GENERAL

G1 This drawing to be read in conjunction with the Architect's relevant drawings and specifications, any discrepancy is to be reported to the Engineer.
G2 All dimensions and levels to be checked on site prior to commencement of construction or fabrication.
G3 The authorised requirements of local authorities and other statutory authorities to be complied with.
G4 All work is to be carried out in accordance with the latest Australian Standards and National Construction Code Series (NCC).
G5 Engineer to be given 48 hrs notice for inspections. Inspections recommended: Compacted and prepared footings, Suspended slab reinforcement , Structural steel frame
G6 The builder is allow for all balustrading details, claddings systems, doors, windows, toppings, renders, coverings, screeds, coatings, tiling, framing details, flashing, water proofing, gutters, glazing, Etc. as required by architectural drawings, the manufacturer's (supplier's) recommendations and specification. Manufacturer's (supplier's) engineer to ensure all complies with the latest NCC and AS/NZS codes. Builder is to ensure all is installed strictly in accordance with these requirements. Make allowance for construction material for the life time of the structure.
G7. The builder shall be responsible for the stability to all parts of existing and new structure until its completion.
G8 Waterproofing to builder's details and specification.
G9. Maximum water table to be 600mm below founding level, if other conditions contact the engineer.

BRICKWORK

B1 All brickwork to be in accordance with AS 3700 and NCC.
B2 All load bearing brickwork to be constructed of bricks with a minimum characteristics unconfined compressive strength of 12 MPa, with C1:L1:S6 mortar internally and C1:L(0-.25):S3 mortar externally.Mortar to be M3 classification, except projects located within 1 Km of the ocean mortar to be M4 classification. Cements other than type GP portland cement and 100% white portland cement shall no be used. (U.N.O.)
B3 Mortar to be machine mixed on site and used within 90 minutes, mortar shall not be remixed.
B4 No horizontal or diagonal chasing of load bearing brickwork, maximum depth of chasing to be 20mm, using a masonry saw.
B5 The suspended slab is to have supporting props removed and is to be generally preloaded with the required bricks prior to the commencement of upper storey brickwork.
B6 Built-in components - columns, wall ties, connectors, reinforcement, flashing, & dump - proof courses, Refer to steel supplier for details for appropriate protective coating to meet durability class and provide certification. Durability class to be R3 classification, except projects located within 1 km of large saltwater bodies or within 3km of heavy industrial areas to be R4. (U.N.O.) Refer design criteria.
B7 Wall ties - medium duty wall ties between each leaf of cavity walls. For more information refer to AS4773.2 Section 10.
B8 In mass brick construction all joints to be completely filled with mortar.
B9 A brick course, as referred to in this document is standard 86mm high.
B10 Tie masonry to steel columns with 3.15mm dia wire ties at min 4c vertically at each side of column (U.N.O.)
B11 Allow for control joint in masonry in accordance with AS 4773.2 Section 7.

REINFORCEMENT

R1 All reinforcement to be in accordance with AS 4671 and NCC requirements.
R2 Designations:

		Laps: (U.N.O.)	
'N'	Deformed bar, grade 500.	Fabric	1 pitch plus 25mm
'S'	Deformed bar, grade 250.	R10	300mm
'R'	Plain round bar, grade 250.	N12	500mm
'W'	Cold drawn round wire, grade 500.	N16	550mm
'RW'	Cold rolled rib wire, grade 500.	N20	650mm
'SL'	Square mesh, grade 500.		
'RL'	Rectangular mesh, grade 500.		
'L-TM'	Trench mesh, grade 500.		

R3 All reinforcement to be free of grease, loose rust and loose millscale, etc.
R4 Any bars cut in order to provide blockout in slab shall be supplemented with an equal number of fully lapped bars of similar size either side of opening. No bars N16 or larger to be cut or displaced without prior approval from Engineer.
R5 Support on approved chairs at 1m maximum centers.
R6 Slopes of cranked bars shall not exceed one in six (1:6)

CONCRETE

C1 All concrete to be in accordance with AS 3600 and NCC requirements.
C2 Concrete:

	Grade: Internal	External	Agg	Max Slump	Cover R/F: Interior	Exterior
Footings	N20		20mm	80mm		65mm
Slab-on-fill	N20	N32	20mm	80mm	20mm	40mm
FRC Columns	N25	N32	20mm	80mm	20mm	
External Concrete		N32	20mm	80mm		40mm
Beams	N25	N32	20mm	80mm	20mm	40mm
Cavity Fill	N25		12mm	100mm	20mm	

C3 All concrete to be cured for a minimum of 7 days.
C4 All concrete is to be supplied by an approved premixing organisation.
C5 All conduits and pipes are to be placed in the centre of the slab between the top and bottom reinforcement layers with a minimum 25mm cover and minimum 25mm clearance between them.
C6 All concrete is to be compacted using a mechanical vibrator.
C7 Distribution steel in slabs may be spliced as necessary with a lap of 40 x diameter
C8 Pour columns before beams or slabs. Pour beams and slabs monolithically.
C9 Construction joints in concrete shall only be made with the approval of the engineer and to be in the locations shown in these drawings.
C10 All grano work, mono concrete, footpaths, kerbing channels, footpaths, pedestrian pavements, (not shown on these drawings) are to be the builder's details according to local authority requirements and AS/NZS 3727 and AS 2876.

TIMBER

T1 All timberwork to be in accordance with AS 1684 - Timber Framing Code.
T2 All timberwork to be in accordance with AS 1720 - Timber Structures Code.
T3 All timberwork to be in accordance with NCC National Construction Code.
T4 Roof to be tied down in accordance with AS1684.
T5 Timber Trusses are designed by others.
T6 Roof beams to be placed horizontally and may be used to support independent ceiling members.
T7 Parapet flashing to be over parapet, not through. All gutters, flashing and cladding to architectural details.
T8 It is the responsibility of the builder to inform the owner of the importance of maintaining external structural timbers by way of painting or similar protection
T9 Fix purlins to raker with 2No. trip-l-grip consectors. Fix purlins with 2M10 bolts to 50 x 50 x 5.0 EA cleats welded to steel beams.
T10 Timber to timber connection to be via EX 10 PL angle cleat and 2M16 bolts to each leg up to 300 beam depth, up to 360 beam depth 3M16 bolts, over 360 beam depth 4M16. End distance minimum 75mm.
T11 Timber to steel connection to be via EX 10 PL cleat fully welded to web of steel beam. Fix timber beam to cleat via 2M16 bolts (U.N.O.) to each leg up to 300 beam depth, up to 360 beam depth 3M16 bolts, over 360 beam depth 4M16. End distance minimum 75mm.
T12 All timber members to be laterally restrained in accordance with AS 1684 and manufacturer's specification.
T13 Timber wall plates fixed to the side of the walls to be connected at 600 c/c maximum (100 form ends) (U.N.O.). Refer 'S7' notes for type of anchors.
T14 Locate double stud under all roof beams. (U.N.O.)

