

STRUCTURAL ENGINEERING DRAWINGS

PROPOSED ADDITIONS & ALTERATIONS

LOT 1 - DP 781474  
1-56 SHIRLEY LANE, BYRON BAY

CLIENT: SHAJI KARLMADATH

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CERTIFICATE OF STRUCTURAL ADEQUACY

Building Design: ARCHDRAFT (AD)  
References: AD JOB No. 0821 SHEET A00 TO A06 DATED 10.08.2023  
Engineer: LUKO HARTMANN & ASSOCIATES (LHA)  
References: LHA Drawings K-01 to K-10 dated 11.12.23

The proposed additions & alterations are hereby certified to be structurally adequate in accordance with the requirements of the current edition of the NCC & the following design criteria and Australian standards:

Design Criteria and Standards

- 1. Loading Code AS1170, Parts 1 and 2;
- 2. Residential Slabs & Footings AS2870-2011 for Class P soil.
- 3. Wind Loads for Housing AS4055 - N3 Loading;
- 4. Timber Framing Code AS1684;
- 5. Steel Structures Code AS4100

  
LUKO HARTMANN B.E.

GENERAL NOTES

- G1 THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL, OTHER CONSULTANTS DRAWINGS & SPECIFICATIONS. ANY DISCREPANCIES ARE TO BE REFERRED TO THE BUILDING DESIGNER OR PROJECT MANAGER FOR A DECISION BEFORE PROCEEDING WITH THE WORK.
- G2 DIMENSIONS SHALL NOT BE OBTAINED BY SCALING OFF DRAWINGS. ALL DIMENSIONS TO BE CHECKED BY BUILDER PRIOR TO COMMENCEMENT OF WORKS.
- G3 THE CONSULTING ENGINEER HAS DESIGNED THE PERMANENT STRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN, IMPLEMENTATION AND CERTIFICATION OF ALL TEMPORARY WORKS, PROPPING, NEEDLING, FALSE WORK, BRACING,BACK-PROPPING, AND SO FORTH, NECESSARY TO COMPLETE THE WORK.
- G4 DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVER STRESSED.
- G5 THE CONTRACTOR RETAINS RESPONSIBILITY OF THE WORKS EVEN IF THE ENGINEER HAS INSPECTED THE WORKS DURING CONSTRUCTION.
- G6 LUKO HARTMANN AND ASSOCIATES IS NOT RESPONSIBLE FOR THE OCCUPATIONAL HEALTH AND SAFETY OF PERSONS AT THE SITE AS THOSE OBLIGATIONS RESIDE WITH THE CONTRACTORS AND / OR SUB CONTRACTORS WHO OCCUPY OR HAVE CONTROL OF THE SITE IN ACCORDANCE WITH APPLICABLE OCCUPATIONAL HEALTH AND SAFETY LEGISLATION, CODES OR PRACTICE, GUIDANCE NOTES, AUSTRALIAN STANDARDS AND OTHER RELEVANT DOCUMENTATION.

LOADINGS

- L1 THE STRUCTURAL WORK AS SHOWN ON THESE DRAWINGS HAS BEEN DESIGNED FOR THE FOLLOWING CASES:
  - I) GENERAL DOMESTIC FLOOR LOADS: 1.5kPa INTERNAL, 2.0 kPa BALCONY
  - II) ROOF LIVE LOADS OF 0.25 kPa DISTRIBUTED + 1.1kN POINT LOAD;
  - III) WIND LOADING TO N3.
- L2 LOAD COMBINATIONS HAVE BEEN CONSIDERED IN ACCORDANCE WITH AS1170.1

UPDATE -A	LH	LH	26.03.24
REVISION	CHKD	OK	DATE


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PROPOSED ADDITIONS & ALTERATIONS 1-56 SHIRLY Ln, BYRON BAY			TITLE PAGE AND CONSTRUCTION NOTES					
CLIENT:        SHAJI KARIMADATH								
DATE:    11.12.23		DESIGN: LH			ISSUE:			DWG No
SCALE:    As noted @ A3		APPD: 			A			K-01

FOUNDATIONS

- F1    REFER TO GEOTECHNICAL REPORT FOR A DESCRIPTION OF THE ANTICIPATED SITE CONDITIONS. THE BUILDER IS TO STUDY THE REPORT AND MAKE HIS OWN EVALUATION ON THE SITE CONDITIONS. ANY    ADDITIONAL    COSTS INCURRED SHALL BE BORNE BY THE BUILDER
- F2    ALL FOOTINGS SHALL BE FOUNDED AT THE RECOMMENDED DEPTH AND INTO THE APPROPRIATE MATERIAL AS SPECIFIED BY THE GEOTECHNICAL REPORT . THE ALLOWABLE BEARING CAPACITY SHALL BE SPECIFIED IN THE FOOTING PLAN . THE TOPS OF THE FOOTINGS SHALL BE A MINIMUM OF 300mm BELOW THE LOWEST ADJACENT STRUCTURAL FLOOR LEVEL UNLESS NOTED OTHERWISE.
- F3    THE FOUNDING MATERIAL AND STEEL REINFORCEMENT TO THE FOOTINGS IS TO BE INSPECTED BY THE P.C.A. (PRINCIPAL CERTIFYING AUTHORITY) PRIOR TO THE POURING OF CONCRETE.  
CONTACT THE P.C.A. FOR THE NOTICE PERIOD REQUIRED FOR INSPECTION.

EARTHWORKS

- E1    ALL CUT AND FILL ASSOCIATED WITH PROPOSED BUILDING WORKS IS TO BE KEPT TO A MINIMUM.
- E2    CUTTING OF UNRETAINED BATTER SLOPES SHOULD NOT EXCEED 1V:3H.
- E3    MAXIMUM DEPTH OF CUT BEFORE BENCHING SHOULD NOT EXCEED 750mm. DISH TYPE DRAINS SHOULD BE PLACED ABOVE & BELOW THE CUTTINGS. BATTERS IN EXCESS OF THIS SLOPE SHOULD BE RETAINED BY A SUITABLY DESIGNED RETAINING WALL.
- E4    BEFORE PLACEMENT OF FILL OCCURS VEGETATION SHOULD BE REMOVED AND THE SLOPE BENCHED.
- E5    THE FILL MATERIAL MUST BE APPROVED, CONTAIN NO ORGANICS AND SHOULD BE PLACED IN CONSERVATIVE LAYERS (MAX. 150mm) AND BE COMPACTED TO A SATISFACTORY STANDARD (min LEVEL 1 STANDARD COMPACTION).
- E6    THE FILL BATTERS SHOULD NOT EXCEED 1V: 3H. THE BATTER SLOPES SHOULD BE REVEGETATED AS SOON AS PRACTICAL TO PREVENT EROSION.
- E7    CUT AND FILL HEIGHTS GREATER THAN 750mm SHOULD BE REFERRED TO THIS OFFICE FOR FURTHER ADVICE.

MASONRY

- M1    ALL MASONRY IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE MASONRY CODE AS3700 & THE REQUIREMENTS OF THE NATIONAL CONSTRUCTION CODE-2014 (NCC);
- M2    BRICKS, BLOCKS & ROCKS ARE TO BE SOUND & CLEAN;
- M3    CONCRETE MASONRY BLOCKS ARE TO BE MINIMUM STRENGTH GRADE 12 / AS 1500;
- M4    MORTAR PROPORTIONS ARE TO BE 1 CEMENT : 0.25 LIME : 3 SAND, COMPRESSIVE STRENGTH 11MPa @ 28 DAYS, NOMINAL 10mm PERP. & HORIZONTAL JOINTS;
- M5    PROVIDE CLEAN-OUT BLOCKS AT BASE OF ALL WALLS AND BAR DOWN ALL CORES TO REMOVE EXCESS MORTAR PRIOR TO PLACEMENT OF VERTICAL RE-BARS & CORE-FILL;
- M6    GROUT CORE-FILL TO BE POURED IN ONE LIFT UP TO A MAXIMUM OF 1800mm, COMPRESSIVE STRENGTH 15 MPA @ 28 DAYS, 10mm MAX. AGG. SIZE, 80mm SLUMP;
- M7    PROVIDE NOT LESS THAN 50mm GROUT COVER TO REINFORCEMENT;
- M8    PROVIDE VERTICAL ARTICULATION JOINTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE NCC, AT NOT LESS THAN 6m CENTRES, NO CLOSER THAN THE WALL HEIGHT FROM THE ENDS OF WALLS & AT CHANGES IN WALL HEIGHT;
- M9    PROVIDE DAMPCOURSES AND CONTINUOUS ANT CAPPING IN ACCORDANCE WITH THE REQUIREMENTS OF THE NCC;
- M10    COREFILL ALL CONCRETE BLOCK CORES.

TIMBER SCHEDULE

GROUND FLOOR LOAD BEARING FRAME (MAX 2.7M HIGH)  
STUD @ 450 CTRS    -    90 x 35 MGP10  
TOP PLATE    -    2 / 35 x 90 MGP10  
BOTTOM PLATE    -    35 x 90 MGP10  
NOGGINGS    -    90 x 35 MGP10 @ 1350 CTRS

STUD AT SIDE OPENINGS

OPENING SIZE	No. OF STUDS
0 - 900	1
1200 - 2100	2
2200 - 3000	3
3200 -	4

REINFORCED CONCRETE

- C1    ALL WORK IS TO BE IN ACCORDANCE WITH ALL CURRENT AUSTRALIAN STANDARDS AS A MINIMUM WORK STANDARD.
- C2    CONCRETE TO HAVE COMPRESSIVE STRENGTH AFTER 28 DAYS OF NOT LESS THAN THAT LISTED BELOW FOR THE VARIOUS CONCRETE ELEMENTS:  
SLAB & FOOTINGS    -    25MPa
- C3    MINIMUM CLEAR COVER TO STEEL ON THE PLANS IS TO TAKE PRECEDENCE BUT GENERALLY TO BE  
- STRIP FOOTINGS, RETAINING WALL FOOTINGS & EXTERNAL SLABS:  
50mm TO ALL SIDES OF FOOTING & 50mm TO EXTERNAL EXPOSURE  
- EXTERNAL SLABS 50mm TOP COVER
- C4    ALL CONCRETE TO BE MECHANICALLY VIBRATED. VIBRATOR SHALL NOT BE USED TO SPREAD CONCRETE. VIBRATOR NOT TO COME INTO CONTACT WITH REINFORCEMENT.
- C5    ALL CONCRETE SURFACES ARE TO BE CURED BY MAINTAINING THE EXPOSED SURFACES IN A MOIST CONDITION FOR A MINIMUM OF SEVEN DAYS IMMEDIATELY CONCRETE IS SET. ALTERNATIVE METHODS OF CURING MAY BE USED BUT MUST BE APPROVED BY THE ENGINEER PRIOR TO USE.
- C6    SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES
- C7    CONSTRUCTION JOINTS WHERE NOT SHOWN SHALL BE LOCATED TO THE ENGINEERS APPROVAL.
- C8    NO HOLES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT PRIOR APPROVAL OF THE ENGINEER
- C9    NO CHEMICALS OR ADDITIONAL WATER ARE TO BE ADDED OR APPLIED TO THE CONCRETE MIX ONCE THE CONCRETE LEAVES THE BATCH PLANT, WITHOUT THE APPROVAL OF THE ENGINEER.
- C10    ALL STEEL REINFORCEMENT IN CONCRETE ELEMENTS IS TO BE INSPECTED BY THE P.C.A., AND PASSED PRIOR TO POURING OF ANY CONCRETE.
- C11    ALL REINFORCEMENT IS TO BE SUPPORTED ON PLASTIC CHAIRS. GENERALLY AT NOT GREATER THAN 800mm CENTRES IN BOTH DIRECTIONS. BARS TO BE TIED AT ALTERNATE INTERSECTIONS. CONDUITS, PIPES ETC ARE NOT TO BE PLACED IN THE COVER OF THE CONCRETE.
- C12    ALL REINFORCEMENT SHALL COMPLY WITH THE REQUIREMENTS OF THE RELEVANT AUSTRALIAN STANDARDS.
- C13    MINIMUM OVERLAP:    BARS & TRENCH MESH 500mm; SLAB MESH 200mm
- C14    CONCRETE TO HAVE A MAXIMUM AGGREGATE SIZE OF 20mm WITH 80mm MAXIMUM SLUMP AND A WATER/CEMENT RATIO OF NOT GREATER THAN 0.55
- C15    A LEVELLING SAND LAYER (40mm MINIMUM IN THICKNESS) IS TO BE PLACED UNDER SLABS ON GROUND. WHERE SANDFILL TO A GREATER DEPTH IS REQUIRED, THE SAND IS TO BE SALT FREE AND IS TO BE PLACED IN LAYERS NO DEEPER THAN 150mm AND COMPACTED TO 98% DRY DENSITY.
- C16    A WATERPROOF MEMBRANE IS TO BE PLACED BENEATH SLABS ON GROUND SO THAT THE GROUND SURFACE UNDER THE SLAB AND THICKENINGS IS ENTIRELY COVERED.
- C17    THIS MEMBRANE SHALL BE MINIMUM 0.2mm (200µM) THICK POLYTHENE SHEETING IN ACCORDANCE WITH AS2870-1996 AND ALL JOINS SHALL BE TAPED.
- C18    PROVIDE TERMITE PROOFING BY LICENSED INSTALLER TO CONNECTIONS BETWEEN GROUND FLOOR SLABS AS WELL AS    ALL PENETRATIONS IN FLOOR SLABS.
- C19    BCA REQUIREMENT FOR TERMITE PROTECTION:  
1) 75mm VERTICAL VISIBLE SLAB EDGE BETWEEN FINISHED GROUND LEVEL & BOTTOM BLOCK COURSE, PROVIDED GROUND SLOPES AWAY FROM THE BUILDING;  
2) 50mm VERTICAL VISIBLE SLAB EDGE BETWEEN FINISHED VERANDAH FLOOR LEVEL & BOTTOM BLOCK COURSE, PROVIDED VERANDAH IS ROOFED.

TIMBER TREATMENT

HAZARD CLASS	PRIMARY USAGE	PROTECTION
H1	INSIDE, ABOVE GROUND, PROTECTED FROM WEATHER & WELL VENTILATED	INSECTS
H2	INSIDE, ABOVE GROUND & PROTECTED FROM WETTING (NO LEACHING)	INSECTS & TERMITES
H3	OUTSIDE, ABOVE GROUND & PERIODIC WETTING & PARTIAL LEACHING	INSECTS, TERMITES & MODERATE DECAY
H4	IN-GROUND / ABOVE GROUND, SEVERE WETTING & LEACHING	INSECTS, TERMITES & SEVERE DECAY

TIMBER

- T1    ALL TIMBER DESIGN, CONSTRUCTION AND MATERIAL TO BE IN ACCORDANCE WITH AS 1684
- T2    HARDWOOD TO BE MINIMUM GRADE F17 U.N.O.
- T3    EXTERNAL TIMBER TO BE EITHER HARDWOOD DURABILITY CLASS I OR CLASS II AS PER AS 1720.2 OR IMPREGNATED PINE GRADE F7, PRESSURE TREATED TO AS 1604 AND RE-DRIED PRIOR TO USE. SUPPLEMENTARY TREATMENT TO BE APPLIED TO ALL CUT SURFACES. SUPPLY SUPPORTING DOCUMENTATION FOR PRESERVATIVE TREATMENT.
- T4    ALL BOLTS IN TIMBER CONSTRUCTION TO BE MINIMUM M12 U.N.O. BOLT HOLES TO BE DRILLED EXACT SIZE.  
WASHERS UNDER HEADS AND NUTS TO BE AT LEAST 2.5 TIMES BOLT DIAMETER.
- T5    ALL EXTERNAL STEEL FIXINGS & BRACKETS TO BE HOT DIP GALVANISED OR SS GRADE 316.
- T6    ALL TIMBER JOINTS AND NOTCHES ARE TO BE 100mm MINIMUM AWAY FROM LOOSE KNOTS, SEVERE SLOPING GRAIN, GUM VEINS OR OTHER MINOR DEFECTS.
- T7    ALL TIMBER USED SHALL HAVE BEEN STRESS GRADED BY VISUAL OR MECHANICAL MEANS IN ACCORDANCE WITH    THE APPROPRIATE AUSTRALIAN STANDARDS.
- T8    EDGE DISTANCES FOR FASTNERS IN TIMBER (FROM ENDS AND SIDES ) SHALL BE IN ACCORDANCE WITH AS1720.1 UNLESS OTHERWISE NOTED
- T9    ALL TRUSS ROOFS ARE TO BE MANUFACTURED, INSTALLED AND BRACED TO MANUFACTURES SPECIFICATIONS

STRUCTURAL STEEL NOTES

- S1    ALL STEELWORK IS TO BE CONSTRUCTED IN ACCORDANCE WITH CODE OF PRACTICE AS 4100-1998 STEEL STRUCTURES CODE, AND ALL OTHER CODES OF PRACTICE REFERRED TO THEREIN.
- S2    ALL WELDS SHALL BE 6mm CONTINUOUS FILLET, ALL BOLTS M20 8.8/S. UNLESS OTHERWISE NOTED (UNO)
- S3    ALL PLATES AND GUSSET PLATES TO BE 10mm THICK UNO
- S4    ALL EXTERIOR BOLTS, NUTS AND WASHERS TO BE HOT DIP GALVANISED OR MARINE GRADE STAINLESS STEEL UNO
- S5    BOLT HOLES TO BE 2mm GREATER THAN SPECIFIED SIZE UNO
- S6    SEAL ALL HOLLOW SECTIONS WITH 4mm PLATE, 4mm SEAL WELD.
- S7    FABRICATOR TO CHECK ALL DIMENSIONS ON SITE WITH CONTRACTOR.
- S8    REFER TO SPECIFICATION FOR COATING OF STEELWORK. WHERE NO SPEC. EXISTS THE MINIMUM PRIMING TREATMENT SHALL BE AS FOLLOWS:  
- CLEAN STEELWORK FREE OF ALL RUST, MILLSCALE, OIL, GREASE AND DELETERIOUS MATERIAL USING ABRASIVE BLAST CLEANING.  
- min. SURFACE PREPARATION IN ACCORDANCE WITH AS 1627 SHALL BE CLASS 2 1/2  
- WITHIN 4 HOURS OF PREPARATION, SHOP PRIME WITH SINGLE COAT (MIN. 75 MICRON) OF HIGH BUILD ZINC PHOSPHATE. (COLOUR AS SPECIFIED BY ARCHITECT)  
- STEELWORK TO BE THOROUGHLY CLEANED TO CLASS 1 AND COATED WITH MIN. 150µM EPOXY MASTIC PRIMER BEFORE ERECTION.  
- IN ACCORDANCE WITH AS 1650 SECTION 5, HOT DIP GALVANISE THE FOLLOWING ITEMS:- ALL EXTERNAL AND EXPOSED STEELWORK. (MIN. ZINC COATING THICKNESS TO BE 600g/m²) UNLESS OTHERWISE DIRECTED BY THE OWNER.
- S9    THE STRUCTURAL STEEL FRAMEWORK AND BRACING MEMBERS SHOWN ON THE PLANS ARE THOSE REQUIRED IN THE DESIGN FOR THE COMPLETED STRUCTURE ONLY AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ANY NECESSARY TEMPORARY CONNECTIONS, SUPPORTS AND BRACING DURING THE ERECTION PROCESS TO MAINTAIN THE STABILITY AND SAFETY OF THE STEELWORK THROUGHOUT CONSTRUCTION.
- S10    THE STEEL FABRICATOR SHALL PROVIDE ALL BOLTS AND CLEATS NECESSARY FOR THE ERECTION OF THE STEELWORK AS SHOWN, NOTED OR IMPLIED ON THESE DRAWINGS OR THE ARCHITECTS DRAWINGS AND SPECIFICATIONS.
- S11    WHEN SHOP SPLICES ARE NECESSARY IN BEAMS or COLUMNS, THE POSITION OF THE SPLICE IS TO BE APPROVED BY THE ENGINEER
- S12    UNLESS OTHERWISE NOTED, ALL STEEL COLUMNS DEPICTED ON THE STRUCTURAL DRAWINGS SET AS BEING CONTAINED WITHIN INTERNAL / EXTERNAL WALL FRAMES ARE TO BE RESTRAINED BETWEEN (min x 2) ADJACENT WALL STUDS (M12 4.6/S BOLTS) THROUGH @ TOP, MID-HEIGHT & BOTTOM & BRACED USING 900min. 83 PLY BRACING (FIXING TO MANUF. SPECS) TO BOTH FACES OF THE WALL.

UPDATE -A	LH	LH	26.03.24
REVISION	CHKD	OK	DATE




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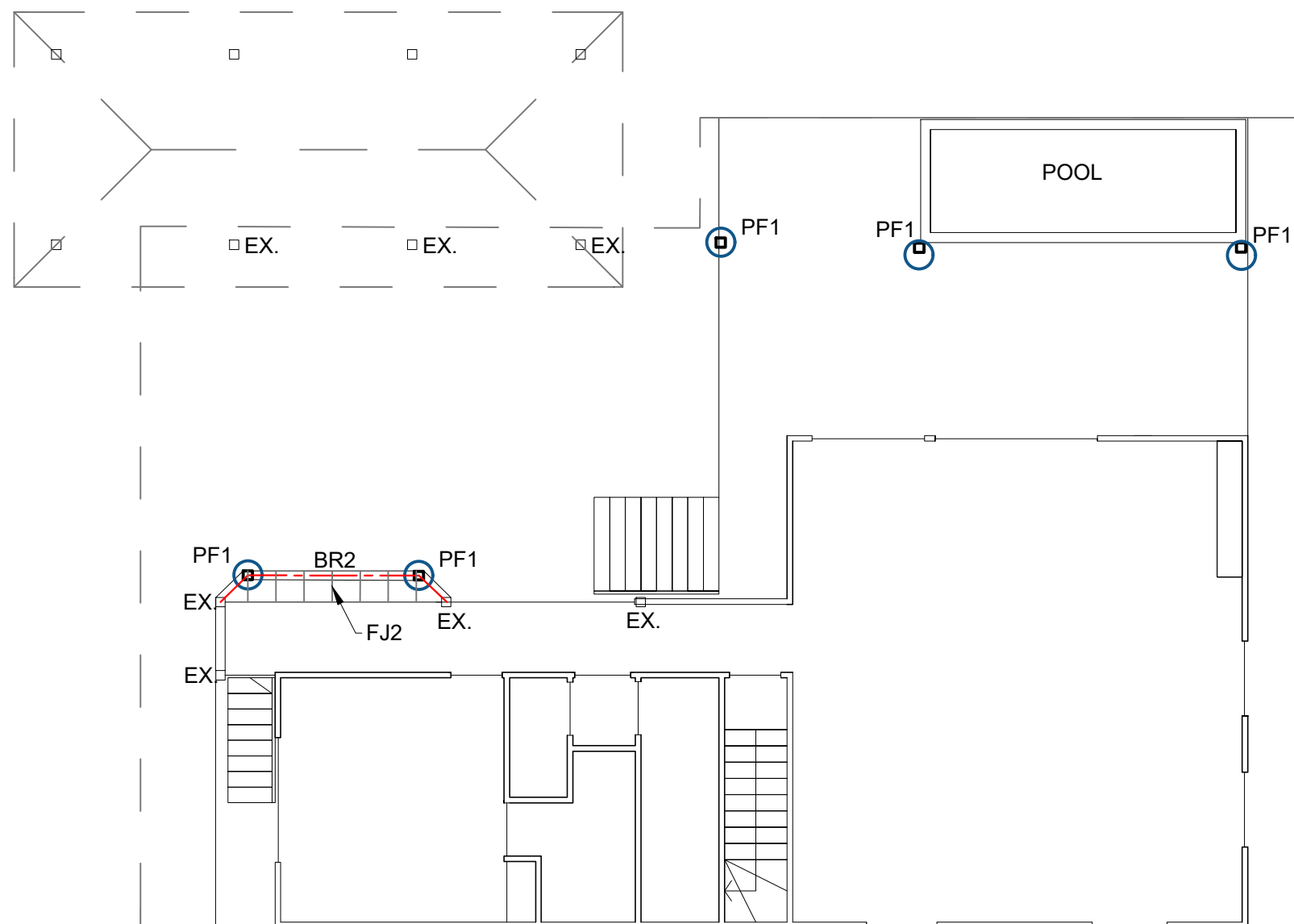
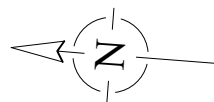
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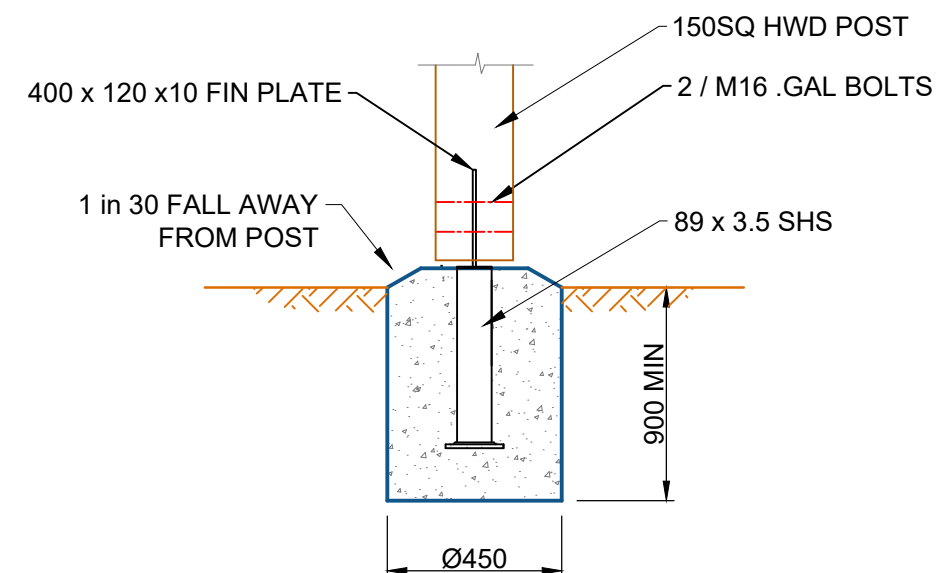


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DATE:    11.12.23				ISSUE:		DWG No		
SCALE:    As noted @ A3		APPD: 		A		K-02		



**FOOTING PLAN**  
SCALE 1:100



**PF2 - FOOTING DETAIL**  
SCALE 1:20

**DRAWING LEGEND**

EX.	INDICATES LOCATION OF EXISTING FOOTINGS AND TIMBER POST
PF#	INDICATES LOCATION PAD FOOTING

**MEMBER SCHEDULE**

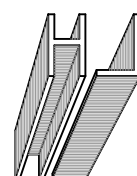
MEMBER	MAX SPAN	MEMBER SIZE
FJ2	0.5	90 x 45 KD Hwd F17
BR2	2.8	170 x 45 KD Hwd F17



\* ALL FOOTING DEPTHS SHOWN ARE MINIMUM ONLY.

