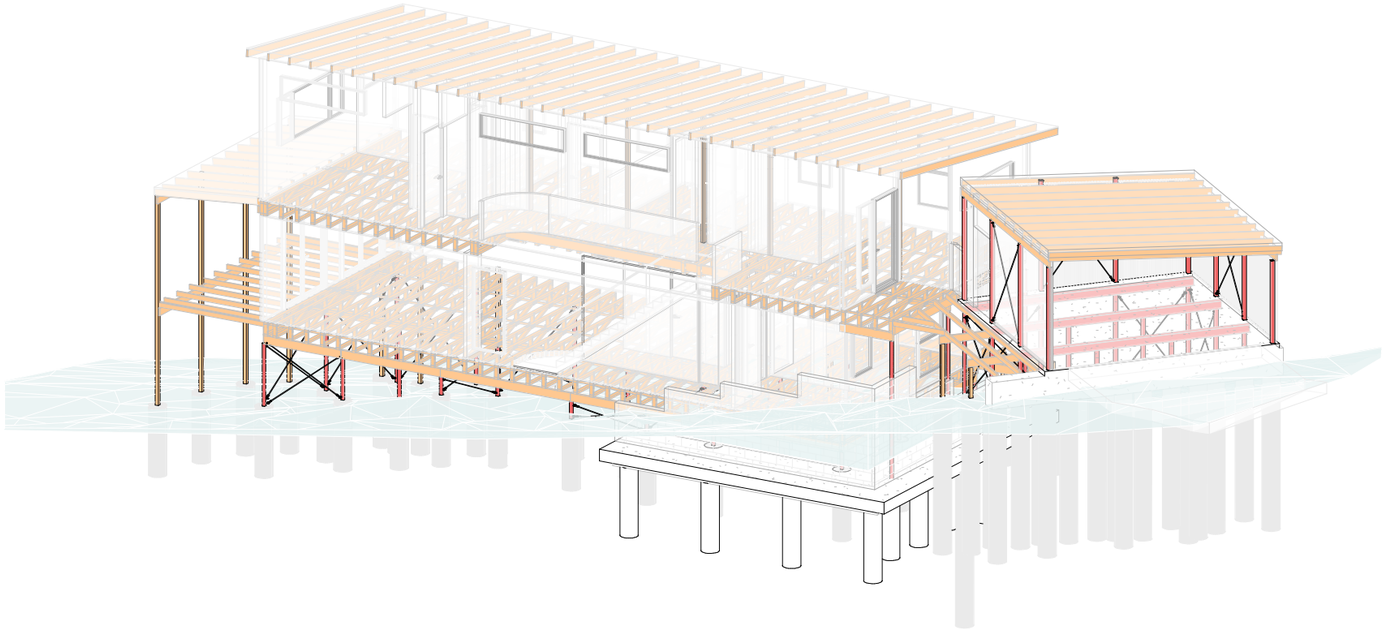
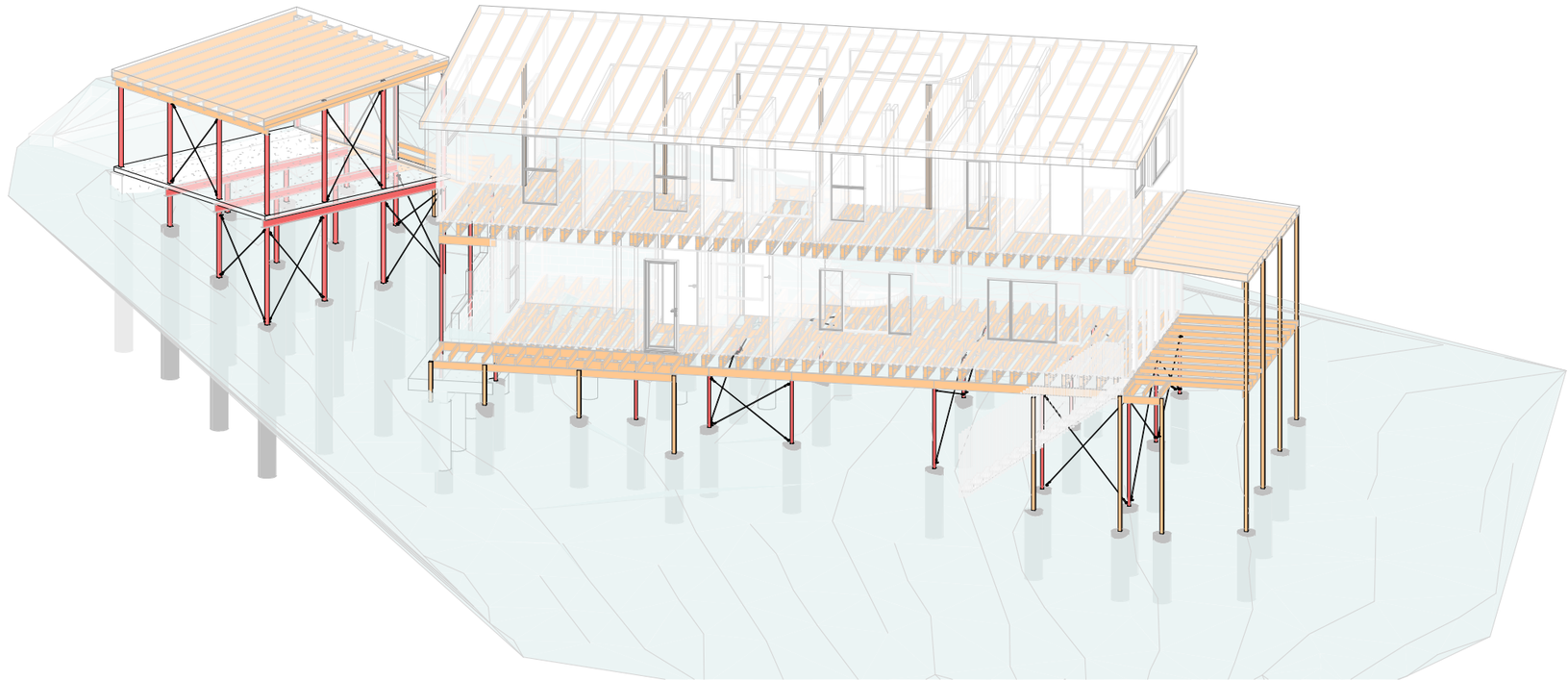


NORTHWEST OVERVIEW



SOUTHEAST OVERVIEW

PUBLIC PORTFOLIO SAMPLE ? CLIENT, SITE, COMPANY AND PROJECT IDENTIFIERS REDACTED

GENERAL NOTES:

1. CONSTRUCTION OF ALL STRUCTURAL AND CIVIL WORK SHALL COMPLY WITH CURRENT EDITIONS OF RELEVANT CONSTRUCTION STANDARDS & CODES.
2. DIMENSIONS SHALL BE VERIFIED BEFORE COMMENCING CONSTRUCTION. DO NOT SCALE DRAWINGS TO OBTAIN DIMENSIONS.
3. THROUGHOUT CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVER STRESSED.
4. CONSTRUCTION SYSTEMS, PROCEDURES AND METHODOLOGY OF STRUCTURAL AND CIVIL WORK SHALL ENSURE COMPLIANCE WITH THE LOCAL AUTHORITY WORKPLACE HEALTH AND SAFETY LEGISLATION.
5. CONTRACTOR IS TO ENSURE COMPLIANCE TO NCC 2019 Volume 2 Part 3.10.6

DESIGN CRITERIA:

ENGINEERING PTY LTD CERTIFIES THE DESIGN OF THE STRUCTURES UNDER THE CRITERIA AS LISTED BELOW:

APPLICABLE CODES:

• AS 1170.0:2002	– PART 0: GENERAL PRINCIPLES
• AS 1170.1:2002	– PART 1: PERMANENT, IMPOSED AND OTHER ACTIONS
• AS 1170.2:2021	– PART 2: WIND LOAD
• AS 3600:2018	– CONCRETE STRUCTURES
• AS 2159:2009	– PILING DESIGN AND INSTALLATION
• AS 4100:2020	– STEEL STRUCTURES
• AS 4055:2021	– WIND LOADS FOR HOUSING
• AS1684.2-2021	– RESIDENTIAL TIMBER FRAMED CONSTRUCTION
• AS2870-2011	– RESIDENTIAL SLABS AND FOOTINGS

DESIGN PARAMETERS (PATIO):

BUILDING LIFETIME	50 YEARS
WIND CLASSIFICATION	N2
TERRAIN CATEGORY	TC3
DECK/FLOOR DEAD LOAD (G)	0.40kPa
DECK LIVE LOAD (Q)	2.00kPa
FLOOR LIVE LOAD	1.50kPa
ROOF DEAD LOAD (G)	0.40kPa
BUILDING IMPORTANCE LEVEL	2
STEEL BEAM/COLUMN/STRUT GRADE	GRADE 350
SOIL BEARING CAPACITY (EXTREMELY WEATHERED ROCK)	350kPa

SHOULD ANY OF THE PROJECT PARAMETERS DIFFER FROM THE PARAMETERS ABOVE, THE DESIGN “AS IS" CANNOT BE USED AND SHOULD BE REVISED BY RPEQ ENGINEER.

SAFETY IN DESIGN AND CONSTRUCTION:

1. ALL CONSTRUCTION WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE LOCAL AUTHORITY WORKPLACE HEALTH AND SAFETY LEGISLATION.
2. CONSTRUCTION ACTIVITY CAN BE HAZARDOUS AND POTENTIAL SAFETY HAZARDS CONSIDERED BY THE DESIGNERS TO HAVE A HIGHER RISK THAN NORMAL CONSTRUCTION ACTIVITY IS IDENTIFIED WITH APPROPRIATE NOTES IN THE DOCUMENTATION.
3. IT IS ESSENTIAL THAT PRIOR TO COMMENCEMENT OF CONSTRUCTION AN ADEQUATE SAFETY PLAN IS PREPARED BY THE BUILDER / CONTRACTOR FOR THE WORKS IN COMPLIANCE WITH STATUTORY REQUIREMENTS. THE SAFETY PLAN SHALL INCLUDE APPROPRIATE WORK METHOD STATEMENTS FOR ALL RISK ACTIVITIES. THE STRUCTURAL ENGINEER IS AVAILABLE TO BE CONSULTED IN REGARDS TO THE SAFETY PLANS.
4. PRIOR TO ANY ERECTION OF STRUCTURAL ELEMENTS, THE CONTRACTOR SHALL HAVE COMPLETED A RISK ASSESSMENT OF ALL CONSTRUCTION PROCEDURES AND ENSURED THAT WHERE POSSIBLE. ALL RISKS HAVE BEEN ELIMINATED AND WHERE NOT POSSIBLE THEIR SAFETY PLAN HAS ADDRESSED THOSE ISSUES AND IT HAS BEEN FORMULATED AND DOCUMENTED FOR STRICT ADHERENCE DURING THE CONSTRUCTION WORKS.
5. PRIOR TO FABRICATION OF STEELWORK THE CONTRACTOR SHALL AGREE WITH THE ENGINEER ON AREAS OF RISK WHICH HAVE BEEN ADDRESSED BY THE DESIGN WHERE POSSIBLE AND AGREE ON SUITABLE CONSTRUCTION PROCEDURES WHERE AREAS OF RISK STILL EXIST.
6. PRIOR TO THE USE OF THE PROJECT AS DESIGNED, THE OWNER SHALL HAVE COMPLETED A RISK ASSESSMENT OF ALL WORK PRACTICES AND ENSURED THAT WHERE POSSIBLE ALL RISKS HAVE BEEN ELIMINATED AND WHERE NOT POSSIBLE THEIR SAFETY PLAN HAS ADDRESSED THOSE ISSUES AND IT HAS BEEN FORMULATED AND DOCUMENTED FOR STRICT ADHERENCE AFTER COMMISSIONING.

FOUNDATION:

1. THE BUILDER SHALL ALLOW TO PAY ALL ASSOCIATED COSTS TO ENGAGE AN APPROVED GEOTECHNICAL ENGINEER TO CARRY OUT ALL INSPECTIONS AND TESTING AS NECESSARY TO CERTIFY THAT THE FOUNDING MATERIAL FOR HIGH LEVEL FOOTINGS WITH THAT NOMINATED IN THE DOCUMENTATION. THE CERTIFICATION IS TO BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER OF QUEENSLAND.
2. FOOTING EXCAVATION SHALL BE CARRIED OUT DOWN TO UNDISTURBED AND UNIFORM FOUNDATION MATERIALS WITH A MINIMUM BEARING CAPACITY AS SPECIFIED IN DESIGN PARAMETERS.
3. THE CONTRACTOR SHALL ENGAGE A SUITABLY QUALIFIED GEOTECHNICAL ENGINEER TO VERIFY THAT THE FOUNDING MATERIAL MEETS THE REQUIRED NOMINATED FOUNDATION CONDITIONS. APPROVAL OF THE FOUNDATION SHALL BE OBTAINED FROM THE GEOTECHNICAL ENGINEER PRIOR TO PLACING CONCRETE.
4. ANY OVER EXCAVATION SHALL BE BACK FILLED WITH A MASS CONCRETE BLINDING LAYER TO THE ASSUMED FOUNDING LEVEL.
5. WHERE EXCAVATION WORK IS TO BE CARRIED OUT ADJACENT TO EXISTING FOOTINGS THE EXACT LEVEL OF THE UNDERSIDE OF THE FOOTINGS SHALL BE DETERMINED BY TEST PITS PRIOR TO EXCAVATION. UNDERPINNING SHALL BE CARRIED OUT AS DETAILED OR REQUIRED BY THE STRUCTURAL ENGINEER.
6. ALL FOOTING EXCAVATIONS SHALL BE FORMED AS NECESSARY WHEN EXCAVATED FACE IS NOT STABLE, DEWATERED AND CLEANED OF LOOSE AND SOFT MATERIAL PRIOR TO PLACING CONCRETE.
7. ALL WALLS AND COLUMNS SHALL BE CONCENTRIC WITH SUPPORTING FOOTINGS UNLESS NOTED OTHERWISE ON THE DRAWINGS.

CONCRETE

1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM WITH CURRENT EDITIONS OF AS 1379, AS 3600 AND AS 3610 EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS. REFER ALSO TO IN-SITU CONCRETE, FORMWORK AND REINFORCEMENT SECTION OF THE SPECIFICATIONS.
2. CONCRETE STRENGTH GRADE SHALL BE 32MPa UNLESS NOTED OTHERWISE.
3. PROJECT ASSESSMENT OF STRENGTH IN ACCORDANCE WITH AS 1379 SHALL BE ADOPTED FOR SAMPLING AND TESTING. REFER TO SPECIFICATION FOR FREQUENCY OF TESTS.
4. SIZE OF ELEMENTS IS EXCLUSIVE OF APPLIED FINISHES. BEAMS DEPTHS INCLUDE SLAB THICKNESS AND ARE THE FIRST DIMENSION SPECIFIED, FOLLOWED BY WIDTH. UNLESS NOTED OTHERWISE ALL FORMED EDGES AND CORNERS OF CONCRETE MEMBERS SHALL HAVE 20MM CHAMFERS.
5. THE FACE OF ALL CONCRETE AGAINST WHICH NEW CONCRETE IS TO BE CAST IS TO BE THOROUGHLY MECHANICALLY SCABBED, FULLY EXPOSING THE AGGREGATE MATRIX, UNLESS OTHERWISE NOTED.
6. CONSTRUCTION JOINTS SHALL BE MADE ONLY AT APPROVED LOCATIONS, AND, IN SLABS SHALL BE CONSTRUCTED WITH A SHEAR KEY TO ENGINEER'S DETAIL U.N.O. SURFACES OF CONCRETE AT ALL JOINTS SHALL BE THOROUGHLY MECHANICALLY SCABBED, FULLY EXPOSING THE AGGREGATE MIX, UNLESS OTHERWISE NOTED.
7. ALL REINFORCEMENT SHALL BE TO AS/NZS 4671 AND REINFORCEMENT GRADE IS DESIGNATED AS FOLLOWS, U.N.O.:
   R: PLAIN ROUND BAR, GRADE 250
   N: DEFORMED BAR, GRADE 500
   SL/RL: WIRE REINFORCING FABRIC, GRADE 500
8. REINFORCEMENT SHALL BE BENT COLD IN ACCORDANCE WITH AS3600 EXCEPT WHERE APPROVED BY THE STRUCTURAL ENGINEER. NO REBENDING SHALL BE PERMITTED.
9. DO NOT CUT REINFORCEMENT ON SITE TO CLEAR PENETRATIONS. DISPLACE REINFORCEMENT SLIGHTLY AS NECESSARY TO CLEAR BLOCKOUTS.
10. CONCRETE COVER AND LAPS TO REINFORCEMENT SHALL BE AS NOTED ON THE DRAWINGS.
11. ALL CONCRETE IS TO BE MECHANICALLY VIBRATED DURING PLACING. CONSTRUCTION JOINTS SHALL BE FORMED AND USED ONLY WHERE SHOWN ON THE DRAWINGS OR SPECIFICALLY APPROVED BY THE ENGINEER.
12. APPLY EVAPORATION RETARDER AND CURE ALL CONCRETE IN ACCORDANCE WITH THE CONCRETE SPECIFICATIONS AND IN ACCORDANCE WITH REQUIREMENTS OF AS3799.
13. FORMWORK IS TO BE IN ACCORDANCE WITH AS 3610 "FORMWORK FOR CONCRETE" UNLESS SPECIFIED OTHERWISE.
14. CONCRETE IS TO BE A CLASS 3 FINISH WHERE EXPOSED TO VIEW IN THE FINAL PROJECT AND CLASS 4 ELSEWHERE.
15. ADEQUATE MEASURES SHALL BE TAKEN TO CONTROL DRYING SHRINKAGE OF CONCRETE DURING PLACEMENT, COMPACTION AND FINISHING.
16. ACCEPTABLE CURING METHODS ARE PONDING, ABSORPTIVE COVER, LOW PRESSURE STEAM, IMPERMEABLE SHEET MEMBRANE AND CURING COMPOUNDS AS PER AS3799 (PVA COMPOUNDS ARE NOT PERMITTED).
17. ACCEPTABLE CURING METHODS ARE PONDING, ABSORPTIVE COVER, LOW PRESSURE STEAM, IMPERMEABLE SHEET MEMBRANE AND CURING COMPOUNDS AS PER AS3799 (PVA COMPOUNDS ARE NOT PERMITTED).
18. CONCRETE PLACEMENT AND COMPACTION IS TO BE COMPLETED WITHIN AN APPROPRIATE TIME.
19. NO WATER IS TO BE ADDED TO CONCRETE MIX ON SITE UNLESS APPROVED AND SPECIFIED BY ENGINEER.

PUBLIC PORTFOLIO SAMPLE ? CLIENT, SITE, COMPANY AND PROJECT IDENTIFIERS REDACTED

CONCRETE (CONT.)

