

GENERAL NOTES

1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANT DRAWINGS, SPECIFICATIONS, & OTHER WRITTEN INSTRUCTIONS ISSUED DURING THE COURSE OF THE CONTRACT. REFER ALL DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH WORK
2. ALL DIMENSION FOR SETTING OUT OR FABRICATION WORKS SHALL BE VERIFIED BY THE CONTRACTOR. ENGINEERS DRAWINGS SHALL NOT BE SCALED FOR DIMENSIONS.
3. UNLESS NOTED OTHERWISE (U.N.O) ALL DIMENSIONS ARE IN MILLIMETRES AND ALL LEVELS ARE IN METRES
4. DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE STRUCTURE IN A STABLE CONDITIONS & ENSURING NO PART SHALL BE OVERSTRESSED.

THE CONTRACTOR SHALL SUPPLY ALL TEMPORARY PROPPING & BRACING AS REQUIRED, INCLUDING TEMPORARY SUPPORT FOR EXCAVATIONS.
5. NO SUBSTITUTIONS FOR ITEMS, MATERIALS OR SIZES SHALL BE MADE WITHOUT WRITTEN APPROVAL FROM THE ENGINEER
6. DETAILS SHOWN ON DRAWINGS ARE TYPICAL AND DO NOT COVER ALL DETAILS. IT IS EXPECTED WORKS ARE CARRIED OUT BY A SUITABLY EXPERIENCE/ QUALIFIED PERSON. IF FURTHER DETAILS ARE REQUIRED, CONTACT ENGINEER.
7. ALL MATERIALS & WORKMANSHIP SHALL BE IN ACCORDANCE WITH RELEVANT CURRENT AUSTRALIAN STANDARD CODES AND WITH THE NATIONAL CONSTRUCTION CODE (NCC)

LOAD CRITERIA

8. IMPORTANCE LEVEL 2 WITH 50 YEAR DESIGN WORKING LIFE IN ACCORDANCE WITH NCC 2019 & AS1170.0:2002
9. LIVE LOADING TO AS1170.1:2002;

FLOOR USE	LIVE LOAD (kPa)	S.I. DEAD LOAD (kPa)
GENERAL	1.5	1.0
BALCONY & DECKS	2.0	0.5
DRIVEWAY	5.0	0.5
10. WIND LOADING TO AS4055:2021;

REGION	TERRAIN CAT.	WIND CLASS	ULT - V _U	SERV. - V _S
B	2	N3	50.0 m/s	32.0 m/s
11. EARTHQUAKE LOADING TO AS1170.4:2007;

RESIDENTIAL STRUCTURE (CLASS 1A OR 1B) IN ACCORDANCE WITH:

- APPENDIX A - HEIGHT <8.5m

- E.D.C 1 - HEIGHT >8.5m

SITE PREP. & FOUNDATIONS

FOOTINGS & PIERS

1. FOOTINGS & SLABS HAVE BEEN DESIGN WITH THE FOLLOWING SOIL CONDITIONS

FOUNDING SOIL	MIN. BEARING CAPACITY	SITE CLASS
STIFF CLAY	100 kPa	N/A
2. FOOTINGS SHALL BE PLACED CENTRALLY UNDER WALLS & COLUMNS UNLESS NOTED OTHERWISE
3. ALL EDGE BEAMS ARE TO BE CONSTRUCTED ON FOUNDING SOIL OR CONTROLLED FILL (BUT NO ROLLED FILL)