STEELWORK

S1 All steelwork to be in accordance with AS 4100, grade 300 MPa min. Cold form steel with AS 4600 min G400
S2 All welding to be in accordance with AS 1554. Minimum welded connection to be 6mm fillet weld. Minimum bolted connection to be two M16 (8.8/s) bolts to an EX 10 flat cleat fully welded to web, alternatively steel beam may be fully welded (U.N.O.). Timber to steel connection, bolted connection to be two M16 (4.6/s) bolts via EX 10 flat cleat fully welded to web of steel beam. (U.N.O.)
S3 Hollow sections to have ends sealed with minimum 5mm plate.
S4 All nut washers and bolts (including hold-down bolts) to be galvanised (or cadmium plated if not exposed). All base / cap plates & lugs to be hot dipped galvanised after welding.
S5 Minimum edge distances and pitch to be in accordance with the steel structures code. Members shall be in one length (U.N.O.)
S6 All steelwork to be corrosion protected in accordance with all relevant 'Standards Australia' codes and the N.C.C. requirements.
Corrosivity category / Durability class in accordance with AS 2699, AS 4312 & AS 3700 table I1.
Minumum Steelwork finish subjected to exterior exposure to be hot dipped galvanising.
For more options refer NCC table 3.4.4.7.
All steel work in contact with ground to be painted with taubmans interzone 954 epoxi - 150 min microns cover or equivalent.
Fire rated treatments to all steel components to be as specified by architect or fire engineer / NCC compliance consultant to achieve required F.R.L.
For 'built in components' refer note 'Brickwork' (B6) this drawing.
S8 Steel strutting beams to be supported on steel shims, FRC packers or hardwood timber of a size to allow full bearing over the beam width and wall top plate width. Beam ends cropped to fit below roof plane should be cut to leave minimum 60mm height of web.
S7 Masonry anchors where noted in the design are to be:
- For solid masonry or concrete base material - expansion type mechanical anchors, Hilti, Powers or equivalent. Min 7 kN pull out, 10 kN shear.
- For cored or hollow masonry base material - chemical type anchors, Hilti, Powers or equivalent. Min 3 kN for pull out and 3 kN for shear.

Confirm capacity and install all anchors in strict accordance with the manufacturer's specifications. All parts to be treated in accordance with clause 3.4.4.4, refer NCC or AS 3700, as applicable.

EARTHWORKS

E1 Clear out tree stumps, unsuitable fill or materials and replace with clean compacted fill or lean mix concrete as required by the engineer.
E2 All fill material to be clean sand.
E3 All filling to be compacted in well watered 300mm layers using clean well graded sand to provide standard penetrometer readings of 7 blows per 300mm. Compact bottoms of the footing trenches where natural sand provides penetrometer readings less than 6 blows per 300mm.
E4 Compaction tests to be carried out to the full depth of the fill material or to 750mm whichever is greater.
E5 Design Engineer to be notified for checking of cut sites prior to the placement of fill in all instances other than natural sand.
E6 Locate footing centrally under walls and columns (U.N.O.)
E7 Drainage requirements (subsoil, runoff and stormwater) are to be determined on site. Drain roof and surface water away from footings. Subsoil and stormwater to builder's specification and specialist sub-contractor's.
E8 Pour lower level first. Difference in foundation level of adjacent footing shall not exceed half of the clear distance between them.
E9 Step footing 343 (max) to suit levels (u.n.o.)
E10 Where plumbing pipes pass through the footings, increase footing depth at least equal to footing depth.
E11 Design engineer to be notified where excavated levels adjacent to the boundary will be below adjacent building footings or retaining walls.The builder is responsible for selecting appropriate temporary or permanent underpinning, piling, shoring, grouting methods to ensure no surcharging or undermining of existing structure. All methods is to be designed and approved by specialist sub-contractor's engineer (NER).
E12 Do not use compaction methods that may be cause damage to adjacent structures. Selection of methods shall be the builders responsibility.
E13 Sand pad - refer to site classification report, if rock is encountered a min 450mm sand pad is recommended.