20. USE ALIPHATIC ALCOHOL AS SOON AS SCREEDING IS FINISHED AS NECESSARY.
21. CURING SHALL COMMENCE ONTO SLABS IMMEDIATELY AFTER INITIAL SET OF THE CONCRETE OR IMMEDIATELY AFTER REMOVAL OF FORMWORK. HOT AND COLD WEATHER CURING PROCEDURES SHALL BE USED IF NECESSARY. REFER ENGINEERING SPECIFICATION FOR TEMPERATURE CONTROL LIMITS ETC.
22. IN WINDY CONDITIONS, WIND BREAKS SHALL BE ERECTED TO SHIELD THE CONCRETE SURFACES DURING AND AFTER PLACEMENT.
23. CONCRETE PLACEMENT AND CURING PROCEDURES ARE TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.
24. STRIPPING OF FORMS AND REMOVAL OF FORMWORK SHALL BE IN ACCORDANCE WITH AS 3600 "CONCRETE STRUCTURES" CLAUSE 17.6 UNLESS SPECIFICALLY APPROVED BY THE ENGINEER.
25. WHERE SAW CUTTING OF CONCRETE IS SPECIFIED IN THE CONTRACT DOCUMENTS THE CONTRACTOR SHALL ALLOW TO SCAN THE CONCRETE WITH GROUND PENETRATING RADAR (GPR) AND ALLOW FOR THE REQUIREMENTS NOTED BELOW UNLESS OTHERWISE NOTED IN THE CONTRACT DOCUMENTS.

PROFILED STEEL DECKING

PD1. MINIMUM FIXINGS
DECKING SHALL BE FIXED IN ACCORDANCE WITH DECKING MANUFACTURER'S RECOMMENDATIONS, AND THE MINIMUM OF:
(A) 12MM DIAMETER PUDDLE WELD LOCATED AT 400 CRS.
(B) 4 MM DIAMETER POWER ACTIVATED DRIVEPINS LOCATED AS PER MANUFACTURER'S RECOMMENDATIONS.
(C) 19MM DIAMETER SHEAR STUDS WELDED THROUGH DECKING AT 400 CRS.
(D) 50MM SEAT WIDTH ON CONCRETE SURFACES.

PD2. FIXING LOCATIONS
FIXINGS SHALL BE WELDED IN MIDDLE OF THE DECK RIB WHERE POSSIBLE. IF WELDED OFF CENTRE THE SIDE ON WHICH THE FIXING IS WELDED SHALL BE ALTERNATED FROM RIB TO RIB.

PD3. DECK PROPERTIES
FLOOR DECK SHALL BE GRADE G550 1.0MM BMT PRESSED METAL RIBBED PROFILE WITH MINIMUM Z350 GALVANISED FINISH TO AS 1397 UNO.

PD4. CONTINUOUS SPANS
THE DECK SHALL BE LAID CONTINUOUS OVER MINIMUM 4 SPANS WHERE POSSIBLE.

PD5. PENETRATIONS
FLOOR PENETRATIONS SHALL BE FORMED IN THE CONCRETE AND THE DECK CUT ONLY AFTER THE CONCRETE HAS ATTAINED MINIMUM 15 MPA STRENGTH.

PD6. COLUMNS
WHERE THE METAL DECK NEEDS TO BE CUT FOR COLUMNS PASSING THROUGH THE FLOOR, PROVIDE
75X50X1.0 GALVANISED ANGLES (OR ALTERNATIVE ENGINEER APPROVED SOLUTION) TO SUPPORT THE CUT DESK EDGES.

PD7. SERVICES CONDUITS
FLOOR SERVICES CONDUITS SHALL BE KEPT CLEAR MINIMUM 100MM FROM ANY SHEAR STUD.

PD8. EDGE FINISHING
EDGES AND ENDS OF PROFILED STEEL DECKING SHALL BE ENCASED IN CONCRETE, OR FINISHED WITH A 1.0MM MINIMUM THICKNESS PROFILED GALVANISED STEEL EDGE.

PD9. PROPPING
PROPPING SHALL BE IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS OR AS SPECIFIED ON THE DRAWINGS.

STRUCTURAL TIMBER NOTES

T1. MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE SPECIFICATIONS AND THE CURRENT EDITIONS OF THE FOLLOWING AUSTRALIAN STANDARD CODES AS APPLICABLE:
AS1720 TIMBER STRUCTURES
AS1684 RESIDENTIAL TIMBER FRAMED CONSTRUCTION

T2. HOLES FOR BOLTS, UNLESS OTHERWISE DETAILED, SHALL BE MADE OVERSIZE AS FOLLOWS:
-UNSEASONED TIMBER-2MM TO 3MM GREATER IN DIAMETER THAN THE BOLT DIAMETER
-SEASONED TIMBER-1MM TO 2MM GREATER IN DIAMETER THAN THE BOLT DIAMETER

T3. SHANK AND THREAD OF BOLTS SHALL BE THOROUGHLY COATED WITH A HEAVY WATERPROOF GREASE BEFORE INSERTION INTO THE TIMBER.

T4. EDGE DISTANCES FOR FASTENERS IN TIMBER (FROM END AND SIDE) SHALL BE IN ACCORDANCE WITH AS 1720.

T5. ALL TIMBER FRAMING TO BE CONSTRUCTED TO AS 1684 (U.N.O.)

T6. CONNECTIONS BETWEEN TIMBER BEAMS TO STEEL COLUMNS SHALL BE:
2-10MM CLEAT PLATE, 6 CFW TO CAP PLATE, 2-M16 COACH BOLTS TYP (U.N.O.)

T7. THE CONTRACTOR'S PREFERRED TIMBER CONNECTOR SELECTION DETAILS TO BE SENT TO THE STRUCTURAL ENGINEER BEFORE COMMENCEMENT OF CONSTRUCTION.

T8. STUD WALL FRAMING TO BE IN ACCORDANCE WITH THE FOLLOWING TABLES:

LOAD BEARING STUD WALL FRAMING

STUDS	90 X 35 MGP12 @ 450 CRS. NOGGINGS AT 1350 CRS. MAX.
TOP PLATE	2-90 X 35 MGP12
BOTTOM PLATE	90 X 35 MGP12 WITH M12 TIE DOWN RODS AT 1800 CRS.
NOTES: (FOR UP TO 2 STOREY STUD WALL ONLY) 1. STUDS CAN BE NOTCHED UP TO 20MM FOR BRACING 2. TOP AND BOTTOM PLATES SHALL NOT BE TRENCHED.	

NON-LOAD BEARING STUD WALL FRAMING

STUDS	90 X 35 MGP12 @ 600 CRS. NOGGINGS AT 1350 CRS. MAX.
TOP PLATE	90 X 35 MGP12
BOTTOM PLATE	90 X 35 MGP12

T9. ALL EXTERNAL TIMBER FRAMING TO BE H3 TREATED.

T10. ALL EXTERNAL TIMBERS SHALL BE DURABLE, SUITABLE FOR EXTERNAL US AND COMPLY WITH THE APPROPRIATE HAZARD LEVEL FOR SPECIFIC SERVICE CONDITIONS.

T11. ALL BOLTED CONNECTIONS SHALL USE WASHERS UNDER BOLT HEAD AND NUT. ALL EXTERNAL BOLTS, NUTS AND WASHERS SHALL BE HOT DIPPED GALVANISED. NO KNOTS OR DEFECTS SHALL OCCUR WITHIN 150MM OF BOLT GROUP OR CONNECTORS, WHERE POSSIBLE, RE-TIGHTEN BOLTS AFTER 6 WEEKS AND AGAIN AT 12 MONTHS.

PUBLIC PORTFOLIO SAMPLE - CLIENT, SITE, COMPANY AND PROJECT IDENTIFIERS REDACTED

STRUCTURAL TIMBER NOTES (CONT.)

T12. MAKE GOOD PRESERVATIVE TREATMENT WHERE CHECKOUTS, HOLES AND CUTS EXPOSE UNTREATED TIMBER.

T13. ALL PROPRIETARY FIXINGS SHALL BE INSTALLED TO DEVELOP THEIR MAXIMUM CAPACITY AND IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

T14. ALL TIMBER FRAMEWORK SHALL BE ADEQUATELY TIED TO RESIST UPLIFT AND RACKING FORCES IN ACCORDANCE WITH AS1684.2 - NON-CYCLONIC AREAS.

T15. THE BUILDER SHALL SUBMIT ONE SET OF TRUSS MANUFACTURER'S LAYOUT DRAWINGS AND COMPUTATIONS FOR REVIEW 48 HOURS PRIOR TO FABRICATION.

T16. METAL FIXINGS SHALL BE COMPATIBLE WITH TIMBER GLUES AND PRESERVATIVE TREATMENTS.

T17. BOLTING SYMBOL:

2M10-4.6/S
2-NUMBER OF BOLTS
M10-DIAMETER IN MM
4.6 0 STRENGTH GRADE
S-SNUG TIGHT (BOLTING PROCEDURE)

T18. NOTCHES, CUTS AND HOLES IN:
FLOOR FRAMING, BEAMS, BEARERS, JOISTS AND RAFTERS: ACCORDING TO CLAUSE 4.1.6
WALL FRAMING, STUDS, AND PLATES: ACCORDING TO CLAUSE 6.2.1.4

T19. NO PENETRATIONS OR CHASES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN TIMBER MEMBERS WITHOUT PRIOR APPROVAL OF THE ENGINEER.

STRUCTURAL STEEL:

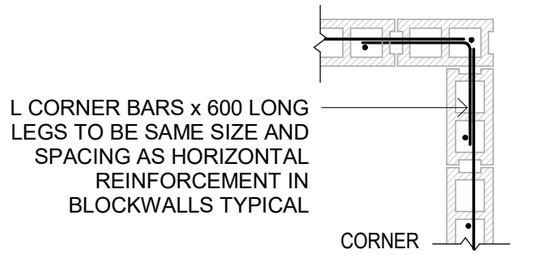
1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM WITH CURRENT EDITIONS OF AS4100, AS/NZS 1554 - 1 & 2 & AS4600 EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
2. ALL STEEL SHALL COMPLY WITH THE FOLLOWING U.N.O. :-
   WELDED SECTION - GRADE 300 TO AS/NZS 3678.2
   ROLLED SECTION - GRADE 300 TO AS/NZS 3679.2
   SHS & RHS - GRADE 350/GRADE 450 TO AS 1163
   CHS - GRADE 250/GRADE 350 TO AS 1163
   FLAT PLATE - GRADE 300 TO AS/NZS 3679..2
   STANDARD PLATE - GRADE 250 TO AS/NZS 3678
3. REFER TO ARCHITECT FOR FIRE RATING REQUIREMENTS.

STRUCTURAL STEEL (CONTINUED):

4. THE CONTRACTOR SHALL UNLESS SPECIFIED ELSEWHERE:
   - A. PROVIDE AND EMPLOY ANY ADDITIONAL TEMPORARY BRACING ETC. NECESSARY TO ADEQUATELY HOLD STEELWORK IN POSITION DURING CONSTRUCTION.
   - B. PROVIDE ALL PACKS, CLEATS, BOLTS (INCL. H.D. BOLTS) ETC. REQUIRED FOR TEMPORARY AND PERMANENT ERECTION OF STEELWORK AND FOR ATTACHMENT OF TIMBER AND MISCELLANEOUS FRAMING.
   - C. SUBMIT WORKSHOP DRAWINGS TO THE ENGINEER FOR PERUSAL. FABRICATION SHALL NOT COMMENCE WITHOUT A WRITTEN RESPONSE.FOR THE SURFACE TREATMENT REQUIREMENTS OF ALL STRUCTURAL STEELWORK REFER TO THE STRUCTURAL STEEL SPECIFICATION. MINIMUM TREATMENT SHALL BE AS FOLLOWS U.N.O. :
   - D. INTERNAL STEELWORK (I.E. PROTECTED FROM CLIMATE) ABRASIVE BLAST CLEAN TO GRADE SA2.5 TO AS1627.9 APPLY ONE COAT OF GOOD QUALITY ALKYD PRIMER (ZINC PHOSPHATE) MINIMUM DRY FILM THICKNESS OF 50 MICRONS;
   - E. ALL STEEL MEMBERS SHALL BE HOT-DIP GALVANIZED (HDG) IN ACCORDANCE WITH AS/NZS 4680. ALTERNATIVELY, PAINT-BASED COATINGS (E.G., ZINC-RICH PRIMERS OR POLYURETHANE SYSTEMS, ACL2, ACC2, IZS1, PUR2A) MAY BE USED, PROVIDED THEY COMPLY WITH AS/NZS 2312 AND AS/NZS 3750.
5. ALL STRUCTURAL STEELWORK BELOW GROUND LEVEL TO BE PAINTED WITH 2 COATS OF HIGH-QUALITY APPROVED BITUMEN PAINT AND ENCASED BY N25 CONCRETE 75MM ALL ROUND U.N.O.
6. MINIMUM WELDING REQUIREMENTS IF NOT OTHERWISE SPECIFIED SHALL BE AS FOLLOWS: ALL WELDS CATEGORY S.P 6MM CONTINUOUS FILLET WELDS, OR WHERE NOTED, COMPLETE PENETRATION BUTT WELDS (C.P.B.W.) USING E48XX ELECTRODES WITH CATEGORY S.P. INSPECTION WITH ALL WELDS 100% VISUALLY SCANNED, ALL TO AS/NZS 1554.1 U.N.O. ALL WELDING SHALL BE PERFORMED BY A QUALIFIED WELDER IN ACCORDANCE WITH AS/NZS 1554.1.
7. SITE WELDS WHERE NOTED IN THE DOCUMENTATION SHALL BE THOROUGHLY WIRE BRUSHED CLEANED AND PAINTED IN ACCORDANCE WITH THE SPECIFICATION.
8. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM WITH CURRENT EDITIONS ENGINEER MAY ORDER NON-DESTRUCTIVE TESTING OF SELECTED WELDS. WELDS PROVED TO BE BELOW THE SPECIFIED QUALITY SHALL BE CUT OUT, REWELDED AND RETESTED AT CONTRACTOR'S EXPENSE.
9. ALL BOLTS, NUTS AND WASHERS, INCLUDING HOLD DOWN BOLTS, CAST-IN FERRULES, CAST-IN PLATES AND MASONRY ANCHORS ARE TO BE HOT DIP GALVANISED U.N.O. ALL GALVANISED COMPONENTS TO BE CAST INTO CONCRETE MUST BE PASSIVATED.
10. ALL STRUCTURAL STEEL FIXING DETAILS ARE TO BE BASED ON AISC STANDARDIZED STRUCTURAL CONNECTIONS U.N.O.
11. ALL PLATES TO BE FROM STANDARD SQUARE EDGE FLATS U.N.O.
12. THE CONTACT SURFACES FOR HIGH STRENGTH FULLY TENSIONED BOLTED CONNECTIONS SHALL BE CLEAN "AS ROLLED" AND NOT PAINTED. FULLY TENSION BOLTS BY THE "PART TURN METHOD OF TIGHTENING", OR BY LOAD INDICATING WASHERS.

MASONRY:

1. ALL WORKMANSHIP AND MATERIALS SHALL COMPLY WITH AS3700.
2. BLOCKS SHALL BE 'AS' SERIES WITH A CHARACTERISED UNCONFINED CONPRESSIVE STRENGTH OF 15MPa.
3. GROUT FOR FILLED MASONRY SHALL BE:
   GRADE = 25 MPa
   MAX. AGG. = 10mm (FOUNDED)
4. DO NOT CARRY OUT BACKFILLING UNTIL WALL HAS ACHIEVED ITS FULL STRENGTH.
5. WEEP HOLE SPACED AT EVERY 2.0 METERS.



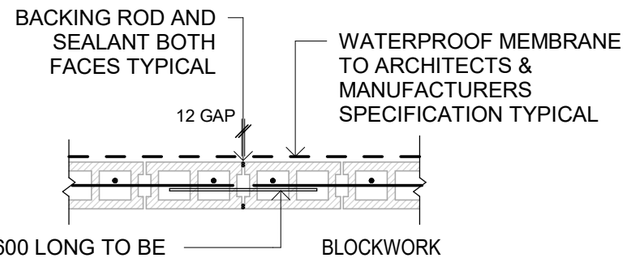
TYPICAL BLOCKWALL DETAILS

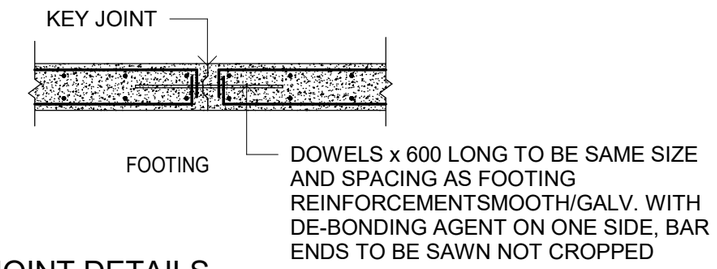
REINFORCEMENT:

1. REINFORCEMENT SYMBOLS
   - N HOT-ROLLED DEFORMED BAR, GRADE 500 TO AS/NZS 4671
   - R PLAIN ROUND, GRADE 250 TO AS/NZS 4671.
   - SL HARD DRAWN REINFORCING FABRIC TO AS/NZS 4671.
2. CONCRETE CURING AND STRIPPING SHALL BE IN ACCORDANCE WITH AUSTRALIAN STANDARDS.
3. ALL CONCRETE SHALL BE COMPACTED BY IMMERSION TYPE VIBRATORS.
4. HOT BENDING OF REINFORCEMENT IS NOT PERMITTED.
5. CONCRETE MORTAR AND GROUT SHALL CONFORM TO AUSTRALIAN STANDARDS.
6. ALL CONCRETE TO BE AS3600 GRADE F'c=25MPa.
7. MINIMUM CLEAR COVER TO ANY REINFORCEMENT COMPLYING WITH AS3600.
8. NO HOLES, CHASES OR EMBED PIPES ARE TO BE PLACED WITHIN THE CONCRETE MEMBERS UNLESS SHOWN ON THE STRUCTURAL DRAWINGS OR APPROVED BY ENGINEERS.
9. REINFORCEMENT IS SHOWN DIAGRAMMATICAL, IT IS NOT NECESSARILY SHOWN IN TRUE PROJECTION.
10. SPLICES OF REINFORCEMENT SHALL ONLY BE MADE IN POSITIONS SHOWN.
11. WHERE LAP LENGTHS ARE NOT SHOWN THEY SHALL SATISFY THE REQUIREMENTS OF AUSTRALIAN STANDARDS. LAP REINFORCEMENT ONLY AT LOCATIONS SHOWN ON THE DRAWING OR AS APPROVED BY THE ENGINEER IN WRITING U.N.O. LAP ALL BARS AS TABULATED IN THE TABLE BELOW:

BAR SIZE	MINIMUM LAP LENGTH	
	FOOTING	RETAINING WALLS
N12	450	500
N16	650	600

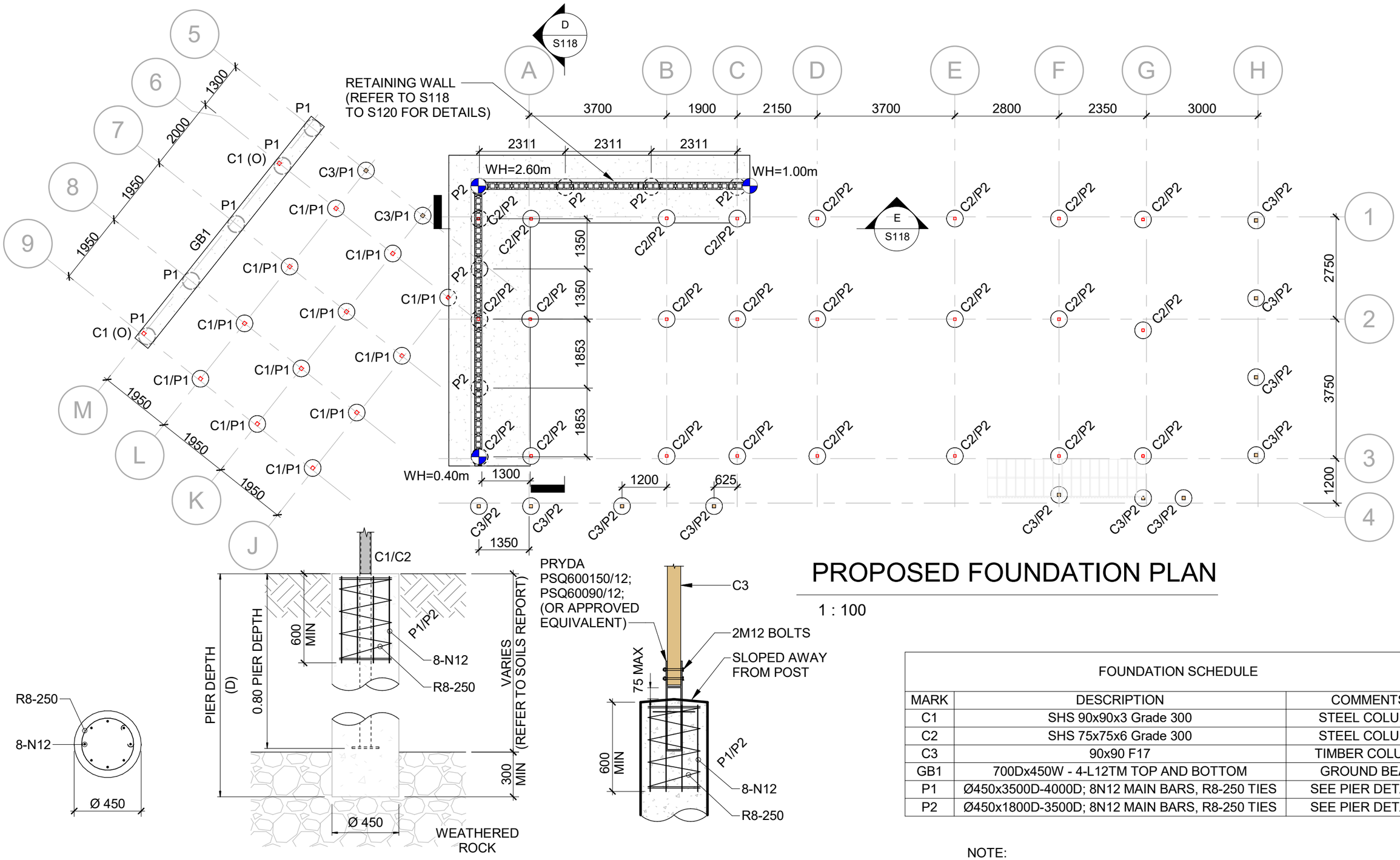
12. DO NOT WELD REINFORCEMENT UNLESS SHOWN ON THE DRAWINGS.
13. SIZES OF THE CONCRETE ELEMENTS DO NOT INCLUDE THE THICKNESS OF ANY APPLIED FINISHES.
14. GROUTING SHALL NO BE NON-SHRINK, PREPARED AND APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTION. GROUTING SHALL FILL THE ENTIRE SPACE BETWEEN PLATE AND CONCRETE SUPPORT/FOOTING.





TYPICAL CONTROL JOINT DETAILS

PUBLIC PORTFOLIO SAMPLE ? CLIENT, SITE, COMPANY AND PROJECT IDENTIFIERS REDACTED



PLAN

SECTION A

SECTION B

PROPOSED FOUNDATION PLAN

1 : 100

PIER DETAILS

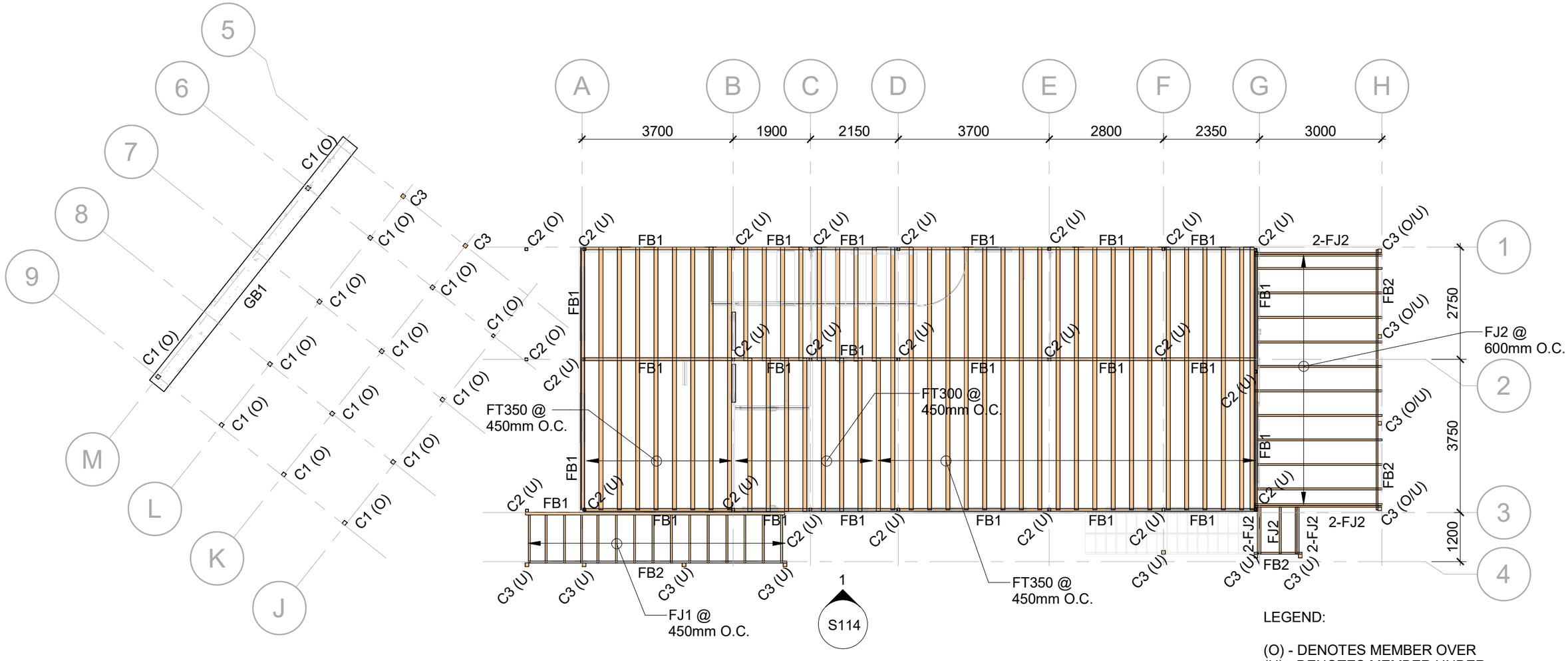
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FOUNDATION SCHEDULE		
MARK	DESCRIPTION	COMMENTS
C1	SHS 90x90x3 Grade 300	STEEL COLUMN
C2	SHS 75x75x6 Grade 300	STEEL COLUMN
C3	90x90 F17	TIMBER COLUMN
GB1	700Dx450W - 4-L12TM TOP AND BOTTOM	GROUND BEAM
P1	Ø450x3500D-4000D; 8N12 MAIN BARS, R8-250 TIES	SEE PIER DETAILS
P2	Ø450x1800D-3500D; 8N12 MAIN BARS, R8-250 TIES	SEE PIER DETAILS

NOTE:

ALL STEEL MEMBERS SHALL BE HOT-DIP GALVANIZED (HDG) IN ACCORDANCE WITH AS/NZS 4680. ALTERNATIVELY, PAINT-BASED COATINGS (E.G., ZINC-RICH PRIMERS OR POLYURETHANE SYSTEMS, ACL2, ACC2, IZS1, PUR2A) MAY BE USED, PROVIDED THEY COMPLY WITH AS/NZS 2312 AND AS/NZS 3750. REFER TO SHEET S106 FOR FURTHER DETAILS.

PUBLIC PORTFOLIO SAMPLE ? CLIENT, SITE, COMPANY AND PROJECT IDENTIFIERS REDACTED



LEGEND:

(O) - DENOTES MEMBER OVER
(U) - DENOTES MEMBER UNDER

PROPOSED LOWER FLOOR FRAMING PLAN

1 : 100

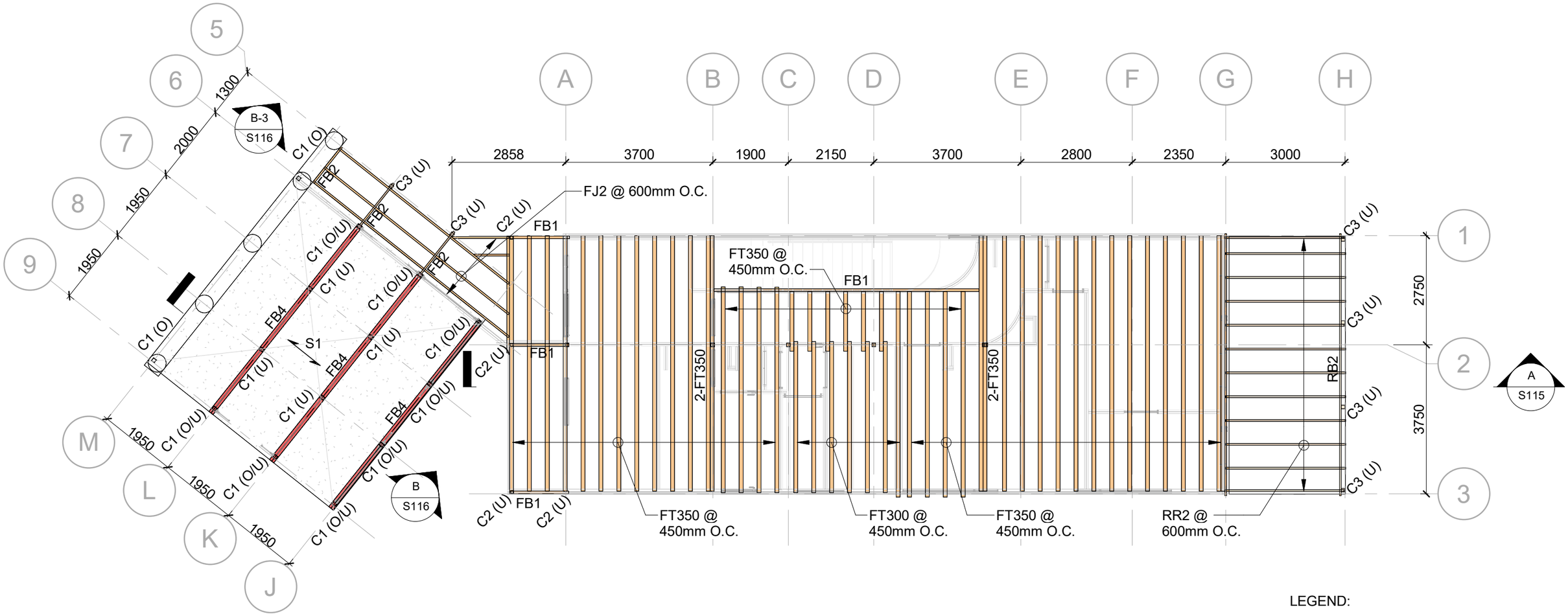
NOTE:

ALL STEEL MEMBERS SHALL BE HOT-DIP GALVANIZED (HDG) IN ACCORDANCE WITH AS/NZS 4680. ALTERNATIVELY, PAINT-BASED COATINGS (E.G., ZINC-RICH PRIMERS OR POLYURETHANE SYSTEMS, ACL2, ACC2, IZS1, PUR2A) MAY BE USED, PROVIDED THEY COMPLY WITH AS/NZS 2312 AND AS/NZS 3750. REFER TO SHEET S106 FOR FURTHER DETAILS.

LOWER FLOOR MEMBER SCHEDULE

MARK	DESCRIPTION	COMMENTS
BR1	16MM GALVANIZED ROD AND TURNBUCKLE	BRACING ROD
C1	SHS 90x90x3 Grade 300	STEEL COLUMN
C2	SHS 75x75x6 Grade 300	STEEL COLUMN
C3	90x90 F17	TIMBER COLUMN
FB1	215x65 GL18 (HYNE)	FLOOR BEARER BEAM
FB2	190x45 F17 KDHW	LOWER FLOOR BEAM
FJ1	170x45 MGP10	FLOOR JOISTS
FJ2	120x45 F17 KDHW @ 600mm O.C.	DECK JOISTS
FT300	REFER TO MANUFACTURER'S SPECIFICATION	FLOOR TRUSS SYSTEM (BY OTHERS)
FT350	REFER TO MANUFACTURER'S SPECIFICATION	FLOOR TRUSS SYSTEM (BY OTHERS)
GB1	700Dx450W - 4-L12TM TOP AND BOTTOM	GROUND BEAM

PUBLIC PORTFOLIO SAMPLE ? CLIENT, SITE, COMPANY AND PROJECT IDENTIFIERS REDACTED



PROPOSED UPPER FLOOR FRAMING PLAN

1 : 100

LEGEND:

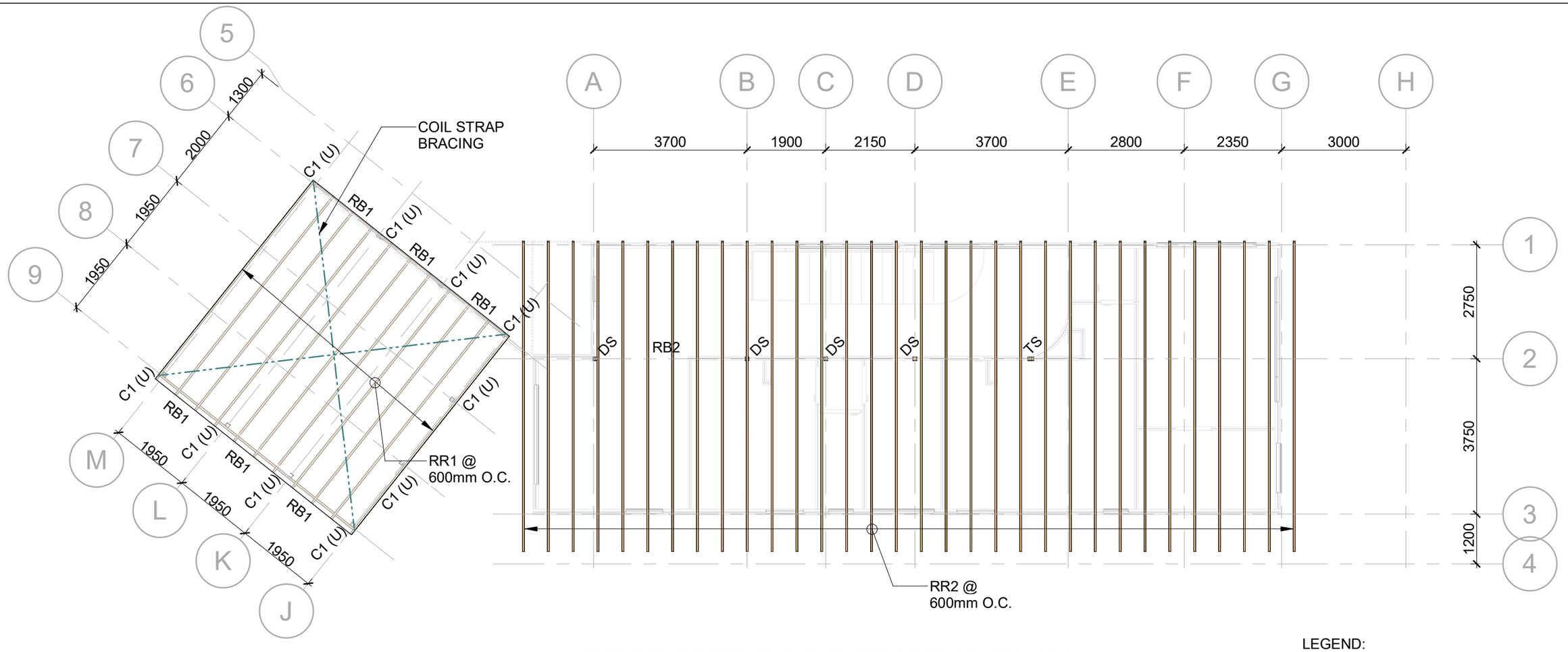
(O) - DENOTES MEMBER OVER
(U) - DENOTES MEMBER UNDER

UPPER FLOOR MEMBER SCHEDULE		
MARK	DESCRIPTION	COMMENTS
C1	SHS 90x90x3 Grade 300	STEEL COLUMN
C2	SHS 75x75x6 Grade 300	STEEL COLUMN
C3	90x90 F17	TIMBER COLUMN
FB1	215x65 GL18 (HYNE)	FLOOR BEARER BEAM
FB2	190x45 F17 KDHW	LOWER FLOOR BEAM
FB4	200UC22.3	GARAGE FLOOR BEAM
FJ2	120x45 F17 KDHW @ 600mm O.C.	DECK JOISTS
FT300	REFER TO MANUFACTURER'S SPECIFICATION	FLOOR TRUSS SYSTEM (BY OTHERS)
FT350	REFER TO MANUFACTURER'S SPECIFICATION	FLOOR TRUSS SYSTEM (BY OTHERS)
RB2	170x45 F17 KD HW	ROOF BEAM
RR2	170x45 F17 @ 600mm O.C.	ROOF RAFTERS
S1	120MM COMPOSITE SLAB 0.75BMT BONDEK WITH SL82 WIRE MESH REINFORCEMENT	CONCRETE SLAB

NOTE:

ALL STEEL MEMBERS SHALL BE HOT-DIP GALVANIZED (HDG) IN ACCORDANCE WITH AS/NZS 4680. ALTERNATIVELY, PAINT-BASED COATINGS (E.G., ZINC-RICH PRIMERS OR POLYURETHANE SYSTEMS, ACL2, ACC2, IZS1, PUR2A) MAY BE USED, PROVIDED THEY COMPLY WITH AS/NZS 2312 AND AS/NZS 3750. REFER TO SHEET S106 FOR FURTHER DETAILS.