ALL INTERNAL BEAMS & SLAB ARE TO BE CONSTRUCTED ON FOUNDING SOIL, CONTROLLED FILL OR ROLLED FILL
4. THE BASE OF ALL FOOTINGS SHALL BE FREE OF ALL LOOSE MATERIAL, MUD AND WATER
5. FOOTINGS SHALL BE CONSTRUCTED & BACKFILLED AS SOON AS POSSIBLE FOLLOWING EXCAVATION TO AVOID GROUND SOFTENING/ DRYING OUT
6. ALL OVER EXCAVATIONS AROUND FOOTING SHALL BE FILLED WITH CONCRETE OF THE SAME GRADE AS FOOTINGS.
7. FOOTINGS DEPTHS ARE PROVISIONAL ONLY, SUBJECT TO ACTUAL SITE CONDITIONS & ENGINEERS APPROVAL
8. IF ANY SERVICE TRENCH IS LOCATED HORIZONTALLY WITHIN A DISTANCE OF 1xFOOTING DEPTH TO ANY FOOTING THE FOUNDING DEPTH SHALL BE TAKEN BELOW DEPTH OF SERVICE TRENCH

CONCRETE

1. ALL WORKMANSHIP & MATERIALS SHALL BE IN ACCORDANCE WITH AS3600:2018
2. CONCRETE SHALL HAVE THE FOLLOWING PROPERTIES:

ELEMENT	GRADE	SLUMP	MAX AGG SIZE
PIERS & FOOTINGS	25	100	20
SLAB ON GROUND	25	80	20
3. ALL CONCRETE SHALL BE SUPPLIED & TESTED BY CONCRETE BATCHING PLANT IN ACCORDANCE WITH AS1379:2007.
4. SITE EXPOSURE IN ACCORDANCE WITH AS 3600:2018: NEAR COSTAL, 1.0-50.0km FROM ANY COASTLINE.

THEREFORE CONCRETE EXPOSURE IS:

A1 - ALL INTERIOR SURFACES & SURFACES IN CONTACT WITH SOIL

B1 - ALL EXTERIOR SURFACES
5. MINIMUM COVER TO REINFORCEMENT SHALL BE:

ELEMENT	TOP	BTM	SIDE
PIERS & FOOTINGS	40		
INTERIOR - SLAB ON GROUND	20	-	40
EXTERIOR - SLAB ON GROUND	40	-	40
6. ADMIXTURES SHALL NOT BE USED WITHOUT WRITTEN APPROVAL BY STRUCTURAL ENGINEER
7. SLURRY USED TO LUBRICATE CONCRETE PUMPS SHALL NOT BE PUMPED INTO ANY STRUCTURAL MEMBER
8. WATER SHALL NOT BE ADDED ON-SITE TO INCREASE SLUMP TO A VALUE IN EXCESS OF SPECIFIED VALUE (REFER CONCRETE NOTE 2)
9. ALL CONCRETE SHALL BE MECHANICALLY VIBRATED DURING PLACEMENT
10. FREE FALL OF CONCRETE DURING POUR TO BE LIMITED TO A MAX OF 3.0m. UNLESS METHOD OF PLACEMENT HAS BEEN APPROVED BY ENGINEER
11. CONCRETE SHALL BE **CURED**:

-INTERIOR SURFACE - 3 DAYS

-EXTERNAL SURFACE - 7 DAYS

CURING SHALL COMMENCE IMMEDIATELY AFTER FINISHING BY COVERING WITH PLASTIC SHEETING, SPRAYING WITH AN APPROVED CURING COMPOUND (COMPLYING WITH AS3799) OR PONDING WATER ON THE TOP SURFACE
12. IN HOT &/OR WINDY WEATHER (>28°) APPLY ALIPHATIC ALCOHOL TO ANY SLABS WITH AN EXPOSED FINISH. THIS WILL MINIMISE SURFACE CRACKING & MOISTURE LOSS
13. SIZE OF CONCRETE ELEMENTS SHOWN DO NOT INCLUDE THICKNESS OF APPLIED FINISHES
14. WHERE NOT SHOWN, CONSTRUCTIONS JOINTS SHALL BE LOCATED TO THE APPROVAL OF THE STRUCTURAL ENGINEER

REINFORCEMENT

1. ALL REINFORCEMENT MATERIAL & SPECIFICATION IN ACCORDANCE WITH AS/NZS 4671:2019

HOW TO READ OUR DRAWINGS:

NO. OF BARS

BAR PROFILE

STRENGTH GRADE 250 OR 500

3/D500N16-400

DUCTILITY

SPACING

BAR SIZE
2. BAR PROFILES

R	PLAIN ROUND BAR
D	DEFORMED RIBBED BAR
I	DEFORMED INDENTED BAR

BAR DUCTILITY	
L	LOW DUCTILITY
N	NORMAL DUCTILITY
E	EARTHQUAKE DUCTILITY
3. ADDITIONAL REINFORCEMENT SYMBOLS

S	SQUARE MESH	EXAMPLE: SL82 MESH
R	RECTANGULAR MESH	EXAMPLE: RL1018 MESH
TM	TRENCH MESH	EXAMPLE: 3-L11TM
4. UNLESS NOTED OTHERWISE ALL BARS SHALL BE GRADE D500N & ALL MESH GRADE 500L
5. REINFORCEMENT IS SHOWN DIAGRAMMATICALLY & NOT NECESSARILY SHOWN IN TRUE PROJECT OR SCALE

REINFORCEMENT BARS MAY BE SCALED IF NOT DIMENSIONED, REFER ALSO TO DETAILS. TOLERANCE -100, +200.
6. SITE BENDING OF BARS SHALL BE DONE WITHOUT HEATING, USING MECHANICAL BENDING TOOLS
7. WELDING OF REINFORCEMENT NOT PERMITTED UNLESS SHOWN ON DRAWINGS OR APPROVED BY STRUCTURAL ENGINEER
8. SPLICES IN REINFORCEMENT SHALL BE MADE ONLY AS SHOWN ON DRAWINGS OR WITH WRITTEN APPROVAL OF STRUCTURAL ENGINEER
9. UNLESS NOTED OTHERWISE BAR LAPS SHALL BE AS FOLLOWS

N12	N16	N20	N24	N28	N32
500	700	900	1100	1300	1500
10. REINFORCEMENT SHALL BE SUPPORTED IN ITS CORRECT POSITION DURING CONCRETING BY PLASTIC BAR CHAIRS AT 800 CRS.

BAR CHAIRS SHALL BE IN ACCORDANCE WITH AS/NZS 2424:2015 AND SHALL BE:

-GRADE 120 (120kg) FOR: N12-N24 BARS

-GRADE 200 (200kg) FOR: N28-N32 BARS
11. ENGINEER SHALL BE GIVEN 48 HOURS NOTICE FOR REINFORCEMENT INSPECTIONS & CONCRETE SHALL NOT BE ORDERED UNTIL APPROVAL IS GIVEN

REINFORCED BLOCKWORK

1. ALL MATERIAL & WORKMANSHIP SHALL BE IN ACCORDANCE WITH AS 3700:2018
2. BLOCK, MORTAR & GROUT SHALL HAVE THE FOLLOWING PROPERTIES

2.1. BLOCK - HOLLOW CONCRETE UNITS

- 390 LONG x 190 WIDE x 190 HIGH OR AS NOTED

- COMPRESSIVE STRENGTH, f_{uc} = 15MPa

- EXPOSURE CLASS = GENERAL PURPOSE

2.2. MORTAR - CLASS M3

- C1: L1: S6 - NO BRICKIES LOAM ALLOWED

- WATER THICKENER MAY OPTIONALLY BE USED

2.3. GROUT - 28 DAY COMPRESSIVE STRENGTH, f_c = 20MPa

- MAX. AGGREGATE SIZE = 10mm

- SLUMP = 230 ± 25
3. SITE EXPOSURE IN ACCORDANCE WITH AS 3700:2018: NEAR COSTAL, 1.0-50.0km FROM ANY COASTLINE
4. BLOCKS SHALL BE FACE-SHELL BEDDED & ALL CORES SHALL BE GROUTED
5. CLEAN-OUT BLOCKS SHALL BE PROVIDED TO WALLS OVER 600 HIGH
6. NO RAKING OF MORTAR JOINTS, JOINTS MAY BE TOOLED 3mm MAX.
7. CONSTRUCTION JOINTS SHALL BE INSTALLED A 12.0m MAX. TO ALL FULLY REINFORCED BLOCK WALLS
8. BLOCK WALLS SHALL HAVE MINIMUM REINFORCEMENT OF N12 BARS AT 400 CENTRES, EACH WAY, UNLESS NOTED OTHERWISE
9. MINIMUM COVER TO REINFORCEMENT SHALL BE:
NOTE: COVER IS MEASURED FROM EXTERNAL FACE OF MASONRY

