

Sub : Construction of Delay Decay Tank for RRU Building at ACTREC, Kharghar Construction of 21 Lakh Litre Domestic water tank and allied water distribution network at ACTREC, Kharghar, Navi Mumbai - 410210

Schedule of Quantities.

Name of Agency							
FINANCIAL BID							
Sr.No.	Item Code	Description	HSN/SAC code	Qty.	Unit	Rate	Amount
PART A							
1	1	Excavation mechanically (using excavators like JCB /Poclain/with bucket) in all types of soil, including murrum, soft rock for foundations, wall, columns, plinth beams, basement, raft, ducts, trenches, underground sumps, septic tanks, soak well including shoring and strutting, bailing out water/pumping off water if required, removing and stacking or Disposing simultaneously the excavated soil anywhere within the ACTREC Campus and/or spreading soils in layers for site development. All complete as per specification and as directed by the Engineer-in-charge. (Dimension of tank will be measured for volumetric measurement payment for excess excavation will not be made)					
2	1a	For depth upto 1.5m.		1465.0	Cum		-
3	1b	For depth exceeding 1.5 upto 3m.		525.0	Cum		-
4	1c	For depth exceeding 3m. upto 4.5m.		150.0	Cum		-
5	2	Earth work in excavation by mechanical means in hard rock for foundations, wall, columns, plinth beams, basement, raft, ducts, trenches, underground sumps, septic tanks, soak well including shoring and strutting, bailing out water/pumping off water if required, removing and stacking or disposing simultaneously the excavated stuff anywhere within the ACTREC Campus and/or spreading soils in layers for site development. All complete as per specification and as directed by the Engineer-in-charge. Blasting prohibited.					
6	2a	For depth exceeding upto 3m.		100.0	Cum		-
7	2b	For depth exceeding 3m. upto 4.5m.		150.0	Cum		-
8	3	Filling in plinth & superstructure under Floors/ Roads with selected excavated earth available within site, in layers of 15 cms. to 20 cms. Including watering, ramming consolidating to 15cm thick or so , by manually compaction or using mechanical plate compactor / vibro-roller etc (manual compaction will be permitted under special condition and as per engineer written instruction), finished to desire levels all as per drawings to get MPD of 95% as per detailed drawings. Including cost of transportation anywhere within site, all complete as per specification or as directed. (Note : Each Tank plinth area to have at least one set of test of MPD conducted irrespective of plinth area or for every 500 sqm of compacted area and part there of).		525.0	Cum		-
9	4	Clearing jungle including uprooting of rank vegetation, grass, brush wood, trees and saplings of girth up to 30 cm measured at a height of 1 m above ground level and removal of rubbish up to a distance of 50 m outside the periphery of the area cleared.		956.0	Sqm		-
10	5	Providing and laying in position ready mixed M15 grade plain cement concrete, with cement content as per approved design mix and manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for plain cement concrete work, including pumping of R.M.C. from transit mixer to site of laying and curing, including the cost of centering, scaffolding, shuttering and finishing, including cost of curing, admixtures in recommended proportions as per IS : 9103 to accelerate/ retard setting of concrete, improve workability without impairing strength and durability as per direction of the Engineer-in-charge. (M15 grade at all locations upto plinth level). Including concreting for thrust block.		115.0	Cum		-
11	6	Providing and laying in position ready mixed M-40 grade concrete for reinforced cement concrete work, cement content as per approved design mix, and manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work, including pumping of R.M.C. from transit mixer to site of laying, including the cost of centering, scaffolding, shuttering, finishing, including cost of admixtures in recommended proportions as per IS : 9103 to accelerate / retard setting of concrete, improve workability without impairing strength and durability and including supply and installation of PVC water stopper all as per direction of the Engineer - in - charge.					
