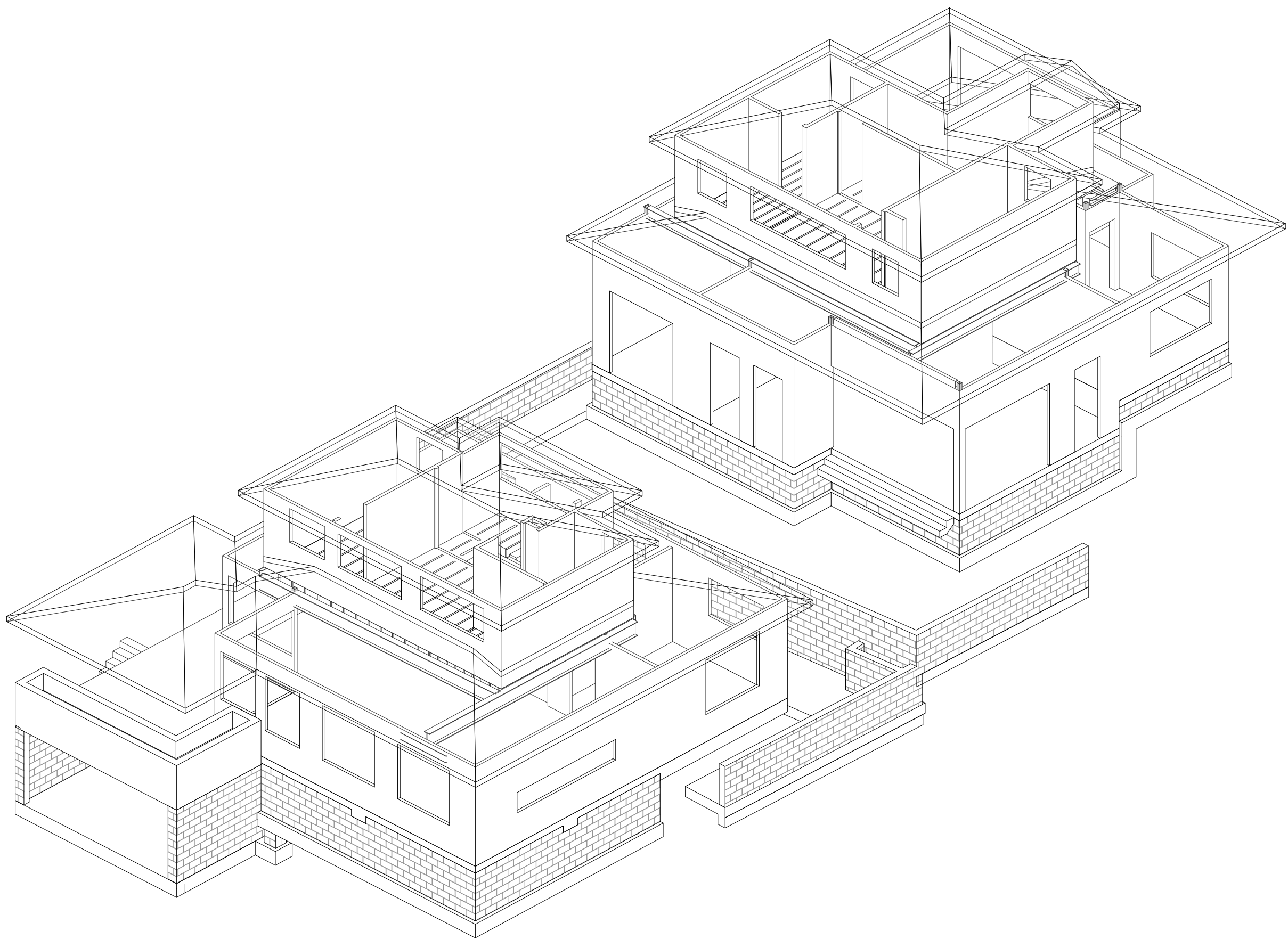


NEW DWELLINGS

1 UNDERCLIFF ROAD, FRESHWATER NSW 2096

STRUCTURAL SERVICES



DRAWING LIST	
DRAWING No	DRAWING TITLE
S0.00	COVER SHEET
S0.01	GENERAL NOTES SHEET 1
S0.02	GENERAL NOTES SHEET 2
S0.03	GENERAL NOTES SHEET 3
S0.10	TYPICAL FOOTING DETAILS SHEET
S0.11	TYPICAL RETAINING WALL DETAILS SHEET
S0.12	TYPICAL SLAB ON GROUND AND SUSPENDED SLAB DETAILS SHEET
S0.14	TYPICAL STEELWORK DETAILS SHEET
S0.15	TYPICAL BLOCKWORK WALL DETAILS SHEET
S1.00	SYDNEY WATER SERVICING COORDINATION PLAN & SECTION
S1.01	FOOTING PLAN - HILL STREET
S1.11	GROUND FLOOR GA PLAN - HILL STREET
S1.21	FIRST FLOOR GENERAL ARRANGEMENT PLAN - HILL STREET
S1.31	ROOF GENERAL ARRANGEMENT PLAN - HILL STREET
S1.51	HILL STREET SECTIONS AND DETAILS - SHEET 1
S2.01	LOWER GROUND FLOOR GA PLAN - UNDERCLIFF ROAD
S2.11	GROUND FLOOR GA PLAN - UNDERCLIFF ROAD
S2.21	FIRST FLOOR GA PLAN - UNDERCLIFF ROAD
S2.31	ROOF GENERAL ARRANGEMENT PLAN - UNDERCLIFF ROAD
S2.51	UNDERCLIFF ROAD SECTIONS AND DETAILS - SHEET 1

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This drawing has been assigned an electronic code that signifies the drawing has been checked and approved by:

Issue	Description	Date	Drawn	Approved
1	CONSTRUCTION ISSUE	16.05.2022	CB	SF
B	ISSUED FOR CONSTRUCTION CERTIFICATE	12.04.2022	CB	SF
A	PRELIMINARY ISSUE	11.03.2022	CB	SF

1:1

0

10m

20m

North

Client
BY GROUP PTY LTD

Architect

plannedspace



CONSULTANTS ENGINEERS | MANAGERS | INFRASTRUCTURE PLANNERS | DEVELOPMENT CONSULTANTS

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Project
NEW DWELLINGS

1 UNDERCLIFF ROAD,
FRESHWATER NSW 2096

Drawing Title
STRUCTURAL
COVER SHEET

Drawn CB	Date MARCH 2022	Scale A1	Q.A. Check Checker		Date
Designed SF	Project No. NSW211942	Dwg No. S0.00	Issue 1		17/05/2022 9:31:49 AM

FOR CONSTRUCTION

B:\301\NSW\211942 - 1 Undercliff Rd Freshwater\NSW211942_STR_R01.rvt 17/05/2022 9:31:49 AM

THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS' DRAWINGS, SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ANY DISCREPANCY SHALL BE REFERRED TO THE STRUCTURAL ENGINEER BEFORE PROCEEDING WITH THE WORK.

G2. DO NOT COMMENCE CONSTRUCTION USING THESE STRUCTURAL DRAWINGS UNTIL A CONSTRUCTION CERTIFICATE IS ISSUED BY THE PRINCIPLE AUTHORITY.

G3. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE RELEVANT CURRENT STANDARDS AUSTRALIA CODES AND WITH THE BUILDING CODE OF AUSTRALIA.

G4. ALL DIMENSIONS RELEVANT TO SETTING OUT AND OFF-SITE WORK SHALL BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION AND FABRICATION IS COMMENCED

G5. DIMENSIONS SHALL NOT BE OBTAINED BY SCALING THE STRUCTURAL DRAWINGS.

G6. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS STATED OTHERWISE. ALL LEVELS ARE EXPRESSED IN METRES. THE RL'S SHOWN ON THESE DRAWINGS ARE FOR THE SOLE PURPOSE OF ASSISTING THE STRUCTURAL DOCUMENTATION. THEY MUST NOT BE USED FOR CONSTRUCTION. REFER TO THE ARCHITECT'S DRAWINGS FOR ALL CONSTRUCTION RL'S.

G7. DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE STRUCTURE IN A STABLE CONDITION AND ENSURING NO PART SHALL BE OVER STRESSED UNDER CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL PROVIDE TEMPORARY BRACING, SHORING AND PROPPING IN ORDER TO KEEP THE BUILDING WORKS AND EXCAVATIONS STABLE AT ALL TIMES.

G8. THE BUILDER IS RESPONSIBLE FOR THE ADEQUACY OF ALL TEMPORARY WORKS INCLUDING SHORING, PROPPING AND BRACING. WHERE NECESSARY THE CONTRACTOR IS TO ENGAGE A STRUCTURAL ENGINEER TO DESIGN AND CERTIFY THE TEMPORARY WORKS

G9. THE METHOD OF CONSTRUCTION AND THE MAINTENANCE OF SAFETY DURING CONSTRUCTION ARE THE RESPONSIBILITY OF THE BUILDER. IF ANY STRUCTURAL ELEMENT PRESENTS DIFFICULTY IN RESPECT OF CONSTRUCTABILITY OR SAFETY, THE MATTER SHALL BE REFERRED TO THE STRUCTURAL ENGINEER FOR RESOLUTION BEFORE PROCEEDING WITH THE WORK.

G10. IF THERE IS A DISCREPANCY IN MEMBER SIZES FOR ANY COMPONENT, ASSUME FOR PRICING PURPOSE ONLY THAT THE LARGER OR MORE EXPENSIVE SIZE IS CORRECT. REFER TO STRUCTURAL ENGINEER FOR DECISION BEFORE DETAILING OR CONSTRUCTION.

G11. THE APPROVAL OF A SUBSTITUTION SHALL BE SOUGHT FROM THE ENGINEER BUT IS NOT AN AUTHORISATION FOR A VARIATION. ANY VARIATIONS INVOLVED MUST BE TAKEN UP WITH THE ARCHITECT OR PROJECT MANAGER BEFORE THE WORK COMMENCES.

G12. ANY DISCREPANCIES OR OMISSIONS SHALL BE REFERRED TO THE ENGINEER FOR A DECISION BEFORE PROCEEDING WITH THE WORK

G13. THE WRITTEN CONSENT OF ADJOINING PROPERTY OWNERS SHALL BE OBTAINED BEFORE INSTALLATION OF UNDERPINNING, ANCHORING WORKS, DRAINAGE LINES OR ANY OTHER WORKS BEYOND THE PROPERTY BOUNDARY.

G14. UNLESS AGREED OR SPECIFIED OTHERWISE, THE BUILDER IS REQUIRED TO NOTIFY AND ALLOW TIME FOR THE STRUCTURAL ENGINEER TO INSPECT THE WORKS AT THE FOLLOWING POINTS, COMPLETED EXCAVATION, FORMWORK, REINFORCEMENT, MEMBRANES AND EMBEDMENT'S PRIOR TO PLACEMENT OF CONCRETE, COMPLETED ERECTED STRUCTURAL ELEMENTS PRIOR TO COVERING

G15. THE BUILDER SHALL GIVE 48 HOURS NOTICE FOR ALL ENGINEERING INSPECTIONS.

G16. SITE INSPECTIONS DO NOT RELIEVE THE BUILDER OF RESPONSIBILITY FOR THE COMPLETENESS AND CORRECTNESS OF THEIR WORK.

G17. WHERE STRUCTURAL ELEMENTS ARE DESIGNED AND CERTIFIED BY OTHER PARTIES, THE CONTRACTOR SHALL OBTAIN WRITTEN CERTIFICATION PRIOR TO PROCEEDING WITH ANY CONSTRUCTION WORK WHICH WOULD PREVENT INSPECTION OR REMEDIAL WORKS TO BE UNDERTAKEN. ALL CERTIFICATIONS ARE TO BE ISSUED TO THE STRUCTURAL ENGINEER FOR REVIEW PRIOR TO WORK PROCEEDING.

G18. THE WORD 'ENGINEER' USED IN THESE NOTES REFERS TO AN EMPLOYEE OR NOMINATED REPRESENTATIVE OF ACOR CONSULTANTS PTY.LTD.

FOUNDATIONS

F1. FOOTINGS HAVE BEEN DESIGNED FOR AN ALLOWABLE BEARING INTENSITY OF 1000 KPA ON CLASS IV SANDSTONE IN ACCORDANCE WITH:

GEOTECHNICAL REPORT No. : 20/2365

PREPARED BY : STS GEOTECHNICS PTY. LTD.

IF A GEOTECHNICAL INVESTIGATION HAS NOT BEEN MADE, THE FOUNDATION CONDITIONS AND REACTIVITY CLASS ARE AN ASSUMPTION AND MUST BE CONFIRMED BY TRIAL EXCAVATIONS BY THE BUILDER.

FOUNDATION MATERIAL SHALL BE APPROVED FOR THIS BEARING PRESSURE BEFORE PLACING MEMBRANE, REINFORCEMENT OR CONCRETE.

F2. RESIDENTIAL SLABS AND FOOTINGS HAVE BEEN DESIGNED FOR A REACTIVITY CLASS P-->A TO AS2870.

F3. BEARING MATERIAL AT BASES OF PIERS TO BE CONFIRMED BY AN EXPERIENCED GEOTECHNICAL ENGINEER OR ENGINEERING GEOLOGIST.

F4. EXCAVATION NEAR FOOTINGS SHALL NOT EXTEND BELOW FOUNDATION LEVEL WITHOUT THE ENGINEERS APPROVAL.

F5. ALL FOOTINGS SHALL BE LOCATED CENTRALLY UNDER WALLS AND COLUMNS UNLESS NOTED OTHERWISE.

F6. DO NOT BACKFILL RETAINING WALLS (OTHER THAN CANTILEVER WALLS) UNTIL FLOOR CONSTRUCTION AT TOP AND BOTTOM IS COMPLETED.

F7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ANY EXCAVATION IN A STABLE CONDITION WITHOUT ADVERSELY AFFECTING SURROUNDING PROPERTY INCLUDING SERVICES. THIS INCLUDES OBTAINING ALL NECESSARY APPROVALS FOR SHORING AND ANCHOR SYSTEMS.

F8. ANY OVER EXCAVATION SHALL BE BACKFILLED WITH CONCRETE GRADE N15.

F9. FOUNDATIONS ADJACENT TO SERVICES ETC. SHALL BE EXTENDED DOWN SUCH THAT THE INFLUENCE LINE OF THE FOUNDATION IS BELOW THE ADJACENT SERVICE.

	ALL WORKMANSHIP AND MATERIALS SHALL COMPLY WITH AS 3600 CURRENT EDITIONS WITH AMENDMENTS, EXCEPT WHERE VARYED BY THE CONTRACT DOCUMENTS.																																																									
C2.	ALL CONCRETE SUPPLY SHALL COMPLY WITH AS1379. CONCRETE PROPERTIES AND COVER TO REINFORCING.																																																									
	<table border="1"> <tr> <th colspan="2">ELEMENT</th><th colspan="2">COVER (mm)</th><th>f_c (MPa) (28 DAYS)</th><th>MAX 56 DAY SHRINKAGE</th></tr> <tr> <td colspan="2">BORED PILES</td><td colspan="2">70</td><td>40</td><td>800</td></tr> <tr> <td rowspan="2">SLAB ON GROUND</td><td>EXTERNAL</td><td>T 50</td><td>B 50</td><td>32</td><td rowspan="2">650</td></tr> <tr> <td>INTERNAL</td><td>T 50</td><td>B 50</td><td>32</td></tr> <tr> <td colspan="2">STRIP FOOTINGS</td><td colspan="2">50</td><td>40</td><td>800</td></tr> <tr> <td colspan="2">PAD FOOTINGS</td><td colspan="2">50</td><td>40</td><td>800</td></tr> <tr> <td rowspan="2">SUSPENDED SLABS</td><td>EXTERNAL</td><td>T 50</td><td>B 40</td><td>40</td><td rowspan="2">650</td></tr> <tr> <td>INTERNAL</td><td>T 30</td><td>B 30</td><td>40</td></tr> <tr> <td rowspan="2">BEAMS</td><td>EXTERNAL</td><td>T 50</td><td>B 50</td><td>40</td><td rowspan="2"></td></tr> <tr> <td>INTERNAL</td><td>T 30</td><td>B 50</td><td>40</td></tr> </table>				ELEMENT		COVER (mm)		f _c (MPa) (28 DAYS)	MAX 56 DAY SHRINKAGE	BORED PILES		70		40	800	SLAB ON GROUND	EXTERNAL	T 50	B 50	32	650	INTERNAL	T 50	B 50	32	STRIP FOOTINGS		50		40	800	PAD FOOTINGS		50		40	800	SUSPENDED SLABS	EXTERNAL	T 50	B 40	40	650	INTERNAL	T 30	B 30	40	BEAMS	EXTERNAL	T 50	B 50	40		INTERNAL	T 30	B 50	40
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	MAXIMUM AGGREGATE SIZE = 20 SLUMP DURING PLACEMENT = 80 EXPOSURE CLASSIFICATION = A1 INTERNAL = B2 EXTERNAL																																																									
C3.	CEMENT TO BE TYPE SL TO AS 3972 UNLESS NOTED OTHERWISE THIS IS A MODIFIED TYPE 'GP' CEMENT. SEE ACSE CONCRETE SPECIFICATION.																																																									
C4.	NO 'BRECCIA' TYPE AGGREGATE IS TO BE USED.																																																									
C5.	NO ADMIXTURES SHALL BE USED IN CONCRETE UNLESS APPROVED IN WRITING BY THE ENGINEER.																																																									
C6.	PROJECT ASSESSMENT OF CONCRETE SHALL BE CARRIED OUT IN ACCORDANCE WITH AS1379.																																																									
C7.	PROJECT CONTROL TESTING SHALL BE CARRIED OUT IN ACCORDANCE WITH AS1379 BY A NATA REGISTERED TESTING LABORATORY. SAMPLES SHALL BE TAKEN FOR TESTING OF SLUMP, COMPRESSIVE STRENGTH AND ANY OTHER TEST SPECIFIED.																																																									
	SLUMP SHALL BE SAMPLED FOR EACH TRUCK AT THE TIME OF POURING.																																																									
	THE MINIMUM FREQUENCY OF SAMPLING FOR COMPRESSIVE TESTING OF EACH TYPE AND GRADE SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE:																																																									
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C8.	BEAM DEPTHS ARE WRITTEN FIRST AND INCLUDE SLAB THICKNESS.																																																									
C9.	SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES.																																																									
C10.	NO HOLES, 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.																																																									
C11.	CONSTRUCTION JOINTS SHALL BE PROPERLY FORMED AND USE ONLY WHERE SHOWN OR SPECIFICALLY APPROVED BY THE ENGINEER.																																																									
C12.	ALL CONCRETE COLUMNS ARE TO BE POURED A MINIMUM OF 4 HOURS PRIOR TO SLAB OR BEAM OVER.																																																									
C13.	DRIP GROOVES ARE TO BE PROVIDED AT ALL EXPOSED EDGES. COVER TO REINFORCEMENT IS TO BE MAINTAINED.																																																									
C14.	CONDUITS, PIPES AND THE LIKE SHALL NOT BE PLACED WITHIN THE CONCRETE COVER.																																																									
C15.	ALL CONCRETE (INCLUDING FOOTINGS AND SLABS ON GROUND) SHALL BE MECHANICALLY VIBRATED TO ACHIEVE FULL COMPACTION.																																																									
C16.	SAWN JOINT JOINTS ARE TO BE CUT AFTER THE CONCRETE HAS SUFFICIENTLY HARDENED THAT WILL NOT BE DAMAGED BY THE SAWING BUT BEFORE SHRINKAGE CRACKING CAN OCCUR.																																																									
C17.	CURING OF ALL CONCRETE SHALL BE IN ACCORDANCE WITH AS3600 AND SHALL COMMENCE WITHIN 2 HOURS OF FINISHING OPERATIONS. CURING SHALL BE BY CONTINUAL SATURATION WITH POTABLE WATER FOR 3 DAYS FOLLOWED BY PREVENTION OF MOISTURE LOSS FOR THE NEXT 4 DAYS USING POLYETHENE SHEETING OR WET HESSIAN PROTECTED FROM WIND OR TRAFFIC AND THEN ALLOWING GRADUAL DRYING OUT. CURING COMPOUNDS MAY BE USED PROVIDED THAT THEY COMPLY WITH AS3789 AND DO NOT AFFECT FLOOR FINISHES. THE COMPATIBILITY OF CURING COMPOUNDS WITH PROPOSED APPLIED FINISHES SHALL BE VERIFIED PRIOR TO APPLICATION. CURING COMPOUNDS ARE TO BE APPLIED UNIFORMLY IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION. PVA BASED CURING COMPOUNDS ARE NOT ACCEPTABLE.																																																									
C18.	ALIPHATIC ALCOHOL:- WHEN SHADE TEMPERATURE EXCEEDS 35° C SPRAY THE EXPOSED SURFACE OF CONCRETE SLAB DURING THE PLACING AND FINISHING OPERATION WITH A FINE FILM OF APPROVED ALIPHATIC ALCOHOL. REPEAT THE SPRAY IF THE SPRAYED SURFACE HAS BEEN RE-WORKED.																																																									
C19.	ENSURE ADEQUATE SUPPLY OF ALIPHATIC ALCOHOL ON SITE BEFORE COMMENCING CONCRETE WORK.																																																									

SLIP JOINTS ARE TO BE USED ON ALL LOAD BEARING MASONRY WALLS. USE TWO LAYERS OF GALVANIZED FLAT STEEL WITH GRAPHITE GREASE BETWEEN IN INTERNAL SKIN & TWO LAYERS OF STAINLESS STEEL WITH GRAPHIC GREASE BETWEEN IN EXTERNAL SKINS. PROVIDE MORTAR LAYING STRIP AS REQUIRED.

C21. NON LOAD BEARING MASONRY SHALL BE SEPARATED FROM THE SOFFIT OF SLABS AND BEAMS BY 20mm.

C22. MASONRY WALLS MUST NOT BE CONSTRUCTED ON SUSPENDED CONCRETE UNTIL ALL TEMPORARY SUPPORTS ARE REMOVED AND ALL MASONRY TO BE LAID HAS BEEN STAMPED ADJACENT TO PROPOSED POSITION.

TYPICAL OPENINGS IN SLABS

C23. LOCATION OF ALL OPENINGS TO BE TO THE APPROVAL OF ACOR.

C24. FOR OPENINGS LESS THAN 300 x 300mm BARS TO BE RE-ARRANGED AROUND HOLE.

C25. FOR PENETRATIONS GREATER THAN 300 x 300mm BUT LESS THAN 1000 x 1000mm USE DETAILS BELOW.

C26. FOR PENETRATIONS GREATER THAN 1000 x 1000mm REFER TO ENGINEER'S PLANS, WHERE OPENINGS ARE NOT DETAILED, CONTACT ENGINEER IMMEDIATELY.

C27. **TOP BARS:** FOR EVERY TWO BARS THAT ARE TERMINATED BY OPENINGS, ADD ONE BAR EACH SIDE USING SAME GRADE AND SIZE OF REINFORCEMENT. WHERE NO TOP BARS ARE SHOWN, ADD 1-N16 TOP EACH SIDE OF OPENING.

PIPE PENETRATION THROUGH BEAM

C28. LOCATION OF ALL OPENINGS TO BE TO THE APPROVAL OF THE STRUCTURAL ENGINEER.

C29. MINIMUM DISTANCE FROM BEAM SOFFIT TO PIPE SOFFIT TO BE 150mm.

C30. FOR PIPES UP TO Ø90, ADD ONE ROW OF TIES EACH SIDE OF PIPE.

C31. FOR PIPES Ø91 TO Ø150, ADD TWO ROWS OF TIES EACH SIDE OF PIPE AND 1-N16 HORIZONTAL BAR 1200 LONG TOP AND BOTTOM OF PIPE AT EVERY VERTICAL TIE LEG.

C32. FOR HOLES GREATER THAN Ø150 REFER TO ENGINEER'S DETAILS, WHERE PENETRATIONS ARE NOT DETAILED, CONTACT STRUCTURAL ENGINEER IMMEDIATELY.

C33. LOCATION OF HOLES TO BE TO THE APPROVAL OF THE STRUCTURAL ENGINEER.

PIERING REQUIREMENT

C34. WHERE A SERVICE TRENCH IS PARALLEL TO A SIDE OF THE SLAB, WHETHER THE SLAB BE IN AN EXCAVATED OR FILLED AREA, THEN PIERING TO SUPPORT THE SLAB BESIDE THE SERVICE TRENCH IS ONLY REQUIRED IF THE SERVICE LINE IS BELOW A LINE OF INFLUENCE DRAWN FROM THE BOTTOM OF THE EDGE BEAM. REFER TO DIAGRAM BELOW.

C35. THESE NOTES ARE INTENDED AS A GUIDE. THERE IS ALWAYS A POSSIBILITY OF SITE CONDITIONS REQUIRING VARIATION TO THESE PROCEDURES. IN SUCH CASES, THE STRUCTURAL ENGINEER MUST BE CONSULTED.

SG1.	THESE SLABS HAVE BEEN DESIGNED IN ACCORDANCE WITH AS 2870-1996* RESIDENTIAL SLABS & FOOTINGS*. PARTICULAR ATTENTION IS DRAWN TO CLAUSE 1.3 & APPENDIX C WHICH REFER TO THE PROBABILITIES OF THE VARIOUS CATEGORIES OF DAMAGE OCCURRING.
SG2.	THE BUILDER SHALL ENSURE THAT ALL CONSTRUCTION IS CARRIED OUT STRICTLY IN ACCORDANCE WITH THE PROVISIONS OF THIS CODE. PARTICULAR ATTENTION IS DRAWN TO SECTION 6 OF THE CODE.
SG3.	TERMITE PROTECTION SHALL BE INSTALLED IN ACCORDANCE WITH AS 3660.1-1995, & OTHER RELEVANT AUSTRALIAN STANDARDS & LOCAL AUTHORITY REQUIREMENTS.
SG4.	THE BUILDER SHALL COMPLETELY SEAL, BY GROUTING, ANY CRACKS THAT MAY DEVELOP IN THE SLAB, GREATER THAN OR EQUAL TO 1mm IN WIDTH, BEFORE APPLYING ANY FINISHES.

SR1. THE RAFT SLABS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH AS 2870-2011 'RESIDENTIAL SLABS AND FOOTINGS' AND ACCEPTED ENGINEERING PRACTICE. PARTICULAR ATTENTION IS DRAWN TO SECTIONS 5 AND 6 OF THE CODE.

SR2. TERMITE PROTECTION, IF REQUIRED BY THE BUILDING SURVEYOR, SHALL BE INSTALLED IN ACCORDANCE WITH AS 3660.1-1995, AND OTHER RELEVANT AUSTRALIAN STANDARDS AND LOCAL AUTHORITY REQUIREMENTS.

SR3. ALL VEGETATION AND TOPSOIL SHALL BE REMOVED FROM THE SLAB AREA.

SR4. THE GROUND BELOW SLAB SHALL BE PROOF ROLLED WITH A HEAVY DUTY ROLLER PRIOR TO ANY COMPACTED FILLING BEING PLACED. ANY SOFT SPOTS ENCOUNTERED SHALL BE DUG OUT AND REPLACED WITH COMPACTED CRUSHED ROCK OR APPROVED FILL IN ACCORDANCE WITH AS 2870 AND AS 3798.

SR5. FILLING USED IN THE CONSTRUCTION OF SLAB EXCEPT WHERE THE SLAB IS SUSPENDED SHALL CONSIST OF CONTROLLED FILL OR ROLLED FILL IN ACCORDANCE WITH SECTION 6 OF AS 2870. CONTROLLED FILL DEPTH SHALL BE LESS THAN 0.3m FOR SAND AND 0.4m FOR NON-SAND FILL. ROLLED FILL SHALL NOT EXCEED 0.6m DEPTH FOR SAND AND 0.3m FOR OTHER MATERIAL. THE REDUCED DEPTH OF CONTROLLED FILL AND ROLLED FILL REQUIRED SHALL BE DETERMINED ON SITE AND SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

SR6. WHERE DEPTH OF CONTROLLED FILL IS THICKER THAN THAT SPECIFIED ABOVE, FILL MATERIAL SHALL BE SPREAD AND COMPACTED IN UNIFORM LAYERS NOT EXCEEDING 0.2 M THICK. TOP SURFACE LAYER SHALL BE COMPACTED TO MINIMUM 95% STANDARD DRY DENSITY DETERMINED BY METHODS IN ACCORDANCE WITH AS 1289. LOWER LAYERS SHALL BE COMPACTED TO 95% STANDARD DRY DENSITY. THE MOISTURE CONTENT OF THE FILL MATERIAL SHALL BE ADJUSTED TO WITHIN 2 % OF THE OPTIMUM MOISTURE CONTENT DURING COMPACTION TO ENSURE THAT THE SPECIFIED COMPACTION IS OBTAINED. COMPACTION TESTS SHALL BE CARRIED OUT AT A RATE OF ONE TEST PER LAYER PER 100 SQUARE METRES OF FILL. TESTS ARE TO BE CARRIED OUT BY NATA REGISTERED LABORATORIES. SUBMIT TEST REPORTS TO THE ENGINEER FOR APPROVAL.

SR7. A 0.3mm POLYETHYLENE MEMBRANE SHALL BE PLACED UNDER SLAB AND RISBS IN ACCORDANCE WITH SECTION 5.3.3 OF AS 2870. LAP SHEETS BY 200mm MINIMUM AT JOINTS AT TAPED AT ALL SERVICE PENETRATIONS, LAPS & PUNCTURES.

SR8. EXCAVATIONS NEAR THE BUILDING EDGE SHALL BE BACKFILLED IN SUCH A MANNER TO PREVENT READY ACCESS OF WATER TO THE FOUNDATIONS.

SR9. SYMBOLS ON THE DRAWING FOR REINFORCEMENT ARE AS OUTLINED IN THE REINFORCEMENT NOTE.

SR10. MESH SHALL BE PLACED NEAR THE TOP OF THE SLAB IN ACCORDANCE WITH SECTION 5.3 OF AS 2870.

SR11. REINFORCEMENT MESH SHALL BE LAPPED SO THAT EACH PAIR OF TRANSVERSE WIRES AT THE EDGE OF ONE SHEET OVERLAPS EACH CORRESPONDING PAIR OF TRANSVERSE WIRES OF 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 DISHS (EITHER OF WHICH MUST NOT DAMAGE THE MEMBRANE) AT 900mm MAXIMUM CENTRES EACH WAY. TRAMPING IN MESH IS NOT PERMITTED.

SR12. REFER TO CONCRETE NOTES FOR CONCRETE STRENGTH GRADE AND REINFORCEMENT COVER.

