पुणे महानगर प्रदेश विकास प्राधिकरण, पुणे

Pune Metropolitan Region Development Authority, Pune
नविन प्रशासकीय इमारत, आकुर्डी रेल्वे स्टेशन जवळ, आकुर्डी, पुणे – 411 044
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पुणे महानगर
नियोजनबद्ध विकास

स्वातंत्र्याचा अमृत महोत्सव

जा. क्र. /EG-2/Electrical Work/संचिका क्र. 113/ १४१२ /2026 दि. ०६/११/२०२६

दरपत्रक सुचना क्र. २४ /2026-27

पुणे महानगर प्रदेश विकास प्राधिकरण कार्यालयामार्फत Urban Growth Centre (UGC) नागरी विकास केंद्राकरीता सांडपाणी व्यवस्थापन प्रकल्पाची उभारणी करणे प्रस्तावित आहे. सदर प्रकल्पाच्या अंतर्गत कार्यान्वित करण्यात मुळशी तालुक्याकरीता येणाऱ्या STP, Pump House इ. विद्युत विषयक Non CSR बाबींचे दर निश्चित करणे प्राधिकरण कार्यालयामार्फत प्रस्तावित आहे. सदर दर प्राप्त झालेनंतर उपरोक्त बाबींच्या दरांचे Rate Analysis (दर पृथ्थकरण) करण्यात येणार आहे. सदर कामाचा Non CSR बाबींचा तपशील सोबत जोडण्यात येत आहे.

विषयांकित कामाकरीता इच्छुक कंत्राटदारांनी सिलबंद दरपत्रके पुणे महानगर प्रदेश विकास प्राधिकरणाच्या आकुर्डी कार्यालयाच्या नवीन प्रशासकीय इमारतीतील दुसऱ्या मजल्यावरील अभियांत्रिकी विभाग (रस्ते) येथील आवक कक्षात दि. 23/11/2026 रोजी सायंकाळी 5:00 वाजपर्यंत आवक विभागात देण्यात याव्यात.

अटी व शर्ती-:

1. कोणतेही दरपत्रक मान्य अथवा नाकारण्याचा अधिकार मा. महानगर आयुक्त, पु.म.प्र.वि.प्रा. यांनी राखुन ठेवला आहे.
2. सदर दरपत्रके केवळ दर निश्चित करणेकरीता मागविण्यात येत आहे.
3. नमुद रक्कम ही सर्व करासह (मात्र GST वगळून) असावी.
4. विषयांकित कामाच्या अधिक माहितीकरीता श्री. प्रशांत सावंत, कनिष्ठ अभियंता, अभियांत्रिकी विभाग-2 यांचेशी संपर्क साधावा.
5. ठेकेदार/कंत्राटदार यांनी दरपत्रकासोबत GST व PAN कार्डची पत्र सादर करणे आवश्यक आहे.

सोबत:- Non CSR बाबींचा तपशील.

(मा. मुख्य अभियंता यांच्या मान्यतेने)

(अनिता कुलकर्णी)
कार्यकारी अभियंता तथा अधीक्षक अभियंता (प्र.)
पुणे महानगर प्रदेश विकास प्राधिकरण,पुणे

Sr No.	Item Description	Qty	Unit	Amount
1	**Submersible Non clog sewage pump -** Design, Supply, Installing, Testing & Commissioning Submersible Sewage Pump suitable as per below specifications. The Raw sewage pumps shall be of submersible, non-clog type Mon block unit. The pump shall handle sewage having specific gravity of 1.05 and particle size 80 mm. The speed of the pump shall be maximum 1500 rpm. The specifications for the pump set shall be as mentioned below. Minimum Pump Efficiency shall not be less than 70% at duty point. The impeller shall be closed non clog type capable of passing solids of 80mm dia. with coating. The pump shall be complete with Automatic Coupling device, electric motor, foundation bolts etc. The automatic coupling device shall have CI pedestal, bracket, Duck foot bend, carbon steel Guide rail pipe, upper guide rail holder etc. The pedestal and bracket shall provide automatic coupling between pump delivery flange and discharge bend. The motor shall be squirrel cage,IE-3 Efficiency, Dry type Ex proof with IP68 class of protection, suitable for operation on 415V (Variation +/- 10%) 3-phase, 50 Hz supply. The motor shall handle permissible liquid temperature up to 40 degree Celsius. It shall be suitable for continuous duty S1 with class H insulation & IP 68 protection. The rating selected shall be at least 10% more than that required at duty point and shall be non-overloading at other points of H-Q curve over a range of 75% to 120% of the rated capacity. Duty point should be so selected that it should be in the middle of H-Q curve with a variation of (+/-) 5%. Motor efficiency 90%.Two independently acting mechanical seals shall be provided to prevent the pumped liquid entering into the motor winding.			
	The seals shall be situated in the oil chamber to ensure proper lubrication. The face combination of the seals shall be as follows: Pump side: SiC/SiC Motor side: SiC / SiC or Carbon Ceramic Each pump shall be provided with 25 Mtr. long submersible cable both for power and control cables, which shall be terminated in the pump starter panel or in weatherproof junction box, if pump starter panel is situated beyond the length of the submersible cable. Pump shall be equipped with surface cooled motor i.e. motor shall be cooled by surrounding fluid. Motor shall be VFD compatible. Pump shall be provided with auto-coupling and integral bend consisting of single / two guide pipes, upper guide pipe bracket, chain, shackle etc. In case of an installation, depth of more than 6 m a guide pipe coupler must be provided. All screwed connections as well as the accessories of the suspension device are made of stainless steel. Lifting Chain - with "O" Ring at 1 m and with D/shackle at one end Features of construction of pumps shall be: Pumps of the category shall be identical and shall be suitable for parallel operation with equal load division. Components of identical pumps shall be interchangeable.Pumps offered should be capable of developing the required head at rated capacity / discharge and it should operate satisfactorily over the range of operation. Pumps should not make undue noise even at fully open valve condition and motor should not be overloaded in this condition also.			
	The manufacturer shall have to consider the condition of pumps being run under the pump duty variation condition as narrated above. **Pump set Protection System shall consist of the following Protection:** 1.1 Moisture monitoring for moisture into the sealing chamber 1.2 Electrode in terminal Chamber 1.3 Bimetal temperature sensor to sense increase in temperature of the motor winding. 1.4 Pump Monitoring Unit - 01 set per pump as per manufacturers design. 1.5 Impeller Type: Single-vane or two-vane (semi-open or closed non-clog design) with back pump-out vanes. 1.6 Protection & Insulation: IP-68 protection for submersibles, F-class high-temperature insulation, and built-in Thermal Overload Protection (TOP) 1.7 Materials of Construction: Cast iron, stainless steel (AISI-410, SS-304, SS-316), bronze, or duplex/super duplex steel for casings and impellers. 1.8 Material of Construction (MOC): • Casing & Impeller: Cast Iron (FG 260 / Gr. 20-40) & SS316 (CF8M) for corrosive/abrasive loads. • Shaft: Stainless Steel (SS 410) • Wear Rings / Internals: SS internals for enhanced longevity. • Mechanical Seals: Dual mechanical seal arrangements (such as Silicon Carbide vs. Silicon Carbide or Buna-N exclusion seals)			
	Hinjewadi - Marunji			
	1) 590 m3/hr @24 mtr head	1	Nos.	
	2) 1180 m3/hr @24 mtr head	1	Nos.	
	3) 2660 m3/hr @24 mtr head	1	Nos.	
	Maan - Bhoirwadi			
	1) 565 m3/hr @23 mtr head	1	Nos.	

