

STANDARD NOTES

GENERAL

G1 ALL WORK AND MATERIALS TO CONFORM TO THE DRAWINGS, THE SPECIFICATION, AND CURRENT BUILDING CODE OF AUSTRALIA AND AUSTRALIAN STANDARDS.

G2 THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE ARCHITECTURAL AND OTHER CONSULTANTS' DRAWINGS, THE SPECIFICATION AND ALL OTHER WRITTEN INSTRUCTIONS ISSUED DURING THE CONSTRUCTION.

G3 THE CONTRACTOR SHALL CONFIRM ALL RELEVANT DIMENSIONS BEFORE COMMENCING CONSTRUCTION AND/OR FABRICATION, DO NOT SCALE STRUCTURAL DRAWINGS.

G4 ALL DISCREPANCIES SHALL BE REFERRED TO THE ARCHITECT/ENGINEER FOR RESOLUTION BEFORE PROCEEDING WITH THE WORKS.

G5 ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE. ALL LEVELS (IN METRES) ARE TO AUSTRALIAN DATUM. ALL CO-ORDINATES ARE TO AUSTRALIAN MAPPING GRID.

G6 THE APPROVAL OF ANY SUBSTITUTION SHALL BE SOUGHT FROM THE ENGINEER. APPROVAL BY THE ENGINEER OF AN ALTERNATIVE IS NOT AN AUTHORISATION FOR A COST VARIATION. ANY CLAIM FOR A COST VARIATION MUST BE SUBMITTED TO THE RELEVANT PARTIES BEFORE THE WORK COMMENCES.

G7 DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN THE WORKS IN A SAFE, STABLE CONDITION AND ENSURE THAT NO PART IS OVER-STRESSED. ALL TEMPORARY PROPPING AND BRACING NECESSARY SHALL BE THE CONTRACTORS RESPONSIBILITY.

G8 ALL PROPS AND FORMWORK TO A BEAM OR SLAB SHALL BE REMOVED BEFORE CONSTRUCTING MASONRY WALLS.

G9 ALL NON-LOAD BEARING WALLS SHALL BE CONSTRUCTED 20mm CLEAR OF SLAB AND BEAM SOFFITS UNLESS NOTED OTHERWISE.

G10 NO HOLES, RECESSES OR CHASES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE WITHOUT THE ENGINEER'S WRITTEN APPROVAL.

G11 THE ENGINEER ACCEPTS NO RESPONSIBILITY FOR THE WORKS CARRIED OUT ON SITE UNLESS INSPECTED AND APPROVED IN WRITING BY THE ENGINEER.

G12 BEFORE STARTING WORK ON SITE, IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THE EXISTING UNDERGROUND SERVICES WILL NOT AFFECT THE WORKS. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR ANY SITE DISCREPANCIES TO THE DRAWINGS, EXISTING LEVELS ARE TO BE VERIFIED ON SITE.

G13 ALL REQUIRED TESTS AND/OR SITE INSPECTIONS ARE TO BE UNDERTAKEN AT THE CONTRACTOR'S EXPENSE.

G14 BUILD, FABRICATE AND PRODUCE ONLY FROM DRAWINGS 'ISSUED FOR CONSTRUCTION'.

FOUNDATIONS

F1 PRIOR TO COMMENCING WORK, THE CONTRACTOR IS TO FAMILIARISE THEMSELVES WITH THE CONTENT OF THE SOIL REPORT. ALL RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL REPORT ARE TO BE IMPLEMENTED.

F2 THE SITE HAS BEEN CLASSIFIED AS CLASS 'P' IN ACCORDANCE WITH AS2870.

F3 SOIL REPORT DETAILS ARE AS FOLLOWS:
PREPARED BY: HARDROCK GEOTECHNICAL PTY. LTD.
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ALL FOOTINGS SHALL BE FOUNDED AT LEAST 100mm INTO NATURAL STIFF SILTY CLAY WITH ALLOWABLE BEARING PRESSURE OF 150kPa, PROVIDE 15MPa BLINDING CONCRETE AS REQUIRED.

F4 THE CONTRACTOR IS TO ALLOW FOR THE ENGAGEMENT OF THE GEOTECHNICAL ENGINEER TO VERIFY THE SAFE BEARING CAPACITY OF THE FOUNDING MATERIAL PRIOR TO PLACEMENT OF CONCRETE.

F5 ALL WORK AND MATERIALS TO COMPLY WITH AS2870.

F6 UNLESS NOTED OTHERWISE, WHEREVER A NEW FOOTING IS LOCATED CLOSE TO AN EXCAVATION, BATTER, EXISTING FOOTING, EXISTING SERVICE LINE OR PROPOSED SERVICE LINE, WHICH IS DEEPER THAN THE NEW FOOTING, THE EXCAVATION FOR THE NEW FOOTING IS TO BE DEEPEMED AND BACKFILLED WITH BLINDING CONCRETE.

F7 OVER-EXCAVATION WITHIN THE INFLUENCE ZONE OF ANY FOOTING AND/OR RETAINING WALL IS NOT ALLOWED WITHOUT THE PRIOR APPROVAL OF THE EXCAVATION SEQUENCE BY THE ENGINEER.

F8 FOR SLABS CONSTRUCTED DIRECTLY ON GROUND, ALL ORGANIC TOP SOIL SHALL BE REMOVED FROM THE AREA COVERED BY THE SLAB. THE SLAB SHALL BEAR ON MATERIAL WITH ALLOWABLE BEARING CAPACITY OF 30-40kPa (REFER TO GEOTECHNICAL REPORT), OVERLAIN BY 50mm OF PACKING SAND FULLY COMPACTED, AND A 0.2mm POLYTHENE MEMBRANE LAPPED 200mm AND TAPPED AT THE JOINTS. ANY SOFT SPOT SHALL BE DUG OUT AND REPLACED WITH COMPACTED CRUSHED ROCK OR 15MPa BLINDING CONCRETE IN ACCORDANCE WITH AS2870 AND AS3798, UNLESS NOTED OTHERWISE.

F9 WHERE SUSPENDED SLAB OR BEAMS ARE TO BE CONSTRUCTED ON THE GROUND, TOP SOIL SHALL BE REMOVED AND FILLING AND/OR NATURAL GROUND UNDER THE SLAB AND BEAMS SHALL BE COMPACTED SO AS TO PROVIDE SUFFICIENT SUPPORT FOR THE WEIGHT OF THE WET CONCRETE AND ANY CONSTRUCTION LOADS PLACED THEREON, WHILE THE CONCRETE IS CURING. FILLING IF REQUIRED SHALL BE EITHER CLEAN SOIL FROM EXCAVATIONS, SANDY LOAM OR OTHER APPROVED MATERIAL. THE SURFACE SHALL BE BROUGHT TO GRADE USING 50mm QUARRY DUST OR SAND AND OVERLAIN BY 0.2mm POLYTHENE MEMBRANE LAPPED 200mm AND TAPPED AT JOINTS.

LOADING NOTES

DESIGN DATA:
LIVE LOADING IN ACCORDANCE WITH AS1170.1
NON TRAFFICABLE ROOF: 0.25kPa
SUSPENDED FLOOR

RESIDENTIAL UP TO 2 STOREY: 1.5kPa
RESIDENTIAL OVER 2 STOREY: 2kPa
STAIR: 4kPa
CORRIDORS/BALCONIES: 4kPa

STRUCTURAL ELEMENTS HAVE BEEN DESIGNED TO THE FOLLOWING S.A.A CODES:

AS1170.0: STRUCTURAL DESIGN ACTIONS - GENERAL PRINCIPLES

AS1170.1: STRUCTURAL DESIGN ACTIONS - PERMANENT, IMPOSED AND OTHER ACTIONS

AS1170.2: STRUCTURAL DESIGN ACTIONS - WIND ACTIONS

AS1684: RESIDENTIAL TIMBER - DESIGN CRITERIA
AS1720: TIMBER STRUCTURES - DESIGN METHODS
AS2870: RESIDENTIAL SLABS AND FOOTINGS - CONSTRUCTION
AS3600: CONCRETE STRUCTURES
AS3700: MASONRY STRUCTURES
AS4100: STEEL STRUCTURES

CONCRETE NOTES

C1 ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3600.

C2 CONCRETE SHALL BE CURED BY AN APPROVED METHOD FOR AT LEAST 7 DAYS AFTER PLACEMENT.

C3 CONCRETE SHALL BE COMPACTED USING MECHANICAL VIBRATION. VIBRATION OF FORMS IS NOT ACCEPTABLE AND CONCRETE SHALL NOT BE SPREAD BY VIBRATING.

C4 CONCRETE SECTIONS SHOWN ARE MINIMUM SIZES AND DO NOT INCLUDE FINISHES. SIZES SHALL NOT BE REDUCED IN ANY WAY OR HOLES FORMED OR MADE IN ANY MEMBER WITHOUT THE APPROVAL OF THE ENGINEER.

C5 SLABS AND BEAMS ARE POURED CONCURRENTLY UNLESS NOTED OTHERWISE AND FINISHED WITH A STEEL FLOAT.

C6 CONCRETE TESTING SHALL COMPLY WITH THE REQUIREMENTS OF AS1979 FOR PROJECT ASSESSMENT.

C7 REINFORCEMENT IS SHOWN DIAGRAMMATICALLY AND NOT IN TRUE PROJECTION.

C8 SYMBOLS ON THE DRAWING FOR REINFORCEMENT ARE AS FOLLOWS:

TO AS1302 GRADE 400MPa DEFORMED REINFORCING BARS
N GRADE 500MPa DEFORMED REINFORCING BARS
R GRADE 250MPa PLAIN REINFORCING BARS TO

AS1302 W HARD-DRAWN STEEL REINFORCING WIRE, GRADE 500 DUCTILITY CLASS L TO AS4671

TM HARD-DRAWN STEEL TRENCH MESH, GRADE 500 DUCTILITY CLASS L TO AS4671

RL RECTANGULAR RIB MESH GRADE 500 DUCTILITY CLASS L TO AS4671

SL SQUARE RIB MESH GRADE 500 DUCTILITY CLASS L TO AS4671

UNLESS OTHERWISE NOTED, ALL REINFORCING BARS (INCLUDING MESH) ARE TO BE D500 (IE DEFORMED BAR OF GRADE 500MPa)

C9 ALL REINFORCEMENT AND INSERTS SHALL BE SUPPORTED AND DESIGN LOCATION BY APPROVED BAR CHAIRS, SPACERS OR TIES. BAR CHAIRS SHALL BE PLACED AT MINIMUM 1000 CENTRES IN TWO DIRECTIONS UNLESS NOTED OTHERWISE.

C10 HOOKS AND COGS SHALL COMPLY WITH AS3600 UNLESS OTHERWISE SHOWN ON DRAWINGS.

C11 WELDING AND THREADING OF REINFORCEMENT IS NOT PERMITTED WITHOUT THE APPROVAL OF THE ENGINEER.

C12 REINFORCEMENT SHALL BE EVENLY DISTRIBUTED OVER THE WIDTHS SHOWN UNLESS NOTED OTHERWISE.

C13 PROVIDE 2-N12 x 1200 BARS DIAGONALLY ACROSS RE-ENTRANT CORNERS OF SLABS, TIED UNDER THE TOP FABRIC.

C14 AT SLAB EDGES INCLUDING CONSTRUCTION AND OTHER JOINTS, AT LEAST ONE REINFORCING BAR OR FABRIC WIRE SHALL BE LOCATED PARALLEL TO AND WITHIN 75mm OF THE SLAB EDGE.

C15 REINFORCEMENT FABRIC SHALL BE LAPPED SO THAT EACH PAIR OF TRANSVERSE WIRES AT THE EDGE OF ONE SHEET OVERLAPS EACH CORRESPONDING PAIR OF TRANSVERSE WIRES OF THE SHEET BEING LAPPED. REINFORCEMENT SHALL BE SUPPORTED IN POSITION PRIOR TO CONCRETING COMMENCING ON DENSE PRECAST CONCRETE SPACER BLOCKS OR BAR CHAIRS ON GALVANISED STEEL DISHES AT 900mm MAXIMUM CENTRES EACH WAY.

C16 TRENCH MESH SHALL BE LAID CONTINUOUSLY AND SHALL BE SPLICED WHERE NECESSARY WITH A MINIMUM LAP OF 500mm.

C17 TRENCH MESH SHALL BE OVERLAPPED BY WIDTH OF FABRIC AT CORNERS AND INTERSECTIONS. THE ENDS OF TRENCH MESH SHALL TERMINATE WITH A CROSSBAR.

C18 CONSTRUCTION JOINTS SHALL BE PROPERLY FORMED AND USED ONLY WHERE APPROVED BY THE ENGINEER. THE INTERFACE OF THE HARDENED CONCRETE SHALL BE THOROUGHLY SCABBLED TO REMOVE LANTACE AT ALL CONSTRUCTION JOINTS.

C19 SAWN JOINTS SHALL BE MADE AT A TIME APPROPRIATE TO THE CONCRETE MIX AND CLIMATIC CONDITIONS, GENERALLY BETWEEN 10 AND 20 HOURS OF PLACING THE CONCRETE.

C20 STRIPPING OF FORMS AND REMOVAL OF FORMWORK SHALL TAKE PLACE IN ACCORDANCE WITH PROCEDURE AGREED TO BY THE ENGINEER.

C21 CONCRETE MUST BE SEPARATED FROM SUPPORTING MASONRY WORK BY TWO LAYERS OF A SUITABLE DE-BONDING MEMBRANE.

C22 SPLICES IN REINFORCEMENT SHALL BE MADE IN THE POSITIONS SHOWN ON THE DRAWINGS OR AS OTHERWISE APPROVED BY THE ENGINEER. THE SPLICE SHALL CONFORM TO AS3600 PROVISIONS.

C23 HOT WATER HEATING PIPES MAY BE EMBEDDED IN THE SLAB PROVIDED THAT THE SLAB THICKNESS IS INCREASED BY 25mm AND LAID ON ADDITIONAL SL82 MESH.

C24 HARD RAMMED MORTARS SHALL CONSIST OF 1 CEMENT TO 2 SAND TYPICALLY BY VOLUME WITH SUFFICIENT WATER TO OBTAIN A DAMP EARTH CONSISTENCY.

C25 FORMWORK SHALL BE DESIGNED AND CONSTRUCTED BY THE CONTRACTOR IN ACCORDANCE WITH AS3610 S.A.A FORMWORK CODE.

C26 NO PLUGS, CHASES OR EMBEDMENT OF PIPES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT PRIOR APPROVAL OF THE ENGINEER.

CONCRETE SCHEDULE			
	EXPOSURE CLASSIFICATION	-	MIN GRADE (MPa)
BLINDING CONCRETE		CV	15
FOOTING	A3		25
INTERNAL FLOOR SLAB	A1		25
EXTERNAL FLOOR SLAB	B1		32

NOTE: UNLESS NOTED OTHERWISE THE MINIMUM 28 DAY COMPRESSIVE STRENGTH OF CONCRETE FOR VARIOUS ELEMENTS SHALL BE AS ABOVE.

TIMBER

CONSTRUCTION

T1 ALL TIMBER DESIGN, CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH AS1720 AND AS1684, UNLESS OTHERWISE SHOWN, ALL TIMBER SHALL BE STRESS GRADE MGP10.

T2 MAKE GOOD PRESERVATIVE TREATMENT WHERE CHECKOUTS, HOLES AND CUTS EXPOSE UNTREATED TIMBER.

T3 NO PENETRATIONS OR CHASES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN TIMBER MEMBERS WITHOUT PRIOR APPROVAL OF THE ENGINEER.

T4 NOTCHING OF BEAMS IS NOT PERMITTED UNLESS NOTED OTHERWISE.

T5 ALL TIMBER BEAMS AND/OR LINTELS ARE TO BE SUPPORTED AT THEIR ENDS BY 2/90x45 SEASONED MGP10 STUDS SECURELY NAILED TOGETHER, UNLESS NOTED OTHERWISE.

T6 STUDS IN ALL LOAD BEARING STUD WALLS ARE TO BE 90x45 MGP10 KD AT 450 MAX CTS WITH NOGGINGS AT 1300 VERTICAL CENTRES. TOP AND BOTTOM PLATES ARE TO BE 90x45 MGP10 KD. LOAD BEARING WALLS SHALL ONLY BE LOADED AT STUD LOCATIONS OR WITHIN 60mm OF EITHER SIDE OF THE STUD. LOADS SHALL NOT BE APPLIED IN THE CENTRE OF THE TOP PLATE.

T7 FIX STUDS TO CROSS MASONRY OR CONCRETE WALLS WITH M10 MASONRY ANCHORS AT 900 CTS, UNLESS NOTED OTHERWISE.

T8 PROVIDE TIMBER BLOCKING AT 1800 CTS TO ALL TIMBER FLOOR JOISTS, UNLESS NOTED OTHERWISE.

T9 ALL DOUBLE MEMBERS SHALL BE NAIL LAMINATED IN ACCORDANCE WITH TIMBER FRAMING MANUAL AND AS1684.

T10 PROVIDE 20mm MIN CLEARANCE TO UNDERSIDE OF ROOF TRUSSES OR FLOOR JOISTS FOR NON-LOAD BEARING STUD WALLS.

T11 PROPRIETARY ROOF TRUSSES AND SIMILAR ELEMENTS ARE TO BE DESIGNED BY THE TRUSS MANUFACTURER IN ACCORDANCE WITH AS1720 AND OTHER RELEVANT AUSTRALIAN STANDARDS. THIS SHALL INCLUDE ALL SUPPORT CONNECTIONS AND CAMBER OF TRUSSES.

T12 THE ROOF FRAMING PLAN SHOWING THE ROOF TRUSS LAYOUT IS FOR TENDER PURPOSES AND IS INDICATIVE ONLY. THE TRUSS MANUFACTURER SHALL BE RESPONSIBLE FOR THE DETAILED LAYOUT AND DESIGN OF ALL TRUSSES, GIRDER TRUSSES, HIP TRUSSES ETC AND ANY ADDITIONAL SUPPORTS, BEAMS, LINTELS AND THE LIKE REQUIRED BY THE DESIGN.

T13 TRUSSES SHALL BE SPACED AT 900mm MAX CTS FOR METAL DECK ROOFS AND AT 600mm MAX CTS FOR TILED ROOFS.

T14 THE DETAILED ROOF TRUSS DESIGN IS TO BE CONSISTENT WITH SUPPORT LINES AND/OR POINTS SHOWN ON THE DRAWINGS. IF THE TRUSS MANUFACTURER WISHES TO ALTER THE LAYOUT OF THE ROOF TRUSSES AND/OR SUPPORTS THE ENGINEER SHALL BE INFORMED AND APPROVAL GIVEN PRIOR TO ANY DETAIL DESIGN OR CONSTRUCTION OCCURRING.

T15 THE TRUSS MANUFACTURER IS TO INDEPENDENTLY CERTIFY THE DESIGN OF THE TRUSSES PRIOR TO SUBMITTING THE DESIGN TO THE ENGINEER FOR REVIEW. CERTIFICATE OF COMPLIANCE AND SUPPORTING CALCULATIONS INCLUDING THE TYPE AND GRADE OF ALL TIMBER MEMBERS, METHOD OF TIE DOWN AND ANTICIPATED DEFLECTION OF THE TRUSSES (BOTH SHORT AND LONG TERM), SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCING FABRICATION.

T16 THE TRUSS DESIGN IS TO ALLOW FOR ANY PLANT OR OTHER SPECIAL LOADS LOCATED ON THE ROOF OR WITHIN THE ROOF SPACE. REFER TO THE ARCHITECTURAL, BUILDING SERVICES AND STRUCTURAL DRAWINGS FOR DETAILS.

T17 THE TRUSS MANUFACTURER IS RESPONSIBLE FOR ANY ROOF BRACING REQUIRED BY THE DESIGN AND FOR STABILITY OF THE STRUCTURE DURING ERECTION.

T18 TRUSSES ARE TO BE FULLY LOADED PRIOR TO CONNECTING THE BOTTOM CHORD TO ANY NON LOAD BEARING WALLS.

T19 REFER TO ARCHITECTS DRAWINGS FOR DETAILS OF ALL SECONDARY FRAMING INCLUDING FIXING OF SHEETING, FLASHING AND CAPPINGS IN ACCORDANCE WITH AS1684.

NON-LOAD BEARING TIMBER LINTEL SCHEDULE

OPENING SIZE (mm)	SECTION
0-2000	120x45 MGP10
2001-3000	140x45 MGP10
3001-4000	200x45 MGP10

TIMBER STUD SCHEDULE FOR LOAD BEARING WALLS

MAXIMUM HEIGHT (mm)	SECTION
0-3000	90x45 MGP10 @450C/C
3000-3500	120x45 MGP10 @ 450C/C
3500-4000	140x45 MGP10 @450C/C

WINDOW SILL MEMBER SCHEDULE

OPENING SIZE (mm)	SECTION
0-1000	90x45 MGP10
1000-2500	2/90x45 MGP10
2500-3000	3/90x45 MGP10
3000-4000	2/200x45 LVL E14

MASONRY

MATERIALS AND MORTAR

M1 ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3700 AND AS4455

M2 CLAY BRICKS SHALL HAVE A CHARACTERISTIC UNCONFINED COMPRESSIVE STRENGTH OF 15MPa UNLESS NOTED OTHERWISE. SOLID CONCRETE BRICKS SHALL HAVE A CHARACTERISTIC UNCONFINED STRENGTH OF 15MPa UNLESS NOTED OTHERWISE.

