

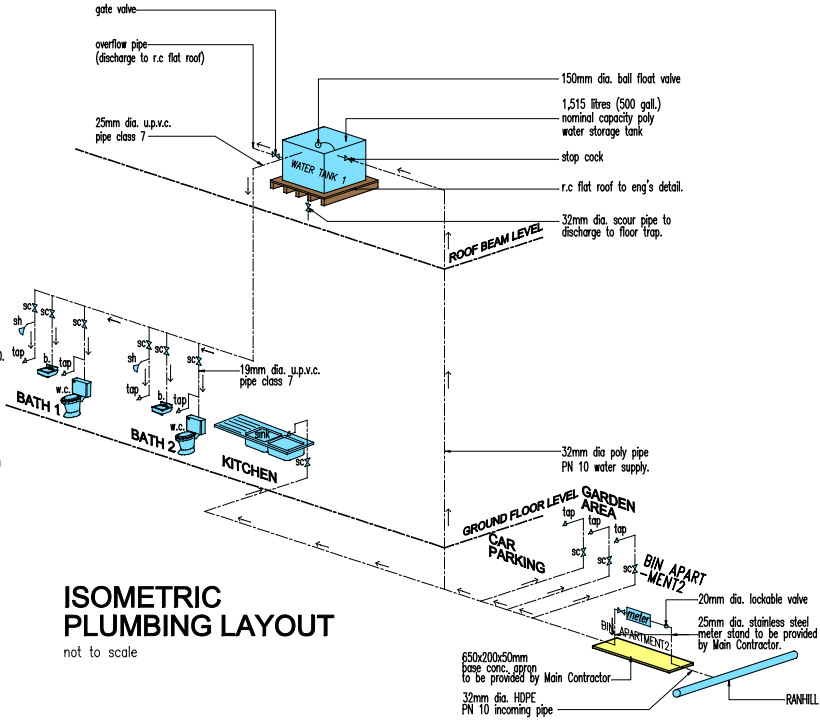
CODE	DESCRIPTIONS
SC	STOP COCK
GV	GATE VALVE
LV	LOCKABLE VALVE
WC	WATER CLOSET
SH	BATH SHOWER
TP	WATER TAP
SINK	KITCHEN SINK
WB	HAND WASH BASIN
FT	FLOOR TRAP
MH	MANHOLE

- SYARAT-SYARAT RANHILL SAJ
- Paip hubungan hendakdahi dari jenis HDPE kelas PN 10.
 - Paip-paip HDPE & PVC yang dipasang di tembok dikelip setiap 915 (3ft).
 - Paip servis naik ke tangki & sink dapur hendakdahi dari jenis Poly.
 - Paip tertanam (concealed) dalam tembok dari jenis UPVC kelas 7.
 - Meter air hendakdahi dipasang di luar pagar berdekatan dengan pintu masuk.

- NOTES
- Waste water from both, w.c and kitchen to be discharge into sewer.
 - All sanitary fitting to be provided with 75mm deep water seal.
 - All plumbing piping to be concealed.

