



बिहार सरकार

लोक स्वास्थ्य अभियंत्रण विभाग

Component Wise Specification Details of Har Ghar Nal Ka Jal Schemes - A Ready Reckoner

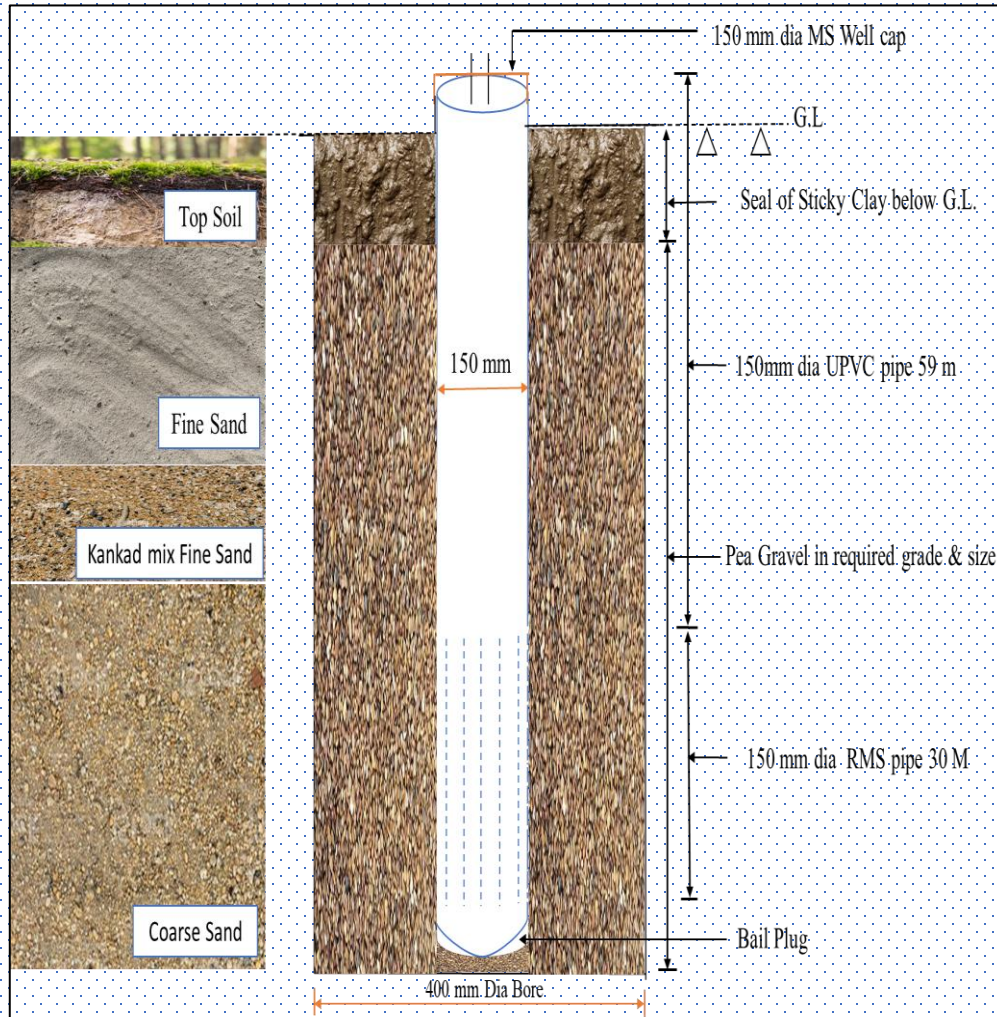
लोक स्वास्थ्य अभियंत्रण
विभाग



हर घर -
नल का जल

1. BORING

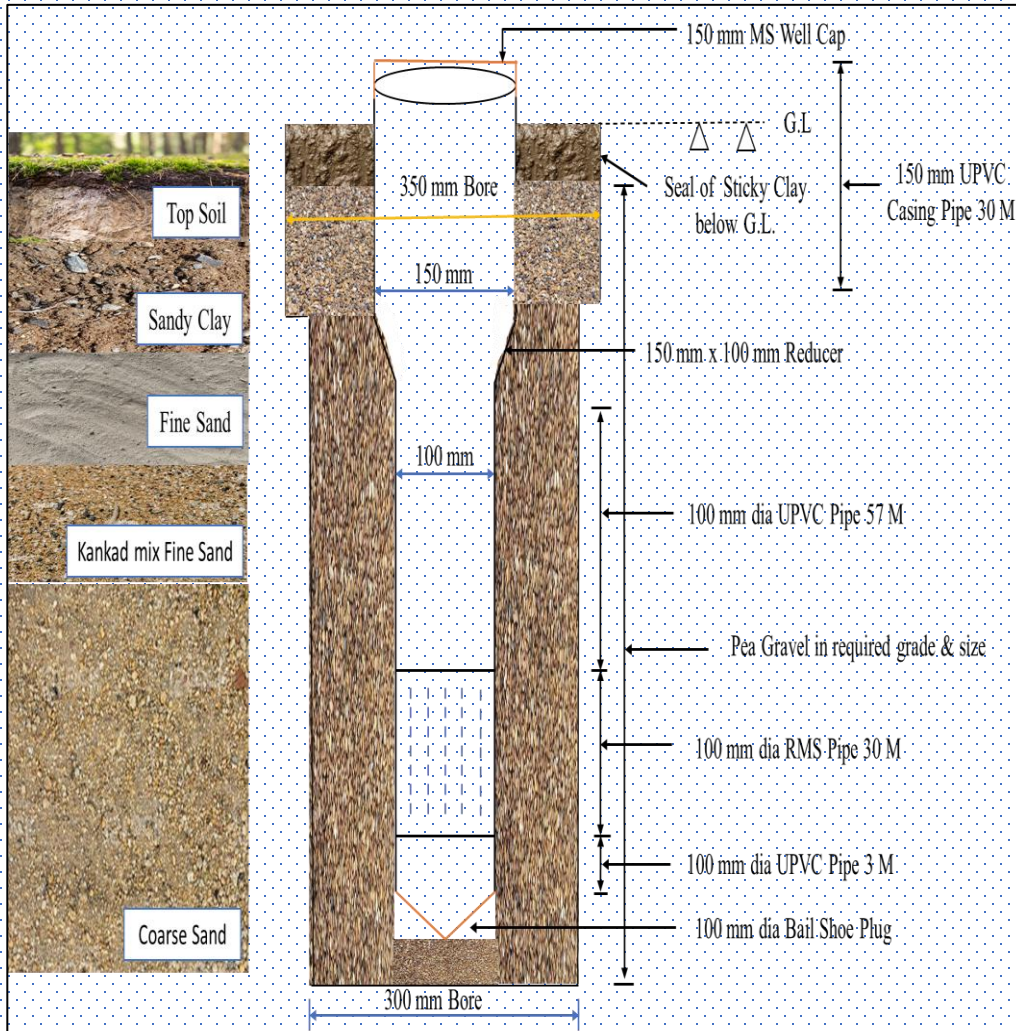
(A) 150 mm X 90 M Deep Gravel Packed Tubewell



1. Boring/Drilling borewell (method prescribed in IS: 2800 part-I)
2. UPVC medium well casing (CM) pipe conforming to IS: 12818.
3. UPVC medium well screen (RMS) pipes with Ribs, conforming to IS:12818.
4. Fitting of approved make and specification.
5. Pea gravel in required grade and size conforming to IS: 4097.