12	6a	All works for Raft and haunch		420.0	Cum		-
13	6b	All works for Wall		290.0	Cum		-
14	6c	All works for Slab and beams etc.		180.0	Cum		-
15	7	Providing and Fixing of reinforcement steel including material fabricating, trasporting, loading, unloading, storing on raised steel rack platform, handling, straightening, cutting to length, bending, making hooked ends, hoisting into place at all levels and heights and binding in position (including Providing & using 18 gauge binding wire) reinforcement bars of all diameters (IS 1786 ,Fe 500 of all grade) to shape and size as per approved bar bending schedules and structural drgs. for all kinds of works at all heights & depths as specified including cost of approved quality PVC/Concrete cover blocks, spacers, chairs at regular interval as per relevant IS code and such other works that are required to make it complete. Quantity of steel as per drawing, approved BBS and with authorized overlaps only shall be measured and paid for. Quantity for chairs and spacer bars will not be paid. The measurement shall be as per IS 1200 and reinforcement hooks and bends shall comply with the requirement of IS 2502 unless clearly specified above.		130.0	MT		-

16	8	Providing and applying internal water proofing with integral crystalline slurry of hydrophilic in nature for waterproofing treatment to the RCC structures like retaining walls of the basement, water tanks, roof slabs, podiums, reservoir, sewage & water treatment plant, tunnels / subway and bridge deck etc., prepared by mixing in the ratio of 5 : 2 (5 parts integral crystalline slurry : 2 parts water) for vertical surfaces and 3 : 1 (3 parts integral crystalline slurry : 1 part water) for horizontal surfaces and applying the same from negative (internal) side with the help of synthetic fiber brush. The material shall meet the requirements as specified in ACI- 212-3R-2010 i.e by reducing permeability of concrete by more than 90% compared with control concrete as per DIN 1048 and resistant to 16 bar hydrostatic pressure on negative side. The crystalline slurry shall be capable of self-healing of cracks up to a width of 0.50mm. The work shall be carried out all complete as per specification and the direction of the engineer-in-charge. Two Coat with 1.1Kg/Sqm. The product should be compatible for use in domestic tank (should be of food grade quality)		942.0	Sqm		-
17	9	Providing box type waterproofing on external face of Underground Water Tank side walls upto plinth level including preparation of surface as required of following operations: a) About 20 mm thick Shahabad stone slabs shall be fixed with cement sand grout 1:4 (1 cement : 4 sand). Grout mixed with water proofing compound 4% by weight by cement and joint well grouted and cured. b) External surface shall be plastered 20 mm thick with cement sand mortar 1:4 (1 cement : 4 sand) mixed with 4% by weight of water proof compound and in ratio roughened. c) Vertical joints shall be well cleaned and grouted to make sure it forms a continuous treatment. If required, joint may be treated with sealant. d) Treatment shall be taken about 300 mm above finished level. e) All pipes etc. coming out of walls shall be sealed by grouting with sealant.		974.0	Sqm		-
18	10	Dry stone rubble soling/pitching of 150 mm to 230mm size shall be approved quality, hard, free from cracks, durable, preferably black trap. Rubble shall be laid on leveled base close to give compact, surface. If base is not properly leveled same will have to be done without any extra cost. Voids in the joints shall be filled with selected chips. A sample of paving shall be prepared and got approved before proceeding ahead. After stones are laid with thickness of 200mm and packed with chips, sand shall be spread and watered to fill remaining voids. Sand shall be allowed to go into joints till final packing is obtained. Rate quoted shall be for materials, labour, watering, leveling site, before paving, consolidating etc. complete.		165.0	Cum		-
19	11	Providing and fixing 560mm diameter CI Heavy Duty Cover over the tank as per specified size. Making the cover operatable in a manner of open/close with necessary fixtures & fittings. The opening area to be measured. The drawing to be approved by EIC.		8.0	Nos		-
20	12	Internal epoxy coated (after applying primer) Ladder to enter the tank with approved design as per the instruction of Engineer incharge.		4.0	Nos		-
21	13	External Ladder to enter the tank with approved design as per the instruction of Engineer incharge.		4.0	Nos		-