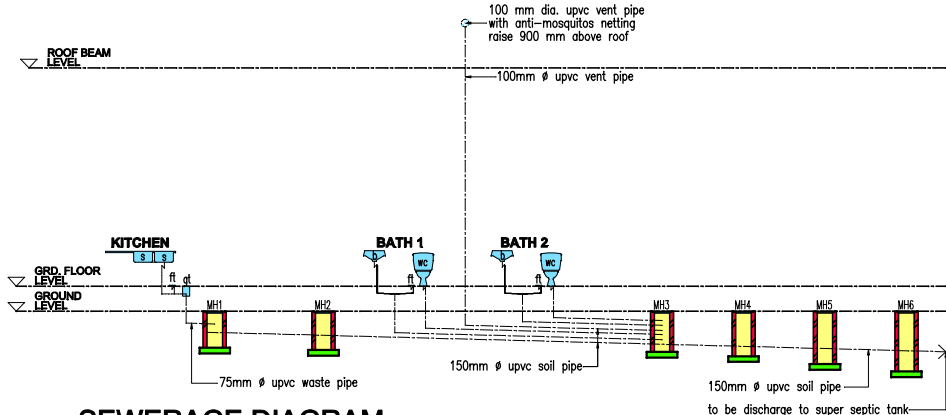
ISOMETRIC PLUMBING LAYOUT

not to scale



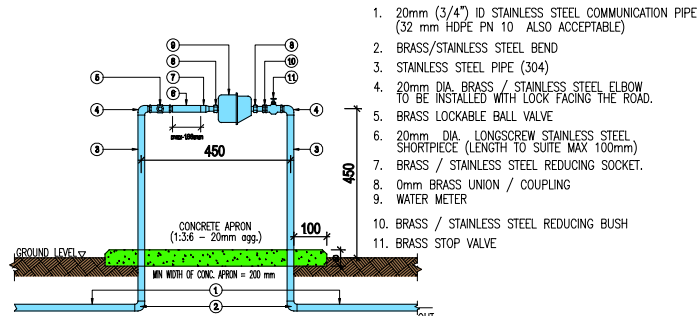
SEWERAGE DIAGRAM

not to scale



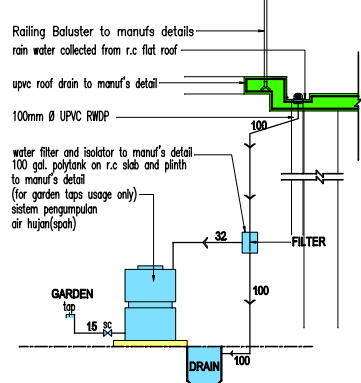
DOMESTIC SINGLE METER INSTALLATION WITH INLINE LOCKABLE VALVE

not to scale



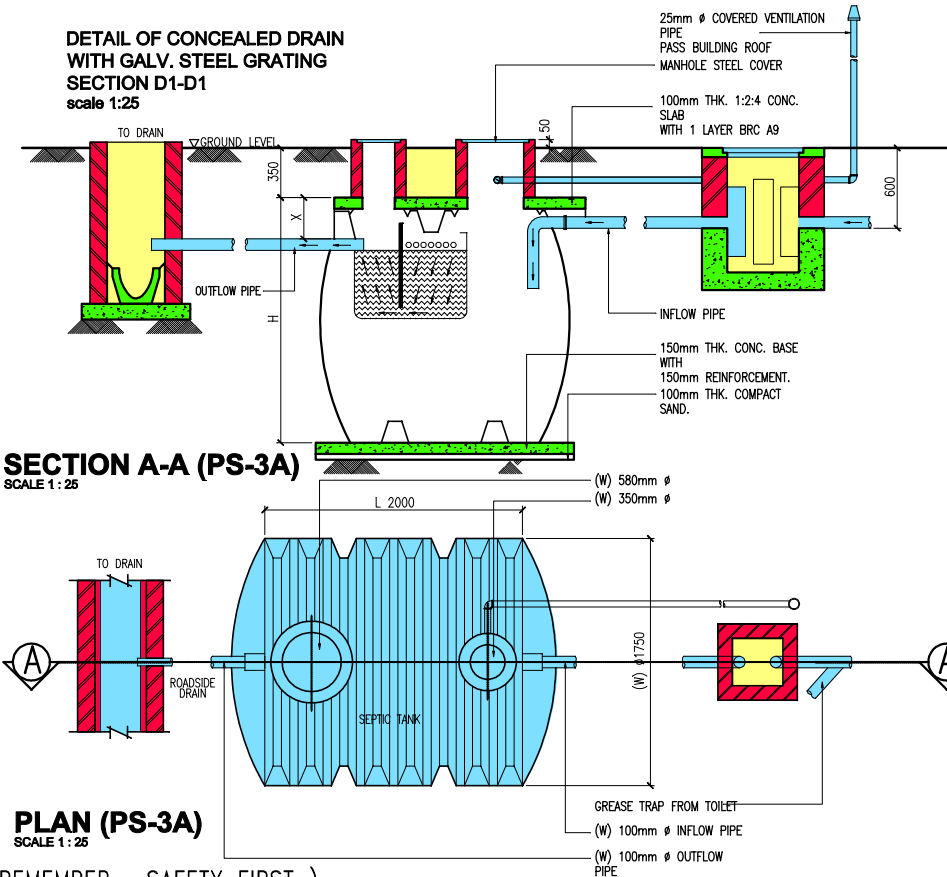
SISTEM PENGUMPULAN AIR HUJAN (SPA)H)

not to scale



SECTION A-A (PS-3A)