SR14.	PROVIDE 3M12 X 2000 BARS OR ONE STRIP OF L11TM300 TRENCH MESH x 2000 LONG DIAGONALLY ACROSS RE-ENTRANT CORNERS OF SLAB TIED UNDER THE TOP MESH.
SR15.	SLAB AND RIBS ARE TO BE CAST IN ONE CONTINUOUS POUR AND THE SLAB IS TO BE STEEL-FLOAT FINISHED U.N.O.
SR16.	THE SLAB SHALL BE CURED FOR 7 DAYS IN ACCORDANCE WITH GOOD PRACTICE TO MINIMISE CRACKING AND SLAB EDGE CURLING DUE TO EARLY DRYING OF THE TOP SURFACE.
SR17.	THE BUILDER SHALL COMPLETELY SEAL, BY GROUTING, ANY CRACKS THAT MAY DEVELOP IN THE SLAB, GREATER THAN OR EQUAL TO 1mm IN WIDTH, BEFORE APPLYING ANY FINISHES.
SR18.	THE GROUND SURROUNDING SLABS SHALL HAVE THE SURFACE AT LEAST 150mm LOWER THAN THE SLAB AND BE SLOPED AWAY FROM THE SLAB EDGE SO THAT WATER WILL DISCHARGE TO SUITABLE DRAINAGE POINTS AND NOT FLOOD THE SLAB SURFACE.

SIN1. UNLESS AGREED OR SPECIFIED OTHERWISE, THE BUILDER IS REQUIRED TO HOLD CONSTRUCTION AND NOTIFY THE STRUCTURAL ENGINEER FOR INSPECTION AT THE FOLLOWING POINTS:

COMPLETED EXCAVATION, FORMWORK, REINFORCEMENT AND EMBEDMENTS PRIOR TO PLACING CONCRETE.

COMPLETED ERECTED STRUCTURAL, TIMBER FRAMING PRIOR TO COVERING (UNLESS COVERED BY AS1684 NATIONAL, TIMBER FRAMING CODE).

COMPLETED ERECTED STRUCTURAL STEELWORK PRIOR TO COVERING.

SIN2. 48 HOURS NOTICE IS REQUIRED FOR INSPECTION. ALL WORK TO BE INSPECTED MUST BE COMPLETED PRIOR TO THE TIME OF INSPECTION.

SIN3. SITE INSPECTIONS DO NOT RELIEVE THE BUILDER OF RESPONSIBILITY FOR THE COMPLETENESS AND CORRECTNESS OF HIS WORK.

SIN4. INSPECTIONS WILL BE PERIODIC AND REPRESENTATIVE AND WILL NOT NECESSARILY BE MADE OF ALL WORKS. ELECTION TO INSPECT OR OTHERWISE WILL BE AT THE ENGINEERS DISCRETION. THE BUILDER IS TO ALLOW TIME AND PROVIDE SITE ACCESS FOR THE INSPECTION TO TAKE PLACE AND IS TO HAVE A RESPONSIBLE SITE FOREMAN AVAILABLE TO RECEIVE ANY COMMENT OR DIRECTION FROM THE ENGINEER.

SIN5. WHERE STRUCTURAL ELEMENTS ARE DESIGNED AND CERTIFIED BY OTHER PARTIES, THE BUILDER SHALL OBTAIN WRITTEN CERTIFICATION, PRIOR TO PROCEEDING WITH ANY CONSTRUCTION WHICH MAY PREVENT INSPECTION OR REMEDIAL WORKS BEING UNDERTAKEN TO THESE ITEMS.

- S1. STRIP ALL VEGETATION, TOPSOIL OR OTHER DELETERIOUS MATERIAL TO SPOIL OR STOCKPILE IF SUITABLE FOR REUSE AS LANDSCAPE. THIS SITE SHOULD THEN BE INSPECTED BY A GEOTECHNICAL ENGINEER OR EXPERIENCED TECHNICIAN AT THE CONTRACTORS EXPENSE TO ENSURE THAT THE STRIPPING IS SATISFACTORY.
- S2. COMPACT THE STRIPPED SURFACE OVER THE PROPOSED FILL AREAS TO AT LEAST 98% STANDARD MAXIMUM DRY DENSITY (SMD) AT A MOISTURE CONTENT WITHIN 2% OF OPTIMUM MOISTURE CONTENT (OMC)
- S3. THE EXPOSED SURFACE OF THE SITE SHOULD THEN BE PROOF ROLLED AND INSPECTED TO DETECT ANY SOFT AREAS. IF THE PROOF ROLLING IS SATISFACTORY, THEN IN-SITU DENSITY TESTS SHOULD BE CARRIED OUT.
- S4. FILLING SHOULD COMPRISE EXCAVATED CLAY SOILS FROM THE SITE OR IMPORTED FILL AND SHOULD BE PLACED IN LAYERS NOT EXCEEDING 200mm COMPACTED THICKNESS TO AT LEAST 98% SMD WITH A MOISTURE CONTENT WITHIN 2% OF OMC.
- S5. DENSITY TESTING AT THIS SITE (AREA GREATER THAN 1500m²) SHOULD BE CARRIED OUT IN ACCORDANCE WITH AT LEAST THE MINIMUM FREQUENCY RECOMMENDED IN ASS3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS", TABLE 8.1 (P.28), IE:
 - A) ONE TEST PER LAYER OR 200MM THICKNESS PER MATERIAL TYPE PER 2500m²; OR
 - B) ONE TEST PER 500m² DISTRIBUTE REASONABLY EVENLY THROUGHOUT DEPTH AND AREA; OR
 - C) THREE TESTS PER VISIT, WHICHEVER REQUIRES THE MOST TESTS.

SP1. REMOVE ALL TOP SOIL, VEGETABLE MATTER AND RUBBLE. IDENTIFY AND REMOVE ANY SOFT AREAS AND PLACE AND COMPACT APPROVED NON-ORGANIC FILL IN ACCORDANCE WITH AS2870.

ALL EXCAVATIONS ARE TO BE CARRIED OUT IN STRICT ACCORDANCE WITH
GEOTECHNICAL REPORT REFERENCED IN NOTE F.1 AND ANY SUBSEQUENT
GEOTECHNICAL ADVISE.

AL	ALTERNATIVE BARS
C/S	BRICKWORK COURSE
BTM	BOTTOM
B	BOTTOM
BJ	BLOCK JOINT
CEN	CENTRAL
CTS	CENTRES
DJ	DOWEL JOINT
EJ	EACH FACE
FC	CONCRETE STRENGTH
FW	EACH WAY
FF	FACE
NF	NEAR FACE
FFL	FINISH FLOOR LEVEL
GALV	GALVANISED
GD	GRATED DRAIN
GL	GROUND LINE
LV	LENGTH VARIES
LVL	LAMINATED VENEER LUMBER
MC	MASS CONCRETE
NSOE	NOT SHOWN ON ELEVATION
NSOP	NOT SHOWN ON PLAN
RL	REDUCED LEVEL
RC	REINFORCED CONCRETE
(1)	REINFORCEMENT LAID FIRST
(2)	REINFORCEMENT LAID SECOND
(3)	REINFORCEMENT LAID THIRD
(4)	REINFORCEMENT LAID FOURTH
S/S	STAINLESS STEEL
STAG	STAGGERED BARS
SSL	STRUCTURAL SLAB LEVEL
TTYP	TYPICAL
T	TOP
U/S	UNDERSIDE
UNO	UNLESS NOTED OTHERWISE
(U-O)	UNDER AND OVER

This drawing has been assigned an electronic code that signifies the drawing has been checked and approved by: Approver

1	CONSTRUCTION ISSUE	16.05.2022	CB	SF
C	ISSUED FOR CONSTRUCTION CERTIFICATE	14.04.2022	CB	SF
B	ISSUED FOR CONSTRUCTION CERTIFICATE	12.04.2022	CB	SF
A	PRELIMINARY ISSUE	11.03.2022	CB	SF

Issue.

Description

Date

Drawn

Approved

0

10m at full size

100m

200m

Architect

plannedspace



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1 UNDERCLIFF ROAD,
FRESHWATER NSW 2096

Drawing Title STRUCTURAL				
GENERAL NOTES SHEET 1				
Drawn CB	Date MARCH 2022	Scale A1	Q.A. Check Checker	Date
Designed SF	Project No. NSW211942		Dwg No. S0.01	Issue 1

FOR CONSTRUCTION

STRUCTURAL STEELWORK

- S1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH STEEL STRUCTURE - AS 4100 AND WELDING - AS 1554 EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENT.
- S2. STEEL COMPONENTS SHALL CONFORM TO THE FOLLOWING TABLE U.N.O.

COMPONENT	AUS. STAND.	GRADE
PLATE	3678	250
HOT ROLLED SECTIONS	3679	300
CHS > 80 mm DIA.	1163	C350
CHS < 80 mm DIA.	1163	C250
RHS & SHS	1163	C350
PURLINS & GIRTS	1397	450
WELDED BEAMS & COLUMNS	3679	300
FLAT BARS & RODS.	3679	250

- S3. BOLT DESIGNATION
- ALL BOLTS TO BE 8.8/S UNLESS NOTED OTHERWISE
- 4.6/S COMMERCIAL BOLTS OF GRADE 4.6 TO AS 1111 SNUG TIGHTENED.
- 8.8/S HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8.8 TO AS 1252 SNUG TIGHTENED.
- 8.8/TB HIGH STRENGTH BOLTS OF GRADE 8.8 TO AS 1252 FULLY TENSIONED TO AS 4100 AS A BEARING JOINT.
- 8.8/TF HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8.8 TO AS 1252 FULLY TENSIONED TO AS 4100 AS A FRICTION JOINT WITH CONTACT SURFACES LEFT UNCOATED.
- S4. ALL BOLTS SHALL BE M20 GRADE 8.8/S U.N.O.
ALL STUDS SHALL BE M20 GRADE 4.6/S U.N.O.
NO STEEL TO STEEL CONNECTION TO HAVE LESS THAN 2 BOLTS.
- S5. ALL PLATES TO BE 10 mm THICK U.N.O.
- S6. UNLESS NOTED OTHERWISE, ALL FILLET WELDS SHALL BE 6mm CONTINUOUS FOR PLATES LESS THAN OR EQUAL TO 12 PL
8mm CONTINUOUS FOR 16 PL
10mm CONTINUOUS FOR 20 PL AND ABOVE.

ELEMENT	WELD CATEGORY
ALL	SP

- ALL BUTT WELDS TO BE COMPLETE PENETRATION BUTT WELDS. ELECTRODES TO BE E48XX U.N.O. WELD CATEGORY AS TABULATED ABOVE.
- S7. THE CONTRACTOR SHALL MAKE THE NECESSARY ALLOWANCES FOR COORDINATING ALL ARCHITECTURAL & STRUCTURAL ELEMENTS IN THE PREPARATION OF STRUCTURAL STEELWORK SHOP DRAWINGS & SUBSEQUENT FABRICATION & ERECTION. CONNECTION DETAILS SHOWN ON STRUCTURAL DRAWINGS ARE TYPICAL ONLY. WHERE A DETAIL IS NOT SHOWN THE FABRICATOR / SHOP DETAILER SHALL PREPARE DETAILS IN ACCORDANCE WITH AS4100 & THE AISC PUBLICATIONS' DESIGN OF STRUCTURAL CONNECTIONS' & 'STANDARDISED STRUCTURAL CONNECTIONS'; THESE DETAILS SHALL TAKE DUE ACCOUNT OF ARCHITECTURAL & SERVICE REQUIREMENTS & SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. THE ENGINEER WILL SUPPLY LOADS AS REQUIRED. ALL COSTS & TIME IMPLICATIONS ASSOCIATED WITH THESE WORKS ARE TO BE ALLOWED FOR BY THE CONTRACTOR.

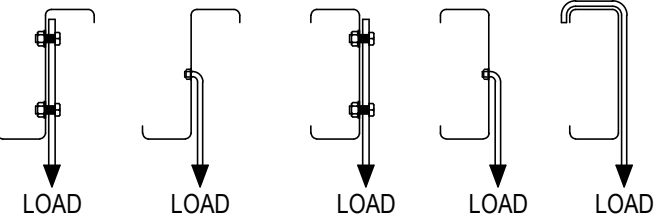
- S8. STRUCTURAL STEELWORK SHALL HAVE THE FOLLOWING TREATMENT:-
- | ELEMENT | SURFACE PREPARATION | PROTECTIVE COATING |
|---|----------------------------------|--|
| INTERIOR MEMBERS | BLAST CLEAN TO CLASS 2 (AS 1627) | ZINC PHOSPHATE PRIMER FILM THICKNESS 0.075mm |
| EXPOSED TO WEATHER INCLUDING ALL STIFFENERS | PICKLE (AS 1627 PART 5) | HOT DIP GALVANISED REFER TO SPECIFICATIONS. |

- S9. ALL STRUCTURAL STEELWORK WHICH IS EXPOSED, STEELWORK IN CONTACT WITH EXTERNAL CAVITY BRICKWORK & ALL LINTELS SHALL BE HOT DIP GALVANISED OR STAINLESS STEEL - REFER TO DRAWINGS. GALVANISING OF STRUCTURAL SECTIONS SHALL BE IN ACCORDANCE WITH AS 4080 AND THE GALVANISING OF THREADED FASTENERS SHALL BE IN ACCORDANCE WITH AS 1214
- S10. AFTER FABRICATION ALL EXPOSED STEELWORK AND STEELWORK BUILT IN EXTERNAL WALLS INCLUDING FITMENTS, NUTS, BOLTS, WASHERS AND HOLDING DOWN BOLTS TO BE HOT DIP GALVANISED.
- S11. ANY FURTHER WELDED JOINTS ARE TO BE PAINTED WITH 2 COATS OF APPROVED GALVANISED PAINT.
- S12. THE ENDS OF ALL TUBULAR MEMBERS ARE TO BE SEALED WITH NOMINAL THICKNESS PLATES AND CONTINUOUS FILLET WELD UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
- S13. THE SUB-CONTRACTOR SHALL PROVIDE ALL CLEATS AND DRILL ALL HOLES NECESSARY FOR ALL ATTACHMENTS WHETHER OR NOT DETAILED ON THE DRAWINGS.
- S14. PROVIDE HOOK BOLTS AT EVERY THIRD PURLIN TO CONTROL BRACE SAG.
- S15. ALL STEELWORK IS TO BE TEMPORARILY BUT SECURELY BRACED UNTIL ALL FINAL BRACING, CLADDING & STABILISING BRICK OR BLOCKWORK HAVE BEEN COMPLETED.
- S16. GRAVITY &/OR GAUGE LINES TO INTERSECT U.N.O.
- S17. CONCRETE ENCASED STEELWORK TO BE WRAPPED WITH F41 MESH & TO HAVE 50mm MIN. COVER OF CONCRETE GRADE 25 TO AS3600
- S18. ALL BASEPLATES ARE TO BE FULLY GROUTED WITH CONEXTRA GP CEMENTITIOUS NON-SHRINK GROUT, OR SIMILAR, WITH A MINIMUM COMPRESSIVE STRENGTH OF 50 MPa
- S19. SHOP DRAWINGS SHALL BE PREPARED BY THE FABRICATOR FOR ALL STRUCTURAL STEELWORK. SUBMIT COPIES OF ALL WORKSHOP DRAWINGS TO ACOR CONSULTANTS FOR STRUCTURAL APPROVAL AT LEAST 14 DAYS PRIOR TO FABRICATION. DO NOT FABRICATE STEELWORK UNTIL WORKSHOP DRAWINGS ARE APPROVED.

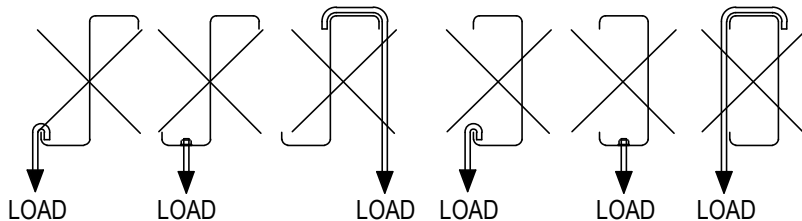
STRUCTURAL STEELWORK CONT'

- PURLINS AND GIRTS
- S20. ALL PURLINS AND GIRTS TO BE COLD FORMED LIGHT-GAUGE STEEL SECTIONS CONFORMING TO ANZ4600 FOR DESIGN AND TO AS1397 FOR MATERIAL PROPERTIES
- S21. THE OVERALL DIMENSIONS OF PURLINS AND GIRTS SHALL NOT BE LESS THAN THE NOMINAL SIZE GIVEN, BOTH FLANGES SHALL BE LIPPED
- S22. SETOUT OF PURLINS & GIRTS TO BE OBTAINED FROM ARCHITECT'S DRAWINGS OR ROOFING CONTRACTOR
- S23. PROVIDE TRIMMER PURLINS BETWEEN MAIN PURLINS TO SUIT ROOF PROFILE(HIPS, VALLEYS, RIDGE LINES ETC.) AND CONNECT WITH PROPRIETARY CLEATS AS RECOMMENDED BY MANUFACTURER
- S24. WHERE NECESSARY TO HANG CEILING, SERVICE PIPES, DUCTWORK ETC. FROM PURLINS, THE BUILDER SHALL ONLY USE THE FOLLOWING APPROVED METHODS.

APPROVED METHODS OF SUSPENDING FROM PURLINS



NON-APPROVED METHODS OF SUSPENDING FROM PURLINS



IF IN DOUBT OBTAIN APPROVAL FROM ENGINEER PRIOR TO PROCEEDING WITH INSTALLATION.

WEB PENETRATIONS

- S25. IT IS THE CONTRACTORS RESPONSIBILITY TO COORDINATE ALL STRUCTURAL ELEMENTS WITH ANY RELEVANT SERVICES DOCUMENTATION AND / OR ARCHITECTURAL REQUIREMENTS.
- S26. ANY PROPOSED PENETRATIONS THROUGH STRUCTURAL STEEL MEMBERS ARE TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION OR INSTALLATION.
- S27. THE ENGINEER WILL SUPPLY LOADS OR ADDITIONAL DESIGN AS REQUIRED. ALL COSTS & TIME IMPLICATIONS ASSOCIATED WITH THESE WORKS ARE TO BE ALLOWED FOR BY THE CONTRACTOR.
- S28. HAND FLAME CUTTING WILL NOT BE PERMITTED FOR ANY PENETRATION.

FIRE PROTECTION

- S29. FIRE PROTECTION REQUIREMENTS TO STEELWORK ARE TO BE AS PER FIRE ENGINEERS DETAILS OR ARCHITECTURAL SPECIFICATIONS.

LIGHT WEIGHT STEEL FRAMING

- S30. UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS, ALL STEEL STUD WALL FRAMING AND FIXINGS SHALL BE AS MANUFACTURED BY RONDO BUILDING SERVICES PTY. LTD.' OR EQUIVALENT, ALL TO BE IN ACCORDANCE WITH THEIR DESIGN MANUAL AND INSTALLATION MANUALS FOR STEEL STUD WALL SYSTEMS.
- S31. THE DESIGN SHALL COMPLY WITH AS4600, TO SUIT THE LOADS SPECIFIED IN THE GENERAL NOTES AND THE SPECIFICATION. AN NPER STRUCTURAL ENGINEER SHALL CERTIFY THE DESIGN. PROVIDE ALL TRIMMERS, HEADS, NOGGINGS ETC.

ROOF SAFETY ACCESS SYSTEMS

- RS1. A ROOF SAFETY ACCESS SYSTEM WHICH COMPLIES WITH THE RELEVANT OH&S REGULATIONS FOR FALL ARREST AND THE RELEVANT AUSTRALIAN STANDARDS IS TO BE INSTALLED AND CERTIFIED BY AN APPROPRIATELY EXPERIENCED SPECIALIST SUPPLIER.
- RS2. THE DESIGN BY THE SPECIALIST IS TO INCLUDE SYSTEM SELECTION, LAYOUT, INSTALLATION, FLASHING, STRENGTHENING WORKS AND CERTIFICATION.

GROUTING OF BASE PLATES

- GB1. ALL GROUT SHALL BE CURED BY THE APPLICATION OF 'MBT AUSTRALIA' 'FLOORSEAL' APPLIED TO THE GROUT STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN PROCEDURE.
- GB2. THE THICKNESS OF THE GROUT BED SHALL BE 50mm.
- GB3. GROUT ALL STEEL BASES BY DRY PACKING USING GROUT WHICH IS NON-SHRINK AND HAS A MINIMUM COMPRESSIVE STRENGTH AT 7 DAYS OF 40 Mpa

TIMBER

- T1. ALL TIMBER DESIGN, MATERIAL AND CONSTRUCTION SHALL COMPLY WITH AS1720, AS1684, AS2082 AND AS2858 AS APPROPRIATE.
- T2. SOFTWOOD TO BE A MINIMUM STRESS GRADE F7 (OREGON) OR MGP10/F5 (PINE), STRENGTH GROUP S05. HARDWOOD TO BE A MINIMUM OF F17 (SEASONED) OR F8 (UNSEASONED). SUBMIT SUPPLIERS CERTIFICATES AS TO STRESS GRADE OF TIMBER MEMBERS IF REQUESTED. ALL TIMBER SHALL BE BRANDED.
- T3. PRESERVATIVE TREATMENT:
ALL TIMBERS TO HAVE THE NECESSARY PRESERVATIVE TREATMENT APPROPRIATE TO THE SPECIES AND USAGE AS SPECIFIED IN AS1604-1997. ALL TREATED TIMBERS TO HAVE VISIBLE MARKS THAT ARE ABLE TO BE SEEN DURING THE FRAMING INSPECTION.
- T4. TERMITE PROTECTION:
ALL CONSTRUCTION WORK SHOULD BE IN ACCORDANCE WITH AS3660.1-2000 PROTECTION OF BUILDINGS FROM SUBTERRANEAN TERMITES PART 1: NEW BUILDING WORK
- T5. TIMBER TREATED IN ACCORDANCE WITH AS1604 SHALL HAVE THE FOLLOWING HAZARD LEVEL: ENVIRONMENT CLASS
INTERIOR ABOVE GROUND HAZARD LEVEL H2
EXTERIOR ABOVE GROUND HAZARD LEVEL H3
EXTERIOR IN GROUND HAZARD LEVEL H5
- T6. EXTERNAL TIMBER SHALL BE EITHER DURABILITY CLASS 1 OR 2 HARDWOOD TO AS1720.2 OR IMPREGNATED PINE PRESSURE TREATED TO AS1604 AND RE-DRIED PRIOR TO USE. SUPPLEMENTARY TREATMENT SHALL BE APPLIED TO ALL CUT SURFACES. SUPPLY SUPPORTING DOCUMENTATION REGARDING PRESERVATIVE TREATMENT IF REQUESTED.
- T7. ALL BOLTS IN TIMBER CONSTRUCTION SHALL BE MINIMUM M12. ALL BOLTED CONNECTIONS SHALL USE WASHERS UNDER HEADS AND NUTS WHICH ARE TO BE AT LEAST 3 TIMES THE BOLT DIAMETER. ALL EXTERNAL BOLTS AND WASHERS SHALL BE HOT DIP GALVANISED.
- T8. UNLESS NOTED OTHERWISE USE:
M12 4.6/S GALVANISED BOLTS WITH 55 DIA x 3.0 GALVANISED WASHERS UNDER HEAD AND NUT.
M12 4.6/S GALVANISED COACH SCREWS WITH 55 DIA x 3.0 GALVANISED WASHERS.
MINIMUM EMBEDMENT 75mm EMBEDMENT INTO SECOND MEMBER.
3.15mm GALVANISED NAILS WITH MINIMUM 35mm EMBEDMENT INTO SECOND MEMBER.
14 GAUGE (6.4mm THREAD DIAMETER) GALVANISED, BUGLE HEADED SCREWS WITH MINIMUM 50mm EMBEDMENT IN TO SECOND MEMBER.
12 GAUGE (5.8mm THREAD DIAMETER) TYPE 17 POINT GALVANISED TIMBER TEK SCREWS, MINIMUM 50mm EMBEDMENT INTO SECOND MEMBER.
GALVANISED CONNECTOR PLATES COMPLYING WITH AS1649.
MAINTAIN TIMBER EDGE DISTANCES AS PER AS1720.
- T9. TIMBER TOLERANCES ON THE FINISHED WIDTH AND THICKNESS TO BE IN ACCORDANCE WITH AS2082, AS1748, AS APPROPRIATE. MINIMUM ACTUAL DIMENSIONS FOR TIMBER MEMBERS ARE AS FOLLOWS: NOMINAL DIMENSION 50 100 150 200 250 >250 MINIMUM ACTUAL 45 90 140 187 235 MINUS 6% HYSPAN AND MGP MEMBERS ARE ACTUAL SIZES.
- T10. ALL TIMBER JOINTS AND NOTCHES ARE TO BE A 100mm MINIMUM AWAY FROM LOOSE KNOTS, SEVERE SLOPING GRAIN, GUM VEINS OR OTHER DEFECTS.
- T11. GLUE LAMINATED TIMBER SHALL BE MANUFACTURED IN ACCORDANCE WITH AS1328. MEMBERS FOR EXTERNAL USE SHALL BE FABRICATED USING RESORCINOL OR PHENOLIC ADHESIVE.
- T12. CAMBER IN BEAMS OR RAFTERS SHALL BE AS NOTED ON THESE STRUCTURAL DRAWINGS OR BEAMS/RAFTERS SHALL BE INSTALLED WITH NATURAL HOG UP.
- T13. ALL PROPRIETARY FIXINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS WRITTEN INSTRUCTIONS. ALL METAL FIXINGS SHALL BE COMPATIBLE WITH TIMBER GLUES AND PRESERVATIVE TREATMENTS.
- T14. NO PENETRATIONS OR NOTCHES OTHER THAN THOSE SHOWN ON THESE STRUCTURAL DRAWINGS SHALL BE MADE IN ANY TIMBER MEMBERS WITHOUT APPROVAL OF ACOR.
- T15. ALL TIMBER SHALL BE PROTECTED FROM THE ELEMENTS DURING FABRICATION AND CONSTRUCTION BY THE APPLICATION OF AN APPROVED WATERPROOF TIMBER PRESERVATIVE, PROPOSALS SHALL BE SUBMITTED TO THE ENGINEER.
- T16. ALL EXPOSED LINES OF BOLTS SHALL BE EVENLY AND EQUALLY SPACED U.N.O. AND SHALL ALIGN WITH ADJACENT EXPOSED BOLT GROUPS.
- T17. ALL ACCESSIBLE BOLTS ARE TO BE RETIGHTENED AND ALL NAILS REDRIVEN AS CLOSE TO COMPLETION OF CONTRACT AS POSSIBLE AND AGAIN AT THE END OF THE DEFECTS LIABILITY PERIOD. ALL OTHER BOLTS SHALL BE RE-TIGHTENED IMMEDIATELY PRIOR TO BEING BUILT-IN.
- T18. WE SUPPORT THE ENVIRONMENT AND RECOMMEND THE USE OF SUSTAINABLE FOREST TIMBER OR RECYCLED TIMBER.
- T19. NON-LOADBEARING TIMBER FRAMED WALLS SHALL FINISH 10mm SHORT OF THE ROOF FRAMING AND SHALL BE LATERALLY RESTRAINED USING 'PRYDA PHL' BRACKETS WITH SLOTTED HOLES AT 1800 CTS IN ACCORDANCE WITH AS1684.
- T20. TIMBER TRUSSES ARE TO BE PRE-CAMBERED AN AMOUNT EQUAL TO THE CALCULATED INITIAL DEAD LOAD DEFLECTION. SUBMIT THREE COPIES OF SHOP DRAWINGS TO THE STRUCTURAL ENGINEER FOR REVIEW. SHOP DRAWINGS SHALL CLEARLY SHOW:
THE DESIGN LOADS ON THE ROOF AND CEILING AND TRUSS NODE POINT LOADS AND THE PRECAMBER, MEMBER SIZES AND LOCATIONS, TIMBER SPECIES, STRESS GRADE, STRENGTH GROUP AND JOINT DETAILS. MEMBER RESTRAINT LOCATIONS.
- T21. PROPRIETARY TIMBER TRUSSES ARE TO BE DESIGNED, INSPECTED AFTER ERECTION, AND CERTIFIED BY AN NPER STRUCTURAL ENGINEER ENGAGED BY THE FABRICATOR OR THE BUILDER. CERTIFICATION SHALL INCLUDE ROOF BRACING AND TIE DOWN TO THE SUPPORTS. THE DESIGN SHALL COMPLY WITH AS1720. THE FABRICATOR SHALL PROVIDE LAYOUT DRAWINGS TO ACOR FOR CONFIRMATION OF THEIR DESIGN ASSUMPTIONS FOR THE SUPPORTING STRUCTURE.