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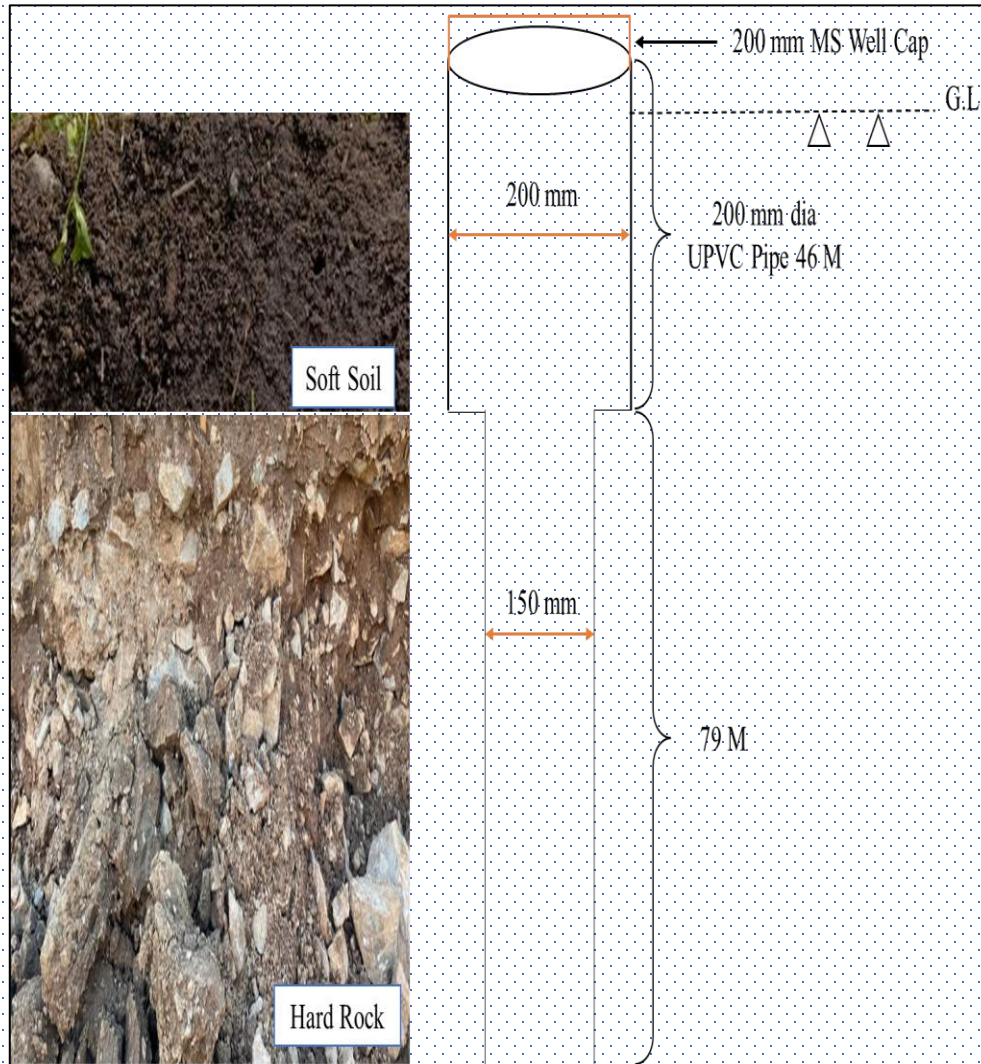
(B) 150 mm x 100 mm x 125 M Deep HYTW



1. Boring/Drilling borewell (method prescribed in IS: 2800 part-I)
2. UPVC medium well casing (CM) pipe conforming to IS: 12818.
3. UPVC medium well screen (RMS) pipes with Ribs, conforming to IS:12818.
4. Fitting of approved make and specification.
5. Pea gravel in required grade and size conforming to IS: 4097.
6. Development of tubewell in accordance with IS:2800 part-I.

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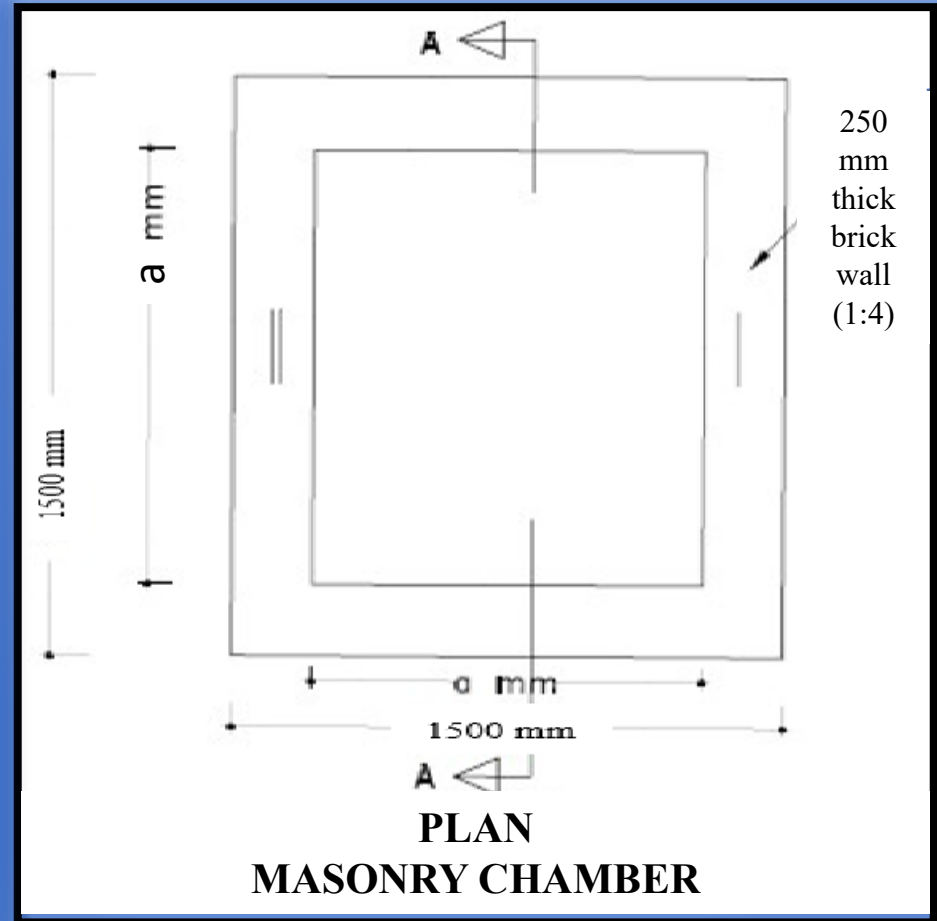
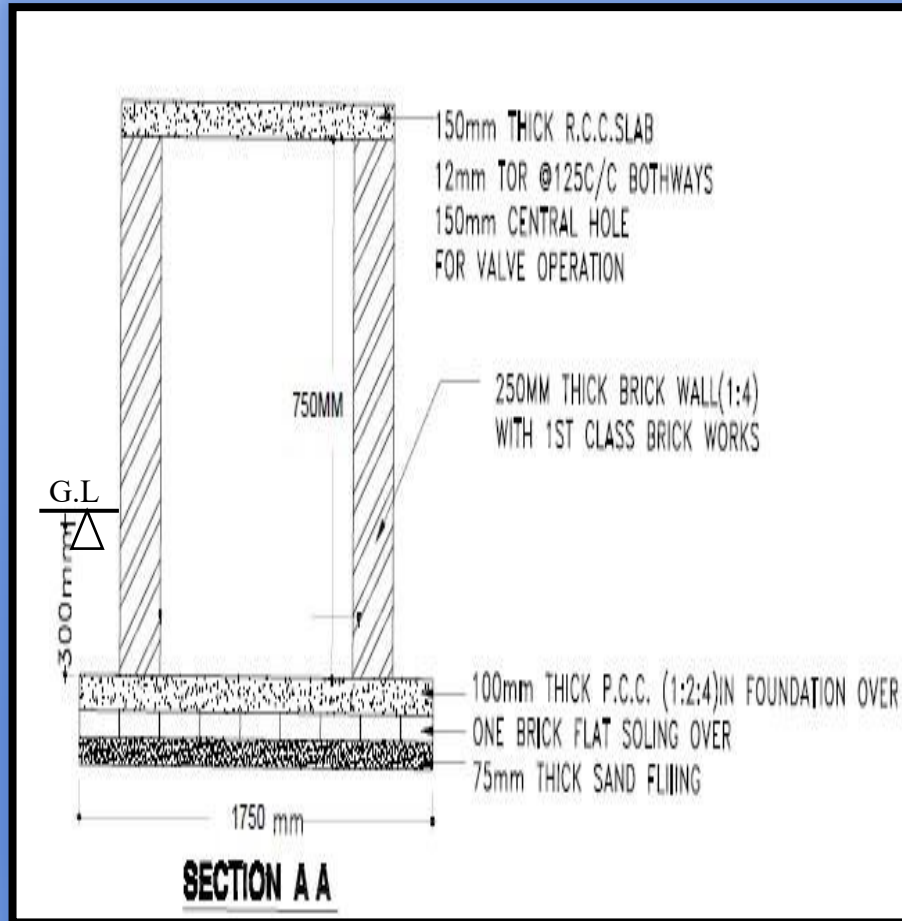
(C) 200 mm x 150 mm x 125 M Deep Drilled HYTW by DTH Rig Machine



1. Boring/Drilling borewell with DT Rig Machine in all kind of soil and rock.
2. UPVC medium well casing (CM) pipe conforming to IS: 12818 (200 dia) @ 46 M.
3. Development of tubewell in accordance with IS:2800 part-I.
4. 200 mm dia MS Cap over the casing – 1 no.