SCALE 1 : 25



PLAN (PS-3A)

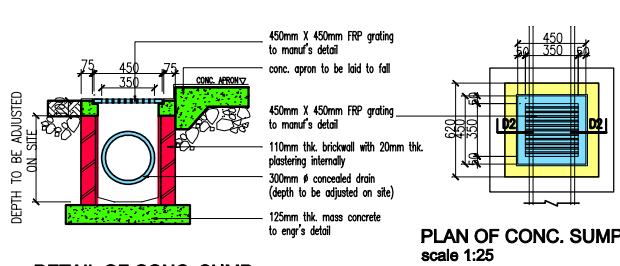
SCALE 1 : 25

DATA	PS-3A
SEPARATION CHAMBER	VOLUME (Litre) 2060
FILTRATION CHAMBER	VOLUME (Litre) 250
HEIGHT (H)	(CM) 175
WIDTH (W)	(CM) 148
INLET PIPE LEVEL (X)	(CM) 17.5
OUTLET PIPE LEVEL (Y)	(CM) 18
INLET PIPE	(CM) 25
OUTLET PIPE	(CM) 10
VENTILATION PIPE	(CM) 2.5
DETENTION TIME	HOUR 31.4
POPULATION	PERSON 5-9

DETAIL OF CONC. SUMP

SECTION D2-D2

scale 1:25



PLAN OF CONC. SUMP
scale 1:25

EFFICIENCY OF TREATMENT

THE PROJECTANK PS-3A IS DESIGNED TO BE USED FOR DOMESTIC SEWAGE FROM RESIDENTIAL AND COMMERCIAL PREMISES WITH A POPULATION EQUIVALENT OF 11 PEOPLES RESPECTIVELY.

THE STANDARD TO SATISFY IS THE MALAYSIA ENVIRONMENTAL QUALITY REGULATIONS, 1979 STANDARD B, i.e FOR EFFLUENT DISPOSAL TO WATERWAYS WHICH ARE NO CONCERN WATER INTAKE :

CRITERIA	INFLUENT (AVERAGE)	EFFLUENT (AVERAGE)
BIOCHEMICAL OXYGEN DEMAND (BOD AT 20° C)	< 200 MG/L	< 50 MG/L
SUSPENDED SOLIDS (SS)	< 250 MG/L	< 100 MG/L

THE DESIGN FLOW OF WASTEWATER IS TAKEN AS 225 LITRES PER CAPITAL PER DAY 225 LITRES IS EQUIVALENT TO 0.225 M

THEREFORE THE DESIGN TOTAL AVERAGE DAILY Q_{AVR} () FOR :

$$Q_{AVR} \text{ FOR PS-3A} = 13 \times 0.225 = 2.925m$$

EFFICIENCY OF BOD REMOVAL

FOR PROJECTANK PS-3A ANAEROBIC SEPTIC SYSTEM, BOD REMOVABLE EFFICIENCY IS TAKEN AS 40% IN THE SEPARATION CHAMBER WHERE SEDIMENTATION PROCESS IS IN PROGRESS. BOD OF THE SETTLED EFFLUENT IS :

$$= \text{DESIGN INFLUENT} \times (100 - 40) \% \\ = 200 \text{ MG/L} \times (100 - 40) \% \\ = 120 \text{ MG/L}$$

THEN IN THE FILTRATION CHAMBER (FILTRATION PROCESS IN PROGRESS), BOD IS FURTHER REDUCED WITH AN ADOPTED EFFICIENCY OF 70% i.e BOD IN THE FINAL EFFLUENT IS :

$$= 120 \text{ MG/L} \times (100 - 70) \% \\ = 36 \text{ MG/L}$$

EFFICIENCY OF SUSPENDED SOLIDS REMOVAL

OR THE PROJEC TANK MODEL PS-3A, 70% OF THE SUSPENDED SOLIDS ARE CONSIDERED TO BE REMOVED IN THE SEDIMENTATION PROCESS ALTHOUGH IN NORMAL PRACTICE, THE EFFICIENCY IS ABOUT 80%.

$$= \text{DESIGN INFLUENT} \times (100 - 70) \% \\ = 250 \text{ MG/L} \times (100 - 70) \% \\ = 75 \text{ MG/L} - \text{OK}$$

DETENTION TIME (DT)

FOR A SEPTIC TANK, THE DETENTION TIME SHOULD BE MORE THAN 24 HOURS.