Sr No.	Item Description	Qty	Unit	Amount
	2) 1130 m3/hr @23 mtr head	1	Nos.	
	3) 2545 m3/hr @23 mtr head	1	Nos.	
	Lavale - Pirangut - TP-1			
	1) 65 m3/hr @16 mtr head	1	Nos.	
	2) 130 m3/hr @16 mtr head	1	Nos.	
	3) 295 m3/hr @16 mtr head	1	Nos.	
	Lavale - Pirangut - TP-2			
	1) 335 m3/hr @20 mtr head	1	Nos.	
	2) 665 m3/hr @20 mtr head	1	Nos.	
	3) 1500 m3/hr @20 mtr head	1	Nos.	
2	**PCC Panel**			
	Hinjewadi & Maan			
	Designing, Providing, Supplying, Transportation, loading,Unloading, Installing, testing and commissioning of **PCC Panel** completed in all respects as per the directions of Engineer Incharge. The panels used as main Source of Power for LT Equipements in Sewage Pumping Station shall be capable to feed as well as recieve power. The detailed specifications and scope of work for the various components of the Panel to be provided must be as under. The rate must be inclusive of the charges for Designing, Providing, Supplying, Transportation, loading, Unloading, Installing, testing and commissioning of LT Main Panel.			
	The panel shall be capable of Supplying Power to pump house panel. the Panel shall be used to supply power for Valve actuators, PLC panel & EOT Crane in the pump house. As per directed by Engineer-In charge.			
	Instruments feed by the panel			
	1. PLC Panel for Valve Actuators in Pump House			
	2. APFC Bank (Automatic Power Factor Correction)			
	3. MCC Feeders			
	Minimum Requirements to be provided with Panel shall be inclusive of all required accessories like Power analyzer, Voltmeter, Ammeter, pushbutton, selector switch, Emergency pushbutton, lamp, buzzer, contactor, overload relay, Other relays, MCBs, Single Phase Protector, Space Heater, thermostat and auxiliary power socket with switch (16A), Astrotimer for external lighting & Panel Lights, CT etc. as per requirement.			
	Required Breakers in the Panel:			
	Incomer ACB (2000A) - 2 Nos. (MSEB+DG with Interlocking mechanical plus electrical interlock / changeover logic with the DG) draw-out, EDO, microprocessor release (LSIG), breaking capacity (Icu = Ics) matched to the fault level.			
	Feeder for STP MCC Panel ACB-1000 amp - 1 Nos.			
	Feeder for PLC Panel - MCB 125 amp- 1 No.			
	Feeder for APFC Panel MCCB- 630 A- 1 Nos.			
	Spare Feeder 1nos.			
	Designing, Providing, Supplying, Transportation, loading, Unloading, Installing, testing and commissioning of **MCC Panel** in all respects as per the directions of Engineer Incharge. The panels used as Source of Power for Equipements in sewage pumping station. The detailed specifications and scope of work for the various components of the Panel to be provided must be as under. The rate must be inclusive of the charges for Designing, Providing, Supplying, Transportation, loading, Unloading, Installing, testing and commissioning of MCC Panel. VFD or soft Starter for motors of 50HP & Above The panel shall be capable of Supplying Power to all equipments of the Sewage Pumping Sation. As per directed by Engineer-In charge.	1	No	