2. MASONRY CHAMBER

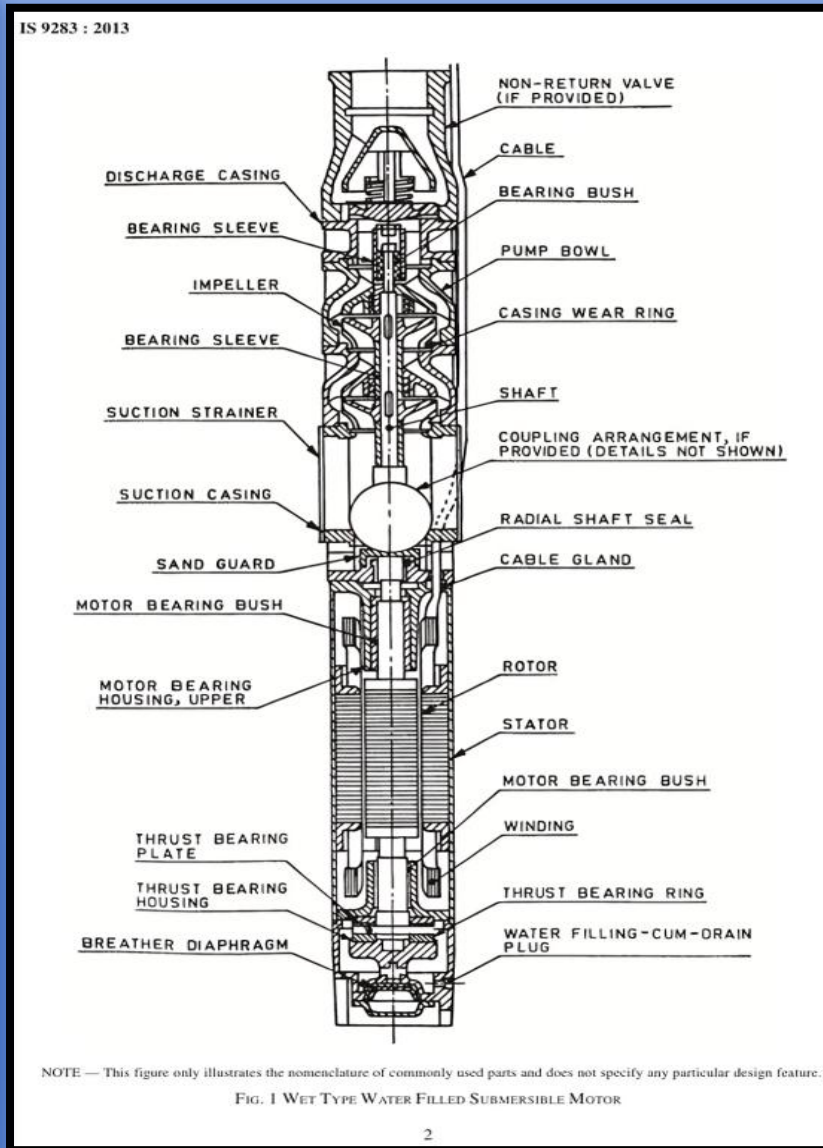
Brick Masonry Chamber size-100 x 100 x 75 cm (inside) having 250mm thick brick wall in cement mortar (1:4).



3. SUBMERSIBLE PUMP SET



Submersible Motor



Component Diagram of Submersible Motor

- Vertical wet type submersible pump conforming to IS:8034 (and as amended thereafter) with standard MOC suitable for potable clear cold water directly coupled with a continuous rated 2- pole water cooled wet type vertical squirrel cage copper wound induction motor conforming to IS:9283 (and as amended thereafter), suitable for operation in A-C Single phases 220V, 50HZ (category B motor)
- **Component:** Material of Construction as per clause 6.2 of IS 8034:2002.
- **Pump Shaft:** Stainless Steel grade X 04 Cr 12, X 12 Cr 12, or X 20 Cr 13 of IS 6603.
- The submersible cable shall conform to IS 694 having copper conductor should be PVC-insulated and PVC sheathed, flexible, and 3-core flat type with an area of 2.5 sq. mm of required length.
- Column pipe must be GI pipe of medium quality having a blue mark on pipe.
- The pump set may also be marked with BIS standard mark.

Material of Construction

- Pump housing: Stainless Steel
- Motor housing: Stainless Steel
- Motor Shaft: Stainless Steel
- Thrust Bearing: Carbon + Stainless Steel
- Diffuser: Noryl [Polyphenylene oxide (PPO)] as per IS code 8034: 2002.
- NRV: Cast Iron
- Winding Material: Copper



IS 9283 : 2013

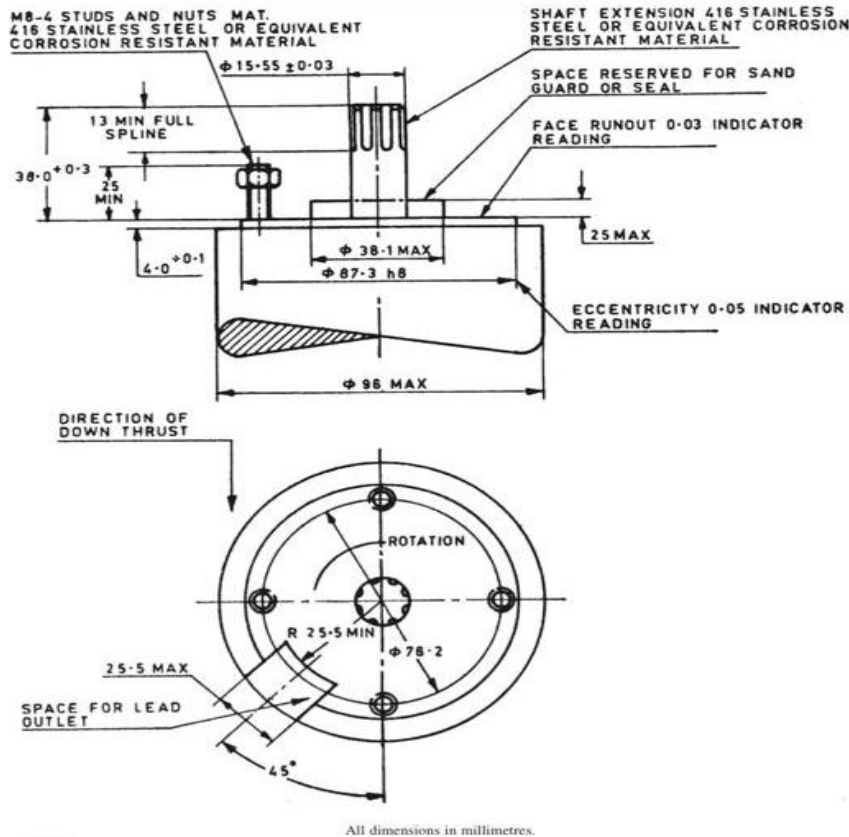


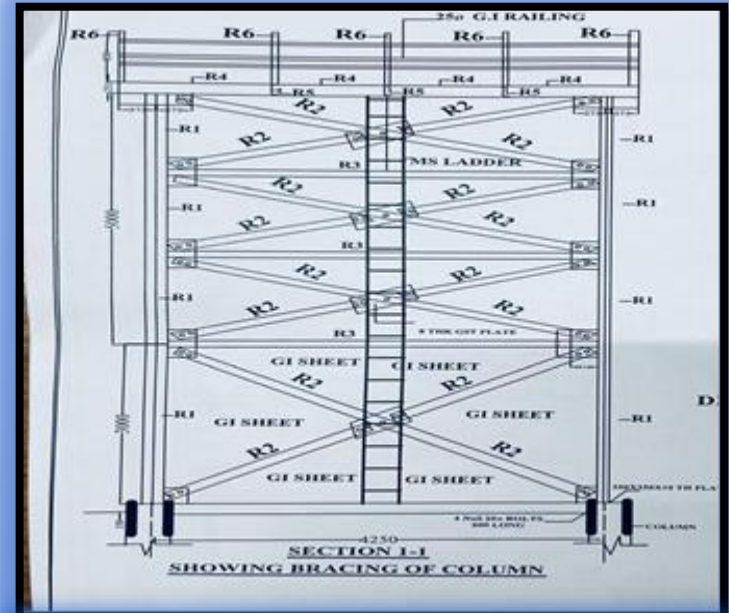
FIG. 5 END CONNECTIONS OF SUBMERSIBLE MOTOR FOR BORE HOLE PUMPS (100 mm BORE)

Dimension Diagram of Submersible Motor

Flat Cable

4. 8 M STEEL STAGING FOR 10,000 LTR. PVC TANK

COMPONENT	L (mm)	W (mm)	Flange Th (mm)	web Th (mm)
ISM 250	250	80	14.1	7.1
Pillar connecting Flat plate	300	200	10	
Butt flat plate	275	275	12	
foundation flat plate	350	350	20	
ISA-65x65x6	65	65	6	
ISA-65x65x6	65	65	6	
flat angle connecting plate	300	50	10	
ISA-100x100x6	100	100	6	
ISA-100x100x6	100	100	6	
ISM 150	150	75	9	5.4
ISM 150	150	75	9	5.4
ISM 125	125	65	8.1	5
flat plate	200	100	10	
25mm dia GI Pipe				
25mm dia GI Pipe				
ISA-65x65x6	65	65	6	
HR 1250x2500x4	4500	3500	4	
pipe 40 NB	40	40	3	
Flat	150	50	10	
M12x50				
ISA-100x100x6	100	100	6	
ISA-65x65x6	65	65	6	
wall	3000	1066	0.5	
roof	4267	1066	0.5	
Total weight of 8 m. Steel Staging- 4261.186 kg.				