GIVEN :
SEPARATION CHAMBER VOLUME FOR PS-3A IS 3.600 m³

FORMULA :

$$DT = \frac{\text{SEPARATION CHAMBER VOLUME}}{\text{DESIGN } Q_{AVR}}$$

PS-3A
DT = $\frac{3.600m}{2.925 \text{ m}^3/\text{D}}$
= 1.23 D - OK
= 1.233 x 20 HOURS
= 24.6 HOURS

ORGANIC LOADING (OL)

GIVEN :
FILTER VOLUME FOR PS II IS 0.25 M³ AND FOR PS III IS 0.50 M³

FORMULA :

$$OL = \frac{\text{AVERAGE BOD VALUE} \times \text{DESIGN } Q_{AVR}}{\text{FILTER VOLUME}}$$

PS-3A
OL = $\frac{0.12 \text{ KG/m}^3 \times 2.925 \text{ m}^3/\text{D}}{0.25 \text{ M}^3}$
= 0.702 KG BOD/(m D)

File No. :

NOTE:-

	DATE OF ISSUE
☐ PRELIMINARY DRAWINGS.	
☒ SUBMISSION DRAWINGS.	
☐ TENDER DRAWINGS	
☐ CONSTRUCTION DRAWINGS.	

NOTE: ALL DRAWINGS SUBJECT TO CHANGES

PROJECT TITLE:

PERMOHONAN PELAN BANGUNAN MENGIKUT AKTA 133 BAGI CADANGAN MEMBINA SEBUAH RUMAH KEDIAMAN 1 TINGKAT DI ATAS LOT 118454, NO 5 JALAN BELIMBING 13, TAMAN KOTA MASAI, 81750 MASAI, MUKIM PLENTONG, DAERAH JOHOR BAHRU, JOHOR.

UNTUK : NOORASLINDA BINTI ASMY

PELUKUS PELAN BERDAFTAR SIGNATURE:

Saya memperakui bahawa perincian-perincian dalam pelan-pelan ini adalah menurut kehendak-kehendak Undang-Undang Kecil Bangunan Seragam 1986 dan saya setuju terima tanggungjawab penuh dengan sewajarnya.

NAMA: BDR AHMAD BIN OMAR
ALAMAT: NO.22, JALAN NONG CHIK HEIGHT 4,
TAMAN NONG CHIK HEIGHTS, 80100
JOHOR BAHRU, JOHOR DARUL TAKZIM.
NO. PENDAFTARAN: BO/A33
KELAS: PELUKUS PELAN BERDAFTAR

PROJECT MANAGEMENT:

NR2ARCHI DESIGN

design • built • consultancy
202103196642 (N02259897-K)

NR 2 ARCHI DESIGN, NO.24-01,
JALAN SUSUR MASAI LAMA 1,
TAMAN SAUJANA, 81100 JOHOR BAHRU,
JOHOR DARUL TAKZIM
TEL: 011-63611050
nr2arch@gmail.com

OWNERS:

NAMA: NOORASLINDA BINTI ASMY
NO K/P: 850301-04-5208
ALAMAT: NO.20, JALAN BUKA 8,
BANDAR BISTARI PERDANA, 81700
PASIR GLIANG, JOHOR
TELNO:

DRAWING TITLE
-DETAIL OF SEPTIC TANK
-DETAIL OF MANHOLE
-ISOMETRIC PLUMBING LAYOUT
-SPAH DETAIL
-SEWERAGE DIAGRAM

FILE REF. NO : NR2/24/PCBANGLOLOT118454/MBPC/BF 04

SCALE : AS-SHOWN

DRAWN/DESIGN BY : SALLEH

DRAWING NO :NR2ARCHIDESIGN/PCBANGLOLOT118454/MBPC/BF 04

DRAWING NO :NR2ARCHIDESIGN/PCBANGLOLOT118454/MBPC/BF 04

NOTE : THIS DRAWING IS COPYRIGHT. CONTRACTOR SHOULD CHECK AND VERIFY ALL DIMENSIONS ON SITE BEFORE WORK COMMENCES. ANY DISCREPANCIES SHOULD BE REPORTED IMMEDIATELY TO THE PELUKUS PELAN BERDAFTAR.