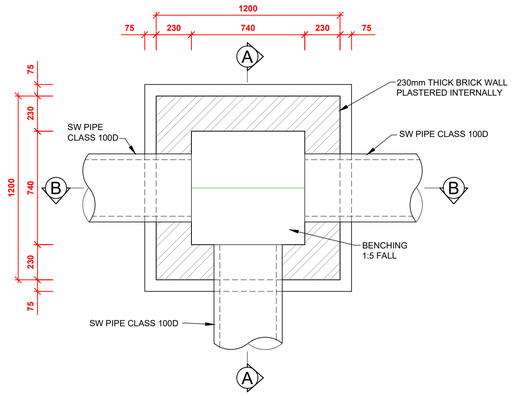
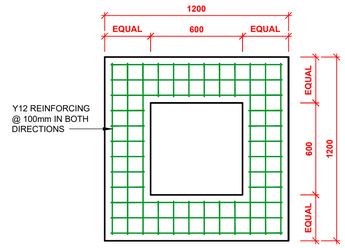


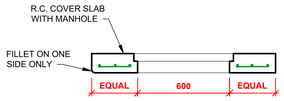
PLAN OF TYPICAL STORMWATER MANHOLE

SCALE 1 : 20



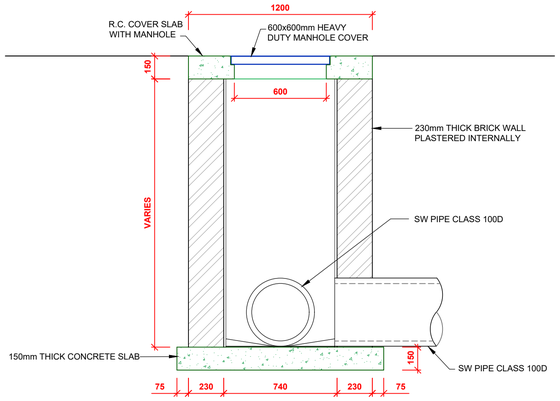
PLAN OF COVER SLAB REINFORCEMENT

SCALE 1 : 20



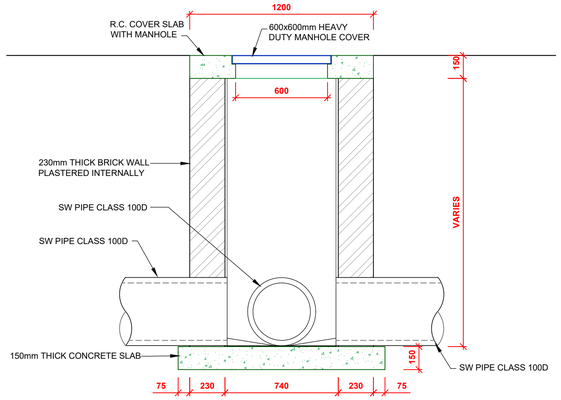
SECTION THROUGH COVER SLAB REINFORCEMENT

SCALE 1 : 20



SECTION A-A

SCALE 1 : 20



SECTION B-B

SCALE 1 : 20

NOTES:

1. CONCRETE MANHOLE COVERS AND FRAMES TO BE DESIGNED IN ACCORDANCE WITH SABS 558: LOADING MEDIUM DUTY Ø600mm WITH STEEL LIP RING. Ø600mm HEAVY DUTY CAST IRON FIG. 3 TYPE 2A IN ROADS AND PARKING AREAS.
2. 'CALCAMITE' OR SIMILAR APROVED LONG LEG POLYPROPYLENE STEP IRONS WITH STEEL REINFORCEMENT FOR MASONRY TO BE PROVIDED IN MANHOLES >1,5m DEEP AND STAGGERED AT 300mm CENTRES VERTICALLY AND 300mm CENTRES HORIZONTALLY. STARTING 500mm BELOW COVER LEVEL.
3. COVER SLABS TO BE REINFORCED WITH 1 No LAYER MESH.
4. BENCHING TO BE 1:3 CEMENT MORTAR.
5. ALL CONCRETE TO BE 25 MPA.
6. ALL MANHOLES TO BE PLASTERED INTERNALLY.
7. MANHOLES TO BE CONSTRUCTED FROM ENGINEERING BRICKS (SABS 1200LE) AND LAID IN ENGLISH BOND.

