

GENERAL NOTES

- THESE DRAWINGS ARE FOR STRUCTURAL PURPOSES ONLY. TO BE READ IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS AND THE SPECIFICATION. DO NOT SCALE. ALL DIMENSIONS ARE IN MILLIMETERS AND SHALL BE OBTAINED FROM THE ARCHITECT'S DRAWINGS UNLESS SPECIFICALLY SHOWN HEREON.
- NOTES WITHIN THE DETAIL DRAWING SET GOVERN OVER NOTES ON THIS SHEET.
- CERTIFICATION OF THESE DETAILS RELY ON THE ENGINEER INSPECTING THE PHYSICAL CONSTRUCTION WORKS IN ACCORDANCE WITH THE INSPECTION SCHEDULE.
- SHOULD ANY AMBIGUITY, ERROR, OMISSION, DISCREPANCY, INCONSISTENCY OR OTHER FAULT EXIST IN DOCUMENTATION, IMMEDIATELY NOTIFY THE ENGINEER.
- DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION. TEMPORARY BRACING/SHORING SHALL BE PROVIDED BY THE CONTRACTOR TO KEEP THE STRUCTURE AND EXCAVATIONS STABLE AT ALL TIMES, ENSURING NO PART OF THE STRUCTURE BECOMES OVERSTRESSED. FOR ALL TEMPORARY BATTERS, OBTAIN ENGINEERS ADVICE.
- PROPRIETARY ITEMS SPECIFIED SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS WRITTEN RECOMMENDATIONS. DO NOT VARY SPECIFIED PRODUCTS WITHOUT WRITTEN APPROVAL FROM THE ENGINEER.
- THE APPROVAL OF A SUBSTITUTION SHALL BE SOUGHT FROM THE ENGINEER BUT IS NOT AN AUTHORIZATION FOR AN EXTRA. ANY EXTRAS INVOLVED MUST BE TAKEN UP WITH THE ARCHITECT /OWNER BEFORE THE WORK COMMENCES.
- THE TERMITE PROTECTION AND WATERPROOFING OF THIS STRUCTURE IS THE BUILDERS RESPONSIBILITY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL SERVICES IN THE VICINITY OF THE WORKS. ANY SERVICES SHOWN ARE PROVIDED DIAGRAMMATICALLY ONLY. THE CONTRACTOR SHALL CONFIRM THE LOCATION OF ALL SERVICES PRIOR TO COMMENCING AND SHALL BE RESPONSIBLE FOR THE REPAIR OF ANY DAMAGE CAUSED TO SERVICES, AS WELL AS ANY LOSS INCURRED AS A RESULT OF THE DAMAGE TO ANY SERVICE.
- ALL WORKMANSHIP AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT EDITIONS, INCLUDING AMENDMENTS, OF RELEVANT AUSTRALIAN STANDARDS & CODES OF PRACTICE, THE BUILDING CODE OF AUSTRALIA AND THE BY-LAWS AND POLICIES OF THE LOCAL GOVERNMENT AUTHORITY, EXCEPT AS VARIED BY THE CONTRACT DOCUMENTS AND APPROVED BY THE CERTIFYING AUTHORITY.
- ALL FRAMING ELEMENTS TO BE CHECKED FOR BUSHFIRE CODE COMPLIANCE.

DESIGN LOADS

- THE STRUCTURAL COMPONENTS DETAILED ON THESE DRAWINGS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE RELEVANT AUSTRALIAN STANDARDS, BUILDING CODES OF AUSTRALIA AND LOCAL GOVERNMENT ORDINANCES.
- U.N.O. DESIGN LIVE LOADS ARE AS FOLLOWS:-

| LIVE LOADS - | | STATIC LOADS - | |
|-----------------|----------|-----------------------------|---------|
| ROOF: | 0.25 kPa | INTERNAL TIMBER FLOOR: | 0.5 kPa |
| INTERNAL FLOOR: | 1.5 kPa | TILED ROOF + CEILING : | 0.9kPa |
| EXTERNAL FLOOR: | 2 kPa | SHEET METAL ROOF + CEILING: | 0.4kPa |
| GARAGE: | 2.5kPa | | |

- DESIGN WIND CATEGORY - **N3**

FOUNDATION NOTES

- FOOTINGS HAVE BEEN DESIGNED FOR A **XX** FOUNDATION MATERIAL FOR AN ALLOWABLE BEARING CAPACITY OF **200 KPA** kPa. THIS FOUNDATION MATERIAL SHALL BE UNIFORM AND BE APPROVED FOR THIS PRESSURE BEFORE PLACING CONCRETE. PIERS SHALL BE USED TO ACHIEVE UNIFORM BEARING WHERE NECESSARY.
- THE SITE IS CLASSIFIED AS CLASS '**XX**', A '**PF, SOG, BP**' FOOTING SYSTEM IN ACCORDANCE WITH AS2870-2011.
- STRIP ALL TOPSOIL FROM THE CONSTRUCTION AREA & PREPARE IN ACCORDANCE WITH AS2870-2011.
- ALL FOOTING/PIER BASES ARE TO BE CLEAN AND FIRM PRIOR TO CONCRETE PLACEMENT.
- PROVIDE DAMP-PROOFING MEMBRANE UNDER ALL SLABS U.N.O.
- PROVIDE 50mm MINIMUM THICK LAYER OF WELL COMPACTED GRANULAR MATERIAL UNDER EACH SLAB.

TREE REMOVAL

- IF TREES HAVE BEEN REMOVED FROM THE SITE WITHIN 12 MONTHS, THE ENGINEER MUST BE INFORMED.
- IF TREES ARE PROPOSED TO BE REMOVED FROM THE CONSTRUCTION ZONE, ALL DISTURBED SOIL IS TO BE REMOVED AND REPLACED TO AN EQUIVALENT NATURAL CONDITION UNLESS PIERING IS PROVIDED.

CONCRETE NOTES

- UNLESS NOTED OTHERWISE CONCRETE IS TO HAVE THE FOLLOWING QUALITIES
 - MAX AGGREGATE SIZE - 20mm
 - SLUMP - 80mm

| CONCRETE STRENGTH GUIDE (F'c) | | |
|-------------------------------|-------------------------|-------|
| SLABS ON GROUND | 20 MPa | U.N.O |
| PIERS AND FOOTINGS | 20 MPa | U.N.O |
| SUSPENDED SLABS | 32 MPa | U.N.O |
| COLUMNS | 32 MPa | U.N.O |
| BLOCK CORE FILLING | 20 MPa (10mm aggregate) | |

- ALL CEMENT TO BE TYPE 'GP' UNLESS NOTED OTHERWISE.
- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3600 AND OTHER RELEVANT CURRENT STANDARDS.
- ALL CONCRETE SHALL BE PLACED IN A MANNER THAT AVOIDS SEGREGATION.



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ALTERATIONS & ADDITIONS

AT: 204 LOWER PLATEAU RD, BILGOLA PLATEAU

FOR: S & D THOMAS

CONCRETE NOTES (CONTINUED)

- CONSTRUCTION JOINTS OTHER THAN THOSE SHOWN SHALL BE TO ENGINEERS APPROVAL
- COLD CONCRETE JOINTS WHERE APPROVED SHALL BE PROPERLY FORMED, WHERE VERTICAL.
- THE FIRST POUR SHALL BE THOROUGHLY SCABBLED AND CLEANED OF ALL POORLY COMPACTED MATERIAL AND LAITANCE. THOROUGHLY SOAKED AND PAINTED WITH A 2:1 SAND CEMENT SLURRY IMMEDIATELY BEFORE PLACING THE SECOND POUR. THOROUGHLY COMPACT THE SECOND POUR AGAINST THE FIRST POUR.
- THE FINISHED CONCRETE SHALL BE FULLY MECHANICALLY VIBRATED TO ACHIEVE FULL COMPACTION, COMPLETELY FILLING FORMWORK, THOROUGHLY EMBEDDING THE REINFORCEMENT AND FREE STONE POCKETS. ALL CONCRETE, INCLUDING SLABS ON GROUND AND FOOTINGS SHALL BE FULLY MECHANICALLY VIBRATED USING A HIGH FREQUENCY MECHANICAL VIBRATOR.
- CONCRETE COVERS MUST BE MAINTAINED THROUGH ALL CHAMFERS, DRIP GROOVES, PENETRATIONS, ETC.
- ALL PENETRATIONS IN SUSPENDED CONCRETE TO BE APPROVED BY THE ENGINEER.
- REPAIRS TO CONCRETE SHALL NOT BE ATTEMPTED WITHOUT INSPECTION AND PERMISSION OF THE ENGINEER.
- WHERE A DAMP-PROOFING MEMBRANE (HIGH IMPACT) IS SPECIFIED BENEATH SLABS ON GROUND PROVIDE 0.2mm POLYTHENE MEMBRANE THROUGHOUT. LAP SHEETS 300mm AND SEAL WITH A 50mm WIDE PRESSURE SENSITIVE WATERPROOF TAPE.
- ALL LOAD BEARING WALLS ARE TO BE FINISHED WITH SMOOTH TROWELLED MORTAR AND A DURABLE SLIP JOINT.
- SLAB THICKNESS DENOTED ON PLAN AS - (XXX)
- NO ADDITIVES ARE TO BE ADDED TO THE CONCRETE WITHOUT THE APPROVAL OF THE ENGINEER.
- ALL CONCRETE SIZES SHOWN ARE MINIMUM AND DO NOT INCLUDE THICKNESS OF APPLIED FINISHES. DO NOT MAKE UNSPECIFIED CONSTRUCTION JOINTS WITHOUT THE APPROVAL OF THE ENGINEER.
- DO NOT PLACE CONDUITS, PIPES, ETC., WITHIN THE CONCRETE COVER.
- U.N.O. SUSPENDED FLOORS, BEAMS, ETC., ARE TO REMAIN PROPPED FOR A MINIMUM OF 21 DAYS AFTER THE COMPLETION OF POURING. DO NO CONSTRUCT MASONRY ON SUSPENDED SLABS OR BEAMS UNTIL SEVEN DAYS AFTER ALL PROPS HAVE BEEN REMOVED.
- IT IS IMPORTANT THAT ALL REINFORCEMENT BE KEPT IN CORRECT POSITION DURING CONCRETE PLACEMENT. PROVIDE SUFFICIENT SUPPORTS UNDER REINFORCEMENT TO ACHIEVE CORRECT COVERS AS NOTES ON THESE DETAILS.