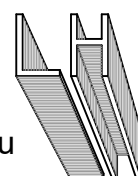
FOOTINGS ARE TO BE FOUND MIN 300mm INTO FIRM NATURAL GROUND MIN BEARING CAPACITY 100kPa

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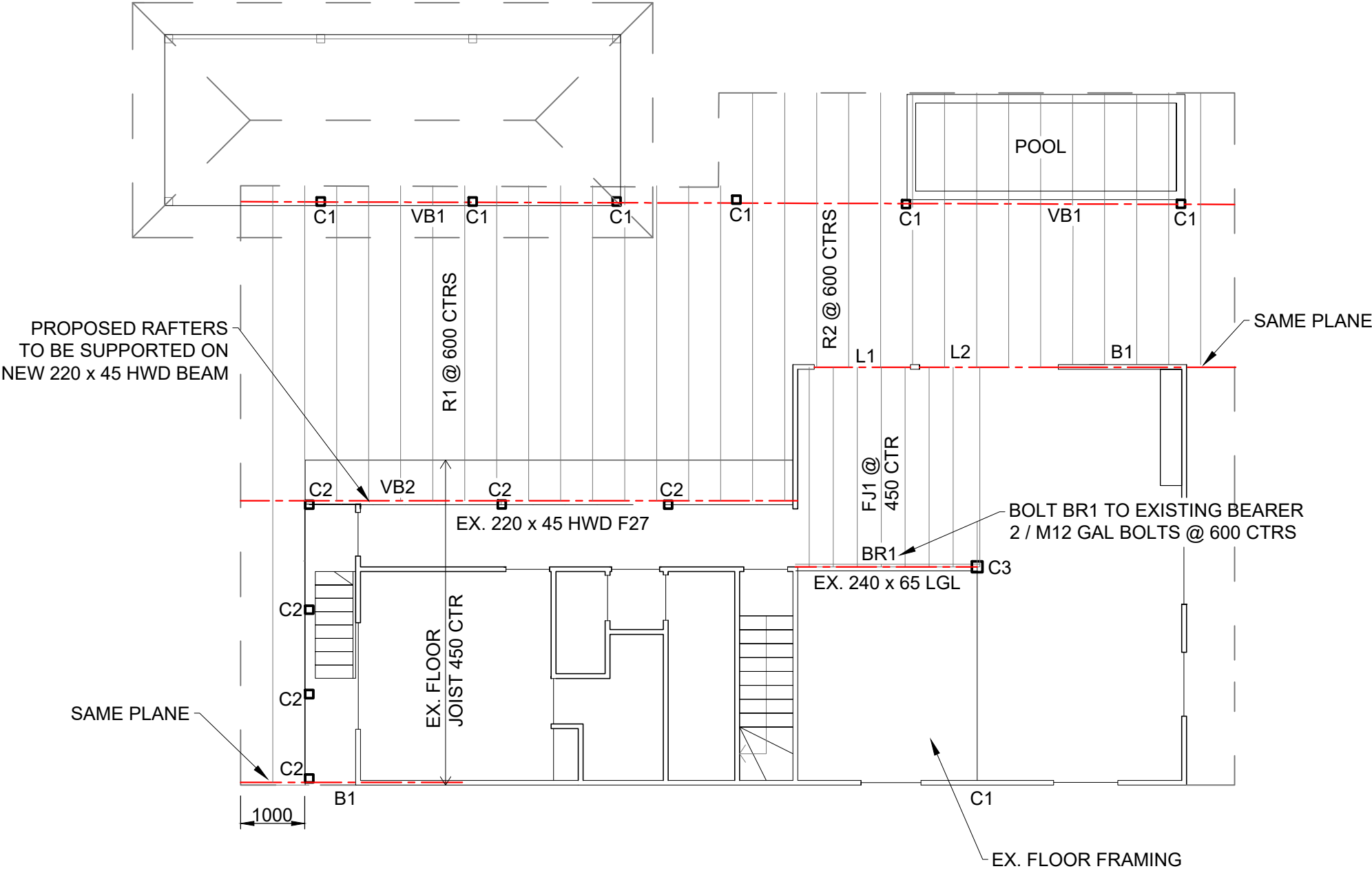
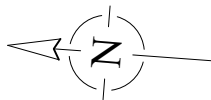
**FOOTING PLAN**

ISSUE:

A

DWG No  
**K-03**

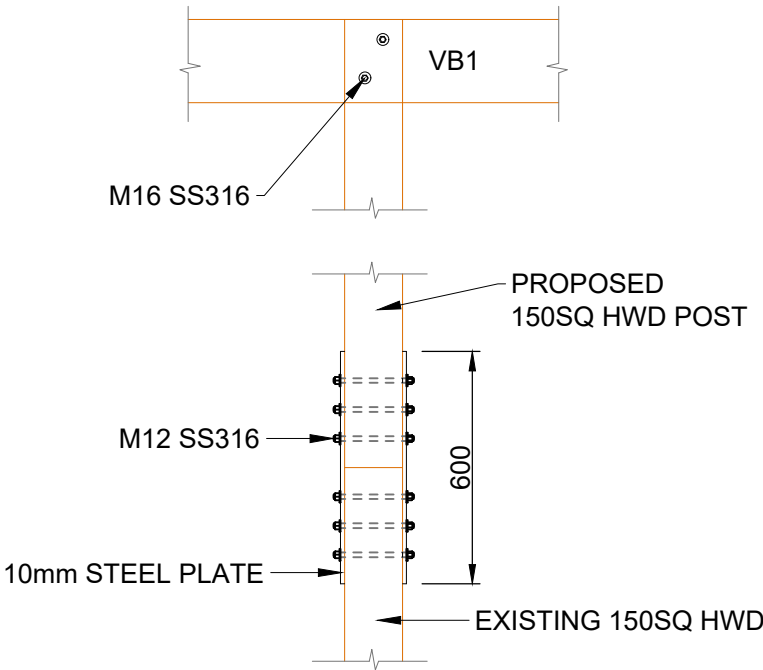
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FLOOR & ROOF FRAMING PLAN  
SCALE 1:100

MEMBER SCHEDULE

MEMBER	MAX SPAN	MEMBER SIZE
FJ1	3.75	200 x 45 LVL E13 H2-S
L1	1.8	170 x 45 LVL E13 H2-S
L2	2.6	200 x 63 LVL E13 H2-S
BR1	3.4	230 x 65 Hyne 15 GLT 15s
VB1	5.1 + 1.5 Cant	215 x 85 Hyne Beam GLT 21s 200 x 100 x 6 RHS
VB2	3.9 + 1.0 Cant	220 x 45 KD Hwd F17
B1	2.0 + 1.0 Cant.	200 x 45 LVL E13 H2-S
R1	5.5 + 0.3 Cant.	200 x 45 LVL E13 H2-S
R2	3.0 + 2.0 Cant.	200 x 45 LVL E13 H2-S
C1	-	150SQ HWD POST
C2	-	EXISTING - 150SQ HWD POST



POST ON POST EXTENSION DETAIL  
SCALE 1:20

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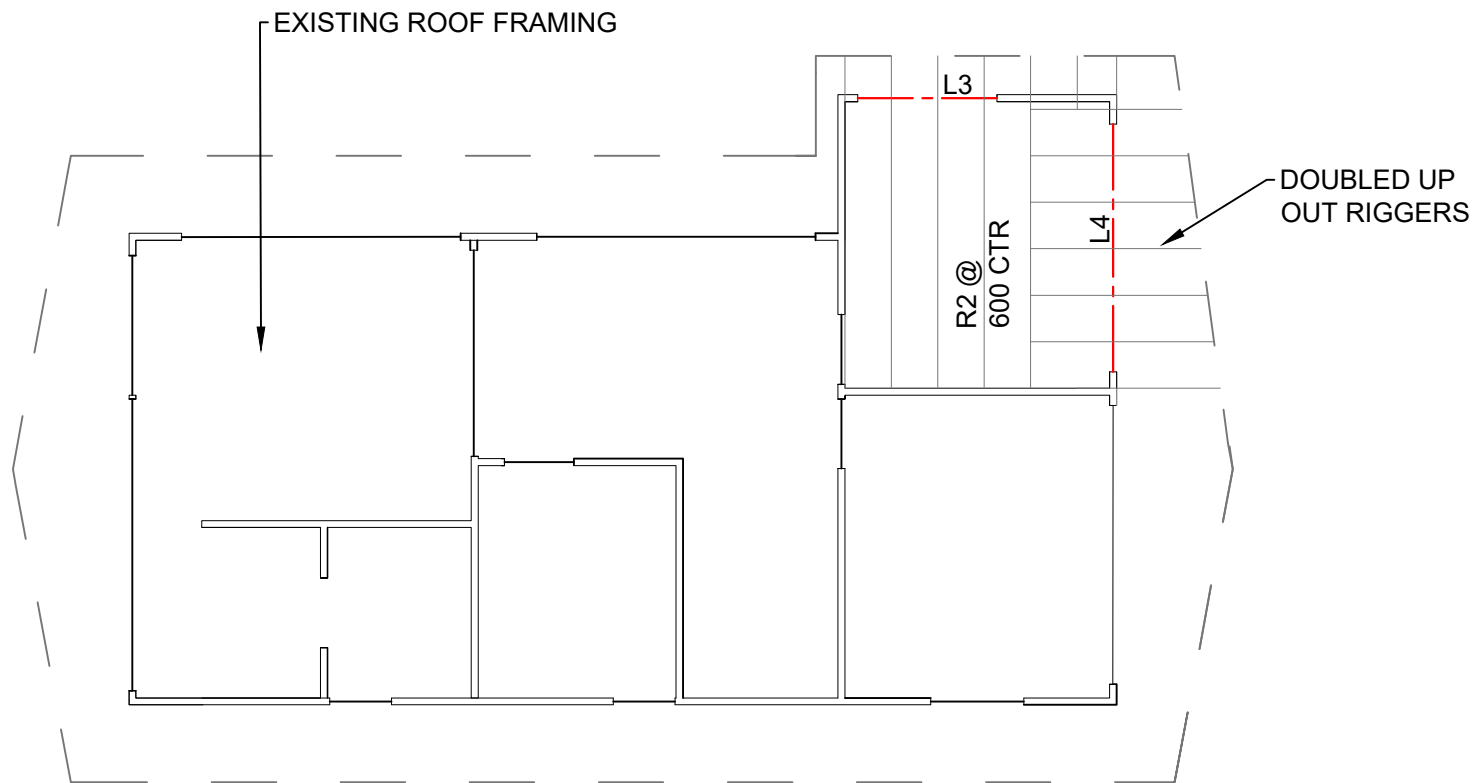
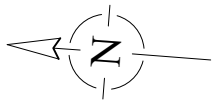


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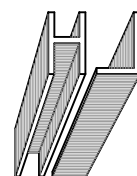
### MEMBER SCHEDULE

MEMBER	MAX SPAN	MEMBER SIZE
R2	3.7	170 x 45 KD HWD F17
L3	1.8	130 x 45 LVL E13 H2-S
L4	3.2	170 x 45 LVL E13 H2-S

### ROOF FRAMING PLAN

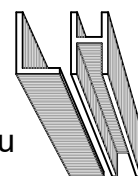
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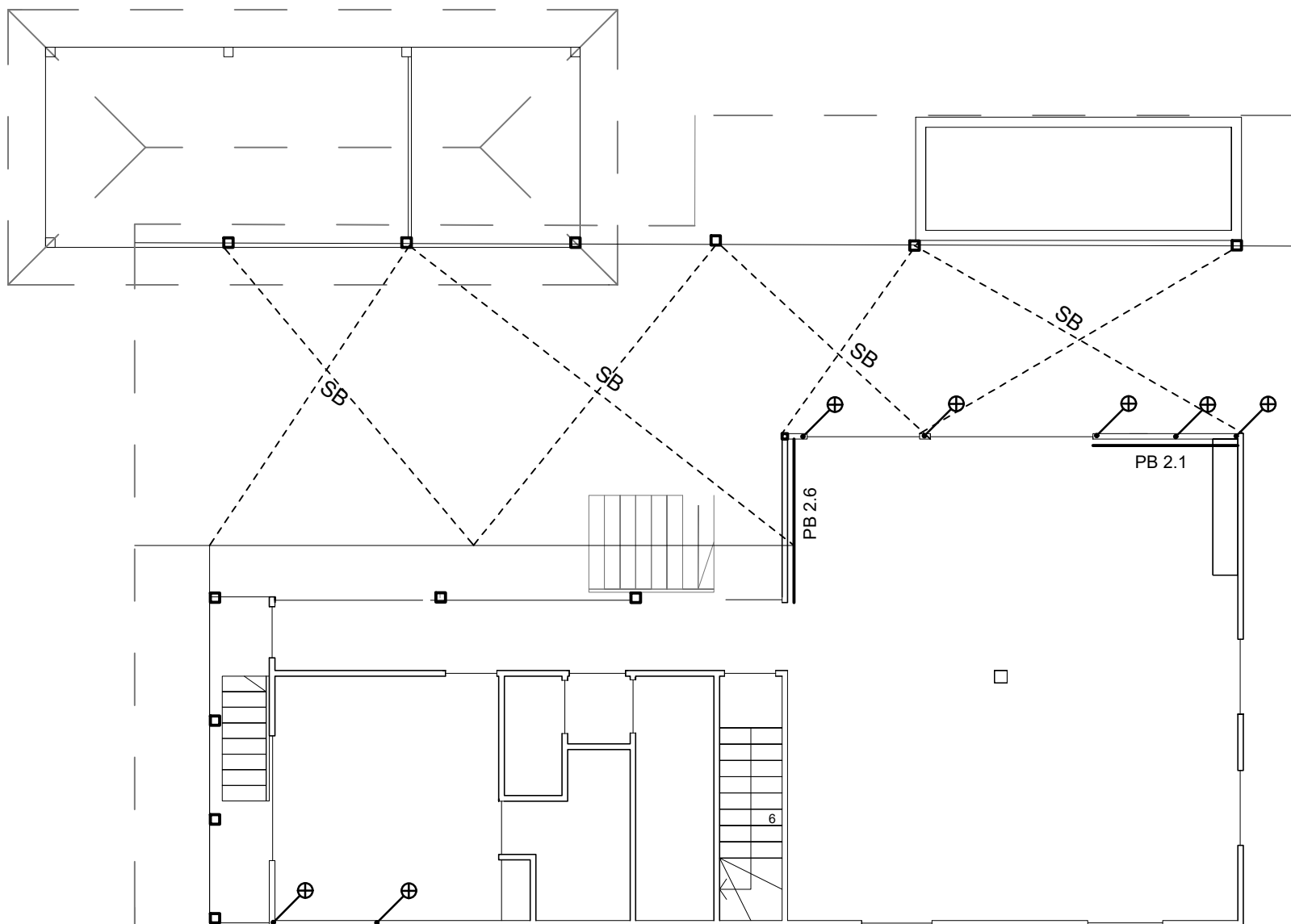
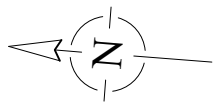
ISSUE:

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DWG No  
**K-05**

UPDATE -A	LH	LH	26.03.24
REVISION	CHKD	OK	DATE





## WIND BRACING PLAN

SCALE 1:100

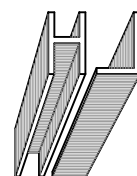
## WIND BRACING KEY

- PA** - 4mm F27 Plywood sheet bracing, complying with AS1684, full wall height.  
M12 Tie down rod continuous from floor slab or bearer to top plate at each end of each sheathed section,  
Bottom plate M12 tie-down @ max 1.2m ctrs.  
Nailing pattern: 150mm top and bottom plates  
150mm vertical edges  
300mm intermediate studs  
Horizontal butt joints at noggings:  
150mm each edge  
Nails 30mm x 2.8mm gal clouts  
Racking resistance 6.4 kN/m @ wall height 2.7m or less. Reduction factors (RF) apply for wall heights exceeding 2.7m & sheathed sections less than 900mm in length.
- PB** - 4mm F27 Plywood sheet bracing, complying with AS1684, full wall height.  
Bottom plate M8 tie-down @ max 1.2m ctrs  
Nailing pattern: 150mm top and bottom plates  
150mm vertical edges  
300mm intermediate studs  
Horizontal butt joints at noggings:  
150mm each edge  
Nails 30mm x 2.8mm gal clouts  
Racking resistance 3.4 kN/m @ wall height 2.7m or less. Reduction factors (RF) apply for wall heights exceeding 2.7m & sheathed sections less than 900mm in length.
- ⊕ - Location of M12 gal tie-down rod continuous from floor slab or bearer to top plate
- - Location of steel or Hwd posts.  
min 2/M12 Gal. bolts to roof beam.  
min 2/M12 Gal. bolts to bearer or slab  
Equivalent to M12 gal tie-down.

PRYDA SPEEDBRACE  
20 x 20 x 1 GAL or SS316

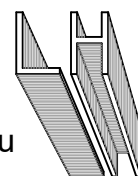


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CONSULTING STRUCTURAL ENGINEERS



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PROPOSED ADDITIONS & ALTERATIONS  
1-56 SHIRLY Ln, BYRON BAY

CLIENT: SHAJI KARIMADATH

DATE: 11.12.23

SCALE: As noted @ A3

APPD:

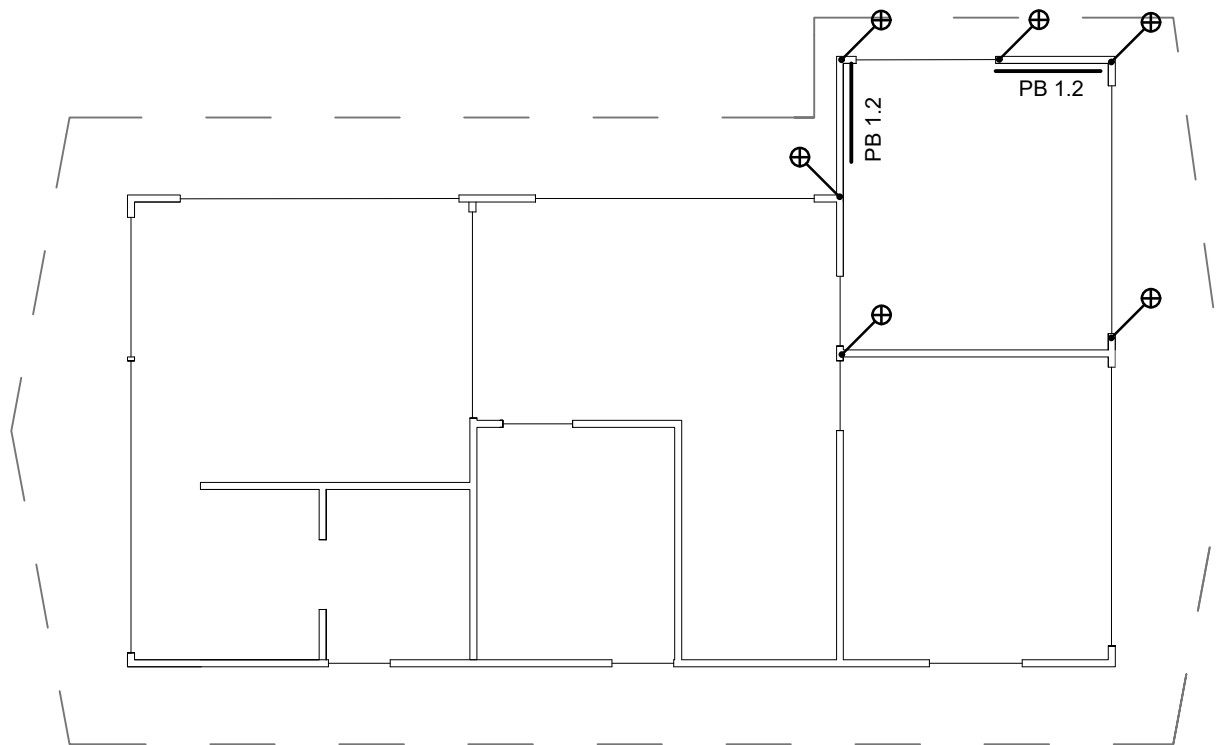
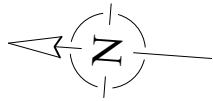
FIRST FLOOR BRACING PLAN

ISSUE:

A

DWG No  
K-06

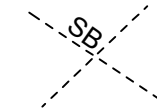
UPDATE -A	LH	LH	26.03.24
REVISION	CHKD	OK	DATE



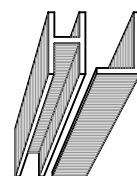
## WIND BRACING KEY

- PA** - 4mm F27 Plywood sheet bracing, complying with AS1684, full wall height.  
M12 Tie down rod continuous from floor slab or bearer to top plate at each end of each sheathed section,  
Bottom plate M12 tie-down @ max 1.2m ctrs.  
Nailing pattern: 150mm top and bottom plates  
150mm vertical edges  
300mm intermediate studs  
Horizontal butt joints at noggings:  
150mm each edge  
Nails 30mm x 2.8mm gal clouts  
Racking resistance 6.4 kN/m @ wall height 2.7m or less. Reduction factors (RF) apply for wall heights exceeding 2.7m & sheathed sections less than 900mm in length.
- PB** - 4mm F27 Plywood sheet bracing, complying with AS1684, full wall height.  
Bottom plate M8 tie-down @ max 1.2m ctrs  
Nailing pattern: 150mm top and bottom plates  
150mm vertical edges  
300mm intermediate studs  
Horizontal butt joints at noggings:  
150mm each edge  
Nails 30mm x 2.8mm gal clouts  
Racking resistance 3.4 kN/m @ wall height 2.7m or less. Reduction factors (RF) apply for wall heights exceeding 2.7m & sheathed sections less than 900mm in length.
- ⊗ - Location of M12 gal tie-down rod continuous from floor slab or bearer to top plate
- - Location of steel or Hwd posts.  
min 2/M12 Gal. bolts to roof beam.  
min 2/M12 Gal. bolts to bearer or slab  
Equivalent to M12 gal tie-down.