Sr No.	Item Description	Qty	Unit	Amount
	Required Instruments & Feeders in the Panel:			
	1. Pump 0.50 DWF (100 HP) - 1 Working + 1 Standby			
	2. Pump 1 DWF (200 HP) - 1 Working + 1 Standby			
	3. Pump 2.25 DWF (450 HP) - 1 Working + 1 Standby			
	4. EOT Crane(5.5 kw)- 1no			
	5.Mechanical Screen - 1 Working			
	6.Conveyor belt - 1 Working + 1 Standby			
	7.Lighting and Power DB			
	8. Feeder for Valve Actuator- MCB (As required) -5+1 Nos			
	Minimum Requirements to be provided with panel:-			
	Panel shall be inclusive of all required accessories like Power analyzer, Voltmeter, Ammeter, pushbutton, selector switch, Emergency pushbutton, lamp, buzzer, contactor, overload relay, Other relays, MCBs, Single Phase Protector, Space Heater, thermostat and auxiliary power socket with switch (16A), Astrotimer for external lighting & Panel Lights etc. as per requirement.			
	Enclosure / Panel Body Specification Panel body shall be of IP 55 protection class. Panel body shall be treated with antirust treatment,seven tank Pretreatment, duly Epoxy powder coated or painted with one coat of red oxide paint and 2 coats of enamel paint completed size of 14 SWG. CRCA Sheet steel used for fabrication of these or similar items shall be cold roiled. All cubicles, panels, cabinets, kiosks, and boards shall comprise rigid welded structural frames made of pressed and formed sheet steel of not less than 3 mm thickness. The frames shall be enclosed by steel sheets of at least 2 mm thickness, smoothly finished, levelled and free from flaws. Stiffeners shall be provided wherever necessary.All doors, panels, removable covers, gland plates, etc., shall be gasketed all-round the perimeter. Padlocking facilities where required shall be provided in addition to above along with padlocks and duplicate keys. All doors shall be removable and supported by strong hinges of the disappearing or internal type and braced in such a manner as to ensure freedom from sagging, bending and general distortion of panel or hinged parts. Panel Shall be of bottom cable entry type. **Standards and Construction:-**Specify: IS / IEC 61439-1 and 2, type-tested assembly; form of separation 3b (MCC) / 4 (PCC); short-time rating for 1 s matched to the fault level; electrolytic-grade copper or aluminium busbars with current density, temperature rise, sleeving and colour coding; full-length earth bus; cable alley; surge protection (Type 1 + 2); earth-fault, under / over-voltage and phase-failure / reversal protection; class 0.5S multifunction meters with RS-485 Modbus for SCADA.			
	Lavale Pirangut TPS-1			
	Designing, Providing, Supplying, Transportation, loading,Unloading, Installing, testing and commissioning of **PCC Panel** completed in all respects as per the directions of Engineer Incharge. The panels used as main Source of Power for LT Equipements in Sewage Pumping Station shall be capable to feed as well as recieve power. The detailed specifications and scope of work for the various components of the Panel to be provided must be as under. The rate must be inclusive of the charges for Designing, Providing, Supplying, Transportation, loading, Unloading, Installing, testing and commissioning of LT Main Panel.			
	The panel shall be capable of Supplying Power to one sewage Pumping Station the Panel shall be used to supply power for Valve actuators, PLC panel & EOT Crane in the pump house. As per directed by Engineer-In charge.			
	Instruments feed by the panel			
	1. PLC Panel for Valve Actuators in Pump House			
	2. APFC Bank (Automatic Power Factor Correction)			
	3. STP Starter Panels / MCC Feeders			
	Minimum Requirements to be provided with Panel shall be inclusive of all required accessories like Power analyzer, Voltmeter, Ammeter, pushbutton, selector switch, Emergency pushbutton, lamp, buzzer, contactor, overload relay, Other relays, MCBs, Single Phase Protector, Space Heater, thermostat and auxiliary power socket with switch (16A), Astrotimer for external lighting & Panel Lights, CT etc. as per requirement.			
	Required Breakers in the Panel:			
	Incomer ACB (1000A) - 2 Nos. (MSEB+DG with Interlocking mechanical plus electrical interlock / changeover logic with the DG) draw-out, EDO, microprocessor release (LSIG), breaking capacity (Icu = Ics) matched to the fault level.			
	Feeder for STP MCC Panel MCCB(As required) - 2 Nos.			
	Feeder for PLC Panel - MCB (As required)- 1 No.			
	Feeder for APFC Panel MCCB- 250 A- 1 Nos.			
	Spare Feeder 1nos.			

