DO NOT SCALE FROM DRAWINGS - USE ONLY FIGURED DIMENSIONS

GENERAL

G1 These drawings shall be read in conjunction with the architectural and other consultants' drawings / specifications and with other such written instructions as may be issued during the construction. Any discrepancy shall be referred to the Engineer before commencing the work.
G2 All dimensions are in millimeters, UNO (unless noted otherwise).
G3 These drawings shall not be scaled, refer to dimensions given only or refer to the Architectural drawings.
G4 All levels and setting out dimensions shown on the drawings shall be checked on site prior to the commencement of the work.
G5 During construction the structure shall be maintained in a stable condition with no part being overstressed with temporary bracing installed as required.
G6 The engineer shall approve any proposed substitution prior to the commencement of work.

LOADING

L1 Superimposed loads are in accordance with AS 1170.1 or as shown in note L4.
L2 Wind loads are in accordance with AS 1170.2 as follows:
Region : A Basic Wind Velocity, Vp : 41 m/s Category : 3
L3 Earthquake loads are in accordance with AS 1170.4 as follows:
a = 0.08 S = 1.0 I = 1.0
L4 Element superimposed loading:

Element	Live Load (kPa)	Dead Load (kPa)
Floors - Internal	1.50	-
Floors - External & Garage	3.00	-
Floors - Mezzanine	3.00	-
Roof Areas	0.25	-

EARTHWORKS

E1 The earthworks shall be carried out in accordance with the geotechnical report by White Geotechnical Group.
E2 The site shall be stripped a minimum depth of 150 mm under pavements and buildings to remove the topsoil. Any remaining uncontrolled fill material, organic material, refuse or roots shall be removed.
E3 The subgrade shall be inspected and approved by the geotechnical engineer.
E4 The excavated subgrade shall be proof rolled a minimum of six (6) passes using a vibrating drum roller with a minimum deadweight of 10 tonnes. Any soft, wet and unsuitable spots shall be removed and reinstated using approved material.
E5 The subgrade shall be compacted to not less than 100% standard dry density ratio within ffl2 % of the optimum moisture content in accordance with AS1289.
E6 Where fill is required to achieve subgrade level it shall be approved ripped sandstone having a maximum particle size of 75 mm. It shall be placed in loose layers no thicker than 300 mm and compacted to not less than 100% standard dry density ratio within ffl2% of the optimum moisture content in accordance with AS1289.
E6 If a vibrating type roller is used, consideration shall be given to the effects on adjacent properties.
E7 All batters shall be a minimum of 1:2 for temporary batters and 1:4 for final batters in clay material.
E8 All filling shall be under the supervision of the project geotechnical engineer who shall provide compaction certificates to the engineer for approval.

FOUNDATION MATERIAL

F1 Strip & pad footings have been designed for an allowable end bearing value of 100 kPa in dense sand material.
F2 Screw piles have been designed for an allowable resistence level of 100kN & shall be installed to manufacturer's specifications.
F3 The foundation material shall be inspected & approved in writing by the geotechnical engineer for the above allowable bearing capacities.
F4 Slabs on ground have been design for a CBR of 5 in accordance with the Cement & Concrete Association Industrial Floors & Pavement Handbook.
F5 Footings shall be located centrally under walls & columns UNO.

REINFORCED CONCRETE

C1 All workmanship and materials shall be in accordance with AS 3600, except where varied by the project documentation.
C2 Concrete quality shall be as follows (subject to note C4 being satisfied):

Element	Slump (mm)	Maximum Aggregate size (mm)	Cement Type	Strength at 28 Days (MPa)	Admixture
Footings	80	20	Normal Portland Type A Cement	25	-
Bored Piers & Pile Caps	80	20		25	-
Floor Slabs on Ground	80	20		32	-
Suspended Floor Slabs	80	20		32	-
Hollowcore Floor Slabs	80	20		32	-
Walls & Columns	80	20		32	-

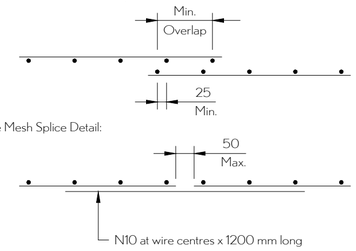
C3 The engineer shall approve any admixtures to be used in the concrete mix.
C4 The clear concrete cover to all reinforcement shall be as follows, UNO:

Exposure Classification to AS 3600	Strength at 28 Days (MPa)	Against Formwork		Against Ground	
		Interior Surface	Exterior Surface	With Membrane	With No Membrane
A1	20	20	30	30	50
A2	25	40	30	40	50
B1	32	40	40		
B2	40	45	45		

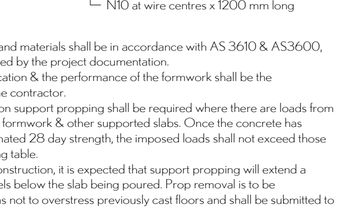
C5 Cover to reinforcement shall be obtained by the use of approved bar chairs placed at maximum 750 mm centers in each direction.
C6 All concrete shall be mechanically vibrated and the vibrators SHALL NOT be used to spread the concrete.
C7 Sizes of the concrete elements do not include thickness of the applied final finishes.
C8 Approval shall be obtained from the engineer prior to the drilling of any holes or cutting in of any chases other than those shown on the structural drawings.
C9 Construction joints where not shown on the structural drawings shall be located in accordance with the engineers approval.
C10 Curing of all concrete is to be achieved by keeping surfaces continuously wet for a period of 7 days (10 days in summer months), and prevention of loss of moisture for a total of 10 days followed by gradual drying out. Approved sprayed on compounds complying with AS3799 may be used provided that they do not interfere with the performance of the proposed floor finishes. Polythene sheeting or wet hessian may be used if protected from wind and traffic.
C11 The suspended slabs shall be propped until 28 day strength has been achieved for slabs. The formwork may be removed once 20 MPa strength has been achieved, however the slab will need to be back propped until 28 day strength has been achieved. No masonry or partition walls are to be constructed on suspended levels until all propping is removed.
C12 Conduits, pipes, etc. shall only be placed in the middle third of the slab depth and spaced at not less than 3 diameters. They shall not be placed within the cover of the reinforcement.
C13 Reinforcement symbols:
S - Denotes grade 250 S bars to AS1302.
N - Denotes grade 500 normal ductility deformed bars to AS4671.
R - Denotes grade 250 normal ductility round bars to AS4671.
SL - Denotes grade 500 low ductility square welded mesh to AS4671.
RL - Denotes grade 500 low ductility rectangular welded mesh to AS4671.
L - Denotes grade 500 low ductility trench welded mesh to AS4671.
C14 Reinforcement is represented diagrammatically and is not necessarily shown in true projection.
C15 Splices in reinforcement shall be made only in positions shown or otherwise approved by the engineer.
C16 Laps and cogs shall be in accordance with AS3600 and not less than the below:

	Minimum Splice Lengths	Minimum Overall Cog Lengths
N12	400 mm	200 mm
N16	600 mm	225 mm
N20	800 mm	275 mm
N24	1100 mm	325 mm
N28	1400 mm	375 mm

C17 Site bending of deformed reinforcing bars shall be done without heating and using mechanical bending tools.
C18 Welding of the reinforcement shall not be permitted unless shown on the structural drawings or approved by the engineer.
C19 Joggles to the bars shall be 1 bar diameter over a length of 12 bar diameters.
C20 Bundled bars shall be tied together at 30 bar diameter centers with 3 wraps of tie wire.
C21 Mesh shall be lapped 2 transverse wires plus 25 mm.



Alternative Mesh Splice Detail:



FORMWORK

W1 All workmanship and materials shall be in accordance with AS 3610 & AS3600, except where varied by the project documentation.
W2 The design certification & the performance of the formwork shall be the responsibility of the contractor.
W3 During construction support propping shall be required where there are loads from stacked materials, formwork & other supported slabs. Once the concrete has achieved its nominated 28 day strength, the imposed loads shall not exceed those given in the loading table.
W4 With multistory construction, it is expected that support propping will extend a minimum of 3 levels below the slab being poured. Prop removal is to be programmed so as not to overstress previously cast floors and shall be submitted to the engineer for approval.
W5 The suspended slabs shall be propped until 28 day strength has been achieved for slabs. The formwork may be removed once 20 MPa strength has been achieved, however the slab will need to be back propped until 28 day strength has been achieved. No masonry or partition walls are to be constructed on suspended levels until all propping is removed.
W6 All exposed corners shall have a 20 mm chamfer, UNO.
W7 All finishes shall be in accordance with the architectural specification.

PERMANENT METAL FORMWORK

P1 The permanent metal formwork shall be installed in accordance with the manufacturers recommendations and shall NOT be substituted from the product specified without written approval from the engineer.
P2 The permanent metal formwork shall be suitably propped.
P3 The permanent metal formwork shall not be spliced or joined midspan.
P4 The permanent metal formwork shall have a minimum end bearing of 50 mm.
P5 The permanent metal formwork shall be fixed to the supporting structure with spot welds or fasteners, there shall be a minimum of 1 fixing per sheet to the support each end adjacent to the side lap.
P6 The permanent metal formwork may need to have the side lap fastened together midspan, this shall be carried out in accordance with the manufacturers recommendations.

HOLLOWCORE FLOOR PLANKS & WALL PANELS

H1 All workmanship & materials shall be in accordance with AS3600.
H2 The 28 day concrete strength shall be a minimum of 40 MPa.
H3 The prestressing steel shall be stress relieved low relaxation strand in accordance with AS1311.
H4 The floor plank topping shall be with 32 MPa concrete or as shown on the drawings. If the topping concrete is used to grout the keyways then the concrete shall have a maximum aggregate size of 10 mm.
H5 The concrete topping thickness and reinforcement shall be as noted on the plans & sections.
H6 The hollowcore planks & panels shall be lifted & supported only at the nominated lifting points.
H7 The hollowcore floor planks shall be installed in accordance with the manufacturers specifications & workshop drawings.
H8 The structure shall be maintained in a stable condition during the erection of the floor planks or wall panels with temporary bracing provided as required.
H9 All keyways shall be aligned & grouted with a 3:1 sand : cement mix or approved concrete topping mix. Ensure that all keyways are properly filled.
H10 Any proposed penetrations &/or chases will require the manufacturers and engineers approval prior to work being carried out.
H11 A minimum of two (2) copies of all workshop drawings shall be supplied to the engineer for approval.

