

PUBLIC HEALTH ENGINEERING DEPARTMENT

Government of Rajasthan



REVISED SCHEDULE OF RATES

YEAR 2023 - 2024
(Exclusive of GST)
(Effective from 01/04/2026)

APPLICABLE FOR

PHED RAJASTHAN WORKS

Issued by:-

Chief Engineer (Tech) & TM.
RWSSMB, PHED, Jaipur

PUBLIC HEALTH ENGINEERING DEPARTMENT

Government of Rajasthan

REVISED PHED BSR 2023

CONTENTS

Chapter No.	Chapter	P. No.
1	Pipe Line Works.	1-21
2	Construction and Commissioning of Tube Wells, Open Wells and Hand Pumps.	22-33
3	RCC Reservoirs.	34-50
4	Earth Work, Road cutting, Repairing & Trenchless Laying.	51-54
5	Pump Sets.	55-61
6	Valves and Appurtenance.	62-74
7	DOL/Star Delta Starter type LT Panels.	75-77
8	Construction of Pump House and Boundary Wall.	78-79
9	Valve Chambers	80-82
10	Solar based water supply schemes.	83-86
11	Instrumentation.	87-89
12	Earth Work & Civil Works related to Storage Tank, Filter media work	90-93
13	Construction and Commissioning of water treatment plants (WTP)	94
14	Miscellaneous.	95-96

Chapter 1

Pipe line work

Note : All rates are exclusive of GST.

S. No.	Description	Unit	Rate (Rs.)
DI PIPES			
1.1	Providing, lowering, laying in trenches, aligning, fixing in position and jointing Ductile Iron (DI) ISI marked K-7 grade S&S pipes as per IS:8329-2000 (amended up to date), with internal cement mortar lining suitable for potable water with rubber ring (EPDM) joints as per IS: 5382-1985 including transportation and freight charges, inspection charges, loading/ unloading charges, including cost of labour and material, specials (Tee, bend etc.) satisfactory hydraulic testing, disinfection, commissioning etc. complete as per technical specifications and direction of Engineer-in-charge. (excluding earth work) Note : Providing and fixing of all requisite specials as per drawing, design and layout are inclusive in RM measurement of the item and shall not be paid separately. Rates are exclusive of GST.		
1.1.1	80 mm	RMT	1193.22
1.1.2	100 mm	RMT	1240.68
1.1.3	150 mm	RMT	1764.41
1.1.4	200 mm	RMT	2164.41
1.1.5	250 mm	RMT	2802.54
1.1.6	300 mm	RMT	3577.12
1.1.7	350 mm	RMT	4355.93
1.1.8	400 mm	RMT	5312.71
1.1.9	450 mm	RMT	6269.49
1.1.10	500 mm	RMT	7487.29
1.1.11	600 mm	RMT	9799.15
1.1.12	700 mm	RMT	13172.88
1.1.13	800 mm	RMT	16851.69
1.1.14	900 mm	RMT	20661.86
1.1.15	1000 mm	RMT	24853.39

S. No.	Description	Unit	Rate (Rs.)
1.2	Providing, lowering, laying in trenches, aligning, fixing in position and jointing Ductile Iron (DI) ISI marked K-9 grade S&S pipes as per IS:8329-2000 (amended up to date), with internal cement mortar lining suitable for potable water with rubber ring (EPDM) joints as per IS: 5382-1985 including transportation and freight charges, inspection charges, loading/ unloading charges, including cost of labour and material, specials (Tee, bend etc.) satisfactory hydraulic testing, disinfection, commissioning etc. complete as per technical specifications and direction of Engineer-in-charge. (excluding earth work) Note : Providing and fixing of all requisite specials as per drawing, design and layout are inclusive in RM measurement of the item and shall not be paid separately. Rates are exclusive of GST.		
1.2.1	100 mm	RMT	1415.25
1.2.2	150 mm	RMT	2020.34
1.2.3	200 mm	RMT	2573.73
1.2.4	250 mm	RMT	3399.15
1.2.5	300 mm	RMT	4317.80
1.2.6	350 mm	RMT	5251.69
1.2.7	400 mm	RMT	6377.12
1.2.8	450 mm	RMT	7612.71
1.2.9	500 mm	RMT	8918.64
1.2.10	600 mm	RMT	11657.63
1.2.11	700 mm	RMT	14895.76
1.2.12	800 mm	RMT	18237.29
1.2.13	900 mm	RMT	22184.75
1.2.14	1000 mm	RMT	26815.25
1.2.15	1100 mm	RMT	32112.71
1.2.16	1200 mm	RMT	37314.41
1.3	Providing, lowering, laying, aligning, fixing in position and jointing at all level/ depths DI standard specials with rubber ring (EPDM)/ nut bolt and insertion sheet and jointing as per IS: 9523-2000 or as amended up to date, such as tees, bends, tapers, caps etc. within trenches in DI pipe line complete including all material, labour, testing and commissioning along with pipe line as per technical specifications and direction of Engineer-in-charge (excluding earth work). Rates are exclusive of GST.		
1.3.1	All End Socketed		
1.3.1.1	Up to 300 mm Diameter	Kg	122.88
1.3.1.2	Above 300mm and up to 600 mm diameter	Kg	136.44
1.3.1.3	Above 600 mm diameter	Kg	175.42
1.3.2	All End Flanged		
1.3.2.1	Up to 300 mm Diameter	Kg	133.90
1.3.2.2	Above 300mm and up to 600 mm diameter	Kg	151.69
1.3.2.3	Above 600 mm diameter	Kg	199.15
1.3.3	Single Flange/ MJ Collar		

S. No.	Description	Unit	Rate (Rs.)
1.3.3.1	Up to 300 mm Diameter	Kg	127.97
1.3.3.2	Above 300mm and up to 600 mm diameter	Kg	142.37
1.3.3.3	Above 600 mm diameter	Kg	185.59
1.3.4	Double Flange Pipe (up to 1 mtr. length)		
1.3.4.1	Up to 300 mm Diameter	Kg	141.53
1.3.4.2	Above 300mm and up to 600 mm diameter	Kg	165.25
1.3.4.3	Above 600 mm diameter	Kg	208.47
HDPE PIPES			
1.4	<p>Providing, lowering, laying and jointing in trenches, standard lengths HDPE ISI marked Pipes as per IS-4984: 1995 (amended up to date) with necessary jointing material like mechanical connectors, i.e. thread/ insert joint/ quick release coupler joint/ compression fitting joint or flanged joint and specials jointing pipe by electro fusion welding method , including transportation and freight charges, inspection charges, loading/ unloading charges, stacking of pipes, including cost of labour and material, specials (Tee, bend etc.), satisfactory hydraulic testing, disinfection, commissioning etc. complete as per technical specifications and direction of Engineer-in-charge of following class and diameter. (excluding earth work) .</p> <p>Note : Providing and fixing of all requisite specials as per drawing, design and layout are inclusive in RM measurement of the item and shall not be paid separately.</p> <p>Supply may be in coil or straight length in 6 M/12 M.</p> <p>Rates are exclusive of GST.</p>		
1.4.1	HDPE PE-80 PN-6		
1.4.1.1	63 mm dia	RMT	144.92
1.4.1.2	75 mm dia	RMT	183.90
1.4.1.3	90 mm dia	RMT	259.32
1.4.1.4	110 mm dia	RMT	392.37
1.4.2	HDPE PE-100 PN-6		
1.4.2.1	63 mm dia	RMT	122.88
1.4.2.2	75 mm dia	RMT	157.63
1.4.2.3	90 mm dia	RMT	223.73
1.4.2.4	110 mm dia	RMT	374.58
1.4.3	HDPE PE-80 PN-10		
1.4.3.1	90 mm dia	RMT	380.51
1.4.3.2	110 mm dia	RMT	572.03
1.4.4	HDPE PE-100 PN-10		
1.4.4.1	90 mm dia	RMT	331.36
1.4.4.2	110 mm dia	RMT	493.22

S. No.	Description	Unit	Rate (Rs.)
1.5	Providing, lowering, laying and jointing in trenches, standard lengths HDPE ISI marked Pipes as per IS-4984: 1995 (amended up to date) with necessary jointing material like mechanical connectors, i.e. thread/ insert joint/ quick release coupler joint/ compression fitting joint or flanged joint and specials jointing pipe by butt fusion/ electro fusion welding method, including transportation and freight charges, inspection charges, loading/ unloading charges, stacking of pipes, including cost of labour and material, specials (Tee, bend etc.), satisfactory hydraulic testing, disinfection, commissioning etc. complete as per technical specifications and direction of Engineer-in-charge of following class and diameter. (excluding earth work). Note : Providing and fixing of all requisite specials as per drawing, design and layout are inclusive in RM measurement of the item and shall not be paid separately. Supply of pipe shall be in straight length in 6/12 M. Rates are exclusive of GST.		
1.5.1	HDPE PE-80 PN-6		
1.5.1.1	125 mm dia	RMT	562.71
1.5.1.2	140 mm dia	RMT	700.85
1.5.1.3	160 mm dia	RMT	882.20
1.5.1.4	180 mm dia	RMT	1108.47
1.5.1.5	200 mm dia	RMT	1327.97
1.5.1.6	225 mm dia	RMT	1678.81
1.5.2	HDPE PE-100 PN-6		
1.5.2.1	125 mm dia	RMT	485.59
1.5.2.2	140 mm dia	RMT	604.24
1.5.2.3	160 mm dia	RMT	760.17
1.5.2.4	180 mm dia	RMT	953.39
1.5.2.5	200 mm dia	RMT	1142.37
1.5.2.6	225 mm dia	RMT	1438.14
1.5.3	HDPE PE-80 PN-10		
1.5.3.1	125 mm dia	RMT	793.22
1.5.3.2	140 mm dia	RMT	993.22
1.5.3.3	160 mm dia	RMT	1283.05
1.5.3.4	180 mm dia	RMT	1598.31
1.5.3.5	200 mm dia	RMT	1960.17
1.5.3.6	225 mm dia	RMT	2447.46
1.5.4	HDPE PE-100 PN-10		
1.5.4.1	125 mm dia	RMT	674.58
1.5.4.2	140 mm dia	RMT	844.07
1.5.4.3	160 mm dia	RMT	1097.46
1.5.4.4	180 mm dia	RMT	1377.97
1.5.4.5	200 mm dia	RMT	1668.64
1.5.4.6	225 mm dia	RMT	2089.83

S. No.	Description	Unit	Rate (Rs.)
MS PIPES			
1.6	Manufacturing, supplying ,lowering, laying and jointing in position to correct line spirally welded SAW/Fabricated MS Pipe having bevelled end plates / coils, confirming to IS 3589-2001 or its latest revision/ amendments, for following thickness and inside diameter,including transportation and freight charges, inspection charges, loading/ unloading charges, including cost of labour and material, specials (Tee, bend etc.), field joints, satisfactory hydraulic testing, disinfection, commissioning etc. complete as per technical specifications and direction of Engineer-in-charge; (excluding earthwork, internal lining and outer coating). Note : Providing and fixing of all requisite specials as per drawing, design and layout are inclusive in RM measurement of the item and shall not be paid separately. Rates are exclusive of GST.		
1.6.1	Outer dia of pipe 219.1 mm and thickness		
1.6.1.1	2.6 mm	RMT	1377.97
1.6.1.2	3.2 mm	RMT	1690.68
1.6.1.3	4 mm	RMT	2105.93
1.6.1.4	4.5 mm	RMT	2363.56
1.6.2	Outer dia of pipe 273 mm and thickness		
1.6.2.1	3.6 mm	RMT	2373.73
1.6.2.2	4 mm	RMT	2633.05
1.6.2.3	5 mm	RMT	3279.66
1.6.2.4	6.3 mm	RMT	4111.86
1.6.3	Outer dia of pipe 323.9 mm and thickness		
1.6.3.1	4 mm	RMT	3131.36
1.6.3.2	4.5 mm	RMT	3517.80
1.6.3.3	5.6 mm	RMT	4362.71
1.6.3.4	7.1 mm	RMT	5505.08
1.6.4	Outer dia of pipe 355.6 mm and thickness		
1.6.4.1	4 mm	RMT	3442.37
1.6.4.2	5 mm	RMT	4290.68
1.6.4.3	5.6 mm	RMT	4796.61
1.6.4.4	7.1 mm	RMT	6055.93
1.6.4.5	8 mm	RMT	6805.93
1.6.5	Outer dia of pipe 406.4 mm and thickness		
1.6.5.1	4 mm	RMT	3938.98
1.6.5.2	5 mm	RMT	4911.86
1.6.5.3	6.3 mm	RMT	6169.49
1.6.5.4	7.1 mm	RMT	6938.98
1.6.5.5	8.8 mm	RMT	8563.56
1.6.6	Outer dia of pipe 457 mm and thickness		
1.6.6.1	4 mm	RMT	4434.75
1.6.6.2	5 mm	RMT	5531.36
1.6.6.3	6.3 mm	RMT	6949.15
1.6.6.4	7.1 mm	RMT	7817.80

S. No.	Description	Unit	Rate (Rs.)
1.6.6.5	8.8 mm	RMT	9653.39
1.6.7	Outer dia of pipe 508 mm and thickness		
1.6.7.1	5 mm	RMT	6155.08
1.6.7.2	5.6 mm	RMT	6885.59
1.6.7.3	6.3 mm	RMT	7735.59
1.6.7.4	7.1 mm	RMT	8704.24
1.6.7.5	8.8 mm	RMT	10751.69
1.6.7.6	10 mm	RMT	12188.14
1.6.7.7	11 mm	RMT	13380.51
1.6.8	Outer dia of pipe 610 mm and thickness		
1.6.8.1	5.8 mm	RMT	8577.12
1.6.8.2	6.3 mm	RMT	9308.47
1.6.8.3	7.1 mm	RMT	10476.27
1.6.8.4	8.8 mm	RMT	12948.31
1.6.8.5	10 mm	RMT	14684.75
1.6.8.6	11 mm	RMT	16126.27
1.6.8.7	12.5 mm	RMT	18279.66
1.6.9	Outer dia of pipe 711 mm and thickness		
1.6.9.1	6.3 mm	RMT	10866.10
1.6.9.2	7.1 mm	RMT	12231.36
1.6.9.3	8 mm	RMT	13764.41
1.6.9.4	8.8 mm	RMT	15123.73
1.6.9.5	10 mm	RMT	17156.78
1.6.9.6	11 mm	RMT	18844.92
1.6.9.7	12.5 mm	RMT	21369.49
1.6.10	Outer dia of pipe 813 mm and thickness		
1.6.10.1	7.1 mm	RMT	14004.24
1.6.10.2	8 mm	RMT	15761.86
1.6.10.3	8.8 mm	RMT	17320.34
1.6.10.4	10 mm	RMT	19652.54
1.6.10.5	11 mm	RMT	21591.53
1.6.10.6	12.5 mm	RMT	24489.83
1.6.10.7	14.2 mm	RMT	27761.02
1.6.11	Outer dia of pipe 914 mm and thickness		
1.6.11.1	8 mm	RMT	17738.98
1.6.11.2	8.8 mm	RMT	19495.76
1.6.11.3	10 mm	RMT	22124.58
1.6.11.4	11 mm	RMT	24310.17
1.6.11.5	12.5 mm	RMT	27579.66
1.6.11.6	12 mm	RMT	26491.53
1.6.11.7	14.2 mm	RMT	31271.19
1.6.12	Outer dia of pipe 1016 mm and thickness		
1.6.12.1	8.8 mm	RMT	21692.37
1.6.12.2	10 mm	RMT	24621.19
1.6.12.3	11 mm	RMT	27056.78
1.6.12.4	12.5 mm	RMT	30700.00
1.6.12.5	12 mm	RMT	29486.44
1.6.12.6	14.2 mm	RMT	34816.10
1.6.12.7	16 mm	RMT	39159.32

S. No.	Description	Unit	Rate (Rs.)
1.6.13	Outer dia of pipe 1067 mm and thickness		
1.6.13.1	8.8 mm	RMT	22790.68
1.6.13.2	10 mm	RMT	25869.49
1.6.13.3	11 mm	RMT	28429.66
1.6.13.4	12.5 mm	RMT	32260.17
1.6.13.5	12 mm	RMT	30984.75
1.6.13.6	14.2 mm	RMT	36588.98
1.6.13.7	16 mm	RMT	41155.93
1.6.14	Outer dia of pipe 1118 mm and thickness		
1.6.14.1	8.8 mm	RMT	23888.98
1.6.14.2	10 mm	RMT	27117.80
1.6.14.3	11 mm	RMT	29802.54
1.6.14.4	12.5 mm	RMT	33820.34
1.6.14.5	12 mm	RMT	32482.20
1.6.14.6	14.2 mm	RMT	38361.02
1.6.14.7	16 mm	RMT	43153.39
1.6.15	Outer dia of pipe 1219 mm and thickness		
1.6.15.1	10 mm	RMT	29589.83
1.6.15.2	11 mm	RMT	32521.19
1.6.15.3	12.5 mm	RMT	36910.17
1.6.15.4	14.2 mm	RMT	41871.19
1.6.15.5	16 mm	RMT	47108.47
1.6.15.6	17.5 mm	RMT	51460.17
1.6.16	Outer dia of pipe 1321 mm and thickness	RMT	
1.6.16.1	12.5 mm		40031.36
1.6.16.2	14.2 mm	RMT	45416.10
1.6.16.3	16 mm	RMT	51102.54
1.6.16.4	17.5 mm	RMT	55828.81
1.6.16.5	20 mm	RMT	63682.20
1.6.17	Outer dia of pipe 1422 mm and thickness		
1.6.17.1	12.5 mm	RMT	43121.19
1.6.17.2	14.2 mm	RMT	48926.27
1.6.17.3	16 mm	RMT	55057.63
1.6.17.4	17.5 mm	RMT	60155.08
1.6.17.5	20 mm	RMT	68626.27
1.6.18	Outer dia of pipe 1524 mm and thickness		
1.6.18.1	14.2 mm	RMT	52471.19
1.6.18.2	16 mm	RMT	59051.69
1.6.18.3	17.5 mm	RMT	64523.73
1.6.18.4	20 mm	RMT	73618.64
1.6.18.5	22.2 mm	RMT	81597.46
1.6.19	Outer dia of pipe 1626 mm and thickness		
1.6.19.1	14.2 mm	RMT	56016.10
1.6.19.2	16 mm	RMT	63045.76
1.6.19.3	17.5 mm	RMT	68892.37
1.6.19.4	20 mm	RMT	78611.86
1.6.19.5	22.2 mm	RMT	87139.83
1.6.20	Outer dia of pipe 1727 mm and thickness		
1.6.20.1	14.2 mm	RMT	59526.27

S. No.	Description	Unit	Rate (Rs.)
1.6.20.2	16 mm	RMT	67000.85
1.6.20.3	17.5 mm	RMT	73218.64
1.6.20.4	20 mm	RMT	83555.93
1.6.20.5	22.2 mm	RMT	92627.12
1.6.21	Outer dia of pipe 1829 mm and thickness		
1.6.21.1	14.2 mm	RMT	63071.19
1.6.21.2	16 mm	RMT	70995.76
1.6.21.3	17.5 mm	RMT	77587.29
1.6.21.4	20 mm	RMT	88548.31
1.6.21.5	22.2 mm	RMT	98169.49
1.6.22	Outer dia of pipe 2032 mm and thickness		
1.6.22.1	16 mm	RMT	78944.92
1.6.22.2	17.5 mm	RMT	86281.36
1.6.22.3	20 mm	RMT	98484.75
1.6.22.4	22.2 mm	RMT	109199.15
1.6.22.5	25 mm	RMT	122800.00
1.6.23	Outer dia of pipe 2235 mm and thickness		
1.6.23.1	17.5 mm	RMT	94976.27
1.6.23.2	20 mm	RMT	108422.03
1.6.23.3	22.2 mm	RMT	120228.81
1.6.23.4	25 mm	RMT	135221.19
1.6.24	Outer dia of pipe 2540 mm and thickness		
1.6.24.1	20 mm	RMT	123350.85
1.6.24.2	22.2 mm	RMT	136800.00
1.6.24.3	25 mm	RMT	153883.05
Lining and coating on MS pipe			
1.7	<p>Providing and applying 3LPE (3 Layer Polyethylene) tape coating conforming to ISO 21809-1, DIN 30670-91 or CAN/CSA Z245.20-10 to external surface of M.S. Pipe comprising of a layer of fusion bonded epoxy (FBE), overlaid with PE adhesive with an outer layer of high density polyethylene including preparation of surface by solvent cleaning, abrasive blasting to a finish of Grade 2.5 to DIN EN ISO 8501-1 and surface profile of 50 to 75 microns as per DIN EN ISO 8503-2. Minimum thickness of FBE shall be 250 microns including field joints coating at site complete as per technical specification and direction of Engineer-in-Charge.</p> <p>Minimum thickness of coating shall be 3.0 mm on weld seam as well as remaining surface.</p> <p>Rates is exclusive of GST.</p>	SQM	1039.83

S. No.	Description	Unit	Rate (Rs.)
1.8	Providing and applying DFBE (Dual Layer Fusion Bonded Epoxy) Coating to the external surface of M.S. Pipes conforming to Canadian Standard CSA Z 245.20-10, consisting of 1st layer of (FBE) Fusion Bonded Epoxy powder and 2nd layer also of FBE powder as Abrasion Resistant Overcoat (ARO) including preparation of surface by solvent cleaning, abrasive blasting to a finish of Grade 2.5 to DIN EN ISO 8501-1 and surface profile of 50 to 75 microns as per DIN EN ISO 8503-2 including field joints coating at site complete as per technical specification and direction of Engineer in In charge. Minimum thickness of coating shall be 600 micron Rates is exclusive of GST.	SQM	808.47
1.9	Providing and applying Spray applied, 100% Solids (Solvent free) Two Component PU (Polyurethane) coating as per AWWA C222 Standard on external surface of M.S. Pipe including preparation of pipe outer surface by solvent cleaning, abrasive blasting to a finish of Grade 2.5 to DIN EN ISO 8501-1 and surface profile of 50 to 75 microns as per DIN EN ISO 8503-2 including field joints coating at site complete as per technical specification and direction of Engineer in In charge. Minimum dry film thickness of coating shall be 1000 micron Rate is exclusive of GST.	SQM	722.03
1.10	Providing and applying with mechanical arrangement 1:3 proportion cement sand gunite , of following thickness to M.S. Pipe outer surface under 2.1 Kg per Sqcm to 2.80 Kg per Sqcm. pressure including removing the loose materials as directed by EIC and including scrapping the surface with wire brushes, degreasing, cleaning by compressed air and providing fixing BRC fabric no.14 as reinforcement, curing for 21 days, disposing off the rebound materials with in a lead of 50 mtr including field joints coating at site complete as per technical specification and direction of Engineer in In charge. Rates are exclusive of GST.		
1.10.1	25 mm thick	SQM	461.86
1.10.2	40 mm thick	SQM	519.49
1.11	Providing and applying polyolifine tape coating (Cold applied) to external surface of M.S. Pipe as per AWWA C214-14 Standard comprising of liquid adhesive, inner layer tape and outer layer tape including preparation of outer surface of pipe by solvent cleaning, abrasive blasting to a finish of Grade 2.5 to DIN EN ISO 8501-1 and surface profile of 50 to 75 microns as per DIN EN ISO 8503-2 including field joints coating at site complete as per technical specification and direction of Engineer in In charge. Rate is exclusive of GST.	SQM	1155.08

S. No.	Description	Unit	Rate (Rs.)
1.12	Providing and applying Solvent free, two pack liquid epoxy lining to internal surface of M.S. Pipe as per BS 6920:2000 and AWWA C210 standard including preparation of internal surface of pipe by cleaning and abrasive blasting including field joints coating at site complete as per technical specification and direction of Engineer in In charge. Liquid Epoxy shall be NSF/WARS approved for drinking water and minimum thickness of lining shall be 406 microns. Rates is exclusive of GST.	SQM	346.61
1.13	Providing and applying 100% Solids, Rigid, DTM Polyurethane lining to internal surface of M.S. Pipe as per AWWA C222 standard including preparation of internal surface of pipe by cleaning and abrasive blasting including field joints coating at site complete as per technical specification and direction of Engineer in In charge. Polyurethane Coating shall be NSF/WARS/SS-375 approved for drinking water and minimum thickness of lining shall be 500 microns. Rates is exclusive of GST.	SQM	544.92
1.14	Providing and making inner cement mortar lining to M.S. Pipes with mechanical devices in cement mortar 1:1 proportion , including cost of all materials, labour, special sand required, machinery, power generation, all equipments, including carrying out "C" value performance test of pipeline, including field joints at site complete as per technical specification and direction of Engineer in In charge. Rates are exclusive of GST.		
1.14.1	9 mm thick for pipes up to 700 mm dia	SQM	260.17
1.14.2	12 mm thick for pipes above 700 mm dia	SQM	288.98
MS Specials			
1.15	Providing and fixing of flanged/ plain ended MS Specials made from MS sheet strips of relevant IS specification of approved thickness by welding, lowering, laying, aligning, fixing in position at all level/ depths in trenches complete material, labour, inside lining, outside coating, testing and commissioning along with pipe line as per technical specifications and direction of Engineer-in-charge. Rates are exclusive of GST.		
1.15.1	MS pipe specials up to 600mm dia (with minimum 5mm thickness sheet)	Kg	106.78
1.15.2	MS pipe specials above 600mm dia(with minimum 6.3mm thickness sheet)	Kg	113.56

S. No.	Description	Unit	Rate (Rs.)
BWSC PIPES			
1.16	Providing , lowering, laying and jointing of Bar Wrapped Steel Cylinder Pipes (BWSC) for overlapping steel welded joint as per IS:15155-2001(amended up to date) of following class and diameter, including transportation and freight charges, inspection charges, loading/ unloading charges, including cost of labour and material, specials (Tee, bend etc.), field joints, satisfactory hydraulic testing, disinfection, commissioning etc. complete as per technical specifications & direction of Engineer-in-charge (excluding earth work). Note : Providing and fixing of all requisite specials as per drawing, design and layout are inclusive in RM measurement of the item and shall not be paid separately. Rates are exclusive of GST.		
	Notes		
1)	Class mentioned below represents the Factory Test pressure of pipe.		
2)	For external coating at site to the joints, necessary polythene wrapping for pouring cement slurry shall also be provided with each pipe.		
1.16.1	Factory Test Pressure 12 Kg/ Cm2		
1.16.1.1	250mm	RMT	2709.32
1.16.1.2	300 mm	RMT	3290.68
1.16.1.3	350 mm	RMT	3919.49
1.16.1.4	400 mm	RMT	4488.14
1.16.1.5	450 mm	RMT	5179.66
1.16.1.6	500 mm	RMT	5605.08
1.16.1.7	600 mm	RMT	7198.31
1.16.1.8	700 mm	RMT	9257.63
1.16.1.9	800 mm	RMT	11352.54
1.16.1.10	900 mm	RMT	13725.42
1.16.1.11	1000 mm	RMT	16514.41
1.16.1.12	1100 mm	RMT	22731.36
1.16.1.13	1200 mm	RMT	25111.86
1.16.1.14	1300 mm	RMT	27564.41
1.16.1.15	1400 mm	RMT	30733.90
1.16.1.16	1500 mm	RMT	36503.39
1.16.1.17	1600 mm	RMT	38866.95
1.16.2	Factory Test Pressure 14 Kg/ Cm2		
1.16.2.1	250mm	RMT	2721.19
1.16.2.2	300 mm	RMT	3300.00
1.16.2.3	350 mm	RMT	3844.92
1.16.2.4	400 mm	RMT	4500.00
1.16.2.5	450 mm	RMT	5190.68
1.16.2.6	500 mm	RMT	5755.08
1.16.2.7	600 mm	RMT	7509.32

S. No.	Description	Unit	Rate (Rs.)
1.16.2.8	700 mm	RMT	10311.02
1.16.2.9	800 mm	RMT	12622.03
1.16.2.10	900 mm	RMT	15303.39
1.16.2.11	1000 mm	RMT	19412.71
1.16.2.12	1100 mm	RMT	22790.68
1.16.2.13	1200 mm	RMT	25365.25
1.16.2.14	1300 mm	RMT	29782.20
1.16.2.15	1400 mm	RMT	34379.66
1.16.2.16	1500 mm	RMT	41853.39
1.16.2.17	1600 mm	RMT	45277.97
1.16.3	Factory Test Pressure 16 Kg/Cm2		
1.16.3.1	250mm	RMT	2721.19
1.16.3.2	300 mm	RMT	3323.73
1.16.3.3	350 mm	RMT	3927.12
1.16.3.4	400 mm	RMT	4513.56
1.16.3.5	450 mm	RMT	5261.02
1.16.3.6	500 mm	RMT	6123.73
1.16.3.7	600 mm	RMT	8004.24
1.16.3.8	700 mm	RMT	11055.08
1.16.3.9	800 mm	RMT	12738.98
1.16.3.10	900 mm	RMT	16502.54
1.16.3.11	1000 mm	RMT	19950.85
1.16.3.12	1100 mm	RMT	24248.31
1.16.3.13	1200 mm	RMT	28183.90
1.16.3.14	1300 mm	RMT	32444.07
1.16.3.15	1400 mm	RMT	37394.07
1.16.3.16	1500 mm	RMT	43756.78
1.16.3.17	1600 mm	RMT	48828.81
1.16.4	Factory Test Pressure 18 Kg/Cm2		
1.16.4.1	250mm	RMT	2722.88
1.16.4.2	300 mm	RMT	3348.31
1.16.4.3	350 mm	RMT	3931.36
1.16.4.4	400 mm	RMT	4568.64
1.16.4.5	450 mm	RMT	5560.17
1.16.4.6	500 mm	RMT	6478.81
1.16.4.7	600 mm	RMT	8532.20
1.16.4.8	700 mm	RMT	11804.24
1.16.4.9	800 mm	RMT	13714.41
1.16.4.10	900 mm	RMT	17696.61
1.16.4.11	1000 mm	RMT	21560.17
1.16.4.12	1100 mm	RMT	26011.02
1.16.4.13	1200 mm	RMT	29424.58
1.16.4.14	1300 mm	RMT	34844.07
1.16.4.15	1400 mm	RMT	39950.85
1.16.4.16	1500 mm	RMT	46927.12
1.16.4.17	1600 mm	RMT	52634.75
1.16.5	Factory Test Pressure 20 Kg/Cm2		
1.16.5.1	250mm	RMT	2729.66
1.16.5.2	300 mm	RMT	3360.17

S. No.	Description	Unit	Rate (Rs.)
1.16.5.3	350 mm	RMT	3984.75
1.16.5.4	400 mm	RMT	4880.51
1.16.5.5	450 mm	RMT	5939.83
1.16.5.6	500 mm	RMT	6980.51
1.16.5.7	600 mm	RMT	9191.53
1.16.5.8	700 mm	RMT	12802.54
1.16.5.9	800 mm	RMT	15854.24
1.16.5.10	900 mm	RMT	19024.58
1.16.5.11	1000 mm	RMT	23463.56
1.16.5.12	1100 mm	RMT	27268.64
1.16.5.13	1200 mm	RMT	32341.53
1.16.5.14	1300 mm	RMT	36779.66
1.16.5.15	1400 mm	RMT	43122.88
1.16.5.16	1500 mm	RMT	51999.15
1.16.5.17	1600 mm	RMT	57072.88
Laying Jointing and Removing of pipe line			
1.17	De-jointing and removing of already laid CI/DI pipes of following diameters in excavated trenches with care, without damaging pipes, CID joints, valves, specials etc. and other materials and then refilling of soil after de-laying and de-jointing of pipelines with proper compaction and disposing of all surplus soil as directed with in a lead of 30 mtr. This also include stacking the pipes with care and transporting the same to div./sub div. store or as directed by EIC with in the division. (Rates are Exclusive of Earth Work) Rates are exclusive of GST.		
1.17.1	80 mm	RMT	38.14
1.17.2	100 mm	RMT	42.37
1.17.3	125 mm	RMT	42.37
1.17.4	150 mm	RMT	50.00
1.17.5	200 mm	RMT	66.95
1.17.6	250 mm	RMT	83.05
1.17.7	300 mm	RMT	100.85
1.17.8	350 mm	RMT	113.56
1.17.9	400 mm	RMT	138.98
1.17.10	450 mm	RMT	169.49
1.17.11	500 mm	RMT	217.80
1.17.12	600 mm	RMT	261.86
1.18	De-jointing and removing of already laid MS pipes of following diameters in excavated trenches with care, without damaging pipes, CID joints, valves, specials etc. and other materials and then refilling of soil after de-laying and de-jointing of pipelines with proper compaction and disposing of all surplus soil as directed with in a lead of 30 mtr. This also include stacking the pipes with care and transporting the same to div./sub div. store or as directed by EIC with in the division. (Rates are Exclusive of Earth Work) Rates are exclusive of GST.		
1.18.1	100 mm	RMT	27.12

