13 RIPPON ST FOOTSCRAY
RESIDENTIAL EXTENSION

GENERAL

1. GENERAL INFORMATION

(A) THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL OTHER DISCIPLINES' SPECIFICATIONS AND DRAWINGS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS THAT MAY BE ISSUED DURING THE CONTRACT. ANY DISCREPANCIES ARE TO BE REPORTED TO THE SUPERINTENDENT FOR ASSESSMENT AND DIRECTION BEFORE FURTHER PROCESSION WITH WORKS.
(B) THESE GENERAL NOTES DO NOT HAVE PRECEDENCE OVER THE SPECIFICATION OR DRAWING NOTES.
(C) ALL SETTING OUT DIMENSIONS ON THE DRAWINGS ARE TO BE VERIFIED BY THE CONTRACTOR ON SITE BEFORE FABRICATION AND CONSTRUCTION HAS COMMENCED.
(D) DO NOT SCALE FOR DIMENSIONS OF THESE DRAWINGS, INCLUDING SOFTCOPY & HARDCOPY FORMATS.
(E) UNLESS NOTED OTHERWISE, ALL DIMENSIONS SHOWN ARE IN MILLIMETRES WITH THE EXCEPTION OF SURVEY LEVELS, WHICH ARE IN METRES.
(F) THE CONTRACTOR IS TO ENSURE THAT ANY PROFESSIONALS, TRADESMEN OR SUPPLIER ENGAGED THROUGHOUT THE DURATION OF THE CONTRACT ARE ACCREDITED AND QUALIFIED FOR THEIR DUTY OF WORK AND CARRY ALL NECESSARY PERMITS REQUIRED BY ANY STATUTORY AUTHORITY.
(G) NO SUBSTITUTIONS SHALL BE MADE, OR SIZES OF STRUCTURAL MEMBERS VARIED, WITHOUT THE PRIOR WRITTEN APPROVAL AND DOCUMENTATION FROM THE ENGINEER. THE APPROVAL OF A SUBSTITUTION FROM THE ENGINEER SHALL NOT BE AN AUTHORISATION FOR A VARIATION TO THE CONTRACT. ANY VARIATIONS TO THE SCOPE OF WORKS SHALL BE DISCUSSED AND AGREED WITH THE SUPERINTENDENT PRIOR TO CONTINUATION OF THE WORKS. AVAILIBILITY OF ALL SPECIFIED MATERIALS WITHIN THE PLANS SHALL BE CONFIRMED DURING THE TENDER PERIOD.
(H) THE CONTRACTOR SHALL ALLOW IN HIS OR HER TENDER FOR APPROVED SUBSTITUTIONS DUE TO NON-AVAILABILITY OF NOMINATED ITEMS.
(I) ALL INFORMATION CONTAINED IN THE STRUCTURAL ENGINEERING DOCUMENTATION IS FOR THE FINAL IN-PLACE CONDITION OF THE STRUCTURE AND IS EXCLUSIVE OF TEMPORARY WORKS. THE PRINCIPAL CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY WORKS AND ASSOCIATED COSTS. THE BUILDER SHALL ENGAGE A TEMPORARY WORKS ENGINEER WHO SHALL BE RESPONSIBLE FOR THE DESIGN, DOCUMENTATION, CERTIFICATION AND SITE SUPERVISION OF ALL NECESSARY TEMPORARY WORKS. THE BUILDER / TEMPORARY WORKS ENGINEER SHALL ENSURE THAT DURING CONSTRUCTION, THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND THAT NO EXISTING STRUCTURAL ELEMENT SHALL BE OVER-STRESSED OR FATIGUED. THE PRINCIPAL CONTRACTOR SHALL PROVIDE ALL TEMPORARY BRACING AND PROPPING AS DEEMED NECESSARY BY THE TEMPORARY WORKS ENGINEER, ALSO INCLUSIVE OF TEMPORARY EXCAVATIONS.
(J) ALL COSTS INCURRED BY THE ENGINEER FOR ASSESSMENT OR APPROVAL OF SUBSTITUTED MEMBERS, ALTERNATIVE BUILDING SOLUTIONS OR TEMPORARY PROPPING WORKS SHALL BE REFERRED TO AND BORNE BY THE BUILDER.
(K) WORKMANSHIP AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE RELEVANT CURRENT STANDARDS AUSTRALIA CODES INCLUDING ALL AMENDMENTS, AND THE LOCAL STATUTORY AUTHORITIES. THE PRINCIPAL CONTRACTOR IS EXPECTED TO STAY ABREAST OF AUSTRALIAN STANDARDS THROUGHOUT THE DURATION OF THE CONSTRUCTION CONTACT.
(L) NO HOLES, RECESSES OR CHASES OTHER THAN THOSE NOMINATED ON THE STRUCTURAL DRAWINGS SHALL BE PRODUCED WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER.

2. NOTES AND SYMBOLS

AS	AUSTRALIAN STANDARD	MC	MASS CONCRETE
BCJ	BLOCK CONTROL JOINT	MIN	MINIMUM
BTM	BOTTOM	NF	NEAR FACE
CFW	CONTINUOUS FILLET WELD	No.	NUMBER
CIP	CAST IN PLATE	NTS	NOT TO SCALE
CJ	CONTROL JOINT	O/A	OVERALL
CL	CENTRE LINE	OD	OUTSIDE DIAMETER
COL	COLUMN	PC	PRECAST PANEL
CONT	CONTINUOUS	PF	PAD FOOTING
CRS	CENTRES	PL	PLATE
DIA OR Ø	DIAMETER	REINF	REINFORCEMENT
DN	NOMINAL DIAMETER	RF	REINFORCEMENT FABRIC
DWG	DRAWING	RL	REDUCED LEVEL
e	EXISTING	RW	RETAINING WALL
EF	EACH FACE	S	SEWER
EW	EACH WAY	SF	STRIP FOOTING
EXTF	EXTERNAL FACE	STD	STANDARD
FF	FAR FACE	SW	STORMWATER
FFL	FINISHED FLOOR LEVEL	T	TOP
FL	FLAT	TB	THICKENING BEAM
FSBW	FULL STRENGTH BUTT WELD	TYP	TYPICAL
HOZ	HORIZONTAL	UNO	UNLESS NOTED OTHERWISE
ID	INTERNAL DIAMETER	U/S	UNDERSIDE
INTF	INTERNAL FACE	VERT	VERTICAL
LONG	LONGITUDINAL	W	WATER
MAX	MAXIMUM		

N16 AT 300 CRS BTM A D500N16 BAR AT 300 CENTRES IN THE BOTTOM OF THE MEMBER
2-N16 TWO D500N16 BARS
RF82 TOP D500RF82 SQUARE MESH IN THE TOP OF THE MEMBER
RF818 TOP D500RF818 RETANGULAR MESH IN THE TOP OF THE MEMBER
3-RF12TM TOP & BTM 3 BAR RF12TM TRENCH MESH IN THE TOP AND BOTTOM OF THE MEMBER
R10 LIGS AT 400 CRS 250R 10mm DIAMETER PLAIN BAR LIGATURES AT 400 CENTRES IN THE MEMBER

3. DESIGN LOADING

(A) THE STRUCTURE HAS BEEN DESIGNED AND DETAILED IN ACCORDANCE WITH ALL RELEVANT AUSTRALIAN STANDARDS AND THE CURRENT BUILDING CODE OF AUSTRALIA.
(B) THE STRUCTURE HAS BEEN DESIGNED FOR THE FOLLOWING LIVE LOADS IN ACCORDANCE WITH AS 1170.1:2002 AND THE PROPOSED USE:
RESIDENTIAL FLOOR: 1.5 kPa; ROOF 0.25 kPa
(C) THE STRUCTURE HAS BEEN DESIGNED FOR ALL SELF WEIGHT AND APPLIED DEAD LOADS.
(D) THE STRUCTURE HAS BEEN DESIGNED FOR WIND LOADS IN ACCORDANCE WITH AS 1170.2:2002:
DESIGN GUST WIND SPEED:
Vu = 40 m/s (ULTIMATE LIMIT STATE DESIGN)
TERRAIN CATEGORY: TC2.5
(E) THE STRUCTURE DESIGNED HEREIN HAS A WIND CLASSIFICATION OF N2

4. CONSTRUCTION

(A) DURING CONSTRUCTION IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT THE STRUCTURE IS MAINTAINED IN A SAFE AND STABLE CONDITION AND NO ELEMENT IS OVERLOADED DUE TO CONSTRUCTION ACTIVITIES.
(B) THE BUILDER SHALL ENGAGE A TEMPORARY WORKS ENGINEER ACCORDINGLY FOR ALL NECESSARY TEMPORARY WORKS DURING CONSTRUCTION. THE BUILDER & TEMPORARY WORKS ENGINEER SHALL ENSURE THAT ALL BUILDING AND EXCAVATION WORK IS STABLE AT ALL TIMES.
(C) IF ANY STRUCTURAL COMPONENT DETAILED IN THESE DRAWINGS PRESENTS A PROBLEM WITH BUILDABILITY OR SAFETY, THE CONTRACTOR IS TO REPORT THE PROBLEM TO THE SUPERINTENDENT FOR RESOLUTION PRIOR TO PROCEEDING WITH THE WORK.
(D) BEFORE CONSTRUCTION OF ALL STRUCTURAL ELEMENTS, THE CONTRACTOR IS TO PLAN FOR AND CO-ORDINATE ALL FOLLOWING TRADES THAT MAY REQUIRE BLOCKOUTS, CHASES, PENETRATIONS, OPENINGS AND FIXINGS.

REINFORCED CONCRETE

1. GENERAL

CONCRETE MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE SPECIFICATION AND THE CURRENT EDITION OF THE S.A.A. CODE FOR CONCRETE IN BUILDINGS AS 3600 TOGETHER WITH ANY CODES, STANDARDS OR REGULATIONS REFERRED TO THEREIN.
THE CONTRACTOR SHALL KEEP A COPY OF AS 3600 ON SITE.

2. CONCRETE CHARACTERISTICS

THE CONTRACTOR SHALL SUPPLY A MIX, BATCHED BY WEIGHT TO COMPLY WITH THE CHARACTERISTICS AS SPECIFIED AND WITH A STRENGTH GRADE TO AS3600. ADDITIVES OTHER THAN WATER REDUCING AGENTS, SHALL NOT BE USED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.

MASS CONCRETE

STANDARD GRADE	N15
PORTLAND CEMENT	TYPE A
MAX NOMINAL AGGREGATE SIZE	20mm
MAX SLUMP	80mm

COLUMNS

STANDARD GRADE	N40
PORTLAND CEMENT	TYPE A
MAX NOMINAL AGGREGATE SIZE	20mm
MAX SLUMP	80mm

SLABS ON GRADE

STANDARD GRADE	N25
PORTLAND CEMENT	TYPE A
MAX NOMINAL AGGREGATE SIZE	20mm
MAX SLUMP	80mm

PRE-CAST PANELS

STANDARD GRADE	N40
PORTLAND CEMENT	TYPE A
MAX NOMINAL AGGREGATE SIZE	20mm
MAX SLUMP	80mm

STRIP & PAD FOOTINGS

STANDARD GRADE	N32
PORTLAND CEMENT	TYPE A
MAX NOMINAL AGGREGATE SIZE	20mm
MAX SLUMP	80mm

COREFILLED BLOCKWORK

STANDARD GRADE	N15
PORTLAND CEMENT	TYPE A
MAX NOMINAL AGGREGATE SIZE	14mm
MAX SLUMP	200mm

SUSPENDED SLABS, STAIRS & LANDINGS

STANDARD GRADE	N40
PORTLAND CEMENT	TYPE A
MAX NOMINAL AGGREGATE SIZE	20mm
MAX SLUMP	80mm

PRE-CAST BARRIERS

STANDARD GRADE	N40
PORTLAND CEMENT	TYPE A
MAX NOMINAL AGGREGATE SIZE	20mm
MAX SLUMP	80mm

3. READYMIX CONCRETE

THE NAME OF THE SUPPLIER AND THE SUPPLIERS SPECIFICATION FOR ALL MIXES TO BE USED DURING THIS CONTRACT SHALL BE SUBMITTED TO THE CONSULTING ENGINEER FOR HIS APPROVAL PRIOR TO THE POURING OF ANY CONCRETE ON SITE. THE CONSULTING ENGINEER MAY APPROVE OR DISAPPROVE OF ANY SUPPLIER OR MIX. SHOULD THE CONTRACTOR OR SUPPLIER WISH TO VARY ANY MIX DURING THE CONTRACT HE SHALL FIRST OBTAIN THE APPROVAL OF THE CONSULTING ENGINEER.
THE SUPPLIER SHALL SUPPLY TO THE BUILDER A DOCKET WITH EACH BATCH DELIVERED STATING:
I) CHARACTERISTIC COMPRESSIVE STRENGTH OF MIX
II) SLUMP AT SITE
III) PLACE OF BATCHING
IV) TIME OF INTRODUCTION OF WATER TO THE MIX
V) INTENDED METHOD OF PLACEMENT
ALL CONCRETE SHALL BE NORMAL CLASS CONCRETE AS DEFINED IN AS 3600 CLAUSES 19.1.7 AND 19.1.8. SHOULD CONCRETE SUPPLIED NOT MEET THE REQUIRED SPECIFIED COMPRESSIVE STRENGTH, ELEMENTS OF THE STRUCTURE CONTAINING THAT CONCRETE MAY BE REJECTED AND ANY SUBSEQUENT SUPPLY OF CONCRETE FROM THAT SUPPLIER MAY NOT BE APPROVED.

THE USE OF CHLORIDE ADDITIVES IS STRICTLY FORBIDDEN IN ALL CONCRETE.

4. SITEMIX CONCRETE

THE USE OF SITEMIX CONCRETE SHALL REQUIRE THE APPROVAL BY THE CONSULTING ENGINEER OF BATCHING METHODS, QUALITY CONTROL, MATERIALS ETC.

5. TERMITE / VAPOUR BARRIER

AN ENDORSED DUAL TERMITE / VAPOUR BARRIER SHALL BE PROVIDED UNDERNEATH AND AROUND THE PERIMETER OF NEW CONCRETE SLABS AND AROUND PIPE PENETRATIONS IN ACCORDANCE WITH AS 3660.1-2000 AND AS 3660.2-2000.

