

PROJECT: DOUBLE STOREY 2 UNITS TOWNHOUSE

ADDRESS: 9 GRANT STREET, DROMANA 3936

WB CIVIL STRUCTURAL ENGINEERS

ABN: 84119322438

PRIYAN WIJEYERATNE, PE 2448

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REVISION "A" NOTES - REFERENCE TO BS RFI DATED - 6/04/2022

ITEM NO:

- 9 - ENCLOSED COMPUTATIONS & R126
- 38 - BLOCK RETAINING WALL - SHT. NO: 7/20 (PROPPRIARY SYSTEM PROVIDED)
- 39 - RC SLEEPER RETAINING WALL - SHT. NO: 7/20
- 40 - SEQUENCE OF RW CONSTRUCTION - SHT NO. 7/20
- 41 - DESIGN LOADS - SHT. NO: 2/20
- 43 - ANGLE OF REPOSE TO SEWER LINE (THIS WILL APPY TO ANY PIPE) - 5/20
- 44 - SPECIFIC CORROSION PROTECTION TO ALL STEEL WORK - 3/20

DISCLAIMER

CIVIL/STRUCTURAL DESIGN ENGINEER WB CIVIL STRUCTURAL ENGINEERS MUST NOT BE HELD RESPONSIBLE FOR ANY CLAIM ARISING DUE TO MISTAKES, OMISSIONS AND SUBSTANDARD WORKMANSHIP BY BUILDER OR ITS SUB CONTRACTORS AND SUPPLIERS

SETTINGOUT

SETTING-OUT OF ANY ELEMENT MUST BE DONE AS PER ARCHITECTURAL PLANS. DIMENSIONS PROVIDED ON THESE PLANS MUST ALWAYS BE CHECKED AGAINST ARCHITECTURAL PLANS. STRUCTURAL ENGINEER (MOBILE: 0401023328) MUST BE KEPT INFORMED IMMEDIATELY OF ANY DISCREPANCY AND CLARIFICATION SOUGHT BEFORE SETTING-OUT AND CONCRETING IS ORGANISED.



WARNING

ALL SERVICES SHOWN ON THESE DRAWINGS ARE APPROXIMATE ONLY AND EXACT LOCATION IS TO BE CONFIRMED ON SITE BY CONTRACTOR PRIOR TO COMMENCEMENT OF ANY WORKS.

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PROJECT ADDRESS:
**9 GRANT STREET,
DROMANA 3936**

SHEET NO: 1/20

SCALE: AS SHOWN

DATE: 1/01/2022



REV.	REMARKS/COMMENTS	DATE	APRV.
B	BOUNDARY RETAINING WALL DETAILS INCLUDED - SHT NO: 20/20.	28/05/2022	PW
A	REV. AS PER BS RFI DATED 6/04/2022	11/04/2022	PW

GALVANISING SPECIFICATIONS

SPECIFICATION FOR HOT DIP GALVANISING – ALL STEEL MEMBERS INCLUDING STRUCTURAL MEMBERS

SCOPE

This specification covers the galvanized coating applied to general steel articles, structural sections, angles, channels, beams, columns, fabricated steel assemblies, threaded fasteners and other steel components. This specification does not apply to the galvanized coating on semi-finished products such as wire, tube or sheet galvanized in specialised or automatic plants.

RELEVANT STANDARDS

AS/NZS 1214	Hot dip galvanized coatings on threaded fasteners
AS 1627.1	Preparation and pre-treatment of surfaces - Removal of oil, grease and related contamination
AS 1627.4	Preparation and pre-treatment of surfaces - Abrasive blast cleaning of steel
AS 1627.5	Preparation and pre-treatment of surfaces - Pickling
AS/NZS 2312.2	Guide to the protection of structural steel against atmospheric corrosion by the use of protective coatings - Part 2: Hot dip galvanising process
AS 4312	Atmospheric corrosivity zones in Australia
AS/NZS 4680	Hot-dip galvanized (zinc) coatings on fabricated ferrous articles

FABRICATION

Care shall be taken to avoid fabrication techniques which could cause distortion or embrittlement of the steel.

All welding slag and burrs shall be removed prior to delivery to the galvanizer.

Holes and/or lifting lugs to facilitate handling, venting and draining during the galvanising process shall be provided at positions as agreed between the designer and the galvanizer.

SURFACE PREPARATION

Unsuitable marking paints shall be avoided and consultation by the fabricator with the galvanizer about removal of grease, oil, paint and other deleterious materials shall be undertaken prior to fabrication.

Surface contaminants and coatings, which cannot be removed by the normal chemical cleaning process in the galvanising operation, shall be removed by abrasive blast cleaning or some other suitable method.

Steelwork shall be pre-cleaned in accordance with the requirements of AS 1627.1 followed by acid pickling, in accordance with the requirements of AS 1627.5. Abrasive blast cleaning to Class 2 finish in accordance with the requirements of AS 1627.4 may be used.

GALVANISING

All articles to be galvanized shall be handled in such a manner as to avoid any mechanical damage and to minimize distortion. (See Note 2 above)

Design features that may lead to difficulties during galvanising should be pointed out prior to galvanising.

Galvanising parameters such as galvanising temperature, time of immersion, and withdrawal speed shall be employed to suit the requirements of the article.

The composition of the zinc in the galvanising bath shall comply with AS/NZS 4680.

COATING REQUIREMENTS

1 Thickness

Table 1. Requirements for coating thickness and mass for articles that are not centrifuged

Steel Thickness mm	Local coating thickness minimum μm	Average coating thickness minimum μm	Average coating mass minimum g/m^2
≤ 1.5	35	45	320
> 1.5 to ≤ 3	45	55	390
> 3 to ≤ 6	55	70	500
> 6	70	85	600

Table 2. Requirements for coating thickness and mass for articles that are centrifuged

Thickness of articles (all components including castings) mm	Local coating thickness minimum μm	Average coating thickness minimum μm	Average coating mass minimum g/m^2
< 8	25	35	250
≥ 8	40	55	390

Note: $1 \text{ g}/\text{m}^2$ coating mass = $0.14 \mu\text{m}$ coating thickness.

The thickness of the galvanized coatings on ISO metric coarse threaded fasteners shall conform to the requirements of AS/NZS 1214:

The thickness of the galvanized coating shall first be tested by the purchaser/designer at the galvanizer's works, using an approved magnetic measuring device. In the event of any dispute, an independent test shall be carried out in accordance with AS/NZS 4680, Appendix G.

2 Surface Finish

The galvanized coating shall be continuous, adherent, as smooth and evenly distributed as possible, and free from any defect that is detrimental to the stated end use of the coated article. On silicon killed steels, the coating may be dull grey, which is acceptable provided the coating is sound and continuous (See Note 3). Any reparation is to be carried out as per Clause 8 of AS/NZS 4680.

The integrity of the coating shall be determined by visual inspection and coating thickness measurements. Where slip factors are required to enable high strength friction grip bolting, where shown, these shall be obtained after galvanising by suitable mechanical treatment of the faying surfaces.

Where a paint finish is to be applied to the galvanized coating, all sharp spikes shall be removed and all edges shall be free from excessive lumps and runs.

3 Adhesion

The galvanized coating shall be sufficiently adherent to withstand normal handling during transport and erection.

INSPECTION

Inspection shall be carried out at the galvanizer's works by a designated party, or at some other place as agreed between fabricator and galvanizer.

CERTIFICATION

When requested by the purchaser/designer, a certificate shall be provided stating that the galvanising complies with the requirements of AS/NZS 4680.

TRANSPORT AND STORAGE

Galvanized components shall, wherever possible, be transported and stored under dry, well-ventilated conditions to prevent the formation of wet storage staining following the recommendations contained in AS/NZS 4680 Appendix F.

A passivation treatment after galvanising may be used to minimise the wet storage staining which may occur on articles unable to be stored in dry, well-ventilated conditions.

Any wet storage staining shall be removed by the galvanizer if formed prior to leaving the galvanizer's plant, unless late pick-up or acceptance of delivery has necessitated the material being stored in unfavourable conditions. Provided the coating thickness complies with the requirements of AS/NZS 4680, no further remedial action is required to the stained areas.

WELDING

Where galvanized steel is to be welded, adequate ventilation shall be provided. If adequate ventilation is not available, supplementary air circulation shall be provided. In confined spaces a respirator shall be used.

Grinding of edges prior to welding may be permitted to reduce zinc oxide fumes formed during welding and eliminate weld porosity which can sometimes occur.

All uncoated weld areas shall be reinstated – see Coating Reinstatement or Clause 8 of AS/NZS 4680.

COATING REINSTATEMENT

Areas of significant surface that are uncoated shall, by agreement between the purchaser and the galvanizer, be reinstated by following the recommendations contained in AS/NZS 4680 - Repair after galvanising, or by other methods nominated by the galvanizer and approved by the contractor. Similar repair methods shall be used for areas damaged by welding or flame cutting, or during handling, transport and erection.

The size of the area able to be repaired shall be relevant to the size of the object and the conditions of service but shall normally be in accordance with the provisions of AS/NZS 4680 - Repair after galvanising.

SWEEP (BRUSH) BLAST CLEANING OF GALVANISED STEEL PRIOR TO PAINTING

Refer AS/NZS 2312.2 Clause 7.5.3.2

GENERAL INFORMATION ON FACTORS THAT AFFECT THE CORROSION OF GALVANISED STEEL

Refer AS/NZS 2312.2.

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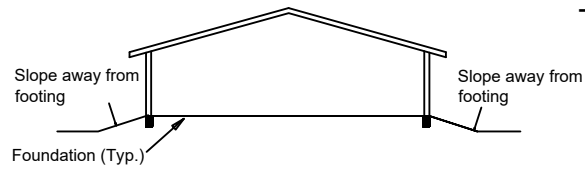
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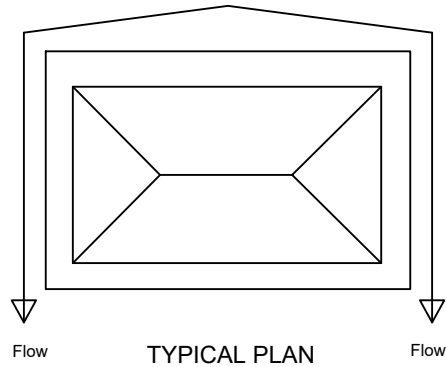


SITE DRAINAGE REQUIREMENTS

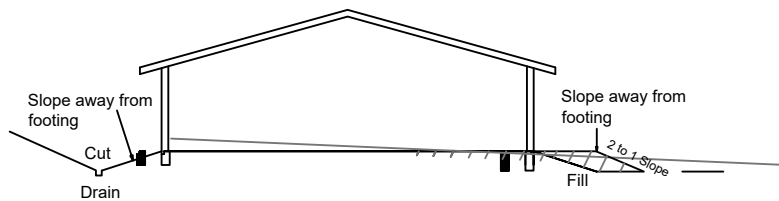
TYPICAL STORMWATER DRAINAGE



TYPICAL SECTION
SITES WITH SLIGHT OR NO FALL

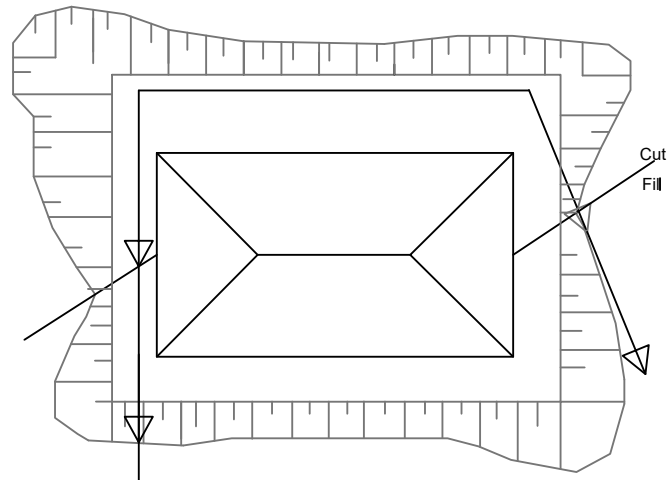


TYPICAL PLAN

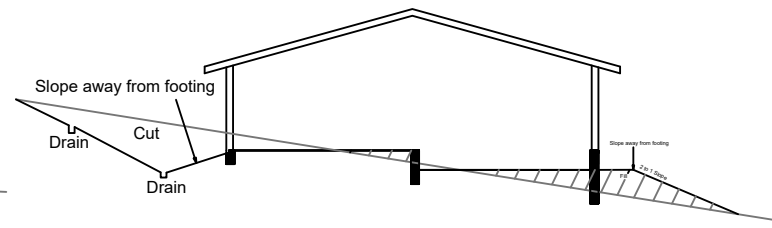


TYPICAL SECTION

SITES WITH FALL UP TO 1 : 18



TYPICAL PLAN



TYPICAL SECTION

SITES WITH FALL GREATER THAN 1 : 18

MAINTENANCE:

- THE MAINTENANCE OF THE SITE AROUND A NEW HOME IS AN IMPORTANT FACTOR IN THE LONG-TERM PERFORMANCE OF THE FOOTING SYSTEM
- THE PRIMARY OBJECTIVE OF THIS MAINTENANCE IS TO MINIMISE THE VARIATION IN SOIL MOISTURE LEVEL AROUND THE FOOTING THAT COULD LEAD TO EXCESSIVE SOIL MOVEMENT AND POSSIBLE DISTRESS TO THE SUPERSTRUCTURE AND/OR FOOTING. WHEN THE SLAB FORMS PART OF THE TERMITE BARRIER SYSTEM FOR THE HOUSE, THEN IT IS ALSO NECESSARY TO MAINTAIN THE EFFECTIVENESS OF THAT BARRIER BY APPROPRIATE MAINTENANCE ACTIVITIES.
- WHEN A CONCRETE SLAB-ON-GROUND IS USED AS PART OF THE TERMITE BARRIER SYSTEM AS OUTLINED IN AS3660.0, THEN IT CANNOT BE TOO HIGHLY STRESSED THAT REGULAR INSPECTION AND MAINTENANCE OF THE SLAB SURROUNDING BY A COMPETENT PROFESSIONAL IS REQUIRED TO ENSURE THAT ANY TERMITE INFESTATION IS DETECTED AND TREATED PROMPTLY.
- ONGOING MAINTENANCE AND INSPECTION ON A REGULAR BASIS IS A REQUIREMENT OF AS3660.1 AND OWNERS SHOULD BE CLEARLY ADVISED OF THEIR RESPONSIBILITIES TO ENSURE THAT THEIR INVESTMENT IS PROPERLY PROTECTED.
- LEAKING TAPS, DOWNPIPES, SEWERS, GUTTERS AND DRAINAGE CAN ALSO AFFECT THE MOISTURE CONTENT OF THE SOIL AND THESE MUST BE INSPECTED REGULARLY TO ENSURE AGAINST DAMAGE TO THE FOOTINGS. SIMILARLY, GUTTERS, DOWNPIPES AND COLLECTION POINTS CAN GET BLOCKED WITH LEAF AND OTHER DEBRIS, PREVENTING THE EFFECTIVE DRAINAGE OF STORMWATER AWAY FROM THE HOUSE. REGULAR INSPECTIONS AND MAINTENANCE SHOULD BE CARRIED OUT TO PREVENT BLOCKAGE.
- IT IS IMPORTANT FOR BUILDER TO MAKE THE HOMEOWNER AWARE OF THE MAINTENANCE ISSUES ASSOCIATED WITH ENSURING THE LONG-TERM PERFORMANCE OF THE FOOTING SYSTEM.

LANDSCAPING

- THE WORKS ON GARDENS SHALL NOT IMPACT ON DRAINAGE REQUIREMENTS, SUBFLOOR VENTILATION AND WEEPHOLE DRAINAGE SYSTEMS. GARDEN BEDS ADJACENT TO THE BUILDING SHALL BE AVOIDED. CARE SHALL BE TAKEN TO AVOID OVERWATERING OF GARDENS CLOSE TO THE BUILDING FOOTINGS. (AS 2870 Cl. B2.3(b))
- PLANTING OF TREES SHALL BE AVOIDED NEAR THE FOUNDATION OF A BUILDING OR NEIGHBOURING BUILDING AS THEY CAN CAUSE DAMAGE DUE TO DRYING OF THE CLAY AT SUBSTANTIAL DISTANCES. TO REDUCE THE POSSIBILITY OF DAMAGE TREES SHOULD BE RESTRICTED TO A DISTANCE FROM THE HOUSE AS FOLLOWS:
- 1 1/2 x MATURE TREE HEIGHT FOR CLASS E SITES.
- 1 1/2 x MATURE TREE HEIGHT FOR CLASS H1 AND CLASS H2 SITES
- 1 1/2 x MATURE TREE HEIGHT FOR CLASS M SITES
- WHERE ROWS OR GROUPS OF TREES ARE INVOLVED, THE DISTANCE FROM THE BUILDING SHOULD BE INCREASED. REMOVAL OF TREES FROM THE SITE CAN ALSO CAUSE SIMILAR PROBLEMS. (AS 2870 B2.3 (c))

DRAINAGE REQUIREMENTS

GENERAL

THESE DRAINAGE AND OTHER REQUIREMENTS FORM PART OF THE FOOTING DESIGN.

DEFECTIVE SURFACE DRAINAGE IS A COMMON FACTOR IN REACTIVE CLAY FOUNDATION MOVEMENT PROBLEMS. THE EFFECTIVE DRAINAGE OF THE SITE IS A PREREQUISITE FOR SATISFACTORY PERFORMANCE OF A FOUNDATION SYSTEM.

THE BUILDER'S RESPONSIBILITY IS TO MAKE THE OWNER AWARE OF THE IMPORTANCE OF SURFACE DRAINAGE, EVEN IF IT IS NOT PART OF BUILDER'S CONTRACT TO CONSTRUCT SURFACE DRAINAGE.

LANDSCAPING AND OTHER FINISHING SITE WORKS MUST BE INCORPORATED WITH WELL DESIGNED SURFACE DRAINAGE TO MITIGATE ANY ADVERSE IMPACT ON A FOUNDATION SYSTEM.

