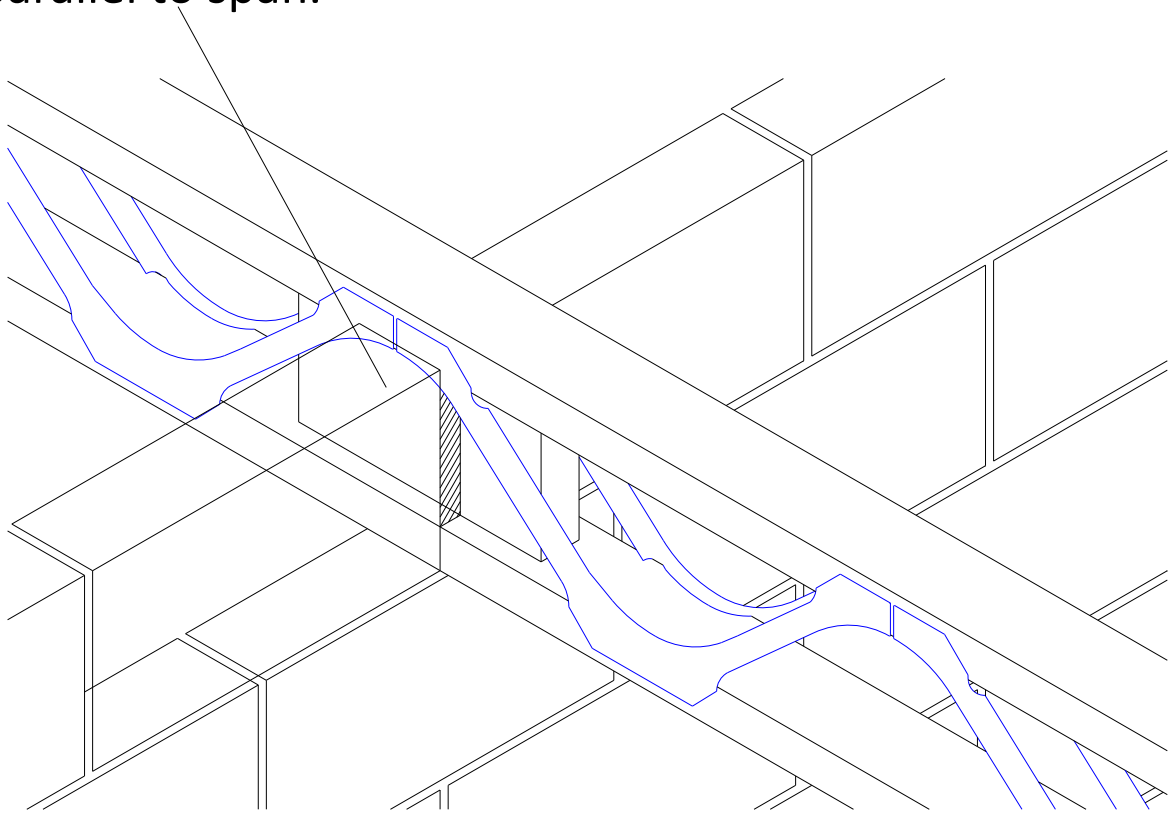
Masonry built up to underside of floor to provide restraint.



(Minimum 45mm Bearing Required If Posi-Joist split on centre of wall.

Bottom Chord Support Internal Masonry Continuous or Butting Ends.

Solid timber block over bearing with grain parallel to span.



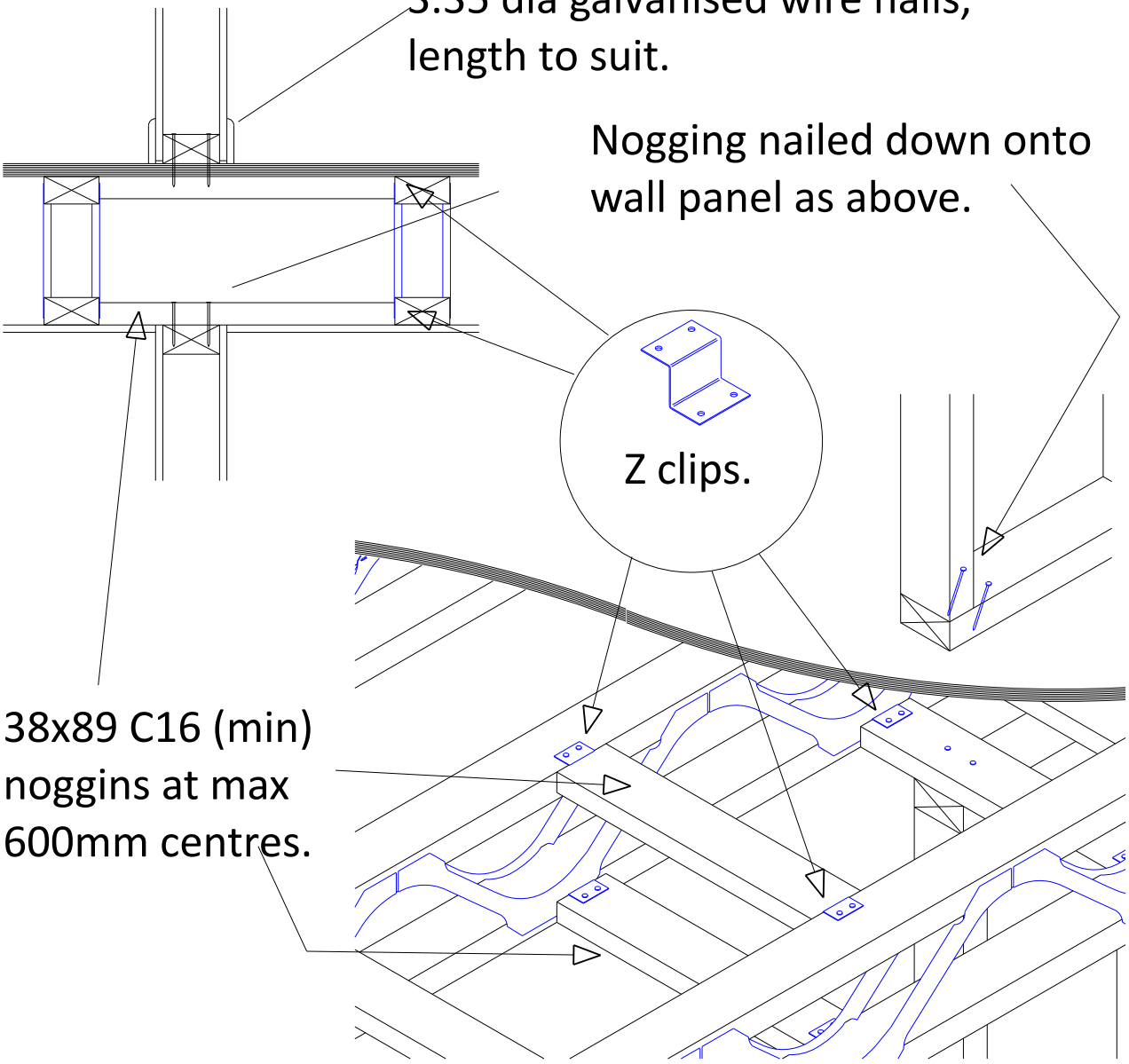
Gap to be filled to provide air tightness.

Note: Use on internal load bearing internal walls (not fire walls).

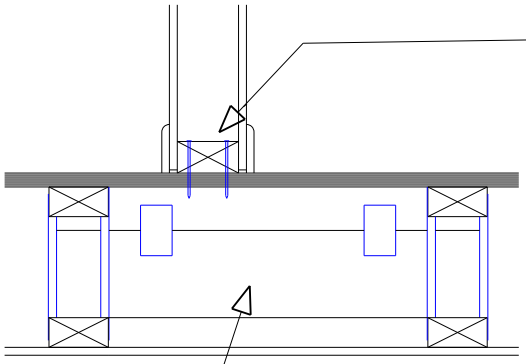
Bottom Chord Support Internal Masonry Continuous Joist with solid timber block

Wall panel skew nailed through onto noggin with a min of 2 no 3.35 dia galvanised wire nails, length to suit.

Nogging nailed down onto wall panel as above.

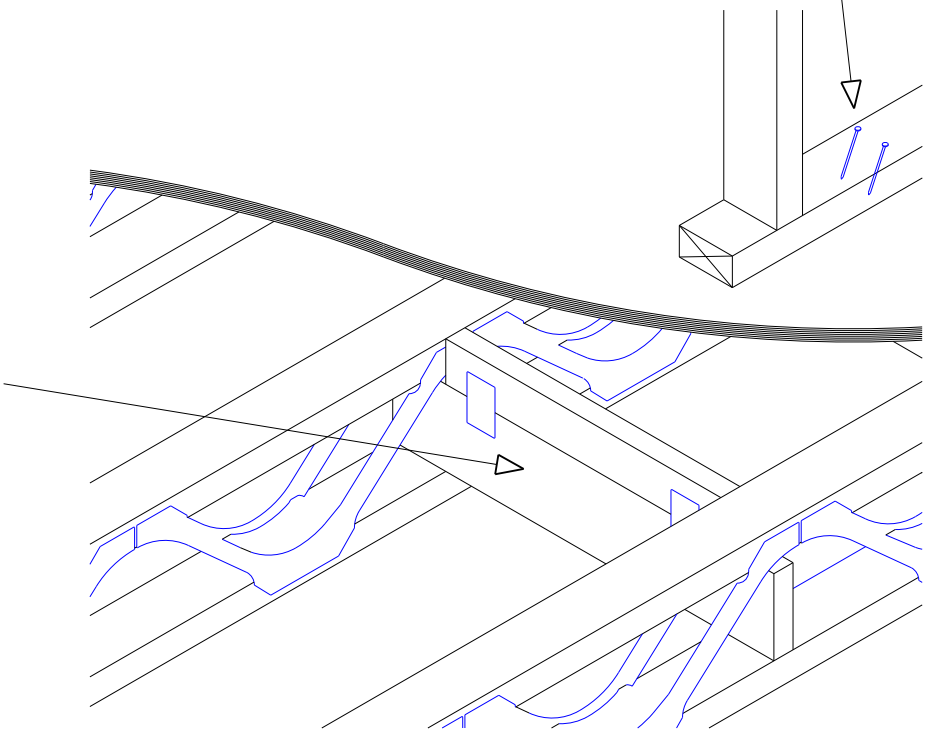


Non-Loadbearing Wall Parallel with Posi-Joists.