Staging with
switch room

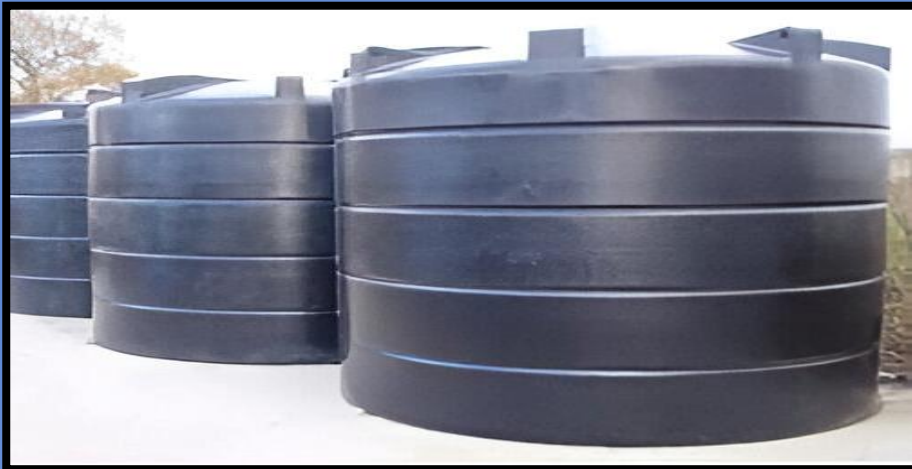
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STEEL STAGING

- Thickness of frame, angle and plate shall be in conforming to IS code-SP-6-1 (1964) and shall be measured by gauge.
- Permissible deviation in straightness 5mm in 1 meter.
- Roof of staging has two-way channel section (R4 & R5).

MEMBER DETAILS	
MEMBER	SECTION
R1	ISMC-250
R2	ISA-65x65x 6
R3	ISA-100x100x6
R4	ISMC-150
R5	ISMC-125
R6	ISA-65x65x6

PVC STORAGE TANK

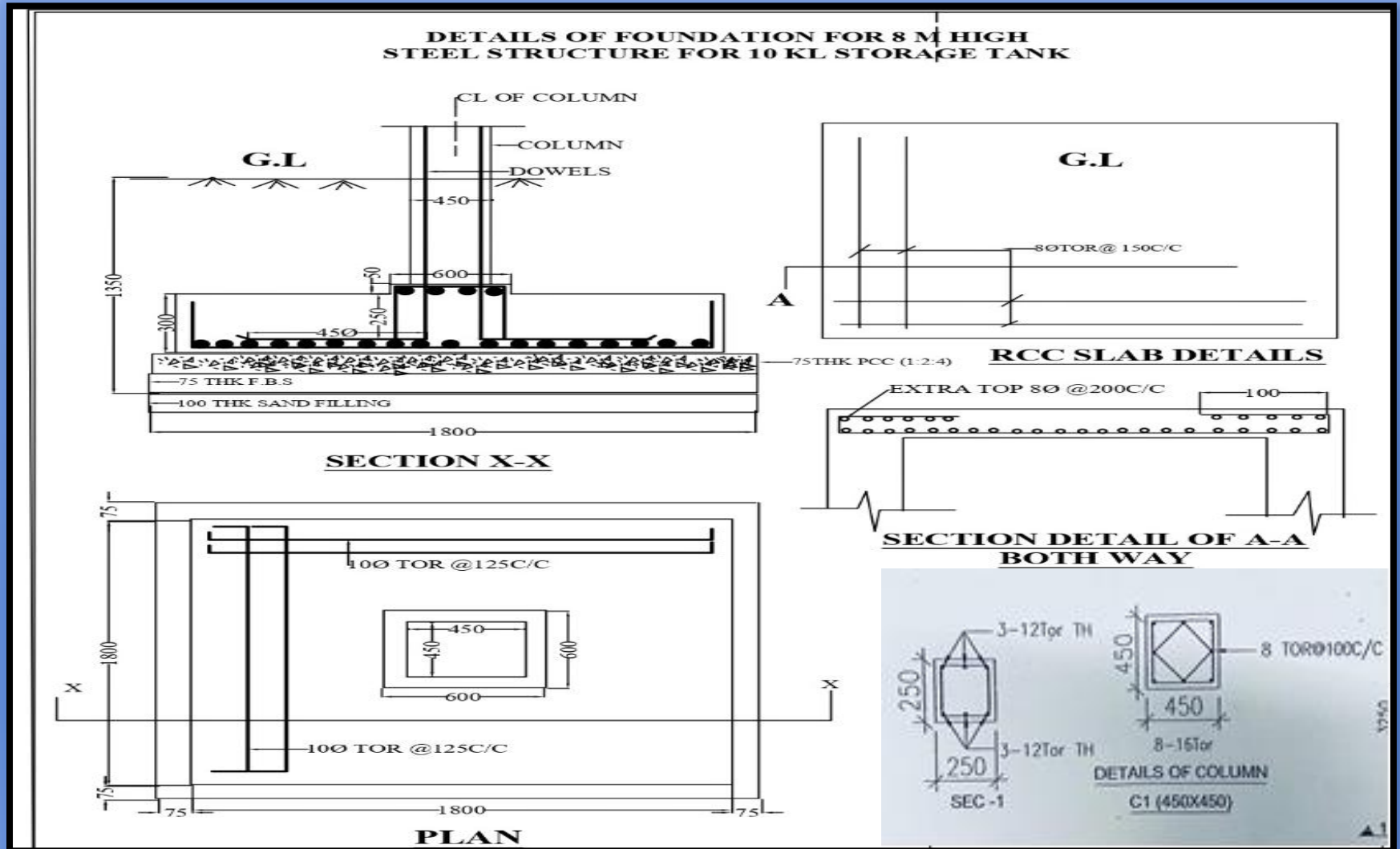


- PVC Tank Conforming to IS Code-12701 (1996).
- PVC STORAGE TANK – 5,000 LTR. Capacity having Min. weight (without lid) 180 Kg., over all height may vary from 1.8 m to 2.1 m and min. internal Dia of manhole is 450 mm.
- Minimum wall and bottom thickness as per IS code – 12701 (1996) must be 10.7 mm.

