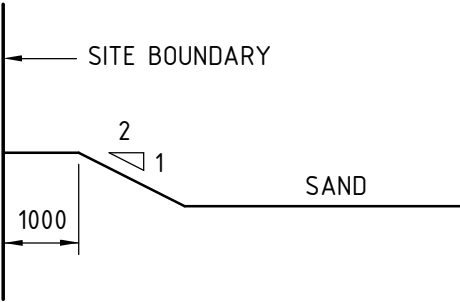


FOUNDATION NOTES

- F1** THE ASSUMED FOUNDING LEVELS OF THE FOOTINGS ARE TO BE AS INDICATED ON THE DRAWINGS. BEFORE ANY REINFORCEMENT OR CONCRETE IS PLACED, THE SAFE BEARING CAPACITY OF THE GROUND IS TO BE VERIFIED BY THE ENGINEER. EXCAVATION SHALL CONTINUE UNTIL THE REQUIRED BEARING CAPACITY IS FOUND. THE OVER-EXCAVATION SHALL BE BACK-FILLED WITH MASS CONCRETE TO THE ASSUMED FOUNDING LEVEL.
ALL FOOTINGS MUST BE FOUNDED 150mm INTO FIRM NATURAL GROUND UNLESS NOTED OTHERWISE.
- F2** FOOTINGS ON BOUNDARY TO BE FOUNDED 600mm BELOW ADJACENT GROUND LEVEL

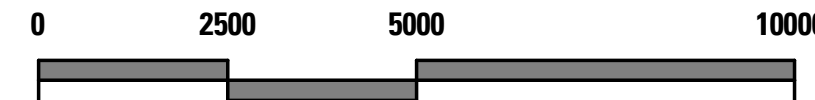
EXCAVATION NOTES

- B1** THE CONTRACTOR IS TO NOTIFY ALL SERVICE AUTHORITIES AND ARRANGE FOR DISCONTINUANCE OF SERVICES OR SUPPLY AS APPLICABLE AND DO ALL CUTTING, DISCONNECTION OR SEALING OFF OF SERVICES AND DRAINS AS REQUIRED. SERVICES OR SUPPLY LINES THAT ARE TO BE RETAINED SHALL REMAIN UNDAMAGED AND GIVEN ALL NECESSARY PROTECTION
- B2** THE CONTRACTOR SHALL DO ALL BRACING NECESSARY TO RETAIN EARTH BANKS, ROADS, PAVEMENTS, WALLS AND FOOTINGS OF ADJOINING PROPERTIES AND PREVENT CAVING AND DISPLACEMENT OF ADJACENT SOIL OR STRUCTURES AND PROVIDE ALL NECESSARY COMPONENTS OF SUCH BRACING.
- B3** U.N.O. ALL EXCAVATED MATERIAL SHALL BE REMOVED FROM THE SITE AND SHALL NOT BE USED FOR LEVELLING UNEVEN AREAS, FILLING EXCESS EXCAVATIONS OR BACKFILLING BEHIND RETAINING WALLS UNLESS WRITTEN APPROVAL HAS BEEN OBTAINED FROM THE ENGINEER
- B4** THE CONTRACTOR SHALL PROVIDE PUMPS, TEMPORARY SUMPS AND DRAINS AND DO ALL BAILING ETC. AS MAY BE NECESSARY TO ENSURE THAT NO WATER IS PERMITTED TO REMAIN IN THE EXCAVATION AT ANY TIME.
- B5** BULK EXCAVATION BATTERS AROUND THE PERIMETER OF THE SITE ARE TO BE AS SHOWN BELOW UNLESS NOTED OTHERWISE ON THE DRAWINGS.