Sr No.	Item Description	Qty	Unit	Amount
	Designing, Providing, Supplying, Transportation, loading, Unloading, Installing, testing and commissioning of MCC **Panel** in all respects as per the directions of Engineer Incharge. The panels used as Source of Power for Equipements in Sewage Pumping station. The detailed specifications and scope of work for the various components of the Panel to be provided must be as under. The rate must be inclusive of the charges for Designing, Providing, Supplying, Transportation, loading, Unloading, Installing, testing and commissioning of MCC Panel.VFD or soft Starter for motors of 50HP & Above The panel shall be capable of Supplying Power to all equipments of the Sewage Pumping Sation. As per directed by Engineer-In charge.	1	No	
	Required Instruments & Feeders in the Panel:			
	1. Pump 0.50 DWF (7.5 HP) - 1 Working + 1 Standby			
	2. Pump 1 DWF (15 HP) - 1 Working + 1 Standby			
	3. Pump 2.25 DWF (40 HP) - 1 Working + 1 Standby			
	4. EOT Crane(5.5 kw)- 1no			
	5.Mechanical Screen - 1 Working			
	6.Conveyor belt - 1 Working + 1 Standby			
	7.Lighting and Power DB			
	8. Feeder for Valve Actuator- MCB (As required) -5+1 Nos			
	Minimum Requirements to be provided with panel:-			
	Panel shall be inclusive of all required accessories like Power analyzer, Voltmeter, Ammeter, pushbutton, selector switch, Emergency pushbutton, lamp, buzzer, contactor, overload relay, Other relays, MCBs, Single Phase Protector, Space Heater, thermostat and auxiliary power socket with switch (16A), Astrotimer for external lighting & Panel Lights etc. as per requirement.			
	Enclosure / Panel Body Specification Panel body shall be of IP 55 protection class. Panel body shall be treated with antirust treatment,seven tank Pretreatment, duly Epoxy powder coated or painted with one coat of red oxide paint and 2 coats of enamel paint completed size of 14 SWG.CRCA Sheet steel used for fabrication of these or similar items shall be cold roiled. All cubicles, panels, cabinets, kiosks, and boards shall comprise rigid welded structural frames made of pressed and formed sheet steel of not less than 3 mm thickness. The frames shall be enclosed by steel sheets of at least 2 mm thickness, smoothly finished, levelled and free from flaws. Stiffeners shall be provided wherever necessary.All doors, panels, removable covers, gland plates, etc., shall be gasketed all-round the perimeter. Padlocking facilities where required shall be provided in addition to above along with padlocks and duplicate keys. All doors shall be removable and supported by strong hinges of the disappearing or internal type and braced in such a manner as to ensure freedom from sagging, bending and general distortion of panel or hinged parts. Panel Shall be of bottom cable entry type. **Standards and Construction:**-Specify: IS / IEC 61439-1 and 2, type-tested assembly; form of separation 3b (MCC) / 4 (PCC); short-time rating for 1 s matched to the fault level; electrolytic-grade copper or aluminium busbars with current density, temperature rise, sleeving and colour coding; full-length earth bus; cable alley; surge protection (Type 1 + 2); earth-fault, under / over-voltage and phase-failure / reversal protection; class 0.5S multifunction meters with RS-485 Modbus for SCADA.			
	Lavale Pirangut TPS-2			
	Designing, Providing, Supplying, Transportation, loading,Unloading, Installing, testing and commissioning of **PCC Panel** completed in all respects as per the directions of Engineer Incharge. The panels used as main Source of Power for LT Equipements in Sewage Pumping Station shall be capable to feed as well as recieve power. The detailed specifications and scope of work for the various components of the Panel to be provided must be as under. The rate must be inclusive of the charges for Designing, Providing, Supplying, Transportation, loading, Unloading, Installing, testing and commissioning of LT Main Panel.			
	The panel shall be capable of Supplying Power to Sewage Puming Station. the Panel shall be used to supply power for Valve actuators, PLC panel & EOT Crane in the pump house. As per directed by Engineer-In charge.			
	Instruments feed by the panel			
	1. PLC Panel for Valve Actuators in Pump House			
	2. APFC Bank (Automatic Power Factor Correction)			
	Minimum Requirements to be provided with Panel shall be inclusive of all required accessories like Power analyzer, Voltmeter, Ammeter, pushbutton, selector switch, Emergency pushbutton, lamp, buzzer, contactor, overload relay, Other relays, MCBs, Single Phase Protector, Space Heater, thermostat and auxiliary power socket with switch (16A), Astrotimer for external lighting & Panel Lights, CT etc. as per requirement.			
	Required Breakers in the Panel:			
	Incomer ACB (630A) - 2 Nos. (MSEB+DG with Interlocking mechanical plus electrical interlock / changeover logic with the DG) draw-out, EDO, microprocessor release (LSIG), breaking capacity (Icu = Ics) matched to the fault level.			
	Feeder for PLC Panel - MCB (As required)- 1 No.			

Sr No.	Item Description	Qty	Unit	Amount
	Feeder for Valve Actuator- MCB (As required) -5+1 Nos			
	Feeder for APFC Panel MCCB- 160 A- 1 Nos.			
	Spare Feeder 1 Nos.			
	Designing, Providing, Supplying, Transportation, loading, Unloading, Installing, testing and commissioning of MCC Panel in all respects as per the directions of Engineer Incharge. The panels used as Source of Power for Equipements in Sewage pumping Station. The detailed specifications and scope of work for the various components of the Panel to be provided must be as under. The rate must be inclusive of the charges for Designing, Providing, Supplying, Transportation, loading, Unloading, Installing, testing and commissioning of MCC Panel. VFD or soft Starter for motors of 50HP & Above. The panel shall be capable of Supplying Power to all equipments of the Sewage Pumping Station. As per directed by Engineer-In charge.			
	Required Instruments & Feeders in the Panel:	1	NO	
	1. Pump 0.50 DWF (50 HP) - 1 Working + 1 Standby			
	2. Pump 1 DWF (100 HP) - 1 Working + 1 Standby			
	3. Pump 2.25 DWF (200 HP) - 1 Working + 1 Standby			
	4. EOT Crane(5.5 kw)- 1no			
	5.Mechanical Screen - 1 Working			
	6.Conveyor belt - 1 Working + 1 Standby			
	7.Lighting and Power DB			
	8. Feeder for Valve Actuator- MCB (As required) -5+1 Nos			
	Minimum Requirements to be provided with panel:-			
	Panel shall be inclusive of all required accessories like Power analyzer, Voltmeter, Ammeter, pushbutton, selector switch, Emergency pushbutton, lamp, buzzer, contactor, overload relay, Other relays, MCBs, Single Phase Protector, Space Heater, thermostat and auxiliary power socket with switch (16A), Astrotimer for external lighting & Panel Lights etc. as per requirement.			
	Enclosure / Panel Body Specification Panel body shall be of IP 55 protection class. Panel body shall be treated with antirust treatment,seven tank Pretreatment,duly Epoxy powder coated or painted with one coat of red oxide paint and 2 coats of enamel paint completed size of 14 SWG. CRCA Sheet steel used for fabrication of these or similar items shall be cold roiled. All cubicles, panels, cabinets, kiosks, and boards shall comprise rigid welded structural frames made of pressed and formed sheet steel of not less than 3 mm thickness. The frames shall be enclosed by steel sheets of at least 2 mm thickness, smoothly finished, levelled and free from flaws. Stiffeners shall be provided wherever necessary.All doors, panels, removable covers, gland plates, etc., shall be gasketed all-round the perimeter. Padlocking facilities where required shall be provided in addition to above along with padlocks and duplicate keys. All doors shall be removable and supported by strong hinges of the disappearing or internal type and braced in such a manner as to ensure freedom from sagging, bending and general distortion of panel or hinged parts. Panel Shall be of bottom cable entry type. **Standards and Construction:**-Specify: IS / IEC 61439-1 and 2, type-tested assembly; form of separation 3b (MCC) / 4 (PCC); short-time rating for 1 s matched to the fault level; electrolytic-grade copper or aluminium busbars with current density, temperature rise, sleeving and colour coding; full-length earth bus; cable alley; surge protection (Type 1 + 2); earth-fault, under / over-voltage and phase-failure / reversal protection; class 0.5S multifunction meters with RS-485 Modbus for SCADA.			

