

GENERAL ABSTRACT

Jal Jeevan Mission (JJM)-JJM CWSS to Marayoor and Kanthalloor Panchayths in Idukki
District-Construction of Well cum Pump house and Transformer control room at Pambar river,
Supply and erection of Transformers and Power connection charges, Supplying and Laying RAW
pumping main.-General Civil Work- (Pambar River Zone)-General Civil Work

Sl No	Head Description	Amount
1	Construction of 9 m dia Intake well	7718045.09
2	Construction of Pump house and Transformer control room	2990568.71
3	Supply and laying Raw Water Pumping Main	19485267.62
4	Supply ,erecting and commissioning of 250 KVA,11kV/433V ,outdoor type Transformer	1803753.63
5	Supply, erection, testing and commissioning of RAW water pump set - Discharge 35 lps, Head 146m	6723909.71
6	Road Restoration Charges(MORD ROAD)	4872111.85
	Total Estimation PAC	43593656.61
C Extra Charges		
C.001	Provision for GST	
	43593656.61	18.00%
		7846858.19
	Grand Total	51440514.80
	Round off	9485.20
	Rounded Total(Rs)	51450000.00
	Rupees Five Crore Fourteen Lakh Fifty Thousand	

Approved By
Sajiv Retnakaran
(PEN:G13690), Chief Engineer

DETAILED ESTIMATE

Jal Jeevan Mission (JJM)-JJM CWSS to Marayoor and Kanthalloor Panchayths in Idukki
District-Construction of Well cum Pump house and Transformer control room at Pambar river,
Supply and erection of Transformers and Power connection charges, Supplying and Laying RAW
pumping main.-General Civil Work- (Pambar River Zone)-General Civil Work

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
1	Construction of 9 m dia Intake well						
1.001	2.31						
	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						
	Clearing jungle						
		1.0000 0	15.500	15.500			240.250
	Total						240.250
	Total Quantity in sqm						240.250
1.002	OD76980/2022-2023						
	Providing ring bund / shoring of length 40m, width 2m and height 3m using earth filled cement bags, polythene sheets and bamboo including cutting of the Earth, filling, conveying and placing in position and dismantling & removing the same after completion of works properly as per the direction of the department officers including all cost of materials, labor charges etc. complete.						
	Providing ring bund / shoring using earth filled cement bags						
		1.0000 0	40.000	2.000	3.000		240.000
	Total						240.000
	Total Quantity in cum						240.000
1.003	100.3.7.1						
	Earthwork in open well excavation (above water) for wells of diameter above 6.0m and up to 9.0m in all kinds of soil and conveying and depositing the spoil within initial lead of 50m and lift up to 1.5m including neat banking.						
	EW in open well excavation						
	Upto 1.5m	3.1400 0	14.000	14.000	1.500	0.2500 00	230.790
	Total						230.790
	Total Quantity in cum						230.790
1.004	100.3.7.12						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Earthwork in open well excavation (in or under water) for wells of diameter above 6.0m and up to 9.0m in all kinds of soil and conveying and depositing the spoil within initial lead of 50m and lift from 1.50m to 3.0m including neat banking.						
	Earthwork in open well excavation-1st depth						
	1.5 m to 3 m	1.0000 0	14.000	14.000	1.500	0.2500 00	73.500
	Total						73.500
	Total Quantity in cum						73.500
1.005	100.3.7.13						
	Earthwork in open well excavation (in or under water) for wells of diameter above 6.0m and up to 9.0m in all kinds of soil and conveying and depositing the spoil within initial lead of 50m and lift from 3.0m to 4.5m including neat banking.						
	EW in open well excavation in or under water-second depth						
	3m-4.5m	1.0000 0	3.140	14*14/4	1.500		230.790
	Total						230.790
	Total Quantity in cum						230.790
1.006	100.3.8.14						
	Earthwork in open well excavation (in or under water) for wells of diameter above 6.0m and up to 9.0m in ordinary rock and conveying and depositing the spoil within initial lead of 50m and lift from 4.5m to 6.0m including neat banking.						
	EW in open well excavation 3rd depth						
	4.5 m - 6 m	1.0000 0	3.140	14*14/4	1.500		230.790
	Total						230.790
	Total Quantity in cum						230.790
1.007	100.3.8.15						
	Earthwork in open well excavation (in or under water) for wells of diameter above 6.0m and up to 9.0m in ordinary rock and conveying and depositing the spoil within initial lead of 50m and lift from 6.0m to 7.5m including neat banking.						
	EW in open well excavation in or under water-4th depth						
	Soft rock-6m-7.2m	1.0000 0	3.140	14*14/4	1.200		184.632
	Total						184.632
	Total Quantity in cum						184.632
1.008	OD86705/2023-2024						
	Granite rock blasting in wells, measured in solids, including collecting and stacking spoil for measurement within the initial lead of 50m and lift up to 7.5m (6m to 7.5m) but excluding bailing out water and including providing protection by earth filled cement bags (300 Nos. of earth filled cement bags / 10 m3 blasting) to avoid damages to the nearby structures)						
	Granite rock blasting in wells- 4th depth						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	7.2 m - 7.5 m	1.0000 0	3.140	14*14	0.300	0.2500 00	46.158
	Total						46.158
	Total Quantity in cum						46.158
1.009	OD78652/2023-2024						
	Granite rock blasting in wells, measured in solids, including collecting and stacking spoil for measurement within the initial lead of 50m and lift up to 9.0m (7.5m to 9.0m) but excluding bailing out water and including providing protection by earth filled cement bags (300 Nos. of earth filled cement bags / 10 m3 blasting) to avoid damages to the nearby structures)						
	Granite rock blasting in wells- 5th depth						
	7.5 m - 8.2 m	1.0000 0	3.140	14*14	0.700	0.2500 00	107.702
	Total						107.702
	Total Quantity in cum						107.702
1.010	100.6.1						
	Providing steel sheet shoring to the sides of the trenches to depths of above 4.00 m but not exceeding 6.00m using 6 mm M.S. sheet 0.50 M wide stiffen on edges with 50 mm x 50mm x 6 mm M.S. angles driving down vertically on either side one after another in lines and levels with suitable pile driving equipments and accessories to a maximum depth of 0.50 M below the bottom of the proposed excavation 0.5 M above ground level suitably braced by horizontal walling pieces at 75 x 150 mm x 8 mm angles on either side at intervals not exceeding 1.50M and horizontal screw jack type struts at 1.50M intervals and maintaining the shoring till the pipes are laid and works are completed, dismantling, cleaning and restacking for reuse including all labour, hire charges and conveyance for equipments, tools and plants and sundries etc. complete.						
	Providing steel sheet shoring to the sides of the trenches						
		1.0000 0	3.140	13.000	1.500		61.230
	Total						61.230
	Total Quantity in sqm						61.230
1.011	100.7.1						
	Bailing out water with 5HP engine and pump set including conveyance to the site, erecting, dismantling and taking back of engine and pump, cost of fuel lubricating oil and other stores pay of staff etc., complete.						
	Bailing out water with 5HP engine and pump set						
	Bailing out water with 2 no.s 5 HP	10.000 00	150*10			0.7500 00	11250.00 0
	Total						11250.00 0
	Total Quantity in Kwh						11250.00 0
1.012	100.7.2						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Bailing out water with engine and pump set above 5HP up to 10HP including conveyance to the site, erecting, dismantling and taking back of engine and pump, cost of fuel lubricating oil and other stores pay of staff etc., complete.						
	Bailing out water with engine and pump set above 5HP up to 10HP						
		20.000 00	150*10			0.7500 00	22500.00 0
	Total						22500.00 0
	Total Quantity in Kwh						22500.00 0
1.013	OD82645/2023-2024						
	DOWEL BARS_ Supplying and providing MS dowel bars of size 16 mm dia , 200 cm long including drilling holes of 20 mm dia to a depth of 100 cm in rock and filling the gap with cement grout (0.100kg/hole) etc complete						
	Dowel bars						
		120.00 000					120.000
	Total						120.000
	Total Quantity in no						120.000
1.014	4.1.3						
	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:2:4 (cement : 2 coarse sand (zone-III) : 4 graded stone aggregate 20 mm nominal size)						
	Providing and laying in position cement concrete						
	Levelling bottom of well	1.0000 0	3.140	10.1*10.1	0.200	0.2500 00	16.016
	Levelling of protection arrangement for inlet pipe	1.0000 0	5.500	5.000	0.100		2.750
	Total						18.766
	Total Quantity in cum						18.766
1.015	5.3						
	Reinforced cement concrete work in beams, suspended floors, roofs, having slope up to 15°; landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral stair cases up to floor five level excluding the cost of centering, shuttering, finishing and reinforcement, with 1:1.5:3 (1 cement : 1.5 coarse sand (Zone III) : 3 graded stone aggregate 20 mm nominal size).						
	RCC work in beams, floors, roofs						
	Base slab and Kerb	1.0000 0	3.140	10.1*10.1	0.800	0.2500 00	64.062
	Roof beam	2.0000 0	15.260	0.400	1.000		12.208