GENERAL NOTES

- G1** THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS DRAWINGS, THE SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT.
- G2** IF ANY DISCREPANCY OCCURS ON THE ENGINEERS DRAWINGS OR BETWEEN DRAWINGS AND SPECIFICATION, THE CONTRACTOR SHALL DURING TENDERING ASSUME THE LARGER/GREATER. ANY DISCREPANCY SHALL BE REFERRED TO THE ENGINEER BEFORE PROCEEDING WITH WORK.
- G3** ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT S.A.A. CODES, INCLUDING ALL AMENDMENTS, AND THE BY-LAWS AND ORDINANCES OF THE RELEVANT BUILDING AUTHORITY, EXCEPT WHERE VARIED BY THE PROJECT SPECIFICATION.
- G4** ALL DIMENSIONS RELEVANT TO SETTING OUT AND OFF-SITE WORK SHALL BE VERIFIED ON SITE BY THE CONTRACTOR BEFORE CONSTRUCTION AND FABRICATION ARE COMMENCED. THE ENGINEERS DRAWINGS ARE NOT TO BE SCALED. NO RESPONSIBILITY WILL BE TAKEN BY THE ENGINEER FOR DIMENSIONS OBTAINED BY SCALING THE DRAWINGS.
- G5** SUBSTITUTIONS MUST BE APPROVED BY THE ENGINEER AND BE INCLUDED IN ANY TENDER.
- G6** DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE STRUCTURE IN A STABLE CONDITION; ENSURING NO PART SHALL BE OVER-STRESSED DURING CONSTRUCTION ACTIVITIES.
- G7** THE STRUCTURAL DRAWINGS DO NOT SHOW ALL DETAILS OF FIXTURES, INSERTS, SLEEVES, OPENINGS, ETC. REQUIRED BY THE VARIOUS TRADES. ALL SUCH DETAILS, INCLUDING OPENINGS FOR CONSTRUCTION PURPOSES, MUST BE APPROVED BY THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION.