22	14	Providing and constructing AAC Light weight Block Masonary with 75mm/100mm/150mm/200mm/300mm thick at all levels in by using approved block laying polymer modified adhesive mortar, including 75mm thick Patli / Stiffeners of M-15 Grade at every 1000mm with 2 nos 8mm steel bars all to be considered in the cost and no separate measurement will be done for steel and patli, also including scaffolding, racking out joints, curing with curing compound etc. in line, level and plumb, All complete as per specification for all height of floor or as directed etc. (Rate includes the cost of stiffeners hoop). (No holes for scaffolding will be permitted into the blockwork)		15.0	Cum		-
23	15	Providing and applying Internal 12 mm to 15mm thick plain/smooth cement plaster finish at all heights and below highest plinth level in cement mortar using Ready mix plaster as per manufacturer specification including 150mm PVC Chicken mesh on both sides of joint, making pattas, bends, grooves, over any bricks or concrete surfaces in single layer as specified smooth finished including preparing the surfaces close hacking of concrete surfaces, curing, double scaffolding to the walls, beams, stair, column, pardis, bends, moulds, pattas, grooves etc. in line, level and plumb, all complete as per specification or as directed. (No holes for scaffolding will be permitted into the blockwork)		175.0	Sqm		-
24	16	Providing and applying External 18 mm thick sand face cement plaster in two coats at all heights below and above highest plinth level with first coat of 12 mm thickness with cement mortar, using readymix plaster mixed as per manufacturer specifications including roughening by cross hatch line to receive top coat of 6 mm thickness with cement mortar and 10-12mm thick single coat plaster under chajja soffit, including 150mm PVC Chicken mesh on both sides of joint, recon fibre, mixing with additional waterproofing compounds including making drip moulds, bends, pattas, grooves (grooves have to be finish with neat cement mixed with waterproofing compound) as per drawing/ details, including double scaffolding, curing with curing compound etc. in line, level and plumb, all complete as per specification or as directed. (No holes for scaffolding will be permitted into the brickwork)		195.0	Sqm		-
25	17	Providing & Applying one / two coats of primer & thereafter two coats of paint as mentioned below of approved make First quality Asian Paints (Apolite) / Goodlass Nerolac/ ICI to the required colour scheme and as per manufacturers instructions / specifications to the walls, beams, columns, ceilings, partitions doors etc. including thoroughly scrapping the existing surface with sand papers, removing old paint, filling up crevices and levelling with waterproof putty / plaster of paris of necessary to obtain smooth surface etc. complete job including removal of stains, painting spots on floors, aluminium window frame & glass etc as to the entire satisfaction of engineer in charge Two Coat Acrylic Emulsion paint		175.0	Sqm		-
26	18	62 mm thick cement concrete flooring with concrete hardener topping, under layer 50 mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) and top layer 12mm thick cement hardener consisting of mix 1:2 (1 cement hardener mix : 2 graded stone aggregate, 6mm nominal size) by volume, hardening compound mixed @ 2 litre per 50 kg of cement or as per manufacture's specifications. This includes cost of cement slurry, but excluding the cost of nosing of steps etc. complete.		132.0	Sqm		-

27	19	Providing and Applying and Levelling the existing surface with Birla White Cement based / Coloured waterproof Putti of average thickness of 1 mm of approved thickness, brand and manufacture, over the plastered wall surface to prepare the surface even and smooth ready for painting purpose etc complete (Rate inclusive of Scaffolding Material, Labour Charges) Etc.		175.0	Sqm		-
28	20	Providing and laying cement water-proofing (including grouting) of average 115 mm thick for balcony, terrace, returns (watta), khurras etc at all the levels including grouting with layer of 20 mm thick cement mortar 1:3 (1 part cement : 3 part coarse sand) mixed with water proofing compound of approved make and as specified by the manufacturer, laying brick bats of required size impregnating in to the base mortar bed with gap of 12 mm all around according to slope, level and curing the same, the gaps around brick bats filled with cement mortar 1:3 (1 part cement : 3 part coarse sand) mixed with waterproofing compound, 15 to 20 mm water proof screed layer above brick bats and finishing top with neat cement @ 2.75 Kg/Sq.M. making square 300 x 300 mm chequered finish marks with string, finishing around rain water outlets, curing etc. in line, level and plumb / slope, complete including furnishing of guarantee for 10 years. The work should be carried out through an approved specialised agency like India Water Proofing Co. or equivalent. (note: The above rates shall be inclusive of Providing and mixing of waterproofing compound as per manufacturer's specifications) (Mode of Measurement : Only the plan area will be measured and No additional measurements will be done for wattas, khurras etc)		132.0	Sqm		-