Sr No.	Item Description	Qty	Unit	Amount
3	**Mechanical Coarse Screen: -**			
	Providing, supplying, erecting, testing and commissioning of a motorized mechanical coarse screen in the screen channel of the sewage treatment plant, complete with toothed rake and motor-driven operating mechanism. The screen bars shall be made of 50 mm × 10 mm stainless steel flats, with 25 mm clear spacing between adjacent bars, installed at an inclination of 60° to 80° to the horizontal, with the screen dimensions as per the following specified sizes and approved drawings. The Material of Construction (MOC) for the screen bars, frame, rake and other wetted components shall be Stainless Steel SS 304L or SS 316L, suitable for resisting corrosion in wastewater environments. The screen shall be designed to maintain an approach velocity of 0.3–0.6 m/s, with a velocity through the screen openings of up to 1.2 m/s at peak flow, subject to hydraulic design requirements. The equipment shall be provided with a suitable geared motor, torque and overload protection, limit switches, and a local/remote electrical control panel compatible with PLC/SCADA systems. The screenings handling arrangement shall include a suitable shaftless screw conveyor or screenings compactor, as required, for washing, compacting, dewatering and discharging screenings into a suitable collection skip/bin. The scope shall include all necessary supporting frames, anchor fasteners, drive assemblies, electrical connections, interconnecting accessories, installation, testing, commissioning and satisfactory trial operation, complete in all respects as per the approved drawings, manufacturer's specifications and directions of the Engineer-in-Charge.			
3.1	1800mm(W) X 1100mm(SWD) 300 mm (Freeboard), Total Depth from 8m-10m	1	Nos.	
3.2	1800mm(W) X 1100mm(SWD) 300 mm (Freeboard), Total Depth Greater than 10m to 12m	1	Nos.	
3.3	1800mm(W) X 1100mm(SWD) 300 mm (Freeboard), Total Depth greater than 12m to14m	1	Nos.	
3.4	1600mm(W) X 900mm(SWD) 300 mm (Freeboard), Total Depth 8m to 10m	1	Nos.	
3.5	1600mm(W) X 900mm(SWD) 300 mm (Freeboard), Total Depth Greater than 10m to 12m	1	Nos.	
3.6	1600mm(W) X 900mm(SWD) 300 mm (Freeboard), Total Depth Greater than 12m to 14m	1	Nos.	
3.7	500mm(W) X 400mm(SWD) 300 mm (Freeboard), Total Depth 3 m to 5 m	1	Nos.	
3.8	500mm(W) X 400mm(SWD) 300 mm (Freeboard), Total Depth Greater than 5 m to 7 m	1	Nos.	
3.9	500mm(W) X 400mm(SWD) 300 mm (Freeboard), Total Depth Greater than 7 m to 9 m	1	Nos.	
3.10	1400mm(W) X 900mm(SWD) 300 mm (Freeboard), Total Depth 6 m to 8 m	1	Nos.	
3.11	1400mm(W) X 900mm(SWD) 300 mm (Freeboard), Total Depth Greater than 8 m to 10 m	1	Nos.	
3.12	1400mm(W) X 900mm(SWD) 300 mm (Freeboard), Total Depth Greater than 10 m to 12 m	1	Nos.	
4	**Manual Coarse Screen: -**			
	Providing and erecting of a manual coarse screen in the screen channel of the sewage treatment plant. The screen bars shall be made of 50 mm × 10 mm stainless steel flats, with 25 mm clear spacing between adjacent bars, arranged in an inclined position at 60° to 80° to the horizontal. The Material of Construction (MOC) for the screen bars, frame and other wetted components shall be Stainless Steel SS 304L or SS 316L, suitable for resisting corrosion in harsh wastewater environments. The screen shall be designed to maintain an approach velocity of 0.3–0.6 m/s, with a velocity through the screen openings of up to 1.2 m/s at peak flow, subject to hydraulic design requirements, to minimise grit deposition while ensuring effective screening. The screen shall be provided with the following channel width and depth, as specified in the approved drawings. The scope shall include all necessary supporting frames, guides, anchor fasteners, fixing arrangements and accessories required for proper installation and operation, complete in all respects as per the approved drawings, technical specifications and directions of the Engineer-in-Charge.			