MASONRY

M1 All workmanship and materials shall be in accordance with AS 3700.
M2 The design strength of masonry shall be:

Exposure Classification to AS 3600	Brick Compressive Strength (MPa)	Brick Salt Resistance Grade	Durability Classification Of Built In Components	Mortar Mix	
				GP Portland e Cement:Lime: Sand	f'c (MPa)
A1 / A2	20	General Purpose	R3	1.0 : 1.0 : 6.0	2.8
B1	20		(Galvanised)	1.0 : 1.0 : 6.0	2.8
B2	20	Exposure	R4 (Stainless)	1.0 : 0.5 : 4.5	2.8

M3 All masonry walls supporting concrete slabs and beams shall have a slip joint comprising of two layers of galvanized steel in between the concrete and masonry.
M4 All masonry walls supporting or supported by concrete floors shall be have vertical joints located to match any control / construction joints in the concrete.
M5 Do not construct any masonry walls on suspended slabs until the slab formwork has been stripped and de-propped.
M6 Non load bearing masonry walls shall be separated from concrete slab or beam above by 20 mm thick compressible filler.
M7 Provide vertical control joints at 8 meters maximum centers, and 4 meters maximum from corners in masonry walls, and between new & existing brickwork. The joint shall have expansion joint ties and suitably sealed with a mastic sealant.
M8 Masonry retaining walls are to be back filled with either of the following material:
- Coarse grained soil with low silt content
- Residual soil containing stones
- Fine silty sand
- Granular materials with low clay content

BLOCKWORK

B1 All workmanship and materials shall be in accordance with AS 3700.
B2 Reinforced concrete blockwork shall comply with the following, UNO:
- Blocks: Minimum 10 MPa unconfined compressive strength conforming to AS4455.
- Mortar: 1.0 : 1.0 : 6.0 ratio of cement : lime : sand UNO.
- Blocks shall be either 'H' or 'Double-U' configuration.
- Provide cleanout holes at the base of the wall & rod core holes to remove excess mortar.
- Core filling shall be 20 MPa concrete with maximum 10 mm aggregate size with a maximum slump of 120 ffl20 mm.
- Minimum cover of 55 mm from the outside of the blockwork.

B3 Blockwork retaining walls are to be back filled with either of the following material:
- Coarse grained soil with low silt content
- Residual soil containing stones
- Fine silty sand
- Granular materials with low clay content

B4 Vertical control joints shall be provided at maximum 8000 mm centers. They shall be reinforced with N20-400 dowels 600 mm long. One end shall be greased & capped.
B5 No admixtures shall be used to the mortar mix or the core fill mix without prior written consent from the engineer.

STRUCTURAL STEELWORK

S1 All workmanship and materials shall be in accordance with AS 4100 and AS/NZS 4600.
S2 The structural design has been based on the following steel grades, UNO:
Hot rolled universal beams, columns, channels & angles: 300PLUS
Circular, square & rectangular hollow sections: C350/C450LO
Cold formed open DuraGal profiles: C350/C450LO
Cold formed lipped Cee & Zed purlins: G550/G500/G450
S3 The structural design has been based on MBPMA nominal size Cee & Zed lipped purlins.
S4 Qualifications of welding procedures and personnel shall conform to Section 4 of AS 1554.1. Non destructive testing of welds shall include 100% visual inspection and additional testing as shown on the drawings.
S5 All welds shall be 6 mm continuous fillet type SP, UNO. All butt welds shall be complete penetration in accordance with AS 1554.1, UNO.
S6 Bolt designation:
4.6/S Commercial bolts to AS 1111, snug tightened.
8.8/S High strength structural bolts to AS 1562, snug tightened.
8.8/TB High strength structural bolts to AS 1562, fully tensioned bearing joint.
8.8/TF High strength structural bolts to AS 1562, fully tensioned friction joint.
S7 All bolts shall be M20 8.8/S, with a minimum of 2 bolts per connection, UNO.
S8 Fin plates shall be a minimum of 10 mm thick, grade 300PLUS steel, UNO.
S9 Concrete encased steelwork shall be wrapped with SL62 mesh and shall have a minimum of 50 mm cover, UNO.
S10 Steelwork not encased in concrete shall have the following surface treatment :

Exposure Classification to AS 3600	Steelwork Protection Required
A1 / A2	Power tool clean to AS1627 Class 1 1 Coat Alkyd Primer (Zinc Phosphate)
B1	Abrasive blast to AS1627 Class 2.5 1 Coat Inorganic Zinc Silicate
B2	Hot Dipped Galvanised to AS1650

S11 Where sealed tube members are hot dip galvanized, the fabricator shall provide drill holes as necessary to allow gases to escape.
S12 All transport and erection damage, site welds etc., shall be reinstated to an equivalent finish to adjacent steelwork.
S13 A minimum of two (2) copies of all workshop drawings shall be supplied to the engineer for approval.

PRECAST PANELS

Y1 All workmanship and materials shall be in accordance with AS 3600.
Y2 The precast panel concrete strength at 28 days shall be a minimum of 40 MPa. The concrete shall be a minimum of 20 MPa before removal from molds.
Y3 Dimensions shown are final concrete sizes and additional concrete must be provided to allow for loss of structural thickness due to surface treatment, etc.
Y4 Panel structural thickness shall be as noted.
Y5 Refer to the architectural drawings for dimensions. rebates, etc.
Y6 All metal work and cast-in ferrules shall be hot dipped galvanized which are exposed to the external enviroment.
Y7 All cast-in ferrules shown on the drawings are to remain sealed until the erection of the panel and shall not be used for lifting.
Y8 Lifting ferrules are the contractors responsibility & extra reinforcement needs to provided in accordance with manufacturers recommendations.
Y9 Concrete cover shall be in accordance with structural drawings.
Y10 Fabric in the panels shall be one sheet, no lapping is permitted unless shown on the structural drawings.
Y11 Penetrations for services shall be neat formed holes, hole boring is not permitted.
Y12 Temporary steel packers may be used under the panels provided they have a minimum of 50 mm cover from the concrete slab or grout.
Y13 A minimum of two (2) copies of all workshop drawings shall be supplied to the engineer for approval. The shop drawings shall show all cast-in inserts.

TIMBER

T1 All workmanship and materials shall be in accordance with AS 1684 and AS1720.
T2 AS1684 shall be applied to domestic construction in sheltered locations.
T3 Softwood to be a minimum of F7 and hardwood to be a minimum of F17 UNO.
T4 External timber shall be either hardwood durability class I or II as per AS1720 or impregnated pine grade F7, pressure treated to As1604 and re-dried prior to use. Supplementary treatment shall be applied to all cut surfaces.
T5 Two (2) copies of timber truss shop drawings shall be submitted to the engineer for approval, clearly indicating design loads and point loads applied to the structure.
T6 All bolts in timber construction shall be M16 4.6/s UNO. Washers under heads and nuts shall be at least 2.5 times the bolt diameter.
T7 All timber joints and notches shall be a minimum of 100 mm away from loose knots, severe sloping grain, gum veins or other minor defects.

FOUNDATION MAINTENANCE

X1 All soils are affected by water. Silts are weakened by water and some sands can settle if heavily watered, but most problems arise on clay foundations. Clays swell and shrink due to changes in moisture content and the potential amount of the movement is implied in the site classification in Australian Standard AS2870, which is specified as follows:
A Stable (Non-reactive).
S Slightly Reactive.
M Moderately Reactive.
H Highly Reactive.
E Extremely Reactive.
X2 All sites shall be maintained at essentially stable moisture conditions and extremes of wetting and drying prevented. This will require attention to the following.
X3 Site drainage: The site shall be graded or drained so that water cannot pond against or near the house. The ground immediately adjacent to the house shall be graded to a uniform fall of 50 mm minimum away from the house over the first meter. The sub floor space for houses with suspended floors shall be graded or drained to prevent ponding. The site drainage requirements shall be maintained.
X4 Gardens: The gardens shall not interfere with the drainage requirements or the sub floor ventilation and weep hole drainage systems. Garden beds adjacent to the house should be avoided. Over watering of gardens close to the house shall be avoided.
X5 Restrictions on trees / shrubs: Planting of trees shall be avoided near the footings of a house or neighboring house on reactive sites as they can cause damage due to drying of the clay. To minimize the possibility of damage, tree planting should be restricted to a distance from the house of :
1.50 x mature height for Class E sites
1.00 x mature height for Class H sites
0.75 x mature height for Class M sites
X6 Where rows or groups of trees are involved, the distance from the building should be increased. Removal of trees from the site can also cause similar problems.
X7 Repair of leaks : Leaks in plumbing, including storm water and sewerage drainage should be repaired promptly.