S. No.	Description	Unit	Rate (Rs.)
1.18.2	125 mm	RMT	27.12
1.18.3	150 mm	RMT	32.20
1.18.4	200 mm	RMT	63.56
1.18.5	250 mm	RMT	81.36
1.18.6	300 mm	RMT	99.15
1.18.7	350 mm	RMT	116.95
1.18.8	400 mm	RMT	134.75
1.18.9	450 mm	RMT	172.03
1.18.10	500 mm	RMT	207.63
1.18.11	600 mm	RMT	250.00
1.19	Laying, Jointing, Testing and Commissioning of uPVC/ PVC Pipes (Class- 3/ 4) in assorted length with specials, valves etc. including local handling and transportation from PHED store and then refilling of soil with proper compaction and disposing of all surplus soil as directed with in a lead of 30 mtr as per satisfaction of EIC. (Rates are Exclusive of Earth Work and jointing materials) Rates are exclusive of GST.		
1.19.1	90 mm	RMT	14.41
1.19.2	110 mm	RMT	16.10
1.19.3	125 mm	RMT	19.49
1.19.4	140 mm	RMT	21.19
1.19.5	160 mm	RMT	22.88
1.19.6	180 mm	RMT	25.42
1.19.7	200 mm	RMT	26.27
1.19.8	225 mm	RMT	28.81
1.19.9	250 mm	RMT	30.51
1.19.10	280mm	RMT	32.20
1.19.11	315 mm	RMT	34.75
1.20	Laying, Jointing, Testing and Commissioning of Ductile Iron (DI) Pipes of any class in assorted length with specials, valves etc. including local handling and transportation from PHED store and then refilling of soil with proper compaction and disposing of all surplus soil as directed with in a lead of 30 mtr as per satisfaction of EIC. (Rates are Exclusive of Earth Work and jointing materials) Rates are exclusive of GST.		
1.20.1	80 mm	RMT	40.68
1.20.2	100 mm	RMT	42.37
1.20.3	125 mm	RMT	44.07
1.20.4	150 mm	RMT	54.24
1.20.5	200 mm	RMT	67.80
1.20.6	250 mm	RMT	84.75
1.20.7	300 mm	RMT	100.00
1.20.8	350 mm	RMT	116.95
1.20.9	400 mm	RMT	142.37
1.20.10	450 mm	RMT	177.97
1.20.11	500 mm	RMT	228.81
1.20.12	600 mm	RMT	268.64

S. No.	Description	Unit	Rate (Rs.)
1.21	Laying, Jointing, Testing and Commissioning of AC Pressure Pipes (Class- 10/15/20) of any class in assorted length with specials, valves etc. including local handling and transportation from PHED store and then refilling of soil with proper compaction and disposing of all surplus soil as directed with in a lead of 30 mtr as per satisfaction of EIC. (Rates are Exclusive of Earth Work and jointing materials) Rates are exclusive of GST.		
1.21.1	80 mm	RMT	26.27
1.21.2	100 mm	RMT	28.81
1.21.3	125 mm	RMT	31.36
1.21.4	150 mm	RMT	33.05
1.21.5	200 mm	RMT	39.83
1.21.6	250 mm	RMT	44.07
1.21.7	300 mm	RMT	83.05
1.21.8	350 mm	RMT	89.83
1.21.9	400 mm	RMT	102.54
1.21.10	450 mm	RMT	117.80
1.21.11	500 mm	RMT	133.90
1.21.12	600 mm	RMT	137.29
1.22	Laying, Jointing, Testing and Commissioning of HDPE pipes of any grade in assorted length with specials, valves etc. with jointing material/ fixing of necessary jointing material like mechanical connector i.e. thread/ insert joint/quick release coupler joint compression fitting joint or flanged joint and jointing pipe in proper position and jointing of all specials by butt fusion / electro fusion welding method, including local handling and transportation from PHED store and then refilling of soil with proper compaction and disposing of all surplus soil as directed with in a lead of 30 mtr as per satisfaction of EIC. (Rates are Exclusive of Earth Work and jointing materials) Rates are exclusive of GST.		
1.22.1	90 mm	RMT	11.86
1.22.2	110 mm	RMT	13.56
1.22.3	125 mm	RMT	59.32
1.22.4	140 mm	RMT	65.25
1.22.5	160 mm	RMT	73.73
1.22.6	180 mm	RMT	81.36
1.22.7	200 mm	RMT	89.83
1.22.8	225 mm	RMT	99.15

S. No.	Description	Unit	Rate (Rs.)
AC pipes			
1.23	Providing, lowering, laying and jointing in trenches, standard lengths ISI marked AC pressure pipe class 15 manufactured by MAZZA process as per IS-1592-2003 or amended up to date with AC coupling and EPDM Rubber sealing rings of Type -3 as per IS: 5382/1985 (Reaffirmed 1998) or amended up to date, including transportation and freight charges, inspection charges, loading/unloading charges, stacking of pipes, labour and material, satisfactory hydraulic testing etc. complete as per technical specifications and direction of Engineer-in-charge. (excluding earth work and specials) Note: These pipes shall only be used for raw water conveyance main from Canal outlet to raw water reservoirs and interconnection works. Rates are exclusive of GST.		
1.23.1	150 mm dia CI-15	RMT	616.10
1.23.2	200 mm dia CI-15	RMT	1002.54
1.23.3	250 mm dia CI-15	RMT	1373.73
1.23.4	300 mm dia CI-15	RMT	1988.98
1.23.5	350 mm dia CI-15	RMT	2520.34
1.23.6	400 mm dia CI-15	RMT	3336.44
1.23.7	450 mm dia CI-15	RMT	3919.49
1.23.8	500 mm dia CI-15	RMT	4961.86
1.23.9	600 mm dia CI-15	RMT	7072.03
CI Specials			
1.24	Providing, lowering, laying, aligning, fixing in position at all level/ depths CI Class - B specials as per IS : 1538, amended up to date in trenches complete including all material, labour, testing and commissioning along with pipe line/ appurtenance as per Technical Specifications and as per direction of Engineer. Note : E/w to be measured and paid separately. Rates are exclusive of GST.		
1.24.1	Plain ended CI specials including tail piece, spigot end and socket end.		
1.24.1.1	Up to 300 mm dia	Kg	94.07
1.24.1.2	Above 300 mm and up to 600 mm dia	Kg	109.32
1.24.2	Double flanged CI pipe fittings.		
1.24.2.1	Up to 300 mm dia	Kg	108.47
1.24.2.2	Above 300 mm and up to 600 mm dia	Kg	121.19

S. No.	Description	Unit	Rate (Rs.)
House hold tap connections			
1.25	<p>Providing Household Tap Connection as per technical specification and approved drawing as per relevant IS code (amended up to date) from uPVC/DI/AC/MS/GI pipe line up to consumer meter/premises by using PP/MS saddle piece (Complete job).This job includes digging out suitable size of pits and trench for laying service line in all kinds of soil (excluding road); depositing and refilling of pit & jhiri with watering & ramming /compacting in layers and disposal of surplus excavated soil as directed with in a lead of 100 meter ; providing & fixing of all fitting duly approved in accordance with specification for potable water including MS/PP saddle piece, gunmetal ferrule 4.0 mm , GM Full-way Valve (IS:778 Mark) or ball valve (min. weight 165 gm) and specials, below ground level 20 mm nominal dia MDPE pipe PE 80 PN 16 as per ISO 4427 / 20 mm nominal dia PPR-C (Three layered) pipe PN16 SDR 7.4 (IS:15801:2008) (ISI mark) and above ground level using 20 mm dia PPR-C pipe with standard PPR fittings/ 15 mm dia GI pipe with fittings in the premises for fixing a tap / meter box (excluding) ,including accessories with flushing, cleaning, disinfecting and testing of pipe line complete required for making of service connection complete in all respect including labour charges . The service line should be laid at least 45 cm below ground level.</p> <p>Note: Road cut and restoration is not part of this item and paid separately.</p> <p>Rate is exclusive of GST.</p>		
1.25.1	For connection with 20 mm dia MDPE/PPR-C pipe length up to 05 mtr.	Each	1405.08

S. No.	Description	Unit	Rate (Rs.)
1.26	<p>Providing Household Tap Connection as per technical specification and approved drawing and as per relevant IS code (amended up to date) from HDPE pipe line up to consumer meter/premises by using electro fusion saddle piece (Complete job).This job includes digging out suitable size of pits and trench for laying service line in all kinds of soil; depositing and refilling of pit & jhiri with watering & ramming /compacting in layers and disposal of surplus excavated soil as directed with in a lead of 100 meter ; providing & fixing of all fitting duly approved in accordance with specification for potable water including electrofusion saddle piece, gunmetal ferrule 4.0 mm , GM Full-way Valve (IS:778 Mark) or wheel valve and specials, below ground level 20 mm nominal dia MDPE pipe PE 80 PN 16 as per ISO 4427 / 20 mm nominal dia PPR-C (Three layered) pipe PN16 SDR 7.4 (IS:15801:2008) (ISI mark) for and above ground level using 20 mm dia PPR-C pipe with standard PPR fittings/ 15 mm dia GI pipes with fittings in the premises for fixing a tap / meter box (excluding) ,including accessories with flushing, cleaning, disinfecting and testing of pipe line complete required for making of service connection complete in all respect including labour charges . The service line should be laid at least 45 cm below ground level.</p> <p>Note: Road cut and restoration is not part of this item and paid separately.</p> <p>Rate is exclusive of GST.</p>		
1.26.1	For connection with 20 mm dia MDPE/PPR-C pipe length up to 05 mtr.	Each	1683.05
1.27	<p>Providing Household Tap Connection as per technical specification and approved drawing as per relevant IS code (amended up to date) from HDPE/uPVC/DI/AC/MS/GI pipe line up to consumer meter/premises by using PP mechanical Integrated saddle with inbuilt flow control valve made out of SS316 designed for 5 LPM discharge at 0.5 bar pressure , not exceeding the flow of 7 LPM at 2 bar and a compression elbow, moulded in single piece/ fusion welded (Complete job) including digging out suitable size of pits and trench for laying service line in all kinds of soil; depositing and refilling of pit & jhiri with watering & ramming /compacting in layers and disposal of surplus excavated soil as directed with in a lead of 100 meter ; providing & fixing of all fitting duly approved in accordance with specification for potable water including GM Full-way Valve (IS:778 Mark) or wheel valve and specials with 20 mm nominal dia MDPE pipe PE 80 PN 16 as per ISO 4427 / 20 mm nominal dia PPR-C (Three layered) pipe PN16 SDR 7.4 (IS:15801:2008) (ISI mark) and above ground level using PPR-C pipe with standard PPR fittings/ GI pipes in the premises for fixing a tap / meter box (excluding) ,including accessories with flushing, cleaning, disinfecting and testing of pipe line complete required for making of service connection complete in all respect including labour charges . The service line should be laid at least 45 cm below ground level.</p>		

S. No.	Description	Unit	Rate (Rs.)
	Note: Road cut and restoration is not part of this item and paid separately. Rate is exclusive of GST.		
1.27.1	For connection with 20 mm dia MDPE/PPR-C pipe length up to 05 mtr.	Each	1508.47
1.28	P & F Bib cock (IS : 781 mark), superior quality of approved make , brass 400 gm, 15 mm nominal bore. Rate is exclusive of GST.	Each	263.56
1.29	P & F Bib cock (IS : 8931 mark), superior quality of approved make, chrome plated with complete brass body including brass handle with wt. 300 to 325 gm.15 mm nominal bore. Rate is exclusive of GST.	Each	263.56
1.30	Road cutting for house hold service connection in minimum trench width wherever road crossing is required. Road cutting of cement concrete,WBM, Black top etc. of all thickness shall be done by using a concrete cutter machine keeping minimum trench width and restoration of the road with Cement concrete with PCC M-10 and CC M-30 grade as per specification and direction of Engineer in charge. Rate is exclusive of GST.	Mtr	169.49
1.31	Add extra over item no 1.21, 1.22 & 1.23 for providing 20 mm PE 80 PN 16 as per ISO 4427 MDPE pipe including excavation, providing, laying & jointing of service line above 5.00 mtr. Rate is exclusive of GST.	Mtr	37.29
1.32	Add extra over item no 1.21, 1.22 & 1.23 for providing 20 mm ISI marked PN16 SDR 7.4 (IS:15801:2008) PPR-C (Three layered) pipe including excavation, providing, laying & jointing of service line above 5.00 mtr. Rate is exclusive of GST.	Mtr	48.31
PVC-O Pipe			
1.33	Providing, lowering, laying and jointing in trenches, standard lengths ISI marked Rigid PVC-O S/S Pipes (push on joints) as per IS-16647: 2017 (amended up to date) with EPDM Gasket seals on joints including transportation and freight charges, inspection charges, loading/ unloading charges, stacking of pipes, laying of pipes, including cost of labour and material, specials (Tee, bend etc.), satisfactory hydraulic testing, disinfection etc. complete as per technical specifications and direction of Engineer-in-charge of following class and diameter. Note : Providing and fixing of all requisite specials as per drawing, design and layout are inclusive in RM measurement of the item and shall not be paid separately. Rates are exclusive of GST.		
1.33.1	PVC-O pipe Class 500 PN-16		
1.33.1.1	110 mm dia	RMT	740.68
1.33.1.2	160 mm dia	RMT	1254.24
1.33.1.3	200 mm dia	RMT	1441.53
1.33.1.4	250 mm dia	RMT	1932.20

S. No.	Description	Unit	Rate (Rs.)
1.33.1.5	315 mm dia	RMT	2355.93
1.33.2	PVC-O pipe Class 500 PN-12.5		
1.33.2.1	110 mm dia	RMT	641.53
1.33.2.2	160 mm dia	RMT	1085.59
1.33.2.3	200 mm dia	RMT	1238.98
PTMT Bib Cock			
1.34	Providing and fixing ISI mark (IS 9763: 2000 or amended up to date) PTMT bib cock 15 mm nominal bore, minimum weight 92 gms and length 100 mm as per technical specification, approved make and direction of Engineer in charge. Rate is exclusive of GST.	Each	166.10
Double chambered restrained joint DI Pipes			
1.35	Providing, lowering, laying and jointing of ISI marked Double chambered restrained joint DI K9 Pipes confirming to IS:8329-2000 (amended upto date); restrained joints are designed and tested as per ISO 10804: 2018 (to be used for minimum required length as per design along with double chambered restrained DI fittings to avoid concrete thrust block at bends) including rubber gaskets confirming to IS 5382 -1985/8329-2000 with latest amendments and locking bars & rubber spacers , conveying to work site, rolling and lowering into trenches, laying true to line, level and perfect linking at joints, testing and commissioning, including loading and unloading, cutting of pipes wherever necessary, jointing with DI special (excluding the cost of restrained joint specials) and rubber gaskets, cleaning the socket and spigot end with soap solution, applying soft soap to the socket and spigot ends before insertion of rubber gaskets, jacking and fixing in perfect conditions etc. The cost includes all accessories and hydraulic test to the required pressure and cost of all jointing materials etc complete including satisfactory hydraulic testing, disinfection etc. complete as per technical specifications and direction of Engineer-in-charge. (excluding earth work) Rates are exclusive of GST.		
1.35.1	100 mm	RMT	2072.03
1.35.2	150 mm	RMT	2904.24
1.35.3	200 mm	RMT	3951.69
1.35.4	250 mm	RMT	5220.34
1.35.5	300 mm	RMT	6526.27
1.35.6	350 mm	RMT	8094.07
1.35.7	400 mm	RMT	9526.27
1.35.8	450 mm	RMT	11229.66
1.35.9	500 mm	RMT	13073.73
1.35.10	600 mm	RMT	17437.29
1.35.11	700 mm	RMT	22688.98
1.35.12	800 mm	RMT	24579.66
1.35.13	900 mm	RMT	34635.59
1.35.14	1000 mm	RMT	40401.69

S. No.	Description	Unit	Rate (Rs.)
1.36	Providing, lowering, laying, aligning, fixing in position and jointing at level/ depths Ductile Iron Double Chambered Restrained Joint specials confirming to IS 9523 : 2000 of Class K-12 with internal Cement mortar lining and external Zinc rich paint coating followed by a finishing layer of bitumen coating duly ISI marked. Joints will be of Double Chamber Restrained Type as per ISO 10804:2018 including rubber gasket confirming to IS 5382 : 1985 and locking bars & rubber gaskets etc complete as per technical specifications and direction of Engineer-in-charge, (excluding earth work). Rates are exclusive of GST.		
1.36.1	Upto 300 mm Diameter	Kg	194.07
1.36.2	Above 300 mm and up to 600 mm diameter	Kg	203.39
1.36.3	Above 600 mm diameter	Kg	259.32

Chapter-2

Construction and Commissioning of Tube wells, Open Wells & Hand Pumps.

Note : All rates are exclusive of GST.

S. No.	Description	Unit	Rate (Rs.)
TUBE WELLS			
2.1	Construction of tube well from ground level & up to 100 mtr depth to accommodate housing and assembly pipe of following sizes in all type of alluvium strata unconsolidated formation such as pebbles, boulders etc. by percussion/rotary drilling method as per IS:2800 Part 1: 1991 and IS:2800 Part II: 1979 (both amended up to date) and technical specifications, with gravel as per IS:4097-1967 and it's packing as per IS: 2800 (Part I & II) 1979 as amended up to date (the work includes the cost of gravel & it's primary packing and packing during development, lowering of housing & strainer assembly pipes with supply and wrapping of coir-rope, wherever necessary for arresting fine sand particles and development work, but excluding the cost of housing and strainer pipe assembly). The work would be completed after obtaining sand free water. Rates are exclusive of GST.		
2.1.1	Nominal bore 150 mm dia.	Mtr	842.37
2.1.2	Nominal bore 200 mm dia.	Mtr	1290.68
2.1.3	Nominal bore 250 mm dia.	Mtr	1510.17
2.1.4	Add 15% extra on above item (Item no 2.1.1 to 2.1.3) for drilling depth beyond 100 mtr and up to 200 mtr, rate shall be applicable for only extra depth beyond 100 mtr and up to 200 mtr.		
2.1.5	Add 40% extra on above item (Item no 2.1.1 to 2.1.3) for drilling depth beyond 200 mtr, rate shall be applicable for only extra depth beyond 200 mtr .		
2.2	Construction of Tube Well from ground level and up to 100 mtr. depth to accommodate housing and assembly pipe in all type of alluvium strata, unconsolidated formation such as pebbles, boulders etc. by percussion/ rotary drilling method as per IS:2800 Part 1: 1991 and IS:2800 Part II: 1979 (both amended up to date) and technical specifications for removal of overburden. The work includes the cost of lowering of casing pipe, but excludes the cost of casing pipe. Rates are exclusive of GST.		
2.2.1	Nominal bore 200 mm dia.	Mtr	1039.83
2.2.2	Nominal bore 250 mm dia.	Mtr	1172.88
2.2.3	Add 15% extra on above item (Item No 2.2.1 to 2.2.2) for drilling depth beyond 100 mtr, rate shall be applicable for only extra depth beyond 100 mtr .		

S. No.	Description	Unit	Rate (Rs.)
2.3	Construction of tube well after completion of drilling by rotary /percussion method & up to 100 mtr. depth in all type of rocks by DTH system as per IS:2800 Part 1: 1991 and IS:2800 Part II: 1979 (both amended up to date) and technical specifications. The work shall be deemed completed only after obtaining sand free water. The bore well should have a throughout nominal size bore beyond casing pipe. Rates are exclusive of GST.		
2.3.1	Nominal bore 150 mm dia.	Mtr	740.68
2.3.2	Nominal bore 200 mm dia.	Mtr	1070.34
2.3.3	Nominal bore 250 mm dia.	Mtr	1298.31
2.3.4	Add 15% extra on above item (Item No 2.3.1 to 2.3.3) for drilling depth beyond 100 mtr and up to 200 mtr from ground level, rate shall be applicable for only extra depth beyond 100 mtr and up to 200 mtr.		
2.3.5	Add 30% extra on above item (Item No 2.3.1 to 2.3.3) for drilling depth beyond 200 mtr and from ground level, rate shall be applicable for only extra depth beyond 200 mtr .		
2.3.6	Add 15% extra on above item (Item No 2.3.1 to 2.3.3) for drilling, where strata is collapsible and lowering of casing pipe is required . The work includes lowering of casing pipe, but excluding the cost of casing pipe. The rate shall be applicable for stretch of collapsible strata only.		
2.4	Construction of Tube Well up to 100 mtr. depth in all type of rocks by DTH system & over burden to accommodate casing pipe of following sizes in all types of soils & over burden including lowering of casing pipes, (if required) excluding cost of casing pipes, as per IS:2800 Part 1: 1991 and IS:2800 Part II: 1979 (both amended up to date) and technical specifications. The work would be completed after obtaining sand free water. The tube well should have a through out bore as per nominal dia of casing pipe. Rates are exclusive of GST.		
2.4.1	Nominal bore 150 mm dia.	Mtr	615.25
2.4.2	Nominal bore 200 mm dia.	Mtr	922.88
2.4.3	Add 15% extra on above item (Item No 2.4.1 to 2.4.2) for drilling depth beyond 100 mtr and up to 200 mtr from ground level, rate shall be applicable for only extra depth beyond 100 mtr and up to 200 mtr.		
2.4.4	Add 30% extra on above item (Item No 2.4.1 to 2.4.2) for drilling depth beyond 200 mtr and from ground level, rate shall be applicable for only extra depth beyond 200 mtr .		
2.4.5	Add 15% extra on above item (Item No 2.4.1 to 2.4.4) for drilling, where strata is collapsible and lowering of casing pipe is required . The work includes lowering of casing pipe, but excluding the cost of casing pipe. The rate shall be applicable for stretch of collapsible strata only.		

S. No.	Description	Unit	Rate (Rs.)
2.5	Construction of tube well from ground level and up to 100 mtr. depth and above of following sizes in all types of soils in alluvium strata, unconsolidated formation such as pebbles, boulders etc. by "bailing" method and without gravel packing as per IS:2800 Part 1: 1991 and IS:2800 Part II: 1979 (both amended up to date) and technical specifications. The work includes formation of cavity at bottom by development with appropriate air compressor or bailer pumping and also lowering of casing pipe but excluding cost of the casing pipe. The tube well should have a throughout bore as per nominal dia of casing pipe. The work would be completed after obtaining sand free water. Rates are exclusive of GST.		
2.5.1	Nominal bore 125 mm dia.	Mtr	412.71
2.5.2	Nominal bore 150 mm dia.	Mtr	460.17
2.5.3	Nominal bore 200 mm dia.	Mtr	760.17
2.6	Construction of tube well from ground level and up to 100 mtr depth and above to accommodate housing assembly pipe in all type of unconsolidated formation such as pebbles, boulders, collapsible formation etc. by Odex drilling method as per IS: IS:2800 Part 1: 1991 and IS:2800 Part II: 1979 (both amended up to date) and technical specifications. The work will include lowering of housing and strainer pipe assembly and casing shoe including cost of casing shoe, but excluding cost of the casing pipe. The work would be completed after obtaining sand free water. Rates are exclusive of GST.		
2.6.1	Nominal bore 125 mm dia.	Mtr	706.78
2.6.2	Nominal Bore 150 mm dia.	Mtr	965.25
2.6.3	Nominal bore 200 mm dia.	Mtr	1415.25
2.6.4	Add 15% extra on above item (Item No 2.6.1 to 2.6.3) for drilling depth beyond 100 mtr, rate shall be applicable for only extra depth beyond 100 mtr.		
2.7	Deepening of existing tube well by DTH system beyond existing depth up to 100 mtr. and above in all type of rocks including flushing of tube well and obtaining sand free water. Rates are exclusive of GST.		
2.7.1	Nominal bore 150 mm dia.	Mtr	785.59
2.7.2	Nominal bore 200 mm dia.	Mtr	1138.98
2.8	Testing verticality of tube well by plumbing system and yield test and draw down test by pumping system as per IS : 2800 (Part – II) – 1979 or as per amended up to date. Rate is exclusive of GST.	Each	6930.51
2.9	Supplying & Packing P-gravel suitable for slot size/mesh size as suggested in IS 2800 (Part-1) 1991 or as per amended up to date. Rate is exclusive of GST.	Cum.	3482.20

S. No.	Description	Unit	Rate (Rs.)
2.10	Development of tube well having depth up to 250 mtr as per IS: 11189- 1985 and IS: 2800 (Part- I)- 1991 (both amended up to date) using suitable methods to give sand free water for required yield of the gravel packed tube well. Rate is exclusive of GST.	Hr.	1233.90
2.11	Supply of ERW M.S. black casing pipe ISI marked (IS: 4270/2001) or amended up to date of following sizes Rates are exclusive of GST.		
2.11.1	150 mm dia NB(Thickness of pipe 5.0 mm & mass of tube 20.13 Kg/m)	Mtr	1638.14
2.11.2	200 mm dia NB (Thickness of pipe 5.4mm & mass of tube 28.46 Kg/m)	Mtr	2316.95
2.11.3	250 mm dia NB (Thickness of pipe 7.1 mm & mass of tube 46.57 Kg/m)	Mtr	3790.68
2.12	Labour charges for making slots on blank pipes made of ERW MS black pipe ISI marked of following sizes, the slotting should be as per IS:8110-1985. Rates are exclusive of GST.		
2.12.1	125 mm dia nominal bore of 4.8 mm thickness	Mtr	149.15
2.12.2	150 mm dia nominal bore of 4.8 mm thickness	Mtr	177.12
2.12.3	200 mm dia nominal bore of 5.4mm thickness	Mtr	268.64
2.12.4	250 mm dia nominal bore of 7.1mm thickness	Mtr	336.44
2.13	Providing & laying ISI marked GI Pipe Light duty ("A" class) as per IS: 1239 for casing pipe for submersible cable external work 40 mm dia complete in all respect. Rate is exclusive of GST.	Mtr	321.19
2.14	Supply & Installation of single phase ISI marked submersible motor pump set of three star or better rating of BEE and as per IS: 8034-2018 (pump) and IS 9283-2013 (motor) or as amended up to date of approved make of following duty condition with required accessories including making connection suitable for tube well/DCB. The job includes lowering of motor pump, installation of complete fitting & accessories, jointing of electrical cables up to switch board, testing of submersible pump set and interconnection up to water mains, complete in all respect. Rates are exclusive of GST.		
2.14.1	Up to 2.0 KW	KW	14205.08
2.14.2	Above 2.0 KW	KW	11059.32
2.15	Supply & Installation of 3 phase ISI marked submersible motor pump set of three star or better rating of BEE and as per IS: 8034-2018 (pump) and IS 9283-2013 (motor) or as amended up to date of approved make of following duty condition with required accessories including making connection suitable for tube well/DCB. The job includes lowering of motor pump, installation of complete fitting & accessories, jointing of electrical cables up to switch board, testing of submersible pump set and interconnection up to water mains, complete in all respect. Rates are exclusive of GST.		
2.15.1	Up to 5.5 KW (7.5 HP) & head up to 120 mtr.	KW	7697.46
2.15.2	Up to 5.5 KW (7.5 HP) & head above 120 mtr.	KW	8159.32
2.15.3	7.5 KW (10 HP) & head up to 120 mtr.	KW	5800.00
2.15.4	7.5 KW (10 HP) & head above 120 mtr.	KW	7050.85
2.15.5	9.3 KW (12.5 HP) & head up to 120 mtr.	KW	4915.25

S. No.	Description	Unit	Rate (Rs.)
2.15.6	9.3 KW (12.5 HP) & head above 120 mtr.	KW	6400.00
2.15.7	11 KW (15 HP) & head up to 120 mtr.	KW	4757.63
2.15.8	11 KW (15 HP) & head above 120 mtr.	KW	5573.73
2.15.9	13 KW (17.5 HP) & head up to 120 mtr.	KW	4748.31
2.15.10	13 KW (17.5 HP) & head above 120 mtr.	KW	5423.73
2.15.11	15 KW (20 HP) and above, head up to 120 mtr.	KW	4728.81
2.15.12	15 KW (20 HP) and above, head above 120 mtr.	KW	5355.93
2.16	Supply and Fixing of Electric feeder panel (having projected canopy)for submersible pump set Single phase up to 5 HP, comprising of DOL Starter, MCB, Indicating Light, Ammeter, Volt meter, connection plate, condensers of approved make and the panel enclosure should be made out from 18 gauge M.S. Sheet with powder coating. Panel size Height 600 mm Width 500 mm depth 250 mm with Stand (made of angle iron of size 35x35x5mm) duly bolted/screwed with enclosure box having 4 legs, each leg's length 18" and double door including in built locking system. The legs should be embedded in M-15 cement concrete platform. The size of CC platform should be equal or bigger than the base size of panel having height of at least 200 mm from ground level. The operation of panel should be suitable for on 240 Volt AC Supply. Rate is exclusive of GST.	Each	8482.20
2.17	Supply and Fixing of electric control feeder panel comprising of suitable rating MCCB, DOL starter, overload relay, ampere meter, volt meter, phase preventer, phase indicators, lighting arrangement etc. complete suitable for three phase pump set. The panel should have space for energy meter (supplied by DISCOM). All these equipments shall be housed by panel box made out from 18 gauge M.S. Sheet with powder coating. Panel should be of minimum size 900 x 600 x 300mm with Stand (made of angle iron of size 35x35x5mm) duly bolted/screwed with enclosure box having 4 legs, each leg's length 18" and double door including in built locking system. The legs should be embedded in M-15 cement concrete platform. The size of CC platform should be equal or bigger than the base size of panel having height of at least 200 mm from ground level. The panel should have opening of suitable size in front of space for energy meter with glass for meter reading. The operation of panel should be suitable for on 440 Volt AC Supply. Rate is exclusive of GST.		
2.17.1	Up to 5.00 HP	Each	11085.59

S. No.	Description	Unit	Rate (Rs.)
2.18	Supply and Fixing of electric control feeder panel comprising of suitable rating MCCB , fully automatic star-delta starter, over load relay, ampere meter with CTs, volt meter, phase preventer, suitable starting capacitors, phase indicators, lighting arrangement etc. complete suitable for three phase pump set. The panel should have space for energy meter (supplied by DISCOM). All these equipments shall be housed by panel box made out from 18 gauge M.S. Sheet with powder coating. Panel should be of minimum size 900 x 600 x 450 mm with Stand (made of angle iron of size 35x35x5mm) duly bolted/screwed with enclosure box having 4 legs, each leg's length 18" and double door including in built locking system. The legs should be embedded in M-15 cement concrete plat form. The size of CC platform should be equal or bigger than the base size of panel having height of at least 200 mm from ground level. The panel should have opening of suitable size in front of space for energy meter with glass for meter reading. The operation of panel should be suitable for on 440 Volt AC Supply. Rates are exclusive of GST.		
2.18.1	Above 5 HP and up to 10 HP	Each	20570.34
2.18.2	Above 10 HP and up to 15 HP	Each	23583.90
2.18.3	Above 15 HP and up to 20 HP	Each	27217.80
2.18.4	Above 20 HP and up to 30 HP	Each	33368.64
2.19	Supply & Fixing of ISI marked three core PVC flat submersible cable as per IS 694:1990 or amended up to date and conductor as per class 5 of IS 8130:1980 including making connection etc. Rates are exclusive of GST.		
2.19.1	3 core 4.0 Sq.mm	Mtr	160.17
2.19.2	3 core 6.0 Sq.mm	Mtr	239.83
2.19.3	3 core 10.0 Sq.mm	Mtr	410.17
2.19.4	3 core 16.0 Sq.mm	Mtr	611.86
2.20	Supply & Fixing XLPE insulated / P.V.C. sheathed cable of 1.1 KV grade with aluminium conductor Armoured of IS:7098-I/1554-1 approved make in ground as per IS:1255 including excavation of 30cmx75cm size trench, 25 cm thick under layer of sand, second Class bricks covering, refilling earth, compaction of earth, making necessary connection, testing etc. as required of size. Rates are exclusive of GST.		
2.20.1	10.0 Sq.mm, 4 core	Mtr	166.10
2.20.2	16.0 Sq.mm, 4 core	Mtr	198.31
2.20.3	25.0 Sq.mm, 3.5 core	Mtr	274.58
2.20.4	35.0 Sq.mm, 3.5 core	Mtr	321.19
2.21	Plate Earthing as per IS:3043 with G.I. Earth plate of size 600mm x 600mm x 6.0mm by embodying 3 to 4 mtr. below the ground level with 20 mm dia. G.I. 'B' class watering Pipe including all accessories like nut, bolts, reducer ,nipple, wire meshed funnel, and C.C. finished chamber covered with hinged type with locking arrangement C.I. Cover, C.I. Frame of size 300mm x 300mm complete with alternate layers of salt and coke/charcoal, testing of earth resistance as required. Rate is exclusive of GST.	Each	3094.07