Sr No.	Item Description	Qty	Unit	Amount
	1800mm(W) X 1100mm(SWD) 300 mm (Freeboard)	1	Nos.	
	1600mm(W) X 900mm(SWD) 300 mm (Freeboard).	1	Nos.	
	500mm(W) X 400mm(SWD) 300 mm (Freeboard)	1	Nos.	
	1400mm(W) X 900mm(SWD) 300 mm (Freeboard).	1	Nos.	
5	**CCTV Surveillance System**			
i)	Supplying & erecting of High definition 4/5 Megapixel IP IR Dome Camera with following features Image Sensor : minimum 1/2.8" Progressive Scan CMOS, Video Resolution : minimum 2592 x 1520 Video Compression : H.264, H.265 or higher, at least Three individually configurable stream,255 Frame rate : minimum 25 fps at all resolutions, WDR : minimum 120 dB Wide Dynamic Range, ONVIF profile conformant, minimum IR distance : 50m, Lens Type : 2.8/4/6 mm Lens, fixed focal,			
	Field of View : 2.8 mm, horizontal FOV 107°, vertical FOV 57°, diagonal FOV 129° 4 mm, horizontal FOV 86°, vertical FOV 47°, diagonal FOV 102° 6 mm, horizontal FOV 55°, vertical FOV 29°, diagonal FOV 65° Lux sensitivity - minimum 0.2 Lux at color, minimum 0.05 Lux at Black & White,0.0 Lux (IR) Night Vision Distance minimum IR - 50m. Camera minimum Adjustment Angles - Pan : 350°, Tilt : 72°, Rotate : 350°. Power Supply : Support 12VDC & PoE, IP67, IK10 - Vandal Resistant. Built in micro SD/SDHC/SDXC card slot of minimum 128 GB, Built in microphone.			
	minimum Input/Output - Audio in × 1, Audio Out × 1, Alarm in × 1, Alarm Out × 1. Image Settings : Rotate mode, saturation, brightness, contrast, sharpness, gain, white balance. Image Enhancements : Day/Night-Auto (ICR)/Color/Black & White, 3D Digital Noise Reduction, Automatic White Balance, Automatic Gain Control, Backlight Compensation,Highlight Compensation. Events : Privacy Masking, Motion detection, Scene change detection, Face capture, Video tampering, audio exception detection, Region entrance detection, Region exiting detection.	1	Set	
	Operating temperature (-30 to 60° C) . Security - User account and password protection, HTTPS, IP filter, IEEE 802.1X, digest authentication, user access log, TLS1.2, AES - 256, SSH/Telnet closed, FTP disabled. Protocol - DHCP, UDP, HTTP, HTTPS, NTP, DNS, RTP, RTSP, SMTP, SSL/TLS, TCP/IP, Secure Real-Time Transport Protocol (SRTP), Bonjour, SNMP and Secure shell (SSH) supported protocol.RoHS, WEEE, ISO-14001 and REACH compliant, UL/EN OR equivalent BIS/TECH/STQC or any indian standards as applicable, CE, FCC certified. duly erected in position on wall/ceiling/false ceiling/provided pole (mounting height not more than 5 meter) etc with all accessories etc..			
ii)	Supplying & erecting of High definition 4/5 Megapixel IP IR varifocal Bullet Camera with following features Image Sensor : minimum 1/ 2.8" Progressive Scan CMOS, Video Resolution : minimum 2592 x 1520 Video compression : H.264, H.265 or higher, at least Three individually configurable stream, Frame Rate : minimum 25 fps at all resolutions. WDR : minimum 120 dB Wide Dynamic Range, ONVIF profile conformant, minimum IR distance : 50m, Lens Type: 2.8 - 13mm Lens, auto/motorized varifocal focal,			
	Field of View : horizontal FOV 103° to 32°, vertical FOV 73° to 24°, diagonal FOV 142° to 40° Lux sensitivity - minimum 0.2 Lux at color, minimum 0.05 Lux at Black & White, 0.0 Lux (IR) Night Vision Distance Min IR- 50m, Camera minimum Adjustment Angles - Pan : 350°, Tilt : 72°, Rotate : 350°. Power Supply : Support 12VDC & PoE, IP67, IK10 – Vandal Resistant, built in micro SD/SDHC/SDXC card slot of min 128 GB, built in microphone. minimum Input/Output- Audio in × 1, Audio Out × 1 , Alarm in× 1, Alarm Out × 1. Image Settings: Rotate mode, saturation, brightness, contrast, sharpness, gain, white balance	1	Set	
	Image Enhancements: Day/ Night-Auto (ICR)/Color/Black & White, 3D Digital Noise Reduction, Automatic White Balance, Automatic Gain Control, Backlight Compensation, Highlight Compensation. Events: Privacy Masking, Motion detection, Scene change detection, Face capture, Video tampering, audio exception detection, Region entrance detection, Region exiting detection. Operating temperature (-30 to 60° C) . Security- User account and password protection, HTTPS, IP filter, IEEE 802.1X, digest authentication, user access log, TLS1.2, AES-256, SSH/Telnet closed, FTP disabled. Protocol - DHCP, UDP, HTTP, HTTPS, NTP, DNS, RTP, RTSP, SMTP, SSL/TLS, TCP/IP, Secure Real-Time Transport Protocol (SRTP), Bonjour, SNMP and Secure shell (SSH) supported protocol. RoHS, WEEE, ISO-14001 and REACH compliant, UL/EN OR equivalent BIS/TECH/STQC or any indian standards as applicable, CE, FCC certified. duly erected in position on wall/ceiling/false ceiling/provided pole (mounting height not more than 5 meter) etc with all accessories etc			

