DETAILED ESTIMATE

Jal Jeevan Mission (JJM)-WSS - to Santhanpara, Rajakumary (Part) and Senapathy (Part) Panchayaths in Idukki District-Package IV A- Supplying and Laying Distribution and providing FHTC in Santhanpara GP-Pipeline Work

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
1	Supplying , Laying and commissioning of Distribution- Cost of materials						
1.001	100.98.119						
	Supply of DI K9 Pipe Conforming to IS 8329/2000, 300mm Dia.						
	300 mm DI K9						
	Pooppara	1	481.000				481.000
	Puthady	1	629.000				629.000
	Jamespadi	1	474.000				474.000
	Spare pipe	1	30.000				30.000
	Deduction for MS pipe	-1	20.000				-20.000
	Total						**1594.000**
						Total Quantity in metre	**1594.000**
1.002	100.98.118						
	Supply of DI K9 Pipe Conforming to IS 8329/2000, 250mm Dia.						
	250 mm DI K9						
	Poopara	1	1477.000				1477.000
	Puthady	1	2712.000				2712.000
	Thodimala	1	10.000				10.000
	Jamespadi	1	2401.000				2401.000
	Spare	1	132.000				132.000
	Deduction for MS pipe	-1	35.000				-35.000
	Total						**6697.000**
						Total Quantity in metre	**6697.000**
1.003	100.98.117						
	Supply of DI K9 Pipe Conforming to IS 8329/2000, 200mm Dia.						
	200 mm DI K9						
	Magnapeak	1	20.000				20.000
	Jamespadi	1	2415.000				2415.000
	Spare	1	48.000				48.000
	Deduction for MS pipe	-1	15.000				-15.000

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	Total						**2468.000**
						Total Quantity in metre	**2468.000**
1.004	100.98.116						
	Supply of DI K9 Pipe Conforming to IS 8329/2000, 150mm Dia.						
	150 mm DI K9						
	Pooppara	1	1609.000				1609.000
	Puthady	1	1395.000				1395.000
	Thodimala	1	1272.000				1272.000
	jamespadi	1	1736.000				1736.000
	Spare	1	120.000				120.000
	Deduction for MS pipe	-1	35.000				-35.000
	Total						**6097.000**
						Total Quantity in metre	**6097.000**
1.005	100.98.115						
	Supply of DI K9 Pipe Conforming to IS 8329/2000, 100mm Dia.						
	100MM DI K9						
	Puthadi	1	985.000				985.000
	Spare	1	20.000				20.000
	Deduction for MS	-1	10.000				-10.000
	Total						**995.000**
						Total Quantity in metre	**995.000**
1.006	100.98.134						
	Supply of HDPE Pipe PE 100 (IS 4984/1995), 8kg, 90mm Outer Dia.						
	90 mm HDPE 8kg						
	Magna Peak	1	652.000				652.000
	Pooppara	1	15519.000				15519.000
	Puthady	1	7105.000				7105.000
	Thodimala	1	4517.000				4517.000
	jamespadi	1	13868.000				13868.000
	Total						**41661.000**
						Total Quantity in metre	**41661.000**
1.007	OD102884/2022-2023						
	90mm HDPE Specials (8kg)						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	90mm HDPE Specials (8kg)						
		1	41661.000				41661.000
	Total						**41661.000**
						Total Quantity in metre	**41661.000**
1.008	100.98.154						
	Supply of HDPE Pipe PE 100 (IS 4984/1995), 10kg, 90mm Outer Dia.						
	90mm HDPE (10kg)						
	Pooppara	1	15763.000				15763.000
	Puthady	1	4612.000				4612.000
	Thodimala	1	1663.000				1663.000
	Jamespadi	1	8486.000				8486.000
	Total						**30524.000**
						Total Quantity in metre	**30524.000**
1.009	OD102885/2022-2023						
	Specials for 90 mm HDPE pipe(10kg)						
	90mm HDPE Specials (8kg)						
		1	30524.000				30524.000
	Total						**30524.000**
						Total Quantity in metre	**30524.000**
1.010	100.98.194						
	Supply of HDPE Pipe PE 100 (IS 4984/1995), 16kg, 90mm Outer Dia.						
	90mm HDPE (16kg)						
	Magnapeak	1	15519.000				15519.000
	Pooppara	1	16464.000				16464.000
	Puthady	1	18434.000				18434.000
	Thodimala	1	16995.000				16995.000
	jamespadi	1	11047.000				11047.000