REINFORCEMENT

- N-DENOTES GRADE 500 DEFORMED BARS TO AS 1302.
- R-DENOTES GRADE 250 HOT ROLLED PLAIN BARS TO AS 1302.
- SL-DENOTES GRADE 450 HARD-DRAWN WIRE REINFORCING FABRIC TO AS 1304.
- W-DENOTES GRADE 450 W HARD-DRAWN PLAIN WIRE TO AS 1303.
- S-DENOTED GRADE 250 DEFORMED POOL BAR
- REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND NOT NECESSARILY IN TRUE PROJECTION.
- DO NOT WELD REINFORCEMENT UNLESS SHOWN ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE ENGINEER.
- FABRIC SHALL BE LAPPED 2 TRANSVERSE WIRES PLUS 25mm. BUNDLED BARS SHALL BE TIED TOGETHER AT 30 BAR DIAMETER CENTRES WITH 3 WRAPS OF TIE WIRE.
- ALL REINFORCEMENT SHALL BE FIRMLY SUPPORTED ON MILD STEEL PLASTIC TIPPED CHAIRS, PLASTIC CHAIRS OR CONCRETE CHAIRS AT NOT GREATER THAN 1 METER CENTRES BOTH WAYS, AND 800 EACH WAY FOR FABRIC. WHEN POURED ON GROUND AS FORM WORK PROVIDE PLATES UNDER ALL BAR CHAIRS. PLASTIC TIPPED STEEL CHAIRS SHALL NOT BE USED ON EXPOSED FACES IN EXPOSURE CLASSIFICATION B1 AND B2.
- SITE BENDING OF REINFORCEMENT SHALL BE AVOIDED IF POSSIBLE. WHERE SITE BENDING IS UNAVOIDABLE IT SHALL BE CARRIED OUT COLD, WITHOUT THE APPLICATION OF HEAT, AND IN ACCORDANCE WITH THE PRACTICE NOTE RPN 1 OF THE STEEL REINFORCEMENT INSTITUTE OF AUSTRALIA.

REINFORCEMENT (CONTINUED)

- LAP JOINT ONLY AT LOCATIONS SHOWN ON THE DRAWINGS OR AS APPROVED, UNLESS OTHERWISE NOTED, LAP ALL BARS AS TABULATED BELOW.

| LAP LENGTH FOR DEFORMED BARS IN SLABS & WALLS | | | | | | |
|-------------------------------------------------|-----|------|------|------|------|------|
| N12 | N16 | N20 | N24 | N28 | N32 | N36 |
| 600 | 600 | 900 | 1600 | - | - | - |
| LAP LENGTH FOR DEFORMED BARS IN BEAMS & COLUMNS | | | | | | |
| N12 | N16 | N20 | N24 | N28 | N32 | N36 |
| 600 | 700 | 1050 | 1600 | 2000 | 2300 | 2700 |

FORMWORK

- THE DESIGN, CONSTRUCTION AND PERFORMANCE OF THE FORMWORK AND FRAMEWORK IS THE RESPONSIBILITY OF THE BUILDER.
- DESIGN, CONSTRUCTION AND STRIPPING TIMES SHALL COMPLY WITH AS 3610 AND AS 3600 UNLESS OTHERWISE APPROVED BY THE ENGINEER.
- DURING CONSTRUCTION TEMPORARY SUPPORT PROPPING SHALL BE PROVIDED WHERE LOADS FROM STACKED MATERIALS, SCAFFOLDING, FORMWORK & ANY OTHER CONSTRUCTION ACTIVITY INDUCE LOADS IN A SLAB, BEAM OR RETAINING WALL.
- THE FORMWORK SHALL NOT RELY ON ANY RESTRAINT OR SUPPORT FROM THE PERMANENT STRUCTURE WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- DESIGN INFORMATION CONCERNING THE FOUNDATION FORMWORK SHALL BE DETERMINED FROM CONDITIONS EXISTING ON SITE AT THE TIME OF CONSTRUCTION. REFER ALSO TO THE GEOTECHNICAL REPORT WHERE AVAILABLE.

BRICKWORK AND BLOCKWORK

- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3700.
- MASONRY UNITS SHALL BE RESISTANCE GRADE SUITABLE FOR THE SITE EXPOSURE CONDITIONS IN ACCORDANCE WITH AS3700.
- MINIMUM DURABILITY CLASSIFICATION OF WALL TIES AND LINTELS IS TO BE 'R4', A CERTIFICATE OF COMPLIANCE SHOULD BE SOUGHT FROM THE SUPPLIER.
- STRENGTHS OF MASONRY UNITS AND TYPE OF MORTAR SHALL BE AS FOLLOWS:

| ELEMENT | MATERIAL | CHARACTERISTIC UNCONFINED COMPRESSIVE STRENGTH (F _{uc}) | MORTAR (CEMENT: LIME :SAND) | CLASSIFICATION |
|---------|----------|-------------------------------------------------------------------|-----------------------------|----------------|
| BRICK | BRICK | 20 MPa | 1:1:6 | M3 |
| BRICK | BRICK | 20 MPa | 1:0.5: 4.5 | M4 |
| BLOCKS | BLOCKS | 15 MPa | 1:1:6 | M3 |
| BLOCKS | BLOCKS | 15 MPa | 1: 0.25 :3 | M4 |

- ONLY LOAD BEARING MASONRY WALLS ARE SHOWN UNDER CONCRETE SLABS.
- MASONRY SUPPORTING SLABS AND BEAMS SHALL BE TROWELLED SMOOTH WITH MORTAR FILLING ALL VOIDS. TWO LAYERS OF MALTHOID SHALL BE PLACED FULL WIDTH ACROSS SUCH LOAD BEARING SURFACES EXCEPT WHERE PROPRIETARY BEARING STRIPS IS NOTED OR ALTERNATIVE DETAIL IS DOCUMENTED. THE HEADS OF LOAD BEARING WALLS SHALL NOT EXTEND ABOVE THE SOFFIT OF THE CONCRETE SLAB ABOVE.
- NON LOAD BEARING WALLS SHALL BE SEPARATED FROM CONCRETE ABOVE BY 12mm THICK CLOSED CELL POLYSTYRENE STRIP.
- NO CHASES OR RECESSES ARE PERMITTED IN LOAD BEARING MASONRY WITHOUT THE APPROVAL OF THE ENGINEER.
- PROVIDE VERTICAL CONTROL JOINTS IN ACCORDANCE WITH THE BCA AT 6m MAX. CENTRES GENERALLY, And 6m MAX. FROM CORNERS FOR BRICKWORK AND BLOCKWORK OR AS SPECIFIED IN AS 3700 AND THE BUILDING CODE OF AUSTRALIA.

BRICKWORK AND BLOCKWORK (CONTINUED)

- PROVIDE CLEAN OUT HOLES 100mm SQUARE MINIMUM AT BASE OF BLOCKWORK WALLS AND ROD CORE HOLES TO REMOVE PROTRUDING MORTAR FINIS PRIOR TO GROUTING.
- GROUT ALL CORES IN REINFORCED BLOCKWORK UNLESS OTHERWISE NOTED.
- MAXIMUM HEIGHT OF BLOCKWORK TO BE GROUTED ON ONE DAY SHALL BE 2400mm. GROUT SHALL BE PLACED IN LIFTS OF 1200mm MAXIMUM AND COMPACTED BY POKER VIBRATOR. A SHORT TIME SHOULD ELAPSE BETWEEN SUCCESSIVE LIFTS TO ALLOW PLASTIC SETTLEMENT TO OCCUR.
- PROVIDE 50mm COVER FROM THE OUTSIDE OF THE BLOCK UNLESS NOTED OTHERWISE.
- BACKFILL TO RETAINING WALLS SHALL BE FREE DRAINING GRANULAR MATERIAL. PROVIDE SUBSOIL DRAIN AT BASE OF WALL. DO NOT BACKFILL UNTIL 14 DAYS AFTER GROUTING U.N.O, OR IF APPLICABLE, AFTER RESTRAINING SLAB OVER HAS BEEN POURED AND CURED FOR 7 DAYS. BACKFILL SHALL BE COMPACTED TO 98% STANDARD MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT = ± 2%.
- STEP STRIP FOOTINGS IN BRICK OR BLOCK COURSES TO SUIT FALLS IN NATURAL GROUND. REINFORCEMENT TO BE CARRIED ACROSS FULL WIDTH OF ADJOINING FOOTINGS AT ALL CORNERS AND INTERSECTIONS.
- BRICK TIES SHALL BE STAINLESS STEEL (GRADE TYPE 316) OR COUNCIL APPROVED NON-METALLIC TIES PLACED AT THE RATE OF 5 TIES PER SQUARE METRE OF WALL SURFACE AREA PLUS ADDITIONAL TIES AT 300mm CENTRES ADJACENT TO OPENINGS AND CONTROL JOINTS. WHERE NON-METALLIC TIES ARE USED THE BUILDER SHALL ENSURE THAT MORTAR IS PROVIDED TOP TO BOTTOM BEFORE PLACING BRICKS, BRICK TIES SHALL COMPLY WITH AS 2699.
- AT CONCRETE / STEEL COLUMN JUNCTIONS MET 5-3 EXPANSION TIES TO BE USED. (INTERNAL SKIN OF CAVITY WALL OR INTERNAL WALL)
- ALL STEELWORK BUILT INTO BRICKWORK TO BE CORROSION PROTECTED IN ACCORDANCE WITH THE BCA AND AS3700.
- ALL BLOCK RETAINING WALLS TO BE WATERPROOFED TO ARCHITECTS AND/OR BUILDERS DETAILS.
- ALL EXCAVATIONS TO BE TEMPORARILY SUPPORTED.

