



**Office of the Chief Executive Officer  
Shri Mata Vaishno Devi Shrine Board, Katra**

---

**CORRIGENDUM**

**Tender ID: 2024\_SMVSB\_259516\_1**

In reference to the e-NIT No. CO/SW/STP/ 162/ 08 of 2024 Dated: 11.10.2024 for the work of Survey, Design, Supply, Installation, Commissioning, Testing, Operation and Comprehensive Maintenance for (05 years) of Centralized Sewage Treatment Plant (STP) 100 KLD capacity based on Membrane Bio Reactor (MBR) for Toilet Blocks at Nomain Staff Colony, Katra” issued vide this office No: CO/SW/ 162/60-63 Dated: 11.10.2024, changes have been made/incorporate in the ibid e-NIT as per following:

- 1. Please read revised technical specifications mentioned in the Annexure I to VIII shall be part of the E-NIT.**

**“Instead of”**

**Technical specifications as mentioned in the Annexure I to VIII of the E-NIT.**

Furthermore, due to typographic error in the ibid e-NIT.

- 2. Please read the EMD amount Rs. 4,20,000/- in the tender details document on [jktender.gov.in](http://jktender.gov.in)**

**“Instead of”**

**EMD amount Rs. 42,00,000/- in the tender details document on [jktender.gov.in](http://jktender.gov.in)**

- 3. Please read the clause No 10 (i) Designing of Civil work**

Civil work like Platforms & other works for the Centralized Sewage Treatment Plant shall have to be designed for the total sewage flow 100 KLD within the available land / site for the project.

**“Instead of”**

Civil work like Platforms & other works for the Centralized Sewage Treatment Plant shall have to be designed for the total sewage flow 30 KLD/day within the available land / site for the project.

Other terms and conditions of the ibid e-NIT shall remain the same

**Sd/-  
Vinay Khajuria  
Asstt. Conservator of Forests**

**Enclosed Annexure I to VIII  
No.: CO/SW/STP/162/131-134  
Dated: 17.10.2024**

Copy to the:-

1. Chief Executive Officer, SMVDSB, Katra, for information.
2. Addl. Chief Executive Officer, SMVDSB, Katra
3. FA/ Chief Accounts Officer, SMVDSB, Katra
4. Dy. Manager (IT) for publication on the official website of the Shrine Board
5. Concerned/ Master file.

### Technical Specifications

**A. Centralized Sewage Treatment Plant-100 KLD followed by MEMBRANE BIO REACTOR Technology (MBR)**

Survey, Design, Supply, Installation, Commissioning, Testing, Operation and Comprehensive Maintenance (Five years) of Centralized Sewage Treatment Plant (based on MEMBRANE BIO REACTOR Technology (MBR) of 100 KLD Capacity complete in all respects to cater the requirement of Toilet Blocks Nomain Staff Colony, Katra of Shri Mata Vaishno Devi Shrine Board.

| <b>DESIGN CRITERIA</b> |   |   |
|------------------------|---|---|
| <b>S.No</b>            | <b>Description</b>  | <b>Consultant's Requirement/ Recommendation</b>                                 |
| 1                      | <b><u>Flow Capacity</u></b><br>Total daily ultimate flow in Cu.m/day<br>Peak factor                     | 100m <sup>3</sup> /day<br>3.00 hrs.   |
| 2                      | <b><u>Quality of the Untreated Effluent</u></b><br>BOD<br>Suspended solids<br>COD<br>pH<br>Oil & grease | 250 to 300 mg/lit<br>250 mg/lit<br>350 to 450 mg/lit<br>6.5 to 8.0<br>10 mg/lit |
| 3                      | <b><u>Quality of the Treated Effluent</u></b><br>BOD<br>Suspended solids<br>COD<br>pH<br>Oil & Grease   | <10mg/lit<br>< 20mg/lit<br><50mg/lit<br>6.5 to 8.5<br>< 5mg/lit                 |
| 4                      | <b><u>Location &amp; Position of STP</u></b>  | Attached as per Survey Report   |
| 5                      | <b><u>Treatment Methodology</u></b>   | MBR Technology  |
| (CONTRACTOR)           |   |   |
| Dated:                 |   |   |

**Affidavit to be submitted by the bidder**

Performa of affidavit to be submitted by the bidder regarding eligibility. "I/We undertake and confirm that eligible similar work(s) has /have not been got executed through another contractor on back to back basis.

