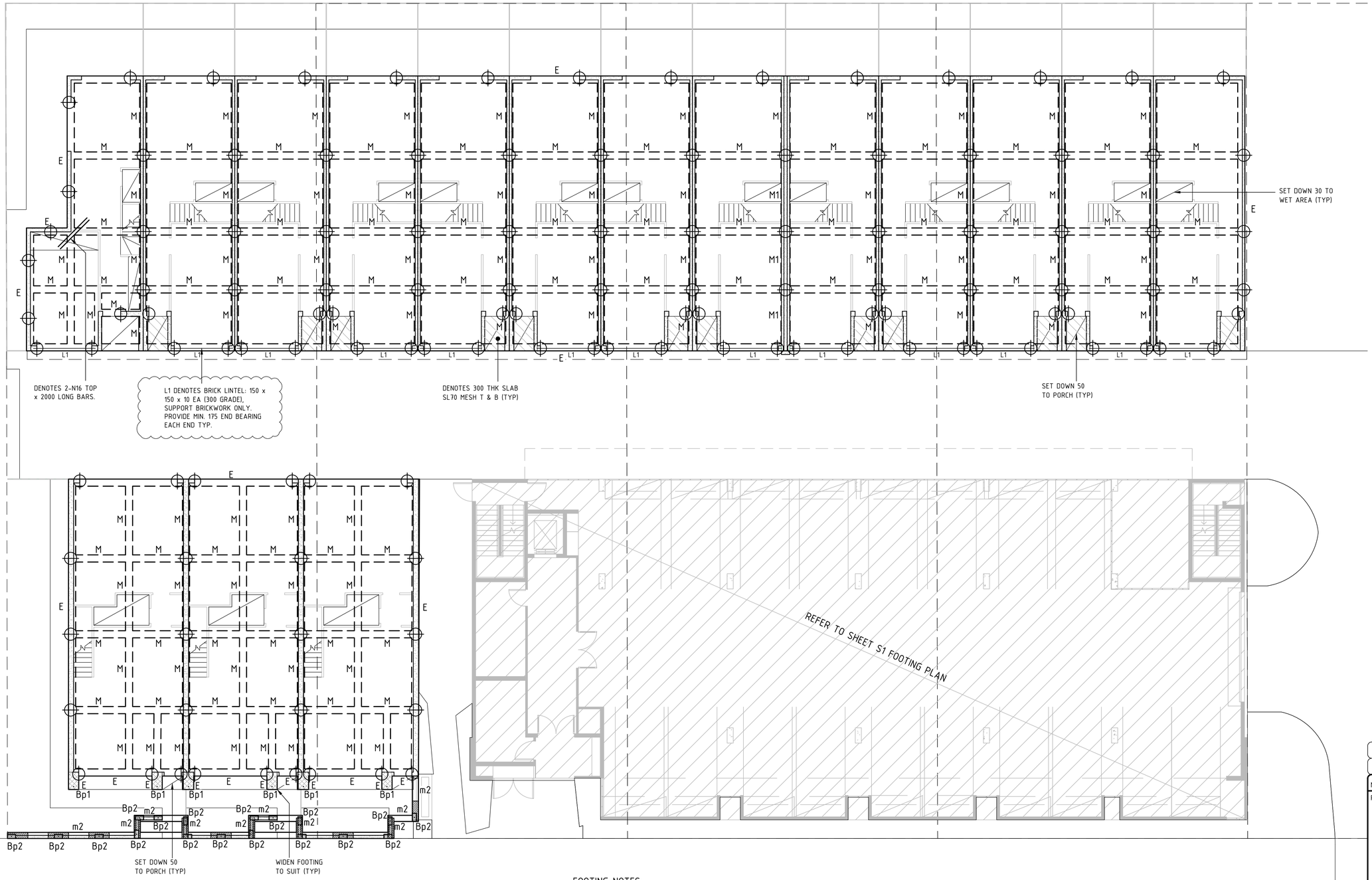

1. GENERAL:
1.1 THESE NOTES SHALL BE READ IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS, THE SPECIFICATIONS AND THE ENGINEER'S FOOTING CONSTRUCTION REPORT/STRUCTURAL DOCUMENTATION, ETC.
1.2 ALL DIMENSIONS AND LEVELS SHALL BE CONFIRMED WITH THE ARCHITECTURAL DRAWINGS AND/OR CHECKED ON SITE.
1.3 ENGINEER'S DRAWINGS MUST NOT BE SCALED.
1.4 THE BUILDER AND/OR AGENT SHALL BE RESPONSIBLE FOR MAINTAINING THE STABILITY OF ALL STRUCTURES AND ANY ELEMENTS UNTIL THEIR COMPLETION AND SHALL ENSURE THAT NO PART OF STRUCTURES OR ANY ELEMENTS ARE OVERSTRESSED BY EXCESSIVE LOADING.
1.5 THE SPECIFICATION BELOW SHALL APPLY UNLESS NOTED OTHERWISE
1.6 REQUEST FOR INFORMATION WILL GENERALLY BE RESPONDED BY THE ENGINEER WITHIN 5 WORKING DAYS, WHILST REVIEWS OF SHOP DRAWINGS GENERALLY WITHIN 10 WORKING DAYS.
2. CONCRETE:
2.1 CONCRETE CONSTRUCTION TO COMPLY WITH AS3600.
2.2 CONCRETE SHALL BE AS FOLLOWS:
GRADE N20 (ie. 20 MPa) TO SLAB ON GROUND & FOOTINGS PROTECTED BY VAPOUR BARRIER, AND RESIDENTIAL STRIP/PAD FOOTINGS.
GRADE N25 TO SUSPENDED SLABS, BEAMS, COLUMNS AND NON-RESIDENTIAL FOOTINGS UNPROTECTED BY VAPOUR BARRIER.
GRADE N32 TO MEMBERS EXPOSED TO EXTERIOR ENVIRONMENTS OR CONCRETE TO HAVE A POLISHED FINISH.
MAXIMUM AGGREGATE 20mm. SLUMP NORMAL 100mm U.N.O.
FOR SITES WITHIN 1KM OF THE SHORE LINE OR LARGE EXPANSES OF SALTWATER, HEAVY INDUSTRIAL AREAS OR HIGH SULPHATE SOILS WHERE SURFACES (eg/VERANDAHS, BALCONIES, CARPORTS) ARE EXPOSED, THE SURFACE SHALL BE PROTECTED WITH SUITABLE TOPPING, SEALER, TILES ETC., OR THE CONCRETE GRADE SHALL BE NOT LESS THAN N40.
2.3 CONSTRUCTION JOINTS ARE TO BE THOROUGHLY SCABBLED OF ALL LAITENCE AND POORLY COMPACTED MATERIAL. VERTICAL JOINTS TO BE POURED AGAINST SHUTTERING (REFER ALSO CRS CLAUSE 2.7.3).
2.4 ALL CONCRETE TO BE PROPERLY CURED BY KEEPING ALL EXPOSED SURFACES IN A MOIST, DAMP CONDITION FOR AT LEAST THE FIRST 7 DAYS. AFTER PLACING OR BY SPRAYING WITH AN APPROVED CURING COMPOUND, SUBJECT TO COMPATIBILITY WITH PROPOSED SURFACE FINISHES.
2.5 MINIMUM STRIPPING TIMES:
SLABS-SOFFIT 14 DAYS, PROPS 21 DAYS
BEAMS-SIDES 3 DAYS, SOFFIT 21 DAYS
COLUMNS AND WALLS - (UNLOADED) 3 DAYS