STRUCTURAL STEELWORK NOTES

- UNLESS NOTED OTHERWISE -
 - USE 10mm THICK GUSSET, FIN AND END PLATES WELDED ALL ROUND.
 - ALL WELDS 6mm CONTINUOUS FILLET MADE WITH E48XX ELECTRODE OR W50X TO BE CATEGORY GP.
 - ALL BOLTS 16mm DIAMETER.
 - ALL BOLTS ARE GRADE 8.8/S.
 - ALL BOLTS, INCLUDING HOLDING DOWN BOLTS ARE TO BE HOT DIP GALVANIZED.
 - BUTT WELD ALL FLANGES AT END PLATES AND ALL MITRE CUTS. GUSSETS TO END PLATES TO BE BUTT WELDED. ALL BUTT WELDS SHALL BE FULL PENETRATION, GRADE SP.
 - ALL CONNECTIONS TO HAVE MINIMUM OF 2 BOLTS.
 - STUDS FABRICATED TO AS1554.2. ALL SHEAR STUDS (COMPOSITE SLAB TO STEEL) GRADE 410MPa. ALL THREADED STUDS (STEEL TO STEEL) GRADE 380 MPa.
 - TURNBUCKLES TO BE QUALITY GRADE 'S' TO AS2319.
- CHIP ALL WELDS FREE OF SLAG.
- CONTRACTOR IS TO CONFIRM WITH ARCHITECT AS TO WHERE EXPOSED WELDS ARE TO BE GROUND FLUSH / SMOOTH.
- PROVIDE TEMPORARY BRACING TO MAINTAIN STABILITY OF STEELWORK DURING CONSTRUCTION.
- DO NOT GROUT UNDER BASE PLATES UNTIL FIRST LEVEL STEELWORK IS PLUMB AND FIXED BY WELDING OR BOLTING.
- SUBMIT ALL SHOP DRAWINGS TO THE ENGINEER BEFORE COMMENCING FABRICATION.
- UNLESS NOTED OTHERWISE, THE FIXING OF PURLINS, GIRTS, BRIDGING, SHEETING AND ANY OTHER COMPONENT SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS. ROD BRIDGING IS NOT ACCEPTABLE UNLESS APPROVED IN WRITING.
- ALL STRUCTURAL STEEL TO BE A MINIMUM GRADE OF 300 MPa.

STEELWORK FINISHED - COMPLYING WITH AS/NZS 2312.1

- ALL PAINT THICKNESS ARE DRY FILM THICKNESS. FIGURES IN BRACKETS REFER TO AS/NZS 2312 SYSTEM DESIGNATION.
- ALL SURFACE PREPARATIONS TO AS/NZS 2312. AS1627 AND IN STRICT ACCORDANCE WITH PAINT MANUFACTURERS SPECIFICATIONS AND REQUIREMENTS. WHERE DECORATIVE FINISHED ARE REQUIRED REFER TO ARCHITECTS SPECIFICATION.
- ALL STEELWORK TO BE CORROSION PROTECTED IN ACCORDANCE WITH THE BCA OR THE CONTRACT DOCUMENTS WHICHEVER IS GREATER. REFER TO AS/NZS 2312.

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INSPECTIONS

AS THE ENGINEERING DESIGNERS, IT IS THE PREFERENCE OF GZ CONSULTING ENGINEERS TO INSPECT ALL STAGES OF THE DETAILED WORKS. INSPECTIONS WHICH WOULD BE REQUIRED TO CERTIFY THE WORKS ARE:

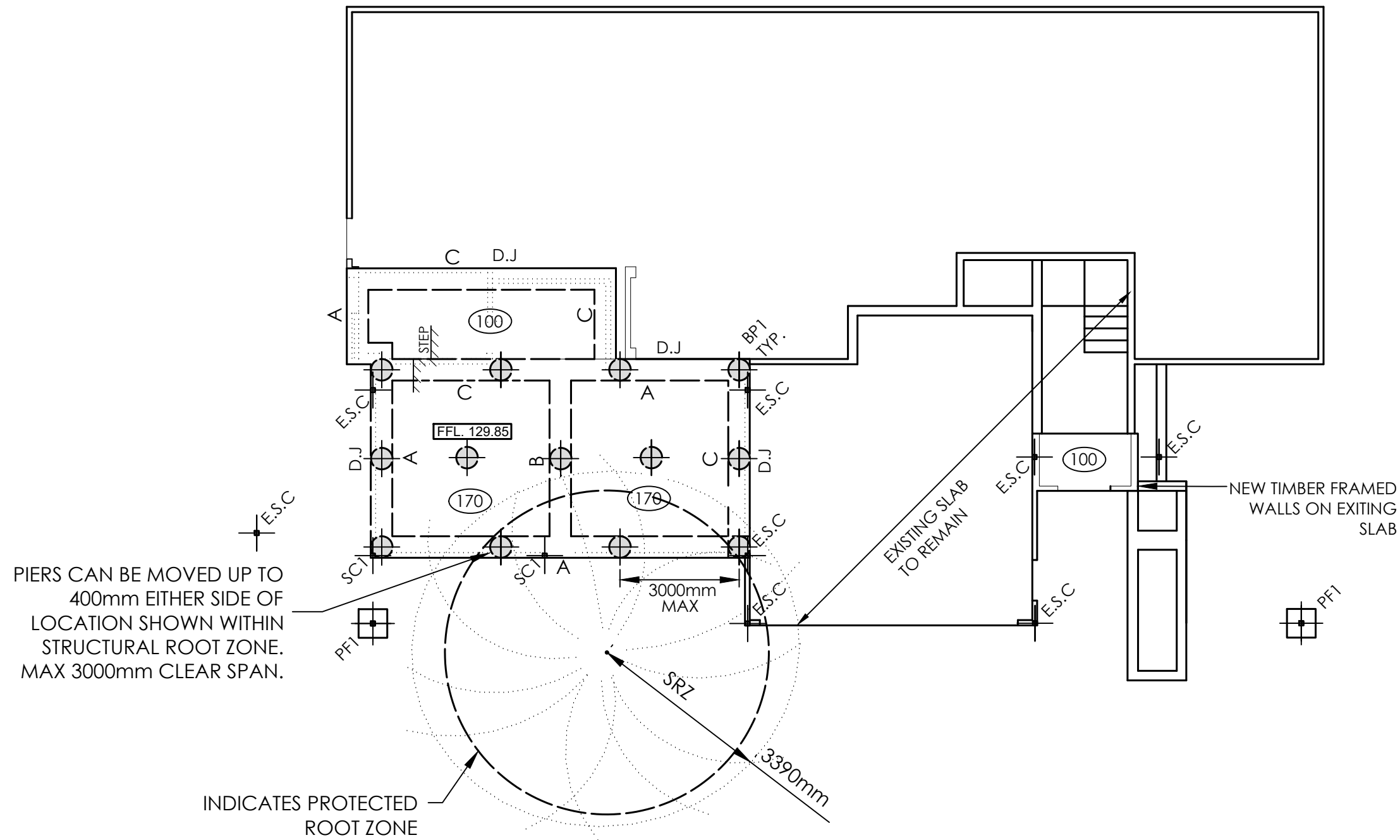
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ALL INSPECTIONS MUST BE CLEARLY VISIBLE, BEFORE DAMP PROOFING MEMBRANE, CONCRETE OR LINING PLACEMENT.

PLEASE NOTE

ANY ELEMENTS NOT INSPECTED BY THE ENGINEER CANNOT BE CERTIFIED BY THE ENGINEER. THE ENGINEER IS TO BE GIVEN 24 HOURS MINIMUM NOTICE FOR INSPECTIONS.

| | |
|-------------|---------|
| JOB NUMBER: | DRG NO: |
| 19061 | 1of6 |



..... DOTTED LINES DENOTE FLOOR OVER

GROUND FLOOR SLAB PLAN (1:100)

SLAB SCHEDULE

CONCRETE STRENGTH $F'c = 40 \text{ MPa}$.