S. No.	Description	Unit	Rate (Rs.)
2.22	Supply & Fixing M S clamp set of 50x6 mm flat from iron with nuts and bolts etc. for holding the riser pipe assembly of submersible pump set. Rate is exclusive of GST.	Each	589.83
2.23	Supply & Fixing tube well cover of MS sheet 8mm thick at top & 5mm thick 100mm wide shroud around the edge so as to form a cap on the top end of casing pipe with GI Nipple 45cm long & two GI flanges at both ends in 80mm sizes passing through a hole in the centre of MS sheet. A 25 mm socket with end plug shall also be welded over top plate. A GI nipple having outside thread of size 1/2" (for installation pressure gauge) shall be provided & welded with 80mm GI nipple near top plate nipple shall be provided with end plug. Rates are exclusive of GST.		
2.23.1	125 mm dia	Each	638.98
2.23.2	150 mm dia	Each	688.14
2.23.3	200 mm dia	Each	835.59
2.23.4	250 mm dia	Each	983.05
2.24	Providing & Lowering in tube well ISI marked GI Pipe medium duty ("B" class), Steel tube as per IS:1239 or amended up to date and zinc coating as per IS 4736, threaded and double flanged (welded) on both ends and two number 25x3mm MS flat welded on both ends between pipe & flange, rubber washer & nut bolts etc. complete in all respect. Rates are exclusive of GST.		
2.24.1	32 mm dia	Mtr	364.41
2.24.2	50 mm dia	Mtr	574.58
2.24.3	65 mm dia	Mtr	648.31
2.24.4	80mm dia	Mtr	800.00
2.25	Providing & Lowering in tube well ISI marked HDPE pipe as per IS 4984:1995 or amended up to date in PE 80 grade and class PN 10 of following dia. including HDPE/GI fittings and PVC rope conforming to IS 5175:1992 or amended up to date, along with clamping of submersible cable etc. complete in all respect. Rates are exclusive of GST.		
2.25.1	40 mm dia	Mtr	73.73
2.25.2	50 mm dia	Mtr	115.25
2.25.3	63 mm dia	Mtr	180.51
2.25.4	75 mm dia	Mtr	256.78
2.25.5	90 mm dia	Mtr	364.41
2.26	Providing, installing, testing and commissioning of double flanged bulk flow meter with removable mechanism, of class B conforming to ISO 4064/1 or amended up to date of approved make including cost of all material and labour as per specifications with GI Box (sheet 16 SWG) suitable with locking arrangement of following dia. Rates are exclusive of GST.		
2.26.1	50 mm dia	Each	10000.85
2.26.2	65 mm dia	Each	11313.56
2.26.3	80 mm dia	Each	13349.15
2.27	Providing & Fixing pump safety cage as per specifications or as directed by Engineer in charge. Rate is exclusive of GST.	Each	937.29

S. No.	Description	Unit	Rate (Rs.)
2.28	Providing and Fixing of ISI marked PVC storage tank of following capacity as per IS: 12701-1989 (of approved make) with cover, 25 mm dia. 1 mtr long GI overflow pipe, 25 cm long 25 mm dia washout GI pipe with plug & socket, including P&F 32 mm dia Ball Cock (Float valve) IS 1703 marked with rod and PVC ball complete with brass weight 1000 gm, including P&F 15mm dia CI quarter turn heavy duty Bib Cocks four no's of superior quality and approved make, including interconnections complete job. Rates are exclusive of GST.		
2.28.1	1000 litres capacity	Each	7232.20
2.28.2	2000 litres capacity	Each	13928.81
2.29	Fabrication & Fixing M.S. Stand of specified class of angle iron L-shaped of 50 mm size with four legs grouted by 300*300*300 mm CC Block M-15 in the ground and all legs tied up with each other through same size of angle iron along with cross bars to support the bottom of 1000 Ltr./ 2000 Ltr. PVC tank complete in all respect. Rate is exclusive of GST.	kg	99.15
2.30	Providing & Fixing of double flanged, CI body, ISI marked NRV of approved make of following sizes Rates are exclusive of GST.		
2.30.1	65 mm dia	Each	2123.73
2.30.2	80 mm dia	Each	2398.31
2.31	Providing and Fixing 32 mm dia Full way valve or wheel valve as per IS:778 or amended up to date of approved make, on pump delivery pipe. Rate is exclusive of GST.	Each	695.76
2.32	Supplying & Installing 100 mm diameter sealed diaphragm bourdon type pressure gauge of range 0 to 10 kg. including all jointing material as per specification with safety cover. Rate is exclusive of GST.	Each	1053.39
2.33	Construction of bore hole for shallow depth tube well from ground level to required depth for following size for all type of relevant strata by percussion/ rotary drilling/ hand boring method excluding cost of casing pipe. The bore hole should be as per nominal bore of PVC casing pipe. The work will be complete after obtaining sand free water. Rates are exclusive of GST.		
2.33.1	125 mm dia nominal bore	Mtr.	294.07
2.33.2	150 mm dia nominal bore	Mtr.	327.97
2.33.3	200 mm dia nominal bore	Mtr.	466.95
2.33.4	250 mm dia nominal bore	Mtr.	656.78
2.34	Providing and Lowering of ISI mark PVC-U casing and screen pipe as per IS : 12818 : 2010 or amended up to date having pipe thickness as per IS code suitable for TW and DCB with threading , winding with superior quality of plastic mesh & rope in three layers with end cap complete as per technical specification and direction of Engineer In charge. Rates are exclusive of GST.		
2.34.1	Shallow well casing pipe (CS) suitable for depth up to 80 mtr.		
2.34.1.1	150 mm nominal dia (internal dia).	Mtr	402.54
2.34.1.2	200 mm nominal dia (internal dia).	Mtr	738.98

S. No.	Description	Unit	Rate (Rs.)
2.34.1.3	250 mm nominal dia (internal dia).	Mtr.	1154.24
2.34.2	Medium well casing pipe (CM) suitable for depth above 80 mtr and up to 250 mtr.		
2.34.2.1	100 mm nominal dia (internal dia)	Mtr.	238.98
2.34.2.2	125 mm nominal dia (internal dia)	Mtr.	381.36
2.34.2.3	150 mm nominal dia (internal dia)	Mtr	522.03
2.34.2.4	200 mm nominal dia (internal dia)	Mtr	944.07
2.34.2.5	250 mm nominal dia (internal dia)	Mtr.	1468.64
2.35	Supply of ISI mark AC pressure pipe class 15 manufactured by MAZZA process as per IS:1592-2003 or amended up to date, for casing of tube well for following dia nominal bore, with jointing material PVC coupler as per technical specification and direction of Engineer In charge. Rates are exclusive of GST.		
2.35.1	125 mm nominal dia	Mtr	277.97
2.35.2	150 mm nominal dia	Mtr	492.37
2.35.3	200 mm nominal dia	Mtr	809.32
2.35.4	250 mm nominal dia	Mtr	1083.90
2.35.5	300 mm nominal dia	Mtr	1572.03
2.36	Making slots of hole size and Nos. as directed by EIC in AC pressure pipe Class 15 as per technical specification for using slotted pipe in TW casing. Rate is exclusive of GST.	Per 100 no.	83.05
RCC OPEN WELLS			
2.37	Dry sinking of well true & vertical in all types of soil including sand, silt, clay, mixed up to 25% with gravel and river bed stones up to size 300 mm in any direction complete as per drawing and technical specification (depth from level of placing of cutting edge & internal dia, to be taken for measurement) rate includes all percentage of pebbles, boulders and river bed stones. (depth to be measured from ground level) Rates are exclusive of GST.		
2.37.1	for depth up to 5.00 m	P.M. dia P.M. depth	1248.31
2.37.2	for depth from 5.00 m to 10.0 mtr	P.M. dia P.M. depth	1743.22
2.37.3	for depth from 10.0 m to 15.0 mtr	P.M. dia P.M. depth	2091.53
2.37.4	for depth from 15.0 m to 20.0 mtr and above.	P.M. dia P.M. depth	2439.83
2.38	Wet sinking of well in all type of strata (soil & boulders in any quantity) including required operations like chiselling, air and water jetting, hoist drives, skilled divers etc. for removal of isolated obstructions and minor blasting if required and lifting of excavated material up to ground level, and spreading the same with ramming and watering within a radius of 50 m from the site of open well. Rate includes all percentage of pebbles, boulders and river bed stones. (depth to be measured from ground level) Rates are exclusive of GST.		

S. No.	Description	Unit	Rate (Rs.)
2.38.1	for depth up to 5.00m	P.M. dia P.M. depth	1805.93
2.38.2	for depth from 5.00m to 10.0 mtr	P.M. dia P.M. depth	2972.03
2.38.3	for depth from 10.00m to 15.0 mtr	P.M. dia P.M. depth	3769.49
2.38.4	for depth from 15.0 m to 20.0 mtr	P.M. dia P.M. depth	4494.07
2.38.5	for depth from 20.0 m to 25.0 mtr	P.M. dia P.M. depth	5460.17
2.38.6	for depth from 25.0 m to 30.0 mtr and above.	P.M. dia P.M. depth	6426.27
2.39	Earth work in excavation over areas (exceeding 30cm depth, 1.5 mtr in width and 10 SQM in plan) for construction of open well, lift up to 1.5 Mtr. including taking out the excavated soil and disposal of surplus excavated soil as directed within a lead of 50 meter. Rates are exclusive of GST.		
2.39.1	All kind of soil	CUM	266.10
2.39.2	Ordinary Rock	CUM	571.19
2.39.3	Hard Rock (Requiring blasting)	CUM	827.12
2.39.4	Hard Rock (Blasting Prohibited)	CUM	1148.31
2.40	Add extra over item No. 2.39.1 for every additional lift of 1.5 Mtr. or part thereof : In all kind of soils. Rate is exclusive of GST.	CUM	39.83
2.41	Add extra over item No. 2.39.2-4 for every additional lift of 1.5 Mtr. or part thereof : In Ordinary rock and hard rock. Rate is exclusive of GST.	CUM	56.78
2.42	Add 20% extra over item No. 2.39 for excavation in saturated soil where pumping or baling out of water is required, including shoring strutting where required and dewatering.		
2.43	Labour charges for horizontal boring 100 mm dia in open well in rocky strata with all types of rock cutting & drilling tools etc. including all T&P required for job including dewatering arrangement. Rate is exclusive of GST.	Mtr	530.51
HAND PUMPS			
2.44	Construction of tube well from ground level & up to 100 mtr depth to accommodate housing and assembly pipe of following sizes in all type of alluvium strata unconsolidated formation such as pebbles, boulders etc. by percussion/rotary drilling method as per IS:2800 Part 1: 1991 and IS:2800 Part II: 1979 (both amended up to date) and technical specifications, with gravel as per IS:4097-1967 and it's packing as per IS: 2800 (Part I & II) 1979 as amended up to date (the work includes the cost of gravel & it's primary packing and packing during development, lowering of housing & strainer assembly pipes with supply and wrapping of coir-rope, wherever necessary for arresting fine sand particles and development work, but excluding the cost of housing and strainer pipe assembly). The work would be completed after obtaining sand free water. Rates are exclusive of GST.		
2.44.1	Nominal bore 125 mm dia.	Mtr	564.41

S. No.	Description	Unit	Rate (Rs.)
2.44.2	Add 15% extra on above item for drilling depth beyond 100 mtr, If depth of bore is more than 100 mtr.		
2.45	Construction of Tube Well up to 100 mtr. depth in all type of rocks by DTH system & over burden to accommodate casing pipe of following sizes in all types of soils & over burden including lowering of casing pipes, (if required) excluding cost of casing pipes, as per IS:2800 Part 1: 1991 and IS:2800 Part II: 1979 (both amended up to date) and technical specifications. The work would be completed after obtaining sand free water. The tube well should have a through out bore as per nominal dia of casing pipe. Rates are exclusive of GST.		
2.45.1	Nominal bore 100 mm dia.	Mtr	398.31
2.45.2	Nominal bore 125 mm dia.	Mtr	455.93
2.45.3	Add 15% extra on above item for drilling depth beyond 100 mtr, If depth of bore is more than 100 mtr.		
2.46	Construction of tube well from ground level and up to 100 mtr. depth and above of following sizes in all types of soils in alluvium strata, unconsolidated formation such as pebbles, boulders etc. by bailing method and without gravel packing as per IS:2800 Part 1: 1991 and IS:2800 Part II: 1979 (both amended up to date) and technical specifications. The work includes formation of cavity at bottom by development with appropriate air compressor or bailer pumping and also lowering of casing pipe but excluding cost of the casing pipe. The tube well should have a throughout bore as per nominal dia of casing pipe. The work would be completed after obtaining sand free water. Rates are exclusive of GST.		
2.46.1	Nominal bore 100 mm dia.	Mtr	288.98
2.46.2	Nominal bore 125 mm dia.	Mtr	316.10
2.47	Supply of ERW M.S. black casing pipe ISI marked {IS:1239(Part-1:2004)} medium of following sizes at site of work. Rates are exclusive of GST.		
2.47.1	100 mm dia NB (Thickness of pipe 4.5 mm & mass of tube 12.50 Kg/m)	Mtr	1089.83
2.47.2	125 mm dia NB(Thickness of pipe 4.8 mm & mass of tube 16.40 Kg/m)	Mtr	1358.47
2.48	Providing and Lowering of ISI mark Medium well PVC-U casing and screen pipe (CM) as per IS : 12818 : 2010 or amended up to date having pipe thickness as per IS code suitable for bore well with threading , winding with superior quality of plastic mesh & rope in three layers with end cap complete as per technical specification and direction of Engineer In charge. Rates are exclusive of GST.		
2.48.1	100 mm nominal dia (internal dia).	Mtr	238.98
2.48.2	125 mm nominal dia (internal dia).	Mtr	381.36
2.49	Labour charges for making slots on blank pipes made of ERW MS black pipe ISI marked of following sizes, the slotting should be as per IS:8110-1985. Rates are exclusive of GST.		
2.49.1	100 mm dia nominal bore	Mtr	116.95

S. No.	Description	Unit	Rate (Rs.)
2.49.2	125 mm dia nominal bore	Mtr	149.15
2.50	Supply & installation of GI pipe 32 mm medium class "B" with pipe sockets (heavy duty). Rate is exclusive of GST.	Mtr	284.75
2.51	Supply and installation of ISI marked India Mark II Hand pump set complete with cylinder & 15 connecting rods. Rate is exclusive of GST.	Set	11355.93
2.52	Supply and installation of ISI Marked India Mark II Hand pump set Extra-Deep (EDW) complete with cylinder and connecting rods. Rates are exclusive of GST.		
2.52.1	EDWHP + 20 Connecting rod.	Set	11769.49
2.52.2	EDWHP + 23 Connecting rod + 1 Weight.	Set	13160.17
2.52.3	EDWHP + 26 Connecting rod + 2 Weight.	Set	14094.07
2.52.4	EDWHP + 30 Connecting rod + 3 Weight.	Set	14428.81
2.53	Supply and installation of ISI mark connecting rod as per departmental specifications. of 3 meter length. Rate is exclusive of GST.	Each	152.54
2.54	Installation of India Mark II/III E.D. I & II hand pump set complete on existing platform. Rate is exclusive of GST.	Each	728.81
2.55	Construction of 185 cm. dia platform as per approved design & drawing of UNICEF. Rate is exclusive of GST.	Each	3083.05

Chapter 3

RCC Reservoirs

Note : All rates are exclusive of GST.

Sr. No.	Description	Unit	Rate (Rs.)
3.1	<p>Construction and commissioning of RCC flat slab Over Head Service Reservoir of following capacity and staging including all material and labour charges as per the Scope of work and Technical Specification, consisting of the following main activities: -</p> <p>a) Topographic survey, preparation of site contour plan, conducting SBC test and its approval from department before construction. Submission and approval of concrete mix design and water quality test report for water to be used in construction.</p> <p>b) Excavation in all types of soil, PCC below foundation, all RCC Work, Plinth protection all around the structure including all material, labour, shuttering, scaffolding etc.</p> <p>c) OHSR shall be provided with adequate plinth protection all around the structure in a width starting from edge of structure at GL and extending at least up to 1.0m beyond the edge of outer most projection of OHSR. The plinth protection shall consist of 150mm thick PCC in M-15 grade concrete laid over 150mm thick layer of compacted soil.</p> <p>d) Providing and applying two coats of food grade epoxy paint on the inside surface roof slab, and 600 mm height of the vertical wall.</p> <p>e) Successfully hydro test and water tightness test as per I.S. code.</p> <p>f) Providing and applying three coats of anti-carbonation paint on the top surface of the roof slab.</p> <p>g) Providing and applying three coats of cement-based paint on the external surface of the container, balcony, cone wall, columns & beams etc.</p> <p>h) Providing and fixing SS-304 ventilator, SS 304 manhole frame and cover and SS-304 ladder from top Slab to bottom Slab inside container.</p> <p>i) Providing and fixing of MS section ladder from the last landing to balcony and MS ladder with safety cage from balcony to top slab.</p> <p>j) Providing and fixing water level indicator (float type).</p> <p>k) Providing and fixing of hand railing all around the balcony, roof and staircase, consisting of 25mm diameter Class-B GI pipe in two rows and 1000 mm high, 50X50X6mm angle iron vertical post at a maximum spacing of 1500mm centres.</p> <p>l) All MS parts to be painted with two coats of the enamel paint over the primer coat of red oxide.</p> <p>m) Providing and fixing of 150mm wide PVC water bar for the construction joints in the container (vertical wall & cone wall).</p> <p>n) Providing one Aluminium portable ladder of appropriate length to access first landing (3.5 to 4.5m above GL) from ground.</p> <p>o) Lighting arrestor consisting of providing and fixing of 2 Nos. of chemical earthing and connecting it to the conical cover of SS ventilator with two separate GI strips of 50mmX3mm</p> <p>p) CI/DI puddle collar shall be fixed in the bottom/slab for connecting inlet, outlet, overflow and washout pipe of the reservoir.</p> <p>q) Painting the name of the scheme and other details on the reservoir, and any other work related to structure as per the directions of Engineer-in- Charge, Technical Specification and Scope of Work.</p> <p>r) Inlet, outlet, overflow, washout pipes and valves are not included in this work, provision for the same shall be taken separately.</p> <p>Rates are exclusive of GST.</p>		

Sr. No.	Description	Unit	Rate (Rs.)
3.1.1	Rates for RCC OHSR,SBC 7 T/sqm, SEISMIC ZONE-II & STAGING 15 M		
3.1.1.1	50 KL capacity	Litre	35.33
3.1.1.2	75 KL capacity	Litre	29.14
3.1.2	Rates for RCC OHSR,SBC 7 T/sqm, SEISMIC ZONE-III & STAGING 15 M		
3.1.2.1	50 KL capacity	Litre	36.68
3.1.2.2	75 KL capacity	Litre	29.90
3.1.3	Rates for RCC OHSR,SBC 7 T/sqm, SEISMIC ZONE-IV & STAGING 15 M		
3.1.3.1	50 KL capacity	Litre	38.95
3.1.3.2	75 KL capacity	Litre	32.05
3.1.4	Rates for RCC OHSR,SBC 10 T/sqm, SEISMIC ZONE-II & STAGING 15 M		
3.1.4.1	50 KL capacity	Litre	32.34
3.1.4.2	75 KL capacity	Litre	25.30
3.1.5	Rates for RCC OHSR,SBC 10 T/sqm, SEISMIC ZONE-III & STAGING 15 M		
3.1.5.1	50 KL capacity	Litre	33.01
3.1.5.2	75 KL capacity	Litre	25.93
3.1.6	Rates for RCC OHSR,SBC 10 T/sqm, SEISMIC ZONE-IV & STAGING 15 M		
3.1.6.1	50 KL capacity	Litre	33.66
3.1.6.2	75 KL capacity	Litre	26.36
3.1.7	Rates for RCC OHSR,SBC 18 T/sqm, SEISMIC ZONE-II & STAGING 15 M		
3.1.7.1	50 KL capacity	Litre	31.09
3.1.7.2	75 KL capacity	Litre	24.32
3.1.8	Rates for RCC OHSR,SBC 18 T/sqm, SEISMIC ZONE-III & STAGING 15 M		
3.1.8.1	50 KL capacity	Litre	32.04
3.1.8.2	75 KL capacity	Litre	25.04
3.1.9	Rates for RCC OHSR,SBC 18 T/sqm, SEISMIC ZONE-IV & STAGING 15 M		
3.1.9.1	50 KL capacity	Litre	32.64
3.1.9.2	75 KL capacity	Litre	25.57
3.2	<i>Construction and commissioning of RCC INTZE type Over Head Service Reservoir of following capacity and staging as per the Scope of work and Technical specifications, consisting of the following main activities: -</i>		

Sr. No.	Description	Unit	Rate (Rs.)
	<p>a) Topographic survey, preparation of site contour plan, conducting SBC test and its approval from department before construction. Submission and approval of concrete mix design and water quality test report for water to be used in construction.</p> <p>b) Excavation in all types of soil, PCC below foundation, all RCC Work, Plinth protection all around the structure including all material, labour, shuttering, scaffolding etc.</p> <p>c) OHSR shall be provided with adequate plinth protection all around the structure in a width starting from edge of structure at GL and extending at least up to 1.0m beyond the edge of outer most projection of OHSR. The plinth protection shall consist of 150mm thick PCC in M-15 grade concrete laid over 150mm thick layer of compacted soil.</p> <p>d) Providing and applying two coats of food grade epoxy paint on the inside surface on the top dome, edge beam and 600 mm height of the vertical wall.</p> <p>e) Conducting successfully hydro test and water tightness test as per I.S. code.</p> <p>f) Providing and applying three coats of anti-carbonation paint on the top surface of the Top Dome.</p> <p>g) Providing and applying three coats of cement-based paint on the external surface of the container, balcony, cone wall, columns & beams etc..</p> <p>h) Providing and fixing SS-304 ventilator, SS 304 manhole frame and cover and SS-304 ladder from top dome/Slab to bottom dome/Slab inside container.</p> <p>i) Providing and fixing of MS section ladder from the last landing to balcony having railing all around it and MS ladder with safety cage from balcony to top dome/slab.</p> <p>j) Providing and fixing water level indicator (float type).</p> <p>k) Providing and fixing of hand railing all around the balcony, top dome and staircase consisting of 25mm diameter Class-B GI pipe in two rows and 1000 mm high, 50X50X6mm angle iron vertical post at a maximum spacing of 1500mm centres.</p> <p>l) All MS parts to be painted with two coats of the enamel paint over the primer coat of red oxide.</p> <p>m) Providing and fixing of 150mm wide PVC water bar for the construction joints in the container (vertical wall & cone wall).</p> <p>n) Providing one Aluminium portable ladder of appropriate length to access first landing (3.5 to 4.5m above GL) from ground.</p> <p>o) Lighting arrestor consisting of providing and fixing of 2 Nos. of chemical earthing and connecting it to the conical cover of SS ventilator with two separate GI strips of 50mmX3mm.</p> <p>p) CI/DI puddle collar shall be fixed in the bottom dome/ slab for connecting inlet, outlet, overflow and washout pipe of the reservoir.</p> <p>q) Painting the name of the scheme and other details on the reservoir, and any other work related to structure as per the directions of Engineer-in- Charge, Technical Specification and Scope of Work.</p> <p>r) <i>Inlet, outlet, overflow, washout pipes and valves are not included in this work, provision for the same shall be taken separately.</i></p> <p>Rates are exclusive of GST.</p>		
3.2.1	Rates for RCC OHSR,SBC 7 T/sqm, SEISMIC ZONE-II & STAGING 18 M		
3.2.1.1	100 KL capacity	Litre	26.09
3.2.1.2	150KL capacity	Litre	20.38
3.2.1.3	200KL capacity	Litre	17.81
3.2.1.4	250KL capacity	Litre	17.33
3.2.1.5	300KL capacity	Litre	17.86
3.2.1.6	400KL capacity	Litre	16.23
3.2.1.7	500KL capacity	Litre	15.49

Sr. No.	Description	Unit	Rate (Rs.)
3.2.1.8	600 KL capacity	Litre	13.73
3.2.1.9	700 KL capacity	Litre	13.14
3.2.1.10	800 KL capacity	Litre	12.66
3.2.1.11	900 KL capacity	Litre	12.25
3.2.1.12	1000 KL capacity	Litre	11.89
3.2.1.13	1250 KL capacity	Litre	11.16
3.2.1.14	1500 KL capacity	Litre	10.56
3.2.1.15	1750 KL capacity	Litre	10.05
3.2.1.16	2000 KL capacity	Litre	9.63
3.2.2	Rates for RCC OHSR,SBC 7 T/sqm, SEISMIC ZONE-III & STAGING 18 M		
3.2.2.1	100 KL capacity	Litre	26.59
3.2.2.2	150KL capacity	Litre	21.02
3.2.2.3	200KL capacity	Litre	18.32
3.2.2.4	250KL capacity	Litre	18.03
3.2.2.5	300KL capacity	Litre	18.31
3.2.2.6	400KL capacity	Litre	16.69
3.2.2.7	500KL capacity	Litre	15.93
3.2.2.8	600 KL capacity	Litre	14.03
3.2.2.9	700 KL capacity	Litre	13.43
3.2.2.10	800 KL capacity	Litre	12.94
3.2.2.11	900 KL capacity	Litre	12.51
3.2.2.12	1000 KL capacity	Litre	12.14
3.2.2.13	1250 KL capacity	Litre	11.41
3.2.2.14	1500 KL capacity	Litre	10.82
3.2.2.15	1750 KL capacity	Litre	10.36
3.2.2.16	2000 KL capacity	Litre	9.98
3.2.3	Rates for RCC OHSR,SBC 7 T/sqm, SEISMIC ZONE-IV & STAGING 18 M		
3.2.3.1	100 KL capacity	Litre	28.27
3.2.3.2	150KL capacity	Litre	22.41
3.2.3.3	200KL capacity	Litre	19.39
3.2.3.4	250KL capacity	Litre	19.27
3.2.3.5	300KL capacity	Litre	19.46
3.2.3.6	400KL capacity	Litre	17.46
3.2.3.7	500KL capacity	Litre	16.46
3.2.3.8	600 KL capacity	Litre	15.03
3.2.3.9	700 KL capacity	Litre	14.28
3.2.3.10	800 KL capacity	Litre	13.66
3.2.3.11	900 KL capacity	Litre	13.13
3.2.3.12	1000 KL capacity	Litre	12.68
3.2.3.13	1250 KL capacity	Litre	11.76
3.2.3.14	1500 KL capacity	Litre	11.14
3.2.3.15	1750 KL capacity	Litre	10.59
3.2.3.16	2000 KL capacity	Litre	10.14
3.2.4	Rates for RCC OHSR,SBC 10 T/sqm, SEISMIC ZONE-II & STAGING 18 M		
3.2.4.1	100 KL capacity	Litre	23.33
3.2.4.2	150KL capacity	Litre	17.98
3.2.4.3	200KL capacity	Litre	16.04
3.2.4.4	250KL capacity	Litre	15.31
3.2.4.5	300KL capacity	Litre	15.23
3.2.4.6	400KL capacity	Litre	12.64

Sr. No.	Description	Unit	Rate (Rs.)
3.2.4.7	500KL capacity	Litre	12.49
3.2.4.8	600 KL capacity	Litre	11.18
3.2.4.9	700 KL capacity	Litre	10.57
3.2.4.10	800 KL capacity	Litre	10.08
3.2.4.11	900 KL capacity	Litre	9.65
3.2.4.12	1000 KL capacity	Litre	9.30
3.2.4.13	1250 KL capacity	Litre	8.57
3.2.4.14	1500 KL capacity	Litre	8.03
3.2.4.15	1750 KL capacity	Litre	7.58
3.2.4.16	2000 KL capacity	Litre	7.23
3.2.5	Rates for RCC OHSR,SBC 10 T/sqm, SEISMIC ZONE-III & STAGING 18 M		
3.2.5.1	100 KL capacity	Litre	24.63
3.2.5.2	150KL capacity	Litre	19.11
3.2.5.3	200KL capacity	Litre	17.03
3.2.5.4	250KL capacity	Litre	16.48
3.2.5.5	300KL capacity	Litre	16.47
3.2.5.6	400KL capacity	Litre	13.75
3.2.5.7	500KL capacity	Litre	13.42
3.2.5.8	600 KL capacity	Litre	12.12
3.2.5.9	700 KL capacity	Litre	11.48
3.2.5.10	800 KL capacity	Litre	10.96
3.2.5.11	900 KL capacity	Litre	10.52
3.2.5.12	1000 KL capacity	Litre	10.14
3.2.5.13	1250 KL capacity	Litre	9.39
3.2.5.14	1500 KL capacity	Litre	8.81
3.2.5.15	1750 KL capacity	Litre	8.35
3.2.5.16	2000 KL capacity	Litre	7.97
3.2.6	Rates for RCC OHSR,SBC 10 T/sqm, SEISMIC ZONE-IV & STAGING 18 M		
3.2.6.1	100 KL capacity	Litre	26.90
3.2.6.2	150KL capacity	Litre	21.17
3.2.6.3	200KL capacity	Litre	18.36
3.2.6.4	250KL capacity	Litre	18.41
3.2.6.5	300KL capacity	Litre	18.04
3.2.6.6	400KL capacity	Litre	14.90
3.2.6.7	500KL capacity	Litre	14.44
3.2.6.8	600 KL capacity	Litre	12.80
3.2.6.9	700 KL capacity	Litre	12.08
3.2.6.10	800 KL capacity	Litre	11.50
3.2.6.11	900 KL capacity	Litre	11.01
3.2.6.12	1000 KL capacity	Litre	10.59
3.2.6.13	1250 KL capacity	Litre	9.75
3.2.6.14	1500 KL capacity	Litre	9.11
3.2.6.15	1750 KL capacity	Litre	8.61
3.2.6.16	2000 KL capacity	Litre	8.19
3.2.7	Rates for RCC OHSR,SBC 18 T/sqm, SEISMIC ZONE-II & STAGING 18 M		
3.2.7.1	100 KL capacity	Litre	21.10
3.2.7.2	150KL capacity	Litre	16.47
3.2.7.3	200KL capacity	Litre	14.62
3.2.7.4	250KL capacity	Litre	13.55
3.2.7.5	300KL capacity	Litre	13.35