REV	APP.	AMENDMENT DESCRIPTION	DATE
B	CJE	BEARING CAPACITY UPDATED	23.06.25
A	CJE	FOR CONSTRUCTION	19.06.25
0	CJE	FOR APPROVAL ONLY	11.04.25

PROPOSED DUAL OCCUAPNCY
103 OCEAN STREET
NARRABEEN NSW 2102

SCOTT

GENERAL NOTES

DRAWN:	DES:	DATE:	SCALE:
CJE	CJE	11 APR 2025	

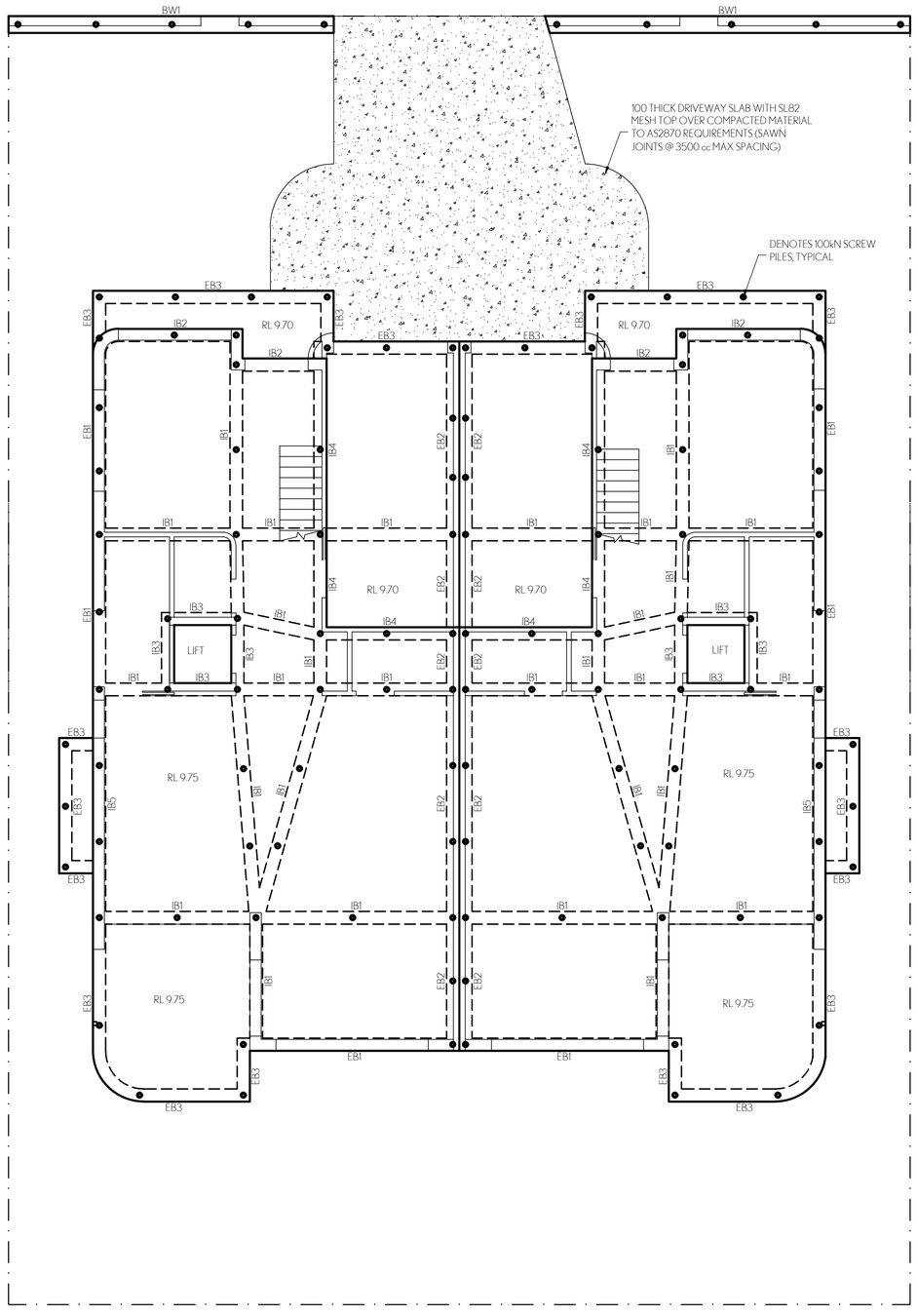
JOB:	DRW:	REV:
25032	S1	B

engineered by...
E2
PO Box 608
WAVERLEY NSW 2024
02 8594 6111
info@E2design.com.au

A2 ORIGINAL SIZE

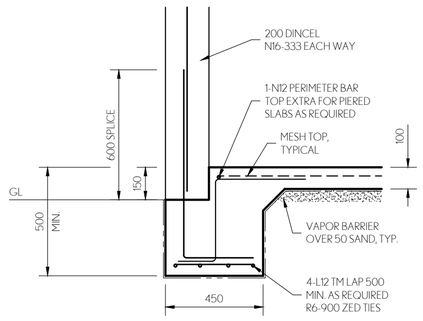
0.5 1 2 3 4 5 10

DO NOT SCALE FROM DRAWINGS - USE ONLY FIGURED DIMENSIONS

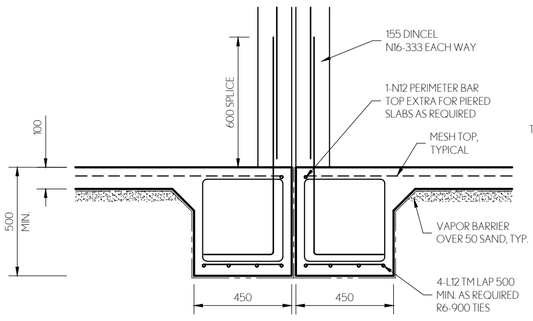


GROUND FLOOR RAFT SLAB PLAN 1:100

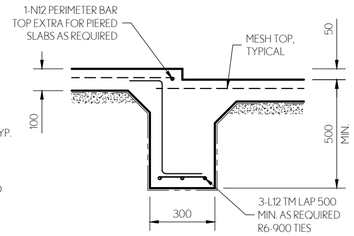
1. 100 thick slab with SL82 mesh top continuous throughout.
2. 2N12 (1200 long) Trimmer bars shall be located at all re-entrant corners, typical.
3. Extra bars as noted on plan & sections.
4. 25 MPa Minimum concrete strength, typical unless noted otherwise.
5. Site preparation shall be carried out in accordance with the current edition of AS2870 Residential slabs & footings construction code & with the general notes.
6. Reinforcement cover to the ground floor slab shall be as follows:
   - 40mm - To unprotected ground
   - 40mm - To external exposure
   - 30mm - To a vapor barrier in contact with the ground
   - 30mm - To internal exposure
7. Screw piles shall be in accordance with the screw pile note and as shown on plan.



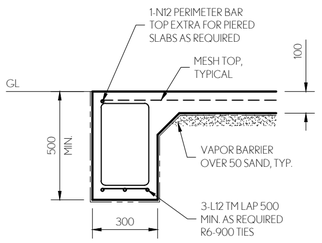
EDGE BEAM DETAIL 'EB1' 1:20



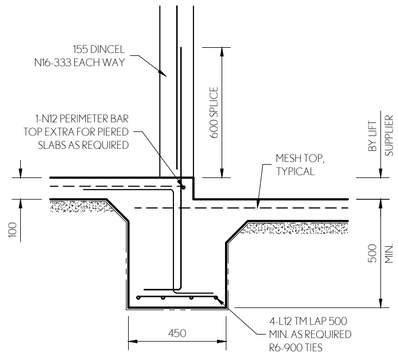
EDGE BEAM DETAIL 'EB2' 1:20



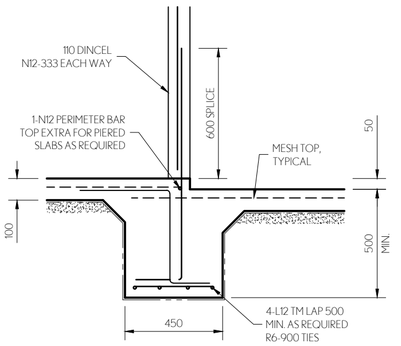
INTERNAL BEAM DETAIL 'IB2' 1:20



EDGE BEAM DETAIL 'EB3' 1:20



INTERNAL BEAM DETAIL 'IB3' 1:20



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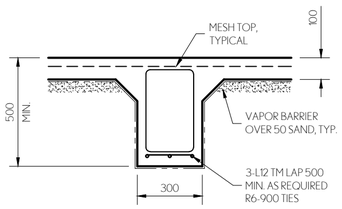
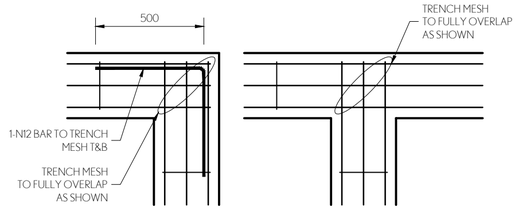
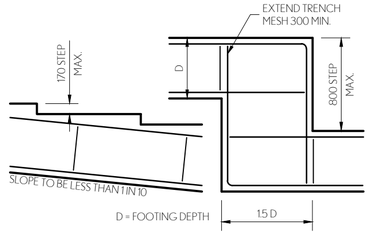


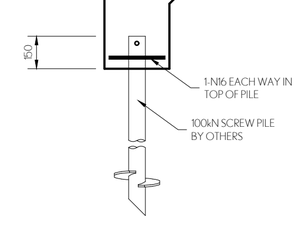
INTERNAL BEAM DETAIL 'IB1' 1:20



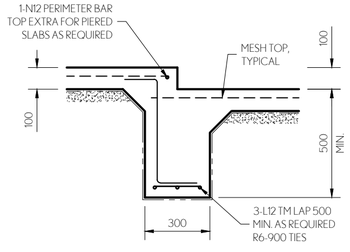
FOOTING CORNER DETAIL 1:20



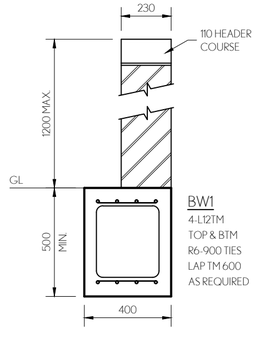
FOOTING STEP DETAIL 1:20



SCREW PILE DETAIL 1:20



INTERNAL BEAM DETAIL 'IB5' 1:20



FENCE FOOTING 'BW1' DETAIL 1:20

DESIGN CRITERIA:

Site Soil Classification	=	A
Wind Classification	=	W33 (N2)
Construction Type	=	Mixed
Roof Cladding Type	=	Metal Sheeting

(Note: Masonry shall be articulated in accordance with technical note 61 from the Cement & Concrete Association of Australia)

EXPOSURE CLASSIFICATION:

Interior Surfaces	=	A1
Exterior Surfaces	=	B2

SCREW PILE NOTE:

Minimum 100kN screw piles shall be installed to manufacturer's specifications.