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Client **CALUM REEVES**

Project **3 BELLIER PLACE HAMILTON HILL, WA**

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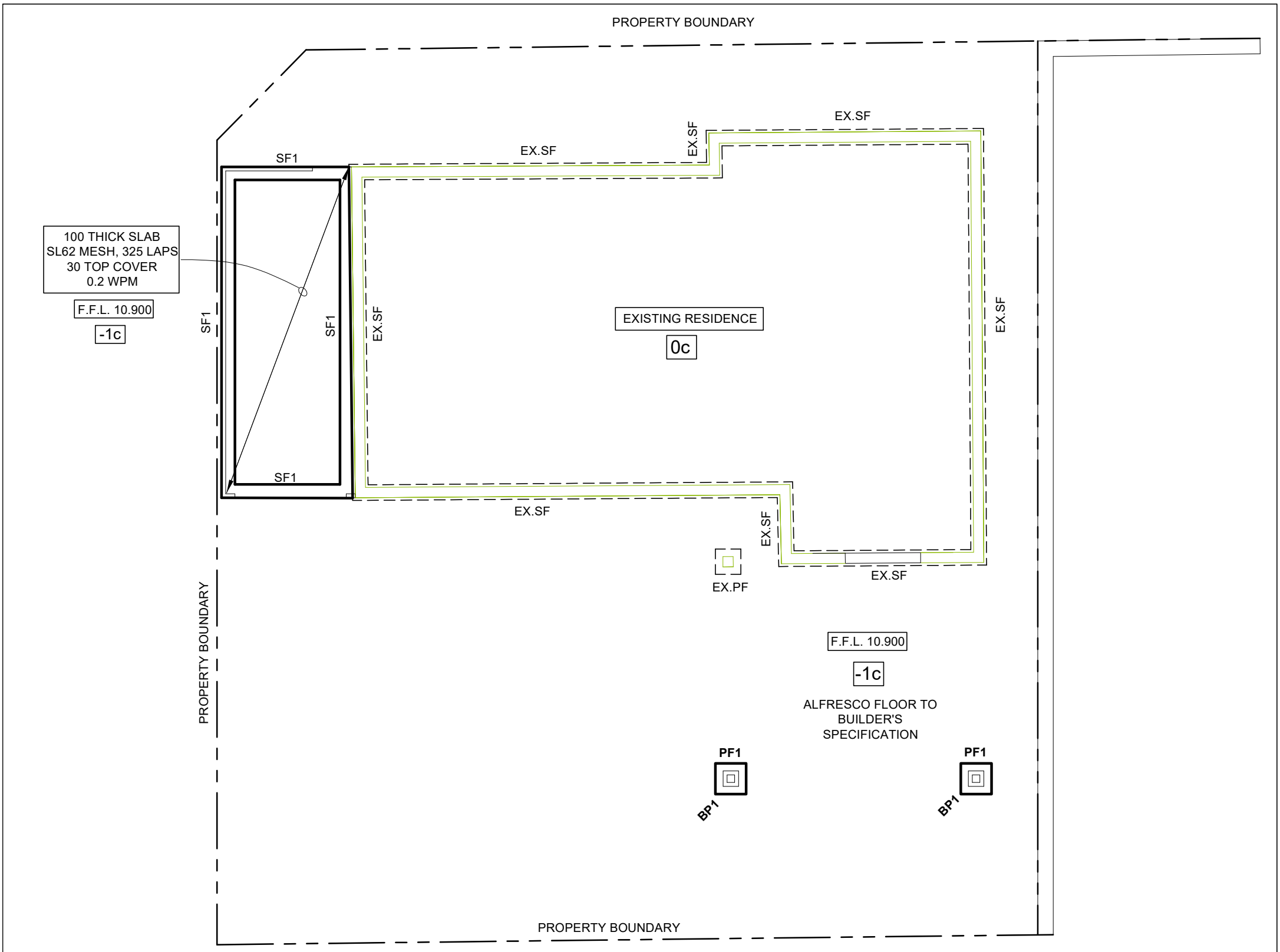

GROUND SLAB & FOOTING LAYOUT 1 : 100

NOTE:
SITE ASSUMED TO BE A CLASS '**A**' SANDY SITE. FOOTING DETAIL MAY BE ALTERED SUBJECT TO SITE ASSESSMENT. BUILDER TO ADVISE IF OTHERWISE.

'BG STRUCTURAL ENGINEERS' RESPONSIBLE FOR THE ADDED STRUCTURE ONLY.
BUILDER'S RESPONSIBILITY TO CHECK EXISTING STRUCTURE IS IN ACCORDING WITH 'BG STRUCTURAL ENGINEERS' ASSUMED EXISTING STRUCTURE AND PREEXISTING STRUCTURAL & ARCHITECTURAL DRAWINGS SUPPLIED.

FOOTINGS & GROUND SLAB NOTES

1. ═══ INDICATES EXISTING BRICK WALLS.
2. ═══ INDICATES NEW BRICK WALLS.
3. BUILDER TO CONFIRM ON SITE ALL DIMENSIONS AND FFL IN ACCORDANCE WITH ARCHITECTURAL & STRUCTURAL PLAN PRIOR TO CONSTRUCTION.
4. ENSURE NO EXISTING STRUCTURES OR SERVICES ON THIS OR ADJACENT PROPERTIES WILL BE SURCHARGED OR UNDERMINED BY THESE WORKS. IF UNSURE, CONTACT THE STRUCTURAL ENGINEER FOR PROPER ADVICE PRIOR TO PROCEEDING.
5. BUILDER'S RESPONSIBILITY TO CHECK INTEGRITY OF EXISTING STRUCTURES TO TAKE IMPOSED LOADS FROM THE PROPOSED STRUCTURE. IF UNSURE CONTACT THE STRUCTURAL ENGINEER FOR PROPER ADVICE.
6. FLOOR TO BUILDER'S SPECIFICATION (U.N.O.) GARAGE, ALFRESCO, STORE ROOM, CARPORT.
7. RE - ENTRANT CORNER REINFORCEMENT: 3 No. N12 / 100 BARS or 2 No. N16 / 100 BARS EACH LOCATION TIED TO UNDERSIDE OF MESH BARS 2000 LONG.
8. TYPICAL: STEP FOOTINGS TO SUIT SITE LEVELS.
9. WIDEN FOOTINGS & THICKENING TO SUITE WHERE REQUIRED.
10. WET AREA - NOMINAL 20mm SETDOWN AND FALLS TO FLOOR WASTE, MAINTAIN SLAB THICKNESS AND REINFORCEMENT MESH TOP COVER. (CRANK MESH DOWN 1:6) SHOWN HATCHED. ▨

FOOTING SCHEDULE		
TYPE	SIZE	REINFORCEMENT
PF1	750 x 750 x 300	MASS CONCRETE

NOTE:
SITE ASSUMED TO BE A CLASS '**A**' SANDY SITE. FOOTING DETAIL MAY BE ALTERED SUBJECT TO SITE ASSESSMENT. BUILDER TO ADVISE IF OTHERWISE.