ELEMENT	COVER
INTERNAL WALLS	40
EXTERNAL WALLS	50
RETAINING WALLS/ WALLS IN CONTRACT WITH GROUND	50

10. GROUT SHALL NOT BE ALLOWED TO FALL MORE THAN 3.0m DURING POUR

RETAINING WALL

1. ALL MATERIAL & WORKMANSHIP SHALL BE IN ACCORDANCE WITH AS 4678:2002
2. WALLS HAVE BEEN DESIGNED IN ACCORDANCE WITH TO A 60 YEAR DESIGN LIFE AND WALL CLASS 2 (MAX. 3.5m WALL HEIGHT)
6. FOOTINGS & PIERS SUPPORTING RETAINING WALLS SHALL BE FOUNDED IN MATERIAL AS SPECIFIED IN FOUNDATION NOTES, SUB SECTION - FOOTINGS & PIERS
7. MAXIMUM SLOPES NEXT TO WALLS SHALL BE:

7.1. BEHIND/ ABOVE WALL - 1V:10H

7.2. IN FRONT/ BELOW WALL - 1V:50H

7.3. OR AS NOTED ON DETAILS
8. ALL WALLS SHALL BE INSTALLED WITH FULL HEIGHT DRAINAGE:

8.1. 300 WIDE RECYCLED CONCRETE DRAINAGE AGGREGATE

8.2. A14 BIDIM - GEOTEXTILE WRAP OR APPROVED EQUIVALENT

8.3. 100Ø SLOTTED AGG. DRAIN, WITH 1:100 FALL TO OUTLET
9. ALL AGG. PIPES SHALL BE CONNECTED TO ROOF/STORMWATER DRAINAGE SYSTEM

ALTERNATE SOLUTIONS MAY BE USED WITH WRITTEN PERMISSION BY STRUCTURAL ENGINEER
10. THE FOLLOWING HAVE NOT BEEN CONSIDERED IN DESIGN:

10.1. GLOBAL STABILITY - CONTRACTOR SHALL ENGAGE GEOTECHNICAL ENGINEER FOR GLOBAL STABILITY ASSESSMENT FOR ANY WALLS OVER 4.0m IN HEIGHT OR WITHIN A LANDSLIDE HAZARD ZONE

10.2. ADJACENT STRUCTURES - NO LOADS FROM ADJACENT STRUCTURES SHALL BE TRANSFERRED TO RETAINING WALL

i.e. - HOUSES, SHEDS, TANKS, POOLS & RETAINING WALLS

10.3. CONSTRUCTION EQUIPMENT & HEAVY COMPACTION EQUIPMENT - SHALL BE KEPT A DISTANCE EQUAL TO WALL HEIGHT AWAY FROM THE BACK OF RETAINING WALL

BLOCK RETAINING WALL

11. BLOCK, MORTAR, GROUT MATERIAL & WORKMANSHIP SHALL BE AS PER STRUCTURAL BLOCK WORK NOTES
12. MINIMUM REINFORCEMENT SHALL BE AS SPECIFIED ON DETAIL SHEETS, IF DETAIL IS NOT PROVIDED ON DRAWINGS - CALL THE ENGINEER
13. FOOTINGS & PIERS SUPPORTING RETAINING WALLS SHALL BE FOUNDED IN MATERIAL AS SPECIFIED IN FOUNDATION NOTES, SUB SECTION - FOOTINGS & PIERS
14. RETAINING WALL SHALL NOT BE BACKFILLED FOR A PERIOD OF 14 DAYS AFTER GROUTING OF BLOCK CORES
15. BLOCK RETAINING WALLS ASSOCIATED WITH HABITABLE AREAS SHALL BE WEATHERPROOF. EXTERNAL FACE SHALL BE TANKED WITH CROMMELIN BLACKSEAL HEAVY DUTY BITUMEN WATERPROOFING MEMBRANE OR AN APPROVED EQUIVALENT

