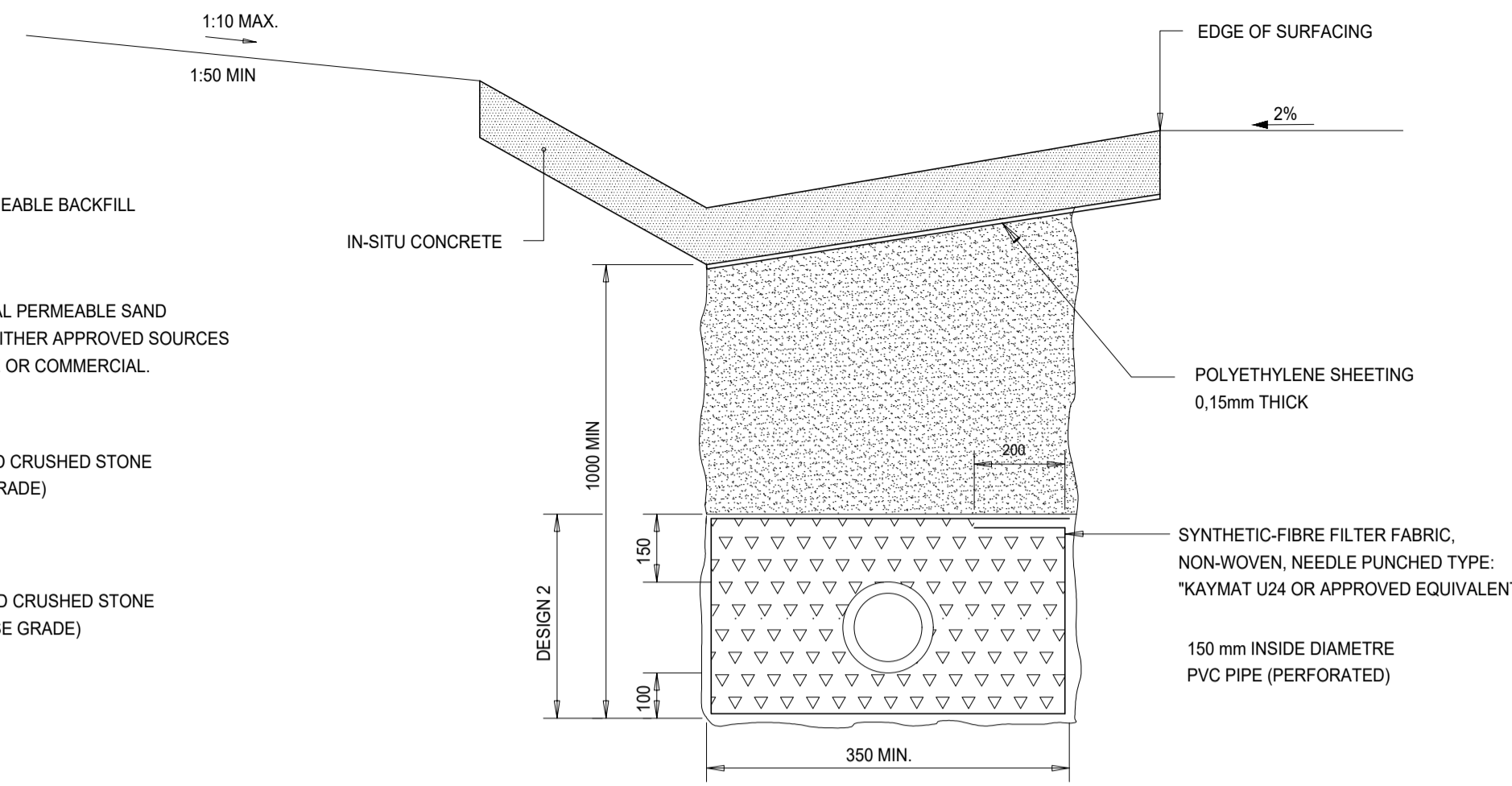


**SHALLOW CUT CONDITION
TYPE "A" SUBSURFACE DRAIN**
N.T.S.

LEGEND

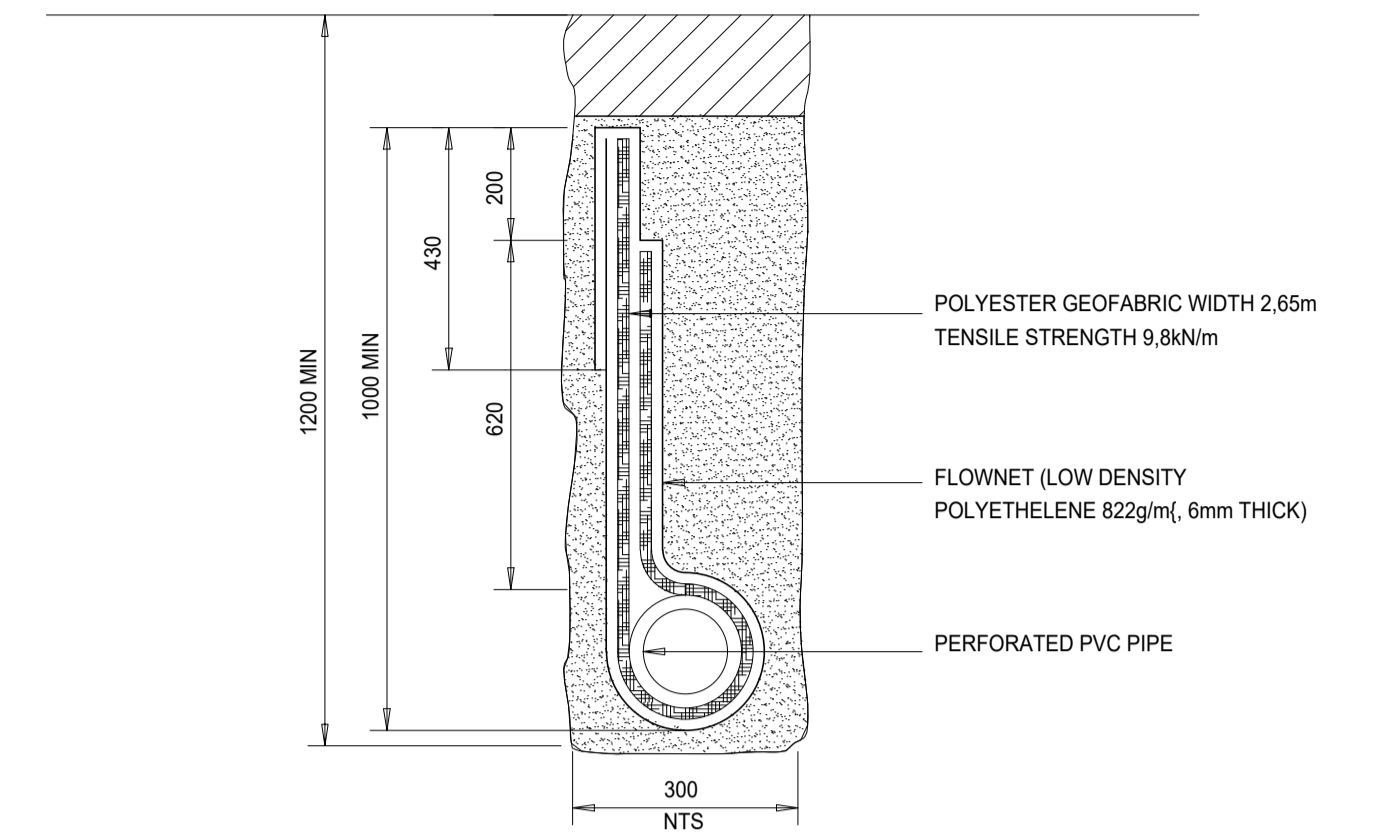
- IMPERMEABLE BACKFILL
- NATURAL PERMEABLE SAND FROM EITHER APPROVED SOURCES ON SITE OR COMMERCIAL.
- GRADED CRUSHED STONE (FINE GRADE)
- GRADED CRUSHED STONE (COARSE GRADE)