DRAINAGE NOTES

- ALL SURFACE DRAINAGE WORKS SHALL BE INSTALLED IN ACCORDANCE WITH CLAUSE 5.6.3 DRAINAGE REQUIREMENTS OF AS 2871-2011, WHEREIN FOR BUILDINGS ON MODERATELY, HIGH AND REACTIVE SITES
- SURFACE DRAINAGE SHALL BE CONTROLLED THROUGHOUT CONSTRUCTION AND BE COMPLETED BY THE FINISH OF CONSTRUCTION
- THE BASES OF TRENCHES SHALL SLOPE AWAY FROM THE BUILDING
- WHERE PIPES PASS UNDER THE FOOTING SYSTEM, CLAY PLUGS ARE TO BE ADOPTED TO PREVENT THE INGRESS OF WATER
- FOR BUILDINGS ON HIGHLY REACTIVE SITES, DRAINER SHALL PROVIDE DRAINAGE ARTICULATION TO ALL STORMWATER, SANITARY PLUMBING DRAINS AND DISCHARGE PIPES IN ACCORDANCE WITH CLAUSE 5.6.4 PLUMBING REQUIREMENTS. WHEREIN FLEXIBLE JOINTS IMMEDIATELY OUTSIDE BUILDING AND COMMENCING WITHIN 1m OF THE BUILDING PERIMETER ARE REQUIRED TO ACCOMMODATE THE REQUIRED DIFFERENTIAL MOVEMENT BASED ON THE SOIL CLASSIFICATION. REFER TO TABLE BELOW FOR MIN. REQUIREMENTS FOR EXPANSION AND ALLOWABLE FITTINGS
- FLEXIBLE JOINTS ARE REQUIRED AT ENTRY & EXIT OF SLAB/FOOTINGS. SURFACE WATER MUST BE DIVERTED AWAY FROM THE DWELLING AND GRADED AWAY FROM ALL FOUNDATIONS TO GIVE A SLOPE OF NOT LESS THAN 60mm OVER THE FIRST 1000mm FROM THE DWELLING
- SUBSURFACE DRAINS TO REMOVE GROUND WATER SHALL BE DETAILED BY THE DESIGN ENGINEER. FURTHERMORE, DAMP-PROOF MEMBRANE IN ACCORDANCE WITH CLAUSE 5.3.3 OF AS 2870 SHALL BE INSTALLED FOR GROUNDWATER DRAINAGE ON AGGRESSIVE SOILS

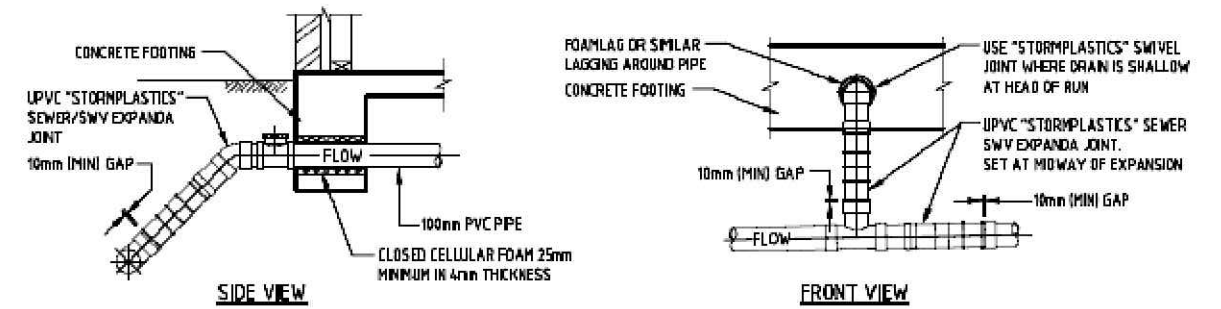
SITE DRAINAGE REQUIREMENTS

CONSTRUCTION STAGE

THE GEO TECHNICAL REPORT HAS RECOMMENDED THE USE OF A CERTAIN FOOTING THAT IS APPROPRIATE FOR THIS SITE, WHILE MAKING THIS RECOMMENDATION IT HAS BEEN ASSUMED THAT CERTAIN SITE DRAINAGE REQUIREMENTS AS PER AS2870:2011 HAS BEEN MET.

DURING THE CONSTRUCTION OF THE FOOTING THE FOLLOWING SITE DRAINAGE REQUIREMENTS ARE LISTED AS BEING PART OF THE FINAL FOOTING DESIGN BY THE DESIGN ENGINEER.

- MUST PREVENT WATER PONDING AGAINST OR NEAR THE FOOTING
- THE GROUND IN THE IMMEDIATE VICINITY OF THE PERIMETER FOOTING SHALL BE GRADED TO A FALL OF 60mm MIN. AWAY FROM THE FOOTING OVER A DISTANCE OF 1000mm (1.2M) AND SHAPED TO PREVENT PONDING OF WATER (THIS INCLUDES THE GROUND UP HILL FROM THE FOOTING ON A CUT/FILL SITE) - WHERE FILLING IS PLACED ADJACENT TO THE BUILDING THE FILLING SHALL BE COMPACTED AND GRADED TO ENSURE DRAINAGE AWAY FROM FOOTINGS OR
- ALL COLLECTED STORMWATER MUST BE DISCHARGED TO A LEGAL POINT OF DISCHARGE
- SURFACE DRAINAGE OF THE SITE SHALL BE CONTROLLED FROM THE START OF THE SITE PREPARATION AND CONSTRUCTION. SURFACE DRAINAGE INCLUDES SURFACE WATER RUN-OFF AND BUILDING WATER (ROOF/FLOOR CONCRETE) RUN-OFF
- ALL WATER RUN-OFF SHALL BE CONTROLLED AT ALL TIMES
- USE TEMPORARY DOWNPIPES TO COLLECT WATER FROM A ROOFED BUILDING FRAME
- WHEN SILT PITS ARE USED TO GATHER SURFACE WATER FROM AREAS ADJACENT TO THE FOOTINGS, THESE SILT PITS ARE TO BE AT LEAST 1000mm AWAY FROM THE FOOTING AND CONNECTED TO THE STORMWATER SYSTEM WITH A SOLID PIPE
- STORMWATER DRAINS SHALL BE AT LEAST 90mm AND HAVE A MINIMUM FALL OF 1:100 AND 100mm COVER UNDER THE SOIL AND OR PAVED AREAS
- INSPECTION OPENINGS SHOULD BE PROVIDED AT EACH PIPE CONNECTION POINT AND AT A NOMINAL SPACING OF 2m
- AVOID UNDERMINING THE FOOTING WITH ANY TRENCHES OR PIPE OR PITS UNLESS THE FOOTING HAS BEEN DESIGNED TO ALLOW FOR SUCH SITUATION. SUB-SURFACE DRAINAGE IS REQUIRED TO REMOVE ANY UNWANTED GROUND WATER BY MEANS OF 90mm SLOTTED PIPE IN A 300mm WIDE TRENCH (MIN. FALL OF 1:100). BASE OF THE TRENCH IS FILLED WITH 10mm CRUSHED ROCK OR SIMILAR COVERING THE SLOTTED PIPE
- AG DRAINS MUST NOT BE INSTALLED WITHIN 1500mm FROM ANY FOOTING
- AG DRAINS MUST BE INSTALLED AT THE BASE OF ALL SITE CUTS THAT EXCEED 400mm IN HEIGHT, ALONG THE HIGH SIDE OF A SLOPING SITE AND POSSIBLY ALONG THE LOW SIDE OF A SLOPING SITE ALONG THE BOUNDARY. TO BE CONNECTED TO



FLEXIBLE PIPE CONNECTIONS FOR CLASS "H" AND "E" SITES,
(AND CLASS "P" SITES WITH HIGHLY REACTIVE SOILS WHERE SPECIFIED IN THE SOIL REPORT)

SEWER & STORMWATER PIPE CONNECTION DETAIL

SCALE: N.T.S

SITE CLASS	MINIMUM REQUIREMENTS FOR SEWER RETICULATION				
	SEWER EXIT POINTS SWIVEL	EXPANDER	MIN. EXPANSION JOINT CAPACITY	ALLOWABLE ROTATION	LAGGING
M	0	0	-	-	MIN. 20
H1	1	1	60MM	15°	MIN. 40
H2/H2-D	2	1	90MM	15°	MIN. 40
E	2	1	120MM	15°	MIN. 40
P	2	1	90MM (UND)	15°	MIN. 40

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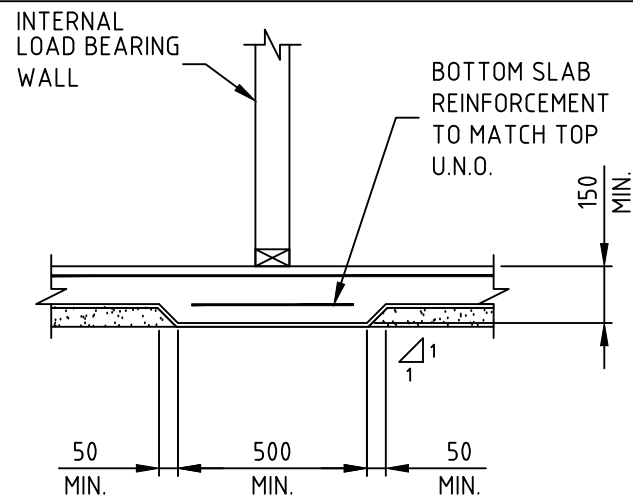
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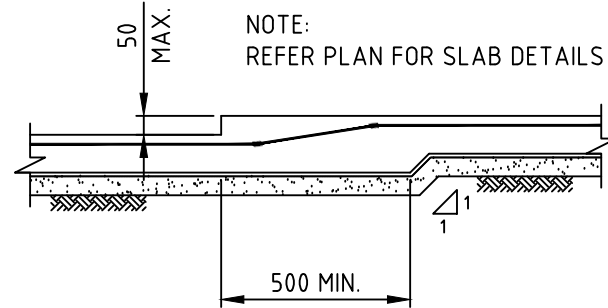
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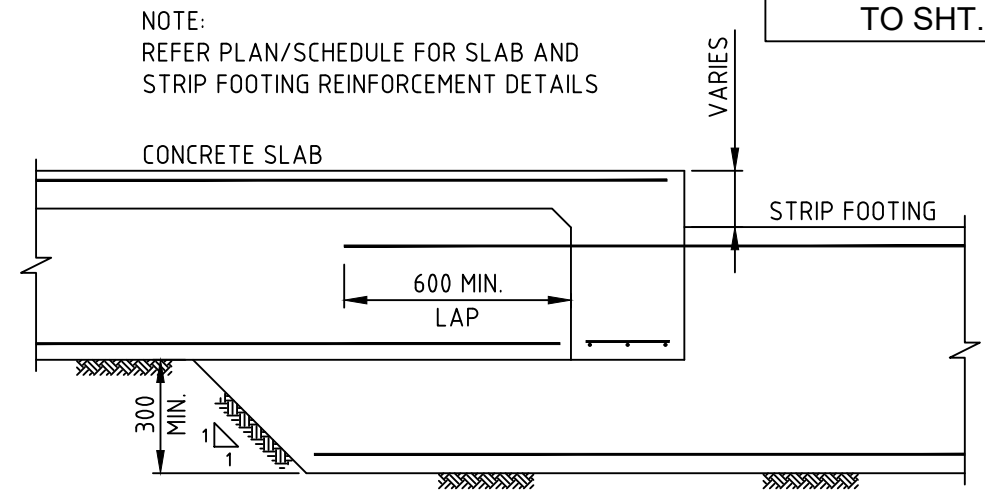
TYPICAL STIFFENED RAFT SLAB & BEAM DETAIL - 1 - NTS



TYPICAL LOAD BEARING WALL ON SLAB DETAIL

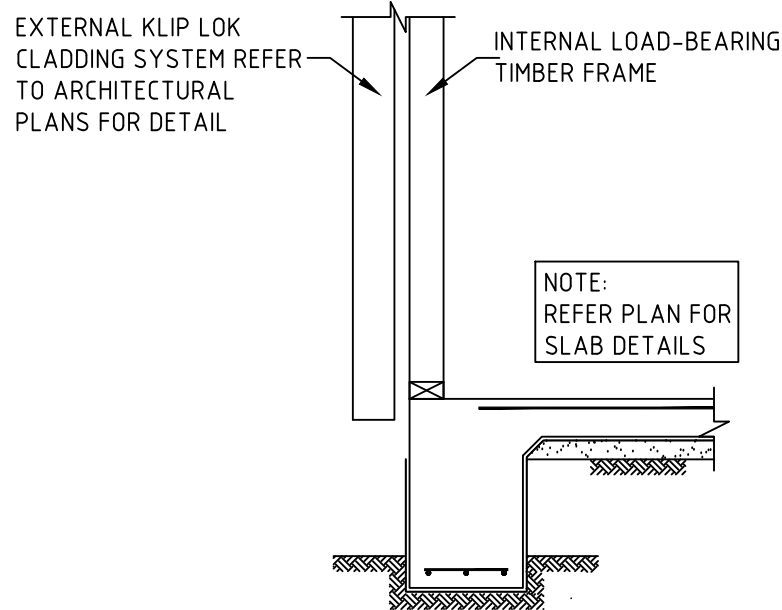


TYPICAL RECESS/SETDOWN AT NO INTERNAL RIB DETAIL

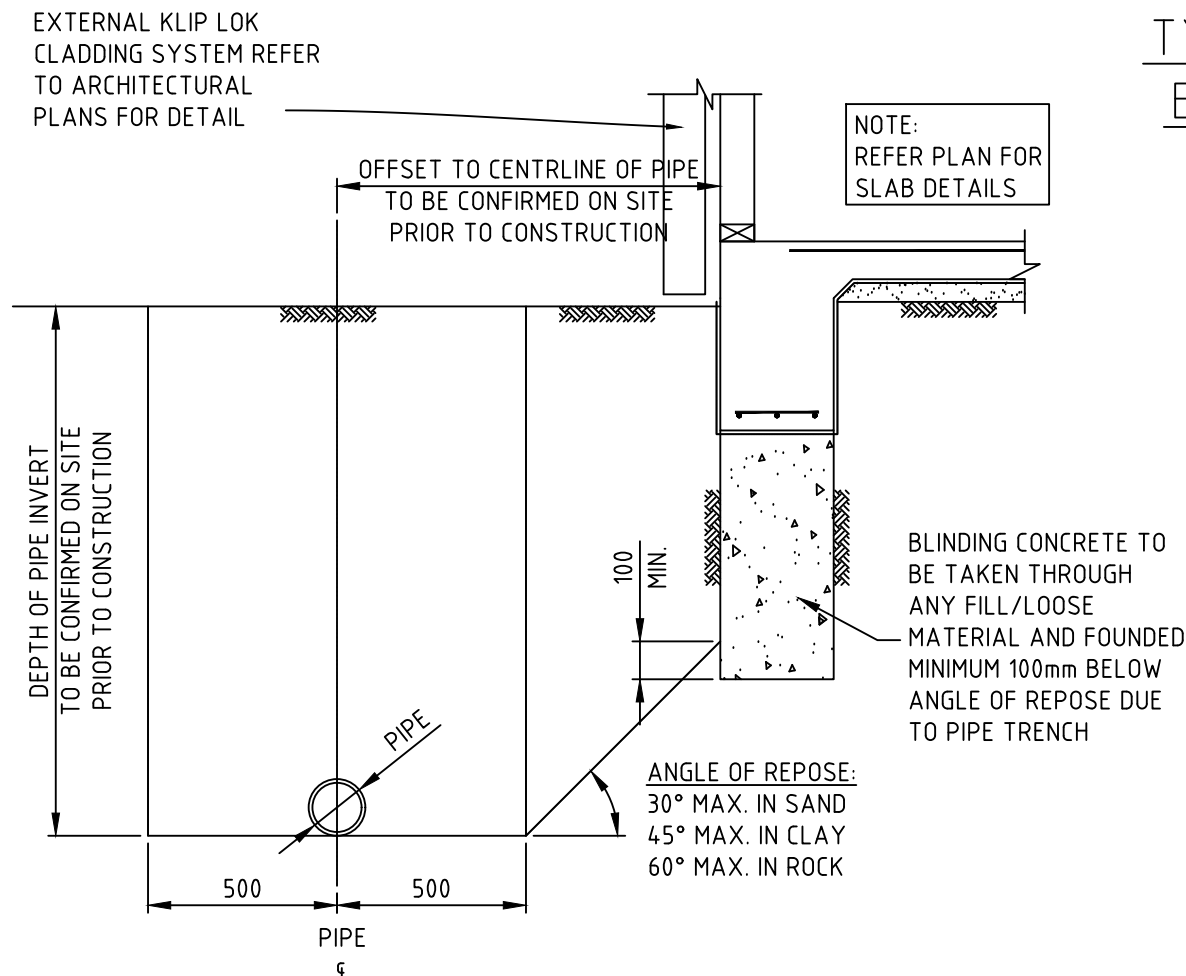


TYPICAL STRIP FOOTING TO SLAB EDGE BEAM CONNECTION DETAIL

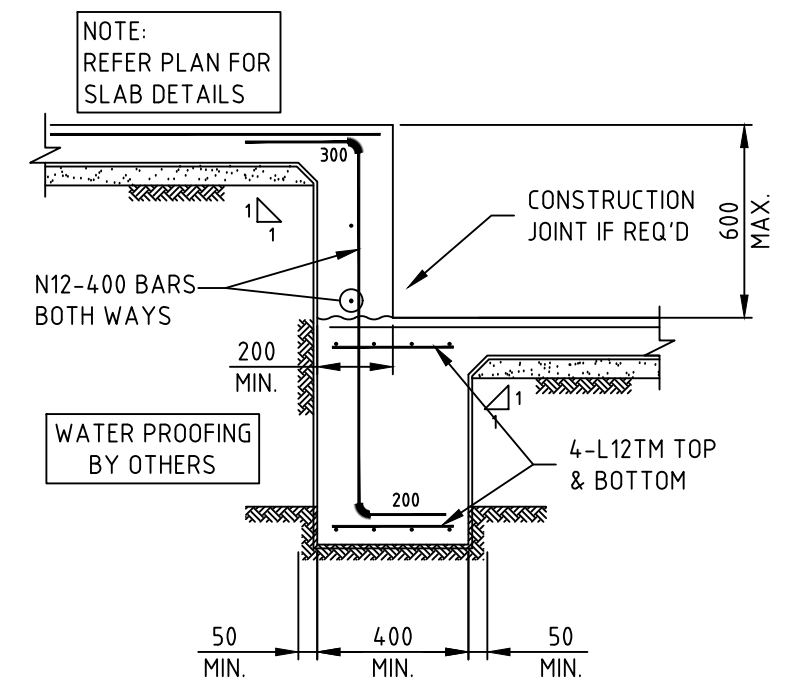
REINFORCEMENT & DIMENSION DETAIL FOR BEAMS & SLAB REFER TO SHT. NO: 7



TYPICAL EXTERNAL WALL DETAIL



TYPICAL ANGLE OF REPOSE DETAIL (IF REQUIRED)