This drawing has been assigned an electronic code that signifies the drawing has been checked and approved by: Approver

						North
1	CONSTRUCTION ISSUE	16.05.2022	CB	SF		
B	ISSUED FOR CONSTRUCTION CERTIFICATE	12.04.2022	CB	SF		
A	PRELIMINARY ISSUE	11.03.2022	CB	SF		
Issue:	Description	Date	Drawn	Approved		
-1	0	1cm at full size			10cm	20cm

Client
BY GROUP PTY LTD

Architect

plannedspace



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Project
NEW DWELLINGS

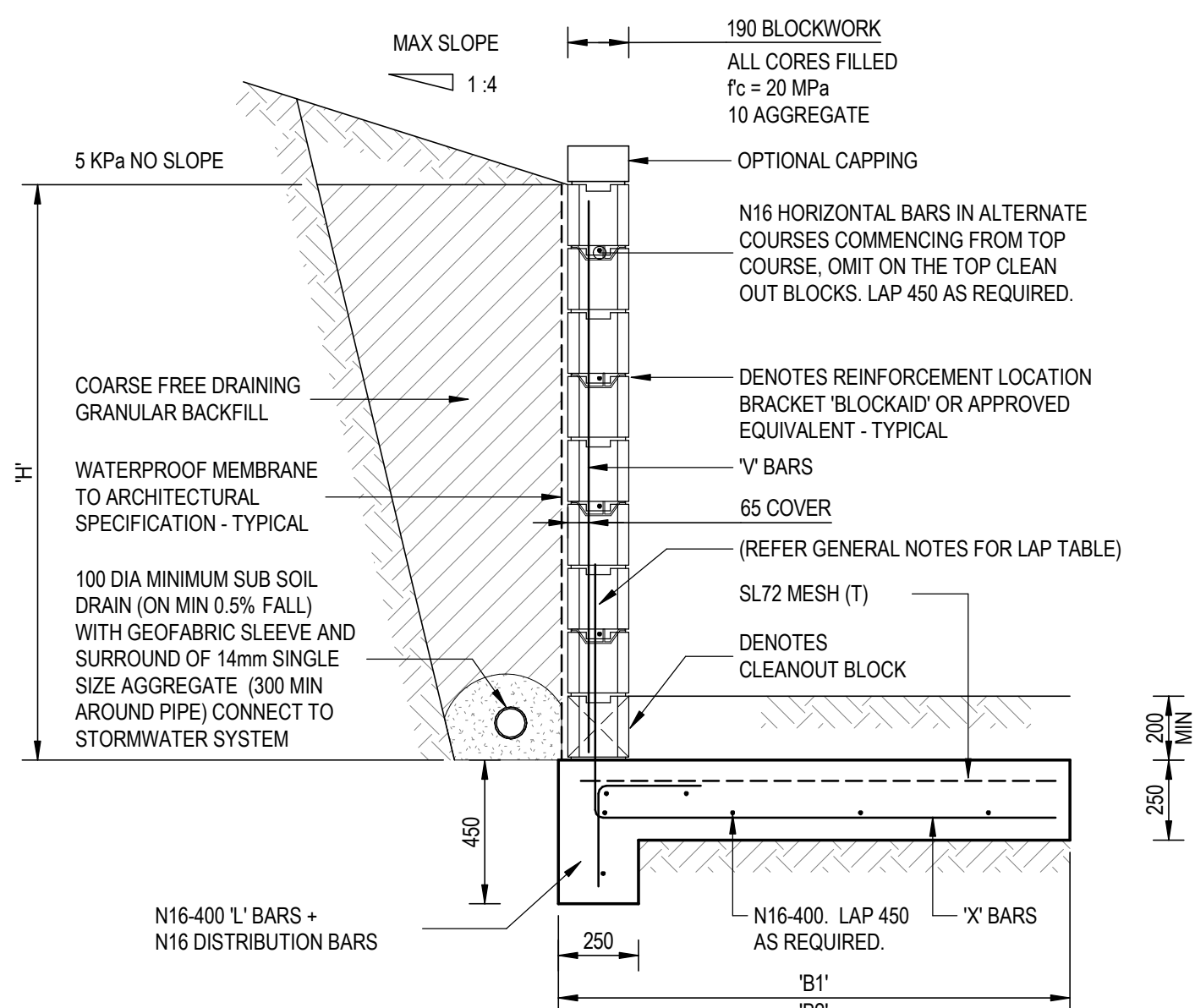
1 UNDERCLIFF ROAD,
FRESHWATER NSW 2096

Drawing Title
STRUCTURAL
GENERAL NOTES SHEET 3

Drawn CB	Date MARCH 2022	Scale A1	Q.A. Check Checker	Date
Designed SF	Project No. NSW211942	Dwg No. S0.03	Issue 1	

FOR CONSTRUCTION

PROPERTIES AND COMPOSITION OF THE IN-SITU MATERIAL, RETAINED MATERIAL AND INFILL MATERIAL IS TO BE INSPECTED / CONFIRMED BY A SUITABLY QUALIFIED GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION OF ANY RETAINING WALLS.



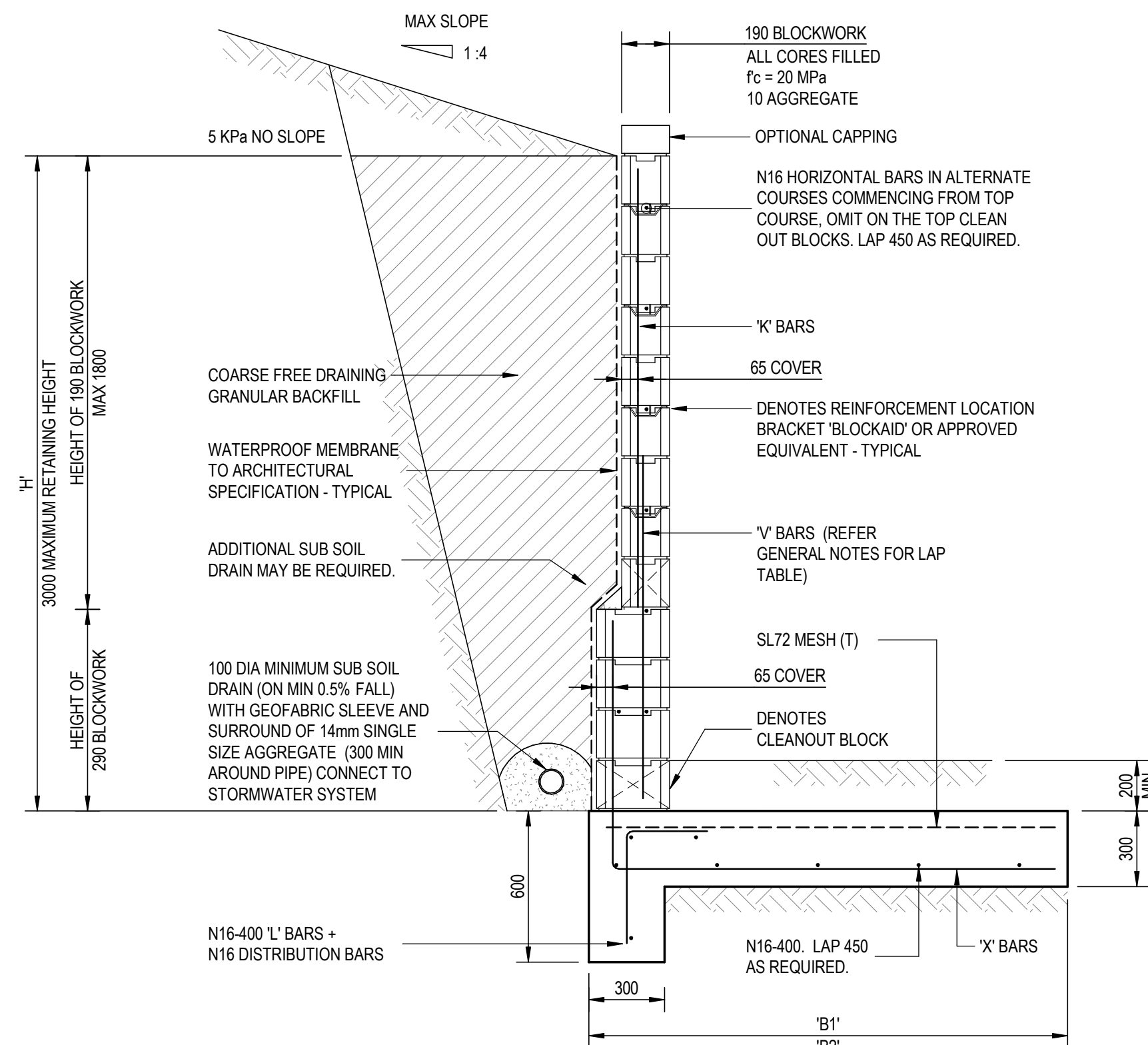
TYPICAL RETAINING WALL DETAIL - RW1 (800 TO 1800 HIGH)

NOTES:
FOOTING FOUNDED ON NATURAL GROUND - MIN 150 kPa BEARING
CONTROL JOINTS AT 8000 MAXIMUM CENTRES
FOOTING CONCRETE STRENGTH $f_c = 25\text{MPa}$
BLOCK WALLS TO BE ADEQUATELY PROPPED DURING BACKFILL AND COMPACTION
REFER TO RETAINING WALL AND REINFORCED BLOCKWORK GENERAL NOTES

RETAINING WALL SCHEDULE

WALL HEIGHT	BACKFILL CONDITION AT TOP OF WALL		REINFORCEMENT	
	5 KPa NO SLOPE	MAX 1:4 SLOPE		
	BASE WIDTH			
'H'	'B'1	'B'2	'X' BARS	'V' BARS
800	700	650	N16-400	N12-400
1000	850	800	N16-400	N12-400
1200	1050	900	N16-400	N16-400
1400	1150	1000	N16-400	N16-400
1600	1350	1200	N16-400	N16-400

NOTE:
WHERE FOOTINGS ARE FOUNDED DIRECTLY ON ROCK, AS AN ALTERNATIVE TO A FOOTING KEY, BARS MAY BE DOWELLED INTO ROCK TO PROVIDE LATERAL RESISTANCE. THE BARS SHALL BE GALVANISED N20, COGGED 300 TO THE TOP REINFORCEMENT ZONE OF THE FOOTING, SPACED TO ACHIEVE A MINIMUM OF 1 PER SQUARE METRE OF FOOTING. EMBEDMENT DEPTH AND METHOD OF FIXING INTO ROCK IS TO BE CONFIRMED BY GEOTECHNICAL ENGINEER, TO ACHIEVE A 20KN ULTIMATE LOAD.

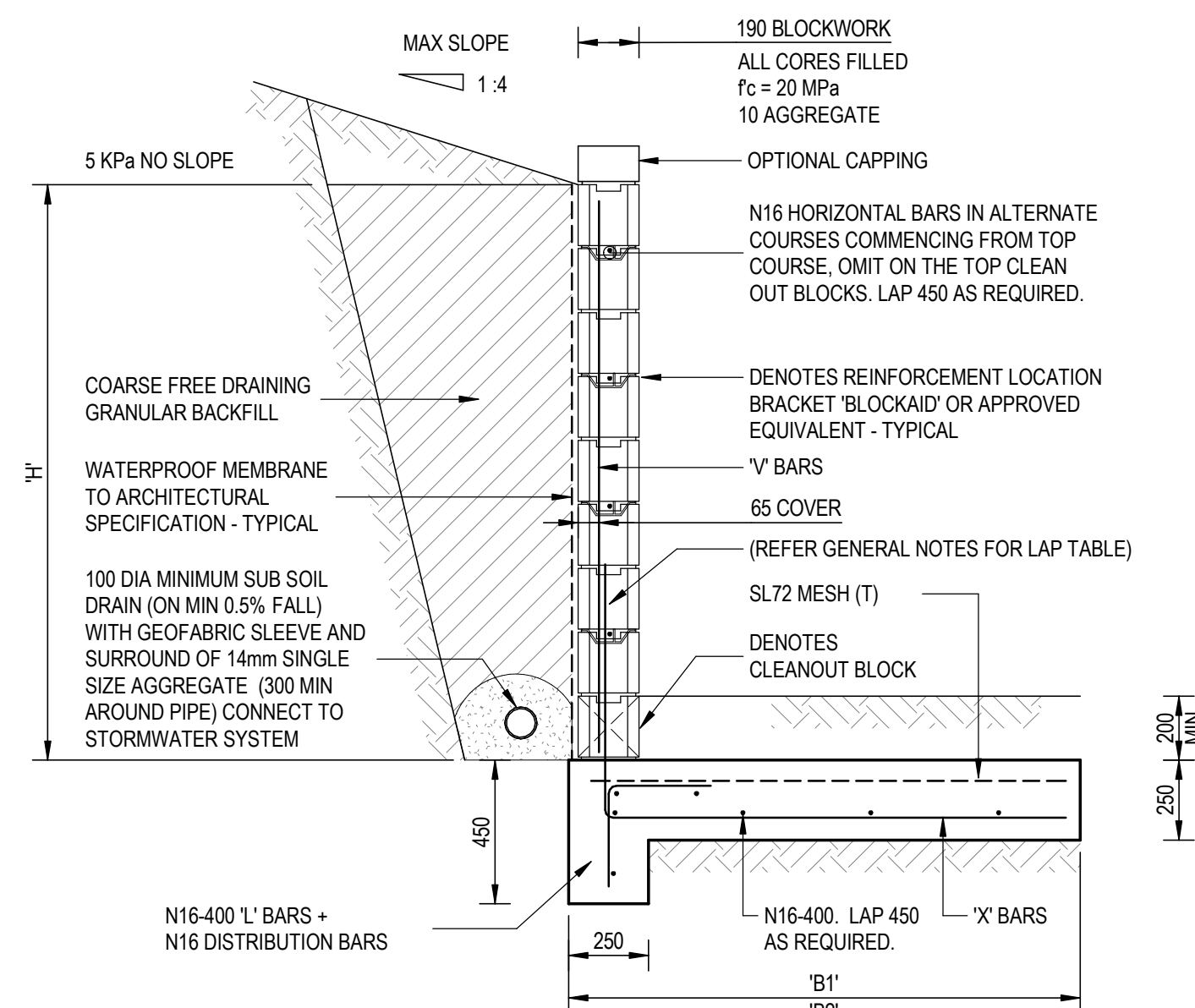


TYPICAL RETAINING WALL DETAIL - RW1 (1801 to 3000 MAX)

NOTES:
FOOTING FOUNDED ON NATURAL GROUND - MIN 150 kPa BEARING
CONTROL JOINTS AT 8000 MAXIMUM CENTRES
FOOTING CONCRETE STRENGTH $f_c \approx 25\text{MPa}$
BLOCKWALLS TO BE ADEQUATELY PROPPED DURING BACKFILL AND COMPACTION
REFER TO RETAINING WALL AND REINFORCED BLOCKWORK GENERAL NOTES

RETAINING WALL SCHEDULE

WALL HEIGHT	BACKFILL CONDITION AT TOP OF WALL						
	5 KPa NO SLOPE	MAX 1:4 SLOPE					
	BASE WIDTH		HEIGHT OF BLOCKWORK		REINFORCEMENT		
'H'	'B'1	'B'2	290 BLOCK	190 BLOCK	'X' BARS	'V' BARS	'K' BARS
1800	1550	1300	0	1800	N16-200	N16-400	N16-400
2200	1750	1600	800	1400	N16-200	N16-400	N16-400
2600	2150	2000	1000	1600	N16-200	N16-400	N16-400
3000	3200	3000	1200	1800	N20-200	N16-400	N16-400



TYPICAL RETAINING WALL DETAIL - RW2 (800 TO 1800 HIGH)

NOTES:
FOOTING FOUNDED ON NATURAL GROUND - MIN 150 kPa BEARING
CONTROL JOINTS AT 8000 MAXIMUM CENTRES
FOOTING CONCRETE STRENGTH $f_c = 25\text{MPa}$
BLOCKWALLS TO BE ADEQUATELY PROPPED DURING BACKFILL AND COMPACTION
REFER TO RETAINING WALL AND REINFORCED BLOCKWORK GENERAL NOTES

RETAINING WALL SCHEDULE

WALL HEIGHT	BACKFILL CONDITION AT TOP OF WALL			
	5 KPa NO SLOPE	MAX 1:4 SLOPE		
	BASE WIDTH		REINFORCEMENT	
'H'	'B1'	'B2'	'X' BARS	'V' BARS
800	1100	1050	N16-400	N12-400
1000	1250	1200	N16-400	N12-400
1200	1450	1300	N16-400	N16-400
1400	1550	1400	N16-400	N16-400
1600	1750	1600	N16-400	N16-400

NOTE:
WHERE FOOTINGS ARE FOUNDED DIRECTLY ON ROCK, AS AN ALTERNATIVE TO A FOOTING KEY, BARS MAY BE DOWELED INTO ROCK TO PROVIDE LATERAL RESISTANCE. THE BARS SHALL BE GALVANISED N20, COGGED 300 TO THE TOP REINFORCEMENT ZONE OF THE FOOTING, SPACED TO ACHIEVE A MINIMUM OF 1 PER SQUARE METRE OF FOOTING. EMBEDMENT DEPTH AND METHOD OF FIXING INTO ROCK IS TO BE CONFIRMED BY GEOTECHNICAL ENGINEER, TO ACHIEVE A 20KN ULTIMATE LOAD.

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[illegible]

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Project
NEW DWELLINGS

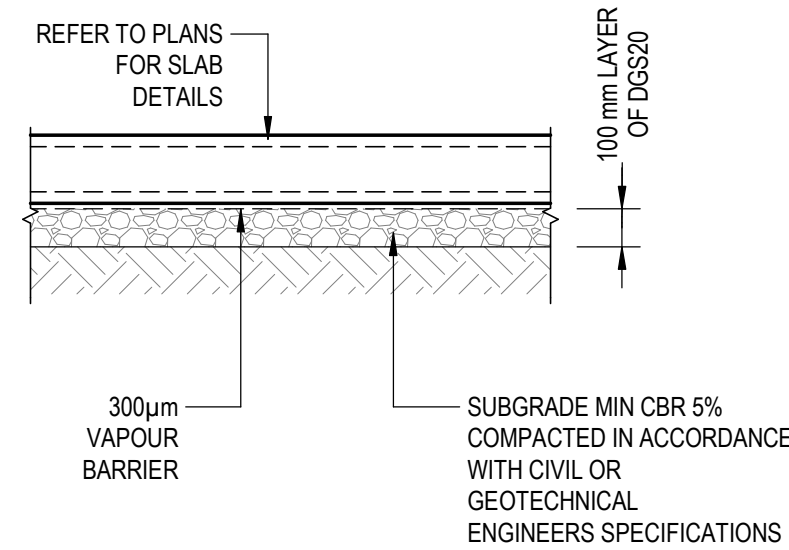
1 UNDERCLIFF ROAD,
FRESHWATER NSW 2096

Drawing Title
STRUCTURAL
TYPICAL RETAINING WALL DETAILS SHEET

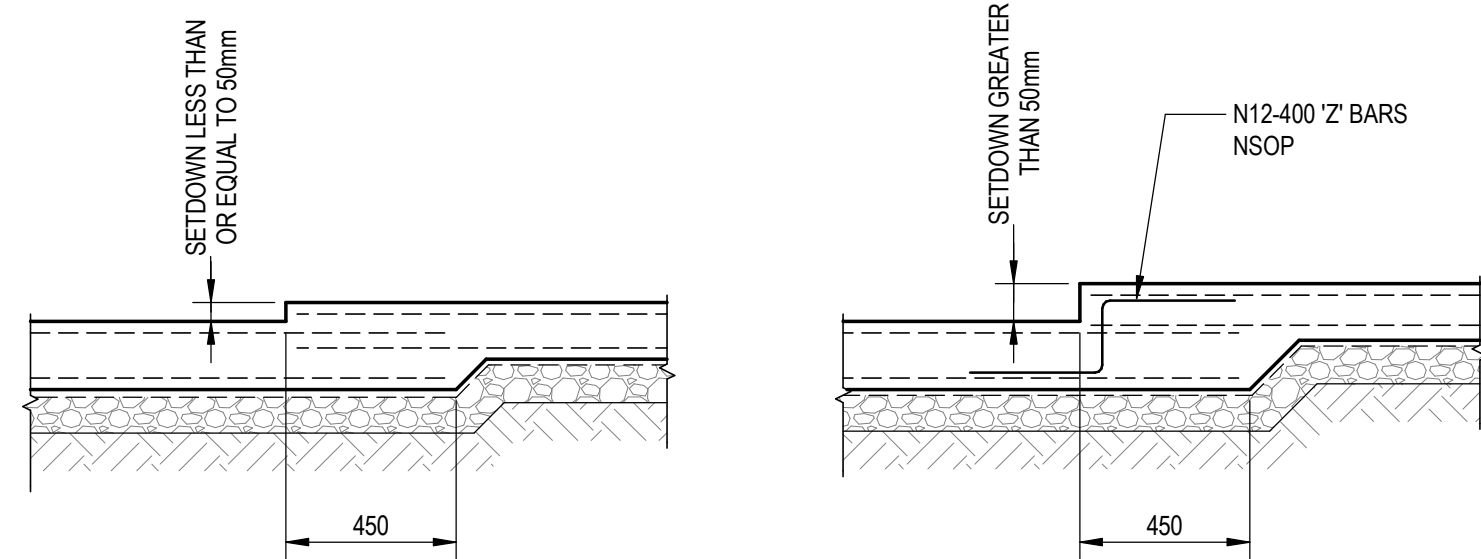
Drawn CB	Date MAY 2022	Scale 1 : 20	A1	Q.A. Check Checker	Date
Designed SF	Project No. NSW211942			Dwg No. S0.11	Issue 1

FOR CONSTRUCTION

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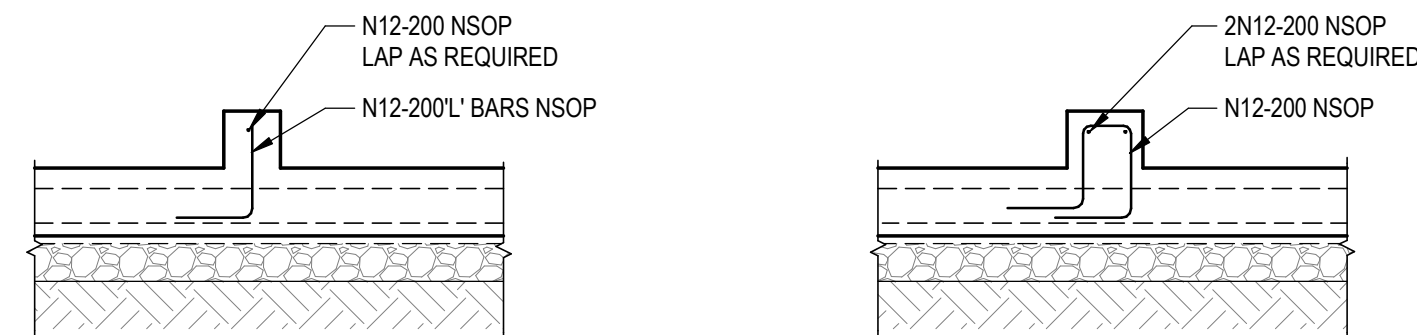


TYPICAL SLAB ON GROUND DETAIL - INTERNAL
SCALE 1:20



REFER TO PLANS FOR SLAB THICKNESSES AND SLAB REINFORCEMENT - TYPICAL

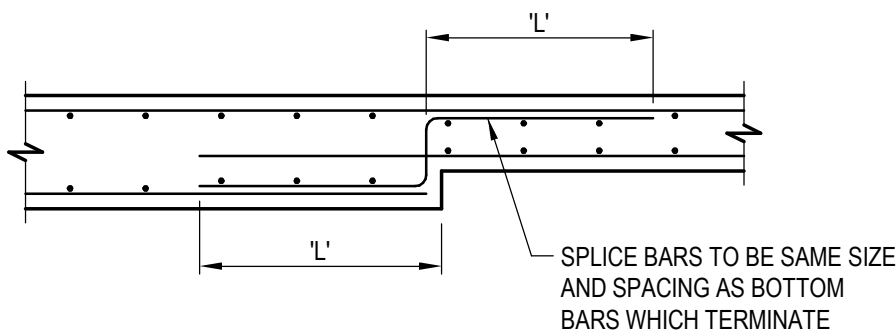
TYPICAL SETDOWNS IN SLAB ON GROUND
SCALE 1:20



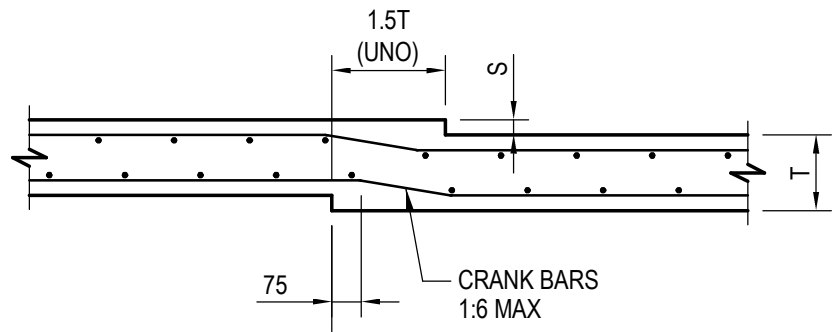
HOB WIDTH <= 150mm
HOB WIDTH > 150mm

TYPICAL HOB DETAILS - SLAB ON GROUND
SCALE 1:20

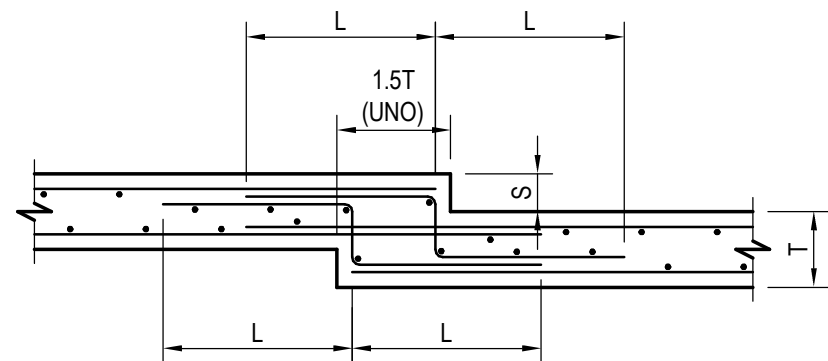
- REFER TO ARCHITECTURAL DOCUMENTS FOR DIMENSIONS AND SETOUTS
- PROVIDE FULL DEPTH JOINTS TO MATCH JOINTS IN SLAB OR AT MAXIMUM 6M CENTRES, STOP REINFORCEMENT 50MM EITHER SIDE OF JOINT.



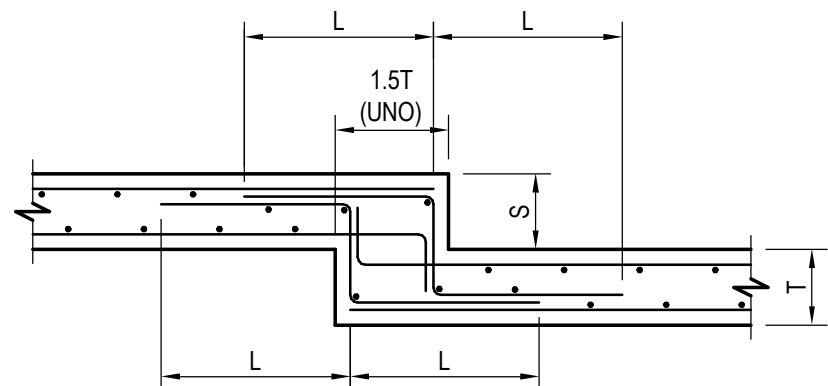
TYPICAL SUSPENDED SLAB CHANGE IN THICKNESS DETAIL
SCALE 1:20



S = LESS THAN 0.2T



S = LESS THAN 0.8T



S = GREATER THAN 0.8T
LESS THAN 1.5T

TYPICAL SUSPENDED FLOOR SETDOWN
SCALE 1:20

- NOTES:
- DETAILS APPLY UNLESS SHOWN OTHERWISE ON THE DRAWINGS
 - REFER ALSO TO GENERAL NOTES ON DRG S001
 - SETDOWNS GREATER THAN 1.5T TO ENGINEERS DETAIL
 - ALL COGS SHALL HAVE AN INTERNAL RADIUS OF 5 BAR DIAMETERS
 - FOR DEVELOPMENT LENGTH 'L' REFER TO LAP SPLICE STANDARD SCHEDULE

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				North
1	CONSTRUCTION ISSUE	16.05.2022	CB	SF
Issue:	Description	Date	Drawn	Approved
-1	0	10m at full size	100m	200m

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Project
NEW DWELLINGS

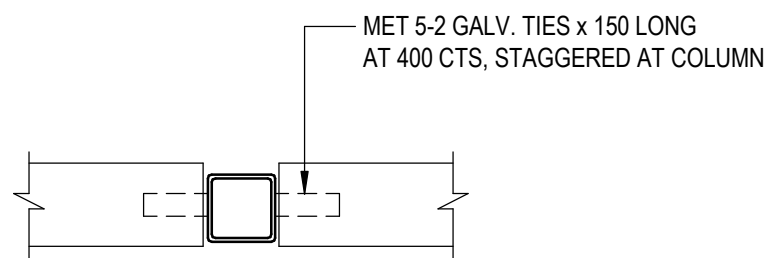
1 UNDERCLIFF ROAD,
FRESHWATER NSW 2096

Drawing Title
STRUCTURAL
TYPICAL SLAB ON GROUND AND SUSPENDED SLAB DETAILS
SHEET

Drawn CB	Date MAY 2022	Scale 1 : 20	A1	Q.A. Check Checker	Date
Designed SF	Project No. NSW211942	Dwg No. S0.12	Issue 1		

FOR CONSTRUCTION

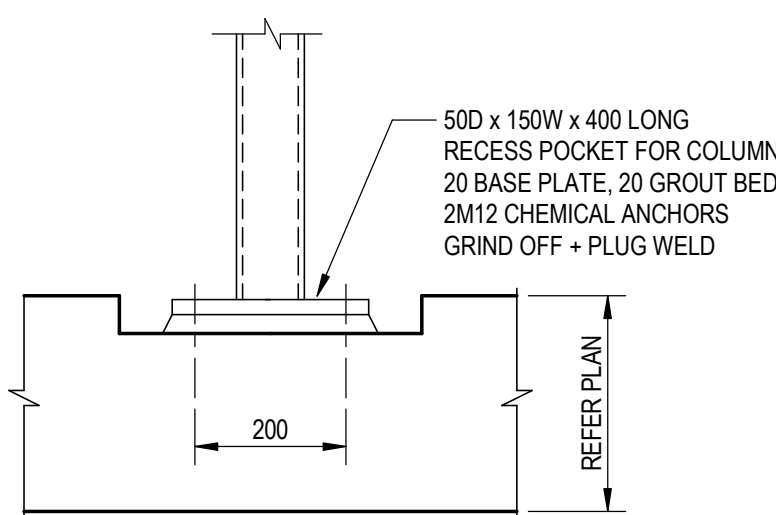
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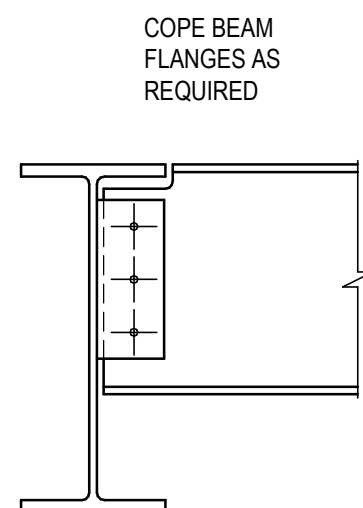
SCALE 1:10

ALL BOLTS ARE TO BE M16 MAXIMA SPIN CAPSULES
125mm MINIMUM EMBEDMENT U.N.O

SCALE 1:10

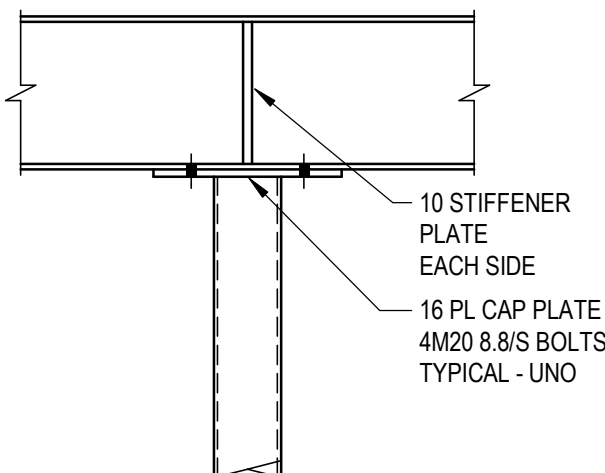


SCALE 1:10



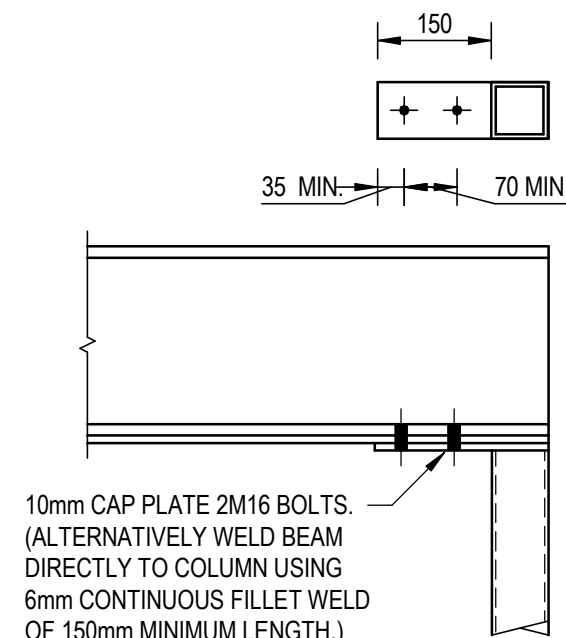
BEAM TO BEAM DETAIL

BEAM TO BEAM DETAIL

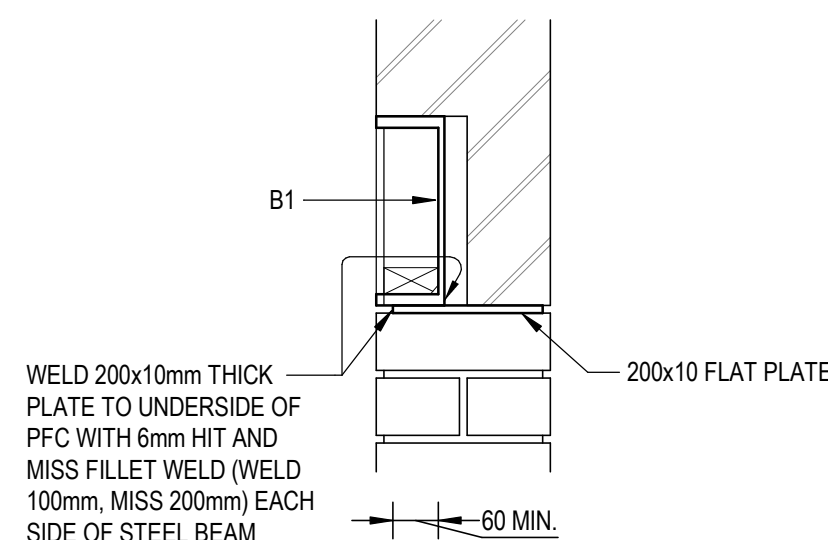


SCALE 1:10

SCALE 1:10



SCALE 1:10



10mm CAP PLATE 4M16 BOLTS.
(ALTERNATIVELY WELD BEAM
DIRECTLY TO COLUMN USING
6mm CONTINUOUS FILLET WELD
OF 150mm MINIMUM LENGTH.)