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Cover slab	1.0000 0	3.140	9.8*9.8	0.200	0.2500 00	15.078
	Walk way	1.0000 0	3.140	11*1.2	0.150		6.217
	side cabine	2.0000 0	3.830	1.300	0.150		1.494
	Beam supporting for walk way	4.0000 0	1.200	0.400	(0.85+.4)/ 2		1.200
	Beam supporting for side cabine	2.0000 0	3.830	0.230	0.400		0.705
	Platform inside the well	0.0000 0	3.140	0.900	1*0.150		0.000
	Platform for supporting valve	3.0000 0	1.000	0.800	0.150		0.360
	Total						101.324
						Total Quantity in cum	101.324
1.016	5.7						
	Reinforced cement concrete work in well - steining excluding the cost of centering, shuttering, finishing and reinforcement, with 1:1.5:3 (1 cement : 1.5 coarse sand (Zone - III) : 3 graded stone aggregate 20 mm nominal size)						
	RCC - well steining						
	Well steining	1.0000 0	3.140	9.4*4	9.500		112.161
	Total						112.161
						Total Quantity in cum	112.161
1.017	5.9.1						
	Centering and shuttering including strutting, etc. and removal of form for:Foundations, footings, bases of columns, etc for mass concrete						
	Centering and shuttering						
	PCC of well	1.0000 0	3.140	10.100	0.200		6.343
	Base slab & kerb	1.0000 0	3.140	10.100	0.800		25.371
	Total						31.714
						Total Quantity in sqm	31.714
1.018	5.9.12						
	Centering and shuttering including strutting, etc. and removal of form for:Well steining						
	Centering and shuttering						
	Well steining - inside	1.0000 0	3.140	9.000	9.500		268.470

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Well steining - out side	1.0000 0	3.140	9.800	9.500		292.334
	Total						560.804
						Total Quantity in sqm	560.804
1.019	5.9.5						
	Centering and shuttering including strutting, etc. and removal of form for:Lintels, beams, plinth beams, girders bressumers and cantilevers						
	Centering and shuttering						
	Roof beam	2.0000 0	15.260	2.000			61.040
	beam - walk way	4.0000 0	1.200	1.650			7.920
	beam - wall	2.0000 0	3.830	1.030			7.890
	Total						76.850
						Total Quantity in sqm	76.850
1.020	5.9.3						
	Centering and shuttering including strutting, etc. and removal of form for:Suspended floors, roofs, landings, balconies and access platform						
	Centering and shuttering						
	Cover slab & walk way	1.0000 0	3.140	12.2*12.2		0.2500 00	116.839
	Cover slab sides	1.0000 0	3.140	12.200	0.150		5.746
	Cover slab side cabin	1.0000 0	3.830	1.300			0.747
	Platform inside the well	0.0000 0	3.140	8.8*1.15	0.150		0.000
	Platform for supporting valve	3.0000 0	1.150	1.100	0.150		0.569
	Total						123.901
						Total Quantity in sqm	123.901
1.021	5.22.6						
	Steel reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete upto plinth levelThermo - Mechanically Treated bars of grade Fe-500D or more						
	Steel reinforcement for R.C.C work						
		1.0000 0	101.536+ 112.161				213.697
	Total						213.697
						Total Quantity in kilogram	213.697

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
1.022	13.1.1						
	12 mm cement plaster of mix:1:4 (1 cement : 4 fine sand)						
	12 mm cement plaster						
	well bottom	1.0000 0	3.140	9*9/4			62.800
	well steining - inside	1.0000 0	3.140	9.000	9.500		268.470
	well steining - out side	1.0000 0	3.140	9.800	2.500		76.930
	Roof beam	2.0000 0	8.500	2.000			34.000
	Beam supporting for walk way	8.0000 0	1.200	1.200			11.520
	Roof slab including walk way	1.0000 0	3.140	12.2*12.2 /4			116.839
	slab -cabin	1.0000 0	3.830	1.300			4.979
	Walk way bottom	1.0000 0	3.140	11.000	1.200		41.448
	Roof slab- side	1.0000 0	3.140	12.200	0.150		5.746
	Total						622.732
						Total Quantity in sqm	622.732
1.023	13.43.1						
	Applying one coat of water thinnable cement primer of approved brand and manufacture on wall surface:Water thinnable cement primer						
	Applying cement primer						
	well steining - out side	1.0000 0	3.140	9.800	2.500		76.930
	Beam supporting for walk way	8.0000 0	1.200	1.200			11.520
	Roof slab sides	1.0000 0	3.140	12.200	0.150		5.746
	slab - cabin	1.0000 0	3.830	1.300			4.979
	Total						99.175
						Total Quantity in sqm	99.175
1.024	13.60.1						
	Wall painting with acrylic emulsion paint of approved brand and manufacture to give an even shade:Two or more coats on new work						
	Wall painting						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity	
	Qty same as item no. 23	1.0000 0	99.175				99.175	
	Total						99.175	
	Total Quantity in sqm							99.175
1.025	100.41.34							
	Supplying and fixing Rectangular C.I. manhole cover 455mm x 610mm with frame (low duty) charges including all cost, labour charges etc., complete.							
	Supplying and fixing Rectangular C.I. manhole cover							
		2.0000 0					2.000	
	Total						2.000	
	Total Quantity in no							2.000
1.026	10.25.2							
	Item Shifted to Sub head 14 as item 14.73 Item Shifted to head 14 as item 14.74 Steel work welded in built up sections/framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required. In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works							
	Providing steel ladder							
	ladder	2.0000 0				100.00 0000	200.000	
	hand railing	1.0000 0				150.00 0000	150.000	
	Total						350.000	
	Total Quantity in kg							350.000
1.027	100.1.1							
	Excavating trenches of required width for pipes, cables, etc., including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20cm in depth, including consolidating each deposited layer by ramming, watering, etc., and disposing of surplus excavated soil as directed, within a lead of 50m, in all kinds of soil.							
	Earth work							
	for intake pipe	3.0000 0	5.500	3.000	1.500		74.250	
	Total						74.250	
	Total Quantity in cum							74.250
1.028	100.1.2							