PUBLIC PORTFOLIO SAMPLE ? CLIENT, SITE, COMPANY AND PROJECT IDENTIFIERS REDACTED



PROPOSED ROOF FRAMING PLAN

1 : 100

LEGEND:

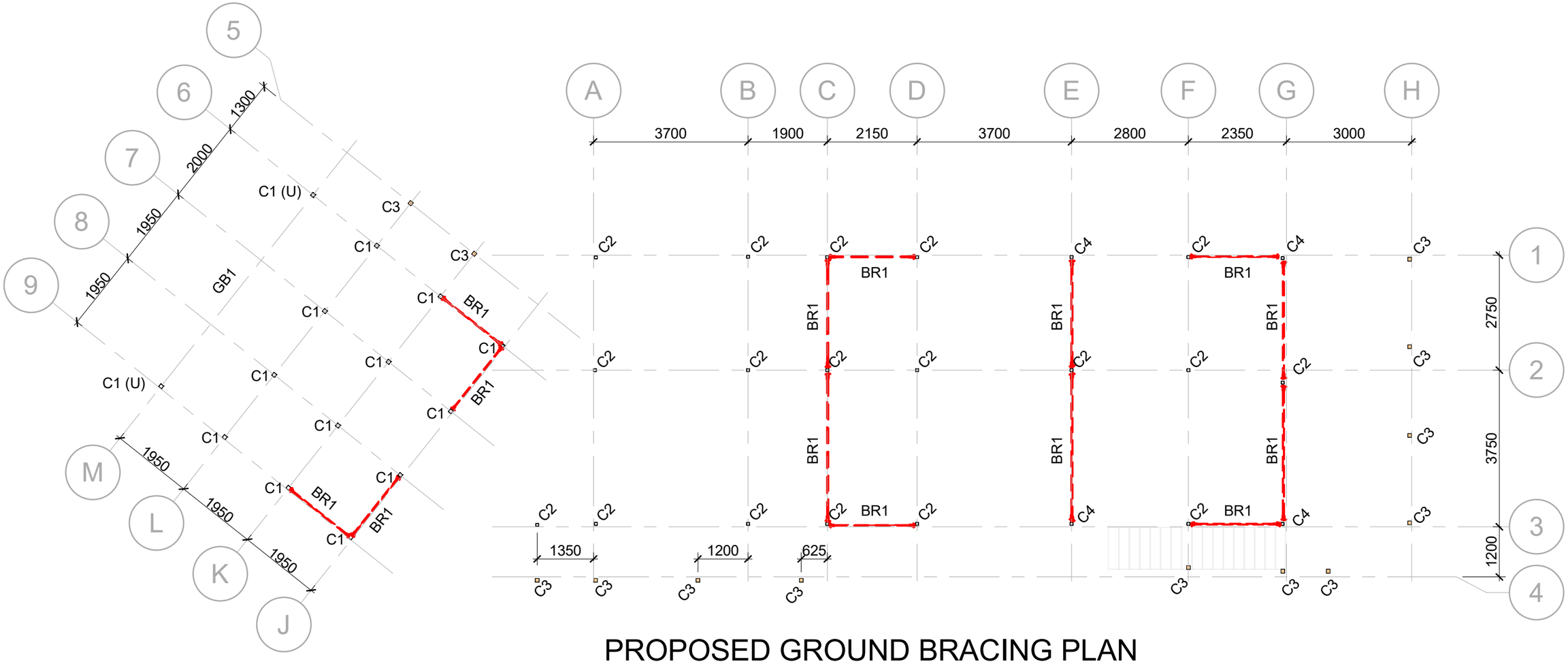
(O) - DENOTES MEMBER OVER
(U) - DENOTES MEMBER UNDER

ROOF MEMBER SCHEDULE		
MARK	DESCRIPTION	COMMENTS
C1	SHS 90x90x3 Grade 300	STEEL COLUMN
C2	SHS 75x75x6 Grade 300	STEEL COLUMN
DS	2-90x45	DOUBLE STUDS
RB1	170x45 F17 KD HW	TIMBER BEAM
RR1	220x45 F17 KD HW @ 600mm O.C.	ROOF RAFTERS
RR2	170x45 F17 @ 600mm O.C.	ROOF RAFTERS
TS	3-90x45	TRIPLE STUDS

NOTE:

ALL STEEL MEMBERS SHALL BE HOT-DIP GALVANIZED (HDG) IN ACCORDANCE WITH AS/NZS 4680. ALTERNATIVELY, PAINT-BASED COATINGS (E.G., ZINC-RICH PRIMERS OR POLYURETHANE SYSTEMS, ACL2, ACC2, IZS1, PUR2A) MAY BE USED, PROVIDED THEY COMPLY WITH AS/NZS 2312 AND AS/NZS 3750. REFER TO SHEET S106 FOR FURTHER DETAILS.

PUBLIC PORTFOLIO SAMPLE ? CLIENT, SITE, COMPANY AND PROJECT IDENTIFIERS REDACTED



PROPOSED GROUND BRACING PLAN

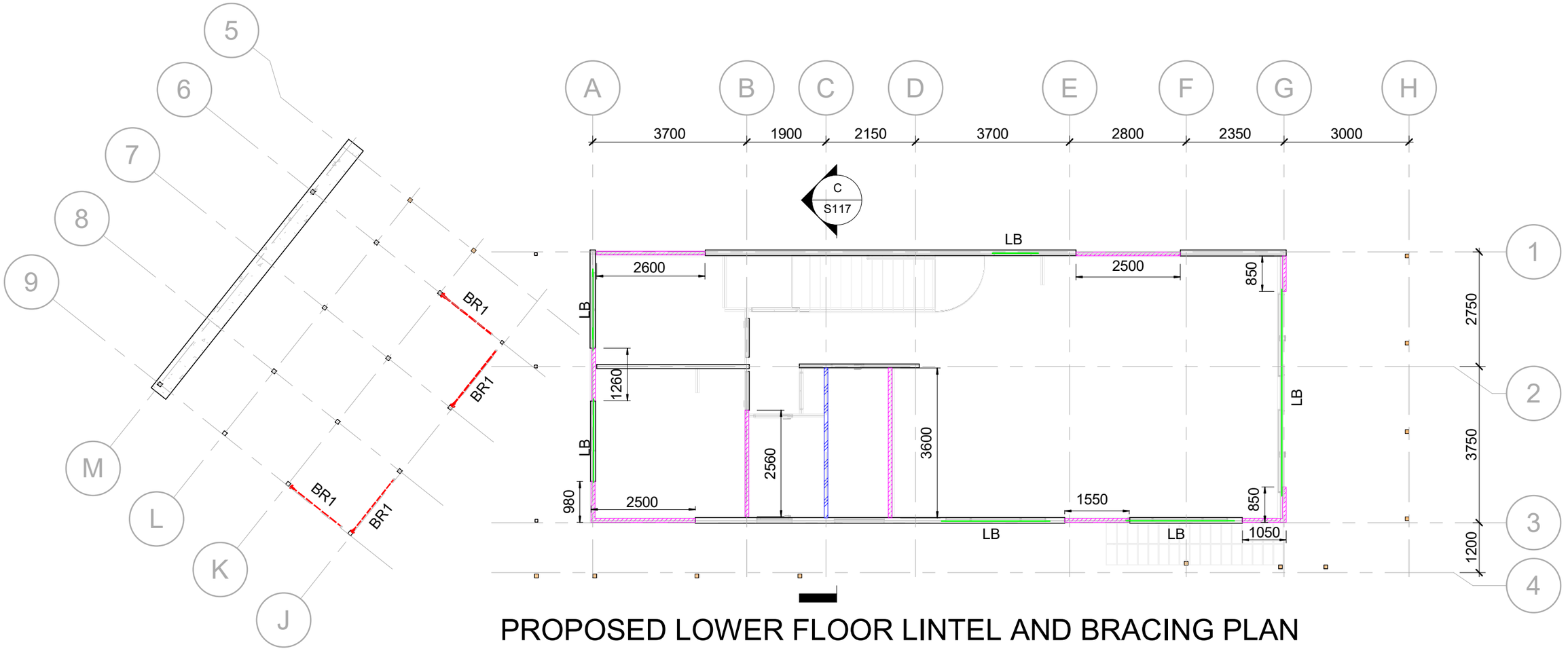
1 : 100

GROUND BRACING SCHEDULE		
MARK	DESCRIPTION	COMMENTS
BR1	16MM GALVANIZED ROD AND TURNBUCKLE	BRACING ROD
C1	SHS 90x90x3 Grade 300	STEEL COLUMN
C2	SHS 75x75x6 Grade 300	STEEL COLUMN
C3	90x90 F17	TIMBER COLUMN
GB1	700Dx450W - 4-L12TM TOP AND BOTTOM	GROUND BEAM

NOTE:

ALL STEEL MEMBERS SHALL BE HOT-DIP GALVANIZED (HDG) IN ACCORDANCE WITH AS/NZS 4680. ALTERNATIVELY, PAINT-BASED COATINGS (E.G., ZINC-RICH PRIMERS OR POLYURETHANE SYSTEMS, ACL2, ACC2, IZS1, PUR2A) MAY BE USED, PROVIDED THEY COMPLY WITH AS/NZS 2312 AND AS/NZS 3750. REFER TO SHEET S106 FOR FURTHER DETAILS.

PUBLIC PORTFOLIO SAMPLE ? CLIENT, SITE, COMPANY AND PROJECT IDENTIFIERS REDACTED



PROPOSED LOWER FLOOR LINTEL AND BRACING PLAN

1 : 100

WIND LOAD ALONG EAST

BRACING REQUIRED
99 kN

BRACING PROVIDED
111 kN

WIND LOAD ALONG NORTH

BRACING REQUIRED
33 kN

BRACING PROVIDED
63 kN

NOTE:

1.0 ALL DIMENSIONS MUST BE VERIFIED ON SITE.
2.0 UNDER GROUND BEAM, PROPER COMPACTION SHALL BE EMPLOYED WITH MINIMUM ALLOWABLE BEARING CAPACITY OF 50kPa.

LEGEND:

– PLYWOOD BRACING TYPE I (SEE S118 FOR DETAILS AND SCHEDULE)

– PLYWOOD BRACING TYPE H METHOD A (SEE S118 FOR DETAILS AND SCHEDULE)

– NON-LOAD BEARING WALL

– LOAD BEARING WALL

– BR1 ON COLUMN

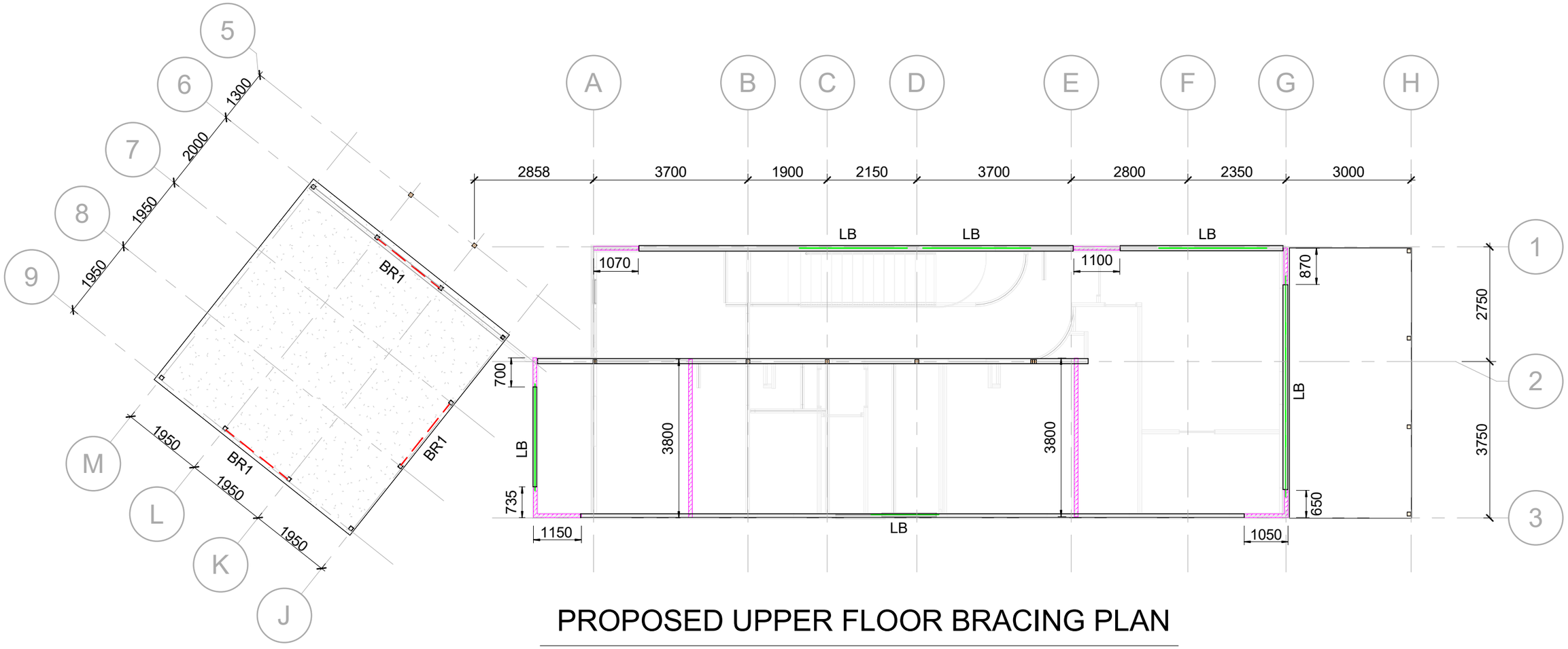
LOWER FLOOR BRACING SCHEDULE		
MARK	DESCRIPTION	COMMENTS
BR1	16MM GALVANIZED ROD AND TURNBUCKLE	BRACING ROD

NOTE:
ALL LINTELS / BEAMS DEEPER THAN 140mm TO HAVE DOUBLE STUD SUPPORTS.

TABLE 1.0

LINTEL SCHEDULES (LB)	
LINTELS SUPPORTING ROOF ONLY	
SPAN < 1100mm	90 x 45 MGP10
1100mm < SPAN < 1300mm	90 x 45 MGP12
1300mm < SPAN < 1500mm	120 x 45 MGP12
1500mm < SPAN < 1800mm	140 x 45 MGP12
1800mm < SPAN < 2100mm	190 x 35 MGP12
2100mm < SPAN < 2400mm	190 x 45 MGP12
2400mm < SPAN < 2700mm	240 x 45 MGP12
2700mm < SPAN < 3100mm	290 x 45 MGP12

PUBLIC PORTFOLIO SAMPLE ? CLIENT, SITE, COMPANY AND PROJECT IDENTIFIERS REDACTED



PROPOSED UPPER FLOOR BRACING PLAN

1 : 100

UPPER FLOOR BRACING SCHEDULE		
MARK	DESCRIPTION	COMMENTS
BR1	16MM GALVANIZED ROD AND TURNBUCKLE	BRACING ROD

NOTE:
ALL LINTELS / BEAMS DEEPER THAN 140mm TO HAVE DOUBLE STUD SUPPORTS.

TABLE 1.0

LINTEL SCHEDULES (LB)	
LINTELS SUPPORTING ROOF ONLY	
SPAN < 1100mm	90 x 45 MGP10
1100mm < SPAN < 1300mm	90 x 45 MGP12
1300mm < SPAN < 1500mm	120 x 45 MGP12
1500mm < SPAN < 1800mm	140 x 45 MGP12
1800mm < SPAN < 2100mm	190 x 35 MGP12
2100mm < SPAN < 2400mm	190 x 45 MGP12
2400mm < SPAN < 2700mm	240 x 45 MGP12
2700mm < SPAN < 3100mm	290 x 45 MGP12

WIND LOAD ALONG EAST

BRACING REQUIRED
44 kN

BRACING PROVIDED
62 kN

WIND LOAD ALONG NORTH

BRACING REQUIRED
14 kN

BRACING PROVIDED
25 kN

NOTE:
1.0 ALL DIMENSIONS MUST BE VERIFIED ON SITE.
2.0 UNDER GROUND BEAM, PROPER COMPACTION SHALL BE EMPLOYED WITH MINIMUM ALLOWABLE BEARING CAPACITY OF 50kPa.

LEGEND:

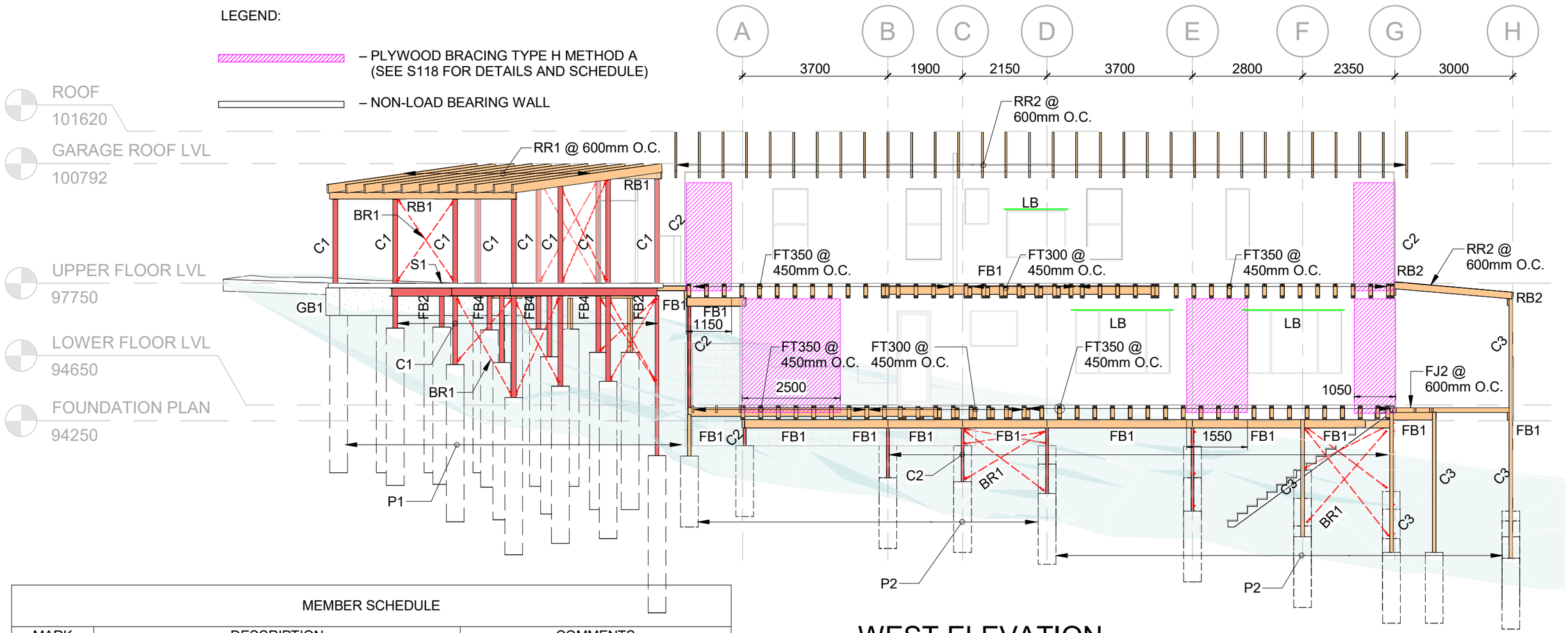
– PLYWOOD BRACING TYPE H METHOD A (SEE S118 FOR DETAILS AND SCHEDULE)