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	Riderline	1	3000.000	1.000	1.000	1.000000	3000.000
	Total						**81459.000**
						Total Quantity in metre	**81459.000**
1.011	OD102886/2022-2023						
	Specials for 90mm HDPE Pipe (16kg)						
	90mm HDPE Specials (16kg)						
		1	81459.000				81459.000
	Total						**81459.000**
						Total Quantity in metre	**81459.000**
1.012	100.98.436						
	Supply of CI Air Valve, Conforming to IS 14848 - 2000, Kinetic Air Valve Type DK, Size 80mm.						
	80 mm CI air valve						
		10					10.000
	Total						**10.000**
						Total Quantity in no	**10.000**
1.013	100.98.444						
	Supply of CI Air Valve, Conforming to IS 14848 - 2000, Single Orifice, Large Orifice Type S2, Size 50mm.						
	50 mm CI air valve						
	Air valve	10					10.000
	Total						**10.000**
						Total Quantity in no	**10.000**
1.014	100.98.445						
	Supply of CI Air Valve, Conforming to IS 14848 - 2000, Double Orifice Type DS2, Size 40mm.						
	40 mm CI air valve						
	40 mm CI air valve	20					20.000
	Total						**20.000**
						Total Quantity in no	**20.000**
1.015	100.98.440						
	Supply of CI Air Valve, Conforming to IS 14848 - 2000, Single Orifice, Small Orifice Type S1, Size 25mm.						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	25 mm CI air valve						
		298					298.000
	Total						**298.000**
						Total Quantity in no	**298.000**
1.016	100.98.463						
	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 300mm.						
	Sluice Valve 300mm						
	For FCV	4					4.000
	Total						**4.000**
						Total Quantity in no	**4.000**
1.017	100.98.474						
	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.0, Size 250mm.						
	250 mm sluice valve						
	For FCV	1					1.000
	Total						**1.000**
						Total Quantity in no	**1.000**
1.018	100.98.473						
	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.0, Size 200mm.						
	200 mm Sluice valve						
	200 mm Sluice valve	2					2.000
	Scour	2					2.000
	Total						**4.000**
						Total Quantity in no	**4.000**
1.019	100.98.472						
	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.0, Size 150mm.						
	150 mm sluice valve						
		3					3.000
	Total						**3.000**
						Total Quantity in no	**3.000**
1.020	100.98.458						
	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.6, Size 100mm.						
	100 mm Sluice valve						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
		1					1.000
	Total						**1.000**
						Total Quantity in no	**1.000**
1.021	100.98.469						
	Supply of CI Double Flanged Sluice Valve Conforming to IS 14846 - 2000, Sluice Valve with Cap PN 1.0, Size 80mm.						
	80 mm sluice valve						
	300mm DI pipe	20					20.000
	250mm DI pipe	40					40.000
	200mm DI pipe	30					30.000
	150mm DI pipe	33					33.000
	Total						**123.000**
						Total Quantity in no	**123.000**
2	Supplying , Laying and commissioning of Distribution- Working charges						
2.001	100.1.1						
	Excavating trenches of required width for pipes, cables, etc., including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20cm in depth, including consolidating each deposited layer by ramming, watering, etc., and disposing of surplus excavated soil as directed, within a lead of 50m, in all kinds of soil.						
	Excavating trenches- All kinds of soil						
	300 mm DI K9	1	1564.000	1.000	1.250	0.750000	1466.250
	250 mm DI K9	1	6565.000	0.900	1.200	0.750000	5317.650
	200 mm DI K9	1	2420.000	0.800	1.150	0.750000	1669.800
	150 mm DI K9	1	5977.000	0.600	1.000	0.750000	2689.650
	100 mm DI K9	1	975.000	0.600	1.000	0.750000	438.750
	90mm HDPE pipe+ Riderline	1	153644.000	0.500	1.000	0.750000	57616.500
	Deduction for tar cutting	-1	4800.000	0.600	0.200	0.750000	-432.000
	Deduction for concrete cutting	-1	2000.000	0.600	0.150	0.750000	-135.000
	Total						**68631.600**
						Total Quantity in cum	**68631.600**