FLOOR TILING NOTE:

SL92 mesh shall be installed in place of the SL82 mesh for tiles areas.

REV.	APP.	AMENDMENT DESCRIPTION	DATE
D	CJE	GENERAL REVISIONS	21.07.25
C	CJE	GENERAL REVISIONS	17.07.25
B	CJE	FOR CONSTRUCTION	19.06.25
A	CJE	FOR APPROVAL ONLY	14.04.25

PROPOSED DUAL OCCUAPNCY

103 OCEAN STREET
NARRABEEN NSW 2102

SCOTT

GROUND FLOOR RAFT SLAB PLAN & DETAILS

DRAWN:	DES:	DATE:	SCALE:
CJE	CJE	11 APR 2025	1:100, 1:20

JOB:	DRW:	REV:
25032	S2	D

engineered by...
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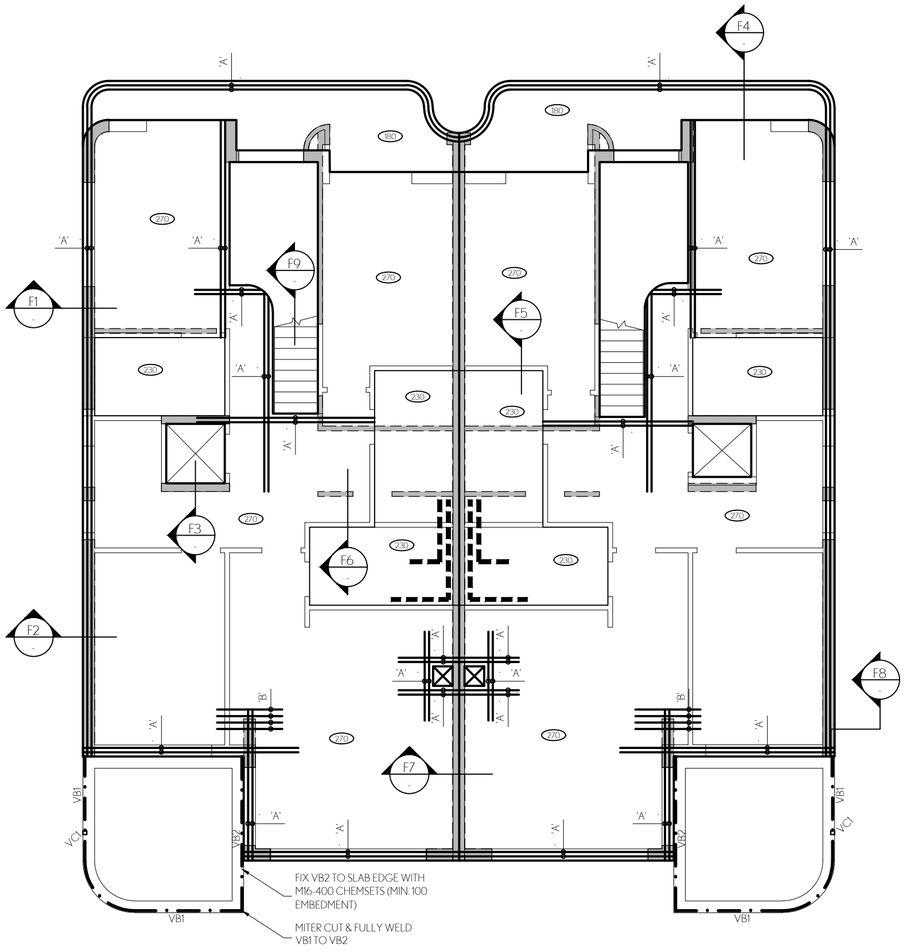
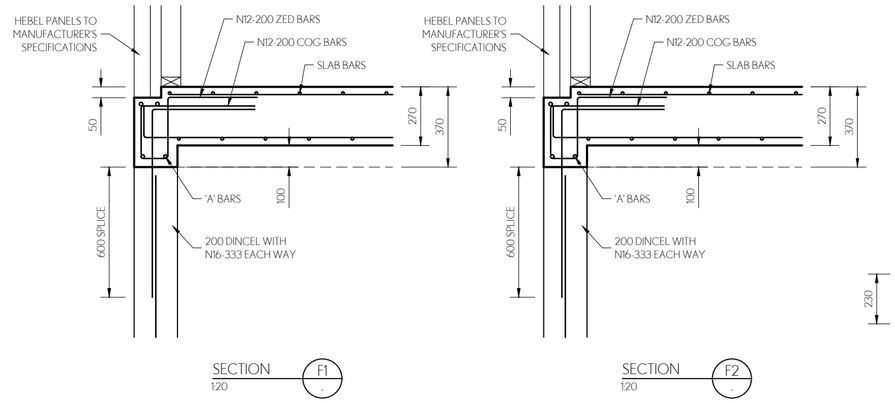
A2 ORIGINAL SIZE

DO NOT SCALE FROM DRAWINGS - USE ONLY FIGURED DIMENSIONS



FIRST FLOOR SLAB PLAN 1:100

1. (180) Denotes 180 thick slab with N12-200 bars top & btm continuous throughout.
2. (190) Denotes 190 thick slab with N12-200 bars top & btm continuous throughout.
3. (230) Denotes 230 thick slab with N12-200 bars top & btm continuous throughout.
4. (270) Denotes 270 thick slab with N12-200 bars top & btm continuous throughout.
5. f'c = 40MPa
6. -50 = 50mm set down
7. Provide 2-N12 trimmers (1200 long) at all re-entrant corners.
8. Cover = Minimum 20mm (internal)
   = Minimum 40mm (external)
9. 'A' = 2-N16 top & btm
10. 'B' = 4-N12 top extra (1500 long)



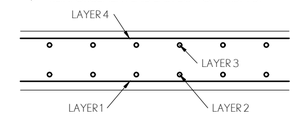
SECTION F1 1:20

SECTION F2 1:20

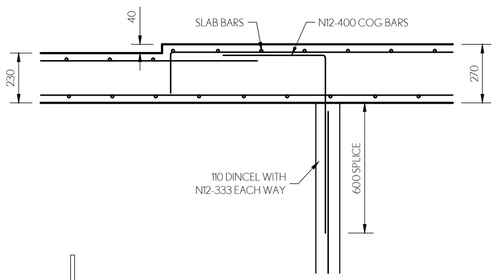
REINFORCEMENT NOTE:

REINFORCEMENT LAYERS :

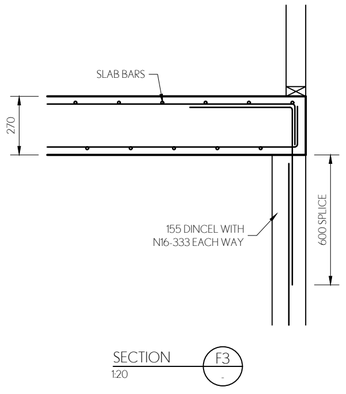
REINFORCEMENT LAID LAST BOTTOM FIRST TOP



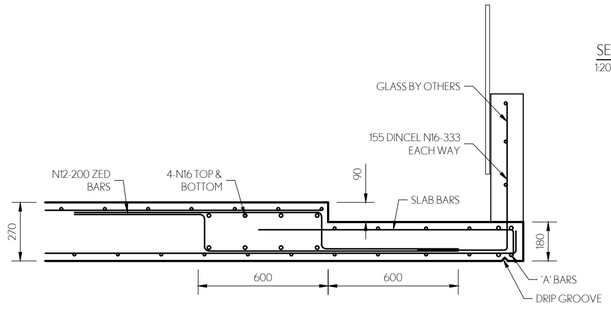
MINIMUM SPLICE LENGHTS:		MINIMUM COG LENGHTS:	
N12 = 400	N24 = 1100	N12 = 200	N24 = 325
N16 = 600	N28 = 1400	N16 = 225	N28 = 375
N20 = 800		N20 = 275	



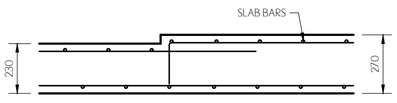
SECTION F6 1:20



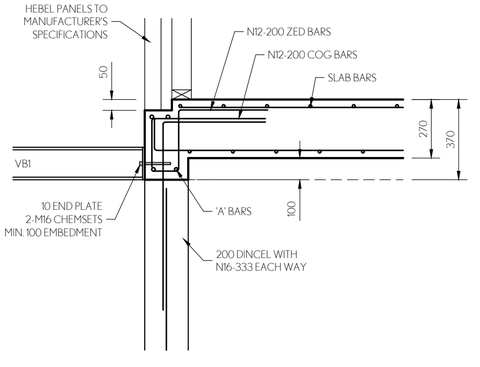
SECTION F3 1:20



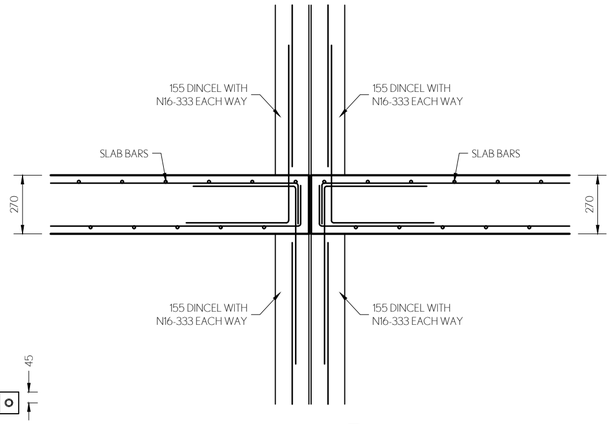
SECTION F4 1:20



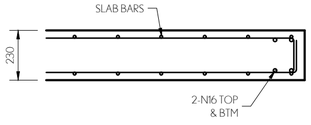
SECTION F5 1:20



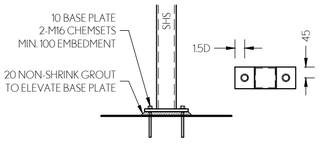
SECTION F8 1:20



SECTION F7 1:20



SECTION F9 1:20



VC1 BASE DETAIL 1:20

D = DIAMETER OF BOLT HOLE

STRUCTURAL STEEL & TIMBER FRAMING SCHEDULE			
MARK	TYPE	SECTION SIZE	COMMENT
VB1	Roof Beam	150 UC 30.0 Galvanised	300 Plus
VB2	Roof Beam	150 PFC 17.7 Galvanised	300 Plus
VC1	Column	89 x 89 x 5.0 SHS Galvanised	C350LO

GALVANISING NOTE:

All proposed framing members with external exposure shall be hot dipped galvanised - see notes on S1.

