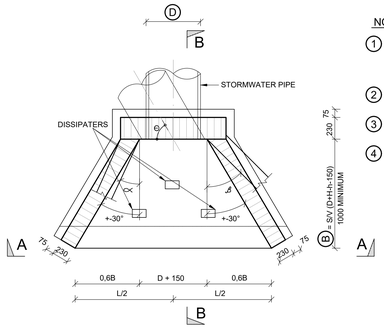


PLAN

NOTES

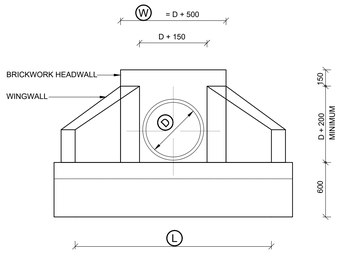
1. Θ = 60° MIN. ; 90° MAX.
   α = 75° - Θ/2
   β = 75° - Θ/2
   D = NOMINAL PIPE DIAMETER
2. APRON SLAB IN 20 MIX CONCRETE
3. ALL EXPOSED CORNERS 10 x 10 CHAMFERED
4. HEADWALL AND WINGWALL : 230 BRICKWORK PLASTERED WITH 12 THICK 1:3 CEMENT/SAND MORTAR WITH WOOD FLOAT FINISH

OUTLET\INLET DIMENSIONS IN mm FOR :
Θ = 90° ; ↻ = 1:1,5 ; h = 300mm & H = 600mm

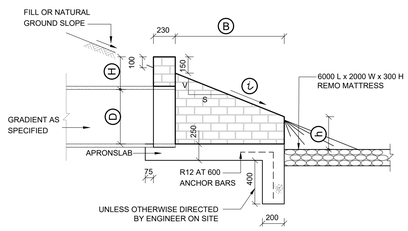
NOM.PIPE DIA. (D)	(W)	(B)	(L)
225	725	1000	1580
300	800	1000	1650
375	875	1000	1720
450	950	1000	1800
600	1100	1200	2150
750	1250	1250	2300

↻ = V/S = GRADIENT TO SUIT FILL OR NATURAL GROUND SLOPE (1:1,5 MAX.)
(h) = HEIGHT TO SUIT GRADIENT ' ' (300 MIN.)
(H) = 300 MIN. ; 900 MAX.

EROSION PROTECTION MEASURES AS SPECIFIED BY THE ENGINEER. WHERE GRASS IS SPECIFIED, SCARIFY AND HYDROSEED WITH THE FOLLOWING MIX OF GRASS SEED UNLESS ANOTHER MIX HAS BEEN SPECIFIED:
- CLORIS GYANA (10kg/ha)
- CYNODON DACTYLON (15kg/ha)
- ERAGROSTIS TEF (5kg/ha)

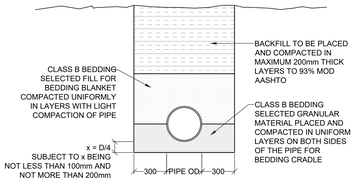


ELEVATION A-A

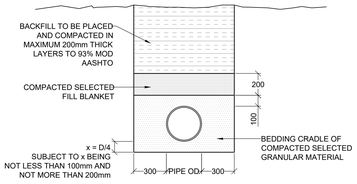


ELEVATION B-B

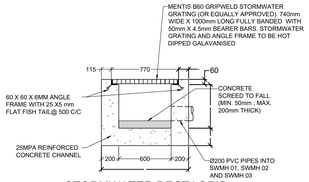
STORMWATER HEADWALL DETAILS
SCALE 1:20



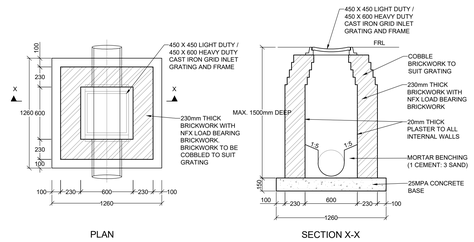
PIPE BEDDING DETAIL: RIGID PIPES
SCALE 1:20