ALL TANKING PRODUCTS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS

RETAINING WALL REPLACEMENT
WORKS AS PER DETAIL SHEET S1
1.2m MAX WALL HEIGHT

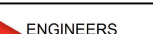
REMOVE EXG. BLOCK WALL AS
REQUIRED

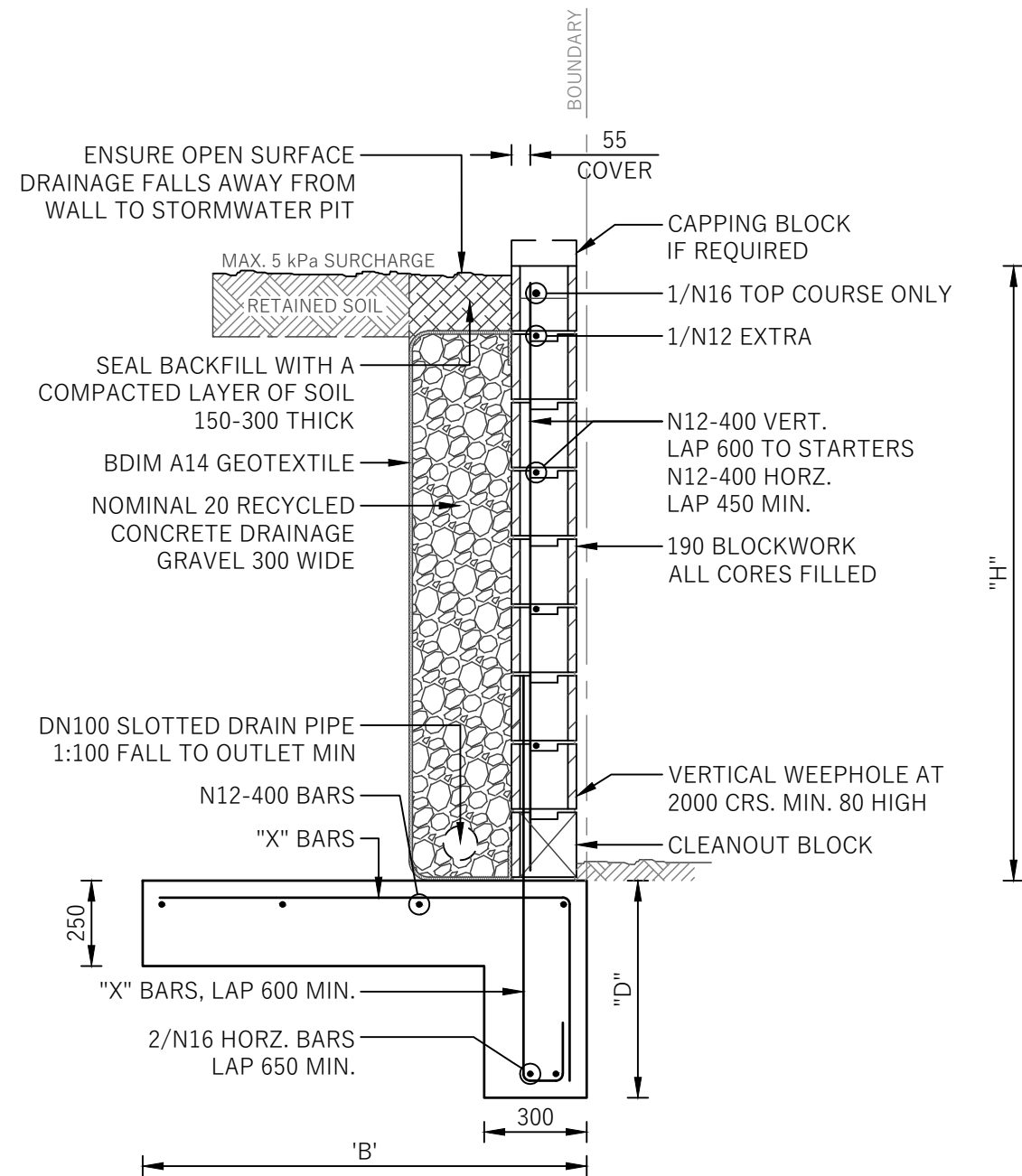
EXTENT OF SLAB REPLACEMENT
WORKS AS PER DETAIL SHEET S2
REMOVE DRIVEWAY SLAB &
INSTALL NEW SLAB WITH RET.
WALL TIE BACK