SCALE 1:100 @ A1

CONCRETE NOTES

- C1** ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3600 AND THE SPECIFICATION
- C2** CONCRETE SIZES SHOWN DO NOT INCLUDE FINISH AND MUST NOT BE REDUCED WITHOUT THE ENGINEERS APPROVAL. DEPTHS OF BEAMS ARE GIVEN FIRST AND INCLUDE SLAB THICKNESS. SLABS AND BEAMS ARE TO BE POURED TOGETHER.
- C3** CONSTRUCTION JOINTS SHALL BE PROPERLY FORMED AND USED ONLY WHERE SHOWN OR SPECIFICALLY APPROVED BY THE ENGINEER.
- C4** ALL CONCRETE SHALL BE GRADE 25, NORMAL DENSITY UNLESS NOTED OTHERWISE. MAXIMUM AGGREGATE SIZE 20mm. ADMIXTURES SHALL NOT BE USED WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.
- C5** ALL CEMENT IS TO BE "A" NORMAL PORTLAND CEMENT OR TYPE "D" SULPHATE-RESISTING CEMENT AS REQUIRED COMPLYING WITH AS1315 UNLESS NOTED OTHERWISE ON THE DRAWINGS. EXTRA RAPID HARDENING SUPERSULPHATED AND HIGH ALUMINA CEMENTS AND CEMENTS CONTAINING CHLORIDE SHALL NOT BE USED. THE USE OF FLY ASH AND/OR SILICA FUME AS A CEMENT SUBSTITUTE WILL ONLY BE PERMITTED AS PART OF A DESIGNED CONCRETE MIX WHICH HAS BEEN APPROVED IN WRITING BY THE ENGINEER.
- C6** MINIMUM CEMENT CONTENT SHALL BE 400kg/cu.m AND MAXIMUM WATER CEMENT RATIO SHALL NOT EXCEED 0.5 FOR GRADE 32 CONCRETE.
- C7** CONCRETE SLUMP TO BE A MAXIMUM OF 80mm UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- C8** FREE DROPPING OF CONCRETE FROM A HEIGHT GREATER THAN 1000mm IS NOT PERMITTED
- C9** CAMBER TO SUSPENDED SLABS AND BEAMS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS SPECIFIED IN THE FORMWORK NOTES OR AS NOTED ON THE DRAWINGS.
- C10** ALL EXPOSED CONCRETE CORNERS TO HAVE 15mm CHAMFER U.N.O.
- C11** NO HOLES, CHASES OR EMBEDMENT OF PIPES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN THE CONCRETE MEMBERS WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.
- C12** ALL EMBEDMENTS SHALL BE HOT DIP GALVANIZED.
- C13** CONCRETE MUST BE CURED BY AN APPROVED METHOD IN ACCORDANCE WITH THE SPECIFICATION FOR SEVEN DAYS AFTER POURING.
- C14** CONCRETE SHALL BE SEPARATED FROM SUPPORTING MASONRY BY TWO LAYERS OF MALTHOID (OR AN APPROVED EQUIVALENT). VERTICAL FACES OF CONCRETE SHALL BE KEPT FREE OF ADJOINING SURFACES BY A 12mm THICKNESS OF BITUMINOUS CANEITE (OR AN APPROVED EQUIVALENT) UNLESS NOTED OTHERWISE ON THE DRAWINGS. ALL NON-LOADBEARING WALLS SHALL BE KEPT CLEAR OF THE UNDERSIDE OF SLABS AND BEAMS BY 20mm UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- C15** BRICKWORK MUST NOT BE BUILT ON CONCRETE SLABS OR BEAMS UNTIL FORMWORK SUPPORTING SAME, HAS BEEN REMOVED.
- C16** HIGH FREQUENCY VIBRATORS SHALL BE USED TO COMPACT ALL CONCRETE
- C17** SURFACES RECEIVING GROUT SHALL BE LEFT ROUGH AND FREE OF LAITANCE
- C18** REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND NOT NECESSARILY SHOWN IN TRUE PROJECTION.
- C19** MINIMUM COVER TO ALL REINFORCEMENT UNLESS NOTED OTHERWISE ON THE DRAWINGS SHALL BE IN ACCORDANCE WITH THE REINFORCEMENT COVER SCHEDULE
- C20** REINFORCEMENT NOTATIONS;
N DENOTES HOT ROLLED DEFORMED BARS
R DENOTES STRUCTURAL-GRADE PLAIN ROUND BARS
ALL REINFORCING BARS TO AS 4671
SL DENOTES HARD-DRAWN WIRE REINFORCING FABRIC TO AS 4671
THE NUMBER IMMEDIATELY FOLLOWING THE BAR GRADE SYMBOL REPRESENTS THE NOMINAL BAR DIAMETER IN MILLIMETRES. THE FIGURE FOLLOWING THE FABRIC SYMBOL IS THE REFERENCE NUMBER.
- C21** SPLICES IN REINFORCEMENT SHALL BE MADE IN THE POSITIONS SHOWN OR AS OTHERWISE APPROVED BY THE ENGINEER. MINIMUM LAP FOR ALL FABRICS SHALL BE THE SPACING OF TWO TRANSVERSE WIRES PLUS 25mm. GRADE D500N BARS SHALL BE LAPPED IN ACCORDANCE WITH THE STANDARD LAP LENGTH TABLE IF NOT STATED OTHERWISE ON THE DRAWINGS
- C22** WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED WITHOUT THE WRITTEN APPROVAL OF ENGINEER.
- C23** ALL REINFORCEMENT SHALL BE SUPPORTED IN ITS CORRECT POSITION ON APPROVED BAR CHAIRS AT 1000mm MAXIMUM CENTRES BOTH WAYS, SO AS NOT TO BE DISPLACED DURING CONCRETING. WHERE REQUIRED PROVIDE N12 SUPPORT BARS AT 1000mm CENTRES.
- C24** UNLESS OTHERWISE SHOWN, PROVIDE N12-450 TYING STEEL WHERE REQUIRED, LAPPED 300mm AT SPLICES
- C25** 3-N12 DIAGONAL CORNER BARS 2000mm LONG ARE REQUIRED AT ALL RE-ENTRANT CORNERS OF OPENINGS IN SLABS AND WALLS.

LOAD BEARING WALL NOTES.

- L1** THE CENTRE LINE OF EACH WALL SHALL BE CONCENTRIC OVER ITS FULL HEIGHT UNLESS OTHERWISE NOTED. REFER TO DRAWINGS FOR WALL THICKNESS.
- L2** DETAILS OF ALL OPENINGS IN WALLS NOT SHOWN ON STRUCTURAL DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