6. TESTING

IN ADDITION TO PROJECT ASSESSMENT OF STRENGTH GRADE IN ACCORDANCE WITH AS 3600 CLAUSE 20.7, THE CONSULTING ENGINEER MAY REQUEST ADDITIONAL TEST CYLINDERS BE OBTAINED FROM PARTICULAR BATCHES OF CONCRETE OR ELEMENTS OF THE STRUCTURE. THE COST OF ADDITIONAL SAMPLES AND TESTS SHALL BE BORN BY THE CLIENT, EXCEPT WHERE THEY DO NOT MEET THE REQUIREMENTS OF CHARACTERISTIC STRENGTH WHEN THE COST SHALL BE THE CONTRACTORS. SHOULD ANY TEST NOT MEET THE REQUIREMENTS OF CHARACTERISTIC STRENGTH, THE CONSULTING ENGINEER MAY AT HIS DISCRETION ALLOW ADDITIONAL INSITU OR CORE TESTING UNDER HIS DIRECTION AND AT THE COST OF THE CONTRACTORS.

7. PLACING

TROUGHS, CHUTES OR PIPES (INCLUDING PUMPING) SHALL NOT BE USED FOR CONVEYING CONCRETE WITHOUT APPROVAL FROM THE CONSULTING ENGINEER. THE FREEFALL OF CONCRETE SHALL NOT EXCEED 2m IN MASSIVE SECTIONS OR 1m IN SECTIONS CONTAINING REINFORCEMENT. TREMMIES SHALL BE USED FOR THE POURING OF WALLS AND COLUMNS. CONSTRUCTION JOINTS, WHERE NOT SHOWN ON PLANS, SHALL BE SITED IN LOCATIONS APPROVED BY THE ENGINEER ON-SITE.

8. COMPACTION

THE CONCRETE SHALL BE THOROUGHLY COMPACTED BY MEANS OF MECHANICAL VIBRATORS AND HAND METHODS, AND CAREFULLY WORKED AROUND THE REINFORCEMENT AND EMBEDDED FIXTURES, UNDER WATERSTOPS AND INTO THE CORNERS OF THE FORMWORK. THE COURSE AGGREGATE SHALL BE WORKED BACK FROM THE FORMS SO AS TO BRING A FULL SURFACE OF MORTAR AGAINST THE FORM, WITHOUT THE FORMATION OF EXCESSIVE SURFACE VOIDS. THE COMPACTION SHALL BE SUCH THAT ALL AIR OR STONE POCKETS WHICH MAY CAUSE HONEYCOMBING, PITTING OR PLACES OF WEAKNESS RE ELIMINATED.

9. CURING

EXPOSED CONCRETE SURFACES ARE TO BE TREATED WITH AN APPROVED SPRAY-ON CURING AGENT TO PROTECT AGAINST LOSS OF MOISTURE FOR A PERIOD OF SEVEN (7) DAYS BY COVERING WITH REINFORCED WATERPROOF BUILDING PAPER OR APPROVED PLASTIC SHEETING. THE COVERING MATERIAL SHALL BE HELD FIRMLY AGAINST THE CONCRETE FOR THE FULL LENGTHS OF ALL EDGES AND LAPS AND AT FREQUENT INTERVALS BETWEEN SO THAT THERE SHALL BE NO AIR CIRCULATION AT CONCRETE SURFACES. NEVERTHELESS THE METHOD USED SHALL NOT CAUSE DAMAGE TO THE CONCRETE SURFACE. IF THE FORMWORK IS REMOVED FROM ANY FORMED SURFACE WITHIN THE TIME SPECIFIED, AN APPROVED CURING PROCEDURE COMPATIBLE WITH THE SPECIFIED FINISH SHALL BE APPLIED IMMEDIATELY. IN ADDITION, THE CONCRETE SHALL BE MAINTAINED AT A TEMPERATURE NO LOWER THAN 5° CELSIUS FOR THE FULL CURING PERIOD, IF NECESSARY BY THE USE OF ARTIFICIAL MEANS OF HEATING.

10. RECORDS

THE CONTRACTOR SHALL KEEP AN ACCURATE RECORD ON THE JOB OF THE DATE OF PLACEMENT OF CONCRETE IN EACH PART OF THE STRUCTURE.

11. FORMWORK

FORMWORKS SHALL BE IN ACCORDANCE WITH AS 3610. WHERE NO FINISH IS SPECIFIED A CLASS 2 FINISH IS REQUIRED FOR EXPOSED SURFACES AND A CLASS 4 FOR SURFACES HIDDEN BY OTHER FINISHES. CONCRETE THICKNESSES NOMINATED IN THESE PLANS DO NOT ACCOUNT FOR ALTERNATE FINISHES AND MUST BE FOUNDED WITH AN EXTRA-OVER ALLOWANCE FOR THE ALTERNATE SURFACE FINISH.

12. REINFORCEMENT

(A) INSPECTION:
NO CONCRETE SHALL BE ORDERED (OR BATCHED) UNTIL FIXED REINFORCEMENT FOR THE WHOLE OF THE POUR HAS BEEN INSPECTED AND APPROVED BY THE BUILDING SURVEYOR OR APPROVED PROXY. THE CONTRACTOR SHALL ALLOW TWENTY FOUR (24) HOURS FOR EACH INSPECTION.
(B) WELDING OR HEATING OF REINFORCEMENT:
STRAIN-HARDENED STEELS SUCH AS COLD-TWISTED BARS, DRAWN WIRE AND MESH SHALL NEVER BE WELDED, OR HEATED BY OTHER MEANS. OTHER STEEL (STRUCTURAL GRADE) MAY BE WELDED WITH THE PRIOR APPROVAL OF THE CONSULTING ENGINEER. THIS INCLUDES THE SPOT WELDING FOR THE PURPOSE OF FIXING OR FORMING OF CAGES FOR FRAMES.
(C) SPLICES:
SPLICES IN REINFORCEMENT SHALL BE MADE ONLY WHERE SHOWN ON DRAWINGS OR AS APPROVED IN WRITING BY THE CONSULTING ENGINEER.
(D) COVER:
MINIMUM COVER TO ALL REINFORCEMENT TO SATISFY EXPOSURE CLASSIFICATIONS WHERE STANDARD FORMWORK AND COMPACTION ARE USED SHALL BE AS FOLLOWS, UNLESS INDICATED ON THE DRAWINGS.

ELEMENT	FORMED & SHELTERED	FORMED & EXPOSED	NO FORMWORK
SLABS AND WALLS	20 mm	30 mm	65 mm
BEAMS	25 mm	40 mm	65 mm
COLUMNS	40 mm	50 mm	75 mm
FOOTINGS	N/A	65 mm	75 mm

EXPOSURE CLASS	A1
ELEMENT	RESIDENTIAL FOOTINGS IN NON-AGGRESSIVE SOILS
MIN. CONCRETE GRADE MPa REFER SCHEDULE ABOVE	25MPa

13. FITTINGS AND FIXTURES

THE CONTRACTOR IN CONSULTATION WITH OTHER TRADES AND SUB-CONTRACTORS, SHALL ACCURATELY BUILD IN AS THE WORK PROCEEDS, ALL OPENINGS, BOLTS, ANCHORS, DOWELS, HANGERS, BRICK TIES, CONNECTIONS AND FITTINGS AS ARE NECESSARY FOR TRADES FOLLOWING ON.

14. CORE HOLES, SERVICES AND BLOCKOUTS

WHERE CORE HOLES, SERVICES OR BLOCKOUTS ARE REQUIRED AND ARE NOT SHOWN ON THE STRUCTURAL ENGINEER DRAWINGS THEY SHALL BE BROUGHT TO THE ATTENTION OF THE CONSULTING ENGINEER WHO SHALL APPROVE OR OTHERWISE THEIR LOCATION AND SIZE, AND SHALL DETERMINE THE EXTENT OF TRIMMING REINFORCEMENT REQUIRED. ANY CONDUITS, PIPES, AND THE LIKE SHALL NOT BE PLACED WITHIN THE CONCRETE COVER ZONE.

15. REPAIR OF DEFECTIVE SURFACES

REPAIR OF DEFECTIVE SURFACES SHALL ONLY BE CARRIED OUT FOLLOWING INSPECTION BY THE CONSULTING ENGINEER. METHOD OF REPAIR SHALL BE TO THE APPROVAL OF THE ENGINEER.

16. PROTECTION OF WORK IN PROGRESS

THE BUILDER SHALL ENSURE THAT ALL COMPLETED OR PARTIALLY COMPLETED WORK IS ADEQUATELY PROTECTED BY SCREENS, COVERS OR BARRIERS AGAINST DAMAGE, UNTIL PRACTICAL COMPLETION.

17. SLAB FINISHES

ALL SLABS ARE TO HAVE A MECHANICAL STEEL TROWELLED FINISH. THE SLABS SHALL BE CONSTRUCTED TO A TOLERANCE OF 3mm IN 3m, AS MEASURED BY A STRAIGHT EDGE TEMPLATE.

MAINTENANCE NOTE:

THE BUILDER AND OWNERS OF THE STRUCTURE UPON THE SITE MUST MAKE THEMSELVES FAMILIAR WITH THE REQUIREMENTS OF THE "CSIRO BUILDING TECHNOLOGY FILE BTF 18 (FOUNDATION MAINTENANCE & FOOTING PERFORMANCE - A HOME OWNERS GUIDE)" THE REQUIREMENTS OF THIS GUIDE MUST BE APPLIED BOTH DURING THE CONSTRUCTION AND OCCUPANCY OF THE SITE BY THE BUILDERS AND OCCUPIERS RESPECTIVELY. SUCH INFORMATION MUST BE ALSO PROVIDED TO FUTURE OCCUPANTS OF THE SITE DURING HANDOVER.

COPIES OF THIS GUIDE CAN BE OBTAINED DIRECTLY FROM CSIRO.

DRAWING REGISTER

PROJECT No.	DWG No.	REV No.	DRAWING TITLE
220603	D01	A	COVER SHEET
	D02	A	FURTHER NOTES
	D03	A	FOUNDATION PROTECTION GUIDELINES
	D04	A	STRUCTURAL MEMBER SCHEDULES & NOTATIONS
	D05	A	STRUCTURAL LAYOUT
	D06	A	CONCRETE STRUCTURAL DETAILS
	D07	A	STEEL STRUCTURAL DETAILS
	D08	A	SERVICE PIPE DETAILS

NOTE:

THIS DRAWING SET MUST NOT BE ADOPTED FOR CONSTRUCTION UNTIL STAMPED BY A REGISTERED PRIVATE OR MUNICIPAL BUILDING SURVEYOR, AND BUILDING PERMIT AWARDED.

PROCEEDING INTO CONSTRUCTON PRIOR TO AWARD OF A BUILDING PERMIT, OR WITHOUT A BUILDING PERMIT ENTIRELY, IS DEEMED TO BE ILLEGAL WORKS WHICH MAY BE REFERRED TO THE VICTORIAN BUILDING AUTHORITY (VBA) FOR FURTHER ACTION AND PENALTIES.

The 4th Little Pig

CONTROLLED DOCUMENT

ISSUE	DATE	ISSUED FOR	REV.
1	23-08-22	PRELIMINARY VERSION	A

DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.

DO NOT SCALE, CHECK AND VERIFY ALL DIMENSIONS ON SITE. REFER DISCREPANCIES TO THE SUPERINTENDENT.

ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH: BUILDING CODE OF AUSTRALIA, APPLICABLE AUSTRALIAN STANDARDS & LOCAL AUTHORITY REQUIREMENTS.

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PROJECT: 13 RIPPON ST FOOTSCRAY
DRAWING: COVER SHEET
DESIGNED: D.P.D. DRAWN: D.P.D.
SCALES: N.T.S. (UNO) AT A3 SIZE DRAWING SHEET
PROJECT No. 220603 DRAWING No. D01 REV. A

STRUCTURAL STEELWORK

1. GENERAL

THE QUALITY OF ALL STEELWORK MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE CURRENT EDITIONS, (INCLUDING AMENDMENTS) OF THE FOLLOWING S.A.A. CODES EXCEPT WHERE CARRIED OUT BY THE SPECIFICATION.

- AS 1111 ISO - METRIC HEXAGON COMMERCIAL BOLTS AND SCREWS.
- AS 1112 ISO - METRIC HEXAGON NUTS
- AS 1131 - DIMENSIONS OF HOT-ROLLED STRUCTURAL STEEL SECTIONS
- AS 1163 - STRUCTURAL STEELS - HOLLOW SECTIONS
- AS 1204 - STRUCTURAL STEELS - ORDINARY WELDABLE GRADES
- AS 1205 - STRUCTURAL STEELS - WEATHER RESISTANT WELDABLE GRADES
- AS 1227 - GENERAL REQUIREMENTS FOR SUPPLY OF HOT-ROLLED STEEL PLATES, SECTIONS, PILING AND BARS FOR STRUCTURAL PURPOSES.
- AS 4100 - S.A.A. STEEL STRUCTURE CODE
- AS 1252 - HIGH STRENGTH STEEL BOLTS
- AS 1275 - METRIC SCREW THREADS FOR FASTENERS
- AS 1511 S.A.A. - HIGH STRENGTH STRUCTURAL BOLTING CODE
- AS 1554 S.A.A. - CODE FOR WELDING IN BUILDING
- AS 1627 - CODE OF PRACTICE FOR PREPARATION AND PRETREATMENT OF METAL SURFACES PRIOR TO PROTECTIVE COATING.

2. SUPERVISION AND INSPECTION

THE CONTRACTOR SHALL:

- PROVIDE ALL FACILITIES FOR INSPECTION AND NORMAL TESTING.
- ARRANGE FOR UNITS TO BE LAID OUT IN THE SHOPS OR YARDS, SO THAT ALL PARTS ARE ACCESSIBLE.
- GIVE THE BUILDING SURVEYOR ADEQUATE FORWARD NOTICE (NOT LESS THAN 24 HOURS) ON EACH OCCASION WHEN STEELWORK IS READY FOR INSPECTION. ALL WORK FOUND TO BE DEFECTIVE AND/OR NOT IN ACCORDANCE WITH THE DRAWINGS OR THE SPECIFICATION SHALL BE REJECTED. STEELWORK MAY BE REJECTED AT THE SITE OR AFTER ERECTION IRRESPECTIVE OF THE FACT THAT IT HAS BEEN ACCEPTED AT THE SHOP OR MILL, IF THE MATERIALS OR WORKMANSHIP DO NOT CONFORM TO THE DRAWINGS AND/OR THE SPECIFICATION.