M3 HOLLOW AND CORED CONCRETE BLOCKS SHALL HAVE A CHARACTERISTIC UNCONFINED COMPRESSIVE STRENGTH OF 15MPa UNLESS NOTED OTHERWISE.

M4 MORTAR FOR UNREINFORCED MASONRY SHALL CONSIST OF 1 CEMENT, 1 HYDRATED LIME, 6 WELL GRADED SAND UNLESS REQUIRED OTHERWISE BY AS3700.

M5 MORTAR FOR REINFORCED MASONRY SHALL CONSIST OF 1 CEMENT, 0.25 HYDRATED LIME, 3 WELL GRADED SAND FOR MORTAR TO CLAY. FOR CAVITY GROUT, MORTAR SHALL CONSIST OF 1 CEMENT, 2.5 SAND AND 1.5 10mm AGGREGATE.

M6 ALL MORTAR SHALL BE TYPE "M3", UNLESS IN A SEVERE MARINE ENVIRONMENT WHERE MORTAR TYPE "M4" SHALL BE USED. REFER AS3700 TABLE 12.2. CEMENT SHALL BE TYPE GP PORTLAND CEMENT OR GB BLENDED CEMENT COMPLYING WITH AS3972. LIME SHALL BE HYDRATED BUILDING LIME COMPLYING WITH AS1672.1. WATER THICKENER SHALL BE METHYL CELLULOSE BASED. SAND SHALL BE WELL GRADED AND FREE FROM SALTS, VEGETABLE MATTER AND IMPURITIES AND SHALL NOT CONTAIN MORE THAN 10% OF THE MATERIAL PASSING THE 75 MICRON SIEVE.

M7 LOAD BEARING MASONRY SHALL HAVE FULL-BED JOINTS UNLESS NOTED OTHERWISE.

M8 MASONRY TIES FOR CAVITY WALLS SHALL BE MEDIUM DUTY GRADE, SPACED AT NOT MORE THAN 600mm CENTRES VERTICALLY AND HORIZONTALLY. TIES FOR VENEER WALLS SHALL BE LIGHT DUTY GRADE SPACED AT NOT MORE THAN 450mm CENTRES VERTICALLY AND HORIZONTALLY. ADDITIONAL TIES SHALL BE PLACED ADJACENT TO LATERAL SUPPORTS, CONTROL JOINTS AND ARCO OPENINGS. A SPACING OF NOT MORE THAN 300mm, AND LOCATED NOT MORE THAN 300mm FROM THE LINE OF SUPPORT, CONTROL JOINT OR PERIMETER OF OPENING. CHARACTERISTIC STRENGTH OF TIES ARE TO BE RATED FOR THE APPROPRIATE CAVITY WIDTH.

M9 MASONRY SHALL BE TIED TO COLUMNS AT 400 MAXIMUM VERTICAL CENTRES. U.N.O

M10 NEW MASONRY SHALL BE TIED INTO EXISTING USING MEDIUM DUTY TIES AT 400mm MAXIMUM VERTICAL CENTRES ALONG ALL VERTICAL EDGES, AND AT 600 MAXIMUM HORIZONTAL CENTRES UNLESS NOTED OTHERWISE.

M11 MASONRY TIES ARE TO BE GALVANISED TO RATING R2 IN ACCORDANCE WITH AS3700 AND AS2699.

M12 TIES BETWEEN LEAVES OF MSONRY FORMING SOLID WALLS OR ENGAGED PIERS SHALL BE MEDIUM DUTY, AND SPACED AT 400mm MAXIMUM CENTRES IN EACH DIRECTION.

STRUCTURAL STEEL

S1 ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH AS4100.

S2 ALL STEEL SHALL BE NEW AND FREE FROM WELDS AND BLEMISHES UNLESS APPROVED BY THE ENGINEER.

S3 FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH AS4100 AND SAA/SNZ HB2.

S4 THE GRADE OF STRUCTURAL STEEL SHALL BE AS FOLLOWS UNLESS STATED OTHERWISE:

SECTION	MIN GRADE (MPa)
HOT ROLLED SECTIONS	300
WELDED BEAM & COLUMN SECTIONS	300
CIRCULAR HOLLOW SECTIONS	250
SQUARE & RECTANGULAR HOLLOW SECTIONS	350
PLATE	250

S5 UNLESS SHOWN OTHERWISE ON THE DRAWINGS, ALL CONNECTIONS SHALL BE IN ACCORDANCE WITH THE FOLLOWING MINIMUM REQUIREMENTS:

ALL WELDS SHALL BE 6MM CONTINUOUS FILLET WELDS ALL ROUND.

ALL BUTRLN BOLTS TO BE M12 – 4.6/5 WITH A MINIMUM OF 2 BOLTS PER CONNECTION.

ALL PURLIN BOLTS TO BE M12 – 4.6/5 WITH A MINIMUM OF 2 BOLTS PER PURLIN END

ALL CLEAT, STIFFENER AND GUSSETT PLATES SHALL BE 10mm THICK
ALL CAP PLATES SHALL BE 12mm THICK
ALL BASE PLATES SHALL BE 12mm THICK
ALL BOLT HOLES SHALL BE 2mm LARGER THAN THE NOMINATED BOLT DIAMETER UNLESS NOTED OTHERWISE, EXCEPT HOLES IN BASE PLATES WHICH SHALL BE 6mm LARGER THAN THE NOMINATED BOLT DIAMETER

S6 ALL WELDING SHALL BE IN ACCORDANCE WITH AS1554.

S7 WELD TYPES ARE DESIGNATED AS FOLLOWS:
CFW CONTINUOUS FILLET WELD
FPBW FULL PENETRATION BUTT WELD
FPBW PARTIAL PENETRATION BUTT WELD

S8 ALL WELDS SHALL BE SP (STRUCTURAL PURPOSE) IN ACCORDANCE WITH AS1554. ALL BUTT WELDS SHALL BE FULL STRENGTH COMPLETE PENETRATION WELDS. ALL ELECTRODES SHALL BE CLASS E48XX UNLESS NOTED OTHERWISE.

S9 WELDING SHALL BE PERFORMED BY AN EXPERIENCED OPERATOR IN ACCORDANCE WITH AS1554 INSPECTED AND CERTIFIED BY QUALIFIED PERSONNEL IN ACCORDANCE WITH AS2214.

S10 ALL HIGH-STRENGTH STRUCTURAL BOLTS SHALL BE M20 GRADE 8.8/S UNLESS NOTED OTHERWISE IN ACCORDANCE WITH AS1252.

S11 HOLDING-DOWN BOLTS SHALL BE M20 GRADE 4.6/S, GALVANISED UNLESS NOTED OTHERWISE.

S12 BOLTS MUST BE OF SUFFICIENT LENGTH TO HAVE AT LEAST ONE FULL THREAD EXPOSED AFTER TIGHTENING.

S13 BOLTS IN OVERSIZED OR SLOTTED HOLES ARE TO HAVE SUITABLE LARGER SIZED WASHERS.

M13 ALL CAVITIES BELOW GROUND LEVEL SHALL BE MORTAR OR GROUT FILLED.

M14 NON-LOAD BEARING WALLS SHALL BE KEPT 20mm CLEAR OF THE UNDERSIDE OF FLOORS AND SHELF ANGLES.

M15 AT VERTICAL CONTROL JOINTS PROVIDE MASONRY FLEXIBLE ANCHORS TYPE MFA 3/3 AT 600mm MAXIMUM CENTRES. INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. JOINTS ARE TO BE 20mm WIDE WITH A 25mm DIAMETER CLOSED-CELL POLYETHYLENE FOAM BACKING ROD AND POLYSULPHIDE BASE CAULKING SEALANT TO THE EXTERNAL FACE UNLESS NOTED OTHERWISE. IN ADDITION, THE JOINT CONSTRUCTION MUST SATISFY REQUIREMENTS FOR FIRE RATING, SOUND INSULATION AND WATERPROOFING AS SPECIFIED BY THE ARCHITECT. CONTROL JOINTS ARE TO BE AT 6000mm MAXIMUM CENTRES.

M16 WHERE NON-LOAD BEARING WALLS ABOUT THE UNDERSIDE OF HORIZONTAL OR RAKING MEMBERS (SLABS, STEEL OR CONCRETE BEAMS) PROVIDE MASONRY FLEXIBLE ANCHORS, TYPE MFA4 TO EVERY THIRD PERPEND, FIXED TO THE STRUCTURAL MEMBER WITH RAMSET 6mm DIAMETER HEAD-DRIVE PINS OR SIMILAR, PROVIDE 10mm CLOSED-CELL POLYETHYLENE FOAM BACKING RODS BETWEEN THE WALL AND THE MEMBER.

M17 WHERE MASONRY WALLS INTERSECT STRUCTURAL MEMBERS (STEEL OR CONCRETE), PROVIDE MASONRY FLEXIBLE ANCHOR TYPE MFA7 AT 600 MAXIMUM CENTRES EMBEDDED IN THE MASONRY WALL AND FIXED TO THE MEMBER WITH 6mm DIAMETER HEAD RAMSET DRIVE-PINS. MFA7 TIES SHALL BE 200mm LONG x 500mm TURNDOWN. TIES TO OUTER SKIN SHALL INCORPORATE A DRIP GROOVE.

M18 FOR WALLS WITH A CAVITY WIDTH BETWEEN 80mm TO 140mm PROVIDE MASONRY FLEXIBLE ANCHOR 'ANCHOR-TIES' AT 430mm VERTICAL AND 600mm HORIZONTAL CENTRES.

M19 CONCRETE BEAMS AND SLABS SHALL BE SEPARATED FROM SUPPORTING MASONRY BY 2 LAYERS OF MALTHOID OR SIMILAR APPROVED MEMBRANE ON TOP OF MORTAR LEVELLING SCREED.

M20 THE CONTRACTOR SHALL PROVIDE DETAILS AND PROCEDURES OF NEEDLE AND PRECAST CONCRETE JOINTS IN MASONRY WALLS FOR APPROVAL BEFORE WORK COMMENCES.

M21 WHERE MASONRY WALLS ARE TO BE CONSTRUCTED ON SUSPENDED SLABS, STACK MASONRY UNITS TO BE USED IN THE WALL AS NEAR AS POSSIBLE TO THE FINAL POSITION OF THE WALL. NO UNITS ARE TO BE STACKED ON SUSPENDED CONCRETE WORKS UNTIL ALL PROPS HAVE BEEN REMOVED. THE STACKED LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD AS SET OUT IN THE LOADING NOTES. NO MASONRY UNITS ARE TO BE STACKED ON CANTILEVERED SLABS.

S14 BOLT TYPES AND BOLTING PROCEDURE ARE DESIGNATED AS FOLLOWS:

4.6/S COMMERCIAL BOLTS TO AS1111, S/NUG TIGHTENED

8.8/S HIGH STRENGTH STRUCTURAL BOLTS, NUTS AND HARDENED WASHERS TO AS1252, S/NUG TIGHTENED

8.8/TB HIGH STRENGTH STRUCTURAL BOLTS AS ABOVE, FULLY TENSIONED TO AS1511 IN A BEARING TYPE JOINT

8.8/TF HIGH STRENGTH STRUCTURAL BOLTS AS ABOVE, FULLY TENSIONED TO AS1511 IN A FRICTION TYPE JOINT

S15 THE ENDS OF ALL TUBULAR MEMBERS SHALL BE SEALED WITH A 6mm PLATE UNLESS NOTED OTHERWISE.

S16 NOT ALL SECONDARY STEELWORK IS SHOWN IN STRUCTURAL DRAWINGS. PROVIDE ALL NECESSARY CLEATS AND HOLES REQUIRED TO FIX TIMBER AND OTHER MATERIALS AND FINISHES TO THE STEELWORK.

S17 BEFORE COMMENCING FABRICATION COPIES OF THE SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. THIS REVIEW DOES NOT INCLUDE CHECKING OF DIMENSIONS.

S18 UNLESS

REV	DESCRIPTION	DATE
A	Preliminary	18.11.20
B	Preliminary	08.12.20
C	Preliminary	20.01.20
Ø	Construction	27.01.21
1	Construction	11.02.21
2	Construction	01.03.21
4	Construction	21.05.21

LEGEND (UNLESS NOTED OTHERWISE ON PLAN)

- 100** DENOTES 100mm THICK STIFFENED RAFT SLAB-ON-GROUND OVER MIN. 50mm SAND BED UNDERLAINE BY MIN. 0.2mm THICK DAMP-PROOF MEMBRANE. 32MPa. ADOPT SL82 TOP. 30mm COVER. PROVIDE 2-N12 x 1200 BARS DIAGONALLY ACROSS RE-ENTRANT CORNERS OF SLABS, TIED UNDER THE TOP FABRIC.
- 130** DENOTES 130mm THICK SUSPENDED SLAB OVER MIN. 50mm SAND BED UNDERLAINE BY MIN. 0.2mm THICK DAMP-PROOF MEMBRANE. 32MPa. ADOPT SL92 TOP & BOTTOM. 30mm COVER. PROVIDE 2-N12 x 1200 BARS DIAGONALLY ACROSS RE-ENTRANT CORNERS OF SLABS, TIED UNDER THE TOP FABRIC.
- BW1** DENOTES 190mm REINFORCED BLOCKWORK WALL. REFER TO DETAIL.
- STEP** DENOTES A STEP ON THE SURFACE OF THE SLAB. SIZE OF STEP TO BE IN ACCORDANCE WITH ARCHITECTURAL DRAWINGS. REFER TO DETAILS FOR REINFORCEMENT DETAILS.
- WB1** DENOTES 2-30X1.0 MITEK STRUCTURAL BRACING STRIP TO UNDER SIDE OF ROOF PURLINS. WRAP AND FIX TO COLUMNS/BEAMS USING 6 SELF-TAPPING SCREW PER STRAP PER END. ALSO FIX TO PURLINS FLANGES AT INTERSECTION USING SELF-TAPPING SCREW, TO MANUFACTURER'S SPECS.
- WB2** DENOTES SPEED CROSS BRACING (3kN/m) - REFER BRACING PLAN AND DETAILS.
- WB2** DENOTES 7mm PLYWOOD WALL BRACING (6kN/m) - REFER TO BRACING PLAN AND DETAILS.
- DENOTES EXTENT OF LOAD BEARING WALL. REFER TO BRACING PLANS AND TIMBER NOTES.
NOTE: ALL EXTERNAL WALLS TO BE LOAD BEARING
- BP1** DENOTES Ø450 CONCRETE PADS. REFER TO TIMBER DECKING SPECIFICATIONS.

NOTE: ALL EXPOSED STEEL TO BE HOT DIP GALVANISED. ALL EXPOSED TIMBER TO BE TREATED. (CLASS 2 DURABILITY OR H3 TREATMENT) OUTSIDE & ABOVE GROUND CONDITIONS ONLY. EXPOSED CONDITIONS IN EXCESS OF ABOVE ASSUMPTION TO BE REFERRED TO THE ENGINEER.

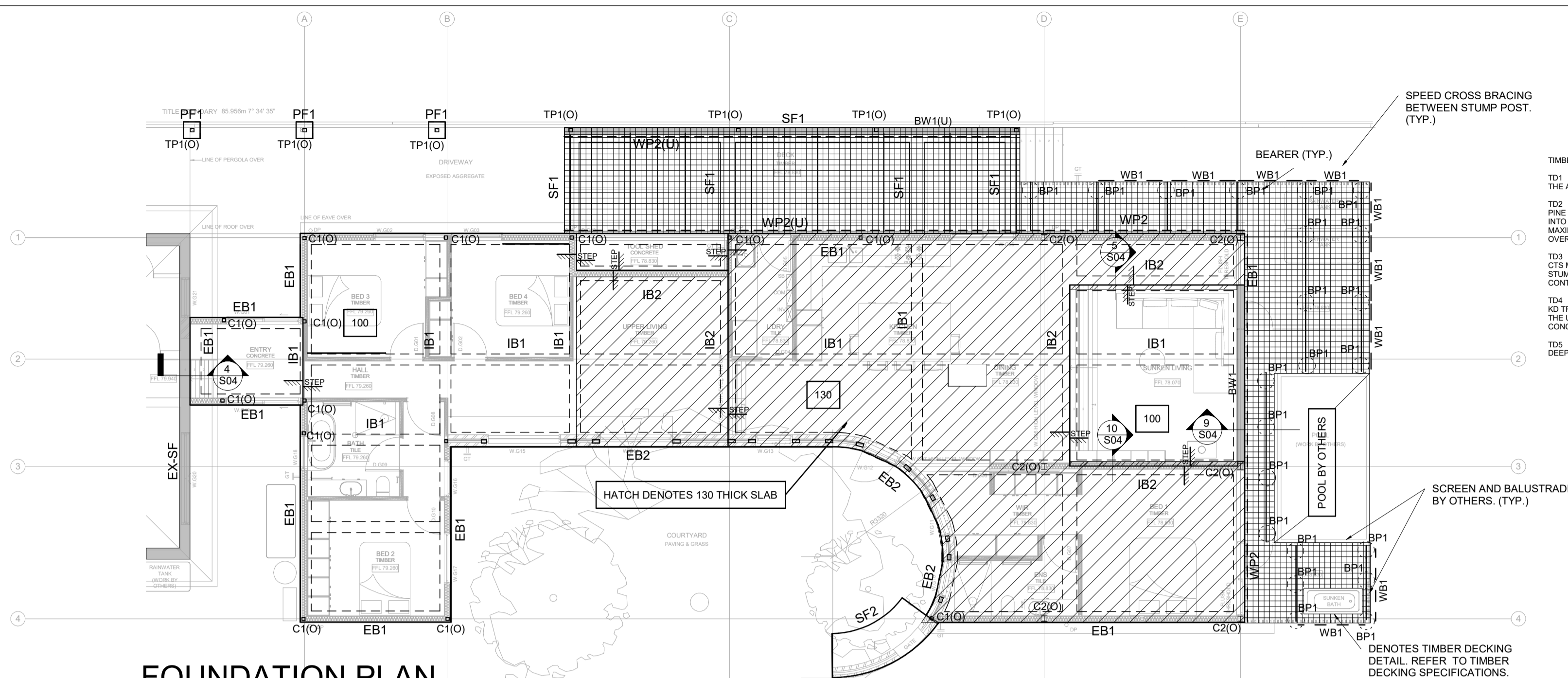
NOTE: FOR FOUNDING DEPTHS REFER TO FOUNDATION NOTE F3.