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Excavating trenches of required width for pipes, cables, etc., including excavation for sockets, and dressing of sides, ramming of bottoms, depth exceeding 1.5m but not exceeding 3m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20cm in depth, including consolidating each deposited layer by ramming, watering, etc., and disposing of surplus excavated soil as directed, within a lead of 50m, in all kinds of soil.						
	Earth work						
		3.0000 0	5.500	3.000	1.500		74.250
	Total						74.250
	Total Quantity in cum						74.250
1.029	100.1.3						
	Excavating trenches of required width for pipes, cables, etc., including excavation for sockets, and dressing of sides, ramming of bottoms, depth exceeding 3m but not exceeding 4.5 m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc., and disposing of surplus excavated soil as directed, within a lead of 50m, in all kinds of soil.						
	Earth work						
		3.0000 0	5.500	3.000	1.500		74.250
	Total						74.250
	Total Quantity in cum						74.250
1.030	18.71.5						
	Providing and laying Double Flanged (screwed / welded) Centrifugally (Spun) Cast Iron, Class B (IS : 1536):300 mm dia C.I Double Flanged Pipe						
	Providing & laying 300 mm DI double flanged pipe						
	300 mm DI	3.0000 0	5.500				16.500
	Total						16.500
	Total Quantity in metre						16.500
1.031	100.31.1.7						
	Conveying and fixing C.I. sluice valves (with cap) by providing bolts, nuts, rubber insertions etc., complete, but excluding the cost of the valve (tail pieces, if required, will be paid separately): 300mm diameter, Class I.						
	Conveying and fixing C.I. sluice valves						
		3.0000 0					3.000
	Total						3.000
	Total Quantity in no						3.000
1.032	100.98.463						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 300mm.						
	Supply of CI Double Flanged Sluice Valve -300 mm dia						
		3.0000 0					3.000
	Total						3.000
	Total Quantity in no						3.000
1.033	5.1.3						
	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level:1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)						
	RCC 1:2:4						
	Anchor block	1.0000 0	3.000	1.500	2.000		9.000
	Base of protection arrangement for inlet pipe	1.0000 0	5.500	3.000	0.200		3.300
	Total						12.300
	Total Quantity in cum						12.300
1.034	OD83163/2023-2024						
	Labour for cutting D.I. pipe with steel saw. 300 mm diameter D.I. pipe						
	Labour for cutting DI pipe						
	300mm DI	3.0000 0					3.000
	Total						3.000
	Total Quantity in Each Cut						3.000
1.035	OD76988/2022-2023						
	Fabricating, supplying and fixing MS grill using 20mm steel bars, 20*20*3mm angles for protecting mouth of inlet pipe from foreign materials such as plastic, decayed vegetations etc						
	MS grill-3mx2mx2m						
	MS grill-3mx2mx2m	1.0000 0	2460.000				2460.000
	Total						2460.000
	Total Quantity in kg						2460.000
2	Construction of Pump house and Transformer control room						
2.001	2.8.1						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Earth work in excavation by mechanical means (Hydraulic excavator) /manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.All kinds of soil						
	Earth work in excavation						
	for ramp beam	1.0000 0	3.500	0.450	0.600		0.945
	for ramp column	2.0000 0	1.500	1.500	1.500		6.750
	Total						7.695
	Total Quantity in cum						7.695
2.002	4.1.3						
	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:2:4 (cement : 2 coarse sand (zone-III) : 4 graded stone aggregate 20 mm nominal size)						
	Providing PCC 1:2:4						
	for column footing	2.0000 0	1.500	1.500	0.100		0.450
	Total						0.450
	Total Quantity in cum						0.450
2.003	5.33.1						
	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including 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 Engineer - in-charge. Note:- Cement content considered in this item is @ 330 kg/ cum. Excess or less cement used as per design mix is payable or recoverable separately.All work upto plinth level						
	Providing mix M-25 grade cement concrete						
	ramp	1.0000 0	5.000	3.500	0.200		3.500
	column footing	2.0000 0	1.200	1.200	0.200		0.576
	column footing trapezoidal portion	2.0000 0	0.312				0.624
	beam	2.0000 0	5.000	0.300	0.300		0.900
	beam	1.0000 0	3.500	0.300	0.600		0.630
	column	2.0000 0	0.300	0.300	2.000		0.360

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Total						6.590
						Total Quantity in cum	6.590
2.004	5.33.2						
	Providing and laying in position machine batched and machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including 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 Engineer - in-charge. Note:- Cement content considered in this item is @ 330 kg/ cum. Excess or less cement used as per design mix is payable or recoverable separately. All work above plinth level upto floor V level						
	Providing RCC design mix M25 grade						
	Lintel	3.1400 0	12.400	0.200	0.150		1.168
	Lintel	1.0000 0	23.650	0.200	0.150		0.710
	Lintel- beam	3.1400 0	9.400	0.200	0.350		2.066
	Sunshade for windows	6.0000 0	2.100	0.600	0.100		0.756
	Sunshade for rolling shutter	1.0000 0	3.600	0.600	0.100		0.216
	column	8.0000 0	0.300	0.450	6.650		7.182
	Gantry beam	3.1400 0	9.400	0.600	0.400		7.084
	Roof beam - inverted	2.0000 0	9.120	0.300	0.570		3.119
	Roof beam	3.1400 0	9.400	0.300	0.450		3.985
	Roof slab- cabin	2.0000 0	3.370	1.600	0.120		1.294
	Roof slab-	3.1400 0	12.400	1.700	0.120		7.943
	Roof slab-top	3.1400 0	10.4*10.4	0.120	1/4		0.000
	Total						35.523
						Total Quantity in cum	35.523
2.005	50.6.1.2						
	Solid block masonry using pre cast solid blocks (Factory made) of size 40x20x20cm or nearest available size confirming to IS 2185 part I of 1979 for super structure up to floor two level thickness 20cm and above in: CM 1:6 (1 cement: 6 coarse sand) etc complete.						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity	
	Solid block masonry							
	Pump house walls	3.1400 0	12.400	0.200	3.750		29.202	
	Pump house walls	3.1400 0	9.400	0.200	1.850		10.921	
	Pump house partition walls	1.0000 0	11.650	0.200	3.750		8.738	
	Pump house walls cabin	2.0000 0	6.000	0.200	3.750		9.000	
	Deduction - Rolling shutter	- 1.0000 0	3.000	0.200	2.500		-1.500	
	Deduction - Rolling shutter	- 1.0000 0	2.000	0.200	2.500		-1.000	
	Deduction - window	- 6.0000 0	1.500	0.200	1.400		-2.520	
	Deduction - ventilator	- 6.0000 0	1.000	0.200	0.600		-0.720	
	Deduction - Lintel	- 3.1400 0	12.400	0.200	0.150		-1.168	
	Deduction - Lintel	- 1.0000 0	23.650	0.200	0.150		-0.710	
	Deduction - opening cabin	- 2.0000 0	3.370	0.200	3.750		-5.055	
	Total						45.188	
	Total Quantity in cum							45.188
2.006	50.6.3.1							
	Solid block masonry using pre cast solid blocks (Factory made) of size 40x20x10cm or nearest available size confirming to IS 2185 part I of 1979 for foundation and plinth for 10 cm thick wall in CM 1:6 (1 cement : 6 coarse sand) including cost of scaffolding etc complete							
	Solid block masonry							
	Parapet wall - cabin	2.0000 0	6.000	0.100	0.750		0.900	
	Parapet wall - PH	3.1400 0	12.400	0.100	0.750		2.920	
	Parapet wall - PH	3.1400 0	9.400	0.100	0.750		2.214	
	Total						6.034	