REV	APP.	AMENDMENT DESCRIPTION	DATE
C	CJE	GENERAL REVISIONS	20.06.25
B	CJE	FOR CONSTRUCTION	19.06.25
A	CJE	FOR APPROVAL ONLY	14.04.25
0	CJE	FOR APPROVAL ONLY	11.04.25

PROPOSED DUAL OCCUAPNCY

103 OCEAN STREET
NARRABEEN NSW 2102

SCOTT

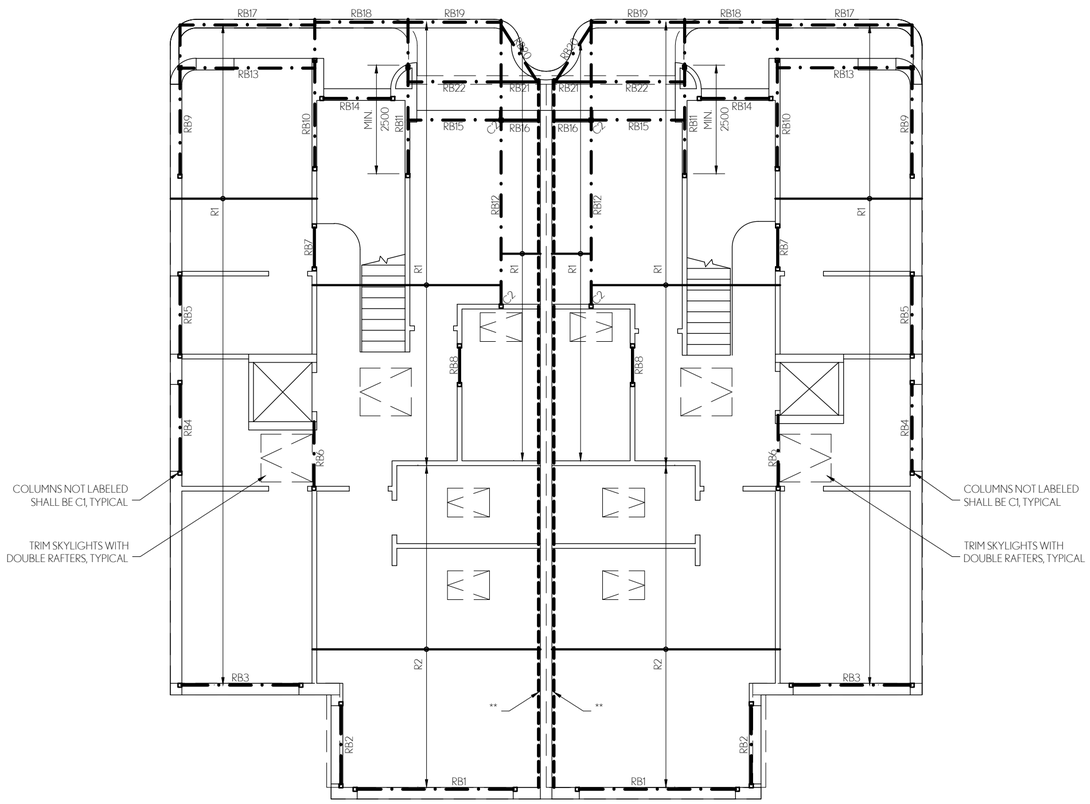
FIRST FLOOR SLAB PLAN & DETAILS

DRAWN:	DES:	DATE:	SCALE:
CJE	CJE	11 APR 2025	1:100, 1:20
JOB: 25032	DRW: S3	REV: C	

engineered by...
E2
PO Box 608
WAVERLEY NSW 2024
02 8594 6111
info@E2design.com.au

A2 ORIGINAL SIZE

DO NOT SCALE FROM DRAWINGS - USE ONLY FIGURED DIMENSIONS



ROOF FRAMING PLAN 1:100

1. New timber roof framing to AS 1684 specifications.
2. Hebel installation to manufacturer's specifications.
3. ** = fix timber plate same size as rafters to Dincel wall with 1-M12 chemset each rafter to manufacturers specifications (minimum 100 embedment).

BRACING NOTE:
All wall & floor bracing shall be to suppliers detail & is the builders responsibility. Additional bracing may be required to Engineer's discretion.

ROOF BRACING NOTE:
Roof shall be fully braced using Pryda Speed Brace fitted to manufacturers specifications.
Additional structural ply/yellow tongue bracing may be required to the underside of the ceiling to Engineer's discretion.

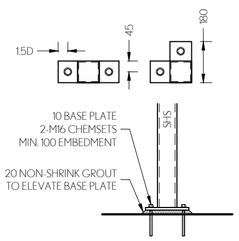
TIMBER FRAMING NOTE:
All timber framing, connections, fixings, notches, etc shall be in installed in accordance with AS1684-2021: Residential Timber Framed Construction (non-cyclonic areas) and the current edition of the Building Code of Australia.
All fire resistant cladding solutions shall be to architects details and installed to BCA requirements to achieve required FRL.

DURABILITY NOTE:
All LVL timbers shall be protected from the environment.
Steel beams and columns shall be protected from corrosion using paint protection or galvanising in accordance with Australian Standards.
If development is in a bushfire zone all exposed timber members shall be F17 grade hardwood.
If steel beams and posts are designated to be galvanised end plates, cap plates and base plates shall also be galvanised.
All nuts and bolts shall be galvanised or marine grade stainless steel.

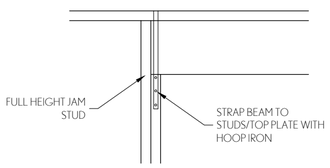
STRUCTURAL STEEL & TIMBER FRAMING SCHEDULE

MARK	TYPE	SECTION SIZE	COMMENT
RB1	Roof Beam	2 / 200 Deep x 45 Wide LVL	Hyspan
RB2	Roof Beam	2 / 150 Deep x 45 Wide LVL	Hyspan
RB3	Roof Beam	2 / 150 Deep x 45 Wide LVL	Hyspan
RB4	Roof Beam	2 / 150 Deep x 45 Wide LVL	Hyspan
RB5	Roof Beam	2 / 150 Deep x 45 Wide LVL	Hyspan
RB6	Roof Beam	2 / 100 Deep x 45 Wide LVL	Hyspan
RB7	Roof Beam	150 Deep x 45 Wide LVL	Hyspan
RB8	Roof Beam	2 / 100 Deep x 45 Wide LVL	Hyspan
RB9	Roof Beam	2 / 200 Deep x 63 Wide LVL	Hyspan
RB10	Roof Beam	2 / 200 Deep x 63 Wide LVL	Hyspan
RB11	Roof Beam	2 / 200 Deep x 63 Wide LVL	Hyspan
RB12	Roof Beam	200 UB 22.3	300 Plus
RB13	Roof Beam	2 / 200 Deep x 45 Wide LVL	Hyspan
RB14	Roof Beam	2 / 150 Deep x 45 Wide LVL	Hyspan
RB15	Roof Beam	2 / 150 Deep x 45 Wide LVL	Hyspan
RB16	Roof Beam	2 / 100 Deep x 45 Wide LVL	Hyspan
RB17	Roof Beam	2 / 150 Deep x 45 Wide LVL	Hyspan
RB18	Roof Beam	2 / 150 Deep x 45 Wide LVL	Hyspan
RB19	Roof Beam	2 / 150 Deep x 45 Wide LVL	Hyspan
RB20	Roof Beam	2 / 150 Deep x 45 Wide LVL	Hyspan
RB21	Roof Beam	2 / 150 Deep x 45 Wide LVL	Hyspan
RB22	Roof Beam	2 / 150 Deep x 45 Wide LVL	Hyspan
R1	Rafters	150 Deep x 45 Wide LVL @ 600 c/c	Hyspan
R2	Rafters	200 Deep x 45 Wide LVL @ 600 c/c	Hyspan
C1	Column	90 x 90 MGP10 Pine (or double studs)	Seasoned
C2	Column	89 x 89 x 3.5 SHS	C350L0

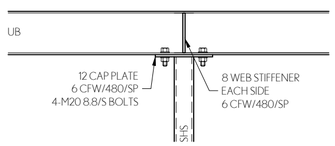
GALVANISING NOTE:
All proposed framing members with external exposure shall be hot dipped galvanised - see notes on S1.