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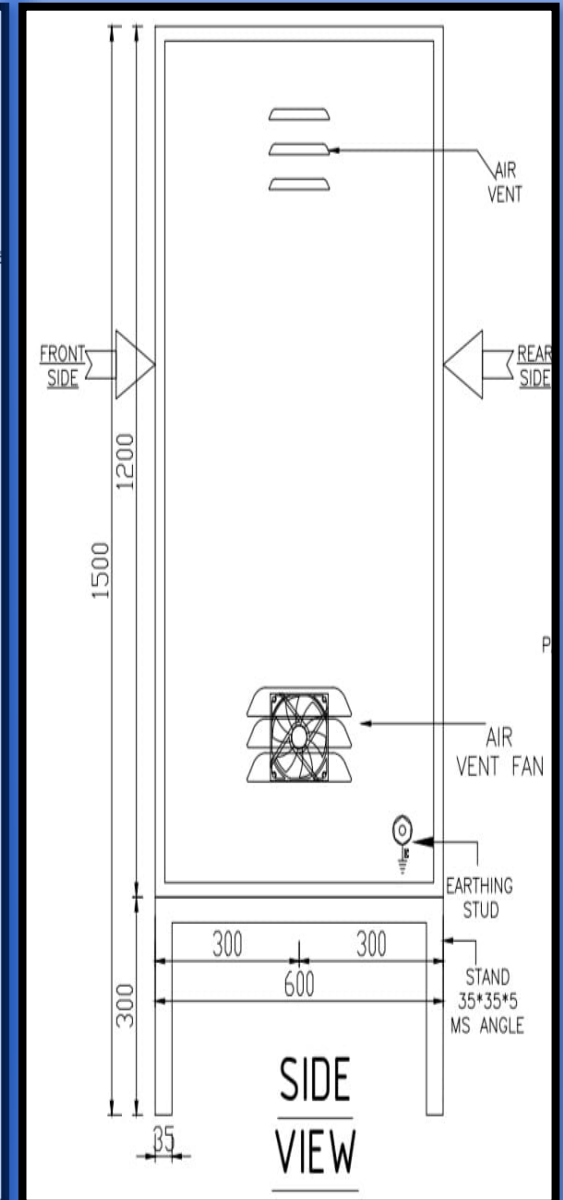
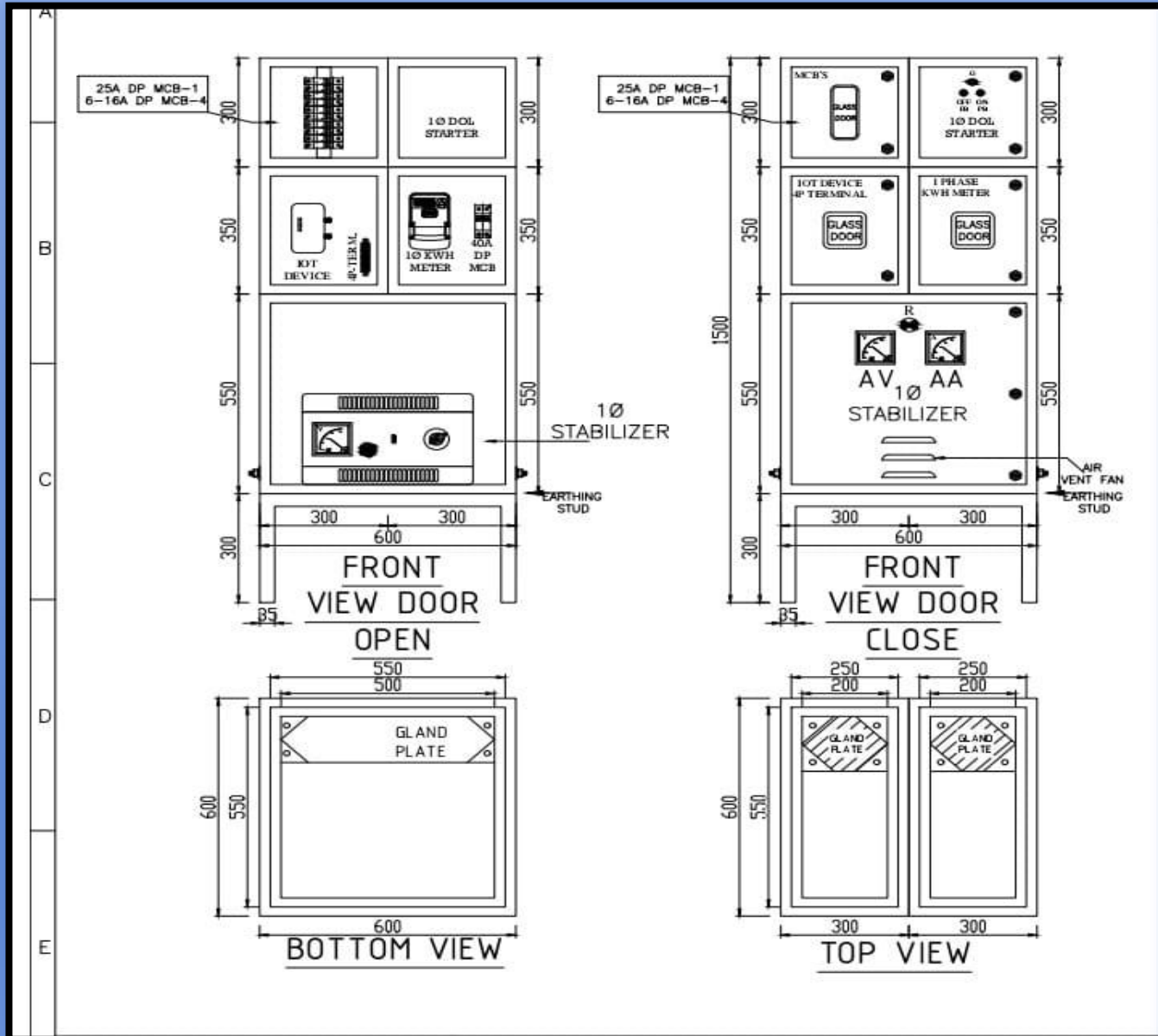
FOUNDATION OF STEEL STAGING

- PCC and Concreting in foundation as per specification given in Estimate.
- Reinforcement in footing and column as per design.



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5. MS CONTROL PANEL



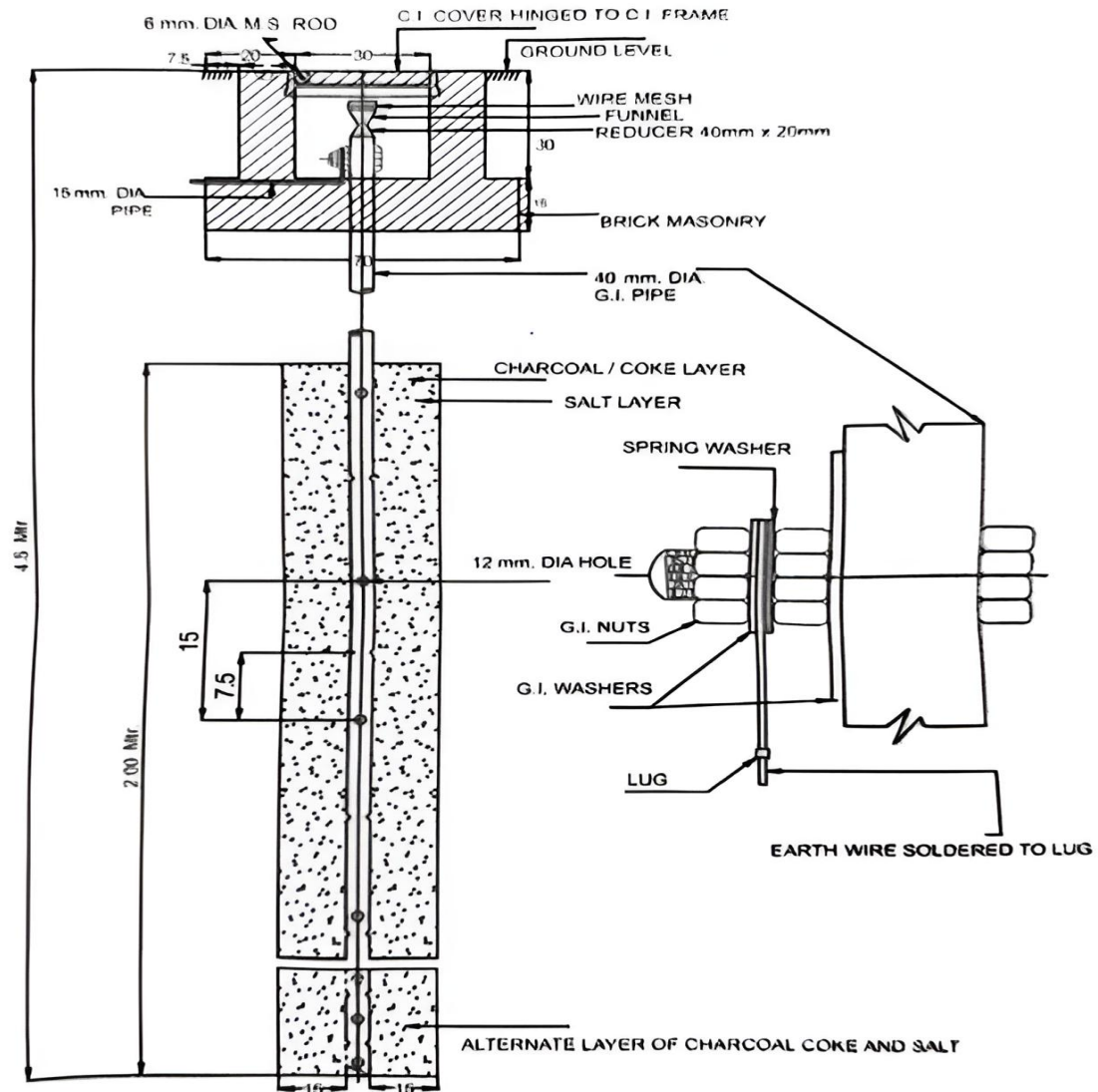
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Door Open View of Control Panel

Door Close View of Control Panel

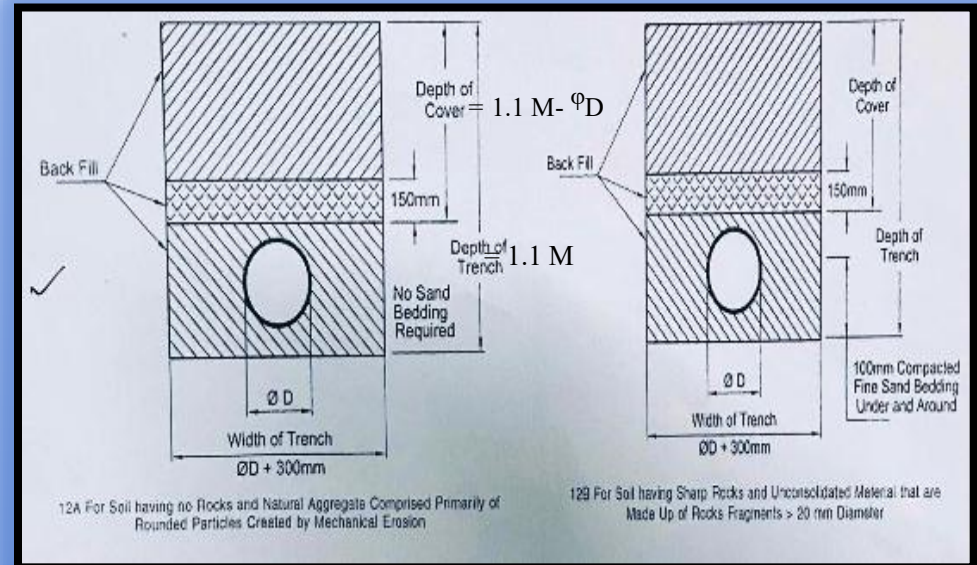
6. PIPE EARTHING



NOTE:
ALL DIMENSIONS ARE IN CM (OTHER DIMENSIONS SHOWN)