2M16 CHEMICAL ANCHORS (MIN. 110mm EMBEDMENT) OR EQUIVALENT.

SLAB EDGE

90x45 STUDS OVER.

8mm BASE PLATE SHAPED TO SUIT WALL LAYOUT.

65 MIN.

35

35

70

Detailed description: This technical drawing shows a cross-section of a wall base plate. The base plate is 8mm thick and shaped to suit the wall layout. It is supported by 90x45 studs. The base plate is secured with 2M16 chemical anchors, which have a minimum embedment of 110mm. The distance from the slab edge to the center of the anchors is 65mm minimum. The base plate has a total width of 70mm, with 35mm on each side of the central stud.

SLAB EDGE

90x45 STUDS OVER.

8mm BASE PLATE SHAPED TO SUIT WALL LAYOUT.

2M16 CHEMICAL ANCHORS (MIN. 110mm EMBEDMENT) OR EQUIVALENT.

65 MIN.

135 MIN.

35

285

TIMBER TO STEEL FIXING NOTES:

1. ALL TIMBER FRAMING TO BE POSITIVELY CONNECTED TO STEEL BEAMS USING M10 BOLTS AT 900mm NOMINAL CTS, OR EQUIVALENT. WE RECOMMEND THAT STEEL BEAMS HAVE THEIR TOP FLANGE AND WEB PREDRILLED FOR FUTURE FRAME FIXING IN ACCORDANCE WITH NOTES.
3. SOLID TIMBER JOISTS ARE NOT TO BE NOTCHED IN EXCESS OF THE RECOMMENDATIONS OF AS1684. WHERE NECESSARY, PROVIDE TIMBER TOP PLATE OVER STEEL BEAM SUPPORTING JOISTS USING TOP MOUNT HANGERS, FOR ENGINEERED TIMBER JOISTS/FLOOR TRUSSES, FIXING TO SUPPORT BEAMS IS TO BE STRICTLY IN ACCORDANCE WITH MANUFACTURERS' SPECIFICATION.
4. TO TOP FLANGE OF STEEL BEAM, PROVIDE TIMBER BLOCKING BETWEEN JOISTS AND POWER FIX TO STEEL BEAM, OR JOIST NAILING PLATE (SEE NOTE 1). ALL TIMBER JOISTS TO BE FIXED TO NAILING PLATE/BLOCKING TO MANUFACTURERS' SPECIFICATION.

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Project
NEW DWELLINGS

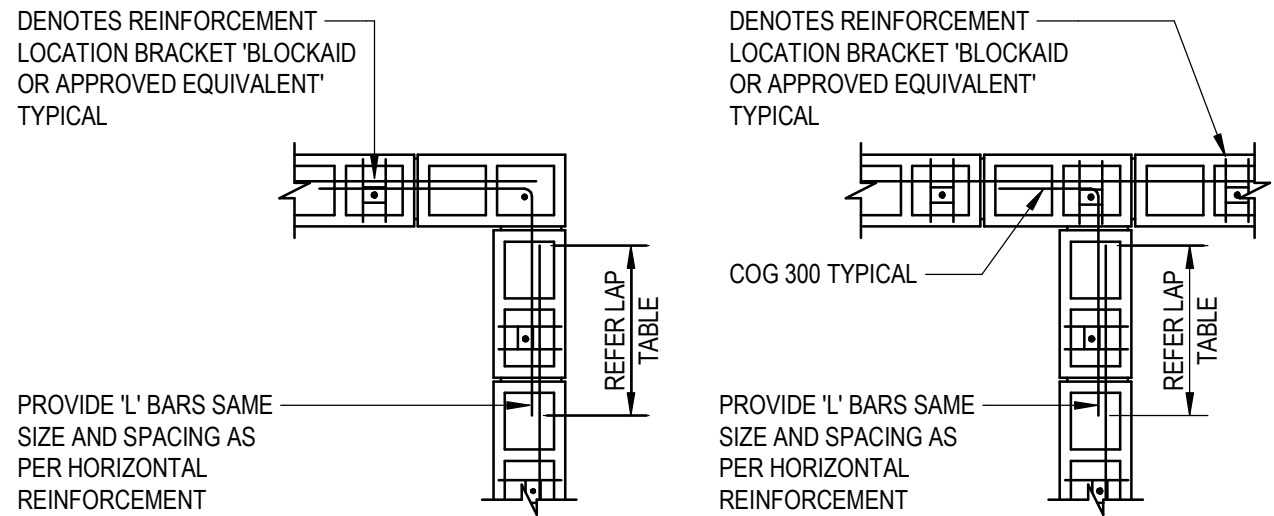
1 UNDERCLIFF ROAD,
FRESHWATER NSW 2096

Drawing Title
STRUCTURAL
TYPICAL STEELWORK DETAILS SHEET

Drawn CB	Date MAY 2022	Scale 1 : 10	A1	Q.A. Check Checker	Date
Designed SF	Project No. NSW211942			Dwg No. S0.14	Issue 1

FOR CONSTRUCTION

7/05/2022 9:38:11 AM BM 380\NSW211942 - 1 Under\Bof Fishing for NSW211942 STR B19.m

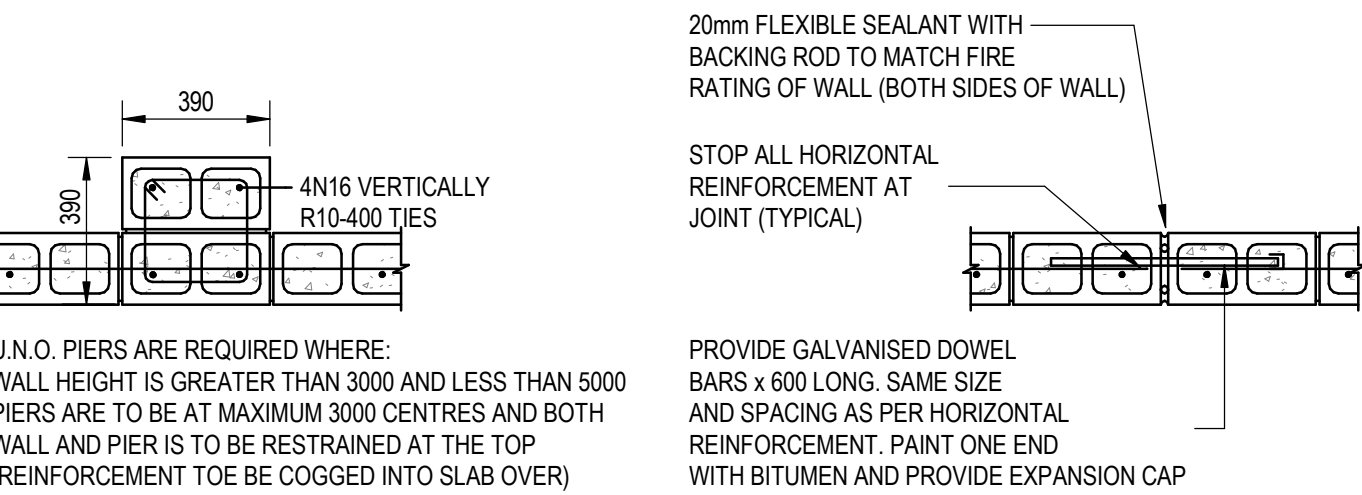


CORNER

INTERSECTION

GROUT COVER TO REINFORCEMENT IN 190 BLOCK RETAINING WALLS SHALL BE MAINTAINED BY THE USE OF PLASTIC 'BLOCKAID' REINFORCEMENT LOCATION BRACKETS (OR APPROVED EQUIVALENT) AT THE INTERSECTION OF ALL HORIZONTAL AND VERTICAL REINFORCEMENT.

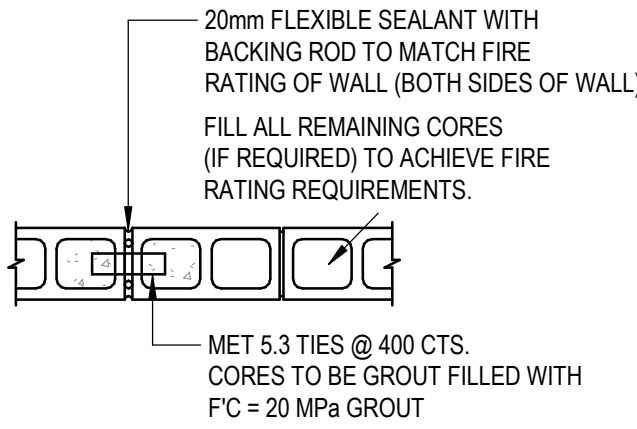
BLOCK WALL JUNCTION DETAILS
SCALE 1:20



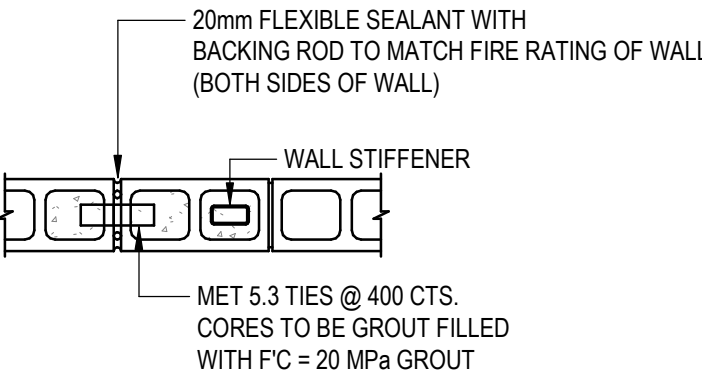
TYPICAL BLOCK PIER REINFORCED WALL

TYPICAL VERTICAL JOINT VCJ - IN A REINFORCED WALL
JOINT TO BE MAX 8000 CTS

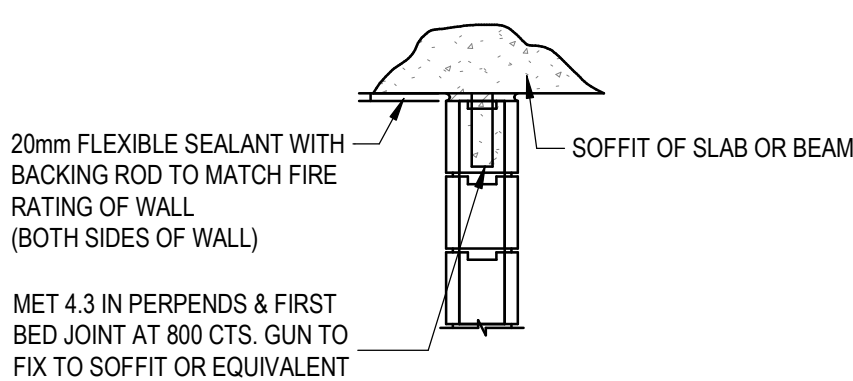
TYPICAL REINFORCED BLOCK WALL DETAILS - PLAN VIEW
SCALE = 1:20



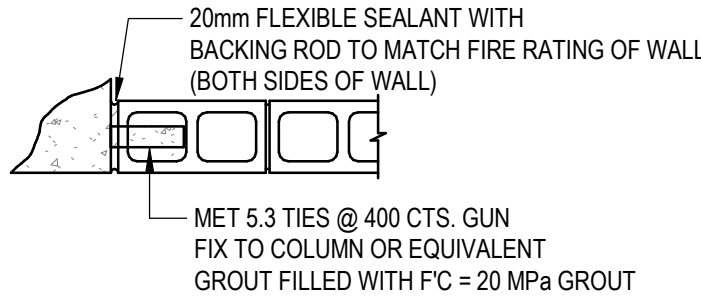
TYPICAL VERTICAL JOINT FOR HOLLOW CORE
JOINT TO BE MAX 8000 CTS



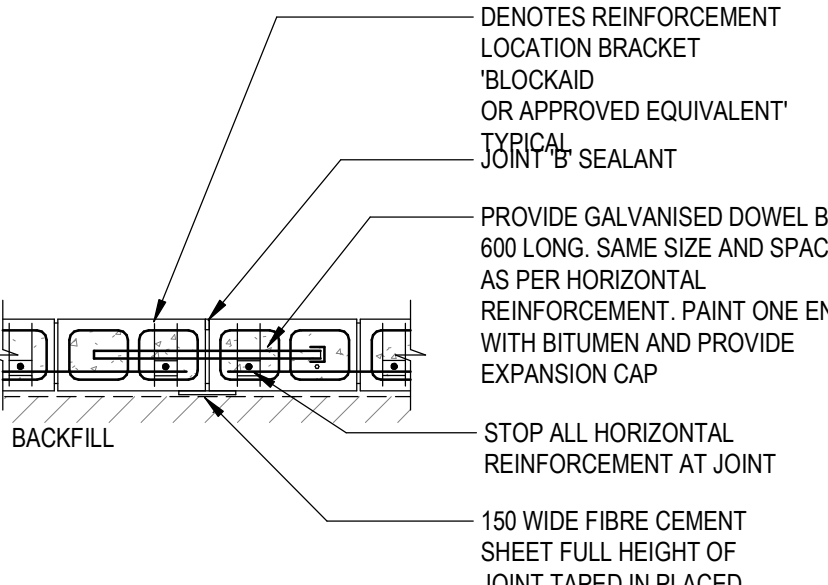
TYPICAL VERTICAL JOINT AT WALL STIFFENER



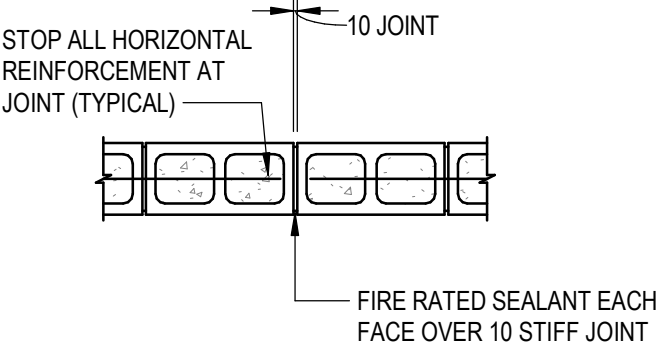
TYPICAL WALL DETAIL AT SLAB OR BEAM SOFFIT
SCALE = 1:20



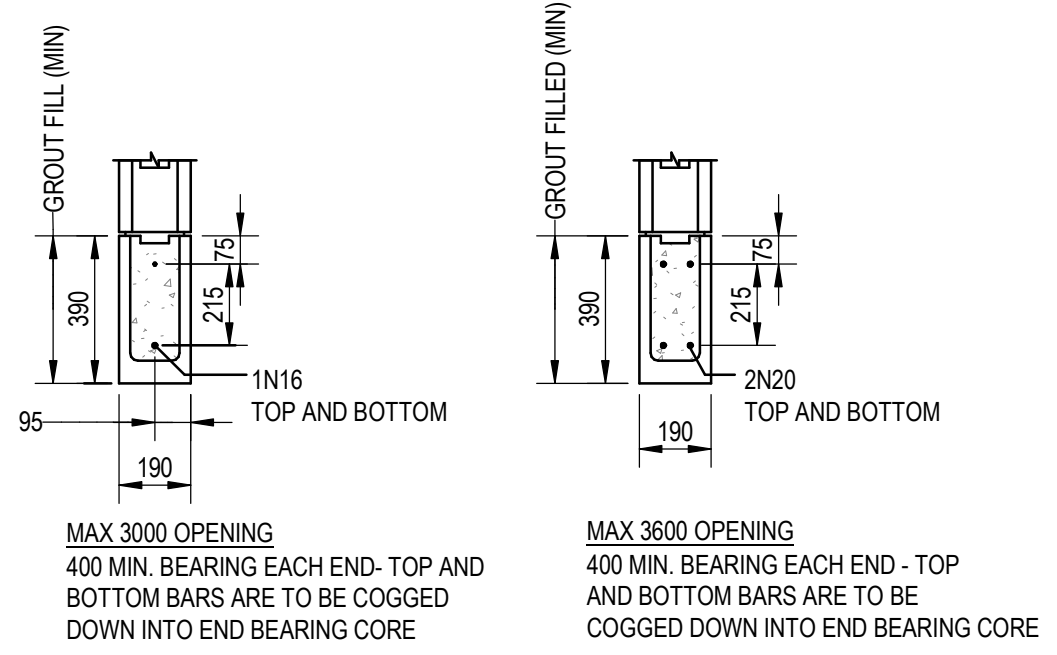
TYPICAL VERTICAL JOINT BETWEEN CONCRETE COLUMN & WALLS - PLAN VIEW
SCALE = 1:20



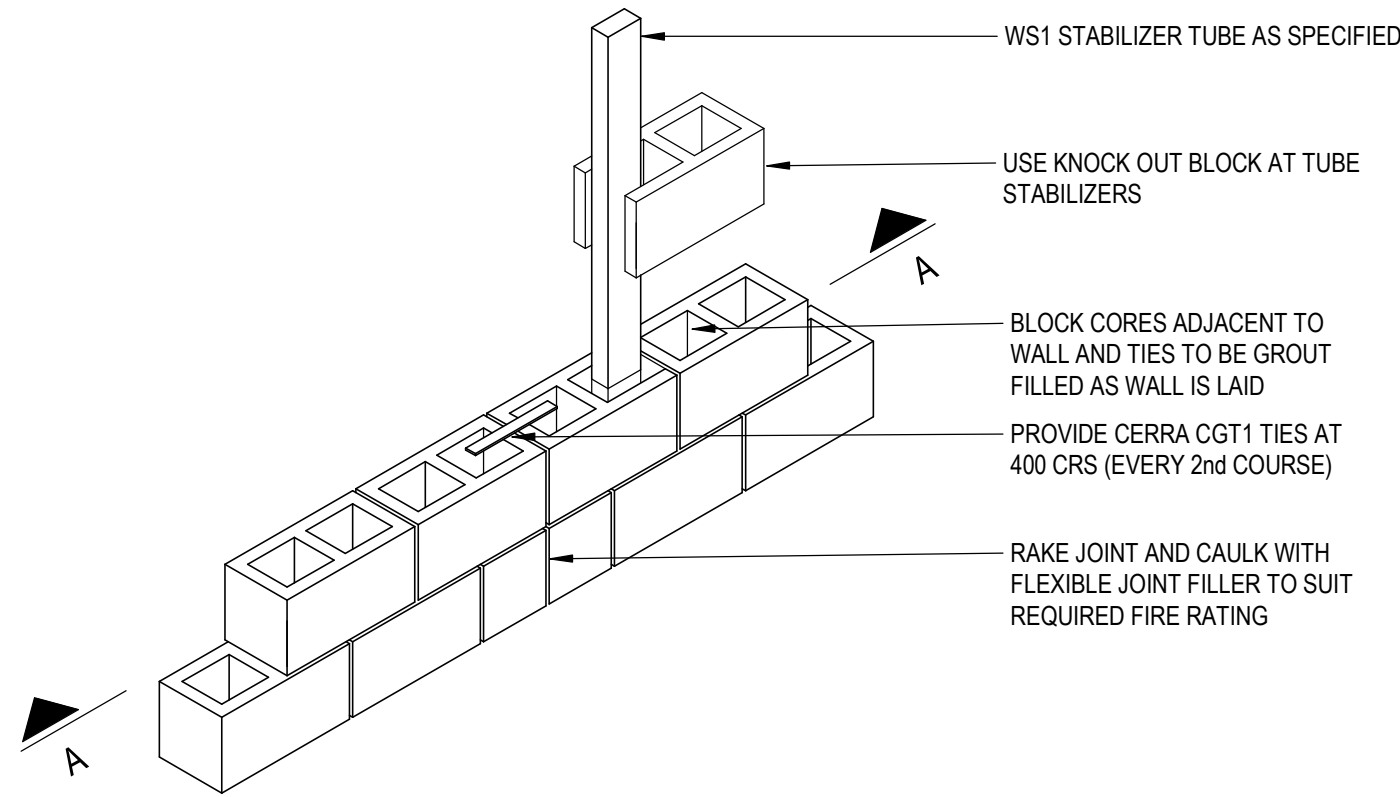
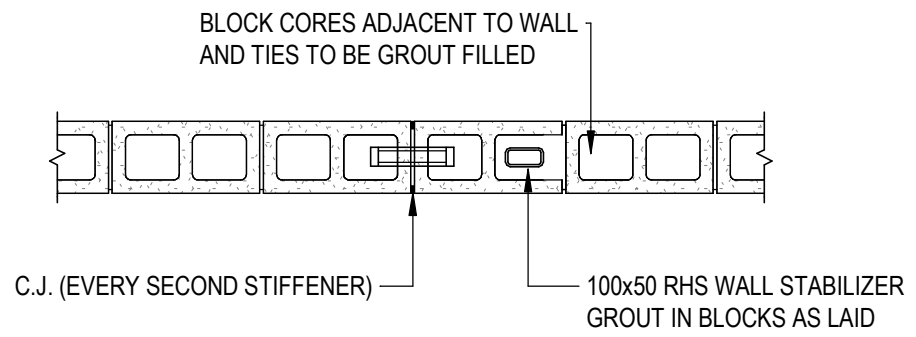
TYPICAL VERTICAL JOINT RWVCJ - IN A RETAINING WALL
JOINT TO BE MAX 8000 CTS



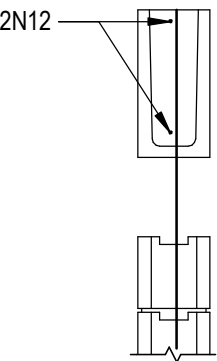
TYPICAL VERTICAL JOINT VCJ - NON REINFORCED WALL
JOINT TO BE MAX 8000 CTS



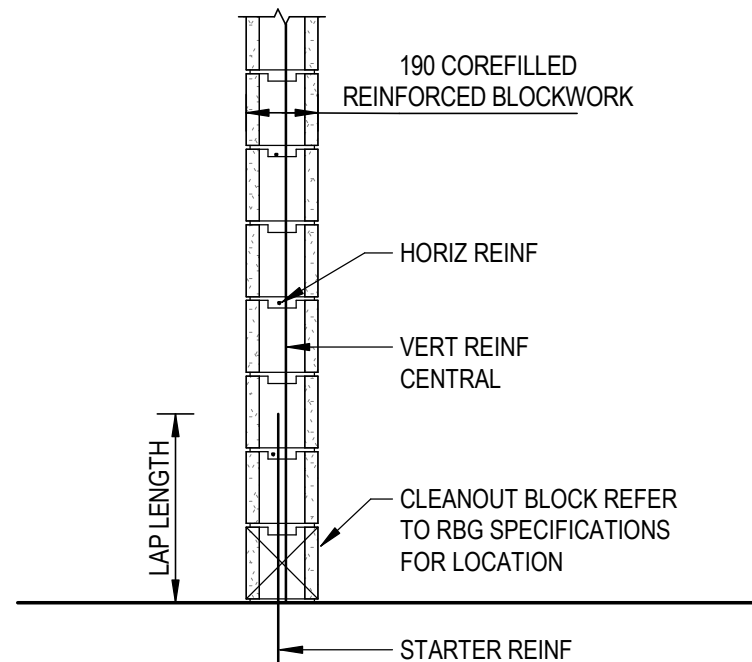
TYPICAL LINTEL DETAILS FOR OPENINGS IN BLOCK WALLS - INTERNAL OR EXTERNAL
SCALE = 1:20



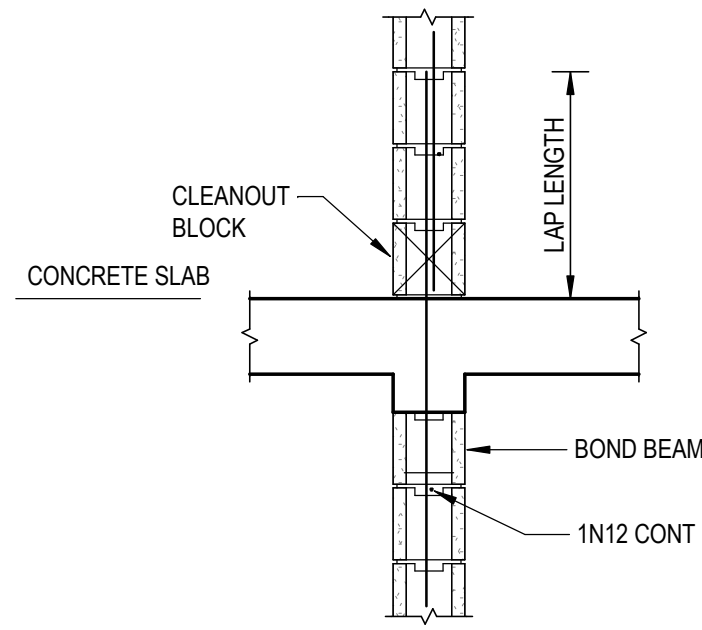
CONTROL JOINT WITH STABILIZER TUBE
(UNREINFORCED 150 AND 200 SERIES BLOCKWORK)
SCALE 1:20



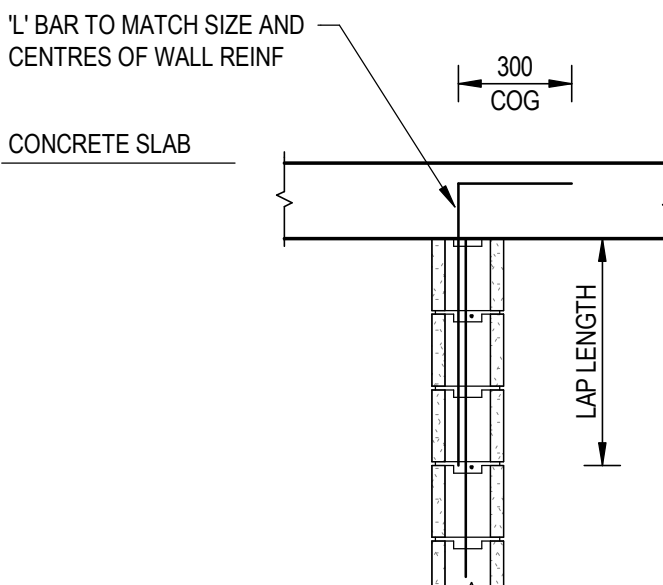
TYPICAL LOAD BEARING RETAINING BLOCKWORK INCORPORATING A BOND BEAM
SCALE 1:20



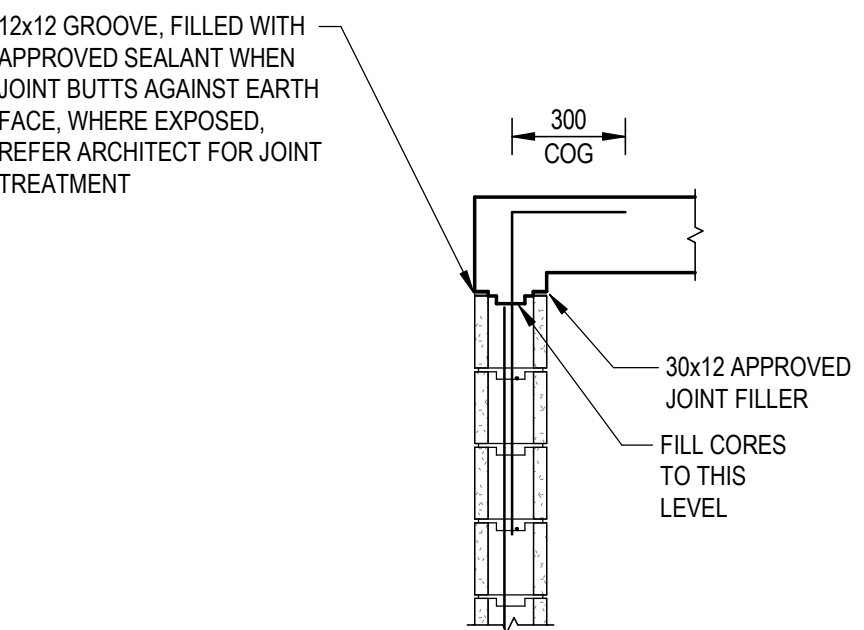
TYPE 2



LOAD BEARING BLOCKWORK AT INTERMEDIATE SLAB
SCALE 1:20
NOTE: BLOCKWALL SHALL NOT INTRUDE INTO SOFFIT OF SLAB BY MORE THAN 10mm