– NON-LOAD BEARING WALL

– LOAD BEARING WALL

– BR1 ON COLUMN

PUBLIC PORTFOLIO SAMPLE ? CLIENT, SITE, COMPANY AND PROJECT IDENTIFIERS REDACTED



WEST ELEVATION

1 : 100

MEMBER SCHEDULE		
MARK	DESCRIPTION	COMMENTS
C1	SHS 90x90x3 Grade 300	STEEL COLUMN
C2	SHS 75x75x6 Grade 300	STEEL COLUMN
C3	90x90 F17	TIMBER COLUMN
FB2	190x45 F17 KDHW	LOWER FLOOR BEAM
FB4	200UC22.3	GARAGE FLOOR BEAM
FJ2	120x45 F17 KDHW @ 600mm O.C.	DECK JOISTS
FT300	REFER TO MANUFACTURER'S SPECIFICATION	FLOOR TRUSS SYSTEM (BY OTHERS)
FT350	REFER TO MANUFACTURER'S SPECIFICATION	FLOOR TRUSS SYSTEM (BY OTHERS)
GB1	700Dx450W - 4-L12TM TOP AND BOTTOM	GROUND BEAM
LB	REFER TO TABLE 1.0	LINTEL BEAM BY DEFAULT U.N.O.
P1	Ø450x3500D-4000D; 8N12 MAIN BARS, R8-250 TIES	SEE PIER DETAILS
P2	Ø450x1800D-3500D; 8N12 MAIN BARS, R8-250 TIES	SEE PIER DETAILS
RB1	170x45 F17 KD HW	TIMBER BEAM
RB2	170x45 F17 KD HW	ROOF BEAM
RR1	220x45 F17 KD HW @ 600mm O.C.	ROOF RAFTERS
RR2	170x45 F17 @ 600mm O.C.	ROOF RAFTERS

NOTE:

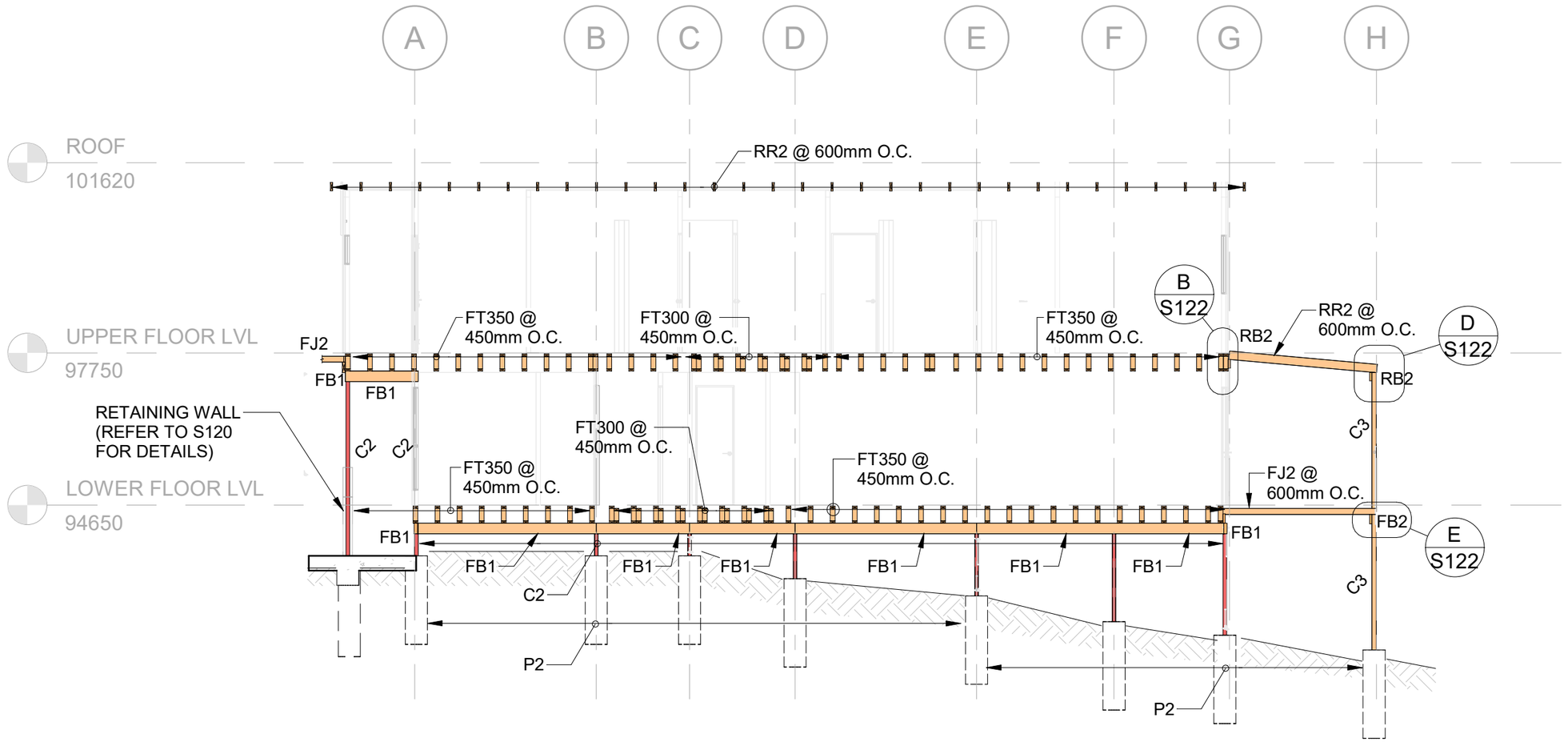
ALL STEEL MEMBERS SHALL BE HOT-DIP GALVANIZED (HDG) IN ACCORDANCE WITH AS/NZS 4680. ALTERNATIVELY, PAINT-BASED COATINGS (E.G., ZINC-RICH PRIMERS OR POLYURETHANE SYSTEMS, ACL2, ACC2, IZS1, PUR2A) MAY BE USED, PROVIDED THEY COMPLY WITH AS/NZS 2312 AND AS/NZS 3750. REFER TO SHEET S106 FOR FURTHER DETAILS.

NOTE:
ALL LINTELS / BEAMS DEEPER THAN 140mm TO HAVE DOUBLE STUD SUPPORTS.

TABLE 1.0

LINTEL SCHEDULES (LB)	
LINTELS SUPPORTING ROOF ONLY	
SPAN < 1100mm	90 x 45 MGP10
1100mm < SPAN < 1300mm	90 x 45 MGP12
1300mm < SPAN < 1500mm	120 x 45 MGP12
1500mm < SPAN < 1800mm	140 x 45 MGP12
1800mm < SPAN < 2100mm	190 x 35 MGP12
2100mm < SPAN < 2400mm	190 x 45 MGP12
2400mm < SPAN < 2700mm	240 x 45 MGP12
2700mm < SPAN < 3100mm	290 x 45 MGP12

PUBLIC PORTFOLIO SAMPLE ? CLIENT, SITE, COMPANY AND PROJECT IDENTIFIERS REDACTED



A SECTION A

S109

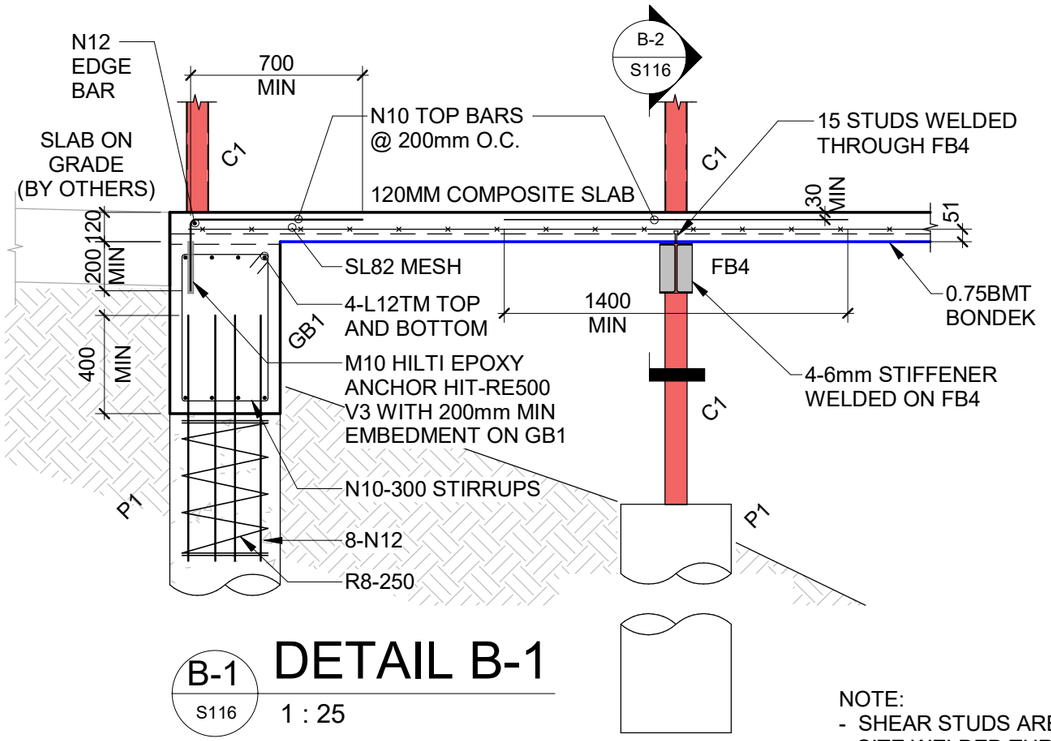
1 : 100

DWELLING MEMBER SCHEDULE		
MARK	DESCRIPTION	COMMENTS
C2	SHS 75x75x6 Grade 300	STEEL COLUMN
FB1	215x65 GL18 (HYNE)	FLOOR BEARER BEAM
FT300	REFER TO MANUFACTURER'S SPECIFICATION	FLOOR TRUSS SYSTEM (BY OTHERS)
FT350	REFER TO MANUFACTURER'S SPECIFICATION	FLOOR TRUSS SYSTEM (BY OTHERS)
P2	Ø450x1800D-3500D; 8N12 MAIN BARS, R8-250 TIES	SEE PIER DETAILS
RR2	170x45 F17 @ 600mm O.C.	ROOF RAFTERS

NOTE:

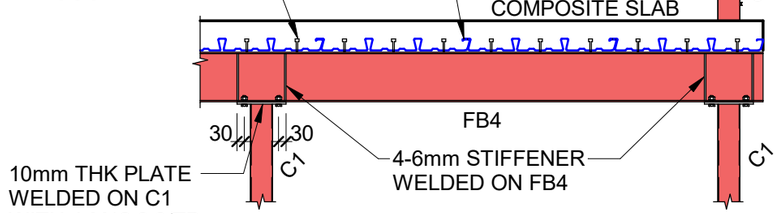
ALL STEEL MEMBERS SHALL BE HOT-DIP GALVANIZED (HDG) IN ACCORDANCE WITH AS/NZS 4680. ALTERNATIVELY, PAINT-BASED COATINGS (E.G., ZINC-RICH PRIMERS OR POLYURETHANE SYSTEMS, ACL2, ACC2, IZS1, PUR2A) MAY BE USED, PROVIDED THEY COMPLY WITH AS/NZS 2312 AND AS/NZS 3750. REFER TO SHEET S106 FOR FURTHER DETAILS.

PUBLIC PORTFOLIO SAMPLE ? CLIENT, SITE, COMPANY AND PROJECT IDENTIFIERS REDACTED



B-1 S116 DETAIL B-1

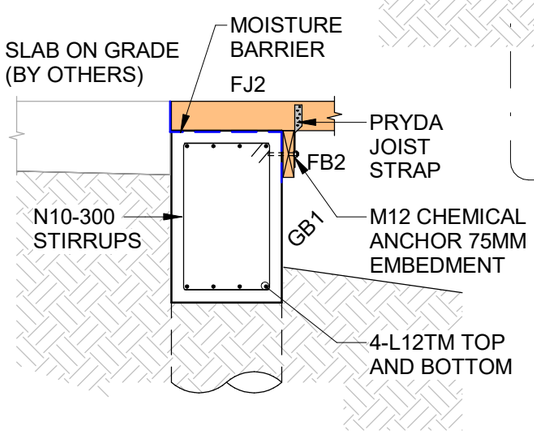
1 : 25



B-2 S116 SECTION B-2

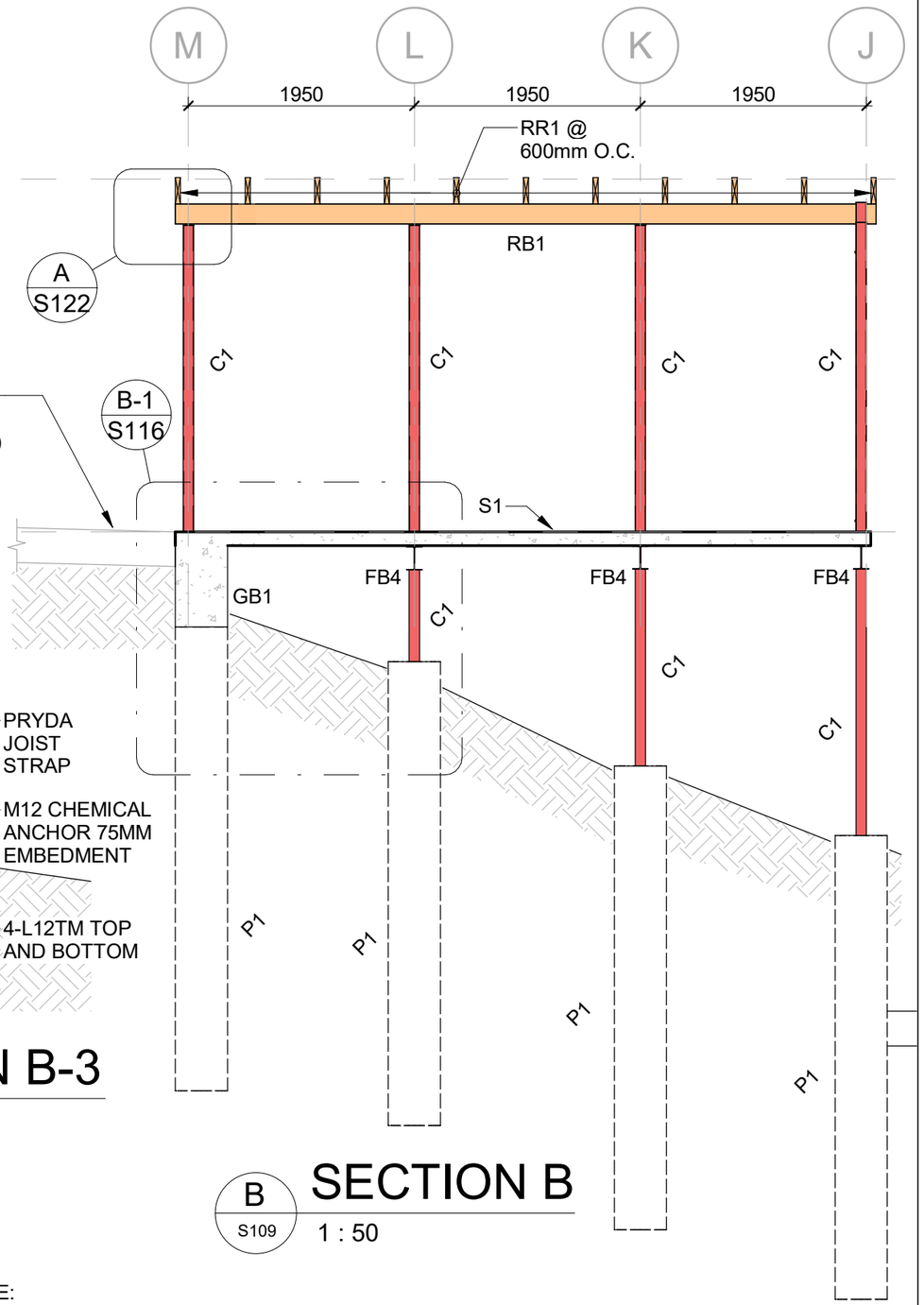
1 : 25

NOTE:
- SHEAR STUDS ARE SITE WELDED THROUGH THE BONDEK RIBS, USING A STUD WELDING GUN AND CERAMIC FERRULES.
- ALL BEAMS REQUIRING SITE WELDED SHEAR STUDS SHALL HAVE "NO PAINT" ZONES ON THE TOP FLANGE TO ENSURE PROPER STUD WELDING THROUGH BONDEK.
- SHEAR STUD SHALL BE AS PER BONDEK SLAB MANUAL (MINIMUM OF FIXING IN EACH PAN AT EACH COMPOSITE BEAM).