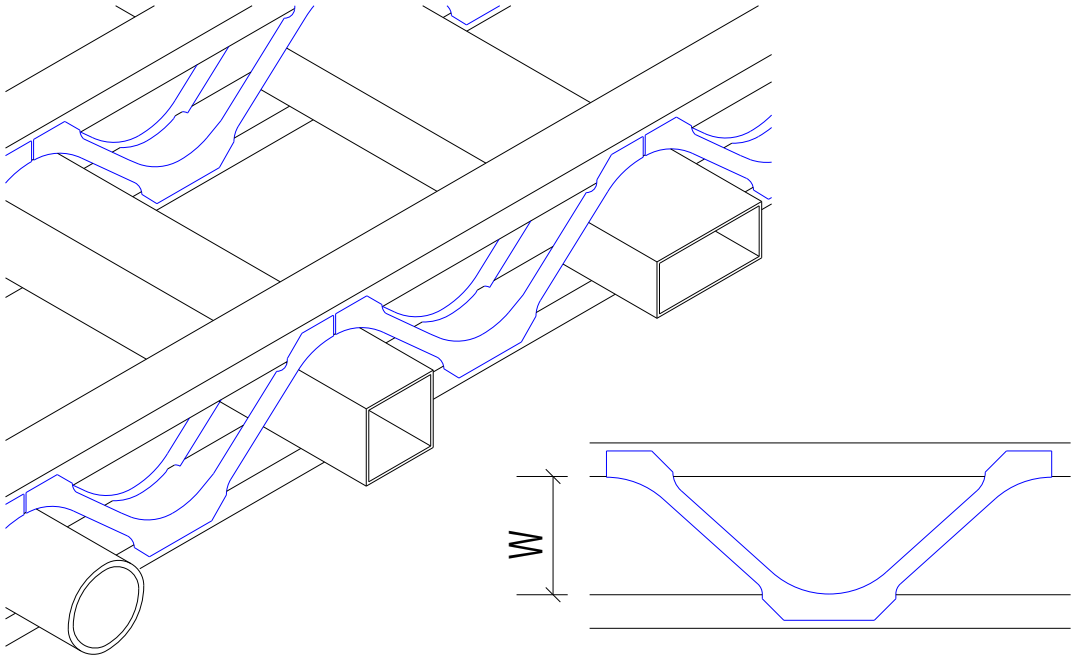


Wall panel skew nailed through onto noggin with a min of 2 no 3.35 dia galvanised wire nails, length to suit.

Plated stacked noggin supported on top of bottom chord of Posi-Joists



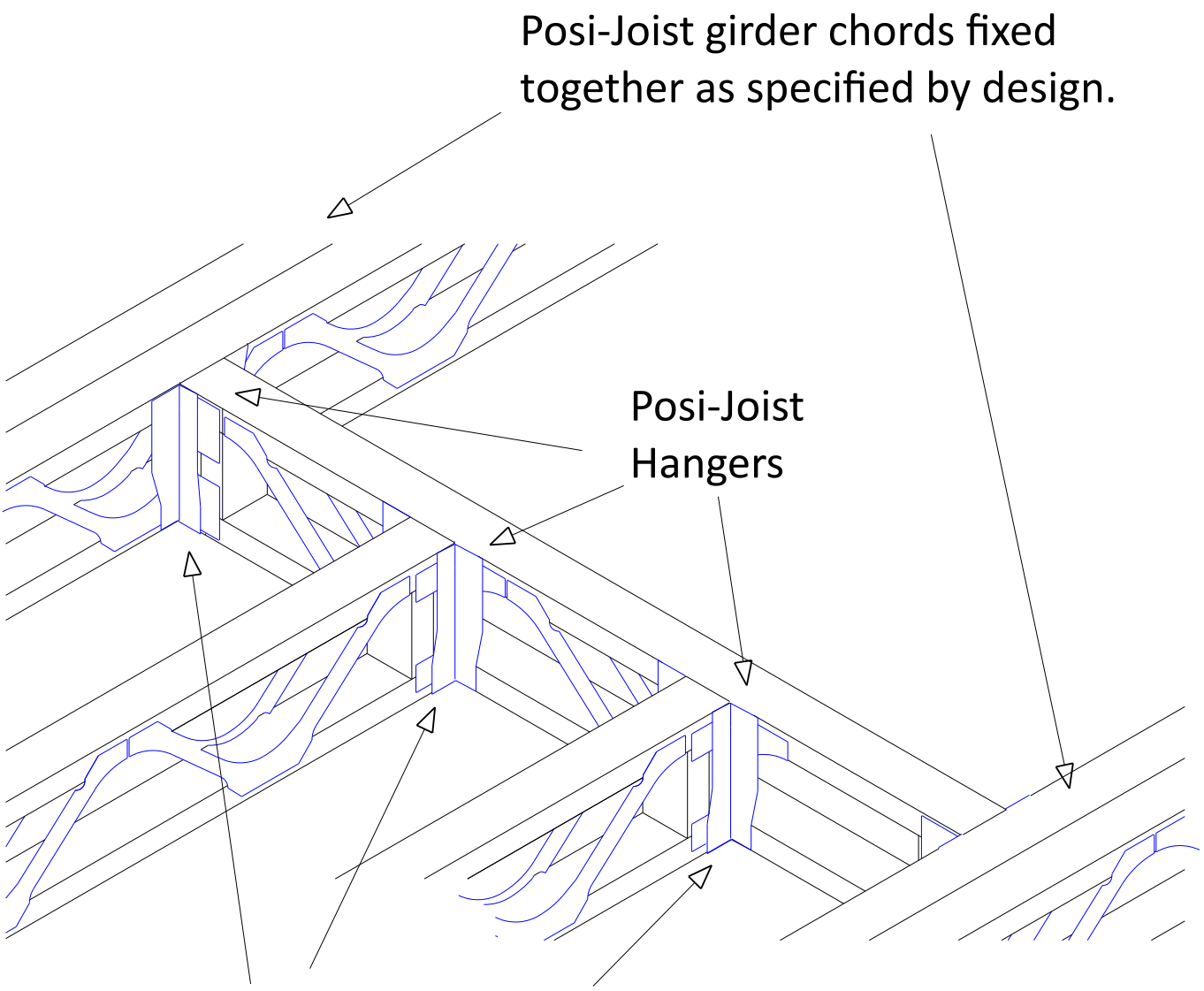
Non-Loadbearing Partitions Parallel To Posi-Joists (Alternative Noggin Support Detail)



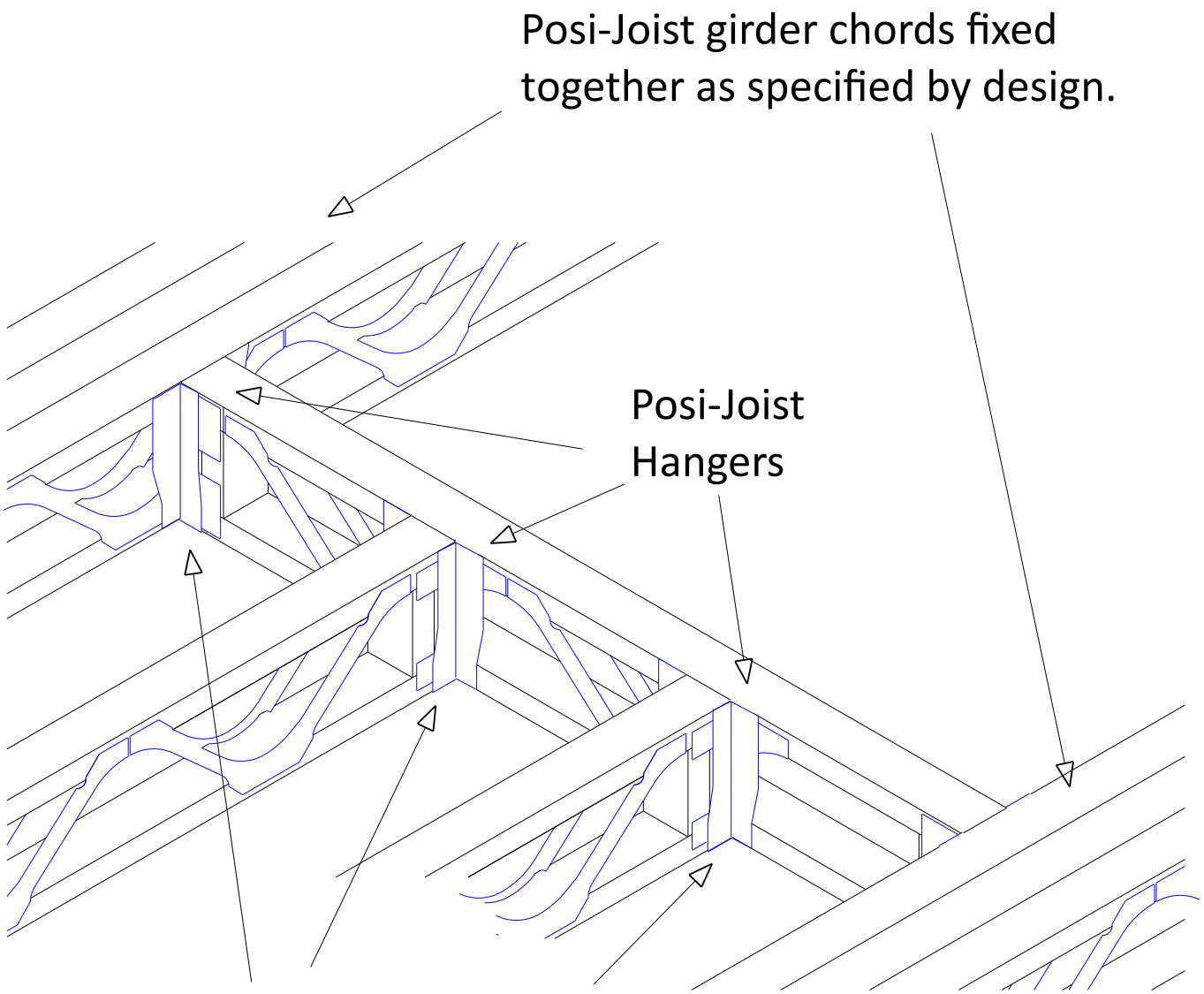
POSI JOIST SIZE	W	CIRCLE DIA	SQUARE	RECTANGLE DEPTH										
				50	75	100	125	150	175	200	225	250	275	300
				RECTANGLE WIDTH										
PS-8	108	105	95	270	180	90	-	-	-	-	-	-	-	-
PS-9	131	124	115	310	240	180	100	-	-	-	-	-	-	-
PS-10	159	150	135	320	270	210	160	80	-	-	-	-	-	-
PS-12	210	190	155	350	310	260	210	160	110	70	-	-	-	-
PS-14	279	250	200	490	440	390	350	300	250	200	160	110	60	-
PS-16	327	272	220	510	470	430	390	340	300	260	220	170	130	90