3. MATERIALS

ALL STEELWORK MATERIALS SHALL BE NEW AND SHALL COMPLY WITH THE RELEVANT STANDARD SPECIFICATIONS LISTED IN CLAUSE 2 (A). STEEL GENERALLY SHALL COMPLY WITH AS 1204 UNLESS SPECIFICALLY STATED OTHERWISE ON THE ASSOCIATED DRAWINGS OR IN THE SPECIFICATION.

4. SUBSTITUTION

SHOULD ANY OF THE MATERIALS SPECIFIED OR INDICATED ON THE DRAWINGS BE UNAVAILABLE, SUBSTITUTIONS TO SUIT AVAILABLE STOCK MAY BE PERMITTED PROVIDED:

- THE CONTRACTOR GIVES THE CONSULTING ENGINEER SATISFACTORY EVIDENCE THAT THE MATERIAL IS NOT AVAILABLE AND THAT AN ORDER WAS PLACED AS SOON AS PRACTICABLE AFTER THE CONTRACT WAS LET.
- THE CONSULTING ENGINEER'S WRITTEN CONSENT IS OBTAINED BEFORE PROCEEDING WITH THE SUBSTITUTION.
- SUCH SUBSTITUTIONS SHALL NOT BE SUBJECT TO ADDITIONAL COST AND THE NORMAL PROGRESS OF WORK SHALL NOT BE DELAYED.

5. SHOP DRAWINGS

BEFORE FABRICATION IS COMMENCED THE CONTRACTOR MUST PREPARE AND SUBMIT 4 COPIES OF SHOP DRAWINGS TO THE CONSULTING ENGINEER FOR APPROVAL. THESE DRAWINGS SHALL CLEARLY SHOW ALL SIZES, DIMENSIONS, MARKINGS AND CONNECTIONS AND SET OUT THE POSITIONS, SIZES AND LENGTHS OF ALL WELDS AS ARE NECESSARY FOR THE COMPLETE FABRICATION ASSEMBLY AND ERECTION OF THE STEELWORK. ALL DESIGN DETAILS SHALL BE IN ACCORDANCE WITH THE RELEVANT CODES LISTED IN CLAUSE 2 (A) OF THE SPECIFICATION. NO FABRICATION SHALL BE COMMENCED, NOT ANY FABRICATION OR SUBSTITUTIONS MADE UNTIL THE SHOP DRAWINGS HAVE BEEN APPROVED IN WRITING BY THE CONSULTING ENGINEER. SHOULD ANY APPROVED ALTERATION OR VARIATION BE MADE TO THE SPECIFIED SIZES, THE CONTRACTOR SHALL SUBMIT A PRICED STATEMENT OF THE EXTRAS AND/OR DEDUCTIONS TO THE CONTRACT PRICE INVOLVED IN THE VARIATIONS, BEFORE FABRICATION COMMENCES. THE CONTRACTOR SHALL ALLOW A PERIOD OF 2 WEEKS FOR EXAMINATION AND APPROVAL OF SHOP DRAWINGS.

6. WORKMANSHIP

(A) GENERALLY: ALL WORKMANSHIP SHALL COMPLY WITH THE REQUIREMENTS OF THE CURRENT S.A.A. CODES.
(B) TOLERANCES: STEELWORK TOLERANCES SHALL SATISFY THE REQUIREMENTS OF RULE 11.2 OF AS 4100
(C) CLEANING: STEELWORK WHICH IS TO BE CONCRETE ENCASED OR STEEL FACES WHICH ARE TO BE IN PERMANENT CONTACT WITH CONCRETE SHALL BE FREE OF PAINT, LOOSE RUST, DIRT, GREASE AND OTHER FOREIGN MATTER, IMMEDIATELY BEFORE PLACING THE CONCRETE. THE CONTRACTOR SHALL ENSURE THAT THE STANDARD OF CLEANING IN THE SHOP OR MILL IS OF SUFFICIENT STANDARD GENERALLY TO FACILITATE THIS REQUIREMENT WITH MINIMUM EFFORT ON SITE. A STANDARD EQUIVALENT TO THAT GIVEN BY CLASS 2 OF AS 1627 PART 7 WILL BE CONSIDERED SUFFICIENT AS AT FABRICATION.

7. ELECTRIC WELDING

(A) CODE REQUIREMENT: ALL WELDING, INCLUDING THE QUALITY OF MATERIALS, QUALIFICATIONS OF WELDERS AND PROCEDURE FOR ALL WELDED CONNECTIONS SHALL COMPLY WITH THE REQUIREMENTS OF AS 1554.
(B) GENERAL REQUIREMENTS: ALL WELDS SHALL BE OF THE FINISHED SIZES SPECIFIED AND SHALL BE CARRIED OUT IN SUCH A SEQUENCE AS TO CAUSE MINIMUM DISTORTION OF THE PARTS WELDED. UNLESS OTHERWISE SHOWN THE MINIMUM SIZE OF FILLET WELD SHALL BE 6 MM. BUTT WELDS MAY BE SUBJECTED TO RADIOGRAPHIC EXAMINATION AT THE DISCRETION OF THE CONSULTING ENGINEER AND NO CLAIM WILL BE CONSIDERED ON THE GROUNDS THAT THIS IMPLIES A HIGHER STANDARD OF WORKMANSHIP.

8. FABRICATION

(A) GENERALLY: FABRICATION SHALL COMPLY WITH THE REQUIREMENTS OF AS 4100, AS 1511 THE CONTRACT DRAWINGS AND THE SPECIFICATION.

9. MARKING

ALL MEMBERS OF THE STRUCTURE TO BE SITE ASSEMBLED SHALL BE MATCH MARKED IN ACCORDANCE WITH THE SHOP DETAILS SUBMITTED FOR APPROVAL. BOLTS, AND SMALL OR LOOSE PIECES SHALL BE SECURELY BAGGED OR BUNDLED AND CLEARLY MARKED FOR IDENTIFICATION. BOLTS, NUTS AND WASHERS SHALL BE SEPARATELY BUNDLED FOR EACH SIZE AND EACH BUNDLE CLEARLY MARKED WITH THE SIZE AND PURPOSE OF THE BOLTS.

10. FIELD CONNECTIONS

ALL ERECTIONS SHALL BE CARRIED OUT BY COMPETENT AND EXPERIENCED MEN AND THE CONTRACTOR SHALL TAKE EVERY CARE TO SAFEGUARD THE PUBLIC, WORKMEN AND ADJOINING PROPERTY. ALL GEAR USED SHALL BE OF ADEQUATE STRENGTH AND SHALL COMPLY WITH ALL REGULATIONS CURRENT AT THE TIME, AND ALL STEELWORK SHALL BE PROPERLY GUYED DURING ERECTION. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL DAMAGE CAUSED TO THE STRUCTURE, ADJOINING BUILDINGS OR INJURY TO WORKMEN DURING ERECTION. ALL COLUMNS SHALL, UNLESS OTHERWISE SHOWN ON THE DRAWINGS BE LEFT TRULY VERTICAL AND CORRECT TO LINE AND LEVEL. BEAMS, GIRTS, ETC. SHALL BE ERECTED LEVEL UNLESS OTHERWISE SHOWN AND CORRECTLY POSITIONED. TRUSSES AND OPEN WEB JOISTS SHALL BE CAREFULLY HANDLED AT ALL TIMES AND WHEN BEING ERECTED SHALL BE LIFTED AT SUCH POINTS AND IN SUCH A MANNER AS WILL PRECLUDE ANY POSSIBILITY OF DAMAGE DUE TO ERECTION STRESSES. IMMEDIATELY AFTER THE ERECTION, EACH TRUSS SHALL BE MADE SECURE BY PURLINS, BRACING OR GUYS TO APPROVAL. BRACING SHALL BE PLACED IN POSITION AS SOON AS THE DEPENDENT WORK WILL PERMIT. THE STRUCTURE SHALL NOT BE DISTORTED TO MATCH ANY UNFAIR HOLES. IN MAKING CONNECTIONS, DRIFTING FOR UNFAIR HOLES WILL NOT BE PERMITTED AND HOLES NOT MATCHING PROPERLY SHALL BE REAMED OR DRILLED OUT AND A LARGER BOLT INSERTED. NO MEMBER NOR PART OF MEMBER WHICH HAS BEEN BENT OR DISTORTED SHALL BE ERECTED IN THAT CONDITION. ALL STRAIGHTENING SHALL BE DONE ON THE GROUND. ALL BOLTS AND TIE RODS SHALL BE LEFT TIGHT AND ALL BEVELLED WASHERS AND PLATES PROPERLY POSITIONED.

11. BUTT WELDED SPLICES IN BEAMS

NOT MORE THAN ONE BUTT WELDED SPLICE WILL BE PERMITTED IN ANY BEAM.
THE SPLICE SHALL BE PROPERLY FORMED IN ACCORDANCE WITH AS 1554 AND SHALL BE SCARFED.

12. GROUTING AND CAULKING

AFTER A SUFFICIENT NUMBER OF COLUMNS HAVE BEEN ALIGNED, LEVELLED AND PLUMBED AND ADEQUATELY BRACED, THE BASES SHALL BE BEDDED WITH PORTLAND CEMENT GROUT OR MORTAR. IN ALL CASES THE GROUT OR MORTAR SHALL DEVELOP, BEFORE BEING LOADED, SUFFICIENT STRENGTH TO PROVIDE AN ALLOWABLE BEARING STRENGTH AT LEAST EQUAL TO THAT ALLOWED FOR THE MATERIAL ON WHICH IT IS PLACED. THE GROUT MIX SHALL NOT BE LEANER THAN 1:2 CEMENT TO SAND AND SHALL BE MIXED AS DRY AS POSSIBLE. IT SHALL BE THOROUGHLY CONSOLIDATED BY RAMMING AGAINST PROPERLY FIXED SUPPORT, UNTIL THE SPACE HAS BEEN COMPLETELY FILLED WITH THE MORTAR.

13. PAINTING

INTERNAL UNEXPOSED & EXPOSED STEELWORK

ALL STEELWORK IS TO BE SHOT BLASTED TO CLASS 2 1/2 IMMEDIATELY AFTER SHOT BLASTING, STEELWORK IS TO BE PRIMED WITH 75 MICRONS OF ZINC SILICATE PRIMER. ANY PAINT DAMAGED DURING ERECTION IS TO BE TOUCHED UP PRIOR TO BUILDING IN.

EXTERNAL EXPOSED STEELWORK

ALL STEELWORK TO BE HOT DIPPED GALVANISED, INCLUDING ALL BOLTS, WASHES AND NUTS.
REFER TO ARCHITECTS SPECIFICATION FOR PAINT FINISHES

14. PURLINS

PURLINS ARE TO BE DETAILED AS ON THE DRAWINGS AND ARE TO BE GALVANISED.
ALL BOLTS, WASHERS AND NUTS ARE TO BE GALVANISED.

TIMBER

1. GENERAL

(A) THE QUALITY OF ALL TIMBER MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE CURRENT EDITIONS, (INCLUDING AMENDMENTS) OF THE FOLLOWING S.A.A. CODES EXCEPT WHERE CARRIED OUT BY THE SPEC.
  - AS 1720 TIMBER STRUCTURES CODE.
  - AS 1684 RESIDENTIAL TIMBER STRUCTURES
(B) TIMBER GRADE TO BE AS SHOWN WITH DURABILITY SUITED TO LOCATION.
(C) ALL EXTERNAL TIMBER TO BE EITHER PRESERVATIVE TREATED TO CLASS H3 OR PAINTED SEASONED HARDWOOD/LAMINATED VENEER LUMBER.
(D) TIE DOWN ALL ROOF FRAMING IN ACCORDANCE WITH AS1684 AND THIS SPECIFICATION.
(E) FRAMING TO BE IN ACCORDANCE WITH AS1684.