B-3 S109 SECTION B-3

1 : 25



B S109 SECTION B

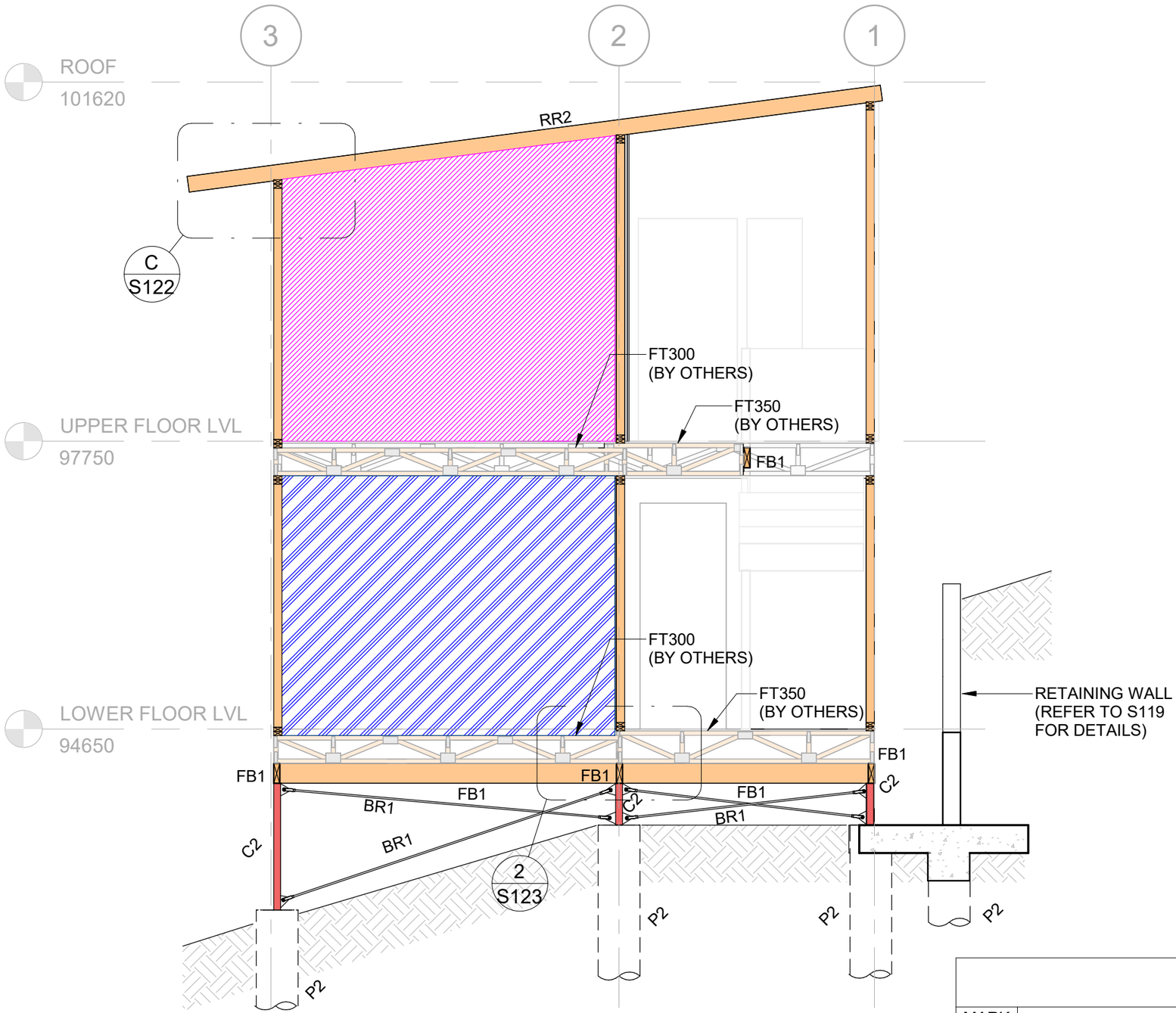
1 : 50

GARAGE MEMBER SCHEDULE		
MARK	DESCRIPTION	COMMENTS
C1	SHS 90x90x3 Grade 300	STEEL COLUMN
FB4	200UC22.3	GARAGE FLOOR BEAM
GB1	700Dx450W - 4-L12TM TOP AND BOTTOM	GROUND BEAM
P1	Ø450x3500D-4000D; 8N12 MAIN BARS, R8-250 TIES	SEE PIER DETAILS
RB1	170x45 F17 KD HW	TIMBER BEAM
RR1	220x45 F17 KD HW @ 600mm O.C.	ROOF RAFTERS
S1	120MM COMPOSITE SLAB 0.75BMT BONDEK WITH SL82 WIRE MESH REINFORCEMENT	CONCRETE SLAB

NOTE:

ALL STEEL MEMBERS SHALL BE HOT-DIP GALVANIZED (HDG) IN ACCORDANCE WITH AS/NZS 4680. ALTERNATIVELY, PAINT-BASED COATINGS (E.G., ZINC-RICH PRIMERS OR POLYURETHANE SYSTEMS, ACL2, ACC2, IZS1, PUR2A) MAY BE USED, PROVIDED THEY COMPLY WITH AS/NZS 2312 AND AS/NZS 3750. REFER TO SHEET S106 FOR FURTHER DETAILS.

PUBLIC PORTFOLIO SAMPLE ? CLIENT, SITE, COMPANY AND PROJECT IDENTIFIERS REDACTED



C
S112

SECTION C

1 : 50

LEGEND:

– PLYWOOD BRACING TYPE I (SEE S118 FOR DETAILS AND SCHEDULE)

– PLYWOOD BRACING TYPE H METHOD A (SEE S118 FOR DETAILS AND SCHEDULE)

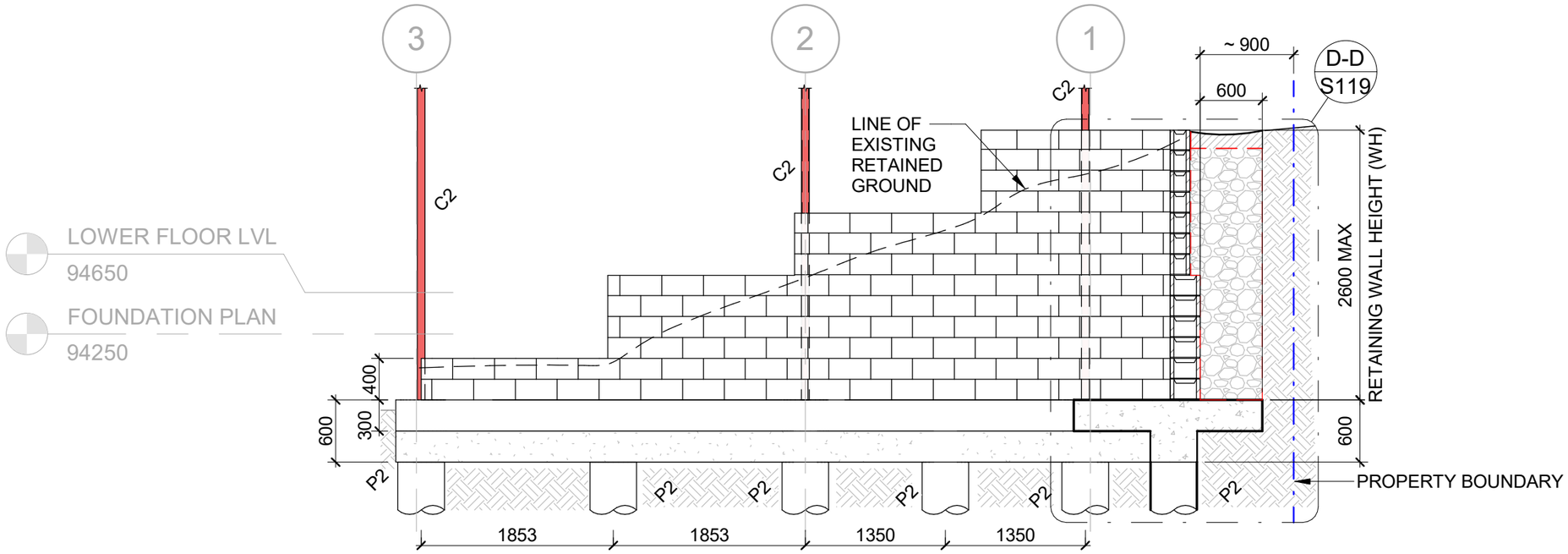
NOTE:

ALL STEEL MEMBERS SHALL BE HOT-DIP GALVANIZED (HDG) IN ACCORDANCE WITH AS/NZS 4680. ALTERNATIVELY, PAINT-BASED COATINGS (E.G., ZINC-RICH PRIMERS OR POLYURETHANE SYSTEMS, ACL2, ACC2, IZS1, PUR2A) MAY BE USED, PROVIDED THEY COMPLY WITH AS/NZS 2312 AND AS/NZS 3750. REFER TO SHEET S106 FOR FURTHER DETAILS.

BRACING MEMBER SCHEDULE

MARK	DESCRIPTION	COMMENTS
BR1	16MM GALVANIZED ROD AND TURNBUCKLE	BRACING ROD
C2	SHS 75x75x6 Grade 300	STEEL COLUMN
FT300	REFER TO MANUFACTURER'S SPECIFICATION	FLOOR TRUSS SYSTEM (BY OTHERS)
FT350	REFER TO MANUFACTURER'S SPECIFICATION	FLOOR TRUSS SYSTEM (BY OTHERS)
P2	Ø450x1800D-3500D; 8N12 MAIN BARS, R8-250 TIES	SEE PIER DETAILS

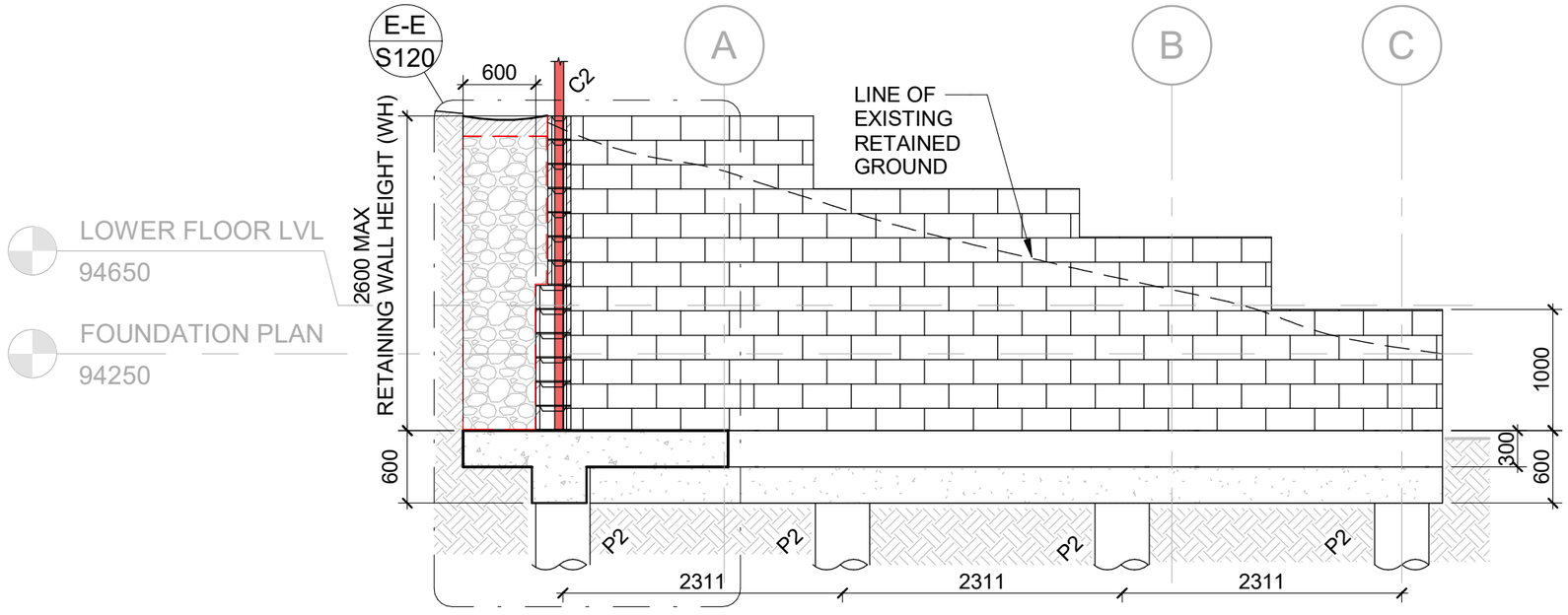
PUBLIC PORTFOLIO SAMPLE ? CLIENT, SITE, COMPANY AND PROJECT IDENTIFIERS REDACTED



SECTION D

D / S107

1 : 50

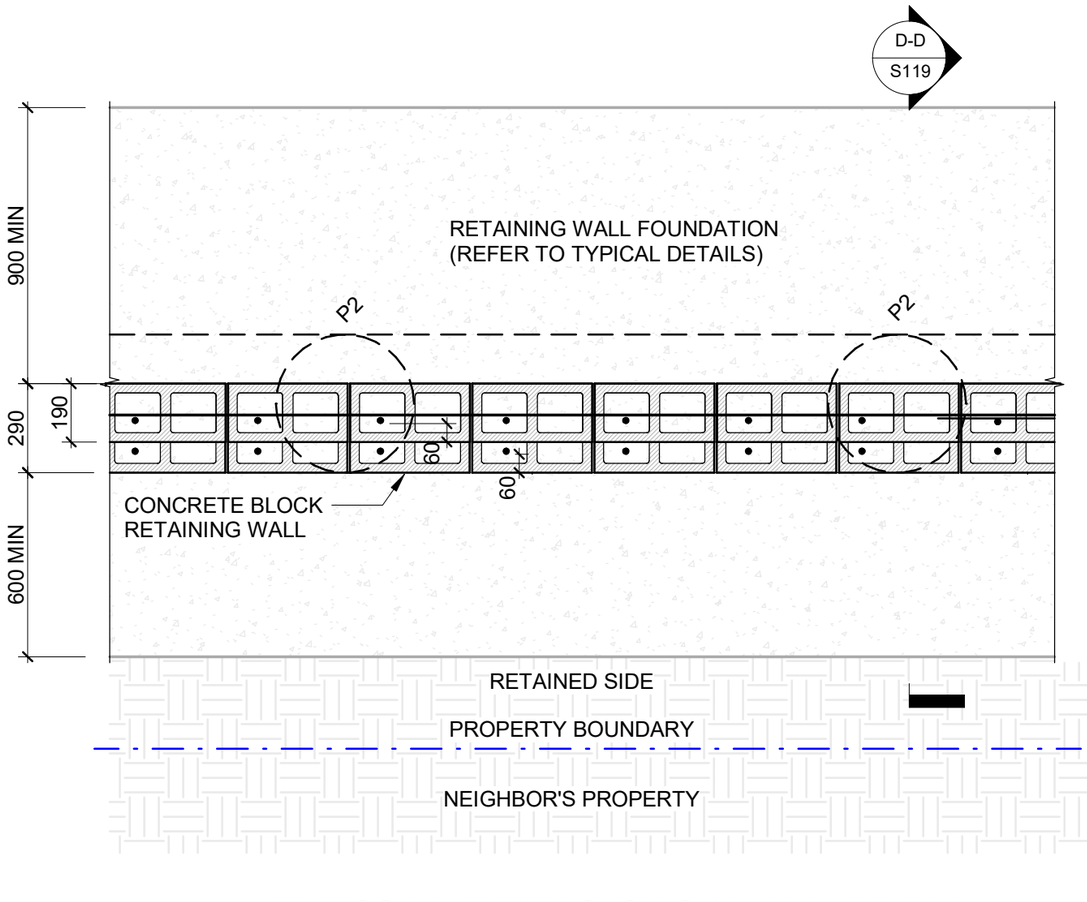


SECTION E

E / S107

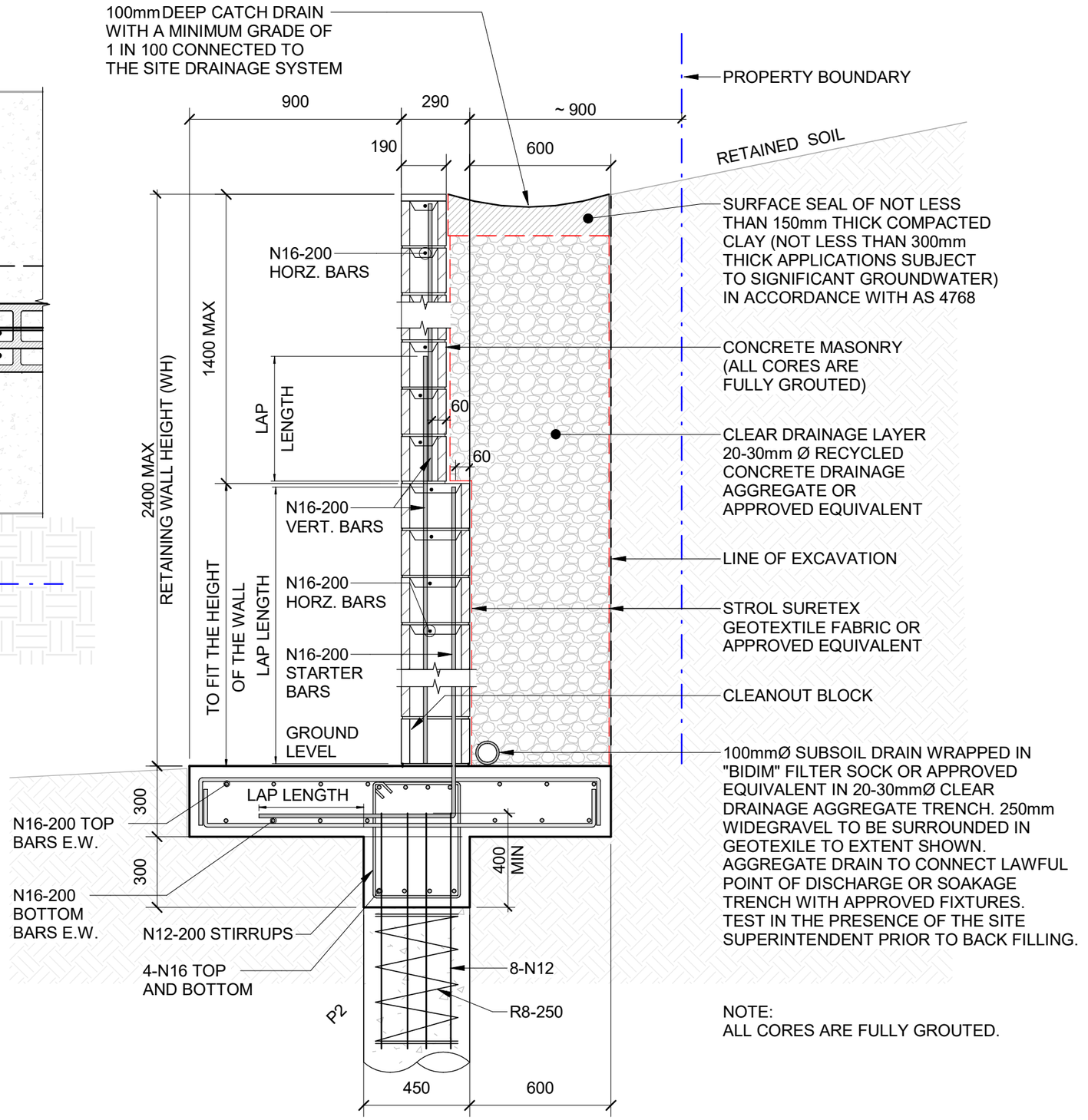
1 : 50

PUBLIC PORTFOLIO SAMPLE ? CLIENT, SITE, COMPANY AND PROJECT IDENTIFIERS REDACTED



TYPICAL RETAINING WALL PLAN

1 : 20

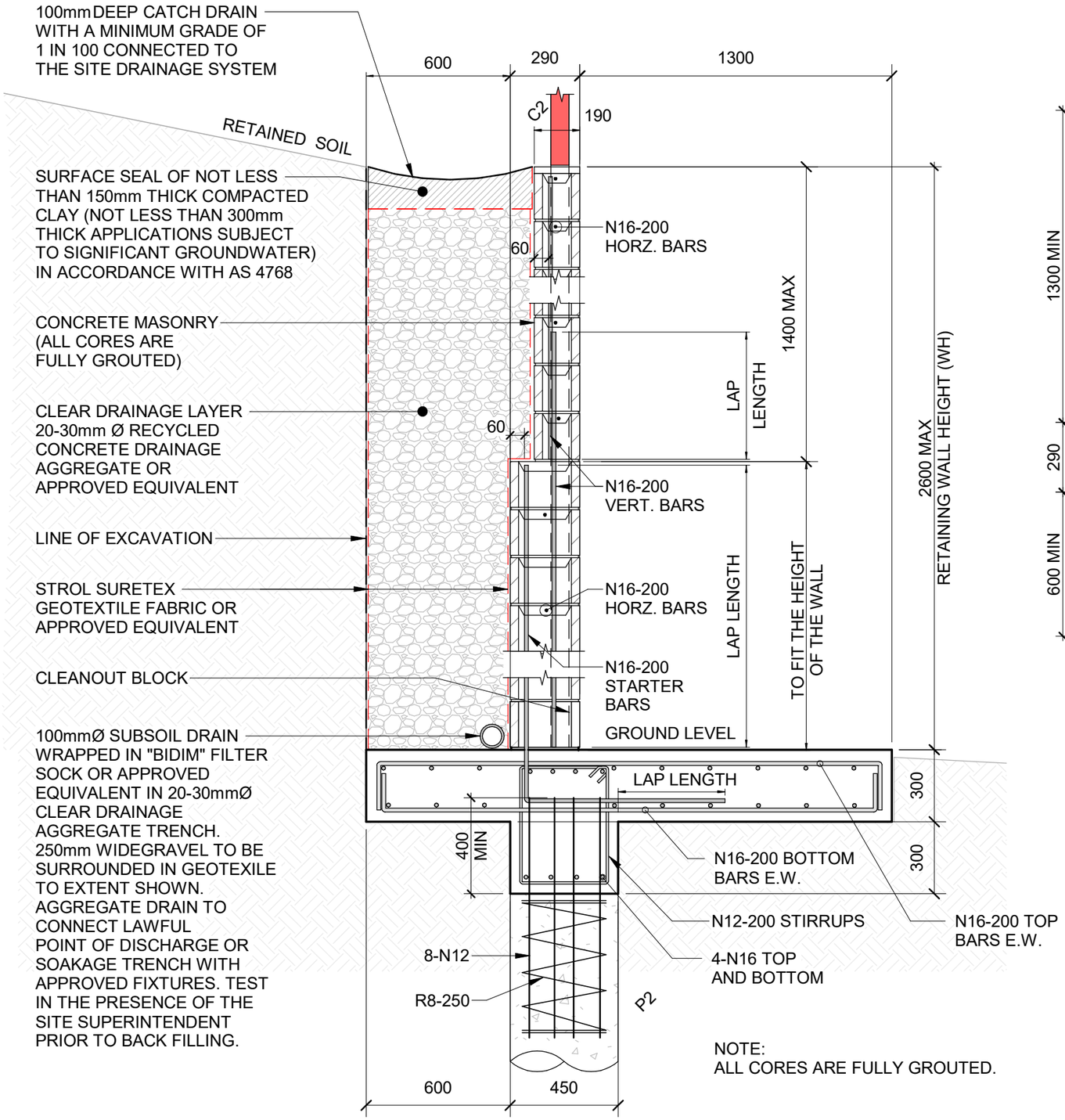


TYPICAL RETAINING WALL DETAILS (EAST)