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
2.002	100.1.5						
	Excavating trenches of required width for pipes, cables, etc., including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20cm in depth, including consolidating each deposited layer by ramming, watering, etc., and disposing of surplus excavated soil as directed, within a lead of 50 m, in Ordinary Rock.						
	Excavating trenches- Ordinary rock						
	300 mm DI K9	1	1564.000	1.000	1.250	0.150000	293.250
	250 mm DI K9	1	6565.000	0.900	1.200	0.150000	1063.530
	200 mm DI K9	1	2420.000	0.800	1.150	0.150000	333.960
	150 mm DI K9	1	5977.000	0.600	1.000	0.150000	537.930
	100 mm DI K9	1	975.000	0.600	1.000	0.150000	87.750
	90mm HDPE pipe+ Riderline	1	153644.000	0.500	1.000	0.150000	11523.300
	Total						**13839.720**
						Total Quantity in cum	**13839.720**
2.003	100.2.3						
	Excavating trenches of required width for pipes, cables, etc.. including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5m, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20cm in depth, including consolidating each deposited layer by ramming, watering, etc., and disposing of surplus excavated soil as directed, within a lead of 50m, in Medium Rock Requiring Blasting.						
	Excavating trenches-Medium Rock						
	300 mm DI K9	1	1564.000	1.000	1.250	0.050000	97.750
	250 mm DI K9	1	6565.000	0.900	1.200	0.050000	354.510
	200 mm DI K9	1	2420.000	0.800	1.150	0.050000	111.320
	150 mm DI K9	1	5977.000	0.600	1.000	0.050000	179.310
	100 mm DI K9	1	975.000	0.600	1.000	0.050000	29.250
	90mm HDPE pipe+ Riderline	1	153644.000	0.500	1.000	0.050000	3841.100
	Total						**4613.240**

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
						Total Quantity in cum	**4613.240**
2.004	100.4.1						
	Excavating in hard rock for trenches by blasting for laying pipes and stacking useful materials for measurements and disposing unserviceable materials within the initial lead of 50m and lift up to 1.50m (depth from 0.0m to 1.50m) and providing protection by earth filled cement bags during blasting to avoid damages to nearby structures (200 Nos. of earth filled cement bags for 10m3 of blasting)						
	Excavation in Hard Rock						
	300 mm DI K9	1	1564.000	1.000	1.250	0.050000	97.750
	250 mm DI K9	1	6565.000	0.900	1.200	0.050000	354.510
	200 mm DI K9	1	2420.000	0.800	1.150	0.050000	111.320
	150 mm DI K9	1	5977.000	0.600	1.000	0.050000	179.310
	100 mm DI K9	1	975.000	0.600	1.000	0.050000	29.250
	90mm HDPE pipe+ Riderline	1	153644.000	0.500	1.000	0.050000	3841.100
	Total						**4613.240**
						Total Quantity in cum	**4613.240**
2.005	100.8.1						
	Fencing one side of trenches, 1.50m height with two rows of 10cm plastic caution tape in vertical casuarina pole (girth 15cm to 24cm) fixed at 2m intervals.						
	Fencing one side for trenches						
	Fencing for DI & HDPE pipe	1	150000.000				150000.000
	Total						**150000.000**
						Total Quantity in metre	**150000.000**
2.006	100.14.5						
	Conveying and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS: 8329 excluding cost of pipes and specials: 300mm diameter Ductile Iron Class K-9 Pipes.						
	Conveying and laying 300 mm DI						
	Pooppara	1	481.000				481.000
	Puthady	1	629.000				629.000
	Jamespadi	1	474.000				474.000
	Total						**1584.000**
						Total Quantity in metre	**1584.000**