RETAINING, FOOTING & SLAB SCHEDULE

(XXX) DENOTES SLAB THICKNESS.

SLAB REINFORCEMENT SCHEDULE

SL82 FABRIC, 40 COVER TOP

FOOTING SCHEDULE

PF1 450W x 450D PAD FOOTING

BP1 450 DIAMETER BORED PIER

SITE CLASSIFICATION

THE SITE IS CLASSIFIED AS CLASS 'P' TYPE 'STR, SOG & BP.' FOOTINGS HAVE BEEN DESIGNED FOR A ROCK FOUNDATION.

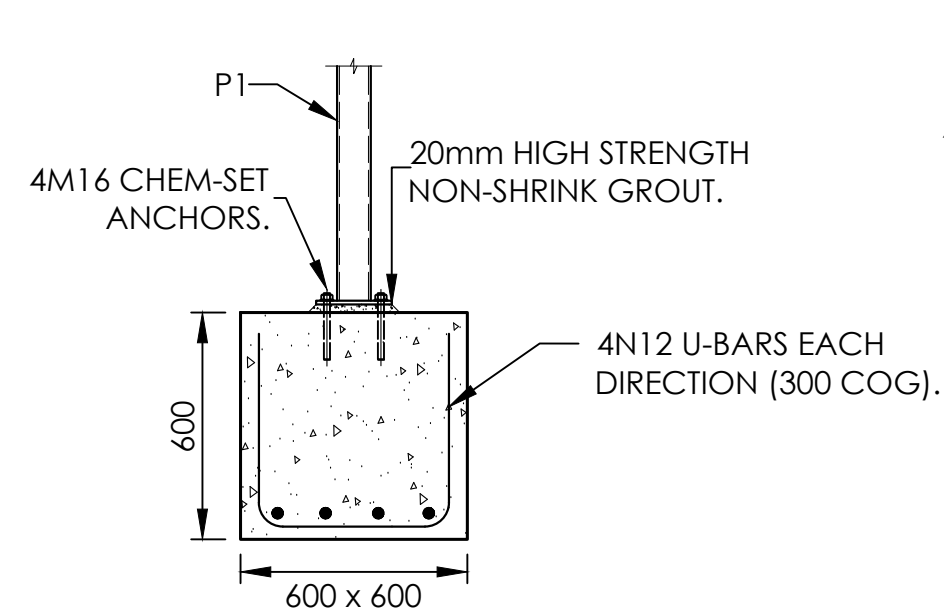
SOG - DENOTES SLAB ON GROUND
BP - DENOTES BORED PIERS
PF - DENOTES PAD FOOTING

FOOTING REQUIREMENTS

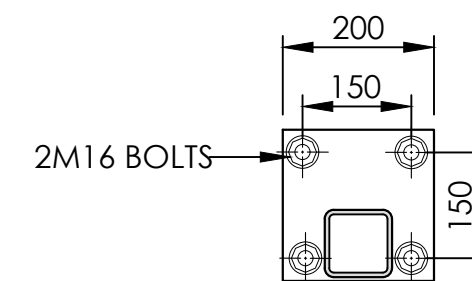
THE FOOTINGS MUST BE INSPECTED BY THE ENGINEER DURING THE COURSE OF EXCAVATIONS, UNLESS GEOTECHNICAL ENGINEERS HAVE BEEN ENGAGED FOR FOUNDATION INSPECTIONS.

PIER HOLES TO BE DUG WITH THE ARBORISTS SUPERVISION IN THE TREE PROTECTION AND STRUCTURAL ROOT ZONE.

STRUCTURAL ENGINEER TO BE CONTACTED FOR FURTHER ADVICE IF PIER NEEDS TO MOVE MORE THAN 400MM OR GREATER THAN 3M FROM THE ADJACENT PILE.

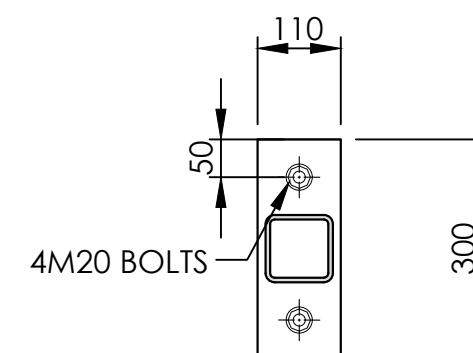


PAD FOOTING: PF1 (1:20)



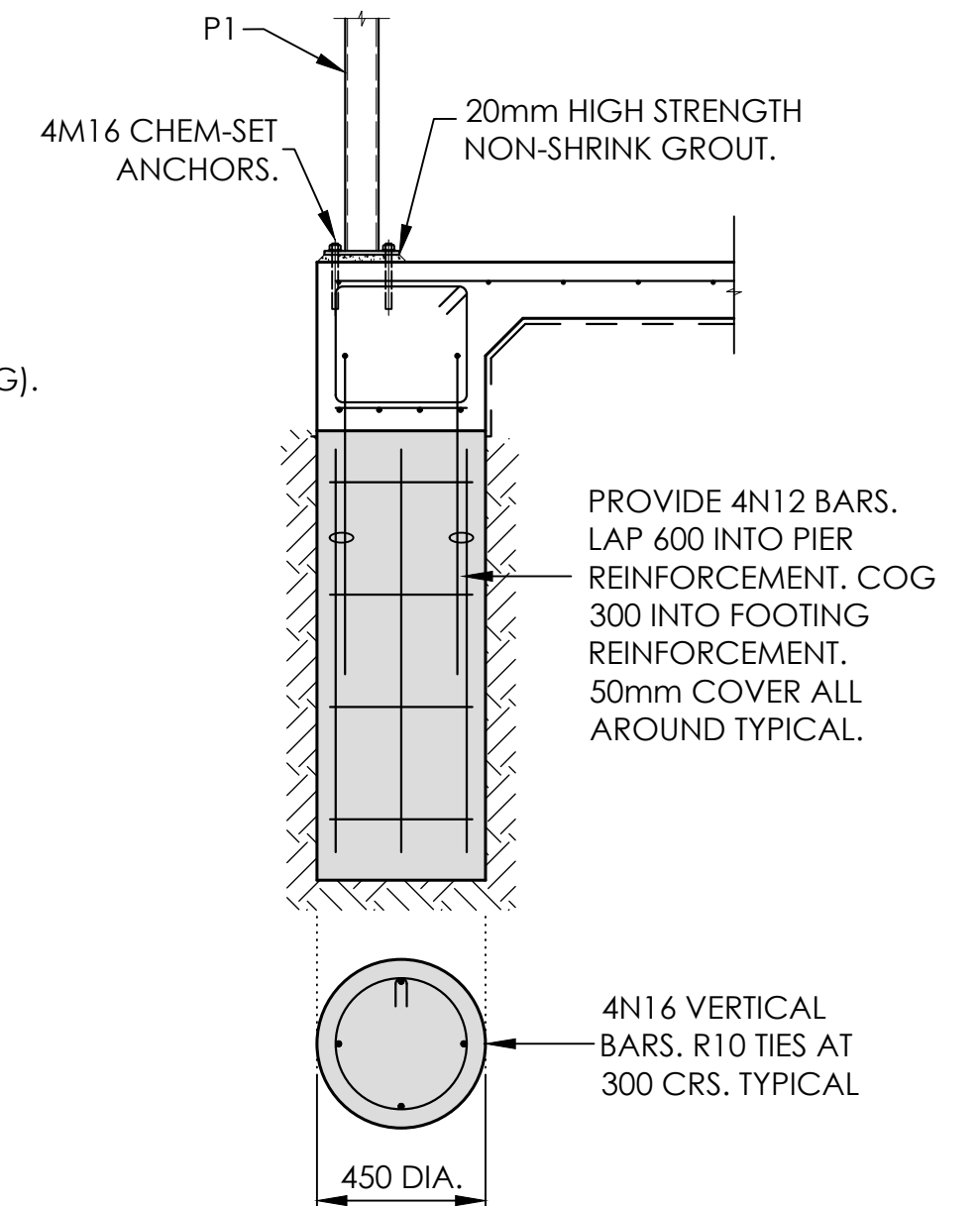
SC OFFSET BASE PLATE

1. ALL BASE PLATES TO BE 10mm PLATE (6mm CFW)
2. ORIENTATE BASE PLATE TO SUIT WALL LOCATION
3. 4M16 CHEMSET ANCHOR BOLTS WITH 125mm EMBEDMENT



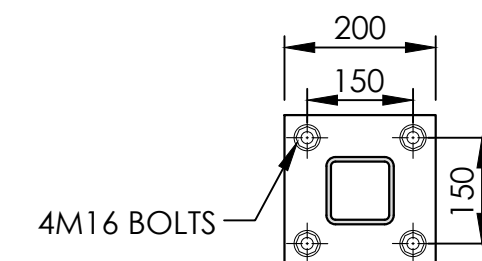
SHS STEEL COLUMN
NARROW BASE PLATE

1. ALL BASE PLATES TO BE 10mm PLATE (6mm CFW)
2. ORIENTATE BASE PLATE TO SUIT WALL LOCATION
3. 2M16 CHEMSET ANCHOR BOLTS WITH 125mm EMBEDMENT



TYPICAL PIERING (RAFT & BP1) DETAIL (1:20)

NOTE
BASE OF PIER HOLES TO BE CLEAN AND FIRM PRIOR TO POURING CONCRETE. ALL LOOSE MATERIAL TO BE REMOVED.