PIPE BEDDING DETAIL: FLEXIBLE PIPES
SCALE 1:20

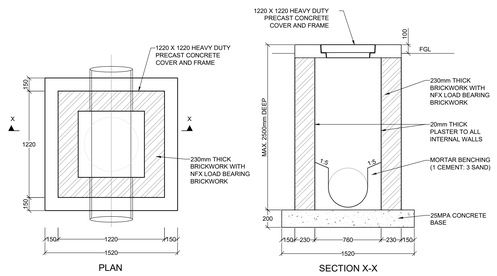


STORMWATER RECTAGRID
CHANNEL DETAILS
N.T.S



PLAN SECTION X-X

STORMWATER MANHOLE TYPE B
450mm X 600mm MANHOLE DETAIL
(MAX. 1500mm DEEP ; PIPES < 450mm Ø)
SCALE 1:20



PLAN SECTION X-X

STORMWATER MANHOLE TYPEC
760mm X 760mm MANHOLE DETAIL
(MAX. 2500mm DEEP ; PIPES < 525mm Ø)
SCALE 1:20

PRELIMINARY

NOTES :

A. GENERAL

1. ALL SETTING OUT TO BE UNDERTAKEN BY A REGISTERED PROFESSIONAL LAND SURVEYOR.
2. PROVE ALL SERVICES PRIOR TO CONSTRUCTION.
3. ALL WORK AREAS TO BE REINSTATED (PREMIX, CONCRETE, ETC.)
4. MUNICIPALITY TO EXECUTE ALL CONNECTIONS INTO MUNICIPAL LINES.
5. ALL LEVELS AND DIMENSIONS TO BE VERIFIED ON SITE.
6. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE STRUCTURAL ENGINEERING AND ARCHITECTURAL DRAWINGS.
7. ALL WORK IS TO BE EXECUTED IN ACCORDANCE WITH SANS 1200.
8. CONTRACTOR TO PROVIDE AN AS-BUILT SURVEY OF ALL WORKS CONSTRUCTED UPON COMPLETION OF THE PROJECT.
9. ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH THE RELEVANT SABS 1200 SPECIFICATIONS.
10. THE CONTRACTOR MUST GIVE THE ENGINEER 48 HOURS WRITTEN NOTICE OF INSPECTIONS PRIOR TO COVERING UP ANY WORKS.
11. THE CONTRACTOR MUST ARRANGE FOR CONTROL TESTING AT FREQUENCIES SPECIFIED IN THE RELEVANT SABS 1200 SPECIFICATIONS. COSTS FOR CONTROL TESTING WILL BE FOR THE CONTRACTORS ACCOUNT.
12. ONCE THE WORKS ARE SET OUT THE CONTRACTOR MUST CALL THE ENGINEER FOR INSPECTION PRIOR TO COMMENCING WITH CONSTRUCTION.
13. SHOULD THE CONTRACTOR DISCOVER ANY DISCREPANCIES IN THE DRAWINGS, THESE DISCREPANCIES MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY. NO ASSUMPTIONS MUST BE MADE.
14. SHOULD THE CONTRACTOR WISH TO USE ANY MATERIALS OTHER THAN THOSE SPECIFIED, HE MUST OBTAIN WRITTEN APPROVAL FROM THE ENGINEER TO DO SO.
15. ANY DESIGN CHANGES DURING CONSTRUCTION MUST BE ISSUED UNDER SITE INSTRUCTION, AFTER APPROVAL BY THE PRINCIPAL AGENT
16. ALL BRICKS USED TO CONSTRUCT SEWER AND STORMWATER MANHOLES MUST BE NFX LOAD BEARING BRICKS CONFORMING TO SABS 1200 LD.
17. ALL EXISTING SERVICES TO BE PROVED PRIOR TO WORK COMMENCING. ANY EXISTING SERVICE THAT IS DAMAGED BY THE CONTRACTOR AND IS SHOWN ON THE CONSTRUCTION DRAWINGS OR INDICATED TO THE CONTRACTOR ON SITE BY THE ENGINEER, MUST BE REPAIRED BY THE CONTRACTOR AT HIS OWN COST.