7. DISTRIBUTION NETWORK

- HIGH DENSITY POLY ETHYLENE (HDPE) PIPES conforming to IS code-4984 (1995).
- Dia 90mm, 75mm, 63mm (PE-100-PN-10 rating).
- DIA 50mm, 40mm (PE-100, PN-8 rating).
- Colour of pipe shall be black having minimum three equispaced longitudinal stripes of width 3mm minimum in blue colour.
- USED IN DISTRIBUTION NETWORK .
- PN 10 (PRESSURE GRADIENT).
- PE 100 : ISO 9080.
- HDPE Pipe must be verified by Third Party (CIPET)



Restoration of P.C.C Roads and allied works



Laying of Pipe line:-Minimum Depth 1.1 M From G.L

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DISTRIBUTION NETWORK

Minimum Maximum Wall Thickness of Pipe as Follows :-

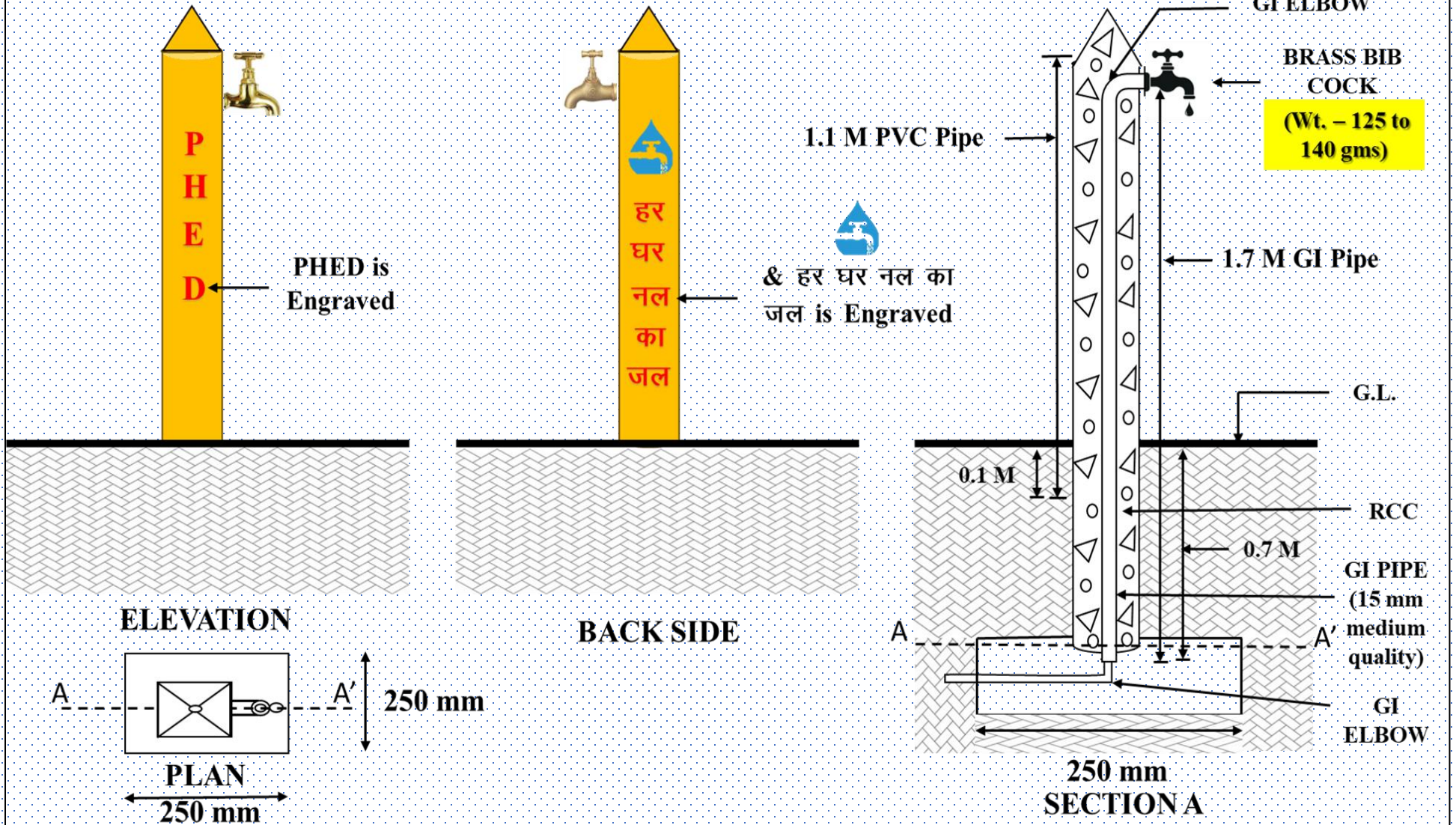
Nominal Diameter (mm)	Outside diameter (mm)	Max (mm)	Min (mm)
40	40	3.5	3.0
50	50	4.3	3.7
63	63	5.3	4.7
75	75	6.3	5.6
90	90	7.5	6.7
110	110	9.1	8.1



- All pipes and PVC Tank shall confirm relevant IS Specification Certified by third-party agency. e.g. CIPET etc.