PRYDA SPEEDBRACE  
20 x 20 x 1 GAL or SS316

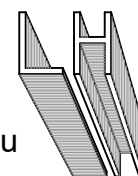


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PROPOSED ADDITIONS & ALTERATIONS  
1-56 SHIRLY Ln, BYRON BAY

SECOND FLOOR BRACING PLAN

CLIENT: SHAJI KARIMADATH

DATE: 11.12.23

SCALE: As noted @ A3

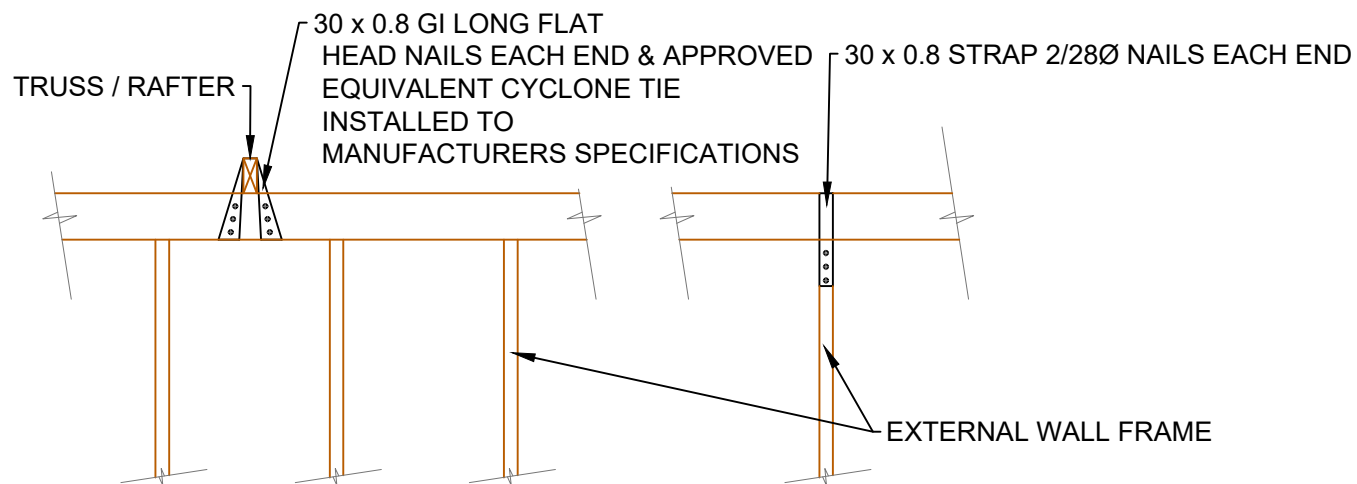
APPD:

ISSUE:

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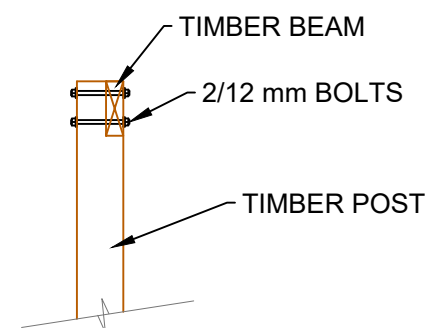
DWG No  
**K-07**

UPDATE -A	LH	LH	26.03.24
REVISION	CHKD	OK	DATE



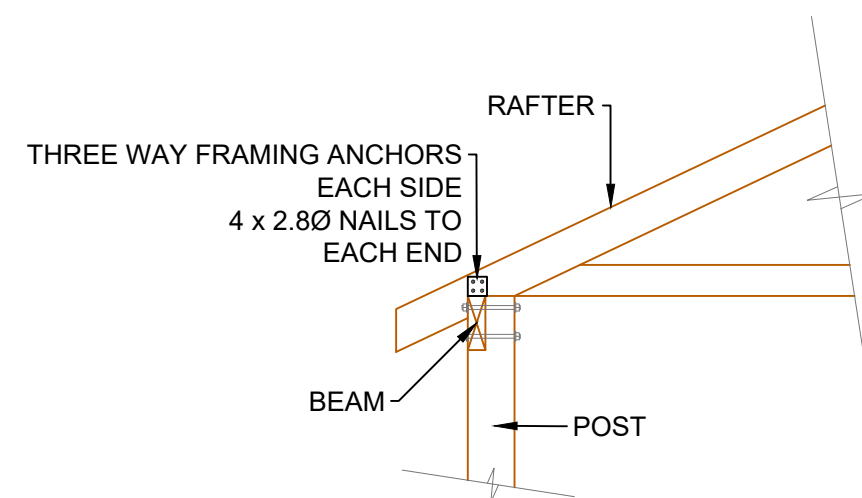
## TRUSS TO WALL / TOP BOTTOM PLATE FRAME CONNECTION

SCALE 1:20



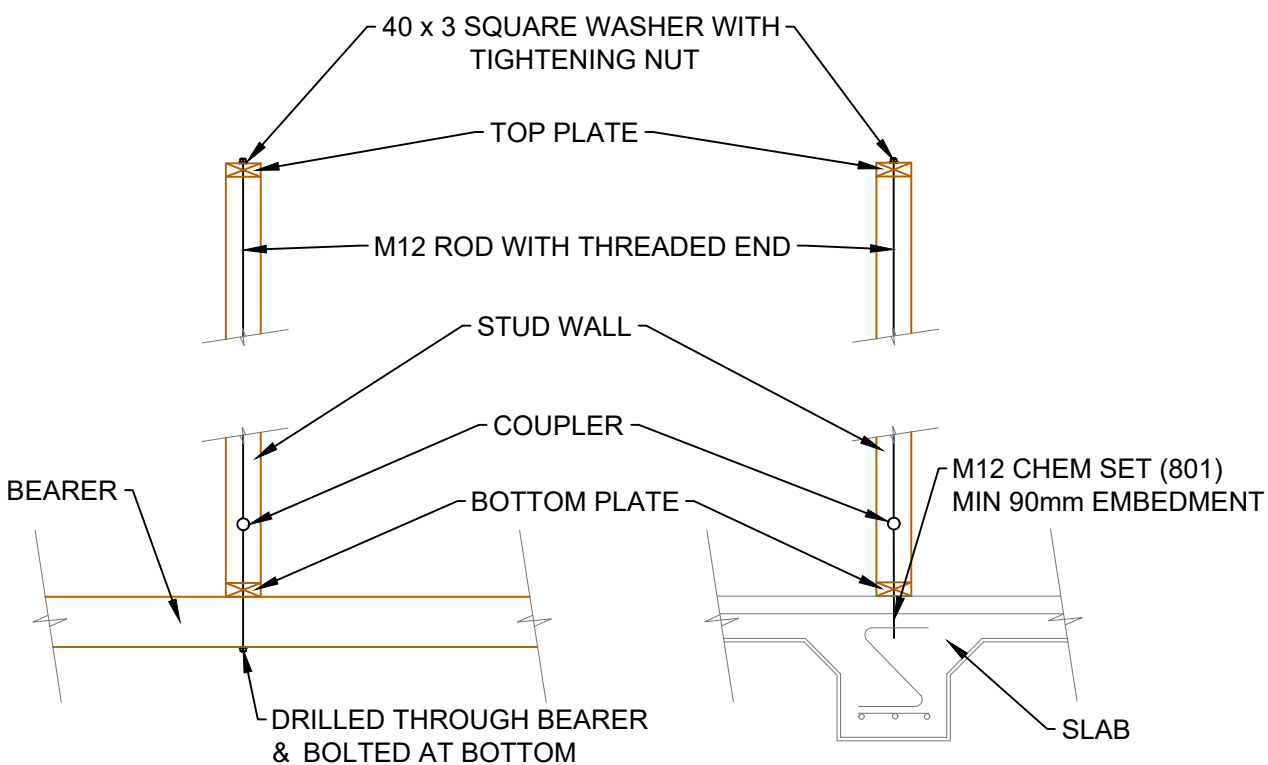
## POST TO BEAM CONNECTION

SCALE 1:20



## RAFTER TO VERANDAH BEAM

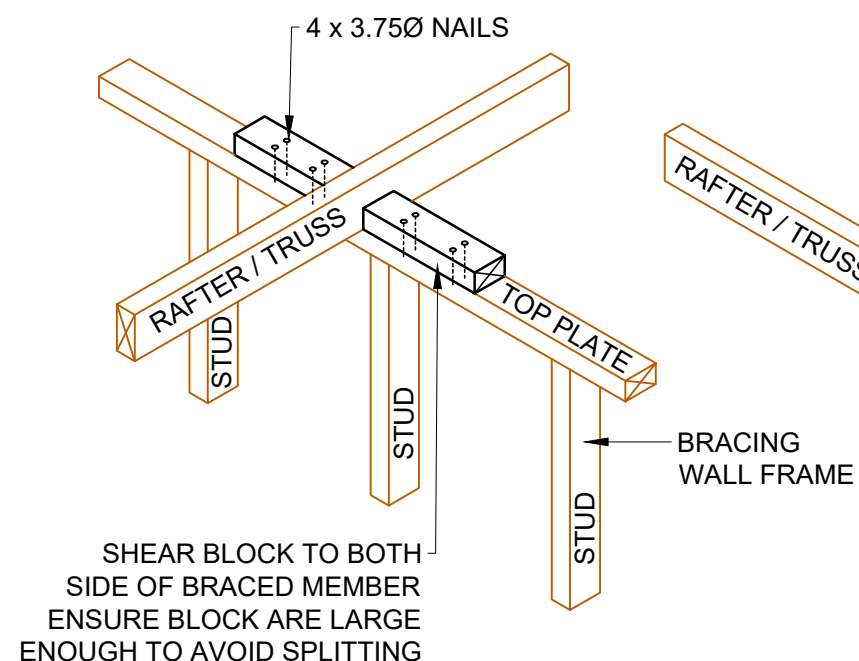
SCALE 1:20



## TIE DOWNS / TOP PLATE TO BEARER/SLAB CONNECTION

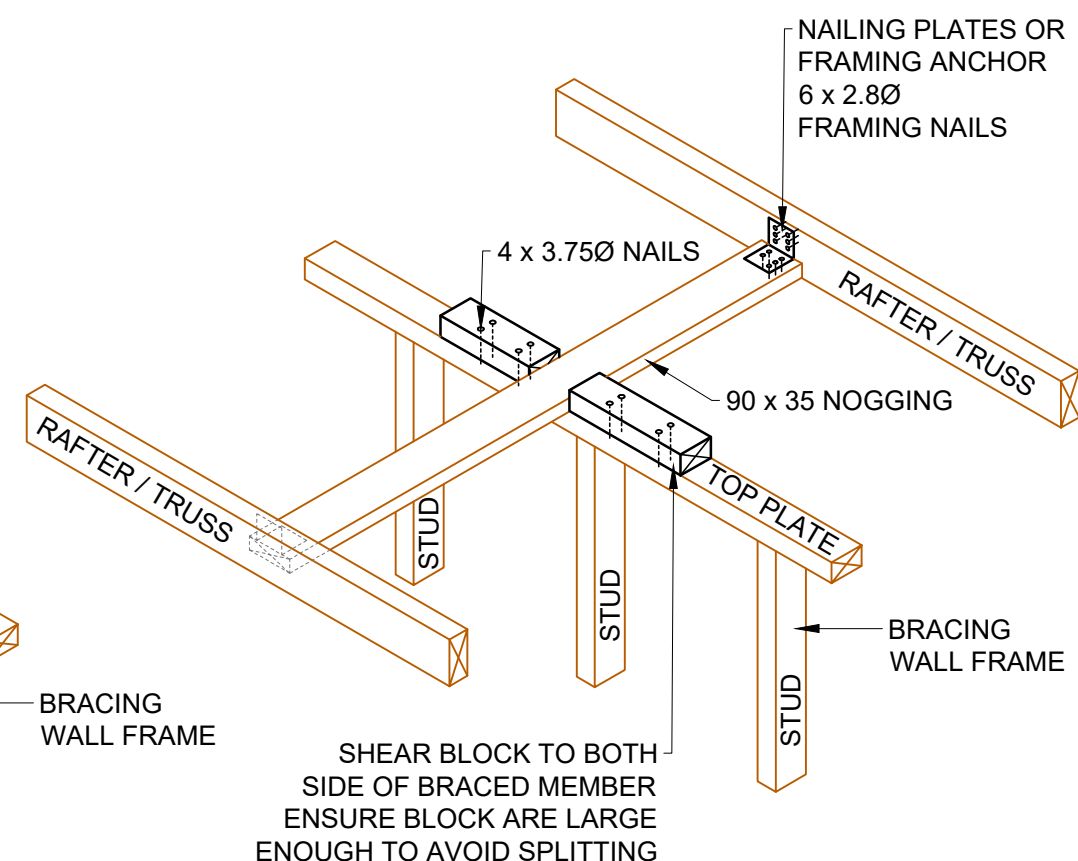
SCALE 1:20

WALL STUDS FOR N3  
<2.7 HIGH @ 450 Ctrs = 1/90 x 35 MGP10  
>2.7 - 3.6 HIGH @ 450 Ctrs = 2/90 x 35 MGP10  
or 90 x 45 MGP10



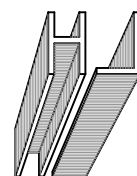
## TYP - INTERNAL BRACING WALL TO RAFTER / JOIST / RAFTERS

SCALE 1:20



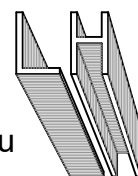
UPDATE -A	LH	LH	26.03.24
REVISION	CHKD	OK	DATE

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PROPOSED ADDITIONS & ALTERATIONS  
1-56 SHIRLY Ln, BYRON BAY

FRAMING DETAILS

CLIENT: SHAJI KARIMADATH

DATE: 11.12.23

DESIGN: LH

ISSUE:

SCALE: As noted @ A3

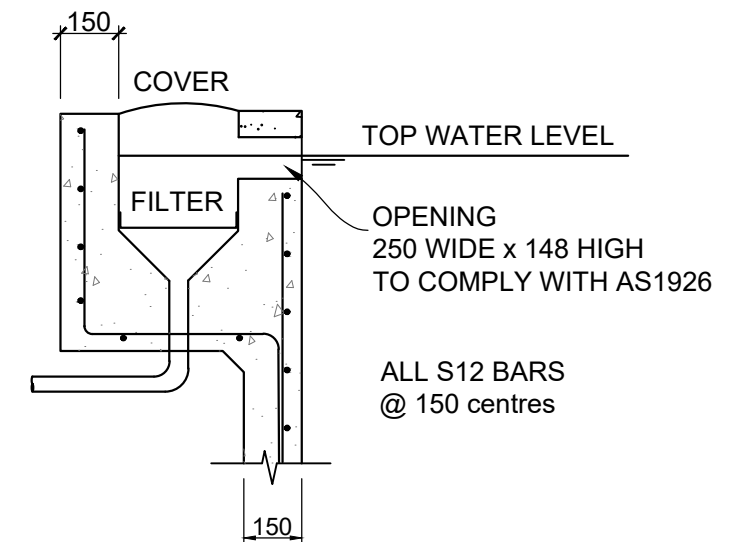
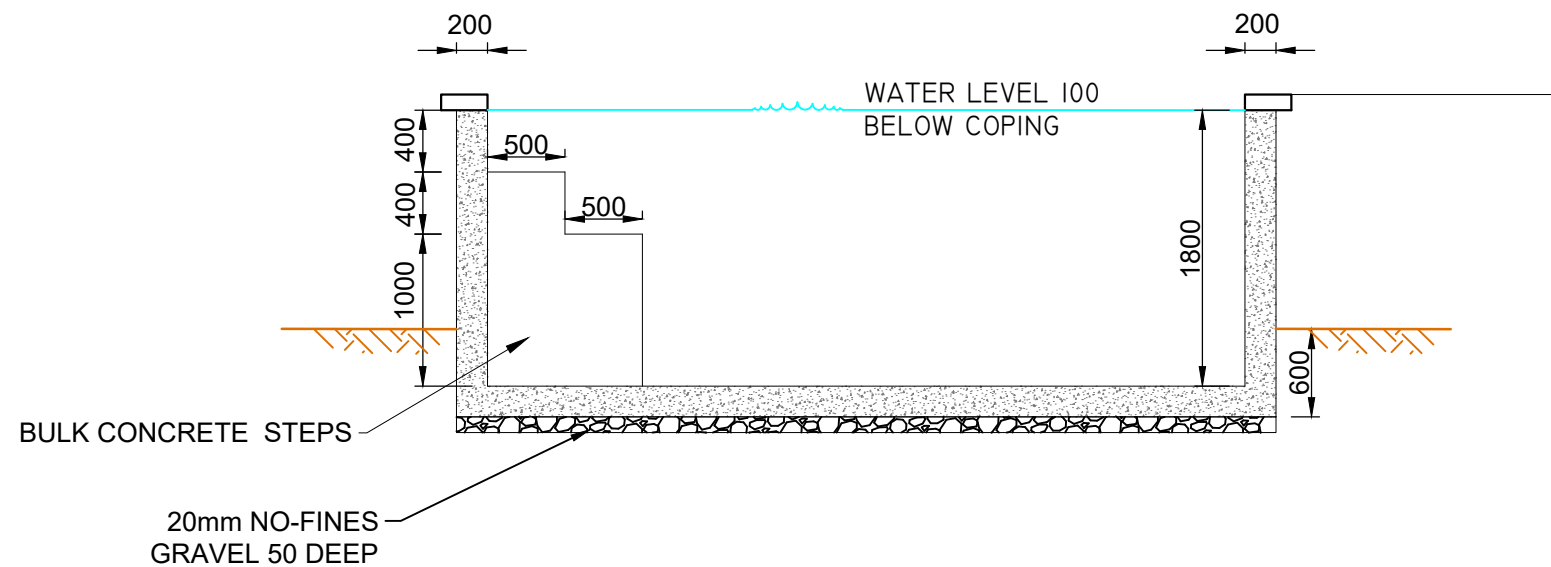
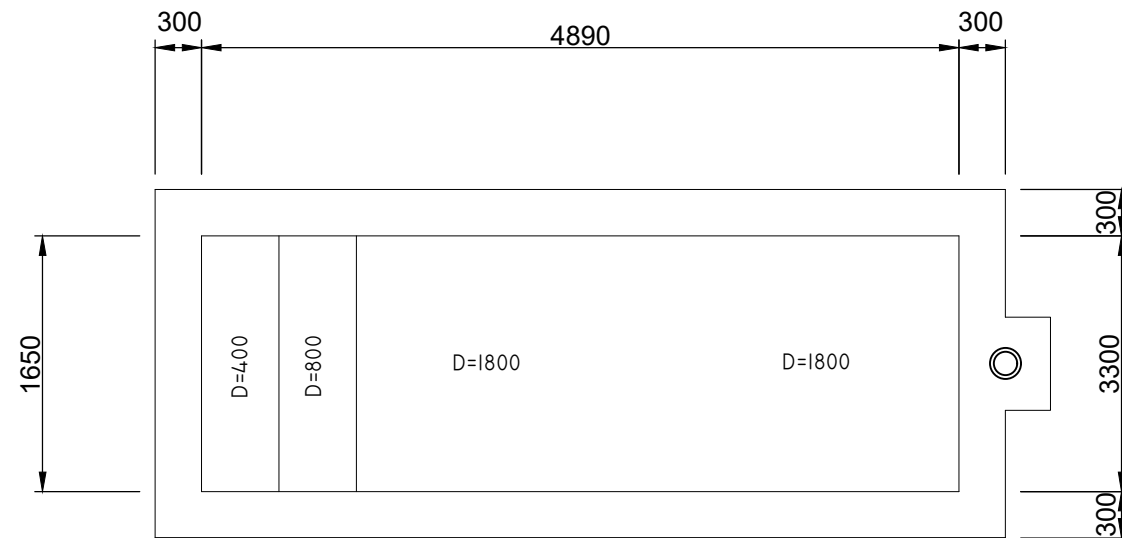
APPD:

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DWG No

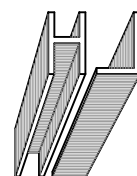
K-08





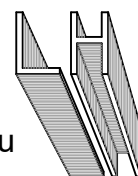
**SKIMMER BOX DETAIL**  
1:20

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PROPOSED ADDITIONS & ALTERATIONS  
1-56 SHIRLY Ln, BYRON BAY

**POOL PLAN**

CLIENT: SHAJI KARIMADATH

DATE: 11.12.23

SCALE: As noted @ A3

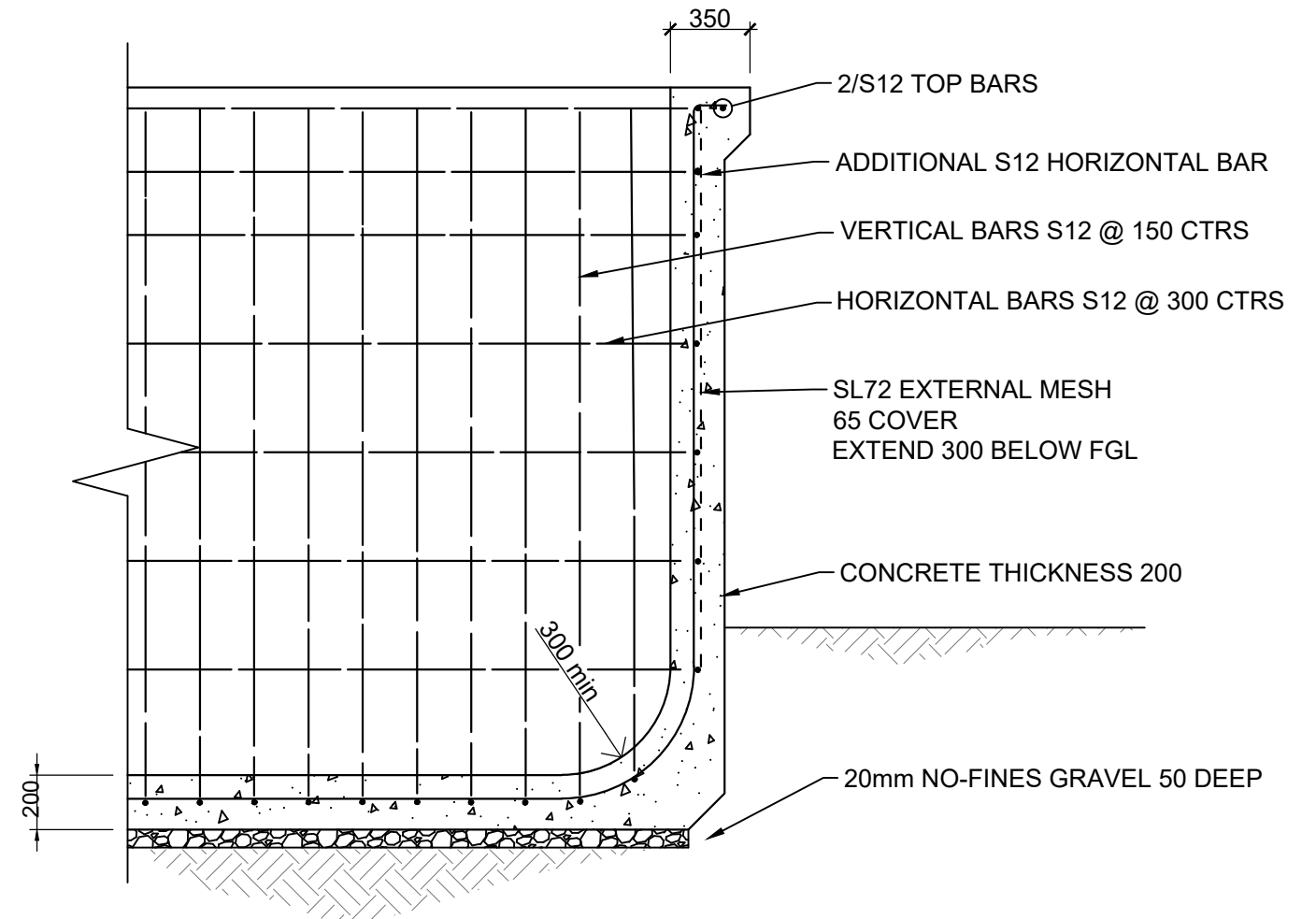
ISSUE:

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DWG No  
**K-09**

UPDATE -A	LH	LH	26.03.24
REVISION	CHKD	OK	DATE


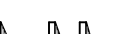

1. Shotcrete pool 32MPa concrete with 65mm cover to reo. (salt water requirement), to be sprayed in one application;
2. Concrete surface to be maintained in a damp condition while curing for a minimum of 14 days;
3. Provide hydrostatic valve as shown in deepest part of pool floor;
4. Provide 4 x S12 trimmer bars 1000mm long each side of hydrostatic valve;
5. Hydrostatic valve to be connected to a slotted pipe embedded in 20mm no-fines cobble filter;
6. Filter dimensions 450x450x600 deep, sides and base of filter lined with geofabric;
7. Place minimum 100mm layer of 20mm no-fines cobble beneath entire base of pool;
8. All reinforcement structural grade S12 unless otherwise specified,  
Laps: 500mm horizontal & vertical bars. Stagger Laps & none within 900mm of corners;
9. Spray concrete against formwork or natural ground;
10. Fill pool with water only after concrete has attained design strength;
11. Childproof perimeter fencing and gates to conform to AS 1926;
12. Use noted dimensions only, do NOT scale off drawings.