CONCRETE SCHEDULE

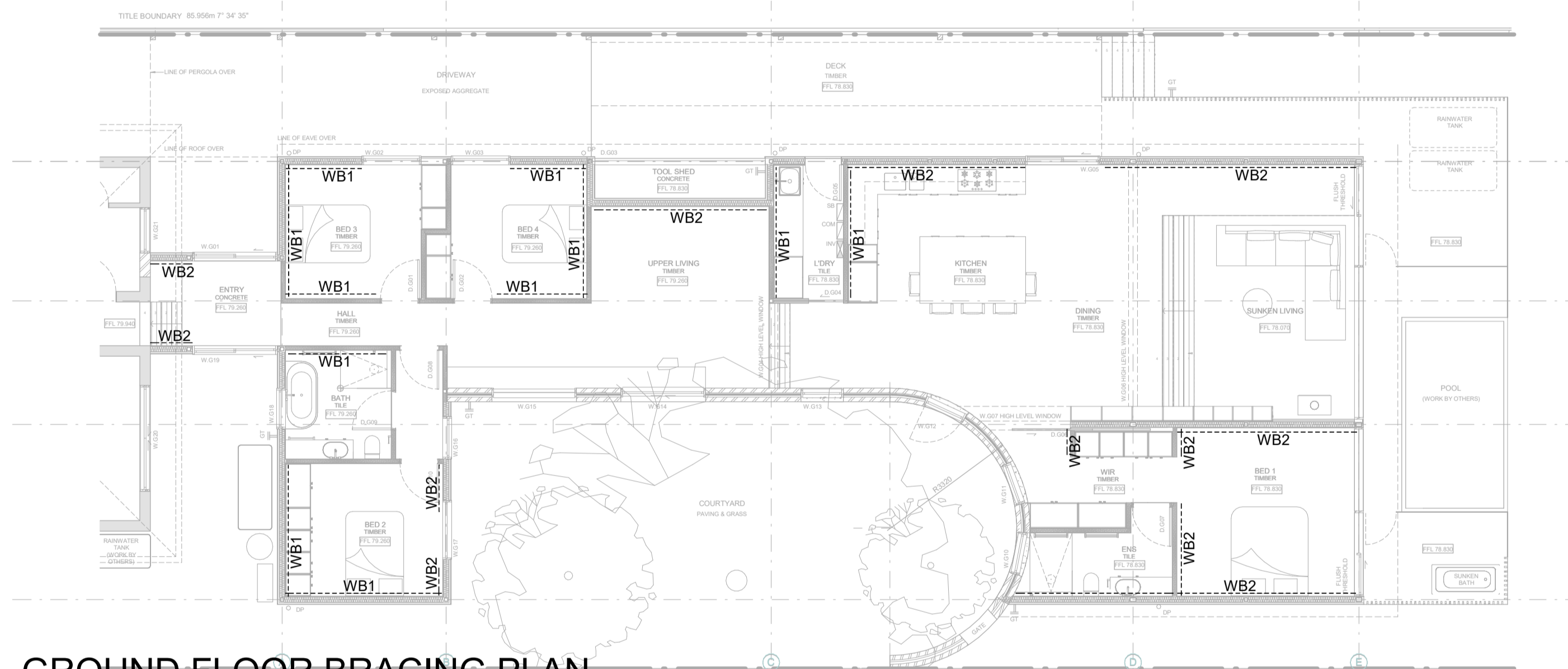
MARK	MEMBER	COMMENTS
BP1	450Ø BORED PIER	
EB1	300x600D MIN. EDGE BEAM	3-L12TM TOP & BOTTOM
EB2	400x600D MIN. EDGE BEAM. REFER DETAIL.	4-L12TM TOP & BOTTOM
IB1	300x600D MIN. INTERNAL BEAM	3-L12TM TOP & BOTTOM
IB2	400x600D MIN. INTERNAL BEAM. REFER DETAIL.	4-L12TM TOP & BOTTOM
PF1	600x600x600D MIN. PAD FOOTING	SL82 TOP & BOTTOM
SF1	400x600D MIN. STRIP FOOTING	4-L12TM TOP & BOTTOM
SF2	1200x600D MIN. STRIP FOOTING	12-L12TM TOP & BOTTOM

MEMBER SCHEDULE

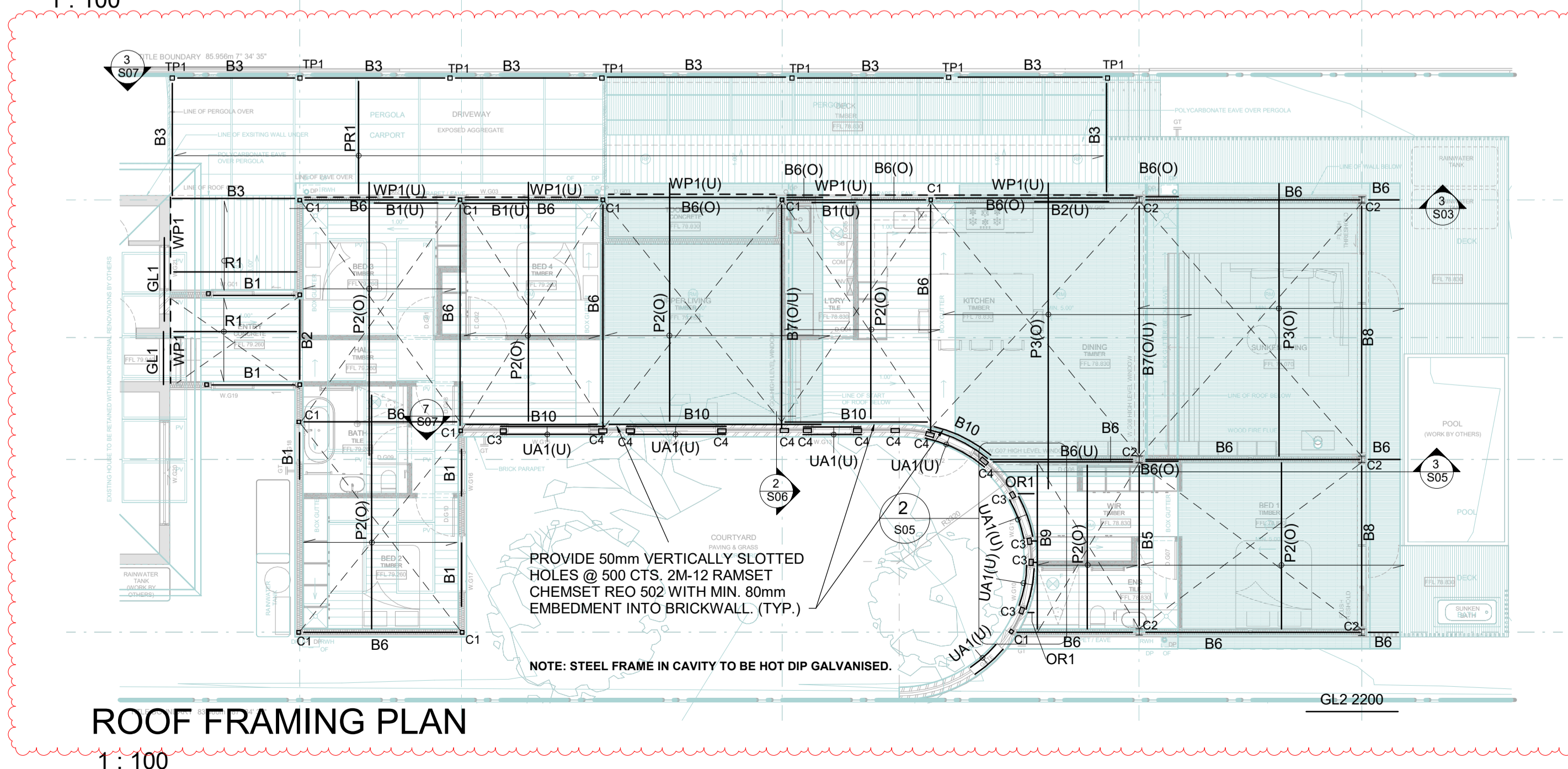
MARK	DESCRIPTION	COMMENTS
B1	140x45 MGP10	
B2	190x45 MGP10	
B3	240x45 F17 KD HW	H3 TREATED
B5	180PFC	
B6	200PFC	
B7	200UB25.4	
B8	200UB29.8	
B9	250PFC	HORIZONTAL ORIENTATION.
B10	200PFC	PROVIDE 50mm VERTICALLY SLOTTED HOLES @ 500 CTS. 2M-12 RAMSET CHEMSET REO 502 WITH MIN. 80mm EMBEDMENT INTO BRICKWALL.
C1	89x6.0 SHS (C350)	
C2	150UC37	
C3	150x100x6.0 RHS (C350)	10mm CLEAT PLATE TO BE PROVIDED FOR ROOF BEAM CONNECTION.
C4	200x100x8.0 RHS (C350)	10mm CLEAT PLATE TO BE PROVIDED FOR ROOF BEAM CONNECTION.
GL1	T-LINTEL 280x10 WEB WITH 10x280 FLANGE	MIN. 150 BEARING
GL2	200PFC + 10x200 H PL	
OR1	89x89x6.0SHS	
P2	SHEET ROOF PURLINS	Z20019 PURLIN @ 1200CENTERS MAX. (Lmax=6300) 1 ROW OF BRIDGING @ MIDSPAN. 900mm LAPPED.
P3	SHEET ROOF PURLINS	Z20024 PURLIN @ 1200CENTERS MAX. (Lmax=6300) 1 ROW OF BRIDGING @ MIDSPAN. 900mm LAPPED.
PR1	PERGOLA RAFTER	ADOPT 1500mm MAX CENTRES: 240x45 MGP10 UP TO 3000mm SPAN
R1	SHEET ROOF RAFTERS	ADOPT 900mm MAX CENTRES: 190x45 MGP10 UP TO 3500mm SPAN
TP1	100x100 F7 KD TREATED PINE POST	H3 TREATED
UA1	150(V)x100x12 UA	
WP1	190x45 MGP10	WAILING PLATE
WP2	140x45 MGP10	WAILING PLATE



FOUNDATION PLAN
1 : 100



GROUND FLOOR BRACING PLAN
1 : 100



ROOF FRAMING PLAN
1 : 100

CLIENT
PARALLEL GROUP PTY LTD

REV	DESCRIPTION	DATE
A	Preliminary	18.11.20
B	Preliminary	08.12.20
C	Preliminary	20.01.20
Ø	Construction	27.01.21

PROJECT
PROPOSED EXTENSION AND ALTERATION

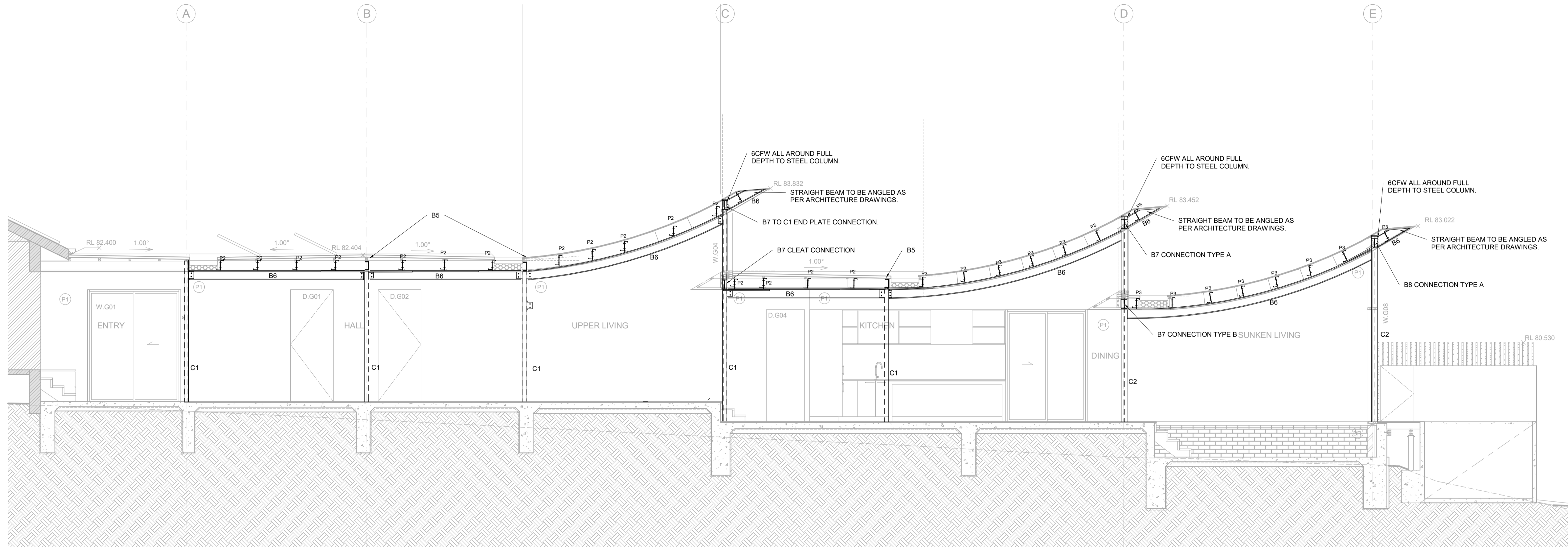
ADDRESS
13 SUNBURY CRESCENT, SURREY HILLS

TITLE
ELEVATION PLAN

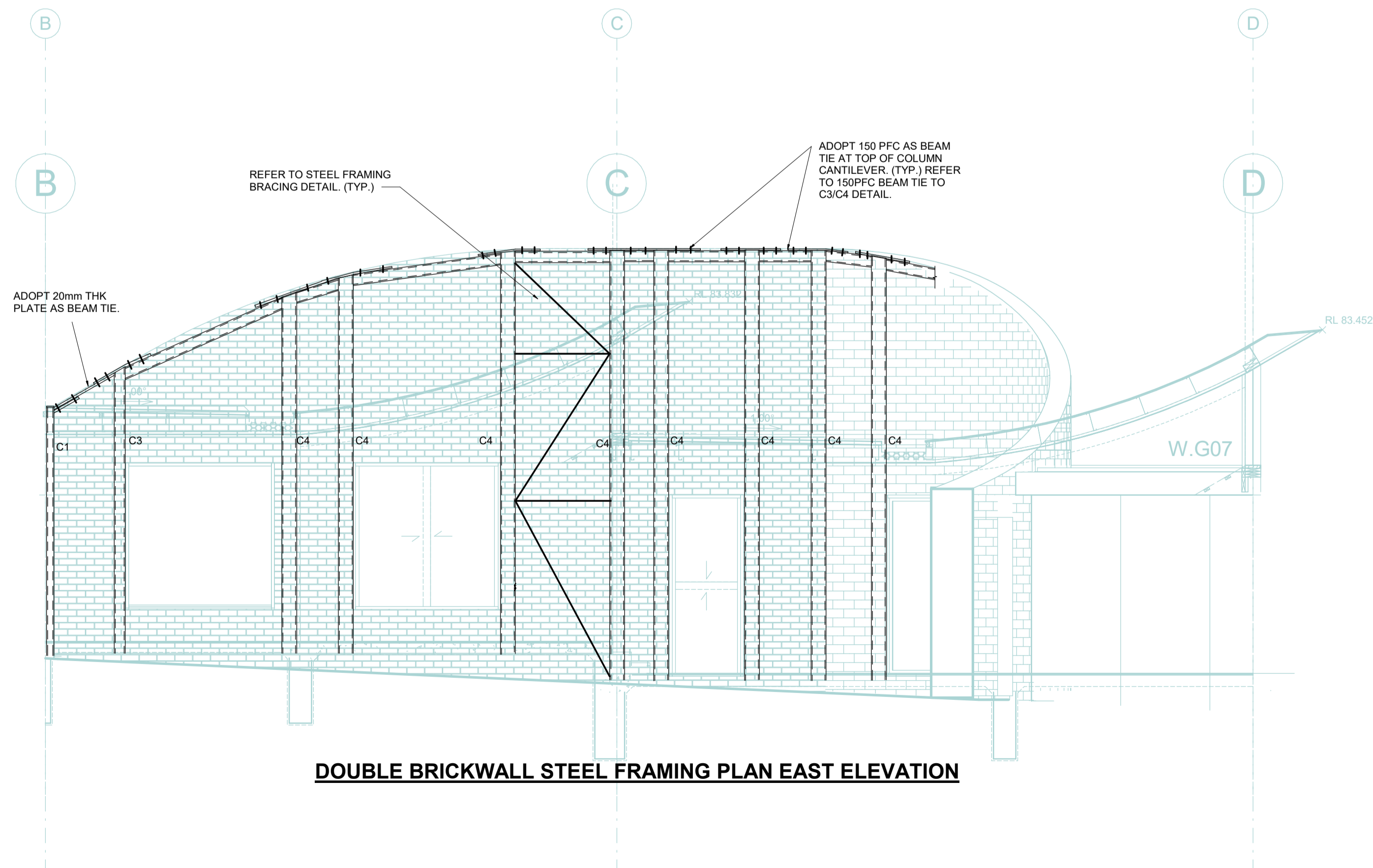
DATE 09.03.21
DESIGNED BON
DRAWN BON
STATUS CONSTRUCTION

200102 - S03

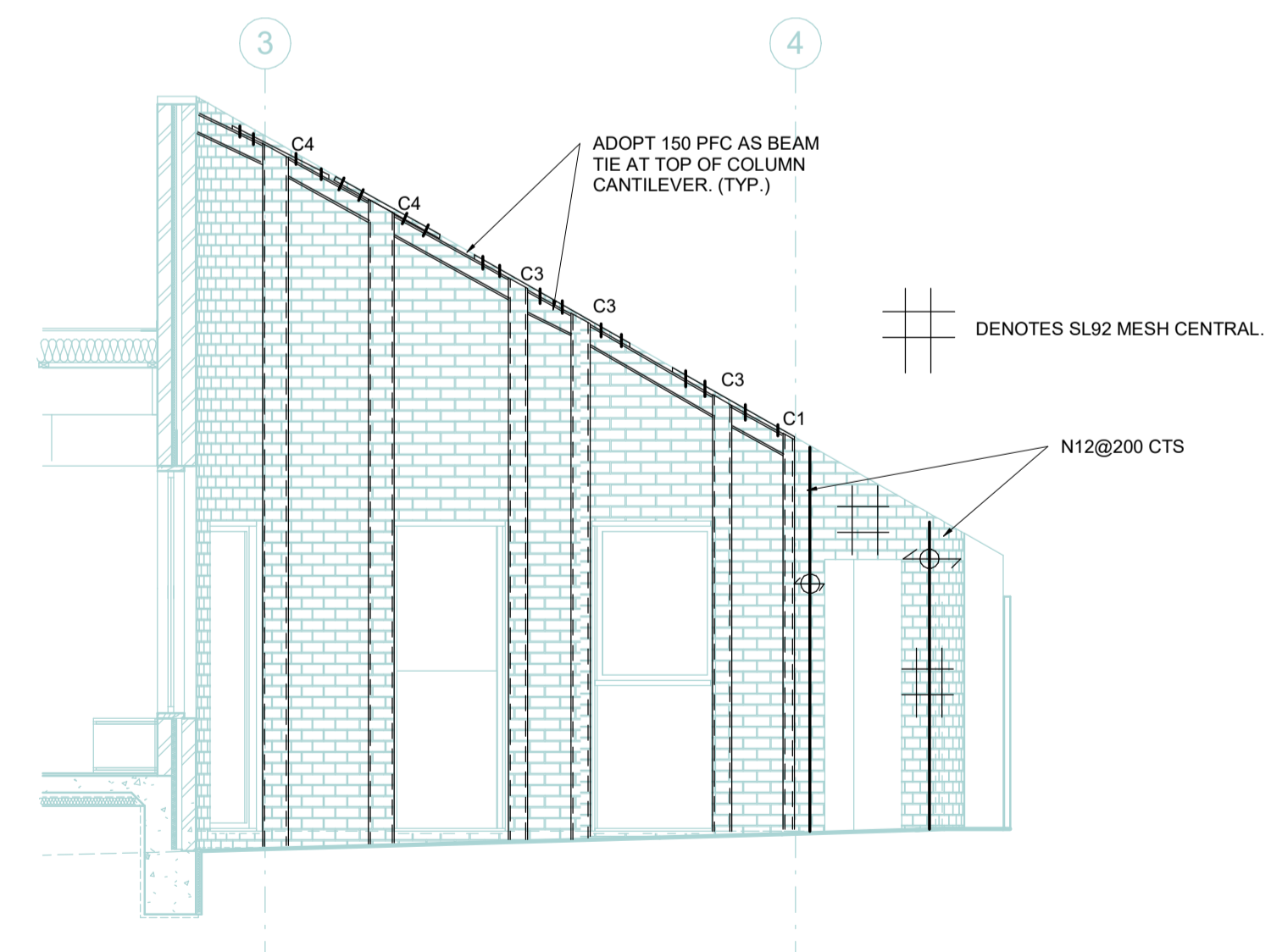
SCALE AT A1 AS INDICATED REV Ø



Roof - Section 1
1 : 50

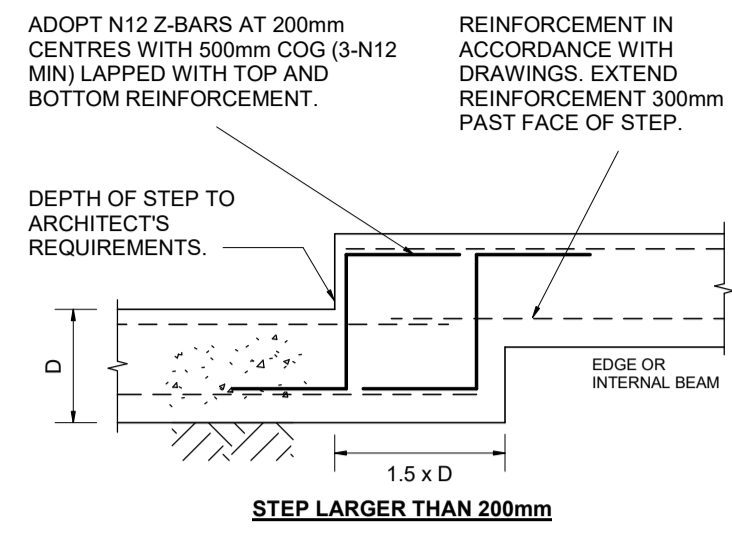


DOUBLE BRICKWALL STEEL FRAMING PLAN EAST ELEVATION

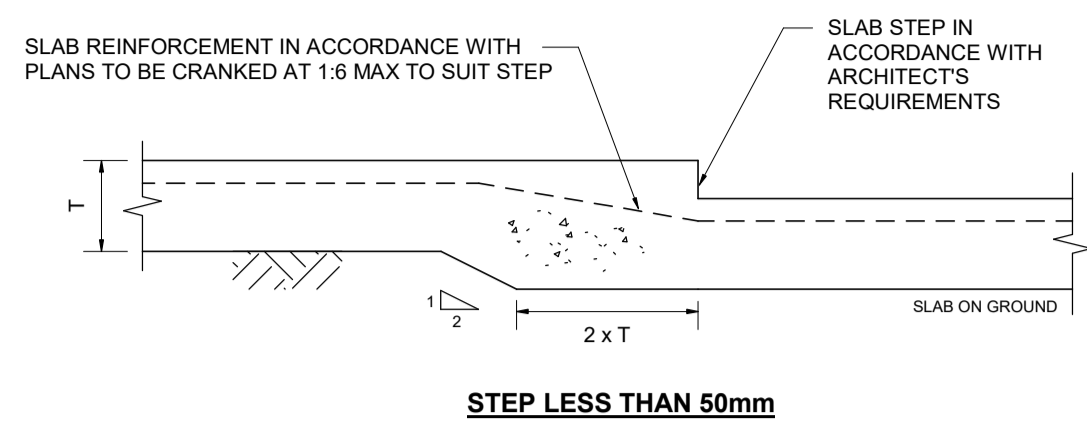
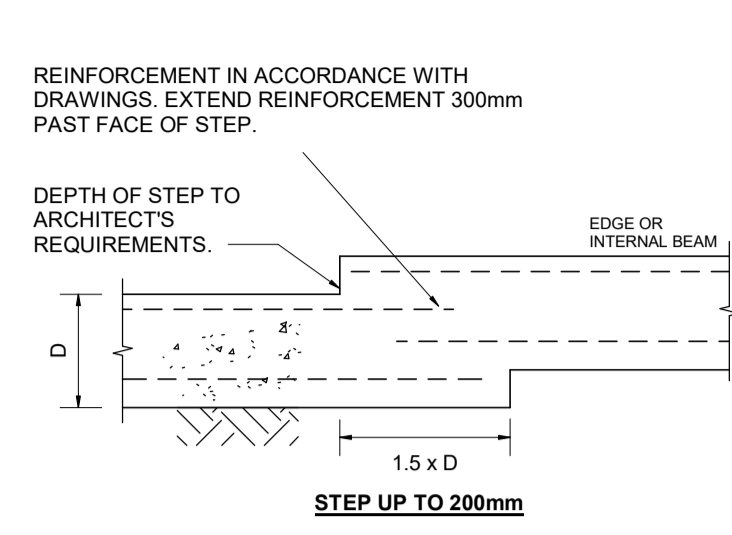