Sr. No.	Description	Unit	Rate (Rs.)
3.2.7.6	400KL capacity	Litre	11.81
3.2.7.7	500KL capacity	Litre	10.90
3.2.7.8	600 KL capacity	Litre	10.25
3.2.7.9	700 KL capacity	Litre	9.68
3.2.7.10	800 KL capacity	Litre	9.21
3.2.7.11	900 KL capacity	Litre	8.81
3.2.7.12	1000 KL capacity	Litre	8.48
3.2.7.13	1250 KL capacity	Litre	7.81
3.2.7.14	1500 KL capacity	Litre	7.30
3.2.7.15	1750 KL capacity	Litre	6.89
3.2.7.16	2000 KL capacity	Litre	6.56
3.2.8	Rates for RCC OHSR,SBC 18 T/sqm, SEISMIC ZONE-III & STAGING 18 M		
3.2.8.1	100 KL capacity	Litre	21.54
3.2.8.2	150KL capacity	Litre	16.97
3.2.8.3	200KL capacity	Litre	14.97
3.2.8.4	250KL capacity	Litre	14.14
3.2.8.5	300KL capacity	Litre	13.71
3.2.8.6	400KL capacity	Litre	12.24
3.2.8.7	500KL capacity	Litre	11.31
3.2.8.8	600 KL capacity	Litre	10.69
3.2.8.9	700 KL capacity	Litre	10.11
3.2.8.10	800 KL capacity	Litre	9.63
3.2.8.11	900 KL capacity	Litre	9.22
3.2.8.12	1000 KL capacity	Litre	8.87
3.2.8.13	1250 KL capacity	Litre	8.18
3.2.8.14	1500 KL capacity	Litre	7.65
3.2.8.15	1750 KL capacity	Litre	7.23
3.2.8.16	2000 KL capacity	Litre	6.89
3.2.9	Rates for RCC OHSR,SBC 18 T/sqm, SEISMIC ZONE-IV & STAGING 18 M		
3.2.9.1	100 KL capacity	Litre	22.75
3.2.9.2	150KL capacity	Litre	17.69
3.2.9.3	200KL capacity	Litre	15.60
3.2.9.4	250KL capacity	Litre	15.27
3.2.9.5	300KL capacity	Litre	14.67
3.2.9.6	400KL capacity	Litre	12.85
3.2.9.7	500KL capacity	Litre	11.83
3.2.9.8	600 KL capacity	Litre	11.14
3.2.9.9	700 KL capacity	Litre	10.54
3.2.9.10	800 KL capacity	Litre	10.04
3.2.9.11	900 KL capacity	Litre	9.64
3.2.9.12	1000 KL capacity	Litre	9.27
3.2.9.13	1250 KL capacity	Litre	8.56
3.2.9.14	1500 KL capacity	Litre	8.02
3.2.9.15	1750 KL capacity	Litre	7.58
3.2.9.16	2000 KL capacity	Litre	7.23
3.2.10	Rates for RCC OHSR,SBC 7 T/sqm, SEISMIC ZONE-II & STAGING 20 M		
3.2.10.1	100 KL capacity	Litre	28.03
3.2.10.2	150KL capacity	Litre	21.96
3.2.10.3	200KL capacity	Litre	18.94
3.2.10.4	250KL capacity	Litre	18.19

Sr. No.	Description	Unit	Rate (Rs.)
3.2.10.5	300KL capacity	Litre	18.71
3.2.10.6	400KL capacity	Litre	16.88
3.2.10.7	500KL capacity	Litre	15.86
3.2.10.8	600 KL capacity	Litre	14.58
3.2.10.9	700 KL capacity	Litre	13.89
3.2.10.10	800 KL capacity	Litre	13.32
3.2.10.11	900 KL capacity	Litre	12.85
3.2.10.12	1000 KL capacity	Litre	12.42
3.2.10.13	1250 KL capacity	Litre	11.53
3.2.10.14	1500 KL capacity	Litre	10.82
3.2.10.15	1750 KL capacity	Litre	10.27
3.2.10.16	2000 KL capacity	Litre	9.82
3.2.11	Rates for RCC OHSR,SBC 7 T/sqm, SEISMIC ZONE-III & STAGING 20 M		
3.2.11.1	100 KL capacity	Litre	28.07
3.2.11.2	150KL capacity	Litre	22.26
3.2.11.3	200KL capacity	Litre	19.19
3.2.11.4	250KL capacity	Litre	18.81
3.2.11.5	300KL capacity	Litre	19.22
3.2.11.6	400KL capacity	Litre	17.35
3.2.11.7	500KL capacity	Litre	16.29
3.2.11.8	600 KL capacity	Litre	14.61
3.2.11.9	700 KL capacity	Litre	13.97
3.2.11.10	800 KL capacity	Litre	13.44
3.2.11.11	900 KL capacity	Litre	12.99
3.2.11.12	1000 KL capacity	Litre	12.60
3.2.11.13	1250 KL capacity	Litre	11.81
3.2.11.14	1500 KL capacity	Litre	11.20
3.2.11.15	1750 KL capacity	Litre	10.71
3.2.11.16	2000 KL capacity	Litre	10.31
3.2.12	Rates for RCC OHSR,SBC 7 T/sqm, SEISMIC ZONE-IV & STAGING 20 M		
3.2.12.1	100 KL capacity	Litre	29.88
3.2.12.2	150KL capacity	Litre	24.00
3.2.12.3	200KL capacity	Litre	20.38
3.2.12.4	250KL capacity	Litre	20.42
3.2.12.5	300KL capacity	Litre	20.54
3.2.12.6	400KL capacity	Litre	18.41
3.2.12.7	500KL capacity	Litre	17.06
3.2.12.8	600 KL capacity	Litre	15.54
3.2.12.9	700 KL capacity	Litre	14.75
3.2.12.10	800 KL capacity	Litre	14.08
3.2.12.11	900 KL capacity	Litre	13.54
3.2.12.12	1000 KL capacity	Litre	13.06
3.2.12.13	1250 KL capacity	Litre	12.11
3.2.12.14	1500 KL capacity	Litre	11.38
3.2.12.15	1750 KL capacity	Litre	10.80
3.2.12.16	2000 KL capacity	Litre	10.32
3.2.13	Rates for RCC OHSR,SBC 10 T/sqm, SEISMIC ZONE-II & STAGING 20 M		
3.2.13.1	100 KL capacity	Litre	25.43
3.2.13.2	150KL capacity	Litre	19.53
3.2.13.3	200KL capacity	Litre	17.10

Sr. No.	Description	Unit	Rate (Rs.)
3.2.13.4	250KL capacity	Litre	16.18
3.2.13.5	300KL capacity	Litre	16.02
3.2.13.6	400KL capacity	Litre	14.22
3.2.13.7	500KL capacity	Litre	12.97
3.2.13.8	600 KL capacity	Litre	12.03
3.2.13.9	700 KL capacity	Litre	11.29
3.2.13.10	800 KL capacity	Litre	10.68
3.2.13.11	900 KL capacity	Litre	10.17
3.2.13.12	1000 KL capacity	Litre	9.75
3.2.13.13	1250 KL capacity	Litre	8.89
3.2.13.14	1500 KL capacity	Litre	8.24
3.2.13.15	1750 KL capacity	Litre	7.74
3.2.13.16	2000 KL capacity	Litre	7.32
3.2.14	Rates for RCC OHSR,SBC 10 T/sqm, SEISMIC ZONE-III & STAGING 20 M		
3.2.14.1	100 KL capacity	Litre	26.16
3.2.14.2	150KL capacity	Litre	20.13
3.2.14.3	200KL capacity	Litre	17.84
3.2.14.4	250KL capacity	Litre	17.39
3.2.14.5	300KL capacity	Litre	17.25
3.2.14.6	400KL capacity	Litre	15.37
3.2.14.7	500KL capacity	Litre	14.09
3.2.14.8	600 KL capacity	Litre	12.56
3.2.14.9	700 KL capacity	Litre	11.91
3.2.14.10	800 KL capacity	Litre	11.22
3.2.14.11	900 KL capacity	Litre	10.62
3.2.14.12	1000 KL capacity	Litre	10.24
3.2.14.13	1250 KL capacity	Litre	9.47
3.2.14.14	1500 KL capacity	Litre	8.88
3.2.14.15	1750 KL capacity	Litre	8.42
3.2.14.16	2000 KL capacity	Litre	8.03
3.2.15	Rates for RCC OHSR,SBC 10 T/sqm, SEISMIC ZONE-IV & STAGING 20 M		
3.2.15.1	100 KL capacity	Litre	28.29
3.2.15.2	150KL capacity	Litre	22.38
3.2.15.3	200KL capacity	Litre	19.25
3.2.15.4	250KL capacity	Litre	19.47
3.2.15.5	300KL capacity	Litre	19.06
3.2.15.6	400KL capacity	Litre	16.67
3.2.15.7	500KL capacity	Litre	15.24
3.2.15.8	600 KL capacity	Litre	13.08
3.2.15.9	700 KL capacity	Litre	12.40
3.2.15.10	800 KL capacity	Litre	11.84
3.2.15.11	900 KL capacity	Litre	11.37
3.2.15.12	1000 KL capacity	Litre	10.96
3.2.15.13	1250 KL capacity	Litre	10.15
3.2.15.14	1500 KL capacity	Litre	9.53
3.2.15.15	1750 KL capacity	Litre	9.03
3.2.15.16	2000 KL capacity	Litre	8.62
3.2.16	Rates for RCC OHSR,SBC 18 T/sqm, SEISMIC ZONE-II & STAGING 20 M		
3.2.16.1	100 KL capacity	Litre	23.06
3.2.16.2	150KL capacity	Litre	17.86

Sr. No.	Description	Unit	Rate (Rs.)
3.2.16.3	200KL capacity	Litre	15.53
3.2.16.4	250KL capacity	Litre	14.45
3.2.16.5	300KL capacity	Litre	14.11
3.2.16.6	400KL capacity	Litre	12.35
3.2.16.7	500KL capacity	Litre	11.41
3.2.16.8	600 KL capacity	Litre	10.85
3.2.16.9	700 KL capacity	Litre	10.20
3.2.16.10	800 KL capacity	Litre	9.67
3.2.16.11	900 KL capacity	Litre	9.22
3.2.16.12	1000 KL capacity	Litre	8.84
3.2.16.13	1250 KL capacity	Litre	8.08
3.2.16.14	1500 KL capacity	Litre	7.51
3.2.16.15	1750 KL capacity	Litre	7.06
3.2.16.16	2000 KL capacity	Litre	6.69
3.2.17	Rates for RCC OHSR,SBC 18 T/sqm, SEISMIC ZONE-III & STAGING 20 M		
3.2.17.1	100 KL capacity	Litre	23.03
3.2.17.2	150KL capacity	Litre	17.98
3.2.17.3	200KL capacity	Litre	15.85
3.2.17.4	250KL capacity	Litre	15.00
3.2.17.5	300KL capacity	Litre	14.53
3.2.17.6	400KL capacity	Litre	12.76
3.2.17.7	500KL capacity	Litre	11.81
3.2.17.8	600 KL capacity	Litre	11.47
3.2.17.9	700 KL capacity	Litre	10.83
3.2.17.10	800 KL capacity	Litre	10.30
3.2.17.11	900 KL capacity	Litre	9.85
3.2.17.12	1000 KL capacity	Litre	9.47
3.2.17.13	1250 KL capacity	Litre	8.70
3.2.17.14	1500 KL capacity	Litre	8.13
3.2.17.15	1750 KL capacity	Litre	7.67
3.2.17.16	2000 KL capacity	Litre	7.30
3.2.18	Rates for RCC OHSR,SBC 18 T/sqm, SEISMIC ZONE-IV & STAGING 20 M		
3.2.18.1	100 KL capacity	Litre	24.05
3.2.18.2	150KL capacity	Litre	18.54
3.2.18.3	200KL capacity	Litre	16.45
3.2.18.4	250KL capacity	Litre	16.03
3.2.18.5	300KL capacity	Litre	15.47
3.2.18.6	400KL capacity	Litre	13.47
3.2.18.7	500KL capacity	Litre	12.37
3.2.18.8	600 KL capacity	Litre	11.89
3.2.18.9	700 KL capacity	Litre	11.25
3.2.18.10	800 KL capacity	Litre	10.73
3.2.18.11	900 KL capacity	Litre	10.27
3.2.18.12	1000 KL capacity	Litre	9.90
3.2.18.13	1250 KL capacity	Litre	9.13
3.2.18.14	1500 KL capacity	Litre	8.54
3.2.18.15	1750 KL capacity	Litre	8.08
3.2.18.16	2000 KL capacity	Litre	7.70
3.2.19	Rates for RCC OHSR,SBC 7 T/sqm, SEISMIC ZONE-II & STAGING 22 M		
3.2.19.1	100 KL capacity	Litre	29.68

Sr. No.	Description	Unit	Rate (Rs.)
3.2.19.2	150KL capacity	Litre	22.72
3.2.19.3	200KL capacity	Litre	19.69
3.2.19.4	250KL capacity	Litre	19.19
3.2.19.5	300KL capacity	Litre	19.21
3.2.19.6	400KL capacity	Litre	17.26
3.2.19.7	500KL capacity	Litre	16.29
3.2.19.8	600 KL capacity	Litre	14.97
3.2.19.9	700 KL capacity	Litre	14.23
3.2.19.10	800 KL capacity	Litre	13.61
3.2.19.11	900 KL capacity	Litre	13.09
3.2.19.12	1000 KL capacity	Litre	12.64
3.2.19.13	1250 KL capacity	Litre	11.72
3.2.19.14	1500 KL capacity	Litre	10.98
3.2.19.15	1750 KL capacity	Litre	10.40
3.2.19.16	2000 KL capacity	Litre	9.92
3.2.20	Rates for RCC OHSR,SBC 7 T/sqm, SEISMIC ZONE-III & STAGING 22 M		
3.2.20.1	100 KL capacity	Litre	29.69
3.2.20.2	150KL capacity	Litre	23.00
3.2.20.3	200KL capacity	Litre	19.97
3.2.20.4	250KL capacity	Litre	19.49
3.2.20.5	300KL capacity	Litre	19.74
3.2.20.6	400KL capacity	Litre	17.74
3.2.20.7	500KL capacity	Litre	16.71
3.2.20.8	600 KL capacity	Litre	15.16
3.2.20.9	700 KL capacity	Litre	14.44
3.2.20.10	800 KL capacity	Litre	13.84
3.2.20.11	900 KL capacity	Litre	13.33
3.2.20.12	1000 KL capacity	Litre	12.90
3.2.20.13	1250 KL capacity	Litre	12.02
3.2.20.14	1500 KL capacity	Litre	11.34
3.2.20.15	1750 KL capacity	Litre	10.80
3.2.20.16	2000 KL capacity	Litre	10.35
3.2.21	Rates for RCC OHSR,SBC 7 T/sqm, SEISMIC ZONE-IV & STAGING 22 M		
3.2.21.1	100 KL capacity	Litre	31.07
3.2.21.2	150KL capacity	Litre	24.87
3.2.21.3	200KL capacity	Litre	20.86
3.2.21.4	250KL capacity	Litre	20.84
3.2.21.5	300KL capacity	Litre	21.21
3.2.21.6	400KL capacity	Litre	18.54
3.2.21.7	500KL capacity	Litre	17.32
3.2.21.8	600 KL capacity	Litre	15.80
3.2.21.9	700 KL capacity	Litre	14.97
3.2.21.10	800 KL capacity	Litre	14.30
3.2.21.11	900 KL capacity	Litre	13.72
3.2.21.12	1000 KL capacity	Litre	13.22
3.2.21.13	1250 KL capacity	Litre	12.23
3.2.21.14	1500 KL capacity	Litre	11.47
3.2.21.15	1750 KL capacity	Litre	10.87
3.2.21.16	2000 KL capacity	Litre	10.38
3.2.22	Rates for RCC OHSR,SBC 10 T/sqm, SEISMIC ZONE-II & STAGING 22 M		

Sr. No.	Description	Unit	Rate (Rs.)
3.2.22.1	100 KL capacity	Litre	27.38
3.2.22.2	150KL capacity	Litre	20.57
3.2.22.3	200KL capacity	Litre	18.14
3.2.22.4	250KL capacity	Litre	17.18
3.2.22.5	300KL capacity	Litre	16.61
3.2.22.6	400KL capacity	Litre	14.63
3.2.22.7	500KL capacity	Litre	13.34
3.2.22.8	600 KL capacity	Litre	12.08
3.2.22.9	700 KL capacity	Litre	11.33
3.2.22.10	800 KL capacity	Litre	10.73
3.2.22.11	900 KL capacity	Litre	10.22
3.2.22.12	1000 KL capacity	Litre	9.79
3.2.22.13	1250 KL capacity	Litre	8.93
3.2.22.14	1500 KL capacity	Litre	8.29
3.2.22.15	1750 KL capacity	Litre	7.78
3.2.22.16	2000 KL capacity	Litre	7.36
3.2.23	Rates for RCC OHSR,SBC 10 T/sqm, SEISMIC ZONE-III & STAGING 22 M		
3.2.23.1	100 KL capacity	Litre	27.65
3.2.23.2	150KL capacity	Litre	20.97
3.2.23.3	200KL capacity	Litre	18.49
3.2.23.4	250KL capacity	Litre	17.90
3.2.23.5	300KL capacity	Litre	17.84
3.2.23.6	400KL capacity	Litre	15.69
3.2.23.7	500KL capacity	Litre	14.39
3.2.23.8	600 KL capacity	Litre	13.32
3.2.23.9	700 KL capacity	Litre	12.52
3.2.23.10	800 KL capacity	Litre	11.85
3.2.23.11	900 KL capacity	Litre	11.35
3.2.23.12	1000 KL capacity	Litre	10.93
3.2.23.13	1250 KL capacity	Litre	10.08
3.2.23.14	1500 KL capacity	Litre	9.42
3.2.23.15	1750 KL capacity	Litre	8.92
3.2.23.16	2000 KL capacity	Litre	8.48
3.2.24	Rates for RCC OHSR,SBC 10 T/sqm, SEISMIC ZONE-IV & STAGING 22 M		
3.2.24.1	100 KL capacity	Litre	29.93
3.2.24.2	150KL capacity	Litre	22.90
3.2.24.3	200KL capacity	Litre	19.81
3.2.24.4	250KL capacity	Litre	20.02
3.2.24.5	300KL capacity	Litre	19.60
3.2.24.6	400KL capacity	Litre	16.98
3.2.24.7	500KL capacity	Litre	15.55
3.2.24.8	600 KL capacity	Litre	14.68
3.2.24.9	700 KL capacity	Litre	13.81
3.2.24.10	800 KL capacity	Litre	13.18
3.2.24.11	900 KL capacity	Litre	12.64
3.2.24.12	1000 KL capacity	Litre	12.18
3.2.24.13	1250 KL capacity	Litre	11.26
3.2.24.14	1500 KL capacity	Litre	10.56
3.2.24.15	1750 KL capacity	Litre	10.00
3.2.24.16	2000 KL capacity	Litre	9.55

Sr. No.	Description	Unit	Rate (Rs.)
3.2.25	Rates for RCC OHSR,SBC 18 T/sqm, SEISMIC ZONE-II & STAGING 22 M		
3.2.25.1	100 KL capacity	Litre	24.57
3.2.25.2	150KL capacity	Litre	18.97
3.2.25.3	200KL capacity	Litre	16.39
3.2.25.4	250KL capacity	Litre	15.46
3.2.25.5	300KL capacity	Litre	14.73
3.2.25.6	400KL capacity	Litre	12.83
3.2.25.7	500KL capacity	Litre	11.80
3.2.25.8	600 KL capacity	Litre	10.83
3.2.25.9	700 KL capacity	Litre	10.14
3.2.25.10	800 KL capacity	Litre	9.58
3.2.25.11	900 KL capacity	Litre	9.11
3.2.25.12	1000 KL capacity	Litre	8.70
3.2.25.13	1250 KL capacity	Litre	7.92
3.2.25.14	1500 KL capacity	Litre	7.32
3.2.25.15	1750 KL capacity	Litre	6.85
3.2.25.16	2000 KL capacity	Litre	6.47
3.2.26	Rates for RCC OHSR,SBC 18 T/sqm, SEISMIC ZONE-III & STAGING 22 M		
3.2.26.1	100 KL capacity	Litre	24.84
3.2.26.2	150KL capacity	Litre	18.92
3.2.26.3	200KL capacity	Litre	16.51
3.2.26.4	250KL capacity	Litre	15.71
3.2.26.5	300KL capacity	Litre	15.21
3.2.26.6	400KL capacity	Litre	13.26
3.2.26.7	500KL capacity	Litre	12.21
3.2.26.8	600 KL capacity	Litre	11.27
3.2.26.9	700 KL capacity	Litre	10.58
3.2.26.10	800 KL capacity	Litre	10.02
3.2.26.11	900 KL capacity	Litre	9.55
3.2.26.12	1000 KL capacity	Litre	9.15
3.2.26.13	1250 KL capacity	Litre	8.36
3.2.26.14	1500 KL capacity	Litre	7.76
3.2.26.15	1750 KL capacity	Litre	7.29
3.2.26.16	2000 KL capacity	Litre	6.90
3.2.27	Rates for RCC OHSR,SBC 18 T/sqm, SEISMIC ZONE-IV & STAGING 22 M		
3.2.27.1	100 KL capacity	Litre	25.36
3.2.27.2	150KL capacity	Litre	19.50
3.2.27.3	200KL capacity	Litre	17.10
3.2.27.4	250KL capacity	Litre	16.52
3.2.27.5	300KL capacity	Litre	16.05
3.2.27.6	400KL capacity	Litre	13.85
3.2.27.7	500KL capacity	Litre	12.72
3.2.27.8	600 KL capacity	Litre	11.75
3.2.27.9	700 KL capacity	Litre	11.07
3.2.27.10	800 KL capacity	Litre	10.52
3.2.27.11	900 KL capacity	Litre	10.04
3.2.27.12	1000 KL capacity	Litre	9.65
3.2.27.13	1250 KL capacity	Litre	8.86
3.2.27.14	1500 KL capacity	Litre	8.26
3.2.27.15	1750 KL capacity	Litre	7.79

Sr. No.	Description	Unit	Rate (Rs.)
3.2.27.16	2000 KL capacity	Litre	7.40
3.2.28	For staging above 22 Mtr (only in exceptional condition where hydraulics not permit) add 2% per Mtr above 22 Mtr.		
3.3	<p>Construction of RCC (Flat slab type) Clear Water Reservoir of following capacity as per the Scope of work and Technical specification, consisting of the following main activities: -</p> <p>a) Topographic survey, preparation of site contour plan, conducting SBC test and its approval from department before construction. Submission and approval of concrete mix design and water quality test report for water to be used in construction.</p> <p>b) Excavation in all types of soil, PCC below foundation & all RCC Work including all labour and material charges including providing and fixing of accessories such as SS ladder, SS manhole frame and covers, water level indicator (float type), SS ventilator with SS screen, float valve, puddle collars, G.I. pipe railing around walk way, Top Dome/Slab, Staircase.</p> <p>c) CWR shall be provided with adequate plinth protection all around the structure in a width starting from edge of structure at GL and extending at least up to 1.0m beyond the vertical wall of CWR. The plinth protection shall consist of 150mm thick PCC in M-15 concrete over 150mm thick compacted soil fill.</p> <p>d) Providing and applying two coats of food grade epoxy paint on the inside surface of the roof slab, and 600 mm height of the vertical wall.</p> <p>e) Successful hydro test and water tightness test as per I.S. code.</p> <p>f) Providing and applying three coats of anti-carbonation paint on the roof Slab.</p> <p>g) Providing and applying three coats of cement-based paint on the remaining external surface area of the structure.</p> <p>h) Providing and fixing SS-304 ventilator, SS 304 manhole frame and cover and SS 304 ladder from roof slab to bottom Slab, inside container. Providing and fixing water level indicator (Float type).</p> <p>i) Providing and fixing MS ladder from ground to top slab.</p> <p>j) All MS parts to be painted with two coats of the enamelled paint over the primer coat of red oxide.</p> <p>k) Providing and fixing of 150mm wide water bar for the construction joints in the container.</p> <p>l) Providing and fixing CI/DI puddle collars the vertical wall for connecting inlet, outlet, overflow and washout pipes of the reservoir.</p> <p>m) Inlet, outlet, overflow, washout pipes and valves are not included in this work, provision for the same shall be taken separately.</p> <p>Rates are exclusive of GST.</p>		
3.3.1	Rates for RCC Partially Underground type clear water reservoir SBC 7 T/sqm, SEISMIC ZONE-2,3 & 4		
3.3.1.1	50 KL capacity	Litre	7.30
3.3.1.2	75 KL capacity	Litre	6.77
3.3.1.3	100 KL capacity	Litre	6.74
3.3.1.4	150KL capacity	Litre	6.05
3.3.1.5	200KL capacity	Litre	5.58
3.3.1.6	250KL capacity	Litre	5.31
3.3.1.7	300KL capacity	Litre	5.15
3.3.2	Rates for RCC Underground type clear water reservoir SBC 7 T/sqm, SEISMIC ZONE-2,3 & 4		
3.3.2.1	50 KL capacity	Litre	7.35

Sr. No.	Description	Unit	Rate (Rs.)
3.3.2.2	75 KL capacity	Litre	6.82
3.3.2.3	100 KL capacity	Litre	6.77
3.3.2.4	150KL capacity	Litre	5.96
3.3.2.5	200KL capacity	Litre	5.62
3.3.2.6	250KL capacity	Litre	5.31
3.3.2.7	300KL capacity	Litre	5.24
3.4	<p>Construction of RCC (Dome type) Clear Water Reservoir of following capacity as per Scope of work and Technical specification, consisting of the following main activities: -</p> <p>a) Topographic survey, preparation of site contour plan, conducting SBC test and its approval from department before construction. Submission and approval of concrete mix design and water quality test report for water to be used in construction. .</p> <p>b) Excavation in all types of soil, PCC below foundation & all RCC Work including all labour and material charges including providing and fixing of accessories such as SS ladder, SS manhole frame and covers, water level indicator (float type), SS ventilator with SS screen, float valve, puddle collars, G.I. pipe railing around walk way, Top Dome/Slab, Staircase.</p> <p>c) CWR shall be provided with adequate plinth protection all around the structure in a width starting from edge of structure at GL and extending at least up to 1.0m beyond the vertical wall of CWR. The plinth protection shall consist of 150mm thick PCC in M-15 concrete over 150mm thick compacted soil fill.</p> <p>d) Providing and applying two coats of food grade epoxy paint on the inside surface of the roof slab, and 600 mm height of the vertical wall.</p> <p>e) Successful hydro test and water tightness test as per I.S. code.</p> <p>f) Providing and applying three coats of anti-carbonation paint on the roof Slab.</p> <p>g) Providing and applying three coats of cement-based paint on the remaining external surface area of the structure.</p> <p>h) Providing and fixing SS-304 ventilator, SS 304 manhole frame and cover and SS 304 ladder from roof slab to bottom Slab, inside container. Providing and fixing water level indicator (Float type).</p> <p>i) Providing and fixing MS ladder from ground to top slab.</p> <p>j) All MS parts to be painted with two coats of the enamelled paint over the primer coat of red oxide.</p> <p>k) Providing and fixing of 150mm wide water bar for the construction joints in the container.</p> <p>l) Providing and fixing CI/DI puddle collars the vertical wall for connecting inlet, outlet, overflow and washout pipes of the reservoir.</p> <p>m) Inlet, outlet, overflow, washout pipes and valves are not included in this work, provision for the same shall be taken separately.</p> <p>Rates are exclusive of GST.</p>		
3.4.1	Rates for RCC Partially Underground type clear water reservoir SBC 7 T/sqm, SEISMIC ZONE2,3 & 4		
3.4.1.1	400 KL capacity	Litre	5.52
3.4.2	Rates for RCC Underground type clear water reservoir SBC 7 T/sqm, SEISMIC ZONE-2,3 & 4		
3.4.2.1	400 KL capacity	Litre	5.38
3.4.3	Rates for RCC Partially Underground type clear water reservoir SBC 7 T/sqm, SEISMIC ZONE-2 & 3.		
3.4.3.1	500 KL capacity	Litre	4.73
3.4.3.2	600 KL capacity	Litre	4.50
3.4.3.3	700 KL capacity	Litre	4.42
3.4.3.4	800 KL capacity	Litre	4.37

Sr. No.	Description	Unit	Rate (Rs.)
3.4.3.5	900 KL capacity	Litre	4.29
3.4.3.6	1000 KL capacity	Litre	4.22
3.4.4	Rates for RCC Partially Underground type clear water reservoir SBC 12.5 T/sqm, SEISMIC ZONE-2 & 3.		
3.4.4.1	500 KL capacity	Litre	4.61
3.4.4.2	600 KL capacity	Litre	4.36
3.4.4.3	700 KL capacity	Litre	4.25
3.4.4.4	800 KL capacity	Litre	4.19
3.4.4.5	900 KL capacity	Litre	4.08
3.4.4.6	1000 KL capacity	Litre	4.00
3.4.5	Rates for RCC Partially Underground type clear water reservoir SBC 7 T/sqm, SEISMIC ZONE-4		
3.4.5.1	500 KL capacity	Litre	5.21
3.4.5.2	600 KL capacity	Litre	4.99
3.4.5.3	700 KL capacity	Litre	4.90
3.4.5.4	800 KL capacity	Litre	4.83
3.4.5.5	900 KL capacity	Litre	4.67
3.4.5.6	1000 KL capacity	Litre	4.54
3.4.6	Rates for RCC Partially Underground type clear water reservoir SBC 12.5 T/sqm, SEISMIC ZONE-4		
3.4.6.1	500 KL capacity	Litre	4.71
3.4.6.2	600 KL capacity	Litre	4.53
3.4.6.3	700 KL capacity	Litre	4.42
3.4.6.4	800 KL capacity	Litre	4.36
3.4.6.5	900 KL capacity	Litre	4.23
3.4.6.6	1000 KL capacity	Litre	4.12
3.4.7	Rates for RCC Underground type clear water reservoir SBC 7 T/sqm, SEISMIC ZONE-2 & 3		
3.4.7.1	500 KL capacity	Litre	4.81
3.4.7.2	600 KL capacity	Litre	4.71
3.4.7.3	700 KL capacity	Litre	4.61
3.4.7.4	800 KL capacity	Litre	4.53
3.4.7.5	900 KL capacity	Litre	4.43
3.4.7.6	1000 KL capacity	Litre	4.36
3.4.8	Rates for RCC Underground type clear water reservoir SBC 12.5 T/sqm, SEISMIC ZONE- 2 & 3		
3.4.8.1	500 KL capacity	Litre	4.71
3.4.8.2	600 KL capacity	Litre	4.59
3.4.8.3	700 KL capacity	Litre	4.50
3.4.8.4	800 KL capacity	Litre	4.44
3.4.8.5	900 KL capacity	Litre	4.35
3.4.8.6	1000 KL capacity	Litre	4.25
3.4.9	Rates for RCC Underground type clear water reservoir SBC 7 T/sqm, SEISMIC ZONE-4		
3.4.9.1	500 KL capacity	Litre	4.87
3.4.9.2	600 KL capacity	Litre	4.80
3.4.9.3	700 KL capacity	Litre	4.68
3.4.9.4	800 KL capacity	Litre	4.59
3.4.9.5	900 KL capacity	Litre	4.49
3.4.9.6	1000 KL capacity	Litre	4.42
3.4.10	Rates for RCC Underground type clear water reservoir SBC 12.5 T/sqm, SEISMIC ZONE-4		

Sr. No.	Description	Unit	Rate (Rs.)
3.4.10.1	500 KL capacity	Litre	4.87
3.4.10.2	600 KL capacity	Litre	4.80
3.4.10.3	700 KL capacity	Litre	4.68
3.4.10.4	800 KL capacity	Litre	4.59
3.4.10.5	900 KL capacity	Litre	4.49
3.4.10.6	1000 KL capacity	Litre	4.42
3.5	<p>Construction of RCC Dome type Ground Level Service Reservoir (GLSR) of following capacity as per the Scope of work and Technical specifications, consisting of the following main activities: -</p> <p>a) Topographic survey, preparation of site contour plan, conducting SBC test and its approval from department before construction. Submission and approval of concrete mix design and water quality test report for water to be used in construction.</p> <p>b) Excavation in all types of soil, PCC below foundation & all RCC Work.</p> <p>c) All the GLSR shall be provided with adequate plinth protection all around the structure in a width starting from edge of structure at GL and extending at least up to 1.0m beyond the vertical wall. The plinth protection shall consist of 150mm thick PCC in M-15 concrete over 150mm thick compacted soil fill.</p> <p>d) Providing and applying two coats of food grade epoxy paint on the inside surface of the roof slab, and 600 mm height of the vertical wall giving.</p> <p>e) Successful hydro test and water tightness test as per I.S. code.</p> <p>f) Providing and applying three coats of anti-carbonation paint on the roof Slab.</p> <p>g) Providing and applying three coats of cement-based paint on the remaining external surface area of the structure.</p> <p>h) Providing and fixing SS-304 ventilator, SS 304 manhole frame and cover and SS 304 ladder from top bottom Slab inside container. Providing and fixing water level indicator (Float type).</p> <p>i) Providing and fixing MS ladder from ground to top slab with safety cage.</p> <p>j) All MS parts to be painted with two coats of the enamelled paint over the primer coat of red oxide.</p> <p>k) Providing and fixing of 150mm wide water bar for the construction joints in the container.</p> <p>l) Providing and fixing CI/DI puddle collars the vertical wall for connecting inlet, outlet, overflow and washout pipe of the reservoir.</p> <p>m) Inlet, outlet, overflow, washout pipes and valves are not included in this work, provision for the same shall be taken separately.</p> <p>Rates are exclusive of GST.</p>		

Sr. No.	Description	Unit	Rate (Rs.)
3.5.1	Rates for RCC GROUND LEVEL SERVICE RESERVOIR SEISMIC ZONE-II & III and SBC18T/sqm		
3.5.1.1	50 KL capacity	Litre	9.08
3.5.1.2	100 KL capacity	Litre	6.86
3.5.1.3	150 KL capacity	Litre	5.78
3.5.1.4	200 KL capacity	Litre	5.33
3.5.1.5	250 KL capacity	Litre	4.87
3.5.1.6	300 KL capacity	Litre	4.70
3.5.1.7	400 KL capacity	Litre	4.48
3.5.1.8	500 KL capacity	Litre	4.36
3.5.2	Rates for RCC GROUND LEVEL SERVICE RESERVOIR SEISMIC ZONE-4 & SBC 18T/sqm		
3.5.2.1	50 KL capacity	Litre	9.26
3.5.2.2	100 KL capacity	Litre	6.96
3.5.2.3	150 KL capacity	Litre	5.86
3.5.2.4	200 KL capacity	Litre	5.35
3.5.2.5	250 KL capacity	Litre	4.90
3.5.2.6	300 KL capacity	Litre	4.72
3.5.2.7	400 KL capacity	Litre	4.49
3.5.2.8	500 KL capacity	Litre	4.36
3.6	Providing and fixing double flanged ISI marked GI pipes medium duty (class B) Steel tube as per IS:1239 or amended up to date and zinc coating as per IS 4736 with GI fittings excluding valves as vertical pipes for RCC Reservoirs including specials required such as bend, tee etc. providing and fixing with MS clamps at every 3 mtr, jointing materials such as nuts, bolt, rubber packing, hydraulic testing etc. complete in all respect up to and from valve chamber as per direction of EIC, Technical Specification and Scope of work. Rates are exclusive of GST.		
3.6.1	50 mm	Mtr	576.27
3.6.2	65 mm	Mtr	738.98
3.6.3	80 mm	Mtr	763.56
3.6.4	100 mm	Mtr	999.15
3.7	Providing and fixing double flanged ISI marked DI Class K-9 pipes as per IS:8329-2000 (amended up to date), as vertical pipes for RCC Reservoirs including specials required such as duck foot bend, bend, tee etc. providing and fixing clamps at every 3 mtr, jointing materials such as nuts, bolt, rubber packing, hydraulic testing etc. complete in all respect up to and from valve chamber as per direction of EIC, Technical Specification and Scope of work. Rates are exclusive of GST.		
3.7.1	100 mm	Mtr	1914.41
3.7.2	150 mm	Mtr	2753.39
3.7.3	200 mm	Mtr	3601.69
3.7.4	250 mm	Mtr	4858.47
3.7.5	300 mm	Mtr	6198.31
3.7.6	350 mm	Mtr	7479.66
3.7.7	400 mm	Mtr	9092.37
3.7.8	450 mm	Mtr	10750.85
3.7.9	500 mm	Mtr	12633.90
3.7.10	600 mm	Mtr	16777.97
3.7.11	700 mm	Mtr	21644.92
	Note: The rates for DI double flanged pipes shall be reduced 5%, if used other than OHSR pipes.		