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
2.007	18.70.5						
	Providing push - on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:300 mm dia pipe						
	push on joints for 300mm DI						
		300					300.000
	Total						**300.000**
						Total Quantity in joint	**300.000**
2.008	18.30.7						
	Providing flanged joints to double flanged C.I./ D.I pipes and specials, including testing of joints:300 mm diameter pipe						
	Providing flanged joints for 300mm DI pipes						
		2					2.000
	Total						**2.000**
						Total Quantity in no	**2.000**
2.009	OD130856/2022-2023						
	Labour for cutting DI Pipe with steel saw 300 mm diameter DI Pipe						
	Cutting 300mm DI Pipe						
		12					12.000
	Total						**12.000**
						Total Quantity in Each Cut	**12.000**
2.010	100.35.5						
	Testing 300mm DI/CI pipeline with potable water to the required test pressure. 300 mm dia Observed Data derived from item no.1023 of PHED DATA						
	Testing 300mm DI pipe						
		1	1584.000				1584.000
	Total						**1584.000**
						Total Quantity in metre	**1584.000**
2.011	100.14.4						
	Conveying and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS: 8329 excluding cost of pipes and specials: 250mm diameter Ductile Iron Class K-9 Pipes.						
	Conveying and laying 250 mm DI						
	Poopara	1	1477.000				1477.000
	Puthady	1	2712.000				2712.000
	Thodimala	1	10.000				10.000
	Jamespadi	1	2401.000				2401.000
	Total						**6600.000**

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
						Total Quantity in metre	**6600.000**
2.012	18.70.4						
	Providing push - on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:250 mm dia pipes						
	Providing push- on -joints						
		1220					1220.000
	Total						**1220.000**
						Total Quantity in joint	**1220.000**
2.013	18.30.6						
	Providing flanged joints to double flanged C.I./ D.I pipes and specials, including testing of joints:250 mm diameter pipe						
	Providing flanged joints to 250mm DI pipes						
		4					4.000
	Total						**4.000**
						Total Quantity in no	**4.000**
2.014	OD130864/2022-2023						
	Labour for Cutting D I pipe with steel saw.250 mm diameter DI Pipe						
	Cutting of 250 mm DI						
	Cutting of 250 mm DI	28					28.000
	Total						**28.000**
						Total Quantity in Each Cut	**28.000**
2.015	100.35.4						
	Testing 250mm DI/CI pipeline with potable water to the required test pressure . 250 mm dia Observed Data derived from item no.1022 of PHED DATA						
	Testing 250 mm DI						
		1	6600.000				6600.000
	Total						**6600.000**
						Total Quantity in metre	**6600.000**
2.016	100.14.3						
	Conveying and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS: 8329 excluding cost of pipes and specials: 200mm diameter Ductile Iron Class K-9 Pipes.						
	Conveying and laying 200 mm DI						
	Magnapeak	1	20.000				20.000
	Jamespadi	1	2415.000				2415.000
	Total						**2435.000**

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
						Total Quantity in metre	**2435.000**
2.017	18.70.3						
	Providing push - on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:200 mm dia pipes						
	Providing push- on -joints						
		455					455.000
	Total						**455.000**
						Total Quantity in joint	**455.000**
2.018	18.30.5						
	Providing flanged joints to double flanged C.I./ D.I pipes and specials, including testing of joints:200 mm diameter pipe						
	Providing flanged joints to 200mm DI pipes						
		2					2.000
	Total						**2.000**
						Total Quantity in no	**2.000**
2.019	OD130870/2022-2023						
	Labour for cutting D.I. pipe with steel saw.200 mm diameter D.I. pipe						
	Cutting of 200 mm DI						
	Cutting of 200 mm DI Pipe	16					16.000
	Total						**16.000**
						Total Quantity in Each Cut	**16.000**
2.020	100.35.3						
	Testing 200mm DI/CI pipeline with potable water to the required test pressure 200 mm dia Observed Data derived from item no.1020 of PHED DATA						
	Testing 200 mm DI						
		1	2435.000				2435.000
	Total						**2435.000**
						Total Quantity in metre	**2435.000**
2.021	100.14.2						
	Conveying and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS: 8329 excluding cost of pipes and specials: 150mm diameter Ductile Iron Class K-9 Pipes.						
	Conveying and laying 150 mm DI						
	Pooppara	1	1609.000				1609.000
	Puthady	1	1395.000				1395.000
	Thodimala	1	1272.000				1272.000