B. EARTHWORKS :

1. 100mm TOPSOIL TO BE STRIPPED AND STOCKPILED AS INSTRUCTED.
2. UNSUITABLE MATERIAL TO BE SPOILT AS INDICATED BY THE ENGINEER.
3. IN SITU MATERIAL TO BE COMPACTED TO 93% MOD. AASHTO DENSITY.
4. FILL TO BE COMPACTED IN MAX. 200mm THICKNESS TO 93% MOD. AASHTO DENSITY.
5. ALL BATTERS TO BE TOPSOILED WITH MATERIAL FROM STOCKPILE.

C. STORMWATER

1. ALL STORMWATER PIPES ARE :
   250mm NOMINAL DIAMETER - CLASS 34HD uPVC
   375mm / 450mm NOMINAL DIAMETER - CLASS 100D CONCRETE
2. ALL STORMWATER CONCRETE PIPES TO COMPLY WITH SANS 677 STANDARDS.
3. ALL JOINTS TO BE 'SPIGOT AND SOCKET' TYPE.
4. ALL STORMWATER PIPES TO BE LAID ON CLASS B BEDDING.

D. SEWER

1. ALL SEWER PIPES ARE 160mm NOMINAL DIAMETER CLASS 34 HEAVY DUTY UPVC PIPES.
2. ALL SEWER PIPES TO BE LAID ON CLASS B BEDDING.
3. ALL SEWER PIPES TO COMPLY WITH SANS 1601 STANDARDS.
4. ALL SEWER PIPES IN PARKING AREAS/ROAD CROSSING TO BE CONCRETE ENCASED 150mm ALL ROUND WITH 25MPa CONCRETE AT 28 DAYS STRENGTH.

E. WATER RETICULATION

1. BULK WATER MAIN : 75mm Ø HDPE PE100 PN 12.5
2. BEDDING TO SUIT FLEXIBLE PIPES.
3. PIPES TO BE INSTALLED WITH ALL COUPLINGS AND TO BE TESTED AND DISINFECTED.
4. INSTALLATION TO COMPLY WITH SABS 1200.
5. THRUST BLOCKS TO BE 25MPa CONCRETE AT 28 DAYS STRENGTH.
6. CONTRACTOR TO ENSURE THAT ALL INDIVIDUAL DOMESTIC SUPPLY WATER MAINS ARE CONNECTED TO THE POTABLE WATER RETICULATION AND NOT THE FIRE RETICULATION.
7. PRECAST MARKERS TO BE INSTALLED TO INDICATE TO THE RELEVANT UNDERGROUND SERVICES (WATER LINES, VALVES, FIRE LINES ETC.)
8. MINIMUM COVER TO BURIED PIPES SHALL BE 800mm, EXCEPT AT ROAD CROSSINGS WHERE THE COVER SHALL BE INCREASED TO 1000mm.

SCALE (mm)
0 10 20

No.	REFERENCE DRAWINGS
911	BULK STORM WATER LONG SECTIONS 2
910	BULK STORM WATER LONG SECTIONS 1
908	BULK STORM WATER RETICULATION LAYOUT
902	BULK SERVICES LAYOUT

REV	DESCRIPTION	BY	DATE
P1	ISSUED FOR COMMENTS	A.M	2024.09.20

Professional person Registration

CLIENT

SOUTH AFRICAN
POLICE SERVICES

PROJECT

MSINSINI POLICE STATION

DETAILS

BULK STORM WATER
TYPICAL DETAILS

MAP AFRICA CONSULTING
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website : www.mapafrica.co.za
FAX (031) 3092929 TEL. (031) 3095831

SABS ISO 9001 CESA

DESIGNED	A.M	COPYRIGHT RESERVED	SCALES
DRAWN	A.M		AS SHOWN
APPROVED	S.S	PL	DATE 2024.09.20
TENDER No.			
DRAWING No.	589/MSI/909		REV P1