NOTE:
DESIGNS 1 AND 2 CAN BE EXCHANGED WHEN INSTRUCTED BY THE ENGINEER

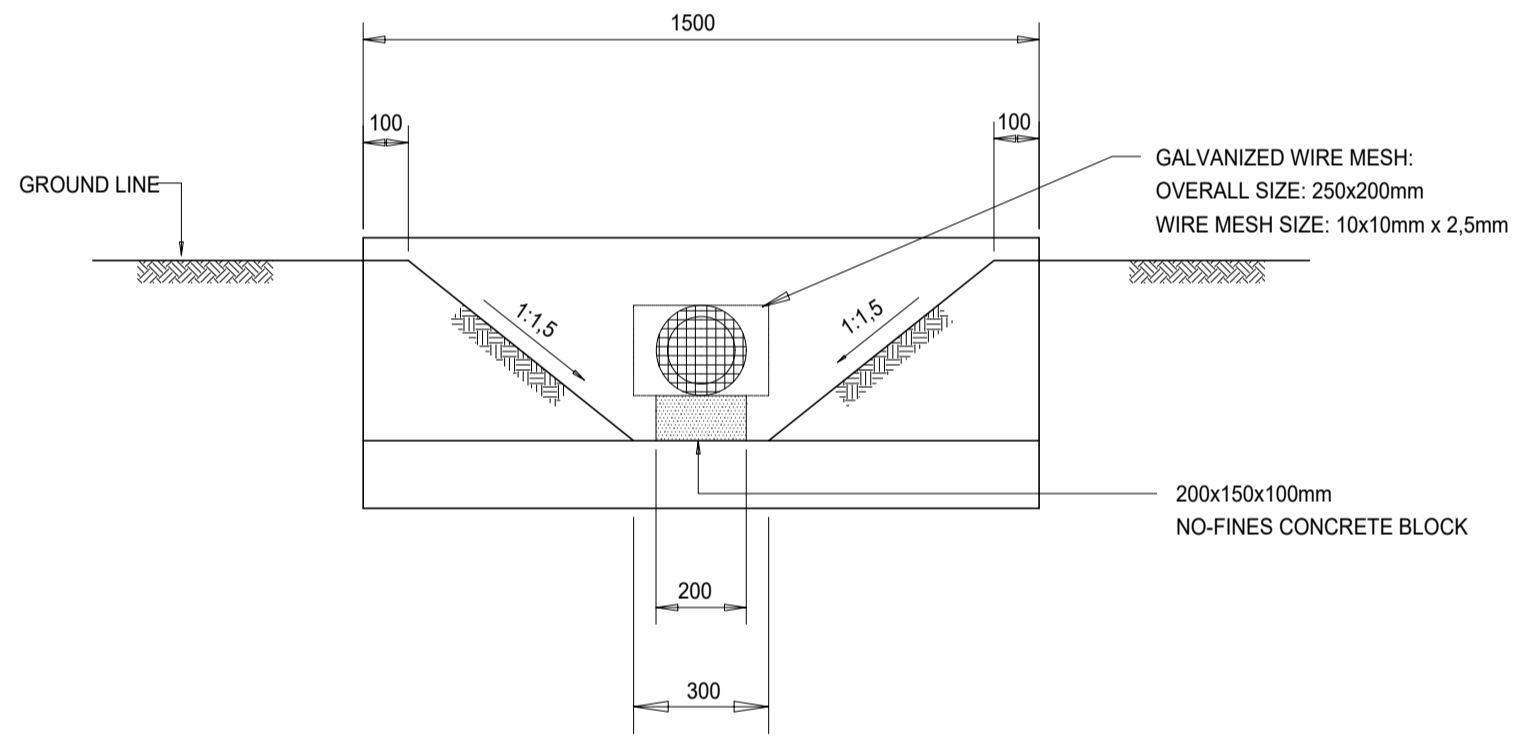


**DEEP CUT CONDITION
TYPE "B" SUBSURFACE DRAIN**
N.T.S.

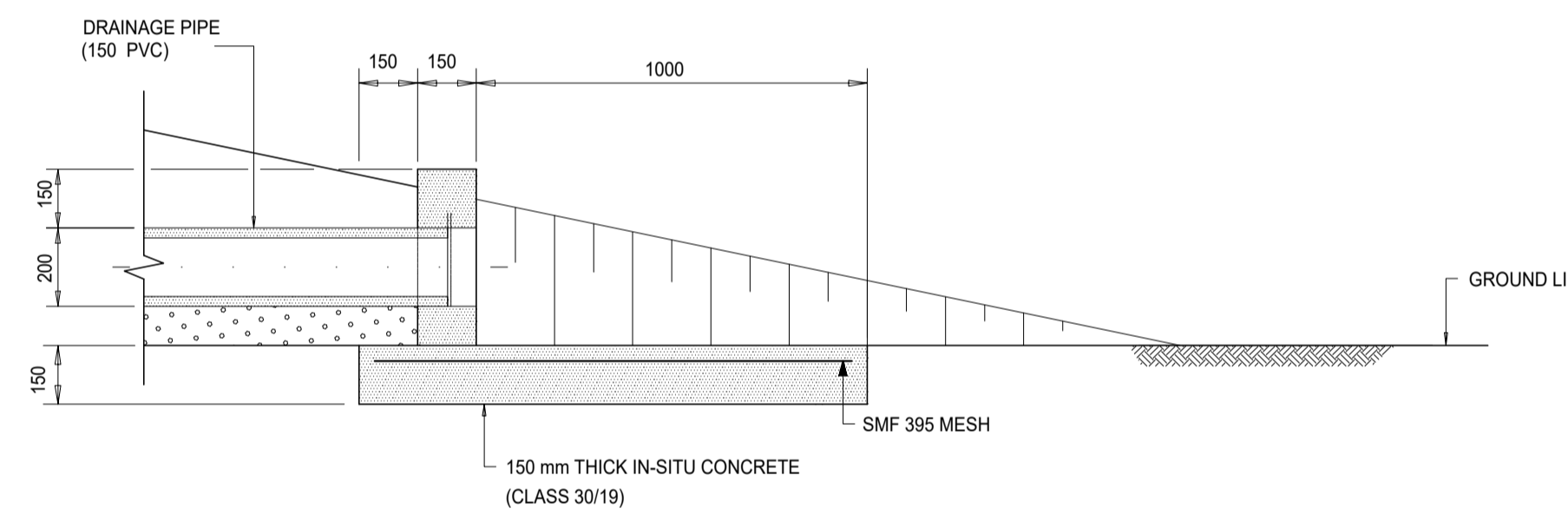
NOTE:
FLOWNET AND PVC PIPE ONLY TO BE INSTALLED AT THE ENGINEER'S REQUEST



**SANDY CONDITION
TYPE "C" SUBSURFACE DRAIN**
SCALE 1:10



FRONT ELEVATION



SECTION B-B

GRADING REQUIREMENTS OF CRUSHED STONE

CRUSHED STONE SHALL BE GRADED CRUSHED STONE, WHICH CONFORMS TO THE FOLLOWING REQUIREMENTS:

PERCENTAGE PASSING THROUGH A -

- 26.6mm SIEVE 100
- 13.2mm SIEVE 60-85

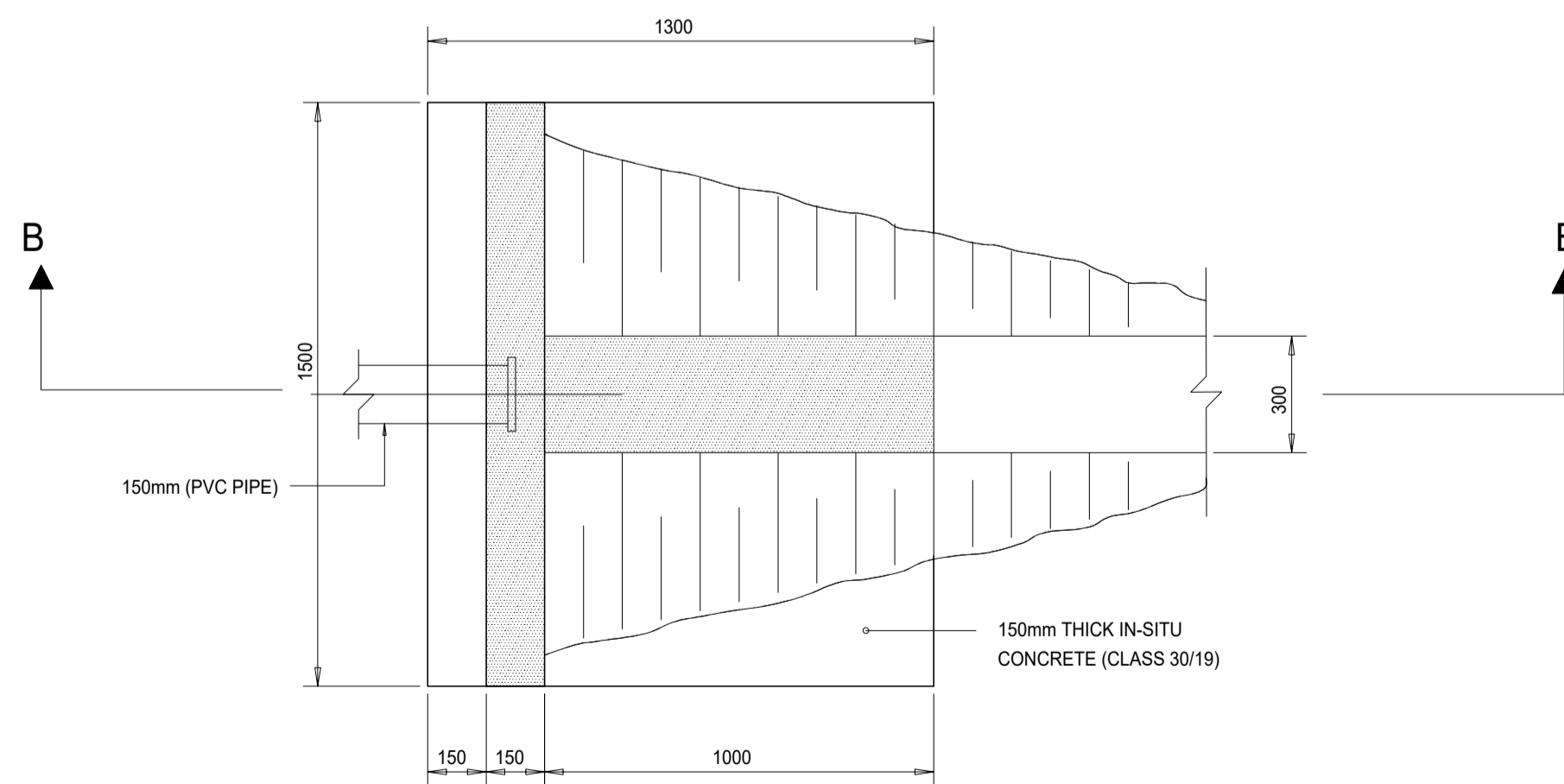
FINE GRADE STONE:

- A MINIMUM OF 15% PASSING THROUGH A 3.35mm SIEVE.
- A MAXIMUM OF 15% PASSING THROUGH A 1.18mm SIEVE.