LARGE SERVICES MAY NEED TO BE OF FLEXIBLE MATERIAL TO BE ABLE TO BE FED THROUGH THE VOIDS IN THE POSI-JOISTS

Maximum Duct Sizes

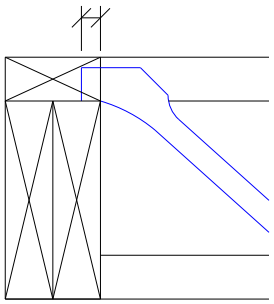


Opening with 2-ply Posi-Joist Girder and Posi-Joist Trimmer Beam



Opening With 3 Ply Posi-Joist Girder and Posi-Joist Trimmer Beam

Unless proven by design the Posi-Strut should overhang the bearing by 15mm.

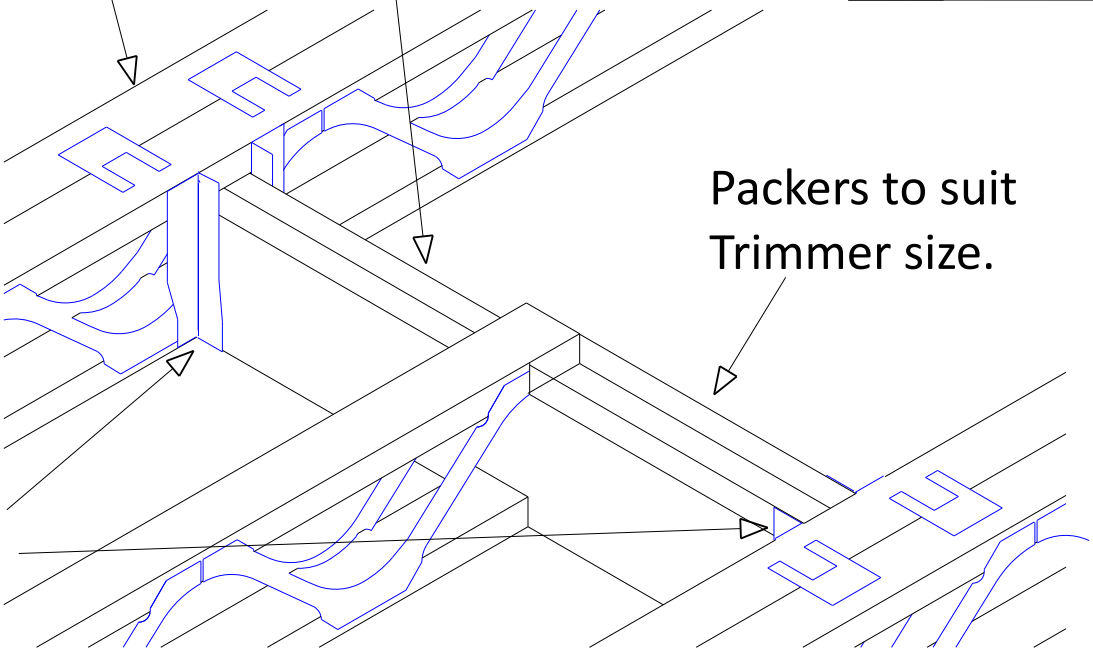


Posi-Joist girder chords fixed together as specified by design.

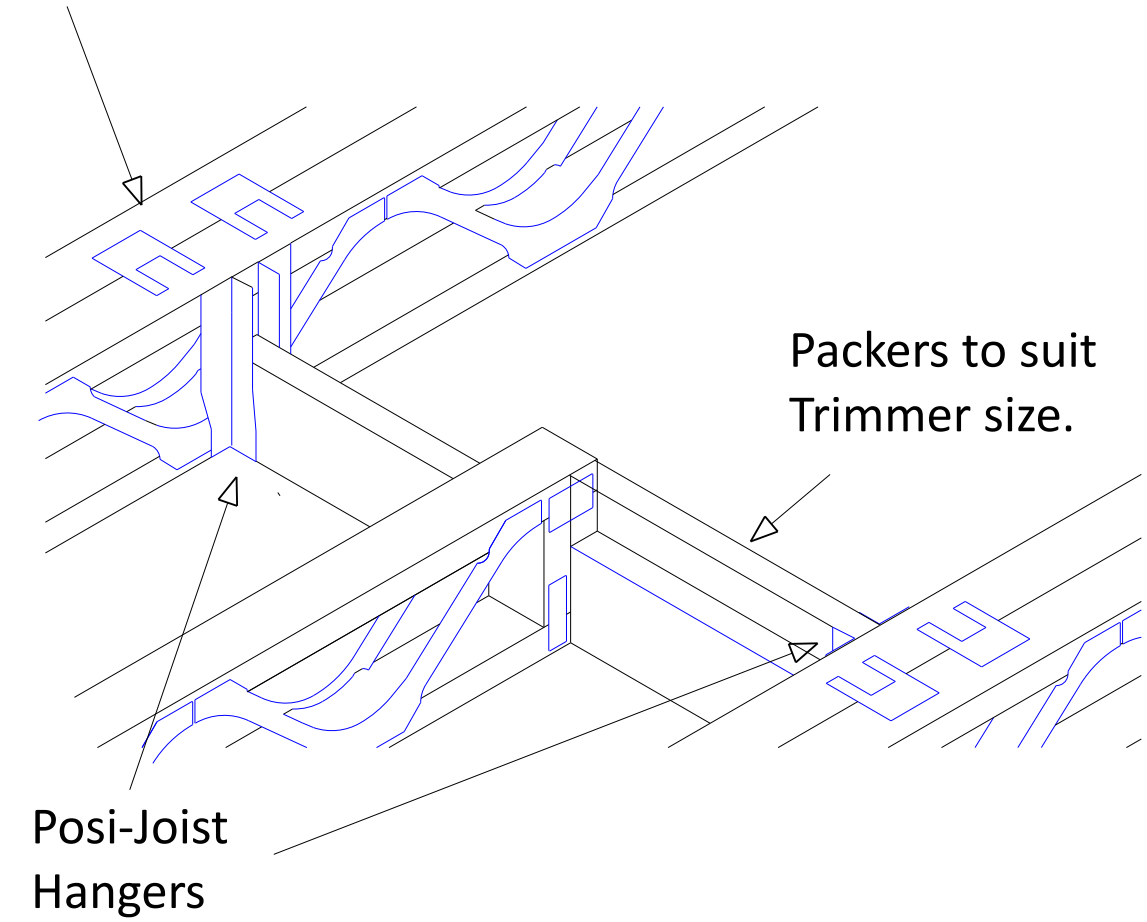
Solid or EWP trimmer (Depth to suit)

Packers to suit Trimmer size.