2.6 REINFORCEMENT DESIGNATIONS ARE AS FOLLOWS:
R - PLAIN ROUND STRUCTURAL BAR TO AS/NZS 4671
F - HARD DRAWN WIRE FABRIC TO AS/NZS 4671
W - HARD DRAWN WIRE BAR TO AS/NZS 4671
N - HOT ROLLED DEFORMED BAR TO AS/NZS 4671
SL - SQUARE RIBBED FABRIC TO AS/NZS 4671
RL - RECTANGULAR RIBBED FABRIC TO AS/NZS 4671
2.7 PROVIDE 0.2mm HIGH IMPACT RESISTANCE REINFORCED POLYETHYLENE MEMBRANE TO AS 2870 THROUGHOUT UNDERSIDE OF FLOOR SLABS ON GROUND. ALL LAPS TO BE 300mm AND SEALED WITH A 50mm WIDE STRIP OF PRESSURE SENSITIVE WATERPROOF TAPE.
2.8 ALL FILLING TO BE NON-CLAY MATERIAL COMPACTED IN 200mm LAYERS TO 98% MAXIMUM DRY DENSITY WHEN TESTED IN ACCORDANCE WITH ASSTM E5.11 STANDARD (1993).
2.9 WHERE ROD REINFORCEMENT IS SPLICED, THE MINIMUM LAP LENGTH SHALL BE: N12-500 LAP, N16-750 LAP, N20-1000 LAP, N24-1450 LAP, N28-1800 LAP, N32-2150 LAP, N36-2600 LAP.
2.10 LAPS TO SLAB MESH TO BE ONE IS FULL MESH PANEL PLUS 25mm.
2.11 CLEAR CONCRETE COVER TO REINFORCEMENT (INCLUDING FITMENTS AND WIRE TIES) SHALL BE:
SLAB ON FILL - 30mm BOTTOM AND SIDES, 30mm TOP.
FOOTINGS PROTECTED BY VAPOUR BARRIER - 40mm BOTTOM AND SIDES, 20mm TOP.
RESIDENTIAL FOOTINGS UNPROTECTED BY VAPOUR BARRIER - 40mm TOP, 50mm BOTTOM AND SIDES
NON-RESIDENTIAL FOOTINGS UNPROTECTED BY VAPOUR BARRIER - 50mm TOP, BOTTOM AND SIDES
SUSPENDED SLABS, BEAMS AND COLUMNS - 20mm INTERNAL, 40mm EXTERNAL
2.12 CONCRETE TO BE KEPT FREE OF LOAD BEARING BRICKWORK BY TWO (2) LAYERS OF SUITABLE MEMBRANE.
2.13 BRICKWORK MUST NOT BE BUILT ON CONCRETE SLABS OR BEAMS UNTIL FORMWORK AND PROPS SUPPORTING SAME HAVE BEEN REMOVED.
2.14 TENSION CRACKS MAY OCCUR IN SLABS. APPLY SUITABLE SEALANT FOR EXPOSED SURFACES.
2.15 PROVIDE 10mm ISOLATION JOINTS WHERE CONCRETE IS ADJACENT STEELWORK/MASONRY. PROVIDE SUITABLE FILLER AND SEALANT.
3. MASONRY:
3.1 CONSTRUCTION TO COMPLY WITH AS 3700.
3.2 MINIMUM CHARACTERISTIC UNCONFINED COMPRESSIVE STRENGTH OF UNITS TO BE AS FOLLOWS:
CLAY BRICKS 40MPa
CONCRETE BRICKS 10MPa
CONCRETE HOLLOW BLOCKS 15MPa
3.3 MORTAR: BRICKWORK 1 : 0.25 : 3 (CEMENT : LIME : SAND)
BLOCKWORK 1 : 0.5 : 4.5
3.4 INFILL CONCRETE GROUT TO REINFORCED MASONRY TO BE GRADE 20, SLUMP 230 +/- 30, 10mm AGGREGATE.