LOAD BEARING BLOCKWORK TO UNDERSIDE OF SLAB
SCALE 1:20
NOTE: BLOCKWALL SHALL NOT INTRUDE INTO SOFFIT OF SLAB BY MORE THAN 10mm



TYPICAL LOAD BEARING RETAINING BLOCKWORK TO UNDERSIDE OF SLAB
SCALE 1:20

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Issue	Description	Date	Drawn	Approved
1	CONSTRUCTION ISSUE	16.05.2022	CB	SF
2				
3				
4				
5				
6				
7				
8				
9				
10				

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Project
NEW DWELLINGS

1 UNDERCLIFF ROAD,
FRESHWATER NSW 2096

Drawing Title
STRUCTURAL
TYPICAL BLOCKWORK WALL DETAILS SHEET

Drawn	Date	Scale	A1	O.A. Check	Date
CB	MAY 2022	1 : 20		Checker	
Designed	Project No.	Dwg No.	Issue		
SF	NSW211942	S0.15	1		

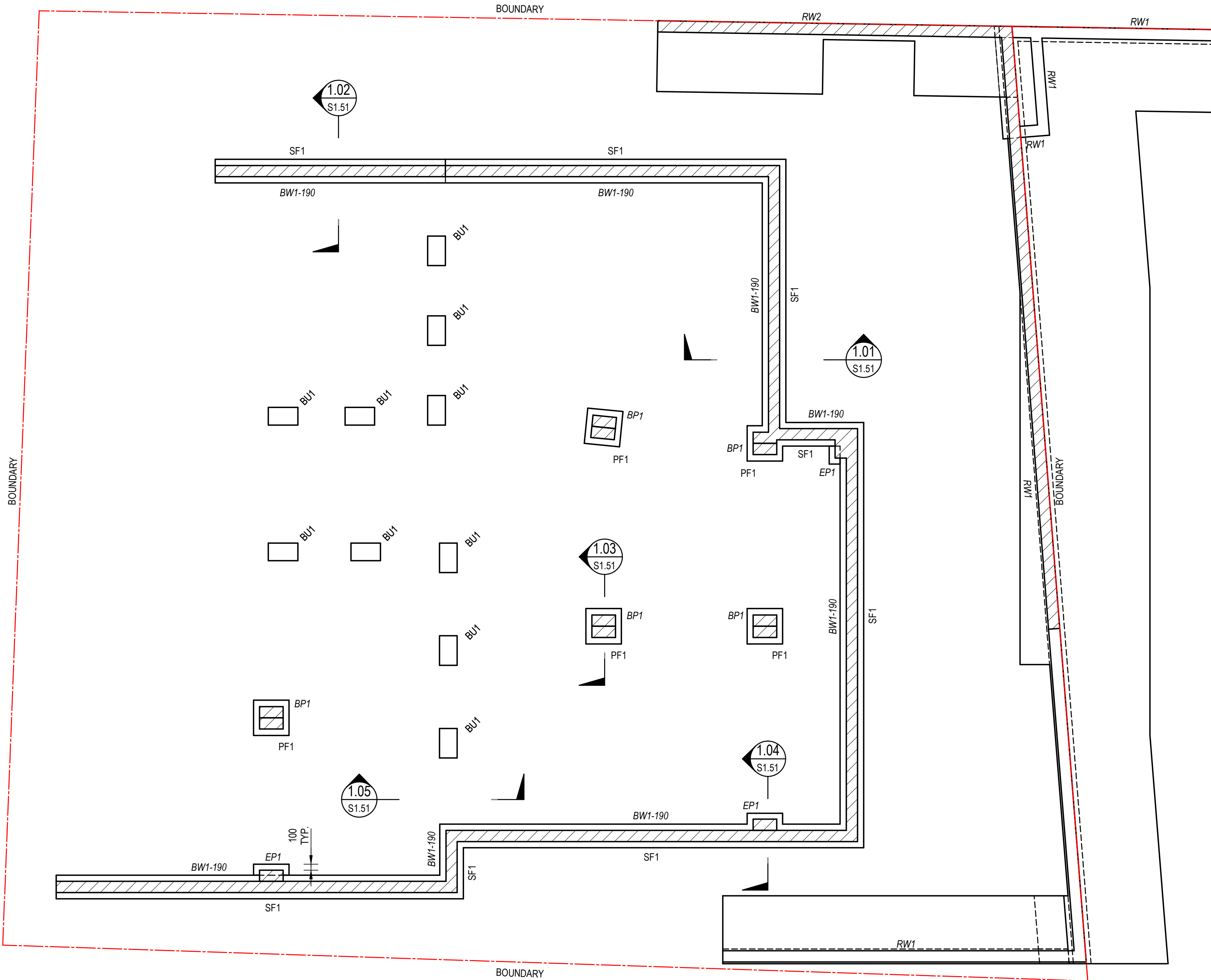
FOR CONSTRUCTION

BIM 360: NSW211942 - 1 Undercliff Rd Freshwater NSW 2153, STR, R004

DOWLING STREET

FOOTPATH

HILL STREET



FOOTING PLAN - HILL STREET

SCALE: 1 : 50

THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE GEOTECHNICAL ASSESSMENT REPORT No. 20/2635, PREPARED BY STS Geotechnics PTY LTD, IN AUGUST 2020 AND ANY SUBSEQUENT ADVICE PROVIDED BY THEM. ALL SITE WORK SHALL BE CARRIED OUT IN STRICT ACCORDANCE WITH THE RECOMMENDATIONS CONTAINED WITHIN SECTION 5 OF THE REPORT.

FOOTING NOTES:

- REFER TO DRAWING S0.01 FOR ALL STRUCTURAL GENERAL NOTES.
- REFER TO DRAWING S1.01 & S0.10 FOR FOOTING SCHEDULE & TYPICAL FOOTING DETAILS.
- REFER TO DRAWING S0.11 FOR RETAINING WALL DETAILS.
- REFER TO DRAWING S0.12 FOR SLAB ON GROUND DETAILS.
- REFER TO DRAWING S0.15 FOR BLOCKWORK WALL DETAILS.
- REFER TO DRAWING S1.51 FOR SECTIONS.
- ALL FALLS, SETDOWNS & WATERPROOFING ARE TO ARCHITECTS DETAILS U.N.O.

WALL SCHEDULE

MARK	SIZE & TYPE	WALL REINFORCEMENT		COMMENTS
		HORIZONTAL	VERTICAL	
BW1-190	190 BLOCKWORK WALL	N16-400 CENTRAL	N16-400 CENTRAL	
BW2-190	190 BLOCKWORK WALL - BW2	N16-400 CENTRAL	N16-400 CENTRAL	
RW1	RW1_190 BLOCKWORK WALL	-	-	REFER TO DRAWING S0.11 FOR DETAILS.
RW2	RW2_190 BLOCKWORK WALL	-	-	REFER TO DRAWING S0.11 FOR DETAILS.
UP1	200 CONCRETE UPSTAND	N12-200 EF	N12-200 EF	N12 U-BARS AT TOP AND BOTTOM TO MATCH WALL REINFORCEMENT.

BLOCK PIER SCHEDULE

MARK	SIZE & TYPE	WALL REINFORCEMENT		COMMENTS
		HORIZONTAL	VERTICAL	
BP1	BP1_190 BLOCKWORK WALL	-	4N12	400 x 400 BLOCK PIERS.
EP1	EP1_190 BLOCKWORK WALL	-	2N12	400 LONG ENGAGED PIERS. PROVIDE WALL TIES BETWEEN EP1 AND WALL.

BUCKET PIER SCHEDULE

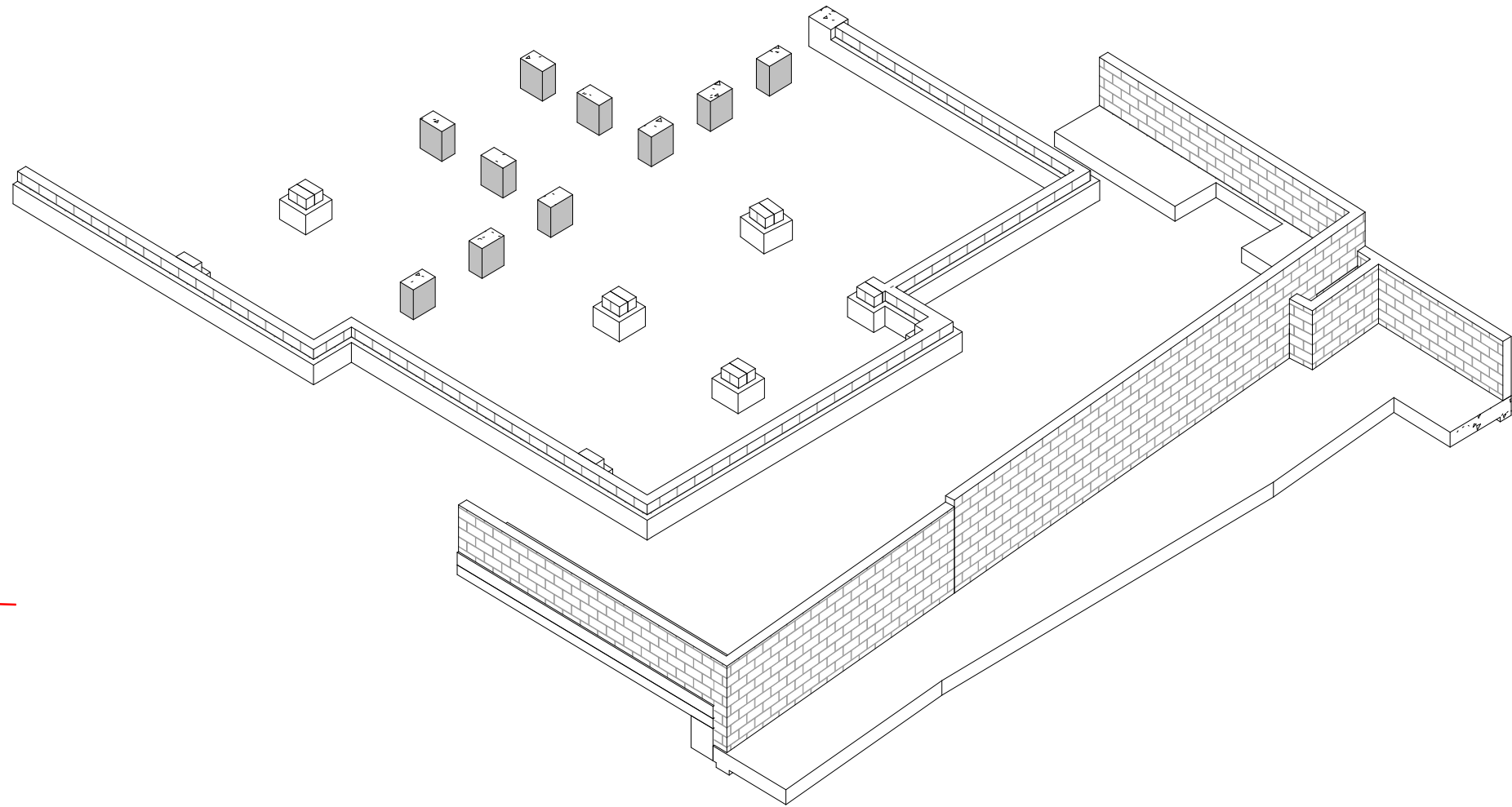
MARK	SIZE	COMMENTS
BU1	300 x 500mm	WHERE REQUIRED, PROVIDE 300 x 500 MASS CONCRETE BUCKET PIERS TO BEARING MATERIAL, AT MAX. 1800 CTS.

PAD FOOTING (PF) SCHEDULE

MARK	LENGTH (A) x WIDTH (B) x DEPTH (C)			REINFORCEMENT		COMMENTS
	A	B	C	BOTTOM	TOP	
PF1	600	600	400	4N12 U-BARS E.W.	SL102	FOUNDED ON CLASS IV SANDSTONE.

STRIP FOOTING (SF) SCHEDULE

MARK	WIDTH	DEPTH	BOTTOM	TOP	TIES	COMMENTS
STRIP FOOTING						
SF1	400	400	L11TM300	L11TM300	R10-600	FOUNDED DIRECTLY ON CLASS IV SANDSTONE. ALTERNATIVELY, PROVIDE 450 x 450 MASS CONCRETE BUCKET PIERS AT 1800 MAX. CTS. TO CLASS IV SANDSTONE.



HILL ST - FOOTING VIEW

SCALE:

FOR CONSTRUCTION

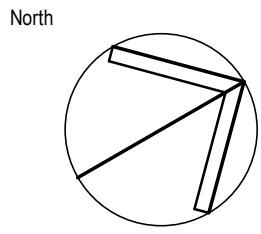
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Issue	Description	Date	Drawn	Approved
1	CONSTRUCTION ISSUE	16.05.2022	CB	SF
B	ISSUED FOR CONSTRUCTION CERTIFICATE	12.04.2022	CB	SF
A	PRELIMINARY ISSUE	11.03.2022	CB	SF

Scale: 1:50



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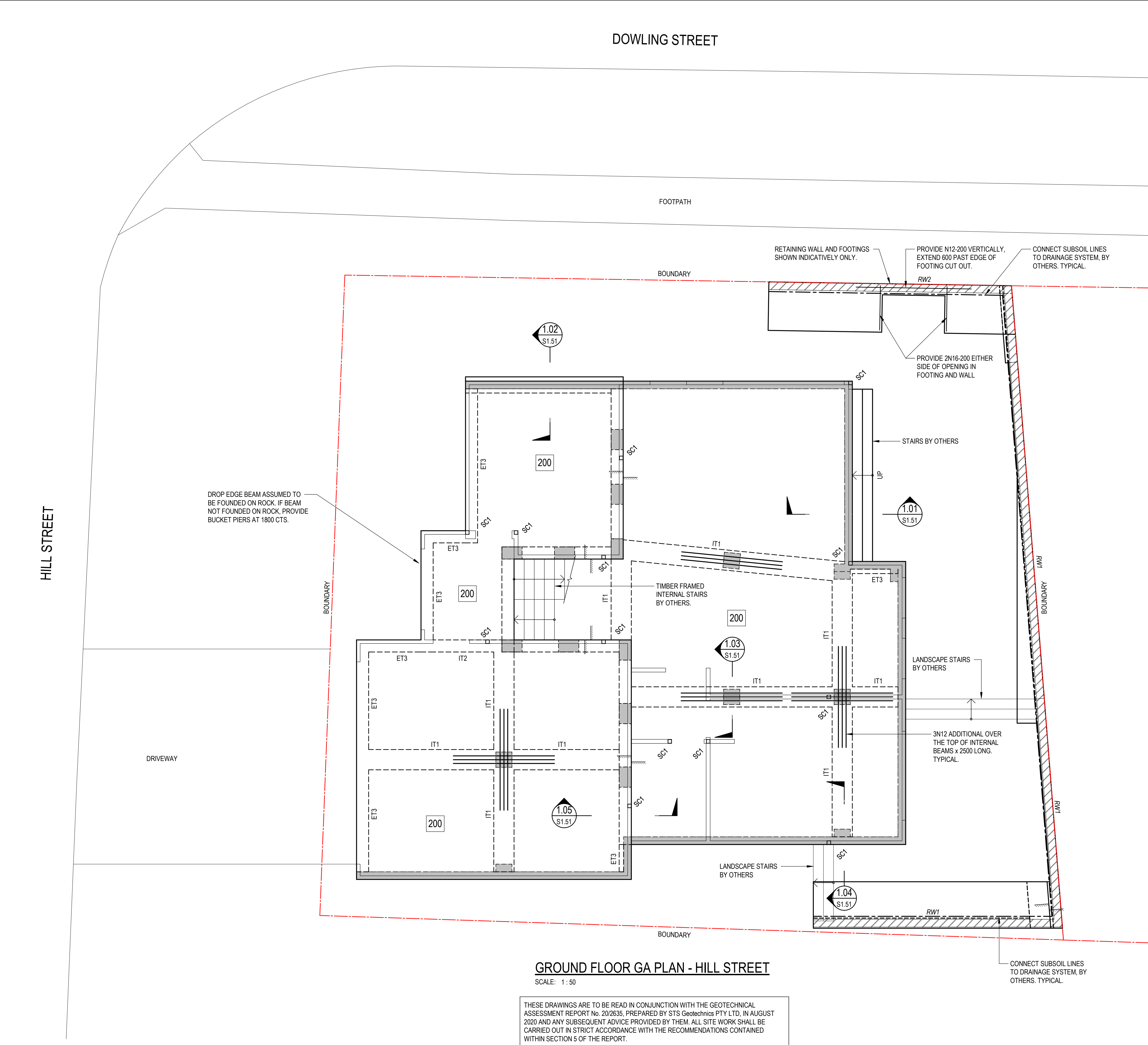
Project
NEW DWELLINGS

1 UNDERCLIFF ROAD,
FRESHWATER NSW 2096

Drawing Title
STRUCTURAL
FOOTING PLAN - HILL STREET

Drawn	Date	Scale	A1	Q.A. Check	Date
CB	MARCH 2022	As indicated		Checker	
Designed	Project No.	Dwg No.	Issue		
SF	NSW211942	S1.01	1		

BM 300 (NSW) 1942 - 1: Universal File Freshwater NSW 2096, STR, RW1



GROUND FLOOR GA PLAN - HILL STREET

SCALE: 1 : 50

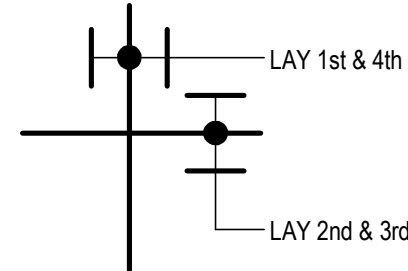
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LEGEND

- 200 DENOTES 200 THICK SLAB ON FILL AS FORMWORK.
ALL SLABS ON GROUND ARE TO BE POURED ONTO A 300um WATERPROOF MEMBRANE OVERLAYING AN 80mm LAYER OF 20mm SINGLE SIZED FREE DRAINING COMPACTED GRANULAR MATERIAL.
SLAB TO BE REINFORCED WITH N12-200 E.W. T&B.
BOTTOM REINFORCEMENT TO BE LAPPED OVER BEAMS AND WALLS.
TOP REINFORCEMENT TO BE LAPPED MIDSPAN.
ANY ADDITIONAL REINFORCEMENT IS SHOWN ON PLAN AND SECTIONS.
- Denotes slab step. Refer to plan for variation.
- SJ DENOTES SAWN JOINT. REFER DETAIL.
- DJ DENOTES DOWEL JOINT. REFER DETAIL.

NOTES:

- REFER TO DRAWINGS S0.01, S0.02, S0.03 FOR ALL STRUCTURAL GENERAL NOTES.
- REFER TO DRAWING S0.11 FOR RETAINING WALL DETAILS.
- REFER TO DRAWING S0.12 FOR SLAB ON GROUND DETAILS.
- REFER TO DRAWING S0.14 FOR STEELWORK DETAILS.
- REFER TO DRAWING S0.15 FOR BLOCKWORK WALL DETAILS.
- REFER TO DRAWINGS S1.51 FOR SECTIONS.
- REFER TO ARCHITECTURAL DRAWINGS FOR ALL CONCRETE SETOUT INFORMATION.
- ALL FALLS, SETDOWNS & WATERPROOFING ARE TO ARCHITECTS DETAILS U.N.O.
- UNLESS NOTED OTHERWISE ALL WET AREA SETDOWNS ARE TO BE A MINIMUM = 30mm.
- NON STRUCTURAL KERBS AND HOBS ARE NOT SHOWN. REFER TO ARCHITECTURAL DRAWINGS FOR EXTENT AND LOCATIONS.
- VERTICAL JOINTS IN WALLS ARE TO MATCH SLAB JOINT LOCATIONS.



REINFORCEMENT LAYING SEQUENCE U.N.O.

STEEL COLUMN SCHEDULE

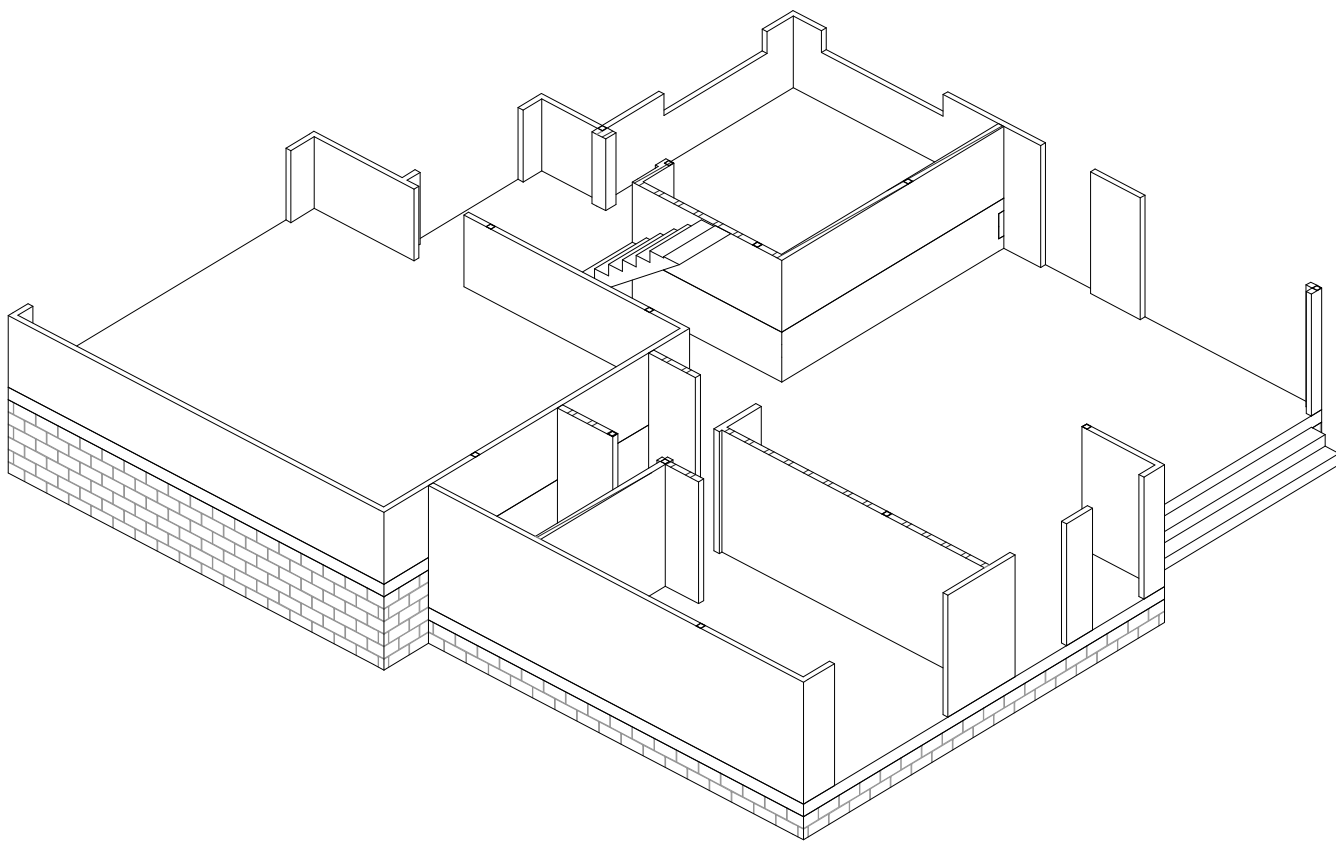
MARK	SIZE	COMMENTS
STEEL COLUMN		
SC1	89x89x5.0SHS	

WALL SCHEDULE

MARK	SIZE & TYPE	WALL REINFORCEMENT		COMMENTS
		HORIZONTAL	VERTICAL	
BW1-190	190 BLOCKWORK WALL	N16-400 CENTRAL	N16-400 CENTRAL	
BW2-190	190 BLOCKWORK WALL - BW2	N16-400 CENTRAL	N16-400 CENTRAL	
RW1	RW1 .190 BLOCKWORK WALL	-	-	REFER TO DRAWING S0.11 FOR DETAILS.
RW2	RW2 .190 BLOCKWORK WALL	-	-	REFER TO DRAWING S0.11 FOR DETAILS.
UP1	200 CONCRETE UPSTAND	N12-200 EF	N12-200 EF	N12 U-BARS AT TOP AND BOTTOM TO MATCH WALL REINFORCEMENT.

CONCRETE THICKENING (ET/IT) SCHEDULE

MARK	WIDTH	DEPTH	COMMENTS
EDGE THICKENING			
ET1	300	400	L11TM200 BOTTOM. R10-600 TIES. REFER TO PLAN FOR ADDITIONAL REINFORCEMENT.
ET2	300	400	L11TM200 BOTTOM. R10-600 TIES. REFER TO PLAN FOR ADDITIONAL REINFORCEMENT.
ET3	300	400	MIN. 400 DEEP. 3N16 BOTTOM. FOUNDED ON ROCK IN ACCORDANCE WITH S0.01, WHERE REQUIRED PROVIDE 450 SQ BUCKET PIERS TO BEARING MATERIAL AT MAX. 1800 CTS.
INTERNAL THICKENING			
IT1	500	400	3N20 TOP & BOTTOM. N12-300 TIES. REFER TO PLAN FOR ADDITIONAL REINFORCEMENT.
IT2	300	400	3N16 BOTTOM. N12-300 TIES. REFER TO PLAN FOR ADDITIONAL REINFORCEMENT.



HILL ST - GROUND FLOOR VIEW

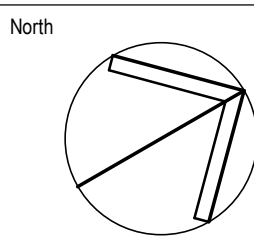
SCALE:

FOR CONSTRUCTION

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Issue	Description	Date	Drawn	Approved
1	CONSTRUCTION ISSUE	16.05.2022	CB	SF
2	ISSUED FOR CONSTRUCTION CERTIFICATE	12.04.2022	CB	SF
3	PRELIMINARY ISSUE	11.03.2022	CB	SF



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BY GROUP PTY LTD

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Project
NEW DWELLINGS

1 UNDERCLIFF ROAD,
FRESHWATER NSW 2096

Drawing Title
STRUCTURAL
GROUND FLOOR GA PLAN - HILL STREET

Drawn	Date	Scale	A1	Q.A. Check	Date
CB	MARCH 2022	As indicated		Checker	
Designed	Project No.	Dwg No.	Issue		
SF	NSW211942	S1.11	1		

BIM 360://NSW211942 - 1/Undercliff Rd Freshwater NSW2153/STR_R001.rvt 17/05/2022 5:38:27 AM

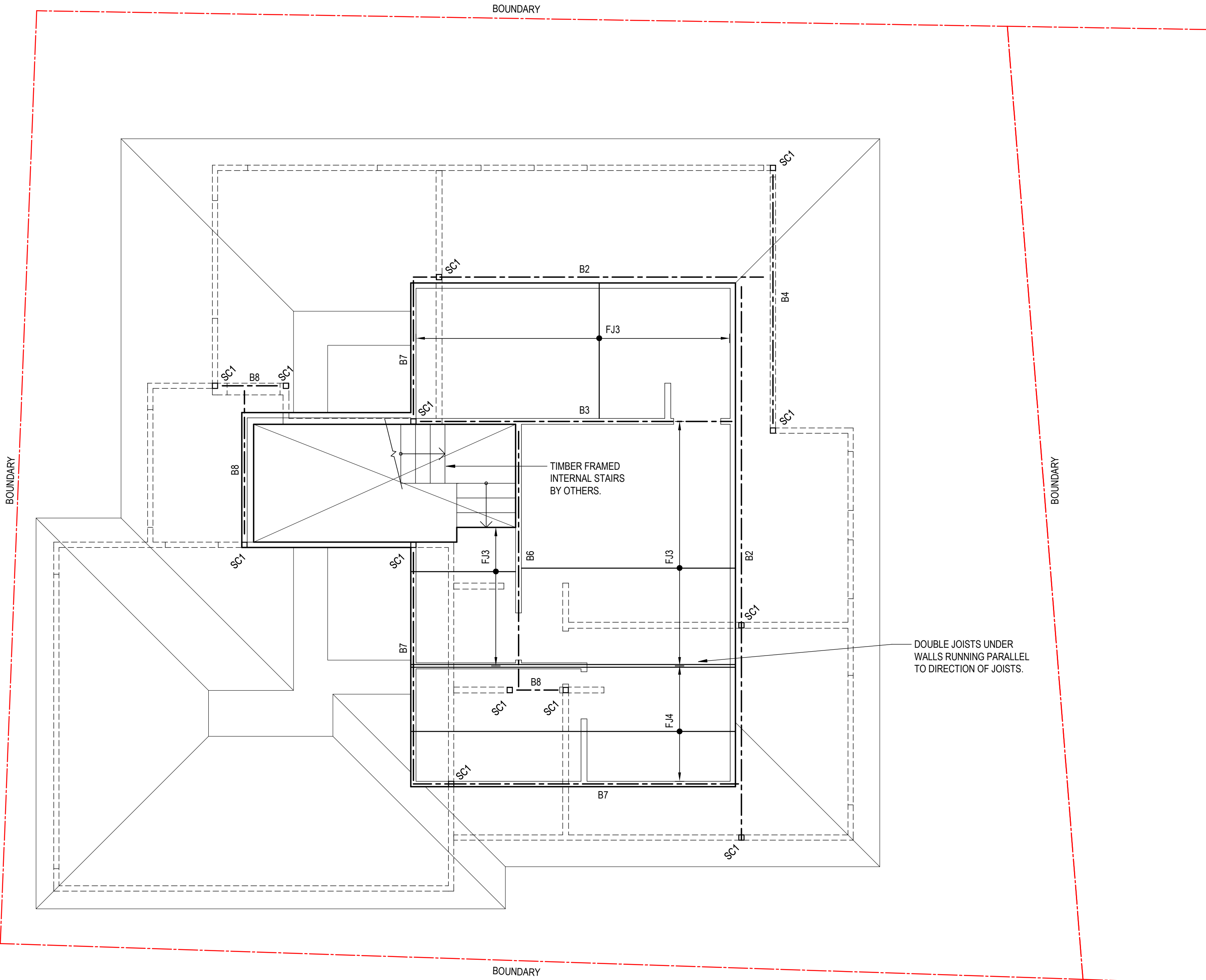
LEGEND

TIMBER ROOF FRAMING BY D & C CONTRACTOR. TYPICAL.