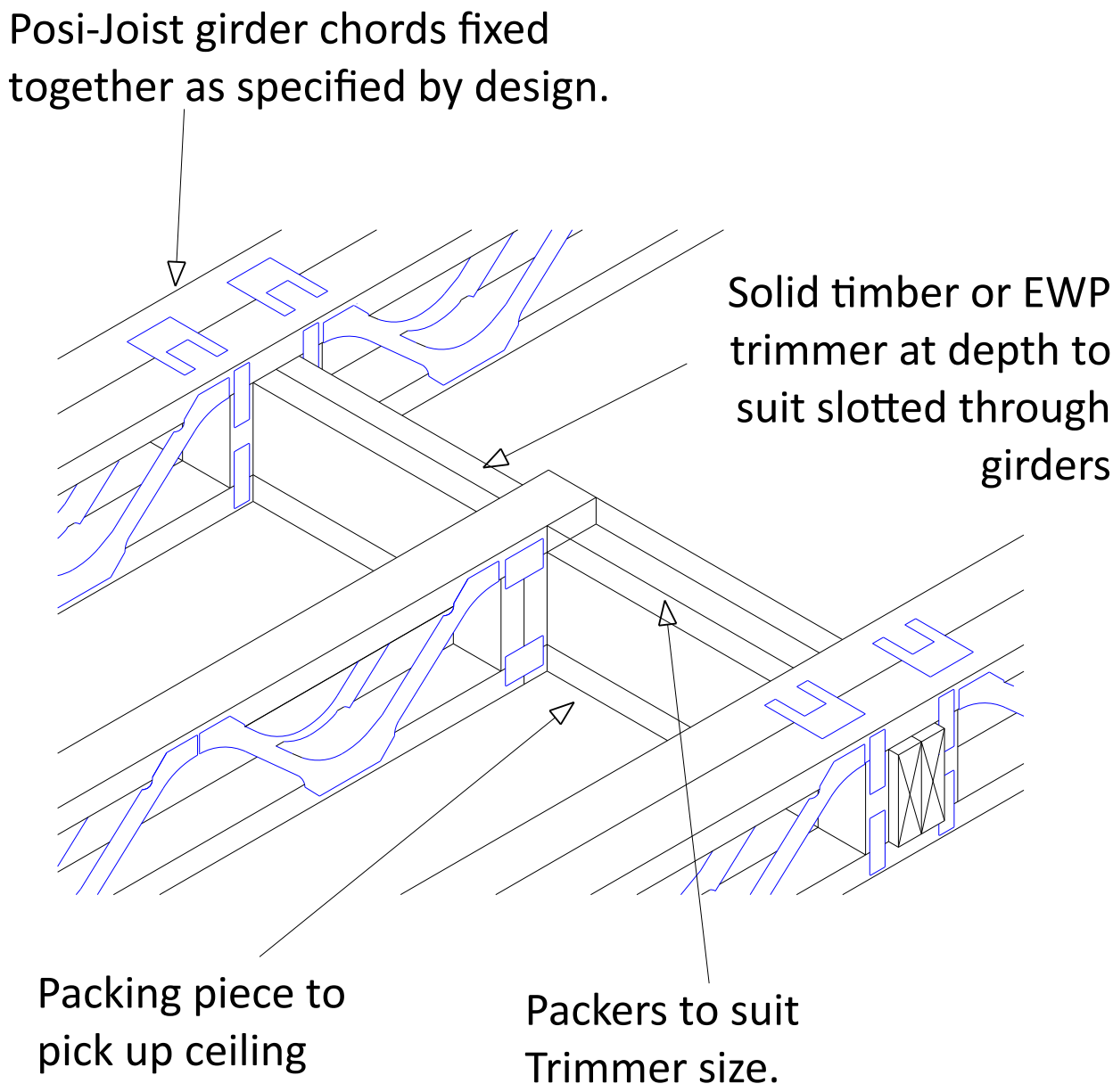
Posi-Joist Hangers



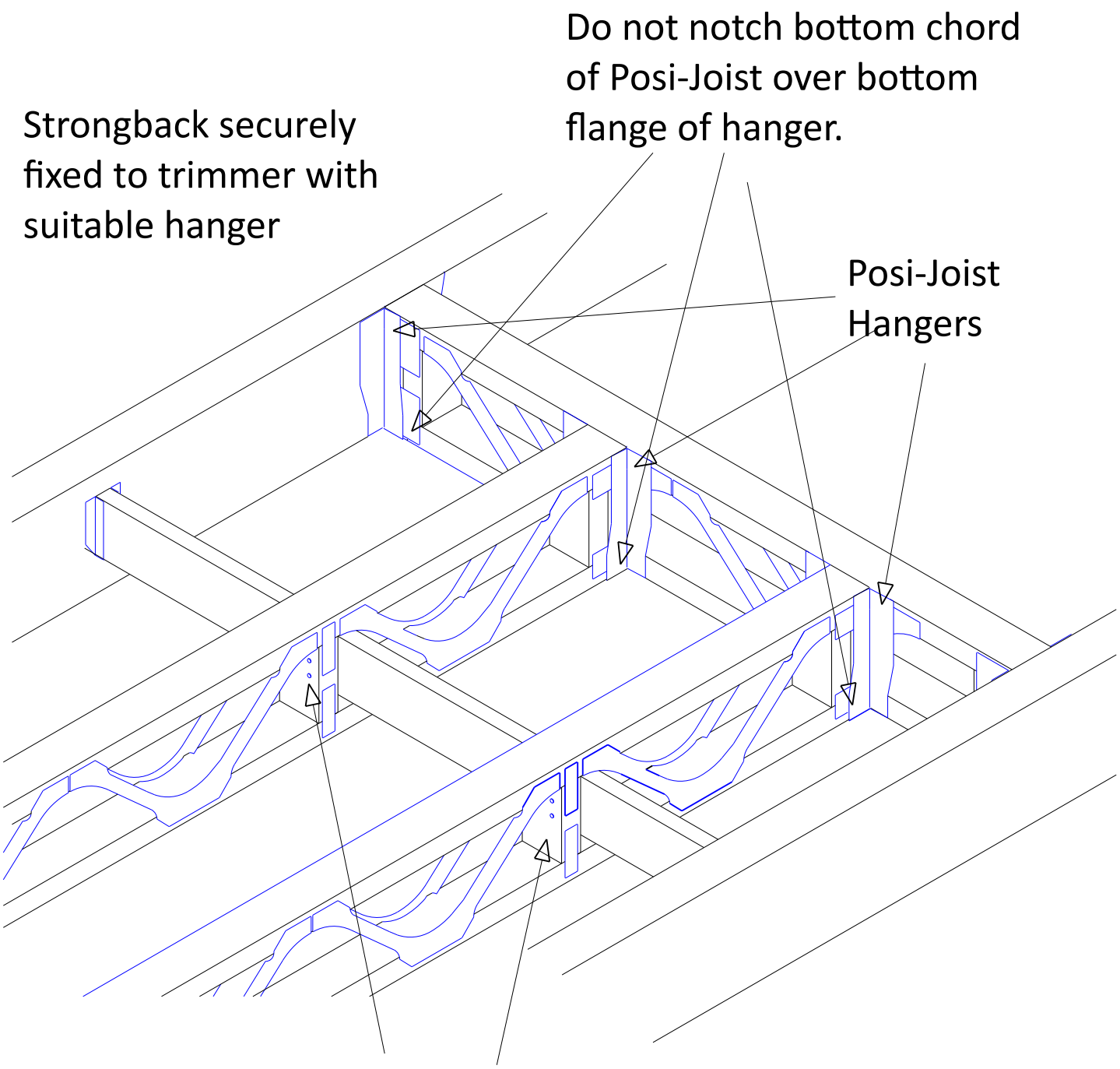
Opening with Posi-Joist Girder and Solid or EWP Trimmer Beam.



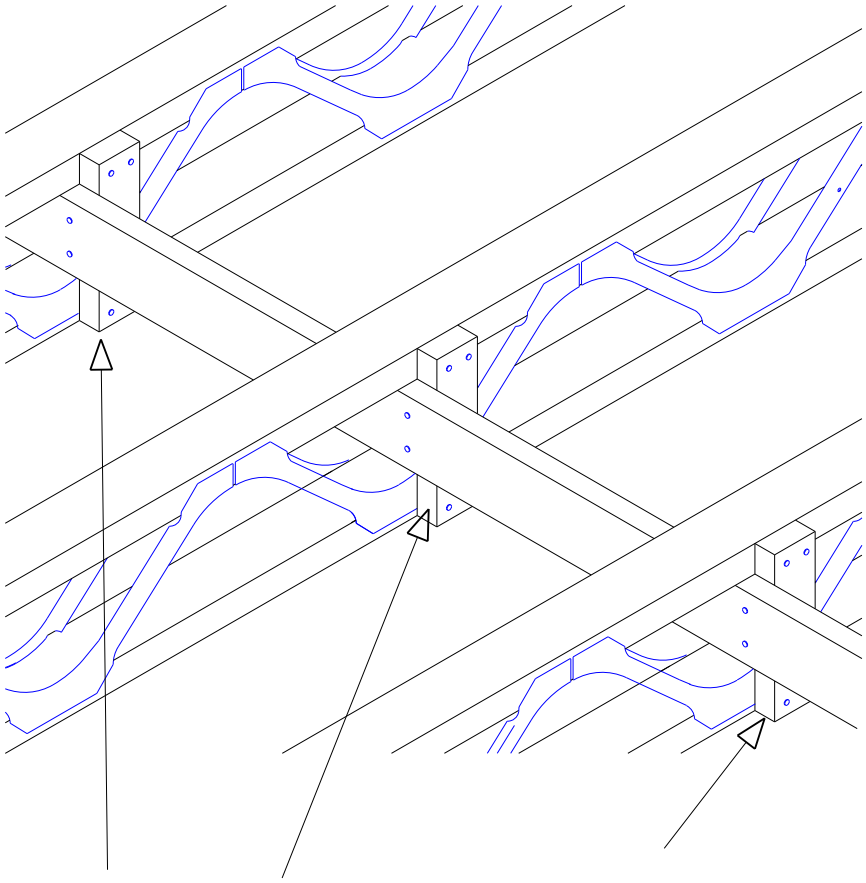
Staircase Opening With Posi-Joist Girder and Solid Timber Trimmer Beam On Hangers



Staircase Opening With Solid Timber Or EWP Trimmer Beam Slotted Through Posi-Joist Girder



Staircase Opening With EWP Stair Trimmer and Posi-Joist Trimmer beam



38x75 (min) blocks twice nailed to top and bottom members and twice nailed to strongback using 3.1x75mm long galvanised ring shank nails.

WEB SIZE	RECOMMENDED MIN STRONGBACK SECTION
PS-8, PS-9 & PS-10	47 x 97 TR26*
PS12, PS-14 & PS16	36 x 147 TR26*

Minimum recommended strongback sizes are given above which may be different when floor is designed to EC5 vibration check, see Posi-Joist calculations ect. Position strongbacks tight to the underside of top chord.