SITE RECTIFICATION WORKS SET-OUT PLAN

1. ALL RETAINING WALL HEIGHTS & SET-OUT ARE TO BE CONFIRMED ON-SITE WITH CLIENT/ OWNER
2. ALL SERVICES ARE SHOWN INDICITAVELY ONLY AND SHALL BE LOCATED AND PEGGED ON-SITE BEFORE CONSTRUCTION BEGINS

				 Structural Consulting Engineers Residential, Commercial & Industrial Investigation & Reporting	  Mobile: 0437 859 236 Email: info@designsirs.com.au 54 Patrea Street, Banyo QLD 4014	Date: MAR. 23	CLIENT CORE4 SERVICES	PROJECT RETAINING WALL RECTIFICATION WORKS AT 90 HARCOURT STREET, NEW FARM QLD 4005	PROJECT NO. S5096	
			Drawn: D.C.			TITLE SITE PLAN			DRAWING NO. S0	REV. 01
			Design: M.C.							
01	ISSUED FOR CONSTRUCTION	29/03/23	M.C.							
Rev.	Description:	Date	Appd.							



FOOTING & REINFORCEMENT SCHEDULE

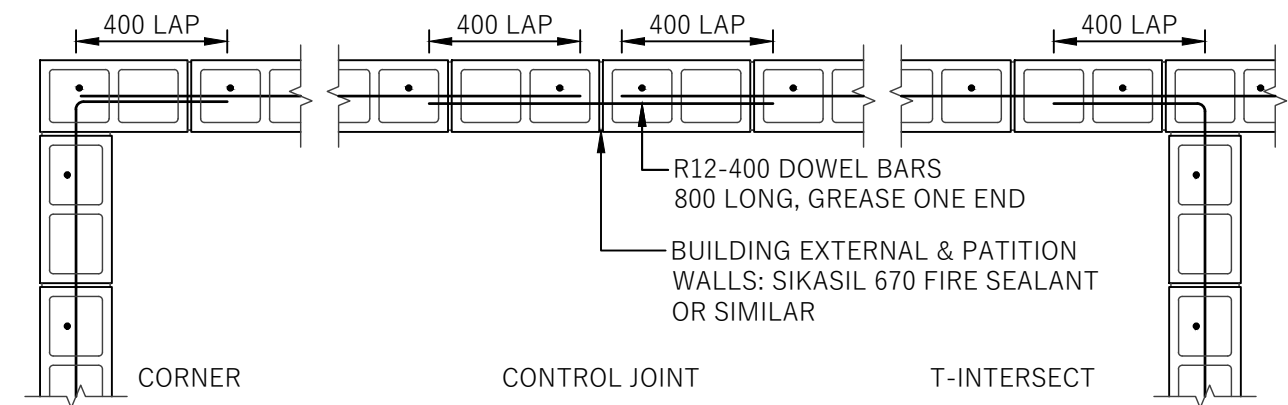
WALL HEIGHT "H"	TOE WIDTH "B"	HEEL DEPTH "D"	"X" BARS
<600	400	400	N12-400
800	600	400	N12-400
1000	700	500	N12-400
1200	800	500	N12-400
1400	1000	600	N16-400
1600	1100	700	N16-400
1800	1300	700	N16-400
2000	1400	800	N20-400