GENERAL FOOTING NOTES

(A) WORKMANSHIP AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE RELEVANT CURRENT STANDARDS AUSTRALIA CODES INCLUDING ALL AMENDMENTS, AND THE LOCAL STATUTORY AUTHORITIES. THE PRINCIPAL CONTRACTOR IS EXPECTED TO STAY ABREAST OF AUSTRALIAN STANDARDS THROUGHOUT THE DURATION OF THE CONSTRUCTION CONTACT.
(B) CONCRETE STRENGTH SHALL BE IN ACCORDANCE WITH THE CONCRETE CHARACTERISTICS TABLE NOMINATED IN THE COVER SHEET OF THIS DRAWING SET AFTER 28 DAYS.
(C) CONCRETE SHALL BE KEPT FREE OF SUPPORTING BRICKWORK WITH 2 LAYERS OF MALTHOID. VERTICAL FACES OF CONCRETE TO BE KEPT FREE BY 10mm MINIMUM THICKNESS OF BITUMINOUS CANEITE.
(D) SLAB REINFORCEMENT TO ACCORD WITH MIN. COVER REQUIREMENTS PER EXPOSURE CLASSIFICATION UNO.
(E) SLAB REINFORCEMENT SHALL BE LAPPED 225mm OR 2 CROSS-WIRES WITH SUPPORT ON BAR CHAIRS TO BE SPACED AT NO MORE THAN 1.0m BOTH WAYS. SLAB MESH REINFORCEMENT TO BE GRADE 500L AND COMPLIANT WITH AS4671.
(F) POLYETHYLENE MEMBRANE TO BE APPROVED 0.2mm THICKNESS. MEMBRANE IS TO BE TAPED AROUND PIPES AND LAPPED 200mm.
(G) ANY PROPOSED SUBSTITUTIONS OR DEVIATIONS FROM THESE PLANS SHALL BE REFERRED TO THE ENGINEER FOR APPROVAL PRIOR TO PROCESSION.
(H) NO TREES ARE TO BE LOCATED A DISTANCE OF 1.5 x 'H' MIN, WHERE 'H' IS THE MATURE TREE HEIGHT AWAY FROM THE FOOTINGS. A SUITABLY QUALIFIED ARBORIST SHOULD BE ENGAGED WHERE THERE IS ANY UNCERTAINTY OR DISCREPANCIES.
(I) ALL DRAINAGE / SOIL IS TO DRAIN AWAY FROM THE BUILDING AT ALL TIMES. APPROPRIATE DRAINAGE IS TO BE INSTALLED TO ELIMINATE WATER PONDING AND WATER INGRESS. DRAINAGE DESIGNS ARE TO BE BY OTHERS (TO AVOID / MINIMISE EDGE BEAM HEAVE). IF RETAINING WALLS ARE REQUIRED, PLEASE ENGAGE THE ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.
(J) THE OWNERS ATTENTION IS DRAWN TO CSIRO SHEET No.10-91 "GUIDE TO HOME OWNERS ON FOUNDATION MAINTENANCE AND FOOTING PERFORMANCE". ALL CURRENT AND FUTURE OWNERS ARE TO BE MADE AWARE OF THIS INFORMATION PRIOR TO CONSTRUCTION / PROPERTY SALE.
(K) ENSURE ANY SERVICE TRENCHES ARE MAINTAINED AT LEAST AT THE DEPTH OF THE EXCAVATION, AWAY FROM THE FOOTINGS (FOR 'CLAY' SITES), AND 2.0x THE DEPTH (FOR 'FILL/SAND/SILT' SITES). PLEASE ENGAGE THE ENGINEER FOR REVIEW SHOULD THIS NOT BE ACHIEVABLE.
(L) FOOTINGS SHALL BE FOUNDED TO UNDISTURBED MATERIAL TO THE MINIMUM SAFE BEARING CAPACITY AS OUTLINED IN THE GEOTECHNICAL REPORT REFERENCED UNDER THE SITE CLASSIFICATION. THE GEOTECHNICAL ENGINEER SHALL BE ENGAGED FOR INDEPENDENT REVIEW SHOULD ANY DISCREPANCIES BE WITNESSED ON-SITE.
(M) THE BASE OF ALL EXCAVATIONS SHALL BE CLEANED OUT OF ALL LOOSE AND DISTURBED MATERIAL PRIOR TO PLACING CONCRETE. CARE SHALL BE TAKEN TO PREVENT LOOSE SURFACE MATERIAL FALLING INTO THE EXCAVATION.
(N) CONCRETE SHALL BE PLACED AS SOON AS POSSIBLE AFTER EXCAVATION AND APPROVAL HAS BEEN GRANTED BY THE ENGINEER AND GEOTECHNICAL CONSULTANT.
(O) OVER-EXCAVATION MAY BE FILLED TO THE UNDERSIDE OF BASE SLABS AS DEFINED ON THE DRAWINGS WITH 15 MPa BLINDING CONCRETE.
(P) THE COST OF FILLING EXCESS DEPTHS AND WIDTHS OF BASE SLABS WITH CONCRETE OVER-AND-ABOVE THE SPECIFIED DIMENSIONS SHALL BE BORNE BY THE CONTRACTOR.
(Q) THE GEOTECHNICAL ENGINEER IS TO INSPECT FOUNDATION SUBGRADES TO ENSURE COMPLIANCE WITH THE GEOTECHNICAL RECOMMENDATIONS USED FOR DESIGN. THE GEOTECHNICAL ENGINEER IS TO BE DIRECTLY ENGAGED BY THE BUILDER, AT THE BUILDERS EXPENSE.

IMPORTANT NOTE

GENERAL FOOTING MOVEMENT (AS A RESULT OF SOIL REACTIVITY) IS EXPECTANT AND MAY CAUSE BUILDING DEFECTS TO OCCUR. THIS FOUNDATION DESIGN IS AIMED TO MINIMISE THIS MOVEMENT, HOWEVER NOT ELIMINATING MOVEMENT ENTIRELY. THE MINIMUM FOOTING SIZING ADOPTED IN THIS DESIGN IS AS PER AS2870-2011. FOOTING MOVEMENT AND BUILDING DAMAGE IS ALSO OUTLINED IN AS2870-2011, APPENDIX B & C. IF THIS POSSIBLE SUPERSTRUCTURE DAMAGE IS NOT ACCEPTABLE AND ONGOING MAINTENANCE IS NOT PREFERRED BY THE OWNER / BUILDER, THEN THE ENGINEER SHALL BE CONTACTED PRIOR TO CONSTRUTION FOR AN ALTERNATIVE PROPOSAL.

MASONRY

1. GENERAL

(A) GENERAL MASONRY MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THIS SPECIFICATION AND THE CURRENT EDITION OF THE S.A.A. CODE FOR MASONRY CONSTRUCTION AS 3700 TOGETHER WITH ANY CODES, STANDARDS OR REGULATIONS REFERRED TO THEREIN. THE CONTRACTOR SHALL KEEP A COPY OF AS 3700 ON SITE.
(B) UNLESS NOTED OTHERWISE, BRICK AND BLOCK STRENGTHS AND MORTAR TYPES ARE TO BE AS FOLLOWS.
(C) MORTAR CLASSIFICATION IN ACCORDANCE WITH AS 3700 - TABLE 5.1 FOR DURABILITY AND 10.1 FOR COMPOSITION:
  - TYPE OF GP PORTLAND CEMENT
  - M3 - 1:1:6 CEMENT:LIME:SAND
  - M4 - 1:1:6 CEMENT:LIME:SAND
  - AN APPROVED WATER THICKENER IS TO BE ADDED TO THE MORTAR IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
(D) THE TOP COURSE OF BLOCK WALLS IS TO BE LAID IN SOLID BLOCKWORK UNLESS SHOWN OTHERWISE ON THE DRAWINGS.
(E) IF ANY PENETRATIONS ARE REQUIRED IN ANY MASONRY WALLS THAT ARE NOT DETAILED ON THE DRAWINGS, REFER THIS MATTER TO THE ENGINEER FOR APPROVAL PRIOR TO PROCEEDING WITH THE WORK.
(F) MASONRY TIES AND FIXINGS TO ABUTTING STEEL, CONCRETE AND REINFORCED MASONRY ELEMENTS ARE TO COMPLY WITH AS 3700 AND ARE TO BE AS FOLLOWS, UNLESS NOTED OTHERWISE.
  - 20 x 3 GALVANISED STEEL TIES AT 600 MAXIMUM CRS TYPICAL.
  - FIX TIES TO STEEL COLUMNS WITH 2 NO. 12 SELF-DRILLING STEEL FASTENERS.
  - REFER ALTERNATIVE METHODS TO THE SUPERINTENDENT.
  - INSTALL TIES AND FIXINGS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
  - INSTALL MASONRY FLEXIBLE ANCHORS (MFA) OR SLIDING ANCHORS WHERE REQUIRED.
(G) REFER TO THE ARCHITECT'S DRAWINGS FOR CONTROL JOINT LOCATIONS. IF NONE ARE SHOWN, VERTICAL MASONRY CONTROL JOINTS ARE TO BE AT 8m MAXIMUM CENTRES AND 5m MAXIMUM FROM CORNERS AND ARE TO BE 10mm WIDE, FREE OF MORTAR AND SEALED WITH AN APPROVED FLEXIBLE SEALANT IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. MATCH VERTICAL JOINT LOCATIONS IN MASONRY WALLS WITH CONTROL JOINTS IN CONCRETE FLOORS FOR BOTH SUPPORTING AND SUPPORTED MASONRY WALLS.
(H) MASONRY WALLS MUST NOT BE CONSTRUCTED ON SUSPENDED CONCRETE FLOORS UNTIL PROPS TO BEAMS AND SLABS HAVE BEEN REMOVED.
(J) NON LOAD BEARING MASONRY WALLS MUST BE SEPARATED FROM THE CONCRETE FLOOR ABOVE BY 10mm UNLESS SHOWN OTHERWISE. TIE THE MASONRY WALL TO THE SLAB WITH APPROVED TIES. ENSURE ACOUSTIC REQUIREMENTS, DUE TO 10mm SEPERATION, ARE SATISFIED AS SPECIFIED BY ARCHITECT.
(K) REINFORCED BLOCKWORK TO BE FILLED WITH GRADE N15 CONCRETE, 10mm MAX AGGREGATE, 200mm SLUMP. COMPACT WITH A VIBRATOR. REINFORCEMENT COVER 25mm MIN TO INSIDE OF FACE SHELL.
(L) MASONRY ANCHORS
  - MASONRY ANCHORS IN HOLLOW CONCRETE BLOCKWORK ARE TO BE M20 HILTI HIT-HY 20 CHEMICAL INJECTION ANCHORS UNLESS SHOWN OTHERWISE.
  - MASONRY ANCHORS IN OLD AND SOFT BRICKWORK ARE TO BE M20 RAMSET CHEMICAL INJECTION ANCHORS UNLESS SHOWN OTHERWISE.
  - MASONRY ANCHORS IN CONCRETE AND REINFORCED CONCRETE BLOCKWORK ARE TO BE M20 RAMSET TRUBOLTS UNLESS SHOWN OTHERWISE.
(M) EXPOSED SINGLE-LEAF WALLS ARE TO BE COATED WITH A SUITABLE PAINT SYSTEM OR SEALING MEMBRANE TO PREVENT WATER PENETRATION.

SITE GEOTECHNICAL CLASSIFICATION

REFER TO SOIL REPORT BY:
MELBOURNE GEOLOGICAL CONSULTANTS
REF NO: 22/07y4 DATE: 10-07-2022
CLASSIFICATION: H1 TO AS2870-2011

NOTE: REFER ALSO TO SOIL INVESTIGATION REPORT FOR ADDITIONAL NOTES, RECOMMENDATIONS, SITE DESIGN PARAMETERS, AND PREPATORY MEASURES. CONSULT THE REPORTING GEOTECHNICAL ENGINEER FOR FURTHER ADVICE SHOULD ANY FIELD DISCREPANCIES OR LATENT GROUND CONDITIONS ARISE. THE 4TH LITTLE PIG IS NOT RESPONSIBLE FOR THE WORK OF THE GEOTECHNICAL ENGINEER. THE 4TH LITTLE PIG DOES NOT ACCEPT ANY RESPONSIBILITY FOR THE ACCURACY, ADEQUACY OR APPROPRIATENESS OF THE GEOTECHNICAL ENGINEERS PROPOSALS. ANY QUERIES IN RESPECT TO THE GEOTECHNICAL REPORT SHOULD BE DIRECTED TO THE GEOTECHNICAL ENGINEER AND BROUGHT TO THE ATTENTION OF THE 4TH LITTLE PIG.

The 4th Little Pig

CONTROLLED DOCUMENT

ISSUE	DATE	ISSUED FOR	REV.
1	23-08-22	PRELIMINARY VERSION	A

DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.

DO NOT SCALE. CHECK AND VERIFY ALL DIMENSIONS ON SITE.
REFER DISCREPANCIES TO THE SUPERINTENDENT.

ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH:
BUILDING CODE OF AUSTRALIA, APPLICABLE AUSTRALIAN STANDARDS & LOCAL AUTHORITY REQUIREMENTS.

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PROJECT:	13 RIPPON ST FOOTSCRAY
DRAWING:	FURTHER NOTES
DESIGNED:	D.P.D.
DRAWN:	D.P.D.
SCALED:	N.T.S. (UNO) AT A3 SIZE DRAWING SHEET
PROJECT No.	220603
DRAWING No.	D02
REV.	A

TREES / SHRUBS

UNLESS SPECIFICALLY INDICATED ON THE FOOTING LAYOUT, TREES AND SHRUBS HAVE NOT BEEN ADDRESSED WITHIN THIS DESIGN. IF SUCH TREES AND / OR SHRUBS DO EXIST WITHIN 1.5 x 'MATURE TREE / SHRUB' HEIGHT FROM THE BUILDING FOOTINGS, AND ARE NOT SHOWN ON THE FOOTING LAYOUT, PLEASE ENGAGE THE ENGINEER IMMEDIATELY AS THIS WILL NECESSITATE CHANGES TO THE FOUNDATION DESIGN(S).

WHERE TREES AND/OR SHRUBS ARE OBSERVED ADJACENT TO THE PROPOSED BUILDING WORKS ON THIS AND/OR ADJOINING SITES (AND LOCATED WITHIN 1.5 x THE 'MATURE TREE/SHRUB HEIGHT FROM THE BUILDING FOOTINGS), THESE TREES/SHRUBS WILL CAUSE BUILDING MOVEMENT TO OCCUR IN THE FUTURE. TREES/SHRUBS TEND TO ABSORB THE MOISTURE FROM WITHIN THE REACTIVE SOILS RESULTING IN DE-HYDRATED SOILS TO VARIOUS DEPTHS BELOW NATURAL GROUND LEVEL.

WHERE TREES AND/OR SHRUBS EXIST WITHIN 1.5 TIMES THEIR FULL MATURE HEIGHT FROM THE FOUNDATIONS OF THE PROPOSED BUILDINGS, AND ARE LOCATED WITHIN THE BUILDING SITE, SUCH TREES AND SHRUBS SHALL BE REMOVED AS EARLY AS POSSIBLE PRIOR TO CONSTRUCTION. UPON REMOVAL (AND THE ROOTS BEING THOROUGHLY GRUBBED OUT), BACKFILLING WITH CLEAN NON-POROUS MATERIAL SHALL BE COMPACTED IN 150mm MAXIMUM LAYERS (WHILST MOIST) TO A MINIMUM 98% AUSTRALIAN STANDARD COMPACTION WITH APPROPRIATE MECHANICAL COMPACTION EQUIPMENT.

THE GROUND MOISTURE CONDITIONS ARE ALSO TO BE STABILISED (RE-HYDRATED) PRIOR TO CONSTRUCTION (AFTER TREE/SHRUB REMOVAL), TO NORMALISE AND MAKE EVEN THE SOIL MOISTURE REGIME THROUGHOUT THE BUILDING SITE. REFER ALSO TO ADDITIONAL GEOTECHNCAL ADVICE FOR MINIMUM RE-HYDRATION PERIODS REQUIRED. EXISTING NEARBY BUILDING DISTRESS MAY ALSO OCCUR RESULTING IN THE REQUIREMENT OF ADDITIONAL RECTIFICATION WORKS.

WHERE TREES AND/OR SHRUBS EXIST WITHIN 1.5 TIMES THEIR FULL MATURE HEIGHT FROM THE FOUNDATIONS OF THE PROPOSED BUILDINGS, AND ARE LOCATED WITHIN NEIGHBOURING SITES, OR WITHIN THE BUILDING SITE HOWEVER CANNOT BE REMOVED, THEN THE FOOTING SYSTEM IS TO BE PIERED AND/OR DEEPENED TO MINIMISE FOOTING MOVEMENT. ALL FOOTINGS ARE TO BE PIERED/DEEPENED TO 3450mm MINIMUM BELOW NATURAL GROUND LEVEL (OR TO DEPTHS AS SPECIFIED BY THE GEOTECHNICAL ENGINEER). PIERED / DEEPENED FOOTINGS ARE NECESSARY FOR THE ADEQUATE LONG-TERM PERFORMANCE OF THE FOOTING SYSTEM. THE PIERED / DEEPENED FOOTINGS MUST BE DEEPENED BELOW THE DRYING EFFECTS CAUSED BY NEARBY TREES/SHRUBS. ALSO, THE GROUND MOISTURE CONDITIONS MUST STABILISE WELL PRIOR TO COMMENCEMENT OF CONSTRUCTION.