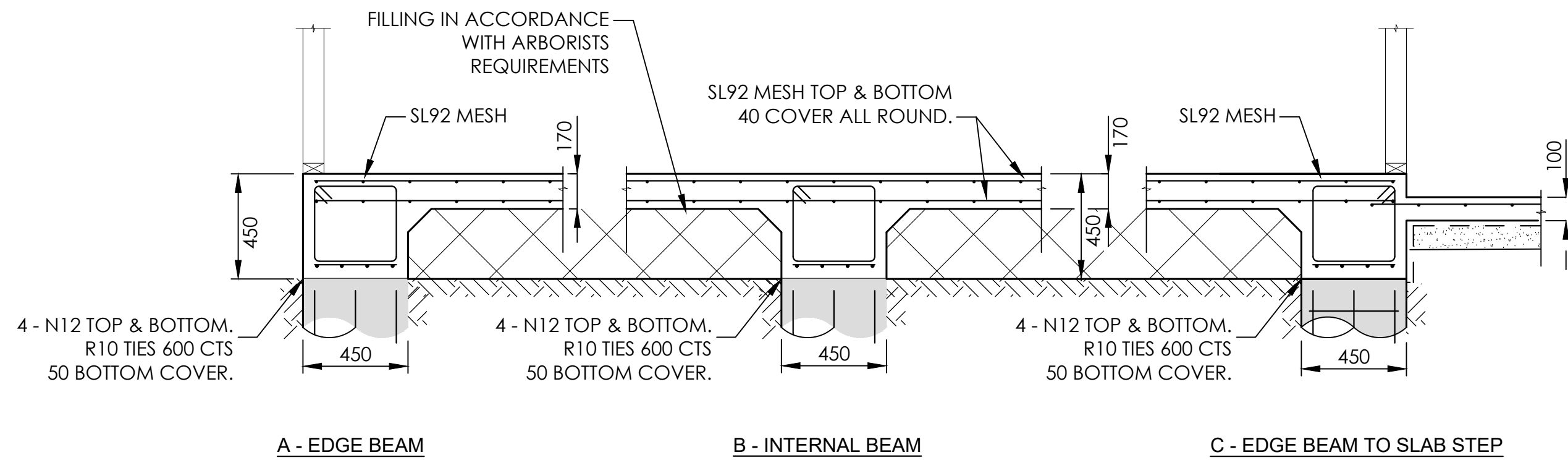


SHS STEEL COLUMN
TYPICAL BASE PLATE

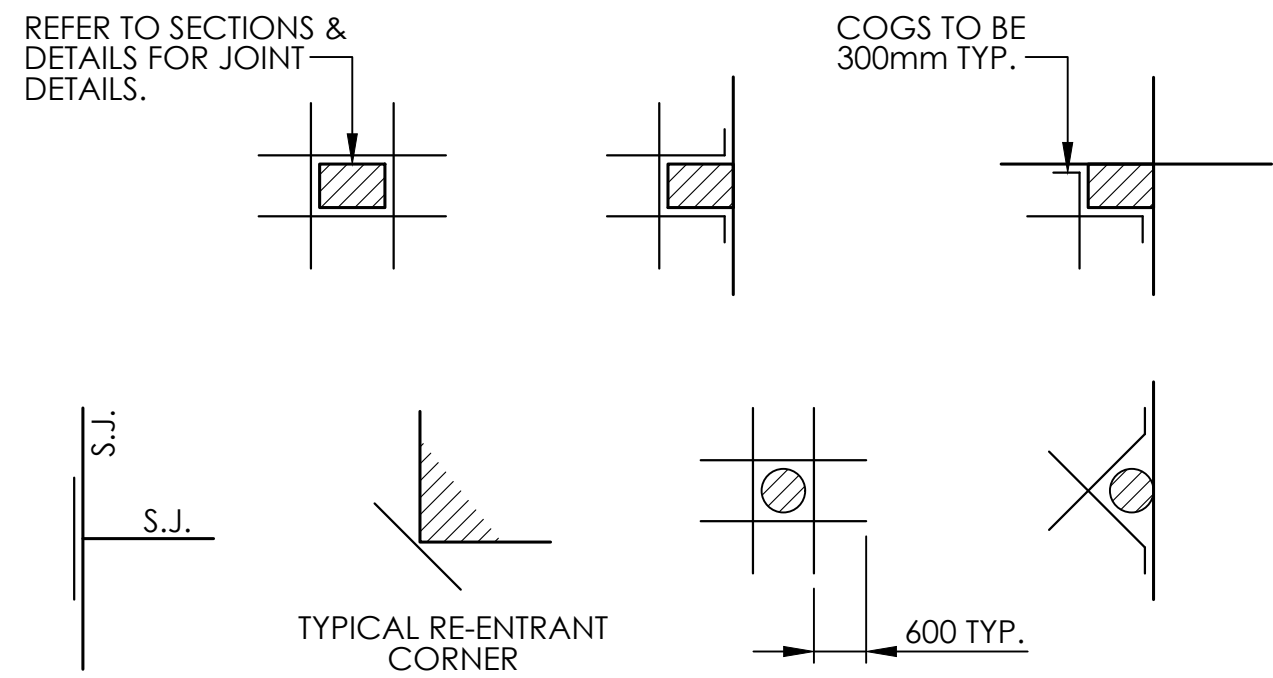
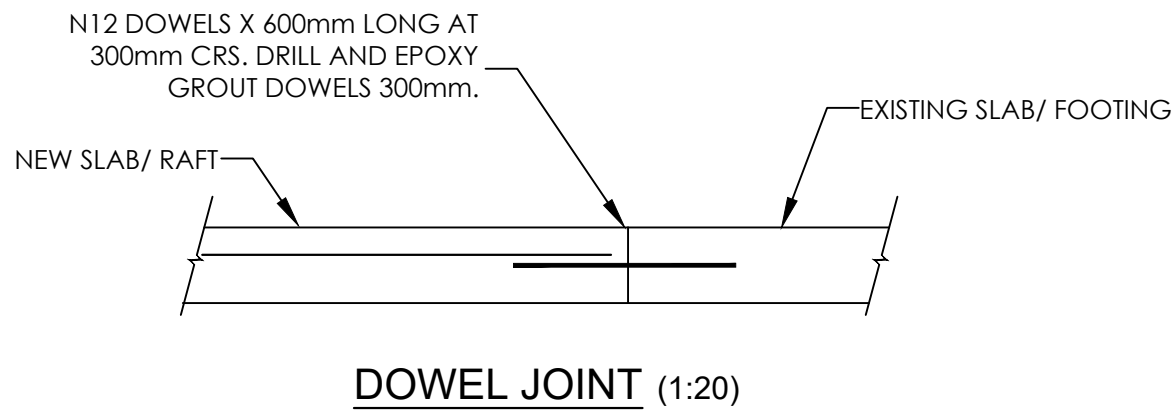
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|-----|----------|-------------------------|-------|---------|----------|------------------------|------------|--------|----------|---------------------------------------|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------|-------|--|
| 0 | 07.06.19 | ISSUED FOR CONSTRUCTION | J.M | G.Z | | DESIGN: | J.M | DRAWN: | J.M | CLIENT: | S & D THOMAS | <div><div><div>GZCONSULTINGENGINEERS</div><div>PTY LTD</div></div><div>A.B.N 69 168 996 585 PO Box 121 6/12 Rickard Road Narrabeen, NSW 2101 office: (02) 9401 4014 info@gzengineers.com.au</div></div> | JOB NUMBER: | | 19061 | |
| 1 | 21.06.19 | ISSUED FOR CONSTRUCTION | J.M | G.Z | | DATE: | 07.06.2019 | SCALE: | AS SHOWN | PROJECT: | ALTERATIONS & ADDITIONS AT | | DRG NO: | 2of6 | | |
| | | | | | | APPROVED: | | | SITE: | 204 LOWER PLATEAU RD, BILGOLA PLATEAU | | | PAGE SIZE: | | A2 | |
| | | | | | | | | | TITLE: | GROUND FLOOR SLAB PLAN | | | | | | |
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| REV | DATE | REVISIONS | DRAWN | CHECKED | APPROVED | BEng MIEAust CPEng NER | | | | | | | | | | |