TYPICAL DEEPENED STEPDOWN AT INTERNAL RIB DETAIL

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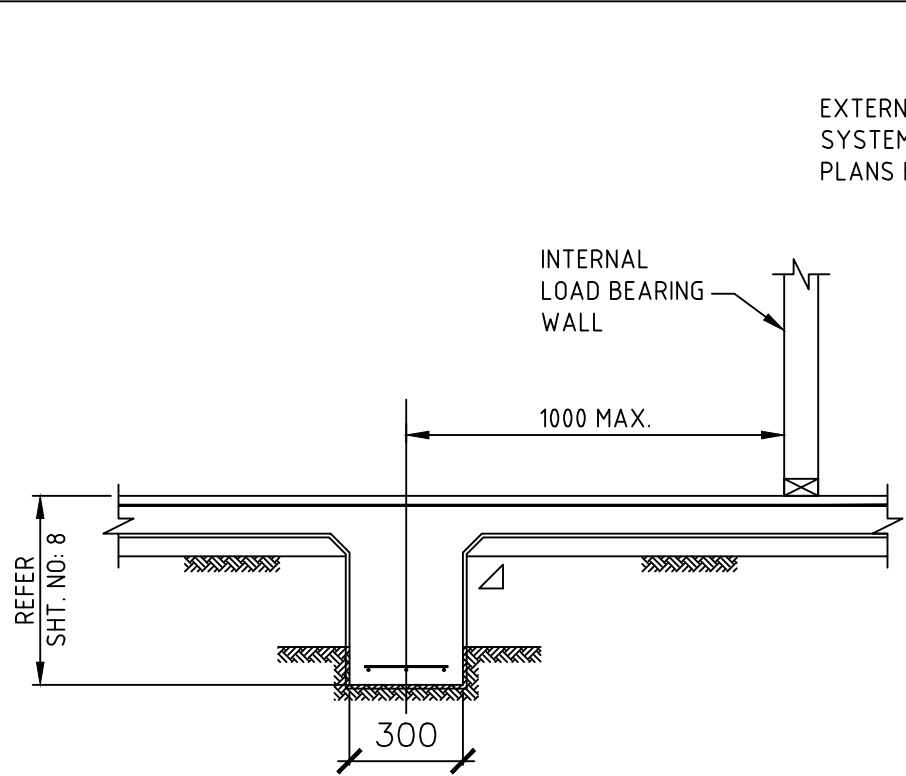
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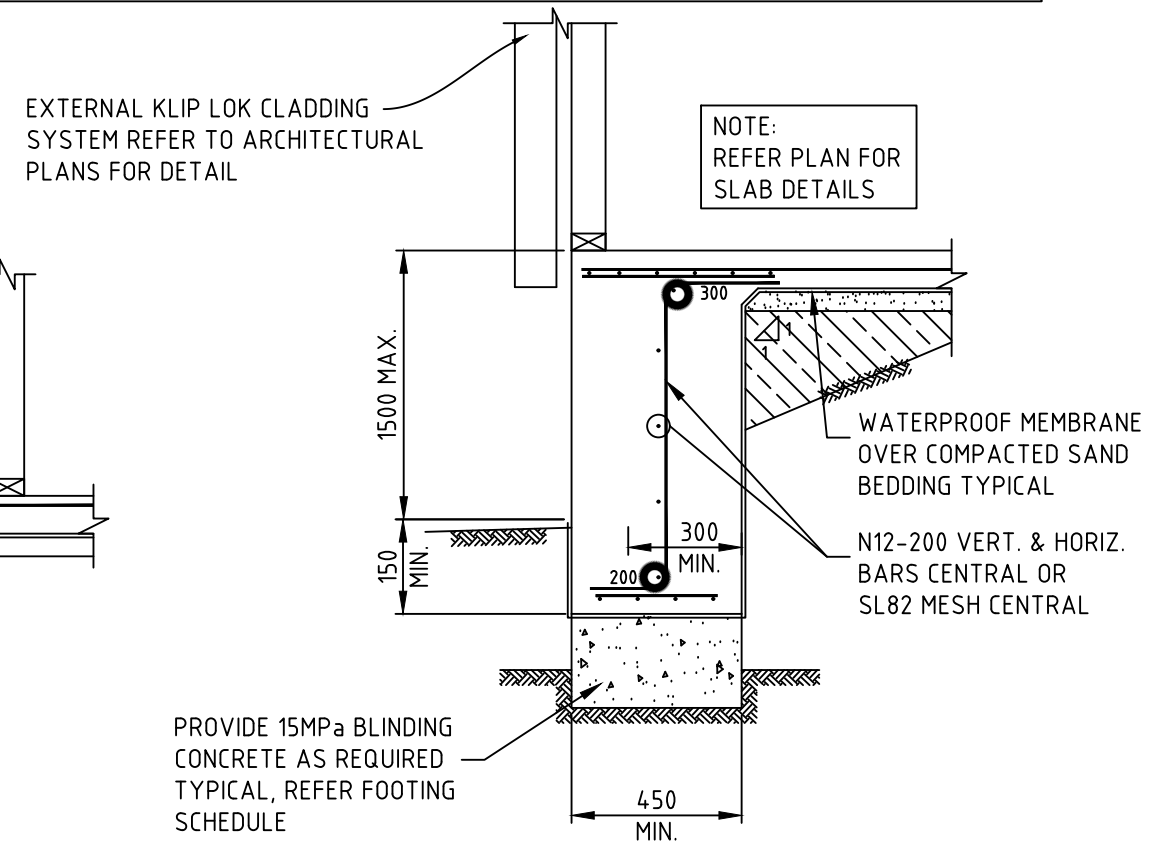
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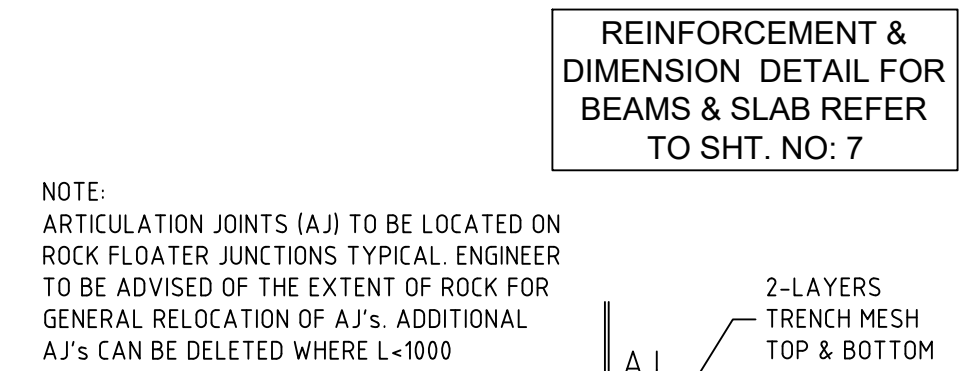
TYPICAL STIFFENED RAFT SLAB & BEAM DETAIL - 2 - NTS



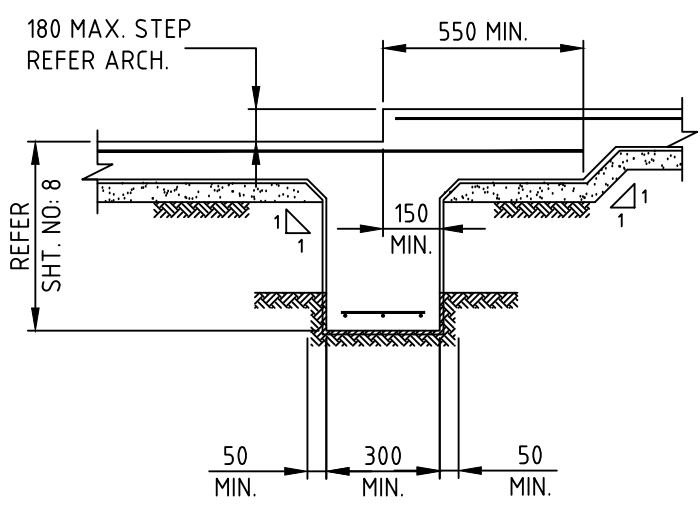
TYPICAL LOAD BEARING WALL ON SLAB DETAIL



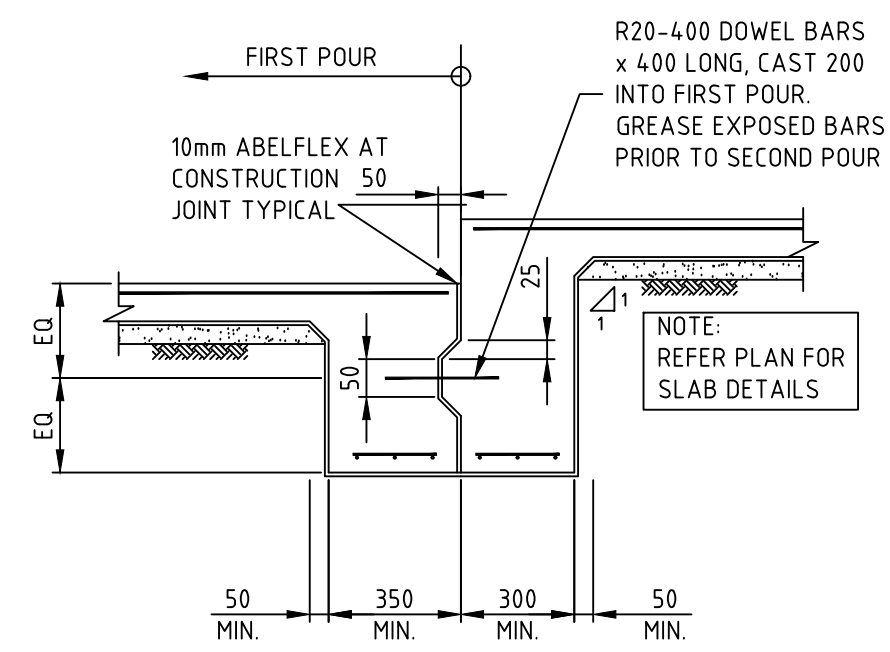
TYPICAL EXTERNAL BEAM WITH DEEPENED REBATE DETAIL



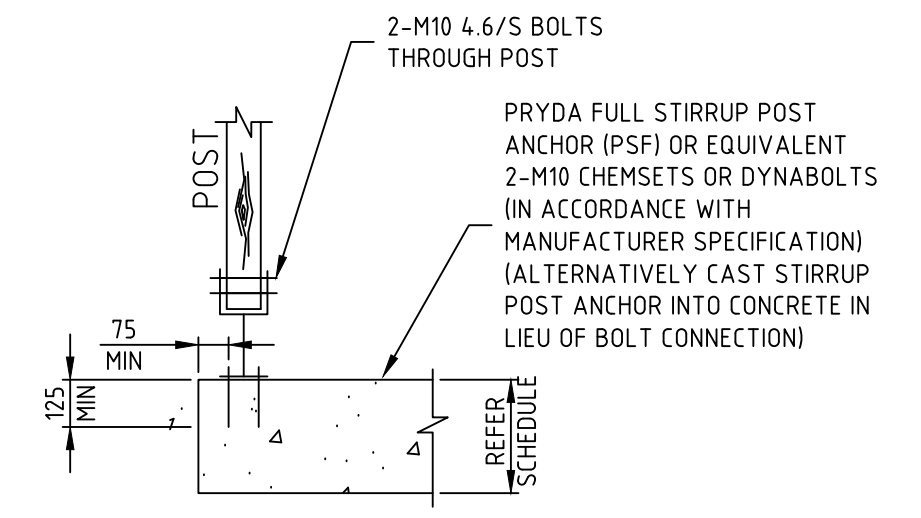
DETAIL WHERE ROCK FLOATER 'LOCALLY' PROJECTS INTO FOOTING




TYPICAL GARAGE STEPDOWN AT INTERNAL RIB DETAIL



TYPICAL SLAB STEPDOWN AT CONSTRUCTION JOINT DETAIL

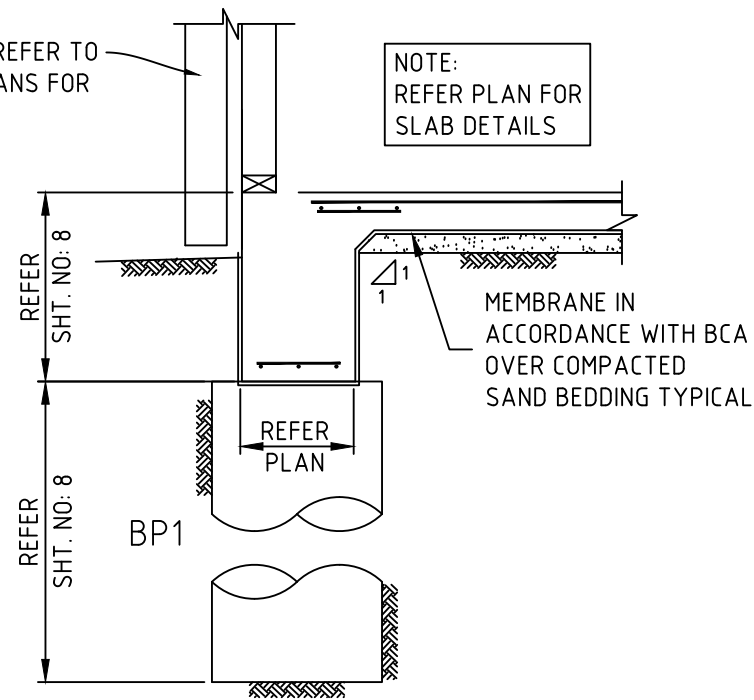


TYPICAL TIMBER FULL STIRRUP POST ON CONCRETE SLAB/FOOTING DETAIL

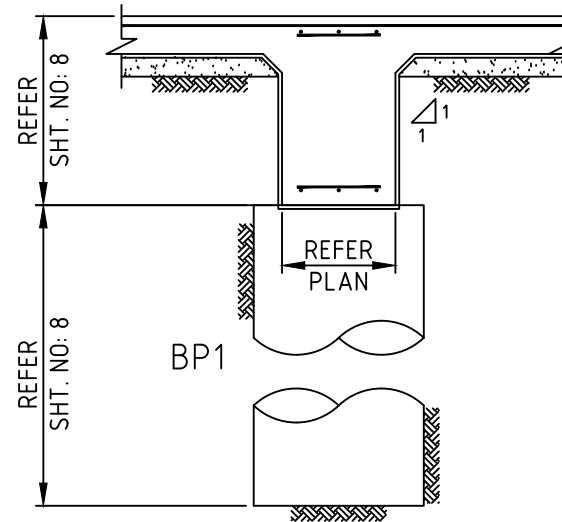
<p>CLIENT: SHEDDEN FERNANDO</p> <p>JOB NO: SF/DS/2022</p>	<p>WB CIVIL STRUCTURAL ENGINEERS ABN: 84119322436</p> <p>OFFICE: NO: 6 TENDULKAR DRIVE, VIC 3335 Mobile: 0401023328 / Ph: 03 9746 0089 Email: priyan@wbce.com.au</p>	<p>REGISTERED ENGINEER CONSUMER AFFAIRS VICTORIA</p> <p>PRIYAN WIJEYERATNE PE 2448, F.I.E.(AUST), C.P.ENG. M.Eng(Struct), M.Tech.(Mgt.), BSc(Civil)</p>	<p>PROJECT: DOUBLE STOREY 2 UNITS TOWNHOUSE PROJECT ADDRESS: 9 GRANT STREET, DROMANA 3936</p>	<p>SHEET NO: 6/20</p> <p>SCALE: AS SHOWN</p> <p>DATE: 1/01/2022</p>	
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TYPICAL STIFFENED RAFT SLAB & BEAM DETAIL - 3 & RETAINING WALL - NTS