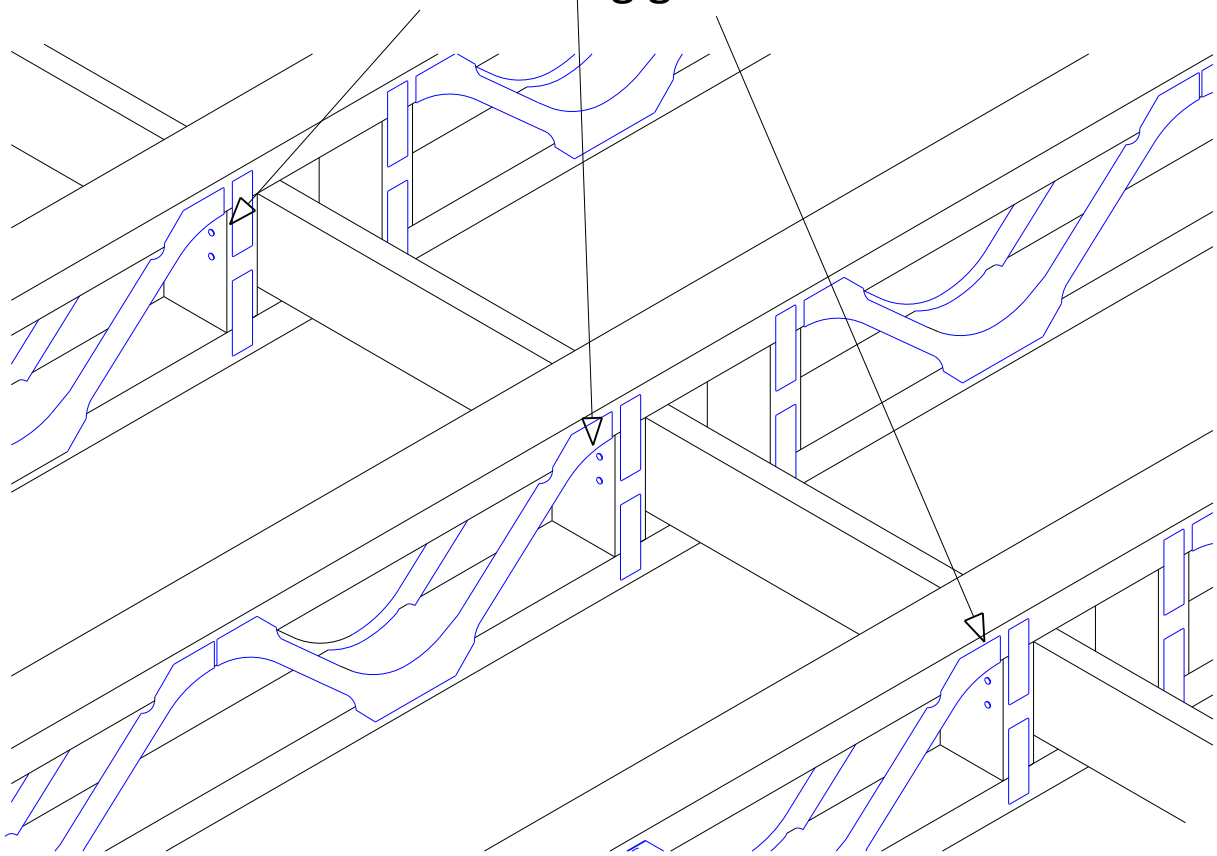
INSERT STRONGBACK THROUGH POSI - JOISTS BEFORE FIXING AS IT CANNOT BE INSTALLED AFTE THEY HAVE BEEN FIXED.

Strongback Detail

Fixed to Site Added Blocks

(Fix at a maximum of 4.0 metre centres and within effective zone)

Twice nail brace to web using
3.1 x 75mm long galvanised wire nails



WEB SIZE	RECOMMENDED MIN STRONGBACK SECTION
PS-8, PS-9 & PS-10	47 x 97 TR26*
PS12, PS-14 & PS16	36 x 147 TR26*

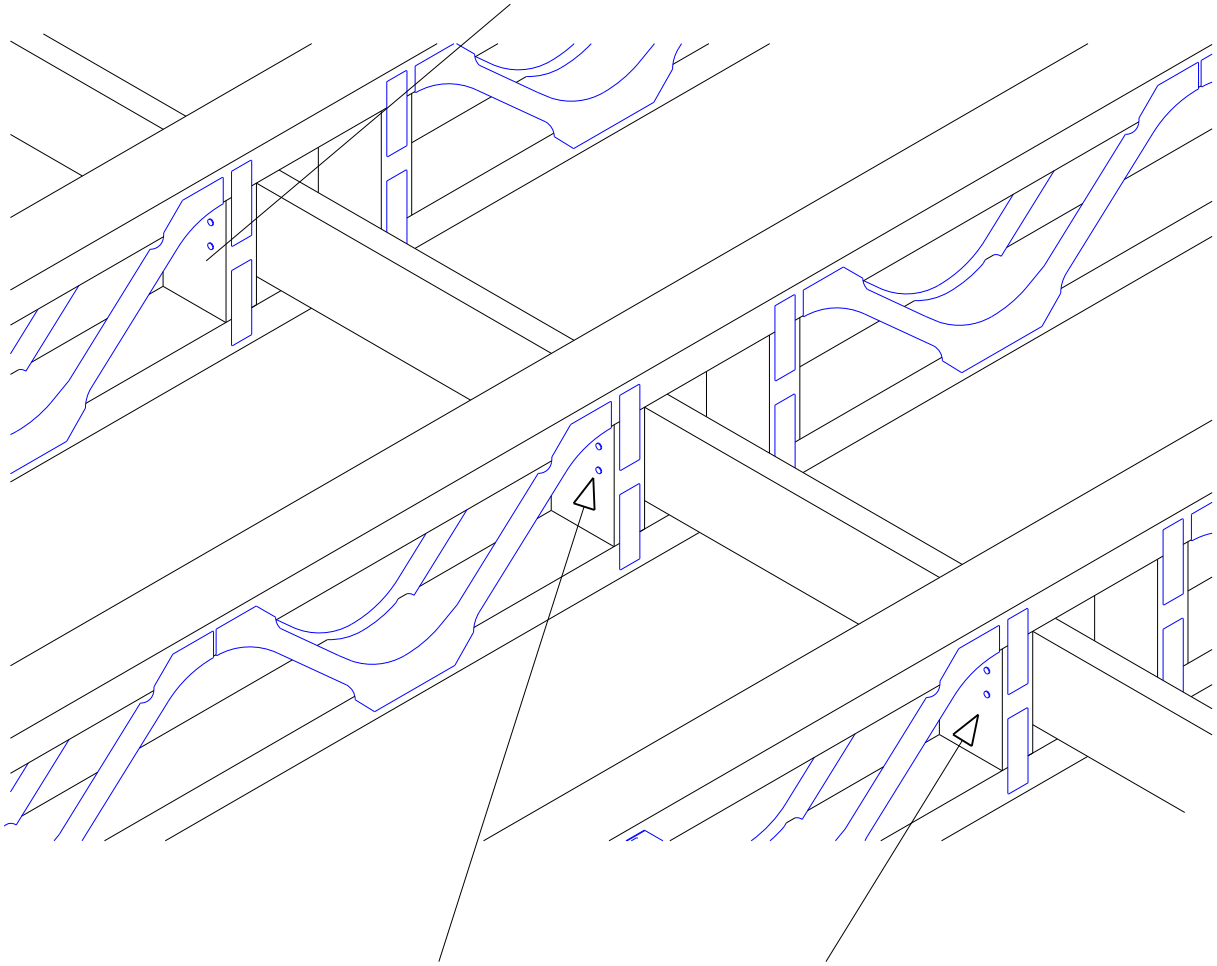
Minimum recommended strongback sizes are given above which may be different when floor is designed to EC5 vibration check, see Posi-Joist calculations ect.
Position strongbacks tight to the underside of top chord.

INSERT STRONGBACK THROUGH POSI - JOISTS BEFORE FIXING AS IT CANNOT BE INSTALLED AFTE THEY HAVE BEEN FIXED.

Strongback Detail

Fixed To Built In Vertical Webs

(Fix at a maximum of 4.0 metre centres and within effective zone)



Twice nail brace to web using
3.1x75mm long galvanised wire nails.

WEB SIZE	RECOMMENDED MIN STRONGBACK SECTION
PS-8, PS-9 & PS-10	47 x 97 TR26*
PS12, PS-14 & PS16	36 x 147 TR26*

Minimum recommended strongback sizes are given above which may be different when floor is designed to EC5 vibration check, see Posi-Joist calculations ect.
Position strongbacks tight to the underside of top chord.

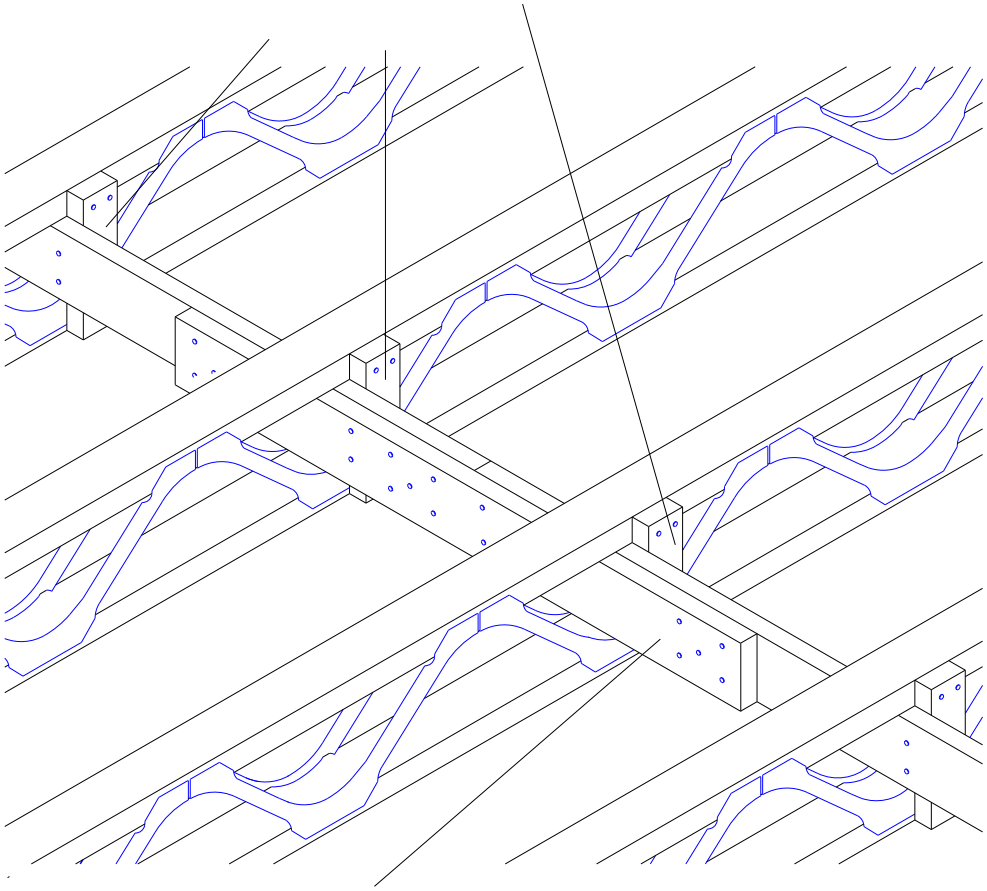
INSERT STRONGBACK THROUGH POSI - JOISTS BEFORE FIXING AS IT CANNOT BE INSTALLED AFTE THEY HAVE BEEN FIXED.

