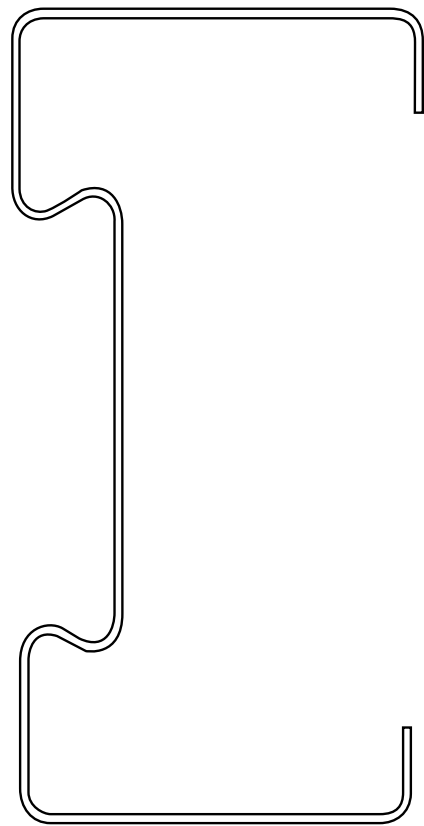


SUPRAFRAME[®]



DESIGN REFERENCE

75mm Open Stud System
W28N Wall Design




This document is to be used in conjunction with the BHP House Framing Customer Information Manual for SUPRAFRAME[®] Wall Framing System.

Specifications included in this document are subject to change without notice. Reference must be made to a controlled copy of the BHP House Framing Customer Information Manual for current specifications.



BHP House Framing

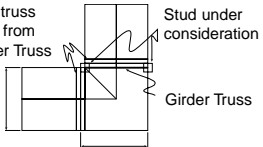
**TILE W28N****WALL DESIGN - Max Overhang 750mm**

Member	Truss Span	Wall Height 2400mm	Wall Height 2700mm
 Common Stud	8m	0.6mm Open Studs @ 600mm c/c 1 row of nogging	0.6mm Open Studs @ 600mm c/c 1 row of nogging
	10m	0.6mm Open Studs @ 600mm c/c 1 row of nogging	0.6mm Open Studs @ 600mm c/c 1 row of nogging
	12m	0.6mm Open Studs @ 600mm c/c 1 row of nogging	0.6mm Open Studs @ 600mm c/c 1 row of nogging
Jamb Stud (opening 1800mm) Up to 10m truss spans		1 x 0.6mm Open Studs beside opening	1 x 0.6mm Open Studs beside opening
Jamb Stud (opening 2700mm) Up to 12m truss spans		2 x 0.6mm Open Studs beside opening	2 x 0.6mm Open Studs beside opening
NOTE: 1. If plasterboard is to be used for wall lining, the maximum stud spacing is 600mm. 2. Truss spacing is 600mm.			


LINTELS

Lintel Span (mm)	Max. Truss Span (m)	
	Single Lintel	Double Lintel
900	12 (12)	12 (12)
1200	12 (12)	12 (12)
1500	11 (12)	12 (12)
1800	8.9 (10.8)	12 (12)
2100	6.3 (9.1)	12 (12)
2400	3.7 (6.3)	12 (12)
2700	2.3 (4.2)	9.2 (11.3)
NOTE: 1. Figures for 200x35x1.0 lintels appear first. Figures for 200x35x1.5 lintels are bracketed. 2. For 280x35x1.5 single lintels, the max. truss span is 12m for spacings up to 1200mm. 3. Use 0.75mm top plate.		

STUDS UNDER GIRDER TRUSSES

 First truss back from Girder Truss Stud under consideration Bridge Truss Girder Truss	Total Area				
	10m ²	15m ²	20m ²	25m ²	30m ²
	2 x 0.6 studs	1 SHS	1 SHS	1 SHS	1 SHS
NOTE: 1. Total area = (bridge truss span x girder truss span)/4. 2. SHS = 75 x 75 x 2.5mm Square Hollow Section.					