TREE ROOT BARRIERS MAY ALSO BE NECESSARY TO ISOLATE ANY TREE ROOT MASS FROM THE BUILDING FOOTINGS. TREE ROOT BARRIERS ARE TO BE INSTALLED TO 2500mm MINIMUM BELOW NATURAL GROUND LEVEL, AND MUST NOT UNDERMINE THE BUILDING FOOTINGS AT ANY TIME. SUCH TREE ROOT BARRIER LOCATIONS AND/OR DEEPENED FOOTINGS ARE TO BE CONFIRMED ON SITE BY OTHERS (PRIOR TO CONSTRUCTION), AND ARE NOT INDICATED ON THESE DRAWINGS. ALL NEARBY TREE/SHRUB LOCATIONS MUST BE CONFIRMED BY A SUITABLY QUALIFIED PROFESSIONAL ON SITE PRIOR TO COMMENCEMENT OF CONSTRUCTION.

THE GROUND IS ALSO TO BE THOROUGHLY RE-MOISTURISED PRIOR TO CONSTRUCTION (AFTER TREE ROOT BARRIER / DEEPENED FOOTING INSTALLATION), TO NORMALISE AND MAKE EVEN THE SOIL MOISTURE REGIME THROUGHOUT THE BUILDING SITE. THE MINIMUM TIME PERIOD REQUIRED FOR RE-MOISTURISATION IS TO BE SPECIFIED BY THE GEOTECHNICAL/SOIL ENGINEER. PLEASE NOTE THAT THIS RE-MOISTURISATION PROCESS MAY CAUSE DISTRESS TO THE EXISTING ADJACENT BUILDINGS AND FOOTINGS, AND HENCE ADDITIONAL RECTIFICATION WORKS REQUIRED.

EASEMENT AND/OR SERVICES

UNLESS SPECIFICALLY INDICATED ON THE FOOTING LAYOUT, THIS BUILDING HAS NOT BEEN CHECKED FOR SEWER AND/OR STORMWATER EASEMENT DETAILS. IF NEARBY EASEMENTS OR SERVICES EXIST, PLEASE CONTACT THE ENGINEER PRIOR TO CONSTRUCTION, AS THIS COULD REQUIRE ALTERATION TO THE FOUNDATION DESIGN(S).

ALL EXISTING ADJACENT SERVICES LOCATIONS ARE TO BE CONFIRMED ON SITE PRIOR TO COMMENCEMENT OF SITE EXCAVATIONS.

ADDITIONALLY, ALL SERVICE TRENCHES ARE TO BE GRADED AWAY FROM THE BUILDING FOOTINGS AT ALL TIMES.

SITE DRAINAGE

THIS FOOTING DESIGN IS BASED ON THE INSTALLATION OF EFFECTIVE DRAINAGE TO DE-WATER THE FOUNDING SOILS AND TO DIVERT GROUNDWATER AWAY FROM THE FOOTINGS WELL PRIOR TO CONSTRUCTION OF THE SLAB. THIS FOOTING DESIGN SHALL ONLY BE VALID IF ADEQUATE SITE DRAINAGE IS ESTABLISHED ON SITE, AND ABNORMAL SOIL MOISTURE CONDITIONS DO NOT EXIST, OR HAVE STABILISED WELL PRIOR TO COMMENCEMENT OF CONSTRUCTION (DRAINAGE DESIGN TO AS3500 AND AS2870 BY OTHERS). REFER ALSO TO THE GEOTECHNICAL REPORT PERTAINING TO THE SUBJECT SITE.

PROVISION SHALL BE MADE TO DRAIN AWAY RAINWATER FROM THE BUILDING FOOTINGS AT ALL TIMES. ADEQUATE SITE DRAINAGE IS CRITICAL ON THIS SITE TO REDUCE THE EXTENT OF FOOTING MOVEMENT. THE SURROUNDING SOILS ARE TO BE DRAINED AWAY FROM THE BUILDING FOOTINGS. ALL SURFACE AND SUBSURFACE WATER IS TO BE DRAINED AND DIVERTED TOWARDS THE "LEGAL POINT OF DISCHARGE". REFER ALSO TO AS2870-2011 MINIMUM DRAINAGE REQUIREMENTS. EFFECTIVE DRAINAGE CONTROL IS THE RESPONSIBILITY OF THE BUILDING CONTRACTOR DURING CONSTRUCTION, AND THE OWNERS & OCCUPIERS UPON HANDOVER (PRESENT & FUTURE).

REMOVAL OF TREES/SHRUBS, PAVING, AND/OR INSTALLATION OF TREE ROOT BARRIERS / DEEPENED FOOTINGS

UPON REMOVAL OF TREES/SHRUBS, PAVING, AND/OR INSTALLATION OF TREE ROOT BARRERS AND DEEPENED FOOTINGS (WHERE REQUIRED), THE SOILS ARE TO BE REMOISTURISED, OR BE ALLOWED TO BE DRIED (DEPENDING ON SITE CONDITIONS AFTER REMOVAL), UNTIL THE SOIL MOISTURE CONDITIONS HAVE STABILISED. THIS IS NECESSARY TO NORMALISE AND MAKE EVEN THE SOIL MOISTURE REGIME THROUGHOUT THE BUILDING SITE PRIOR TO COMMENCING CONSTRUCTION OF THE FOOTINGS. REFER ALSO TO ADDITIONAL ADVICE FROM THE GEOTECHNICAL ENGINEER, PARTICULARLY REGARDING MINIMUM RE-MOISTURISATION PERIOD REQUIRED.

SITE BOUNDARY

UNDER NO CIRCUMSTANCES, SHALL ANY PART OF THE BUILDING WORKS (FOOTINGS, SUPERSTRUCTURE, ETC.) ENCROACH INTO THE NEIGHBOURING PROPERTY. ALL SITE BOUNDARIES MUST BE ESTABLISHED PRIOR TO COMMENCEMENT OF CONSTRUCTION. NEIGHBOURING ASSETS SHALL NOT BE COMPROMISED AT ANY TIME.

UNDERMINING

PROPOSED EXCAVATIONS ARE NOT TO UNDERMINE NEIGHBOURING FOOTINGS AND/OR STRUCTURES AT ANY TIME. ALSO, EXISTING FOOTINGS ARE NOT TO BE UNDERMINED AT ANY TIME. BUILDER IS TO SUFFICIENTLY BRACE ENTIRE STRUCTURE DURING CONSTRUCTION. REFER TO ANGLE OF REPOSE DIAGRAM HEREIN FOR GUIDELINES FOR TRENCHING NEAR FOUNDATIONS.

EXPOSED CONCRETE FINISH AND/OR SLAB HEATING

UNLESS SPECIFICALLY NOTED ON THESE DRAWINGS, THIS FOUNDATION DESIGN DOES NOT ACCOUNT FOR SLAB HEATING, OR FOR AN EXPOSED CONCRETE FINISH.

BRITTLE FLOOR COVERINGS / FLOOR TILES

SHOULD THE DWELLING HAVE LARGE AREAS OF BRITTLE FLOOR COVERINGS (EG TILED AREAS), THEN THE INSTALLATION OF SUCH COVERINGS IS TO BE DELAYED A MINIMUM OF 6 MONTHS AFTER THE COMPLETION OF THE SLAB POUR. IT IS HIGHLY RECOMMENDED THAT A FLEXIBLE TILE ADHESIVE IS USED. IF THE ABOVE IS NOT POSSIBLE THEN THE ENGINEER SHOULD BE CONTACTED PRIOR TO POURING THE SLAB FOR ALTERNATIVES.

SHRINKAGE CRACKING

SLAB CRACKING AS A RESULT OF SHRINKAGE IS INEVITABLE AND CAN CONTINUE FOR USUALLY UP TO 18 MONTHS. IT IS THEREFORE NOT ADVISABLE TO PLACE BRITTLE FLOOR COVERINGS FOR AT LEAST SIX MONTHS AFTER THE CONCRETE SLAB HAS BEEN POURED. THIS PERIOD ALLOWS SHRINKAGE CRACKS TO DEVELOP AND STABILISE PRIOR TO PLACEMENT OF SUCH FLOOR COVERINGS. IT IS ALSO ADVISABLE TO ADOPT FLEXIBLE MORTAR OR GROUT FOR THE INSTALLATION OF THESE FLOOR COVERINGS.

PIPES/SERVICES TO FOOTING CONNECTIONS

SHOULD REACTIVE SOILS BE PRESENT AT THIS SITE, THE CONNECTIONS OF ANY BUILDING SEWERAGE LINES AT THE FOOTING/SOIL INTERFACE MUST BE DESIGNED TO BE MOVEMENT TOLERANT.

WHERE PIPES OR SERVICES CONNECT TO FOOTINGS, ALLOWANCES SHOULD BE MADE FOR SETTLEMENT BY SLEEVING OR TAPPING PIPES WITH FOAM AS PER AS2870 MINIMUM REQUIREMENTS.

BUILDING ARTICULATION (LAYOUT BY OTHERS)

THIS FOOTING DESIGN IS BASED ON THE WALL PROFILE(S) DOCUMENTED IN THE ARCHITECTURAL DRAWINGS REFERENCED ON SHEET 1.
PLEASE CONTACT THE ENGINEER SHOULD ANY REVISIONS TAKE PLACE PRIOR TO CONSTRUCTION.
PROVIDE ADDITIONAL BUILDING ARTICULATION AT THE JUNCTIONS OF ALL SHALLOW TO DEEPENED FOOTING/PIERS, FOOTINGS FOUNDED INTO DIFFERENT FOUNDING MATERIALS, AND ALL EXISTING TO PROPOSED EXTENSION JUNCTIONS.

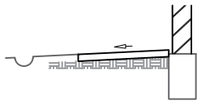
PLEASE REFER ALSO TO THE GEOTECHNICAL REPORT PERTAINING TO THIS SITE.

FOOTINGS BELOW LOAD BEARING WALLS

THIS FOOTING LAYOUT HAS NOT BEEN DESIGNED TO SUPPORT ANY INTERNAL LOAD BEARING WALLS (OTHER THAN SETDOWN FOOTINGS, OR AS SPECIFIED). PROVIDE INCREASED FOOTINGS DIRECTLY BELOW ALL POINT LOADS FROM ABOVE (TYPICAL).

DRAINAGE REQUIREMENTS:

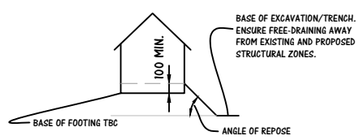
"THE SITE SHOULD BE GRADED OR DRAINED SO THAT WATER CANNOT POND AGAINST OR NEAR THE BUILDING. THE GROUND IMMEDIATELY ADJACENT TO THE BUILDING SHOULD BE GRADED TO A UNIFORM FALL OF 50mm MINIMUM AWAY FROM THE BUILDING OVER THE FIRST METRE. THE SITE DRAINAGE RECOMMENDATIONS SHOULD BE MAINTAINED FOR THE ECONOMIC LIFE OF THE BUILDING." (REFER TO AS2870-2011, Clause B2.3). SURROUNDING SOILS TO BE DRAINAGE AWAY FROM FOOTINGS. ALL SURFACE AND SUB-SURFACE WATER IS TO BE DRAINAGE AND DIVERTED TO THE LEGAL POINT OF DISCHARGE. (REFER TO AS2870-2011).



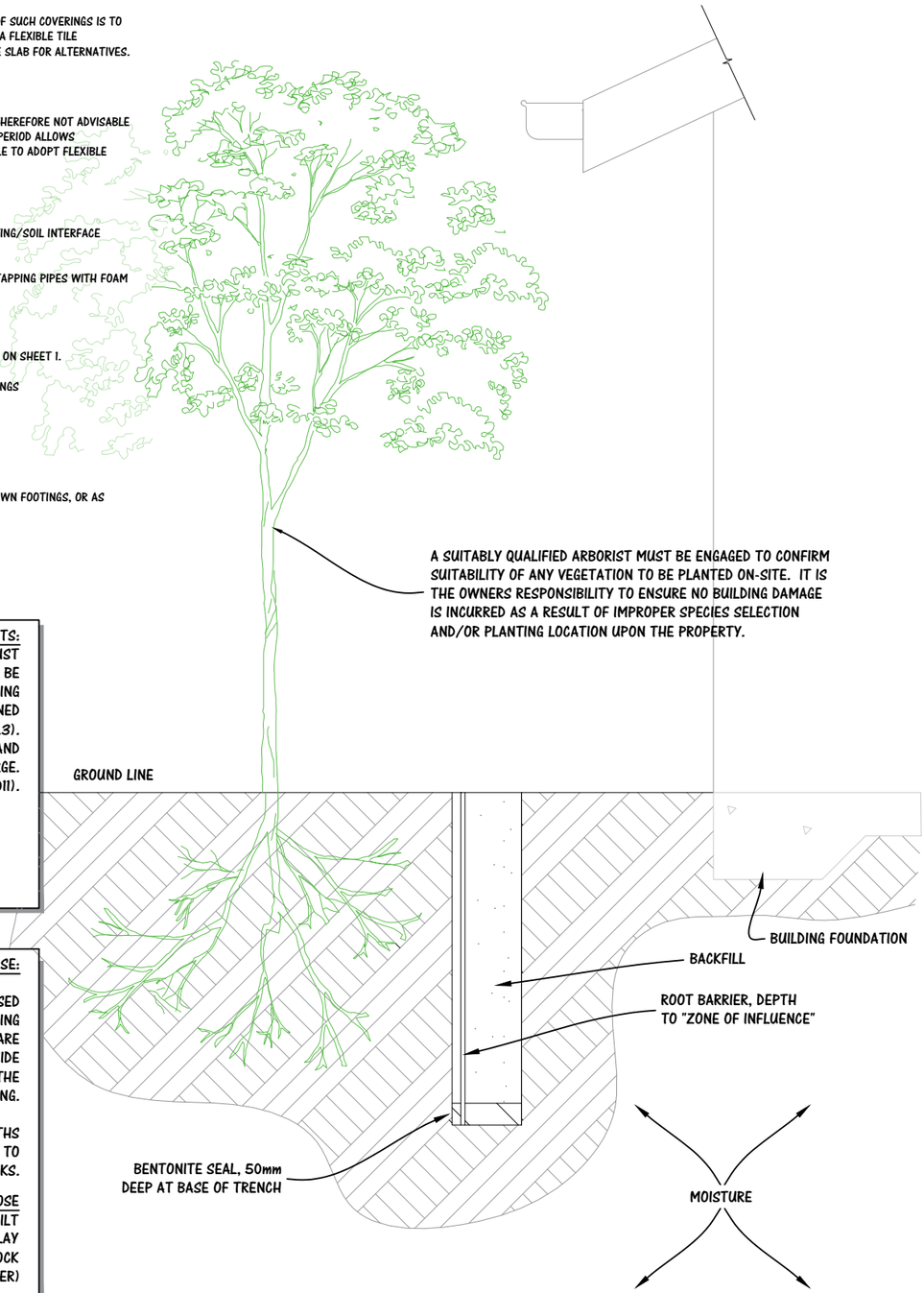
FOOTINGS & ANGLE OF REPOSE:

TRENCHES MUST NOT UNDERMINE EXISTING FOOTINGS NOR BE UNDERMINED BY PROPOSED EXCAVATIONS. ENSURE THE ANGLE OF REPOSE IS SUFFICIENTLY CLEAR AT ALL TIMES DURING CONSTRUCTION IN ACCORDANCE WITH THE DETAIL HEREIN. EXISTING SOIL MATERIALS ARE INDICATED IN THE GEOTECHNICAL REPORT AND SHOULD BE REFERRED TO AS AN INITIAL GUIDE FOR ANGLE OF REPOSE DETERMINATIONS. ANY CLARIFICATIONS SHOULD BE SOUGHT FROM THE GEOTECHNICAL ENGINEER PRIOR TO EXCAVATION AND/OR TRENCHING.