29	21	ALUMINUM OPENABLE WINDOWS Providing & fixing in position aluminium openable window shutter fully glazed / aluminium grills with using 5.5mm thick glass sheet of approved make and quality plain / frusted / bajari glass of approved make Triveni / Shri Vallabh / J / A / G / pilkinten fixed with aluminium beeding channels with two way rubber gasket / PVC lining to ensure water tightness and Nos rattling for aluminium grill fixing with Fchannel beeding using satin finish aNosized 15 micron jindaL sections for shutters and frame of required size and section including using aluminium / S.S. hinges of required size of Archies make, tower bolt of required size of Archies make , C type alum handle for shutter of Archies make and other necessary hardware as per requirement etc.with granite frame Openable windows with glass shutters complete all as per specified and directed by Engineer in charge.		5.0	Sqm		-
30	22	SITC for Rubber Isolation Pads for Pump Foundations as per the instruction of Engineer in charge.		7.0	No		-
31	23	Cable Trench with Removable Chequered Plate Covers as per the instruction of engineer incharge		57.0	m		-
32	24	Suction Pipe Nozzles with Puddle Flanges 250 mm dia		4.0	No		-
33	25	Inlet Pipe Nozzles with Flanges 75 mm dia		4.0	No		-
34	26	Tanker Water Inlet Nozzles at the Top Slab 150 mm dia		8.0	No		-
35	27	Top Slab Vents with Mosquito Net Covers 75 mm dia		8.0	No		-
36	28	Overflow Pipe Sleeves 100 mm dia		8.0	No		-
37	29	SITC of Conventional Earthing System with the Provision of watering facility and Inspection chamber as per specification mentioned (including tinned copper plate 600X600X3mm and copper strip 25X3mm) Earthing work including all the necessary fixtures and copper strip lining work complete as per the instruction of Engineer incharge.		4.0	No		-
38	30	Supplying and fixing rolling shutters of approved make, made of required size M.S. laths, interlocked together through their entire length and jointed together at the end by end locks, mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete, including the cost of providing and fixing necessary 27.5 cm long wire springs manufactured from high tensile steel wire of adequate strength conforming to IS: 4454 - part 1 and M.S. top cover of required thickness for rolling shutters. 80x1.20 mm M.S. laths with 1.20 mm thick top cover		16.5	Sqm		-
39	31	Providing and fixing P.V.C. pipes 100mm dia for pipes having wall thickness of 2.2 to 2.7 mm conforming to I.S. 13592- 1992 including proper rainwater receiving recess with P.V.C. plug, bend, necessary fittings, such as, offsets, shoes, including fixing the pipe on wall using approved wooden cleats projecting 25mm to 40mm from face of wall a fixing with clips of approved quality and number ,filing the joint using rubber gasket with solvent cement and properly resting the shoe of pipes on C.C. or masonry blocks, including necessary scaffolding and maintenance for 3 yrs for any leakages or dislocations of pipes. All the P.V.C. fittings and additional 2 piece socket clips shall be got approved from engineer in charge etc. complete. (Pipes to laid in Shaft for Risers-6kg for AC drain & Vent pipe)		6.0	Rmt		-
40	32	RCC Pump Foundations for Pumps, Pressure Tank & Panel as per the instruction of Engineer incharge.		1.0	L.S.		-
41	33	Excavation of Road crossing (1.2 mX 1.2m), Backfilling, Soling below PCC / Road, M-15 PCC below Hume pipe and RCC Slab, M-25 grade 150 mm thk. RCC Slab including shuttering and Reinforcement & Complete.for both Fire Pipe & Electrical Cables		100.0	Cum		-
42	34	Thrust block to support pipe where pipe changes direction, minimum 600mm with RCC supports the dead ends and under pillar hydrants		1.0	L.S.		-
43	35	Providing Mechanical Scaffolding, Scissor Lift or Boom Lifts with supervisory, safety manpower as per ACTREC Safety Standards wherever required.		1.0	L.S.		-
Total for Part A							-
PART B							

44	36	SITC of Transfer Pump & Motor System (from Existing Water Tank to Proposed Water Tank) 100 M3/Hr. @ 50 m head (1W + 1S) Main Potable Water Centrifugal Pump & Motor Set of 30 HP each ,PN 16 rated with Bronze Impeller, Cast Iron Housing pump set with fixed speed and Dedicated Control Panel for Transfer Pump & Motor Set , with IE3 Motors, Efficiency of Systems shall be above 70% for potable water system with a dedicated control panel as per NBC 2016 Pump & Controllers to be EN/ISI Approved and as per specification with CI Body, Bronze impeller, SS 304 shaft and 300 Liter with 10 Bar Pressure Tank with pressure gauge and intelligent pressure transmitter . Both tor & Pump Provided on common base frame including Skid of SS 304 Polished coupling, With SS Suction & Discharge Valves & NRV for Individual pumps as per P & ID , anti vibration pad, seismic bracing, coupling guard, pressure transmitter with indication LED light, necessary flanges, gaskets, GI nut/bolts, pipe fittings , railing & coupling guards for pumps and motors.. Pumps & Motors should be provided with required GI/SS foundation bolts and installation plates as necessary for mounting on civil foundation platform. SS Name plate shall be provided of size 3 Inch X 4 Inches for each pump Giving Flow Rate in M3/Hr and Head in mtrs, with Motor ratings in KW & HP, Make : Ebara, Kirloskar, Grundfos.No parts or system shall be of Chinese origin		0.0	Nos		