PROPRIETARY TIMBER TRUSSES ARE TO BE DESIGNED, INSPECTED AFTER ERECTION, AND CERTIFIED BY AN NPER STRUCTURAL ENGINEER ENGAGED BY THE FABRICATOR OR THE BUILDER. CERTIFICATION SHALL INCLUDE ROOF BRACING AND TIE DOWN TO THE SUPPORTS. THE DESIGN SHALL COMPLY WITH AS1720. THE FABRICATOR SHALL PROVIDE LAYOUT DRAWINGS TO ACOR FOR CONFIRMATION OF THEIR DESIGN ASSUMPTIONS FOR THE SUPPORTING STRUCTURE.

ALL TIMBER FRAMING, CONNECTIONS, BRACING AND TIEDOWNS TO BE IN ACCORDANCE WITH AS1684.

- NOTES:
- REFER TO DRAWINGS S0.01-S0.03 FOR ALL STRUCTURAL GENERAL NOTES.
 - REFER TO DRAWINGS FOR WALL SCHEDULE.
 - REFER TO ARCHITECTURAL DRAWINGS FOR ALL SETOUT INFORMATION.
 - ALL FALLS, SETDOWNS & WATERPROOFING ARE TO ARCHITECTS DETAILS U.N.O.

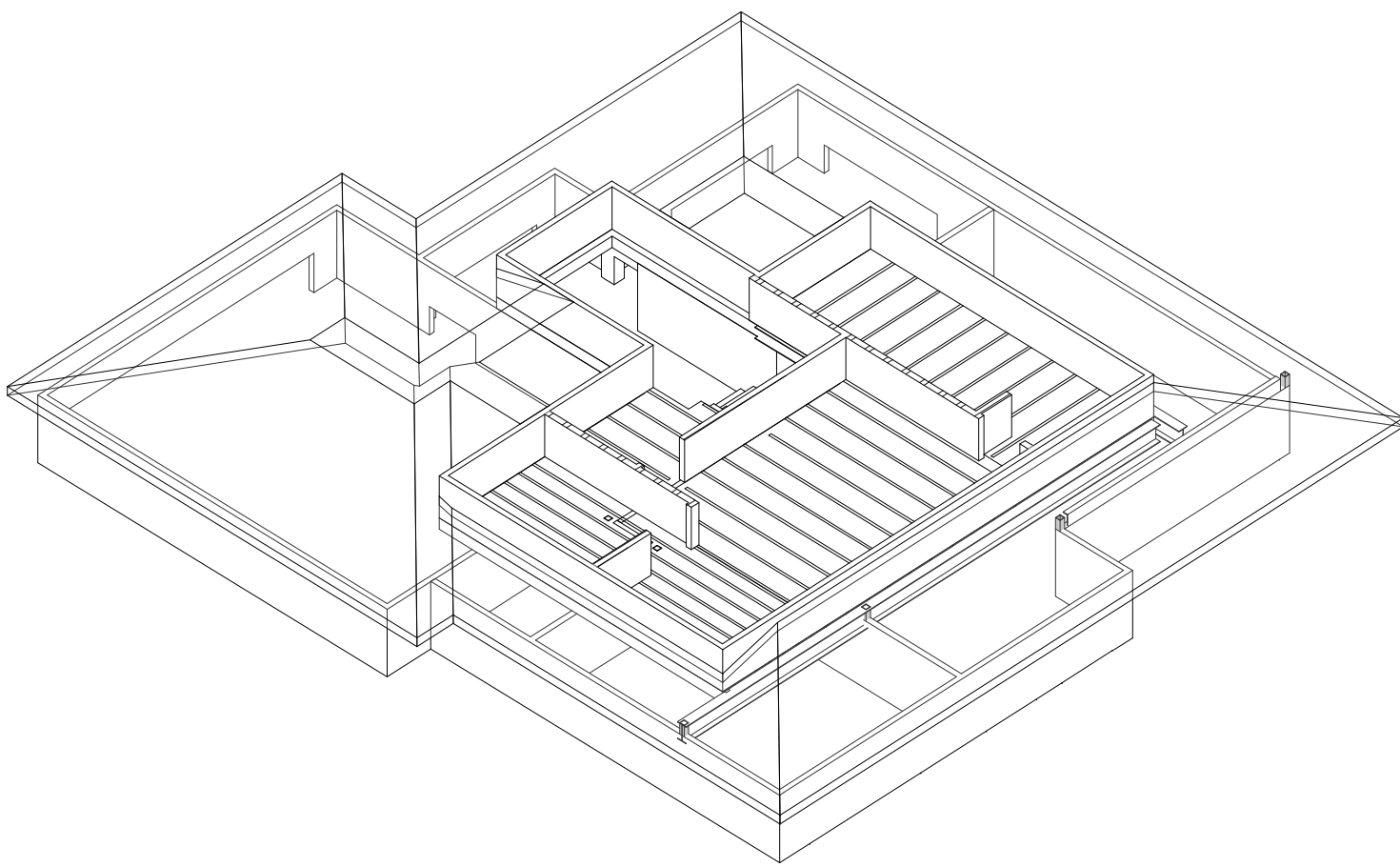


FIRST FLOOR GENERAL ARRANGEMENT PLAN - HILL STREET

SCALE: 1 : 50

FRAMING SCHEDULE_HILL STREET		
MARK	SIZE	COMMENTS
JOIST		
FJ3	200x45	meySPAN13 AT 450 CTS.
FJ4	200x45	meySPAN13 AT 300 CTS.
STEEL BEAM		
B2	310UB40.4	BEAM TO BE CONTINUOUS AND BROUGHT TO SITE IN ONE LENGTH.
B3	200UC46.2	
B4	250PFC	
B6	200PFC	
B7	180PFC	
B8	150PFC	

STEEL COLUMN SCHEDULE		
MARK	SIZE	COMMENTS
STEEL COLUMN		
SC1	89x89x5.0SHS	



HILL ST - FIRST FLOOR VIEW

SCALE:

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B	ISSUED FOR CONSTRUCTION CERTIFICATE	12.04.2022	CB	SF
A	PRELIMINARY ISSUE	11.03.2022	CB	SF

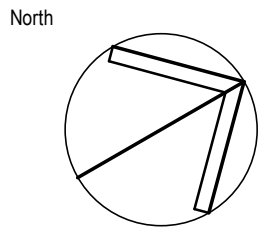
1

0

10m at full size

100m

200m



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1 UNDERCLIFF ROAD,
FRESHWATER NSW 2096

Drawing Title
STRUCTURAL
FIRST FLOOR GENERAL ARRANGEMENT PLAN - HILL STREET

Drawn	Date	Scale	A1	Q/A Check	Date
CB	MARCH 2022	As indicated		Checker	
Designed	Project No.	Dwg No.	Issue		
SF	NSW211942	S1.21	1		

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LEGEND

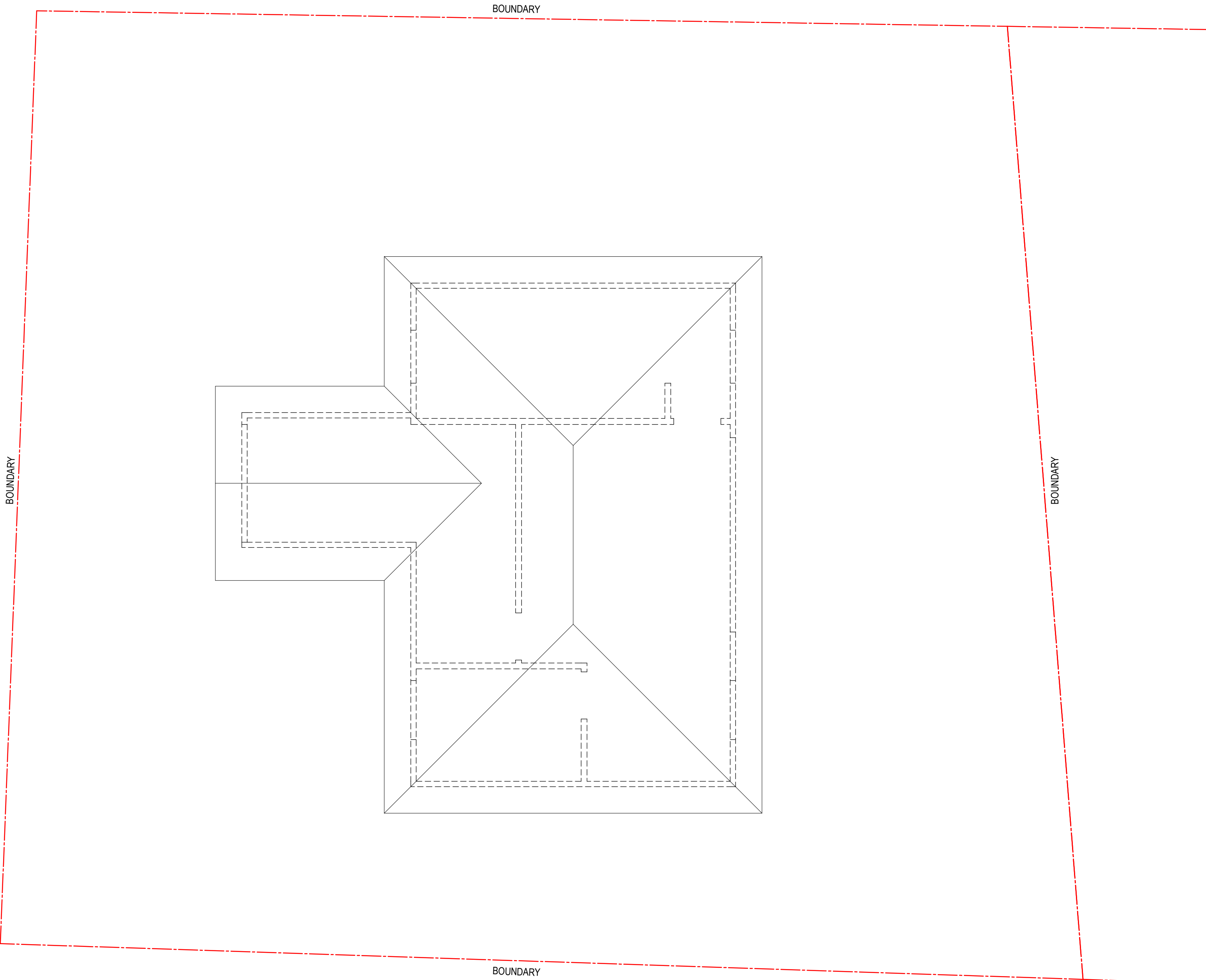
TIMBER ROOF FRAMING BY D & C CONTRACTOR. TYPICAL.

PROPRIETARY TIMBER TRUSSES ARE TO BE DESIGNED, INSPECTED AFTER ERECTION, AND CERTIFIED BY AN NPER STRUCTURAL ENGINEER ENGAGED BY THE FABRICATOR OR THE BUILDER. CERTIFICATION SHALL INCLUDE ROOF BRACING AND TIE DOWN TO THE SUPPORTS. THE DESIGN SHALL COMPLY WITH AS1720. THE FABRICATOR SHALL PROVIDE LAYOUT DRAWINGS TO ACOR FOR CONFIRMATION OF THEIR DESIGN ASSUMPTIONS FOR THE SUPPORTING STRUCTURE.

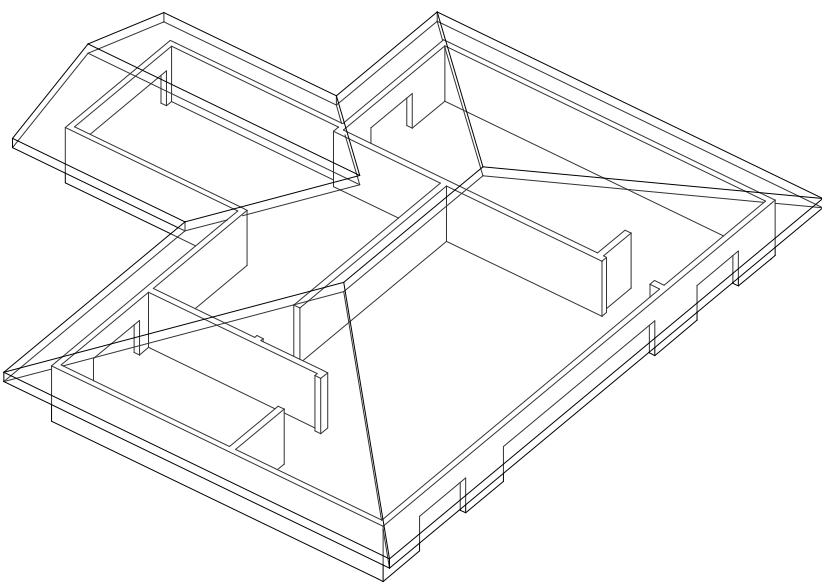
ALL TIMBER FRAMING, CONNECTIONS, BRACING AND TIEDOWNS TO BE IN ACCORDANCE WITH AS1684.

NOTES:

- REFER TO DRAWINGS S0.01-S0.03 FOR ALL STRUCTURAL GENERAL NOTES.
- REFER TO DRAWINGS FOR WALL SCHEDULE.
- REFER TO ARCHITECTURAL DRAWINGS FOR ALL SETOUT INFORMATION.
- ALL FALLS, SETDOWNS & WATERPROOFING ARE TO ARCHITECTS DETAILS U.N.O.



ROOF GENERAL ARRANGEMENT PLAN - HILL STREET
SCALE: 1 : 50



HILL ST - ROOF VIEW
SCALE:

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A	PRELIMINARY ISSUE	11.03.2022	CB	SF

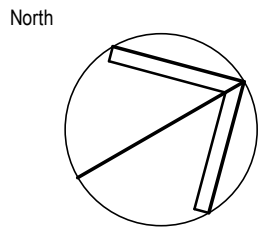
1

0

10m at full size

100m

200m



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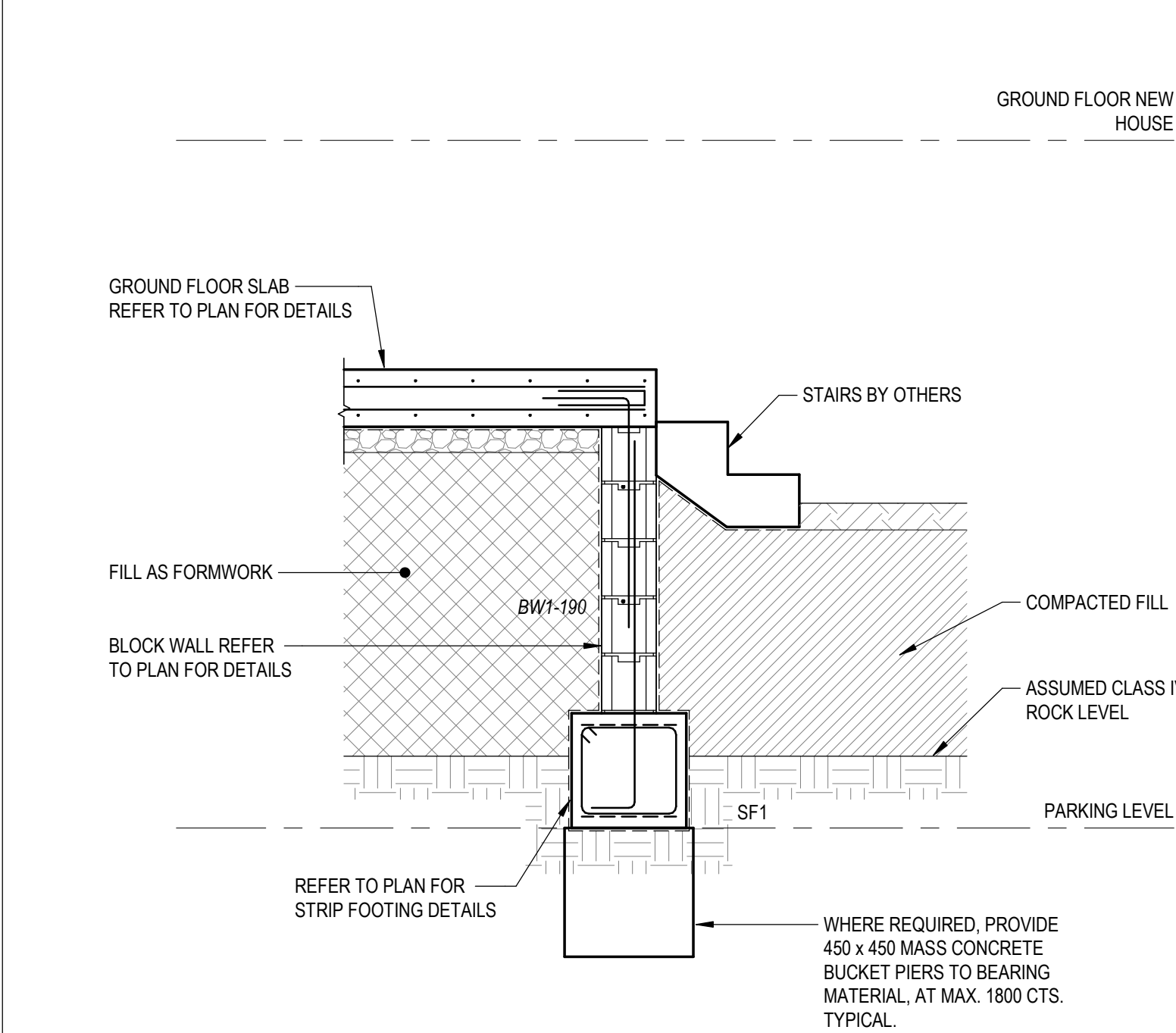
Project
NEW DWELLINGS

1 UNDERCLIFF ROAD,
FRESHWATER NSW 2096

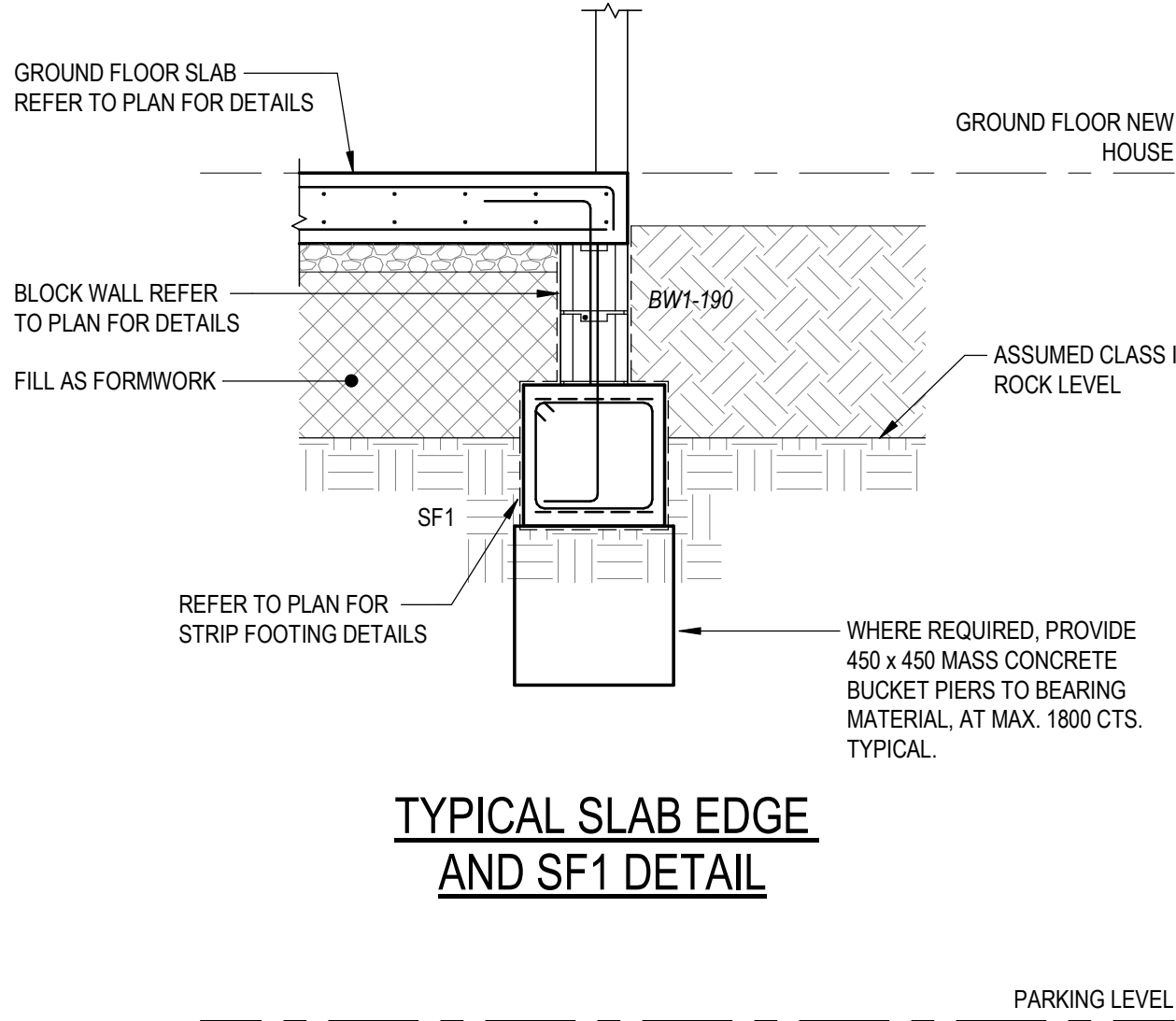
Drawing Title
STRUCTURAL
ROOF GENERAL ARRANGEMENT PLAN - HILL STREET

Drawn	Date	Scale	A1	O.A. Check	Date
CB	MARCH 2022	As indicated		Checker	
Designed	Project No.	Dwg No.	Issue		
SF	NSW211942	S1.31	1		

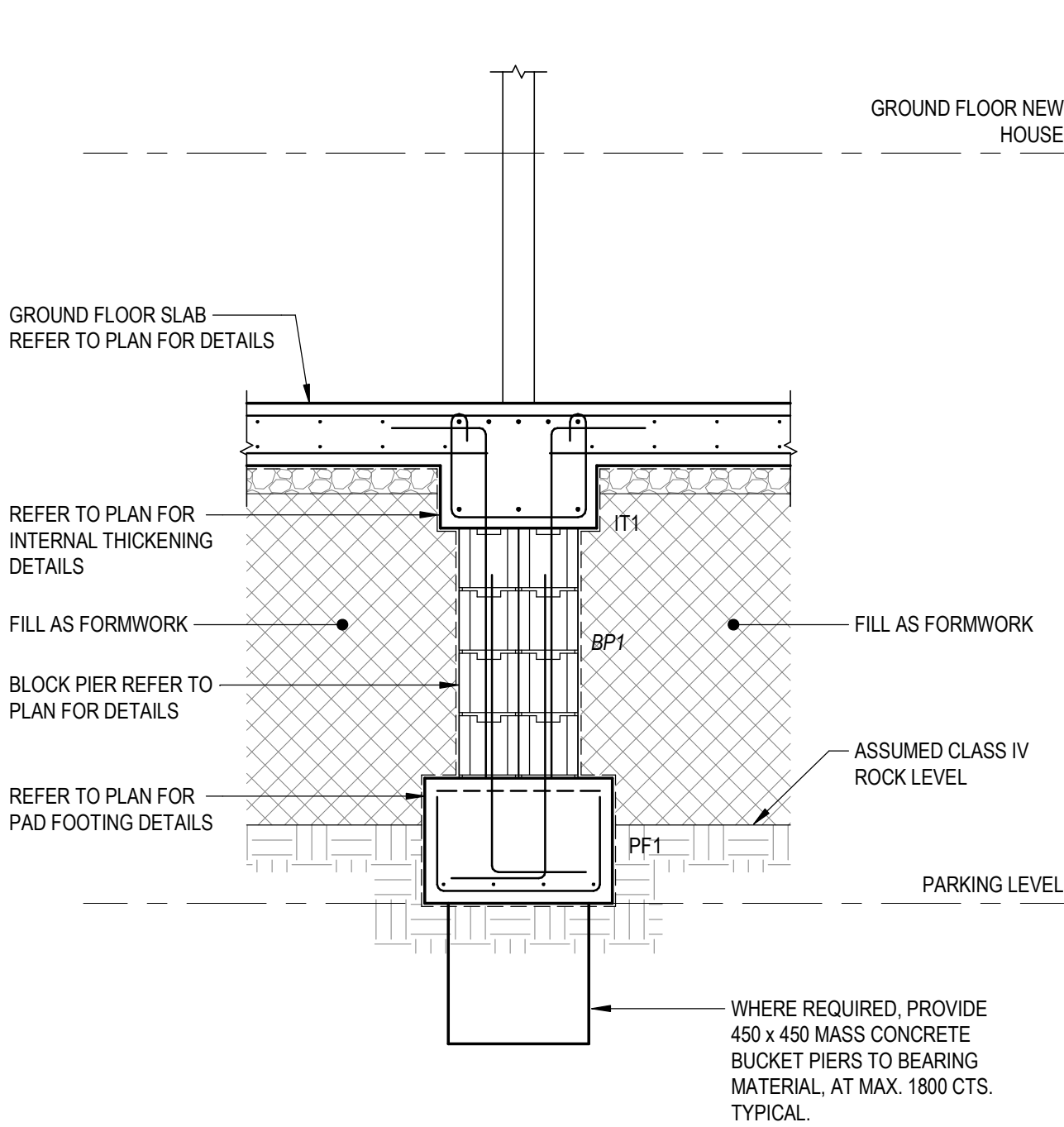
FOR CONSTRUCTION



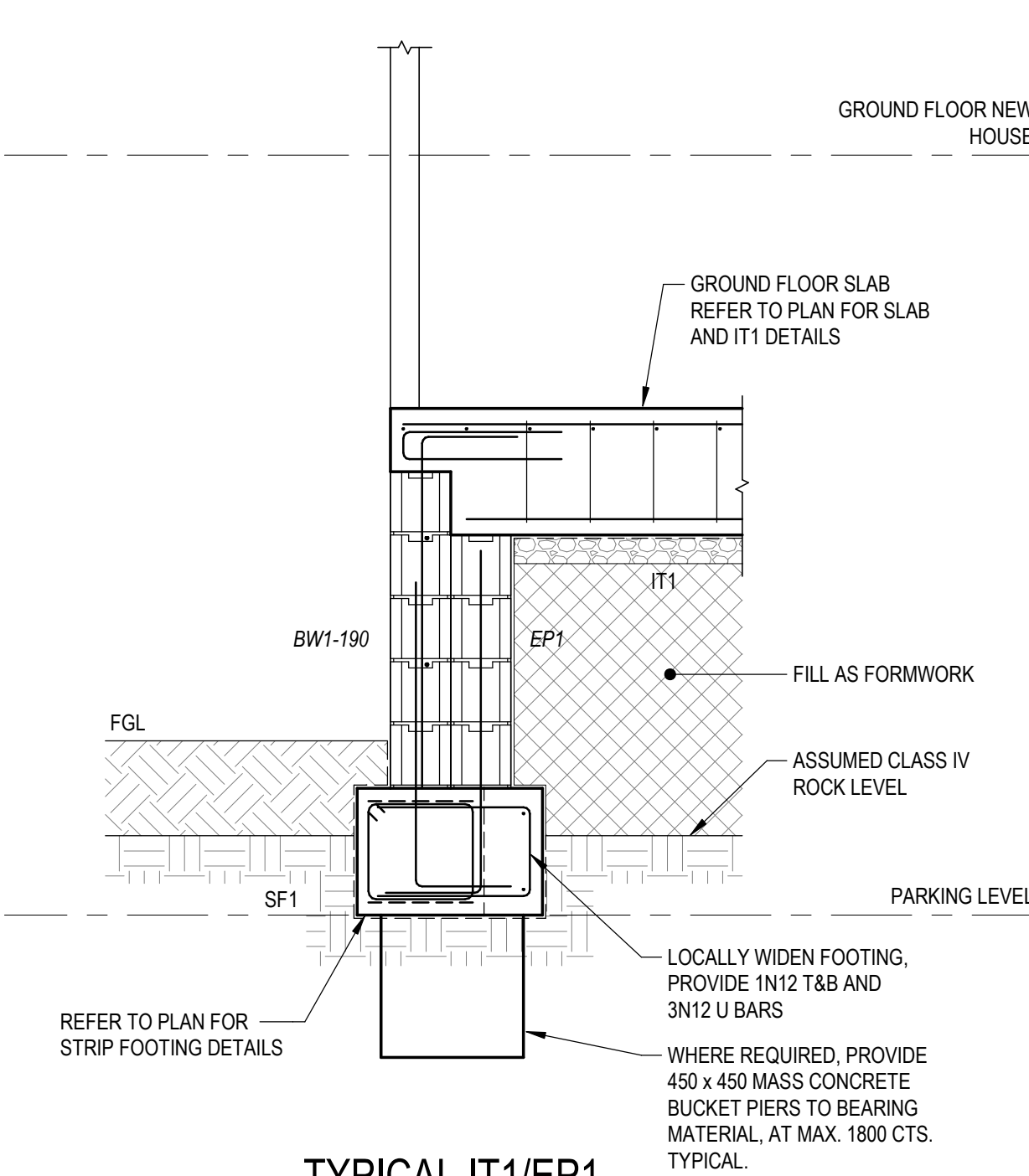
SECTION 1.01
SCALE = 1 : 20
S1.01



SECTION 1.02
SCALE = 1 : 20
S1.01

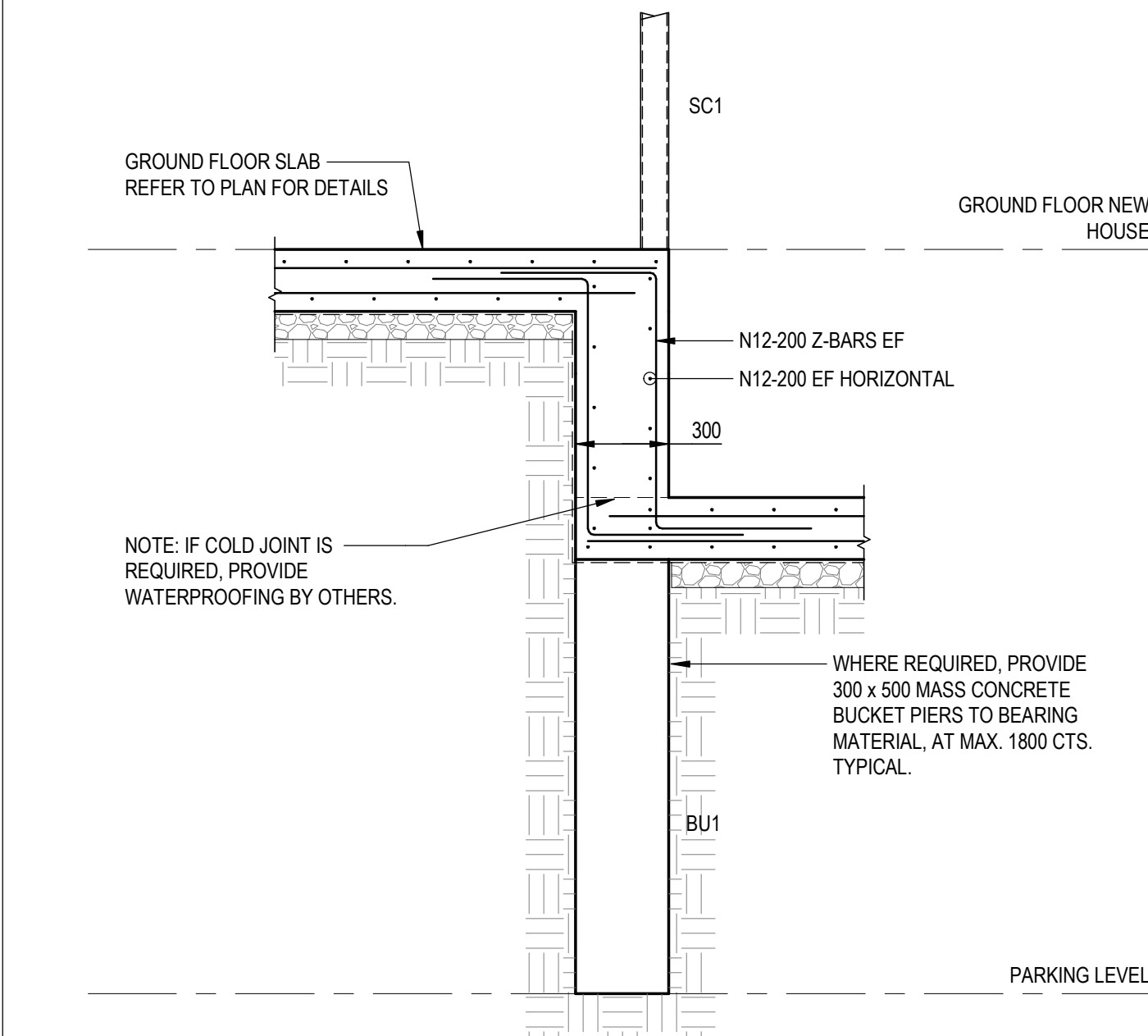


SECTION 1.03
SCALE = 1 : 20
S1.01



TYPICAL IT1/EP1
DETAIL

SECTION 1.04
SCALE = 1 : 20
S1.01



SECTION 1.05
SCALE = 1 : 20
S1.01

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Issue	Description	Date	Drawn	Approved
1	CONSTRUCTION ISSUE	16.05.2022	CB	SF
B	ISSUED FOR CONSTRUCTION CERTIFICATE	12.04.2022	CB	SF
A	PRELIMINARY ISSUE	11.03.2022	CB	SF