DOUBLE BRICKWALL STEEL FRAMING AND REINFORCEMENT PLAN SOUTH ELEVATION

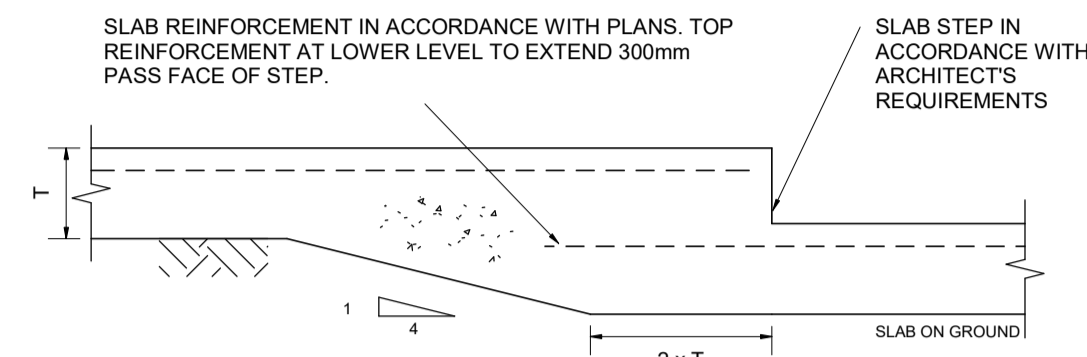
REV	DESCRIPTION	DATE
A	Preliminary	18.11.20
B	Preliminary	08.12.20
C	Preliminary	20.01.20
Ø	Construction	27.01.21
1	Construction	11.02.21



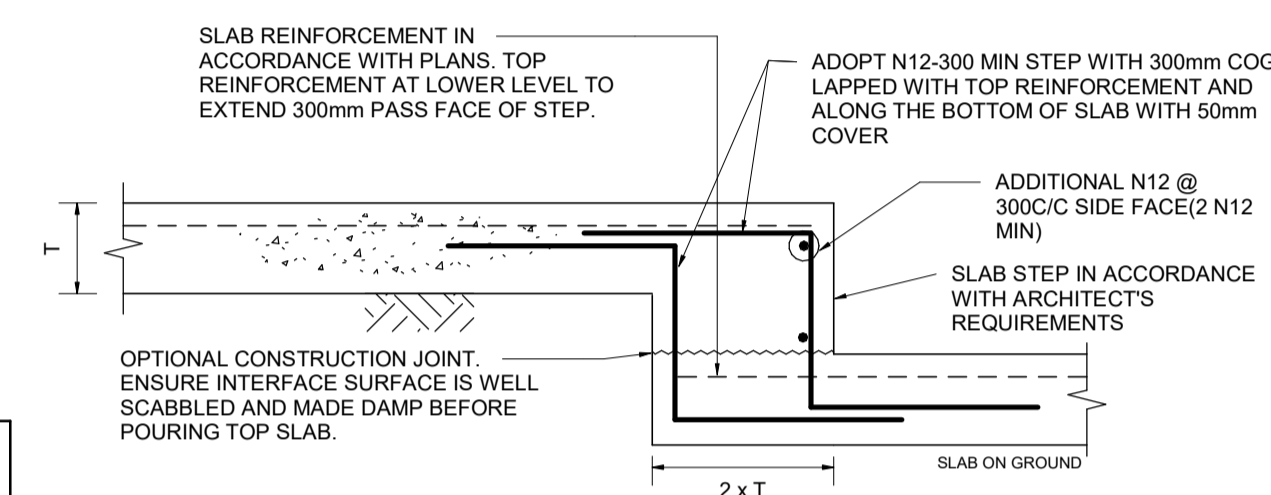
FOOTING STEP DETAIL



STEP LESS THAN 50mm



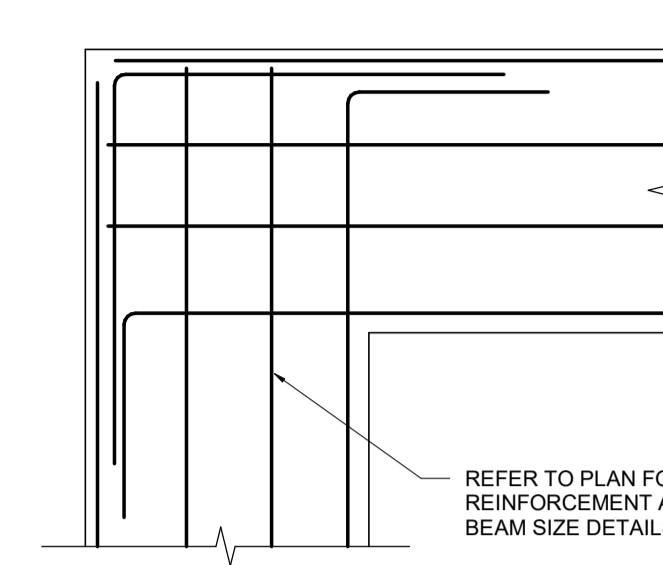
STEP 50mm < STEP < 200mm



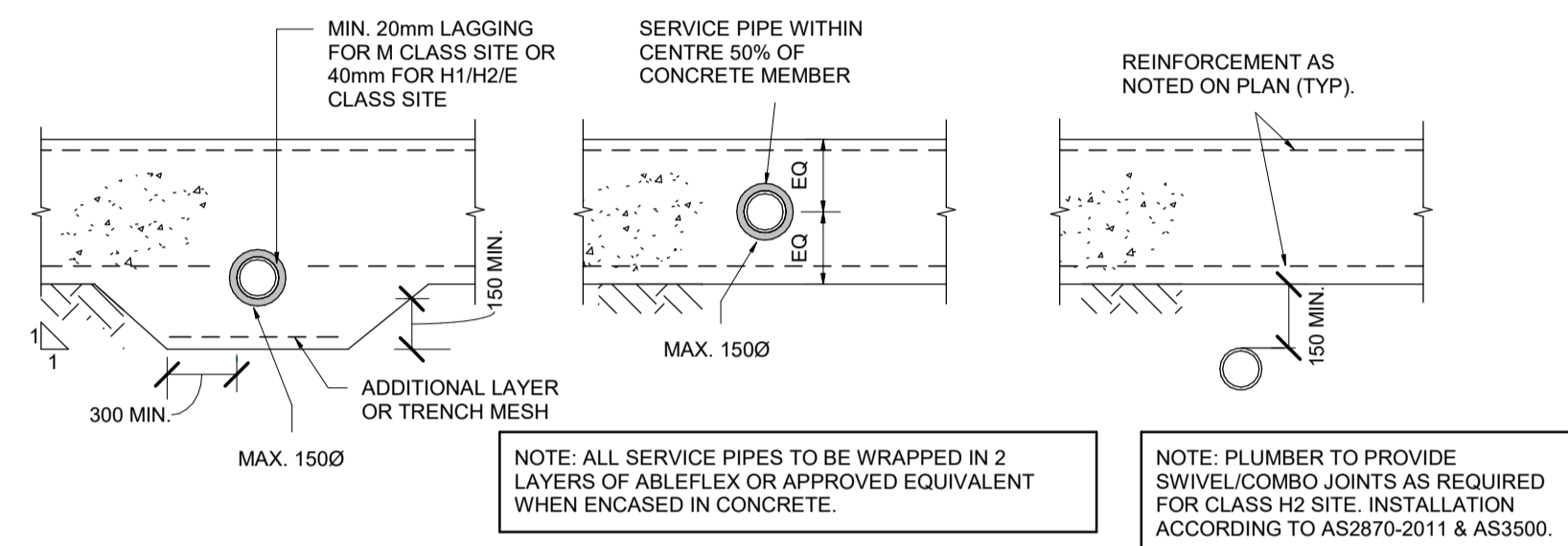
STEP LARGER THAN 200mm

SLAB STEP DETAIL

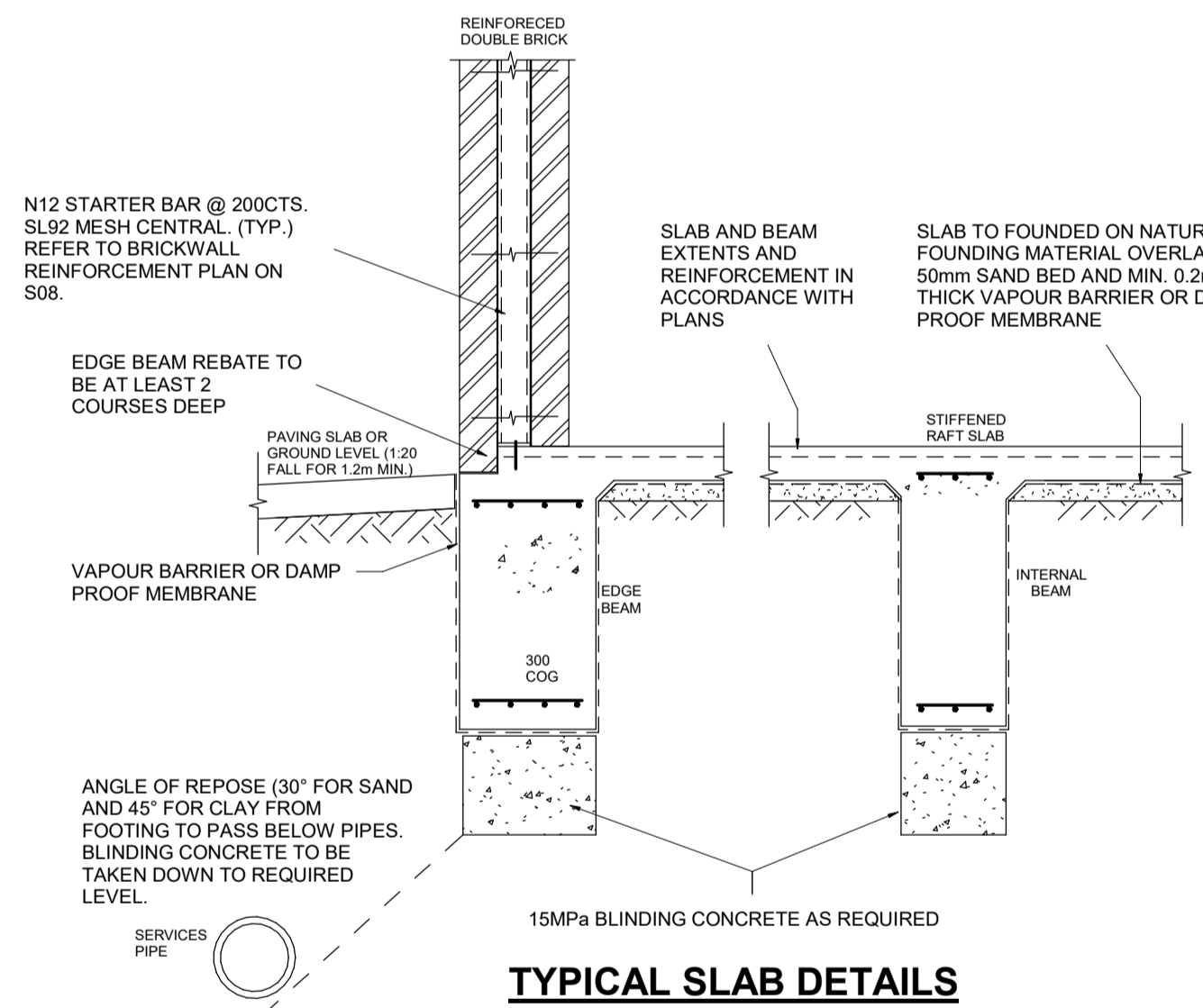
TENSION SPLICE LENGTHS		
BAR SIZE	SPLICE LENGTH IN STANDARD DETAILS	MIN. Fc
N12	400	25
N16	600	25
N20	900	25