TOP PLATE

 Common Stud Spacing (mm)	Truss Spacing (mm)		
	600	900	1200
	Truss Span (m)	Truss Span (m)	Truss Span (m)
450	11.5 (12)	7.5 (12)	5 (9)
600	10.0 (12)	6.0 (11)	4 (8)
NOTE: Figures are for 0.75 (1.0)mm top plate thickness.			

CONNECTIONS

	Truss Span (m)		
	8m	10m	12m
Top Plate/Stud	2 clinches per side	2 clinches per side	2 clinches per side
Bottom Plate/Stud	2 clinches per side	2 clinches per side	2 clinches per side
NOTE: 1. Use 0.75mm plate and O.6mm stud. 2. 1200mm truss spacing.			

INTERNAL NON LOAD-BEARING WALLS

2400mm Wall Height	3600mm Wall Height
0.6mm Open Stud at 1000mm c/c	0.6mm Open Stud at 500mm c/c
NOTE: It is permissible to interpolate within the table.	

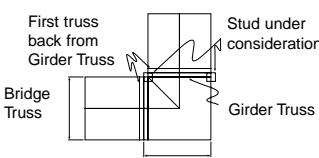
SHEET W28N
WALL DESIGN - Max Overhang 750mm

Member	Truss Span	Wall Height 2400mm	Wall Height 2700mm
 Common Stud	8m	0.6mm Open Studs @ 1000mm c/c 1 row of nogging	0.6mm Open Studs @ 750mm c/c 1 row of nogging
	10m	0.6mm Open Studs @ 1000mm c/c 1 row of nogging	0.6mm Open Studs @ 750mm c/c 1 row of nogging
	12m	0.6mm Open Studs @ 1000mm c/c 1 row of nogging	0.6mm Open Studs @ 750mm c/c 1 row of nogging
Jamb Stud (opening 2700mm) Up to 12m truss span		1 x 0.6mm Open Stud beside opening	1 x 0.6mm Open Stud beside opening
NOTE: 1. If plasterboard wall linings are to be used, maximum stud spacing is 600mm. 2. Truss spacing is 1200mm.			

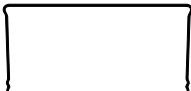
LINTELS

- NOTE:** 1. For all openings up to and including 2700mm, and truss spans up to and including 12m, use a 200 x 35x1.0mm single angle lintel.
 2. Use 0.75mm top plate.

STUDS UNDER GIRDER TRUSSES

	Total Area				
	10m ²	15m ²	20m ²	25m ²	30m ²
	1 (1)	2 (1)	2 (2)	2 (2)	SHS
NOTES: 1. Total area = (bridge truss span x girder truss span)/4. 2. Figures are for 0.6 (0.75)mm stud thickness. 3. SHS = 75 x 75 x 32mm Square Hollow Section.					

TOP PLATE

	Common Stud Spacing (mm)	Truss Span (m)		
		600	900	1200
			Truss Span (m)	Truss Span (m)
	450	12 (12)	12 (12)	12 (12)
	600	12 (12)	12 (12)	10.5 (12)
NOTE: Figures are for 0.75 (1.0)mm top plate thickness.				

CONNECTIONS

	Truss Span (m)		
	8m	10m	12m
Top Plate/Stud	2 clinches per side	2 clinches per side	2 clinches per side
Bottom Plate/Stud	2 clinches per side	2 clinches per side	2 clinches per side
NOTE: 1. Use 0.75mm plate and 0.6mm stud. 2. 1200mm truss spacing.			

INTERNAL NON LOAD-BEARING WALLS

2400mm Max Wall Height	3600mm Max Wall Height
0.6mm Open Stud at 1000mm c/c	0.6mm Open Stud at 500mm c/c
NOTE: It is permissible to interpolate within the table.	