D-D
S118

1 : 20

PUBLIC PORTFOLIO SAMPLE? CLIENT, SITE, COMPANY AND PROJECT IDENTIFIERS REDACTED

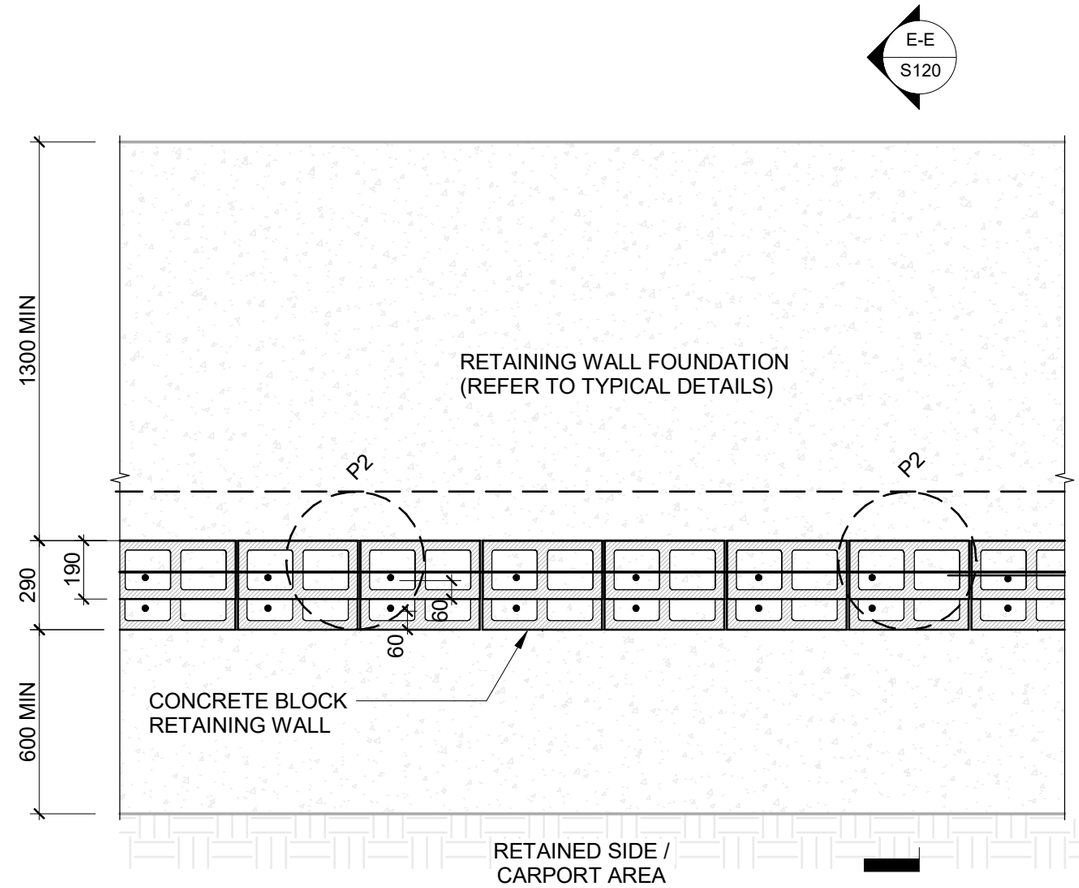


NOTE:
ALL CORES ARE FULLY GROUTED.

E-E
S118

TYPICAL RETAINING WALL DETAILS (NORTH)

1 : 20



TYPICAL RETAINING WALL PLAN1

1 : 20

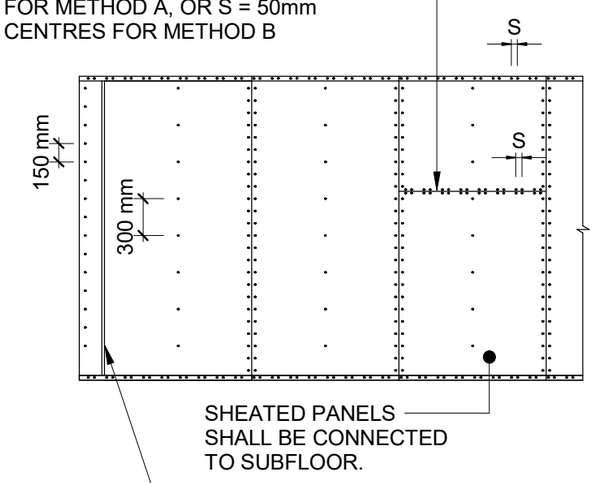
PUBLIC PORTFOLIO SAMPLE ? CLIENT, SITE, COMPANY AND PROJECT IDENTIFIERS REDACTED

TYPE OF BRACING	BRACING CAPACITY kN/m

PLYWOOD SHALL BE NAILED TO FRAME USING 30 x 2.8 Ø GALVANISED FLAT-HEAD NAILS OR EQUIVALENT

FOR METHOD A, M12 RODS SHALL BE USED AT EACH END OF SHEATHED SECTION TOP PLATE TO BOTTOM PLATE/FLOOR FRAM. METHOD B HAS NO RODS BUT SHEATHING SHALL BE NAILED TO TOP AND BOTTOM PLATES AND ANY HORIZONTAL JOINTS AT 50mm CENTRES.

HORIZONTAL BUTT JOINTS ARE PERMITTED, PROVIDED NAIL FIXED TO NOGGING AT S = 150mm CENTRES FOR METHOD A, OR S = 50mm CENTRES FOR METHOD B



MINIMUM PLYWOOD THICKNESS, mm

STRESS GRADE	STUDS SPACING, mm	
	450	600
F8	7	9
F11	6	7
F14	4	6
F27	4	4.5

FASTENER SPACING (S) mm	
TOP AND BOTTOM PLATE:	
— METHOD A	150
— METHOD B	50
VERTICAL EDGES	150
INTERMEDIATE STUDS	300

FIXING OF BOTTOM PLATE TO FLOOR FRAME OR SLAB

METHOD A:

M12 RODS AS SHOWN PLUS A 13kN CAPACITY CONNECTION AT MAX. 1200mm CETRES.

METHOD A 5.6

NOTE:
FOR PLYWOOD FIXED TO BOTH SIDES OF THE WALL, SEE CLAUSES 8.3.6.5 AND 8.3.6.10.

PLYWOOD BRACING "TYPE H - METHOD A"

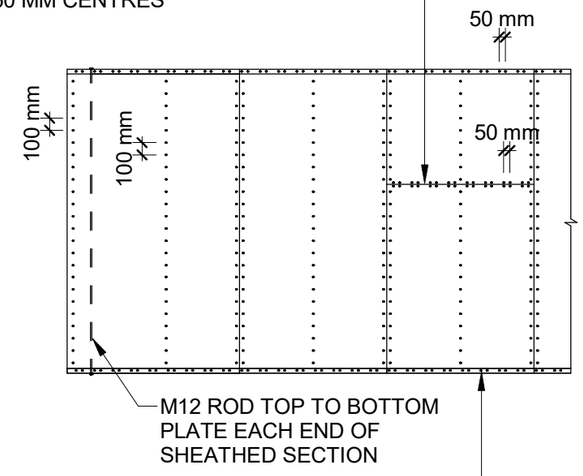
1 : 50

TYPE OF BRACING	BRACING CAPACITY kN/m

PLYWOOD SHALL BE NAILED TO FRAME USING 30 MM X 2.8 MM Ø GALVANIZED FLAT-HEAD NAILS OR EQUIVALENT. MINIMUM BRACING PANEL LENGTH SHALL BE 600 MM.

FOR METHOD A, M12 RODS SHALL BE USED AT EACH END OF SHEATHED SECTION TOP PLATE TO BOTTOM PLATE/FLOOR FRAM. METHOD B HAS NO RODS BUT SHEATHING SHALL BE NAILED TO TOP AND BOTTOM PLATES AND ANY HORIZONTAL JOINTS AT 50mm CENTRES.

HORIZONTAL BUTT JOINTS PERMITTED, PROVIDED FIXED TO NOGGING AT 50 MM CENTRES



MINIMUM PLYWOOD THICKNESS, mm

STRESS GRADE	STUDS SPACING, mm		
	450	600	
NO NOGGING (EXCEPT HORIZONTAL BUTT JOINTS)			
F11	7	7	7.6

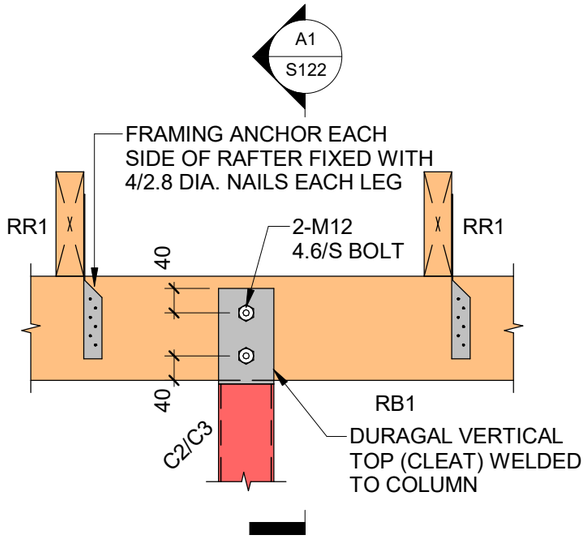
FASTENER SPACING (S) mm	
TOP AND BOTTOM PLATE:	50
VERTICAL EDGES	100
INTERMEDIATE STUDS	100

NOTE:
FOR PLYWOOD FIXED TO BOTH SIDES OF THE WALL, SEE CLAUSES 8.3.6.5 AND 8.3.6.10.

PLYWOOD BRACING "TYPE I"

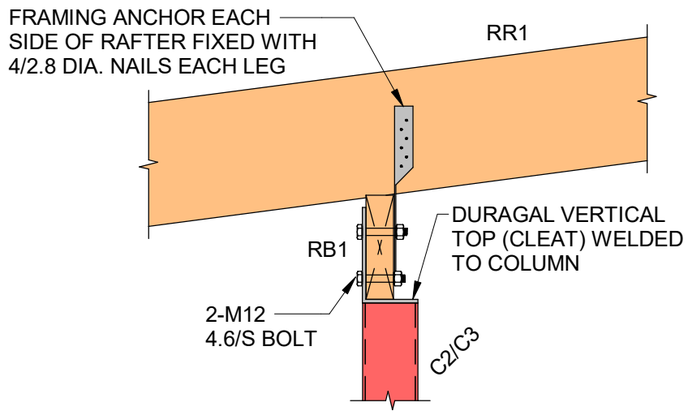
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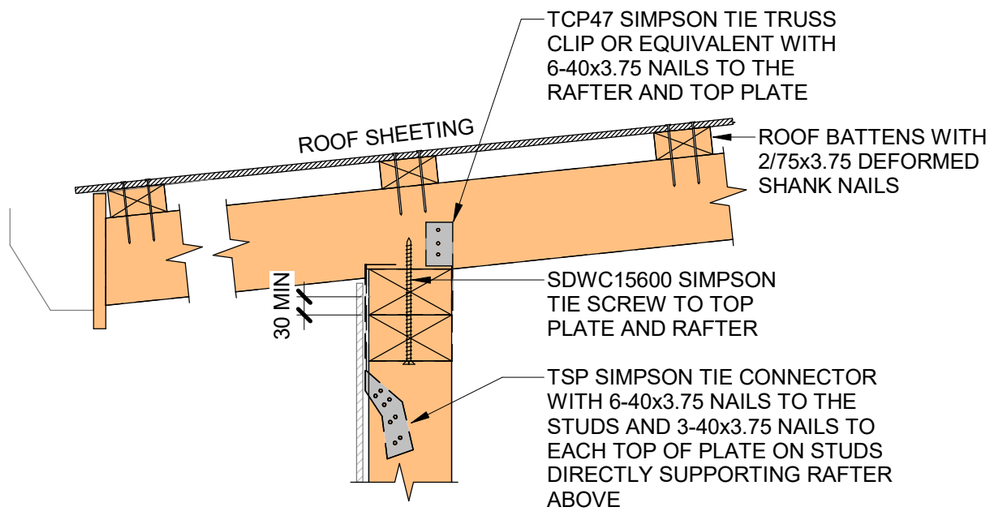
A S116 **DETAIL A**

1 : 10



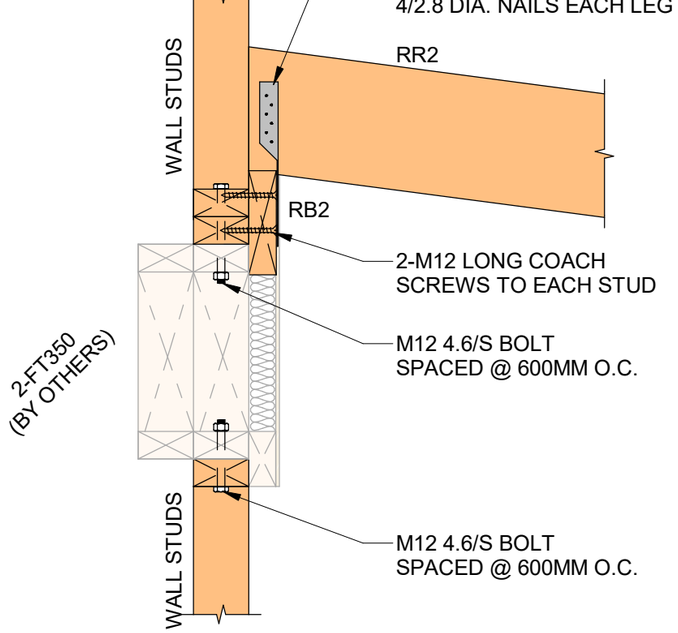
A1 S122 **DETAIL A1**

1 : 10



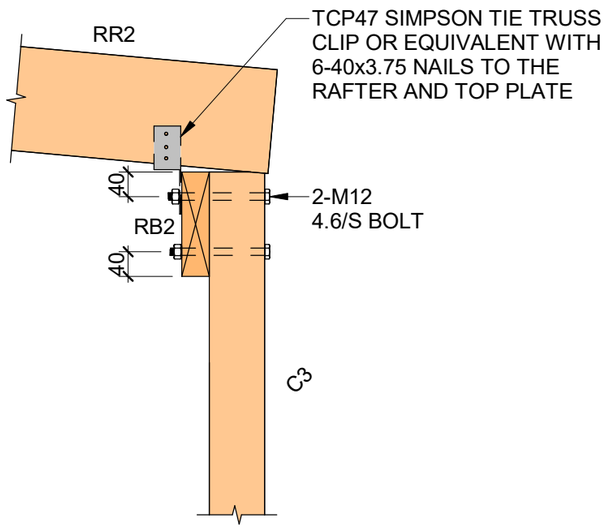
C S117 **DETAIL C**

1 : 10



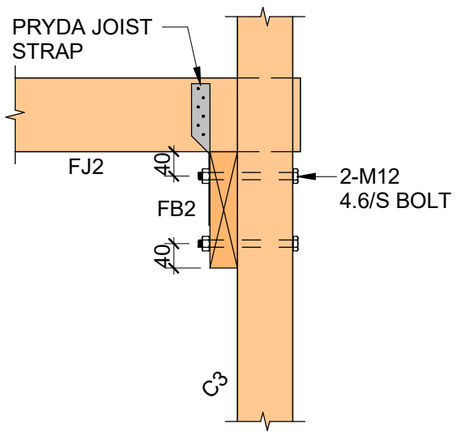
B S115 **DETAIL B**

1 : 10



D S115 **DETAIL D**

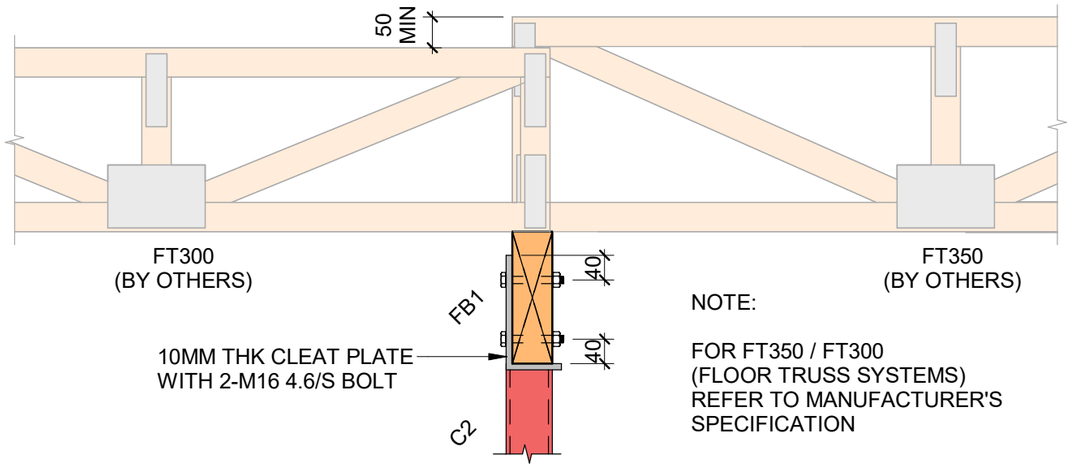
1 : 10



E S115 **DETAIL E**

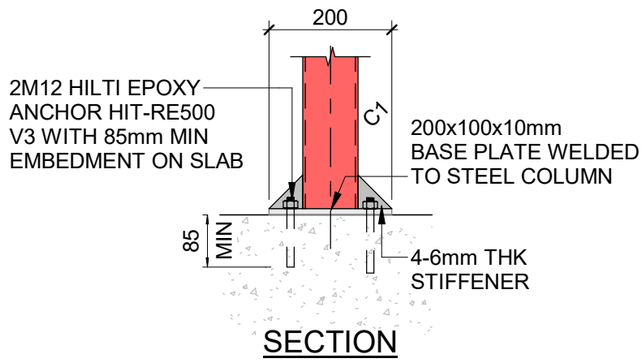
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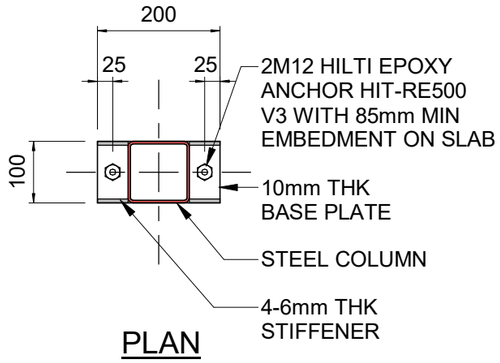
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TYPICAL STEP DOWN DETAIL