General Notes:

1. All dimensions and levels are to be checked on site and where applicable to match the existing structure.
2. Any discrepancies or contradictions on the drawings are to immediately be reported to the Engineer.
3. All dimensions are in millimetres. Drawings are not to be scaled.
4. All dimensions shown on the drawings are to be set out on site on the horizontal plane.
5. A complete set of drawings to be available on site at all times.
6. The contractor is responsible for the correct setting out on site and to ensure that the setting out details are in accordance with the drawings.
7. All drawings are to be read in conjunction with the architect's details and drawings.
8. The contractor is responsible for checking that the reinforcement is fixed and maintained in the correct position before and during the casting of concrete.
9. Finished structure is to comply with the latest amendments of SANS 10400.
10. No concrete may be cast without the approval from the Engineer and a minimum of 48 hours' notice is to be given to the Engineer prior to an inspection on site.
11. All reinforcing steel to comply with SANS 0920 as follows.:
    - R - Plain round mild steel bars of strength 250MPa.
    - Y - High yield deformed steel bars of strength 450MPa.
12. All reinforcing steel is to be bent in accordance with SANS 282:2004.
13. Symbols.:
    - T - Top
    - M - Middle
    - B - Bottom
    - EW - Each way
    - HOR - Horizontal
    - ABR - Alternate bars reversed
    - STG - Staggered
    - NTS - Not to Scale
14. Minimum splicing to reinforcing steel bars are as follows.:
    - Y10 - 400mm
    - Y12 - 480mm
    - Y16 - 640mm
    - Y20 - 800mm
    - Y25 - 1000mm
    - Y32 - 1280mm
    - Y40 - 1600mm
15. Minimum cover to reinforcing steel bars unless otherwise stated on drawings are as follows.:
    - Column bases - 75mm
    - Strip foundations - 50mm
    - Raft foundations - 40mm
    - Staircases - 40mm
    - Columns - 40mm
    - Slabs - 40mm
    - Beams - 40mm
    - Walls - 40mm
16. Max slump for all concrete to be 75mm unless otherwise stated on drawings.
17. All concrete to be 25/19 MPa unless otherwise stated on drawings. Contractor to provide Engineer with test results for 3 x test cubes. All concrete to be vibrated when placed on site.
18. Concrete to be cured on site by daily watering for a period of seven (7) days.
19. All concrete works supporting brickwork to be cured for a minimum of three (3) days prior to any construction of brickwork commencing.
20. Minimum compressive strength of bricks shall be 7Mpa in accordance with SANS 10400 unless otherwise stated on the drawings.
21. Clay bricks to be thoroughly wetted before use.
22. A slip joint comprising of 2 by layers 3 ply malthoid must be provided between all loadbearing brickwork and the concrete structure.
23. A 10mm soft joint must be provided between all non loadbearing brickwork and the concrete structure.
24. The specification for fill material to be as follows.:
    - Contain no organic material.
    - Contain no stone with a dimension of larger than two thirds of the layer being compacted.
    - A PI of not exceeding 10 and a CBR of at least 15% at 93% MOD A.A.S.H.T.O and be capable of being compacted to 98% MOD A.A.S.H.T.O.
    - Swell at 100% MOD A.A.S.H.T.O shall not exceed 1.5%.
25. A sample of fill material together with test results to be provided to Engineer prior to construction.

Removal of formwork & supports from concrete:	Days:
Beam sides	2
Deck plates - props left under	7
Beam soffits - props left under	12
Removal of slab props	17
Removal of beam props	21

NB: The above does not include any adjustment for loading (excluding normal loading) being applied above the structural element.

Revision Details

No.	Date	Description	By

SINAKHO CONSULTING

EAST LONDON OFFICE
93 Western Avenue, P.O. Box 13101, VINCENT, EAST LONDON, 5217
Tel: 043 726 4389, info@sinakhoconsulting.co.za

KOMANI OFFICE
44 Grey Street, P.O. Box 9676, KOMANI, 5320
Tel: 045 838 3939, info@sinakhoconsulting.co.za

PROUDLY SOUTH AFRICAN

FOR APPROVAL

Client: REDLINE GROUP

Project: NAHOON VALLEY DEVELOPMENT

Drawing Title: STORMWATER MANHOLE DETAILS

Designed:	N.Weyer
Scale:	As Shown
Drawn:	N.Weyer
Size:	A1
Checked:	D.De Wet
Date:	06 July 2022
Revision:	0
Drawing No.:	S212602-SWD-03