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
Total Quantity in cum							6.034
2.007	5.22.6						
	Steel reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete upto plinth level Thermo - Mechanically Treated bars of grade Fe-500D or more						
	Steel reinforcement						
		1.0000 0	6.59+45. 712			100.00 0000	5230.200
	Total						5230.200
Total Quantity in kilogram							5230.200
2.008	5.9.3						
	Centering and shuttering including strutting, etc. and removal of form for: Suspended floors, roofs, landings, balconies and access platform						
	Centering and shuttering						
	roof slab	3.1400 0	11.800	1.700			62.988
	Roof slab side	3.1400 0	12.400	0.120			4.672
	Roof slab top	3.1400 0	10.400	10.400	1/4		0.000
	Roof slab side	3.1400 0	10.400	0.120			3.919
	Roof slab cabin	2.0000 0	3.370	1.600			10.784
	Roof slab cabin-side	2.0000 0	6.570	0.120			1.577
	sunshade window	8.0000 0	2.100	0.600			10.080
	sunshade side	8.0000 0	3.300	0.075			1.980
	sunshade RS	1.0000 0	3.600	0.600			2.160
	sunshade side	1.0000 0	4.800	0.075			0.360
	Ramp slab	1.0000 0	5.000	3.500			17.500
	Ramp slab side	2.0000 0	5.000		0.200		2.000
	Total						118.020
Total Quantity in sqm							118.020
2.009	5.9.5						
	Centering and shuttering including strutting, etc. and removal of form for: Lintels, beams, plinth beams, girders bressumers and cantilevers						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Centering and shuttering						
	Lintel	2.0000 0	3.140	12.200	0.150		11.492
	Lintel beam	2.0000 0	3.140	9.200	0.350		20.222
	Roof beam inverted	2.0000 0	9.120	1.140			20.794
	Roof beam	6.2800 0	9.200	1.200			69.331
	Gantry beam	3.1400 0	9.200	1.400			40.443
	Beam ramp	2.0000 0	5.000	0.800			8.000
	Beam ramp	1.0000 0	3.500	1.200			4.200
	Total						174.482
						Total Quantity in sqm	174.482
2.010	5.9.6						
	Centering and shuttering including strutting, etc. and removal of form for: Columns, Pillars, Piers, Abutments, Posts and Struts						
	Centering and shuttering						
	Column	8.0000 0	1.500		6.650		79.800
	Columns - Ramp	2.0000 0	1.200		2.000		4.800
	Total						84.600
						Total Quantity in sqm	84.600
2.011	13.1.1						
	12 mm cement plaster of mix:1:4 (1 cement : 4 fine sand)						
	12 mm cement plastering						
	Pump house inside wall	1.0000 0	3.140	12.200	3.750		143.655
	Pump house inside wall	1.0000 0	3.140	9.200	1.850		53.443
	Pump house outside wall	1.0000 0	3.140	12.600	3.750		148.365
	Pump house outside wall	1.0000 0	3.140	9.600	1.850		55.766
	Pump house partitian wall	2.0000 0	11.650		3.750		87.375
	Pump house sunshade - windows	16.000 00	2.100	0.675			22.680

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Pump house roof	2.0000 0	3.140	10.4*10.4	1/4		0.000
	Pump house roof slab	2.0000 0	3.140	11.800	1.700		125.977
	Pump house roof slab cabin	4.0000 0	3.370	1.600			21.568
	Pump house roof slab sides	1.0000 0	3.140	10.400	0.120		3.919
	Pump house roof slab sides	1.0000 0	3.140	12.400	0.120		4.672
	Pump house roof slab sides -cabin	1.0000 0	6.570		0.120		0.788
	Pump house roof parapet	1.0000 0	3.140	9.400	1.600		47.226
	Pump house roof parapet	1.0000 0	3.140	12.400	1.600		62.298
	Pump house roof beam	1.0000 0	3.140	9.400	1.200		35.419
	Pump house roof beam- cabin	2.0000 0	6.000		0.750		9.000
	Pump house roof beam-inverted	2.0000 0	9.120	1.140			20.794
	Pump house gantry beam	1.0000 0	3.140	9.400	1.400		41.322
	Pump house roof parapet cabin	2.0000 0	3.140	6.000	1.600		60.288
	Pump house column	8.0000 0	1.500	6.650			79.800
	Ramp	1.0000 0	5.000	3.500			17.500
	Ramp side	2.0000 0	5.000	0.200			2.000
	Deduction-rolling shutter	- 1.0000 0	3.000	2.500			-7.500
	Deduction-rolling shutter	- 1.0000 0	2.000	2.500			-5.000
	Deduction-windows	- 6.0000 0	1.500	1.400			-12.600
	Deduction-ventilators	- 6.0000 0	1.000	0.600			-3.600

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Deduction-opening	2.0000 0	3.370	3.880			-26.151
	Total						989.004
						Total Quantity in sqm	989.004
2.012	13.43.1						
	Applying one coat of water thinnable cement primer of approved brand and manufacture on wall surface:Water thinnable cement primer						
	Applying cement primer						
	Qty same as item no 11	1.0000 0	1158.815				1158.815
	Total						1158.815
						Total Quantity in sqm	1158.815
2.013	13.60.1						
	Wall painting with acrylic emulsion paint of approved brand and manufacture to give an even shade:Two or more coats on new work						
	Wall painting						
	Qty same as Item no. 12	1.0000 0	1158.815				1158.815
	Total						1158.815
						Total Quantity in sqm	1158.815
2.014	13.71						
	Lettering with black Japan pint of approved brand and manufacture						
	Lettering						
		100.00 000				20.000 000	2000.000
	Total						2000.000
						Total Quantity in per Letter per cm height	2000.000
2.015	50.9.1.1						
	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia & length (hold fast lugs or dash fastener shall be paid for separately), using good quality Anjili wood /jack wood						
	Providing wood work						
	Windows - horizontal	12.000 00	1.700	0.100	0.075		0.153
	Windows - vertical	24.000 00	1.400	0.100	0.075		0.252
	Ventilators - horizontal	12.000 00	1.200	0.100	0.075		0.108