Strongback Detail

Fixed To Built In Vertical Webs

(Fix at a maximum of 4.0 metre centres and within effective zone)

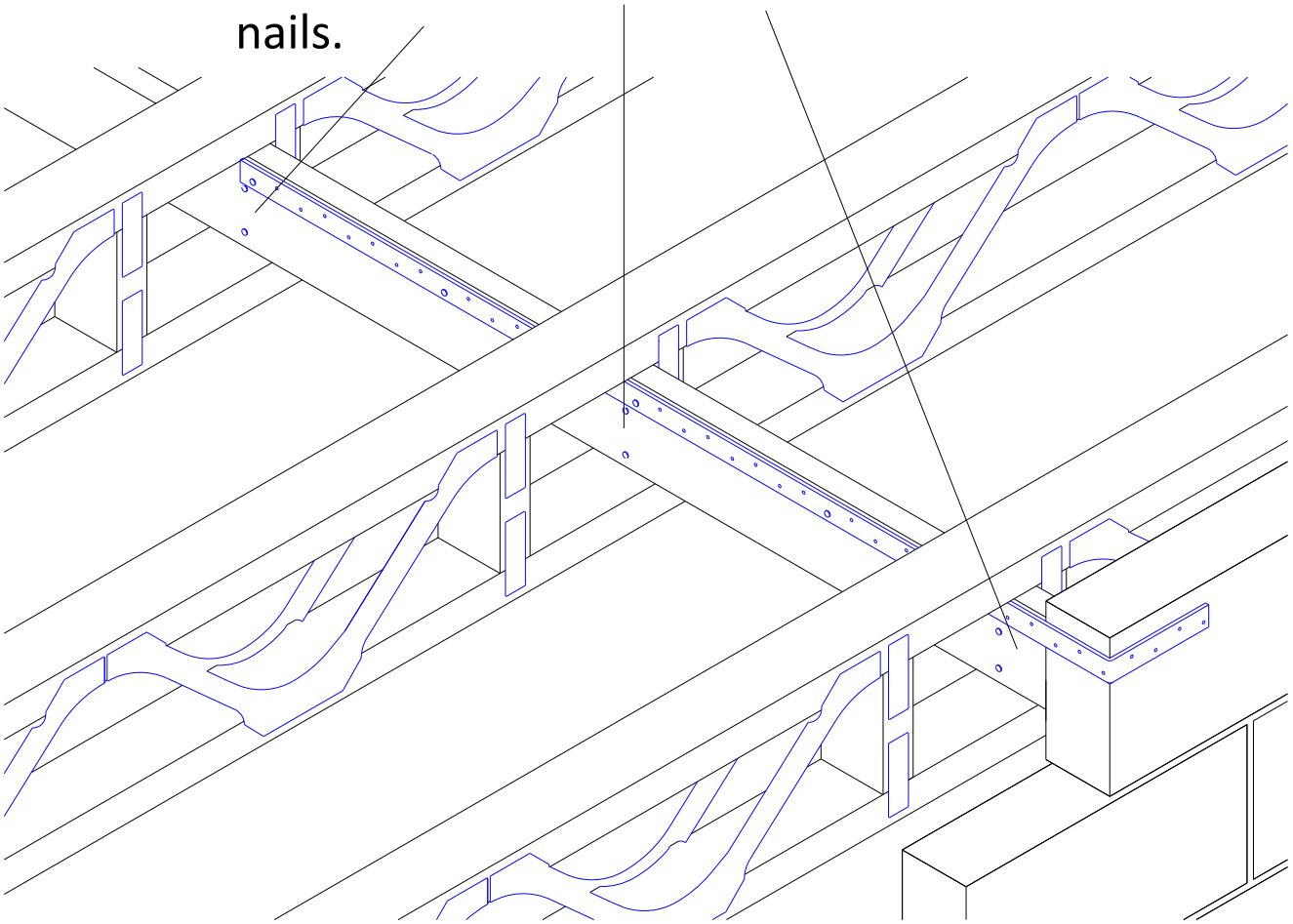
38x75 (min) blocks twice nailed to top and bottom members and twice nailed to strongback using 3.1x75mm long galvanised annular ringshank nails.



1200mm long splice fixed with 10no 3.1x90mm long galvanised annular ringshank nails each side of splice, nailed through and clenched over on far side.

Strongback Splice
Fixed to Site Added Blocks

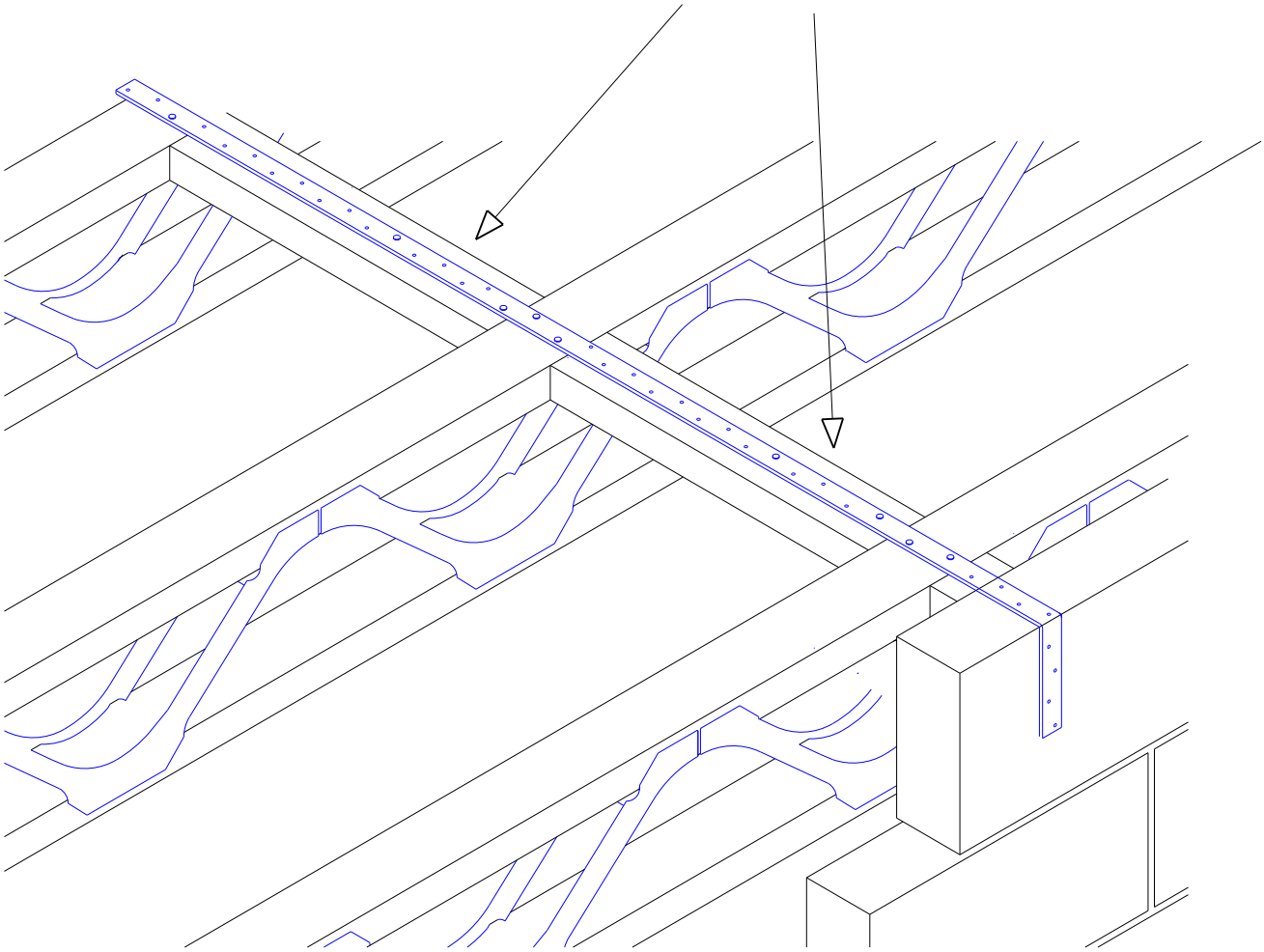
Strongback twice nailed to brace using min 3.1x75mm long galvanised annular ringshank nails.



Strap fixed along top edge of strongback. Refer to strap manufacturers details for fixing method.

Horizontal Restraint Strap Fixed to Strongback

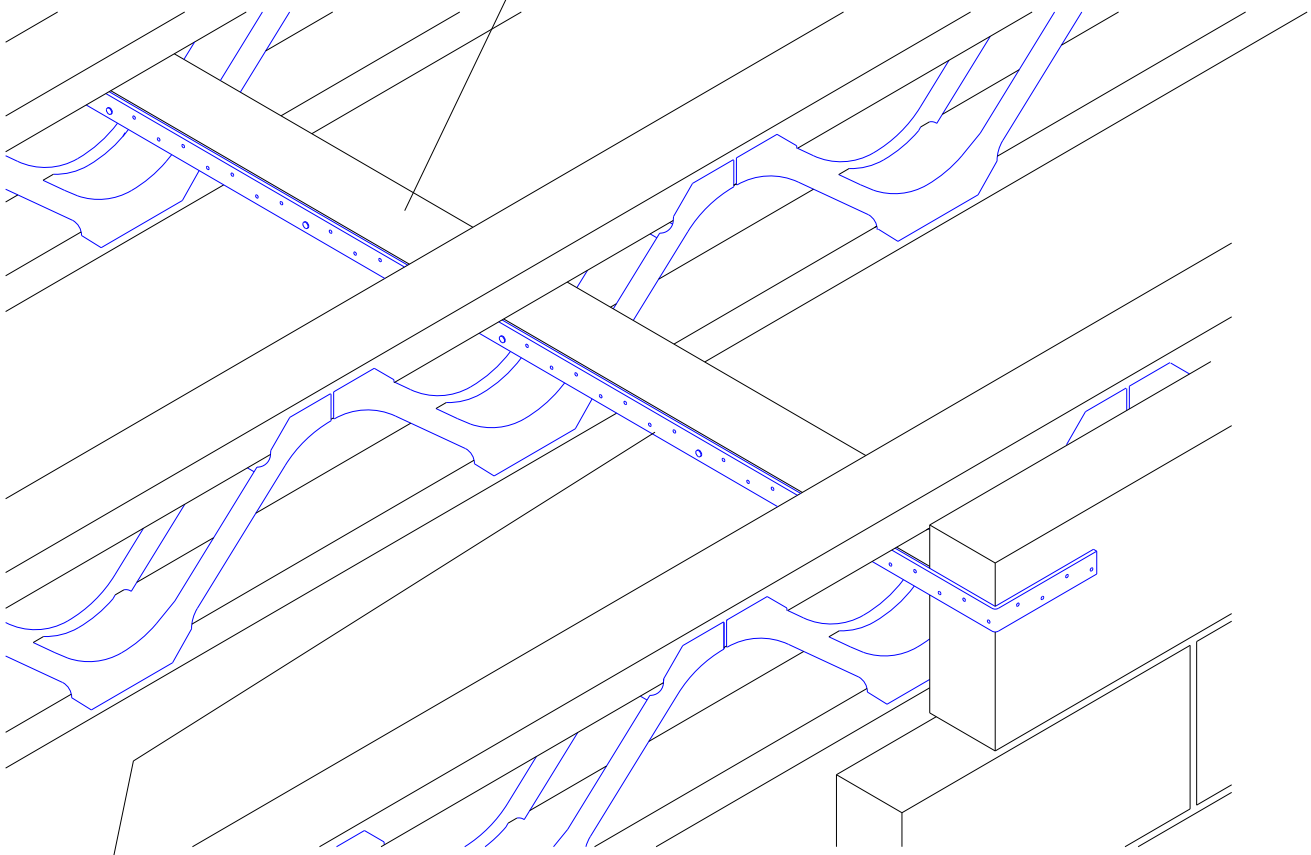
min 35 x 72 C16 noggin fixed between joists.