TYP. WALL SECTION  
DEPTH 1.8 - 2.0M

DO NOT SCALE OFF DRAWINGS  
WRITTEN DIMENSIONS PREFERRED  
BUILDER TO VERIFY ALL DIMENSIONS



				<div>Luko Hartmann &amp; Associates CONSULTING STRUCTURAL ENGINEERS</div> <div><div>0432 358 231</div><div>luko@lhaengineering.com.au</div></div>	PROPOSED ADDITIONS & ALTERATIONS 1-56 SHIRLY Ln, BYRON BAY		POOL REINFORCEMENT DETAILS					
					CLIENT: SHAJI KARIMADATH							
					DATE: 11.12.23					DWG No		
UPDATE -A REVISION	LH CHKD	LH OK	26.03.24 DATE		SCALE: As noted @ A3		APPD: 		A			K-10

## STRUCTURAL ENGINEERING DRAWINGS

### PROPOSED ADDITIONS & ALTERATIONS

LOT: 1 DP: 781417

2-56 SHIRLEY LANE BYRON BAY N.S.W.

CLIENT: SHAJI KARIMADATH

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K-02	CONSTRUCTION NOTES
K-03	FOOTING PLAN
K-04	FOOTING DETAILS
K-05	FIRST FLOOR FRAMING PLAN
K-06	STEEL DETAILS
K-07	SECOND FLOOR FRAMING PLAN
K-08	CONNECTION DETAILS
K-09	ROOF FRAMING PLAN
K-10	SUB - FLOOR WIND BRACING PLAN
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K-12	SECOND FLOOR WIND BRACING PLAN
K-13	FRAMING DETAILS
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K-15	POOL REINFORCEMENT DETAILS

## CERTIFICATE OF STRUCTURAL ADEQUACY

**Building Design:** ARCHDRAFT (AD)  
**References:** AD JOB No. 0821 SHEET B00 TO B11 DATED 05.12.2023  
**Engineer:** LUKO HARTMANN & ASSOCIATES (LHA)  
**References:** LHA Drawings K-01 to K-15 dated 11.12.23

The proposed additions & alterations are hereby certified to be structurally adequate in accordance with the requirements of the current edition of the NCC & the following design criteria and Australian standards:

### Design Criteria and Standards

1. Loading Code AS1170, Parts 1 and 2;
2. Residential Slabs & Footings AS2870-2011 for Class P soil.
3. Wind Loads for Housing AS4055 - N3 Loading;
4. Timber Framing Code AS1684;
5. Steel Structures Code AS4100

LUKO HARTMANN B.E.

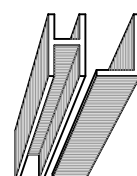
### GENERAL NOTES

- G1 THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL, OTHER CONSULTANTS DRAWINGS & SPECIFICATIONS. ANY DISCREPANCIES ARE TO BE REFERRED TO THE BUILDING DESIGNER OR PROJECT MANAGER FOR A DECISION BEFORE PROCEEDING WITH THE WORK.
- G2 DIMENSIONS SHALL NOT BE OBTAINED BY SCALING OFF DRAWINGS. ALL DIMENSIONS TO BE CHECKED BY BUILDER PRIOR TO COMMENCEMENT OF WORKS.
- G3 THE CONSULTING ENGINEER HAS DESIGNED THE PERMANENT STRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN, IMPLEMENTATION AND CERTIFICATION OF ALL TEMPORARY WORKS, PROPPING, NEEDLING, FALSE WORK, BRACING, BACK-PROPPING, AND SO FORTH, NECESSARY TO COMPLETE THE WORK.
- G4 DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVER STRESSED.
- G5 THE CONTRACTOR RETAINS RESPONSIBILITY OF THE WORKS EVEN IF THE ENGINEER HAS INSPECTED THE WORKS DURING CONSTRUCTION.
- G6 LUKO HARTMANN AND ASSOCIATES IS NOT RESPONSIBLE FOR THE OCCUPATIONAL HEALTH AND SAFETY OF PERSONS AT THE SITE AS THOSE OBLIGATIONS RESIDE WITH THE CONTRACTORS AND / OR SUB CONTRACTORS WHO OCCUPY OR HAVE CONTROL OF THE SITE IN ACCORDANCE WITH APPLICABLE OCCUPATIONAL HEALTH AND SAFETY LEGISLATION, CODES OR PRACTICE, GUIDANCE NOTES, AUSTRALIAN STANDARDS AND OTHER RELEVANT DOCUMENTATION.

### LOADINGS

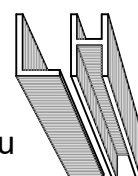
- L1 THE STRUCTURAL WORK AS SHOWN ON THESE DRAWINGS HAS BEEN DESIGNED FOR THE FOLLOWING CASES:
- I) GENERAL DOMESTIC FLOOR LOADS: 1.5kPa INTERNAL, 2.0 kPa BALCONY
  - II) ROOF LIVE LOADS OF 0.25 kPa DISTRIBUTED + 1.1kN POINT LOAD;
  - III) WIND LOADING TO N3.
- L2 LOAD COMBINATIONS HAVE BEEN CONSIDERED IN ACCORDANCE WITH AS1170.1

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PROPOSED ADDITIONS & ALTERATIONS  
2-56 SHIRLEY Ln, BYRON BAY

TITLE PAGE AND  
CONSTRUCTION NOTES

CLIENT: SHAJI KARIMADATH

DATE: 11.12.23

DESIGN: LH

ISSUE:

DWG No

UPDATE -A  
REVISION

LH  
CHKD

LH  
OK

22.03.24  
DATE

SCALE: As noted @ A3

APPD:

A

K-01

F1 REFER TO GEOTECHNICAL REPORT FOR A DESCRIPTION OF THE ANTICIPATED SITE CONDITIONS. THE BUILDER IS TO STUDY THE REPORT AND MAKE HIS OWN EVALUATION ON THE SITE CONDITIONS. ANY ADDITIONAL COSTS INCURRED SHALL BE BORNE BY THE BUILDER

F2 ALL FOOTINGS SHALL BE FOUNDED AT THE RECOMMENDED DEPTH AND INTO THE APPROPRIATE MATERIAL AS SPECIFIED BY THE GEOTECHNICAL REPORT. THE ALLOWABLE BEARING CAPACITY SHALL BE SPECIFIED IN THE FOOTING PLAN. THE TOPS OF THE FOOTINGS SHALL BE A MINIMUM OF 300mm BELOW THE LOWEST ADJACENT STRUCTURAL FLOOR LEVEL UNLESS NOTED OTHERWISE.

F3 THE FOUNDING MATERIAL AND STEEL REINFORCEMENT TO THE FOOTINGS IS TO BE INSPECTED BY THE P.C.A. (PRINCIPAL CERTIFYING AUTHORITY) PRIOR TO THE POURING OF CONCRETE.  
CONTACT THE P.C.A. FOR THE NOTICE PERIOD REQUIRED FOR INSPECTION.

- E1 ALL CUT AND FILL ASSOCIATED WITH PROPOSED BUILDING WORKS IS TO BE KEPT TO A MINIMUM.
- E2 CUTTING OF UNRETAINED BATTER SLOPES SHOULD NOT EXCEED 1V:3H.
- E3 MAXIMUM DEPTH OF CUT BEFORE BENCHING SHOULD NOT EXCEED 750mm. DISH TYPE DRAINS SHOULD BE PLACED ABOVE & BELOW THE CUTTINGS. BATTERS IN EXCESS OF THIS SLOPE SHOULD BE RETAINED BY A SUITABLY DESIGNED RETAINING WALL.
- E4 BEFORE PLACEMENT OF FILL OCCURS VEGETATION SHOULD BE REMOVED AND THE SLOPE BENCHED.
- E5 THE FILL MATERIAL MUST BE APPROVED, CONTAIN NO ORGANICS AND SHOULD BE PLACED IN CONSERVATIVE LAYERS (MAX. 150mm) AND BE COMPACTED TO A SATISFACTORY STANDARD (min LEVEL 1 STANDARD COMPACTION).
- E6 THE FILL BATTERS SHOULD NOT EXCEED 1V: 3H. THE BATTER SLOPES SHOULD BE REVEGETATED AS SOON AS PRACTICAL TO PREVENT EROSION.
- E7 CUT AND FILL HEIGHTS GREATER THAN 750mm SHOULD BE REFERRED TO THIS OFFICE FOR FURTHER ADVICE.

M1 ALL MASONRY IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE MASONRY CODE AS3700 & THE REQUIREMENTS OF THE NATIONAL CONSTRUCTION CODE-2014 (NCC);

M2 BRICKS, BLOCKS & ROCKS ARE TO BE SOUND & CLEAN;

M3 CONCRETE MASONRY BLOCKS ARE TO BE MINIMUM STRENGTH GRADE 12 / AS 1500;

M4 MORTAR PROPORTIONS ARE TO BE 1 CEMENT : 0.25 LIME : 3 SAND, COMPRESSIVE STRENGTH 11MPa @ 28 DAYS, NOMINAL 10mm PERP. & HORIZONTAL JOINTS;

M5 PROVIDE CLEAN-OUT BLOCKS AT BASE OF ALL WALLS AND BAR DOWN ALL CORES TO REMOVE EXCESS MORTAR PRIOR TO PLACEMENT OF VERTICAL RE-BARS & CORE-FILL;

M6 GROUT CORE-FILL TO BE POURED IN ONE LIFT UP TO A MAXIMUM OF 1800mm, COMPRESSIVE STRENGTH 15 MPA @ 28 DAYS, 10mm MAX. AGG. SIZE, 80mm SLUMP;

M7 PROVIDE NOT LESS THAN 50mm GROUT COVER TO REINFORCEMENT;

M8 PROVIDE VERTICAL ARTICULATION JOINTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE NCC, AT NOT LESS THAN 6m CENTRES, NO CLOSER THAN THE WALL HEIGHT FROM THE ENDS OF WALLS & AT CHANGES IN WALL HEIGHT;

M9 PROVIDE DAMPCOURSES AND CONTINUOUS ANT CAPPING IN ACCORDANCE WITH THE REQUIREMENTS OF THE NCC;

M10 COREFILL ALL CONCRETE BLOCK CORES.

GROUND FLOOR LOAD BEARING FRAME (MAX 2.7M HIGH)

STUD @ 450 CTRS	-	90 x 35 MGP10
TOP PLATE	-	2 / 35 x 90 MGP10
BOTTOM PLATE	-	35 x 90 MGP10
NOGGINGS	-	90 x 35 MGP10 @ 1350 CTRS

### STUD AT SIDE OPENINGS

OPENING SIZE	No. OF STUDS
0 - 900	1
1200 - 2100	2
2200 - 3000	3
3200 -	4

- C1 ALL WORK IS TO BE IN ACCORDANCE WITH ALL CURRENT AUSTRALIAN STANDARDS AS A MINIMUM WORK STANDARD.
- C2 CONCRETE TO HAVE COMPRESSIVE STRENGTH AFTER 28 DAYS OF NOT LESS THAN THAT LISTED BELOW FOR THE VARIOUS CONCRETE ELEMENTS:  
SLAB & FOOTINGS - 25MPa
- C3 MINIMUM CLEAR COVER TO STEEL ON THE PLANS IS TO TAKE PRECEDENCE BUT GENERALLY TO BE  
- STRIP FOOTINGS, RETAINING WALL FOOTINGS & EXTERNAL SLABS:  
50mm TO ALL SIDES OF FOOTING & 50mm TO EXTERNAL EXPOSURE  
- EXTERNAL SLABS 50mm TOP COVER
- C4 ALL CONCRETE TO BE MECHANICALLY VIBRATED. VIBRATOR SHALL NOT BE USED TO SPREAD CONCRETE. VIBRATOR NOT TO COME INTO CONTACT WITH REINFORCEMENT.
- C5 ALL CONCRETE SURFACES ARE TO BE CURED BY MAINTAINING THE EXPOSED SURFACES IN A MOIST CONDITION FOR A MINIMUM OF SEVEN DAYS IMMEDIATELY CONCRETE IS SET. ALTERNATIVE METHODS OF CURING MAY BE USED BUT MUST BE APPROVED BY THE ENGINEER PRIOR TO USE.
- C6 SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES
- C7 CONSTRUCTION JOINTS WHERE NOT SHOWN SHALL BE LOCATED TO THE ENGINEERS APPROVAL.
- C8 NO HOLES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT PRIOR APPROVAL OF THE ENGINEER
- C9 NO CHEMICALS OR ADDITIONAL WATER ARE TO BE ADDED OR APPLIED TO THE CONCRETE MIX ONCE THE CONCRETE LEAVES THE BATCH PLANT, WITHOUT THE APPROVAL OF THE ENGINEER.
- C10 ALL STEEL REINFORCEMENT IN CONCRETE ELEMENTS IS TO BE INSPECTED BY THE P.C.A., AND PASSED PRIOR TO POURING OF ANY CONCRETE.
- C11 ALL REINFORCEMENT IS TO BE SUPPORTED ON PLASTIC CHAIRS. GENERALLY AT NOT GREATER THAN 800mm CENTRES IN BOTH DIRECTIONS. BARS TO BE TIED AT ALTERNATE INTERSECTIONS. CONDUITS, PIPES ETC ARE NOT TO BE PLACED IN THE COVER OF THE CONCRETE.
- C12 ALL REINFORCEMENT SHALL COMPLY WITH THE REQUIREMENTS OF THE RELEVANT AUSTRALIAN STANDARDS.
- C13 MINIMUM OVERLAP: BARS & TRENCH MESH 500mm; SLAB MESH 200mm
- C14 CONCRETE TO HAVE A MAXIMUM AGGREGATE SIZE OF 20mm WITH 80mm MAXIMUM SLUMP AND A WATER/CEMENT RATIO OF NOT GREATER THAN 0.55
- C15 A LEVELLING SAND LAYER (40mm MINIMUM IN THICKNESS) IS TO BE PLACED UNDER SLABS ON GROUND. WHERE SANDFILL TO A GREATER DEPTH IS REQUIRED, THE SAND IS TO BE SALT FREE AND IS TO BE PLACED IN LAYERS NO DEEPER THAN 150mm AND COMPACTED TO 98% DRY DENSITY.
- C16 A WATERPROOF MEMBRANE IS TO BE PLACED BENEATH SLABS ON GROUND SO THAT THE GROUND SURFACE UNDER THE SLAB AND THICKENINGS IS ENTIRELY COVERED.
- C17 THIS MEMBRANE SHALL BE MINIMUM 0.2mm (200µm) THICK POLYTHENE SHEETING IN ACCORDANCE WITH AS2870-1996 AND ALL JOINS SHALL BE TAPED.
- C18 PROVIDE TERMITE PROOFING BY LICENSED INSTALLER TO CONNECTIONS BETWEEN GROUND FLOOR SLABS AS WELL AS ALL PENETRATIONS IN FLOOR SLABS.
- C19 BCA REQUIREMENT FOR TERMITE PROTECTION:  
1) 75mm VERTICAL VISIBLE SLAB EDGE BETWEEN FINISHED GROUND LEVEL & BOTTOM BLOCK COURSE, PROVIDED GROUND SLOPES AWAY FROM THE BUILDING;  
2) 50mm VERTICAL VISIBLE SLAB EDGE BETWEEN FINISHED VERANDAH FLOOR LEVEL & BOTTOM BLOCK COURSE, PROVIDED VERANDAH IS ROOFED.

HAZARD CLASS	PRIMARY USAGE	PROTECTION
H1	INSIDE, ABOVE GROUND, PROTECTED FROM WEATHER & WELL VENTILATED	INSECTS
H2	INSIDE, ABOVE GROUND & PROTECTED FROM WETTING (NO LEACHING)	INSECTS & TERMITES
H3	OUTSIDE, ABOVE GROUND & PERIODIC WETTING & PARTIAL LEACHING	INSECTS, TERMITES & MODERATE DECAY
H4	IN-GROUND / ABOVE GROUND, SEVERE WETTING & LEACHING	INSECTS, TERMITES & SEVERE DECAY

- T1 ALL TIMBER DESIGN, CONSTRUCTION AND MATERIAL TO BE IN ACCORDANCE WITH AS 1684
- T2 HARDWOOD TO BE MINIMUM GRADE F17 U.N.O.
- T3 EXTERNAL TIMBER TO BE EITHER HARDWOOD DURABILITY CLASS I OR CLASS II AS PER AS 1720.2 OR IMPREGNATED PINE GRADE F7, PRESSURE TREATED TO AS 1604 AND RE-DRIED PRIOR TO USE. SUPPLEMENTARY TREATMENT TO BE APPLIED TO ALL CUT SURFACES. SUPPLY SUPPORTING DOCUMENTATION FOR PRESERVATIVE TREATMENT.
- T4 ALL BOLTS IN TIMBER CONSTRUCTION TO BE MINIMUM M12 U.N.O. BOLT HOLES TO BE DRILLED EXACT SIZE.  
WASHERS UNDER HEADS AND NUTS TO BE AT LEAST 2.5 TIMES BOLT DIAMETER.
- T5 ALL EXTERNAL STEEL FIXINGS & BRACKETS TO BE HOT DIP GALVANISED OR SS GRADE 316.
- T6 ALL TIMBER JOINTS AND NOTCHES ARE TO BE 100mm MINIMUM AWAY FROM LOOSE KNOTS, SEVERE SLOPING GRAIN, GUM VEINS OR OTHER MINOR DEFECTS.
- T7 ALL TIMBER USED SHALL HAVE BEEN STRESS GRADED BY VISUAL OR MECHANICAL MEANS IN ACCORDANCE WITH THE APPROPRIATE AUSTRALIAN STANDARDS.
- T8 EDGE DISTANCES FOR FASTNERS IN TIMBER (FROM ENDS AND SIDES ) SHALL BE IN ACCORDANCE WITH AS1720.1 UNLESS OTHERWISE NOTED
- T9 ALL TRUSS ROOFS ARE TO BE MANUFACTURED, INSTALLED AND BRACED TO MANUFACTURES SPECIFICATIONS

S2 ALL STEELWORK IS TO BE CONSTRUCTED IN ACCORDANCE WITH CODE OF PRACTICE AS 4100-1998 STEEL STRUCTURES CODE, AND ALL OTHER CODES OF PRACTICE REFERRED TO THEREIN.

S2 ALL WELDS SHALL BE 6mm CONTINUOUS FILLET, ALL BOLTS M20 8.8/S. UNLESS OTHERWISE NOTED (UNO)

S3 ALL PLATES AND GUSSET PLATES TO BE 10mm THICK UNO

S4 ALL EXTERIOR BOLTS, NUTS AND WASHERS TO BE HOT DIP GALVANISED OR MARINE GRADE STAINLESS STEEL UNO

S5 BOLT HOLES TO BE 2mm GREATER THAN SPECIFIED SIZE UNO

S6 SEAL ALL HOLLOW SECTIONS WITH 4mm PLATE, 4mm SEAL WELD.

S7 FABRICATOR TO CHECK ALL DIMENSIONS ON SITE WITH CONTRACTOR.

S8 REFER TO SPECIFICATION FOR COATING OF STEELWORK. WHERE NO SPEC. EXISTS THE MINIMUM PRIMING TREATMENT SHALL BE AS FOLLOWS:




- CLEAN STEELWORK FREE OF ALL RUST, MILLSCALE, OIL, GREASE AND DELETERIOUS MATERIAL USING ABRASIVE BLAST CLEANING.
- min. SURFACE PREPARATION IN ACCORDANCE WITH AS 1627 SHALL BE CLASS 2 1/2
- WITHIN 4 HOURS OF PREPARATION, SHOP PRIME WITH SINGLE COAT (MIN. 75 MICRON) OF HIGH BUILD ZINC PHOSPHATE. (COLOUR AS SPECIFIED BY ARCHITECT)
- STEELWORK TO BE THOROUGHLY CLEANED TO CLASS 1 AND COATED WITH MIN. 150µm EPOXY MASTIC PRIMER BEFORE ERECTION.
- IN ACCORDANCE WITH AS 1650 SECTION 5, HOT DIP GALVANISE THE FOLLOWING ITEMS: ALL EXTERNAL AND EXPOSED STEELWORK. (MIN. ZINC COATING THICKNESS TO BE 600g/m<sup>2</sup>) UNLESS OTHERWISE DIRECTED BY THE OWNER.

S9 THE STRUCTURAL STEEL FRAMEWORK AND BRACING MEMBERS SHOWN ON THE PLANS ARE THOSE REQUIRED IN THE DESIGN FOR THE COMPLETED STRUCTURE ONLY AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ANY NECESSARY TEMPORARY CONNECTIONS, SUPPORTS AND BRACING DURING THE ERECTION PROCESS TO MAINTAIN THE STABILITY AND SAFETY OF THE STEELWORK THROUGHOUT CONSTRUCTION.

S10 THE STEEL FABRICATOR SHALL PROVIDE ALL BOLTS AND CLEATS NECESSARY FOR THE ERECTION OF THE STEELWORK AS SHOWN, NOTED OR IMPLIED ON THESE DRAWINGS OR THE ARCHITECTS DRAWINGS AND SPECIFICATIONS.