Further that, if such a violation comes to the notice of SMVDSB, then I/We shall be debarred for biding in SMVDSB Contracts in future forever. Also, if such a violation comes to the notice of SMVDSB before date start of work, the Authorized Officer of SMVDSB shall be free to forfeit the entire amount of Earnest Money Deposit/ Performance Guarantee."

Signature of Bidders \_\_\_\_\_

Signature of Block Letters \_\_\_\_\_

Name of the Firm & Address \_\_\_\_\_

## List of Indian Standards on Sewerage and Sewage System

|    |   |   |
|----|---|---|
| 1  | <b>IS: 5600-1970</b>                      | Indian Standard Code: Specification for Sewage and Drainage Building Elements   |
| 2  | <b>IS 6279 :1971</b>                      | Indian Standard Code: Equipment for grit removal devices  |
| 3  | <b>IS 6280:1971</b>                       | Sewage screens  |
| 4  | <b>IS 7784: Part 1&amp; 2: Sec 1 to 5</b> | Indian Standard Code: Code of practice for design of cross drainage work Part 1 General features                            |
| 5  | <b>IS 9110:1979</b>                       | Indian Standard Code: Hand operated augers for cleaning water closet. pipe and sewer  |
| 6  | <b>IS 9213:1979</b>                       | Indian Standard Code: BOD Bottle  |
| 7  | <b>IS 10037 : PT1 to 3 :1981</b>          | Indian Standard Code: Requirements for sludge dewatering equipment. Part 1 sludge drying beds-sand, gravel and under drains |
| 8  | <b>IS 10261 :1982</b>                     | Indian Standard Code: Requirement for sewing tank (clarifier equipment) for waste water                                     |
| 9  | <b>IS 10552:1983</b>                      | Indian Standard Code: Buckets to be used in power driven buckets type sewer cleaning machine                                |
| 10 | <b>IS :4733-1972</b>                      | Method of sampling test sewage effluent   |

**Annexure -IV**

| <b>Approved Makes of Major Components for Centralized Sewage Treatment Plant</b> |   |  |
|--|---|--|
| 1  | Air blower  | Akash/A1 Blower/Key/Airvak   |
| 2  | Blower Motor  | Bharat Bijlee /Crompton Greaves/ Siemens / Kirloskar or Equivalent   |
| 3  | Submersible Non Clog Pump                                 | Willo/KSB/CNP/Kirloskar/Lubi   |
| 4.   | Clear water pumps   | Willo/KSB/CNP/Kirloskar/Lubi   |
| 5  | Disinfection Pump   | Asia Lmi / Toshcon/Pentair/ E-Dose or Equivalent   |
| 6  | Gear Boxes  | Greaves Gear or Equivalent   |
| 7  | Cable   | Finolex / Polycab / Delto /Havells or equivalent   |
| 8  | Sludge Transfer Pump                                      | Roto/ Kirloskar /Willo / Ksb / Lubi/Jhonsons or equivalent   |
| 9  | Butter Fly Valve  | ISI  |
| 10   | Control Panel   | CPRI Approved Vendor with component shall be from L&T / Siemens / English Electric Component / Auto Switch or Equivalent |
| 11   | Gun Metal Valve   | Any ISI make   |
| 12   | HDPE / PVC Pipe Class III                                 | Finolex / Supreme / Oro / Trustlene or Equivalent with fitting   |
| 13   | GU/MS Pipe Heavy Class paint / epoxy paint                | Jindal Hissar/Surya/Prakash or equivalent  |
| 14   | Solution Tank   | Sintex, Ganga, Sheetal, LDPE or equivalent   |
| 15   | Diffuser  | Rehau/ Techpro/W360  |
| 16   | Structural Steel  | Tata / Rathi / Ispat /Sail or equivalent   |
| 17   | MS/GI /UPVCPiping   | Jindal / Supreme/Astral/Surya Prakash  |
| 18   | MBR Unit  | Qua/Dow/Imemflow/Dupond/Hiflux/Pentair   |
| 19.  | Screw Press   | W 360/CNP/Akash/Auric/Pharmatech/SIMA  |
| 20   | Basket Type Centrifuge                                    | A B engineers/ W 360/Apollo  |
| 21   | Sludge Loading Pumps                                      | Kirloskar/Roto/Rotomac/Willo   |
| 22   | UV System   | Alfa/Creative/W 360/Sukrat   |
| 23   | Ozonator System   | Creative/Sukrat/Am Ozonics/W360  |
| 24   | Flow meter  | Aster,UPC/W360/Forbes  |
| 24   | Pressure gauges, Transmitter                              | H guru   |
| 25   | Permeate Pumps & Back wash Pumps& Other clear water pumps | Willo/KSB/CNP/Kirloskar/Lubi   |
| 26   | Control Panel (Electrical)                                | CPRI Approved Vendor   |
| 27   | Cabling & Wiring  | Finolex, National, Polycab   |
| 28   | Cable Tray  | Vendor specific, ISI Mark  |