1 0 10m at full size 100m 200m

North

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Project
NEW DWELLINGS

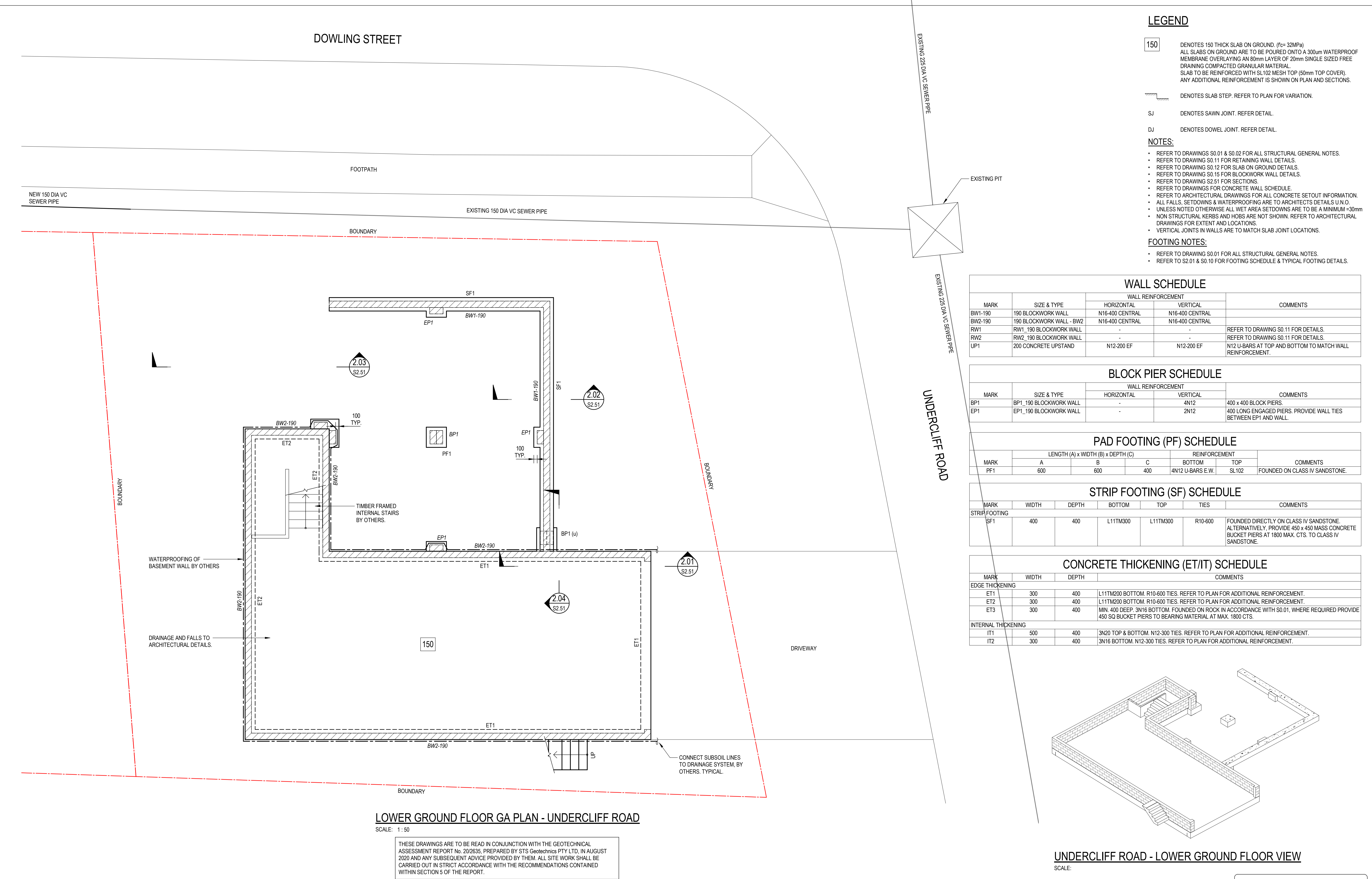
1 UNDERCLIFF ROAD,
FRESHWATER NSW 2096

Drawing Title
STRUCTURAL
HILL STREET SECTIONS AND DETAILS - SHEET 1

Drawn	Date	Scale	A1	Q/A Check	Date
CB	03/11/22	1 : 20		Checker	
Designed	Project No.	Dwg No.	Issue		
SF	NSW211942	S1.51	1		

FOR CONSTRUCTION

BM 300 NSW211942 - 1 Undercliff Rd Freshwater NSW21534 STR R19-01 17/05/2022 5:38:36 AM



LEGEND

150 DENOTES 150 THICK SLAB ON GROUND. (f_c= 32MPa)
ALL SLABS ON GROUND ARE TO BE POURED ONTO A 300um WATERPROOF MEMBRANE OVERLAYING AN 80mm LAYER OF 20mm SINGLE SIZED FREE DRAINING COMPACTED GRANULAR MATERIAL.
SLAB TO BE REINFORCED WITH SL102 MESH TOP (50mm TOP COVER).
ANY ADDITIONAL REINFORCEMENT IS SHOWN ON PLAN AND SECTIONS.

DENOTES SLAB STEP. REFER TO PLAN FOR VARIATION.

SJ DENOTES SAWN JOINT. REFER DETAIL.

DJ DENOTES DOWEL JOINT. REFER DETAIL.

NOTES:

- REFER TO DRAWINGS S0.01 & S0.02 FOR ALL STRUCTURAL GENERAL NOTES.
- REFER TO DRAWINGS S0.11 FOR RETAINING WALL DETAILS.
- REFER TO DRAWING S0.12 FOR SLAB ON GROUND DETAILS.
- REFER TO DRAWING S0.15 FOR BLOCKWORK WALL DETAILS.
- REFER TO DRAWING S2.51 FOR SECTIONS.
- REFER TO DRAWINGS FOR CONCRETE WALL SCHEDULE.
- REFER TO ARCHITECTURAL DRAWINGS FOR ALL CONCRETE SETOUT INFORMATION.
- ALL FALLS, SETDOWNS & WATERPROOFING ARE TO ARCHITECTS DETAILS U.N.O.
- UNLESS NOTED OTHERWISE ALL WET AREA SETDOWNS ARE TO BE A MINIMUM +30mm
- NON STRUCTURAL KERBS AND HOBBS ARE NOT SHOWN. REFER TO ARCHITECTURAL DRAWINGS FOR EXTENT AND LOCATIONS.
- VERTICAL JOINTS IN WALLS ARE TO MATCH SLAB JOINT LOCATIONS.

FOOTING NOTES:

- REFER TO DRAWING S0.01 FOR ALL STRUCTURAL GENERAL NOTES.
- REFER TO S2.01 & S0.10 FOR FOOTING SCHEDULE & TYPICAL FOOTING DETAILS.

WALL SCHEDULE

MARK	SIZE & TYPE	WALL REINFORCEMENT		COMMENTS
		HORIZONTAL	VERTICAL	
BW1-190	190 BLOCKWORK WALL	N16-400 CENTRAL	N16-400 CENTRAL	
BW2-190	190 BLOCKWORK WALL - BW2	N16-400 CENTRAL	N16-400 CENTRAL	
RW1	RW1_190 BLOCKWORK WALL	-	-	REFER TO DRAWING S0.11 FOR DETAILS.
RW2	RW2_190 BLOCKWORK WALL	-	-	REFER TO DRAWING S0.11 FOR DETAILS.
UP1	200 CONCRETE UPSTAND	N12-200 EF	N12-200 EF	N12 U-BARS AT TOP AND BOTTOM TO MATCH WALL REINFORCEMENT.

BLOCK PIER SCHEDULE

MARK	SIZE & TYPE	WALL REINFORCEMENT		COMMENTS
		HORIZONTAL	VERTICAL	
BP1	BP1_190 BLOCKWORK WALL	-	4N12	400 x 400 BLOCK PIERS.
EP1	EP1_190 BLOCKWORK WALL	-	2N12	400 LONG ENGAGED PIERS. PROVIDE WALL TIES BETWEEN EP1 AND WALL.

PAD FOOTING (PF) SCHEDULE

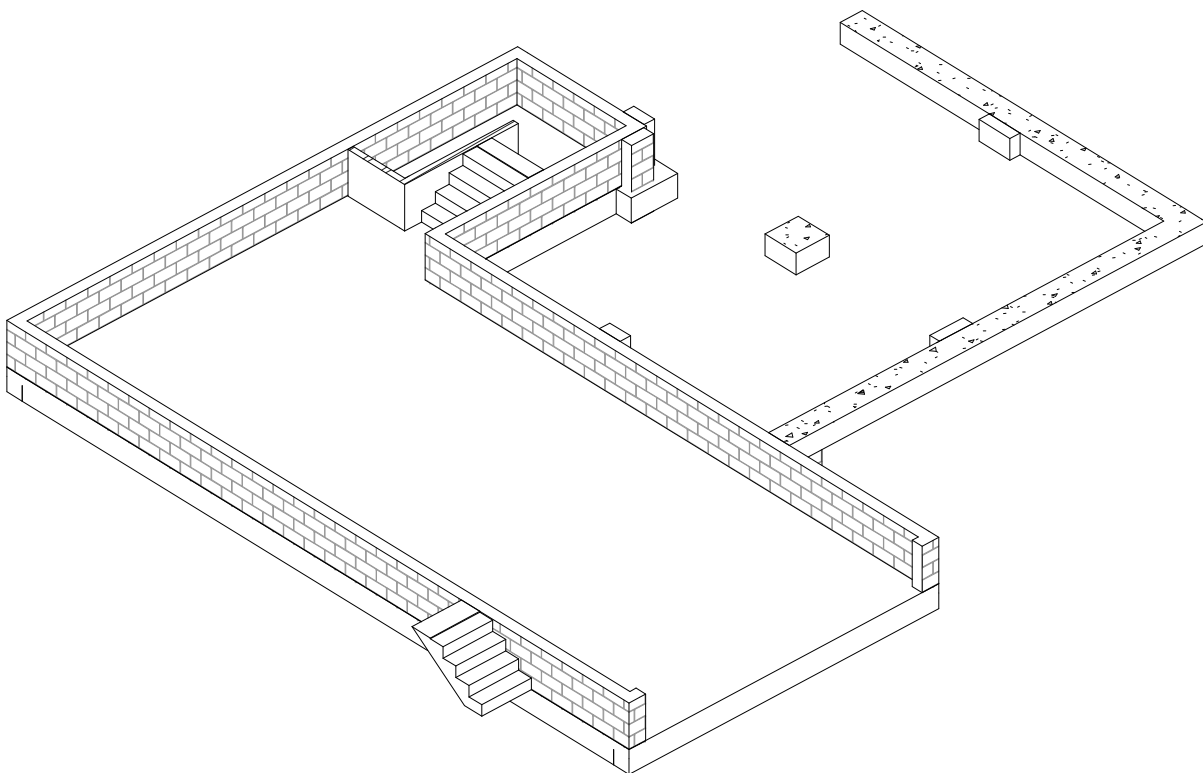
MARK	LENGTH (A) x WIDTH (B) x DEPTH (C)			REINFORCEMENT		COMMENTS
	A	B	C	BOTTOM	TOP	
PF1	600	600	400	4N12 U-BARS E.W.	SL102	FOUNDED ON CLASS IV SANDSTONE.

STRIP FOOTING (SF) SCHEDULE

MARK	WIDTH	DEPTH	BOTTOM	TOP	TIES	COMMENTS
STRIP FOOTING						
SF1	400	400	L11TM300	L11TM300	R10-600	FOUNDED DIRECTLY ON CLASS IV SANDSTONE. ALTERNATIVELY, PROVIDE 450 x 450 MASS CONCRETE BUCKET PIERS AT 1800 MAX. CTS. TO CLASS IV SANDSTONE.

CONCRETE THICKENING (ET/IT) SCHEDULE

MARK	WIDTH	DEPTH	COMMENTS
EDGE THICKENING			
ET1	300	400	L11TM200 BOTTOM. R10-600 TIES. REFER TO PLAN FOR ADDITIONAL REINFORCEMENT.
ET2	300	400	L11TM200 BOTTOM. R10-600 TIES. REFER TO PLAN FOR ADDITIONAL REINFORCEMENT.
ET3	300	400	MIN. 400 DEEP. 3N16 BOTTOM. FOUNDED ON ROCK IN ACCORDANCE WITH S0.01, WHERE REQUIRED PROVIDE 450 SQ BUCKET PIERS TO BEARING MATERIAL AT MAX. 1800 CTS.
INTERNAL THICKENING			
IT1	500	400	3N20 TOP & BOTTOM. N12-300 TIES. REFER TO PLAN FOR ADDITIONAL REINFORCEMENT.
IT2	300	400	3N16 BOTTOM. N12-300 TIES. REFER TO PLAN FOR ADDITIONAL REINFORCEMENT.



UNDERCLIFF ROAD - LOWER GROUND FLOOR VIEW

SCALE:

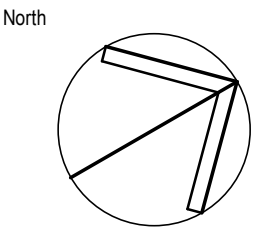
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B	ISSUED FOR CONSTRUCTION CERTIFICATE	12.04.2022	CB	SF
A	PRELIMINARY ISSUE	11.03.2022	CB	SF

1:1 0 10m at full scale 100m 200m



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Project
NEW DWELLINGS

1 UNDERCLIFF ROAD,
FRESHWATER NSW 2096

Drawing Title
**STRUCTURAL
LOWER GROUND FLOOR GA PLAN - UNDERCLIFF ROAD**

Drawn CB	Date MARCH 2022	Scale As indicated	A1 O.A. Check Checker	Date
Designed SF	Project No. NSW211942	Dwg No. S2.01	Issue 1	

B:\300_NSW211942 - 1_Undercliff Rd_Freshwater\NSW211942_STR_R001.dwg 17/06/2022 5:38:40 AM

DOWLING STREET

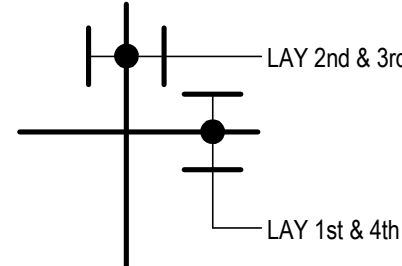
LEGEND

200 DENOTES 200 THICK SLAB.
N12-200 E.W. T&B.
BOTTOM REINFORCEMENT TO BE LAPPED OVER BEAMS AND WALLS.
TOP REINFORCEMENT TO BE LAPPED MIDSPAN.

DENOTES SLAB STEP. REFER TO PLAN FOR VARIATION.

NOTE: (SUSPENDED SLAB)

- REFER TO DRAWINGS S0.01-S0.03 FOR ALL STRUCTURAL GENERAL NOTES.
- REFER TO DRAWING S0.11 FOR RETAINING WALL DETAILS.
- REFER TO DRAWING S0.12 FOR SLAB ON GROUND DETAILS.
- REFER TO DRAWING S0.12 FOR SUSPENDED SLAB DETAILS.
- REFER TO DRAWING S0.14 FOR STEELWORK DETAILS.
- REFER TO DRAWING S0.15 FOR BLOCKWORK DETAILS.
- REFER TO ARCHITECTURAL DRAWINGS FOR ALL CONCRETE SETOUT INFORMATION.
- ALL FALLS, SETDOWNS & WATERPROOFING ARE TO ARCHITECTS DETAILS U.N.O.
- UNLESS NOTED OTHERWISE ALL WET AREA SETDOWNS ARE TO BE A MINIMUM =30mm
- NON STRUCTURAL KERBS AND HOBS ARE NOT SHOWN. REFER TO ARCHITECTURAL DRAWINGS FOR EXTENT AND LOCATIONS.



REINFORCEMENT LAYING SEQUENCE U.N.O.

CONCRETE THICKENING (ET/IT) SCHEDULE

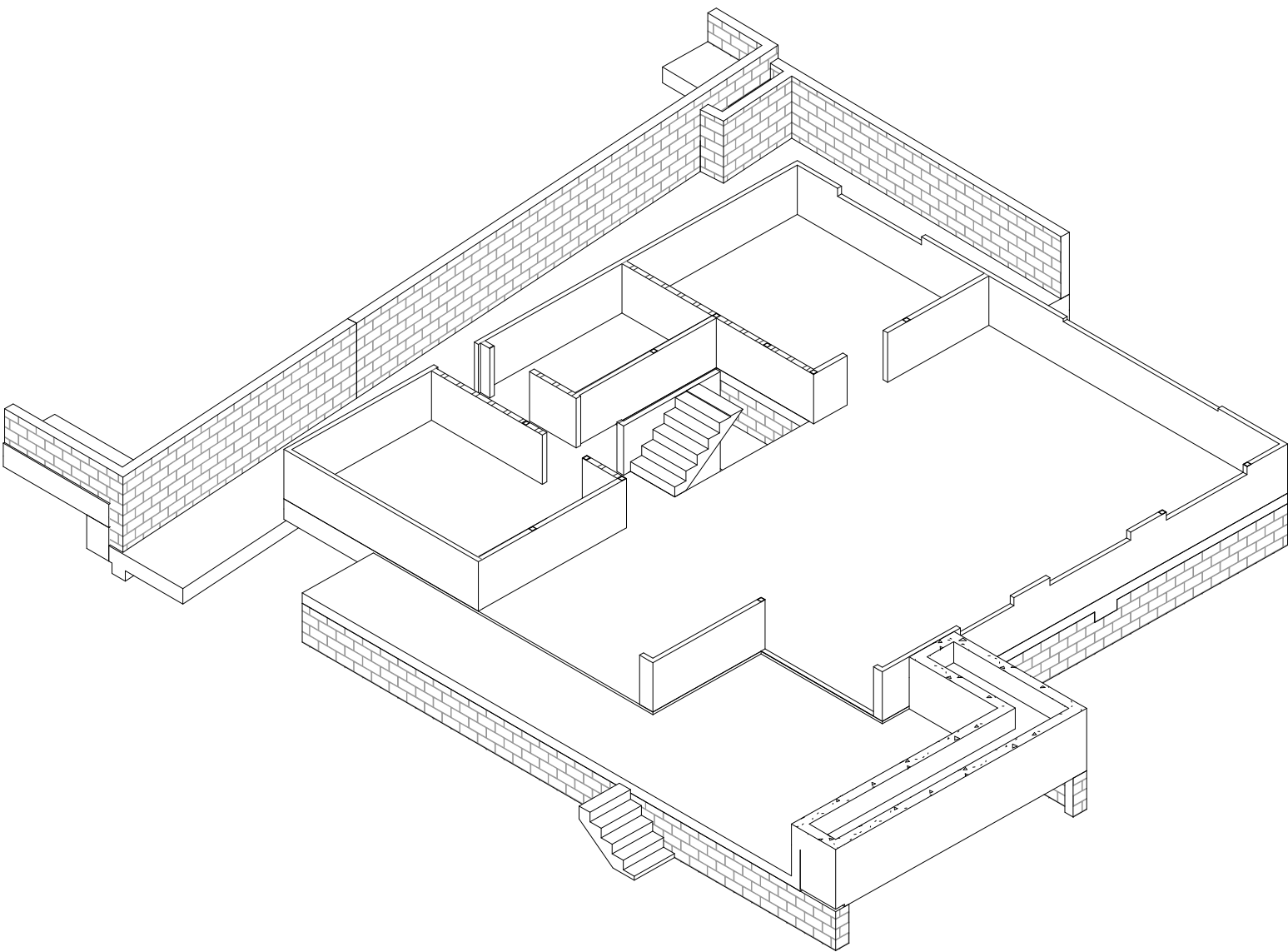
MARK	WIDTH	DEPTH	COMMENTS
EDGE THICKENING			
ET1	300	400	L11TM200 BOTTOM. R10-600 TIES. REFER TO PLAN FOR ADDITIONAL REINFORCEMENT.
ET2	300	400	L11TM200 BOTTOM. R10-600 TIES. REFER TO PLAN FOR ADDITIONAL REINFORCEMENT.
ET3	300	400	MIN. 400 DEEP. 3N16 BOTTOM. FOUNDED ON ROCK IN ACCORDANCE WITH S0.01, WHERE REQUIRED PROVIDE 450 SQ BUCKET PIERS TO BEARING MATERIAL AT MAX. 1800 CTS.
INTERNAL THICKENING			
IT1	500	400	3N20 TOP & BOTTOM. N12-300 TIES. REFER TO PLAN FOR ADDITIONAL REINFORCEMENT.
IT2	300	400	3N16 BOTTOM. N12-300 TIES. REFER TO PLAN FOR ADDITIONAL REINFORCEMENT.

STEEL COLUMN SCHEDULE

MARK	SIZE	COMMENTS
STEEL COLUMN		
SC1	89x89x5.0SHS	

WALL SCHEDULE

MARK	SIZE & TYPE	WALL REINFORCEMENT		COMMENTS
		HORIZONTAL	VERTICAL	
BW1-190	190 BLOCKWORK WALL	N16-400 CENTRAL	N16-400 CENTRAL	
BW2-190	190 BLOCKWORK WALL - BW2	N16-400 CENTRAL	N16-400 CENTRAL	
RW1	RW1_190 BLOCKWORK WALL	-	-	REFER TO DRAWING S0.11 FOR DETAILS.
RW2	RW2_190 BLOCKWORK WALL	-	-	REFER TO DRAWING S0.11 FOR DETAILS.
UP1	200 CONCRETE UPSTAND	N12-200 EF	N12-200 EF	N12 U-BARS AT TOP AND BOTTOM TO MATCH WALL REINFORCEMENT.



UNDERCLIFF ROAD - GROUND FLOOR VIEW

SCALE:

FOR CONSTRUCTION

GROUND FLOOR GA PLAN - UNDERCLIFF ROAD

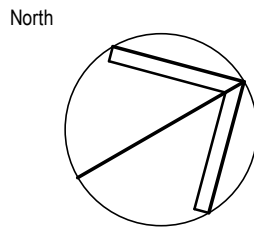
SCALE: 1 : 50

THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE GEOTECHNICAL ASSESSMENT REPORT No. 20/2635, PREPARED BY STS Geotechnics PTY LTD, IN AUGUST 2020 AND ANY SUBSEQUENT ADVICE PROVIDED BY THEM. ALL SITE WORK SHALL BE CARRIED OUT IN STRICT ACCORDANCE WITH THE RECOMMENDATIONS CONTAINED WITHIN SECTION 5 OF THE REPORT.

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A	PRELIMINARY ISSUE	11.03.2022	CB	SF



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ACOR Consultants Pty Ltd
Unit 10, Level 1, No.1 Maitland Place
Norwest NSW 2153
T +61 2 9634 6311



Project
NEW DWELLINGS

1 UNDERCLIFF ROAD,
FRESHWATER NSW 2096

Drawing Title
STRUCTURAL
GROUND FLOOR GA PLAN - UNDERCLIFF ROAD

Drawn	Date	Scale	A1	Q.A. Check	Date
CB	MARCH 2022	As indicated		Checker	
Designed	Project No.			Dwg No.	Issue
SF	NSW211942			S2.11	1

BIM 360://NSW211942 - 1: Undercliff Rd Freshwater NSW 2153, STR, R004

LEGEND

TIMBER ROOF FRAMING BY D & C CONTRACTOR. TYPICAL.

PROPRIETARY TIMBER TRUSSES ARE TO BE DESIGNED, INSPECTED AFTER ERECTION, AND CERTIFIED BY AN NPER STRUCTURAL ENGINEER ENGAGED BY THE FABRICATOR OR THE BUILDER. CERTIFICATION SHALL INCLUDE ROOF BRACING AND TIE DOWN TO THE SUPPORTS. THE DESIGN SHALL COMPLY WITH AS1720. THE FABRICATOR SHALL PROVIDE LAYOUT DRAWINGS TO ACOR FOR CONFIRMATION OF THEIR DESIGN ASSUMPTIONS FOR THE SUPPORTING STRUCTURE.

ALL TIMBER FRAMING, CONNECTIONS, BRACING AND TIEDOWNS TO BE IN ACCORDANCE WITH AS1684.

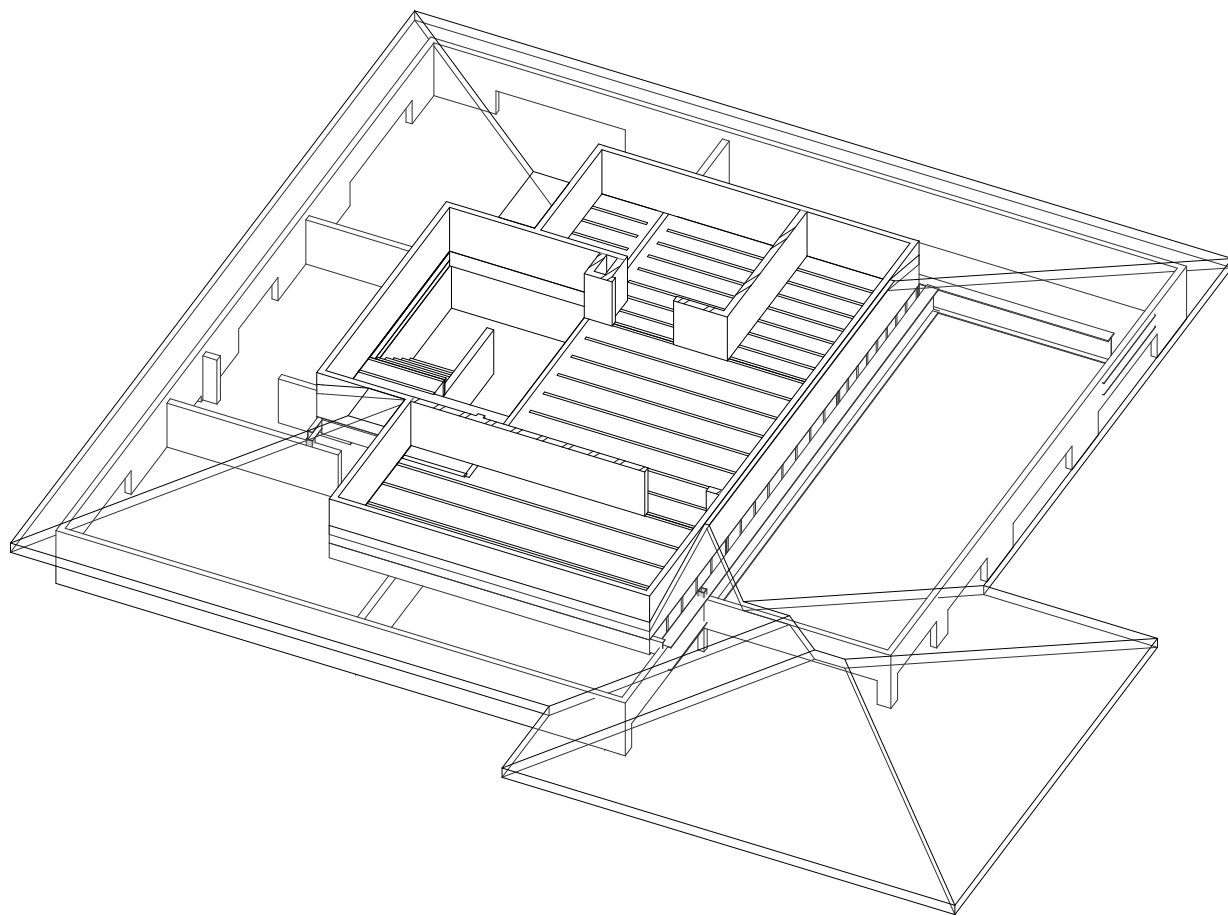
- NOTES:
- REFER TO DRAWINGS S0.01-S0.03 FOR ALL STRUCTURAL GENERAL NOTES.
 - REFER TO DRAWINGS FOR WALL SCHEDULE.
 - REFER TO ARCHITECTURAL DRAWINGS FOR ALL SETOUT INFORMATION.
 - ALL FALLS, SETDOWNS & WATERPROOFING ARE TO ARCHITECTS DETAILS U.N.O.