3.5 FOR HOLLOW BLOCK RETAINING WALLS, ALL CORES TO BE GROUTED.
3.6 GROUTING TO REINFORCED MASONRY SHALL BE COMPACTED BY RODDING WITH A PLAIN ROUND BAR. ALL AIR POCKETS AND BUBBLES MUST BE DISPLACED DURING COMPACTION. HOWEVER, CARE MUST BE TAKEN TO AVOID DAMAGING OR DISLODGING THE MASONRY OR REINFORCEMENT WHILE COMPACTING THE GROUT.
4. STEELWORK
4.1 ALL TO COMPLY WITH AS 4100, AS/NZ 1538, AND AS 2327.
4.2 ALL WELDING TO COMPLY WITH AS 1554, PARTS 1, 2 AND 3.
4.3 ALL FILLET WELDS TO BE 6mm (CATEGORY SP) EXTENDING THE FULL LENGTH OF THE EDGES IN CONTACT, EXCEPT WHERE PLATE THICKNESSES ARE LESS THAN 6mm, USE A WELD SIZE TO MATCH.
4.4 THE STEELWORKER SHALL SUPPLY ALL HD BOLTS, NUTS AND ALL OTHER BOLTS AND WASHERS REQUIRED FOR THE ERECTION OF THE STEELWORK, HOLES FOR HD BOLTS TO BE 3mm OVERSIZE HOLES FOR OTHER BOLTS TO BE NO MORE THAN 2mm OVERSIZE.
4.5 ALL BOLTING SHALL COMPLY WITH AS4100 AND BE GRADE 8.8/S
4.6 ALL BASE PLATES, HD BOLTS AND COLUMNS IN CONCRETE WHICH IS IN CONTACT WITH GROUND TO HAVE CONCRETE COVER OF 75mm MINIMUM.
4.7 MINIMUM EDGE DISTANCE (TAKEN FROM CENTRE OF FASTENER) SHALL BE:
SHEARED OR HAND FLAME CUT EDGE - 1.7D
ROLLED PLATE, MACHINE FLAME CUT SAWN OR PLANED EDGE - 1.5D
ROLLED EDGE OF A ROLLED SECTION - 1.25D
WHERE 'D' IS THE NOMINAL DIAMETER OF THE FASTENER.
4.8 STEELWORK TO BE CONCRETE ENCASED MUST FIRST BE WRAPPED WITH F41 MESH. THE REINFORCEMENT IS TO BE PLACED 25mm FROM THE STEELWORK.
4.9 PROVIDE A 10mm CLEARANCE BETWEEN VERTICAL FACES OF STEELWORK AND ADJACENT MASONRY WALLS. PROVIDE PURPOSE MADE WA OR SIMILAR APPROVED TIES BETWEEN STEELWORK AND MASONRY AT 600 c/c MAXIMUM.
4.10 ALL STEELWORK TO BE ADEQUATELY PROPPED AND BRACED DURING CONSTRUCTION UNTIL PERMANENT BRACING, MASONRY AND CLADDING HAS BEEN ERECTED.
4.11 ALL COLD FORMED SECTIONS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS, TRIMMING MEMBERS THE SAME SIZE AS THE ADJOINING MEMBERS SHALL BE PROVIDED TO SUPPORT EDGES OF SHEETING ALONG UNSUPPORTED EDGES SUCH AS HIPS, VALLEYS AND ROOF/WALL PENETRATIONS.
4.12 STEELWORK PROTECTIVE COATINGS TO BE:
EXPOSED EXTERNAL STEELWORK WITHIN 1 km OF BREAKING SURF OR WITHIN 100m OF SALT WATER NOT SUBJECT TO BREAKING SURF OR HEAVY INDUSTRIAL AREAS : HOT-DIP GALVANIZED, AND WITH AN APPROVED PAINTING SYSTEM TO AS/NZS 2312.
EXPOSED EXTERNAL STEELWORK (NOT EXPOSED TO CORROSIVE ENVIRONMENT) : HOT-DIP GALVANIZED, 12MET TREATED OR ONE COAT SPRAYED INORGANIC ZINC SILICATE PAINT OVER CLASS 2.5 ABRASIVE BLAST SURFACE. STEELWORK ACTING AS DOWNPIPE OR GUTTER : HOT-DIP GALVANIZED AND PAINTED.
INTERNAL STEELWORK (NOT EXPOSED TO MOISTURE OR CORROSIVE ENVIRONMENT): ZINC PHOSPHATE PRIMER OVER WIRE BRUSH SURFACE.
NOTE: ALL STEELWORK IN CONTACT WITH THE GROUND, PAVING OR SOIL ETC SHALL IN ADDITION TO THE PROTECTION REQUIRED ABOVE BE EITHER WRAPPED IN 'DENSO' TAPE OR CONCRETE ENCASED WITH A MINIMUM OF 75mm THICK CONCRETE.
4.13 TWO (2) COPIES OF THE SHOP DETAIL DRAWINGS ARE TO BE SUBMITTED TO THE ENGINEER AND REVIEW OF THE SAME OBTAINED BEFORE COMMENCING FABRICATION. REVIEW WILL NOT COVER DIMENSIONS. SHOP DRAWINGS WILL GENERALLY BE REVIEWED BY THE ENGINEERS WITHIN 10 WORKING DAYS.
5. TIMBER:
5.1 ALL TO COMPLY WITH AS 1720 AND AS 1684.
5.2 ALL MGP10 GRADE TIMBER MUST EXCLUDE 'HEART IN' MATERIAL TO GIVE THE TIMBER A MINIMUM JOINT GROUP STRENGTH OF JD4 IN ACCORDANCE WITH AS 1720.
6. EARTHWORKS:
ALL TO COMPLY WITH AS 3798 GUIDELINES
7. SITE INSPECTIONS:
MUST BE CARRIED OUT AT THE FOLLOWING STAGES:
- AFTER SITE PREPARATION AND TRENCHING FOR THE FOOTING BEAMS.
- AFTER THE PREPARATION OF REINFORCEMENT, PRIOR TO THE PLACEMENT OF ANY CONCRETE.
- AT THE CONCRETE POUR.
- AFTER COMPLETION OF THE MASONRY AND/OR FRAMING, PRIOR TO PLACEMENT OF LININGS.
- UPON COMPLETION OF THE INSTALLATION OF PAVING/STORMWATER DRAINS/PIPES AND STRUCTURES.
8. SURFACE PROTECTIVE COATINGS:
ALL STRUCTURAL MEMBERS AND SURFACES,IE. BEAMS,COLUMNS,WALLS,FLOORS,CEILINGS,ROOFS AND THE LIKE BOTH INTERNALLY AND EXTERNALLY SHALL BE COATED WITH AN APPROVED PROTECTIVE COATING TO SUIT THEIR INTENDED USE/EXPOSURE ENVIRONMENT, WHICH IS TO BE APPLIED IN STRICT ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS AND SPECIFICATIONS.
9. RETAINING WALLS:
REFER TO SHEET RWN (GENERAL NOTES FOR RETAINING WALL CONSTRUCTION)
10. TERMITE PROTECTION:
TERMITE PROTECTION SYSTEM SHALL BE IN ACCORDANCE WITH AS 3660.1