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Ventilators - vertical	18.000 00	0.600	0.100	0.075		0.081
	Total						0.594
	Total Quantity in cum						0.594
2.016	50.9.5.1						
	Providing and fixing glazed shutters for doors, windows and clerestory windows using 4 mm thick float glass panes including ISI marked M.S pressed butt hinges bright finished of required size with necessary screws. Using Anjili wood/ jack wood 35 mm thick shutters.						
	Providing and fixing glazed shutters						
	Window	18.000 00	0.500	1.400			12.600
	Ventilator	12.000 00	0.500	0.600			3.600
	Total						16.200
	Total Quantity in sqm						16.200
2.017	13.48.2						
	Finishing with Deluxe Multi surface paint system for interiors and exteriors using primer as per manufacturers specifications:Painting wood work with Deluxe Multi Surface Paint of required shade. Two or more coat applied @ 0.90 ltr/10 sqm over an under coat of primer applied @ 0.75 ltr/10 sqm of approved brand and manufacture						
	Finishing with Deluxe Multi surface paint						
	Window	6.0000 0	1.500	1.400		1.0000 00	12.600
	Ventilator	6.0000 0	1.000	0.600		1.0000 00	3.600
	Total						16.200
	Total Quantity in sqm						16.200
2.018	10.6.3						
	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.80x0.90 mm M.S. laths with 0.90 mm thick to cover						
	Supplying and fixing rolling shutter						
	Rolling shutter	1.0000 0	3.000		2.500		7.500
	Rolling shutter	1.0000 0	2.000		2.500		5.000
	Total						12.500

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Total Quantity in sqm						12.500
2.019	10.7						
	Providing and fixing ball bearing for rolling shutters.						
	Providing and fixing ball bearing						
		2.0000 0					2.000
	Total						2.000
	Total Quantity in no						2.000
2.020	13.48.3						
	Finishing with Deluxe Multi surface paint system for interiors and exteriors using primer as per manufacturers specifications:Painting Steel work with Deluxe Multi Surface Paint to give an even shade. Two or more coat applied @ 0.90 ltr/10 sqm over an under coat of primer applied @ 0.80 ltr/10 sqm of approved brand and manufacture						
	Finishing with Deluxe Multi surface paint						
	Rolling shutter	1.0000 0	3.000		2.500	2.4000 00	18.000
	Rolling shutter	1.0000 0	2.000		2.500	2.4000 00	12.000
	Total						30.000
	Total Quantity in sqm						30.000
2.021	OD272481/2022-2023						
	Supply , delivery and fixing of 5 T or suitable capacity Electrically and manually working on single girder with overhead travelling trolley and clear lift as per site conditions for lifting the chemicals, Chlorine, pumps etc.. and fitting as required, supplied with one set of crane slings with GI D shackle and clamps etc. complete as per the instruction of the Engineer in charge.
						
	Supply , delivery and fixing of 5 T or suitable capacity cran and trolley						
		1.0000 0					1.000
	Total						1.000
	Total Quantity in no						1.000
2.022	10.1						
	Structural steel work in single section, fixed with or without connecting plate, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.						
	Structural steel work						
		1.0000 0	675.000				675.000
	Total						675.000
	Total Quantity in kilogram						675.000
2.023	10.26.2						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing, staircase railing and similar works, including applying priming coat of approved steel primer.E.R.W. tubes						
	Providing and fixing hand rail						
		100.00 000					100.000
	Total						100.000
	Total Quantity in kg						100.000
2.024	OD717/2023-2024						
	Electrification of pump house						
	Electrification of pump house						
		1.0000 0					1.000
	Total						1.000
	Total Quantity in no						1.000
3	Supply and laying Raw Water Pumping Main						
3.001	100.98.118						
	Supply of DI K9 Pipe Conforming to IS 8329/2000, 250mm Dia.						
	Supply of 250mm DI K9 pipe						
	Raw water PM	1.0000 0	3350.000				3350.000
	2% for future mace	1.0000 0	3350.000			0.0200 00	67.000
	deduct for MS	- 1.0000 0	150.000				-150.000
	Total						3267.000
	Total Quantity in metre						3267.000
3.002	100.98.446						
	Supply of CI Air Valve, Conforming to IS 14848 - 2000, Double Orifice Type DS2, Size 50mm.						
	Supply of CI air valve-50mm						
		4.0000 0					4.000
	Total						4.000
	Total Quantity in no						4.000
3.003	100.98.445						
	Supply of CI Air Valve, Conforming to IS 14848 - 2000, Double Orifice Type DS2, Size 40mm.						
	Supply of CI air valve-40mm						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
		6.0000 0					6.000
	Total						6.000
						Total Quantity in no	6.000
3.004	100.98.460						
	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 150mm.						
	Supply of CI Double Flanged Sluice Valve						
	150mm	2.0000 0					2.000
	Total						2.000
						Total Quantity in no	2.000
3.005	OD252034/2022-2023						
	Supply of CI Non Return Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 250 mm.						
	Supply of NRV-250mm						
		2.0000 0					2.000
	Total						2.000
						Total Quantity in no	2.000
3.006	100.1.1						
	Excavating trenches of required width for pipes, cables, etc., including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20cm in depth, including consolidating each deposited layer by ramming, watering, etc., and disposing of surplus excavated soil as directed, within a lead of 50m, in all kinds of soil.						
	EW excavation in all classes of soil						
	250mm DI pipe	1.0000 0	3200.000	0.900	1.200	0.6000 00	2073.600
	Deduct Tar surface	1.0000 0	2865.000	0.900	0.200		-515.700
	Total						1557.900
						Total Quantity in cum	1557.900
3.007	100.1.5						
	Excavating trenches of required width for pipes, cables, etc., including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20cm in depth, including consolidating each deposited layer by ramming, watering, etc., and disposing of surplus excavated soil as directed, within a lead of 50 m, in Ordinary Rock.						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	EW excavation in ordinary rock						
	250mm DI pipe	1.0000 0	3200.000	0.900	1.200	0.3000 00	1036.800
	Total						1036.800
	Total Quantity in cum						1036.800
3.008	100.2.2						
	Excavation work by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5m in width or 10m ² on plan), including dressing of sides and ramming of bottoms, lift up to 1.5m, including getting out the excavated soil and disposal of surplus excavated soils as directed, within a lead of 50m, in Medium Rock where Blasting is Prohibited.						
	EW excavation in Medium Rock						
	250mm DI pipe	1.0000 0	3200.000	0.900	1.200	0.0500 00	172.800
	Total						172.800
	Total Quantity in cum						172.800
3.009	100.4.1						
	Excavating in hard rock for trenches by blasting for laying pipes and stacking useful materials for measurements and disposing unserviceable materials within the initial lead of 50m and lift up to 1.50m (depth from 0.0m to 1.50m) and providing protection by earth filled cement bags during blasting to avoid damages to nearby structures (200 Nos. of earth filled cement bags for 10m ³ of blasting)						
	EW excavation in hard rock with protection						
	250mm DI pipe	1.0000 0	1400.000	0.900	1.200	0.0500 00	75.600
	Total						75.600
	Total Quantity in cum						75.600
3.010	100.1.13						
	Excavating trenches of required width for pipes, cables, etc., including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20cm in depth, including consolidating each deposited layer by ramming, watering, etc., and disposing of surplus excavated soil as directed, within a lead of 50m, in Hard Rock where Blasting is Prohibited.						
	EW excavation in hard rock						
		1.0000 0	1800.000	0.900	1.200	0.0500 00	97.200
	Total						97.200
	Total Quantity in cum						97.200
3.011	100.8.1						
	Fencing one side of trenches, 1.50m height with two rows of 10cm plastic caution tape in vertical casuarina pole (girth 15cm to 24cm) fixed at 2m intervals.						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Fencing						
	Fencing	1.0000 0	1450.000				1450.000
	Total						1450.000
	Total Quantity in metre						1450.000
3.012	100.14.4						
	Conveying and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS: 8329 excluding cost of pipes and specials: 250mm diameter Ductile Iron Class K-9 Pipes.						
	Conveying and laying 250mm DI pipe						
	250mm DI K9 pipe+MS	1.0000 0	3350.000				3350.000
	Total						3350.000
	Total Quantity in metre						3350.000
3.013	18.70.4						
	Providing push - on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:250 mm dia pipes						
	Providing push on joints						
	Push on joints	590.00 000					590.000
	Total						590.000
	Total Quantity in joint						590.000
3.014	18.30.6						
	Providing flanged joints to double flanged C.I./ D.I pipes and specials, including testing of joints:250 mm diameter pipe						
	Providing flanged joints						
	Flanged joints	12.000 00					12.000
	Total						12.000
	Total Quantity in no						12.000
3.015	100.59.1						
	Cutting the bituminous / concrete roads with cutting machine for a minimum depth of 200mm along the sides of proposed alignment of the pipe to be laid without causing any damage to other utilities, including the charges for hire and conveyance of tools and plant, cost of consumables and charges for lighting, watching, ribbon fencing, caution boards, traffic diversion, and as per the direction of departmental officers etc. complete, before carrying out the demolition of bituminous / concrete road by mechanical means and carrying out the excavation.						
	Cutting the bituminous/concrete road						
		1.0000 0	2865.000				2865.000