**Annexure -V**

| <b>DESIGN CRITERIA &amp; SPECIFICATION OF EQUIPMENTS CENTRALIZED SEWAGE TREATMENT PLANT - 100 KLD for Toilet Block at Nomain Staff Colony, Katra</b> |                          |                |               |
|--|--------------------------|----------------|---------------|
| <b>S. No.</b>  | <b>DESIGN PARAMETERS</b> | <b>Inlet</b>   | <b>Outlet</b> |
| 1  | pH                       | 6.5 - 8.0      | 6.5 - 8.5     |
| 2  | BOD                      | 250 - 300 mg/l | < 10 mg/L     |
| 3  | COD                      | 350 - 450 mg/l | < 50 mg/L     |
| 4  | TSS                      | 200 - 300 mg/l | < 20 mg/L     |
| 5  | Oil & Grease             | < 10 mg/l      | < 5 mg/l      |

**Annexure -VI**

| <b>CIVIL WORKS FOR STP (SCOPE OF SMVDSB)</b>  |                    |
|---|--------------------|
| <b>1. COLLECTION TANK ( EXISTING)</b>         |                    |
| Quantity                                      | 1 No.              |
| Capacity                                      | As per site        |
| MOC   | Civil Construction |
| <b>2. ELECTRICAL SUPPLY TO OUR PANEL</b>      |                    |
| <b>3. SUPPLY OF SEWAGE TO COLLECTION TANK</b> |                    |
| <b>4. EARTHING TO OUR PANEL</b>               |                    |

| <b>MILD STEEL TANKS</b>                                  |                                   |
|--|-----------------------------------|
| <b>1. BAR SCREEN CHAMBER</b>                             |                                   |
| Quantity   | 1 No.                             |
| Size   | 0.6m x 0.8m x 0.8m                |
| Capacity   | 0.4m <sup>3</sup>                 |
| MOC of Tanks   | Mild Steel                        |
| Thickness of Tanks                                       | 5 mm thick                        |
| Surface Protection (Inside)                              | FRP Coating thickness 2 mm        |
| Surface Protection (Outside)                             | Enamel                            |
| <b>2. OIL &amp; GREASE TRAP</b>                          |                                   |
| Quantity   | 1 No.                             |
| Size   | 0.6m x 0.8m x 0.8m                |
| Capacity   | 0.4m <sup>3</sup>                 |
| MOC of Tanks   | Mild Steel                        |
| Thickness of Tanks                                       | 5 mm thick                        |
| Surface Protection (Inside)                              | FRP Coating thickness 2 mm        |
| Surface Protection (Outside)                             | Enamel                            |
| <b>3. COLLECTION CUM EQUALIZATION TANK</b>               |                                   |
| Quantity   | 1 No.                             |
| Size   | 2.8 m x 3.0 m x 3.0m + 0.4m FB    |
| Capacity   | 25 m <sup>3</sup>                 |
| MOC of Tanks   | Mild Steel                        |
| Thickness of Tanks                                       | 5 mm thick                        |
| Surface Protection (Inside)                              | FRP Coating thickness 2 mm        |
| Surface Protection (Outside)                             | Enamel                            |
| <b>4. ANOXIC TANK</b>                                    |                                   |
| Quantity   | 1 No.                             |
| Size   | 3.6 m x 1.0 m x 2.8 m + 0.4 m FB  |
| Capacity   | 10 m <sup>3</sup>                 |
| MOC of Tanks   | Mild Steel                        |
| Thickness of Tanks                                       | 5 mm thick                        |
| Surface Protection (Inside)                              | FRP Coating thickness 2 mm inside |
| Surface Protection (Outside)                             | Inside : FRP: Outside: Enamel     |
| <b>5. AERATION TANK</b>                                  |                                   |
| Quantity   | 1 No.                             |
| Size   | 3.6m x 2.5m x 2.8m + 0.4m FB      |
| Capacity   | 25 m <sup>3</sup>                 |
| MOC of Tanks   | Mild Steel                        |
| Thickness of Tanks                                       | 5 mm thick                        |
| Surface Protection (Inside)                              | FRP Coating thickness 2 mm        |
| Surface Protection (Outside)                             | Enamel                            |
| <b>6. MBR TANK (AS PER MEMBRANE MAKE RECOMMENDATION)</b> |                                   |
| Quantity   | 1 No.                             |
| Size   | 3.6m x 1.5m x 2.8m + 0.4m FB      |
| Capacity   | 15 m <sup>3</sup>                 |
| MOC of Tanks   | Mild Steel                        |
| Thickness of Tanks                                       | 5 mm thick                        |
| Surface Protection (Inside)                              | FRP Coating thickness 2 mm        |
| Surface Protection (Outside)                             | Enamel                            |