EXTERNAL KLIP LOK CLADDING SYSTEM REFER TO ARCHITECTURAL PLANS FOR DETAIL



TYPICAL EXTERNAL BEAM/RIB ON PIER



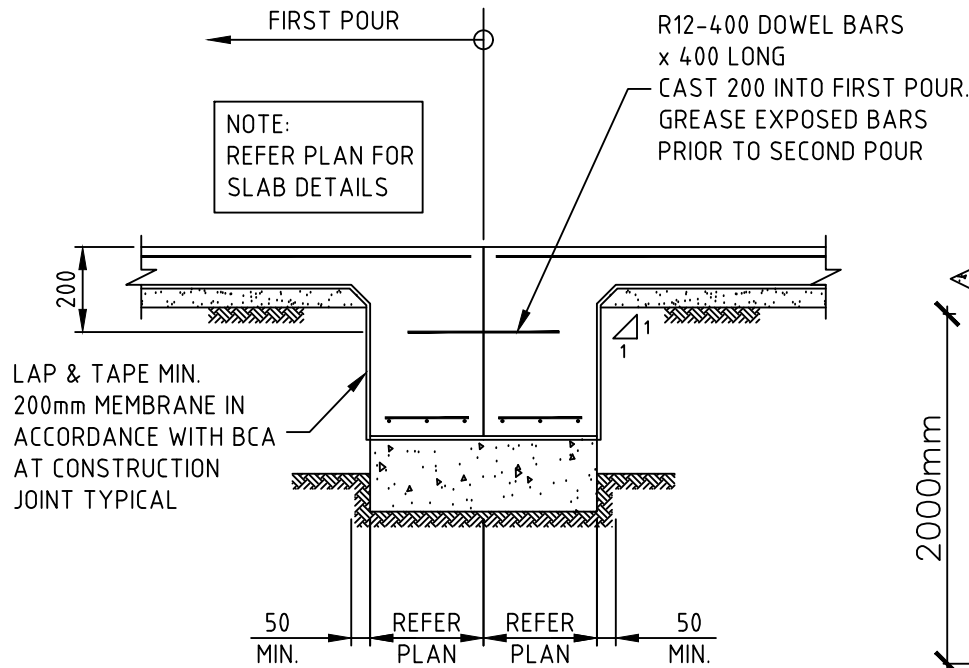
TYPICAL INTERNAL RIB ON PIER

REINFORCEMENT & DIMENSION DETAIL FOR BEAMS & SLAB REFER TO SHT. NO: 7

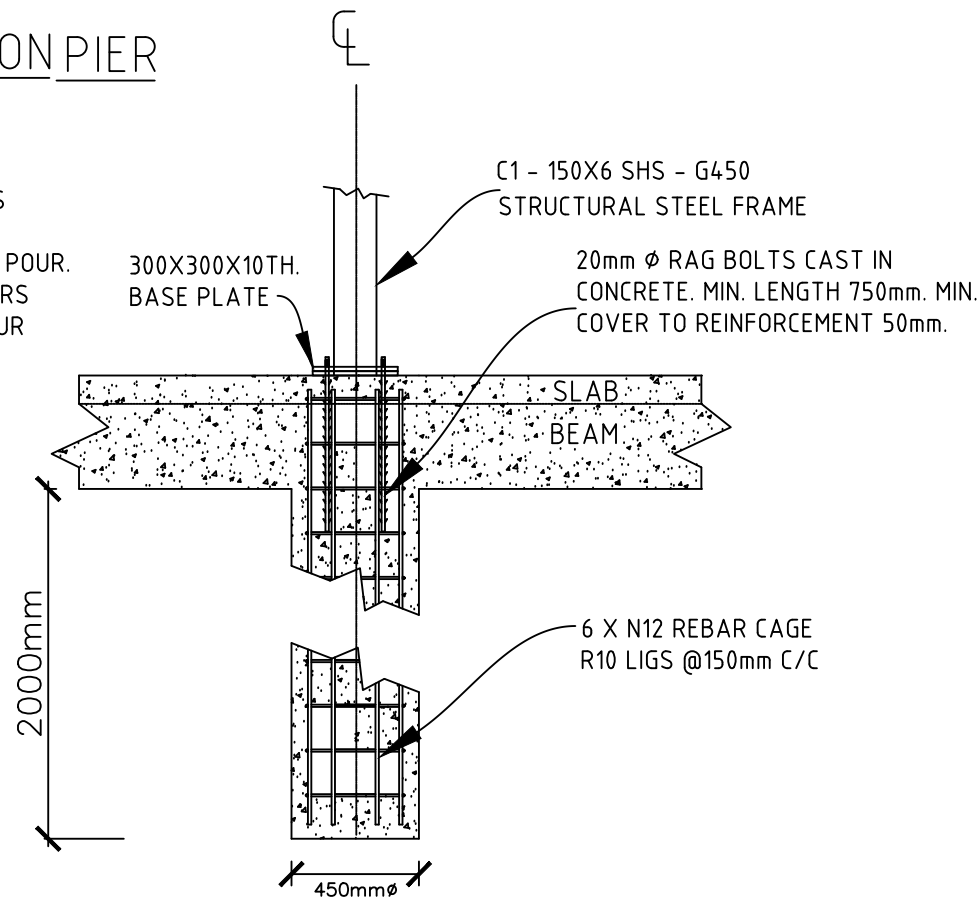
NOTES - RC SLEEPER RETAINING WALL

SEQUENCE OF CONSTRUCTION

- HAVE NEIGHBOR INFORMED & CONSENT FORM SIGNED OFF.
- CARRY OUT JOINT PRE-INSPECTION OF ADJOINING EXISTING STRUCTURE(S) & TAKE PHOTOS FOR EXISTING CONDITION RECORD.
- BORE GROUND FOR FOOTINGS.
- PLACE 100UCs & ALIGN. POUR WET CONCRETE & COMPACT.
- LET CONCRETE CURE FOR MIN. 3 DAYS.
- START EXCAVATING GROUND DOWN TO REQUIRED RETAINING HEIGHT, SLOWLY & CAREFULLY, ONE BAY AT A TIME.
- WHEN EXCAVATION COMPLETE, INSERT SLEEPERS TO HEIGHT.
- REPEAT UNTIL ALL SLEEPERS INSTALLED.
- PLACE AG PIPE & CONNECT TO LPD & PLACE AND COMPACT SCREENING AS SHOWN ON DETAIL.
- BACKFILL WITH APPROVED FILL MATERIAL AND COMPACT. LEVEL AND CLEAN UP THE SITE.
- CARRY OUT JOINT POST-INSPECTION OF ADJOINING STRUCTURE(S) INCLUDING PHOTOS.
- IF ANY DEFECTS SUCH AS CRACKS DISCOVERED ON EXISTING STRUCTURES, CAREFULLY TAKE PHOTOS AND RECORD THEM JOINTLY.



TYPICAL CONSTRUCTION & EXPANSION JOINT DETAIL



STEEL COLUMN FOOTINGS DETAIL

CLIENT:
SHEDDEN FERNANDO

JOB NO: SF/DS/2022

WB CIVIL STRUCTURAL ENGINEERS

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PROJECT:
DOUBLE STOREY 2 UNITS
TOWNHOUSE
PROJECT ADDRESS:
9 GRANT STREET,
DROMANA 3936

SHEET NO: 7/20

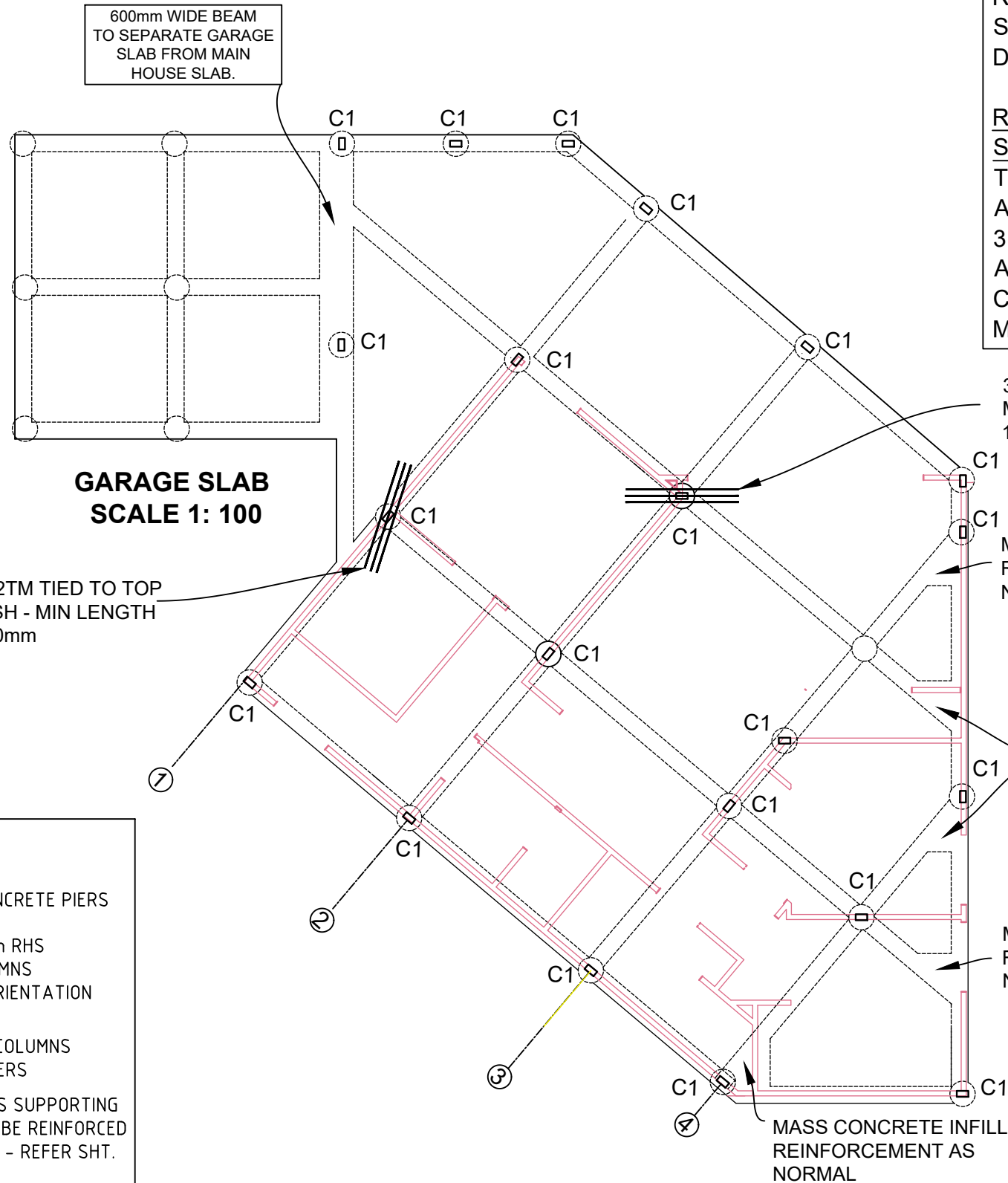
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DATE: 1/01/2022



STIFFENED RAFT SLAB DETAIL - SCALE 1: 100

CLASSIFICATION 'P' & WIND N2
REPORT NO: 1410 0540 - 1
A&Y ASSOCIATES - 6/12/2021



NOTE

REFER TO SHT NO: 6 FOR STEEL COLUMN FOOTING DETAIL.

REINFORCEMENT CAGE SUPPLIER:

TRANSFAB REINFORCEMENT AUSTRALIA
 315-210 MAIDSTONE ST, ALTONA
 CONTACT: MR. GAGAN 0410 378 653

RAFT SLAB SCHEDULE

Overall Slab Depth - 400mm
 Slab thickness - 100mm
 Internal beam width - 300mm
 Internal beams @ step-down width - min. 300mm
 External beam width - 300mm

>>Vapour barrier 0.20mm th. in accordance with BCA to be lapped 200mm min. and taped at lap-joints.

CONCRETE

Concrete strength to be 20MPa at 28 days with a slump of 100mm at pouring. Min. cover to reinforcement to be 30mm

REINFORCEMENT

TOP

Slab mesh - SL81
 Internal beams 2-N12 (tied to mesh)
 External beams 2-N12 (tied to mesh)

BOTTOM

Internal beams - 3L-12TM20
 External beams - 3L12TM20

MINIMUM LAP LENGTHS

3L-12TM20: 500mm
 SL 92/82 Mesh: 300mm
 N16 bars: 600mm

BEAM CORNERS & AT 'T's

LAPS TO BE FULL WIDTH OF BEAM

MASS CONCRETE BORED PIERS

450mm dia. Min. 32MPa grade concrete. Founding depth 2000mm from ground level. All Piers to be poured at once before the slab is poured. Finish slab levels as per Architectural Plans. It is builders responsibility to pour piers and finish at appropriate top level to suit finish slab levels. Concrete Piers supporting steel columns to be reinforced with a steel cage - Refer to Sht. No: 7.

GARAGE SLAB SCALE 1: 100

3L12TM TIED TO TOP MESH - MIN LENGTH 1200mm

3L12TM TIED TO TOP MESH - MIN LENGTH 1200mm

MASS CONCRETE INFILL REINFORCEMENT AS NORMAL

MASS CONCRETE INFILL REINFORCEMENT AS NORMAL

MASS CONCRETE INFILL REINFORCEMENT AS NORMAL

MASS CONCRETE INFILL REINFORCEMENT AS NORMAL

○ 450mm ϕ MASS CONCRETE PIERS

□ 200mmX100mmX6mm RHS STRUCTURAL COLUMNS FOLLOW COLUMN ORIENTATION AS SHOWN

⊕ RHS STRUCTURAL COLUMNS ANCHORED IN RC PIERS

ALL CONCRETE PIERS SUPPORTING STEEL COLUMNS TO BE REINFORCED WITH A STEEL CAGE - REFER SHT. NO: 7

— GROUND FLOOR PLAN (REFER TO ARCH. PLANS FOR DETAIL)

GROUND FLOOR SLAB SCALE 1: 100

NOTE:

- IT IS BUILDER'S RESPONSIBILITY, TO DRAIN SURFACE & ROOF STORMWATER AWAY FROM FOUNDATION DURING & AFTER BUILDING.
- WHERE CUT& FILL IS INVOLVED, FILL MUST BE COMPACTED WELL.
- TIE 3 X N12 DIAGONAL BARS @ RE-ENTRANT CORNERS TO MESH
- DIAGONAL BARS MAY BE CRANKED DOWN WHERE NEEDED

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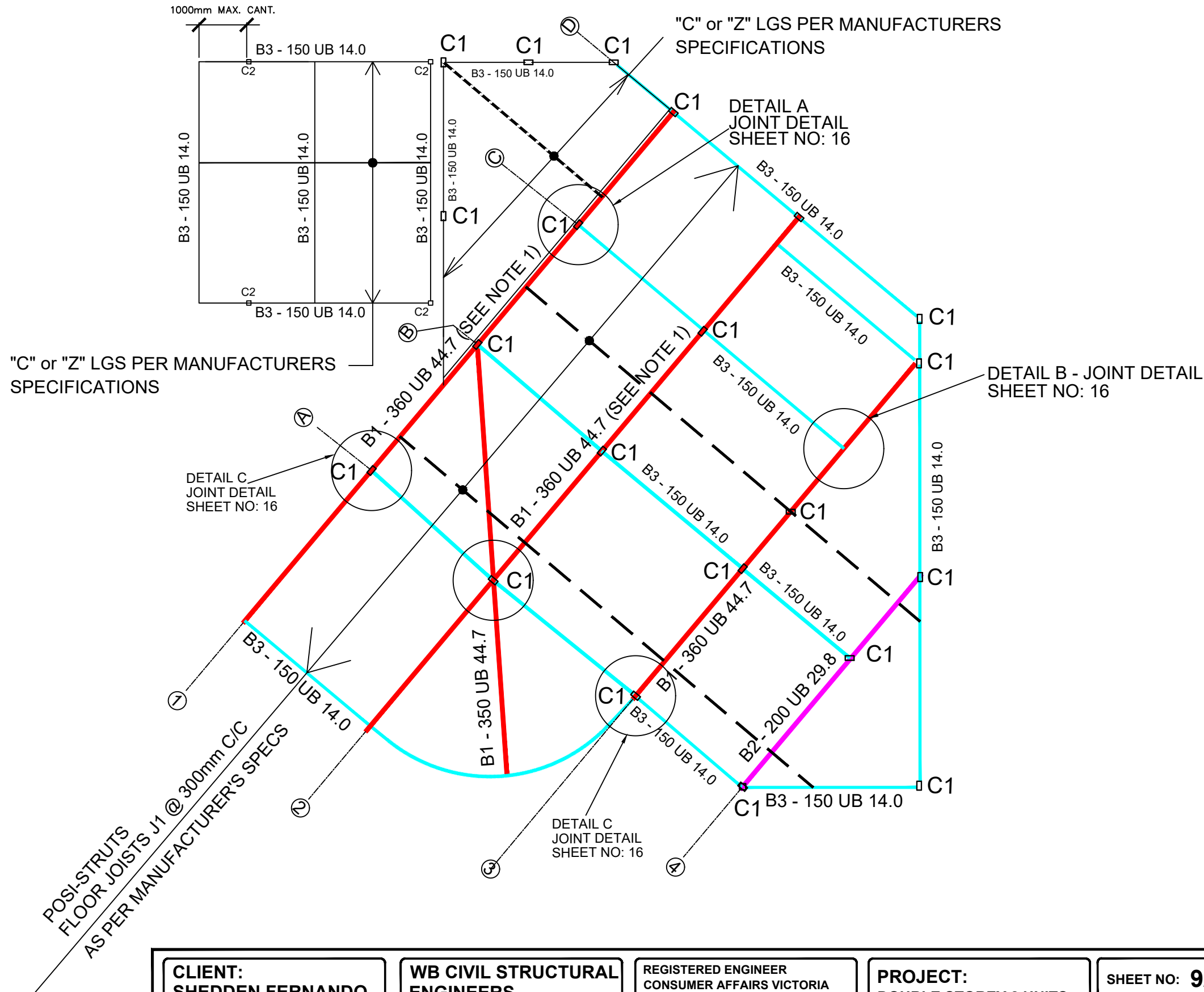
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SCALE: AS SHOWN

DATE: 1/01/2022




L1 - FLOOR & CARPORT FRAMING DETAIL - NTS

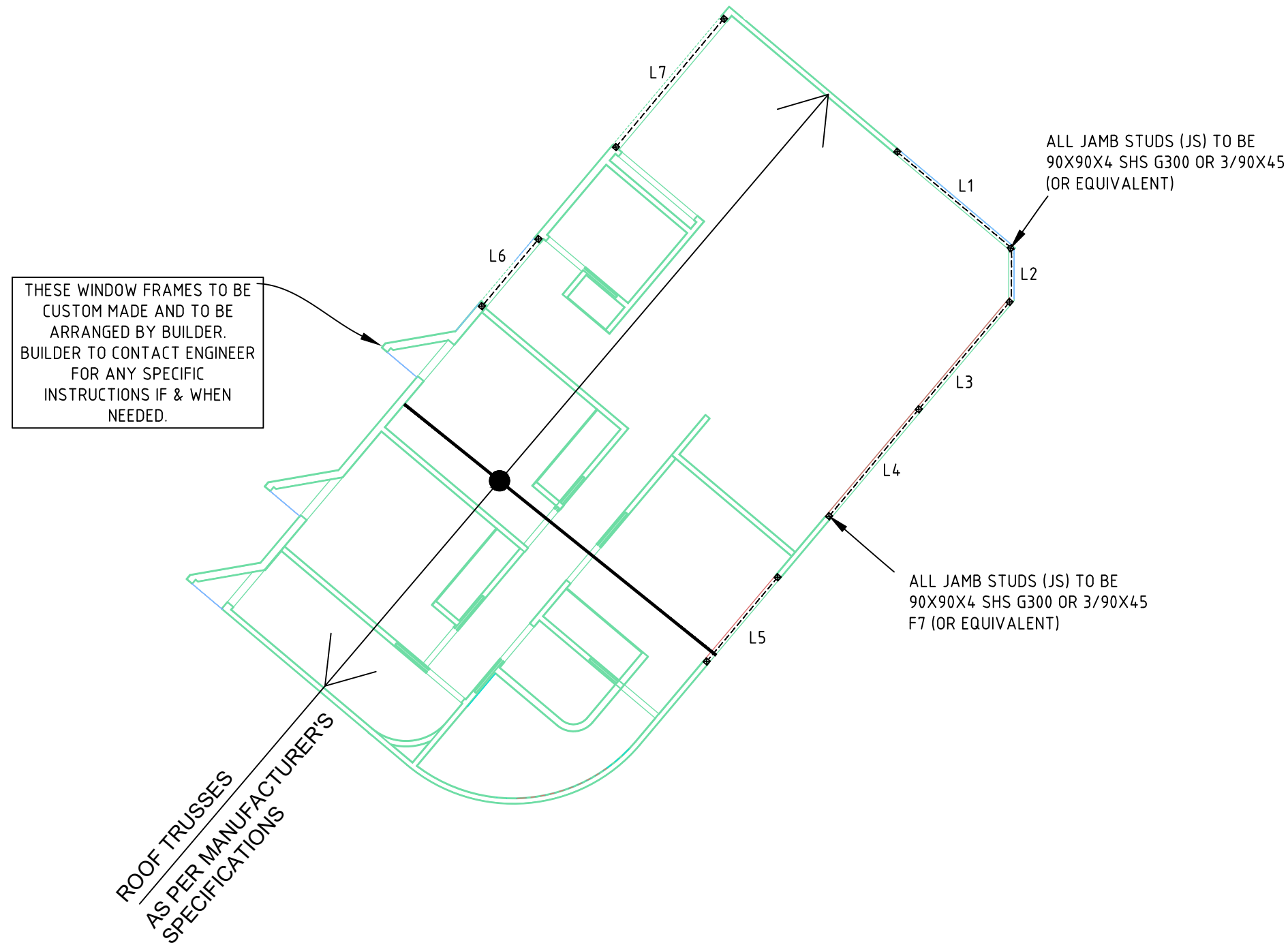


L1 FLOOR & CARPORT FRAMING SCHEDULE

MARK	SECTION	REMARKS
B1	360 UB 44.7	MIN. G 300 (SEE NOTE 1 BELOW)
B2	200 UB 29.8	MIN. G300
B3	150 UB 14.0	MIN. G 300
C1	200X100X6 RHS	MIN G450
C2	100X100X4 SHS	TO BE ANCHORED TO GARAGE SLAB WITH 4/12mm ϕ RAMSET OR SIMILAR ANCHORS MIN. EMBEDMENT 75mm IN CONCRETE. 10mm. STEEL BASEPLATE WELDED TO COLUMN BASE WITH CFW 6MM MIN. G450
J1	@ 300mm C/C	POSI-STRUTS PER MANUFACTURER
NOTE 1	THESE 2, B1 - BEAMS MUST RUN ON COLUMNS & AT LEAST 2 CONTINUOUS SPANS, BEFORE CANTILEVER.	