FRAMING SCHEDULE_UNDERCLIFF ROAD

MARK	SIZE	COMMENTS
JOIST		
FJ1	240x45	meySPAN13 AT 300 CTS.
FJ2	240x45	meySPAN13 AT 450 CTS.
STEEL BEAM		
B1	410UB59.7	
B5	230PFC	
B9	180PFC	
B10	150PFC	
B11	200UB25.4	

STEEL COLUMN SCHEDULE

MARK	SIZE	COMMENTS
STEEL COLUMN		
SC1	89x89x5.0SHS	

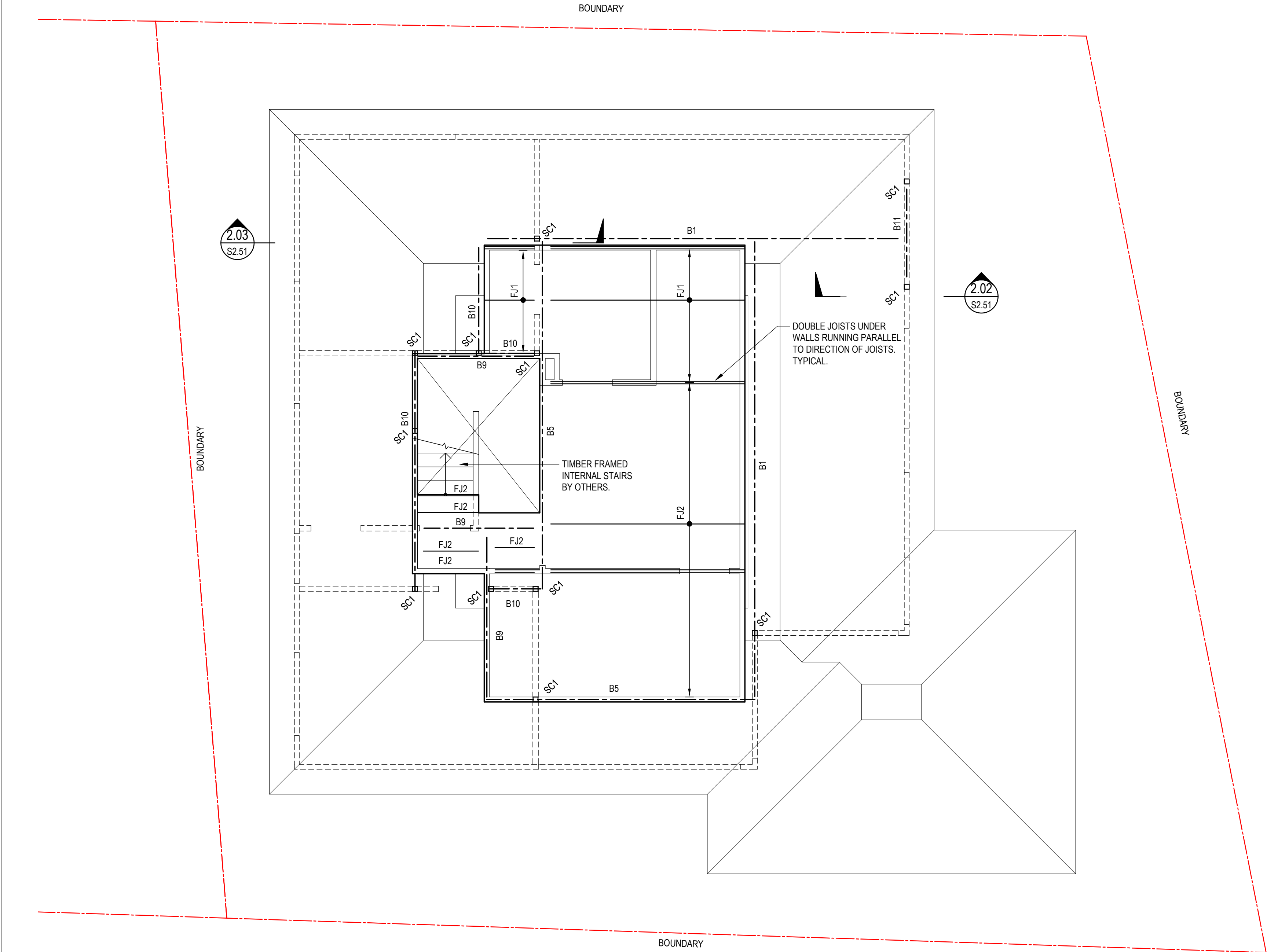


UNDERCLIFF ROAD - FIRST FLOOR VIEW

SCALE:

FIRST FLOOR GA PLAN - UNDERCLIFF ROAD

SCALE: 1 : 50

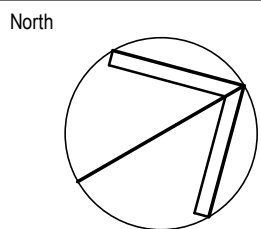


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Issue	Description	Date	Drawn	Approved
1	CONSTRUCTION ISSUE	16.05.2022	CB	SF
B	ISSUED FOR CONSTRUCTION CERTIFICATE	12.04.2022	CB	SF
A	PRELIMINARY ISSUE	11.03.2022	CB	SF

1:1 0 10m 20m



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BY GROUP PTY LTD

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Project
NEW DWELLINGS

1 UNDERCLIFF ROAD,
FRESHWATER NSW 2096

Drawing Title
STRUCTURAL
FIRST FLOOR GA PLAN - UNDERCLIFF ROAD

Drawn	Date	Scale	A1	Q/A Check	Date
CB	MARCH 2022	As indicated		Checker	
Designed	Project No.	Dwg No.	Issue		
SF	NSW211942	S2.21	1		

FOR CONSTRUCTION

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LEGEND

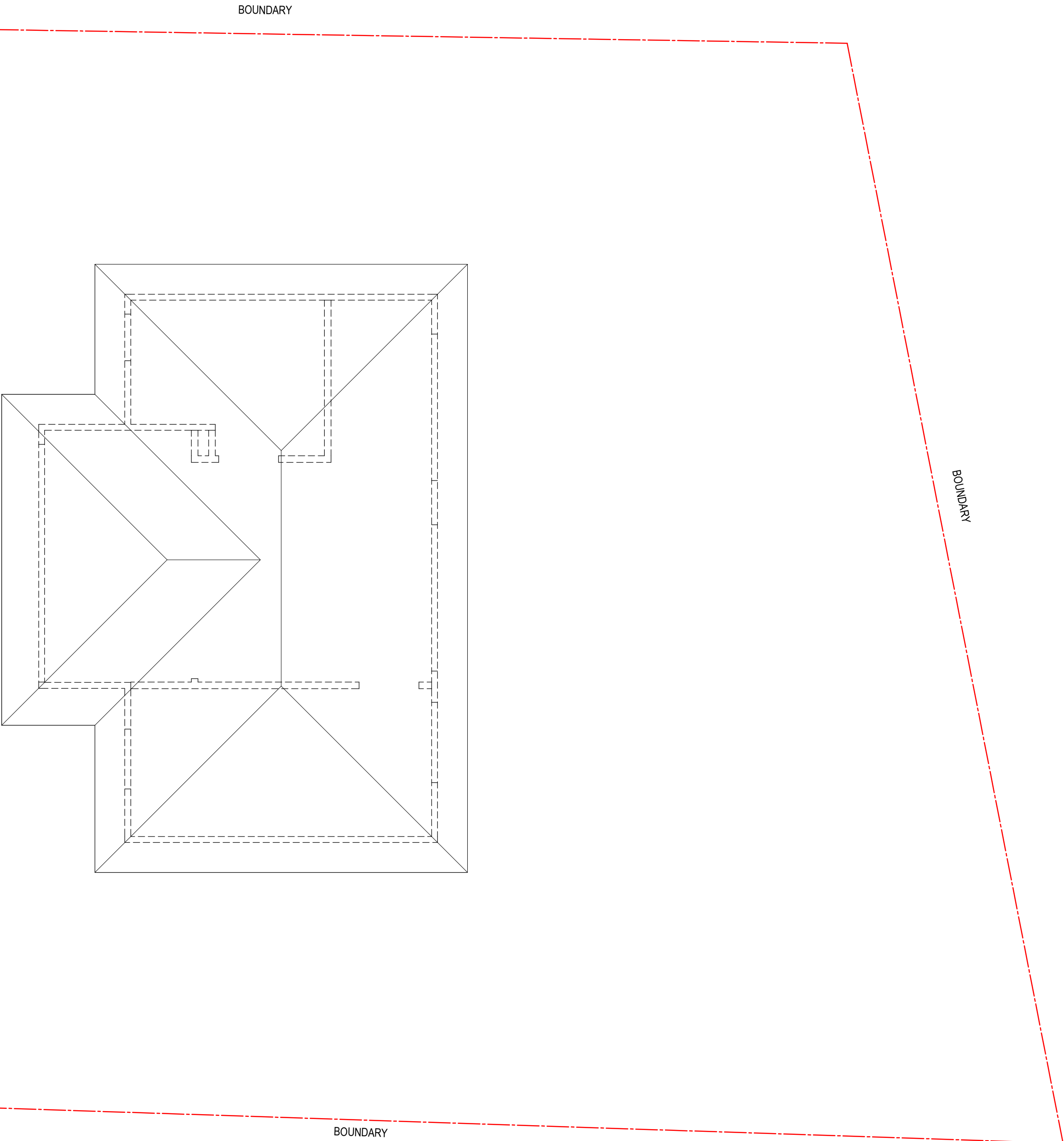
TIMBER ROOF FRAMING BY D & C CONTRACTOR. TYPICAL.

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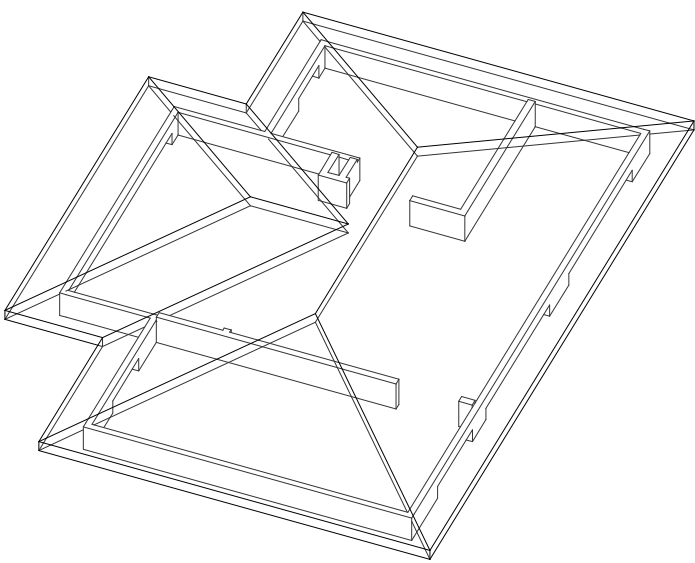
ALL TIMBER FRAMING, CONNECTIONS, BRACING AND TIEDOWNS TO BE IN ACCORDANCE WITH AS1684.

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ROOF GENERAL ARRANGEMENT PLAN - UNDERCLIFF ROAD
SCALE: 1 : 50



UNDERCLIFF ROAD - ROOF VIEW
SCALE:

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Issue	Description	Date	Drawn	Approved
1	CONSTRUCTION ISSUE	16.06.2022	CB	SF
B	ISSUED FOR CONSTRUCTION CERTIFICATE	12.04.2022	CB	SF
A	PRELIMINARY ISSUE	11.03.2022	CB	SF

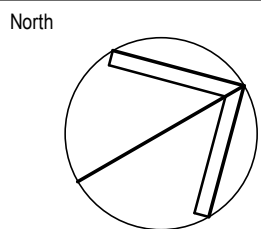
1:1

0

10m at full size

100m

200m



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Project
NEW DWELLINGS

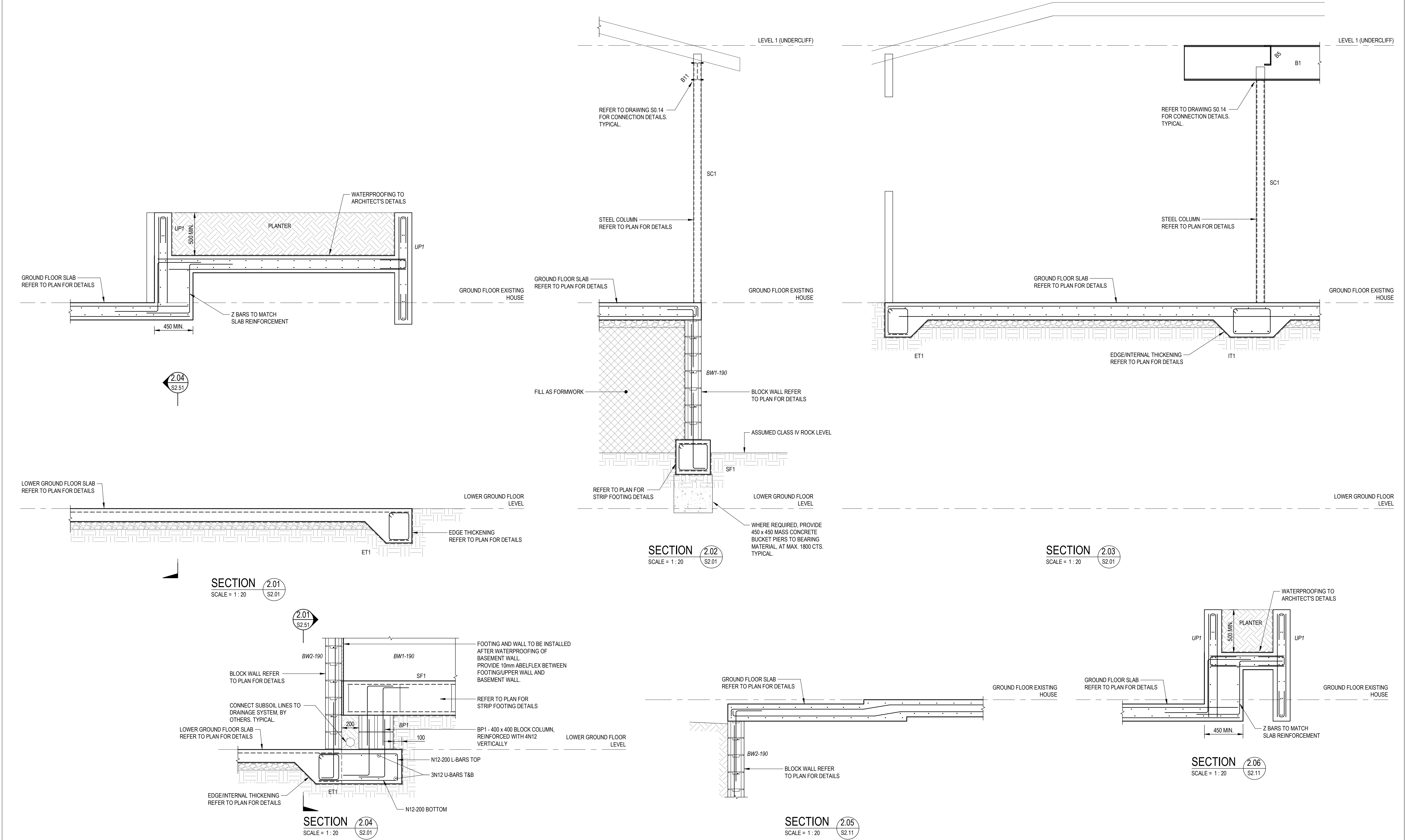
1 UNDERCLIFF ROAD,
FRESHWATER NSW 2096

Drawing Title
STRUCTURAL
ROOF GENERAL ARRANGEMENT PLAN - UNDERCLIFF ROAD

Drawn	Date	Scale	A1	Q.A. Check	Date
CB	MARCH 2022	As indicated		Checker	
Designed	Project No.	Dwg No.	Issue		
SF	NSW211942	S2.31	1		

FOR CONSTRUCTION

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A	PRELIMINARY ISSUE	11.03.2022	CB	SF

1:1 0 10m at full scale 100m 200m

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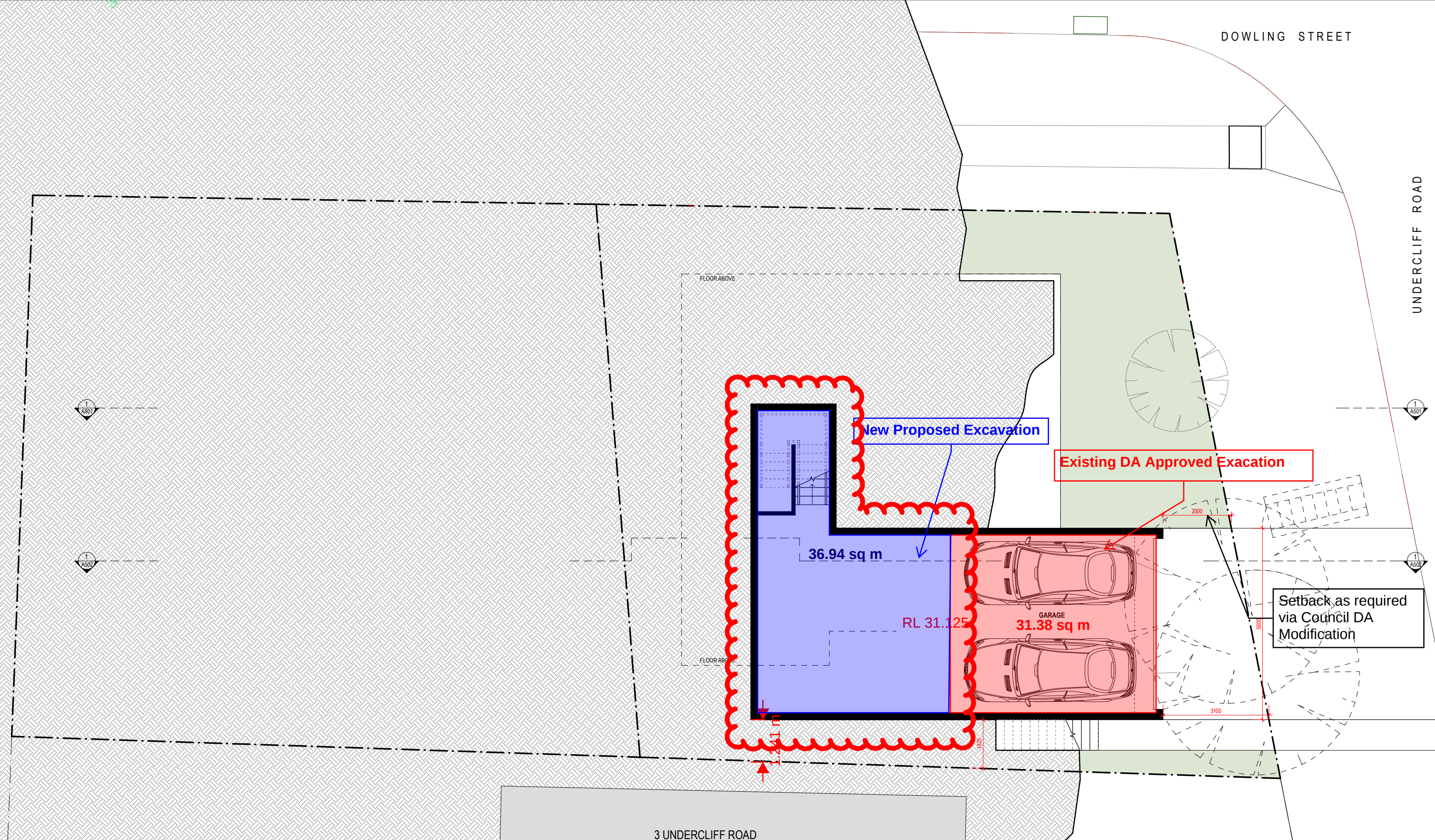
1 UNDERCLIFF ROAD,
FRESHWATER NSW 2096

Drawing Title
**STRUCTURAL
UNDERCLIFF ROAD SECTIONS AND DETAILS - SHEET 1**

Drawn	Date	Scale	A1	O.A. Check	Date
CB	MARCH 2022	1 : 20		Checker	
Designed	Project No.	Dwg No.	Issue		
SF	NSW211942	S2.51	1		

FOR CONSTRUCTION

BM 300 (NSW) 11942 - 1: Undercliff Rd, Freshwater NSW 2096, STR, R19/41



1 201 LOWER LEVEL (UNDERCLIFF)
A501 1:50

STATUS
CONSTRUCTION CERTIFICATE

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1 18.04.2022 ISSUED FOR CC

ISS DATE

PURPOSE OF ISSUE

NOTES

1:20 @ A3 0 0.1 0.2 0.5m
1:10 @ A1

PROJECT
Undercliff and Hill Residences
1 Undercliff Road Freshwater

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Leith Group

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DRAWING NO.
A201

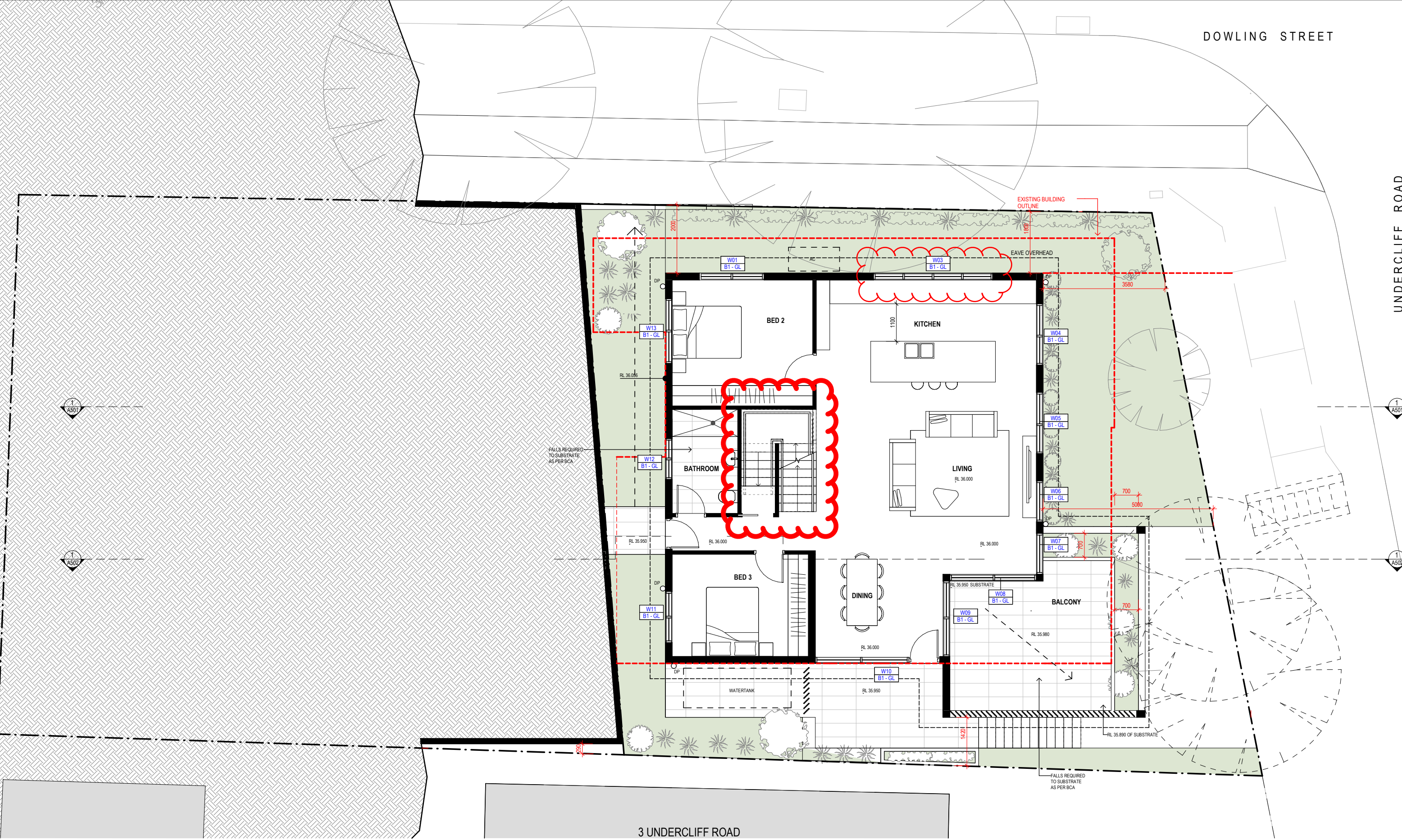
ISSUE
1

JOB NO.
DEV1911

DRAWN BY JP CHECKED BY JT SCALE 1:50@ A1 DATE 18.04.2022

DRAWING TITLE
PROPOSED LOWER GROUND
FLOOR PLAN (UNDERCLIFF RD)





1 202_GROUND LEVEL (UNDERCLIFF)
A501 1:50

STATUS
CONSTRUCTION CERTIFICATE

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1 18.04.2022 ISSUED FOR CC

ISS DATE

PURPOSE OF ISSUE

NOTES

1:20 @ A3 0 0.1 0.2 0.5m
1:10 @ A1

PROJECT
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1 Undercliff Road Freshwater

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DRAWING NO.
A202

ISSUE
1

JOB NO.
DEV1911

DRAWN BY JP CHECKED BY JT SCALE 1:50@ A1 DATE 18.04.2022

DRAWING TITLE
PROPOSED GROUND FLOOR PLAN (UNDERCLIFF RD)





A - LINEA WEATHERBOARD
FINISH = DULUX RAKU



B - ALUMINIUM WINDOW FRAMES
FINISH = SHALE GREY



D - COLORBOND ROOFING
FINISH = SHALE GREY



E - GLASS BALUSTRADE



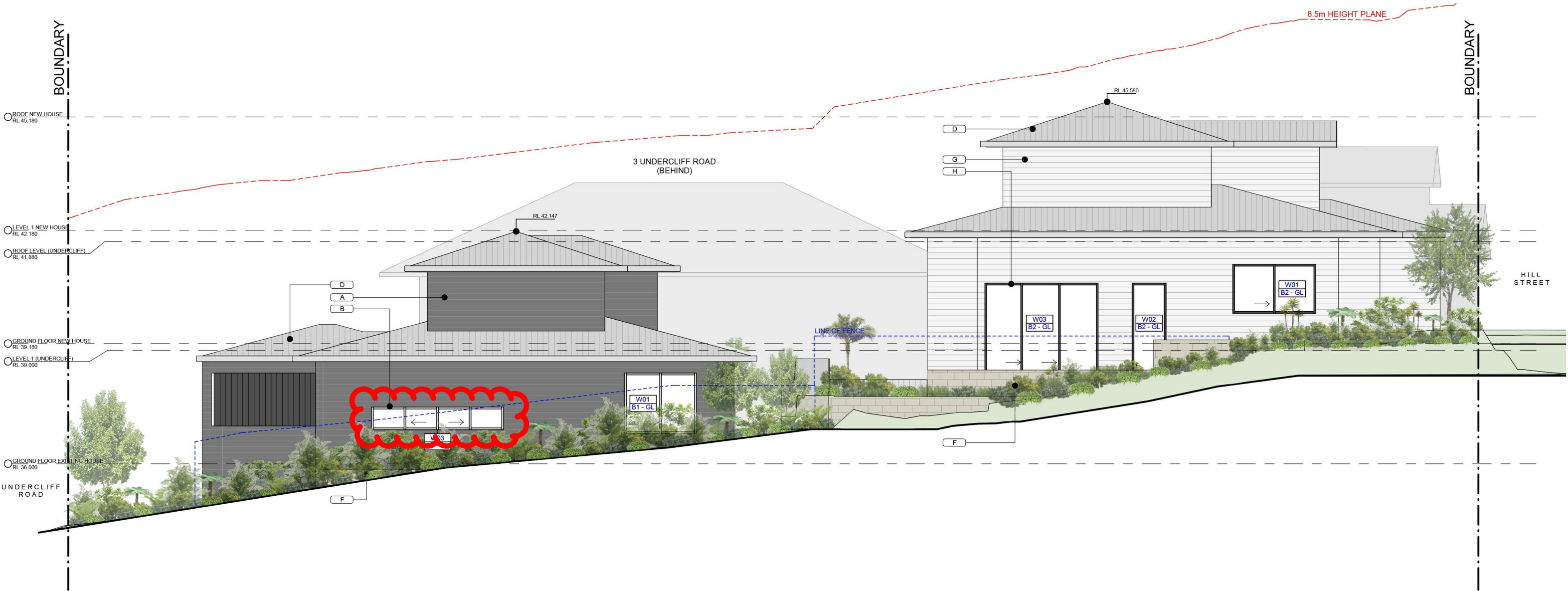
F - NEWPORT STONE
BOND = ASHLAR



G - LINEA WEATHERBOARD
FINISH = DULUX TERRACE WHITE



H - ALUMINIUM WINDOW FRAMES
FINISH = DULUX RAKU



1 400 WEST ELEVATION_UNDERCLIFF & HILL
1:50

STATUS
CONSTRUCTION CERTIFICATE

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1 18.04.2022 ISSUED FOR CC

ISS DATE

PURPOSE OF ISSUE

NOTES

PROJECT
Undercliff and Hill Residences
1 Undercliff Road Freshwater

CLIENT
Leith Group

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DRAWING NO.
A404

ISSUE
1

JOB NO.
DEV1911

DRAWN BY
Author

CHECKED BY
Checker

SCALE
@ A1

DATE
18.04.2022

DRAWING TITLE
WEST ELEVATIONS (UNDERCLIFF & HILL)