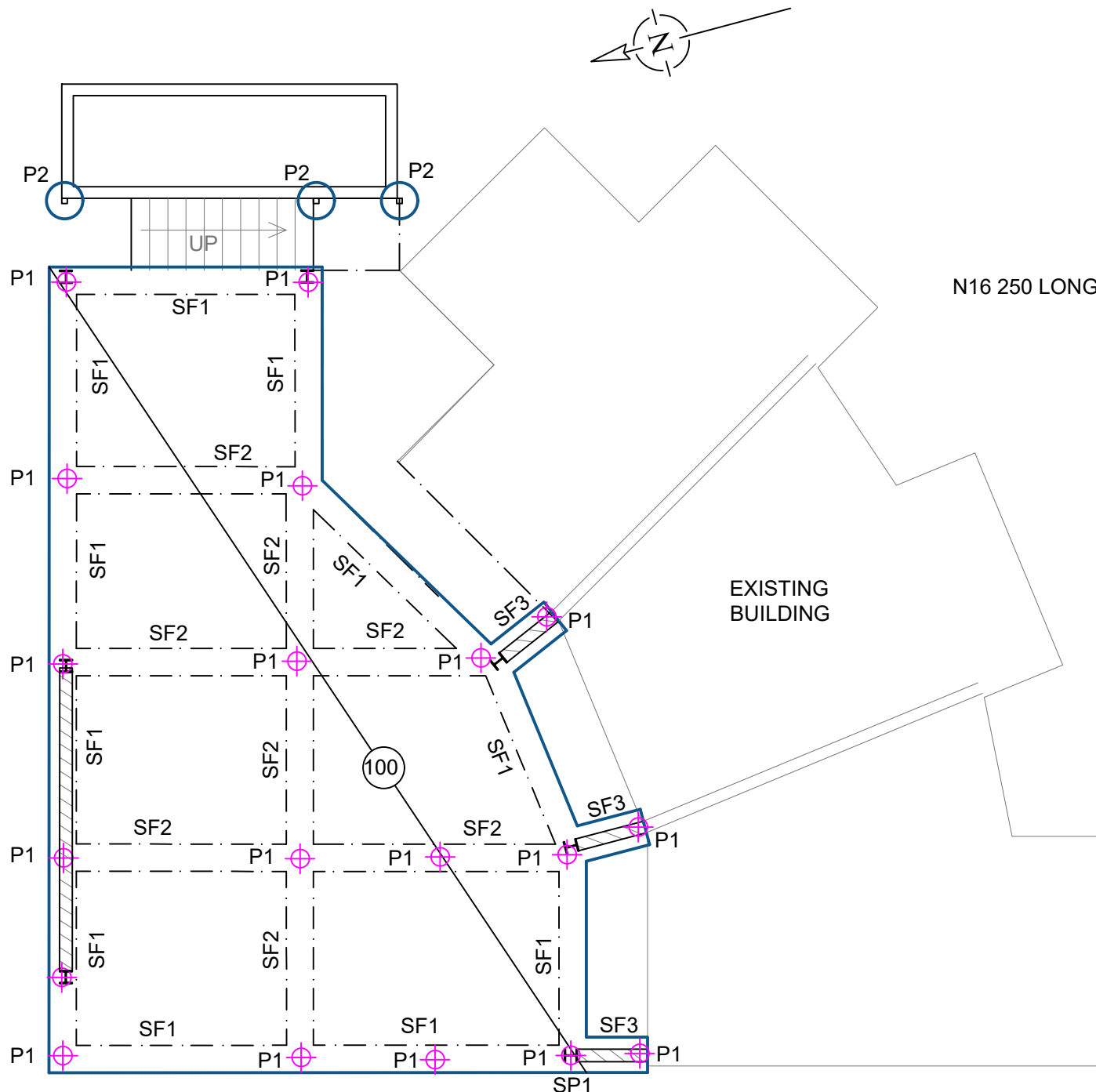
S11 WHEN SHOP SPLICES ARE NECESSARY IN BEAMS or COLUMNS, THE POSITION OF THE SPLICE IS TO BE APPROVED BY THE ENGINEER

S12 UNLESS OTHERWISE NOTED, ALL STEEL COLUMNS DEPICTED ON THE STRUCTURAL DRAWINGS SET AS BEING CONTAINED WITHIN INTERNAL / EXTERNAL WALL FRAMES ARE TO BE RESTRAINED BETWEEN (min x 2) ADJACENT WALL STUDS (M12 4.6/S BOLTS) THROUGH @ TOP, MID-HEIGHT & BOTTOM & BRACED USING 900min. 83 PLY BRACING (FIXING TO MANUF. SPECS) TO BOTH FACES OF THE WALL.

				<div>Luko Hartmann &amp; Associates CONSULTING STRUCTURAL ENGINEERS</div> <div><div></div><div>0432 358 231</div><div></div></div> <div>luk@lhaengineering.com.au</div>											CONSTRUCTION NOTES						
					CLIENT: SHAJI KARIMADATH																
					DATE: 11.12.23					DESIGN: LH					ISSUE:					DWG No	
UPDATE -A	LH	LH	22.03.24		SCALE: As noted @ A3					APPD: 					A					K-02	
REVISION	CHKD	OK	DATE																		

DRAWING LEGEND

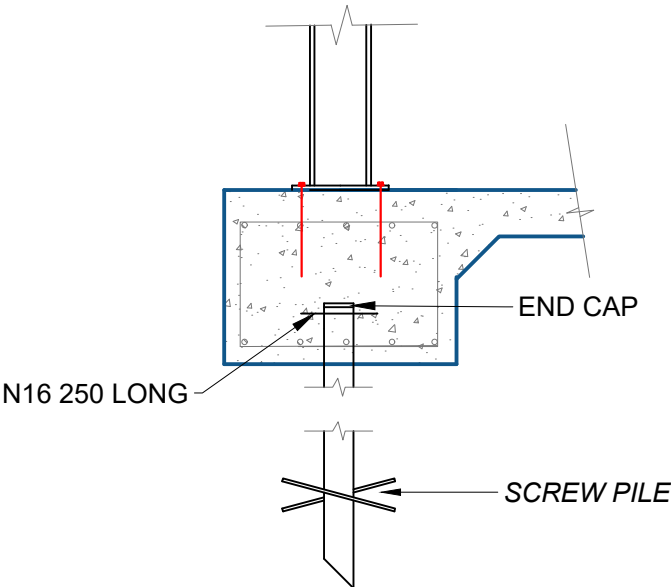
	INDICATES CONC. STRIP FOOTING
	INDICATES 100 THICK CONCRETE SLAB SL82 MESH, 25 MPa, TOP COVER 40
	INDICATES LOCATION OF 190 CORE FILLED BLOCK WALLS
	P1 INDICATES LOCATION OF SCREW PIERS MIN 150kN LOAD CAPACITY
	INDICATES LOACTION OF 200UC COLUMNS



FOOTING PLAN  
SCALE 1:100

ALL TIMBER FRAMING TO COMPLY WITH AS1684 & N3 WIND

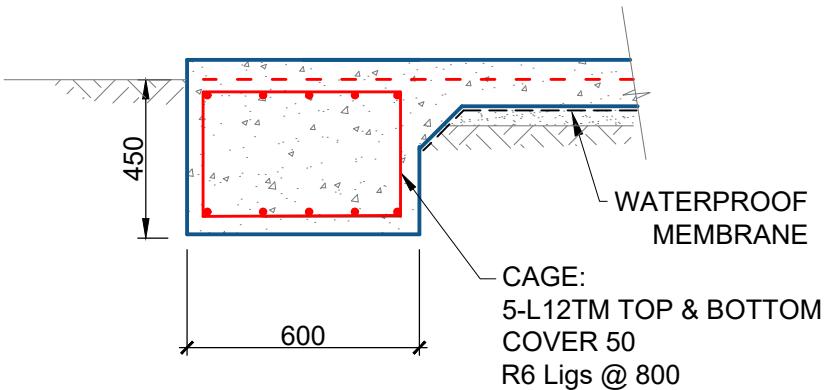
\* ALL FOOTING DEPTHS SHOWN ARE MINIMUM ONLY.  
FOOTINGS ARE TO BASED ON FIRM NATURAL GROUND MIN BEARING CAPACITY 100kPa



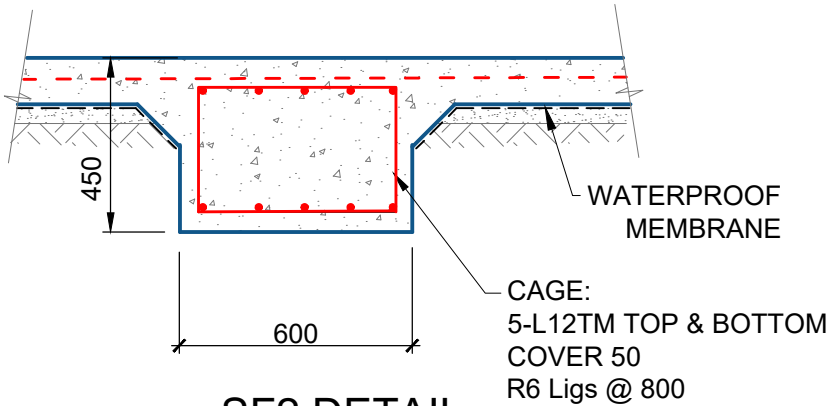
P1 - SCREW PIER DETAIL  
SCALE 1:20

KEY

P1 - LOAD CAPACITY 150 kN MIN.
P2 - LOAD CAPACITY 75 kN MIN.



SF1 DETAIL  
SCALE 1:20



SF2 DETAIL  
SCALE 1:20

UPDATE -A	LH	LH	22.03.24
REVISION	CHKD	OK	DATE

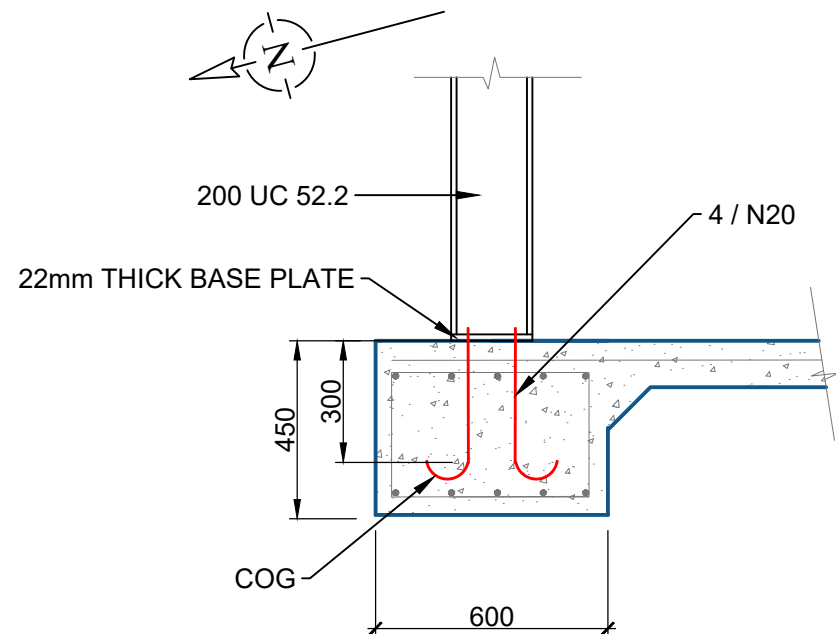
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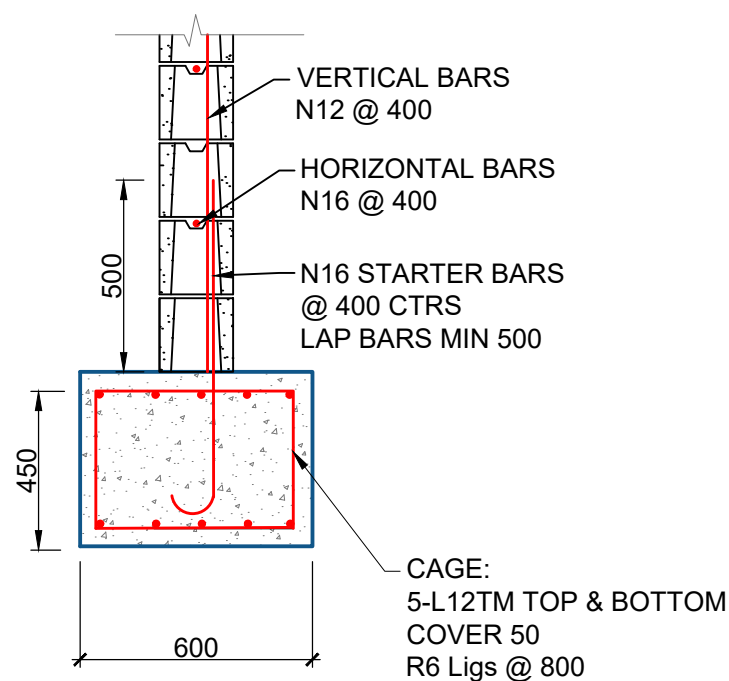
[luko@lhaengineering.com.au](mailto:luko@lhaengineering.com.au)

PROPOSED ADDITIONS & ALTERATIONS 2-56 SHIRLEY Ln, BYRON BAY			FOOTING PLAN			
CLIENT: SHAJI KARIMADATH						
DATE: 11.12.23	DESIGN: LH	ISSUE:				DWG No
SCALE: As noted @ A3	APPD:	A				K-03





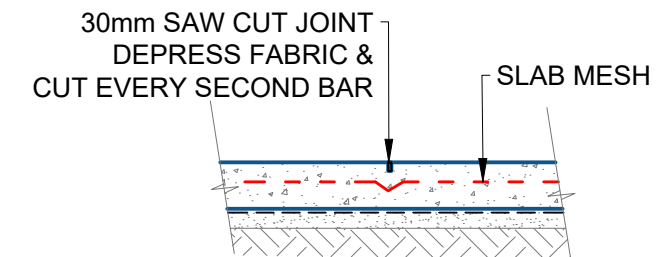
**SF1 DETAIL**  
SCALE 1:20



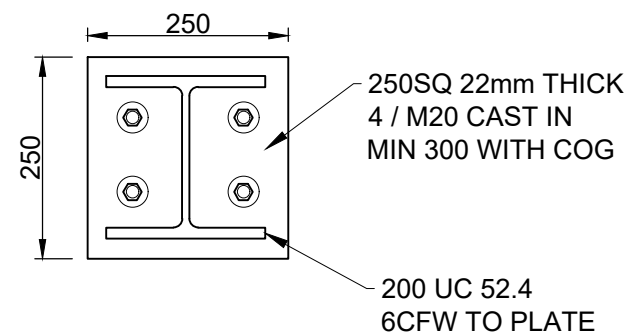
**SF3 DETAIL**  
SCALE 1:20

**NOTE:**

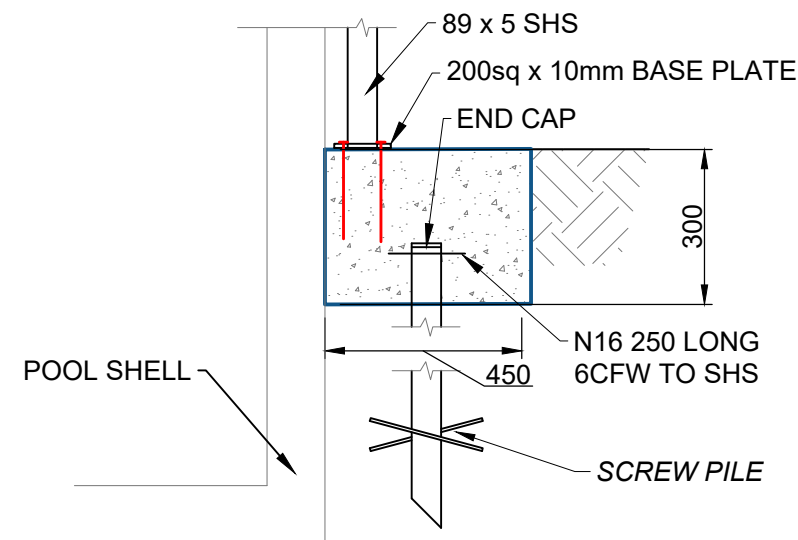
ARTICULATION JOINT IN  
CONCRETE SLAB REQUIRED AT  
MAX 6m CENTERS.  
SAW CUT OR CONNOLLY KEY  
JOINT



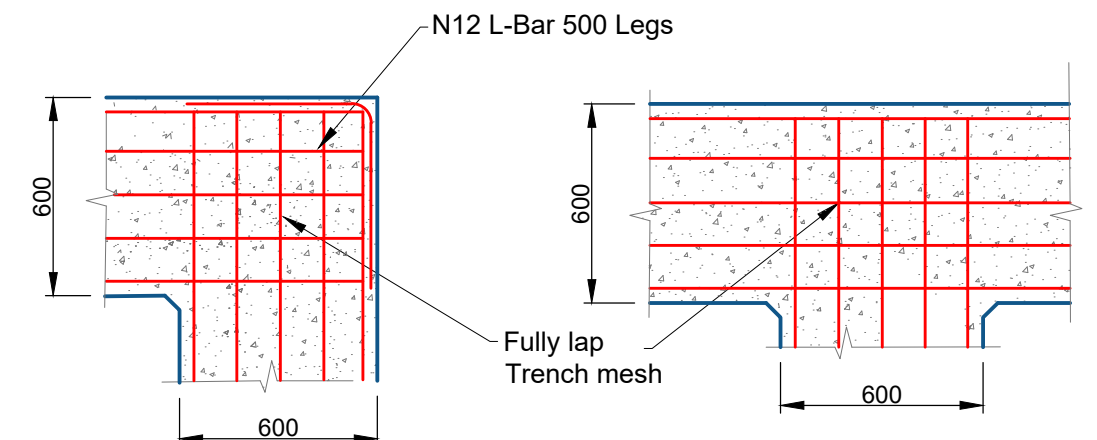
**TYP. SAW CUT JOINT**  
SCALE 1:20



**200UC52.4 BASE PLATE DETAIL**  
SCALE 1:10



**P2 - FOOTING DETAIL**  
SCALE 1:20



WATERPROOF MEMBRANE  
CONTINUOUS BENEATH  
SLAB & BEAMS

**BEAM JUNCTION DETAIL**  
SCALE 1:20

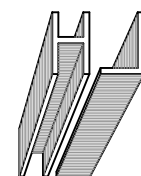
\* ALL FOOTING DEPTHS  
SHOWN ARE MINIMUM ONLY.

FOOTINGS ARE TO BE BASED ON  
FIRM NATURAL GROUND MIN  
BEARING CAPACITY 100kPa



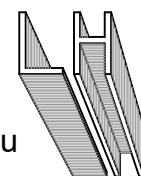
ALL TIMBER FRAMING TO COMPLY WITH AS1684 & N3 WIND

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**0432 358 231**

luko@lhaengineering.com.au



PROPOSED ADDITIONS & ALTERATIONS  
2-56 SHIRLEY Ln, BYRON BAY

CLIENT: SHAJI KARIMADATH

DATE: 11.12.23

SCALE: As noted @ A3

DESIGN: LH

APPD:

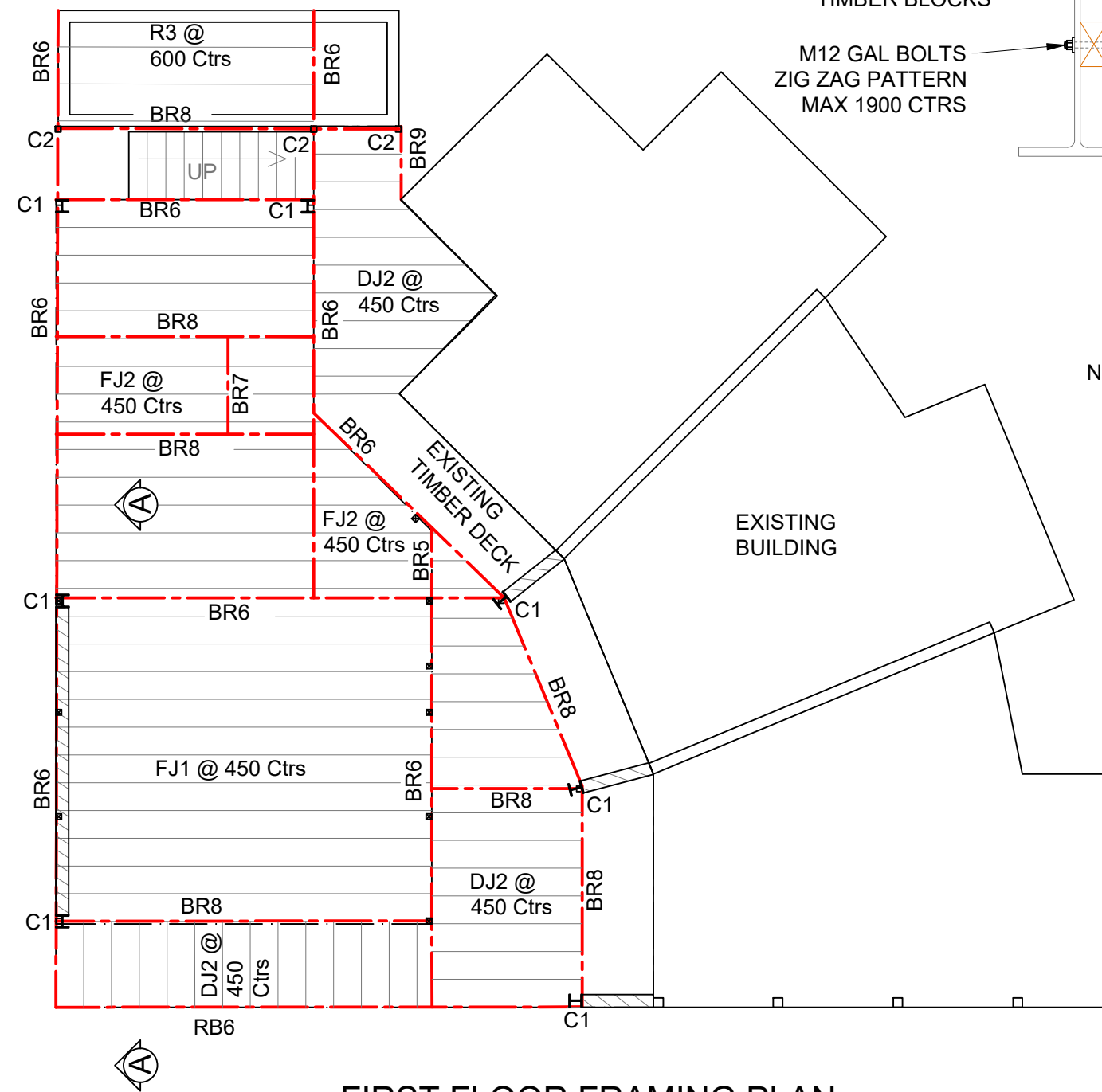
**FOOTING DETAILS**

ISSUE:

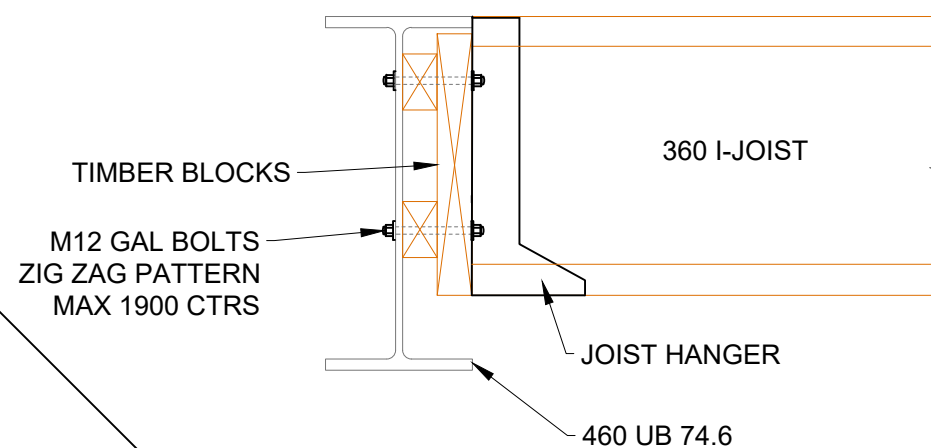
A

DWG No  
**K-04**

UPDATE -A REVISION	LH CHKD	LH OK	22.03.24 DATE



FIRST FLOOR FRAMING PLAN  
SCALE 1:100



TYP. I-JOIST TO UB  
CONNECTION

NOTE: I JOIST TO STEEL BEAM  
CONNECTION AS PER  
SMART JOIST DESIGN  
GUIDE 2021 ED 2

MEMBER SCHEDULE

MEMBER	MAX SPAN	MEMBER SIZE
BR5	1.2	240 x 45 LVL E13 H2-S
BR6	4.3	460 UB 74.6
BR7	1.6	300 x 45 LVL E13 H2-S
BR8	4.2	250PFC
BR9	1.2	140 x 45 KD HWD F17
FJ1	6.1	360 x 45 LVL E13 H2-S or SJ36058 I-JOIST
FJ2	5.0	300 x 45 LVL E13 H2-S or SJ24040 I-JOIST
DJ2	2.9	140 x 45 KD HWD F17
R3	4.2	200 x 45 LVL E13 H2-S
C1		200 UC 52.2
C2		89 x 3.5 SHS

	INDICATES LOCATION OF 190 CORE FILLED BLOCK BRACING WALLS
	INDICATES LOCATION OF SHS FOUND ABOVE

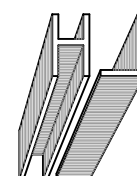
BLOCK WORK BRACING WALL  
REINFORCEMENT SCHEDULE.