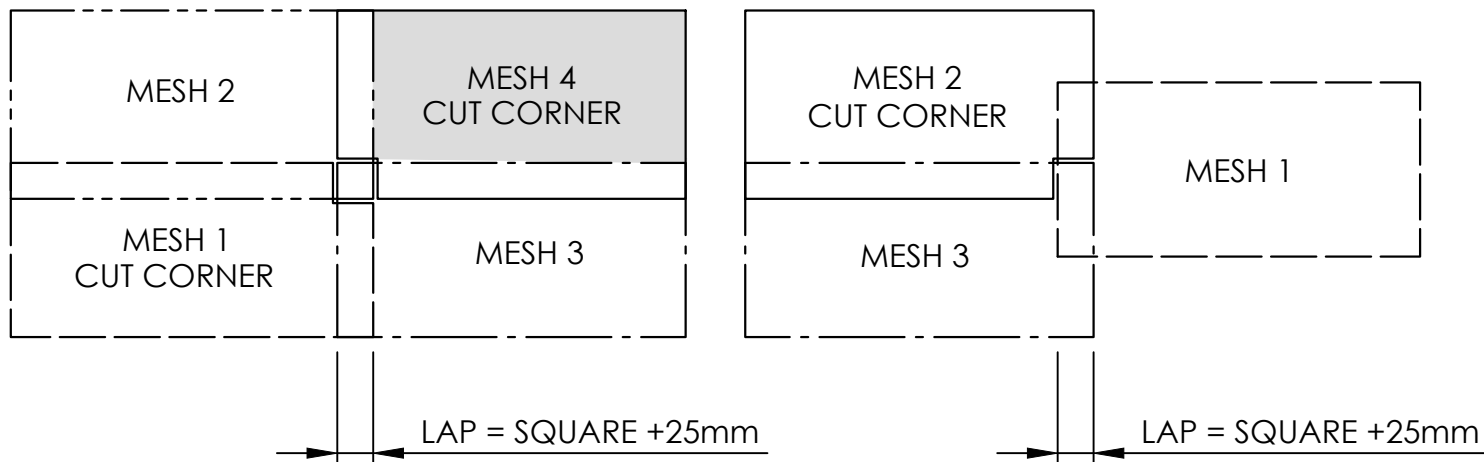


TYPICAL RAFT SLAB DETAILS (1:20)



SLAB ON GROUND - ALL TRIMMERS TO BE 2N12 TOP U.N.O.
SUSPENDED SLAB - ALL TRIMMERS TO BE 3N16 T&B U.N.O.

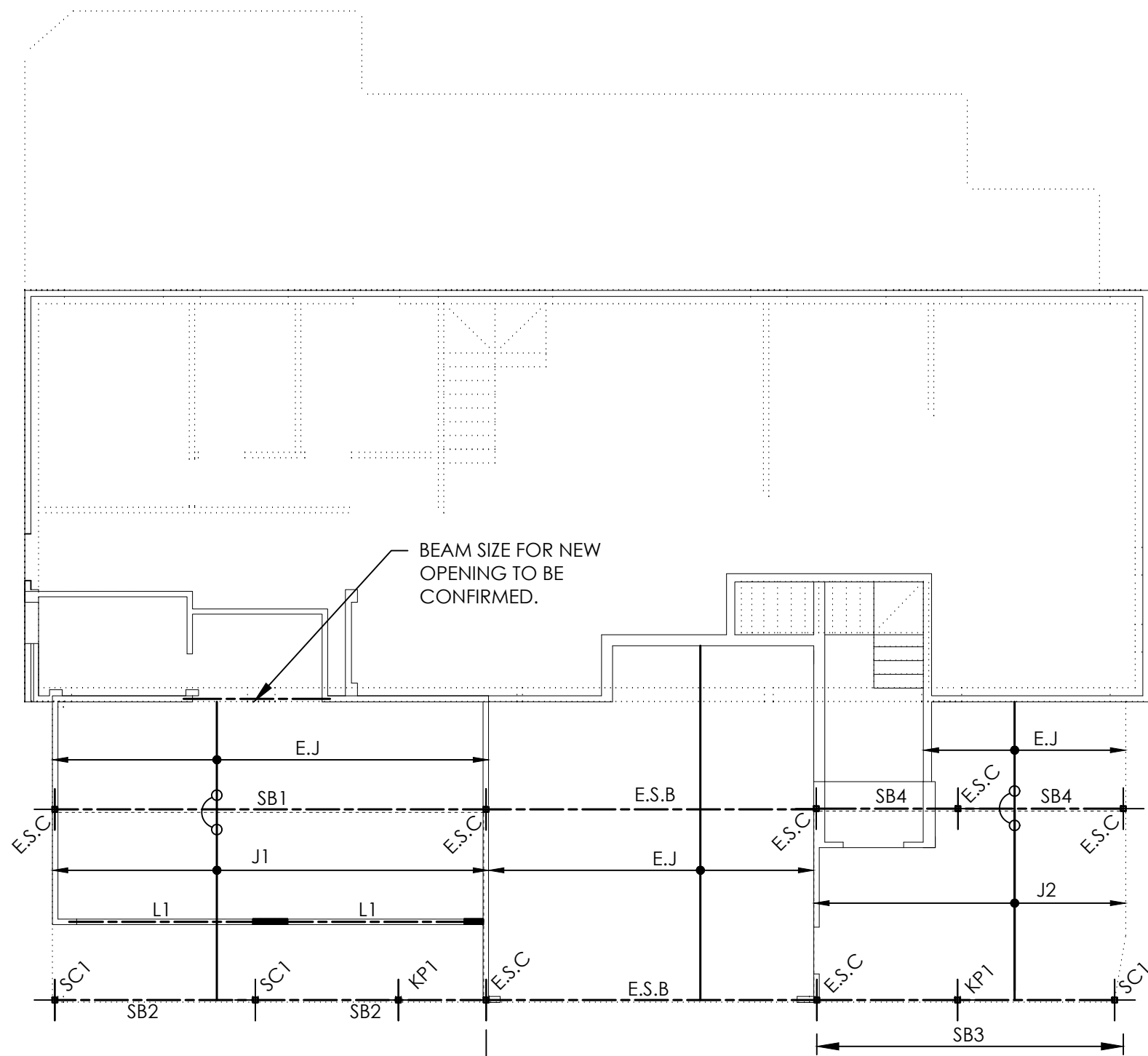
TYPICAL TRIMMER DETAILS (N.T.S)
AT ALL COLUMNS, WALLS, PITS, FLOOR WASTES, ETC THAT CAUSE A PENETRATION THROUGH THE SLAB.



MESH IN SLAB ON GROUND LAPPING DETAIL (N.T.S)
ALL MESH LAPS TO COMPLY WITH ALTERNATE DIAGRAM AND CONSTRUCTION NOTES.



| | | | | | | | | | | | |
|-----|----------|-------------------------|-------|---------|----------|------------------------|-----------------|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------|
| 0 | 07.06.19 | ISSUED FOR CONSTRUCTION | J.M | G.Z | | DESIGN: J.M | DRAWN: J.M | CLIENT: S & D THOMAS | <div><div><div>GZ</div><div>CONSULTING ENGINEERS</div></div><div><div>PTY LTD</div><div>A.B.N 69 168 996 585 PO Box 121 6/12 Rickard Road Narrabeen, NSW 2101 office: (02) 9401 4014 info@gzengineers.com.au</div></div></div> | JOB NUMBER: 19061 | |
| 1 | 21.06.19 | ISSUED FOR CONSTRUCTION | J.M | G.Z | | DATE: 07.06.2019 | SCALE: AS SHOWN | PROJECT: ALTERATIONS & ADDITIONS AT | | DRG NO: 3of6 | PAGE SIZE: A2 |
| | | | | | | APPROVED: | | SITE: 204 LOWER PLATEAU RD, BILGOLA PLATEAU | | | |
| | | | | | | | | TITLE: SLAB & FOOTING DETAILS | | | |
| REV | DATE | REVISIONS | DRAWN | CHECKED | APPROVED | BEng MIEAust CPEng NER | | | | | |



..... DOTTED LINES DENOTE FLOOR OVER

FIRST FLOOR FRAMING PLAN (1:100)

STEEL BEAMS

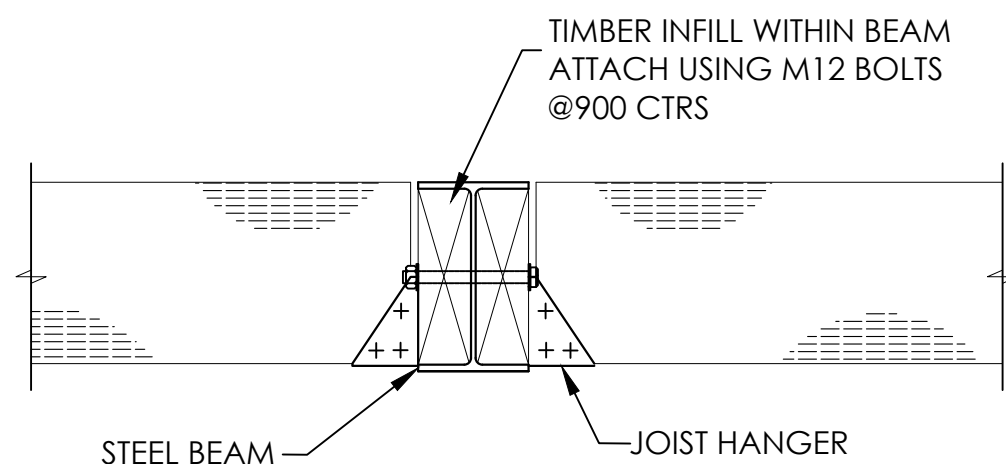
SB1 250 UC 72
SB2 200 PFC
SB3 200 PFC
SB4 200 UB 22
ESB EXISTING STEEL BEAM

STEEL COLUMNS

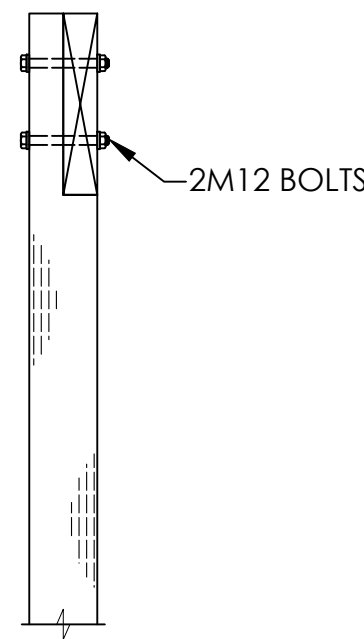
SC1 89 x 89 x 6 SHS
KP1 89 x 89 x 6 SHS
ESC EXISTING STEEL COLUMN