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	jamespadi	1	1736.000				1736.000
	Total						**6012.000**
						Total Quantity in metre	**6012.000**
2.022	18.70.2						
	Providing push - on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:150 mm dia pipes						
	Providing push- on -joints						
		1108					1108.000
	Total						**1108.000**
						Total Quantity in joint	**1108.000**
2.023	18.30.4						
	Providing flanged joints to double flanged C.I./ D.I pipes and specials, including testing of joints:150 mm diameter pipe						
	Providing flanged joints to 150mm DI pipes						
		4					4.000
	Total						**4.000**
						Total Quantity in no	**4.000**
2.024	OD130936/2022-2023						
	Labour for Cutting DI Pipe with steel saw 150 mm diameter DI Pipe						
	Cutting 150 mm DI Pipe						
	Cutting 150 mm DI Pipe	24					24.000
	Total						**24.000**
						Total Quantity in Each Cut	**24.000**
2.025	100.35.2						
	Testing 150mm DI/CI pipeline with potable water to the required test pressure 150 mm dia Observed Data derived from item no.1018 of PHED DATA						
	Testing 150 mm DI						
		1	6012.000				6012.000
	Total						**6012.000**
						Total Quantity in metre	**6012.000**
2.026	100.14.1						
	Conveying and laying S&S Centrifugally Cast (Spun) / Ductile Iron Pipes conforming to IS: 8329 excluding cost of pipes and specials: 100mm diameter Ductile Iron Class K-9 Pipes.						
	Laying 100 mm DI Pipes						
	Puthadi	1	985.000				985.000

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	Total						**985.000**
						Total Quantity in metre	**985.000**
2.027	18.70.1						
	Providing push - on-joints to Centrifugally (Spun) Cast Iron Pipes or Ductile Iron Pipes including testing of joints and including the cost of rubber gasket:100 mm dia pipes						
	Push on Joint						
		185					185.000
	Total						**185.000**
						Total Quantity in joint	**185.000**
2.028	18.30.2						
	Providing flanged joints to double flanged C.I./ D.I pipes and specials, including testing of joints:100 mm diameter pipe						
	flanged joint						
		2					2.000
	Total						**2.000**
						Total Quantity in no	**2.000**
2.029	OD135945/2022-2023						
	Labour for Cutting DI Pipe with steel saw 100 mm diameter D I Pipe						
	Cutting 100 mm DI pipe						
		10					10.000
	Total						**10.000**
						Total Quantity in Each Cut	**10.000**
2.030	100.35.1						
	Testing 100mm DI/CI pipeline with potable water to the required test pressure 100 mm dia						
	.						
		1	985.000				985.000
	Total						**985.000**
						Total Quantity in metre	**985.000**
2.031	100.10.1						
	Laying HDPE pipes (IS : 4984) on land portion including conveying within initial lead and aligning the pipes, electro-fusion welding using automatic or semi-automatic electrofusion machines, testing the pipeline thus fabricated to suit the hydraulic working pressure and after testing, aligning the pipeline, lowering the pipe in position into the trenches already made, testing the line to suitable pressure with potable water before back filling and levelling the trenches including all labour charge, hire for appliances etc., complete but excluding cost of pipe and fittings: 90mm Nominal Outer Diameter pipes.						
	laying HDPE pipes						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	90mm HDPE pipe	1	153644.000				153644.000
	Total						**153644.000**
						Total Quantity in metre	**153644.000**
2.032	18.67.1						
	Providing and laying S & S C.I. Standard specials suitable for mechanical jointing as per IS 13382:Upto 300 mm dia						
	Providing and laying S & S CI standard specials						
	300 mm DI K9	5				0.480000	2.400
	250 mm DI K9	15				0.360000	5.400
	200 mm DI K9	8				0.270000	2.160
	150 mm DI K9	15				0.200000	3.000
	100 mm DI K9	3				0.130000	0.390
	Total						**13.350**
						Total Quantity in quintal	**13.350**
2.033	18.68.1						
	Providing and laying D.I specials of class K - 12 suitable for push - on jointing as per IS : 9523 :Upt 600 mm dia						
	DI Specials						
	300 x 90 Bend	4				0.680000	2.720
	300 x 45 Bend	8				0.500000	4.000
	300 x 22.5 Bend	10				0.440000	4.400
	300 x 11.25 Bend	15				0.400000	6.000
	250 x 90 Bend	4				0.480000	1.920
	250 x 45 Bend	10				0.360000	3.600
	250 x 22.5 Bend	17				0.320000	5.440
	250 x 11.25 Bend	35				0.300000	10.500