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Total						2865.000
						Total Quantity in metre	2865.000
3.016	OD252185/2022-2023						
	Dismantling manually including disposal of unserviceable material within 50 metres lead as per direction of Engineer -in-Charge:Bituminous road						
	Dismantling manually and disposal of u/s materials						
	Tar surface	1.0000 0	2865.000	0.900			2578.500
	Total						2578.500
						Total Quantity in sqm	2578.500
3.017	18.68.1						
	Providing and laying D.I specials of class K - 12 suitable for push - on jointing as per IS : 9523 :Upt 600 mm dia						
	Providing DI specials						
	250mm x90 DI bend	4.0000 0				0.4800 00	1.920
	250mm x45 DI bend	4.0000 0				0.3600 00	1.440
	250mm x22.5 DI bend	18.0000 00				0.3200 00	5.760
	250mm x11.25 DI bend	26.0000 00				0.3000 00	7.800
	250mm MJ collar	6.0000 0				0.3600 00	2.160
	250mm DI Flanged Tee 150	2.0000 0				0.7100 00	1.420
	250mm DI Flanged Tee x80	10.0000 00				0.6400 00	6.400
	250mm DI T P	12.0000 00				0.3200 00	3.840
	Total						30.740
						Total Quantity in quintal	30.740
3.018	100.32.3						
	Conveying and fixing C. I. Double Acting Air Valve of approved quality with bolts, nuts, rubber insertions etc., complete, but excluding the cost of air valve (tail pieces, if required, will be paid separately): 50mm Double Acting Air Valve.						
	Conveying and fixing CI D/A air valve						
	50mm Air valve	4.0000 0					4.000
	Total						4.000
						Total Quantity in no	4.000

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
3.019	100.32.2						
	Conveying and fixing C. I. Single Acting Air Valve of approved quality with bolts, nuts, rubber insertions etc., complete, but excluding the cost of air valve (tail pieces, if required, will be paid separately): 40mm Single Acting Air Valve.						
	Conveying and fixing CI D/A air valve						
	40mm Air valve	6.0000 0					6.000
	Total						6.000
	Total Quantity in no						6.000
3.020	100.31.2.4						
	Conveying and fixing C.I. sluice valves (with cap) by providing bolts, nuts, rubber insertions etc., complete, but excluding the cost of the valve (tail pieces, if required, will be paid separately): 150mm diameter, Class II.						
	Conveying and fixing C.I. sluice valves						
	150mm	2.0000 0					2.000
	Total						2.000
	Total Quantity in no						2.000
3.021	100.31.2.6						
	Conveying and fixing C.I. sluice valves (with cap) by providing bolts, nuts, rubber insertions etc., complete, but excluding the cost of the valve (tail pieces, if required, will be paid separately): 250mm diameter, Class II.						
	Conveying and fixing CI D/F NR valve-250mm Dia						
	CI NR valve	2.0000 0					2.000
	Total						2.000
	Total Quantity in no						2.000
3.022	OD61054/2023-2024						
	Labour for cutting C I/ D I pipe with steel saw. 250mm dia. D I pipe						
	Labour for cutting C.I pipe-250 mm						
		30.000 00					30.000
	Total						30.000
	Total Quantity in Each Cut						30.000
3.023	100.35.4						
	Testing 250mm DI/CI pipeline with potable water to the required test pressure . 250 mm dia Observed Data derived from item no.1022 of PHED DATA						
	Testing 250 mm dia DI pipe+MS pipe						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
		1.0000 0	3000+35 0				3350.000
	Total						3350.000
						Total Quantity in metre	3350.000
3.024	OD269920/2022-2023						
	Supplying and erection of 250 mm electro magnetic flow meter conforming in protection level of IP -68 for flow sensor and IP -67 for transmitter and having an accuracy level of 0.5 with LED/LCD display unit .The flow meter should have the housing to be made of SS 304 carbon steel with anti corrosive protection and inside liner to be made up of hard rubber /neoprene all conforming to drinking water standers .The flow metre should coupled with HARTB for data acquisition and transfer with provision for wirless transfer through GSM .The manufacture should be have calibration standards as per ISO 17025and the product shall have warranty provisions for at least 2 years						
	Supply and erection of Magnetiel flow meter-250mm						
		1.0000 0					1.000
	Total						1.000
						Total Quantity in no	1.000
3.025	100.37.8.1						
	In situ fabrication of M.S. pipes of size 250mm (I.D.) using 8mm thick M.S. plate including cost and conveyance charges of M.S. plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an even shade over an under-coat of primer etc., complete.						
	Fabricating M.S pipe of 250mm Dia						
		1.0000 0	150.000				150.000
	Total						150.000
						Total Quantity in metre	150.000
3.026	100.37.8.2						
	Fabricating M.S. flanges of diameter 250mm using 12mm thick M.S. plate including cost and conveyance charges of M.S. plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an even shade over an under-coat of primer etc., complete: For pipes fabricated with 8mm thick M.S. plates.						
	Fabricating M.S flanges of 250mm Dia						
		4.0000 0					4.000
	Total						4.000
						Total Quantity in no	4.000
3.027	100.37.8.3						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Cutting 250mm (I.D.) M.S. pipes for making bends and other specials by gas cutting including cost of gas, all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.						
	cutting M.S pipe						
		20.000 00					20.000
	Total						20.000
	Total Quantity in no						20.000
3.028	100.37.8.4						
	Welding 250mm (I.D.) M.S. pipes for making bends and other specials by gas/electric welding machine including cost of gas and welding rods, all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.						
	Welding MS pipe						
		20.000 00					20.000
	Total						20.000
	Total Quantity in no						20.000
3.029	100.37.8.5						
	Grinding cut and weld edges of 250mm (I.D.) M.S. pipes during fabrication work including all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.						
	Grinding MS pipe						
		40.000 00					40.000
	Total						40.000
	Total Quantity in no						40.000
3.030	2.8.1						
	Earth work in excavation by mechanical means (Hydraulic excavator) /manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.All kinds of soil						
	EW excavation in all classes of soil						
	Valve chamber	15.000 00	2.100	2.100	1.800		119.070
	Total						119.070
	Total Quantity in cum						119.070
3.031	4.1.3						
	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:2:4 (cement : 2 coarse sand (zone-III) : 4 graded stone aggregate 20 mm nominal size)						
	PCC 1:2:4						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Valve chamber PCC	15.000 00	1.800	1.800	0.100		4.860
	Anchor block	14.000 00	0.600	0.600	0.600		3.024
	above the trench	1.0000 0	150.000	0.900	0.200		27.000
	Total						34.884
						Total Quantity in cum	34.884
3.032	5.1.2 Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level:1:1:5:3 (1 cement 1.5 coarse sand :3 graded stone aggregate 20 mm nominal size)						
	RCC 1:1.5:3						
	Valve chamber floor slab	15.000 00	1.800	1.800	0.150		7.290
	Valve chamber side wall	15.000 00	6.600	0.150	1.450		21.533
	Valve chamber cover slab	45.000 00	1.800	0.600	0.200		9.720
	Total						38.543
						Total Quantity in cum	38.543
3.033	5.1.3 Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level:1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)						
	RCC 1:2:4						
	RCC anchor block	35.000 00	1.000	1.000	1.000		35.000
	Total						35.000
						Total Quantity in cum	35.000
3.034	5.9.2 Centering and shuttering including strutting, etc. and removal of form for:Walls (any thickness) including attached pilasters, butteresses, plinth and string courses etc.						
	Centering and shuttering						
	valve chamber pcc	15.000 00	4*1.800		0.100		10.800
	Side wall inside	15.000 00	6.000		1.450		130.500
	Side wall outside	15.000 00	7.200		1.450		156.600