JOISTS

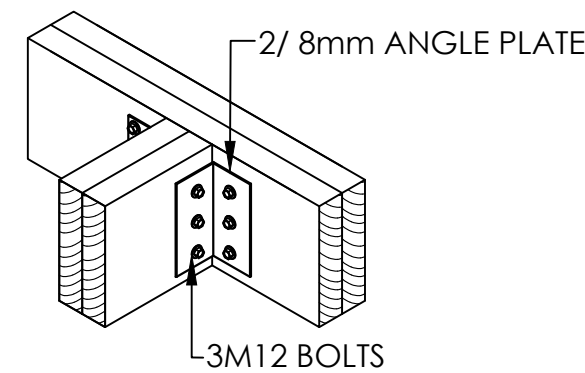
J1 170 x 45 LVL @450 CTS
F2 200 x 58 LVL @450 CTS



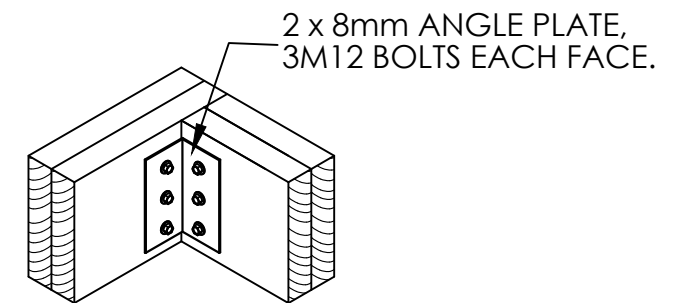
JOIST TO BEAM CONNECTION (1:10)



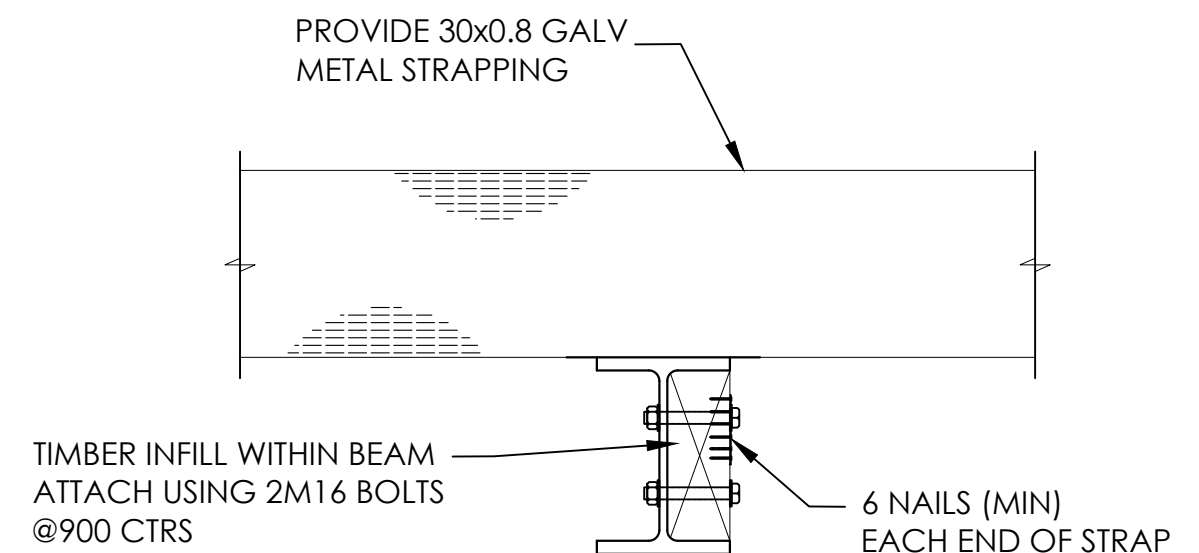
TIMBER POST TO TIMBER
BEAM CONNECTION (1:10)



TYPICAL TIMBER BEAM (1:10)
CONNECTION



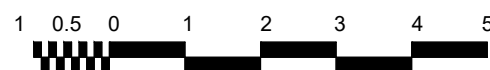
TYPICAL TIMBER BEAM (1:10)
CONNECTION



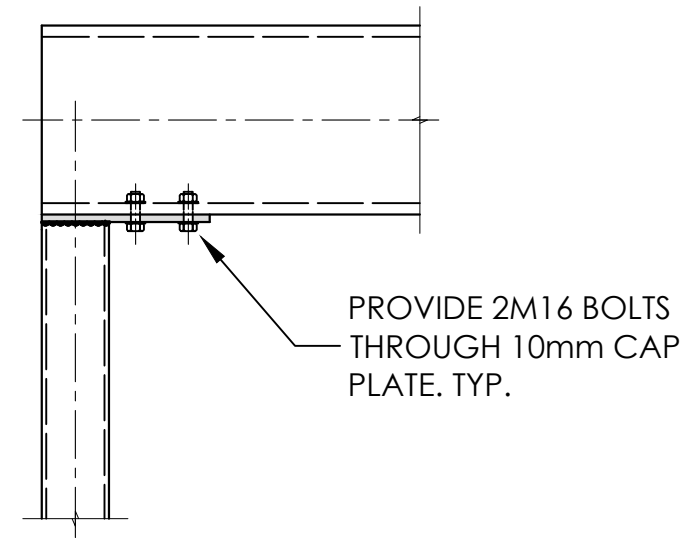
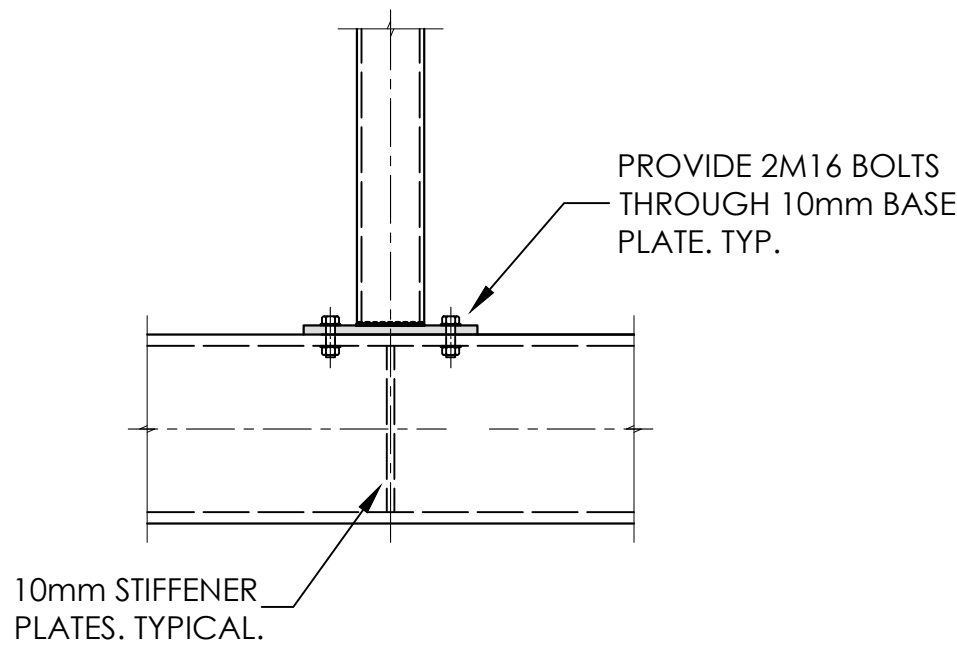
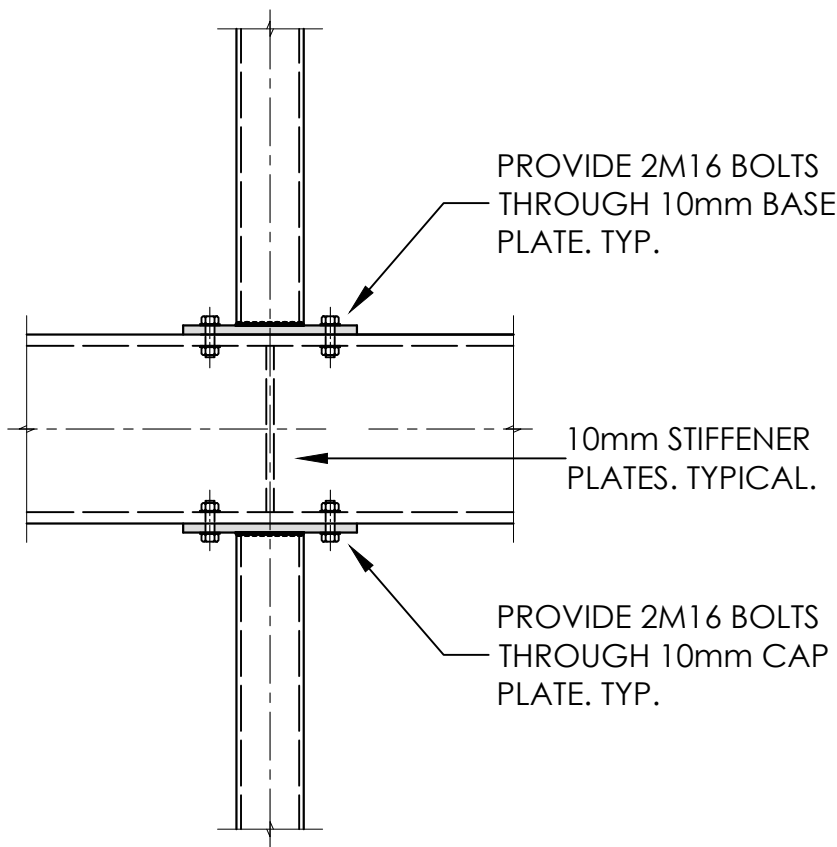
JOIST OVER BEAM CONNECTION (1:10)