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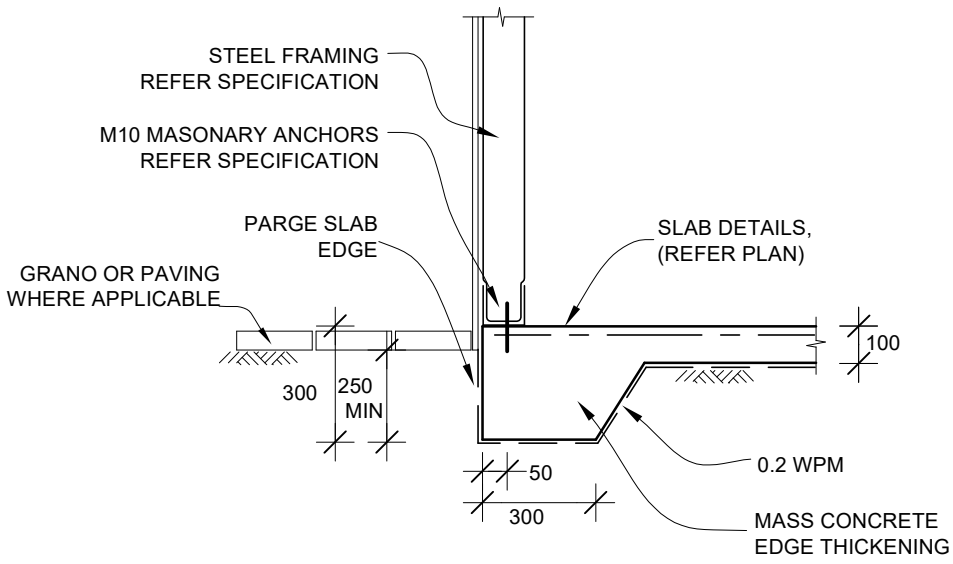
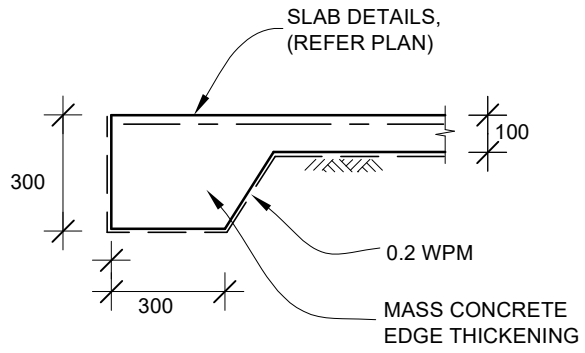
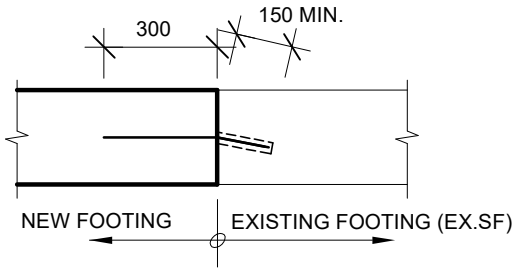


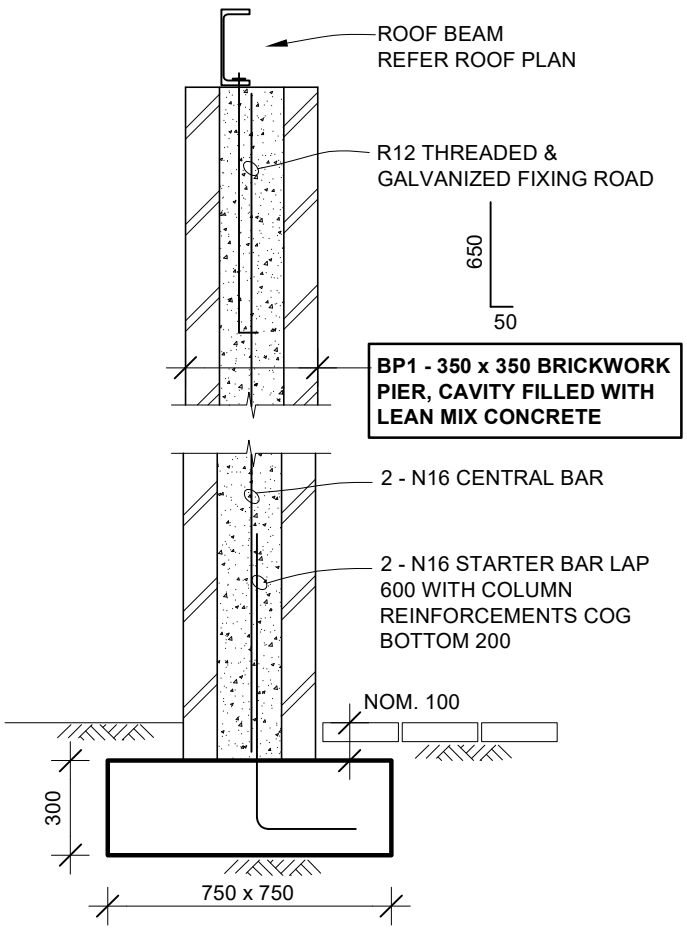


EXTERNAL (SF1) 1 : 20

USE 3-N12 DOWELL BARS,
DRILL AND EPOXY GROUT
150mm INTO EXISTING FOOTING.



FOOTING DOWELL



BRICKWORK PIER (BP1) 1 : 20

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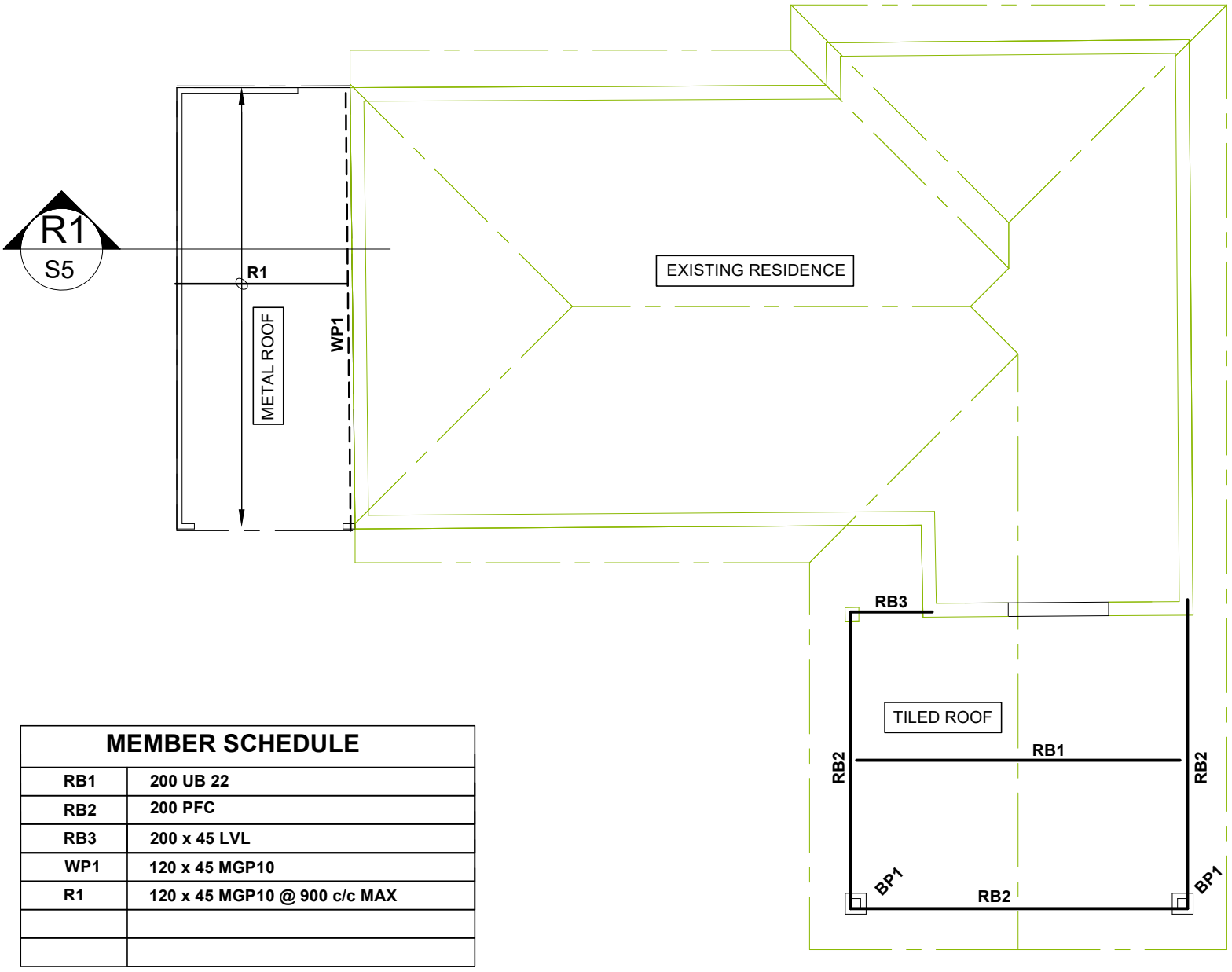