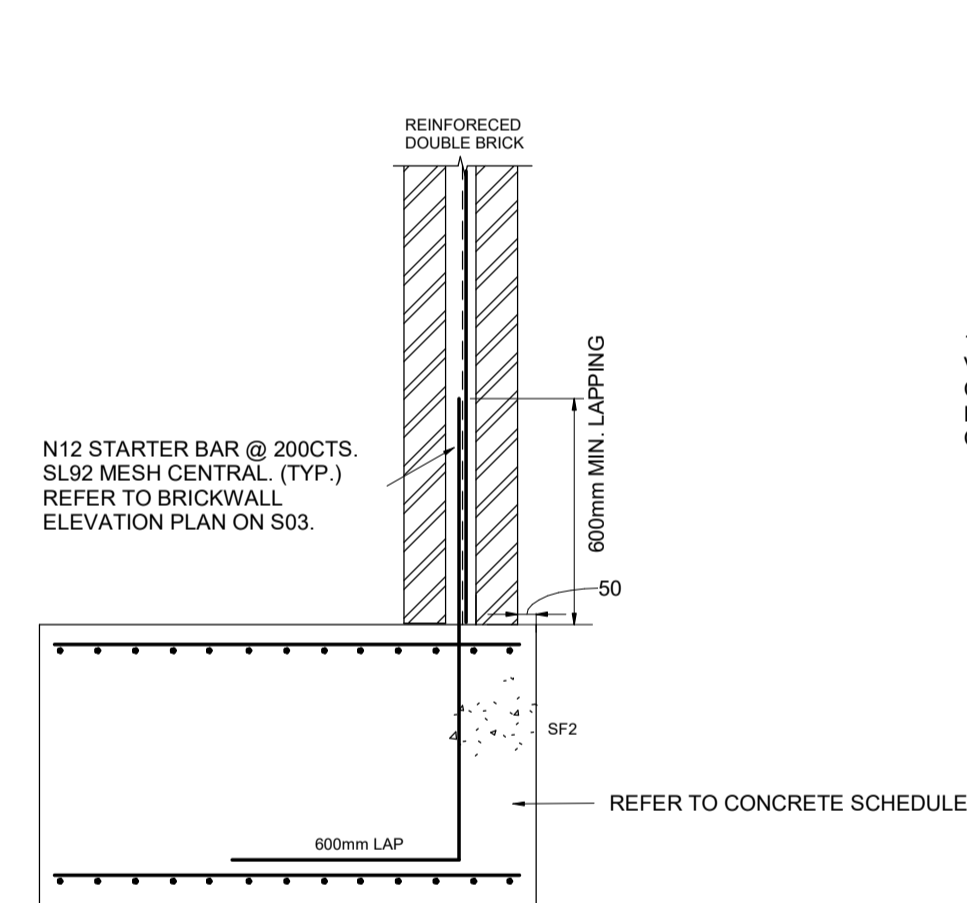
TYPICAL CORNER REINFORCEMENT DETAIL



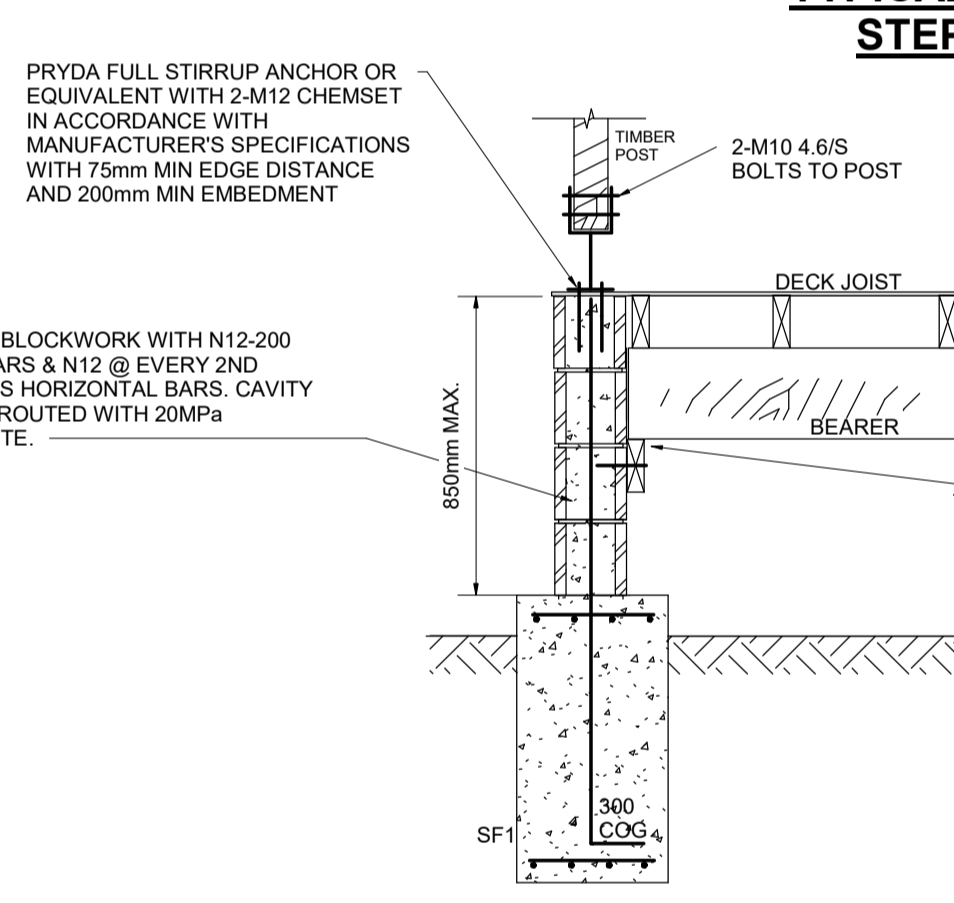
SERVICE PIPE PENETRATION THROUGH RIB BEAM AND STRIP FOOTING DETAILS



TYPICAL SLAB DETAILS

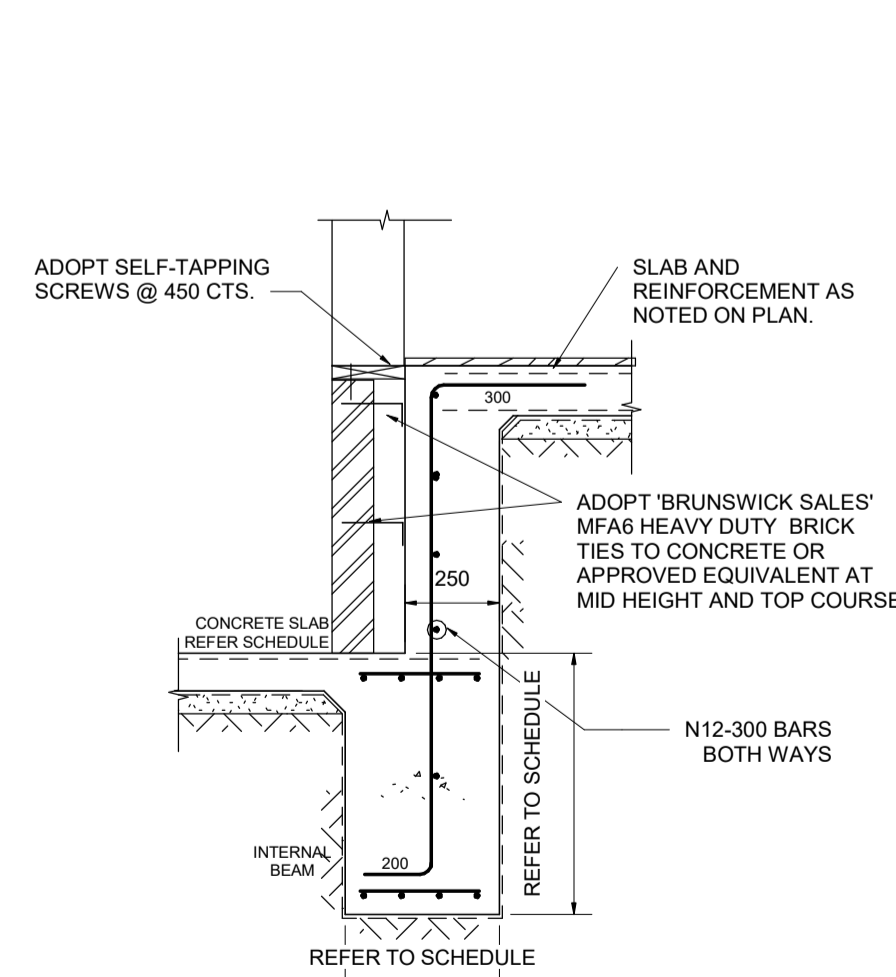


TYPICAL REINFORCED DOUBLE BRICK WALL FOOTING DETAILS

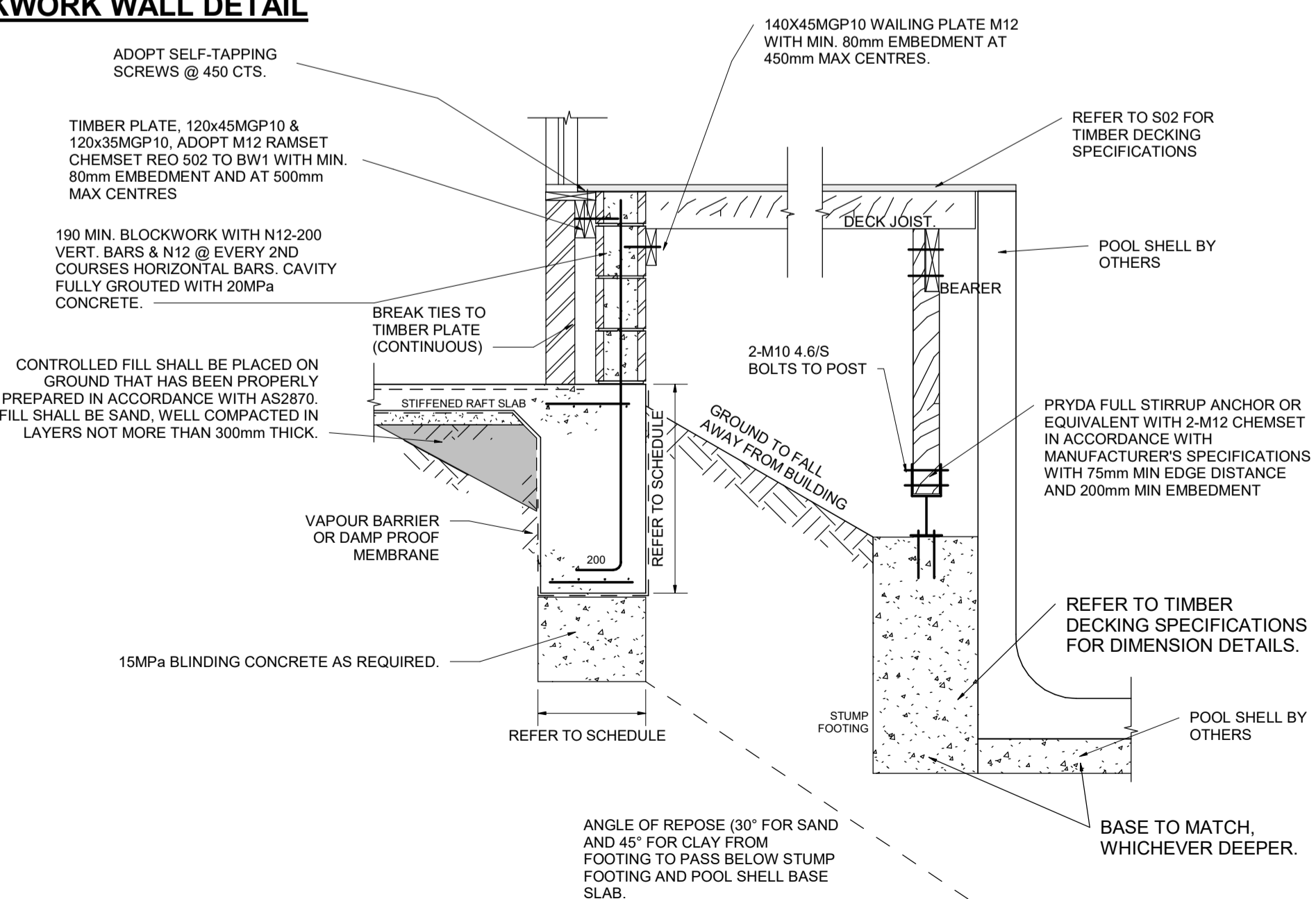


TYPICAL INTERNAL BEAM STEPDOWN DETAIL

TIMBER DECKING TO BLOCKWORK WALL DETAIL



1 Ground Floor - Section 6



1 Ground Floor - Section 1

1 Ground Floor - Section 4

Scale: 1:20

1 Ground Floor - Section 5

Scale: 1:20

4
S02

5
S02

10
S02

9
S02

Scale: 1:20

CLIENT
PARALLEL GROUP PTY LTD

REV	DESCRIPTION	DATE
A	Preliminary	18.11.20
B	Preliminary	08.12.20
C	Preliminary	20.01.20
Ø	Construction	27.01.21

PROJECT
PROPOSED EXTENSION AND ALTERATION

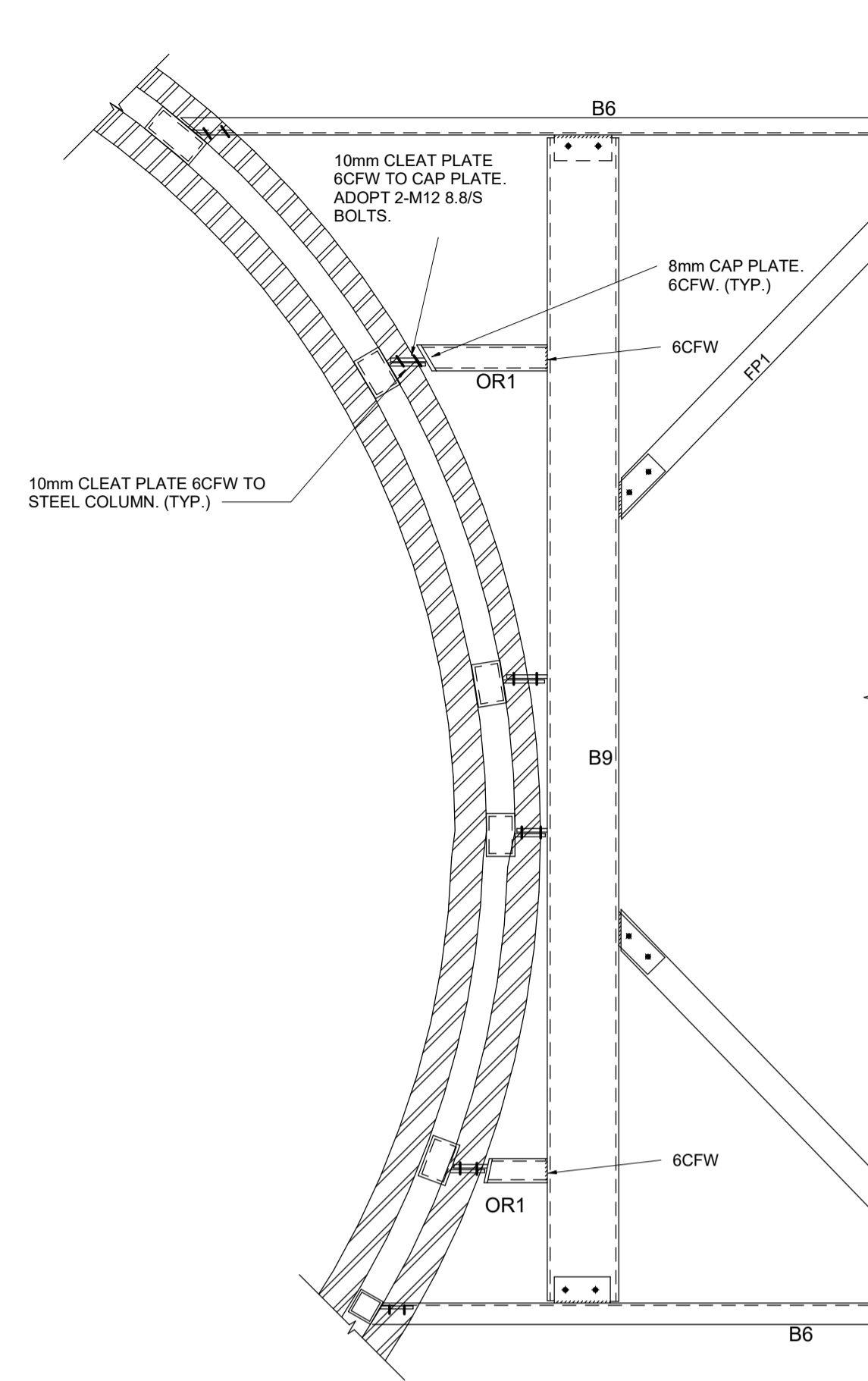
ADDRESS
**13 SUNBURY CRESCENT,
SURREY HILLS**

TITLE
**MASONRY AND FRAMING
DETAILS**

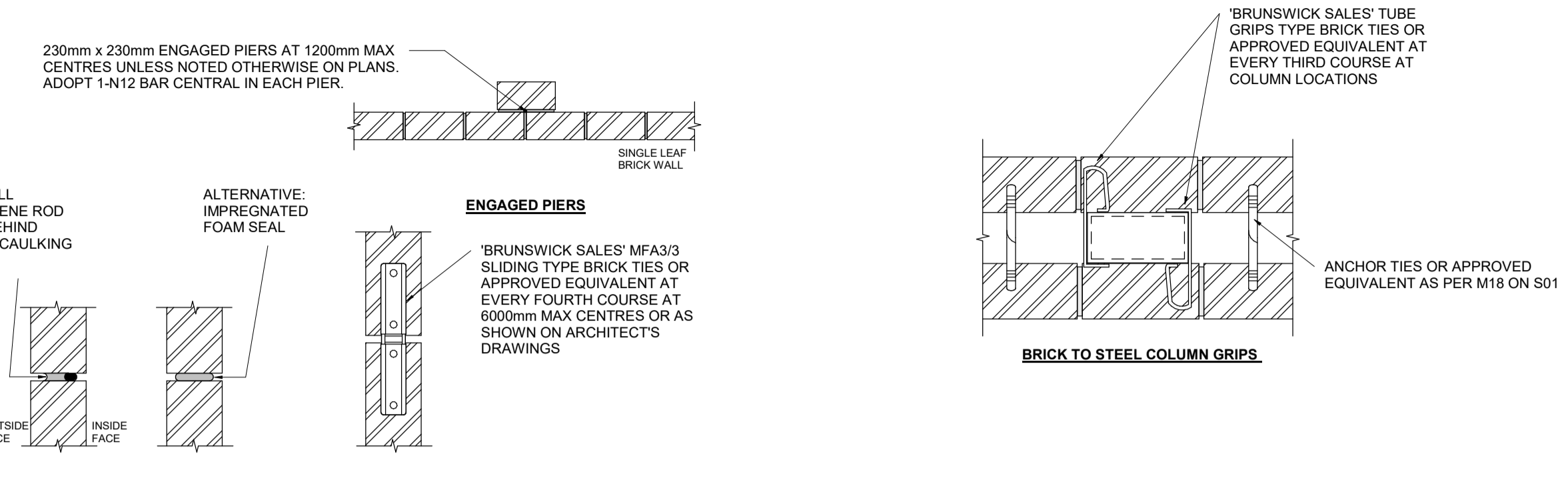
DATE **09.03.21**
DESIGNED **BON**
DRAWN **BON**
STATUS **CONSTRUCTION**

200102 - S05

SCALE AT A1 AS INDICATED REV Ø

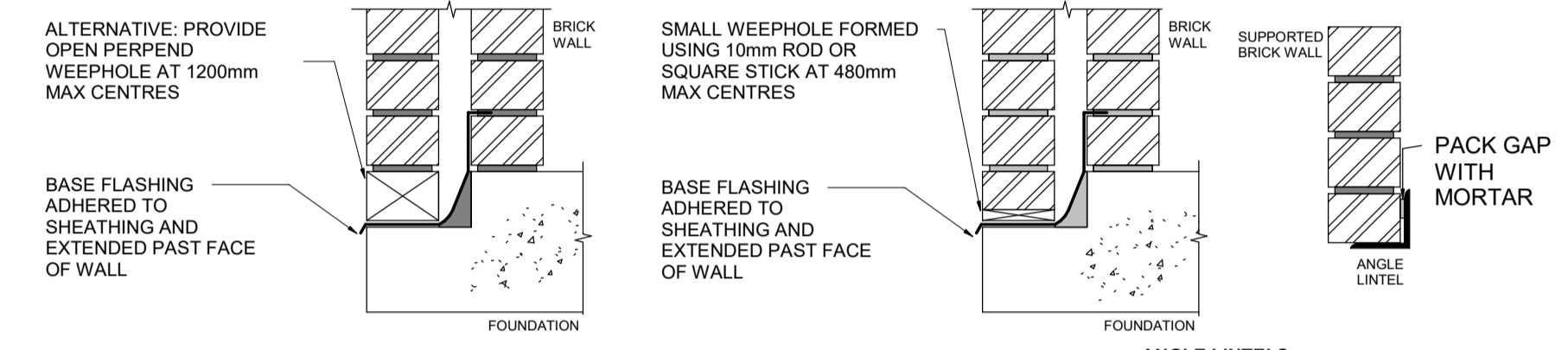


2 First Floor - Callout 1
Scale: 1 : 20

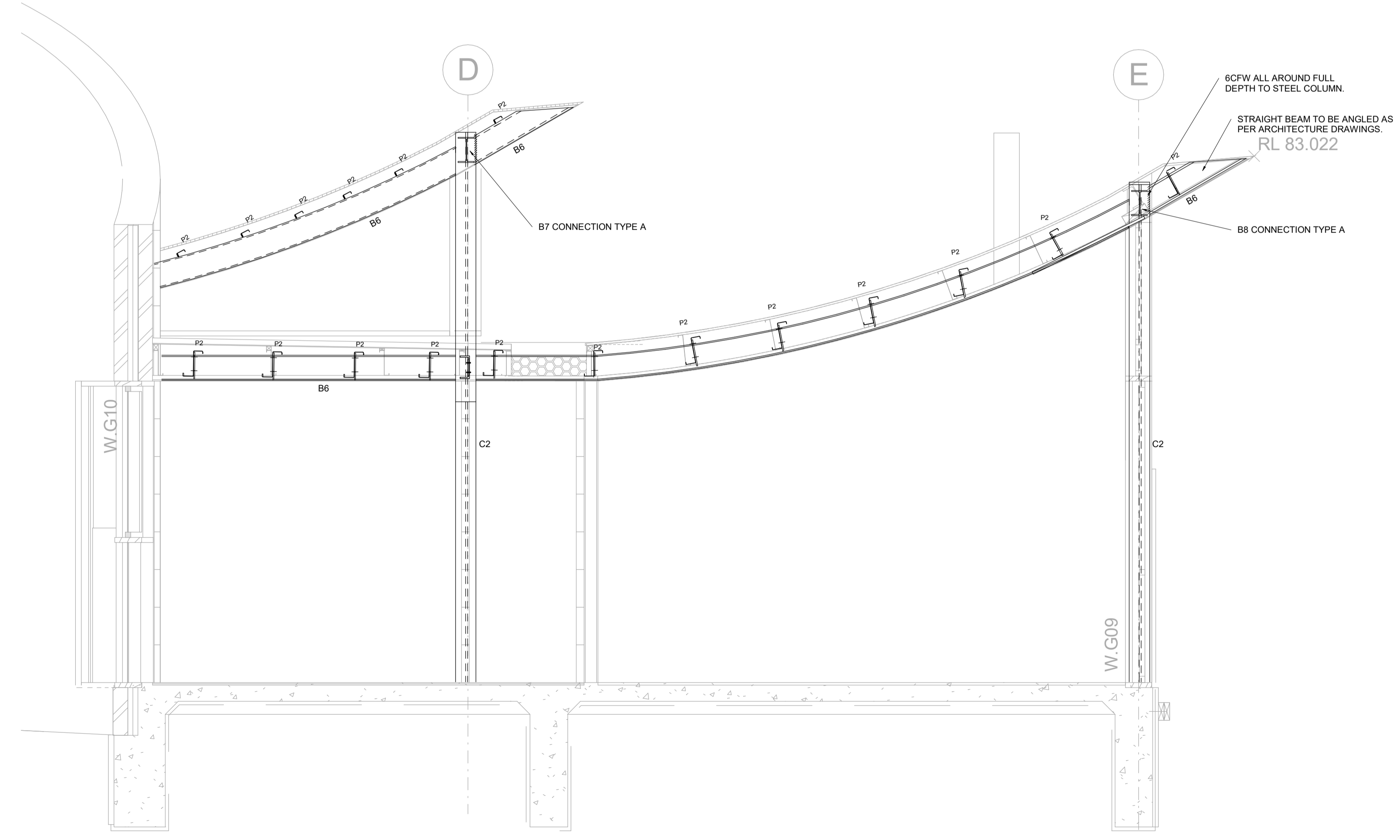


NOTE: REFER TO MASONRY NOTES M15 AND M18 ON SHEET S01.

ARTICULATION AND CONTROL JOINTS

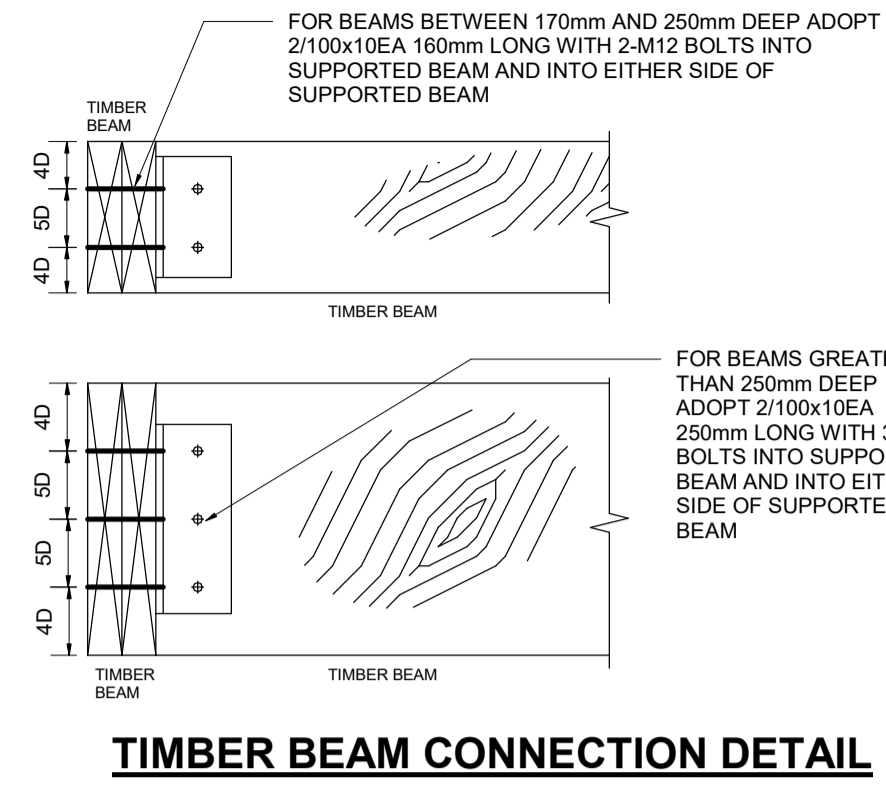


BRICK CONSTRUCTION DETAILS



2 First Floor - Section 2
Scale: 1 : 25

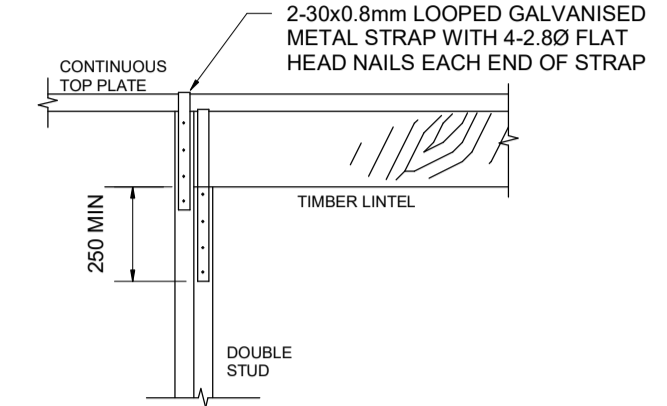
REV	DESCRIPTION	DATE
A	Preliminary	18.11.20
B	Preliminary	08.12.20
C	Preliminary	20.01.20
Ø	Construction	27.01.21
3	Construction	09.03.21



BOLT SCHEDULE

WASHER SIZE	BOLT SIZE
25x25x1.6mm	UP TO M6
50x50x3mm	UP TO M12
65x65x5mm	UP TO M20
75x75x6mm	GREATER THAN M20

NOTE: ALL BOLTED CONNECTIONS SHALL USE WASHERS UNDER ALL BOLT HEADS AND NUTS. SIZES OF WASHERS TO BE IN ACCORDANCE WITH AS1702, AS ABOVE.