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ROOF FRAMING PLAN - NTS



ROOF LINTEL SCHEDULE

MARK	SECTION	REMARKS
L1	240mmX45mm F17	OR EQUIVALENT
L2	240mmX45mm F17	OR EQUIVALENT
L3	240mmX45mm F17	OR EQUIVALENT
L4	240mmX45mm F17	OR EQUIVALENT
L5	240mmX45mm F17	OR EQUIVALENT
L6	240mmX45mm F17	OR EQUIVALENT
L7	240mmX45mm F17	OR EQUIVALENT
JS	90X90X4 SHC G300 OR 3/90X45 F7	TIMBER JAMB STUDS F7 OR EQUIVALENT

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PROJECT:
DOUBLE STOREY 2 UNITS
TOWNHOUSE
PROJECT ADDRESS:
9 GRANT STREET,
DROMANA 3936

SHEET NO: 10/20

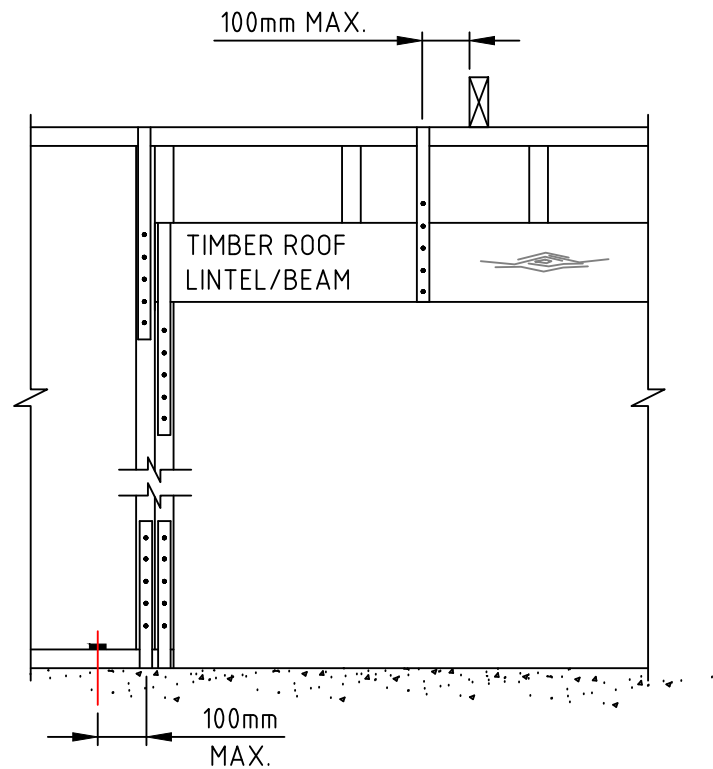
SCALE: AS SHOWN

DATE: 1/01/2022



TIMBER FRAME TIE DOWN DETAIL - NTS

THESE NOTES ARE TYPICAL DETAILS ONLY. BUILDER MAY USE EQUIVALENT MATERIALS & METHODS AS PER AS1684



TYPICAL TIMBER BEAM/LINTEL TIE DOWN DETAIL

TIMBER ROOF LINTEL TIE DOWN SCHEDULE

LINTEL SPAN	WIND CLASSIFICATION (NON-CYCLONIC AREAS)		
	N1 & N2	N3	N4
0 - 1200	2/75x3.05φ NAILS	G.I.S. x 1 TOP & BOTTOM 4/2.8φ NAILS EACH END + M10 BOLT TO SLAB OR G.I.S. TO FLOOR FRAME	G.I.S. x 2 TOP & BOTTOM 4/2.8φ NAILS EACH END + M10 BOLT TO SLAB OR FLOOR FRAME
1201 - 1800	2/75x3.05φ NAILS	G.I.S. x 1 TOP & BOTTOM 6/2.8φ NAILS EACH END + M10 BOLT TO SLAB OR G.I.S. TO FLOOR FRAME	G.I.S. x 2 TOP & BOTTOM 6/2.8φ NAILS EACH END + M12 BOLT TO SLAB OR FLOOR FRAME
1801 - 2400	2/75x3.05φ NAILS	G.I.S. x 2 TOP & BOTTOM 4/2.8φ NAILS EACH END + M10 BOLT TO SLAB OR FLOOR FRAME	M12 BOLT/ROD THROUGH PLATE & LINTEL (EACH END) TO SLAB OR FLOOR FRAME
2401 - 3000	2/75x3.05φ NAILS	G.I.S. x 2 TOP & BOTTOM 4/2.8φ NAILS EACH END + M10 BOLT TO SLAB OR FLOOR FRAME	M12 BOLT/ROD THROUGH PLATE & LINTEL (EACH END) TO SLAB OR FLOOR FRAME
3001 - 3600	2/75x3.05φ NAILS	G.I.S. x 2 TOP & BOTTOM 6/2.8φ NAILS EACH END + M12 BOLT TO SLAB OR FLOOR FRAME	M16 BOLT/ROD THROUGH PLATE & LINTEL (EACH END) TO SLAB OR FLOOR FRAME

FRAMING TIE DOWN SCHEDULE

CONNECTION		WIND CLASSIFICATION (NON-CYCLONIC AREAS)		
		N1 & N2	N3	N4
SINGLE / UPPER STOREY	STUDS TO BOTTOM/TOP PLATES	2/75x3.05φ NAILS (UP TO 38 STUD) OR 2/90x3.05φ NAILS (38-50 STUD)	G.I.S. 2/2.8φ NAILS EACH END OR FRAMING ANCHOR x 1 WITH 4/2.8φ NAILS EACH LEG	G.I.S. 3/2.8φ NAILS EACH END OR FRAMING ANCHOR x 2 WITH 4/2.8φ NAILS EACH LEG
	BOTTOM PLATES TO SLAB	75 MASONRY NAILS (HAND DRIVEN AT SLAB EDGE), SCREW OR BOLT AT 1.2m MAX. CRS.	75 MASONRY NAILS 0.3m MAX. CRS. OR M10 CAST IN BOLT (180 MIN. EMBEDMENT) 1.2m MAX. CRS.	M10 CAST IN BOLTS WITH 180 MIN. EMBEDMENT 1.2m MAX. CRS.
	BOTTOM PLATES TO FLOOR FRAME	2/75x3.05φ NAILS (UP TO 38 STUD) OR 2/90x3.05φ NAILS (38-50 STUD) 600 MAX. CRS.	2/NO. 14 TYPE 17 SCREWS 900 MAX. CRS. (40 MIN. EMBEDMENT INTO JOIST)	2/NO. 14 TYPE 17 SCREWS 900 MAX. CRS. (40 MIN. EMBEDMENT INTO JOIST)

- EQUIVALENT FIXING IS PERMISSIBLE TO BE ADOPTED IN LIEU OF ABOVE SPECIFICATION AND IT MUST BE IN ACCORDANCE WITH AS1684.2-2010
- REFER TO TRUSS MANUFACTURER FOR TIE-DOWN FIXING ON ROOF BATTENS AND RAFTERS/TRUSSES
- TIMBER MEMBERS ASSUMED TO BE JD4 GROUP OR STRONGER
- HOUSE ASSUMED TO HAVE A MAXIMUM WIDTH OF 12m
- STUDS ASSUMED TO BE AT 450 MAX. CRS.
- THE TOP PLATE SHALL BE FIXED OR TIED TO THE LINTEL WITHIN 100mm OF EACH RAFTER/TRUSS, OR THE RAFTER/TRUSS FIXED DIRECTLY TO THE LINTEL WITH A FIXING OF EQUIVALENT TIE-DOWN STRENGTH TO THAT REQUIRED FOR THE RAFTER/TRUSS
- G.I.S. MEANS 30 x 0.8 GALVANISED IRON STRAP

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PROJECT:
DOUBLE STOREY 2 UNITS
TOWNHOUSE
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9 GRANT STREET,
DROMANA 3936

SHEET NO: 11/20

SCALE: AS SHOWN

DATE: 1/01/2022



TIMBER FRAME SIZING TABLE

TIMBER FRAMING MEMBERS (U.N.O)

STUDS:

90X35 MGP10 AT 450 MAX CRS 1ST FLOOR (MAX. HEIGHT 2700mm)
 90 x 35 MGP10 AT 450 MAX. CRS. (MAX. GROUND FLOOR HEIGHT 2700mm)
 90 x 45 MGP10 AT 450 MAX. CRS. (HEIGHT 2700-3000mm)
 90 x 45 MGP12 AT 450 MAX. CRS. (HEIGHT 3000-3600mm)
 NOGGINGS AT MIDHEIGHT

2-90 x 45 MGP12 AT 450 MAX. CRS. (HEIGHT 3600-4200mm)
 NO NOTCHING OF STUDS
 NOGGINGS AT 1/3 HEIGHT

DOUBLE STUDS: 2-90 x 45 MGP10 STUDS U.N.O.

FIX END STUD WALL TO MASONRY WALLS WITH
 M10 DYNABOLT AT TOP, BOTTOM AND 1200 MAX. CRS. TYPICAL

WALL PLATES:

UPPER STOREY: TOP PLATE - 1 X 45 x 90 MGP10 NOT TRENCHED
 BTM PLATE - 45 x 90 MGP10 NOT TRENCHED

LOWER STOREY: TOP PLATE - 45 x 90 MGP10 NOT TRENCHED
 BTM PLATE - 45 x 90 MGP10 NOT TRENCHED
 FIXED TO SLAB WITH 75mm MASONRY NAILS AT 600mm MAX. CRS.
 (FOLLOW TABLE 9.4 AS 1684.2)

REFER BRACING PLAN FOR FIXING REQUIREMENTS
 PROVIDE DOUBLE TOP PLATES IF SUPPORTING METAL ROOF TRUSS

STUDS AT SIDE OPENINGS:

OPENING WIDTH	STUDS:
UP TO 1200MM	1-90 x 35 MGP10
1200MM TO 1800MM	2-90 x 45 MGP10
1800MM TO 2400MM	2-90 x 45 MGP10

WALL BRACING:

BRACING OF ALL STUD WALLS TO BE IN ACCORDANCE WITH THE RESIDENTIAL TIMBER
 FRAMING CONSTRUCTION AS 1684.2-2010. U.N.O.

FIXING REQUIREMENTS:

GENERAL: REFER TO AS1684.2-2010 RESIDENTIAL TIMBER FRAMING
 CONSTRUCTION MANUAL TYPICAL FIXING REQUIREMENTS.

MINIMUM JOINT REQUIREMENTS FOR SHEET ROOF STRUCTURES:

JOINT OR MEMBER:	MINIMUM FIXING DETAILS:
RAFTERS & PURLINS	METAL STRAPS, APPROVED FRAMING ANCHORS OR EQUIVALENT SHALL BE USED TO TIE RAFTERS TO TOP WALL PLATES AND TOP WALL PLATES TO STUDS (OR RAFTERS DIRECTY TO STUDS) WITH A MINIMUM OF 300MM x 3.15MM DIAMETER NAILS OR CLOUTS INTO THE SIDE GRAIN ON EACH MEMBER. MAXIMUM SPACINGS OF FASTENINGS SHALL BE 1800MM OR THREE STUD SPACINGS, WHICHEVER IS THE LESSER.
LARGE SPAN ROOF MEMBER (SUCH AS TRUSSES OR ROOF BEAMS OF SPAN 6000MM OR GREATER).	AS FOR RAFTERS & PURLINS SPACINGS OF FASTNINGS SHALL NOT EXCEED THE SPACING OF THE ROOF MEMBERS.

FIXING FOR STRUCTURES IN AREAS SUBJECT TO RELATIVELY HIGH WINDS:

GENERAL: REFER TO AS1684.2 -2010 RESIDENTIAL TIMBER FRAMING CONSTRUCTION MANUAL
 ADDITIONAL FIXING REQUIREMENTS.

NOTE: EQUIVALENT TIMBER GRADE CAN BE USED TO
 REPLACE TIMBER GRADES SPECIFIED

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**DOUBLE STOREY 2 UNITS
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SHEET NO: 12/20

SCALE: AS SHOWN

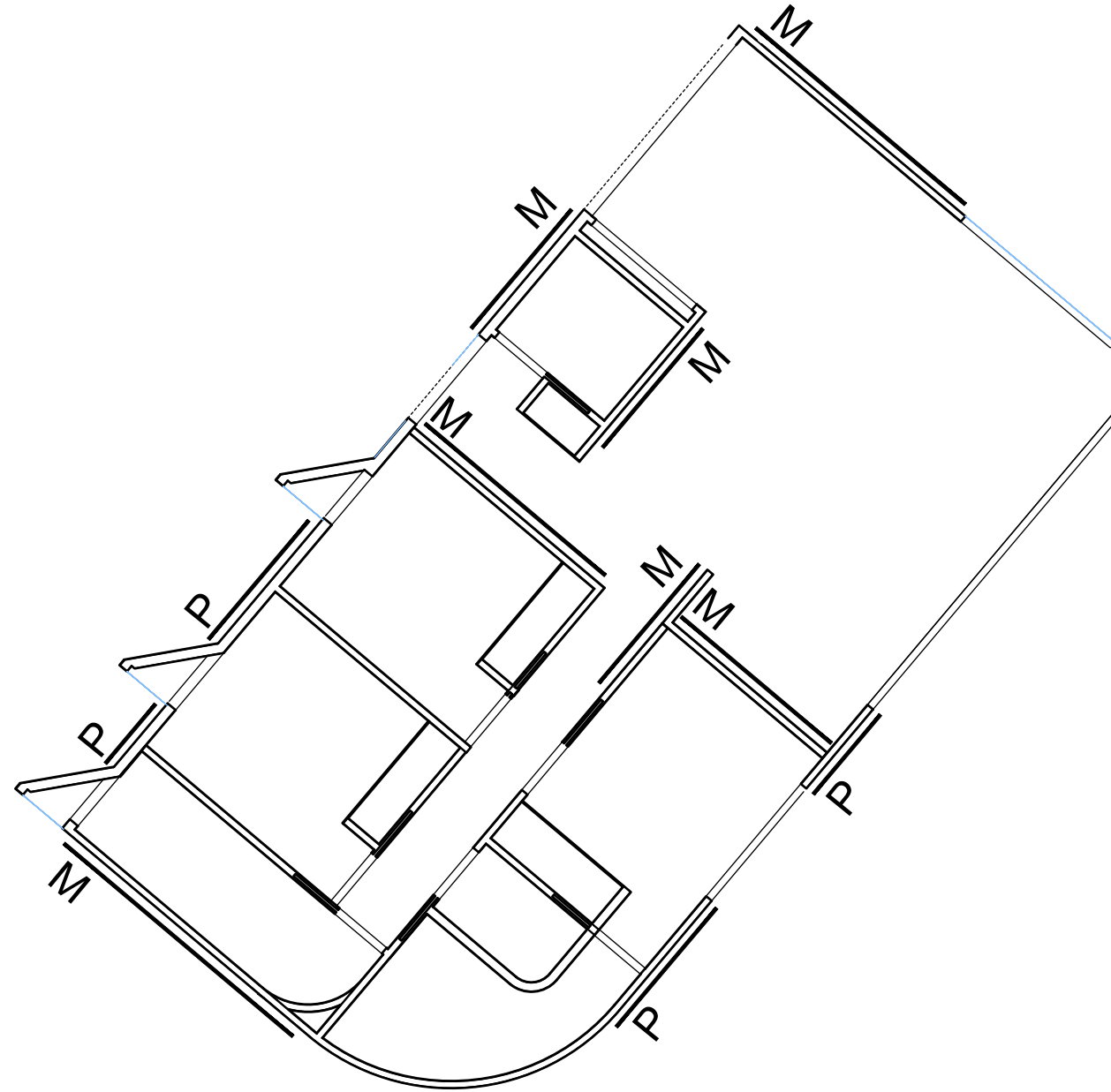
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BRACING PLAN GROUND & UPPER STOREYS - NTS

NOTES:

1. NO GROUND FLOOR BRACING REQUIRED AS STEEL COLUMNS & BEAMS PROVIDE REQUIRED LATERAL SUPPORT.
2. L1 (UPPER FLOOR) TIMBER FRAME BRACING TO AS1864 & AS SPECIFIED HERE.
3. TIMBER FRAMING TO AS1864.
4. **WIND CLASSIFICATION AS PER A&Y ASSOCIATES REPORT - N2.**