MEMBER SCHEDULE	
RB1	200 UB 22
RB2	200 PFC
RB3	200 x 45 LVL
WP1	120 x 45 MGP10
R1	120 x 45 MGP10 @ 900 c/c MAX

ROOF PLAN 1 : 100

ROOF NOTES

1. **METAL / TILED** ROOF
2. ROOF BRACING AND ROOF TIE DOWN AS PER TIE DOWN NOTES & DETAILS & IN ACCORDANCE WITH TIMBER FRAMING CODE A.S. 1684
3. BUILDER AND OWNER NOTE:
   ALL EXTERNALLY EXPOSED STRUCTURAL TIMBERS ARE TO BE MAINTAINED BY PAINTING OR SIMILAR PROTECTION AT ALL TIMES
4 LVL IS NOT SUITABLE FOR WEATHER EXPOSED APPLICATIONS UNLESS SUITABLE PRESERVATIVE TREATED. REFER MANUFACTURER'S SPECIFICATION.
5. TIMBER BEAMS - PROVIDE 8 PL ANGLE CLEAT. FIX TO BEAM VIA BOLTS UP TO 200 LVL - 2M12, 300 LVL - 2M16, 360 LVL - 3M16, OVER 360 - 4M16, FIX TO BRICKWORK VIA 4-M12 CHEMICAL ANCHORS. STEEL BEAMS - PROVIDE 10 PL END PLATE. FULLY WELD TO END OF BEAM. FIX TO BRICKWORK VIA 4-M12 CHEMICAL ANCHORS. ALTERNATIVELY, KEY TIMBER AND STEEL BEAMS 90 MIN INTO BRICKWORK.

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TIE DOWN SPECIFICATION
ROOF CLADDING: TILED
WIND CLASSIFICATION N1
TIMBER FRAMED TO AS 1684

A) WIND CLASSIFICATION : N1

B) PHYSICAL CONDITIONS:
- B1. Tiled roof cladding
- B2. Timber framed rood structure, designed and constructed strickly in accordance with AS1684 - Timber Framing Code.
- B3. Roof pitch greater than 10° and less than 35°
- B4. Maximum rafter spacing 600mm
- B5. Maximum batten spacing 330mm
- B6. External wall plate min 35mm thick MGP10 (U.N.O.)

C) DESIGN CRITERIA:

C.1 Relevant Australian Standards:
- a) AS4055 - Wind Loads for Housing
- b) AS1170.2 - Loading Code - Wind Loads
- c) AS1288 - Glass in Buildings
- d) AS1684 - Timber Framing Code

C.2 Design Wind Velocity 34 m/s (Ultimate Limit State)

C.3 Design Wind Pressure for glazing:
- a) Up to 1.2m from corner = 1.04 kPa
- b) Greater than 1.2m from corner = 0.69 kPa

D) TIEDOWN DETAILS:

D1. External Wall Plate:

D.1.1 Tie down external wall plate with 32x0.8mm PGI straps (or equivilent) at each side of corners and openings and at 1200ctrs max elsewhere. Fix straps to wall plate with 4 No Ø3.15 or Ø2.8mm galv. connector nails. If the tie down straps are extended up and fixed to a batten (min size 70 x 35 MGP10) , a non-structural wall plate may be used.

D.1.2 Build straps min 75mm into bed joint min 12c down. Where over openings, shot fasten or weld straps to lintel.

D.1.3 At each side of all openings over 2.4m wide, provide a full wall height strap.

D.1.4 Where straps are positioned next to rafter it is permissible to fix to side of rafter. Extend over rafter and fix to opposite side with 4 No Ø2.8 or Ø3.15 connector nails.

D2. Verandah or Carport (Pitching) Beams:

D.2.1 Fix beams to posts with 2M12 bolts (U.N.O.)

D.2.2 Fix beams to piers with full height Ø10 rod built into pier.

D.3 Lintels and Columns at Window Junction:

D.3.1Standard Ø10 locating lug for lintels into column. No tie required

D.3.2 Provide 8mm base plate to column and built into brick wall.

D.4 Internal Beams (Raking Ceilings):

D.4.1 Tie down not required.

D.5 Rafters :

D.5.1 Fix rafters to the external wall plate using 2 No Ø3.05x75 skew nails.