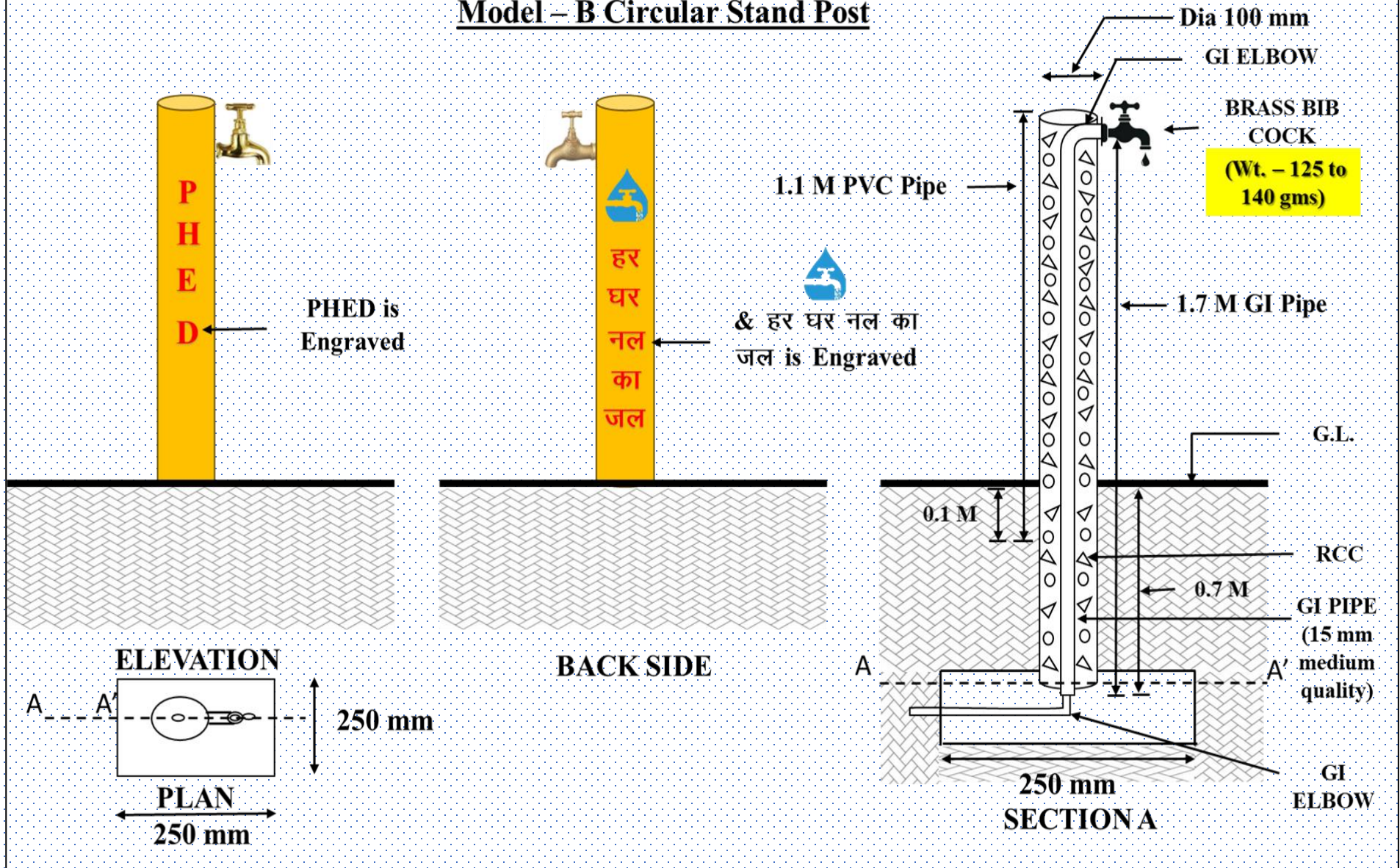
8. STAND POST

Model - A Square Stand Post



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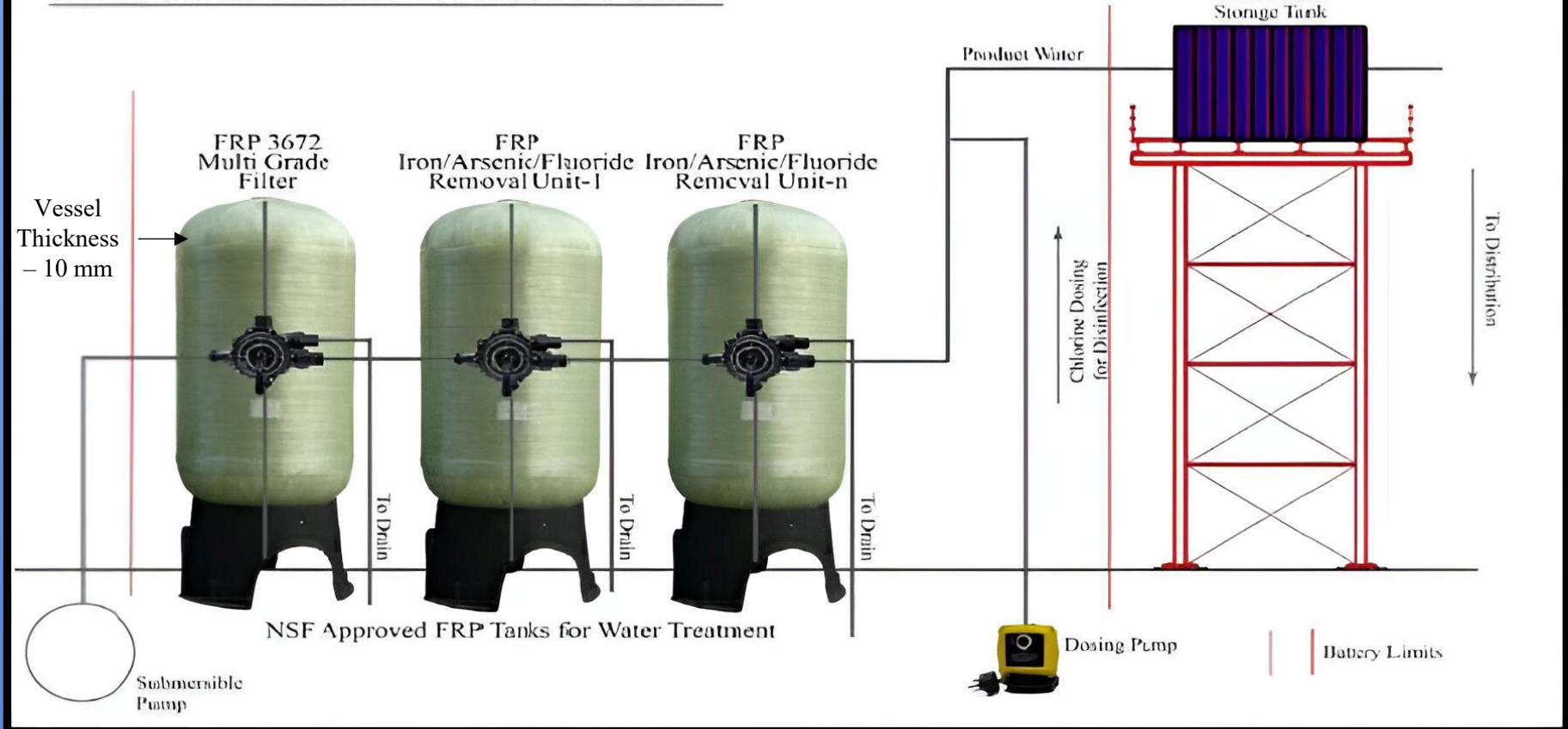
Model – B Circular Stand Post



1. MDPE Pipe (PE 80 Grade Compound) PN-12.5 as per IS: 4427.
2. Other Shapes like Hexagonal Stand Post may be used as per approved design.

9. WATER TREATMENT PLANT

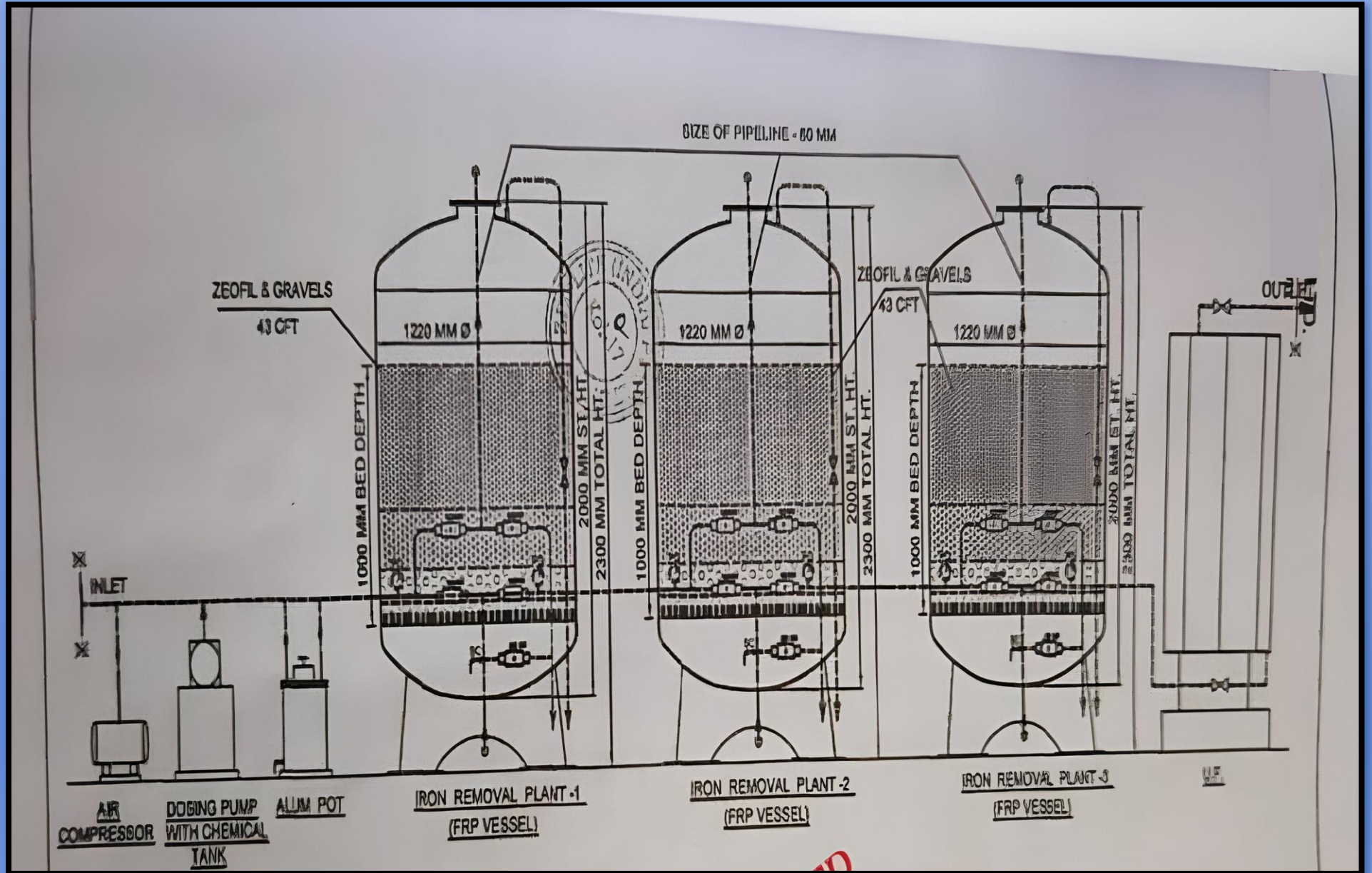
General Schematic Diagram for Community Based Iron/Arsenic/Fluoride Removal Plant



➤ Backwashing should be done as per protocol of the Water Treatment plant supplying agency.

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SCHEMATIC DIAGRAM OF WATER TREATMENT PLANT (WTP)



WATER TREATMENT PLANT

Limit of Iron, Arsenic and Fluoride as per IS 10500: -			Technologies Used For Iron, Arsenic & Fluoride		
Parameters	Acceptable limit	Permissible limit	Iron	Arsenic	Fluoride
Iron	1.0 mg/l	No relaxation	<ul style="list-style-type: none"> Oxidation/ Filtration Ion Exchange Adsorption 	<ul style="list-style-type: none"> Oxidation /Filtration Ion Exchange Adsorption 	<ul style="list-style-type: none"> Adsorption Ion Exchange Membrane technique (Nano technology)
Arsenic	0.01mg/l	No relaxation			
Fluoride	1.0 mg/l	1.5 mg/l			

10. CHLORINATOR

Specification:-

In Water supply schemes under Har Ghar Nal Ka Jal Yojna, the department uses Electronically Regulated doser-type chlorinator using Sodium Hypo Chlorite.