SHOULD ANY UNDERMINING OCCUR, NOTIFY THIS OFFICE IMMEDIATELY. ALL SERVICE DEPTHS AND LOCATIONS, ALONG WITH EXISTING FOOTING DEPTHS, MUST BE CONFIRMED PRIOR TO COMMENCEMENT OF WORKS.



ANGLE OF REPOSE
30° MAX IN SAND AND/OR SILT
45° MAX IN CLAY
60° MAX IN ROCK
(TBC BY GEOTECH ENGINEER)



TREE ROOT BARRIER DETAIL
NOT TO SCALE

The 4th Little Pig

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PROJECT:	13 RIPPON ST FOOTSCRAY
DRAWING:	FOUNDATION PROTECTION GUIDELINES
DESIGNED:	D.P.D.
DRAWN:	D.P.D.
SCALE:	N.T.S. (UNO) AT A3 SIZE DRAWING SHEET
PROJECT No.	220603
DRAWING No.	D03
REV.	A

NOTATION

PROPOSED WALL ON CURRENT FLOOR LEVEL. REFER TO ARCHITECTURAL PLANS FOR FURTHER DETAILS.

(xxx) THICKNESS OF REINFORCED CONCRETE SLAB, SL72 TOP (30 COVER). REFER TO DRAWING FOR ADDITIONAL REINFORCEMENT.

SUB-FLOOR

REFER FOOTING SCHEDULE FOR SIZE, REINFORCEMENT, AND CONSTRUCTION NOTES

EBx — CONCRETE SLAB EDGE BEAM.

IBx — CONCRETE SLAB INTERNAL BEAM.

PFx — CONCRETE PAD FOOTING.

SUPERSTRUCTURE

REFER MEMBER SCHEDULE FOR SIZES & MATERIALS

FJx — FLOOR JOISTS @450c/c UNO

FBx — FLOOR BEAM AND/OR BEARER

PERPENDICULAR EXTENT OF STRUCTURAL MEMBER

Ct — COLUMN

(b) — STRUCTURAL MEMBER BELOW

SEE SHEET D01 - D03 FOR GENERAL PROJECT CONSTRUCTION NOTES

PAD FOOTING SCHEDULE- 250kPa BEARING CAPACITY OPTION

	DIMENSIONS			REINFORCEMENT		
MARK	FOOTING WIDTH	FOOTING LENGTH	FOOTING DEPTH	BTM. X-BARS	BTM. Y-BARS	TOP EA. WAY
PF1	400	400	MIN. 1000 UNO	N12-100	N12-100	N/A

SLAB ON-GROUND SCHEDULE- 150kPa BEARING CAPACITY OPTION

	DIMENSIONS			REINFORCEMENT		
MARK	FOOTING WIDTH	FOOTING LENGTH	FOOTING DEPTH	BTM. X-BARS	BTM. Y-BARS	TOP EA. WAY
EB1	300	N/A	MIN. 400 UNO	3-L11TM	N/A	N/A
IB1	300	N/A	MIN. 400 UNO	3-L11TM	N/A	N/A

MEMBER SCHEDULE

DRAWING REF.	MEMBER NO.	SPECIFICATION
Structural Layout (D05)	Floor Joist FJ01	200mm x 35mm hySPAN
	Floor Beam FB01	200UB18.2 (G300)
	Floor Beam FB02	200x75PFC (G300)
	Column C01	89 x 3.5 SHS (G350)

STEEL SECTION ABBREVIATIONS

SHS	SQUARE HOLLOW SECTION	□
RHS	RECTANGULAR HOLLOW SECTION	▯
CHS	CIRCULAR HOLLOW SECTION	○
UB	UNIVERSAL BEAM	I
UC	UNIVERSAL COLUMN	H
PFC	PARALLEL FLANGE CHANNEL	C
EA	EQUAL ANGLE	L
UA	UNEQUAL ANGLE (LONG LEG VERTICAL)	L

TIE-DOWN SCHEDULE

ROOF TRUSS	30x0.8mm G.I. LOOPED STRAP. 5/2.8mm NAILS PER EACH END
ROOF BATTEN	4.17 DIA. (No 8) SCREW, 35 THREADED PENETRATION TO RAFTER / TRUSS OR EQUIVALENT FIXING
ROOF BEAM / RAFTER	20x0.8 G.I.S LOOPED 3/2.8 DIA NAILS EACH SIDE OR EQUIVALENT FIXING
TOP PLATE / STUD	PRYDA STUD TIE EVERY SECOND STUD OR EQUIVALENT FIXING
STUD / BOTTOM PLATE	PRYDA STUD TIE EVERY SECOND STUD OR EQUIVALENT FIXING
LINTEL TIE-DOWN ROOF BEAM	20x0.8 G.I.S LOOPED 3/3.75 DIA CLOUTS EACH SIDE OR EQUIVALENT FIXING

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PROJECT: 13 RIPPON ST FOOTSCRAY

DRAWING: STRUCTURAL MEMBER SCHEDULES & NOTATIONS

DESIGNED: D.P.D. DRAWN: D.P.D.

SCALE: N.T.S. (UNO) AT A3 SIZE DRAWING SHEET

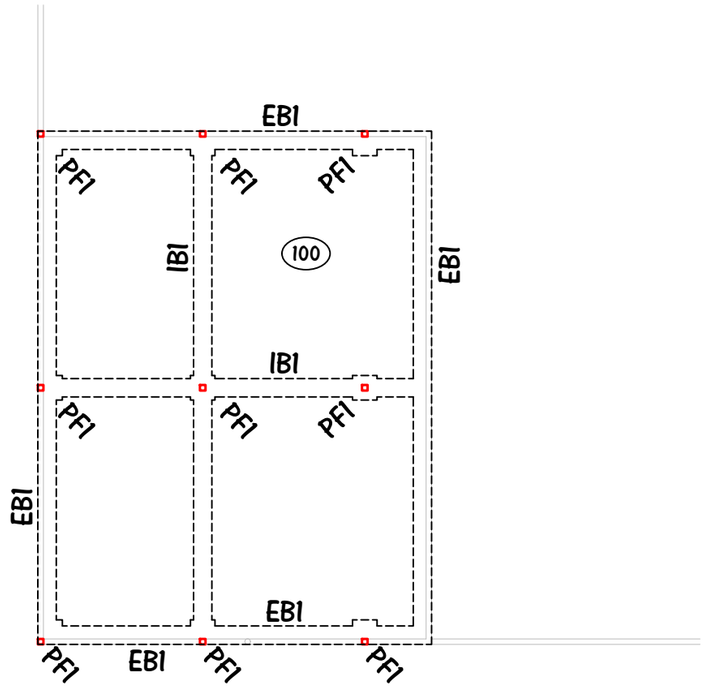
PROJECT No. 220603 DRAWING No. D04 REV. A

SEE SHEET D01 - D03 FOR GENERAL PROJECT CONSTRUCTION NOTES

WALL FRAMING NOTES:

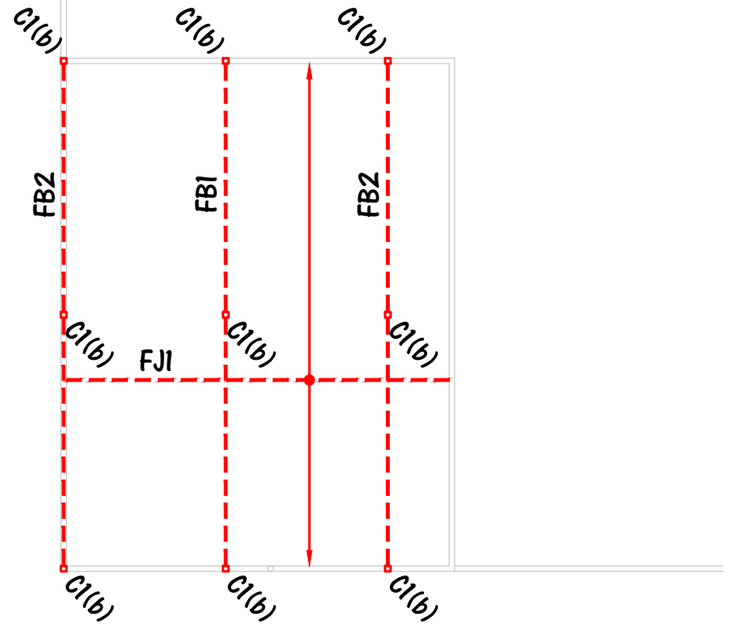
1. REFER TO BUILDING DESIGN PLANS FOR DIMENSIONS AND FINISHED FLOOR LEVELS AS REQUIRED.
2. THESE NOTES AND DETAILS ARE TO BE READ IN CONJUNCTION WITH THE PROJECTS CONTRACT DOCUMENTATION.
3. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THIS INSTALLATION GUIDE, THE CURRENT EDITION OF THE TECHNICAL MANUAL AND OTHER DOCUMENTATION.
4. REFER TO ARCHITECTURAL DRAWINGS FOR ALL SETTING OUT DIMENSIONS.
5. SHOULD ANY OMISSION, PENETRATION, CUTTING OF PANELS, DISCREPANCY OR FAULT EXIST, CONTACT THE ENGINEER IMMEDIATELY FOR A DECISION BEFORE PROCEEDING WITH WORK.
6. ALL LOAD-BEARING WALLS, BEARING ON FLOOR PANELS (WHERE APPLICABLE), SHALL BE SUPPORTED SEPARATELY IN ACCORDANCE WITH THE ENGINEERS DESIGN.
7. THE TEMPORARY RESTRAINT OF WALLS IS THE RESPONSIBILITY OF THE BUILDER / INSTALLER.
8. UNDER NO CIRCUMSTANCE IS ANYTHING (INCLUDING BASKETBALL HOOPS) TO BE FIXED TO WALLS ABOVE LINTELS. OWNERS TO BE NOTIFIED IN WRITING.
9. ALL TIMBER FRAMING, FIXING AND BRACING TO BE IN ACCORDANCE WITH AS 1684, TIMBER FRAMING MANUAL AND ANY SUPPLEMENTS AND ARCHITECTS DRAWINGS & SPECIFICATIONS.
10. ALL CONNECTORS TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS.
11. ALL MULTIPLE / ADJOINING MEMBERS ARE TO BE FIXED TOGETHER TO FORM A SINGLE UNIT.
12. ALL STEEL COLUMNS SHALL BE FIXED TO THE ADJACENT WALL STUDS AT BOTH SIDES WITH M10 BOLTS OR SUITABLE IMPACT FASTENERS AT THE TOP AND BOTTOM OF THE COLUMN ADJACENT TO NOGGINGS. COLUMNS ARE TO BE FOUNDED ON CONCRETE FOOTINGS.
13. ALL EXTERNAL TIMBER SHALL BE TREATED, PAINTED OR BOXED TO PROVIDE MIN. H3 LEVEL PROTECTION AGAINST ENVIRONMENTAL DEGRADATION.
14. MAXIMUM UNDERSIZE FOR ALL TIMBER MEMBERS SHALL BE AS FOLLOWS: (i) 0mm FOR SEASONED PINE SPECIES AND OTHER SEASONED SOFTWOODS (ii) 3mm FOR UNSEASONED HARDWOODS (iii) 0 FOR SEASONED HARDWOODS (iv) 4mm FOR OREGON

TO RIPPON ST



SUBFLOOR PLAN

SCALE 1:100 (A3)



FRAMING PLAN

SCALE 1:100 (A3)

FOUNDATION CONSTRUCTION NOTES:

1. REFER TO BUILDING DESIGN PLANS FOR DIMENSIONS AND FINISHED FLOOR LEVELS AS REQUIRED.
2. ALL EXISTING ADJACENT SERVICES LOCATIONS ARE TO BE CONFIRMED ON-SITE PRIOR TO COMMENCEMENT OF SITE EXCAVATIONS. ADDITIONALLY, ALL SERVICE TRENCHES ARE TO BE GRADED AWAY FROM THE BUILDING FOOTINGS AT ALL TIMES (TYP.)
3. REFER TO FOUNDATION TYPICAL DETAILS FOR MINIMUM ALLOWABLE BEARING CAPACITY OF FOUNDING MATERIAL. BUILDER / CONTRACTOR TO MAKE ALLOWANCE FOR GROUND CONDITION LIMITATIONS AS NOTED IN THE GEOTECHNICAL REPORT. ANY LATENT CONDITIONS ENCOUNTERED SHALL BE REPORTED TO THE ENGINEER PRIOR TO CONTINUATION OF WORKS.
4. NO ENCROACHMENT NOR DISTURBANCE SHALL BE INCURRED UPON OR BEYOND THE EXISTING TITLE BOUNDARIES WITHOUT PRIOR WRITTEN CONSENT FROM THE NEIGHBOURING PROPERTY OWNER.
5. USE APPROPRIATE FLEXIBLE BEDDING MORTAR FOR BRITTLE COVERINGS WHERE BRITTLE AREA (EG CERAMIC TILES) IS GREATER THAN 16 SQM. ALTERNATIVELY, THE LAYING OF TILES (WITH FLEXIBLE ADHESIVE) SHOULD BE DELAYED FOR AT LEAST 90 DAYS.
6. SITE SCRAPE A MINIMUM OF 100mm OF TOPSOIL. REMOVE ALL ORGANIC MATERIAL FROM THE BUILDING SITE.
7. PERFORM THE SITE CUT TO REQUIRED BENCH LEVEL.
8. FOLLOWING THE SITE CUT, WHERE THE DEPTH OF ANY REMAINING FILL IS GREATER THAN 150mm:
   - 8.1. REMOVE ALL FILL DOWN TO 150mm
   - 8.2. COMPACT THE REMAINING 150mm LAYER OF FILL IN ACCORDANCE WITH AS2870-2011 SECTION 6.4
   - 8.3. ANY ADDITIONAL REQUIRED FILL IS TO BE COMPACTED IN ACCORDANCE WITH 5 (BELOW)
9. WHERE THE DEPTH OF FILL IS LESS THAN 150mm, THEN THE FILL IS TO BE COMPACTED IN ACCORDANCE WITH BELOW
10. ANY ADDED FILL FORMING PART OF THE CUT/FILL OPERATIONS SHALL BE COMPACTED IN 150mm MAXIMUM LAYERS (OR 300mm MAXIMUM LAYERS FOR SAND FILL) AT OPTIMUM MOISTURE CONTENT. THE LAYERS ARE TO BE COMPACTED IN ACCORDANCE WITH AS2870-2011 ESECTION 6.4 . EXTEND 1000mm PAST THE SLAB EDGE
11. IF THE FILL ON THE SITE IS NOT COMPACTED AS PER THE ABOVE SPECIFICATIONS, THE CONTACT SHOULD BE MADE TO THIS OFFICE FOR FURTHER ADVICE. EDGE BEAMS TO BE DEEPENED TO NATURAL OR CONTROLLED FILL MAY BE ACCEPTABLE.
12. IN AREAS WHERE THE SLAB IS SUSPENDED OVER BORED OR BULK PIERS, FILL IS NOT REQUIRED TO BE REMOVED OR COMPACTED AS ABOVE.
13. A MAXIMUM OF 50mm LAYER OF BEDDING MATERIAL IS RECOMMENDED TO BE PLACED OVER THE BUILDING AREA (EXTENDING 1000mm OUTSIDE THE BUILDING CODE LINE). IT IS TO BE WELL-GRADED CRUSHED ROCK EQUIVALENT TO CLASS 3 QUARRY PRODUCT OR SIMILAR. IT IS CONSIDERED TO BE ACCEPTABLE TO EXCEED 50mm IN DEPTH ONLY FOR LOCALISED SMALL DEPRESSIONS IN SUB-BASE PROVIDED THESE AREAS ARE WELL-COMPACTED IN ACCORDANCE WITH FOOTING CODE AS2870-2011.
14. PLUMBER IS TO LAY DRAINAGE PIPES BELOW THE GROUND SURFACE. ALL RISERS ARE TO BE FIRMLY STAKED.
15. PREPARE THE FORMWORK IN ACCORDANCE WITH THE FOOTING PLAN AND DETAILS. WAFFLE PODS ARE TO BE PLACED IN ACCORDANCE WITH START LOCATION ON THE SLAB LAYOUT PLAN. WAFFLE PODS ARE TO BE CUT AND TAPED AROUND PLUMBING PIPES.
16. PLACE ALL SLAB REINFORCEMENT AS INDICATED BY THE SLAB LAYOUT PLAN AND POUR CONCRETE.
17. POLISHED CONCRETE (WHERE APPLICABLE) MUST ADOPT A MIN. 32MPa CONCRETE MIX.

2 1.5 1 0.5 0 1 2 3 4 5 6 7 8

Reduced plot - A1 to A3 - 2 x SCALE.

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PROJECT: 13 RIPPON ST FOOTSCRAY

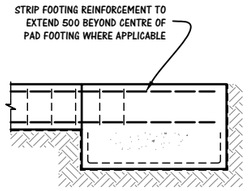
DRAWING: STRUCTURAL LAYOUT
GROUND FLOOR - SUBFLOOR

DESIGNED: D.P.D. DRAWN: D.P.D.

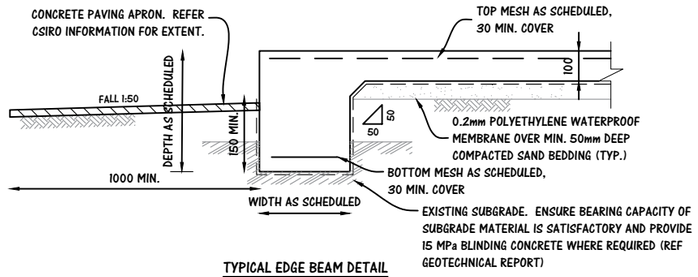
SCALES: N.T.S. (UNO) AT A3 SIZE DRAWING SHEET

PROJECT No. 220603 DRAWING No. D05 REV. A

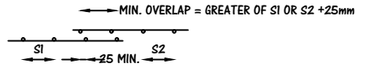
SEE SHEET D01 - D03 FOR GENERAL PROJECT CONSTRUCTION NOTES



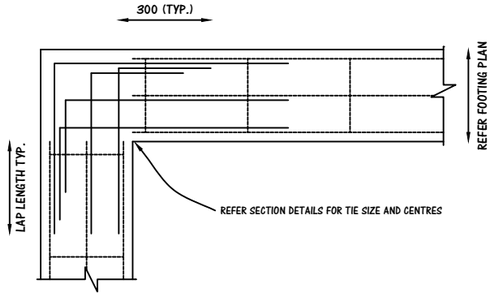
PAD / STRIP FOOTING TRANSITION DETAIL



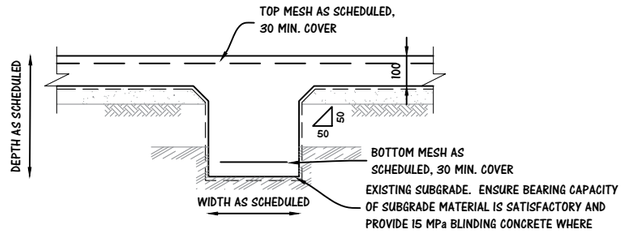
TYPICAL EDGE BEAM DETAIL



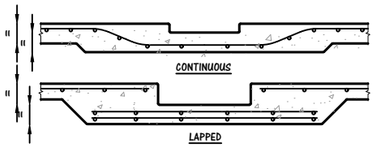
TENSION LAP SPLICE IN CONVENTIONAL FABRIC DETAIL



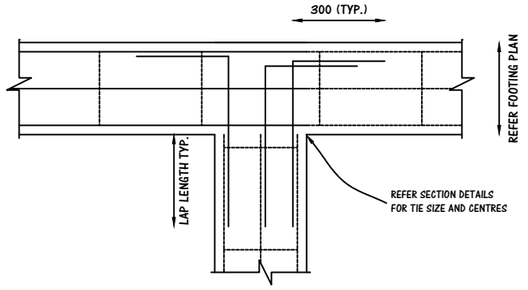
EDGE BEAM 90° CORNER DETAIL



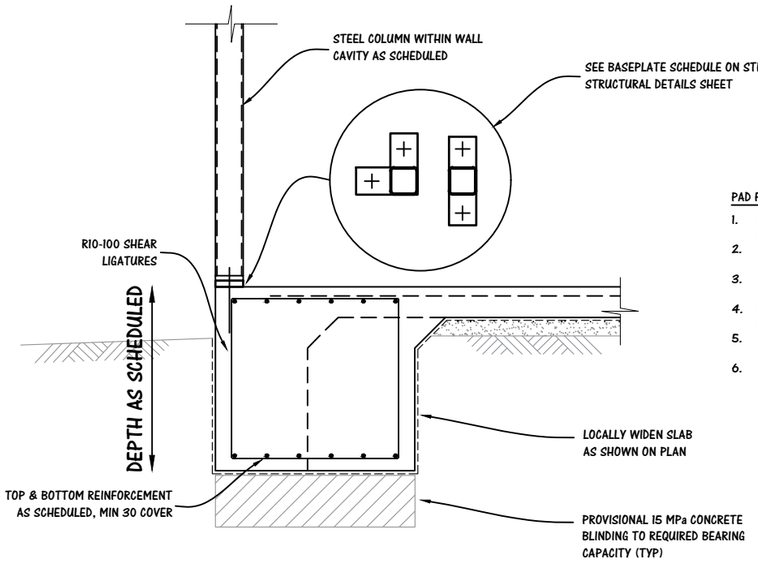
TYPICAL INTERNAL BEAM DETAIL



SLAB RECESS ALTERNATIVE DETAILS



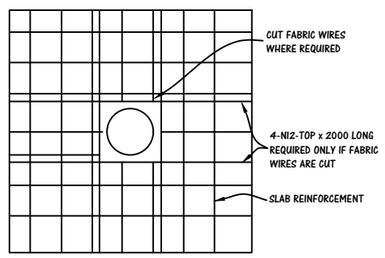
EDGE BEAM INTERSECTION DETAIL



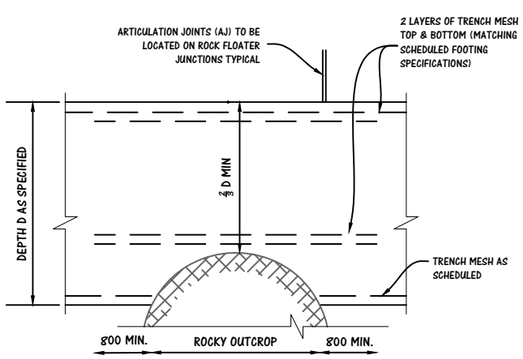
TYPICAL STEEL BASE PLATE DETAIL (UNO)

PAD FOOTING NOTES:

1. FOR REINFORCEMENT, DIMENSIONS, ETC. REFER TO FOOTING SCHEDULE
2. OVERBREAK BELOW FOOTINGS TO BE FILLED TO UNDERSIDE OF FOOTING WITH BLINDING CONCRETE
3. OVERBREAK AROUND FOOTINGS TO BE FILLED WITH CONCRETE OF THE SAME GRADE AS FOOTINGS
4. FOUND MIN. 100mm INTO NATURAL MATERIAL AS PER GEOTECHNICAL REPORT GUIDELINES
5. DETAILS ABOVE APPLY UNLESS SHOWN OTHERWISE ON THE DRAWINGS
6. REFER ALSO TO STANDARD NOTES ON COVER SHEET



TYPICAL SLAB PENETRATION DETAIL



PROVISIONAL DETAIL WHERE ROCK FLOATERS CONFLICT WITH FOOTING

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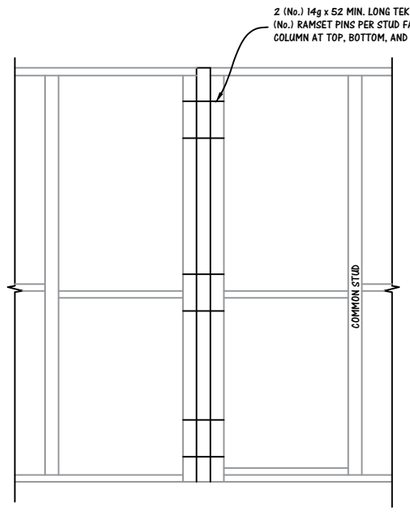
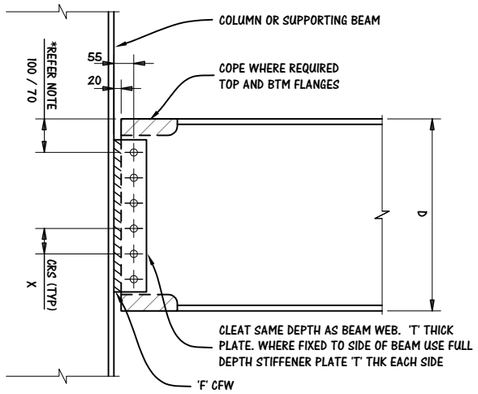
PROJECT: 13 RIPPON ST FOOTSCRAY
DRAWING: CONCRETE STRUCTURAL DETAILS
DESIGNED: D.P.D. DRAWN: D.P.D.
SCALES: N.T.S. (UNO) AT A3 SIZE DRAWING SHEET
PROJECT No. 220603 DRAWING No. D06 REV. A

SEE SHEET D01 - D03 FOR GENERAL PROJECT CONSTRUCTION NOTES



COLUMN TO STUDS DETAIL



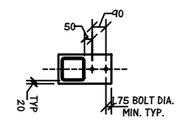
NOTE:
* DENOTES 70 FOR 200 DEEP OR LESS MEMBER. 100 FOR ALL OTHER SECTIONS.
FOR FIN PLATES TO RC & PRECAST, REFER TO TYPICAL 'T' CLEAT DETAIL ON THIS PAGE.