National Certificate of Registration of a Building Product

No. 960199

This is to certify that:

BHP SUPRAFRAME™ Wall Framing System

Manufactured by:

BHP House Framing
Lot 1 Russell Street
Emu Plains NSW 2750
Telephone: (047) 20 1900
Facsimile: (047) 20 1999

And described in:

Reference material	Reference No.	Date of publication
BHP SUPRAFRAME™ Wall Framing System Manual		
Section 1	Component Details - Issue 1, October 1995	
Section 2	System Documentation	
2.1	Design Wall Framing	
2.1.1	Single or upper storey construction - Issue 1, October 1995	
2.1.2	Lower Storey of Two Storey Construction (Upper Storey Load) - Issue 1, Rev. 1, Oct. 1995 Pages 1-4, 6-21 and 46-69	
2.1.2	Issue 2, Rev. 1, July 1996 Pages 9 and 22-47	

Has been approved by Dr. Lita Pines (CSIRO) Division of Building Construction Engineering as suitable for construction of one storey and upper storey domestic buildings in non-cyclonic areas subject to the following conditions and provided it conforms to the description and is used under the conditions specified it will fulfil the requirements of the following clause of The Building Code of Australia:

B.1.3(c) Domestic metal framing: AS 3623

Quality Assurance Level, Level C (Three stage quality assurance system in place for the installation of the product)

Conditions of Approval:

- The design of the wall complies with BHP SUPRAFRAME™ Wall Framing System Manual.
- The fabrication of the wall shall comply with procedures specified in BHP SUPRAFRAME™ Wall Framing System Manual.
- Construction is carried out only in accordance with specifications issued by BHP House Framing.
- Design of other components to be used with the wall system shall comply with the requirements of relevant Australian Standards and be approved by the local authorities.
- Where the site conditions, loads or spans are beyond those included in the SUPRAFRAME™ Wall System Manual, specific engineering advice is obtained to verify these requirements.

Dated: 29 August 1996

This Certificate is valid until: 29 August 1997

Paul Williams
NATIONAL INSTITUTE OF BUILDING REGISTRATION SCHEME
REGISTRATION OFFICER



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House Framing Division
BHP Steel

6 August 1996

CERTIFICATE OF STRUCTURAL APPROVAL

This is to certify that the following documented SUPRAFRAME™ Design Wall Framing System Single or Upper Storey Construction - Domestic Dwell, pages 1-625 (July 1996), has been prepared in accordance with the following criteria:

APPLICABLE STANDARDS

- AS 3623-1995: Domestic metal framing
- AS 1338-1998: SAA Cold Formed Steel
- AS 1428-1995: SAA Hot Rolled Steel
- AS 1170-1995: Part 1 SAA Loading Code - Dead and Live loads and Loading Combination
- AS 1170-1995: Part 2 SAA Loading Code - Wind loads
- AS 4055-1992: Wind Loads for Building

References

1. NASH/AISC: Minimum requirements for domestic wall framing, structural performance of Steel Framed Housing, 1995.
2. SAA 1995: STRUCTURAL STEEL DESIGN - DOMESTIC HOUSE FRAMING
3. Handbook, 1995: Strength of Cold Formed Steel Structures, AISC, 1988

Domestic Loads

Dead Loads: In accordance with AS 1170 Part 1
Live Loads: In accordance with AS 1170 Part 1
Wind Loads: In accordance with AS 1170 Part 2 and AS 4055

THE DESIGNER warrants that the design complies with the following standards:
SUPRAFRAME™ Construction Manual / Wall Framing, (pages 1-625 G-D, 1996)

Buildings designed in per the SUPRAFRAME™ Bored Steel Design, M.A.A. & A.P.™ are capable of satisfying the construction set standards in which it will conform in accordance with the provisions of relevant codes and Australian Standards.

For and on behalf of BHP Building Division

Paul Williams
N. Fitzsimmons
BHP Steel, Lot 1 Russell Street, Emu Plains
Product Development Manager - Framing System

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