45	37	SITC of Hydro Pneumatic (HPN) Pump & Motor System for Delivering Water from Proposed Water Tank to Phase 1 Network 60 M3/Hr. @ 100m (1W + 1S) head Main Electric motor driven Vertical Inline Potable Water Centrifugal Pump & Motor Set of 30 HP each, Bronze Impeller,SS Shaft pump set with VFD per Motor & pump set and Dedicated Main Control Panel for HPN System & Jockey Pump as in 2b.System will be PN 16 rated. All pumps will be with IE 3 Motors for potable water system with a dedicated control panel as per NBC 2016 Pump & Controllers to be ISI Approved and as per specification with Bronze Impeller, SS 304 shaft, , Bottom & Top Casing in CI, and 500 Liters, 16 Bar Pressure Tank with prssure gauge Provided on common base plate including Skid of SS 304 Polished coupling, With SS 304 Valves in Suction & Dlscharge and NRV for Individual pumps , integral pressure transmitter with LED light anti vibration pad, seismic bracing, coupling guard, necessary flanges, gaskets, GI nut/bolts, pipe fittings , railing & guards for pumps.. Pumps should be provided with required GI foundation bolts and installation plates as necessary for mounting on civil foundation platform. SS Name plate 2 Inch X 3 Inches for each pump Giving Flow Rate in M3/Hr and Head in mtrs, with Motor ratings in KW & HP, Make: Ebara, Kirloskar. No parts or system shall be of Chinese origin		2.0	Nos		
46	38	SITC of 20 M3/Hr @ 100 m head, 15 HP Electric motor driven Vertical Inline Jockey Pump & Motor set integrated in central control panel of HPN pumps as per NBC 2016 , IS and as per specification with Bronze impeller, SS shaft SS Chamber , CI Top & Bottom Casing, with VFD for Pump and all Valves in Suction & Discharge & NRV, foundation bolt, etc with SS Name plate 12 Inch X 6 Inches for each pump, motor Giving Flow Rate in M3/Hr and Head in mtrs, with Motor ratings in KW & HP. The package shall include the controller, VFD Drive as per specifications Given. Auto & Manual Operation , Make: Ebara, Kirloskar, Grundfos. No parts or system shall be of Chinese origin		1.0	Nos		
47	39	150 mm SS 316 Bourdon type Glycerin Filled Pressure gauge (150mm dial) with gauge cock - range 0-16 kg/sq.cm(g), gauges should be fitted on both suction and discharge headers . Gauges in Suction shall be compound type, Make: Wika, H - Guru, Waree		2.0	Nos		
48	40	150 mm SS 316 Bourdon type Glycerin Filled Normal Pressure gauge (150mm dial) with gauge cock - range 0-16 kg/sq.cm(g), gauges should be fitted on both suction and discharge headers . Gauges in Suction shall be compound type, Make: Wika, H - Guru, Waree		2.0	Nos		
49	41	Piping in the pump house (aboveground) : SITC of SS 304 External Polished & Buffed Pipe Conforming to (ASTM A312) , Heavy Class, Upto 150 NB Schedule 10. For 100 NB , 80 NB, 25 NB shall be Schedule 40 including fitting, elbows, tees, reducers, painting, support, nuts, bolts, washers, gaskets etc as required with Argon Gas Welding and Welding Electrodes as per tender requirements, Al Pipes shall be despatched with End caps Make: Tata/Jindal/Roopam Steel					
50	41a	200mm dia.		0.0	Rmt		-
51	41b	150mm dia.		100.0	Rmt		-
52	41c	100mm dia.		40.0	Rmt		-
53	41d	80 mm dia.		20.0	Rmt		-
54	41e	50 mm dia.		15.0	Rmt		-
55	41f	25mm dia.		20.0	Rmt		-
56	41g	15mm dia.		10.0	Rmt		-
57	42	SITC of Cast Steel (may include SS 304 component) Gate Valves with flanged ends with matching companion flages as per API 600, Class 150 , PN 20 rating OS & Y Type Raising Stem type Gate Valve , Maximum Working Pressure 300 psi, Hydrostatic pressure 600psi for Potable Water Service, Refer Datasheet for detailed specifications					
58	42a	200mm dia.		0.0	Nos		-
59	42b	150mm dia.		8.0	Nos		-
60	42c	100mm dia.		4.0	Nos		-
61	42d	80mm dia.		2.0	Nos		-
62	42e	50mm dia.		2.0	Nos		-
63	43	SITC of Cast Steel (may include SS 304 component) Check Valve as per BS 1868 with flanged ends with matching companion flanges, Class 150 , PN 20 rating , Maximum Working Pressure 300 psi, Hydrostatic pressure 30 bar for Potable Water Service, Refer Datasheet for detailed specifications					
64	43a	150 mm dia		5.0	Nos.		-
65	43b	100 mm dia		3.0	Nos.		-
66	43c	80 mm dia		8.0	Nos.		-
67	44	SITC of Cast Steel (may include SS 304 component) Y Type strainer with flanged ends with matching companion flanges, Class 150 , PN 20 rating , Maximum Working Pressure 300 psi, Hydrostatic pressure 30 bar for Potable Water Service, Shall have SS 304 Mesh of 1.5 mm holes and mesh shall be removable and cleanable. Refer Datasheet for detailed specifications					