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Total						297.900
						Total Quantity in sqm	297.900
3.035	5.9.1						
	Centering and shuttering including strutting, etc. and removal of form for: Foundations, footings, bases of columns, etc for mass concrete						
	Centering and shuttering						
	Cover slab side	45.000 00	4.800			0.200	43.200
	Anchor block	35.000 00	4.000			1.000	140.000
	Anchor block	14.000 00	2.400			0.600	20.160
	Total						203.360
						Total Quantity in sqm	203.360
3.036	5.22.6						
	Steel reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete upto plinth level Thermo - Mechanically Treated bars of grade Fe-500D or more						
	Steel reinforcement						
	Valve chamber	1.0000 0	38.543			80.000 000	3083.440
	Anchor block	1.0000 0	35.000			50.000 000	1750.000
	Total						4833.440
						Total Quantity in kilogram	4833.440
4	Supply ,erecting and commissioning of 250 KVA,11kV/433V ,outdoor type Transformer						
4.001	OD254267/2022-2023						
	Supply,erection,commissioning of 250 KVA,11kV/433V,Outdoor Type Transformer						
	Supply ,erection ,commissioning of 250KVA,11KV/433V .Outdoor transformer						
	Transformer	1.0000 0					1.000
	Total						1.000
						Total Quantity in set	1.000
5	Supply, erection, testing and commissioning of RAW water pump set - Discharge 35 lps, Head 146m						
5.001	OD273147/2022-2023						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	<p>Supply and erection of Vertical Turbine pump set with following specifications.</p> <p>Supply, erection, testing and commissioning of VT Pump sets at RAW water pump house- 35 lps discharge and 146 m head. Size of & pumping main: 250 mm DI K9, Length of pumping main: 3350m, Maximum length of column pipe: below 1.5m, & Casing: Cast iron, Speed: below 1500 rpm</p> <p>Supply, & erection, testing and commissioning of KWA approved make ISI marked high efficiency type, self water & lubricated above floor discharge type vertical turbine pump with bronze impeller, SS shaft, MS fabricated (minimum 8 mm) flanged column assembly with strainer and all accessories conforming to IS 1710. The pump shall be coupled with suitable vertical hollow motor specified in item No. 2.</p> <p>Casing: Cast & iron & Speed: below 1500 rpm Impeller: Enclosed type Bronze LTB 2 dynamically balanced as per & ISO 1940 grade 3 standards & Sleeve: SS 304 & Column shaft - SS 410 &</p> <p>Pump shaft - SS 316 & Bowl Casing ring: Bronze LTB 2 Epoxy painted MS Column pipe 10 mm Thick flanged ends each having length below 1.5 Meter. Strainer fabricated with SS 304 Bearings for spider and bowl synthetic Rubber with outer brass/CI shell & Discharge Head Bearing - Thrust / angular roller & Ratchet & assembly unlocking Centrifugally action & & Minimum</p> <p>Efficiency: suitable to achieve minimum 70% efficiency for pump & motor & (Vibrations should be limited as per HIS 9.6.4.3 standards. & Pump performance tolerance should be subject to Hydrate Institute standard class A - No negative & tolerance is applicable in efficiency and no positive tolerance in power).</p> <p>Supply, erection, testing and commissioning of suitable rating high efficiency Kirlosker/crompton/BHEL/Marthon/Alstom or equivalent KWA approved make EF1 squirrel cage Induction, SPDP, Vertical hollow shaft motor suitable for direct & coupling with the above pump having RPM below 1500 or nearest capable to operate on voltage of & 415V (+/-10%) 50 hz (+/-3%) AC 3 phase, 50 degree Ambient temp. rise. conforming to relevant IS. Motor & shall be energy efficient and supporting certificates to prove IE2/IE3 as per IS 12615-2018. &</p> <p>Design, supply, erection, testing and commissioning of medium voltage sheet steel clad, totally enclosed, dust tight and vermin proof, indoor floor mounted cubicle type switch board fabricated out of 16 swg. Mild steel sheet for operation 3 phase, 415 volts 50 Hz, AC supply system. The panel board for one working at a time with 500 A SFU as incomer, change over switch for pumpsets, incoming main and 2 nos 250 Amps TPN SFU with HRC fuse as outgoing. The panel board consisting of voltmeter with selector switch, Ammeter CTS with selector switch, indication lamps necessary control & fuse base with HRC fuse and Neutral link etc. also one year Warrantee and Supply of ELCB/RCCB to be added at panel for safety. The switch board surface treated after degreasing, pickling, phosphating etc anti-rust primer coating followed by two coats of spray paint of approved shade as standard construction practice approved by the Kerala Electrical Inspectorate standard and as standard practice. &</p> <p>Supply and fitting of suitable rating metalized heavy duty poly propylene (MDXL) power & capacitor with capacitor fixing stand, connecting copper cables, termination etc. suitable for the above motor as per CEA regulations 2010. KVAR shall be provided for enhancing existing power factor to unity. & Supply and installation of suitable size, CI Double Flanged heavy duty Sluice Valve with cap PN 2.0, conforming to IS 14846 - 2000. The size shall not be less than the size of pump delivery & Supply and installation & of</p>						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	<p>suitable size best quality, ISI marked heavy duty cast iron, double flanged reflux non return valve (PN2) as per IS: 5312, The size shall not be less than the size of pump delivery