D.6 Battens:

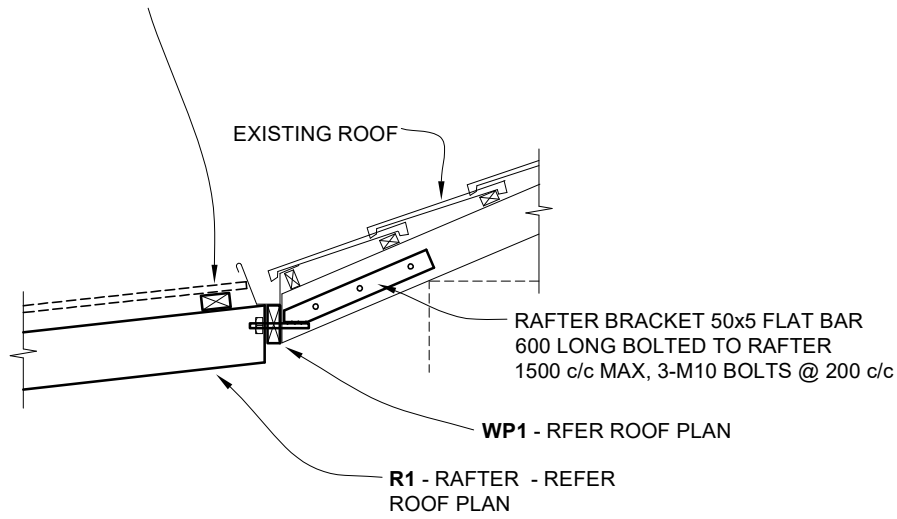
D.6.1 Fix timber battens to rafters using 1 No. 65 x 2.8 nail.

D.7 Roof Cladding:

D.7.1 Roof cladding to be fixed to manufacturer's details for N1 classification as per AS4055.

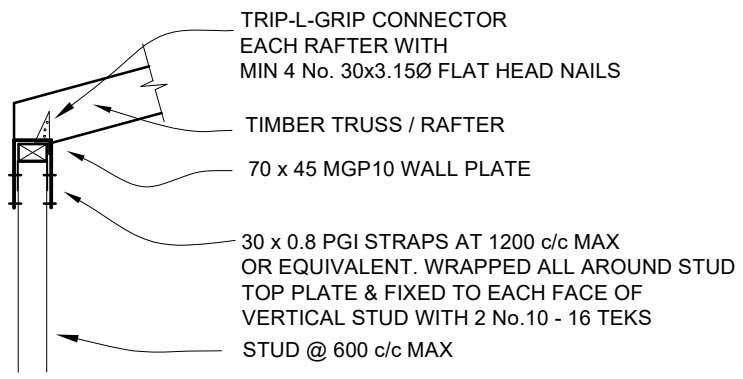
DISCLAIMER:
This specification is provided as a guide to good practice as outlined in the specified standards. It will not necessarily provide the optimum solution in all cases. It is assumed that the person using this specification have sound knowledge of building and understand the general principles involved in constructing roof to resist wind uplift.

ROOF BATTEN - REFER TO BUILDER'S DETAIL TO AS 1684
TIEDOWN DETAILS
- Refer details
- Battens:
  - Fix timber battens to rafters using - 1 No 14 type 17x75 tek
  - Where steel battens are used, fix battens to rafters using - 2 No. M5.5 - 11x40 batten zip screws with a length of 40mm.
- Roof Cladding:
  Roof cladding to be fixed to manufacturer's details for N1 classification as per AS 4055



GARAGE ROOF DETAIL N.T.S.

SECTION R1/S4 N.T.S.



ROOF TIEDOWN ROOF / STUDWORK 1 : 20

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DESIGN CRITERIA

THIS SPECIFICATION IS BASED ON THE FOLLOWING CRITERIA

REGION	**A**
TERRAIN CATEGORY	**2**
ULTIMATE LIMIT STATE WIND SPEED	**50 m/s**
SERVICEABILITY LIMIT STATE WIND SPEED	**32 m/s**
WALL HEIGHT	**3.00m Max**

Actual battens spacing to be designed to suit truss spacing and batten selection, to batten manufacturers specification

WALL FRAME SPECIFICATION

1. All framing section is to be manufactured from continuous galvanised sheet steel conforming to AS 1397-2001 (Steel sheet and strip).

2. Welding of frame should be by the metal inert gas technique (MIG) conforming to AS 1544 (Welding Code).

3. Fabrication and erection of steel frames shall conform with the requirements of AS/NZS 4600 - 1996 (Cold formed steel structures code)

4. Holes for plumbing or electrical services shall be plain holes not more than 25mm diameter or flanged holes not more than 33mm diameter. Holes in studs shall be placed only in the top or bottom 100mm of their height.

STEEL FRAMING SECTIONS

COMPONENT	SECTION	DIMENSIONS	BAS STEEL THICKNESS	MATERIAL GRADE
TOP PLATE	STIFFENED PLATE	94 x 78	1.2	G500
BOTTOM PLATE	STANDARD PLATE	90 x 32	1.2	G500
STUDS, NOGGINGS & BRACING	STANDARD STUD	90 x 32	1.2	G500

1. BOTTOM PLATES

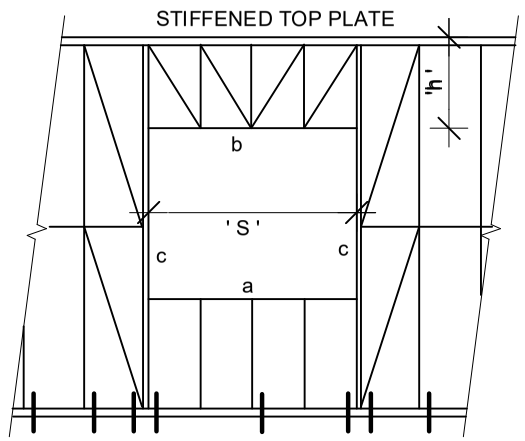
1.1 All walls use 90 x 32 x 1.2 G500 stud section.

2. TOP PLATES

2.1 External Walls

2.1.1 External walls and load bearing walls use 94 x 78 x 1.2mm G500 top plate - maximum opening width less than 3.6m. For opening over 3.6m refer to engineer for design requirements. Top plate to be continuous between cross walls or spliced using 50 x 50 x 1.6mm angle section 300mm long to both sides fixed with 4 No. 12 x 20 teks each side.

2.2 Internal Non-Load Bearing Walls
Use 90x32x1.2 G500 stud section throughout.



SPAN 'S'	h (Min)
600 < S ≤ 1500	230
1500 < S ≤ 1800	280
1800 < S ≤ 2400	380
2400 < S ≤ 2700	450
2700 < S ≤ 3600	600

SPAN 'S'	a	b	c
600 < S ≤ 1500	90 x 32 x 1.2	90 x 32 x 1.2	2 / 90 x 32 x 1.6
1500 < S ≤ 2400	90 x 32 x 1.2	90 x 32 x 1.2	90 x 90 x 2.0 SHS
2400 < S ≤ 3600	90 x 32 x 1.2	90 x 32 x 1.2	90 x 90 x 2.5 SHS

3.0 STUDS

3.1 External Walls
For walls heights less than 3.0m use 90x32x1.2mm G500 stud section at 600mm maximum centres.

Studs are to be welded into top and bottom plates with 60mm min. weld length each end. Refer to standard details for location of welds.