Strap fixed to noggin. Refer to strap manufacturers details for fixing method.

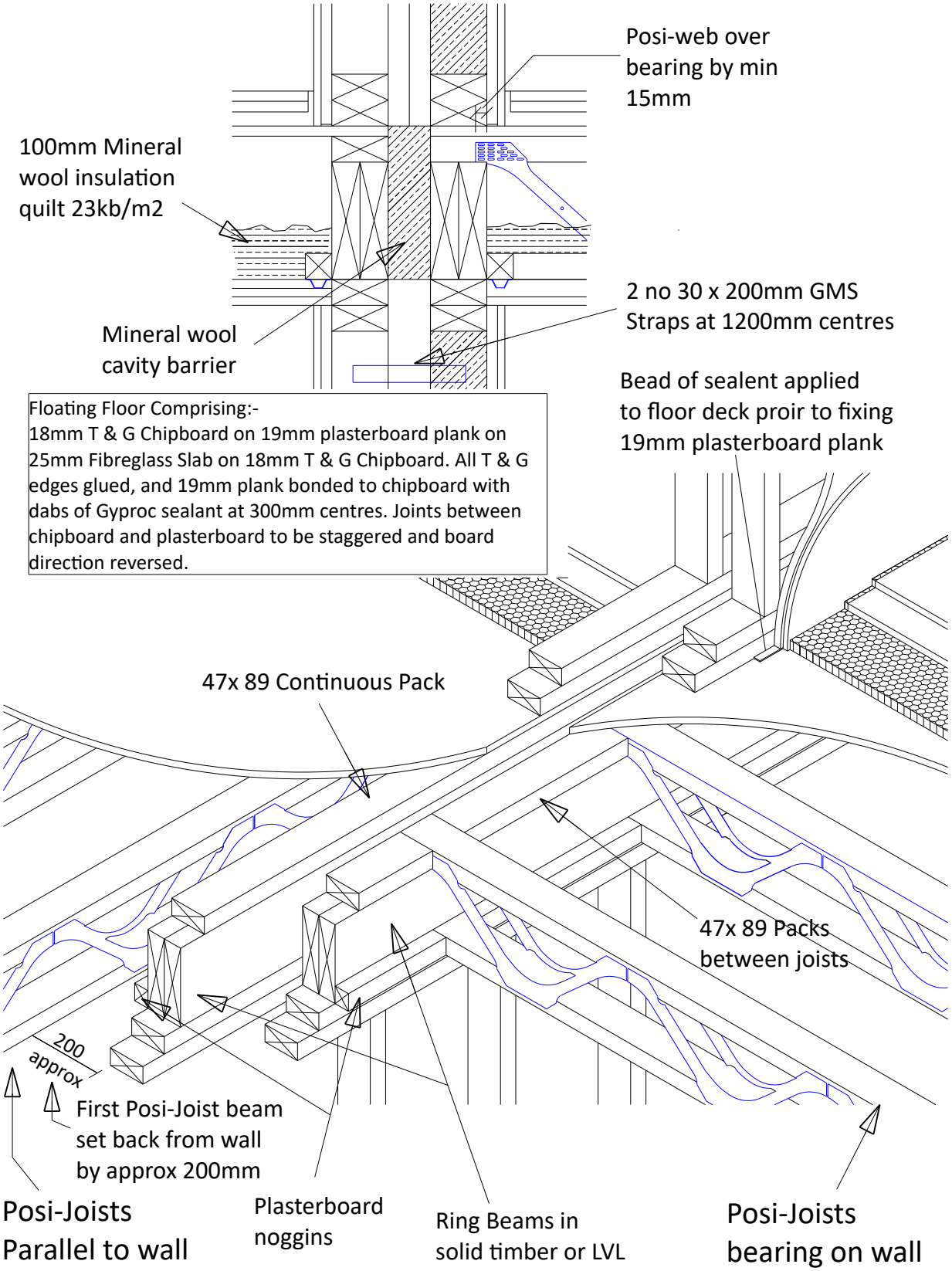
Horizontal Restraint Strap Fixed To Noggins

35x97 C16 Noggin nailed to underside of top chord of Posi-Joist using 3.1x75mm long galvanised annular ringshank nails.



Strap fixed along top edge of strongback. Refer to strap manufacturers details for fixing method.

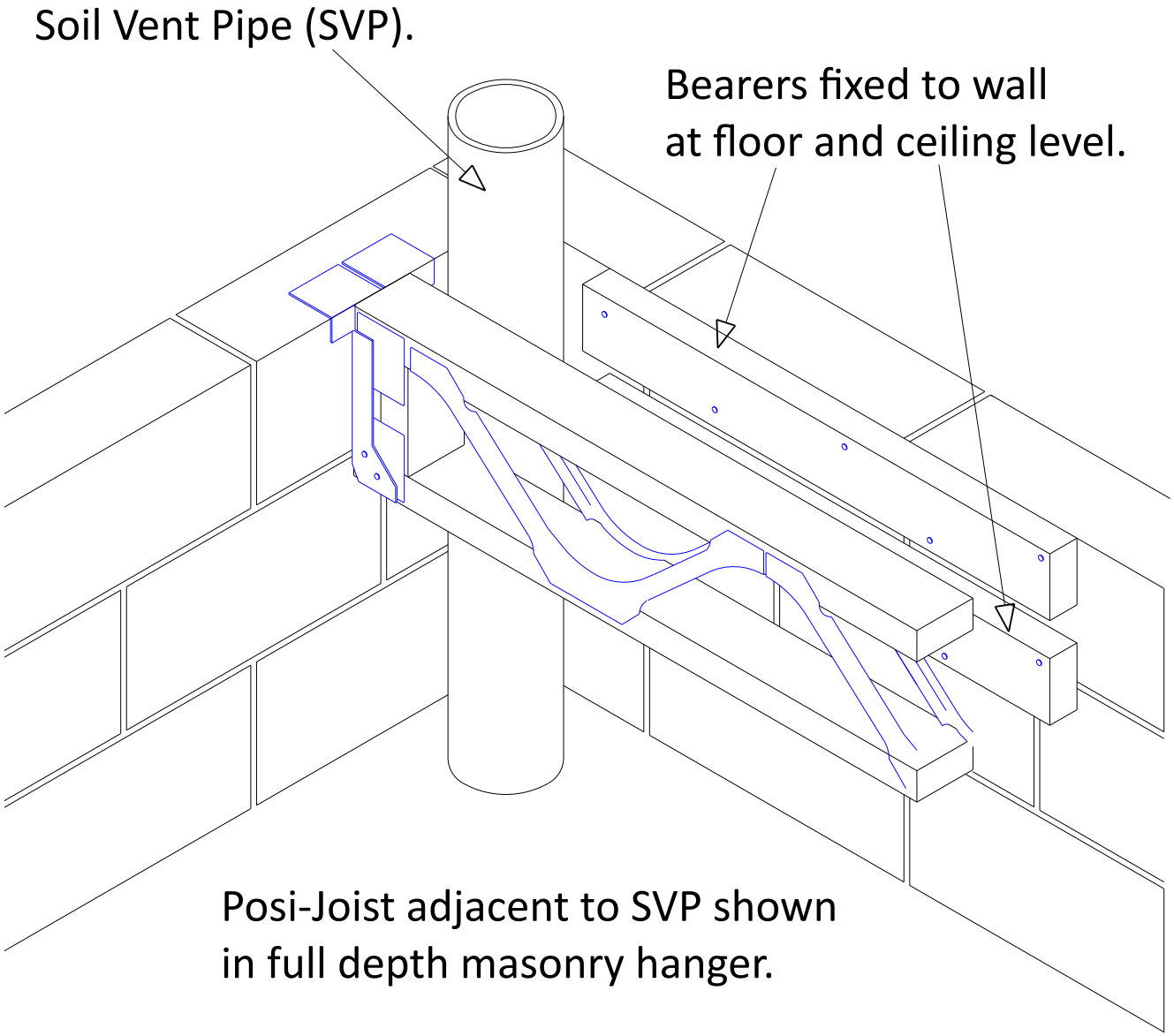
Horizontal Restraint Strap Fixed to Continuous Noggin



Floating Floor Comprising:-
18mm T & G Chipboard on 19mm plasterboard plank on 25mm Fibreglass Slab on 18mm T & G Chipboard. All T & G edges glued, and 19mm plank bonded to chipboard with dabs of Gyproc sealant at 300mm centres. Joints between chipboard and plasterboard to be staggered and board direction reversed.