Chapter 4

Earth work, Road cutting, restoration & trenchless laying

Note : All rates are exclusive of GST.

S. No.	Description	Unit	Rate (Rs.)
4.1	Earth work in excavation by mechanical means (Hydraulic Excavator)/ manual means in trenches of required width and gradient for laying and jointing of pipe line including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 Mtr. including taking 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 disposal of surplus excavated soil as directed within a lead of 50 Mtr. including required all safety provisions etc.: All kinds of soil Rate is exclusive of GST.	Cum	169.49
4.2	Add extra for trenches for every additional lift over item no 4.1 Rates are exclusive of GST.		
4.2.1	Above 1.5 mtr and up to 3.0 mtr.	Cum	16.95
4.2.2	Above 3.0 mtr and up to 4.5 mtr.	Cum	33.05
4.3	Earth work in excavation by mechanical means (Hydraulic Excavator)/ manual means in trenches of required width and gradient for laying and jointing of pipe line including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5 Mtr. including taking 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 stacking serviceable material for measurements and disposal of unserviceable material as directed, with in a lead of 50 Mtr. including all safety provisions required .: Rates are exclusive of GST.		
4.3.1	Ordinary rock	Cum	309.32
4.3.2	Hard rock (requiring blasting)	Cum	462.71
4.3.3	Hard rock(blasting prohibited)	Cum	662.71
4.4	Add extra for trenches for every additional lift over item no 4.3 Rates are exclusive of GST.		
4.4.1	Above 1.5 mtr and up to 3.0 mtr.	Cum	31.36
4.4.2	Above 3.0 mtr and up to 4.5 mtr.	Cum	61.86

S. No.	Description	Unit	Rate (Rs.)
4.5	Dismantling of cement concrete pavement for pipe line and chambers by mechanical means using pneumatic tools, cutting the peripheral edge by CC cutter, breaking to pieces not exceeding 0.02 cum in volume and stock piling at designated locations and disposal of dismantled materials up to a lead of 1000 meters. Measurement for dismantled trench to be made as per standard trench width specified in tender document and no extra payment shall be made for trench width more than specified, re-handling of material/earth to complete the tasks as per technical specification and scope of work. Rate is exclusive of GST.	Cum	641.53
4.6	Dismantling of flexible pavement for pipe line and chambers by mechanical means using pneumatic tools, breaking to pieces not exceeding 0.02 cum in volume and stock piling at designated locations and disposal of dismantled materials up to a lead of 1000 meters. Measurement for dismantled trench to be made as per standard trench width specified in tender document and no extra payment shall be made for trench width more than specified, re-handling of material/earth to complete the tasks per technical specification and scope of work. Rates are exclusive of GST.		
4.6.1	Bituminous courses	Cum	352.54
4.6.2	Granular courses	Cum	250.85
4.7	Providing and laying in position cement concrete M10 grade nominal mix 1:3:6 (1 Cement : 3coarse sand : 6 graded stone aggregate 40 mm nominal size) in base course complete including all material, labour, machinery, lighting, guarding for road restoration work in trenches of pipe line and chamber work. Measurement for CC work to be made as per standard trench width specified in tender document and no extra payment shall be made for trench width more than specified, complete work as per technical specification and scope of work. Rate is exclusive of GST.	Cum	3964.41
4.8	Providing and laying in position cement concrete in specified grade over prepared base course complete including finishing, curing, all material, labour, machinery, lighting, guarding for road restoration work in trenches of pipe line and chamber work. Measurement for CC work to be made as per standard trench width specified in tender document and no extra payment shall be made for trench width more than specified, complete work as per technical specification and scope of work. Rates are exclusive of GST.		
4.8.1	M20 grade Nominal Mix 1: 1.5: 3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20mm nominal size).	Cum	5222.03
4.8.2	Plain cement concrete pavement of M-30 Grade	Cum	5505.93

S. No.	Description	Unit	Rate (Rs.)
4.9	<p>Removing & Re-fixing of Precast concrete interlocking blocks for laying of pipe line by manual method, stacking of serviceable & non serviceable material separately, disposal of dismantled material lead up to 50 mtr. The C.C. interlocking paving blocks be laid on average 25 mm thick bed of coarse sand and the joints to be filled with fine sand. Laying procedure on compacted sub base as defined. Complete job is to be executed as per the directions of Engineer in charge. The rates to be inclusive of fixing of 70 percent reusable precast concrete interlocking block and cost of required new precast concrete interlocking block against damaged, including all lead and lift as per Technical specifications. (Interlocking block manufactured by fully computerized automatic stationery hydraulic vibro pressed machine & full computerized automatic batching plant of class A-1 as per BS:6717-2001. Tensile splitting strength and breaking load as per BS: 6717-2001 Colour: Grey cement natural colour. Variation in Dimension : Less than 1.6 mm Variation in thickness: Less than 3.2 mm)</p> <p>Note: If existing precast block used more than 70%, than for every 1% use above 70%, deduction of 1% in cost shall be done for every 1% use above 70%.</p> <p>Rates are exclusive of GST.</p>		
4.9.1	60 mm thick.	Sqm.	233.05
4.9.2	80 mm thick.	Sqm.	252.54
4.9.3	100 mm thick	Sqm.	281.36
4.10	<p>Horizontal directional drilling (by trenchless technology) of suitable dia hole minimum 1.0 mtr below natural ground level in all type of soil under CC/BT roads and pulling HDPE pipes of dia up to 110 mm, which are available in the form of a coil including excavation, shoring/ strutting, preparation, maintain the thrust and including, road dismantling, excavation and refilling of drive pit and exit pit, restoration of road cut as per technical specification and scope of work, but excluding the cost of pipe line.</p> <p>Rate is exclusive of GST.</p>	RMT	244.92

S. No.	Description	Unit	Rate (Rs.)
4.11	<p>Supply laying and pushing of MS casing pipe of specified thickness approved by concerned department authority by trenchless method adopting any suitable technology below ground at required depth under running traffic condition as per Highway/ Railway standard including carrying out survey work at the job site for determining underground cable trenches like telephone, cable, water & sanitary lines and resistivity test for finding the soil strata using necessary equipments for completion of works, mobilizing of machineries and specialized crew at the job site complete in all respect, including excavation of driven pit and exit pit (up to 3 meter depth) with proper protection at these sites with shoring sheets and ISMB. Providing MS cutting edges for front shield and constructing thrust bed at designated level. Necessary dewatering and providing concrete foundation at the base of the driven pit, PVC/Rubber saddle as per the requirement of Highway/Railway authority, crane for handing of pipe and any other machinery, tools, and tackles required, construction of temporary works as per design, drawing and method as per approved by authority specification and the direction of the Engineer.</p> <p>Apply corrosion, resistant, protection on inside and outside of casing pipe as per technical specification.</p> <p>Rates are exclusive of GST.</p>		
4.11.1	300 mm Dia 8 mm thick casing pipe.	RMT	15553.39
4.11.2	400 mm Dia 8 mm thick casing pipe .	RMT	17772.88
4.11.3	500 mm Dia 8 mm thick casing pipe .	RMT	19973.73
4.11.4	600 mm Dia 10 mm thick casing pipe .	RMT	25602.54
4.11.5	700 mm Dia 10 mm thick casing pipe .	RMT	28353.39
4.12	<p>Removing & Re-fixing of Bricks Kharanja road by manual means for laying of pipe line, stacking of serviceable & unserviceable material separately, disposal of dismantled material lead up to 50 mtr. The Bricks interlocking be laid on average 12 mm thick bed of mud mortar and the joints to be filled with pointing in cement mortar 1:3. Laying procedure on compacted sub base as defined. Complete job is to be executed as per the direction of Engineer in charge. The rates are inclusive of fixing of 80 percent reusable Bricks and cost of required new First class FPS bricks (min. 10.5 Mpa) in place of damaged bricks, all lead and lift as per Technical Specifications and direction of Engineer in Charge.</p> <p>Note: If existing bricks used more than 80%, than for every 1% above 80% use, deduction of 1% in cost shall be done for every 1% use above 80%.</p> <p>Rates are exclusive of GST.</p>		
4.12.1	Horizontal aligned Bricks	Sqm.	179.66
4.12.2	Vertical aligned Bricks	Sqm.	194.92

Chapter 5

Pump sets

Note : All rates are exclusive of GST.

Sr. No.	Description	Unit	Rate (Rs.)
5.1	<p>Providing, installation, testing and commissioning of Centrifugal Monoblock pump set conforming to IS 9079 , 2 pole motor operating at synchronised speed of 3000 RPM with requisite MOC impeller, priming funnel, cock, suitable flanges at suction and delivery side. Pump shall have common shaft for pump and motor. Motor shall be suitable for working on 415 V \pm 10%, 3 Ph, 50 Hz A.C. Supply. Motor shall be TEFC type and Pump set shall be suitable for working at various discharge and head requirements as per scope of work. Pump shall be erected on C.C. foundation / cross channels / RSJ frame block with suitable foundation bolts grouted in C.C. foundation block etc. complete in all respect as per specification, scope of work and direction of Engineer in Charge of following power rating, suitable for prescribed duty conditions mentioned in TD.</p> <p>Rates are exclusive of GST.</p>		
5.1.1	Centrifugal Monoblock Pump set (Single Stage)		
5.1.1.1	2.2 KW (3.0 HP)	Each	28872.88
5.1.1.2	3.7 KW (5.0 HP)	Each	37084.75
5.1.1.3	5.5 KW (7.5 HP)	Each	46800.85
5.1.1.4	7.5 KW (10 HP)	Each	57215.25
5.1.1.5	9.3 KW (12.5 HP)	Each	66830.51
5.1.1.6	11.0 KW (15 HP)	Each	70464.41
5.1.1.7	15.0 KW (20.0 HP)	Each	92224.58
5.1.1.8	18.5 KW (25.0 HP)	Each	121719.49
5.1.2	Centrifugal Monoblock Pump set (Double Stage)		
5.1.2.1	3.7 KW (5.0 HP)	Each	42664.41
5.1.2.2	5.5 KW (7.5 HP)	Each	51881.36
5.1.2.3	7.5 KW (10.0 HP)	Each	62295.76
5.1.2.4	9.3 KW (12.5 HP)	Each	68989.83
5.1.2.5	11.0 KW (15.0 HP)	Each	76227.12
5.1.2.6	15.0 KW (20.0 HP)	Each	99698.31
	Vacuum Pump set (Monoblock)		
5.2	<p>Providing, installation, testing and commissioning of Mono block Vacuum pump set with base plate including C.C. foundation / cross channels / RSJ frame and foundation bolts etc. complete in all respect as per specification, scope of work and direction of Engineer in Charge.</p> <p>Rates are exclusive of GST.</p>		
5.2.1	0.75 KW (1 HP), single Ph	Each	26394.07
5.2.2	2.2 KW (3 HP), three Ph	Each	48072.03
	Vacuum Pump set (Coupled)		

Sr. No.	Description	Unit	Rate (Rs.)
5.3	Providing, installation, testing and commissioning of Vacuum pump set with horizontal foot mounted TEFC squirrel cage motor working on three phase 50 Hz, 415 Volts +/- 10% with base plate including cost of flexible couplings, coupling guard etc. complete in all respect as per specification, scope of work and direction of Engineer in Charge. Rates are exclusive of GST.		
5.3.1	3.7 KW (5.0 HP)	Each	102393.22
5.3.2	7.5 KW (10.0 HP)	Each	126256.78
5.4	Providing, installation, testing and commissioning of Submerged Centrifugal Pump sets with motor 4 pole synchronised speed of 1500 rpm (water immersed, dry air filled, class "F" insulated TEWC motor integrally mounted on volute casing pump sets for drinking water) 3 phase, +/- 3%, 415 volt +/- 10%, along with suitable foundation/ installation device and with 10 mtr cable, material of construction of impeller SS, casing (volute) CI, wearing ring SS, etc. complete in all respect as per specification, scope of work and direction of Engineer in Charge of following power rating, suitable for prescribed duty conditions mentioned in TD. Rates are exclusive of GST.		
5.4.1	15 KW	Each	206577.12
5.4.2	18.5 KW	Each	254779.66
5.4.3	22 KW	Each	302980.51
5.4.4	30 KW	Each	413154.24
5.4.5	37 KW	Each	506837.29
5.4.6	45 KW	Each	536572.03
5.4.7	55 KW	Each	689065.25
5.4.8	75 KW	Each	764980.51
5.4.9	90 KW	Each	1035165.25
5.4.10	110 KW	Each	1273949.15
5.4.11	125 KW	Each	1397257.63
5.4.12	132 KW	Each	1473590.68
5.4.13	160 KW	Each	1696760.17
5.4.14	180 KW	Each	1802637.29
5.4.15	200 KW	Each	2163164.41

Sr. No.	Description	Unit	Rate (Rs.)
5.5	<p>Providing, installation, testing and commissioning of submersible Monoblock pump set conforming to IS 8034 and 2 pole motor operating at synchronised speed of speed 3000 RPM, with water proof winding. Pump shall be suitable for various delivery head and discharge with stainless steel shaft. Motor suitable for working on 415 V \pm 10%, 3 Ph, 50 Hz AC and with water lubricated bearing to accept entire hydraulic thrust. Supply, with cable guard, thrust carbon/fibre bearing to withstand entire hydraulic thrust. The pump set shall be suitable for direct coupling, with suitable suction strainer. Pump should have suitable discharge out let as per manufacturer's design. Antithrust stream lined non return valve shall be provided with the pump and minimum 6 m submersible copper conductor cable in single / double run and 2 pairs of suitable size erection clamp 10 mm thick shall be provided with each pump etc. complete in all respect as per specification, scope of work and direction of Engineer in Charge of following power rating, suitable for prescribed duty conditions mentioned in TD.</p> <p>Rates are exclusive of GST.</p>		
5.5.1	2.2 KW (3.0 HP)	Each	30450.85
5.5.2	3.7 KW (5.0 HP)	Each	33848.31
5.5.3	5.5 KW (7.5 HP)	Each	45583.90
5.5.4	7.5 KW (10 HP)	Each	51389.83
5.5.5	9.3 KW (12.5 HP)	Each	64819.49
5.5.6	11.0 KW (15 HP)	Each	72514.41
5.5.7	15.0 KW (20.0 HP)	Each	86226.27
5.6	<p>Providing, installation, testing and commissioning of submersible dewatering pump set conforming to relevant IS codes and as per scope of work and Technical Specifications, with water proof winding. Pump shall be suitable for various delivery head and discharge with stainless steel shaft, impeller, pump and motor body. Motor suitable for working on 415 V \pm 10%, 3 Ph, 50 Hz A.C. Supply, with cable guard. The pump set shall be suitable for direct coupling, with suitable suction strainer etc. complete in all respect as per specification, scope of work and direction of Engineer in Charge of following power rating, suitable for prescribed duty conditions mentioned in TD.</p> <p>Rates are exclusive of GST.</p>		
5.6.1	0.75 KW (1.0 HP)	Each	34368.64
5.6.2	1.5 KW (2.0 HP)	Each	39407.63
5.6.3	2.2 KW (3.0 HP)	Each	68056.78
5.6.4	3.7 KW (5.0 HP)	Each	91101.69

Sr. No.	Description	Unit	Rate (Rs.)
5.7	Providing and fixing at site with necessary packing, Horizontal Centrifugal Split Casting pumps with 4 pole induction motor operating at synchronised speed of speed 1500 RPM as per IS 12615: 2011 or amended up to date , CI casing and casing ring, SS 316 impeller, SS 410 Shaft and shaft sleeve, coupling guard, common base plate, foundation bolts, Cement concrete foundation etc. complete with all respect as per the specification and scope of work and direction of Engineer in Charge of following range of duty conditions. Note: Duty condition of required pump shall also be mentioned in BoQ. Rates are exclusive of GST.		
5.7.1	Discharge 20 to 30 LPS and head 20 to 30 M	Each	140980.51
5.7.2	Discharge 20 to 30 LPS and head 31 to 40 M	Each	205277.12
5.7.3	Discharge 20 to 30 LPS and head 41 to 50 M	Each	242062.71
5.7.4	Discharge 20 to 30 LPS and head 51 to 60 M	Each	277380.51
5.7.5	Discharge 20 to 30 LPS and head 61 to 70 M	Each	353955.08
5.7.6	Discharge 20 to 30 LPS and head 71 to 80 M	Each	353955.08
5.7.7	Discharge 20 to 30 LPS and head 81 to 90 M	Each	353955.08
5.7.8	Discharge 31 to 40 LPS and head 20 to 30 M	Each	205277.12
5.7.9	Discharge 31 to 40 LPS and head 31 to 40 M	Each	242062.71
5.7.10	Discharge 31 to 40 LPS and head 41 to 50 M	Each	277380.51
5.7.11	Discharge 31 to 40 LPS and head 51 to 60 M	Each	353955.08
5.7.12	Discharge 31 to 40 LPS and head 61 to 70 M	Each	417385.59
5.7.13	Discharge 31 to 40 LPS and head 71 to 80 M	Each	417385.59
5.7.14	Discharge 31 to 40 LPS and head 81 to 90 M	Each	486806.78
5.7.15	Discharge 41 to 50 LPS and head 20 to 30 M	Each	242062.71
5.7.16	Discharge 41 to 50 LPS and head 31 to 40 M	Each	353955.08
5.7.17	Discharge 41 to 50 LPS and head 41 to 50 M	Each	353955.08
5.7.18	Discharge 41 to 50 LPS and head 51 to 60 M	Each	417385.59
5.7.19	Discharge 41 to 50 LPS and head 61 to 70 M	Each	486806.78
5.7.20	Discharge 41 to 50 LPS and head 71 to 80 M	Each	569975.42
5.7.21	Discharge 41 to 50 LPS and head 81 to 90 M	Each	569975.42
5.7.22	Discharge 51 to 60 LPS and head 20 to 30 M	Each	277380.51
5.7.23	Discharge 51 to 60 LPS and head 31 to 40 M	Each	353955.08
5.7.24	Discharge 51 to 60 LPS and head 41 to 50 M	Each	417385.59
5.7.25	Discharge 51 to 60 LPS and head 51 to 60 M	Each	486806.78
5.7.26	Discharge 51 to 60 LPS and head 61 to 70 M	Each	569975.42
5.7.27	Discharge 51 to 60 LPS and head 71 to 80 M	Each	727326.27
5.7.28	Discharge 51 to 60 LPS and head 81 to 90 M	Each	727326.27
5.7.29	Discharge 61 to 70 LPS and head 20 to 30 M	Each	277380.51
5.7.30	Discharge 61 to 70 LPS and head 31 to 40 M	Each	353955.08
5.7.31	Discharge 61 to 70 LPS and head 41 to 50 M	Each	486806.78
5.7.32	Discharge 61 to 70 LPS and head 51 to 60 M	Each	569975.42
5.7.33	Discharge 61 to 70 LPS and head 61 to 70 M	Each	727326.27
5.7.34	Discharge 61 to 70 LPS and head 71 to 80 M	Each	727326.27
5.7.35	Discharge 61 to 70 LPS and head 81 to 90 M	Each	839394.07

Sr. No.	Description	Unit	Rate (Rs.)
5.7.36	Discharge 71 to 80 LPS and head 20 to 30 M	Each	353955.08
5.7.37	Discharge 71 to 80 LPS and head 31 to 40 M	Each	417385.59
5.7.38	Discharge 71 to 80 LPS and head 41 to 50 M	Each	569975.42
5.7.39	Discharge 71 to 80 LPS and head 51 to 60 M	Each	727326.27
5.7.40	Discharge 71 to 80 LPS and head 61 to 70 M	Each	727326.27
5.7.41	Discharge 71 to 80 LPS and head 71 to 80 M	Each	839394.07
5.7.42	Discharge 71 to 80 LPS and head 81 to 90 M	Each	982800.85
5.7.43	Discharge 81 to 90 LPS and head 20 to 30 M	Each	353955.08
5.7.44	Discharge 81 to 90 LPS and head 31 to 40 M	Each	486806.78
5.7.45	Discharge 81 to 90 LPS and head 41 to 50 M	Each	569975.42
5.7.46	Discharge 81 to 90 LPS and head 51 to 60 M	Each	727326.27
5.7.47	Discharge 81 to 90 LPS and head 61 to 70 M	Each	727326.27
5.7.48	Discharge 81 to 90 LPS and head 71 to 80 M	Each	982800.85
5.7.49	Discharge 81 to 90 LPS and head 81 to 90 M	Each	982800.85
5.7.50	Discharge 91 to 100 LPS and head 20 to 30 M	Each	417385.59
5.7.51	Discharge 91 to 100 LPS and head 31 to 40 M	Each	569975.42
5.7.52	Discharge 91 to 100 LPS and head 41 to 50 M	Each	727326.27
5.7.53	Discharge 91 to 100 LPS and head 51 to 60 M	Each	727326.27
5.7.54	Discharge 91 to 100 LPS and head 61 to 70 M	Each	839394.07
5.7.55	Discharge 91 to 100 LPS and head 71 to 80 M	Each	982800.85
5.7.56	Discharge 91 to 100 LPS and head 81 to 90 M	Each	1086682.20
5.7.57	Discharge 101 to 120 LPS and head 20 to 30 M	Each	417385.59
5.7.58	Discharge 101 to 120 LPS and head 31 to 40 M	Each	569975.42
5.7.59	Discharge 101 to 120 LPS and head 41 to 50 M	Each	727326.27
5.7.60	Discharge 101 to 120 LPS and head 51 to 60 M	Each	839394.07
5.7.61	Discharge 101 to 120 LPS and head 61 to 70 M	Each	982800.85
5.7.62	Discharge 101to 120 LPS and head 71 to 80 M	Each	982800.85
5.7.63	Discharge 101to 120 LPS and head 81 to 90 M	Each	1319377.97
5.7.64	Discharge 121 to 140 LPS and head 20 to 30 M	Each	486806.78
5.7.65	Discharge 121 to 140 LPS and head 31 to 40 M	Each	727326.27
5.7.66	Discharge 121 to 140 LPS and head 41 to 50 M	Each	839394.07
5.7.67	Discharge 121 to 140 LPS and head 51 to 60 M	Each	982800.85
5.7.68	Discharge 121 to 140 LPS and head 61 to 70 M	Each	982800.85
5.7.69	Discharge 121 to 140 LPS and head 71 to 80 M	Each	1134233.05
5.7.70	Discharge 121 to 140 LPS and head 81 to 90 M	Each	1319377.97
5.7.71	Discharge 141 to 160 LPS and head 20 to 30 M	Each	569975.42
5.7.72	Discharge 141 to 160 LPS and head 31 to 40 M	Each	727326.27
5.7.73	Discharge 141 to 160 LPS and head 41 to 50 M	Each	982800.85
5.7.74	Discharge 141 to 160 LPS and head 51 to 60 M	Each	1086682.20
5.7.75	Discharge 141 to 160 LPS and head 61 to 70 M	Each	1319377.97
5.7.76	Discharge 141 to 160 LPS and head 71 to 80 M	Each	1319377.97
5.7.77	Discharge 141 to 160 LPS and head 81 to 90 M	Each	1572318.64
5.7.78	Discharge 161 to 180 LPS and head 20 to 30 M	Each	727326.27
5.7.79	Discharge 161 to 180 LPS and head 31 to 40 M	Each	839394.07
5.7.80	Discharge 161 to 180 LPS and head 41 to 50 M	Each	982800.85
5.7.81	Discharge 161 to 180 LPS and head 51 to 60 M	Each	1134233.05

Sr. No.	Description	Unit	Rate (Rs.)
5.7.82	Discharge 161 to 180 LPS and head 61 to 70 M	Each	1319377.97
5.7.83	Discharge 161 to 180 LPS and head 71 to 80 M	Each	1447355.93
5.7.84	Discharge 161 to 180 LPS and head 81 to 90 M	Each	1572318.64
5.7.85	Discharge 181 to 200 LPS and head 20 to 30 M	Each	727326.27
5.7.86	Discharge 181 to 200 LPS and head 31 to 40 M	Each	982800.85
5.7.87	Discharge 181 to 200 LPS and head 41 to 50 M	Each	1086682.20
5.7.88	Discharge 181 to 200 LPS and head 51 to 60 M	Each	1319377.97
5.7.89	Discharge 181 to 200 LPS and head 61 to 70 M	Each	1447355.93
5.7.90	Discharge 181 to 200 LPS and head 71 to 80 M	Each	1694632.20
5.7.91	Discharge 181 to 200 LPS and head 81 to 90 M	Each	1873750.85
5.8	<p>Providing and fixing at site with necessary packing, Horizontal Centrifugal Split Casting pumps with 4 pole induction motor operating at synchronised speed of speed 1500 RPM as per IS 12615: 2011 or amended up to date , CI casing and casing ring, SS 316 impeller, SS 410 Shaft and shaft sleeve, coupling guard, common base plate, foundation bolts, Cement concrete foundation etc. complete with all respect as per the specification and scope of work and direction of Engineer in Charge of following range of duty conditions.</p> <p>Note: Duty condition of required pump shall also be mentioned in BoQ.</p> <p>Rates are exclusive of GST.</p>		
5.8.1	Discharge 201 to 220 LPS and head 20 to 30 M	Each	727326.27
5.8.2	Discharge 201 to 220 LPS and head 31 to 40 M	Each	982800.85
5.8.3	Discharge 201 to 220 LPS and head 41 to 50 M	Each	1319377.97
5.8.4	Discharge 201 to 220 LPS and head 51 to 60 M	Each	1447355.93
5.8.5	Discharge 201 to 220 LPS and head 61 to 70 M	Each	1572318.64
5.8.6	Discharge 221 to 240 LPS and head 20 to 30 M	Each	839394.07
5.8.7	Discharge 221 to 240 LPS and head 31 to 40 M	Each	1086682.20
5.8.8	Discharge 221 to 240 LPS and head 41 to 50 M	Each	1319377.97
5.8.9	Discharge 221 to 240 LPS and head 51 to 60 M	Each	1572318.64
5.8.10	Discharge 221 to 240 LPS and head 61 to 70 M	Each	1694632.20
5.8.11	Discharge 241 to 260 LPS and head 20 to 30 M	Each	839394.07
5.8.12	Discharge 241 to 260 LPS and head 31 to 40 M	Each	1134233.05
5.8.13	Discharge 241 to 260 LPS and head 41 to 50 M	Each	1319377.97
5.8.14	Discharge 241 to 260 LPS and head 51 to 60 M	Each	1572318.64
5.8.15	Discharge 241 to 260 LPS and head 61 to 70 M	Each	1873750.85
5.8.16	Discharge 261 to 280 LPS and head 20 to 30 M	Each	982800.85
5.8.17	Discharge 261 to 280 LPS and head 31 to 40 M	Each	1319377.97
5.8.18	Discharge 261 to 280 LPS and head 41 to 50 M	Each	1447355.93
5.8.19	Discharge 261 to 280 LPS and head 51 to 60 M	Each	1694632.20
5.8.20	Discharge 261 to 280 LPS and head 61 to 70 M	Each	2019512.71
5.8.21	Discharge 281 to 300 LPS and head 20 to 30 M	Each	982800.85
5.8.22	Discharge 281 to 300 LPS and head 31 to 40 M	Each	1319377.97
5.8.23	Discharge 281 to 300 LPS and head 41 to 50 M	Each	1572318.64
5.8.24	Discharge 281 to 300 LPS and head 51 to 60 M	Each	1694632.20
5.8.25	Discharge 281 to 300 LPS and head 61 to 70 M	Each	2019512.71

Sr. No.	Description	Unit	Rate (Rs.)
5.8.26	Discharge 301 to 325 LPS and head 20 to 30 M	Each	1086682.20
5.8.27	Discharge 301 to 325 LPS and head 31 to 40 M	Each	1319377.97
5.8.28	Discharge 301 to 325 LPS and head 41 to 50 M	Each	1694632.20
5.8.29	Discharge 301 to 325 LPS and head 51 to 60 M	Each	1873750.85
5.8.30	Discharge 301 to 325 LPS and head 61 to 70 M	Each	2247000.85
5.8.31	Discharge 326 to 350 LPS and head 20 to 30 M	Each	1086682.20
5.8.32	Discharge 326 to 350 LPS and head 31 to 40 M	Each	1447355.93
5.8.33	Discharge 326 to 350 LPS and head 41 to 50 M	Each	1694632.20
5.8.34	Discharge 326 to 350 LPS and head 51 to 60 M	Each	2019512.71
5.8.35	Discharge 326 to 350 LPS and head 61 to 70 M	Each	2247000.85
5.8.36	Discharge 351 to 400 LPS and head 20 to 30 M	Each	1319377.97
5.8.37	Discharge 351 to 400 LPS and head 31 to 40 M	Each	1572318.64
5.8.38	Discharge 351 to 400 LPS and head 41 to 50 M	Each	1873750.85
5.8.39	Discharge 351 to 400 LPS and head 51 to 60 M	Each	2247000.85
5.8.40	Discharge 351 to 400 LPS and head 61 to 70 M	Each	2468372.03

Chapter 6

Valves and Appurtenances

Note : All rates are exclusive of GST.