3.2 Internal Load Bearing Walls
Use 90x32x1.2mm G500 stud section at 600mm maximum centres.
Internal Braced walls to be treated as load bearing walls.
Welding of studs at ends to be as for external walls.

3.3 Internal Non-Load Bearing Walls
Use 90x32x1.0mm G550 stud section at 600mm maximum centres.
Studs are to be welded into top and bottom plates with 40mm min weld length each end.

4.0 NOGGING

Provide one rows of nogging at mid height of wall to 2700mm. Noggings to be welded to studs with 30mm minimum weld length each end.

4.1 External Walls
For all walls less than 2.7m high use one row of noggings. For all walls to 3.0m high use two row of noggings

4.2 Internal Load Bearing Walls and Internal Brace Walls
For all walls less than 2.7m high use one row of noggings. For all walls to 3.0m high use two row of noggings

5.0 WINDOW AND DOOR OPENING HEAD PLATES

5.1 External Walls
For openings less than 1.8m, 75mm weld at each end.
For openings 1.8m to 2.1m, 120mm weld at each end.
For openings 2.1m to 4.0m, with 160mm weld at each end.

6.0 WINDOW OPENING SILL PLATES

6.1 External walls
For openings less than 2.7m, 75mm weld at each end.
For openings 2.7m to 3.0m, 160mm weld at each end.
For openings to 3.6m, 200mm weld each end.

7.1 External Walls - 2.4m to 3.0m height
For openings less than to 0.6m, 60mm weld at each end.
For openings to 1.5m, 90mm weld at each end.
For openings to 3.6m, 130mm weld at each end.
Refer to standard details for weld locations.

7.3 Internal Load Bearing Walls and Internal Brace Walls
For openings less than to 0.6m, 60mm weld at each end.
For openings to 1.5m, 90mm weld at each end.
For openings to 3.6m, 130mm weld at each end.
Refer to standard details for weld locations.

9.0 WINDOW HEAD WEBS AND STUDS

Use 75x32x1.2mm G500 stud section with 60mm weld at each end except as follows for ends webs

OPENING	WELDS AT ENDS OF END WEBS
< 1.8m	60mm
1.8m to 2.2m	90mm
2.1m to 3.6m	100mm

Refer to standard details for weld locations.

10.0 STUDS UNDER WINDOWS

Use 90x32x1.2mm G500 stud section at 600mm centres for sill heights < 1.3m.

11.0 FIXINGS

11.1 Concrete Floors
Fix external walls with one galv. screw M10 'Powers' Powerfast (or Ramset Chemset 101) through 65x65x5mm galvanised plate washer at 1200mm centres generally plus at wall junctions, at sides of openings, at corners and two bolts at each stud at ends of a diagonal brace. 2 - M10 at opening, refer detail.

11.2 Wall Junctions
Fix frames together at junctions using pairs of No. 10 x 16 Teks at 500 crs and top end bottom.

11.3 Girder Truss Supports and Beam Supports
Multiple fixings will generally be required at these locations. Refer to detail drawings

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DESIGNED	B.G.	DATE	11.10.2021
		A3 Print Size 100%	