NOM. DEPTH	CONNECTION DETAILS			
	T	F	BOLTS	X
150 / 180	8	8	2M20	70
200	10	8	2M20	70
250	10	10	2M20	70
310	10	10	3M20	70
360	10	12	3M20	70
410	10	6	4M20	70
460	10	6	4M20	70

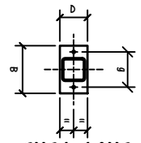
TYPICAL BEAM TO BEAM FIN PLATE CONNECTION DETAILS FOR PFC / UB / WB / UC / WC MEMBERS

NOTE: ALSO REFER TO TYPICAL COLUMN BASE PLATE DETAILS

NOTES:
- WELDS- 6 CFW (E48xx)
- BOLTS- 4.6/S
- COLUMN SHAFTS WITH COLD-SAWN ENDS
- PROVIDE FULL BEARING CONTACT U.N.O

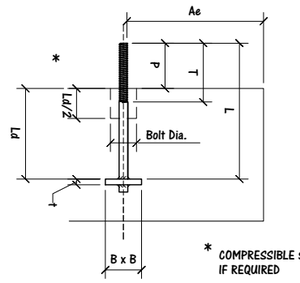


SHS 'or' CHS



SHS 'or' CHS

COLUMN BASE PLATE SCHEDULE								
SECTION	D	B	t	p	g	BOLTS		HOLE
						No.	Dia.	Dia.
89 SHS	110	260	12	-	180	2	20	26



* COMPRESSIBLE SLEEVE IF REQUIRED

HOLDING DOWN BOLT DETAILS

HOLDING DOWN BOLTS U.N.O
Material
Grade 4.6 AS 1111
Finish
Galvanised AS/NZS 4680
For External Situations

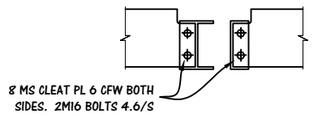
NUTS AND WASHERS
Material
Grade 4.6 AS 1237
Finish
Galvanised AS 1650
For External Situations

BASE PLATE
Material
Grade 250 AS3679
Finish
Black

THREAD LENGTH THREAD PROJ. EMBED. EDGE DIST. PLATE THICKNESS WELD (E48xx)

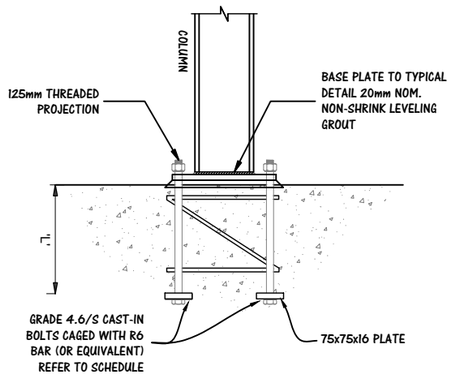
SIZE	L	T	P	Ld	Ae	B	t	tw
M30	440	170	140	300	450	125	20	8
M24	375	150	125	250	375	100	16	6
M20	325	150	125	200	300	75	12	6
M16	250	125	100	150	225	65	10	6

HOLDING DOWN BOLT NOTES :
- FOR EMBEDMENT LENGTHS OR EDGE DISTANCES LESS THAN THESE VALUES, FULLY DEVELOPED REINFORCEMENT MUST BE PROVIDED TO INTERCEPT POTENTIAL CRACKING PLANES.
- CONCRETE UNREINFORCED, Fc = 25MPa MINIMUM
- TACK WELD 10mm BAR AROUND HOLDING DOWN BOLTS TO FORM A CAGE, TYPICALLY



TYPICAL TIMBER BEAM - STEEL BEAM CONNECTION DETAIL

BOLT DIA.	'L' MIN
16	450
20	500
24	600
30	800



TYPICAL COLUMN HOLDING DOWN BOLTS TO FOOTING DETAIL

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PROJECT: 13 RIPPON ST FOOTSCRAY

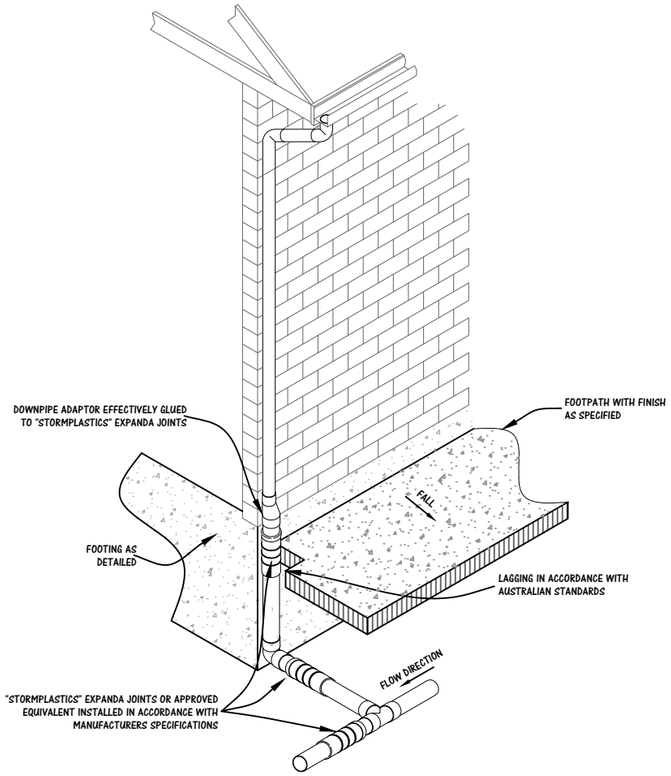
DRAWING: STEEL STRUCTURAL DETAILS

DESIGNED: D.P.D. DRAWN: D.P.D.

SCALED: N.T.S. (UNO) AT A3 SIZE DRAWING SHEET

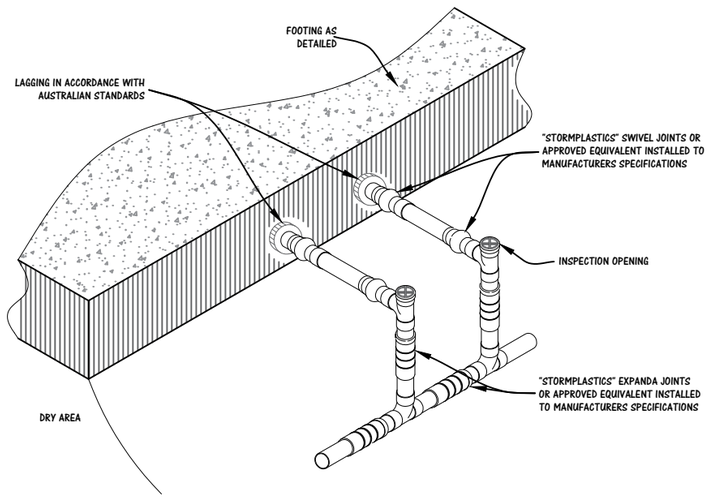
PROJECT No. 220603 DRAWING No. D15 REV. A

SEE SHEET D01 - D03 FOR GENERAL PROJECT CONSTRUCTION NOTES



TYPICAL STORMWATER PIPE CONNECTIONS (REACTIVE SITES)

NOT TO SCALE



TYPICAL STORMWATER / SEWER PIPE CONNECTIONS (REACTIVE SITES)

NOT TO SCALE

AS2870-2011 SPECIFIC "DRAINAGE & PLUMBING REQUIREMENTS:

REFER TO: CLAUSES 5.6.3 & 5.6.4 OF AS2870-2011.

DRAINAGE REQUIREMENTS

REFER ALSO TO AS2870-2011:

DUE TO THE REACTIVITY OF THE SOILS ON THIS SITE, THE STORMWATER DRAINAGE AND SEWERAGE SYSTEMS MUST BE DESIGNED WITH FLEXIBLE CONNECTIONS TO TOLERATE FOUNDATION MOVEMENT. ON REACTIVE SITES, THE SOILS WILL EXPAND AND CONTRACT SUBJECT TO THE MOISTURE LEVELS WITHIN THE FOUNDING SOILS. AS THE MOISTURE LEVELS VARY, THE FOUNDATION MOVEMENT BELOW THE FOOTINGS WILL ALSO VARY, HENCE RESULTING IN BUILDING DAMAGE. IT IS CRITICAL TO MAINTAIN A CONSTANT GROUND MOISTURE REGIME THROUGHOUT THE SITE TO ENSURE GROUND MOVEMENT IS MINIMISED AND STABILISED AS BEST AS POSSIBLE.
THE ENTIRE SITE SHALL BE GRADED AND DRAINED AWAY FROM BUILDING FOOTINGS, AND TOWARDS THE LEGAL POINT OF DISCHARGE. SURFACE WATER MUST NOT BE ALLOWED TO POND AND DRAIN TOWARDS THE BUILDING FOOTINGS UNDER ANY CIRCUMSTANCES. A MINIMUM GRADE OF 50mm FALL IS REQUIRED OVER THE FIRST METRE AWAY FROM THE BUILDING FOOTINGS. ALL SURFACE AND SUBSURFACE WATER MUST DRAIN TOWARDS THE LEGAL POINT OF DISCHARGE, INCLUDING DURING THE CONSTRUCTION PHASE, AS WELL AS FOR THE ULTIMATE BUILDING FOOTPRINT AND SITE LAYOUT FOR THE ENTIRE LIFESPAN OF THE BUILDING.
WHERE EXCAVATED TRENCHES ARE NECESSARY FOR PLUMBING REQUIREMENTS, THE BASE OF ALL TRENCHES WITHIN 1500mm OF THE BUILDING MUST BE BACKFILLED WITH WELL-COMPACTED CLAY TO THE UPPER 300mm OF THE TRENCH.
ALL TRENCHES WHICH EXTEND FROM BENEATH THE BUILDING MUST BE BACKFILLED WITH WELL-COMPACTED CLAY (OR APPROVED EQUIVALENT) TO THE ENTIRE DEPTH OF THE TRENCH TO CREATE AN IMPERVIOUS BARRIER. ANY SUBSURFACE WATER MUST NOT BE ALLOWED TO ENTER BENEATH THE FOOTING SYSTEM.
SUBSURFACE DRAINS FOR THE COLLECTION AND DIVERSION OF GROUNDWATER SHALL NOT BE ADOPTED WITHIN 1500mm OF THE BUILDING ENVELOPE.

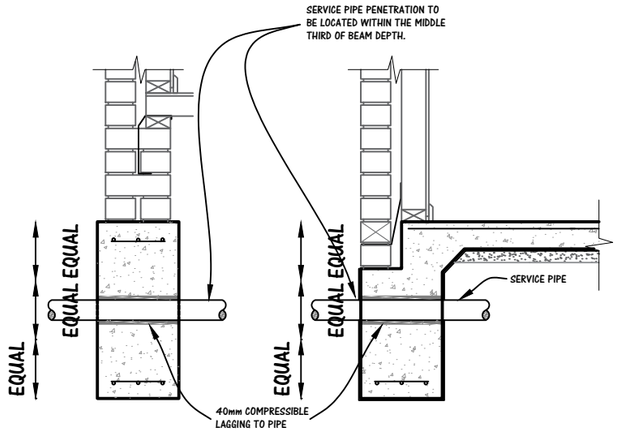
PLUMBING REQUIREMENTS

REFER ALSO TO AS2870-2011:

DUE TO THE REACTIVITY OF THE SOILS ON THIS SITE, THE STORMWATER DRAINAGE AND SEWERAGE SYSTEMS MUST BE DESIGNED WITH FLEXIBLE CONNECTIONS TO TOLERATE FOUNDATION MOVEMENT. WHERE PIPE PENETRATIONS THROUGH FOOTING BEAMS ARE NECESSARY AND CANNOT BE AVOIDED, PROVIDE 40mm THICK CLOSED-CELL POLYETHYLENE LAGGING TO ALL PIPES AT SUCH PENETRATIONS. INCREASED PIPE SLEEVES (OF EQUIVALENT MOVEMENT TOLERANCE) MAY BE ADOPTED AS AN ALTERNATIVE. ANY PIPEWORK TRAVERSING THROUGH THE FOOTING SYSTEM, OR FROM BELOW THE FOOTING SYSTEM, SHALL INCORPORATE FLEXIBLE JOINTS DIRECTLY ADJACENT TO THE BUILDING ENVELOPE, AND WITHIN THE FIRST 1000mm OF THE BUILDING. SUCH JOINTS ARE TO TOLERATE DIFFERENTIAL MOVEMENT (IN ALL DIRECTIONS) OF 75mm FOR SITES OF CLASS "H" SOIL CLASSIFICATIONS. WHERE 'P - PROBLEM' SITES ARE ENCOUNTERED, THIS JOINT MOVEMENT CAPACITY IS TO BE INCREASED (PLEASE CONTACT THIS OFFICE). WHERE DESIGN GUIDANCE FOR SUCH FLEXIBLE JOINTS IS LIMITED, THE FLEXIBLE JOINT POSITION SHALL BE SET AT MID-RANGE TO ALLOW FOR MOVEMENT IN ALL DIRECTIONS.
ALL HOT AND COLD WATER PIPES BENEATH A SLAB SHALL BE INSTALLED WITHIN A CONDUIT.
ALL PIPE AND DRAINAGE INSTALLATIONS SHALL COMPLY WITH AS2870, AS3500, AND ANY OTHER RELEVANT AUSTRALIAN STANDARDS AND BUILDING REGULATIONS.

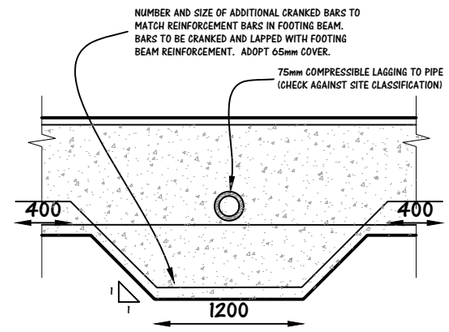
MINIMUM REQUIREMENT FOR EXPANSION/FLEXI JOINTS			
SITE CLASS	DESIGN Ys MOVEMENT (mm)	MIN. EXPANSION JOINT CAPACITY REQUIREMENT	ALLOWABLE ROTATION
E	Ys>75	150mm	15
H2	60<Ys<=75	90mm	
H1	40<Ys<=60	50mm	
M	Ys<40	MIN. 25mm LAGGING THROUGH FOOTING	N/A

MINIMUM REQUIREMENTS FOR SEWER ARTICULATION			
SITE CLASS	DESIGN Ys MOVEMENT (mm)	SWIVEL	EXPANDER
M	Ys<40	1	0
H1	40<Ys<=60	1	1
H2	60<Ys<=75	2	1
E	Ys>75	2	1



TYPICAL SERVICE PIPE BEAM PENETRATION DETAIL

NOT TO SCALE



TYPICAL SERVICE PIPE PENETRATION DETAIL

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PROJECT: 13 RIPPON ST FOOTSCRAY

DRAWING: SERVICE PIPE DETAILS

DESIGNED: D.P.D. DRAWN: D.P.D.

SCALE@: N.T.S. (UNO) AT A3 SIZE DRAWING SHEET

PROJECT No. 220603 DRAWING No. D19 REV. A