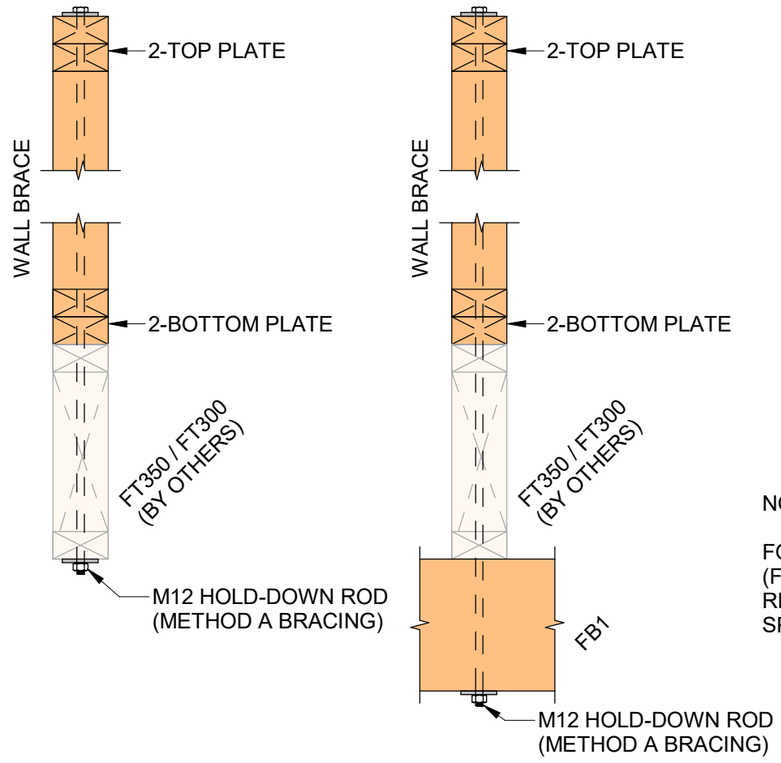
1 : 10





TYPICAL COLUMN TO SLAB CONNECTION

1 : 10

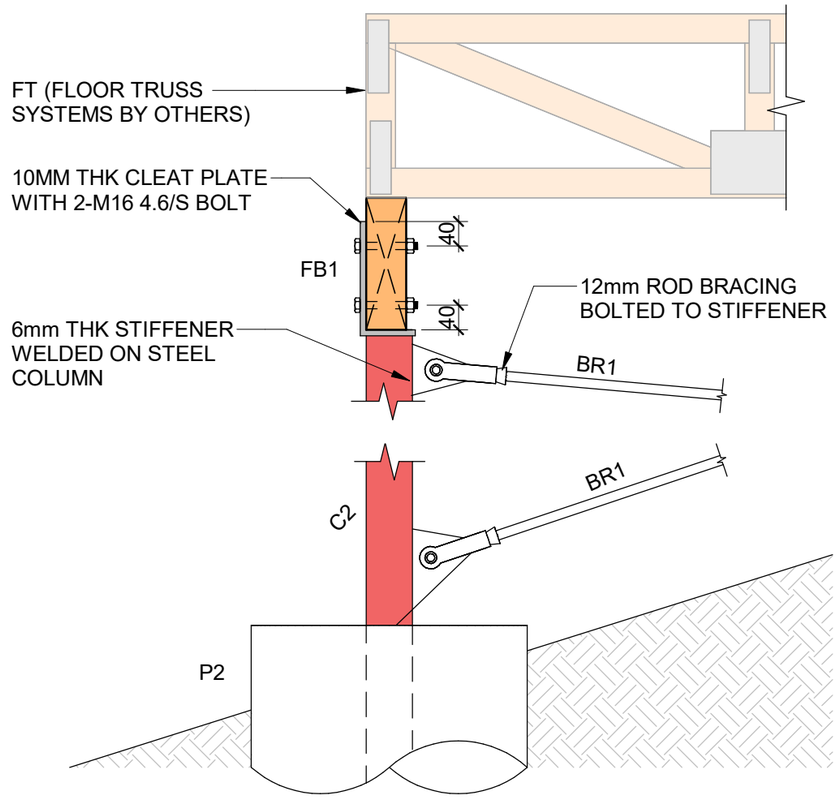


NOTE:

FOR FT350 / FT300
(FLOOR TRUSS SYSTEMS)
REFER TO MANUFACTURER'S
SPECIFICATION

TYPICAL HOLD DOWN CONNECTION

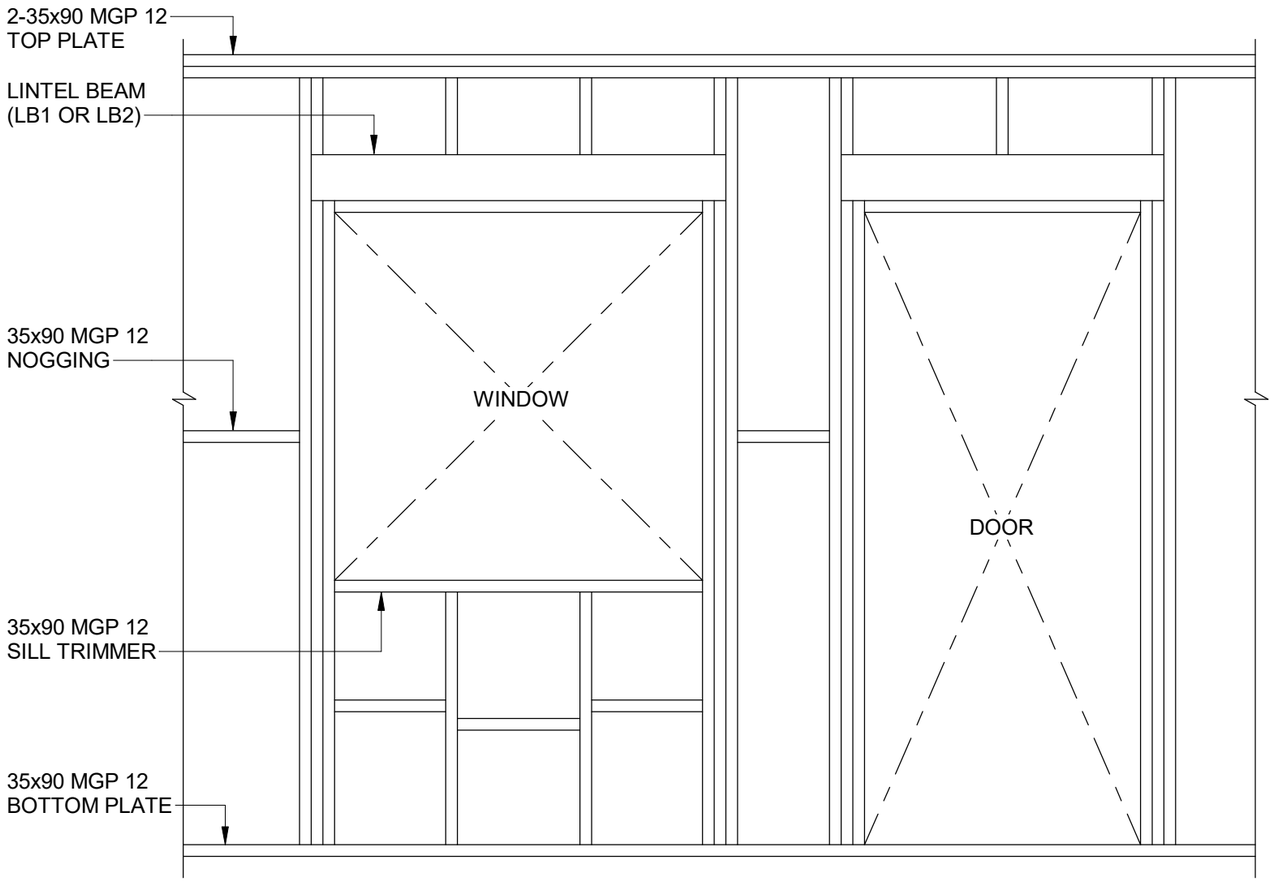
1 : 10



TYPICAL BRACING CONNECTION

1 : 10

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LINTEL AND WALL FRAMING DETAIL

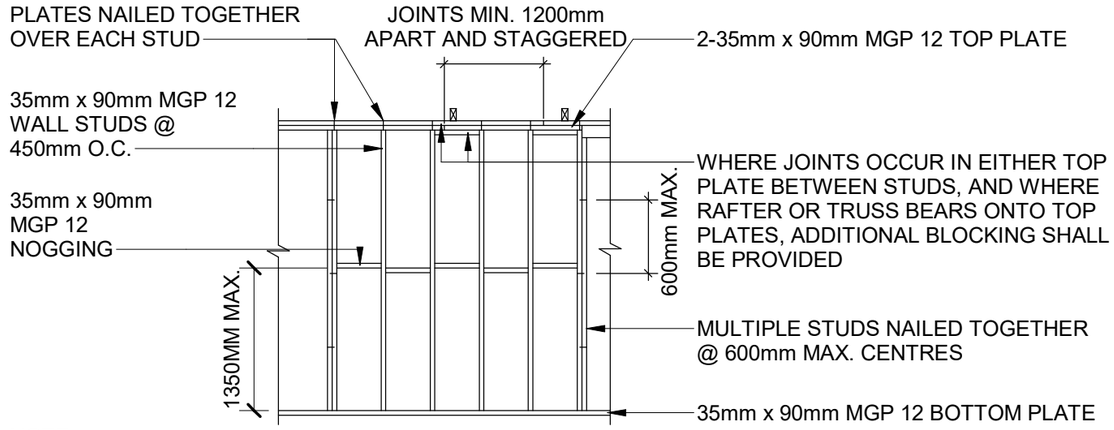
1 : 20

STUD LAMINATION:

STUDS SHALL BE NAILED TOGETHER WITH ONE 75mm NAIL AT MAXIMUM 600mm CENTRES.

WHERE SCREW ARE USED IN LIEU OF NAILS, THEY SHALL BE MINIMUM NO. 10 SCREWS. THEY MAY BE AT THE SAME SPACING AND PATTERN, PROVIDED THEY PENETRATE A MINIMUM OF 75% INTO THE THICKNESS OF THE FINAL RECEIVING MEMBER.

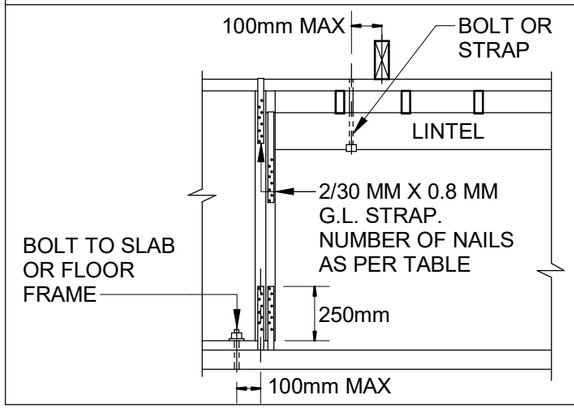
POSTS SHALL NOT BE NAIL-LAMINATED.



NOTE:
REFER TO SECTION 9 FOR OTHER NOMINAL FIXING REQUIREMENTS INCLUDING PLATES TO STUDS.

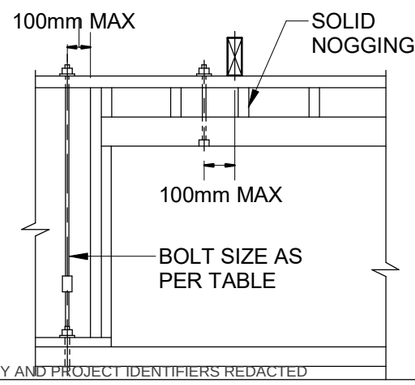
TYPICAL WALL STUDS DETAIL

UPLIFT CAPACITY OF BEAM / LINTEL TIE-DOWN CONNECTIONS						
POSITION OF TIE-DOWN CONNECTION	UPLIFT CAPACITY, KN					
	UNSEASONED TIMBER			SEASONED TIMBER		
BEAMS/LINTELS/RING BEAMS TO STUDS/POSTS/FLOOR	J2	J3	J4	JD4	JD5	JD6
	4 NAILS EACH END OF STRAP M10 BOLT TO FLOOR					
	17	12	8.4	12	9.8	7.4
	6 NAILS EACH END OF STRAP M12 BOLT TO FLOOR					
	17	17	12	17	14	10



THE TOP PLATE SHALL BE FIXED OR TIED TO THE LINTEL WITHIN 100 MM OF EACH RAFTER/TRUSS, OR THE RAFTER/TRUSS FIXED DIRECTLY TO THE LINTEL WITH A FIXING OF EQUIVALENT TIE-DOWN STRENGTH TO THAT REQUIRED FOR THE RAFTER/ TRUSS.

UPLIFT CAPACITY OF BEAM / LINTEL TIE-DOWN CONNECTIONS						
POSITION OF TIE-DOWN CONNECTION	UPLIFT CAPACITY, KN					
	UNSEASONED TIMBER			SEASONED TIMBER		
BEAMS/LINTELS/RING BEAMS TO STUDS/POSTS/FLOOR	J2	J3	J4	JD4	JD5	JD6
BOLT						
M10	18	18	18	15	12	9.0
M12	27	27	26	20	16	12



THE TOP PLATE SHALL BE FIXED OR TIED TO THE LINTEL WITHIN 100 MM OF EACH RAFTER/TRUSS, OR THE RAFTER/TRUSS FIXED DIRECTLY TO THE LINTEL WITH A FIXING OF EQUIVALENT TIE-DOWN STRENGTH TO THAT REQUIRED FOR THE RAFTER/TRUSS.

PUBLIC PORTFOLIO SAMPLE ? CLIENT, SITE, COMPANY AND PROJECT IDENTIFIERS REDACTED

NOMINAL FIXINGS FOR TIMBER MEMBERS		
JOINT		MINIMUM FIXING FOR EACH JOINT
FLOOR FRAMING		
BEARER TO TIMBER STUMP/POST		4/75 x 3.33mm OR 5/75 x 3.05mm MACHINE-DRIVEN NAILS PLUS 1/30 x 0.8mm G.I. STRAP OVER BEARER AND FIXED BOTH ENDS TO STUMP WITH 4/2.8mm DIA. EACH END; OR 1/M10 BOLT THROUGH BEARER HALVED TO STUMP; OR 1/M12 CRANKED BOLT FIXED VERTICALLY THROUGH BEARER AND BOLTED TO STUMP PLUS 4/75 x 3.33mm OR 5/75 x 3.05mm MACHINE-DRIVEN NAILS
BEARER TO MASONRY COLUMN/WALL/PIER (EXCLUDING MASONRY VENEER CONSTRUCTION)		1/M10 BOLT OR 1/50 x 4mm MILD STEEL BAR FIXED TO BEARER WITH M10 BOLT AND CAST INTO MASONRY (TO FOOTING)
FLOOR JOIST TO BEARER		2/75 x 3.05mm DIA. NAILS
WALL FRAMING		
PLATES TO STUDS AND PLATES TO RING BEAMS AT 600mm MAX. CENTRES		PLATES UP TO 38mm THICK - 2/75 x 3.05mm NAILS THROUGH PLATE; PLATES 38 TO 50mm THICK - 2/90 x 3.06mm NAILS THROUGH PLATE;OR 2/75 x 3.05mm NAILS SKEWED THROUGH STUD INTO PLATE
NOGGINGS TO STUDS		2/75 x 3.05mm NAIL SKEWED OR THROUGH NAILED
TIMBER BRACES TO STUDS OR PLATES/RING BEAMS		2/50 x 2.80mm DIA. NAILS AT EACH JOINT
LINTEL TO JAMB STUD		2/75 x 3.05mm DIA. NAILS AT EACH JOINT
BOTTOM PLATES TO JOISTS	NON-LOADBEARING AND NON-BRACING WALLS	2/2.8mm DIA. NAILS AT MAX. 600mm CENTRES
	OTHER WALLS	PLATES UP TO 38mm THICK - 2/75 x 3.05mm NAILS AT MAX. 600mm CENTRES PLATES 38 TO 50mm THICK - 2/90 x 3.05mm NAILS AT MAX. 600mm CENTRES
BOTTOM PLATES TO CONCRETE SLAB		ONE 75mm MASONRY NAIL (HAND-DRIVER AT SLAB EDGE), SCREW OR BOLT AT NOT MORE THAN1200mm CENTRES
RIBBON PLATE TO TOP PLATE		SEE CLAUSE 2.5 AND CLAUSE 9.2.8
MULTIPLE STUDS		1/75 x 3.05mm NAIL AT 600 CENTRES MAX.
POSTS TO BEARERS OR JOISTS		1/M12 OR 2/M10 BOLTS (UNLESS OTHERWISE SPECIFIED)

NOTE:

ALL FIXINGS SHALL BE AS PER TABLE ABOVE UNLESS NOTED OTHERWISE ON THE SECTION DETAILS.

PUBLIC PORTFOLIO SAMPLE ? CLIENT, SITE, COMPANY AND PROJECT IDENTIFIERS REDACTED