GLUE LAMINATED (GLULAM)

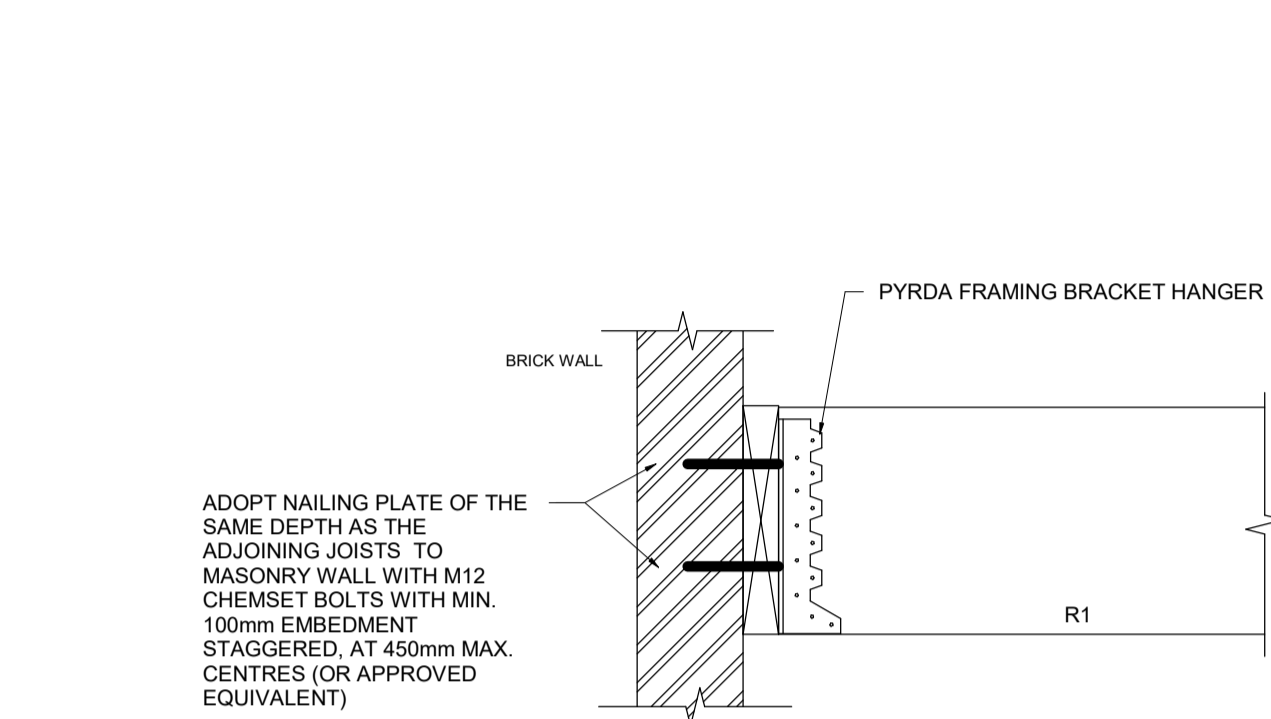
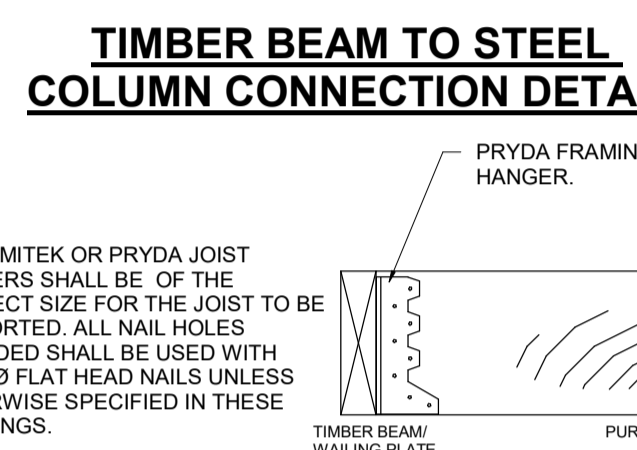
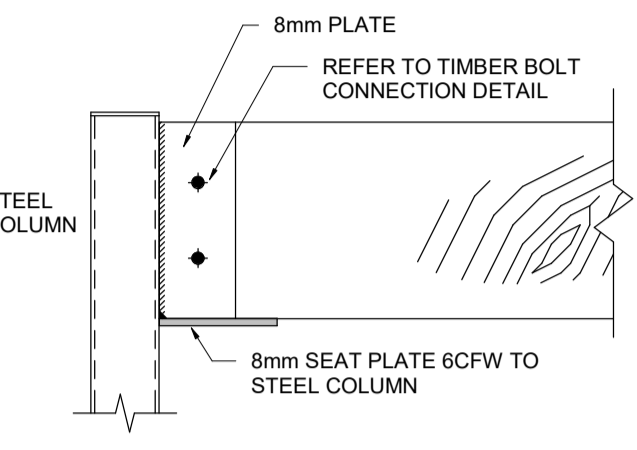
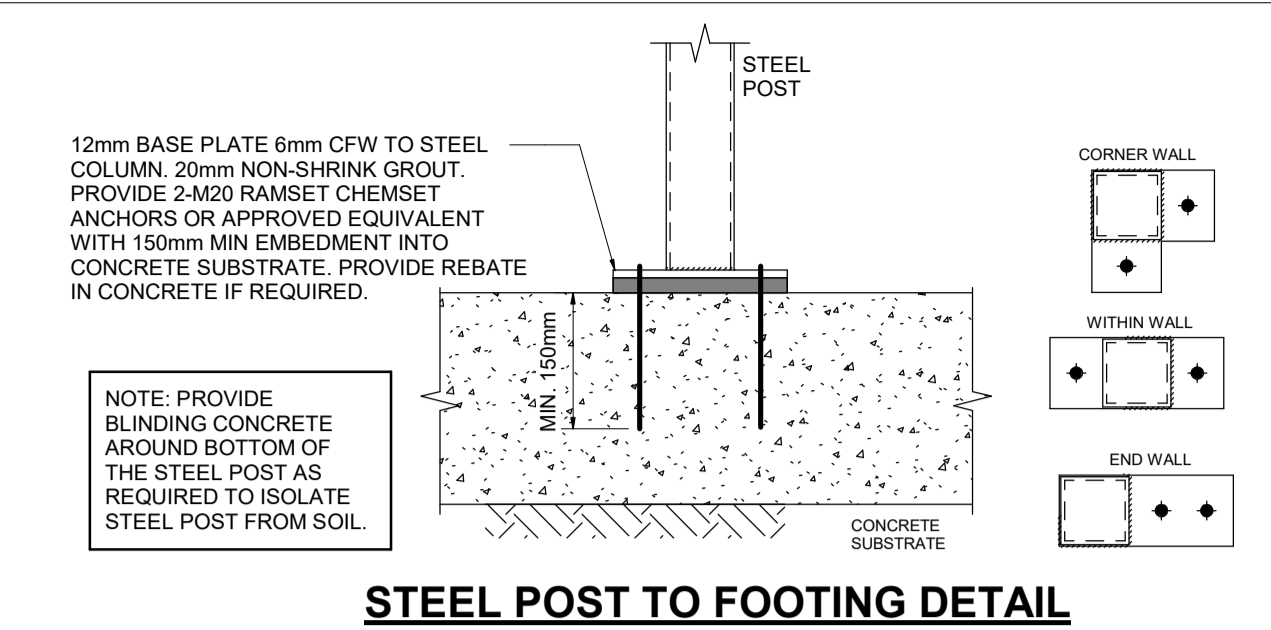
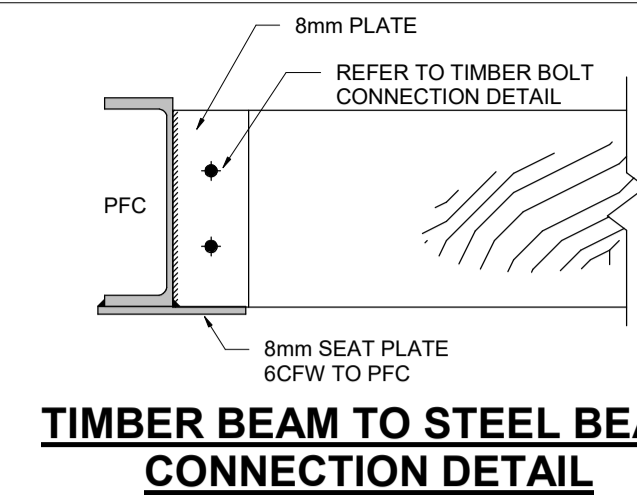
LAMINATED VENEER LUMBER (LVL)

ALTERNATIVE: VERTICAL LAMINATIONS MAY BE ACHIEVED BY ADOPTING THE PRINCIPLE DESCRIBED IN AS1684 (CLAUSE 2.3).

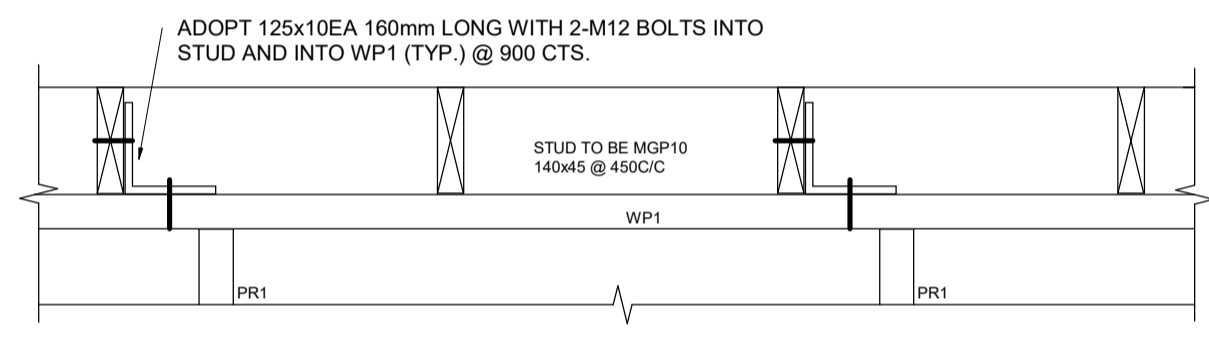
TIMBER MEMBER LAMINATION

BOLTED CONNECTION DETAILS

MEMBER SIZE	BOLTS	CLEAT PLATE
UP TO 200 DEEP	2-M16 8.8/S BOLTS	10mm 6CFW
UP TO 250 DEEP	2-M20 8.8/S BOLTS	
UP TO 360 DEEP	3-M20 8.8/S BOLTS	