C2 BASE DETAIL 1:20
D = DIAMETER OF BOLT HOLE



TIMBER HEADER TIE DOWN DETAIL 1:20



UB TO SHS CONNECTION 1:20

REV	APP	AMENDMENT DESCRIPTION	DATE
C	CJE	GENERAL REVISIONS	21.07.25
B	CJE	FOR CONSTRUCTION	19.06.25
A	CJE	FOR APPROVAL ONLY	14.04.25
0	CJE	FOR APPROVAL ONLY	11.04.25

PROPOSED DUAL OCCUAPNCY
103 OCEAN STREET
NARRABEEN NSW 2102

SCOTT

ROOF FRAMING PLAN & DETAILS

DRAWN:	DES:	DATE:	SCALE:
CJE	CJE	11 APR 2025	1:100, 1:20

JOB:	DRW:	REV:
25032	S4	C

engineered by...
E2
PO Box 608
WAVERLEY NSW 2024
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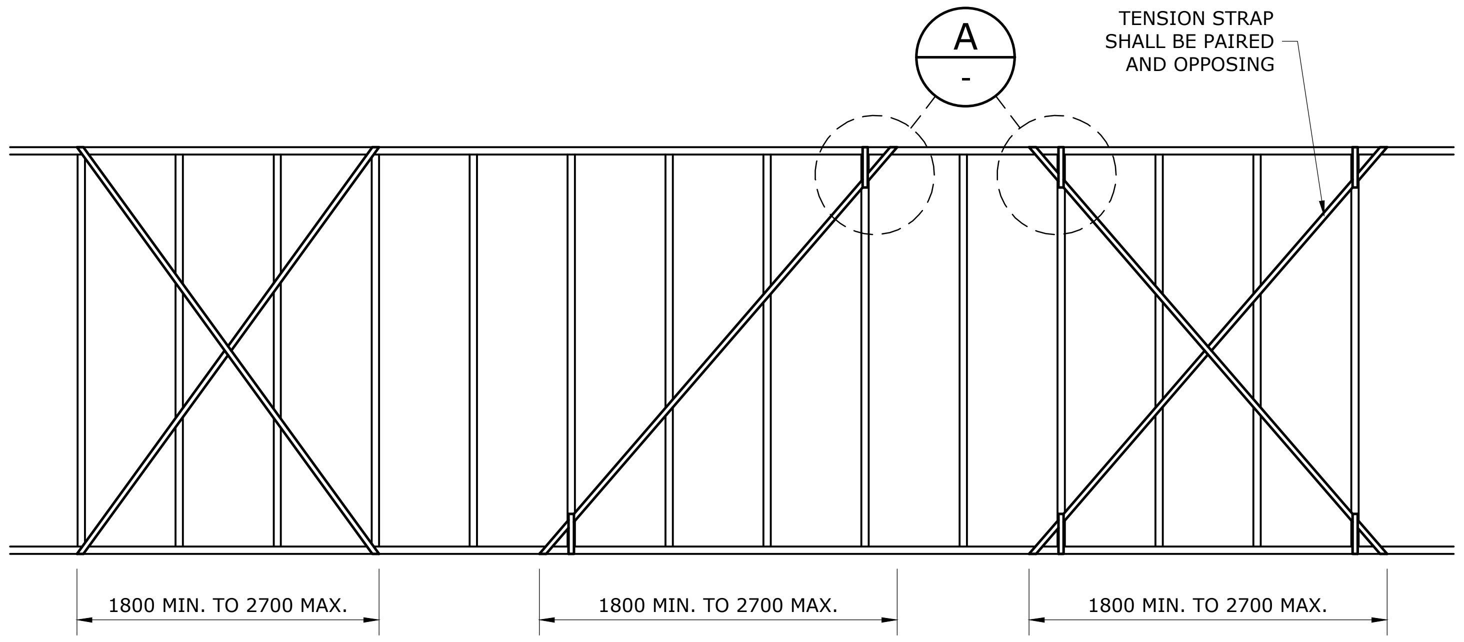
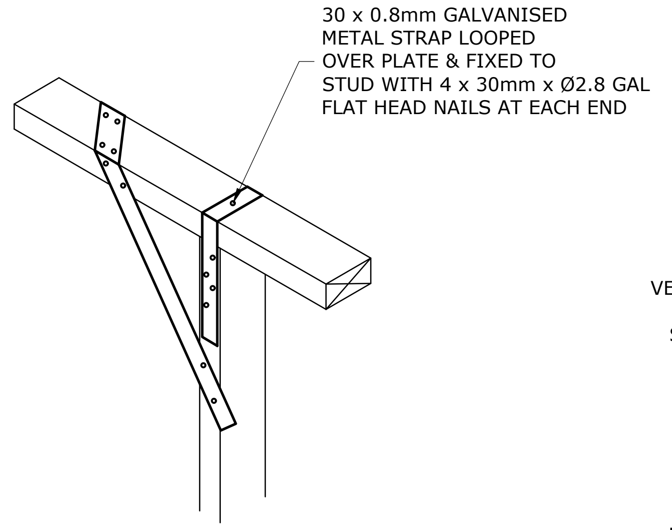
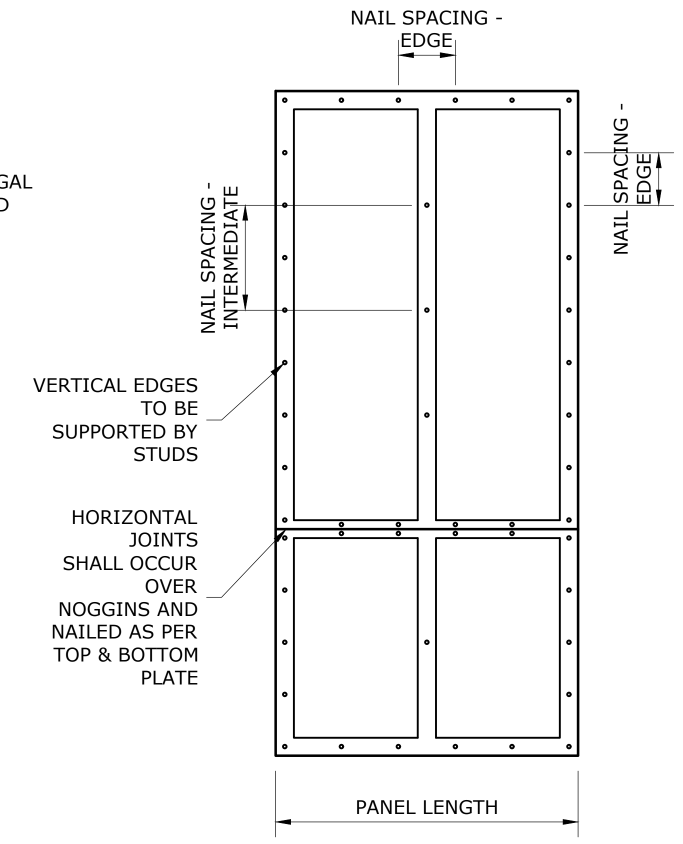
A2 ORIGINAL SIZE



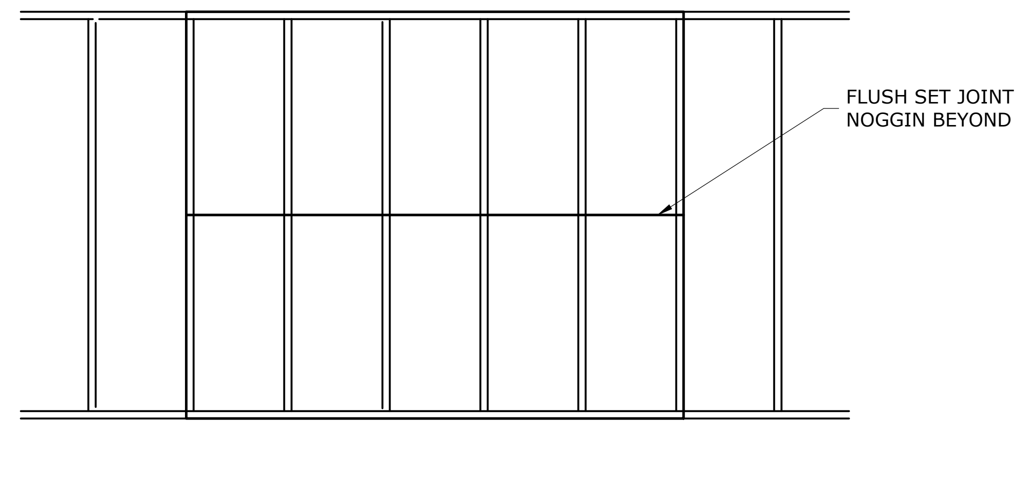
TYPE A TENSION STRAP   TYPE A METAL ANGLE   TYPE B TENSION STRAP



DETAIL A -



SHEET BRACING DETAILS TYPE C



HARDIES VILLABOARD BRACING DETAILS (V)

NOTES
1. SHEETS SHOULD BE FIXED TO TIMBER FRAMED BRACING WALLS WITH 30xØ2.8 FIBRE CEMENT NAILS (GALVANISED).
2. NAILS SHOULD BE DRIVEN JUST BELOW THE SURFACE OF THE SHEET USING THE HAMMER FACE ONLY. NAILS MUST NOT BE PUNCHED.
3. ANCHOR BOLTS MUST BE PLACED AT BOTH ENDS OF EACH SECTION OF BRACING WALL AND NOT AT MORE THAN 2400mm c/c.
4. ANCHOR BOLTS MUST BE LOCATED WITHIN DIMENSION 'A' OF THE ADJACENT FACE OF THE STUDSAS ABOVE AND IN THE TABLE FOLLOWING.
5. BETWEEN ANCHOR BOLTS 1-M10 BOLT SHALL BE PROVIDED AT A MAXIMUM OF 1200mm c/c TO FURTHER FIX THE BOTTOM PLATE TO THE SUB-STRUCTURE.