RETAINING WALL DETAIL

SCALE 1: 20

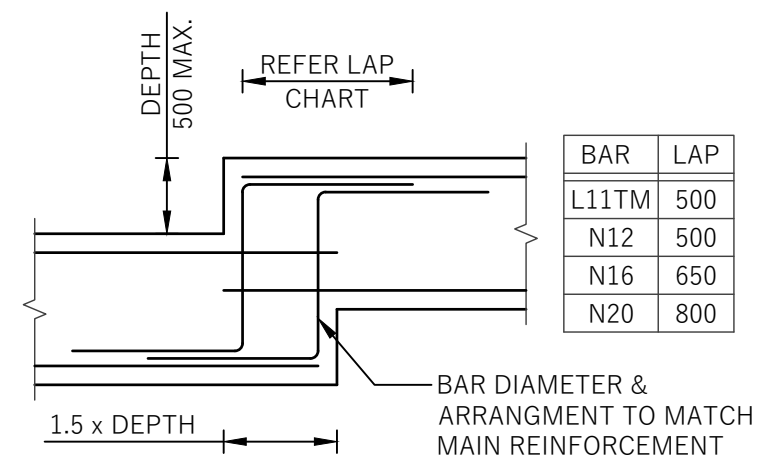
- BLOCK CONTROL JOINTS AT 6.0m CRS. MAX
- ALL STEEL COVER IN CONCRETE FOOTING TO BE 50 MIN.

BACKFILL WITH MATERIAL WON FROM SITE AS REQUIRED. COMPACTED IN 150 LAYERS MAX. WALL IS NOT TO BE BACKFILLED LESS THAN 10 DAY AFTER FOOTING POUR



BLOCKWORK TYPICAL CONNECTION DETAILS

SCALE 1: 20

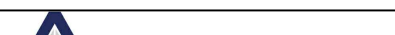
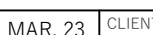


RETAINING WALL/ GROUND BEAMS STEP DETAIL

SCALE 1: 20

01	ISSUED FOR CONSTRUCTION	29/03/23	M.C.	DESIGN SIRS ENGINEERS Structural Consulting Engineers Residential, Commercial & Industrial Investigation & Reporting	REGISTERED ENGINEERS AUSTRALIA Professional Engineer MEMBER Mobile: 0437 859 236 Email: info@designsirs.com.au 54 Patrea Street, Banyo QLD 4014	Date: MAR. 23	CLIENT	CORE4 SERVICES	PROJECT	RETAINING WALL RECTIFICATION WORKS AT 90 HARCOURT STREET, NEW FARM QLD 4005	PROJECT NO.	S5096
						Drawn: D.C.						
Rev.	Description:	Date	Appd.			Design: M.C.			TITLE	DETAIL SHEET 1	DRAWING NO.	REV.
						Certified: MARK CHILTS RPEQ: Z5483					S1	01



				 Structural Consulting Engineers Residential, Commercial & Industrial Investigation & Reporting  Mobile: 0437 859 236 Email: info@designsirs.com.au 54 Patrea Street, Banyo QLD 4014	Date: MAR. 23	CLIENT CORE4 SERVICES	PROJECT RETAINING WALL RECTIFICATION WORKS AT 90 HARCOURT STREET, NEW FARM QLD 4005	PROJECT NO. S5096		
			Drawn: D.C.		 THIS DRAWING & THE STRUCTURAL DESIGN CONTAINED WITHIN REMAINS THE PROPERTY OF DESIGN SIRS AND SHALL NOT BE COPIED, USED OR RETAINED IN PART OR IN WHOLE WITHOUT WRITTEN CONSENT			TITLE DETAIL SHEET 2	DRAWING NO. S2	REV. 01
			Design: M.C.							
01	ISSUED FOR CONSTRUCTION	29/03/23	M.C.			Certified:  MARK CHILTONS RPEO: 25483				
Rev.	Description:	Date	Appd.							