68	44a	150 mm dia		2.0	Nos.		-
69	44b	100 mm dia		2.0	Nos.		-
70	44c	80 mm dia		1.0	Nos.		-

71	45	SS 304, Ball Typ Non return valve with matching flanges , PN 20 rating, fittings, nuts, bolts, washers etc., Make : Valves - Hawa / L& T Audco / Kirloskar / Azbil/ Flowserve					
72	45a	150 mm dia.		1.0	Nos.		-
73	46	Supplying and installing SS 304 double flanged Ball typ NRV valve PN 20 rating with matching flanges of following sizes conforming to ISI mark, havingSS body and SS working parts with matching flanges, nut bolts, gaskets, etc. complete in all respect , Make : Valves - Hawa / L& T Audco / Cair Automation / Kirloskar / Azbil/ Flowserve/Rapid					-
74	46a	150mm dia.		2.0	Nos.		-
75	46b	50mm dia.		0.0	Nos.		-
76	47	SITC of 150 mm dia Electro magnetic type flow meter with flange connections for the test header and meter range shall be 50% - 200% of the nominal flow and direct digital display, 4- 20 mA & HART output, direct reading type as per datasheet		1.0	Nos.		-
77	48	SS 304 Ball valves as per IS:9890 - screwed type					-
78	48a	25mm dia.		3.0	Nos.		-
79	49	12 Nos Upright Type Sprinklers K115, UL Listed or FM Approved operating at 79 degC inside the pump house with required piping, alarm valve, gong bell, reducer, test sprinkler, flow switch flushing line, etc tapp off from main sprinkler line from fire pump house		1.0	L.S.		-
80	50	4 Nos of Smoke Cum heat addressable detector, Manual Call point , control Module, Horn & Strobe of Notifier Make with alarm & 2 C X 2.5 sq mm FRLS Copper cabling in 25mm GI conduit in pump house to be installed and integrated with main complex fire alarm system of plant, all connections to be provided in terminating junction boxes, all excavations as needed for taking cabling to nearest panel shall be in vendors scope		1.0	L.S.		-
81	51	Electrical Hoist Fitted on Hook with Chain Pulley System for Maintenance of Pumps & motors on Pump House Ceiling		1.0	L.S.		-
82	52	SS Nozzles & SS pipe Sleeves as required for Suction, Delivery, Flow Meter, Overflow, Inlet, Outlet, Bypass, with individual puddle flange		1.0	L.S.		-
83	53	SS Pressure Reducing Valves with Adjustable pressure range from 2 - 12 Bar, pressure gauge to be provided with adjustable range control Make: Vanaz, Claval, Newage		3.0	Nos.		-
84	54	SITC of Power Distribution Board free standing type MCC Panel as per IS/IEC 61349, Copper Busbars, Copper rods of 16mm for panel earthing, Caution signages and Electrical Safety built within panel, Siemens Grey Colour of MS 1.6mm CRCA thickness with 7 tank process of manufacture , colour powder coated to Siemens Grey with 100mm Base frame, minimum dimensions of 2100X 2000 X 800 (H X W X D) mm with base frame of 100mm with gland plate MCCB/Breaker, Load Manager, Overload relays, Contactor, Star Delta Starter etc in Type 2 coordination for individual motor loads (all motors are IE3 Motors, so all components shall be accordingly selected) as shown in distribution board drawing (for Controllers & Curret Meter, Pumps of Transfer Pumps (30 HP 1W + 1S) & Hydropneumatic Pumps (30 HP 2W) & Jockey Pump (1No. 15 HP) . It may happen that Transfer Pumps, HPN Pumps & Jockey Pump can run simultaneously at one time. Lighting Load 63A, Emergency Back Up System lighting lod 32A , Space Heater, Inside lighting on Door Open and Auto Supply Cut off switch, Auto Transfer Switch 400A with two incomers of main & standby power wired directly from two individual feeders , 400 A Incomer MCCB, 200 A MCCB for Transfer Pumps and 200A for Hydropneumatic System, Pump House Lighting & Exhaust Fan MPCB 63 A. spare 3 phase 63 A Connection for connecting 3 phase loads as per enclosed drawing and in line with NBC, CIDCO, ACTREC Electrical & Safety Standards. All cable glands SS 304, IP 65 and Double compression type. Panel shall have removable lifting eyebolts. Two Place grounding on panel Panel board should have access below the panel of at least 1000mm and hence panel should be rested on required supports or RCC with access platform in RCC		1.0	Nos		-
85		The Control Panel Manufacturer shall have CPRI , CE , Approval, Company Shall be ISO 9001 certified. The Panel shall be of the following .Consider BMS contacts around 30 Nos for PLC system. Manufacturer shall have CPRI , CE . Approval, CCompany Shall be ISO 9001 certified. The Panel shall be of the following Make Only. : L & T, Siemens, Schneider, Elecmecc					-
86	55	SITC of Micro Plc System with CPU, Redundant Power Supply of 24VDC 10A, 2 Nos Analog Inputs, 8 Nos Digital Inputs and 8 Nos Digital Outputs in Wall Mounted IP 55 Panel with surge protection and UPS power provided through 230V AC, 50 Hz connection		0.0	Nos		-