ALL STRUCTURAL BLOCK WORK 190 H BLOCKS  
N16 STARTER BARS @ 400 CTRS  
N16 VERTICLE BARS AT 400 CTRS LAB 500 WITH STARTERS  
N16 HORIZONTAL BAR @ 400 CTRS

ALL STELL WORK TO COMPLY WITH STEEL STRUCTURES CODE AS4100

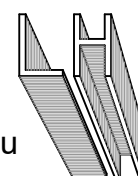
ALL TIMBER FRAMING TO COMPLY WITH AS1684 & N3 WIND

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PROPOSED ADDITIONS & ALTERATIONS  
2-56 SHIRLEY Ln, BYRON BAY

FIRST FLOOR FRAMING PLAN

CLIENT: SHAJI KARIMADATH

DATE: 11.12.23

DESIGN: LH

ISSUE:

DWG No

UPDATE -A  
REVISION

LH  
CHKD

LH  
OK

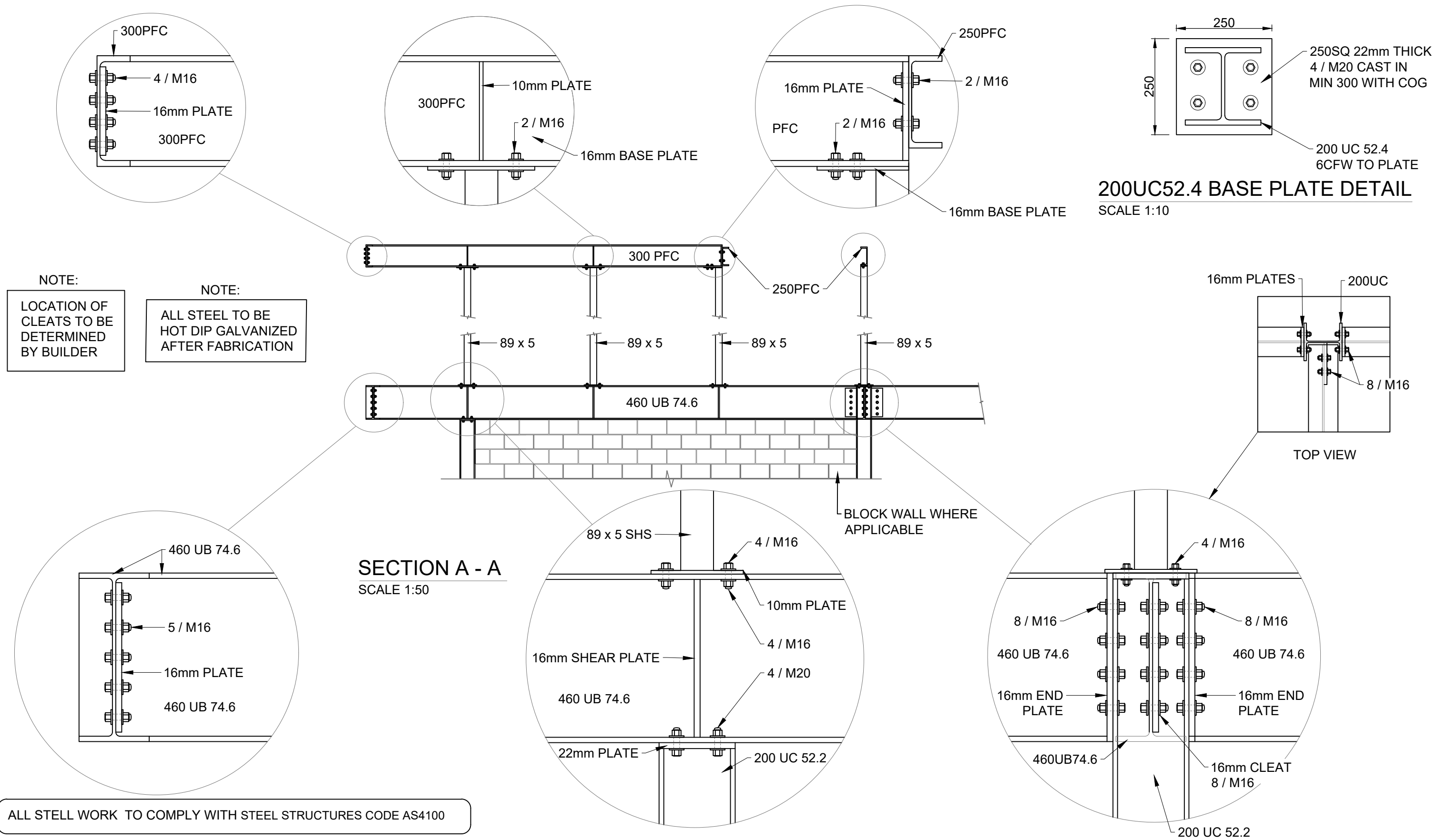
22.03.24  
DATE

SCALE: As noted @ A3

APPD:

A

K-05



UPDATE -A	LH	LH	22.03.24
REVISION	CHKD	OK	DATE




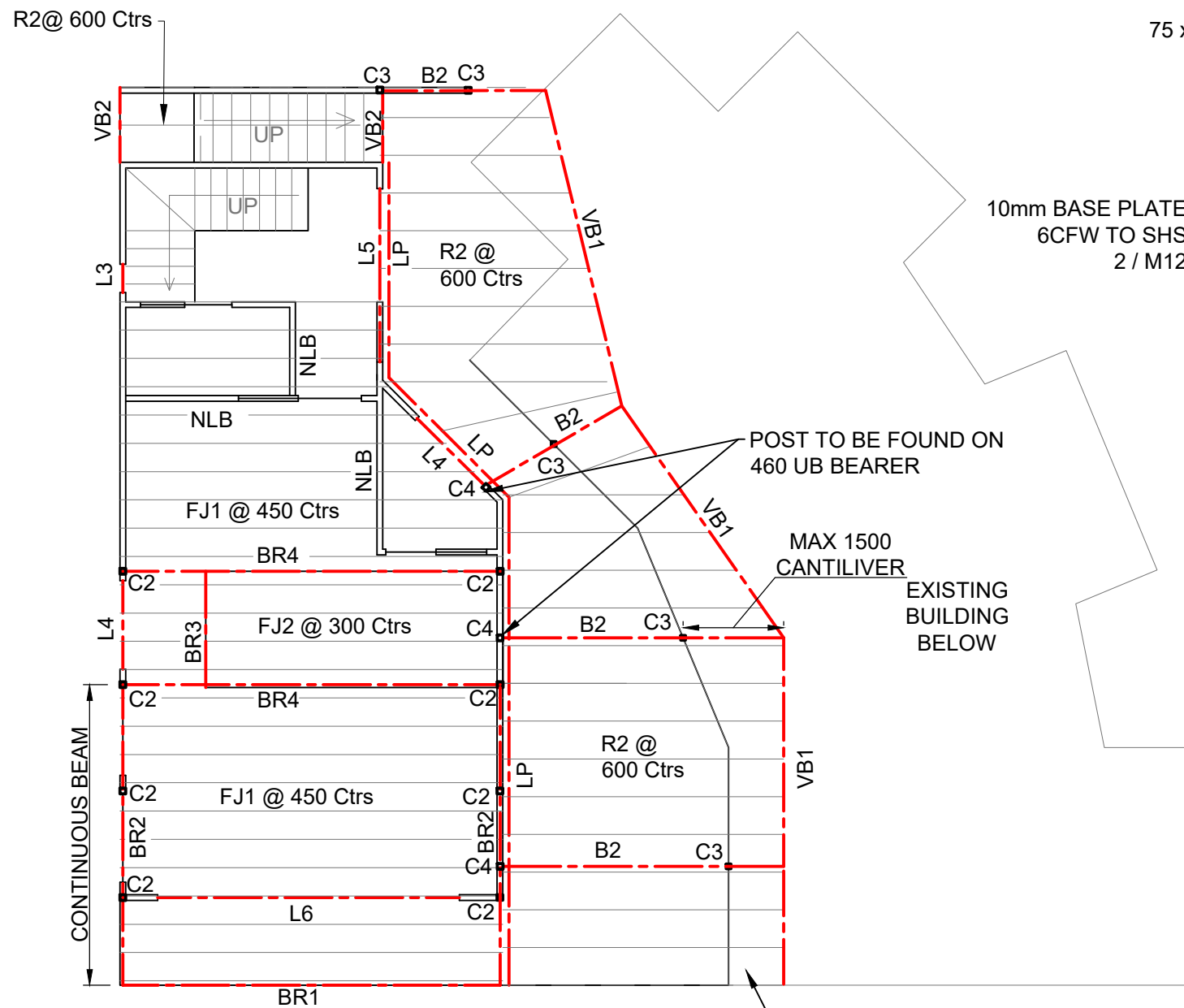
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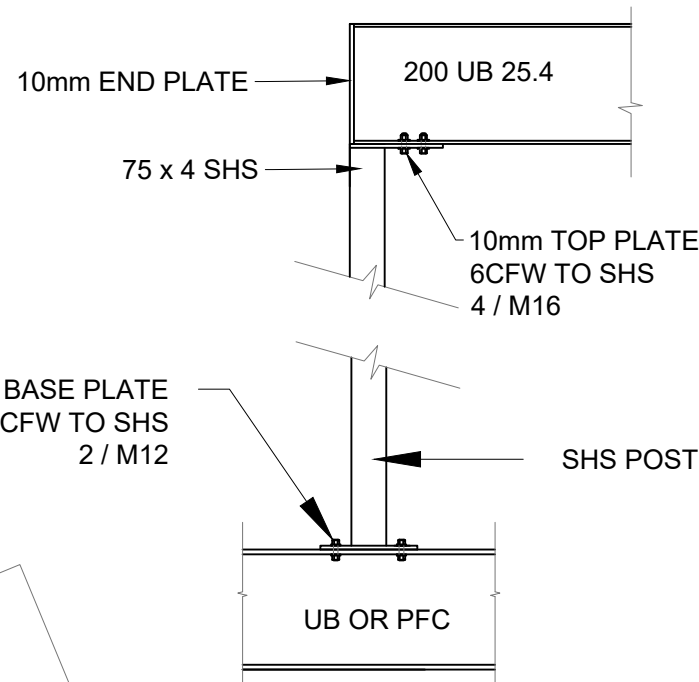
[luko@lhaengineering.com.au](mailto:luko@lhaengineering.com.au)



PROPOSED ADDITIONS & ALTERATIONS 2-56 SHIRLEY Ln, BYRON BAY				STEEL DETAILS			
CLIENT: SHAJI KARIMADATH							
DATE: 11.12.23	DESIGN: LH		ISSUE:				DWG No <b>K-06</b>
SCALE: As noted @ A3	APPD: 		A				



**SECOND FLOOR FRAMING PLAN**  
SCALE 1:100



**TYP. C4 POST CONNECTION DETAIL**

LP: LEDGER PLATE  
200 x 45 LVL E13 H3  
M12 GAL BOLTS @ MAX 600 CTRS

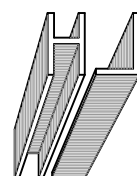
## MEMBER SCHEDULE

MEMBER	MAX SPAN	MEMBER SIZE
BR1	6.1	300PFC
BR2	3.2 + Cant 1.2	300PFC
BR3	1.9	300 x 45 LVL E13 H2-S
BR4	6.1	250PFC
L3	0.5	2 / 90 x 45 KD Pine MGP10
L4	1.5	150 x 45 LVL E13 H2-S
L5	2.8	300 x 45 LVL E13 H2-S
L6	4.8	300 x 45 LVL E13 H2-S
FJ1	6.1	SJ36058 I-JOIST or 360 x 45 LVL E13 H2-S
FJ2	5.0	SJ30040 I-JOIST or 240 x 45 LVL E13 H2-S
VB1	5.8	230 x 65 Hyne Beam GLT 15s
VB2	1.2	140 x 45 KD HWD F27
R2	4.5	200 x 45 LVL E13 H3
B2	2.8 + Cant. 1.5	200 UB 25.4
C2		89 x 3.5 SHS
C3		75 x 4 SHS
C4		75 x 4 SHS

ALL TIMBER FRAMING TO COMPLY WITH AS1684 & N3 WIND

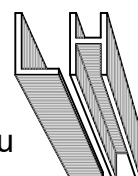
NLB - NON LOAD BEARING WALL

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PROPOSED ADDITIONS & ALTERATIONS  
2-56 SHIRLEY Ln, BYRON BAY

**SECOND FLOOR FRAMING PLAN**

CLIENT: SHAJI KARIMADATH

DATE: 11.12.23

DESIGN: LH

ISSUE:

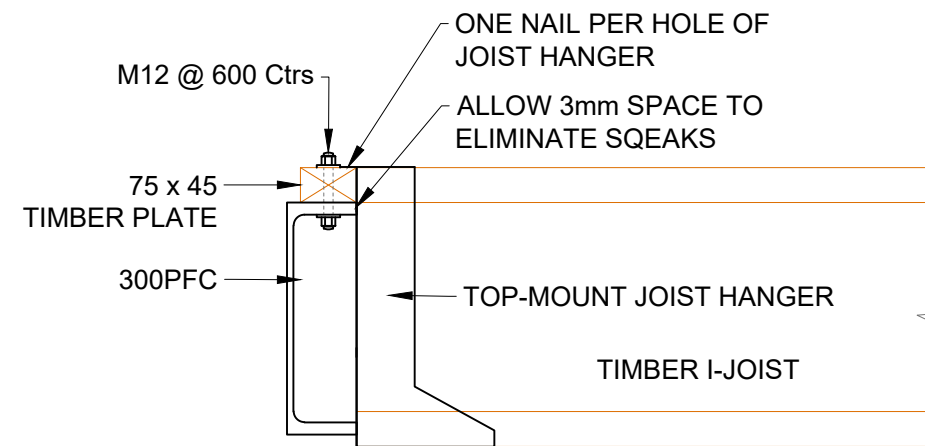
SCALE: As noted @ A3

APPD:

A

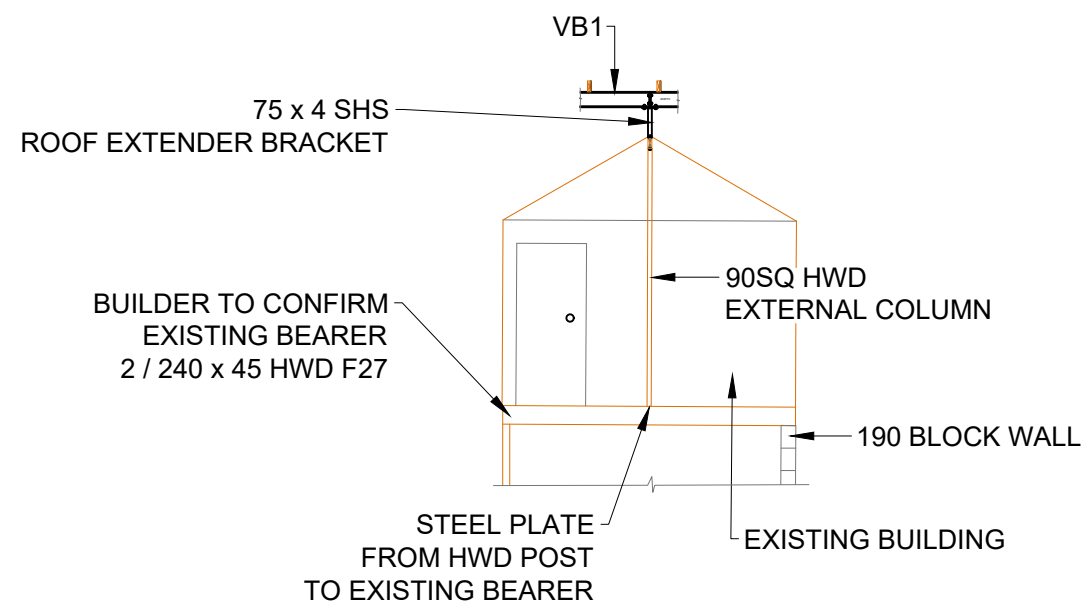
DWG No  
**K-07**

UPDATE -A	LH	LH	22.03.24
REVISION	CHKD	OK	DATE

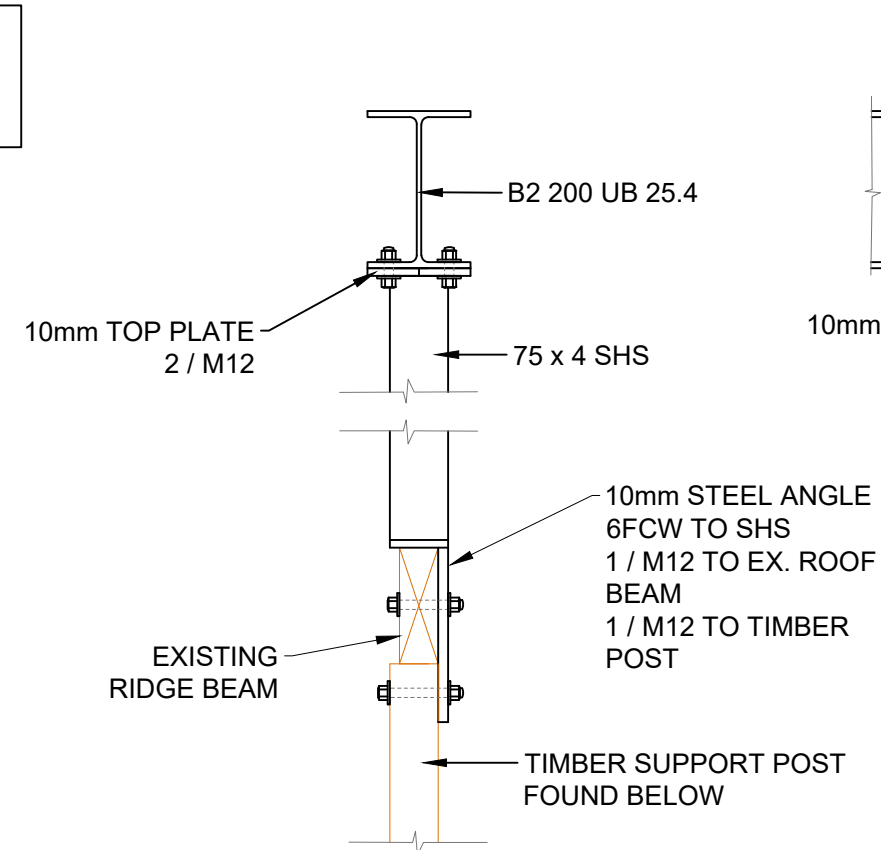


**TYP. I-JOIST TO PFC CONNECTION**

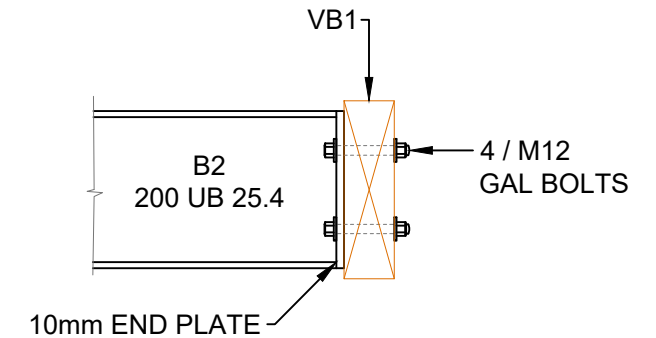
**NOTE:**  
I JOIST TO STEEL BEAM CONNECTION AS PER SMART JOIST DESIGN GUIDE 2021 ED 2



**BED 2, 3 & 5 ELEVATION  
& ROOF EXTENDER BRACKET**  
SCALE 1:100

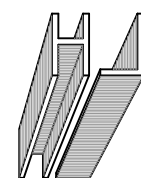


**B2 TO C4 COLUMN CONNECTION DETAIL**  
SCALE 1:10



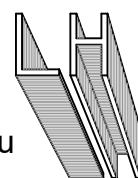
**B2 TO VB1 CONNECTION DETAIL**  
SCALE 1:10

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PROPOSED ADDITIONS & ALTERATIONS  
2-56 SHIRLEY Ln, BYRON BAY

**CONNECTION DETAILS**

CLIENT: SHAJI KARIMADATH

DATE: 11.12.23

DESIGN: JH

ISSUE:

SCALE: As noted @ A3

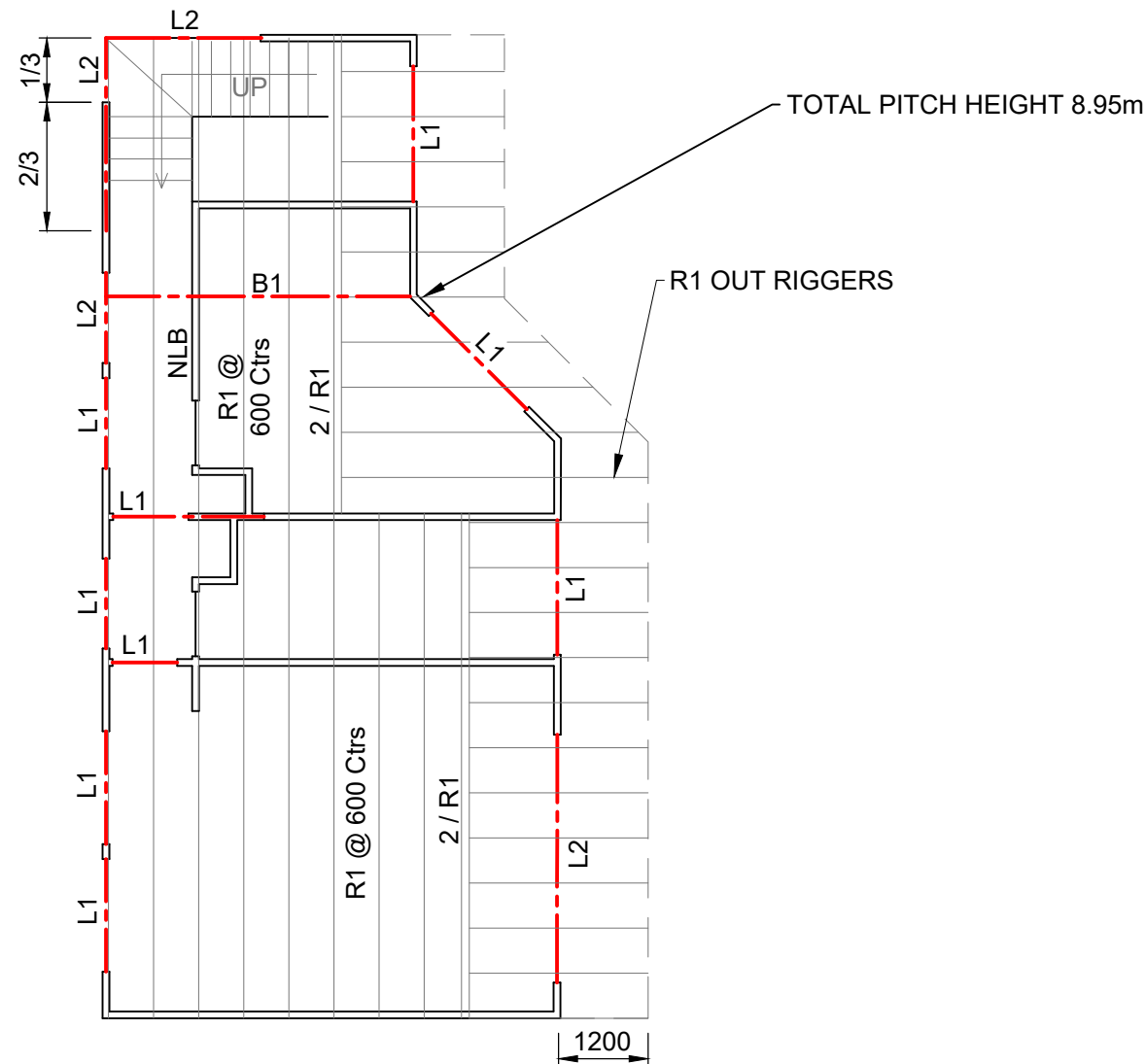
APPD:

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DWG No  
**K-08**

UPDATE -A	LH	LH	22.03.24
REVISION	CHKD	OK	DATE





## ROOF FRAMING PLAN

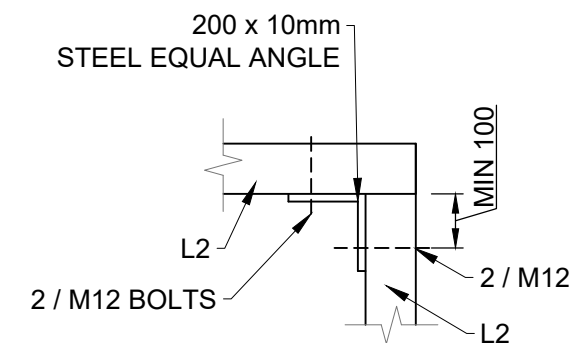
SCALE 1:100

NLB - NON LOAD BEARING WALL

ALL TIMBER FRAMING TO COMPLY WITH AS1684 & N3 WIND

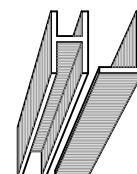
## MEMBER SCHEDULE

MEMBER	MAX SPAN	MEMBER SIZE
B1	4.1	195 x 85 Hyne Beam GLT 15 or 300 x 45 LVL E13 H2
L1	1.8	130 x 45 LVL E13 H2
L2	3.3	200 x 45 LVL E13 H2
R1	5.0	170 x 45 LVL E13 H2 or 170 x 45 KD HWD F27



## TC - TIMBER LINTEL CONNECTION DETAIL

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PROPOSED ADDITIONS & ALTERATIONS  
2-56 SHIRLEY Ln, BYRON BAY

ROOF FRAMING PLAN

CLIENT: SHAJI KARIMADATH

DATE: 11.12.23

DESIGN: JH

ISSUE:

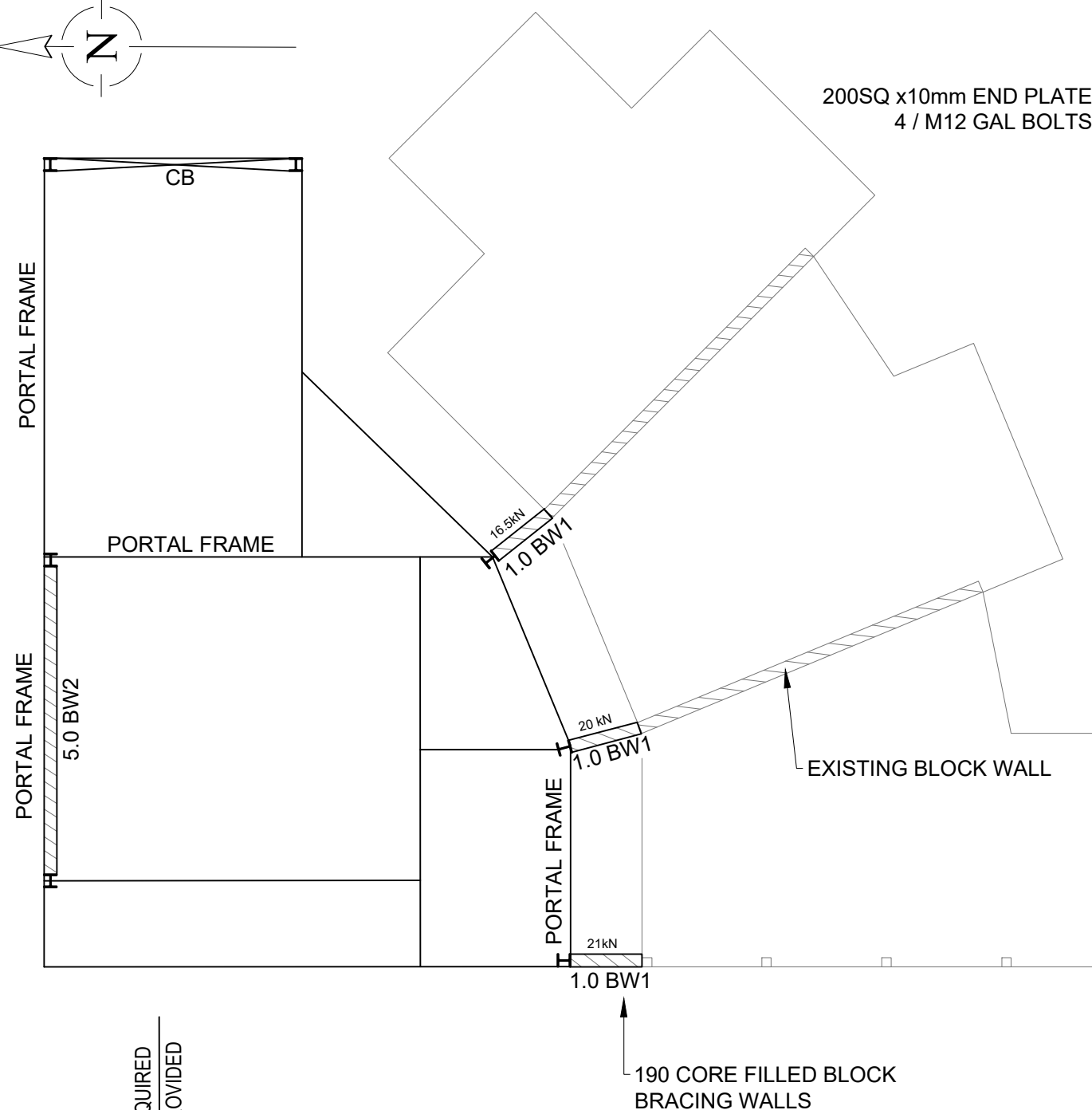
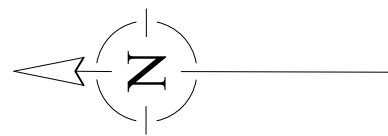
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APPD:

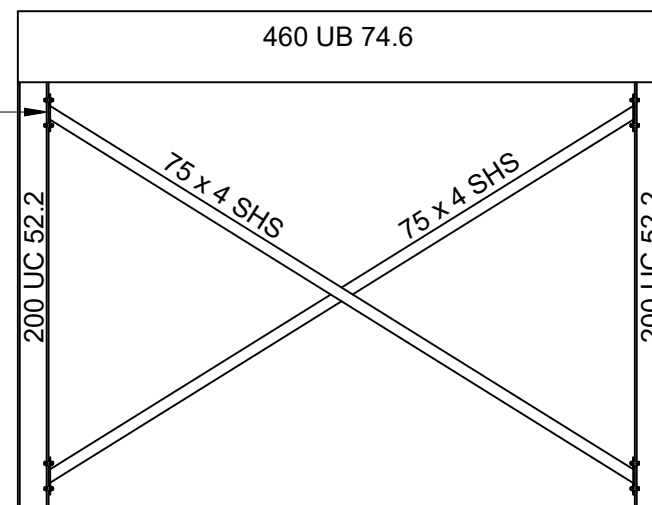
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DWG No  
**K-09**

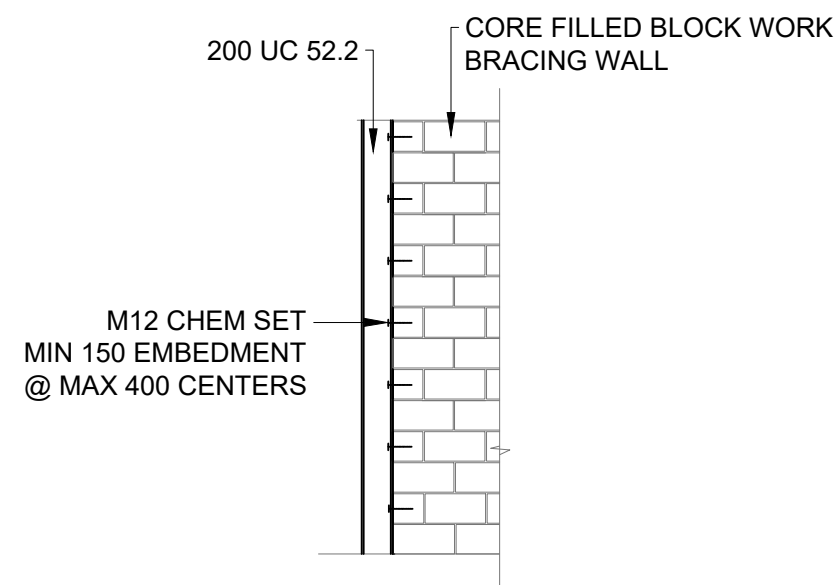
UPDATE -A	LH	LH	22.03.24
REVISION	CHKD	OK	DATE



**SUB FLOOR BRACING PLAN**  
SCALE 1:100



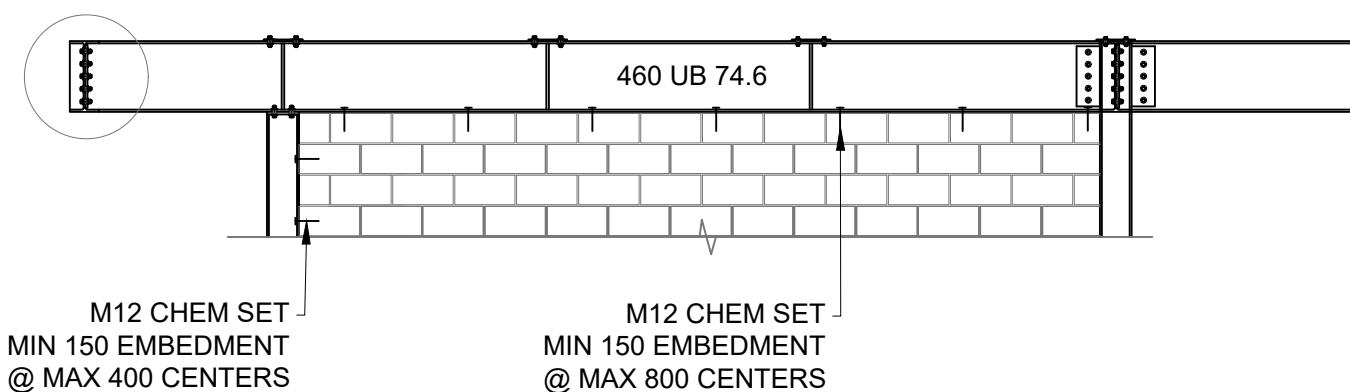
**(CB) 75 x 4 SHS CROSS  
BRACE DETAIL**  
SCALE 1:50



**(BW1) 190 CORE FILLED BLOCK WORK  
BRACING DETAIL**  
SCALE 1:50

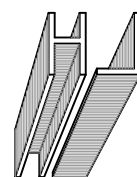
**BLOCK WORK BRACING WALL  
REINFORCEMENT SCHEDULE.**

ALL STRUCTURAL BLOCK WORK 190 H BLOCKS  
N16 STARTER BARS @ 400 CTRS  
N16 VERTICLE BARS AT 400 CTRS LAB 500 WITH STARTERS  
N16 HORIZONTAL BAR @ 400 CTRS



**(BW2) 190 CORE FILLED BLOCK WORK  
BRACING DETAIL**  
SCALE 1:50

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PROPOSED ADDITIONS & ALTERATIONS  
2-56 SHIRLEY Ln, BYRON BAY

**SUB - FLOOR BRACING PLAN**

CLIENT: SHAJI KARIMADATH

DATE: 11.12.23

DESIGN: JH

ISSUE:

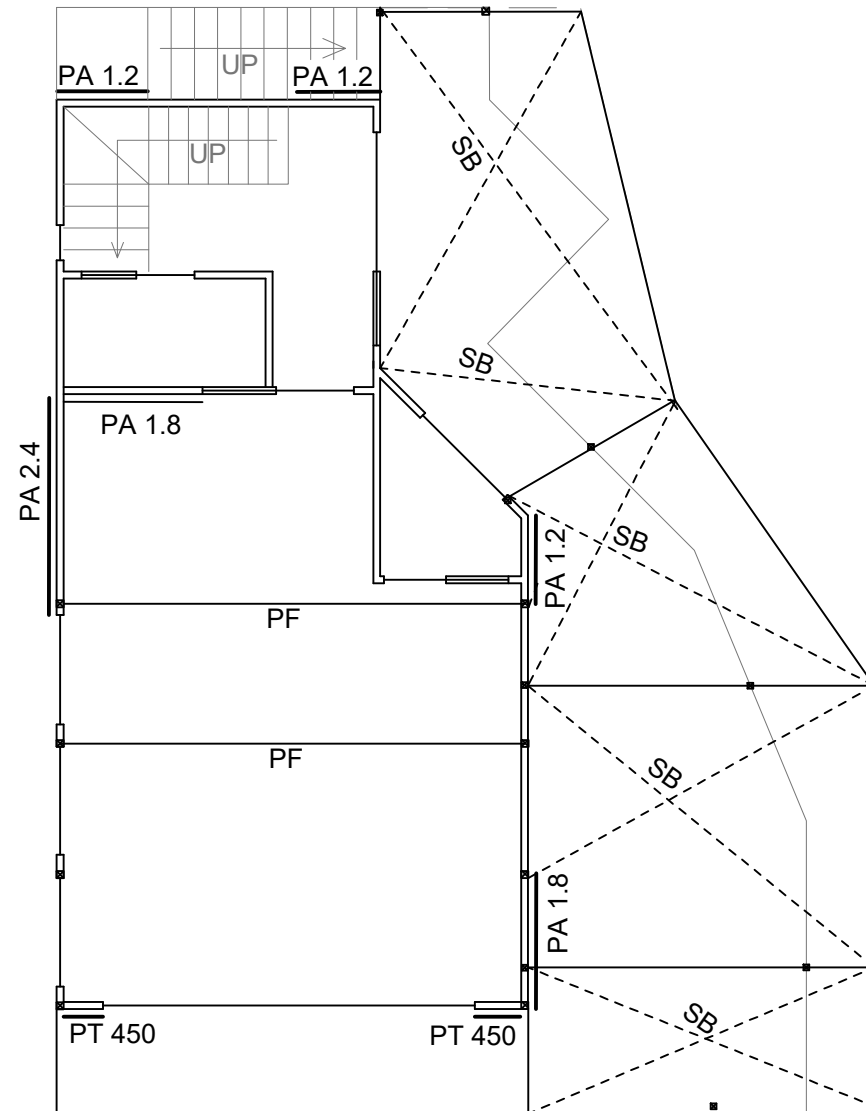
DWG No  
**K-10**

SCALE: As noted @ A3

APPD:

A

UPDATE -A	LH	LH	22.03.24
REVISION	CHKD	OK	DATE



**FIRST FLOOR BRACING PLAN**  
SCALE 1:100

PT. 450mm POWER BRACING TRUSS INSTALLED TO  
MANUFACTURES SPECIFICATIONS

(PF) INDICATES STEEL PORTAL FRAME, BRACING CAPACITY = 4KN

### WIND BRACING KEY N3

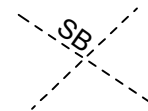
**PA** - 4mm F27 Plywood sheet bracing, complying with AS1684, full wall height.  
M12 Tie down rod continuous from floor slab or bearer to top plate at each end of each sheathed section,  
Bottom plate M12 tie-down @ max 1.2m ctrs.  
Nailing pattern: 150mm top and bottom plates  
150mm vertical edges  
300mm intermediate studs  
Horizontal butt joints at noggings:  
150mm each edge  
Nails 30mm x 2.8mm gal clouts  
Racking resistance 6.4 kN/m @ wall height 2.7m or less. Reduction factors (RF) apply for wall heights exceeding 2.7m & sheathed sections less than 900mm in length.

**PB** - 4mm F27 Plywood sheet bracing, complying with AS1684, full wall height.  
Bottom plate M8 tie-down @ max 1.2m ctrs  
Nailing pattern: 150mm top and bottom plates  
150mm vertical edges  
300mm intermediate studs  
Horizontal butt joints at noggings:  
150mm each edge  
Nails 30mm x 2.8mm gal clouts  
Racking resistance 3.4 kN/m @ wall height 2.7m or less. Reduction factors (RF) apply for wall heights exceeding 2.7m & sheathed sections less than 900mm in length.

⊕ - Location of M12 gal tie-down rod continuous from floor slab or bearer to top plate

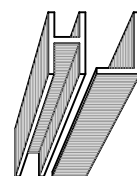
▪ -Location of steel or Hwd posts.  
min 2/M12 Gal. bolts to roof beam.  
min 2/M12 Gal. bolts to bearer or slab  
Equivalent to M12 gal tie-down.

*PRYDA SPEEDBRACE*  
20 x 20 x 1 GAL or SS316



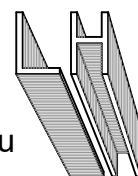
UPDATE -A	LH	LH	22.03.24
REVISION	CHKD	OK	DATE

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PROPOSED ADDITIONS & ALTERATIONS  
2-56 SHIRLEY Ln, BYRON BAY

CLIENT: SHAJI KARIMADATH

DATE: 11.12.23

DESIGN: LH

ISSUE:

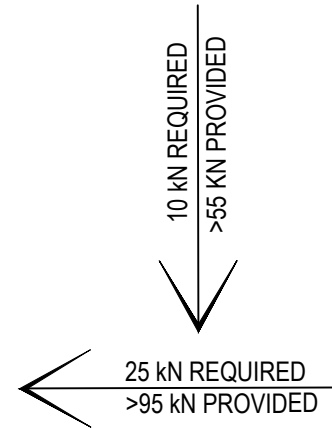
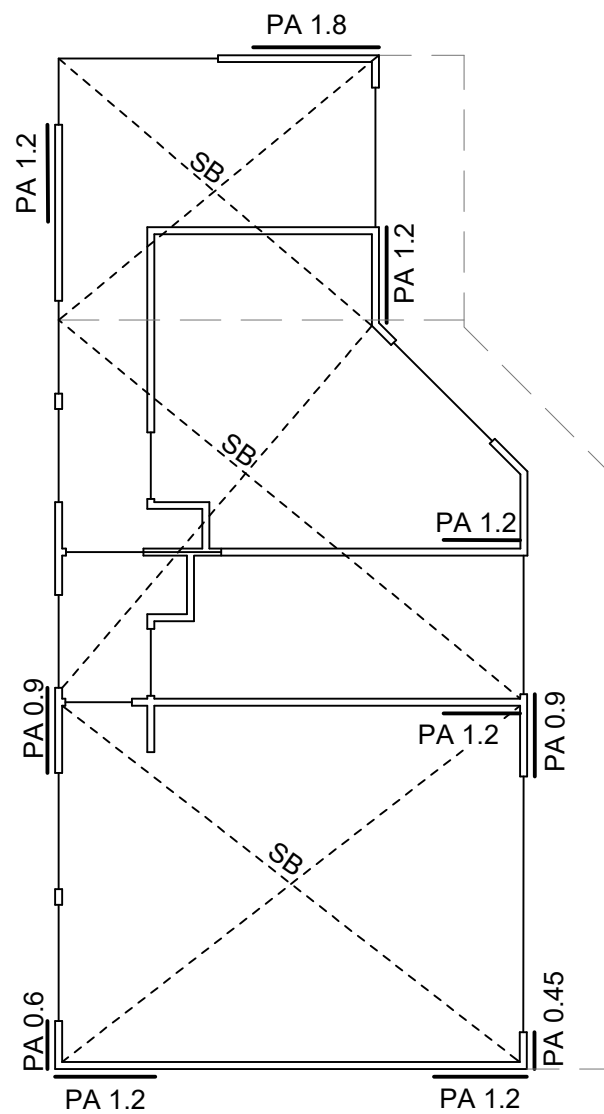
SCALE: As noted @ A3

APPD:

*[Signature]*

A

DWG No  
**K-11**



**FIRST FLOOR BRACING PLAN**  
SCALE 1:100

### WIND BRACING KEY N3

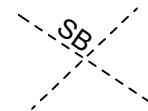
**PA** - 4mm F27 Plywood sheet bracing, complying with AS1684, full wall height.  
M12 Tie down rod continuous from floor slab or bearer to top plate at each end of each sheathed section,  
Bottom plate M12 tie-down @ max 1.2m ctrs.  
Nailing pattern: 150mm top and bottom plates  
150mm vertical edges  
300mm intermediate studs  
Horizontal butt joints at noggings:  
150mm each edge  
Nails 30mm x 2.8mm gal clouts  
Racking resistance 6.4 kN/m @ wall height 2.7m or less. Reduction factors (RF) apply for wall heights exceeding 2.7m & sheathed sections less than 900mm in length.

**PB** - 4mm F27 Plywood sheet bracing, complying with AS1684, full wall height.  
Bottom plate M8 tie-down @ max 1.2m ctrs  
Nailing pattern: 150mm top and bottom plates  
150mm vertical edges  
300mm intermediate studs  
Horizontal butt joints at noggings:  
150mm each edge  
Nails 30mm x 2.8mm gal clouts  
Racking resistance 3.4 kN/m @ wall height 2.7m or less. Reduction factors (RF) apply for wall heights exceeding 2.7m & sheathed sections less than 900mm in length.

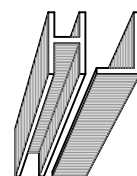
⊕ - Location of M12 gal tie-down rod continuous from floor slab or bearer to top plate

▪ -Location of steel or Hwd posts.  
min 2/M12 Gal. bolts to roof beam.  
min 2/M12 Gal. bolts to bearer or slab  
Equivalent to M12 gal tie-down.