 Starter

 Supplying

 a complete integrated soft starter panel capable of operating the motor having a protection level of IP 40 or more with integrated bypass contactor in the panel and motor protection relay having parameters as per CEA regulations 2010 with a power control MCB and line power contactor and the starting current shall be 2.50- 3.50 times the normal full load current of motor with ammeter, voltmeter and phase indicators, space

 heaters, floor mounting type and having an insulation level of 1100 V. The standard is to be IEC 60947-4.2.

 Supply and installation of 150mm dia, Glycerence filled pressure gauge with stop cock/ valve to be fitted in a stand or wall visible while operating the valves with copper tube connections suitable for the above pumps.

 Supply of all materials and providing suitable plate earthing with 200x1200x12mm CI plate buried in ground at a depth of 3m from ground level with alternate layers of charcoal and salt including the supply and fixing of 32mm dia perforated GI pipe, funnel for watering purposes, with MS/CI cover etc. as per IE standards conforming of IS 3043/87.

 Supply, laying and giving earthing connections to motors, starters, capacitors, panel boards etc. using suitable size copper flat as per CEA regulations 2010.

 Supply, laying, termination and connecting of (Suitable size) (AYFY/XLPE) insulated armoured Copper cable for working voltage up to 1100 volt confirming to relevant IS specification to lead cable from panel board to starter and starter to motor and starter to capacitor including terminations materials such as gland, socket, gland earth etc. as per CEA regulations 2010.

 Erecting the above motor pump set in suitable concrete foundation including fixing the starter, motor, cubical panel board including cost of all materials etc...Installing the electrical items, wiring and earthing, giving connection etc.as directed by the departmental officers as per CEA regulations 2010 and ISI specifications, fitting suction and delivery pipes and specials, Sluice valve, Reflux valve, Gauges etc. including clamping wherever necessary etc. complete and trial run for a period of one week to the satisfaction of the authority officers

 Including cost of all

 the components specified above including 2 year warrantee</p>						
	Supply and erection of Vertical Turbine pump set-Head 146m ,Discharge -35 lps						
	100 HP	2.0000 0					2.000
	Total						2.000
	Total Quantity in no						2.000
5.002	OD273501/2022-2023						
	Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with						
	Eathing with GI earth plate						
		2.0000 0					2.000
	Total						2.000
	Total Quantity in set						2.000
5.003	OD275117/2022-2023						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Earthing strip of 50 x 6 mm GI strip.						
	earthing strip of size 50x6 mm GI .						
	earthing GI strip	1.0000 0	2.000				2.000
	Total						2.000
	Total Quantity in metre						2.000
5.004	OD274167/2022-2023						
	Submitting application to KSEBL for power connection and power extension						
	Submitting application to KSEBL for power connection and power extension						
	LS	1.0000 0	1.000				1.000
	Total						1.000
	Total Quantity in L.S						1.000
6	Road Restoration Charges(MORD ROAD)						
6.001	3.5.3						
	Excavation in Soil using Hydraulic Excavator and Tippers with disposal upto 1000 m
 Excavation for roadwork in soil with hydraulic excavator of 0.9 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross-sections, and transporting to the embankment location with a lift upto 1.5 m and lead upto 1000 m as per Technical Specification Clause 302.3						
	Earth work for road work						
		1.0000 0	2865.000	0.900	0.400		1031.400
	Total						1031.400
	Total Quantity in cum						1031.400
6.002	4.1.A.1						
	Granular Sub-base with Well Graded Material (Table 400.1)
 (A) By Mix in Place Method
 Construction of granular sub-base by providing well graded material, spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with smooth wheel roller to achieve the desired density, complete as per Technical Specification Clause 401.
 (i) For Grading I Material						
	Providing GSB						
		1.0000 0	2865.000	0.900	0.200		515.700
	Total						515.700
	Total Quantity in cum						515.700
6.003	4.9						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Wet Mix Macadam & Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the material with water at OMC in mechanical mixer (Pug Mill), carriage of mixed material by tipper to site, laying in uniform layers in sub-base/base course on a well prepared sub-base and compacting with smooth wheel roller of 80 to 100kN weight to achieve the desired density including lighting, barricading and maintenance of diversion, etc as per Tables 400.11 & 400.12 and Technical Specification Clause 406. & By Mechanical Means with 1 km lead						
	Providing WMM						
		1.0000 0	2865.000	0.900	0.200		515.700
	Total						515.700
	Total Quantity in cum						515.700
6.004	5.1.1a						
	Prime Coat :- Low porosity & Providing and applying primer coat with bitumen emulsion (SS-1) on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.70-1.0 kg/sqm using mechanical means as per Technical Specification Clause 502						
	Providing and applying prime coat						
		1.0000 0	2865.000	1.350			3867.750
	Total						3867.750
	Total Quantity in sqm						3867.750
6.005	5.2.3a						
	Tack Coat & Providing and applying tack coat with Bitumen emulsion (RS-1) using emulsion distributor at the rate of 0.25 to 0.30 kg per sqm on the prepared granular surfaces treated with primer & cleaned with Hydraulic broom as per Technical Specification Clause 503.						
	Providing and applying tack coat						
		1.0000 0	2865.000	1.350			3867.750
	Total						3867.750
	Total Quantity in sqm						3867.750
6.006	5.9.1.2a						
	20mm thick Open-Graded Premix Carpet using Bituminous (penetration grade/modified bitumen) Binder - Bitumen S-65 & Providing, laying and rolling of open-graded premix carpet of 20 mm thickness composed of 13.2 mm to 5.6 mm aggregates either using penetration grade bitumen or emulsion to required line, grade and level to serve as wearing course on a previously prepared base, including mixing in a suitable plant, laying and rolling with a three wheel 80-100 kN static roller capacity, finished to required level and grades to be followed by seal coat of either Type A or Type B or Type C as per Technical Specification Clause 508. & Case - I By Manual Means & (II) Bitumen (S-65)						
	20mm thick Open-Graded Premix Carpet						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
		1.0000 0	2865.000	1.350			3867.750
	Total						3867.750
	Total Quantity in sqm						3867.750
6.007	5.12.A.3.2a						
	Seal Coat - Manual Means - Type C - Bitumen S-65
 Providing and laying seal coat sealing the voids in a bituminous surface laid to the specified levels, grade and cross fall using Type A, Type B and Type C as per Technical Specification Clause 510
 A. By Manual Means :- Case - III : Type C
 (II) Bitumen (S-65)						
	Providing and applying seal coat						
		1.0000 0	2865.000	1.350			3867.750
	Total						3867.750
	Total Quantity in sqm						3867.750