No	REVISION	DRAWN	CHE'KD	DATE
B	ADDED BRICK LINTELS	JVI	KWA	23.07.19
A	BUILDING APPROVAL ISSUE	JVI	KWA	21.05.19

PROJECT
PROPOSED TOWNHOUSE
AT: 90 JOHNS ROAD
PROSPECT
FOR: CITIFY & BFC Pty Ltd

DRAWING TITLE
TOWNHOUSE FOOTING PLAN

APPARTMENT BLOCK FOOTING PLAN
1:100

PLEASE NOTE:
1. IN AREAS WHERE THE DEPTH OF FILL BENEATH A SLAB PANEL EXCEEDS 400 INCREASE THE SLAB THICKNESS TO 125 & PROVIDE 2 LAYERS OF SL72 MESH (1T,1B).
2. FOOTINGS ARE TO BE CONTINUOUSLY TRENCHED OR PIERED 200 INTO FIRM NATURAL GROUND.
3. A TRENCH INSPECTION IS MANDATORY FOR THIS SITE, THE FULL EXTENT OF ADDITIONAL WORKS (REF. NOTES 1 & 2) IS TO BE CONFIRMED ON SITE.
4. PRE-WETTING OF THIS SITE IS MANDATORY & SHOULD BE INSPECTED BY THIS OFFICE PRIOR TO CONSTRUCTION.