*PRYDA SPEEDBRACE*  
20 x 20 x 1 GAL or SS316

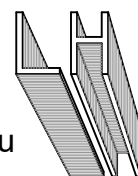


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PROPOSED ADDITIONS & ALTERATIONS  
2-56 SHIRLY Ln, BYRON BAY

CLIENT: SHAJI KARIMADATH

DATE: 11.12.23

DESIGN: LH

SCALE: As noted @ A3

APPD:

**SECOND FLOOR BRACING PLAN**

ISSUE:

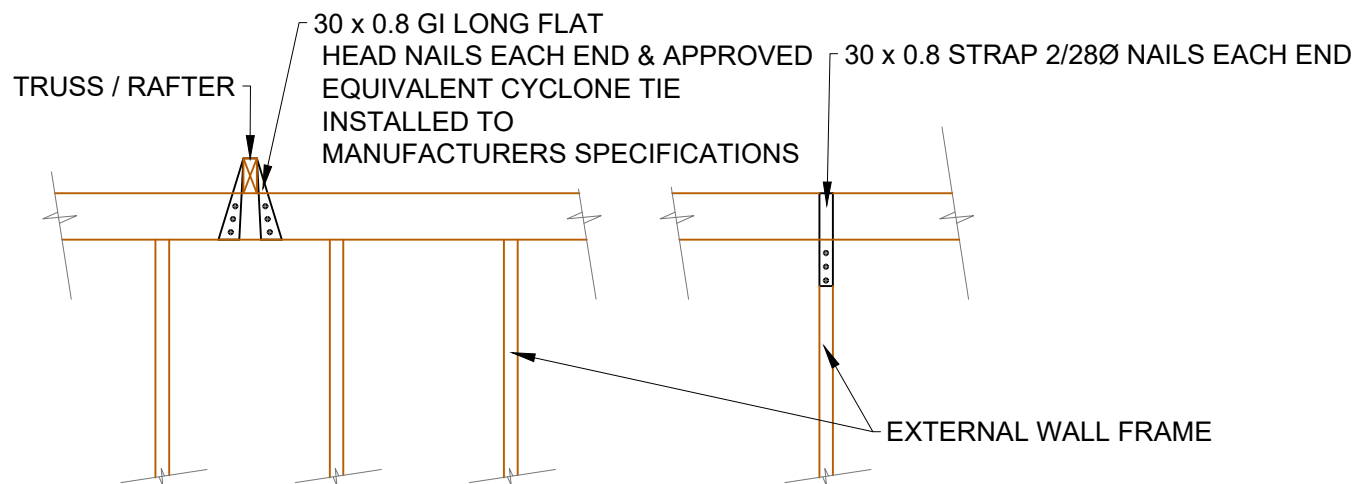
DWG No  
**K-12**

REVISION

CHKD

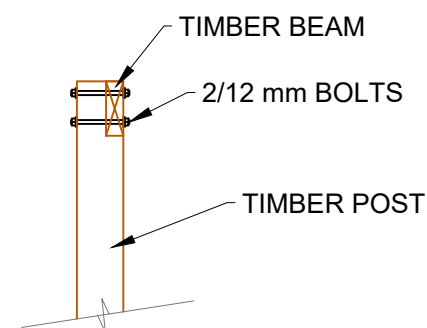
OK

DATE



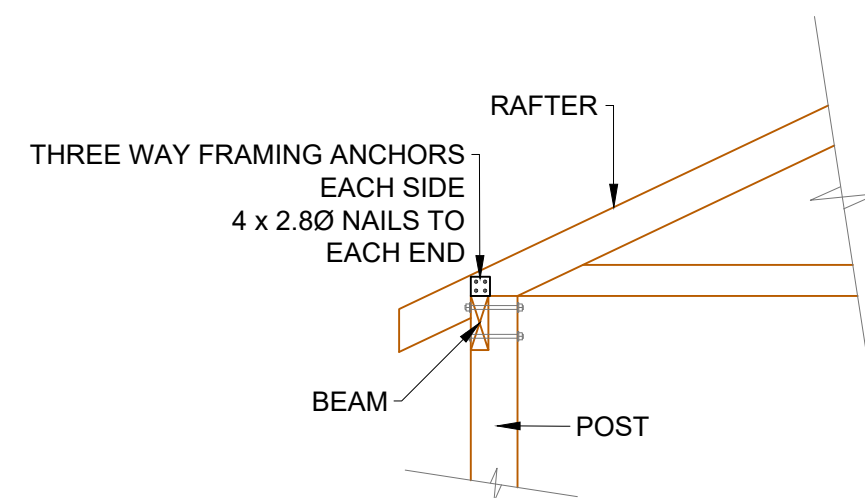
## TRUSS TO WALL / TOP BOTTOM PLATE FRAME CONNECTION

SCALE 1:20



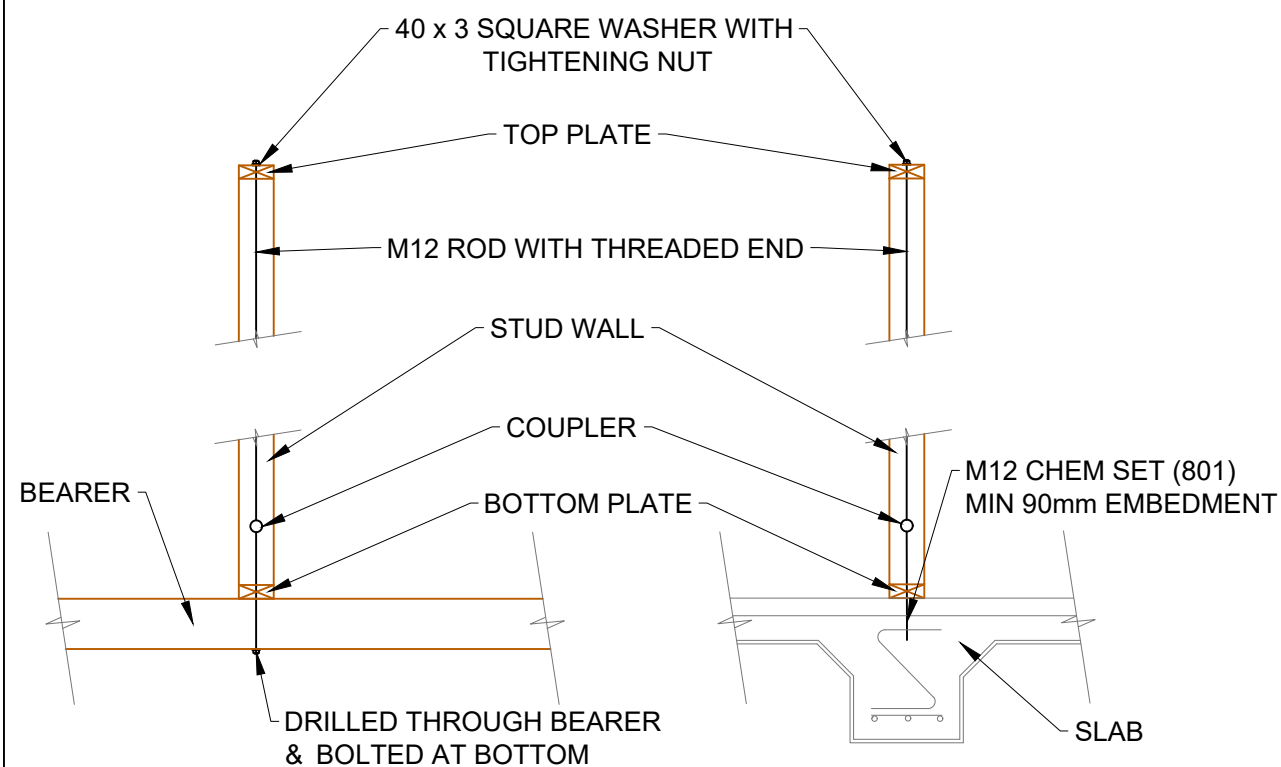
## POST TO BEAM CONNECTION

SCALE 1:20



## RAFTER TO VERANDAH BEAM

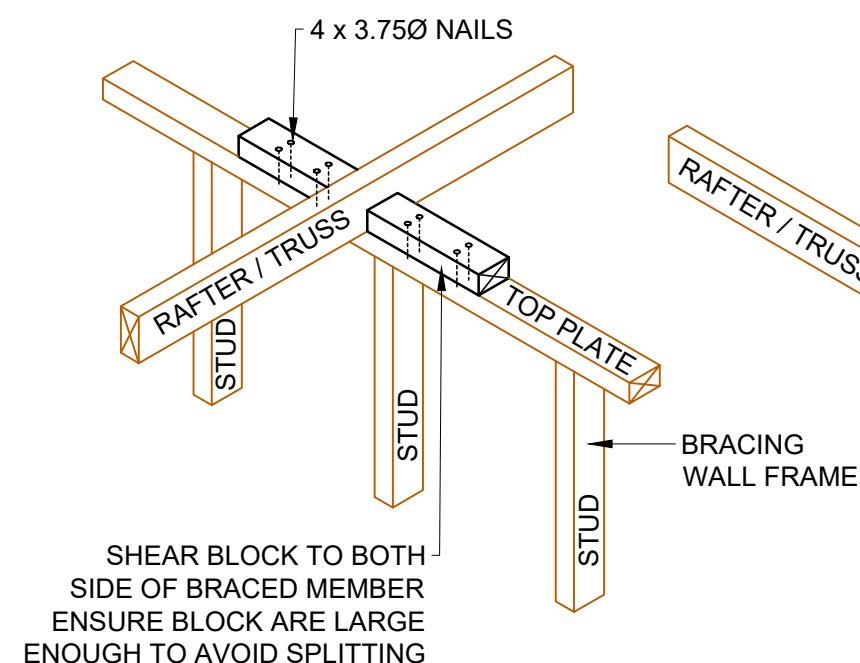
SCALE 1:20



## TIE DOWNS / TOP PLATE TO BEARER/SLAB CONNECTION

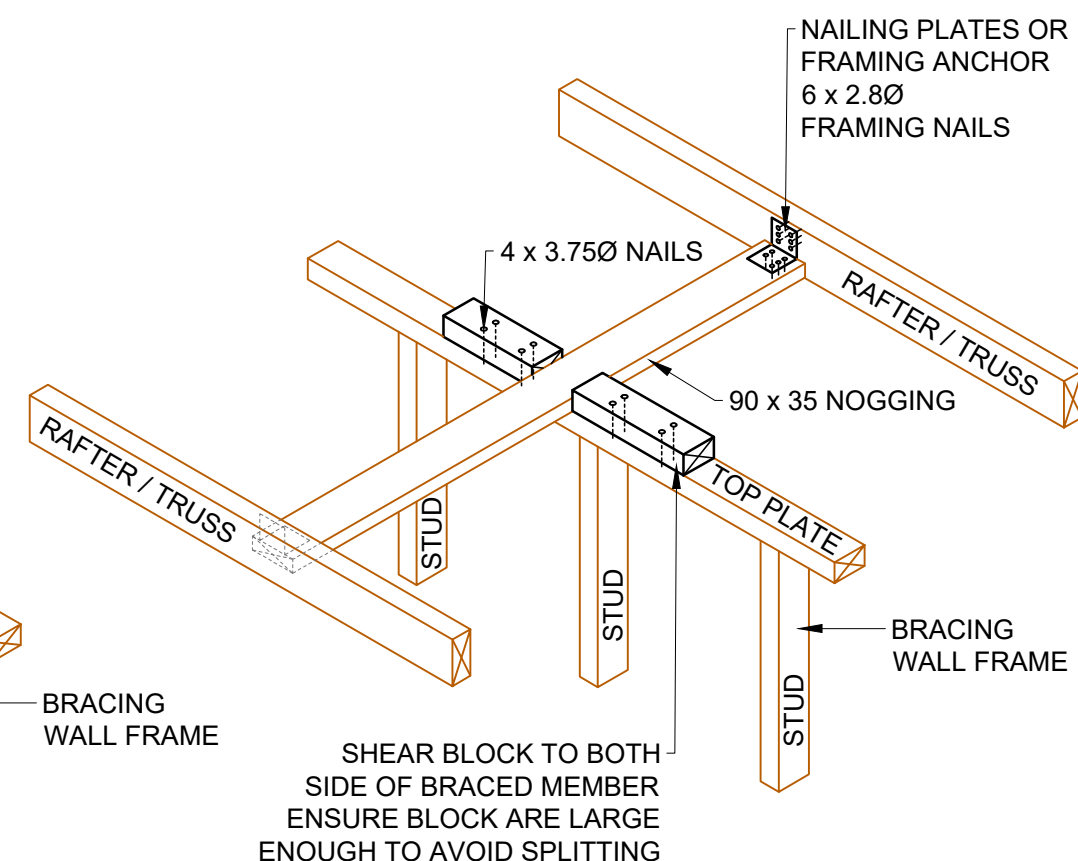
SCALE 1:20

WALL STUDS FOR N3  
<2.7 HIGH @ 450 Ctrs = 1/90 x 35 MGP10  
>2.7 - 3.6 HIGH @ 450 Ctrs = 2/90 x 35 MGP10  
or 90 x 45 MGP10



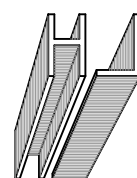
## TYP - INTERNAL BRACING WALL TO RAFTER / JOIST / RAFTERS

SCALE 1:20



REVISION	CHKD	OK	DATE

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PROPOSED ADDITIONS & ALTERATIONS  
2-56 SHIRLY Ln, BYRON BAY

FRAMING DETAILS

CLIENT: SHAJI KARIMADATH

DATE: 11.12.23

DESIGN: LH

ISSUE:

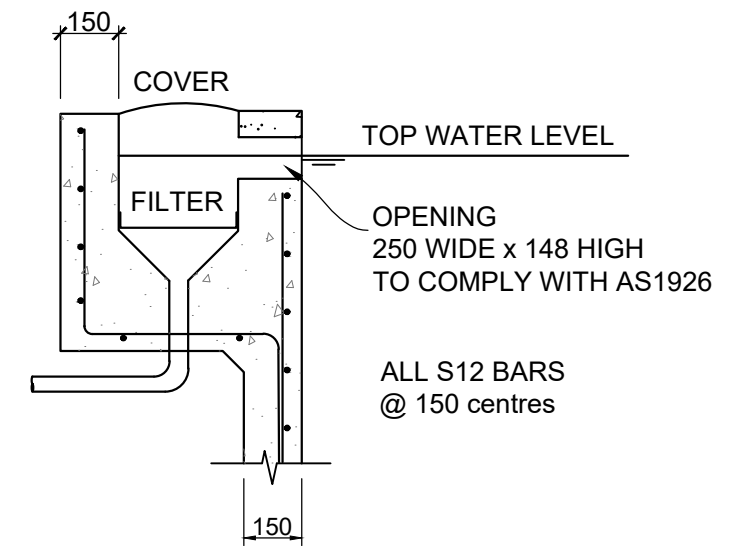
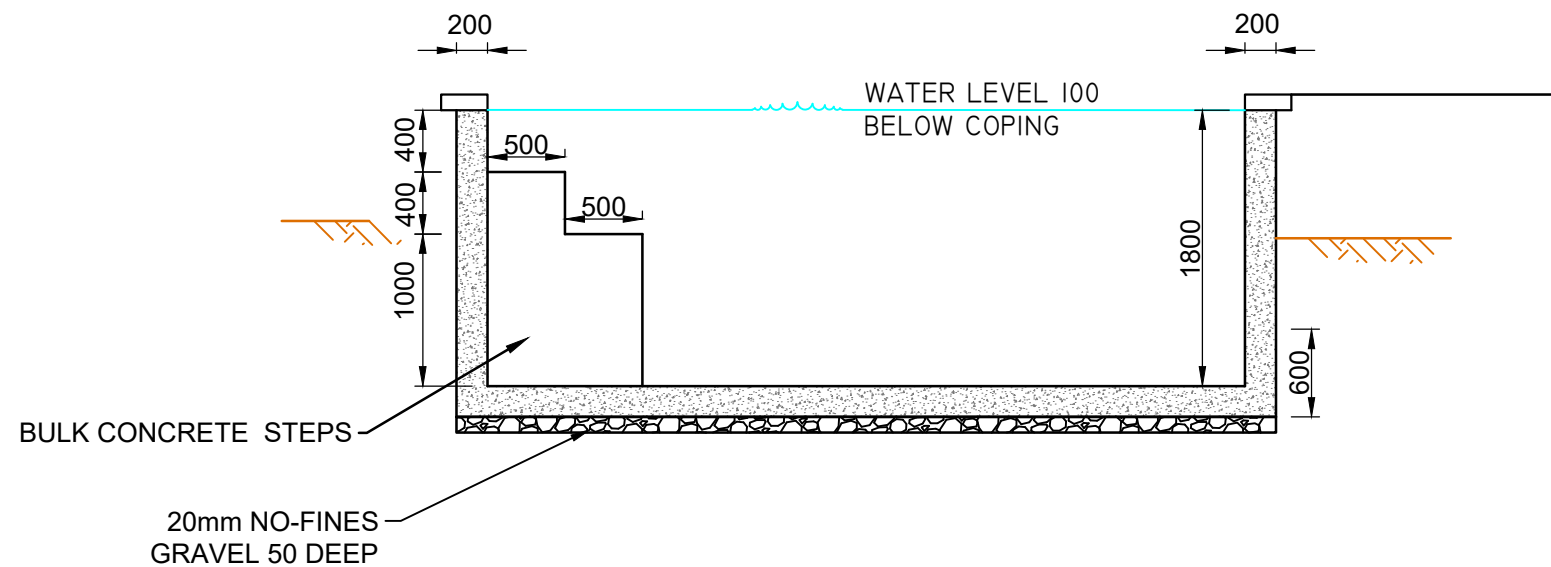
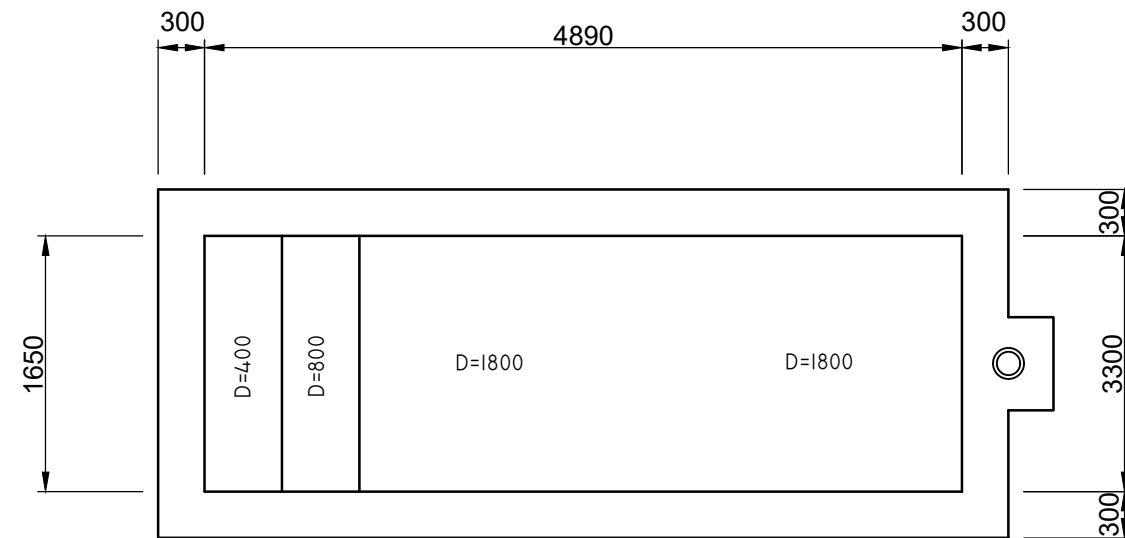
SCALE: As noted @ A3

APPD:

*[Signature]*

DWG No  
**K-13**

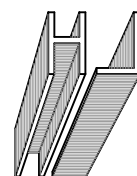




**SKIMMER BOX DETAIL**  
1:20

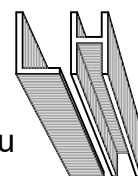
REVISION	CHKD	OK	DATE

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PROPOSED ADDITIONS & ALTERATIONS  
2-56 SHIRLY Ln, BYRON BAY

**POOL PLAN**

CLIENT: SHAJI KARIMADATH

DATE: 11.12.23

SCALE: As noted @ A3

APPD:

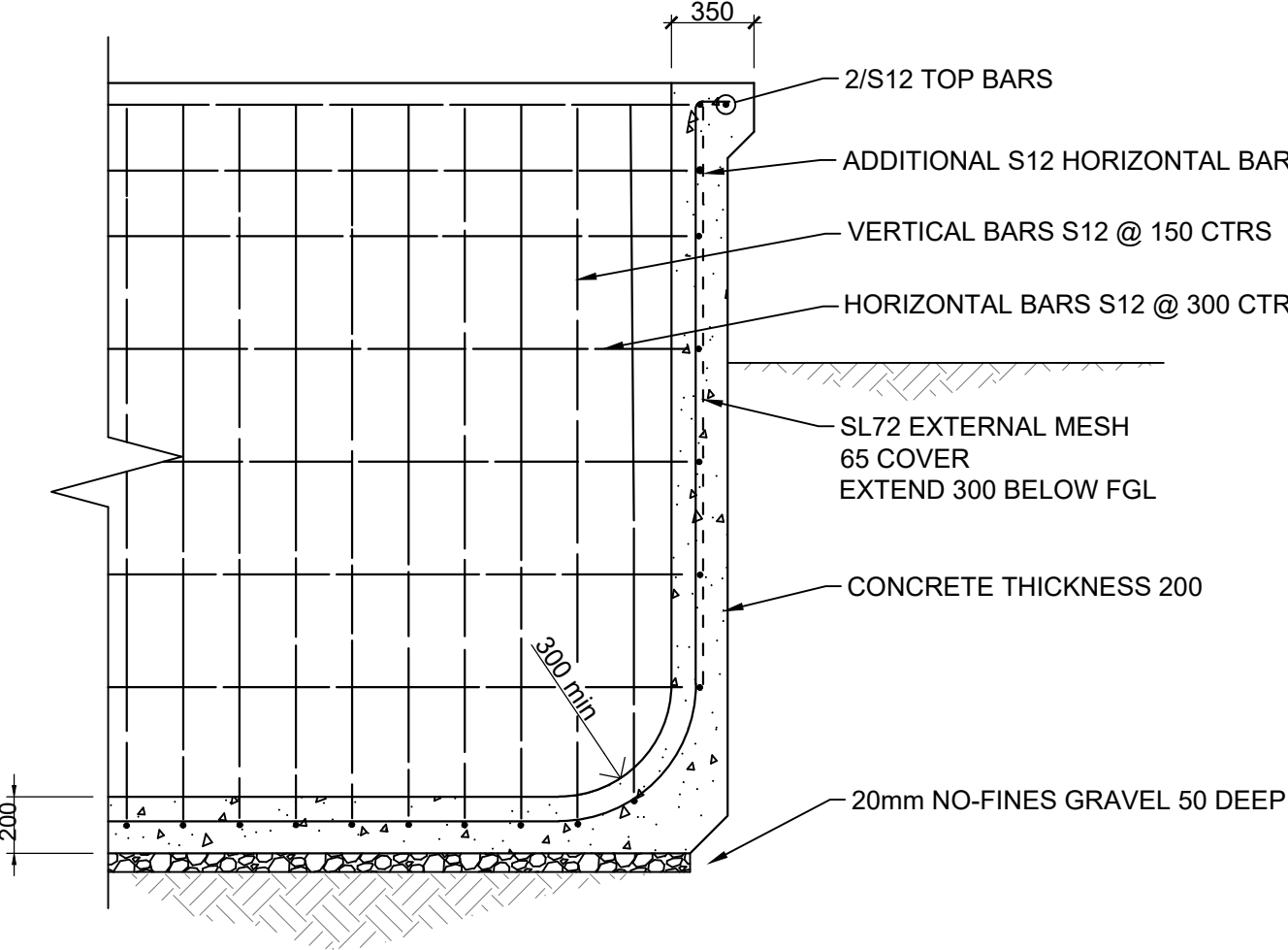
*[Signature]*

ISSUE:

DWG No  
**K-14**

SPECIFICATIONS

- 1. Shotcrete pool 32MPa concrete with 65mm cover to reo. (salt water requirement), to be sprayed in one application;
- 2. Concrete surface to be maintained in a damp condition while curing for a minimum of 14 days;
- 3. Provide hydrostatic valve as shown in deepest part of pool floor;
- 4. Provide 4 x S12 trimmer bars 1000mm long each side of hydrostatic valve;
- 5. Hydrostatic valve to be connected to a slotted pipe embedded in 20mm no-fines cobble filter;
- 6. Filter dimensions 450x450x600 deep, sides and base of filter lined with geofabric;
- 7. Place minimum 100mm layer of 20mm no-fines cobble beneath entire base of pool;
- 8. All reinforcement structural grade S12 unless otherwise specified,  
Laps: 500mm horizontal & vertical bars. Stagger Laps & none within 900mm of corners;
- 9. Spray concrete against formwork or natural ground;
- 10. Fill pool with water only after concrete has attained design strength;
- 11. Childproof perimeter fencing and gates to conform to AS 1926;
- 12. Use noted dimensions only, do NOT scale off drawings.



TYP. WALL SECTION  
DEPTH 1.8 - 2.0M

DO NOT SCALE OFF DRAWINGS  
WRITTEN DIMENSIONS PREFERRED  
BUILDER TO VERIFY ALL DIMENSIONS




REVISION	CHKD	OK	DATE

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PROPOSED ADDITIONS & ALTERATIONS 2-56 SHIRLY Ln, BYRON BAY			POOL REINFORCEMENT DETAILS				
CLIENT:        SHAJI KARIMADATH							
DATE:    11.12.23							DWG No
SCALE:    As noted @ A3		APPD: 					K-15