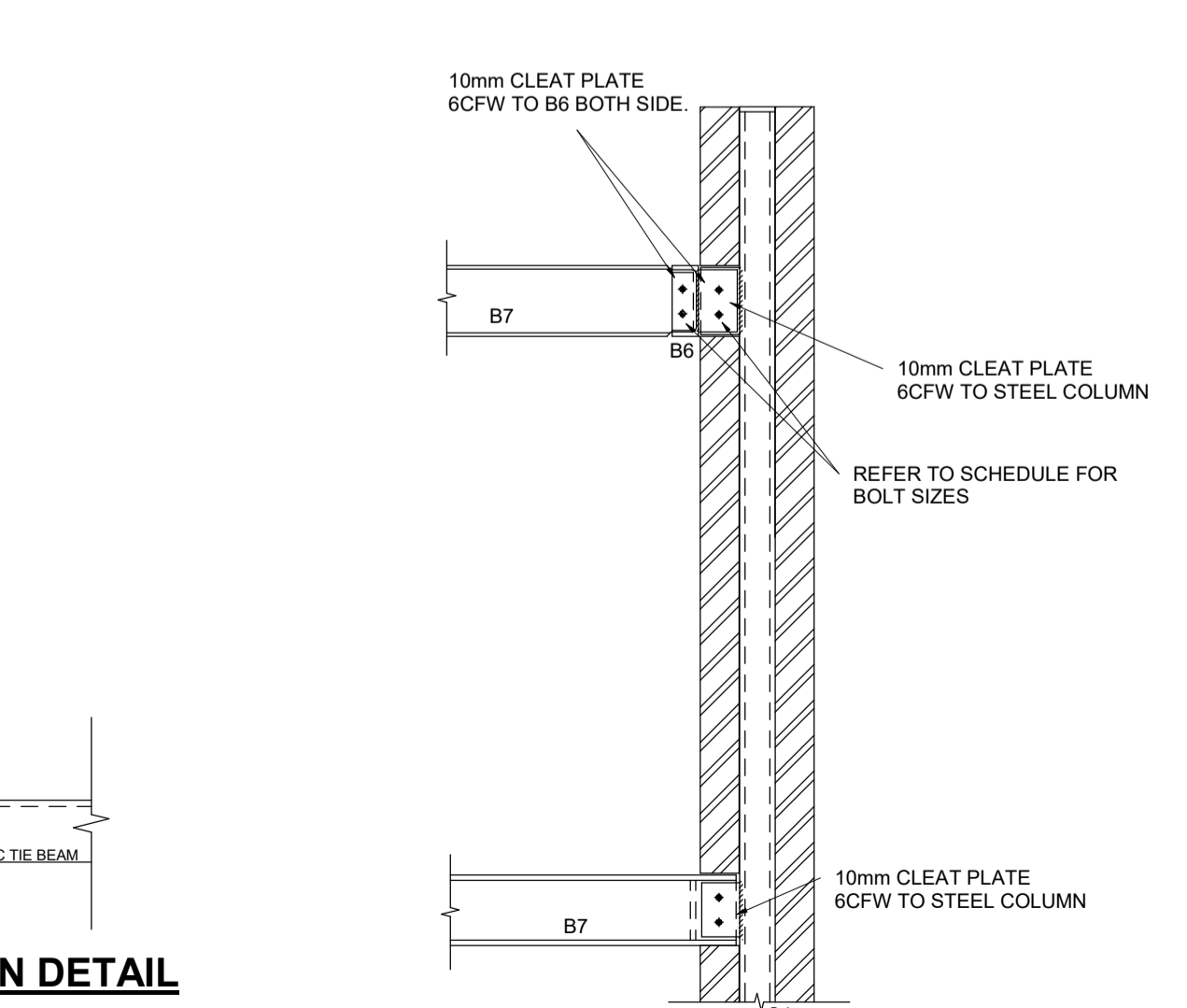
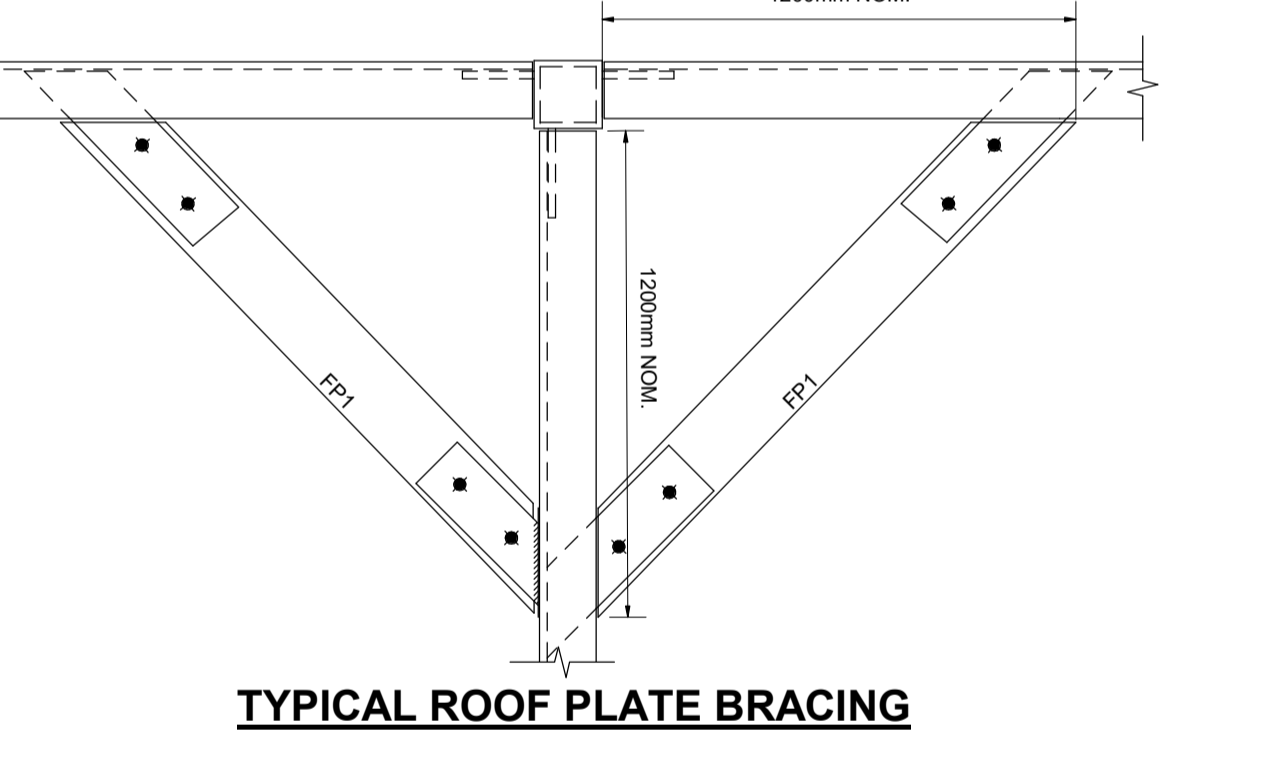
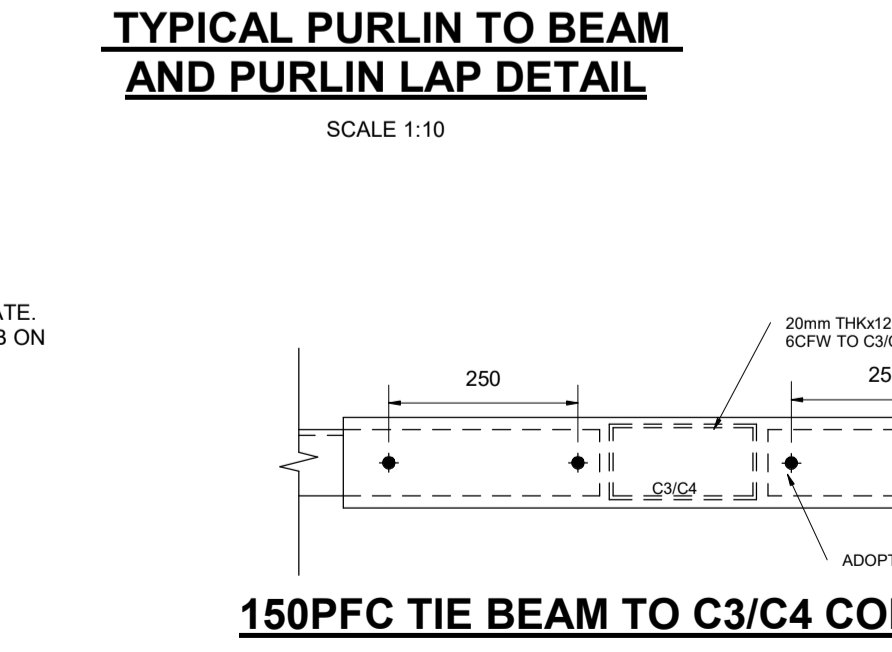
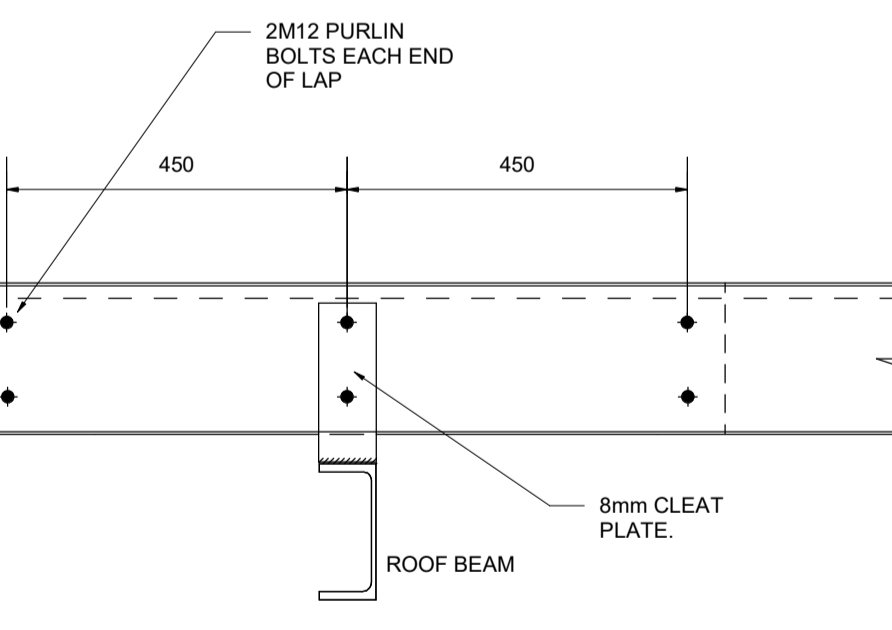
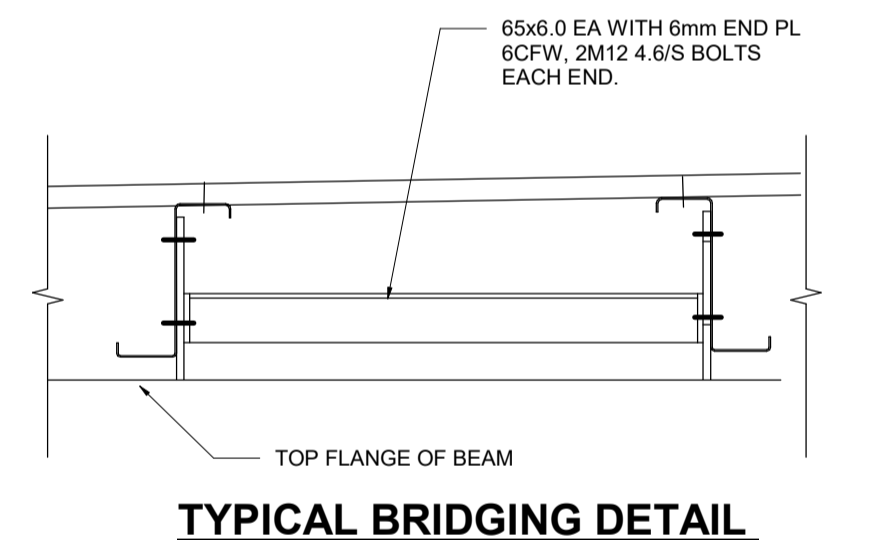
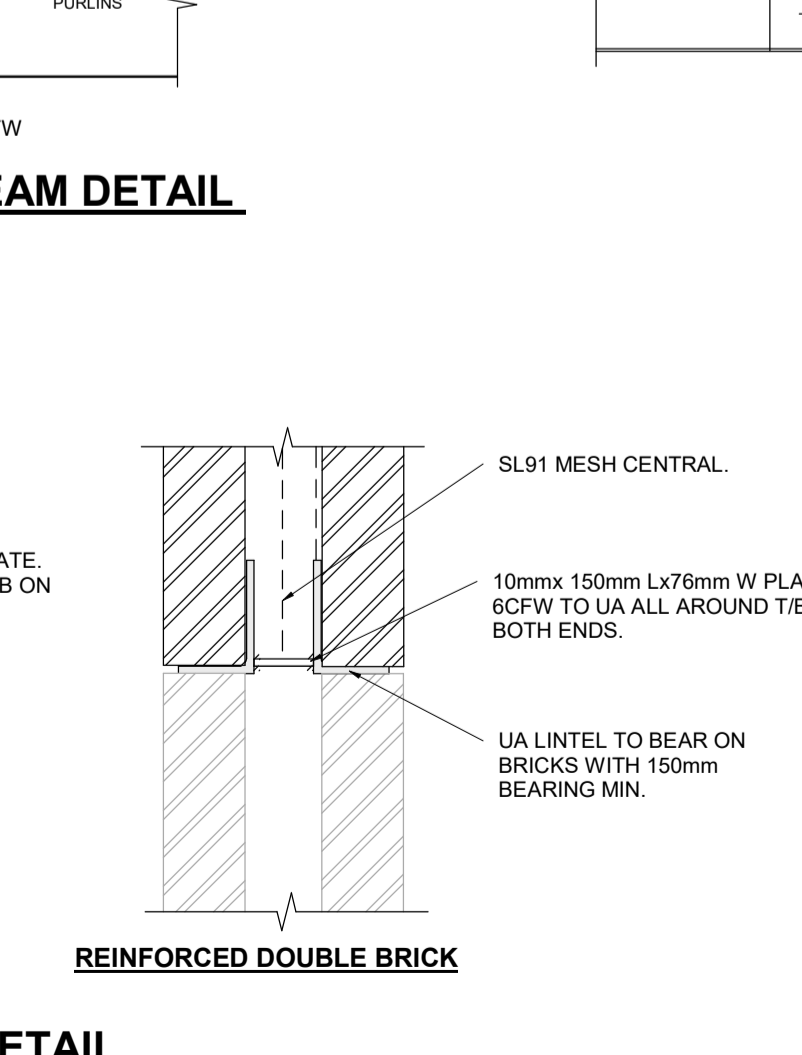
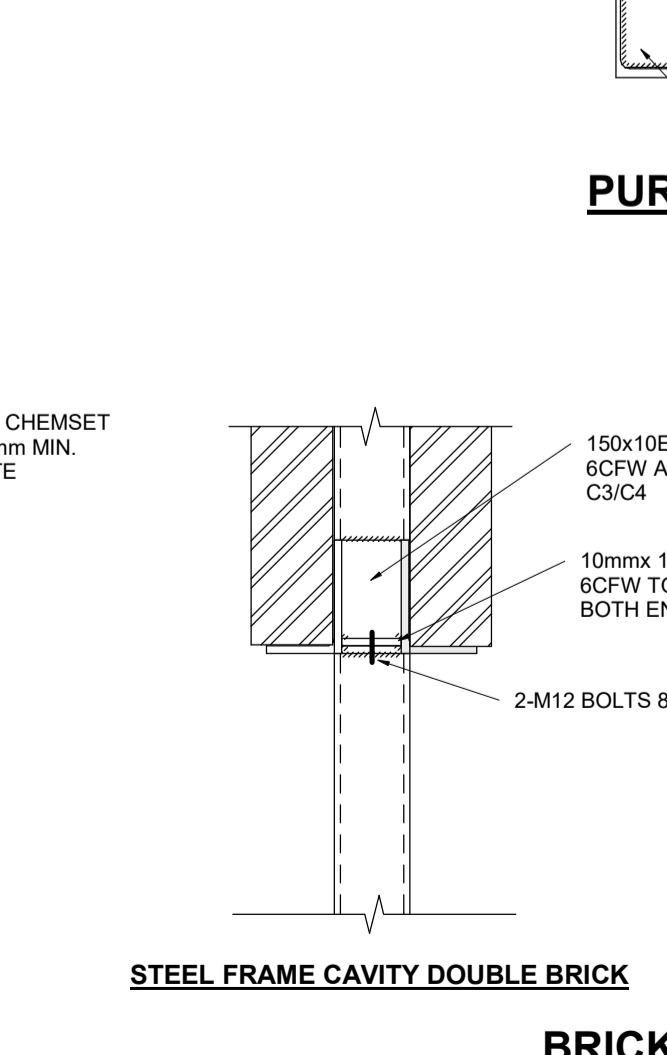
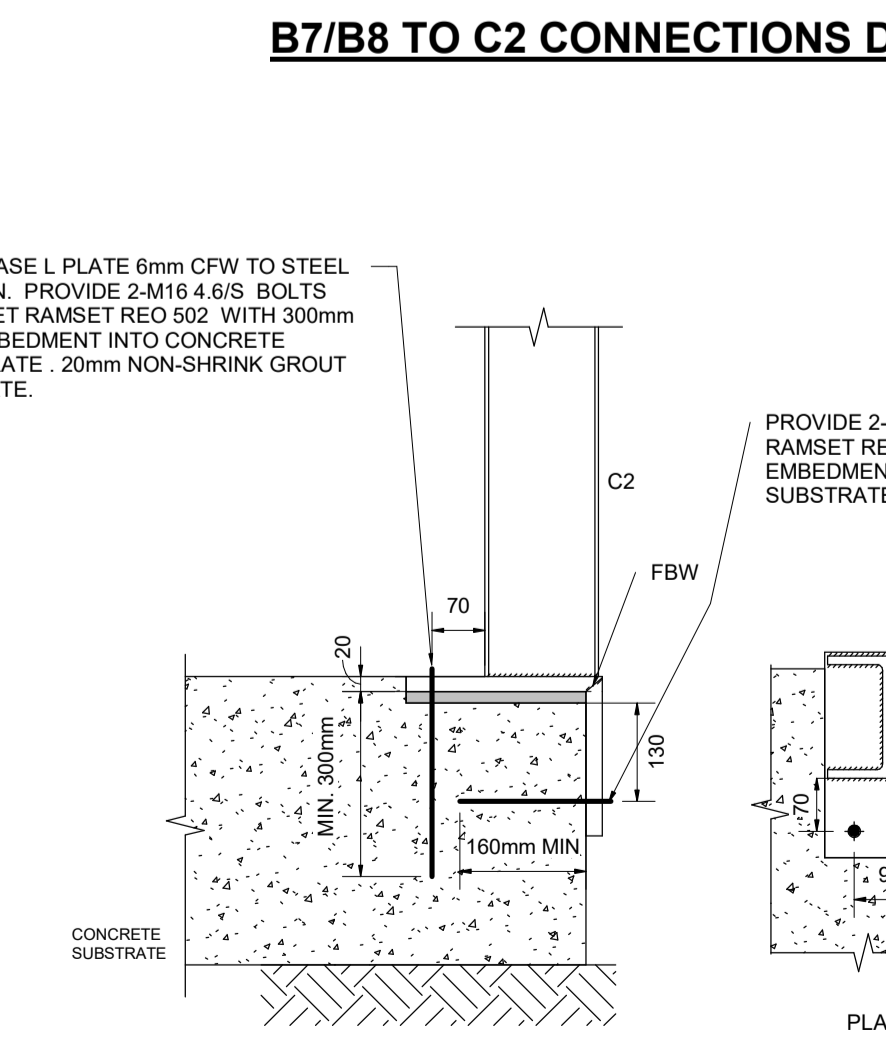
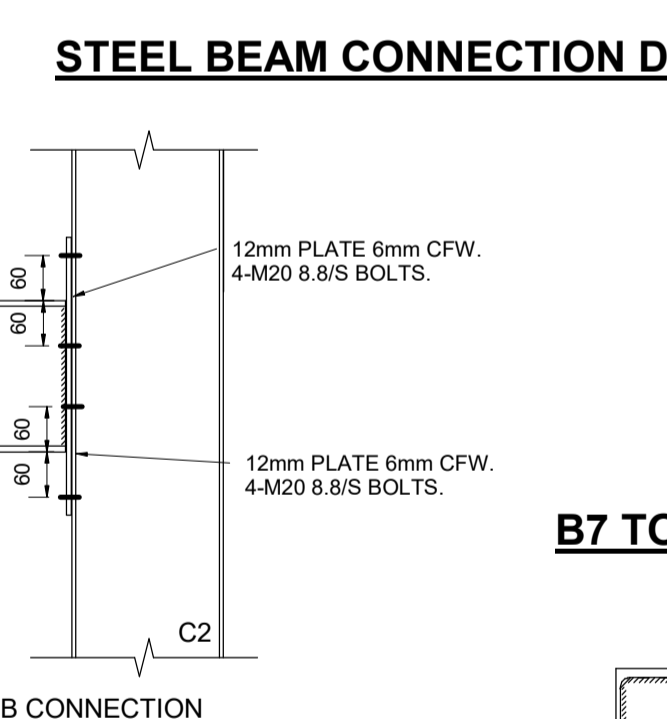
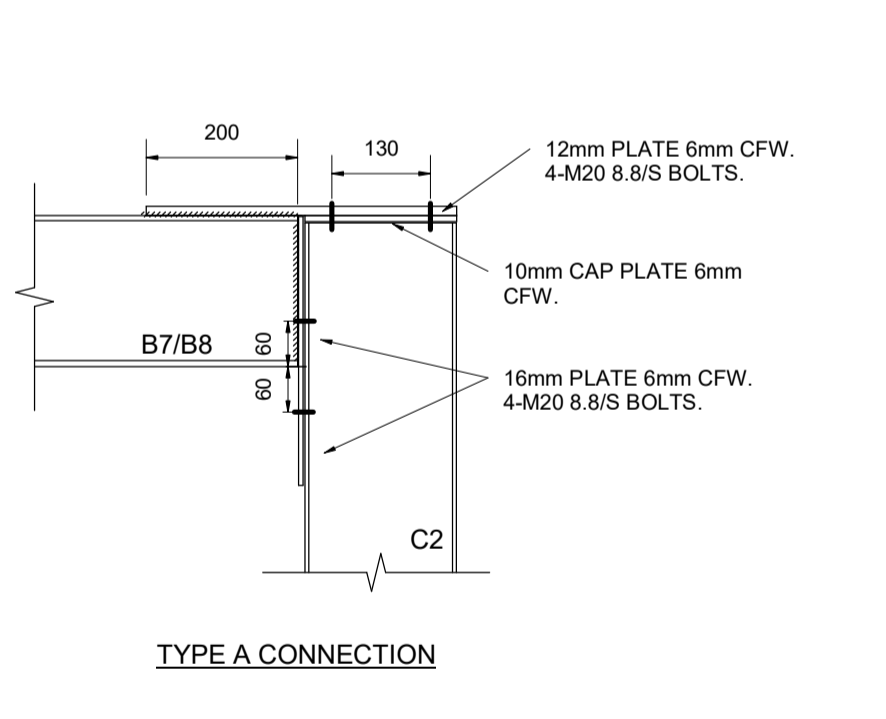
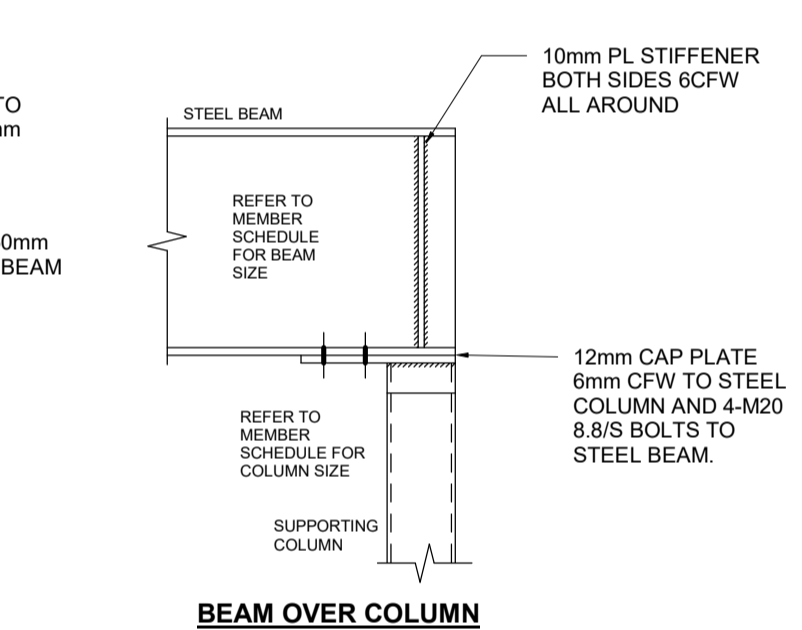
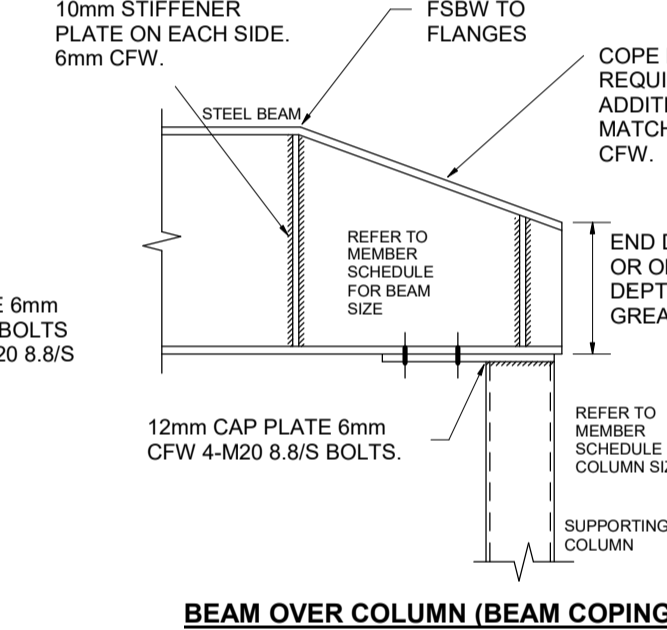
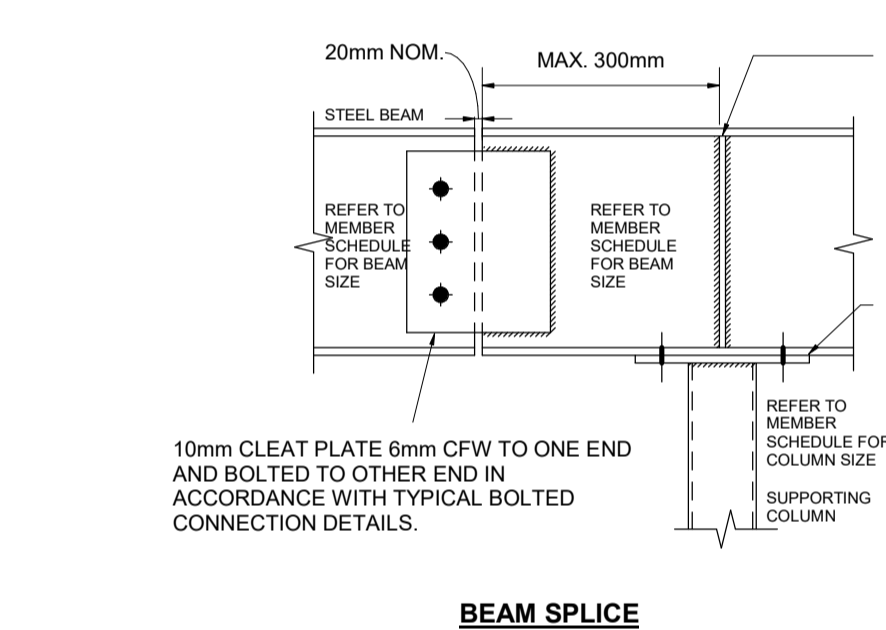
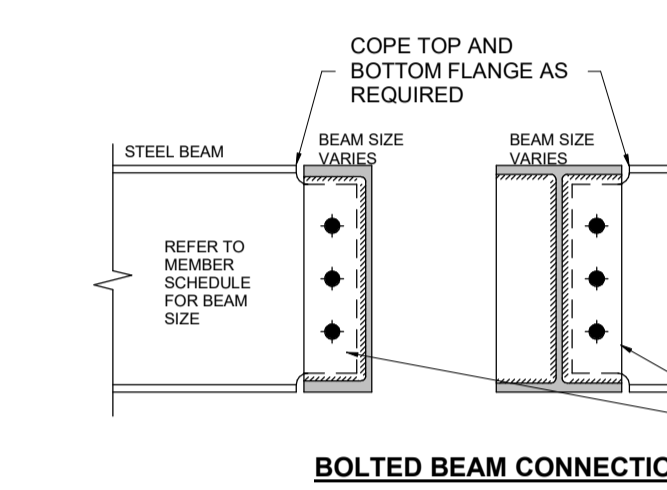
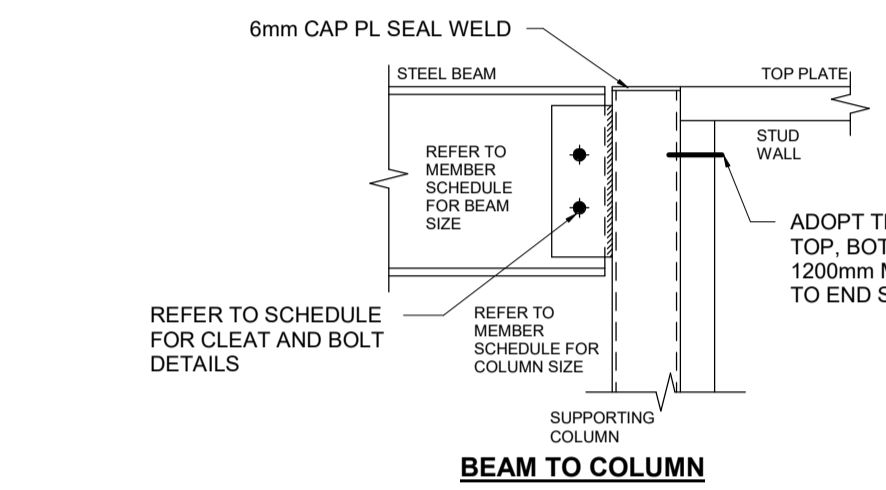