87	56	Level Switches with Capacitance detection provision, Settable Alarm Limits, Probe Lengths as per Tank depth , LL & HH Alarm Outputs in form of pot free contacts, built in DC power supply, 230 VAC, 50 hz or 24VDC operation for Water Service with IP 68 protection , with Controller and alarm		0.0	Nos		-
88	57	Level Transmitters with Ultrasonic detection provision, Digital Display of Levels . Settable Alarm Limits, Probe Lengths as per Tank depth , LL & HH Alarm Outputs in form of pot free contacts, built in DC power supply, 230 VAC, 50 hz or 24VDC operation for Water Service with IP 68 protection , with Controller and alarm		0.0	Nos		-
89	58	SITC of Armoured PVC/XLPE Insulated FRLS Copper Cable, 1100V, Tinned Copper, Shielded (for Instrumentation) , Twisted (for communication) , Wherever in building in 25mm GI Conduit for LV System, LT Cables on GI Cable Trays or Excavated in Soft soil , Road crossing, Remaking of road, Make : Polycab/Metaplast/ Lapp/Belden/ Supercab/Ramco					-
90	58a	3C X 2.5 sq mm		200.0	Rmt		-
91	58b	3C X 4 Sq mm		200.0	Rmt		-
92	58c	3C X 10 sq mm		100.0	Rmt		-
93	58d	3C X 16 Sq mm		50.0	Rmt		-
94	58e	3C X 150 Sqmm		400.0	Rmt		-
95	59	SITC of CAT 6 Cable Armoured		0.0	Rmt		-
96	60	SITC of GI Perorated Cable Trays 50 X 50mm X 16 SWG with coupler plates, all mounting accessories for wall , column mounting		100.0	Rmt		-
97	61	SITC of GI Perorated Cable Trays 300 X 50mm X 14 SWG with coupler plates all mounting accessories for wall , column mounting		20.0	Rmt		-
98	62	SITC of Copper strip of size 25mmX3mm, copper strip shall be ETP grade only.		30.0	Rmt		-
99	63	SITC of 2 Port Switches , Make : CISCO, D Link, Synergy		0.0	Nos		-
100	64	SITC of 24 Port Switches , Make : CISCO, D Link, Synergy		0.0	Nos		-

101	65	SITC of Pentium Computer , 8GB RAM, 2 TB HDD, 21 Inch Colour LED Monitor, Keyboard, Mouse, Licened WINDOWS10 Software, Licensed Copy of MS Office, Antivirus, GUI Software with SCADA Performance, MIMIC Screen made for the entire water management system, 2 KVA UPS with 30 minuyetes Back up and Laserjet Printer, Make: Dell, HP	0.0	Nos	-
102	66	SITC of Electrical Fittings for Pump house like 4 X 18 W LED tubelights, 1250 CFM X 2 Nos Exhaust Fans, with wiring, switches complete in all respect	0.0	Nos	-
103	67	SITC of Dry powder type (gas cartridge) with cylinder initially fully charged with dry chemical powder (ABC type) complete with standard discharge valve with tube, as per NFPA 10 & also should be suitable for Supply, O & M as per IS 2190			
104	67a	6 kg. Capacity	1.0	Nos	-
105	67b	9 kg. Capacity	1.0	Nos	-
106	68	SITC of Carbon dioxide type with cylinder initially fully charged with CO2 gas complete with squeeze lever discharge valve, pressure gauge, discharge tube/horn, CI bracket for wall mounting etc.	1.0	Nos	-
107	69	Sand Fire Buckets 4 Nos outside the pump House, Owens & Briquette Store.	1.0	Nos	-
108	70	Electrical Fire Safety Auto Glow Signage's Illuminents of size 255 X 190 mm for EXITS, ELECTRICAL SAFETY, DANGER SIGNS, SLIP, TRIP & FALL, CAUTION 440V, UP, DOWN, as per MIDC Requirement and IS Standards 9457, IS 12349, IS 12407	1.0	Nos	-
109	71	Underground Pipe : 150mm dia Domestic Yard Headers Underground with wrapping coating Type SS 304 Sch 10 Pipe as per above specifications type Scheule 10 along with fittings & with anticorrosive wrapping & coating as per IS 1standards 1/3rd overlap with 150mm wide and 4mm THICK TAPE.			
110	71a	150mm dia Domestic Yard Headers Underground with wrapping coating Type SS 304, Sch 10 Pipe as per above specifications type Schedule 10	60.0	Mtr.	-
111	72	Supplying, installing and testing & commissioning above ground .Steel Pipe of Schedule 10 for domestic line of following sizes conforming to ASTM A 312 along with all fittings & with distinctly painted Sea Green Band at every 10 meter interval to IS: 2379 standard .Pipes will be polished externally and buffed with shining finish. The line will include all welding works of entire network with pipes, with welding electrode for SS lines, necessary fittings like Tee Branch, Tee Run, Elbow 45 & 90 degrees, Reducer, Coupling, flanges as required complete in all respects , 12mm Pipe Support Clamps with nuts for clamping on RCC Supports etc complete in all respect			
112	72a	150mm dia Domestic Yard Headers Type SS 304, Sch 10 Pipe as per above specifications type Scheule 10	650.0	Mtr.	-
113	73	SITC of 80mm dia Domestic Wet Riser for Buildings in UPVC , Sch. 40, with all UPVC Fittings , GI Clamps 6mm thick included with saddling, clamping arrangements, with fixing glue Make: Astral, Finolex, Polycab	300.0	Mtr.	-
114	74	SITC of Cast Steel Gate Valves, as per BS 1873 /BS 1868 with flanged ends with matching companion flages as per API 600, Class 150 , PN 20 rating OS & Y Type Raising Stem type Gate Valve , Blue Painted SS Steering wheels, LOTO to be provided for all valves Maximum Working Pressure 300 psi, Hydrostatic pressure 600psi for Potable Water Service, Refer Datasheet for detailed specifications			