REVISION	DRAWING No.	PROJECT No.
1	S6 of 7	6892

Eng	Revision	Date	Details

Client CALUM REEVES

Project 3 BELLIER PLACE
HAMILTON HILL, WA

Boris Govedarica
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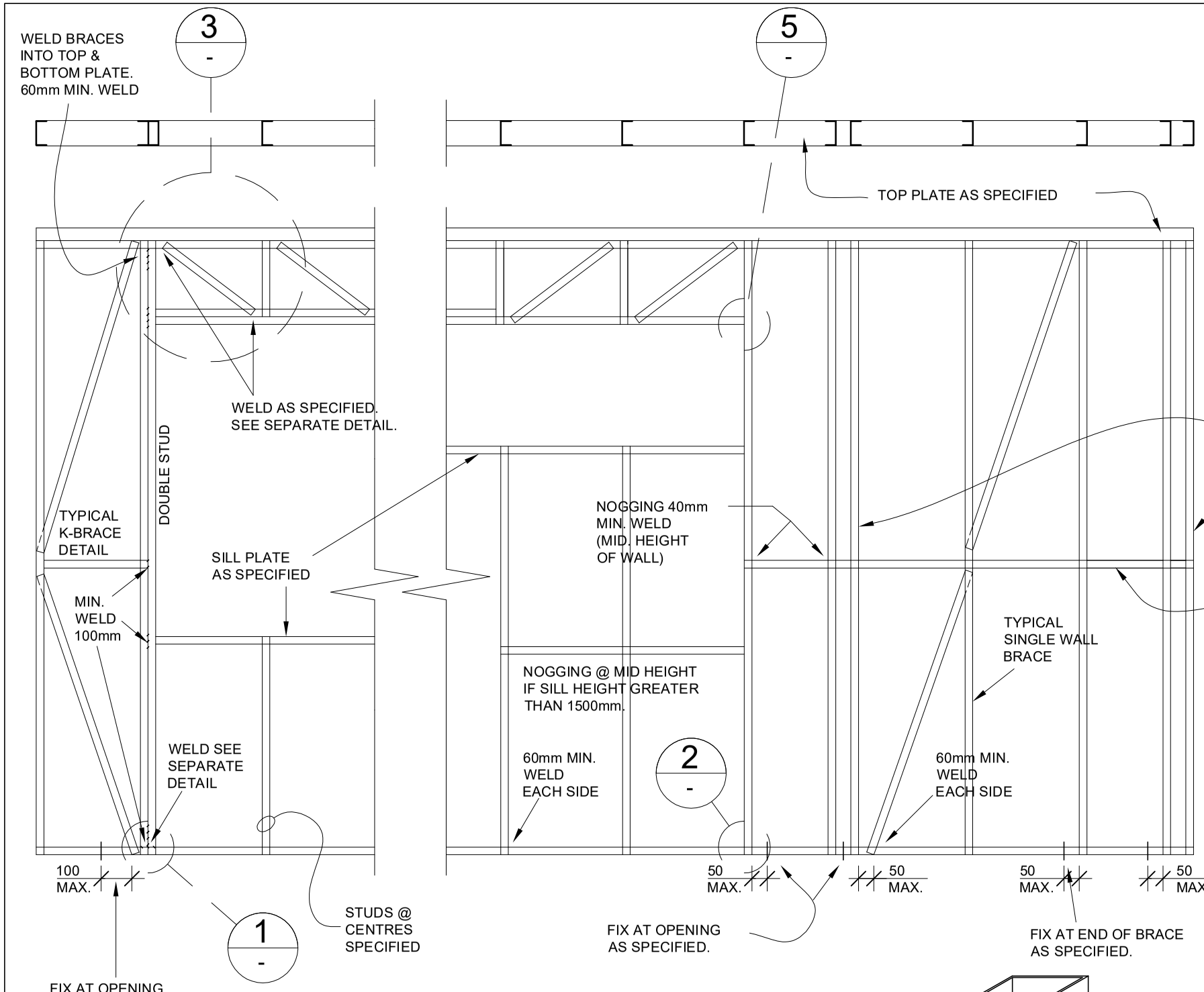
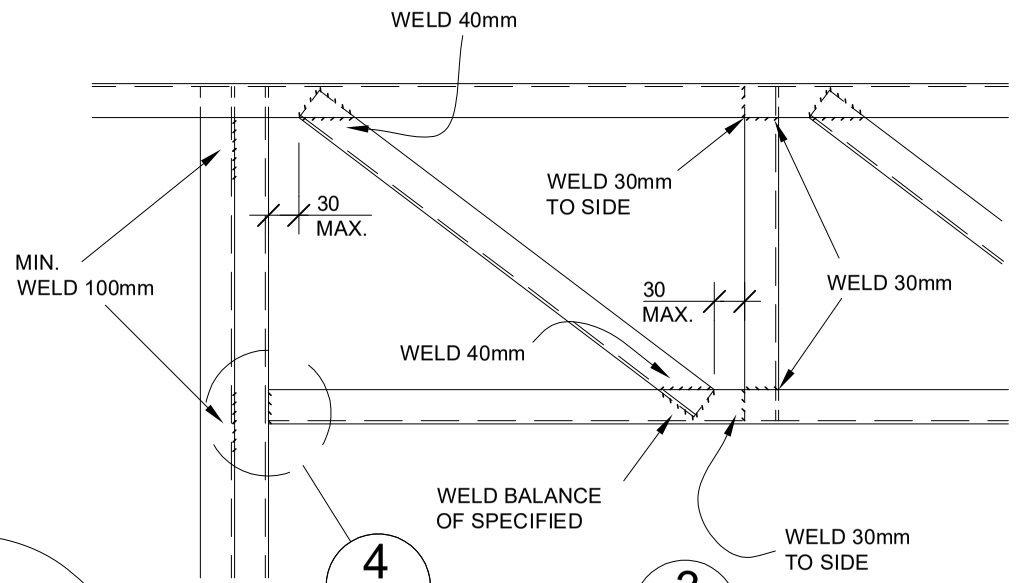
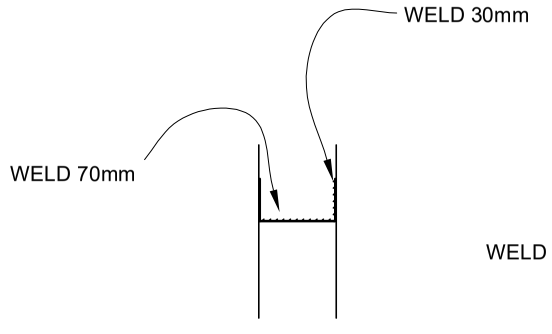




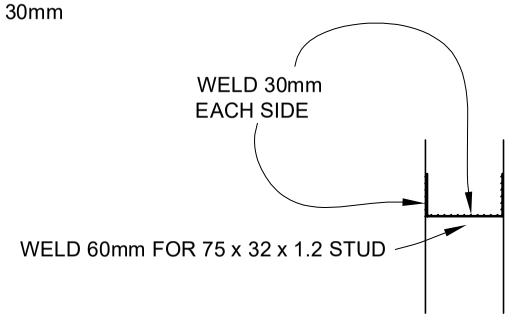
NOTE: WELD ONE SIDE OF FRAME ONLY

TYPICAL WALL STUD FRAME DETAILS

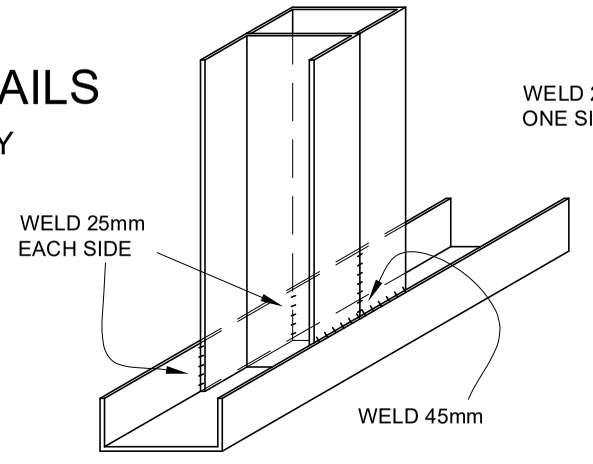
NOTE: WELD ONE SIDE OF FRAME ONLY



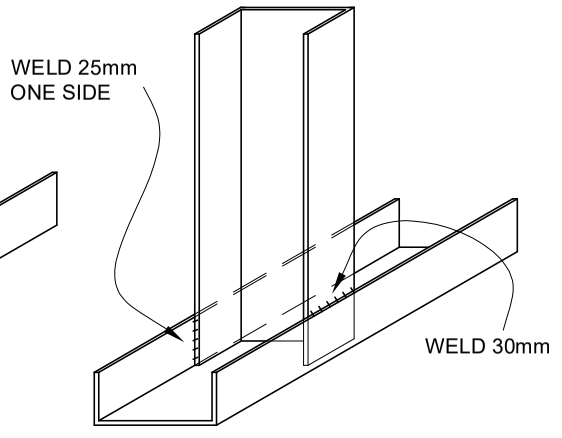
DETAIL 4 - NTS



DETAIL 5 - NTS



DETAIL 1 - NTS



DETAIL 2 - NTS

NOTE: WELD ONE SIDE OF FRAME ONLY

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