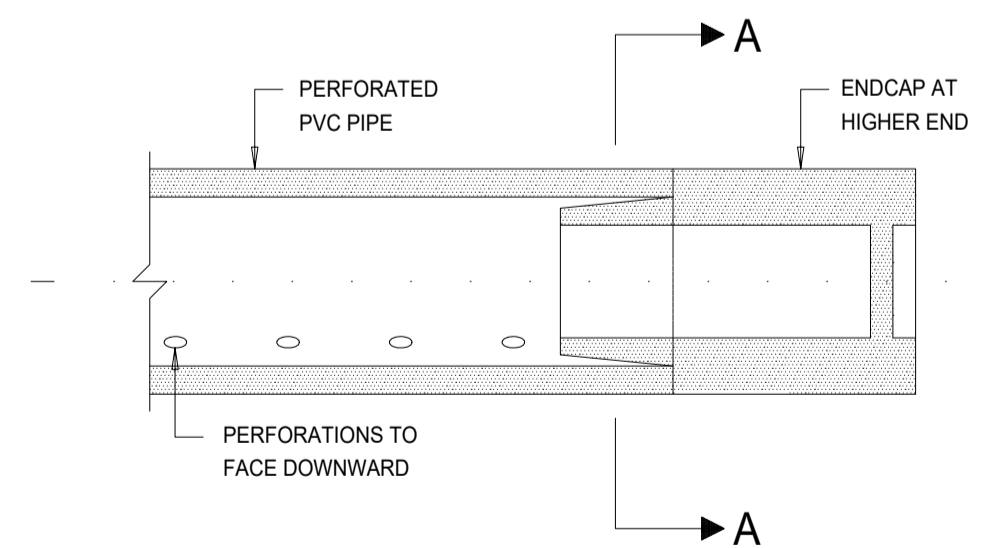
COARSE GRADE STONE:

- A MINIMUM OF 15% PASSING THROUGH A 6.70mm SIEVE.
- A MAXIMUM OF 15% PASSING THROUGH A 2.36mm SIEVE.

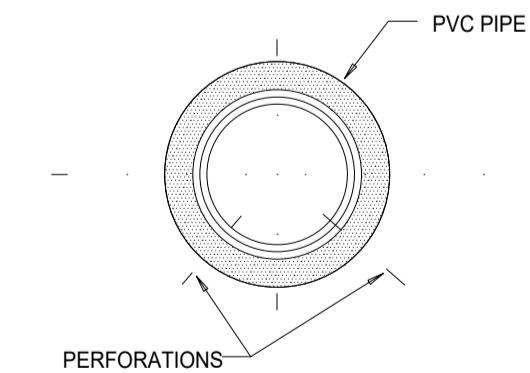
IN THE CASE OF ANY CRUSHED STONE NOT MORE THAN 5% OF THE MATERIAL SHALL PASS THROUGH THE 0.075mm SIEVE.



**PLAN
DETAIL OF OUTLET STRUCTURE**



**SECTION THROUGH PIPE CENTRE LINE
ENDCAP DETAIL**
SCALE 1:5



SECTION A-A

ISSUED FOR TENDER

| No | DATE | REVISION | CONSULT | DIR |
|----|-----------|--------------------|---------|-----|
| A | FEB. 2020 | DESIGN DEVELOPMENT | | |
| 00 | NOV. 2022 | TENDER | | |

CLIENT

CITY OF MBOMBELA

P. O. BOX 45
NELSPRUIT
1200

1 NEL STREET
NELSPRUIT
1200

Tel.: (013) 759 9111 Fax.: (013) 759 2070

DESIGNED BY

DRAWN BY L.N. MHLANGA

CHECKED BY T. MAGAGULA Pr Tech Eng.

APPROVED BY T. MAGAGULA Pr Tech Eng.

CONSULTANT

SHUMA AFRICA

UNIT 75, BUILDING 11,
SONPARK SHOPPING CENTRE,
GNR, MADIBA DRIVE AND
PIET RETIEF STREET
NELSPRUIT

P O BOX 1644
NELSPRUIT
1200

Tel.: (013) 752 3658 Fax.: (086) 545 7391

APPROVED

MBOMBELA DATE

CONSULTING ENGINEER DATE

CONTRACT NUMBER : REG 55/2019

PROJECT

NKOMENI TO THEMBSISA ROAD

DESCRIPTION

SUB - SURFACE DRAINS

DESIGN PLAN
(Full signature)

For: M.M.

For: Consulting Engineer

CONSULTANTS
DRAWING NUMBER
SH-920-31-03-TD

SCALE
AS - SHOWN

REVISION No.
00

SHEET 1 of 1

DATE
FEBRUARY 2023