R1/PR1 CONNECTION DETAILS



WALING PLATE (WP1) TO STUD FRAMING CONNECTION DETAIL

WALING PLATE (WP1) TO STUD FRAMING CONNECTION DETAIL



REV	DESCRIPTION	DATE
A	Preliminary	18.11.20
B	Preliminary	08.12.20
C	Preliminary	20.01.20
Ø	Construction	27.01.21

PROJECT
PROPOSED EXTENSION AND ALTERATION

ADDRESS
13 SUNBURY CRESCENT, SURREY HILLS

TITLE
FRAMING AND BRACING DETAILS

DATE **09.03.21**

DESIGNED **BON**

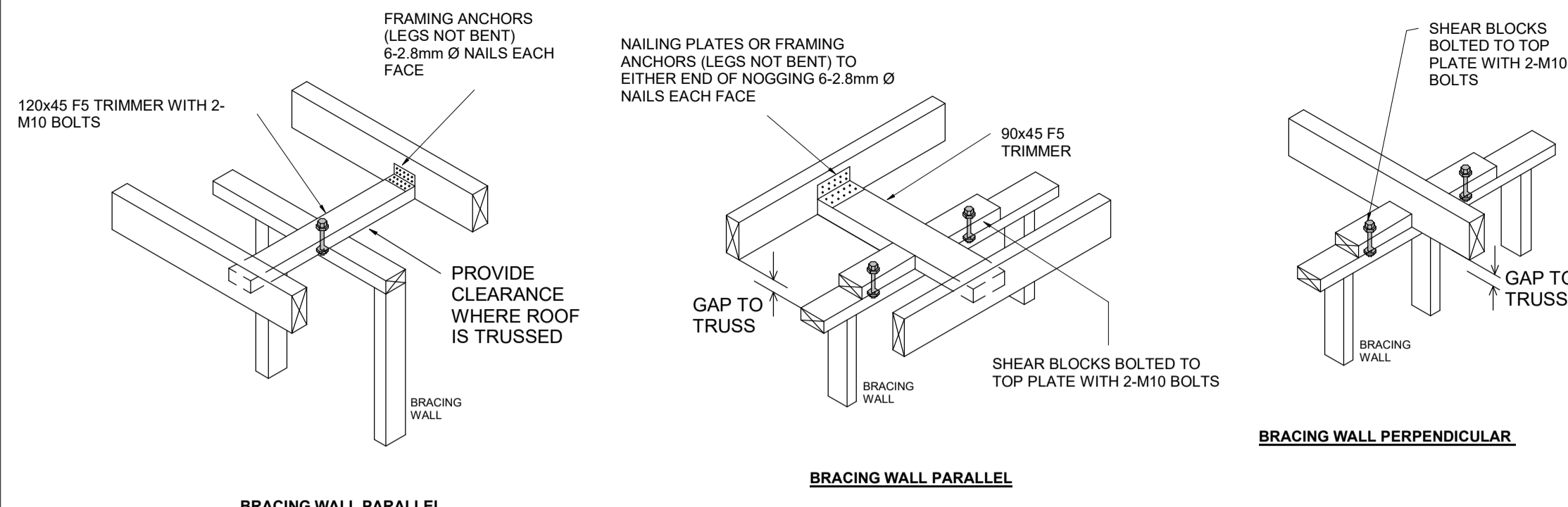
DRAWN **BON**

STATUS **CONSTRUCTION**

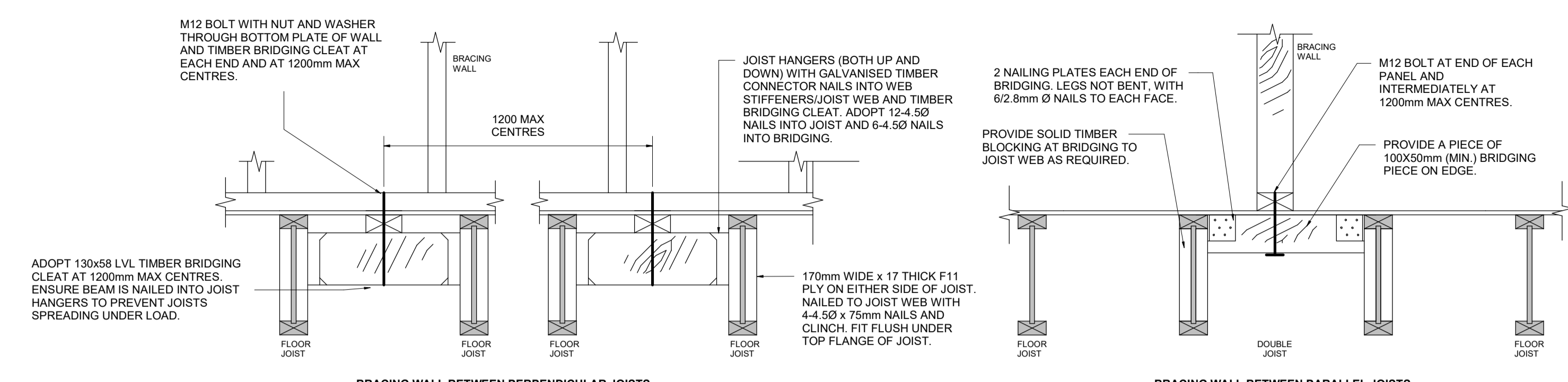
200102 - S07

SCALE AT A1 AS INDICATED REV Ø

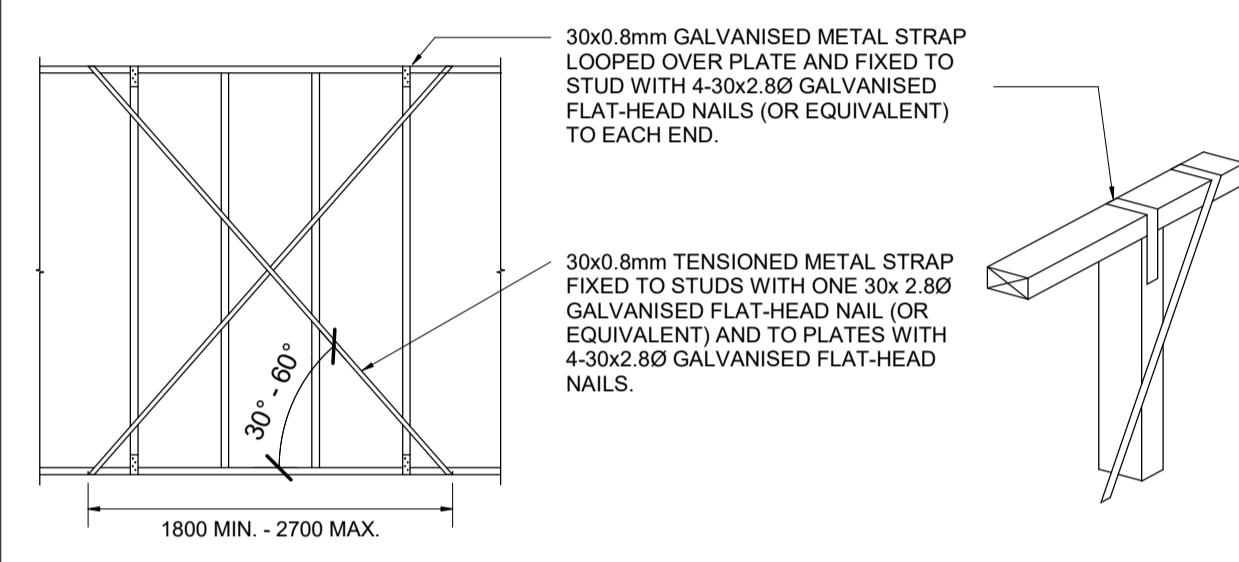
NOTE: FOR TRUSSED ROOFS, SCREWS OR BOLTS THROUGH THE TOP PLATE SHALL BE PLACED IN HOLES THAT PERMIT VERTICAL MOVEMENT OF THE TRUSSES.



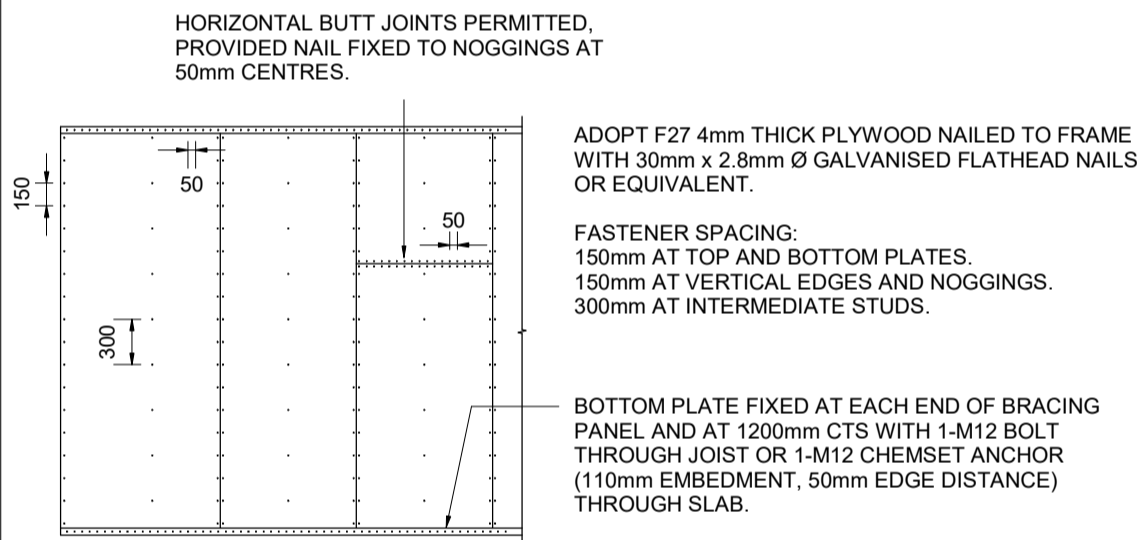
BRACING WALL TOP PLATE DETAIL



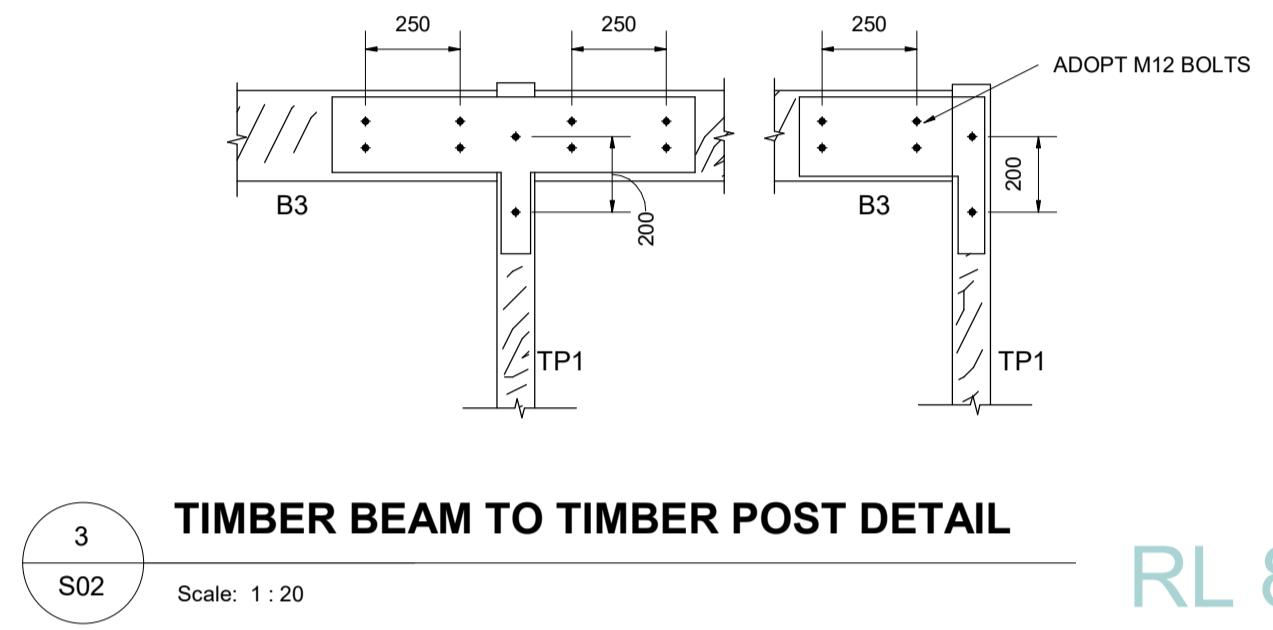
BRACING WALL BOTTOM PLATE DETAIL



WALL BRACING DETAIL

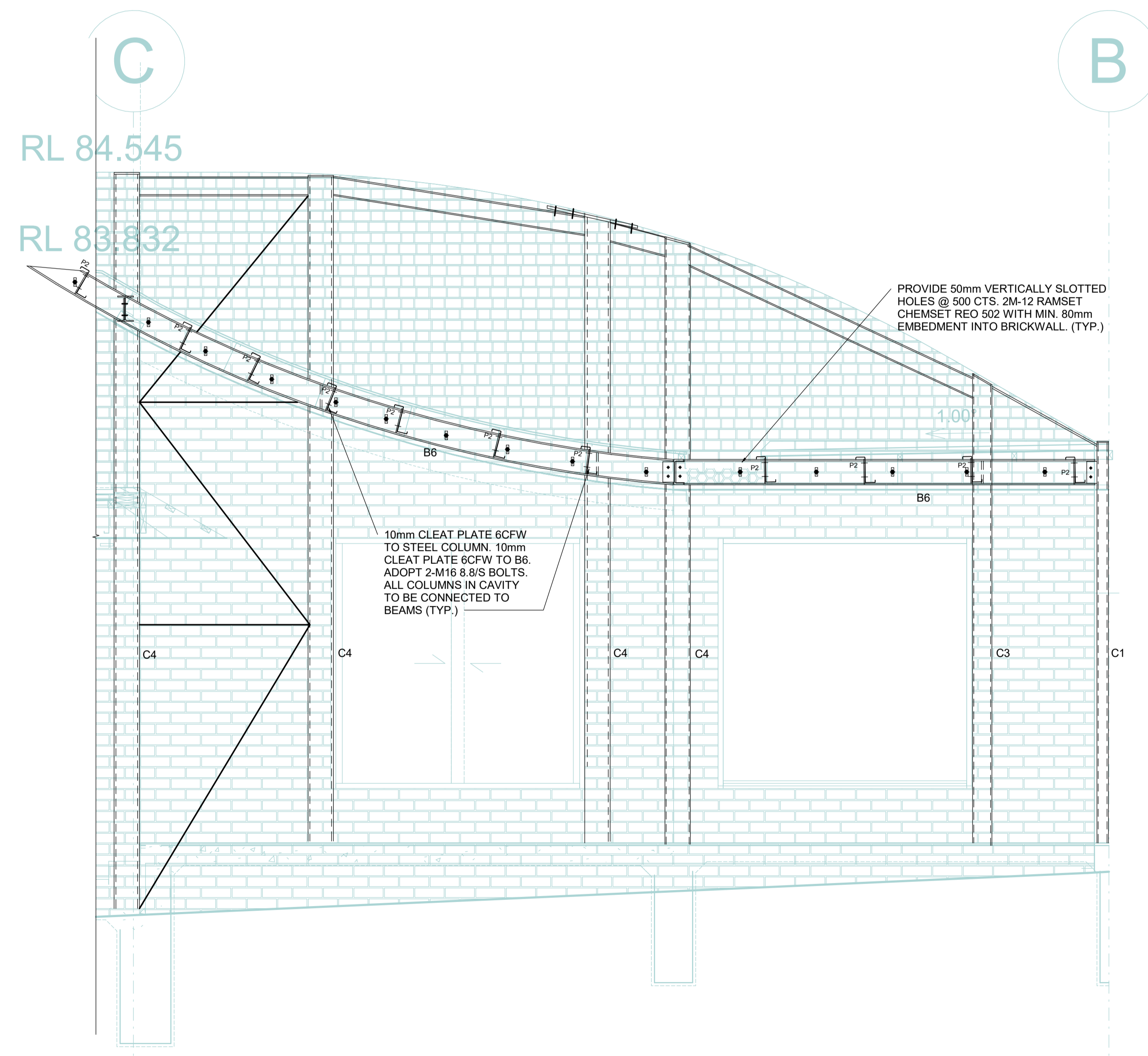


WALL BRACING DETAIL



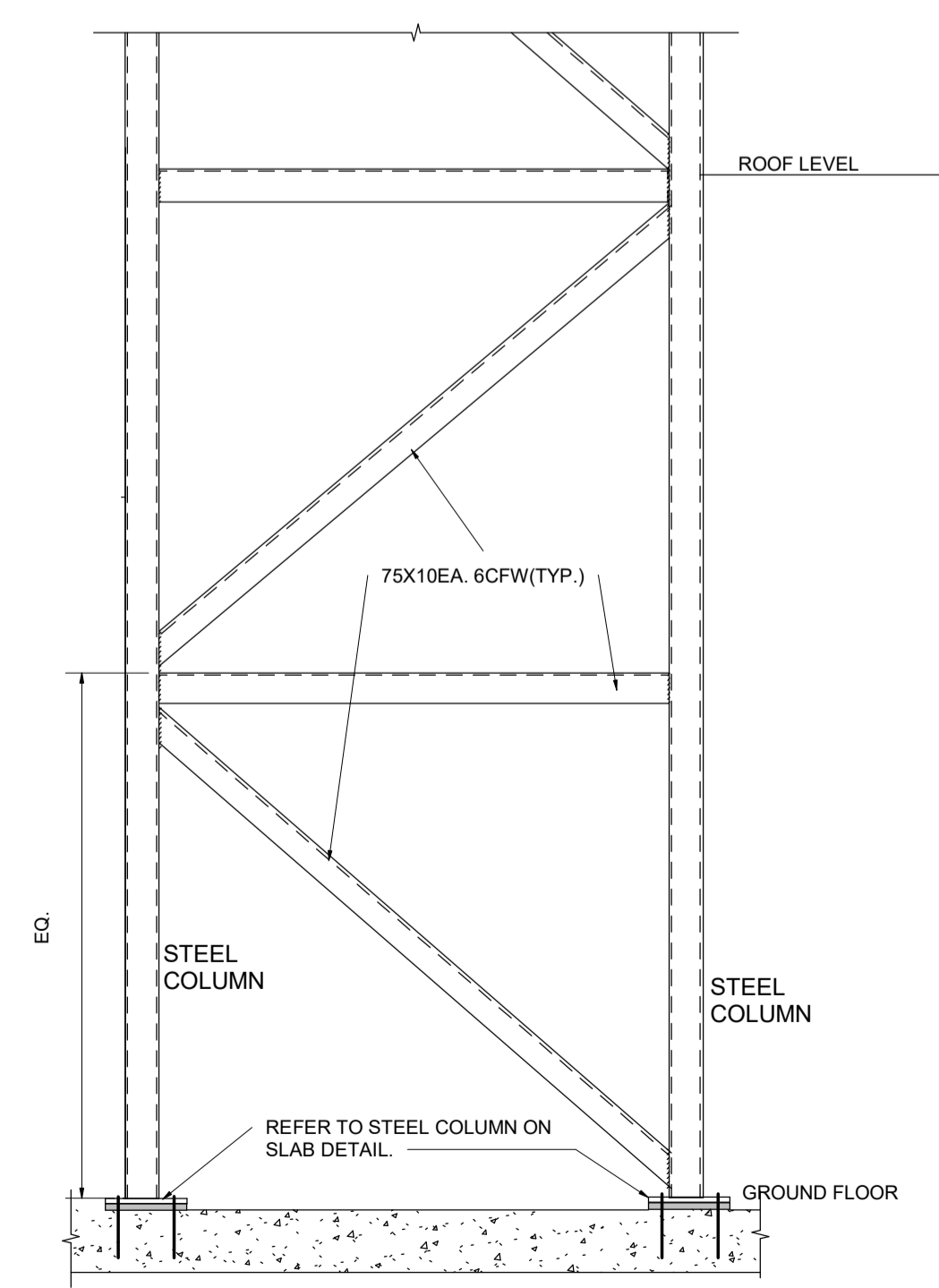
TIMBER BEAM TO TIMBER POST DETAIL

3
S02 Scale: 1:20



2 First Floor - Section 3

7
S02 Scale: 1:25



TYPICAL STEEL FRAME BRACING DETAIL