S. No.	Description	Unit	Rate (Rs.)
6.1	Providing, lowering, aligning, fixing in position in pipe line, CI D/F Sluice valves straight and pocket less body passage of approved make of following Pressure rating & dia complete, confirming to IS:14846 (amended up to date) and of following specifications: Body, Bonnet, Wedge, Gland, Thrust Plate, Cap & Hand wheel of Grey cast iron of IS:210/ FG200 Stem - AISI- 410 ,Body Seat ring, Wedge facing ring & Bushes - LTB2/ SS , Face to face dimensions as per IS 14846/2000 (amended up to date) ,Epoxy (Non-Toxic- suitable for drinking water) applied inside and outside, Flanges Drilled as per IS 1538. Nut-Bolt confirming to IS:1363 and IS: 1367/ CS/ galvanised steel Insertion rubber of black EPDM 6mm thick . Sluice valves including all jointing & jointing material, labour, testing and commissioning along with pipe line as per Technical Specifications and as per direction of Engineer-in-charge. Note 1 : Rates are exclusive of tail piece/ dismantling joints and earth work. Note 2 : Rates are exclusive of GST.		
6.1.1	Manually Operated CI Sluice valve of Class PN-1.0		
6.1.1.1	80 mm HW	Each	5339.83
6.1.1.2	100 mm HW	Each	7329.66
6.1.1.3	125 mm HW	Each	9468.64
6.1.1.4	150 mm HW	Each	11521.19
6.1.1.5	200 mm HW	Each	19155.08
6.1.1.6	250 mm HW	Each	30272.88
6.1.1.7	300 mm HW	Each	38459.32
6.1.1.8	350 mm with Gear	Each	73591.53
6.1.1.9	400 mm with Gear	Each	96150.00
6.1.1.10	450 mm with Gear	Each	125139.83
6.1.1.11	500 mm with Gear	Each	156681.36
6.1.1.12	600 mm with Gear	Each	223025.42
6.1.2	Motorized Sluice Valves with Electric Actuator with integral starter of Class PN 1.0		
6.1.2.1	80 mm dia	Each	100420.34
6.1.2.2	100 mm dia	Each	103638.98
6.1.2.3	125 mm dia	Each	107344.07
6.1.2.4	150 mm dia	Each	113065.25
6.1.2.5	200 mm dia	Each	128256.78
6.1.2.6	250 mm dia	Each	145382.20
6.1.2.7	300 mm dia	Each	154897.46
6.1.2.8	350 mm dia	Each	188554.24
6.1.2.9	400 mm dia	Each	212672.88
6.1.2.10	450 mm dia	Each	247186.44
6.1.2.11	500 mm dia	Each	290473.73
6.1.2.12	600 mm dia.	Each	359796.61

S. No.	Description	Unit	Rate (Rs.)
6.2	Providing, lowering, laying, aligning, fixing in position CI D/F short body pattern type butterfly valves having body, disc and end cover in graded cast iron generally conforming to (IS13095/1991amended up to date), synthetic rubber faced ring secured on disc by retaining ring with SS steel screw stub shaft of SS riding in Teflon bearing including C.C. foundation/ structural steel support, material, labour, testing along with pipe line and commissioning as per Technical Specifications and as per direction of Engineer in charge. Note 1 : Rates are exclusive of tail piece/ dismantling joints and earth work. Note 2 : Rates are exclusive of GST.		
6.2.1	Manually Operated Butterfly Valve PN-1.0		
6.2.1.1	100 mm dia (With lever operated)	Each	10815.25
6.2.1.2	125 mm dia (With lever operated)	Each	14900.00
6.2.1.3	150 mm dia (With lever operated)	Each	18539.83
6.2.1.4	200 mm dia (With Gear Operated)	Each	27900.85
6.2.1.5	250 mm dia (With Gear Operated)	Each	35421.19
6.2.1.6	300 mm dia (With Gear Operated)	Each	44172.03
6.2.1.7	350 mm dia (With Gear Operated)	Each	55089.83
6.2.1.8	400 mm dia (With Gear Operated)	Each	71406.78
6.2.1.9	450 mm dia (With Gear Operated)	Each	86111.02
6.2.1.10	500 mm dia (With Gear Operated)	Each	107237.29
6.2.1.11	600 mm dia (With Gear Operated)	Each	145637.29
6.2.1.12	700 mm dia (With Gear Operated)	Each	198508.47
6.2.1.13	800 mm dia (With Gear Operated)	Each	283121.19
6.2.1.14	900 mm dia (With Gear Operated)	Each	364820.34
6.2.1.15	1000 mm dia (With Gear Operated)	Each	471538.14
6.3	Providing, lowering, aligning, fixing in position in pipe line, CI double flanged swing type Non Return Valves (NRV) of approved make of following Pressure rating & dia complete, confirming to IS: 5312 (part -1)/ 2004 (amended up to date) and of following specifications: Body, Cover & disc of Grey cast iron of IS:210/ FG200. Face to face dimensions as per IS 5312 (part -1):2004 , Flanges Drilled as per IS:1538. Epoxy (Non-Toxic & suitable for drinking water) applied on body, cover and disc inside and outside . Body seat ring of SS/CS Door face ring - EPDM/ Neoprene (food grade quality) ,Shaft of SS- AISI- 410 ,Hinge Malleable cast iron / SS AISI 316 ,Bonnet Gasket EPDM, Bush- Leaded tin Bronze/ PTET, Gasket EPDM/NBR ,Nut-Bolt as per IS:1363 and IS: 1367 (galvanised steel) ,Insertion rubber of black EPDM 6mm thick. Suitable support structure as per directions of EIC including jointing & jointing material, labour, testing and commissioning along with pipeline as per Technical Specification & as per direction of Engineer-in-charge. Note 1 : Rates are exclusive of tail piece/ dismantling joints and earth work. Note 2 : Rates are exclusive of GST.		
6.3.1	Class PN 1.0		
6.3.1.1	80 mm dia	Each	5270.34
6.3.1.2	100 mm dia	Each	6756.78
6.3.1.3	125 mm dia	Each	8857.63
6.3.1.4	150 mm dia	Each	11107.63
6.3.1.5	200 mm dia	Each	19083.90
6.3.1.6	250 mm dia	Each	30982.20
6.3.1.7	300 mm dia	Each	42721.19
6.3.1.8	350 mm dia	Each	75272.88
6.3.1.9	400 mm dia	Each	107671.19

S. No.	Description	Unit	Rate (Rs.)
6.3.1.10	450 mm dia	Each	136503.39
6.3.1.11	500 mm dia	Each	196720.34
6.3.1.12	600 mm dia	Each	291575.42
6.4	<p>Providing, lowering, aligning, fixing in position in pipe line, CI double flanged Dual plate check valve of approved make of following Pressure rating & dia complete, as per API: 594/ API: 598 and of following specifications: Body & Cover of Grey cast iron of IS:210/ FG200 , Disc / plates - Cast steel ,Disc seal ring of EPDM/ NBR (food grade quality) ,Body seat of SS ,Face to face dimensions as per API: 594 ,Flanges Drilled as per IS:1538. Epoxy (Non-Toxic & suitable for drinking water) applied on body & cover inside and outside . Shaft/Stop Pin of SS- AISI- 304/410 , Hinge SS AISI 316/304 / CS ,Spring SS AISI 316/304 , Bonnet Gasket EPDM ,Bush- Brass with EPDM/NBR "O "ring seal.Nut-Bolt confirming to IS:1363 and IS: 1367 (galvanised steel) ,Insertion rubber of black EPDM 6mm thick . Suitable support structure as per directions of EIC including jointing & jointing material, labour, testing and commissioning along with pipeline as per Technical Specification & as per direction of Engineer-in-charge.</p> <p>Note 1 : Rates are exclusive of tail piece/ dismantling joints and earth work.</p> <p>Note 2 : Rates are exclusive of GST.</p>		
6.4.1	Class PN 1.0		
6.4.1.1	80 mm dia	Each	5131.36
6.4.1.2	100 mm dia	Each	6520.34
6.4.1.3	125 mm dia	Each	8169.49
6.4.1.4	150 mm dia	Each	10778.81
6.4.1.5	200 mm dia	Each	18552.54
6.4.1.6	250 mm dia	Each	29337.29
6.4.1.7	300 mm dia	Each	39296.61
6.4.1.8	350 mm dia	Each	52180.51
6.4.1.9	400 mm dia	Each	74890.68
6.4.1.10	450 mm dia	Each	92147.46
6.4.1.11	500 mm dia	Each	98725.42
6.4.1.12	600 mm dia	Each	130346.61
6.5	<p>Providing, lowering, aligning, fixing in position and Jointing in pipe line, CI single Air Valve Flanged/ Screwed type of approved makes for following pressure rating & dia complete, confirming to IS: 14845-2000 (amended up to date) and of following specifications: Body , Cover and Cowl - Grey Cast Iron as per IS:210- FG 200 ,Float - Stainless Steel AISI 304 / IS: 3444 ,Float Guide- HBT1,Body seat ring - Leaded tin bronze/ SS , Seal ring and face ring - EPDM/NBR, Ends flanged according to IS 6418 or Screwed type shall have external pipe threads conforming to IS 554 Fasteners - CS Epoxy paint inside outside of food grade safe for drinking water ,Valves including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer in charge.</p> <p>Note 1 : Rates are exclusive of connecting tee, pipe piece and earth work.</p> <p>Note 2 : Rates are exclusive of GST.</p>		
6.5.1	Class PN 1.0		
6.5.1.1	15 mm S-1 Type	Each	2053.39
6.5.1.2	25 mm S-1 Type	Each	2665.25
6.5.1.3	40 mm S-1 Type	Each	3315.25
6.5.1.4	50 mm S-2 Type	Each	3889.83
6.5.2	Class PN 1.6		
6.5.2.1	15 mm S-1 Type	Each	2192.37
6.5.2.2	25 mm S-1 Type	Each	2793.22

S. No.	Description	Unit	Rate (Rs.)
6.5.2.3	40 mm S-1 Type	Each	3428.81
6.5.2.4	50 mm S-2 Type	Each	4077.12
6.6	Providing, lowering, aligning, fixing in position and Jointing in pipe line, CI Double Acting Kinetic Air Valve with isolating Sluice Valve of approved makes for following pressure rating & dia complete, confirming to IS: 14845-2000 (amended up to date) and of following specifications: Body , Cover and Cowl - Grey Cast Iron as per IS:210- FG 200 ,Float - Stainless Steel AISI 304 / IS: 3444 , Float Guide- HBT1.HP Orifice- HTB2/ SS,Body seat ring - Leaded tin bronze/ SS .Seal ring and face ring - EPDM/NBR ,Ends flanged according to IS 6418,Fastners - CS, Epoxy paint inside outside of food grade safe for drinking water ,Valves including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer in charge. Note 1 : Rates are exclusive of connecting tee, pipe piece and earth work. Note 2 : Rates are exclusive of GST.		
6.6.1	Class PN 1.0		
6.6.1.1	40 mm	Each	9844.07
6.6.1.2	50 mm	Each	11215.25
6.6.1.3	80 mm	Each	14501.69
6.6.1.4	100 mm	Each	19703.39
6.6.1.5	150 mm	Each	41181.36
6.6.1.6	200 mm	Each	62797.46
6.6.2	Class PN 1.6		
6.6.2.1	40 mm	Each	10534.75
6.6.2.2	50 mm	Each	11971.19
6.6.2.3	80 mm	Each	15133.90
6.6.2.4	100 mm	Each	20494.92
6.6.2.5	150 mm	Each	43320.34
6.6.2.6	200 mm	Each	65858.47
6.7	Providing, lowering, aligning, fixing in position and Jointing in pipe line, CI Body Flanged End Tamper proof Kinetic Air Valve of approved makes of following pressure rating and dia and as per following specifications: Governing standard - AWWA C512/ IS:14845:2000(amended up to date),Body, High pressure cover , Low pressure cover, Cowl and Joint support ring - Grey cast iron of grade IS:210/FG200 ,Float- LP ball & HP ball : AISI 304 stainless Steel, Float Guide- HTB1,Seat ring & Gasket - EPDM/NBR, HP Orifice & HP orifice plug : HTB2/ SS ,Bush: Bronze , Flanges as per IS/ BS, Drilled as per IS:1538. Epoxy paint (Non-Toxic & suitable for drinking water) applied on body & cover inside and outside Fasteners - CS/ Galvanised steel ,Outlet of big orifice will have a screen to prevent Tamper of float, with CI metal seated D/F Non rising stem Sluice Valves as per (IS: 14846 amended up to date) PN 1.0 ratings Valves including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer in charge. Note 1 : Rates are exclusive of connecting tee, pipe piece and earth work. Note 2 : Rates are exclusive of GST.		
6.7.1	Class PN 1.0		
6.7.1.1	40 mm	Each	10856.78
6.7.1.2	50 mm	Each	11896.61
6.7.1.3	80 mm	Each	14664.41
6.7.1.4	100 mm	Each	19683.90

S. No.	Description	Unit	Rate (Rs.)
6.7.1.5	150 mm	Each	33517.80
6.7.1.6	200 mm	Each	48806.78
6.8	<p>Providing, lowering, aligning, fixing in position in pipe line at work site, DI D/F Resilient seated (soft seated) Sluice Valves (Gate Valves) , Vacuum tight(bubble tight), straight and pocket less body passage of approved make of following class & dia complete confirming to BS-EN-1171/ AWWA C-509 and of following specifications: Body & bonnet of Ductile cast iron of grade GGG40/GGG50 as per DIN 1693 or GR SG-400/12 as per IS 1865 or equivalent grade as per IS :3896-part2-1985 and subsequent revisions, Wedge of same material as body & shall vulcanised rubber lined with EPDM (food grade quality) and seals of NBR Face to face dimensions as per BS 5163-89/ IS 14846/2000 (amended up to date) /Din 3202 F4, Stem/ spindle of SS AISI 316/410 Electrostatic epoxy powder(EP-P)/ Fusion bond epoxy (Non-Toxic- suitable for drinking water) coated with minimum thickness of 250 microns inside and outside, Drilled as per IS 1538. Nut-Bolt confirming to IS:1363 and IS: 1367 (Galvanised steel) Insertion rubber of black EPDM 6mm thick. Suitable support structure as per directions of EIC, Sluice valves including all jointing & jointing material, labour, testing and commissioning along with pipe line as per Technical Specifications and as per direction of Engineer-in-charge.</p> <p>Note 1 : Rates are exclusive of tail piece/ dismantling joints and earth work.</p> <p>Note 2 : Rates are exclusive of GST.</p>		
6.8.1	Manually Operated Resilient Seated Sluice Valves of Class PN 1.6		
6.8.1.1	80 mm dia	Each	7743.22
6.8.1.2	100 mm dia	Each	9791.53
6.8.1.3	125 mm dia	Each	14480.51
6.8.1.4	150 mm dia	Each	16194.07
6.8.1.5	200 mm dia	Each	24911.86
6.8.1.6	250 mm dia	Each	41339.83
6.8.1.7	300 mm dia	Each	52650.85
6.8.1.8	350 mm dia	Each	98790.68
6.8.1.9	400 mm dia	Each	129385.59
6.8.1.10	450 mm dia	Each	172717.80
6.8.1.11	500 mm dia	Each	222147.46
6.8.1.12	600 mm dia.	Each	326484.75
6.8.1.13	700 mm dia. With Gear	Each	607768.64
6.8.1.14	800 mm dia. With Gear	Each	858921.19
6.8.1.15	900 mm dia. With Gear	Each	1186764.41
6.8.1.16	1000 mm dia. With Gear	Each	1554505.08
6.8.2	Motorized Sluice Valves with Electric Actuator and integral starter of Class PN 1.0		
6.8.2.1	80 mm dia	Each	102077.12
6.8.2.2	100 mm dia	Each	105006.78
6.8.2.3	125 mm dia	Each	111639.83
6.8.2.4	150 mm dia	Each	115932.20
6.8.2.5	200 mm dia	Each	131406.78
6.8.2.6	250 mm dia	Each	150708.47
6.8.2.7	300 mm dia	Each	165231.36
6.8.2.8	350 mm dia	Each	216541.53
6.8.2.9	400 mm dia	Each	245100.00
6.8.2.10	450 mm dia	Each	305127.97

S. No.	Description	Unit	Rate (Rs.)
6.8.2.11	500 mm dia	Each	358989.83
6.8.2.12	600 mm dia.	Each	446239.83
6.8.3	Motorized Sluice Valves with Electric Actuator and integral starter of Class PN 1.6		
6.8.3.1	80 mm dia	Each	102794.07
6.8.3.2	100 mm dia	Each	105714.41
6.8.3.3	125 mm dia	Each	112679.66
6.8.3.4	150 mm dia	Each	118390.68
6.8.3.5	200 mm dia	Each	131653.39
6.8.3.6	250 mm dia	Each	150579.66
6.8.3.7	300 mm dia	Each	164342.37
6.8.3.8	350 mm dia	Each	217055.08
6.8.3.9	400 mm dia	Each	243626.27
6.8.3.10	450 mm dia	Each	300576.27
6.8.3.11	500 mm dia	Each	351483.05
6.8.3.12	600 mm dia.	Each	442027.97
6.9	<p>Providing, lowering, aligning, fixing in position in pipe line, DI D/F resilient seated (soft seated) short body pattern type double eccentric Butterfly valves of approved make of following class & dia complete confirming to BS EN 593/ BS 5155/ IS 13095/1991 amended up to date and of following specifications: Body, disc and end cover of Ductile cast iron of grade GGG40/GGG50 as per DIN 1693 or GR SG-400/12 as per IS 1865 or equivalent grade as per IS :3896-part2-1985 and subsequent revisions, Face to face dimensions as per DIN 3202 F4/ IS 13095 Drilled as per IS:1538. Electrostatic Epoxy Powder(EP-P) / Fusion Bonded Epoxy (Non-Toxic & suitable for drinking water) coated with minimum thickness of 250 micron applied on both body and disc inside and outside. Disc seal ring of EPDM/ Neoprene (food grade quality) and disc seal retaining ring of SS/CS. Shaft of SS- AISI- 410/316 & shaft bearings- bronze/ PTET or Teflon with EPDM/NBR "O "ring seal, Nut-Bolt confirming to IS:1363 and IS: 1367 (Galvanised steel) Insertion rubber of black EPDM 6mm thick. Suitable support structure as per directions of EIC including jointing & jointing material, labour, testing and commissioning along with pipeline as per Technical Specification & as per direction of Engineer-in-charge.</p> <p>Note 1 : Rates are exclusive of tail piece/ dismantling joints and earth work.</p> <p>Note 2 : Rates are exclusive of GST.</p>		
6.9.1	Class PN 1.6, Manually Operated with Gear		
6.9.1.1	100 mm dia	Each	42377.12
6.9.1.2	150 mm dia	Each	48761.02
6.9.1.3	200 mm dia	Each	50709.32
6.9.1.4	250 mm dia	Each	56136.44
6.9.1.5	300 mm dia	Each	63297.46
6.9.1.6	350 mm dia	Each	79274.58
6.9.1.7	400 mm dia	Each	104524.58
6.9.1.8	450 mm dia	Each	132704.24
6.9.1.9	500 mm dia	Each	166315.25
6.9.1.10	600 mm dia	Each	206577.97
6.9.1.11	700 mm dia	Each	283032.20
6.9.1.12	800 mm dia.	Each	376938.14
6.9.1.13	900 mm dia.	Each	488268.64
6.9.1.14	1000 mm dia.	Each	636385.59

S. No.	Description	Unit	Rate (Rs.)
6.9.2	Class PN 1.0, Motorised Operated		
6.9.2.1	200 mm dia	Each	133650.00
6.9.2.2	250 mm dia	Each	146261.86
6.9.2.3	300 mm dia	Each	163752.54
6.9.2.4	350 mm dia	Each	177888.98
6.9.2.5	400 mm dia	Each	203683.05
6.9.2.6	450 mm dia	Each	234323.73
6.9.2.7	500 mm dia	Each	253480.51
6.9.2.8	600 mm dia	Each	293946.61
6.9.2.9	700 mm dia	Each	382791.53
6.9.2.10	800 mm dia.	Each	495289.83
6.9.2.11	900 mm dia.	Each	591446.61
6.9.2.12	1000 mm dia.	Each	750472.03
6.9.3	Class PN 1.6, Motorised Operated		
6.9.3.1	200 mm dia	Each	136281.36
6.9.3.2	250 mm dia	Each	149378.81
6.9.3.3	300 mm dia	Each	168516.95
6.9.3.4	350 mm dia	Each	183103.39
6.9.3.5	400 mm dia	Each	209658.47
6.9.3.6	450 mm dia	Each	241244.92
6.9.3.7	500 mm dia	Each	265671.19
6.9.3.8	600 mm dia	Each	312112.71
6.9.3.9	700 mm dia.	Each	404288.14
6.9.3.10	800 mm dia.	Each	524284.75
6.9.3.11	900 mm dia.	Each	631189.83
6.9.3.12	1000 mm dia.	Each	795634.75
6.10	<p>Providing, lowering, aligning, fixing in position in pipe line, DI resilient seated (soft seated) Concentric Wafer type, Butterfly valves of approved make of following Pressure rating & dia complete confirming to BS EN 593/ BS 5155/ IS 13095/1991 amended up to date and of following specifications: Body- Ductile cast iron of grade GGG40/GGG50 as per DIN 1693 or GR SG-400/12 as per IS 1865 or equivalent grade as per IS :3896-part2-1985 and subsequent revisions, Disc - DI (same as body material) / CS, Face to face dimensions as per DIN 3202 F4/ IS 13095 , Flanges Drilled as per IS:1538 ,Electrostatic Epoxy Powder(EP-P) / Fusion Bonded Epoxy (Non-Toxic & suitable for drinking water) coated with minimum thickness of 250 micron applied on both body and disc inside and outside . Liner & Disc seal - EPDM/ Neoprene (food grade quality) ,Shaft of SS- AISI- 410/420 & shaft bearings-bronze/ PTET or Teflon with EPDM/NBR "O "ring seal , Nut-Bolt confirming to IS:1363 and IS: 1367/ Galvanised steel, Insertion rubber of black EPDM 6mm thick ,Suitable support structure as per directions of EIC including jointing & jointing material, labour, testing and commissioning along with pipeline as per Technical Specification & as per direction of Engineer-in-charge.</p> <p>Note 1 : Rates are exclusive of tail piece/ dismantling joints and earth work.</p> <p>Note 2 : Rates are exclusive of GST.</p>		
6.10.1	Class PN 1.6, Wafer Type		
6.10.1.1	80 mm (Lever Operated)	Each	8970.34
6.10.1.2	100 mm (Lever Operated)	Each	10833.05
6.10.1.3	125 mm (Lever Operated)	Each	18261.02
6.10.1.4	150 mm (Lever Operated)	Each	19827.97
6.10.1.5	200 mm (with Gear)	Each	29901.69
6.10.1.6	250 mm (with Gear)	Each	38606.78

S. No.	Description	Unit	Rate (Rs.)
6.10.1.7	300 mm (with Gear)	Each	42856.78
6.11	<p>Providing, lowering, aligning, fixing in position in pipe line, DI D/F resilient seated (soft seated) Swing type Non Return Valve of approved make of following Pressure rating & dia complete, generally conforming to IS: 5312 (part -1)/ 2004 (amended up to date) and of following specifications: Body, Bonnet & disc of Ductile cast iron of grade GGG40/GGG50 as per DIN 1693 or GR SG-400/12 as per IS 1865 or equivalent grade as per IS :3896-part2-1985 and subsequent revisions, Face to face dimensions as per IS 5312 (part -1):2004 Drilled as per IS:1538. Electrostatic Epoxy Powder(EP-P) / Fusion Bonded Epoxy (Non-Toxic & suitable for drinking water) coated with minimum thickness of 250 micron applied on body, cover and disc inside and outside . Disc seal ring of EPDM/ Neoprene (food grade quality) and disc seal retaining ring of SS/CS.Shaft of SS- AISI- 410, Hinge SS AISI 316/410 ,Bonnet Gasket EPDM ,Bush- Brass with EPDM/NBR "O "ring seal Nut-Bolt confirming to IS:1363 and IS: 1367 (galvanised steel) Insertion rubber of black EPDM 6mm thick. Suitable support structure as per directions of EIC including jointing & jointing material, labour, testing and commissioning along with pipeline as per Technical Specification & as per direction of Engineer-in-charge.</p> <p>Note 1 : Rates are exclusive of tail piece/ dismantling joints and earth work.</p> <p>Note 2 : Rates are exclusive of GST.</p>		
6.11.1	Class PN 1.6		
6.11.1.1	80 mm dia	Each	8015.25
6.11.1.2	100 mm dia	Each	10676.27
6.11.1.3	125 mm dia	Each	15062.71
6.11.1.4	150 mm dia	Each	18492.37
6.11.1.5	200 mm dia	Each	31365.25
6.11.1.6	250 mm dia	Each	47273.73
6.11.1.7	300 mm dia	Each	64905.08
6.11.1.8	350 mm dia	Each	108849.15
6.11.1.9	400 mm dia	Each	140453.39
6.11.1.10	450 mm dia	Each	181966.95
6.11.1.11	500 mm dia	Each	217063.56
6.11.1.12	600 mm dia	Each	286434.75
6.12	<p>Providing, lowering, aligning, fixing in position in pipe line, DI double flanged resilient seated Dual plate check valve of approved make of following Pressure rating & dia complete, as per API: 594/ API: 598 and of following specifications: Body & Bonnet of Ductile cast iron of grade GGG40/GGG50 as per DIN 1693 or GR SG-400/12 as per IS 1865 or equivalent grade as per IS :3896-part2-1985 and subsequent revisions, Disc / plates - SG-400/12 or CF-8M,Face to face dimensions as per API: 594 , Flanges Drilled as per IS:1538. Electrostatic Epoxy Powder(EP-P) / Fusion Bonded Epoxy (Non-Toxic & suitable for drinking water) coated with minimum thickness of 250 micron applied on body and cover inside and outside . Disc seal ring of EPDM/ Neoprene (food grade quality) and disc seal retaining ring of SS/CS. Shaft of SS- AISI- 410 , Hinge SS AISI 316/304, Spring SS AISI 316/304, Bonnet Gasket EPDM ,Bush- Brass with EPDM/NBR "O "ring seal, Nut-Bolt confirming to IS:1363 and IS: 1367 (galvanised steel) , Insertion rubber of black EPDM 6mm thick .Suitable support structure as per directions of EIC including jointing & jointing material, labour, testing and commissioning along with pipeline as per Technical Specification & as per direction of Engineer-in-charge.</p> <p>Note 1 : Rates are exclusive of tail piece/ dismantling joints and earth work.</p> <p>Note 2 : Rates are exclusive of GST.</p>		

S. No.	Description	Unit	Rate (Rs.)
6.12.1	Class PN 1.6		
6.12.1.1	80 mm dia	Each	9816.95
6.12.1.2	100 mm dia	Each	11323.73
6.12.1.3	125 mm dia	Each	12054.24
6.12.1.4	150 mm dia	Each	17745.76
6.12.1.5	200 mm dia	Each	30940.68
6.12.1.6	250 mm dia	Each	46671.19
6.12.1.7	300 mm dia	Each	65654.24
6.12.1.8	350 mm dia	Each	70522.88
6.12.1.9	400 mm dia	Each	91072.03
6.12.1.10	450 mm dia	Each	109116.10
6.12.1.11	500 mm dia	Each	128472.03
6.13	<p>Providing, lowering, aligning, fixing in position and Jointing in pipe line, DI Body Flanged End Tamper proof Kinetic Air Valve of approved makes of following pressure rating and dia and as per following specifications: Governing standard - AWWA C512/ IS:14845:2000(amended up to date) Body, High pressure cover , Low pressure cover, Cowl and Joint support ring - Ductile cast iron of grade GGG40/GGG50 as per DIN 1693 or GR SG-400/12 as per IS 1865, Float- LP ball & HP ball : AISI 304 stainless Steel, Seat ring & Gasket - EPDM/NBR ,HP Orifice & HP orifice plug : Bronze/ SS ,Bush: Bronze ,Flanges as per IS/ BS, Drilled as per IS:1538. Electrostatic Epoxy Powder(EP-P) / Fusion Bonded Epoxy (Non-Toxic & suitable for drinking water) coated with minimum thickness of 250 micron applied on body & cover inside and outside fasteners - CS/ Galvanised steel, Outlet of big orifice will have a screen to prevent Tamper of float, with DI metal seated D/F Non rising stem Sluice Valves as per (IS: 14846 amended up to date) PN 1.6 ratings Valves including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer in charge.</p> <p>Note 1 : Rates are exclusive of connecting tee, pipe piece and earth work.</p> <p>Note 2 : Rates are exclusive of GST.</p>		
6.13.1	Class PN 1.6		
6.13.1.1	40 mm dia	Each	11034.75
6.13.1.2	50 mm dia	Each	11439.83
6.13.1.3	80 mm dia	Each	14606.78
6.13.1.4	100 mm dia	Each	19872.03
6.13.1.5	150 mm dia	Each	34035.59
6.13.1.6	200 mm dia	Each	46626.27

S. No.	Description	Unit	Rate (Rs.)
6.14	Providing, lowering, aligning, fixing in position and Jointing in pipe line, combination Air Release Valve Kinetic type with single chamber housed Double orifice and have 3 functions , large Air exhaust, small Air venting and large air intake during vacuum of pipeline of approved makes of following pressure rating and dia and as per following specifications: Governing standard - AWWA C512 ,Body and bonnet of Ductile cast iron of grade GGG40/GGG50 as per DIN 1693 or GR SG-400/12 as per IS 1865,Float & internal trim: AISI 304 stainless Steel, Seat ring & Gasket - EPDM/NBR Drilled as per IS:1538. Electrostatic Epoxy Powder(EP-P) / Fusion Bonded Epoxy (Non-Toxic & suitable for drinking water) coated with minimum thickness of 250 micron applied on body & cover inside and outside Fasteners - CS/ Galvanised steel ,Outlet of big orifice will have a screen to prevent Tamper of float, Big orifice size should be equal or larger than the inlet flange bore, for fully comply with AWWA C512.), Valve including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer in charge. Note 1 : Rates are exclusive of connecting tee, pipe piece and earth work. Note 2 : Rates are exclusive of GST.		
6.14.1	Class PN 1.6		
6.14.1.1	50 mm dia	Each	15308.47
6.14.1.2	80 mm dia	Each	19668.64
6.14.1.3	100 mm dia	Each	26314.41
6.14.1.4	150 mm dia	Each	42002.54
6.14.1.5	200 mm dia	Each	52724.58
6.15	Providing, lowering, aligning & fixing in position DI D/F Plunger Type Flow Control Valve of approved make of following Pressure rating & dia complete and of following specifications: Body- Ductile cast iron of grade GGG40/GGG50 as per DIN 1693 or EN-JS 1030, Plunger/ Piston - Stainless steel AISI- 304/ Gr 1.4301, Piston Guides- Bronze Welded Overlay / SS Shaft/Crank/Spindle- Stainless steel AISI- 410/ Gr 1.4021 Body Seat Ring- Stainless steel AISI- 316/304/ Bronze IS:318- LTB2 ,Seal (O- ring / Quad ring)- EPDM/ NBR, Bearing Bush - Bronze IS:318- LTB2,Slotted cylinder / Strainer / Diffuser- AISI- 420/ 304,Nut- Bolts - SS, Face to Face- as per ANSI B 16.1/ EN 558-1 and Flange ends should be as per ANSI B-16.5, Class 150 and Class 300/ EN-1092-2. Insertion rubber of black EPDM 6mm thick ,Electrostatic Epoxy Powder(EP-P) / Fusion Bonded Epoxy (Non-Toxic & suitable for drinking water) coated with minimum thickness of 250 micron applied both inside and outside . Suitable support structure as per directions of EIC including jointing & jointing material, labour, testing and commissioning as per Technical Specification & as per direction of Engineer-In- Charge. Note 1 : Rates are exclusive of tail piece/ dismantling joints and earth work. Note 2 : Rates are exclusive of GST.		
6.15.1	Plunger Type Flow Control Valve		
6.15.1.1	80 mm dia	Each	286471.19
6.15.1.2	100mm dia	Each	312235.59
6.15.1.3	125 mm dia	Each	348009.32
6.15.1.4	150mm dia	Each	381820.34
6.15.1.5	200mm dia	Each	467811.86
6.15.1.6	250mm dia	Each	547178.81
6.15.1.7	300mm dia	Each	668030.51
6.15.1.8	350mm dia	Each	702854.24