TIMBER NOTES

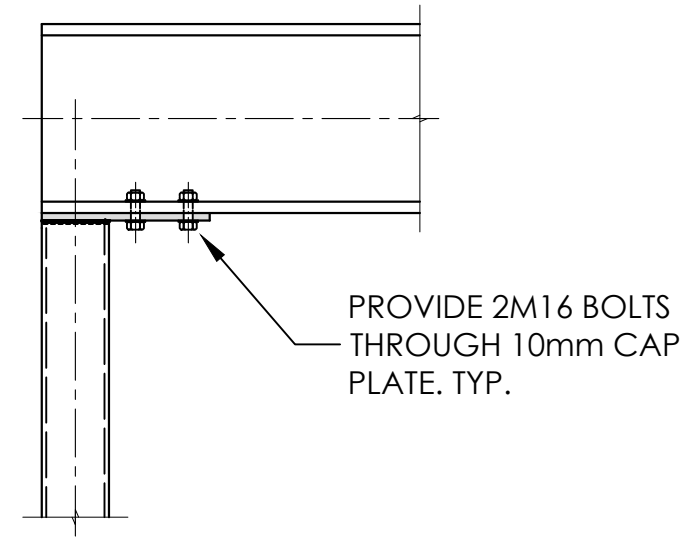
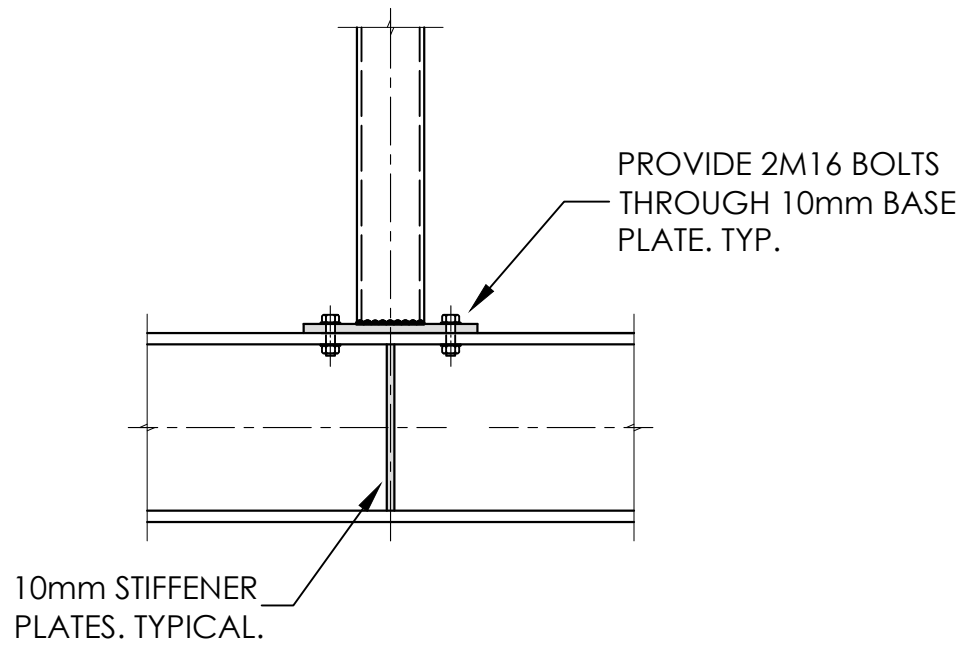
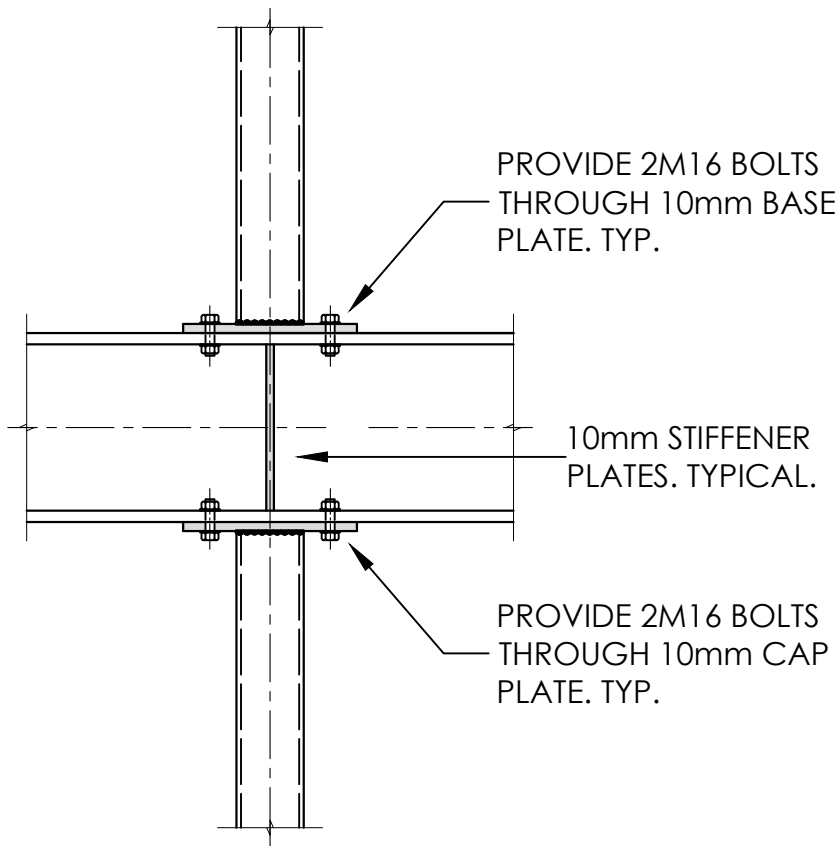
- ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH AS1684 AND AS1720.
- SOFTWOOD TO BE A MINIMUM OF F7 AND HARDWOOD TO BE MINIMUM OF F14 UNLESS NOTED OTHERWISE.
- SOFTWOOD TIMBER FRAMING TO HAVE A MINIMUM PROTECTIVE TREATMENT OF H2 OR T2.
- EXTERNAL TIMBER TO BE EITHER HARDWOOD DURABILITY CLASS I OR II AS PER AS1720 OR IMPREGNATED PINE, PRESSURE TREATED TO AS1604. SUPPLEMENTARY TREATMENT TO BE APPLIED TO ALL SITE CUT SURFACES.
- ROOF TRUSSES DESIGNED BY THE MANUFACTURER SHALL BE TO THE RELEVANT STANDARDS. DRAWINGS TO BE SUBMITTED TO THE ENGINEER CLEARLY INDICATING THE LOADS THAT ARE IMPOSED ON THE STRUCTURE.
- ALL BOLTS TO BE MINIMUM M16 4.6/S, WITH WASHER AT LEAST 2.5 x BOLT DIAMETER.
- ALL FASTENERS TO BE HOT DIP GALVANISED.
- ALL CONNECTIONS AND BRACING TO BE CARRIED OUT IN ACCORDANCE WITH AS1684 AND AS1720.
- ALL WALLS SHALL BE 90 x 45 F7 AT 450mm CENTRES UNLESS NOTED OTHERWISE. PROVIDE DOUBLE STUDS OR 90 x 90 MGP10 POSTS UNDER THE ENDS OF ALL BEAMS, LINTELS, STRUTS AND TRUSSES UNLESS NOTED OTHERWISE.
- ALL LVL'S USED SHALL COMPLY WITH AS4357 AND BE INSTALLED AS PER THE MANUFACTURERS SPECIFICATIONS.
- ALL JOISTS WITH A DEPTH GREATER THAN 150mm SHALL HAVE BLOCKING OVER SUPPORT BEARERS AND AT A MAXIMUM OF 3M CENTRES.



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| | | | | | | | TITLE: FIRST FLOOR FRAMING PLAN | | | | |
| REV | DATE | REVISIONS | DRAWN | CHECKED | APPROVED | | | | | | |



PARALLEL FLANGE CHANNELS (PFC) (1:10)



UNIVERSAL BEAMS (UB) (1:10)

STANDARD STEELWORK CONNECTION DETAILS



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|-----|----------|-------------------------|-------|---------|----------|
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| DESIGN: | J.M | DRAWN: | J.M |
| DATE: | 07.06.2019 | SCALE: | AS SHOWN |
| APPROVED: | | | |
| BEng MIEAust CPEng NER | | | |

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| CLIENT: | S & D THOMAS |
| PROJECT: | ALTERATIONS & ADDITIONS AT |
| SITE: | 204 LOWER PLATEAU RD, BILGOLA PLATEAU |
| TITLE: | TYPICAL STRUCTURAL DETAILS |

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