- Residual chlorine of 0.2 ppm should be maintained at the tail end of supply.
- For 2 ppm and 30% chlorine solution Amount of NaOCl required per litre

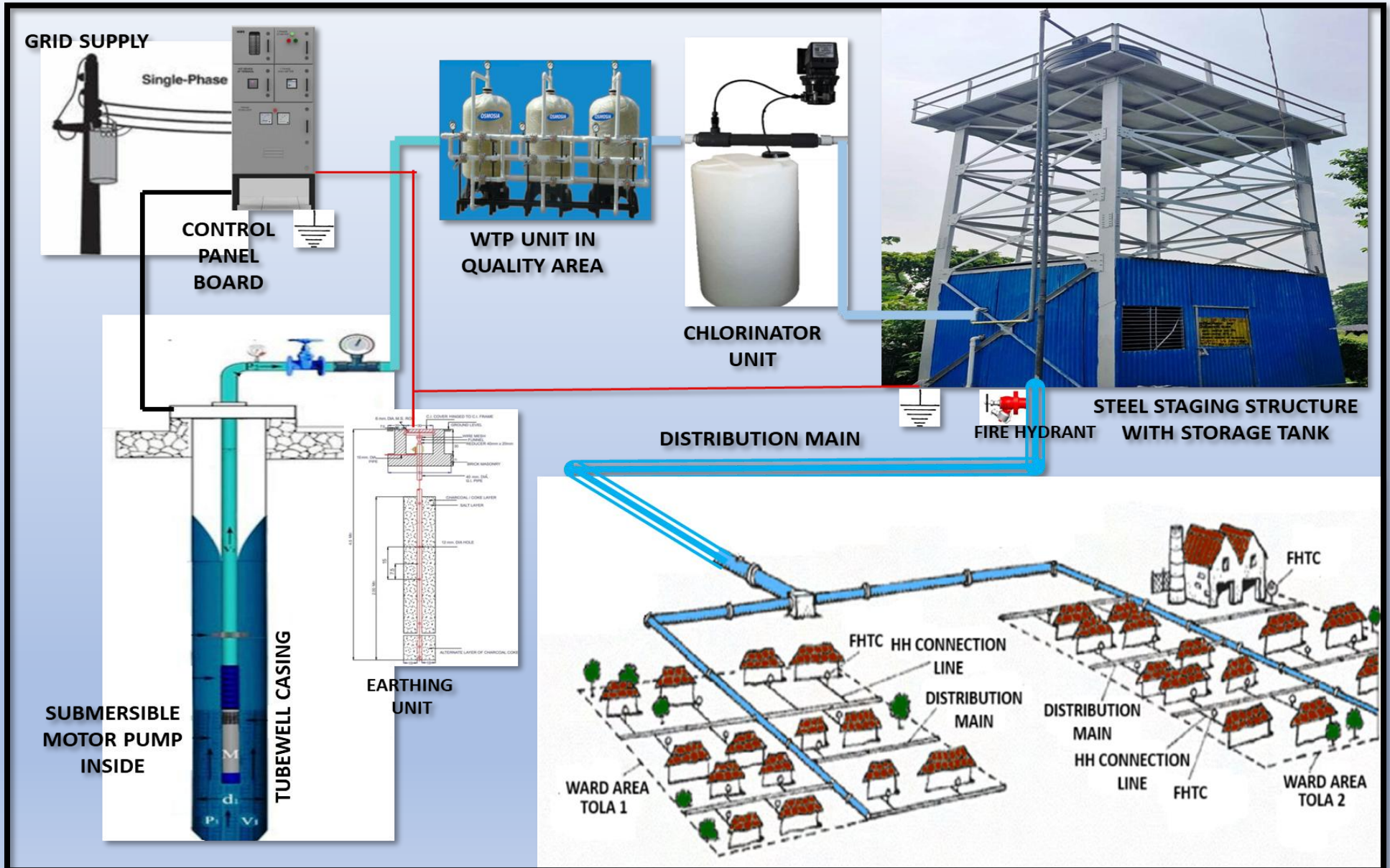
$$(A) = (\text{Total population served} * 81 * 2/1000000) * (100/30) * 365$$
- Generally, 25-litre chlorinator is used in the ward level scheme.

Dosing System



Continued...

11. "HAR GHAR NAL KA JAL SCHEME" AT A GLANCE





'हर घर नल का जल' योजना की सतत् क्रियाशीलता पर्यवेक्षण प्रणाली

समाधान की पुष्टि

केन्द्रीकृत शिकायत निवारण प्रकोष्ठ

उपभोक्ता/शिकायकर्ता एवं पम्प चालक/अनुरक्षक

(समस्या)

समाधान की पुष्टि

सामाजिक प्रमाणीकरण/
जियोटैग फोटोग्राफ

समाधान की पुष्टि

उपभोक्ता/शिकायकर्ता एवं
पम्प चालक/अनुरक्षक

(समस्या)



उपभोक्ता

समाधान की पुष्टि

उपभोक्ता/शिकायकर्ता एवं पम्प चालक/अनुरक्षक

(समस्या)

(समाधान)

(समस्या)

मुख्यमंत्री ग्रामीण पेयजल निश्चय योजना एवं पंचायती राज विभाग द्वारा हस्तांतरित पेयजलापूर्ति योजनाओं से संबंधित शिकायत दर्ज करना हुआ अब और आसान

पेयजलापूर्ति के अभाव/नति, नरन्वति एवं संपोषण संबंधित अपनी शिकायत एवं सुझाव दर्ज करा सकते हैं

टोल-फ्री नंबर 1800-123-1121 / 1800-345-1121 / 155367

अब "नल जल शिकायत एप" के माध्यम से शिकायत करना होगा और भी आसान अपने एंड्रॉयड फोन में Play Store से डाउनलोड करें

SMS/व्हाट्सएप नंबर: 8544429024/8544429082

पर वॉईस/संख्या, गांव, पंचायत, प्रखंड, जिला के साथ शिकायतकर्ता का नाम एवं जीवाइल नंबर तथा शिकायत का प्रकार लिखकर Whatsapp करें

ईमेल: phedgrc2024@gmail.com

वेबसाइट: www.phedgrc.in



QR कोड स्कैन करें
नल जल शिकायत एप
डाउनलोड करें



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समाधान की पुष्टि

समस्या

जलापूर्ति संबंधित के शिकायत हेतु अपने जिला नियंत्रण कक्ष के निम्न नंबरों पर संपर्क करें

नियंत्रण कक्ष (मुख्यालय, पटना) : 0612 2215152 | 0612 2215271 | 0612 2215739

जिला का नाम	नियंत्रण कक्ष दूरभाष	कार्यपालक अभियंता का मोबाईल नंबर	जिला का नाम	नियंत्रण कक्ष दूरभाष	कार्यपालक अभियंता का मोबाईल नंबर	जिला का नाम	नियंत्रण कक्ष दूरभाष	कार्यपालक अभियंता का मोबाईल नंबर
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मधे	06111-2291501	8544428564	मुजफ्फरपुर	0621-2242445	8544428591	मुजफ्फरपुर	06276-298190	8544428562
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जयपुर	0430099061	8544428566	मैथिली	06182-244791	8544428593	सीतामढ़ी	06226-251818	8544428575
कटिहार	06324-210638	8544428567	मैथिली	06184-242076	8544428594	सिंहभद्र	06222-299928	8544428576
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कौमुदी	06182-350034	8544428571	सुपौल	06274-295484	8544428582	पुर्निया	06484-242531	8544428586
कलसंग	06183-295053	8544428573	पुर्निया	06252-233374	8544428585	पुर्निया	0650431382	8544428587
कमलपुर	0641-2400586	8544428584	पुर्निया	06250-296049	8544428582	कृष्णगंज	06456-295059	8544428597
कौमुदी	06424-237051	8032545745	सुपौल	061807001	8544428583	अररिया	06453-350024	8544428598
कौमुदी	0472667624	8544428587	सुपौल	06337-220306	8544428586	कटिहार	06482-242580	8544428599
कौमुदी	06424-456609	8544428588	सुपौल	0624-3358334	8544428583			
कौमुदी	06344-226211	8544428589	सुपौल	0627-9358837	8544428589			

दीर्घकालीन अनुरक्षण एवं रखाव-रखाव संवेदक/ एजेंसी नियंत्रण कक्ष

समाधान

ओओ एंड एमओ/ मरम्मत दल

लोक स्वास्थ्य अभियंत्रण विभाग, बिहार द्वारा जनहित में जारी

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PREPARED BY DESIGN WING &
SUPPORTED BY MECHANICAL WING
PHED, BIHAR