TYPE A - SHEET BRACING (PA) SPECIFICS

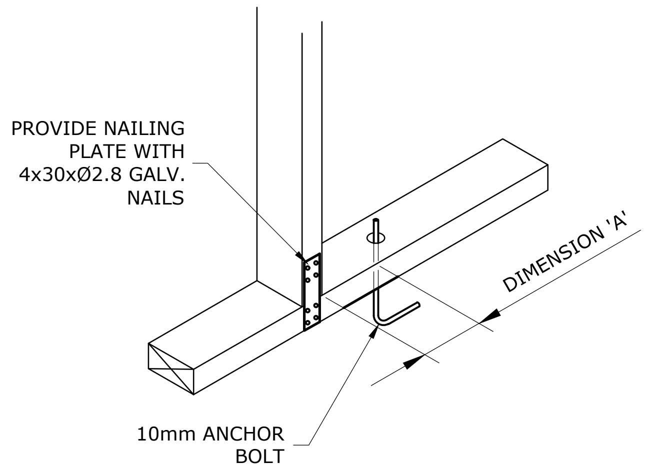
PRODUCT	AUSTRALIAN STANDARD	TYPE / GRADE	MINIMUM THICKNESS (mm) FOR STUD SPACING (mm)		PANEL LENGTH (mm)	NAIL SIZE (mm)	NAIL SPACING (mm)		SPECIAL REQUIREMENTS
			450	600			EDGE	INTERMEDIATE	
PLYWOOD	AS2269	F8 F11 F14 F27	7 6 6 6	9 7 6 6	900	30xØ2.8 GALV.	150	300	NO NOGGING REQ'D EXCEPT AT SHEET ENDS. NAILS SHALL BE 7mm FROM ALL EDGES
HARDBOARD (MASONITE)	AS2458	G.P.	6.4	6.4	900	30xØ2.8 GALV.	100	300	NAILS TO BE 10mm FROM VERTICAL EDGES & 20mm FROM HORIZONTAL EDGES. NO NOGGING REQ'D EXCEPT AT SHEET ENDS.

TYPE A - SHEET BRACING NOTES
1. PANEL LENGTHS GREATER THAN THOSE LISTED ABOVE CAN BE CONSIDERED AS A NUMBER OF BRACING UNITS DIRECTLY PROPORTIONED TO THEIR INSTALLED LENGTH i.e. A 1200mm PANEL OF PLYWOOD EQUALS 1200 / 900 = 1.33 BRACING UNITS.
2. NAILS SHOULD BE DRIVEN JUST BELOW THE SURFACE OF THE SHEET USING THE HAMMER FACE ONLY. NAILS MUST NOT BE PUNCHED.
3. PLYWOOD PANEL LENGTHS OF 600mm ARE EQUIVALENT TO $\frac{1}{3}$ OF A TYPE A BRACING UNIT.
4. FOR STUD SPACING OF 600mm c/c WHERE NOGGINS ARE INSTALLED AND THE PLYWOOD BRACING PANELS ARE NAILED TO THE NOGGINS AT 1500mm c/c, THE PLYWOOD THICKNESS MAY BE AS FOR STUD SPACING AT 450mm c/c.
5. PA* INDICATES FULL LENGTH AVAILABLE.
6. REFER TO TABLE 1 ON THE FOLLOWING SHEET FOR TOP & BOTTOM PLATE FIXING DETAILS.

TYPE C - SHEET BRACING (PB) SPECIFICS

PRODUCT	AUSTRALIAN STANDARD	TYPE / GRADE	MINIMUM THICKNESS (mm) FOR STUD SPACING (mm)		PANEL LENGTH (mm)	NAIL SIZE (mm)	NAIL SPACING (mm)		SPECIAL REQUIREMENTS
			450	600			EDGE	INTERMEDIATE	
PLYWOOD	AS2269	F8 F11 F14 F27	7 6 6 6	9 7 6 6	900 / 1200	30xØ2.8 GALV.	50 TO PLATES & 150 TO EDGE STUDS	300	NO NOGGING REQ'D EXCEPT AT SHEET ENDS. NAILS SHALL BE 7mm FROM ALL EDGES
HARDBOARD (MASONITE)	AS2458	G.P.	6.4	6.4	900 / 1200	30xØ2.8 GALV.	50 TO PLATES & 150 TO EDGE STUDS	300	NAILS TO BE 10mm FROM VERTICAL EDGES & 20mm FROM HORIZONTAL EDGES. NO NOGGING REQ'D EXCEPT AT SHEET ENDS.

TYPE B - SHEET BRACING NOTES
1. PANEL LENGTHS GREATER THAN THOSE LISTED ABOVE CAN BE CONSIDERED AS A NUMBER OF BRACING UNITS DIRECTLY PROPORTIONED TO THEIR INSTALLED LENGTH i.e. A 1200mm PANEL OF PLYWOOD EQUALS 1200 / 900 = 1.33 BRACING UNITS.
2. NAILS SHOULD BE DRIVEN JUST BELOW THE SURFACE OF THE SHEET USING THE HAMMER FACE ONLY. NAILS MUST NOT BE PUNCHED.
3. PB* INDICATES FULL LENGTH AVAILABLE.
4. REFER TO TABLE 1 ON THE FOLLOWING SHEET FOR TOP & BOTTOM PLATE FIXING DETAILS.



TYPICAL ANCHORING DETAILS

TYPICAL NAILING PLATE & ANCHOR BOLT
ANCHOR BOLTS ARE Ø10mm & ARE FOR TYING THE WALLS BOTTOM PLATE TO THE SUB-STRUCTURE. A STANDARD Ø30mm FLAT ROUND WASHER MUST BE USED UNDER EACH NUT EXCEPT WHERE TIE DOWN STRAPS ARE USED. ANCHOR BOLTS MAY BE REPLACED WITH M10 CHEMSET ANCHORS.

MAXIMUM DIMENSION 'A' WITH TOP & BOTTOM PLATE OF		
75 x 38 F11	70 x 45 F5	70 x 35 F5
220	110	60

TYPE A - STRAP BRACING (SA) SPECIFICS

TYPE OF DIAGONAL BRACE	MATERIAL & SIZE	NAILING REQUIREMENTS		SPECIAL REQUIREMENTS
		TO EACH STUD	TO EACH PLATE	
METAL ANGLE	GALVANISED ANGLE, NOM. SECTION 20x18x1.2mm MIN. NET SECTION 42mm²	1x30xØ2.8 GALV. FLAT HEAD NAIL	2x30xØ2.8 GALV. FLAT HEAD NAIL	DRILL HOLES IF NECESSARY TO PREVENT NAIL SPLITTING
TENSION STRAP	GALVANISED FLAT METAL TENSION STRAPPING OF MIN. THICKNESS 0.8mm & MIN. NET SECTION OF 15.2mm²	1x30xØ2.8 GALV. FLAT HEAD NAIL	3x30xØ2.8 GALV. FLAT HEAD NAIL	STRAPS MUST BE PROPERLY TENSIONED

TYPE B - STRAP BRACING (SB) SPECIFICS

TYPE OF DIAGONAL BRACE	MATERIAL & SIZE	NAILING REQUIREMENTS		SPECIAL REQUIREMENTS
		TO EACH STUD	TO EACH PLATE	
TENSION STRAP	GALVANISED FLAT METAL TENSION STRAP NOM. SIZE 30x0.8mm & MIN. SECTION OF 24mm²	2x30xØ3.15 GALV. FLAT HEAD NAIL	4x30xØ2.8 GALV. FLAT HEAD NAIL	STRAPS MUST BE PROPERLY TENSIONED & STRAP MUST RETURN OVER TOP PLATE & UNDER THE BOTTOM PLATE. THE STUD NEAREST TO EACH END OF EACH DIAGONAL STRAP SHALL BE FIXED TO THE PLATES WITH STRAPS OR FRAMING ANCHORS 4x30xØ2.8 NAILS AT EACH END.

PLATE FIXING TABLE - (TABLE 1)

BRACING TYPE	PLATE	FIXING DETAILS
TYPE A	BOTTOM PLATE TO JOISTS	2 / 75mm NAILS AT 600mm c/c ALONG JOIST FOR PLATES TO 38mm THICK & 2 / 90mm NAILS AT 600mm c/c ALONG JOIST FOR PLATE TO 50mm THICK.
	BOTTOM PLATE TO SLAB	1 / 75mm MASONRY NAIL AT 1200mm c/c FOR PLATES TO 38mm THICK & 1 / 90mm MASONRY NAIL AT 1200mm c/c ALONG JOIST FOR PLATE TO 50mm THICK.
TYPE B	BOTTOM PLATE TO JOISTS	1-M10 BOLT OR 1 / 30x0.8 GALVANISED METAL STRAP AT MAXIMUM 1200mm c/c ALONG JOIST OR TO EVERY SECOND JOIST. STRAP TO HAVE 3 / 30xØ2.8 NAILS EACH END.
	BOTTOM PLATE TO SLAB	1-M10 BOLT OR CAST-IN GALVANISED METAL BOTTOM PLATE CONNECTOR AT EACH END OR BRACING UNIT & AT 1200mm MAXIMUM c/c.
ALL TYPE A OR B	TOP PLATE TO CEILING OR ROOF FRAMING	JOISTS, BATTENS OR RAFTERS SHALL BE FIXED TO TOP PLATES WITH 2 / 75mm NAILS AT EACH CROSSING AT MAXIMUM OF 1200mm c/c ALONG THE TOP PLATE. TRUSSES CAN BE FIXED TO TOP PLATE USING BLOCKING OR PROPRIETORY CONNECTORS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

AS 1684.2 N1/N2 Supp 1 - 2006   Wind classification N1/N2 - Seasoned softwood - Stress grade F5