S. No.	Description	Unit	Rate (Rs.)
6.15.1.9	400mm dia	Each	972111.86
6.15.1.10	450mm dia	Each	1024545.76
6.15.1.11	500mm dia	Each	1334505.93
6.15.1.12	600mm dia	Each	1697044.07
6.15.1.13	700mm dia	Each	2762951.69
6.15.1.14	800mm dia	Each	3545650.85
6.15.1.15	900mm dia	Each	4874003.39
6.15.1.16	1000mm dia	Each	5057383.90
6.16	<p>Providing, lowering, aligning and fixing in position DI D/F Diaphragm type Pressure Reducing / Flow Control Valve of approved make of following Pressure rating & dia complete and of following specifications: Body & Bonnet - Ductile cast iron of grade GGG40/GGG50 as per DIN 1693 or ASTM A 536, Diaphragm and Resilient seal disc - Flexible, non-wicking nylon fabric reinforced synthetic elastomer -Buna-N / EPDM (FDA / WRAS approved), Body Seat Ring - Cast stainless steel ASTM- A 351 GR. CF8M / AISI- 316, raised, replaceable inline & onsite Stem - Stainless Steel, AISI-316/410, raised, replaceable inline & onsite Spring & Bearing bush- Stainless Steel, AISI-316 ,Disc guide, disc retainer & diaphragm washer - Stainless Steel, AISI-304/ 316/Bronze ,Seal- EPDM/ NBR ,Pilot Body- Stainless Steel, AISI-304/ CF8 or Brass Tubing - Stainless Steel, AISI-304 / Copper ,Solenoid Valve- Stainless Steel, AISI-316 ,Throttling plug - Stainless Steel, AISI-304, Nut- Bolts - SS Face to Face- as per ANSI B 16.1/ EN 558-1 and Flange ends should be as per ANSI B-16.5, Class 150 and Class 300/ EN-1092-2. insertion rubber of black EPDM 6mm thick Electrostatic Epoxy Powder(EP-P) / Fusion Bonded Epoxy (Non-Toxic & suitable for drinking water) coated with minimum thickness of 250 micron applied both inside and outside. Suitable support structure as per directions of EIC including jointing & jointing material, labour, testing and commissioning as per Technical Specification & as per direction of Engineer-In- Charge.</p> <p>Note 1 : Rates are exclusive of tail piece/ dismantling joints and earth work.</p> <p>Note 2 : Rates are exclusive of GST.</p>		
6.16.1	Pilot operated SCADA Compatible Diaphragm Type Pressure Reducing Valves (Class PN 1.6)		
6.16.1.1	80 mm dia	Each	97164.41
6.16.1.2	100 mm dia	Each	105245.76
6.16.1.3	125 mm dia	Each	121301.69
6.16.1.4	150 mm dia	Each	143369.49
6.16.1.5	200 mm dia	Each	177787.29
6.16.1.6	250 mm dia	Each	242020.34
6.16.1.7	300 mm dia	Each	319295.76
6.16.1.8	350 mm dia	Each	443811.86
6.16.1.9	400 mm dia	Each	565696.61
6.16.1.10	450 mm dia	Each	759973.73
6.16.1.11	500 mm dia	Each	1040708.47
6.16.1.12	600 mm dia	Each	1394378.81
6.16.2	Diaphragm Type Flow Control Valve With Electrical Actuator suitable for SCADA (PN 1.6)		
6.16.2.1	80 mm dia	Each	91810.17
6.16.2.2	100 mm dia	Each	101694.07
6.16.2.3	125 mm dia	Each	118766.10
6.16.2.4	150 mm dia	Each	131450.00
6.16.2.5	200 mm dia	Each	153797.46

S. No.	Description	Unit	Rate (Rs.)
6.16.2.6	250 mm dia	Each	221102.54
6.16.2.7	300 mm dia	Each	307106.78
6.16.2.8	350 mm dia	Each	419936.44
6.16.2.9	400 mm dia	Each	745329.66
6.16.2.10	450 mm dia	Each	1029147.46
6.16.2.11	500 mm dia	Each	1237614.41
6.16.2.12	600 mm dia	Each	1811887.29
<u>Dismantling/ Expansion Joints</u>			
6.17	Providing, lowering, laying, aligning, fixing in position and jointing CI dismantling joint (Suitable for Sluice valves etc.) as per IS specifications complete of the following sizes including all jointing material, cost of all labour, testing and commissioning Technical Specifications and as per direction of Engineer. Class PN 1.0 Rates are exclusive of GST.		
6.17.1	80 mm dia	Each	2668.64
6.17.2	100 mm dia.	Each	3106.78
6.17.3	125 mm dia.	Each	4061.02
6.17.4	150 mm dia.	Each	4879.66
6.17.5	200 mm dia.	Each	7257.63
6.17.6	250 mm dia.	Each	9939.83
6.17.7	300 mm dia.	Each	11884.75
6.17.8	350 mm dia.	Each	15463.56
6.17.9	400 mm dia.	Each	20944.92
6.17.10	450 mm dia.	Each	24369.49
6.17.11	500 mm dia.	Each	28975.42
6.17.12	600 mm dia.	Each	40935.59
6.18	Providing, lowering, laying, aligning, fixing in position and jointing MS dismantling joint (Fabricated Steel) as per IS specifications complete of the following sizes including all jointing material, cost of all labour, testing and commissioning Technical Specifications and as per direction of Engineer. Rates are exclusive of GST.		
6.18.1	80 mm dia	Each	3588.14
6.18.2	100 mm dia.	Each	4348.31
6.18.3	125 mm dia.	Each	5761.86
6.18.4	150 mm dia.	Each	8122.03
6.18.5	200 mm dia.	Each	10013.56
6.18.6	250 mm dia.	Each	12977.12
6.18.7	300 mm dia.	Each	16204.24
6.18.8	350 mm dia.	Each	22710.17
6.18.9	400 mm dia.	Each	30343.22
6.18.10	450 mm dia.	Each	35685.59
6.18.11	500 mm dia.	Each	43336.44
6.18.12	600 mm dia.	Each	55400.00
6.18.13	700 mm dia.	Each	78611.02
6.18.14	800 mm dia.	Each	101307.63
6.18.15	900 mm dia.	Each	131265.25
6.18.16	1000 mm dia.	Each	155537.29

S. No.	Description	Unit	Rate (Rs.)
6.19	Providing, installation, testing and commissioning of following Stain less steel AISI 304 Expansion bellows of 10/16 bar rating with tie rods as per technical specifications and layout drawings including jointing material like nuts, bolts, rubber gaskets etc. complete in all respect as per technical specification and as per direction of Engineer. Rates are exclusive of GST.		
6.19.1	80 mm dia.	Each	6151.69
6.19.2	100 mm dia.	Each	7066.95
6.19.3	125 mm dia.	Each	8148.31
6.19.4	150 mm dia.	Each	9699.15
6.19.5	200 mm dia.	Each	10977.97
6.19.6	250 mm dia.	Each	13431.36
6.19.7	300 mm dia.	Each	16622.03
6.19.8	350 mm dia.	Each	20083.05
6.19.9	400 mm dia.	Each	25867.80
6.19.10	450 mm dia.	Each	30458.47
6.19.11	500 mm dia.	Each	48450.85
6.19.12	600 mm dia.	Each	58755.08
6.19.13	700 mm dia.	Each	80157.63
6.19.14	800 mm dia.	Each	100238.98
6.19.15	900 mm dia.	Each	119438.14
6.19.16	1000 mm dia.	Each	156495.76
6.20	Removing of existing CI/ DI Double flange sluice valves, non return valves, butter fly valves etc. in existing Distribution/ Rising Main/ Transmission Main pipe line of following sizes, works include de-jointing of valve, dewatering, taking it out of the pit with adequate safety arrangement at site and then refill the pit from excavated sand by ramming it at sides of pipe & up to ground level. Work shall be done as per specification, scope of work and direction of Engineer-in-charge. All old material shall be removed safely & all old material shall be deposited in Divisional Store. Note: Rates are exclusive of earth work and road cutting. Rates are exclusive of GST.		
6.20.1	80 mm	Each	405.93
6.20.2	100 mm	Each	440.68
6.20.3	125 mm	Each	547.46
6.20.4	150 mm	Each	583.05
6.20.5	200 mm	Each	635.59
6.20.6	250 mm	Each	812.71
6.20.7	300 mm	Each	1197.46
6.20.8	350 mm	Each	1396.61
6.20.9	400 mm	Each	1567.80
6.20.10	450 mm	Each	2129.66
6.20.11	500 mm	Each	2350.85
6.20.12	600 mm	Each	2607.63

Chapter 7

DOL / Star delta starter type LT panels

Note : All rates are exclusive of GST.

S. No.	Description	Unit	Rate (Rs.)
7.1	SITC DOL Starter type LT Panel of following rating, all switchgears are of PHED approved makes, CRCA sheet of Panel enclosure is of TATA/ Essar 1.6mm/ 2.0mm thick duly Electrostatic Powder Coated with angle frame including other ancillaries (Insulators, Acrylic Sheet , Backlight Sheet, Hardware, Wire, Name Plates, Lugs, Pvc Channel , Mcb Chanel , Lock, Hing , Bidding , Connectors, Neutral Links , Spiral , Saddle & Packing Material) etc. complete as per Technical Specifications and as per direction of Engineer-In-Charge. Rates are exclusive of GST.		
7.1.1	DOL STARTER 2.2 KW (3 HP)- : For 2 motors (1 W+ 1S) I/C - MCB 25A ,FP, 10 KA, C Curve (1) , Analog Voltmeter 96*96mm (0-500V) (1), Volt Selector Switch (1) , Analog Ammeter 96*96mm (0-60A) (1), Amp. Selector Switch (1), C. T. 30/5A CL 1.0 5VA (3) , Indicating Lights (Red-1, Yellow -1) (2), Indicating Lights (Blue - 1) (1), Control MCB 6A SP 10 KA C Curve (3) and O/G- MCB 16A ,TP, 10 KA, C Curve (2), Power Cont 9A TP AC3 Duty(2), 2 NO+2 NC Aux. Block(2), Thermal Overload Relay (4-6A)(2), Control MCB 6A SP 10 KA C Curve (2), Single Phase Preventer (2), Indicating Lights (Red- 1, Green - 1, Amber-1)(6), Push Button 22.5 (Red - 1, Green - 1)(4), Selector Switch 1 Pole, 2 Way (2), Capacitor 440VAC Heavy Duty MPP Type 2 Kvar (2)	Each	41827.12
7.1.2	DOL STARTER 3.7KW (5 HP) - : For 2 motors (1 W+ 1S) I/C - MCB 32A ,FP, 10 KA, C Curve (1) , Analog Voltmeter 96*96mm (0-500V) (1), Volt Selector Switch (1) , Analog Ammeter 96*96mm (0-60A) (1), Amp. Selector Switch (1), C. T. 30/5A CL 1.0 5VA (3) , Indicating Lights (Red-1, Yellow -1) (2), Indicating Lights (Blue - 1) (1), Control MCB 6A SP 10 KA C Curve (3) and O/G- MCB 25A ,TP, 10 KA, C Curve (2), Power Cont 12A TP AC3 Duty(2), 2 NO+2 NC Aux. Block(2), Thermal Overload Relay (7-10A)(2), Control MCB 6A SP 10 KA C Curve (2), Single Phase Preventer (2), Indicating Lights (Red- 1, Green - 1, Amber-1)(6), Push Button 22.5 (Red - 1, Green - 1)(4), Selector Switch 1 Pole, 2 Way (2), Capacitor 440VAC Heavy Duty MPP Type 2 Kvar (2)	Each	42722.88
7.1.3	DOL STARTER 5.5 KW (7.5HP) - : For 2 motors (1 W+ 1S) I/C - MCB 40A ,FP, 10 KA, C Curve (1) , Analog Voltmeter 96*96mm (0-500V) (1), Volt Selector Switch (1) , Analog Ammeter 96*96mm (0-60A) (1), Amp. Selector Switch (1), C. T. 30/5A CL 1.0 5VA (3) , Indicating Lights (Red-1, Yellow -1) (2), Indicating Lights (Blue - 1) (1), Control MCB 6A SP 10 KA C Curve (3) and O/G- MCB 25A ,TP, 10 KA, C Curve (2), Power Cont 12A TP AC3 Duty(2), 2 NO+2 NC Aux. Block(2), Thermal Overload Relay (7-10A)(2), Control MCB 6A SP 10 KA C Curve (2), Single Phase Preventer (2), Indicating Lights (Red- 1, Green - 1, Amber-1)(6), Push Button 22.5 (Red - 1, Green - 1)(4), Selector Switch 1 Pole, 2 Way (2), Capacitor 440VAC Heavy Duty MPP Type 2 Kvar (2)	Each	43600.00

S. No.	Description	Unit	Rate (Rs.)
7.2	<p>SITC STAR DELTA Starter type LT Panel of following rating: all switchgears are of PHED approved makes, CRCA sheet of Panel enclosure is of TATA/ Essar 1.6mm/ 2.0mm thick duly Electrostatic Powder Coated with angle frame including other ancillaries (Insulators, Acrylic Sheet , Backlight Sheet, Hardware, Wire, Name Plates, Lugs, Pvc Channel , Mcb Chanel , Lock, Hing , Bidding , Connectors, Neutral Links , Spiral , Saddle & Packing Material) etc. and 100A/ 125A ,TPN, Aluminium Bus Bar with Colour coated heat shrinkage sleeves complete as per Technical Specifications and as per direction of Engineer-In-Charge.</p> <p>Rates are exclusive of GST.</p>		
7.2.1	<p>STAR DELTA STARTER 7.5 KW (10.0 HP) - : For 2 motors (1 W+1S) I/C - MCB 63A ,FP, 10 KA, C Curve (1) , Analog Voltmeter 96*96mm (0-500V) (1), Volt Selector Switch (1) , Analog Ammeter 96*96mm (0-60A) (1), Amp. Selector Switch (1), C. T. 60/5A CL 1.0 5VA (3) , Indicating Lights (Red-1, Yellow -1) (2), Indicating Lights (Blue - 1) (1), Control MCB 6A SP 10 KA C Curve (3) and O/G- MCB 32A ,TP, 10 KA, C Curve (2), Power Cont 18A TP AC3 Duty(2), 2 NO+2 NC Aux. Block(2), Thermal Overload Relay (7-10A)(2), Control MCB 6A SP 10 KA C Curve (2), Single Phase Preventer (2), Indicating Lights (Red- 1, Green - 1, Amber-1)(6), Push Button 22.5 (Red - 1, Green - 1)(4), Selector Switch 1 Pole, 2 Way (2), Capacitor 440VAC Heavy Duty MPP Type 5Kvar (2), S/D Timer(2)</p>	Each	55150.00
7.2.2	<p>STAR DELTA STARTER 9.3 KW (12.5 HP) - : For 2 motors (1 W+1S) I/C - MCB 63A ,FP, 10 KA, C Curve (1) , Analog Voltmeter 96*96mm (0-500V) (1), Volt Selector Switch (1) , Analog Ammeter 96*96mm (0-60A) (1), Amp. Selector Switch (1), C. T. 60/5A CL 1.0 5VA (3) , Indicating Lights (Red-1, Yellow -1) (2), Indicating Lights (Blue - 1) (1), Control MCB 6A SP 10 KA C Curve (3) and O/G- MCB 40A ,TP, 10 KA, C Curve (2), Power Cont 18A TP AC3 Duty(2), 2 NO+2 NC Aux. Block(2), Thermal Overload Relay (7-10A)(2), Control MCB 6A SP 10 KA C Curve (2), Single Phase Preventer (2), Indicating Lights (Red- 1, Green - 1, Amber-1)(6), Push Button 22.5 (Red - 1, Green - 1)(4), Selector Switch 1 Pole, 2 Way (2), Capacitor 440VAC Heavy Duty MPP Type 5Kvar (2), S/D Timer(2)</p>	Each	56727.12
7.2.3	<p>STAR DELTA STARTER 11.0 KW (15.0 HP) - : For 2 motors (1 W+1S) I/C - MCB 63A ,FP, 10 KA, C Curve (1) , Analog Voltmeter 96*96mm (0-500V) (1), Volt Selector Switch (1) , Analog Ammeter 96*96mm (0-60A) (1), Amp. Selector Switch (1), C. T. 60/5A CL 1.0 5VA (3) , Indicating Lights (Red-1, Yellow -1) (2), Indicating Lights (Blue - 1) (1), Control MCB 6A SP 10 KA C Curve (3) and O/G- MCB 40A ,TP, 10 KA, C Curve (2), Power Cont 25A TP AC3 Duty(2), 2 NO+2 NC Aux. Block(2), Thermal Overload Relay (9-13A)(2), Control MCB 6A SP 10 KA C Curve (2), Single Phase Preventer (2), Indicating Lights (Red- 1, Green - 1, Amber-1)(6), Push Button 22.5 (Red - 1, Green - 1)(4), Selector Switch 1 Pole, 2 Way (2), Capacitor 440VAC Heavy Duty MPP Type 7.5Kvar (2), S/D Timer(2)</p>	Each	59797.46

S. No.	Description	Unit	Rate (Rs.)
7.2.4	<p>STAR DELTA STARTER 15.0 KW (20.0 HP) : For 2 motors (1 W+1S)</p> <p>I/C- MCCB 100A TPN 25 KA With T/M Based Over Current & Short Circuit Protection (1), Spreaders (2), Extended Rotary Handle (1) , Analog Voltmeter 96*96mm (0-500V) (1), Volt Selector Switch (1) , Analog Ammeter 96*96mm (0-60A) (1), Amp. Selector Switch (1), C. T. 100/5A CL 1.0 5VA (3) , Indicating Lights (Red-1, Yellow -1) (2), Indicating Lights (Blue - 1) (1), Control MCB 6A SP 10 KA C Curve (3) and</p> <p>O/G- MCCB 63A TPN 25 KA With T/M Based Over Current & Short Circuit Protection (2), Power Cont 32A TP AC3 Duty(2), 2 NO+2 NC Aux. Block(2), Thermal Overload Relay (12-18A)(2), Control MCB 6A SP 10 KA C Curve (2), Single Phase Preventer (2), Indicating Lights (Red- 1, Green - 1, Amber-1)(6), Push Button 22.5 (Red - 1, Green - 1)(4), Selector Switch 1 Pole, 2 Way (2), Capacitor 440VAC Heavy Duty MPP Type 7.5Kvar (2), S/D Timer(2)</p>	Each	84089.83
7.2.5	<p>STAR DELTA STARTER 18.5 KW (25.0 HP) - : For 2 motors (1 W+1S)</p> <p>I/C- MCCB 125A TPN 25 KA With T/M Based Over Current & Short Circuit Protection (1), Spreaders (2), Extended Rotary Handle (1) , Analog Voltmeter 96*96mm (0-500V) (1), Volt Selector Switch (1) , Analog Ammeter 96*96mm (0-60A) (1), Amp. Selector Switch (1), C. T. 125/5A CL 1.0 5VA (3) , Indicating Lights (Red-1, Yellow -1) (2), Indicating Lights (Blue - 1) (1), Control MCB 6A SP 10 KA C Curve (3) and</p> <p>O/G- MCCB 100A TPN 25 KA With T/M Based Over Current & Short Circuit Protection (2), Power Cont 32A TP AC3 Duty(2), 2 NO+2 NC Aux. Block(2), Thermal Overload Relay (16-24A)(2), Control MCB 6A SP 10 KA C Curve (2), Single Phase Preventer (2), Indicating Lights (Red- 1, Green - 1, Amber-1)(6), Push Button 22.5 (Red - 1, Green - 1)(4), Selector Switch 1 Pole, 2 Way (2), Capacitor 440VAC Heavy Duty MPP Type 10 Kvar (2), S/D Timer(2)</p>	Each	91977.97
7.2.6	<p>STAR DELTA STARTER 22.0 KW (30.0 HP) - : For 2 motors (1 W+1S)</p> <p>I/C- MCCB 125A TPN 25 KA With T/M Based Over Current & Short Circuit Protection (1), Spreaders (2), Extended Rotary Handle (1) , Analog Voltmeter 96*96mm (0-500V) (1), Volt Selector Switch (1) , Analog Ammeter 96*96mm (0-60A) (1), Amp. Selector Switch (1), C. T. 125/5A CL 1.0 5VA (3) , Indicating Lights (Red-1, Yellow -1) (2), Indicating Lights (Blue - 1) (1), Control MCB 6A SP 10 KA C Curve (3) and</p> <p>O/G- MCCB 100A TPN 25 KA With T/M Based Over Current & Short Circuit Protection (2), Power Cont 40A TP AC3 Duty(2), 2 NO+2 NC Aux. Block(2), Thermal Overload Relay (23-32A)(2), Control MCB 6A SP 10 KA C Curve (2), Single Phase Preventer (2), Indicating Lights (Red- 1, Green - 1, Amber-1)(6), Push Button 22.5 (Red - 1, Green - 1)(4), Selector Switch 1 Pole, 2 Way (2), Capacitor 440VAC Heavy Duty MPP Type 12.5 Kvar (2), S/D Timer(2)</p>	Each	103438.14

Chapter 8

Construction of pump house and boundary wall

Note : All rates are exclusive of GST.

S. No.	Description	Unit	Rate (Rs.)
8.1	Construction of Pump house of brick/ stone masonry of required size suitable for installation of maximum 4 no. Monoblock pump sets as per approved GA drawing, scope of work and technical specification complete work in all respect including electrical works for lighting and fans, rain water drainage. The plinth area of pump house shall be area of measurement. Rate is exclusive of GST.	sqm	17161.86
8.2	Construction of boundary wall of Brick/ stone masonry as per enclosed GA drawing, scope of work and technical specifications complete work in all respect. Brief details of boundary wall parameter is as below: 1. Depth of foundation- 900 mm. 2. PCC in M-10, width -900 mm and thickness 100 mm, 3. Stone masonry in CM: 1:6 section of foundation above PCC, 600 mm (W) x 450 mm (D) and 450 mm (W) x 450 mm (D) 4. Superstructure work: Stone masonry in CM: 1:6, W-300, height-1650 mm,/ Brick work in CM: 1:6 W-230 mm, height- 1650 mm. 5. Cement mortar pointing on Stone masonry and cement mortar plaster 20 mm thick on brick masonry in CM 1:6. 6. Expansion joint shall be on every 30 mtr. 7. On top of wall there shall be CC Coping 75 mm thick (1:2:4) shall be provided. 8. Pillar for main gate 350x350 mm in size is part of boundary wall. 9. Cement paint of approved colour in 3 coat shall be done. Rate is exclusive of GST.	RMT	4932.20
8.3	Providing and fixing steel, gate, grating and grills made of angles, tees, square bars, flats or black pipe with hold fast and fitting complete as per design and drawing including cutting welding and fabrication with priming coat of red oxide and two coat of enamel paints. Rate is exclusive of GST.	Kg	102.54
8.4	Construction of Pump house of RCC framed structure as per approved standard GA, structure, electrical drawing, scope of work and technical specification complete work in all respect including electrical works for indoor and outdoor lighting and fans, rain water drainage, sanitary, plumbing, monorail/ EOT crane etc for Earth quake zone II and SBC equal to or more than 7 T/sqm. Note: Standard drawings can be viewed on website https://pheddms.rajasthan.gov.in/private/public/dms_document.aspx . Rates are exclusive of GST.		
8.4.1	Type I (72.3 Sqm)	Each	1657847.46
8.4.2	Type II (111.34 Sqm)	Each	2343830.51
8.4.3	Type III (150.6 Sqm)	Each	2849118.64
8.4.4	Type IV (212.9 Sqm)	Each	4416076.27
8.4.5	Type V (381.5 Sqm)	Each	7462847.46
8.4.6	Type VI (407.48 Sqm)	Each	8358830.51
8.4.7	Type VII (692.72 Sqm)	Each	11647322.03

8.5	Construction of Pump house of RCC framed structure with pump pit in RCC walls as per scope of work and technical specification complete work in all respect including electrical works for indoor and outdoor lighting and fans, rain water drainage, sanitary, plumbing, monorail/ EOT crane etc. complete as per direction of Engineer-in-charge. The GA, structure, electrical, sanitary, P&ID, SLD to be prepared by the contractor and submitted to department for approval for earth quake zone II. Rates are exclusive of GST.		
8.5.1	Pump House with Monorail arrangement	sqm	18915.25
8.5.2	Pump House with suitable EOT arrangement with Girder	sqm	20737.29
8.5.3	Add 4% for earth quake zone III on above item no. 8.5.1 & 8.5.2		
8.5.4	Add 8% for earth quake zone IV on above item no. 8.5.1 & 8.5.2		

Chapter 9

Construction of Valve Chamber

Note : All rates are exclusive of GST.

S. No.	Description	Unit	Rate (Rs.)
9.1	Construction of RCC Sluice valve chamber for different type of valves including earthwork excavation, 100mm PCC M15 as levelling course, RCC M25 grade for base slab, side wall & cover slab , including cost of steel reinforcement , form work, Pre-cast slabs, plastic encapsulated CI/MS Foot Rest, MS flats for the support of pre-cast, proper curing of concrete work complete in all respect as per specifications and standard drawings and as per direction of Engineer-in-Charge. Rates are exclusive of GST.		
9.1.1.	For Class-AA loading		
9.1.1.1	Sluice valve chamber of size 1.13 m x0.85 m x1.325 m- for pipe size-up to 100 mm	Each	31101.69
9.1.1.2	Sluice valve chamber of size 1.17m x 0.95m x1.47m for pipe size-from 125-to-150mm	Each	34661.02
9.1.1.3	Sluice valve chamber of size 1.26m x1.185m x1.88m for pipe size-from 200-to-300mm	Each	44322.03
9.1.1.4	Sluice valve chamber of size 1.39m x1.43m x2.245m for pipe size-from 350-to-450mm	Each	55338.98
9.1.1.5	Sluice valve chamber of size 1.61m x1.75m x2.85m for pipe size-from 500-to-700mm	Each	76186.44
9.1.2	For Class-A loading		
9.1.2.1	Sluice valve chamber of size1.13m x0.85m x1.27m for pipe size-upto100mm	Each	25254.24
9.1.2.2	Sluice valve chamber of size1.17m x0.95m x1.415m for pipe size-from 125-to-150mm	Each	28389.83
9.1.2.3	Sluice valve chamber of size1.26m x1.185m x1.82m for pipe size-from 200-to-300mm	Each	36864.41
9.1.2.4	Sluice valve chamber of size1.39m x1.43m x2.185m for pipe size-from 350-to-450mm	Each	47288.14
9.1.2.5	Sluice valve chamber of size1.61m x1.75m x2.795m for pipe size-from 500-to-700mm	Each	66864.41
9.1.3	For in-campus Valve Chambers		
9.1.3.1	Sluice valve chamber of size1.13m x0.85m x1.225m for pipe size-upto100mm	Each	24406.78
9.1.3.2	Sluice valve chamber of size1.17m x0.95m x1.37m for pipe size-from 125-to-150mm	Each	27372.88
9.1.3.3	Sluice valve chamber of size1.26m x1.185m x1.76m for pipe size-from 200-to-300mm	Each	35338.98
9.1.3.4	Sluice valve chamber of size1.39m x1.43m x2.125m for pipe size-from 350-to-450mm	Each	44661.02
9.1.3.5	Sluice valve chamber of size1.61m x1.75m x2.72m for pipe size-from 500-to-700mm	Each	61525.42

S. No.	Description	Unit	Rate (Rs.)
9.2	Construction of RCC Air valve chamber for different type of valves including earthwork excavation, 100mm PCC M15 as levelling course, RCC M25 grade for base slab, side wall & cover slab , including cost of steel reinforcement , form work, Pre-cast slabs, Plastic encapsulated CI/MS Foot Rest, MS flats for the support of pre-cast, proper curing of concrete work complete in all respect as per specifications and standard drawings and as per direction of Engineer-in-Charge. Rates are exclusive of GST.		
9.2.1	For Class-AA loading		
9.2.1.1	Air valve chamber of size0.9m x1m x1.695m for air valve size-from 50 mm-to-80mm	Each	33559.32
9.2.1.2	Air valve chamber of size1m x1.1m x1.945m for air valve size of 100mm	Each	38813.56
9.2.1.3	Air valve chamber of size1.05m x1.4m x2.42m for air valve size of 150mm	Each	49915.25
9.2.1.4	Air valve chamber of size1.325m x1.7m x2.875m for air valve size of 200mm	Each	68728.81
9.2.2	For Class-A loading		
9.2.2.1	Air valve chamber of size0.9m x1m x1.71m for air valve size-from 50 mm-to-80mm	Each	28389.83
9.2.2.2	Air valve chamber of size1m x1.1m x1.96m for air valve size of 100mm	Each	33474.58
9.2.2.3	Air valve chamber of size1.05m x1.4m x2.42m for air valve size of 150mm	Each	43305.08
9.2.2.4	Air valve chamber of size1.325m x1.7m x2.9m for air valve size of 200mm	Each	60000.00
9.2.3	For in-campus Valve Chambers		
9.2.3.1	Air valve chamber of size0.9m x1m x1.66m for air valve size-from 50 mm-to-80mm	Each	27457.63
9.2.3.2	Air valve chamber of size1m x1.1m x1.91m for air valve size of 100mm	Each	32457.63
9.2.3.3	Air valve chamber of size1.05m x1.4m x2.37m for air valve size of 150mm	Each	41949.15
9.2.3.4	Air valve chamber of size1.325m x1.7m x2.825m for air valve size of 200mm	Each	56694.92
9.3	Construction of RCC Scour valve chamber wet type for different type of valves including earthwork excavation, 100mm PCC M15 as levelling course, RCC M25 grade for base slab, side wall & cover slab , including cost of steel reinforcement , form work, Pre-cast slabs, Plastic encapsulated CI/MS Foot Rest, MS flats for the support of pre-cast, proper curing of concrete work complete in all respect as per specifications and standard drawings and as per direction of Engineer-in-Charge. Rates are exclusive of GST.		
9.3.1	For Class-AA loading		
9.3.1.1	Scour valve chamber of size1.13m x0.85m x1.985m for connecting pipe size-upto100mm	Each	37118.64

S. No.	Description	Unit	Rate (Rs.)
9.3.1.2	Scour valve chamber of size1.175m x0.95m x2.285m for connecting pipe size-more than 100 mm & up to 150mm	Each	40000.00
9.3.1.3	Scour valve chamber of size1.2m x1.08m x2.485m for connecting pipe size- more than 150 mm & up to 200mm	Each	45084.75
9.3.2	For Class-A loading		
9.3.2.1	Scour valve chamber of size1.13m x0.85m x1.95m for connecting pipe size-upto100mm	Each	32293.22
9.3.2.2	Scour valve chamber of size1.175m x0.95m x2.25m for connecting pipe size-more than 100 mm & upto150mm	Each	34800.00
9.3.2.3	Scour valve chamber of size1.2m x1.08m x2.45m for connecting pipe size-more than 150 mm & upto200mm	Each	39223.73
9.4	Construction of RCC Scour valve chamber dry type for different type of valves including earthwork excavation, 100mm PCC M15 as levelling course, RCC M25 grade for base slab, side wall & cover slab , including cost of steel reinforcement , form work, Pre-cast slabs, Plastic encapsulated CI/MS Foot Rest, MS flats for the support of pre-cast, proper curing of concrete work complete in all respect as per specifications and standard drawings and as per direction of Engineer-in-Charge. Rates are exclusive of GST.		
9.4.1	For Class-AA loading		
9.4.1.1	Scour valve chamber of size1.13m x0.85m x1.985m for connecting pipe size-upto100mm	Each	32288.14
9.4.1.2	Scour valve chamber of size1.175m x0.95m x2.285m for connecting pipe size- more than 100 mm & up to 150mm	Each	34237.29
9.4.1.3	Scour valve chamber of size1.2m x1.08m x2.485m for connecting pipe size- more than 150 mm & up to 200mm	Each	41694.92
9.4.2	For Class-A loading		
9.4.2.1	Scour valve chamber of size1.13m x0.85m x1.95m for connecting pipe size-upto100mm	Each	28090.68
9.4.2.2	Scour valve chamber of size1.175m x0.95m x2.25m for connecting pipe size-more than 100 mm & upto150mm	Each	29786.44
9.4.2.3	Scour valve chamber of size1.2m x1.08m x2.45m for connecting pipe size-more than 150 mm & upto200mm	Each	36274.58
9.5	Construction of RCC pillar for following size of air valves including earthwork excavation, RCC M25 grade for base slab, vertical pillar, including cost of steel reinforcement ,GI (class-B)/MS vertical pipe, form work, proper curing of concrete work complete in all respect as per standard specifications and drawings and as per direction of Engineer-in-Charge. Rates are exclusive of GST.		
9.5.1	Air valve pillar for air valves size of 80mm dia	Each	16779.66
9.5.2	Air valve pillar for air valves size of 100mm dia	Each	18474.58
9.5.3	Air valve pillar for air valves size of 150mm dia	Each	25762.71
9.5.4	Air valve pillar for air valves size of 200mm dia	Each	30932.20

Chapter 10

Solar based water supply schemes

Note : All rates are exclusive of GST.