| <b>7. MBR CLEANING TANK (AS PER MEMBRANE MAKE RECOMMENDATIONS)</b> |                               |
|--|-------------------------------|
| Quantity   | 1 No.                         |
| Size   | 3.6 m x 1.5m x 2.8m + 0.4m FB |
| Capacity   | 15 m3                         |
| MOC of Tanks   | Mild Steel                    |
| Thickness of Tanks   | 5 mm thick                    |
| Surface Protection (Inside)  | FRP Coating thickness 2 mm    |
| Surface Protection (Outside)                                       | Enamel                        |
| <b>8. TREATED WATER TANK</b>                                       |                               |
| Quantity   | 1 No.                         |
| Size   | 2.0m x 2.0m x 2.8m + 0.4m FB  |
| Capacity   | 11.2 m3                       |
| MOC of Tanks   | Mild Steel                    |
| Thickness of Tanks   | 5 mm thick                    |
| Surface Protection (Inside)  | FRP Coating thickness 2 mm    |
| Surface Protection (Outside)                                       | Enamel                        |
| <b>9. SLUDGE HOLDING TANK</b>                                      |                               |
| Quantity   | 1 No.                         |
| Size   | 2.0 m x 2.0m x 2.8m + 0.4m FB |
| Capacity   | 11.2 m3                       |
| MOC of Tanks   | Mild Steel                    |
| Thickness of Tanks   | 5 mm thick                    |
| Surface Protection (Inside)  | FRP Coating thickness 2 mm    |
| Surface Protection (Outside)                                       | Enamel                        |



| <b>DESIGN CRITERIA &amp; SPECIFICATION OF EQUIPMENTS CENTRALIZED SEWAGE TREATMENT PLANT - 100 KLD FOR TOILET BLOCK AT NOMAIN STAFF COLONY, KATRA ELECTROMECHANICAL EQUIPMENTS</b> |                                  |
|---|----------------------------------|
| <b>1. COARSE SCREEN</b>   |                                  |
| Quantity  | 1 No.                            |
| Size  | 0.6m(L)x 0.6m(W)x 0.6 m(H)       |
| Spacing between bars  | 25 mm                            |
| MOC   | SS 304                           |
| <b>2. FINE SCREEN</b>   |                                  |
| Quantity  | 1 No.                            |
| Size  | 0.6m(L)x 0.6m(W)x 0.6 m(H)       |
| Spacing between bars  | 10mm                             |
| MOC   | SS 304                           |
| <b>3. SEWAGE LIFTING PUMPS</b>  |                                  |
| Quantity  | 2 Nos. (1W + 1S)                 |
| Capacity  | 5.0 m <sup>3</sup> /hr           |
| Head  | 12 Mtr                           |
| Partical Size   | 40 mm                            |
| MOC   | CI Casing CI Impeller & CS Shaft |
| Type  | Submersible                      |
| Protection  | FRP Motor Cover                  |
| Make  | Kirloskar/CNP/Willo/Lubi         |
| <b>4. ANOXIC TANK AGITATOR</b>  |                                  |
| Quantity  | 1 No.                            |
| Type  | Central Drived                   |
| MOC   | SS 304                           |
| RPM   | 50                               |
| Make  | Fabricated                       |
| <b>5. ROOT AIR BLOWERS FOR EQUALISATION TANK AND SLUDGE HOLDING TANK</b>  |                                  |
| Quantity  | 2 Nos. (1W + 1S)                 |
| Capacity  | 150 m <sup>3</sup> /hr           |
| Head  | 5000 mm WC                       |
| Type  | Twin Lobe Type                   |
| MOC   | CI                               |
| Automation Feature for Root Air Blowers   | Timer based Interlocking         |
| Protection  | FRP Motor Cover                  |
| Make  | Akash/ Beta / Airvak             |
| <b>6. MBR MODULE</b>  |                                  |
| Quantity  | 1 No.                            |
| Capacity  | 100 m <sup>3</sup>               |
| MOC of Frame  | PVDF                             |
| Design Flux   | 30'                              |
| Tentative Area per Module   | 490'                             |