PLEASE NOTE:
THE LOCATION OF EXISTING STRUCTURES ADJACENT TO THE AREA OF CONSTRUCTION ARE TO BE CHECKED ON SITE BY THE BUILDER / CONTRACTOR. SHOULD A RISK OF POTENTIALLY UNDERMINING AN EXISTING STRUCTURE EXIST, THIS OFFICE IS TO BE NOTIFIED IMMEDIATELY.

FOOTING SCHEDULE			
MARK	WIDTH X DEPTH	REINF.	LIGS. #
E, M	350 x 850	8-N16 (4T,4B)	W10 @ 800 C/C
m2	300 x 600	6-N16 (3T,3B)	W10 @ 800 C/C
M1	450 x 850	10-N16 (5T,5B)	W10 @ 800 C/C

Bp1 - DENOTES REINFORCED BRICK PIER WITH 1-N16 ROD VERTICAL CENTRAL IN CONCRETE FILLED CAVITY TO FULL HEIGHT. - PROVIDE STARTER BAR 600 EMBEDDED INTO FOOTING AND 300 COG, EXTEND STARTER BAR INTO BRICK PIER WITH 600 MIN LAP TO VERTICAL REO.

Bp2 - DENOTES REINFORCED 200 SERIES BLOCKWORK PIER WITH 1-N16 ROD VERTICAL CENTRAL IN CONCRETE FILLED CAVITY TO FULL HEIGHT. EMBED ROD 50mm FROM BASE OF TRENCH PIER

- DENOTES TRENCH PIER 1000 LONG x WIDTH OF THE FOOTING, TO BE FOUNDED 1000 INTO FIRM NATURAL GROUND WITH 6-N12 VERTICAL BARS & W8 @ 300 C/C LIGS.

FOOTING NOTES:
1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE ARCHITECTURAL DWGS & CR1.
2. MAINTAIN SLAB THICKNESS AND FOOTING DEPTH AT ALL SET DOWNS.
3. REINF. CONCRETE STRIP FOOTINGS ARE TO BE CONTINUOUSLY TRENCHED TO 200 MIN. INTO NATURAL GROUND OR CERTIFIED COMPACTED FILL UNO.
4. GROUND FLOOR SLAB TO BE 100mm THICK REINF. WITH TWO LAYER OF SL72 PLACED 25mm FROM TOP & BOTTOM FACE. (UNO)
5. REFER TO DETAIL FOR CORNER REINFORCEMENT AND LAGGING REQUIREMENTS, AND CD5 FOR FLEXIBLE CONNECTION REQUIREMENTS IN ACCORDANCE WITH A CLASS 'H2-D' SITE.
6. LAPS IN MESH TO BE ONE FULL SQUARE PLUS 25mm.
7. SETDOWNS, RAMPS, FALLS ETC. TO ARCHITECTURAL/CIVIL DETAIL.
8. EXISTING SERVICES ARE TO BE LOCATED PRIOR TO CONSTRUCTION AND THIS OFFICE IS TO BE CONTACTED IF THESE CLASH WITH THE ABOVE DOCUMENTED FOOTINGS.
9. UNDERGROUND SERVICES & STORMWATER PIPES TO RUN THROUGH THE MIDDLE THIRD OF FOOTINGS. REFER TO TYPICAL DETAILS. PAD / STRIP FOOTING RL'S MAY NEED TO BE LOWERED TO ACHIEVE (CONFIRM ON SITE)
10. ⊕ DENOTES ARTICULATION JOINTS IN MASONRY TO FULL HEIGHT.

When sheet printed full size, the scale bar is 100mm.
0 10 20 30 40 50 100mm

Civil, Structural, Environmental, Geotechnical, Mechanical, Electrical, Fire, Hydraulics, Lifts, Green ESD
Level 6, 100 Pirie Street, Adelaide SA 5000
Telephone 08 8238 4100
Facsimile 08 8410 1405
Berri Office: 25 Vaughan Terrace, Berri SA 5343
TMK CONSULTING ENGINEERS

SCALES AS SHOWN
© COPYRIGHT RESERVED
DRAWN JVI
DATE MAR '19
ENGINEER KWA
CHECKED FK
DRAWING No. 1806063-S100/B