L1 - FLOOR - NTS

METAL BRACING M

PLYWOOD BRACING P

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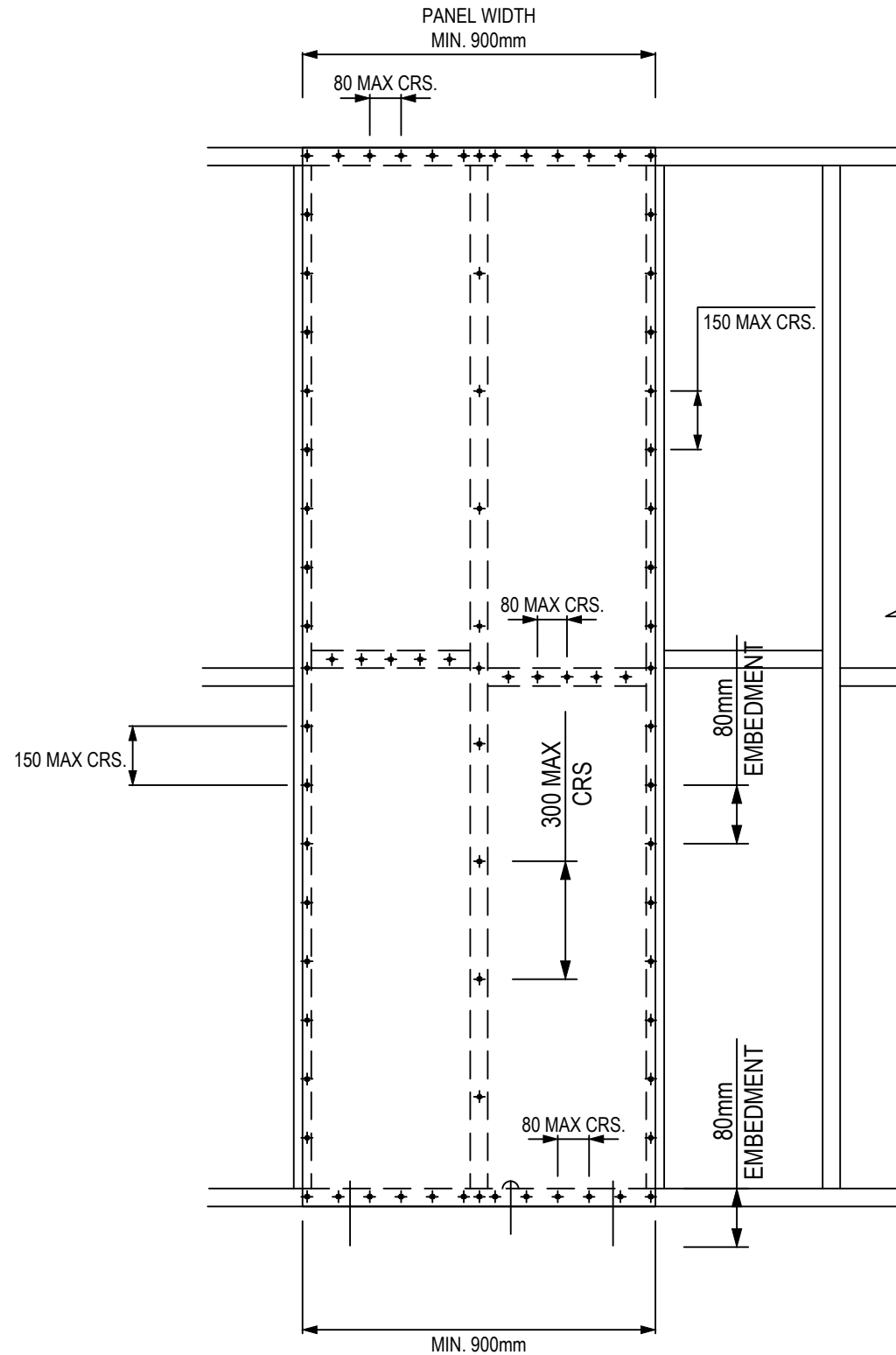
SHEET NO: 13/20

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DATE: 1/01/2022




WALL BRACING TYPES - TYPICAL 1 - NTS



MINIMUM PLYWOOD THICKNESS (mm)		
STRESS GRADE	STUD SPACING	
	450	600
F8	7	7
F11	4.5	4.5
F14	4	4
F27	3	3

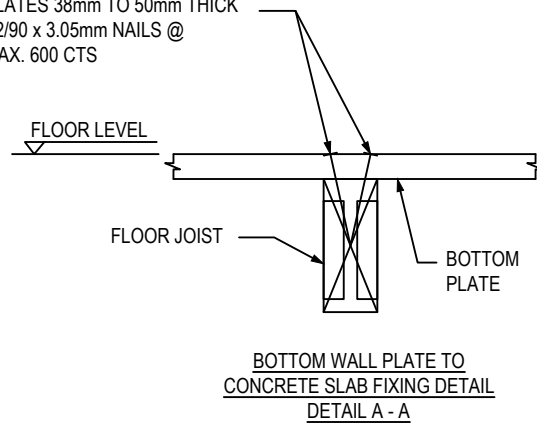
NOTE:
PLYWOOD SHALL BE NAILED TO FRAME USING 30X2.8Ø GALV. FLAT HEAD NAILS @ CRS INDICATED ON FIGURE.

PLYWOOD BRACING SYSTEM - PW (BRACING CAPACITY - 3.4kN/m)

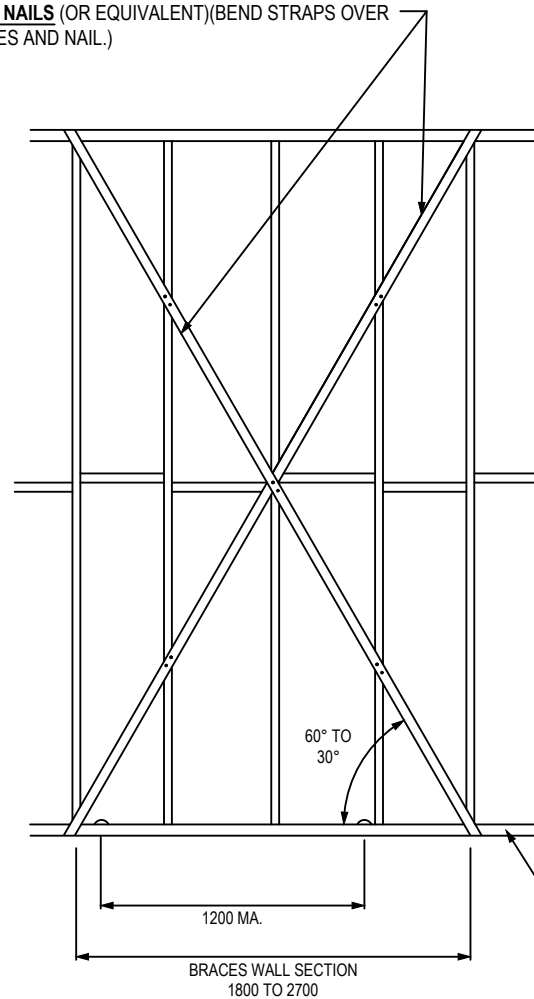
<p>CLIENT: SHEDDEN FERNANDO</p> <p>JOB NO: SF/DS/2022</p>	<p>WB CIVIL STRUCTURAL ENGINEERS ABN: 84119322436</p> <p>OFFICE: NO: 6 TENDULKAR DRIVE, VIC 3335 Mobile: 0401023328 / Ph: 03 9746 0089 Email: priyan@wbcse.com.au</p>	<p>REGISTERED ENGINEER CONSUMER AFFAIRS VICTORIA</p> <p>PRIYAN WIJEYERATNE PE 2448, F.I.E.(AUST)., C.P.ENG. M.Eng(Struct)., M.Tech.(Mgt.), BSc(Civil)</p>	<p>PROJECT: DOUBLE STOREY 2 UNITS TOWNHOUSE PROJECT ADDRESS: 9 GRANT STREET, DROMANA 3936</p>	<p>SHEET NO: 14/20</p> <p>SCALE: AS SHOWN</p> <p>DATE: 1/01/2022</p>	
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WALL BRACING TYPES - TYPICAL 2 - NTS

PLATES UP TO 38mm THICK
 - 2/75 x 3.05mm NAILS @
 MAX. 600 CTS OR
 PLATES 38mm TO 50mm THICK
 - 2/90 x 3.05mm NAILS @
 MAX. 600 CTS



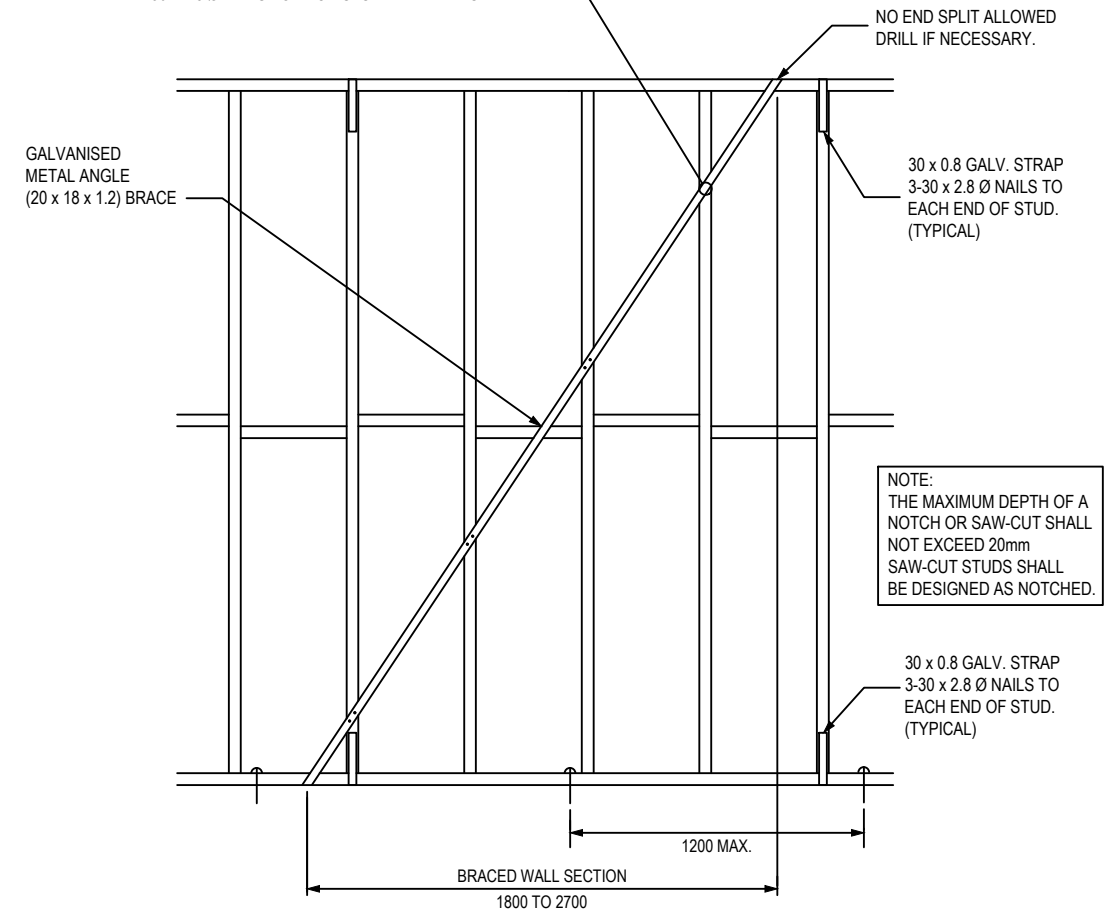
TENSIONED GALVANISED METAL STRAPS
 WITH MINIMUM THICKNESS OF 0.8mm AND MINIMUM NET
 SECTION OF 15.2mm².
FIXED TO STUDS WITH 1/30x2.8Ø GALVANISED
 FLAT PLATES WITH 3/30 x 2.8Ø GALVANISED
FLAT-HEAD NAILS (OR EQUIVALENT)(BEND STRAPS OVER
 WALL PLATES AND NAIL.)



FIX BOTTOM PLATE TO FLOOR
 FRAME OR SLAB WITH NOMINAL
 FIXING ONLY (SEE AS1684.2
 TABLE 9.4)

OR

GALVANISED METAL ANGLE BRACE - (20 x 18 x 1.2mm)
 2-30 x 2.8 Ø NAILS TO EACH STUD AND PLATES



CLIENT:
SHEDDEN FERNANDO

JOB NO: SF/DS/2022

**WB CIVIL STRUCTURAL
 ENGINEERS**

ABN: 84119322436

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 NO: 6 TENDULKAR DRIVE, VIC 3335
 Mobile: 0401023328 / Ph: 03 9746 0089
 Email: priyan@wbcse.com.au

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 M.Eng(Struct), M.Tech.(Mgt.), BSc(Civil)

PROJECT:
**DOUBLE STOREY 2 UNITS
 TOWNHOUSE**
PROJECT ADDRESS:
**9 GRANT STREET,
 DROMANA 3936**

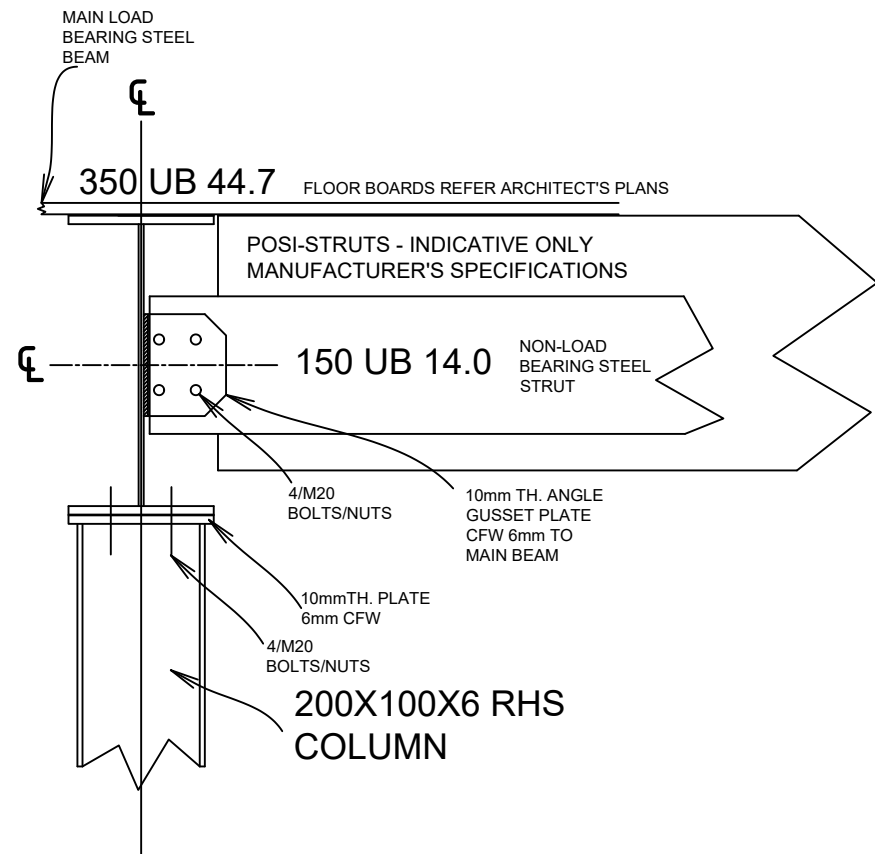
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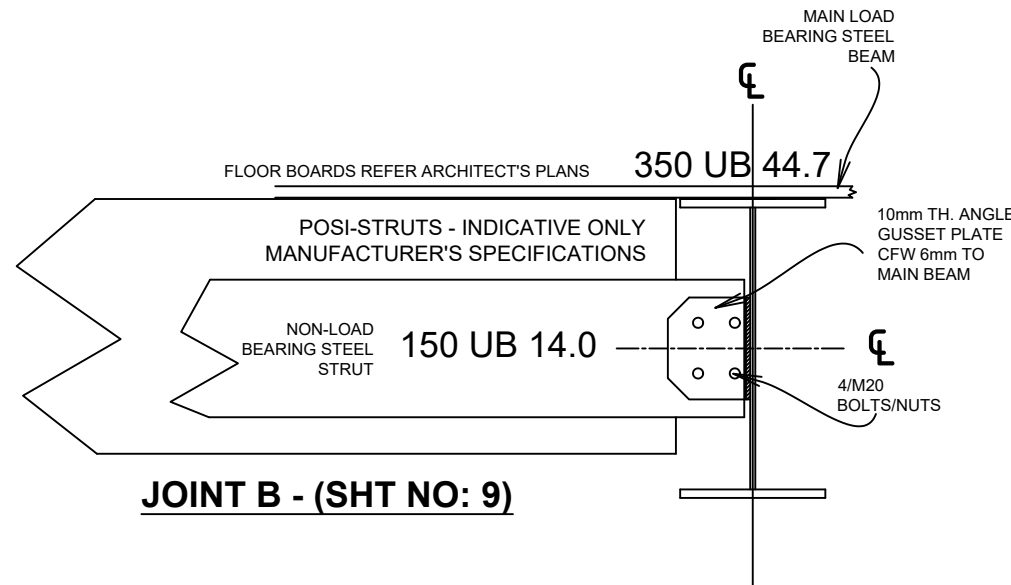
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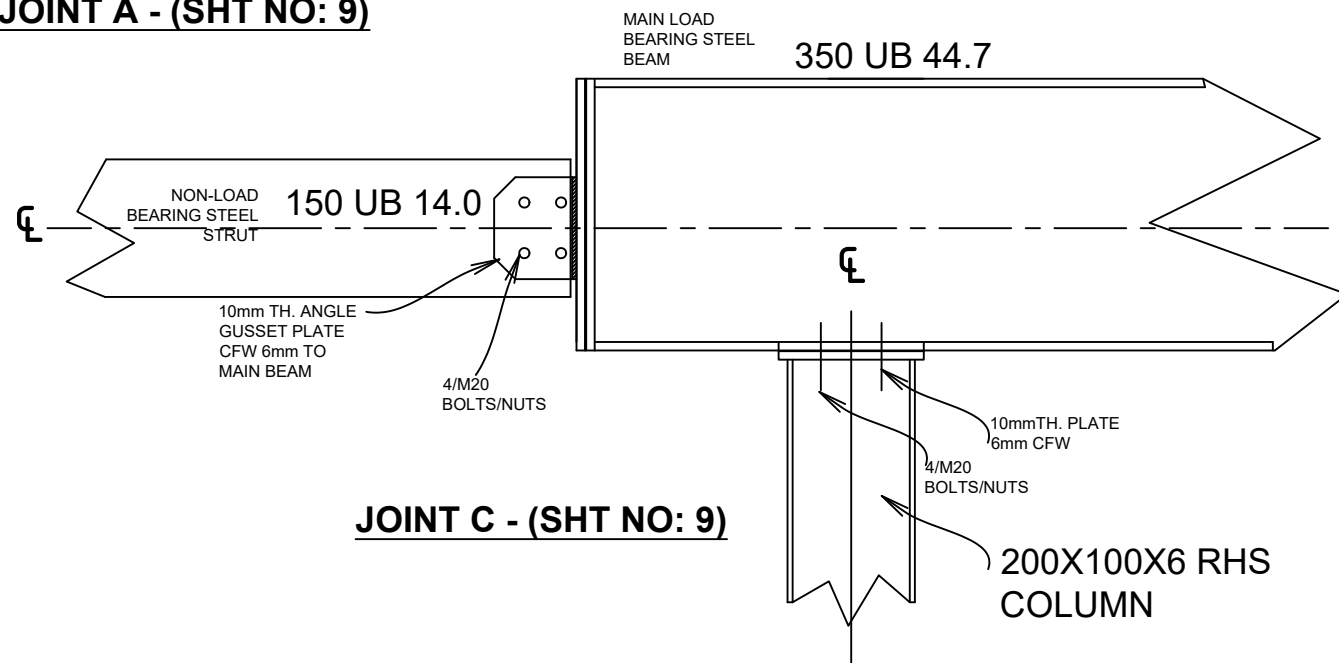
MEMBER JOINT DETAIL 1 (SHT. NO 9) - NTS