Sr No.	Item Description	Qty	Unit	Amount
iii)	Supplying, installing, testing & commissioning of minimum 4 Nos Ch. Network Video Recorder (NVR), suitable for 2 MP cameras only with HDMI/VGA outputs provided HDMI output of 4K resolution or VGA output with output up to 1920x1080. Support H.265 or higher, H.264, MJPEG, Incoming Bandwidth 40Mbps with minimum 1 SATA ports, ANR Technology, 1 SATA interfaces for 1 HDDs and capacity of each HDD up to 8 TB, Min. 02 USB port, RJ-45 10 /100 Mbps self-adaptive Ethernet interface, support multi brand network Cameras, ON VIF conformance, Multiple network monitoring: Web viewer.support protocol TCP/IP, DHCP, DNS, DDNS, NTP, SADP, SMTP, NPS, ISCSI, UPnP™, HTTPS. RoHS, UL, CE, FCC certified. duly erected in provided U Rack with wiring connections, tagging and programming etc complete as per specifications no. CCTV-NVR	1	Set	
iv)	Supplying, installing, testing and commissioning of 2 TB Internal Surveillance Hard Disk Drive suitable for continuous 24×7 operation in the provided Network Video Recorder (NVR), compatible with SATA interface and supporting a SATA interface transfer rate of 6 Gb/s, maximum sustained data transfer rate of 145–180 MB/s, minimum 64 MB cache, compatibility with NVRs supporting up to 8 drive bays and recording from up to 64 cameras, load/unload cycle rating of 3,000,000 cycles, annual workload rating of 180 TB/year and Mean Time Between Failures (MTBF) of 1,000,000 hours. The HDD shall be suitable for continuous video recording and playback, compliant with applicable RoHS and CE requirements, and UL certified where applicable. The drive shall be supplied with all necessary accessories, duly installed in the designated NVR drive bay, configured, tested and commissioned as per the manufacturer's recommendations and Technical Specification No. CCTV-HDD.	1	Set	
v)	supply, Installation, Testing and Commissioning (SITC) of CCTV Monitor: Supplying and erecting a 22"–24" professional LED monitor suitable for an 8-channel NVR, with Full HD resolution of 1920 × 1080 pixels, minimum brightness of 250 cd/m², minimum contrast ratio of 1000:1, viewing angle of 178°/178°, maximum response time of 8 ms, and input interfaces including HDMI, VGA, BNC, USB and Audio In. The monitor shall have built-in speakers of minimum 2 W output, operate on 100–240 V AC, 50 Hz supply, and be suitable for continuous 24 × 7 operation. The scope shall include standard wall-mounting bracket or tabletop stand, necessary wiring, connections, accessories, installation, testing and commissioning, complete in all respects, as per CCTV-MON technical specifications and instructions of the Engineer-in-Charge.	1	Set	
vi)	43" Professional LED Display Monitor – Technical Specification Supplying, installing, testing and commissioning of 43-inch Professional LED Display Monitor suitable for continuous CCTV surveillance monitoring applications and compatiblewith 16/32 Channel Network Video Recorder (NVR) systems, complete with mounting accessories, interconnections and all associated works required for satisfactory operation. The display shall have a minimum screen size of 43 inches with Full HD resolution of 1920 ×1080 pixels, LED backlit technology and be designed for 24 Hours × 7 Days continuous operation. The monitor shall provide a minimum brightness of 500 cd/m², contrast ratio of 1000:1, viewing angle of 178° Horizontal / 178° Vertical and response time not exceeding 8 milliseconds. The monitor shall be equipped with minimum following interfaces: HDMI Input, VGA Input, BNC Video Input, Port, Audio Input, Power Input.	1	Set	
	The monitor shall have built-in speakers with minimum output of 10 Watts and shall be suitable for operation on 100–240 Volts, 50 Hz AC supply. The display shall support continuous display of live video streams, playback and CCTV management applications and shall be compatible with the supplied NVR, video management software and IP camera system.			
	The scope shall include: Professional grade LED display monitor,Wall mounting bracket / table top stand as specified.,Power cord and signal cables.,HDMI/VGA/BNC connectivity as required,Mounting hardware, fasteners and accessories, Installation, alignment and configuration,Testing and commissioning. The monitor shall comply with applicable BIS/TEC/STQC requirements and shall be certified for electrical safety and electromagnetic compatibility as per relevant Indian and International standards. The display shall be erected on wall or tabletop location as directed and integrated with the CCTV surveillance system for real-time monitoring and recording applications. The contractor shall provide complete operation and maintenance support during the DBOT period and ensure reliable and uninterrupted operation of the display system. Measurement: The item shall be measured on a complete installed, tested and commissioned basis including monitor, mounting accessories, wiring connections, interfacing, testing, commissioning and O&M obligations etc..			
vii)	Supplying, installing, testing and commissioning of 8 TB Internal Surveillance Hard Disk Drive suitable for continuous 24×7 operation in the provided Network Video Recorder (NVR), compatible with SATA interface and supporting a SATA interface transfer rate of 6 Gb/s, maximum sustained data transfer rate of 210–213 MB/s, minimum 256 MB cache, support for NVRs with 8 or more drive bays and recording from up to 64 cameras, load/unload cycle rating of 3,000,000 cycles, annual workload rating of 180 TB/year and Mean Time Between Failures (MTBF) of 1,000,000 hours. The HDD shall be suitable for continuous video recording and playback, compliant with applicable RoHS and CE requirements, and UL certified where applicable. The drive shall be supplied with all necessary accessories, duly installed in the designated NVR drive bay, configured, tested and commissioned as per the manufacturer's recommendations and Technical Specification No. CCTV-HDD.	1	Set	

Sr No.	Item Description	Qty	Unit	Amount
viii)	Supplying, laying, dressing, terminating, testing and commissioning of Enhanced CAT-6 (Category 6) UTP cable suitable for Ethernet networking and data communication applications, conforming to ANSI/TIA-568.2-D standards. The complete 4-connector channel shall comprise compatible horizontal cable, connecting hardware, patch cords and equipment cords, as applicable, and shall meet the specified channel performance requirements. The installation shall include all necessary accessories, connectors, termination, labelling and testing. A channel performance test report from a calibrated field certifier shall be submitted, verifying compliance with the applicable ANSI/TIA-568.2-D requirements.	1	Set	
6	**Sluice gate**			
	Designing, manufacturing, supplying, erecting, testing and commissioning of stainless steel (SS-316) fabricated sluice gates at various locations in the PMRDA area or as directed by the Engineer-in-Charge, complete in all respects. The sluice gates shall be open channel type, wall/channel mounted, manually or electrically operated, suitable for seating water head, and shall be of flush-bottom closure, upward-opening, rising-spindle type, self-contained, and closed-top frame construction. The sluice gates shall conform to IS 5620, IS 13349 or latest relevant Indian Standards and BS EN 10088 as applicable, including mandatory shop testing and hydraulic test certificate, and shall be designed to withstand all operating loads, hydrostatic pressure and environmental conditions encountered during service. The frame shall be of rigid fabricated unit construction in SS-316, designed to safely withstand the water head of 7 m without excessive deflection. The frame shall be provided with a fabricated spigot/flange of adequate depth on the rear side for proper embedding in concrete, ease of installation and effective sealing against leakage. The side guides shall be fabricated from SS-316 and securely fixed to the frame by stainless-steel stud bolts. The guides shall extend over the full height of the waterway to provide smooth and effective guidance of the gate throughout its entire travel. Provision shall be made for longitudinal adjustment of the guides to achieve proper wedging action consistent with sealing requirements. Adequate arrangements such as tongues, keys, shoulders or guide legs shall be provided to limit lateral movement and maintain alignment.	1	Nos	
	The gate leaf (door) shall be fabricated from SS-316 plates and adequately stiffened with welded reinforcement ribs on the downstream side to ensure rigidity and prevent distortion under load. Minimum thickness shall not be less than 5 mm, with ribs properly designed as per load condition. The seating faces shall be properly machined, and suitable EPDM/resilient sealing arrangement shall be provided to ensure leak-proof operation under seating-head conditions. Maximum permissible leakage shall not exceed 1.25 litres per minute per metre of sealing perimeter. The gate leaf shall be provided with integrally fabricated lugs/brackets, drilled to accommodate the bearing pin for spindle connection. Positive stop arrangements shall be provided integrally with the frame and gate leaf to limit gate travel and prevent over-running during operation. The spindle (stem) shall be made of SS-316, of adequate diameter and strength to transmit operating loads safely (minimum yield strength 240 MPa). The spindle shall have machine-cut square threads. The threaded portion shall remain completely above the maximum water level, free from contact with sewage or water, and readily accessible for inspection and lubrication. Suitable couplings shall be provided where required.			
	Technical Specifications / Materials			
	Sluice Gate Frame - SS AISI 316 Gate Door / Plate - SS AISI 316 Contacting Faces - EPDM P Type Rubber on Metal Guides Brackets - SS AISI 316 Stem and Extended Spindle - SS 316 Stem Nut - SS AISI 316 Head Stock - Hot Dip Galvanised Hand Wheel - Hot Dip Galvanised Type of Gate - Wall Mounted Flow Direction (Type of Head) - Seating Type of Operation - Manual / Electrically operated Direction of Gate Opening - Upward Rising Nut Bolts - SS 316 Fasteners - SS 316 Supplier should provide minimum 3 years comprehensive warranty and 10 years spares commitment.			
	1800mm(W) X 1100mm(SWD) 300 mm (Freeboard)	1	Nos.	
	1600mm(W) X 900mm(SWD) 300 mm (Freeboard).	1	Nos.	
	500mm(W) X 400mm(SWD) 300 mm (Freeboard)	1	Nos.	
	1400mm(W) X 900mm(SWD) 300 mm (Freeboard).	1	Nos.	
7	**Shifting of existing underground Optical Fibre Cable (OFC) : -**			