|   |  |
|---|--|
| Product water Turbidity                 | <1 NTU                                 |
| Membrane                                | SUBMERGED Reinforced Hollow Fiber MBR  |
| Type                                    | Spiral wound                           |
| Make                                    | Qua/Dow/Imemflow/W360                  |
| <b>7. MBR ACTUATED VALVE</b>            |  |
| Quantity                                | 1 Lot                                  |
| Size                                    | As required                            |
| Type                                    | Actuated Type                          |
| Make                                    | Belimo / Leader / W360                 |
| <b>8. MBR CHAIN PULLEY WITH MS SKID</b> |  |
| Quantity                                | 1 No.                                  |
| Capacity                                | As per MBR Manufacturer recommendation |
| <b>9. MBR BACK PULSE PUMPS</b>          |  |
| Quantity                                | 1 No. (1W)                             |
| Capacity                                | 8 m <sup>3</sup> /hr                   |
| Head                                    | 20 Mtr                                 |
| MOC                                     | CI Casing CI Impeller & CS Shaft       |
| Type                                    | Centrifugal                            |
| Protection                              | FRP Motor Cover                        |
| Make                                    | Kirloskar/CNP/Willo/Lubi               |
| <b>10. MBR BACK PULSE TANKS</b>         |  |
| Quantity                                | 1 No.                                  |
| Capacity                                | 500 Ltr                                |
| MOC                                     | LDPE                                   |
| Make                                    | Sintex                                 |
| <b>11. CHLORINE DOSING SYSTEM</b>       |  |
| Quantity                                | 1 Set<br>(Pump - 1 No. / Tank - 1 No.) |
| <b>DOSING PUMP</b>                      |  |
| Capacity                                | 0 - 12 LPH                             |
| MOC                                     | PP                                     |
| Type                                    | Metering Dosing Pump                   |
| Protection                              | FRP Motor Cover                        |
| Make                                    | Asia LMI / Grundfos                    |
| <b>DOSING TANK</b>                      |  |
| Quantity                                | 1 No.                                  |
| Capacity                                | 200 ltr                                |
| Special Feature                         | MS Skid Mounted                        |
| Make                                    | Sintex                                 |
| <b>12. ACID DOSING SYSTEM</b>           |  |
| Quantity                                | 1 Set<br>(Pump - 1 No. / Tank - 1 No.) |
| <b>DOSING PUMP</b>                      |  |

|                                       |  |
|---------------------------------------|--|
| Capacity                              | 0 - 12 LPH                             |
| MOC                                   | PP                                     |
| Type                                  | Metering Dosing Pump                   |
| Protection                            | FRP Motor Cover                        |
| Make                                  | Asia LMI / Grundfos                    |
| <b>DOSING TANK</b>                    |  |
| Quantity                              | 1 No.                                  |
| Capacity                              | 200 ltr                                |
| Special Feature                       | MS Skid Mounted                        |
| Make                                  | Sintex                                 |
| <b>13. COARSE BUBBLE DIFFUSERS</b>    |  |
| Quantity                              | 1 Lot                                  |
| Size                                  | 200 mm Dia                             |
| Type                                  | Disc                                   |
| MOC of Membrane                       | Silicon                                |
| Make                                  | Techpro / Scozen                       |
| <b>14. FINE BUBBLE DIFFUSERS</b>      |  |
| Quantity                              | 1 Lot                                  |
| Size                                  | 63 mm Dia x 600 mm Long                |
| Type                                  | Tubular                                |
| MOC of Membrane                       | Silicon                                |
| Make                                  | Techpro / Scozen                       |
| <b>15. SLUDGE RECIRCULATION PUMPS</b> |  |
| Quantity                              | 2 Nos. (1W + 1S)                       |
| Capacity                              | 15.0 m <sup>3</sup> /hr                |
| Head                                  | 10 M                                   |
| MOC                                   | CI Casing CI Impeller & CS Shaft       |
| Type                                  | Self Priming Pump                      |
| Protection                            | FRP Motor Cover                        |
| Make                                  | Kirloskar/CNP/Willo/Lubi               |
| <b>16. MBR PERMEATE PUMPS</b>         |  |
| Quantity                              | 2 Nos. (1W + 1S)                       |
| Capacity                              | 5 m <sup>3</sup> /hr                   |
| Head                                  | 25 - 30 m                              |
| MOC                                   | CI Casing CI Impeller & CS Shaft       |
| Make                                  | Kirloskar/CNP/Willo/Lubi               |
| <b>17. CHLORINE DOSING SYSTEM</b>     |  |
| Quantity                              | 1 Set<br>(Pump - 1 No. / Tank - 1 No.) |
| <b>DOSING PUMP</b>                    |  |
| Capacity                              | 0 - 12 LPH                             |
| MOC                                   | PP                                     |
| Type                                  | Metering Dosing Pump                   |