STRUCTURAL STEELWORK NOTES

- S1** ALL MATERIALS, WORKMANSHIP, FABRICATION AND ERECTION SHALL COMPLY WITH THE REQUIREMENTS OF AS4100, AS/NZS4600, AS1554 AND THE SPECIFICATION.
- S2** UNLESS SHOWN OTHERWISE, ALL STEEL SHALL BE IN ACCORDANCE WITH AS3679 GRADE 300. ALL STEEL HOLLOW SECTIONS SHALL BE GRADE 350 IN ACCORDANCE WITH AS1163. ALL PRESSED METAL PURLINS AND GIRTS SHALL BE GRADE 450 STEEL IN ACCORDANCE WITH AS/NZS4600
- S3** UNLESS SHOWN OTHERWISE ON THE DRAWINGS, ALL CONNECTIONS SHALL BE IN ACCORDANCE WITH THE FOLLOWING MINIMUM REQUIREMENTS:
(i) ALL WELDS SHALL BE 6MM CONTINUOUS FILLET WELDS ALL ROUND.
(ii) ALL BOLTS SHALL BE M20 – 8.8/5, WITH A MINIMUM OF 2 BOLTS PER CONNECTION.
PURLIN BOLTS TO BE M12 – 4.6/S WITH A MINIMUM OF 2 BOLTS PER PURLIN END
(iii) ALL GUSSET AND CLEAT PLATES SHALL BE 10mm THICK.
(iv) ALL CAP PLATES SHALL BE 12mm THICK.
(v) ALL BASE PLATES SHALL BE 20mm THICK.
- S4** BOLT DESIGNATION:
4.6/S REFERS TO COMMERCIAL BOLTS OF STRENGTH GRADE 4.6 TO AS1111 TIGHTENED TO A SNUG TIGHT CONDITION.
8.8/S REFERS TO HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8.8 TO AS1252 TIGHTENED TO A SNUG TIGHT CONDITION.
8.8/TB REFERS TO HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8.8 TO AS1252 FULLY TENSIONED TO AS4100 AS A BEARING JOINT.
8.8/TF REFERS TO HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8.8 TO AS1252 FULLY TENSIONED TO AS4100 AS A FRICTION JOINT.
- S5** HIGH STRENGTH BOLTED JOINTS SHALL BE IN ACCORDANCE WITH AS4100. THE SPECIFIED BOLT TENSION SHALL BE OBTAINED BY USE OF THE "PART TURN" METHOD OF TIGHTENING.
- S6** ALL BOLTS, NUTS AND WASHERS SHALL BE HOT DIP GALVANISED.
- S7** ALL WELDS SHALL BE SP (SPECIAL PURPOSE) IN ACCORDANCE WITH AS1554. ALL ELECTRODES SHALL BE CLASS E48. ALL BUTT WELDS SHALL BE FULL STRENGTH COMPLETE PENETRATION WELDS.
- S8** SUBSTITUTIONS FOR STEEL SECTIONS SHOWN ON DRAWINGS SHALL NOT BE MADE WITHOUT THE APPROVAL OF THE ENGINEER.
- S9** ALL STEELWORK BELOW GROUND OR FINISHED SURFACE LEVEL IS TO BE ENCASED IN 75mm MIN. CONCRETE ALL ROUND OR 2 COATS OF BITUMINOUS PAINT.
- S10** ALL STEELWORK, EXCEPT THAT WHICH IS TO BE CONCRETE ENCASED, FIRE SPRAYED OR CONTACT SURFACES OF FRICTION TYPE JOINTS, SHALL BE SURFACE CLEANED AND PAINTED IN ACCORDANCE WITH THE SPECIFICATION.
- S11** STEELWORK THAT IS CONCRETE ENCASED, FIRE SPRAYED OR FACING SURFACES OF FRICTION TYPE JOINTS SHALL BE LEFT UNPAINTED AND FREE FROM SCALE.
- S12** THE CONTRACTOR SHALL PROVIDE ALL CLEATS AND DRILL ALL HOLES NECESSARY FOR FIXING STEEL, TIMBER AND OTHER ELEMENTS TO STEEL WHETHER OR NOT DETAILED ON THE STRUCTURAL DRAWINGS.
- S13** THE FABRICATION AND ERECTION OF THE STRUCTURAL STEELWORK SHALL BE SUPERVISED BY QUALIFIED PERSONNEL EXPERIENCED IN SUCH SUPERVISION TO ENSURE THAT ALL REQUIREMENTS OF THE DESIGN ARE MET. DETAILS OF ERECTION SEQUENCE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF ERECTION.
- S14** COLUMNS AND MULLIONS SHALL HAVE THEIR BASE PLATES FULLY GROUTED IN ACCORDANCE WITH THE SPECIFICATIONS AFTER PLUMBING AND LEVELLING ON STEEL PACKERS.
- S15** 3 HARD COPIES OF STEELWORK SHOP DETAIL DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR INSPECTION PRIOR TO COMMENCEMENT OF ANY FABRICATION. THE INSPECTION SHALL NOT COVER LAYOUT AND MEMBER DIMENSIONS.
- S16** UNLESS SHOWN OTHERWISE ON THE DRAWINGS, ALL STEEL FLOOR BEAMS SUPPORTING CONCRETE SLABS TO HAVE N12 TIE BARS WELDED TO TOP FLANGE AT 1000 CENTERS. PROVIDE 300 COG INTO SLAB.
- S17** FIRE PROTECTION TO STEELWORK IS TO BE AS PER THE FIRE REPORT AND ARCHITECTURAL DETAILS. USING FIRE RETARDANT SPRAY OR FIRE RATED LININGS OR INTUMESCENT PAINT AS REQUIRED. REFER TO MANUFACTURER'S SPECIFICATIONS FOR THICKNESSES TO SATISFY THE FRL AS NOTED IN THE TABLE PROVIDED.