Sr No.	Item Description	Qty	Unit	Amount
	Shifting of existing underground Optical Fibre Cable (OFC) located along or crossing the proposed alignment, including trench excavation, dismantling and re-laying of existing cable or supply of new cable wherever required and approved, HDPE duct, sand bedding, necessary jointing kits and materials, fusion splicing, OTDR testing, backfilling, compaction and reinstatement of road/footpath wherever required, complete as directed by the Engineer-in-Charge..	1	Rmt	
8	**Shifting of existing underground LT/11 kV/22 kV HT electrical cables of MSEDCL : -**			
	Shifting of existing underground LT/11 kV/22 kV HT electrical cables of MSEDCL along or across the proposed alignment, including trench excavation, dismantling and re-laying of existing cables or supply of new cables wherever required and approved, sand bedding, protective HDPE/GI pipes at crossings, half-round RCC/Hume pipe protection wherever specified, cable jointing kits, straight-through joints, termination kits, testing, backfilling, compaction and reinstatement of road/footpath wherever required, complete as per applicable PWD Electrical DSR/MJP SSR, MSEDCL specifications and under MSEDCL supervision.	1	Rmt	
9	**Supplying of Sodium Hypochlorite (NaOCl) solution : -**			
	Supplying of Sodium Hypochlorite (NaOCl) solution containing 10–12% available chlorine for disinfection of treated sewage at STP, considering a preliminary chlorine dosage of 5 mg/L, subject to confirmation based on treated effluent quality and chlorine demand, including packing, transportation and delivery at site, complete as directed by the Engineer-in-Charge.	1	Kg	
10	**Supplying of polyelectrolyte (polymer) in powder form : -**			
	Supplying of polyelectrolyte (polymer) in powder form for sludge conditioning and mechanical dewatering at STP, with a typical preliminary dosage of 2–5 kg of active polymer per tonne of dry solids (kg/tonne DS), subject to confirmation by laboratory treatability tests and actual operating conditions, including packing, transportation and delivery at site, complete as directed by the Engineer-in-Charge.	1	Kg	
11	**Supply, Installation, Testing and Commissioning of Laboratory Equipment for STP : -**			
	Supply, installation, testing and commissioning of complete laboratory equipment for the STP, including a 6-sample COD digester with glass tubes and condenser; 90-litre BOD incubator; hot air oven of size 18" × 18" × 18" with MS powder-coated outer body, digital temperature controller and fan; analytical balance of 220 g capacity with 0.1 mg readability (ACZET Model CY2242 or equivalent); muffle furnace of size 9" × 4" × 4"; 2-litre magnetic stirrer with hot plate; 6-jar test apparatus with analogue controller; digital bench-top pH meter with electrode; digital bench-top turbidity meter; dissolved oxygen (DO) meter; bench-top conductivity meter; pocket-type TDS meter; top-pan balance of 6000 g capacity with 0.5 g readability; vacuum filtration assembly with pump; laboratory thermometer/temperature probe set; 250 mm plain desiccator; transparent 125 ml BOD bottles; colony counter; compound microscope; fully automatic vertical autoclave of size 14" × 22"; and 4-litre water distillation unit, complete with all necessary accessories, standard fittings, electrical connections, installation, testing, commissioning and demonstration, as required for satisfactory operation, in accordance with the approved technical specifications and as directed by the Engineer-in-Charge.	1	Set	
12	**Sundry Materials for General Operation and Maintenance of STP and Pump House : -**			
	Providing all necessary sundry materials, consumables, labour and materials required for general operation, routine maintenance and minor repairs of the STP and Pump House, including filter/media materials, pipes and pipe fittings, valves, electrical cables and accessories, lubricants and oils for blowers and other equipment, cotton waste, cleaning soap and materials, anti-corrosive paint for pipes and M.S. structures, minor repairs to walkways, platforms and M.S. structures, coagulants and other process chemicals, general electrical maintenance materials, and other miscellaneous materials required for proper operation and maintenance, complete as directed by the Engineer-in-Charge.	-	Lum sum	