Ceiling (not shown) comprising:-
2 Layers 15mm Gyproc Fireline Board on 16mm resilient bars at 400mm centres. First layer fixed with 38mm Gyproc screws at 230mm centres. Second layer fixed with 60mm Gyproc screws at 230mm centres. Staggered with first layer screws.
Lay Firleline board in echelon pattern with staggered joints.

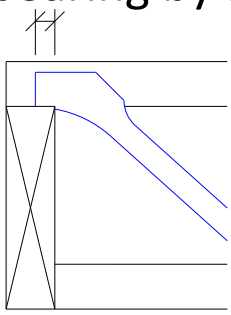
Typical Timber Frame Compartment Floor / Party Wall Detail

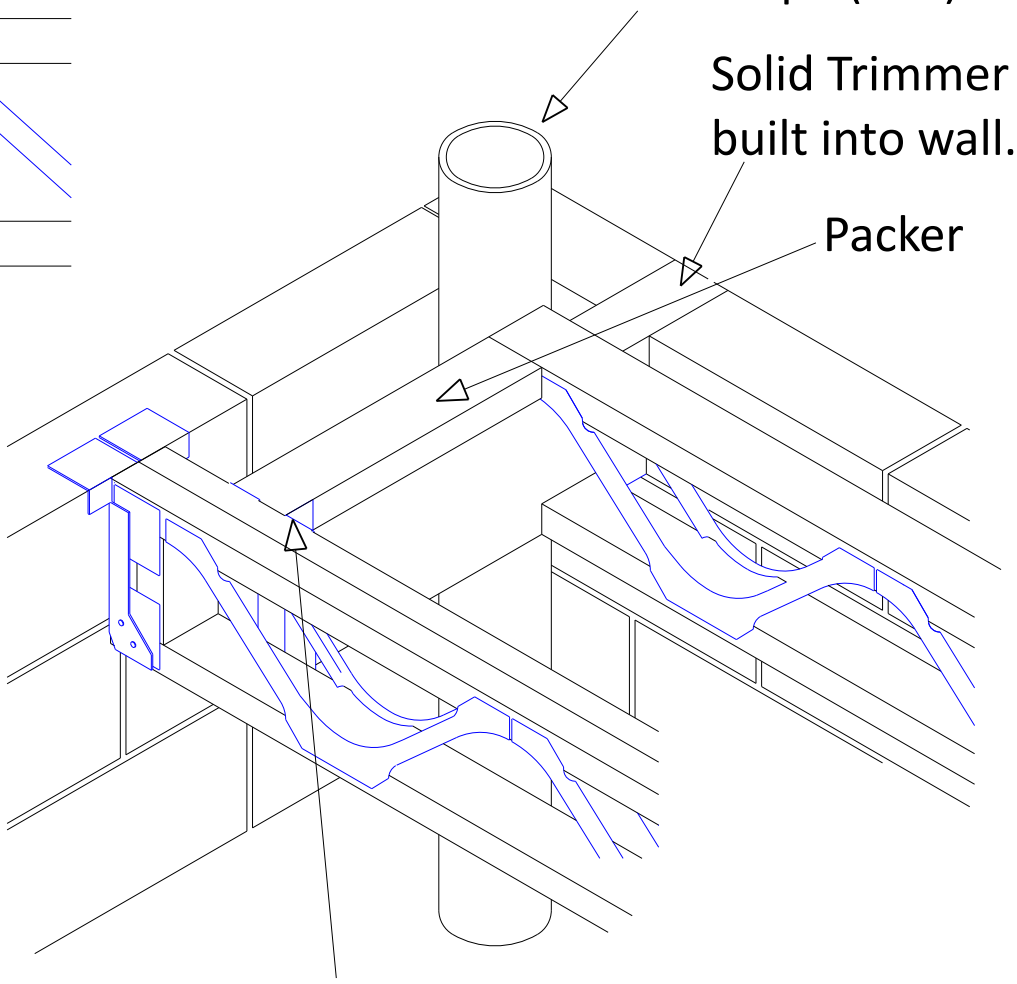


Note: This may not perform well acoustically as sound will be transmitted directly from the floor to the bearer through the inner leaf of the wall.

Fixing Round SVP using Bearer Plates

Unless proven by design the Posi-Strut should overhang the bearing by 15mm

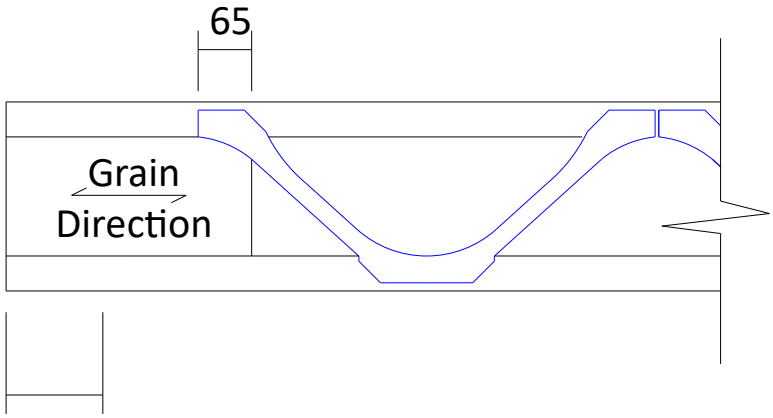




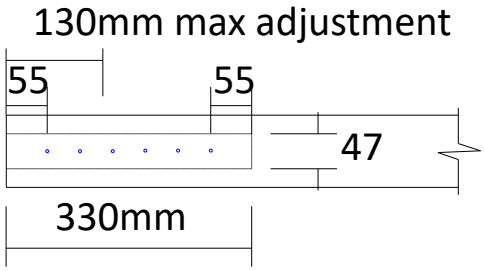
Fixing Round SVP using Solid Trimmer.

330mm solid block from dry well seasoned timber tight fixed at manufacture

Max 130mm to be trimmed on site



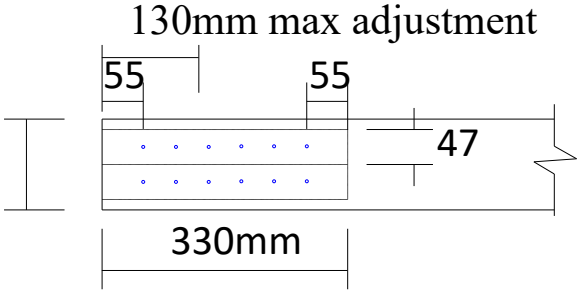
Side elevation



Block nailed to top and bottom chords using 6 no. 3.1mm diameter 90mm long power driven annular ring-shank nails at 44mm centres.

Plan view of Posi-Joist with one block

Two blocks required when chords are 122mm or 147mm

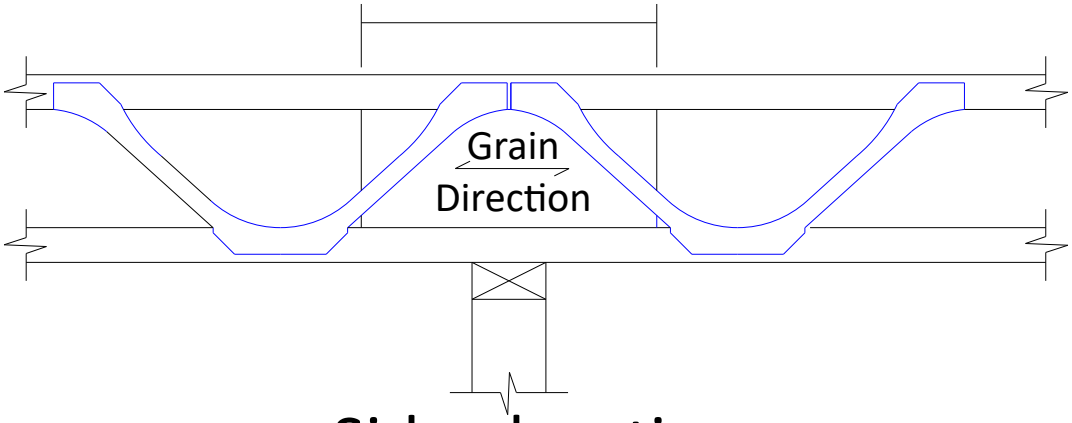


Block nailed to top and bottom chords using 6 no. 3.1mm diameter 90mm long power driven annular ring-shank nails at 44mm centres.

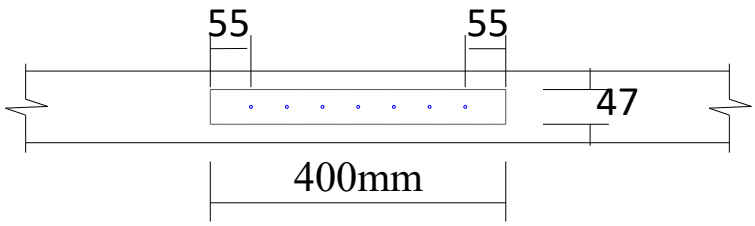
Plan view of Posi-Joist with two blocks

General Support Details
Site Length Adjustment

400mm solid block from dry well seasoned timber
tight fixed at manufacture



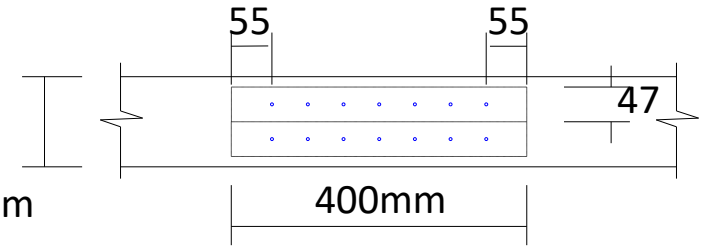
Side elevation



Block nailed to top and bottom chords using
7 no. 3.1mm diameter 90mm long power driven
annular ring-shank nails at 48mm centres.

Plan view of Posi-Joist
with one block

Two blocks
required when
chords are
122mm or 147mm



Block nailed to top and bottam chords using
7 no 3.1mm diameter 90mm long power driven
annular ring-shank nails at 48mm centres.

Plan view of Posi-Joist
with two blocks

General Support Details

Internal Blocked Bearing Detail