|   |                                     |
|---|-------------------------------------|
| Protection                              | FRP Motor Cover                     |
| Make                                    | Asia LMI / Grundfos                 |
| <b>DOSING TANK</b>                      |                                     |
| Quantity                                | 1 No.                               |
| Capacity                                | 200 ltr                             |
| Special Feature                         | MS Skid Mounted                     |
| Make                                    | Sintex                              |
| <b>18. FILTER PRESS FEED PUMPS</b>      |                                     |
| Quantity                                | 2 Nos. (1W + 1S)                    |
| Capacity                                | 2 m <sup>3</sup> /hr                |
| Head                                    | 40 m                                |
| MOC                                     | CI Casing CI Impeller & CS Shaft    |
| Protection                              | FRP Motor Cover                     |
| Make                                    | Kirloskar/CNP/Willo/Lubi            |
| <b>19. FILTER PRESS</b>                 |                                     |
| Quantity                                | 1 No.                               |
| Capacity                                | 24 x 24 " + 22 Nos Plates           |
| MOC                                     | CI/MS                               |
| Make                                    | Universal/W360/Pharmatech           |
| <b>20. POLY DOSING SYSTEM</b>           |                                     |
| Quantity                                | 1 Set (Pump - 1 No. / Tank - 1 No.) |
| <b>DOSING PUMP</b>                      |                                     |
| Capacity                                | 0 - 12 LPH                          |
| MOC                                     | PP                                  |
| Type                                    | Metering Dosing Pump                |
| Protection                              | FRP Motor Cover                     |
| Make                                    | Asia LMI / Grundfos                 |
| <b>DOSING TANK</b>                      |                                     |
| Quantity                                | 1 No.                               |
| Capacity                                | 200 ltr                             |
| Special Feature                         | MS Skid Mounted                     |
| Make                                    | Sintex                              |
| <b>AGITATOR FOR POLY DOSING TANK</b>    |                                     |
| Type                                    | Central Driven                      |
| MOC                                     | SS304                               |
| Make                                    | Environ                             |
| <b>21. TREATED WATER TRANSFER PUMPS</b> |                                     |
| Quantity                                | 2 Nos. (1W + 1S)                    |
| Capacity                                | 5 m <sup>3</sup> /hr                |
| Head                                    | 30 Mtr                              |
| Protection                              | FRP Motor Cover                     |
| MOC                                     | CI Casing CI Impeller & CS Shaft    |

|   |  |
|---|--|
| Make  | Kirloskar/CNP/Willo/Lubi   |
| <b>22. PLUMBING</b>   |  |
| Piping & Valves   | uPVC/MS - Epoxy as per requirement                                   |
| Air Grid in EQT & Aeration  | uPVC/  |
| Air Grid in Gardening & Flushing Water Tank   | uPVC   |
| <b>23. FLOW METER</b>   |  |
| Quantity  | 2 Nos. (Inlet & Outlet)  |
| Line Size   | As per Design  |
| Make  | UPC / Forbes Marshall  |
| <b>24. TURBIDITY METER</b>  |  |
| Quantity  | 1 No.  |
| Line Size   | As per Design  |
| Make  | UPC / Aster / Forbes Marshall  |
| <b>25. ELECTRICALS (ELECTRICAL PANEL )</b>  |  |
| DOL / Starters for Dosing Pumps + Float Switch, Energy Meter  |  |
| Electrical Wiring & Cable Tray  |  |
| Quantity  | 1 Lot  |
| Make of Control Panel   | CPRI Approved vendor with wiring & Cabling from National /Equivalent |
| Cable Tray MOC  | GI Perforated  |
| Automation Feature for Pumps  | Through Float type level controller                                  |
| Automation Feature for root Air Blowers   | Timer based Interlocking   |
| <b>26. Designing, Commissioning &amp; Consultancy including Supervision &amp; Management of the Project</b> |  |