S. No.	Description	Unit	Rate (Rs.)
10.1	<p>Supply, installation, testing and commissioning of MNRE approved Grid tied Solar Panels with inverter, meter, cable etc. suitable for Rooftop installation as well as Utility Scale Solar Power Projects with 25 years of Linear Generation warranty. Work includes designing of solar panel area and MS frame and foundation on ground/roof of Pump house or CWR, showing arrangement of panel in available space, installation of PV module on MS frame as per approved design and drawings. Mounting structure shall be suitably designed to withstand wind velocity up to 150km/hr.</p> <p>Grid Tie Transformer less inverters, Multiple independent MPPTs, Peak efficiency of >98%. Connect up to multiple strings PV arrays, Easy & fast connection, Built-in string-level monitoring, IP65 protection level, Wi-Fi / internet based remote monitoring with 5 years warranty.</p> <p>All cabling up to panel and metre, earthing etc. required accessories are inclusive. The work shall be executed as per detailed technical specifications, approved drawing and direction of Engineer in Charge.</p> <p>Note: There shall be 5 year service warranty for panel, inverter, meter, cable etc. and suitable provision shall be included in tender document.</p> <p>Rates are exclusive of GST.</p>		
10.1.1	Solar panels up to 10 KW at a single location.	Watt	50.85
10.1.2	Solar panels more than 10 KW and up to 50 KW at a single location.	Watt	48.31
10.2	<p>Supply, installation, testing and commissioning of MNRE approved off Grid Solar Panels for running of motor pumps with 25 years of Linear Generation warranty, Work includes designing of solar panel area and MS frame and foundation on ground/roof of Pump house or CWR, showing arrangement of panel in available space, installation of PV module on MS frame as per approved design and drawings. Mounting structure shall be suitably design to withstand wind velocity up to 150km/hr. The work shall be executed as per detailed technical specifications, approved drawing and direction of Engineer in Charge.</p> <p>Note: There shall be 5 year service warranty for solar panel and mounting structure and suitable provision shall be included in tender document.</p> <p>Rate is exclusive of GST.</p>	Watt	36.44

S. No.	Description	Unit	Rate (Rs.)
10.3	<p>Supply, installation, testing and commissioning of MNRE approved off Grid Solar Panels for running of motor pumps with 25 years of Linear Generation warranty, Work includes designing of solar panel area and MS fabricated structure 120 micron hot dip galvanized iron , showing arrangement of panel in available space and installation of PV module on frame structure such that minimum height of lower edge of panel shall be 4.0 mtr from ground level to safeguard against damage and theft as per indicative drawing enclosed with the bid document. The foundation of structure shall be in RCC. Mounting structure shall be suitably designed to withstand wind velocity up to 150km/hr. The work shall be executed as per detailed technical specifications, approved drawing and direction of Engineer in Charge.</p> <p>Note: There shall be 5 year service warranty for solar panel and mounting structure and suitable provision shall be included in tender document.</p> <p>Rate is exclusive of GST.</p>	Watt	50.85
10.4	<p>Supply, installation, testing and commissioning of MNRE approved off Grid Solar Panels for running of motor pumps with 25 years of Linear Generation warranty, Work includes designing of solar panel area and structure, showing arrangement of panel on rectangular OHSR with flat roof/ MS fabricated structure with polyethylene tank and installation of PV module on above structure as per approved design and drawings. Mounting structure shall be suitably design to withstand wind velocity up to 150km/hr. The work shall be as per detailed technical specifications, approved drawing and direction of Engineer in Charge.</p> <p>This item does not include cost of OHSR/ MS fabricated structure with tank but includes cost of items required for installation of solar panels on top of the tank.</p> <p>Note: There shall be 5 year service warranty for solar panel and mounting structure and suitable provision shall be included in tender document.</p> <p>Rate is exclusive of GST.</p>	Watt	43.22
10.5	<p>Providing, installation, testing and commissioning of AC submersible pump sets with inbuilt or individual solar pump controller with Maximum power point tracking (MPPT) for optimally use the solar panel and maximize water discharge to deliver maximum water during the day including PVC flat submersible cable from controller to motor pumps..</p> <p>Solar pump shall be of Stainless steel construction and performance shall be as per scope of work and minimum lift of water shall be as per defined in scope .</p> <p>Pump controller shall have Adequate protection against dry operation of motor pump set, and against hails and storms. Full protection against open circuit, accidental short circuit and reverse polarity should be provided. A good reliable on/off switch be provided. The cable shall be ISI marked three core PVC flat submersible cable as per IS 694:1990 or amended up to date (standard insulation) and conductor as per class 5 of IS 8130:1980 or amended up to date.</p> <p>The duty condition of pump set shall be as per scope of work and entire work shall be executed as per technical specification and direction of Engineer in charge.</p> <p>Rates are exclusive of GST.</p>		

S. No.	Description	Unit	Rate (Rs.)
10.5.1	0.75 KW (1.0 HP)	Each	62886.44
10.5.2	1.5 KW (2.0 HP)	Each	67119.49
10.5.3	2.2 KW (3.0 HP)	Each	97279.66
10.5.4	3.7 KW (5.0 HP)	Each	124927.97
10.5.5	5.5 KW (7.5 HP)	Each	153896.61
10.5.6	7.5 KW (10.0 HP)	Each	167738.98
10.5.7	9.3 KW (12.5 HP)	Each	188838.98
10.5.8	11 KW (15.0 HP)	Each	207146.61
10.6	<p>Supply, installation, testing and commissioning of DC submersible pump sets with inbuilt or individual solar pump controller with Maximum power point tracking (MPPT) for optimally use the solar panel and maximize water discharge to deliver maximum water during the day including PVC flat submersible cable from controller to motor pumps.</p> <p>Solar pump shall be of Stainless steel construction and performance shall be as per scope of work and minimum lift of water shall be as per defined in scope .</p> <p>Pump controller shall have Adequate protection against dry operation of motor pump set, and against hails and storms. Full protection against open circuit, accidental short circuit and reverse polarity should be provided. A good reliable on/off switch suitable for DC use is to be provided. The cable shall be ISI marked three core PVC flat submersible cable as per IS 694:1990 or amended up to date (standard insulation) and conductor as per class 5 of IS 8130:1980 or amended up to date.</p> <p>The duty condition of pump set shall be as per scope of work and entire work shall be as per technical specification and direction of Engineer in charge.</p> <p>Rates are exclusive of GST.</p>		
10.6.1	0.75 KW (1.0 HP)	Each	94943.22
10.6.2	1.5 KW (2.0 HP)	Each	111731.36
10.6.3	2.2 KW (3.0 HP)	Each	139567.80
10.7	<p>Supply, installation, testing and commissioning of Remote monitoring unit on off grid solar controller for remote ON/OFF, parameter setting, monitoring and troubleshooting through mobile etc. complete. Web charges and data charges for 5 year during service warranty etc. complete in all respect as per technical specification and as per direction of Engineer.</p> <p>Rate is exclusive of GST.</p>	Each	38838.98

S. No.	Description	Unit	Rate (Rs.)
10.8	<p>Providing, installation, testing and commissioning structural steel work riveted or bolted in built up sections, trusses and framed work, including cutting, hoisting for following staging and capacity of Rotational Moulded Polyethylene water storage tank on it as per indicative drawing given in the bid document. On the Polyethylene tanks, there shall be provision of suitable space for installation of solar panels up to 5.0 KW and further additional 2.5 KW on the side of Steel structure if required as per indicative drawing. Cost of solar panels is not included in this item .</p> <p>The structural steel shall be 120 micron hot dip galvanized iron and foundation of structure shall be in RCC with minimum depth as 2.0 mtr (other than rocky strata). The work includes P&F of Polyethylene Water Storage Tank(IS: 12701, ISI marked, indicating the BIS license No.) of approved make with cover. Providing & fixing 50 mm dia ISI marked G.I. class B pipe for inlet, outlet and over flow pipe and 32 mm GI class B pipe for wash out with GM gate valves at inlet and outlet pipe Including making connection etc. complete as per drawing, technical specification and direction of Engineer in In charge. The scope includes inlet GI pipe from ground level to water tank and outlet pipe from water tank to ground and up to 2.0 mtr away from foundation and overflow pipe is to be interconnected in distribution pipe line. Wash out pipe shall be taken up to a suitable point minimum 5.0 mtr away from tank. Water level controller shall installed to monitor level in tank and shall automatically shut off motor when tank is filled .</p> <p>Note: There shall be 5 year service warranty for structure, tank, fittings etc. and suitable provision shall be included in tender document.</p> <p>Rates are exclusive of GST.</p>		
10.8.1	5000 Litre X 2 Nos. PE water tank, staging 10 meter.	Each	564038.14
10.8.2	7500 Litre X 2 Nos. PE water tank, staging 10 meter.	Each	619712.71
10.8.3	5000 Litre X 2 Nos. PE water tank , staging 12 meter.	Each	639482.20
10.8.4	7500 Litre X 2 Nos. PE water tank, staging 12 meter.	Each	692143.22

Chapter 11

Instrumentation

Note : All rates are exclusive of GST.

S. No.	Description	Unit	Rate (Rs.)
Electromagnetic Flow meter			
11.1	<p>SITC of D/F Full bore type Electromagnetic Flow Meter of approved make of following dia and specifications complete: Media : Water (Raw/ Chlorinated) , Pressure : up to 1.5MPa, Process temp: - 50 deg C, Flow/Meter Tube : SS 304, Electrode : SS AISI 316L / Hastelloy C276/ Tantalum, Lining Material : Hard Rubber/ Neoprene / Poly-urethane (PU) , Flange : SS / CS, Flange Standard & Rating : ANSI 150, Coil housing : SS AISI 304/ Carbon Steel/ Die Cast Aluminium, with anticorrosive paint & provide completely sealed (leak proof) construction as per requirement of IEC 60529, Accuracy : ± 0.5 % M.V.- velocity 0.3 to 10 m/s, Transmitter/ signal convertor Enclosure : Die Cast Aluminium, Power Supply : 80-240 V AC - 50Hz, Output 1 : 4-20 mA, Output 2: Pulse, Communication Output : RS 485/ Heart, Display Type : LCD/ LED Display, Cable Entry : M20 X 1.5, Provision of RAM/PROM to store calibration and configuration parameters and totalizer value during power failure, Protection category- IP 68 for sensor (flow tube) and IP 67 for transmitter/ convertor, including Surge Arrester, if required, and all materials required for making connection etc. complete in all respect as per technical specification and direction of Engineer In-Charge.</p> <p>Note 1 : Rates are exclusive of tail piece / dismantling joints and earth work.</p> <p>Note 2 : Rates are exclusive of GST.</p>		
11.1.1	EFM 50 mm	Each	78749.15
11.1.2	EFM 80 mm	Each	87827.12
11.1.3	EFM100 mm	Each	96147.46
11.1.4	EFM 125 mm	Each	107187.29
11.1.5	EFM 150 mm	Each	118378.81
11.1.6	EFM 200 mm	Each	120315.25
11.1.7	EFM 250 mm	Each	150372.03
11.1.8	EFM 300 mm	Each	185833.05
11.1.9	EFM 400 mm	Each	233307.63
11.1.10	EFM 450 mm	Each	328107.63
11.1.11	EFM 500 mm	Each	359564.41
11.1.12	EFM 600 mm	Each	441500.00

S. No.	Description	Unit	Rate (Rs.)
ULTRASONIC FLOW METER			
11.2	SITC of Ultrasonic Flow Meter of approved make of following dia sized pipelines and specifications complete: Media : Water (Raw/Clear) , Pressure : up to 1.5MPa, Process temp: - 50 deg C, Flow velocity range: - 10 m/s to +10m/s (bidirectional), Power supply- 80 to 240 v/ AC, 50 Hz.,Output 1 : 4-20 mA, Communication Output : RS 485, Display Type : LCD/ LED Display, Cable Entry : M20 X 1.5, Acoustic path: single/ dual, Accuracy : ± 1% of M.V (max.) for size 50-300mm and ± 2% of M.V (max.) for size 350-2000mm (single path) , Transmitter Enclosure: Cast Aluminium, Sensor cable: encapsulated, Sensor mounting method: V / Z type, Protection type: IP 67, including all materials required for Ultrasonic Flow Meter complete in all respect as per technical specification and as per direction of Engineer In-Charge. Rates are exclusive of GST.		
11.2.1	UFM 200mm -600 mm (CLAMP ON TYPE)	Each	286881.36
11.2.2	UFM 200mm -600 mm (INSERTION TYPE)	Each	333804.24
BULK FLOW METER (MECHANICAL TURBINE TYPE)			
11.3	SITC of Bulk Flow Meter with removable mechanism class "B" confirming to ISO:4064:2005/ IS: 2373 of approved make of following dia sized pipelines and specifications complete: Media : Water (Clear) , Temp. 50 deg., Pr. rating: PN16, Protection type: IP- 68, Body Material : IS-210 Gr. FG-200, Accuracy Class :Class B (±2 % @ Nominal flow rate), Magnetic Drive, Dry Dial, Epoxy powder coated, Pulse out put option, Anti-magnetic protection including all materials and making connection with existing pipeline required for Bulk Flow Meter including cutting the existing pipeline etc. complete in all respect as per technical specification and as per direction of Engineer In-Charge. Note 1 : Rates are exclusive of tail piece / dismantling joints and earth work. Note 2 : Rates are exclusive of GST.		
11.3.1	BFM 80 mm	Each	10752.54
11.3.2	BFM100 mm	Each	13132.20
11.3.3	BFM 125 mm	Each	18244.07
11.3.4	BFM 150 mm	Each	20357.63
11.3.5	BFM 200 mm	Each	25774.58
11.3.6	BFM 250 mm	Each	54610.17
11.3.7	BFM 300 mm	Each	73444.92
11.3.8	BFM 400 mm	Each	123219.49
11.3.9	BFM 450 mm	Each	141127.97
11.3.10	BFM 500 mm	Each	209717.80
11.3.11	BFM 600 mm	Each	224944.07

S. No.	Description	Unit	Rate (Rs.)
ULTRASONIC LEVEL SENSOR			
11.4	SITC of Ultrasonic Level Transmitter suitable for measuring water level in reservoir, Normal Powered 24VDC, Type of Transmitter: Two Wire (4-20 mA), Cable Entry:1/2" NPT (F), Sensor Material: PP, slip-on Flange: 2 ½" Flange, Material of Construction for Slip-on flange: PP, output 4~20mA, HART compatible, accuracy +/- 0.2 % as per detailed Technical specification, scope of work and direction of Engineer in charge. Rate is exclusive of GST.		
11.4.1	Measuring range 0.0 to 6.0 mtr	Each	55753.39
11.5	SITC of Ultrasonic Level Transmitter suitable for measuring water level in reservoir, powered by solar panel with minimum 48 power back up or internal installed battery (5 years battery life with replacement warranty), with out put as GSM/GPRS + data logger , Sensor Material: PP, accuracy +/- 0.2 %, as per detailed Technical specification, scope of work and direction of Engineer in charge. Rate is exclusive of GST.		
11.5.1	Measuring range 0.0 to 6.0 mtr	Each	100937.29

Chapter 12

Earth Work & Civil Works related to Storage Tank, Filter media work

Note : All rates are exclusive of GST.

S. No.	Description	Unit	Rate (Rs.)
STORAGE TANKS			
12.1	Earth work in excavation over area (for Sedimentation cum storage tank) Exceeding 30 cm in depth 1.5 Mtrs in width as well as 10 Sqm on plan) including disposal of excavated earth lead up to 50 M and all lift. Disposed earth to be levelled and neatly dressed including stacking of useful material if any available during excavation for all kind of soil. Earth work to be carried out by means of mechanical system i.e. Tractor craw or any other mechanical system. No extra payment shall be done for lift of any limit. This work also involves dressing of sides & bottom for lining purpose which is to be done manually, slope of sides to be maintained as per specification. Work is to be done as per direction of Engineer In Charge and technical specifications. Rate is exclusive of GST.	Cum	78.81
12.2	Silt clearance from Sedimentation cum storage tank with all lift and lead up to 50 Mtr. Silt to be disposed outside the Headworks boundaries. Disposed silt to be levelled and neatly dressed including stacking of useful material if any available during excavation for all kind of soil. Silt clearance is to be carried out by means of mechanical system i.e. Tractor craw/Trolley or any other mechanical system. No extra payment shall be done for lift . This work also involves dressing of bottom which is to be done manually and there shall be no damage to lining and LDPE film of tank. Work is to be done as per direction of Engineer In Charge and technical specifications. Rate is exclusive of GST.	Cum	99.15
	NOTE :- For additional lead, beyond 50M, every additional lead will be paid as per PWD BSR. But for lead of 500M, 1 km. and onward; initial rate of 50M will be deducted from concern rates of above said leads		
12.3	SINGLE FLAT BRICK LINING WITH 250 MICRON LDPE FILM:- Preparing surface levelled & dressed to proper slope & laying over it on sand properly rammed and watered in 2 Layers of 5 cm each. Providing and laying 250 micron LDPE film as per ISS:2506-1984 including overlapping on the finished surface of compacted sand. Over LDPE film 15 mm thick cement sand mortar 1:3 shall be provided and laid which shall be cured properly. Over the base mortar single layer I st class brick lining in cement sand mortar 1:3 shall be provided with joints not more than 8 mm wide and curing shall be done for 14 days. This also includes providing weedicides & anti-termite treatment, complete work as per technical specifications. Rate is exclusive of GST.	Sqm	499.15

S. No.	Description	Unit	Rate (Rs.)
12.4	Providing and fixing PVC float in Raw Water Storage tank with CI tail piece 150mm dia-2 Nos, CI puddle collar-150mm dia- 1.20 M- 1 No. and PVC hose pipe- 150mm dia -6 M & all accessories complete in all respect as per Instructions of Engineer In Charge. Complete Job Rate is exclusive of GST.	Job	13393.22
FILTER MEDIA			
12.5	Providing and placing of new graded gravel as (i) Size of Gravel vary from 50 mm at the bottom to 2. to 5 mm at the top as detailed: (a) Passing 80 mm screen but held on 10 mm- 150 mm layer (b) Passing 25 mm screen but held on 10 mm- 50 mm layer (c) Passing 10 mm screen but held on 5 mm- 50 mm layer Passing (d) 5 mm screen but held on 2 mm- 50 mm layer (ii) The filter gravel shall be as spherical as possible, hard, clean and uniform in quality and also shall not contain such impurities as dirt and clay as per IS: 8419 (Part-I) for filter gravel specifications. The work also includes washing the gravel with required concentration of HCL acid and finally with water and placing the same in filter beds as per direction of Engineer- In- Charge and technical specification complete in all respect. The gravel shall not contain more than 5% acid soluble matter as determined by solubility test in Appendix B of IS: 8419 (Part-I) amended up to date. (For RGF) Rate is exclusive of GST.	Cum	3327.12
12.6	Supply and charging of filter media (Gravel) as per department specification including screaming, washing with 5% HCL solution to make Gravel (Size 4 to 6mm, 8 to 12mm, 10 to 20mm - Hard Coarse grit from approved quarry) free from silt, clay and other all impurities work to be executed as per scope of work fixed by the department at the time of tendering (for SSF) Rate is exclusive of GST.	Cum	1767.80
12.7	Providing and Placing of new filter media as (i) Sand shall be hard and resistant quartz or quartzite and free of clay, fine particles, soft grains and dirt of any description. (ii) Effective size shall be 0.45 to 0.70 mm. (iii) Uniformity Coefficient not be more than 1.70 nor less than 1.30. (iv) Ignition loss should not exceed 0.70% by weight. (v) Soluble fraction in HCL acid shall not exceed 5.0% by weight, (vi) Silica content should not be less than 95% (vii) Specific Gravity shall be in the range between 2.55 to 2.65 (viii) Wearing loss shall not exceed 3.0%. and as per specifications given in IS: 8419 (Part-I). Filter media (fine sand and coarse sand) should be processed through disintegrator and dust separator in automatic plant including screening of sand to desired specification and washing and cleaning of sand with water by aqua wash technology at quarry site. (For RGF) Rate is exclusive of GST.	Cum	3550.85

S. No.	Description	Unit	Rate (Rs.)
12.8	Providing and Placing of new filter media as (i) Sand shall be hard and resistant quartz or quartzite and free of clay, fine particles, soft grains and dirt of any description. (ii) Effective size shall be 0.20 to 0.30 mm. (iii) Uniformity Coefficient not be more than 5.0 nor less than 3.0. (iv) Ignition loss should not exceed 0.70% by weight. (v) Soluble fraction in HCL acid shall not exceed 7.0% by weight, (vi) Silica content should not be less than 95% (vii) Specific Gravity shall be in the range between 2.55 to 2.65 (viii) Wearing loss shall not exceed 3.0%. and as per specifications given in IS: 8419 (Part-I). (ix) The sand should not contain more than 2% of calcium and manganese calculated as carbonate. Filter media (fine sand and coarse sand) should be processed through. Disintegrator and dust separator in automatic plant including screening of sand to desired. Specification and washing and cleaning of sand with water by aqua wash technology at quarry site. The sand shall not contain more than 5% acid soluble matter as determined by solubility test in Appendix B of IS: 8419 (Part-I) (Fine sand 0.2 to 0.3mm and coarse sand 1.0 to 1.7mm) (For SSF) Rate is exclusive of GST.	Cum	3550.85
12.9	Fixing of pipes for under drainage system including plugging pipes with CM 1:4 on one end and fixing other end in collecting channel with CM 1:4 with all Material etc.(Excl.cost of pipes) This job, also, includes Making 4mm dia holes in pipes @15 cm c/c in zig-zag pattern and testing of under drainage system as per instruction of Engineer-in-charge. Rate is exclusive of GST.	RM	27.12
12.10	Removing & Re-fixing of pipes for under drainage system including cleaning of one end plugged pipes and fixing /embedded in CM 1:4 on one end and fixing other end in collecting channel with CM 1:4 with all Material etc.(Excl.cost of pipes) This job, also, includes Making 4mm dia holes if required in pipes @15 cm c/c in zig-zag pattern. Rate is exclusive of GST.	RM	22.03
12.11	Making 4mm dia hole in pipes of under drainage system of filters duly drilled. Carriage of pipe from stacks to filter site, making two per rows on pipe and points of making holes in Zig-Zag pattern in two hold raw. Making 4mm dia holes with drill machine @ 15cm c/c in zig-zag pattern. Rate is exclusive of GST.	Each	1.69
12.12	Labour charges for screening of old sand (received from filter beds) through the standard sieves, washing the sand with HCL acid of required concentration as directed by the Engineer- In- Charge, so as to remove all the mud and other deposits from sand grains and then clean with water till the sand is as neat and clean that it impart no colour to clean while washing. It also includes placing this washed filter media (sand) in filter beds in layer as instructed by the Engineer- In- Charge. (RGF, SSF) Rate is exclusive of GST.	Cum	775.42

S. No.	Description	Unit	Rate (Rs.)
12.13	Labour charges for screening of old gravel (received from filter beds) through the standard different sizes sieves for required sizes of gravel, washing the gravel with HCL acid of required concentration as directed by the Engineer- In- Charge, so as to remove all the mud and other deposits from gravel grains and then clean with water till the gravel is as neat and clean that it impart no colour to clean while washing. It also includes placing this washed gravel in filter beds in layer as instructed by the Engineer- In- Charge. (RGF, SSF) Rate is exclusive of GST.	Cum	580.51

Chapter 13

Construction and Commissioning of Water treatment Plant (WTP)

Note : All rates are exclusive of GST.

S. No.	Description	Unit	Rate (Rs.)
13.1	Design, construction, commissioning & testing of Non Mechanical Rapid Gravity Filter Plant of capacity as under. This work includes construction of RCC receiving chamber, baffle channel, flocculate, clarifier, collecting channel, filter beds , operation gallery, clear water chamber, channel, chlorination chamber, Back wash tank, pipe system for carrying raw water from Pump House to inlet of RGF, clear water from Plant to CWR, De-sludging system including providing pipe system from clarifier , flocculate & back wash water chamber to existing storage tank, over head back wash tank, back wash pumps (1W+1S) set with piping system, air blowers (1W+1S) as per design, interconnection of raw water, clear water, sludge pipes etc. including allied works such for construction ,commissioning of system as defined in scope of work, technical specifications and provisions of CPHEEO manual at various water supply schemes Rates are exclusive of GST.		
13.1.1	Up to 40 KLH capacity	KLH	80,508.47
13.1.2	Above 45 KLH and up to 60 KLH	KLH	76,271.19
13.1.3	Above 65 KLH and up to 90 KLH	KLH	66,101.69
13.1.4	Above 100 KLH and up to 125 KLH	KLH	60,169.49
13.1.5	Above 130 KLH and up to 160 KLH	KLH	55,932.20
13.1.6	Above 170 KLH and up to 200 KLH	KLH	52,542.37
13.1.7	Above 205 KLH and up to 300 KLH (Deduct 1% per 5 KLH in rate of item 13.1.6)	KLH	
13.2	Design, construction, testing and commissioning of Rapid Gravity Filter Treatment Plant including all relevant civil, electrical , mechanical ,instrumentation, automization and SCADA works, chemical building and stores along with ancillary civil works as defined in scope of work, technical specification and provisions of CPHEEO manuals for the following capacity . Rates are exclusive of GST.		
13.2.1	Cost of 200 KLH	Each	22,542,372.88
13.2.2	Add per KLH above 200 KLH and up to 500 KLH	KLH	95,084.75
13.2.3	Cost of 500 KLH	Each	51,067,796.61
13.2.4	Add per KLH above 500 KLH and up to 2000 KLH	KLH	86,271.19
13.2.5	Cost of 2000 KLH	Each	180,474,576.27
13.2.6	Add per KLH above 2000 KLH and up to 5000 KLH	KLH	76,779.66
13.2.7	Cost of 5000 KLH	Each	410,813,559.32
13.2.8	Add per KLH above 5000 KLH and up to 75000 KLH	KLH	67,033.90

Chapter 14
Miscellaneous

Note : All rates are exclusive of GST.

S. No.	Description	Unit	Rate (Rs)
14.1	<p>Survey by Electronic Total station/DGPS of villages with a view of preparing "village index plan "indicating roads/ streets, surface and width of road/ streets along with places of importance such as Panchayat Bhawan, Hospital, School, Post office, Temple Water Supply structures (GLRs, PSPs, pumping station physical boundary of village north etc. including levels at some important points as per instruction of engineer in charge. Hydraulic Design of Distribution network in Loop/Water Gem/EPANET or any other compatible software. Preparation of Auto CAD Drawing (A-3/A-2) with complete hydraulic design out put details, such as pipe no, node no, pipe length, pressure at node etc. Submission of three sets of colour print prepared in Auto CAD.</p> <p>Rates are exclusive of GST.</p>		
14.1.1	Rate for length up to 2.5 km	No.	6779.66
14.1.2	Add extra for length more than 2.5 km	Km	1694.92
14.2	<p>Survey of all properties, preparation of GIS based consumer mapping of consumer water connection database, plotting assets on GIS map etc. (Satellite image will be provided by the Department)</p> <p>Rates are exclusive of GST.</p>	FHTC	36.02
14.3	<p>Data entry of existing FHTCs in rural area under JJM on website ejalshakti.gov.in; work includes visiting the village for collecting basic data consumers like i.e. Aadhar no./ration card/voter ID/BPL card/ PAN card/driving license/passport/Antyodaya card/mobile no. etc. and entering the details on the above website. The cost also includes computer and operator.</p> <p>Rates are exclusive of GST.</p>	FHTC	25.42
14.4	<p>Preparation of DPRs for single and small multi village rural water supply schemes under JJM for Administrative & Financial Sanction and Technical sanction, the work includes:</p> <p>Survey by Electronic Total station/DGPS of villages with a view of preparing village index plan, existing HW plan and survey for route of rising/ trunk mains, indicating roads/ streets, surface and width of road/ streets along with places of importance such as Panchayat Bhawan, Hospital, School, Post office, Temple Water Supply structures (GLRs, PSPs, pumping station physical boundary of village north etc. including levels and TBM at important places as per instruction of engineer in charge.</p> <p>Preparation of technical report, forecasting of population and design demand, source design, techno-economic design of rising mains, selection and design of pumps sets, capacities of CWR, OHSR etc. complete work as per departmental prevailing guidelines and practice.</p> <p>Hydraulic Design of Distribution network in Loop/Water Gem/EPANET or any other compatible software. Preparation of Auto CAD Drawing (A-3/A-2) with complete hydraulic design output details, such as pipe no, node no, pipe length, pressure at node etc.</p>		

S. No.	Description	Unit	Rate (Rs)
	<p>Preparation of estimate of various components based on prevailing BSRs in PHED and non BSR if any with detailed analysis. Preparation of conceptual drawings, L-sections for rising mains, HW plan, GA drawings of P.S., ESR, CWR, GLSR, valve chambers etc.</p> <p>Printing of DPR in 6 copies, including drawings in appropriate size of paper for A&F and technical sanctions separately as per direction of EIC. Reply of observation raised by department for A&F and TS shall be submitted within timeframe as per scope of work.</p> <p>Work excludes preparation of Bid document.</p> <p>The DPR shall include all other habitation and main village in a unit.</p> <p>Rates are exclusive of GST.</p>		
14.4.1	For present population 100-500 souls	Per village	23728.81
14.4.2	For present population 501-1500 souls	Per village	27455.93
14.4.3	For present population 1501-4000 souls	Per village	37000.85
14.4.4	For present population above 4001 souls	Per village	38087.29