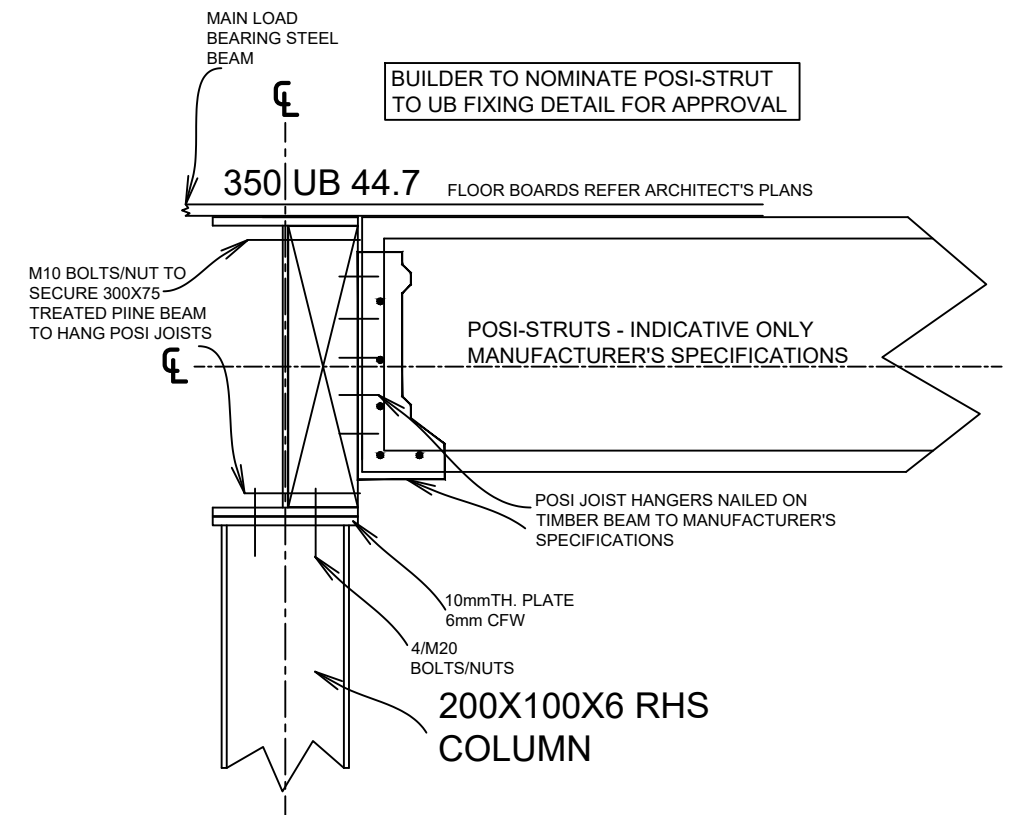
JOINT A - (SHT NO: 9)



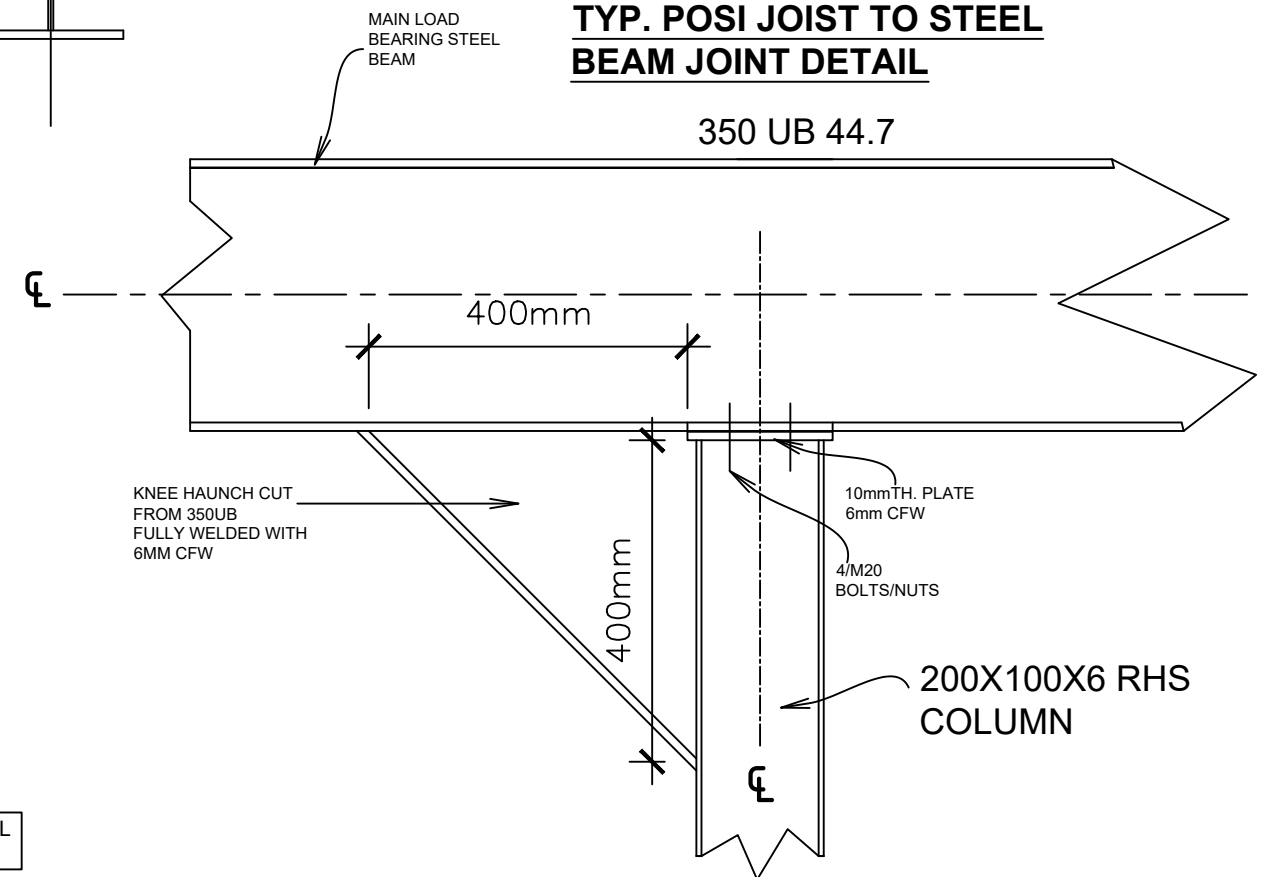
JOINT B - (SHT NO: 9)



JOINT C - (SHT NO: 9)



TYP. POSI JOIST TO STEEL BEAM JOINT DETAIL



JOINT D - (SHT NO: 9)

BUILDER MAY PROPOSE AN EQUIVALENT JOINT SYSTEM FOR ENGINEER'S APPROVAL PRIOR TO FABRICATION & INSTALLTION

BUILDER TO ACHIEVE REQUIRED LEVELS AND SLOPES FOR DRAINAGE PURPOSES AS PER ARCHITECTURAL PLANS.

UNO USE 6mm CFW FOR ALL WELDED CONNECTIONS

BUILDER TO USE TIMBER PACKING TO ACHIEVE REQUIRED HEIGHT WHEREVER NECESSARY.

REFER TO STEEL GALVANISING INFORMATION ON SHEET NO: 2/19

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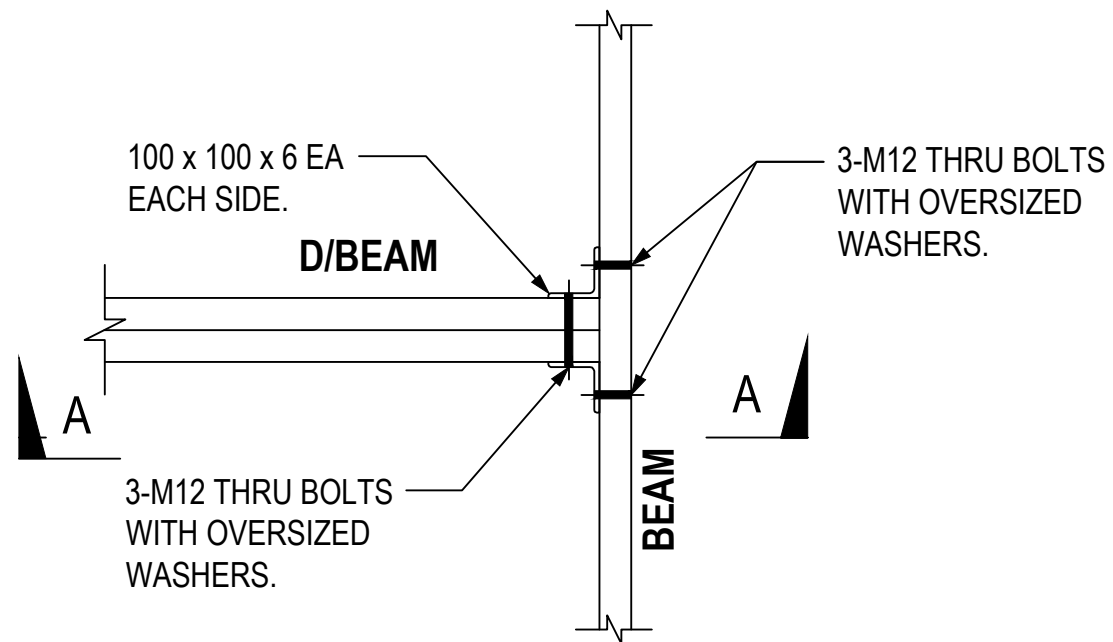
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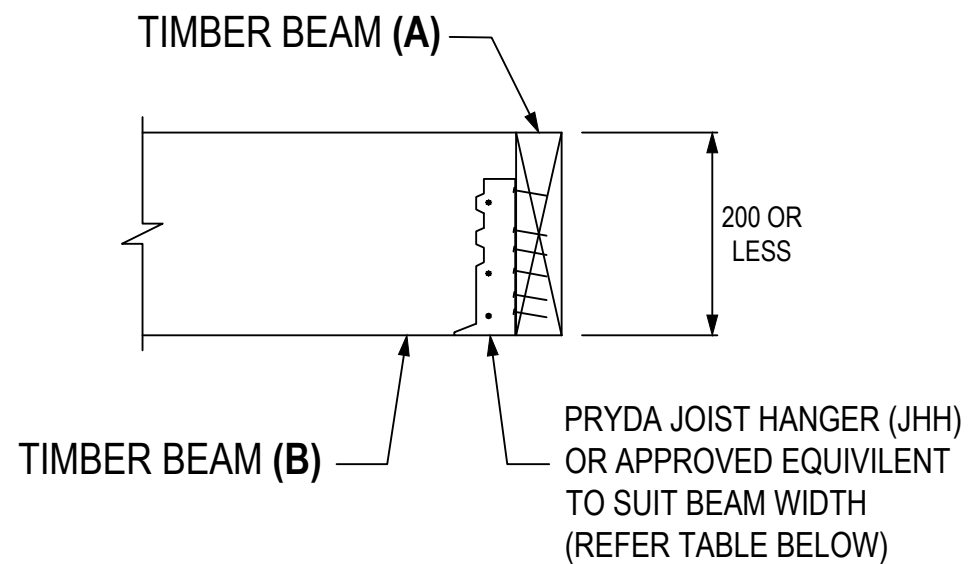
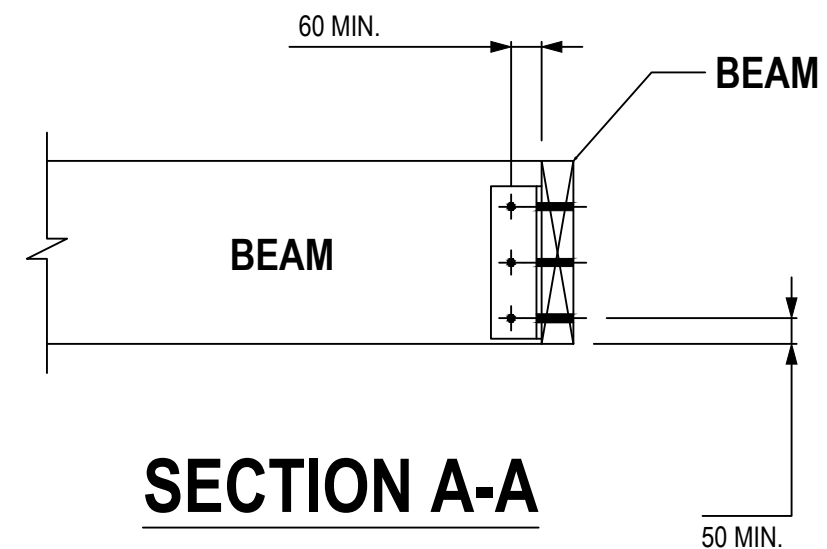
DATE: 1/01/2022



TYPICAL MEMBER JOINT DETAIL 2 - NTS



TIMBER BEAM TO TIMBER BEAM CONNECTION DETAIL



JOIST HANGER DETAIL

BUILDER MAY PROPOSE AN EQUIVALENT JOINT SYSTEM FOR ENGINEER'S APPROVAL PRIOR TO FABRICATION & INSTALLTION

BUILDER TO ACHIEVE REQUIRED LEVELS AND SLOPE FOR DRAINAGE PURPOSES AS PER ARCHITECTURAL PLANS.

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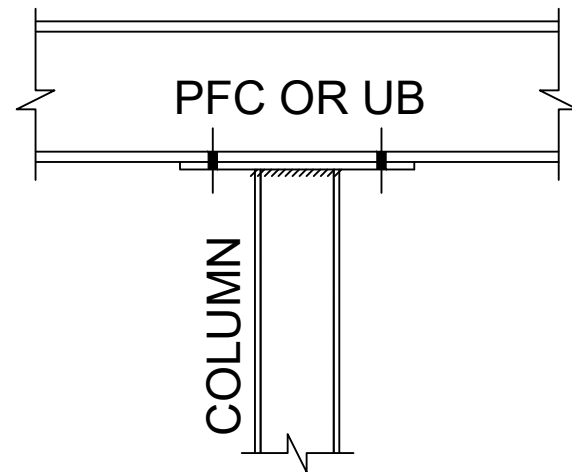
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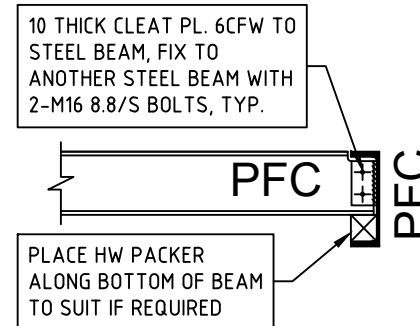
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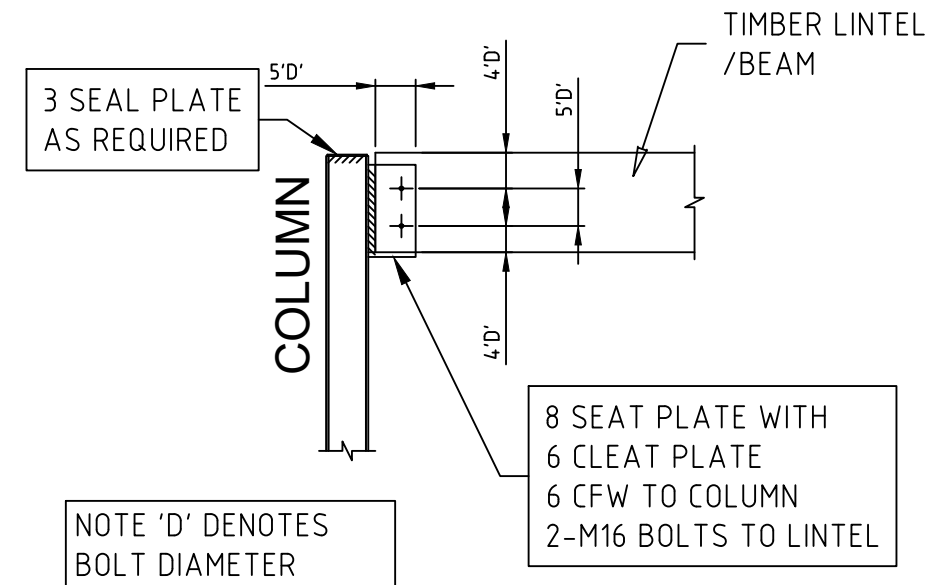
TYPICAL MEMBER JOINT DETAIL 3 - NTS



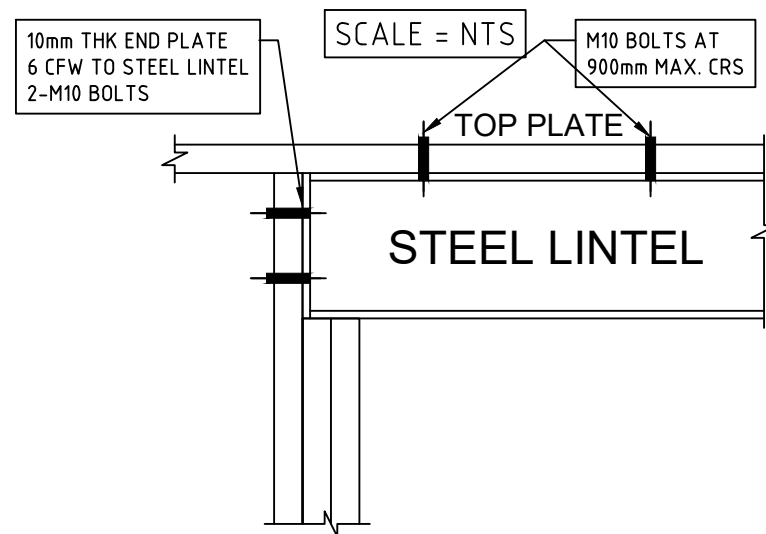
STEEL BEAM TO STEEL COLUMN DETAIL



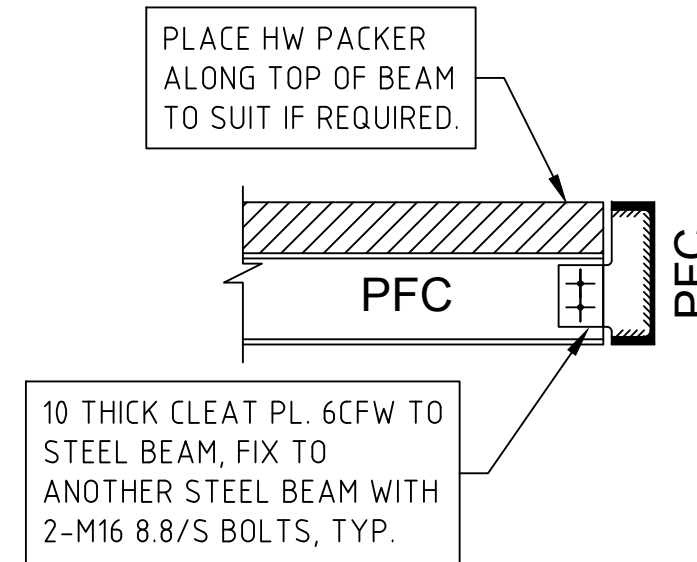
STEEL BEAM TO STEEL BEAM DETAIL



TIMBER BEAM/LINTEL TO S/COLUMN CONNECTION DETAIL



STEEL LINTEL TO DOUBLE STUD DETAIL



STEEL BEAM TO STEEL BEAM DETAIL

BUILDER MAY PROPOSE AN EQUIVALENT JOINT SYSTEM FOR ENGINEER'S APPROVAL PRIOR TO FABRICATION & INSTALLTION

BUILDER TO ACHIEVE REQUIRED LEVELS AND SLOPE FOR DRAINAGE PURPOSES AS PER ARCHITECTURAL PLANS.