115	74a	200 mm dia	0.0	Nos.	-
116	74b	150mm dia.	8.0	Nos.	-
117	74c	100mm dia.	0.0	Nos.	-
118	74d	80mm dia.	28.0	Nos	-
119	75	SITC of SS 304 Y Strainer. With Wire Mesh Screen 40 , low pressure drop, easily maintainable, PN 16 rating with matching flanges			
120	75a	80mm dia.	14.0	Nos.	-
121	76	SS 304 Double Wafer Type NRV for Back flow prevention			
122	76a	80mm dia.	7.0	Nos	-
123	77	SITC of Crash Guard for Road side Tapping Point s 6 Inch Pipe in Parking area	0.5	Ton	-
124	78	GI Supports including angle, channel, beam, special fitting, plates & clamps required to support the pipe, skid	40.0	Nos.	-
125	79	SITC of 150mm SS 316 Glycerin filled Bourdon type Pressure gauge (150mm dial) with gauge cock - range 0-16 kg/sq.cm(g) for indicating pressure at 6 remote points, Make WIKA, H Guru, Waree	8.0	Nos	-
126	80	SITC of SS 304 Pressure Relief Valve 6 " Inlet and 1" outlet to regulate pressure on over ground lines (on 4 corners of the network) due to water getting heated during summer times, water should not be wasted and should be diverted either to the tank or sumps, Make : Newage, Claval, Audco, Tyco	8.0	Nos	-
127	81	SITC of SS 304 Drain Valves 6 " Inlet and 2 " outlet for maintenance and flushing of domestic line as per locatons suggested by ACTREC, Make : Newage, Claval, Audco, Tyco	8.0	Nos	-
128	82	SITC of Providing Blind flanges of 80mm dia. UPVC	8.0	Nos	-
129	83	SITC of Providing Reducer 80 X 50 mm for UPVC network	8.0	Nos	-
130	84	RCC Supports : For the Pipe upto 150 mm Dia with all mounting accessories , clamps, bolts, supporting beams, complete excavation, refilling, soling of 230mm, 100mm PCC, depth upto top of pipe of 750mm and final finishing in RCC on road/hard soil or enclosing with soft soil as required, rates can be renegotiated by Lupin on size of supports is reduced due to site conditions. GI Supports wherever RCC Supports are not possible ISMC 75 X 40	130.0	Nos	-
131	85	NP2 class RCC hume pipes with collar complete provided with Inspection Chamber to check water leakage, pipe lengths should be suitable for required individual road width, no pipe length should be left loose during burying of hume pipe underground, adequate support system and packing, should be able to take load bearing of the vehicular movements on the specific road , burial depth 1000mm minimum or as per Company Civil standards with complete soling, PCC, RCC Work			
132	85a	450 mm dia, thickness 75mm as per IS458 latest edition	60.0	Rmt	-
133	86	Supplying, installing and testing & commissioning above ground .GI pipe of Schedule 10 for domestic line of following sizes conforming to ASTM A 312 along with all fittings & with distinctly painted Sea Green Band at every 10 meter interval to IS: 2379 standard .Pipes will be polished externally and buffed with shining finish. The line will include all welding works of entire network with pipes, with welding electrode for GI pipelines, necessary fittings like Tee Branch, Tee Run, Elbow 45 & 90 degrees, Reducer, Coupling, flanges as required complete in all respects , 12mm Pipe Support Clamps with nuts for clamping on RCC Supports etc complete in all respect			
134	86a	150mm dia Domestic Yard Headers Type GI pipe, Sch 10 Pipe as per above specifications type Scheule 10	0.0	Mtr.	-
Total for Part B					

Total Cost inclusive of All Taxes and duties excluding GST	-
GST @ 12% for the project	-
Total Cost inclusive of All Taxes and duties including GST	-

NOTE:

- 1 The agency is requested to visit the site to know actual scope of work.
- 2 Rate shall be quoted inclusive of all taxes Excluding GST which will be paid extra as applicable on submission of challan. FOR TMC/ACTREC applicable rate of GST is 12%. Agency has to consider GST at rate specified.
- 3 Material required at site should be assessed by the agency and bill will not be settled for excess/supplied items.
- 4 Bill will be settled as per actual measurement after supply of material at site.
- 5 Deviations/suggestions may be put on separate page in order to attain higher quality performance. Competent authority reserves full right to accept or reject any kind of changes.
- 6 Agency will have to prepare detailed shop drawing/ plan of work & obtained approval before execution. Agency will have time bound work schedule for carrying out the work.
- 7 Payment will be released for consumed quantity on satisfactory completion on providing necessary certifications/documentation.
- 8 All above items of this schedule shall have standard make as specified in Tender and approved before installation.
- 9 Agency has to get a sample approved from Engineer-in-charge in writing before any supply of item.
- 10 ACTREC reserves the right to reject any sample and rescind the work order if the samples are found to be unsatisfactory and if the agency is unable to meet the requirement of ACTREC.