TABLE 36

WALL STUDS
Not notched lower storey loadbearing walls

Size DxB (mm)	Stud Height (mm)	Sheet Roof: Floor Joist Spacing 450 – Upper Floor Load Width 1800	450 – 3600	450 – 4800	600 – 1800	600 – 3600	600 – 4800	Tile Roof: 450 – 1800	450 – 3600	450 – 4800	600 – 1800	600 – 3600	600 – 4800
Stud Spacing 450 mm													
70x35	2400	7500	7500	7200	7500	5800	NS	6700	4700	3200	4600	2600	NS
	2700	6300	3600	NS	4200	NS	NS	3800	2100	NS	2500	NS	NS
	3000	2300	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
70x45	2400	7500	7500	7500	7500	7500	7000	7500	7400	5800	6600	4600	3100
	2700	7500	7500	5500	7500	4500	NS	6000	4000	2300	4100	2000	NS
	3000	5400	2800	NS	3600	NS	NS	3300	1600	NS	2200	NS	NS
2/70x35	2400	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500
	2700	7500	7500	7500	7500	7500	7500	7500	7500	6900	7500	5600	4200
	3000	7500	7500	7500	7500	6400	1900	7200	5100	3600	5000	3000	NS
2/70x45	2400	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500
	2700	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	6800
	3000	7500	7500	7500	7500	7500	7500	7500	7500	6400	7000	5000	3600
90x35	2400	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500
	2700	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	6200	4800
	3000	7500	7500	7500	7500	6700	3300	7500	5700	4200	5400	3400	1500
90x45	2700	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500
	3000	7500	7500	7500	7500	7500	7500	7500	7500	7100	7500	5600	4100
2/90x35	3000	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500
2/90x45	3000	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500
Stud Spacing 600 mm													
70x35	2400	7500	7500	5200	7100	4200	NS	5800	4400	2800	4000	2400	NS
	2700	3800	NS	NS	2200	NS	NS	2300	NS	NS	NS	NS	NS
70x45	2400	7500	7500	7500	7500	7500	6500	7500	7000	5500	6500	4400	2800
	2700	7500	5500	3500	5700	2900	NS	4800	3300	2000	3300	1800	NS
	3000	2800	NS	NS	1600	NS	NS	1800	NS	NS	NS	NS	NS
2/70x35	2400	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500
	2700	7500	7500	7500	7500	7500	7500	7500	7500	6800	7500	5400	3900
	3000	7500	7500	6800	7500	5500	NS	6800	4900	3300	4800	2800	NS
2/70x45	2400	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500
	2700	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	6600
	3000	7500	7500	7500	7500	7500	7100	7500	7500	6000	6900	4800	3300
90x35	2400	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500
	2700	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	6000	4500
	3000	7500	7500	5200	7100	4200	2600	5800	4200	3300	4200	2700	NS
90x45	2400	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500
	2700	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7300
	3000	7500	7500	7500	7500	7500	7500	7500	7500	6500	7100	5400	3900
2/90x35	3000	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500
2/90x45	3000	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500	7500

NOTES:
i) Maximum Roof Load Widths are based on the support of a maximum total sheet roof, framing and ceiling mass of 40 kg/m², a maximum total tile roof, framing and ceiling mass of 90 kg/m² and a maximum flooring mass of 40 kg/m². For guidance on roof and ceiling mass refer to Appendix B.
ii) Studs for internal non-loadbearing bracing walls and partitions (not carrying roof or floor loads) shall be as per Clause 6.3.5.
iii) Edge distances for some sheet bracing materials may require a minimum stud width of 45 mm for joining sheets.
iv) For gable or skillion end studs (not supporting floor or roof loads) refer Clause 6.3.2.5.
v) Large stud sizes may be made up by vertical nail lamination as per Clause 2.4.
vi) For design parameters refer to Figure 6.12.
vii) All stud walls shall be nogged at not more than 1350 mm centres.
viii) Where studs are used for tie-down, the maximum tension load that can be imparted to the stud is 8.5kN per stud or laminate where they are nail laminated.

AS 1684.2 N1/N2 Supp 1 - 2006   Wind classification N1/N2 - Seasoned softwood - Stress grade F5

TABLE 7

WALL STUDS - Not notched - single or upper storey

Size DxB (mm)	Stud Height (mm)	Sheet Roof: Rafter / Truss Spacing 450	600	900	1200	Tile Roof: 450	600	900	1200
Stud Spacing 450 mm									
70x35	2400	7500	7500	7500	5800	7500	6600	4500	3300
	2700	7500	7000	4700	3500	5400	4100	2700	2000
	3000	4900	3700	2500	1900	2900	2200	NS	NS
70x45	2400	7500	7500	7500	7500	7500	7500	5800	4300
	2700	7500	7500	6900	5200	7500	6000	4000	3000
	3000	7500	6300	4200	3200	4900	3600	2400	1800
2/70x35	2400	7500	7500	7500	7500	7500	7500	7500	6800
	2700	7500	7500	7500	7500	7500	7500	6400	4800
	3000	7500	7500	7500	6400	7500	7000	4600	3400
2/70x45	2400	7500	7500	7500	7500	7500	7500	7500	7500
	2700	7500	7500	7500	7500	7500	7500	7500	6200
	3000	7500	7500	7500	7500	7500	7500	6000	4500
	3600	7500	7500	5500	4100	6200	4600	3000	2000
90x35	2400	7500	7500	7500	7500	7500	7500	7500	7100
	2700	7500	7500	7500	7500	7500	7500	6900	5100
	3000	7500	7500	7500	6100	7500	7200	4800	3500
90x45	2400	7500	7500	7500	7500	7500	7500	7500	7500
	2700	7500	7500	7500	7500	7500	7500	7500	6700
	3000	7500	7500	7500	7500	7500	7500	6400	4800
	3600	7500	7400	4900	3700	5800	4200	2800	2000
2/90x35	3000	7500	7500	7500	7500	7500	7500	7500	7500
	3600	7500	7500	7500	7500	7500	7500	5600	4200
2/90x45	3000	7500	7500	7500	7500	7500	7500	7500	7500
	3600	7500	7500	7500	7500	7500	7500	7200	5400
	4200	7500	7500	7000	5200	7500	6000	3800	2700
Stud Spacing 600 mm									
70x35	2400	7500	7500	6500	4900	7500	5700	3800	2900
	2700	6700	5000	3400	2600	4000	3000	2000	NS
70x45	2400	7500	7500	7500	7300	7500	7500	5600	4200
	2700	7500	7500	5700	4300	6600	5000	3400	2500
	3000	5800	4500	3000	2200	3500	2600	1700	NS
2/70x35	2400	7500	7500	7500	7500	7500	7500	7500	6800
	2700	7500	7500	7500	7500	7500	7500	6400	4800
	3000	7500	7500	7500	5600	7500	6500	4400	3200
2/70x45	2400	7500	7500	7500	7500	7500	7500	7500	7500
	2700	7500	7500	7500	7500	7500	7500	7500	6200
	3000	7500	7500	7500	7500	7500	7500	6000	4400
90x35	2400	7500	7500	7500	7500	7500	7500	7500	7100
	2700	7500	7500	7500	7500	7500	7500	6500	4900
	3000	7500	7500	6600	5000	7500	5800	3900	2900
90x45	2400	7500	7500	7500	7500	7500	7500	7500	7500
	2700	7500	7500	7500	7500	7500	7500	7500	6700
	3000	7500	7500	7500	7500	7500	7500	6000	4500
2/90x35	3000	7500	7500	7500	7500	7500	7500	7500	7500
	3600	7500	7500	7500	6700	7500	7500	5200	3800
2/90x45	3000	7500	7500	7500	7500	7500	7500	7500	7500
	3600	7500	7500	7500	7500	7500	7500	7300	5400

NOTES
i) Maximum roof load widths are based on the support of a maximum total sheet roof, framing and ceiling mass of 40 kg/m² and a maximum tile roof, framing and ceiling mass of 90 kg/m². For guidance on roof and ceiling mass refer to Appendix B.
ii) Studs for internal non-loadbearing bracing walls and partitions (not carrying roof loads) shall be as per Clause 6.3.5.
iii) Edge distances for some sheet bracing materials may require a minimum stud width of 45 mm for joining sheets.
iv) For gable or skillion end studs (not supporting roof loads) refer Clause 6.3.2.5.
v) Large stud sizes may be made up by vertical nail lamination as per Clause 2.4.
vi) For design parameters refer to Figure 6.1.2.
vii) All stud walls shall be nogged at not greater than 1350 mm centres.
viii) Where studs are used for tie-down, the maximum tension load that can be imparted to the stud is 8.5kN per stud or laminate where they are nail laminated.

GENERAL NOTES
1. FIXING SHOULD COMMENCE AS CLOSE AS POSSIBLE TO THE ENDS OF EACH BRACING UNIT.
2. WALL TOP PLATES MUST BE DESIGNED TO PROVIDE LATERAL LOAD TRANSFER WHILE ALLOWING TRUSS TO SETTLE UNDER DEAD LOAD.

SUB-FLOOR BRACING
ALL BRACING SHALL BE FIXED TO THE FLOOR OR FOOTING BELOW & THE FLOOR ABOVE TO ENABLE THE TRANSFER OF THE FULL DESIGN STRENGTH OF THE BRACING SYSTEM.
BRACING IN THE SUB-FLOOR SHALL BE EVENLY DISTRIBUTED. THE MAXIMUM DISTANCE BETWEEN BRACING SETS, STUMPS, PIERS, WALLS OR POSTS, etc. UNDER A PLATFORM STRIP OR SHEET TIMBER FLOOR SYSTEM SHALL BE 1400mm PROVIDED THE MINIMUM WIDTH OF THE FLOOR IS 6000mm.

A2 ORIGINAL SIZE

REV	APP.	AMENDMENT DESCRIPTION	DATE
A	CJE	FOR CONSTRUCTION	19.06.25
0	CJE	FOR APPROVAL ONLY	11.04.25

PROPOSED DUAL OCCUAPNCY
103 OCEAN STREET
NARRABEEN NSW 2102

SCOTT

BRACING DETAILS

DRAWN:	DES:	DATE:	SCALE:
CJE	CJE	11 APR 2025	
JOB: 25032		DRW: S5	REV: A

engineered by... E2
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