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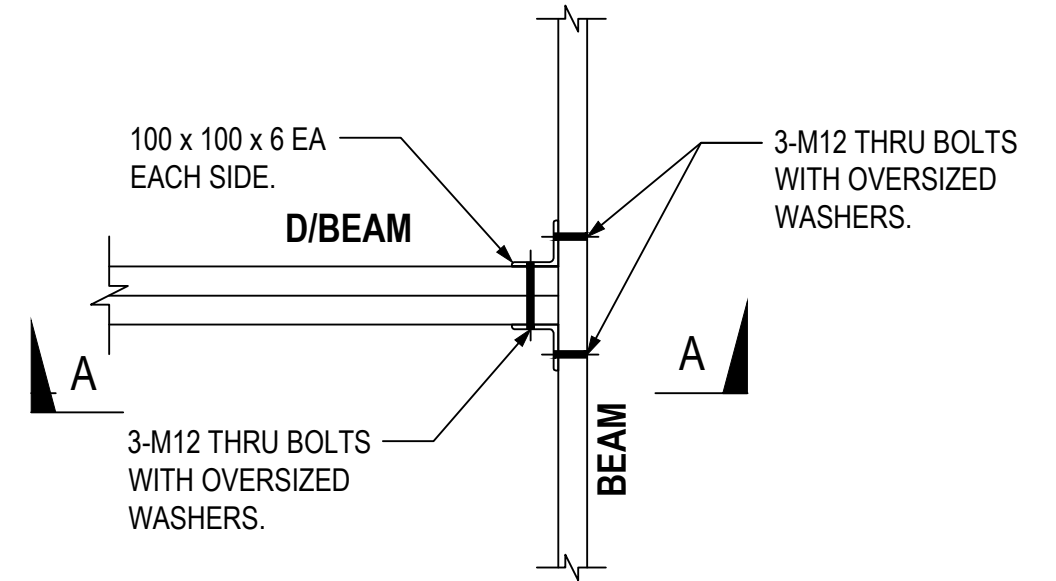
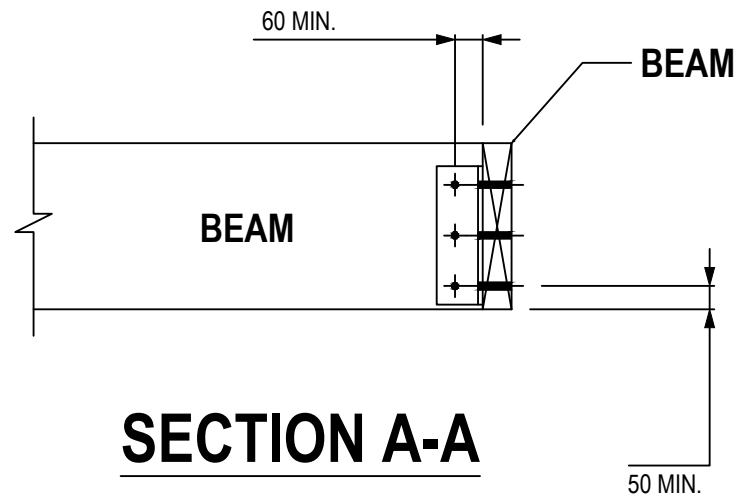
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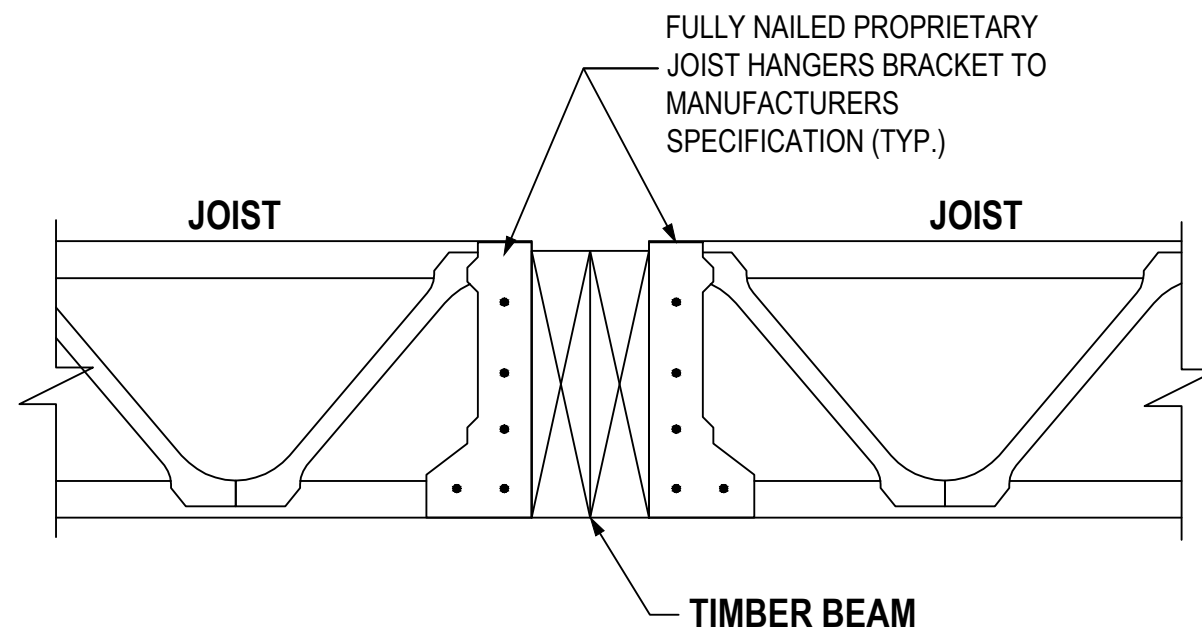
DATE: 1/01/2022



TYPICAL MEMBER JOINT DETAIL 4 - NTS



TIMBER BEAM TO TIMBER BEAM CONNECTION DETAIL



FLOOR JOIST TO TIMBER BEAM CONNECTION DETAIL

BUILDER MAY PROPOSE AN EQUIVALENT JOINT SYSTEM FOR ENGINEER'S APPROVAL PRIOR TO FABRICATION & INSTALLTION

BUILDER TO ACHIEVE REQUIRED LEVELS AND SLOPE FOR DRAINAGE PURPOSES AS PER ARCHITECTURAL PLANS.

CLIENT:
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JOB NO: SF/DS/2022

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PROJECT:
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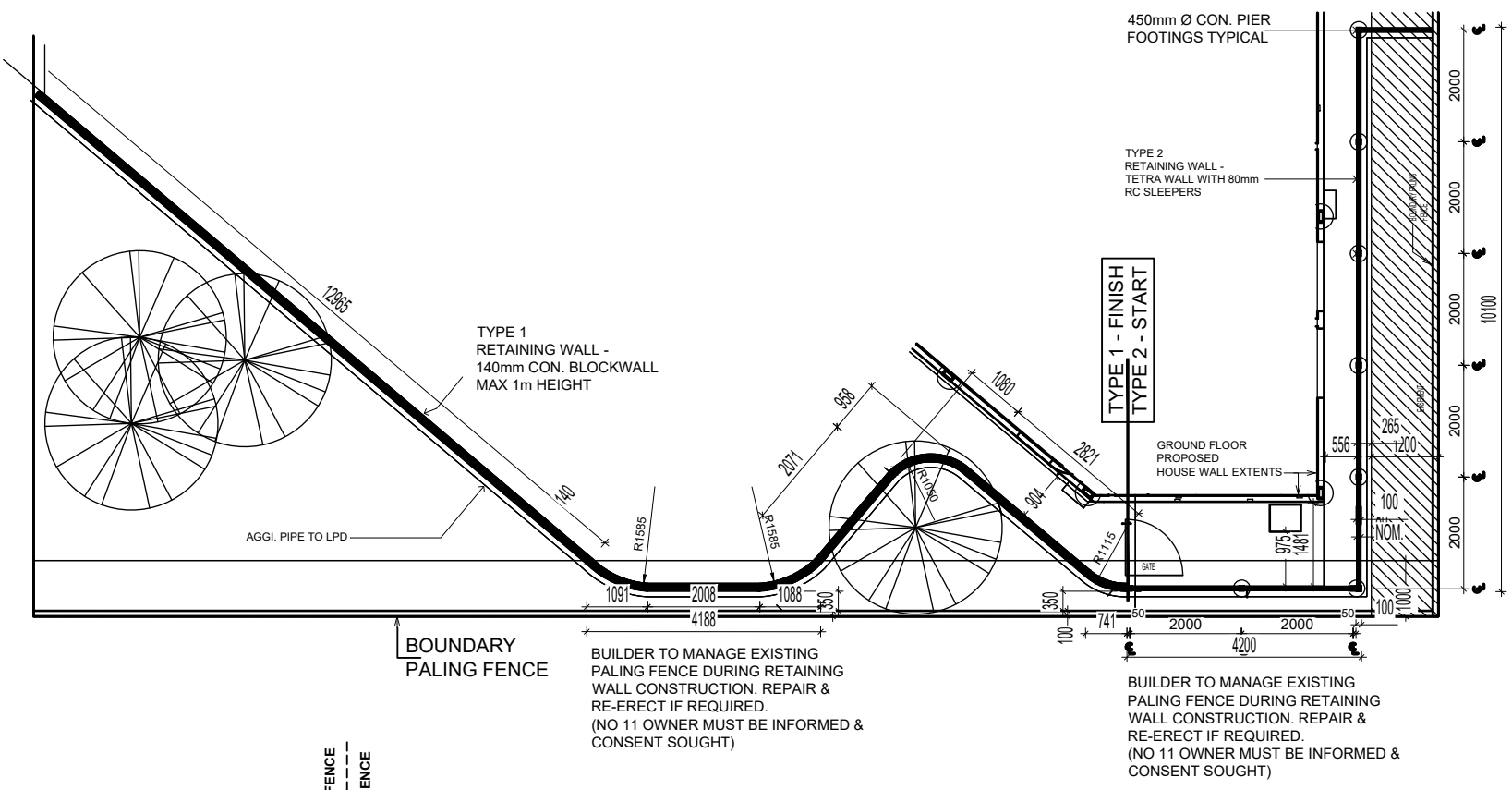
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SCALE: AS SHOWN

DATE: 1/01/2022



RETAINING WALLS DETAIL - NTS



NOTES - TYPE 1 - RC CORE FILLED CON BLOCK RETAINING WALL

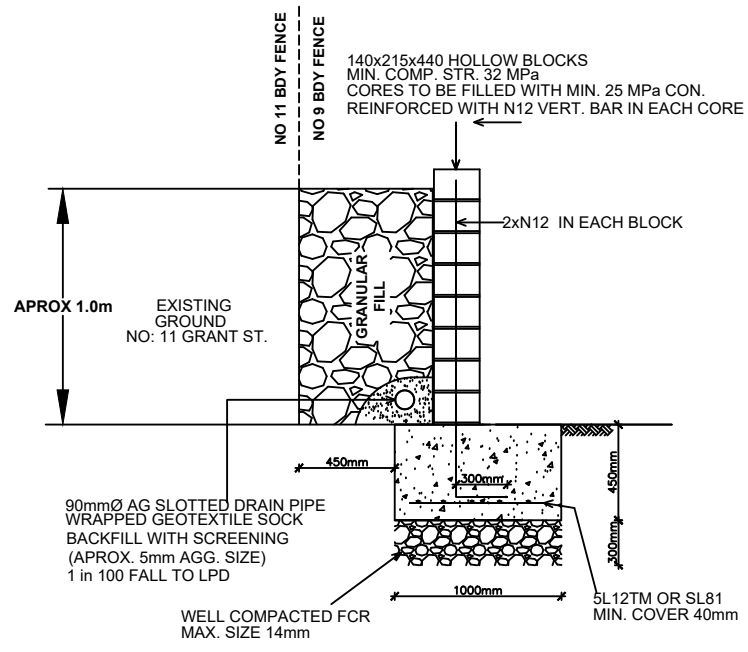
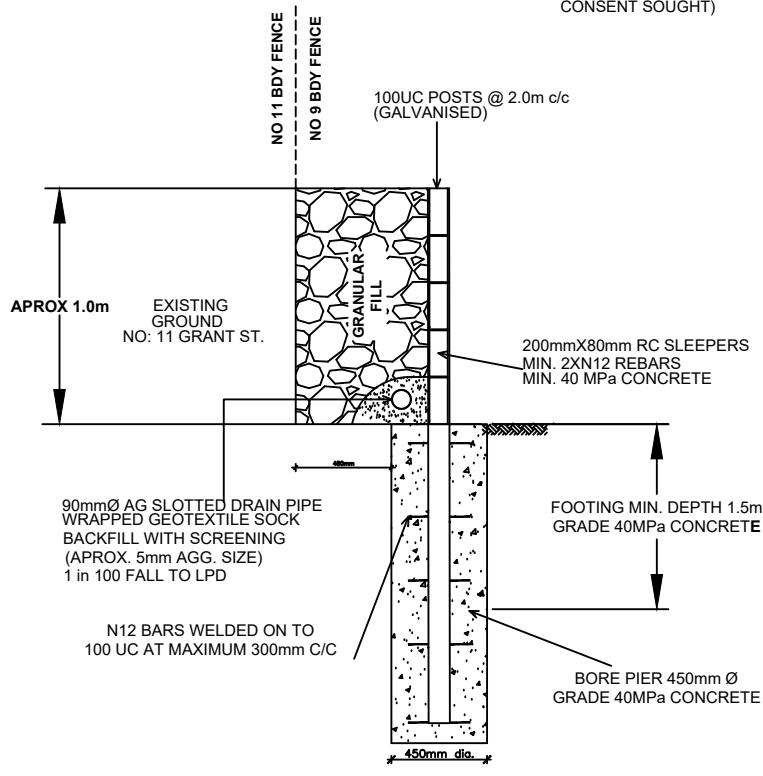
SEQUENCE OF CONSTRUCTION

- HAVE NEIGHBOR INFORMED & CONSENT FORM SIGNED OFF.
- CARRY OUT JOINT PRE-INSPECTION OF ADJOINING EXISTING STRUCTURE(S) & TAKE PHOTOS FOR EXISTING CONDITION RECORD.
- EXCAVATE GROUND & PREPARE FOR FOOTINGS (REFER TO NOTE 12).
- PLACE 4R12TM WITH 40mm COVER, AND POUR CONCRETE.
- LET CONCRETE CURE FOR MIN. 3 DAYS.
- START LAYING CON. BLOCKS. INCLUDE 20MPa CONCRETE TO CORE FILL AND R12 BARS IN EACH CORE VERTICALLY.
- COMPLETE LAYING BLOCKWORK.
- PLACE AG PIPE & CONNECT TO LPD & PLACE AND COMPACT SCREENING AS SHOWN ON DETAIL.
- BACKFILL WITH APPROVED GRANULAR FILL MATERIAL AND COMPACT. LEVEL AND CLEAN UP THE SITE.
- CARRY OUT JOINT POST-INSPECTION OF ADJOINING STRUCTURE(S) INCLUDING PHOTOS.
- IF ANY DEFECTS SUCH AS CRACKS DISCOVERED ON EXISTING STRUCTURES, CAREFULLY TAKE PHOTOS AND RECORD THEM JOINTLY.
- IT IS ADVISED TO REMOVE EXISTING PALING FENCE WHERE CLEARANCE BTW FENCE AND WALL IS LESS THAN 500mm AND RE-INSTALL AFTER RW CONSTRUCTION, WITH THE CONSENT OF THE ADJOINING OWNER.

NOTES - TYPE 2 - RC SLEEPER RETAINING WALL

SEQUENCE OF CONSTRUCTION

- HAVE NEIGHBOR INFORMED & CONSENT FORM SIGNED OFF.
- CARRY OUT JOINT PRE-INSPECTION OF ADJOINING EXISTING STRUCTURE(S) & TAKE PHOTOS FOR EXISTING CONDITION RECORD.
- BORE GROUND FOR FOOTINGS.
- PLACE 100UCs & ALIGN. POUR WET CONCRETE & COMPACT.
- LET CONCRETE CURE FOR MIN. 3 DAYS.
- START EXCAVATING GROUND DOWN TO REQUIRED RETAINING HEIGHT, SLOWLY & CAREFULLY, ONE BAY AT A TIME.
- WHEN EXCAVATION COMPLETE, INSERT SLEEPERS TO HEIGHT.
- REPEAT UNTIL ALL SLEEPERS INSTALLED.
- PLACE AG PIPE & CONNECT TO LPD & PLACE AND COMPACT SCREENING AS SHOWN ON DETAIL.
- BACKFILL WITH APPROVED GRANULAR FILL MATERIAL AND COMPACT. LEVEL AND CLEAN UP THE SITE.
- CARRY OUT JOINT POST-INSPECTION OF ADJOINING STRUCTURE(S) INCLUDING PHOTOS.
- IF ANY DEFECTS SUCH AS CRACKS DISCOVERED ON EXISTING STRUCTURES, CAREFULLY TAKE PHOTOS AND RECORD THEM JOINTLY.
- IT IS ADVISED TO REMOVE EXISTING PALING FENCE WHERE CLEARANCE BTW FENCE AND WALL IS LESS THAN 500mm AND RE-INSTALL AFTER RW CONSTRUCTION, WITH THE CONSENT OF THE ADJOINING OWNER.



TYPE 2 - RETAINING WALL (REFER TO PLAN ABOVE FOR START & FINISH)
TYPICAL CONCRETE SLEEPER RETAINING WALL (PRE-CAST CON.)
RECOMMENDED PRODUCT: TETRAWAL
CONTACT DETAIL: 360 BACCHUS MARSH ROAD, CORIA, GEELONG 3214 - PH: 1300 838 729

TYPE 1 - RETAINING WALL (REFER PLAN ABOVE FOR START & FINISH)
TYPICAL RC CORE FILLED CON. BLOCK RETAINING WALL
RECOMMENDED BLOCK SIZE: 140mmx215mmx440mm

CLIENT:
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PROJECT:
DOUBLE STOREY 2 UNITS TOWNHOUSE
PROJECT ADDRESS:
9 GRANT STREET, DROMANA 3936

SHEET NO: 20/20

SCALE: AS SHOWN

DATE: 1/01/2022