REINFORCEMENT COVER SCHEDULE

ELEMENT	EXPOSURE CLASSIFICATION	COVER (mm)
PAD FOOTINGS	A2	40
STRIP FOOTINGS	A2	40
SLAB ON GROUND	A1	30 TOP 40 SIDES & BOTTOM
SUSPENDED SLAB	A1	25 INTERNAL 35 EXTERNAL
COLUMNS	A1	30
PRECAST	B1	40
PILES		75

CONCRETE STRENGTH SCHEDULE

ELEMENT	CHARACTERISTIC CONCRETE STRENGTH (f _c) AT 28 DAYS	SPECIAL REQUIREMENTS
PAD FOOTINGS	32 MPa	NIL
STRIP FOOTINGS	32 MPa	NIL
SLABS ON GROUND	32 MPa	NIL
PRECAST CONCRETE WALLS	40 MPa U.N.O.	NIL
SUSPENDED SLAB & BEAMS	40 MPa	NIL
COLUMNS	40 MPa	NIL
PILES	REFER SCHEDULE	NIL

DESIGN LIVE LOADINGS:

RETAIL:-	3.0 KPa
STAIR & LANDINGS:-	4.0 KPa
LIVING AREAS:-	1.5 KPa
BALCONIES, PATIOS:-	2.0 KPa

WIND ASSESSMENT:

ULTIMATE WIND SPEED:-	46 m/s
SERVICEABILITY WIND SPEED:-	37 m/s

EARTHQUAKE ASSESSMENT:

IMPORTANCE LEVEL:-	3.00
PROBABILITY FACTOR (kp):-	1.30
HAZARD FACTOR (z):-	0.10
SITE SUB-SOIL CLASS:-	De
EARTHQUAKE DESIGN CATEGORY (EDC):-	EDC II <25m

FIRE RATING SCHEDULE

AREA	ELEMENT	FIRE RATING
CARPARK	FLOOR	120
	LOAD BEARING EXT. WALLS	120
	BEAMS & COLUMNS	120
APARTMENT	LOAD BEARING EXT. WALLS	90
	BEAMS & COLUMNS	90
	FLOOR	90
RETAIL	LOAD BEARING EXT. WALLS	120
	BEAMS & COLUMNS	120
	FLOOR	120

STANDARD LAP & COG LENGTHS

BAR DIAMETER	MIN. LAP LENGTH (mm)	COG LENGTH (mm)
N12	600	170
N16	800	200
N20	1000	250
N24	1200	300
N28	1500	350
N32	1800	400
FABRIC	TWO CROSS WIRES + 25mm	

INSPECTION NOTE:

RE-INSPECTIONS AS A RESULT OF UNSATISFACTORY WORK OR TO ATTEND SITE TO SPECIFICALLY CLARIFY BUILDERS QUERIES (OUTSIDE OF INSPECTING OTHER WORKS) WILL INCUR A FEE WHICH WILL BE CHARGED TO THE BUILDER DIRECT.

SHOP DRAWING INSPECTION:

THE SUBCONTRACTOR SHALL PREPARE FULLY DIMENSIONED AND DETAILED SHOP DRAWINGS FOR EACH MEMBER

02.07.19	ISSUED FOR TENDER	T
Date	Revision	Issue

Designer	RW	Drawn	82 & MM
Approved	Approver	Date	02/07/2019 1:00:14 PM
		Sheet	

Project	
HYDE PARK PLACE 248 UNLEY ROAD, HYDE PARK SA	
Client	N + CITYFY & BFC PTY LTD
Drawing Title	Scale 1 : 100 GENERAL NOTES
Drawing Number 20492-S01	Issue T