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	200 x 90 Bend	4				0.320000	1.280
	200 x 45 Bend	8				0.260000	2.080
	200 x 22.5 Bend	14				0.230000	3.220
	200 x 11.25 Bend	20				0.210000	4.200
	150 x 90 Bend	4				0.200000	0.800
	150 x 45 Bend	8				0.160000	1.280
	150 x 22.5 Bend	20				0.150000	3.000
	150 x 11.25 Bend	38				0.140000	5.320
	100x 90 bend	4				0.110000	0.440
	100x 45bend	8				0.100000	0.800
	100x 22.5 bend	15				0.900000	13.500
	100x 11.25 bend	20				0.900000	18.000
	300 x 250 Tee	4				0.740000	2.960
	300 x 200 Tee	6				0.640000	3.840
	300 x 150 Tee	9				0.580000	5.220
	300 x 80 Tee	3				0.500000	1.500
	250 x 200 Tee	4				0.500000	2.000
	250 x 150 Tee	5				0.450000	2.250
	250 x 80 Tee	7				0.370000	2.590
	200 x 150 Tee	8				0.360000	2.880
	200 x 80 Tee	9				0.290000	2.610
	300 x 100 Tee	2				0.510000	1.020

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	250 x 100 Tee	5				0.400000	2.000
	200 x 100 Tee	3				0.310000	0.930
	150 x 100 Tee	2				0.220000	0.440
	300 TP	12				0.430000	5.160
	250 TP	6				0.320000	1.920
	200 TP	4				0.230000	0.920
	150 TP	1				0.160000	0.160
	100 TP	2				0.100000	0.200
	80 TP	123				0.080000	9.840
	Total						**140.940**
						Total Quantity in quintal	**140.940**
2.034	100.32.4						
	Conveying and fixing C. I. Double Acting Air Valve of approved quality with bolts, nuts, rubber insertions etc., complete, but excluding the cost of air valve (tail pieces, if required, will be paid separately): 80mm Double Acting Air Valve.						
	80 mm CI air valve						
		10					10.000
	Total						**10.000**
						Total Quantity in no	**10.000**
2.035	100.32.3						
	Conveying and fixing C. I. Double Acting Air Valve of approved quality with bolts, nuts, rubber insertions etc., complete, but excluding the cost of air valve (tail pieces, if required, will be paid separately): 50mm Double Acting Air Valve.						
	50 mm CI air valve						
		10					10.000
	Total						**10.000**
						Total Quantity in no	**10.000**
2.036	100.32.2						
	Conveying and fixing C. I. Single Acting Air Valve of approved quality with bolts, nuts, rubber insertions etc., complete, but excluding the cost of air valve (tail pieces, if required, will be paid separately): 40mm Single Acting Air Valve.						
	40 mm CI air valve						
		20					20.000

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	Total						**20.000**
						Total Quantity in no	**20.000**
2.037	100.32.1						
	Conveying and fixing C. I. Single Acting Air Valve of approved quality with bolts, nuts, rubber insertions etc., complete, but excluding the cost of air valve (tail pieces, if required, will be paid separately): 25mm Single Acting Air Valve.						
	25 mm CI air valve						
		298					298.000
	Total						**298.000**
						Total Quantity in no	**298.000**
2.038	100.31.1.7						
	Conveying and fixing C.I. sluice valves (with cap) by providing bolts, nuts, rubber insertions etc., complete, but excluding the cost of the valve (tail pieces, if required, will be paid separately): 300mm diameter, Class I.						
	Conveying and fixing 300 mm C.I. sluice valves (with cap)						
		4					4.000
	Total						**4.000**
						Total Quantity in no	**4.000**
2.039	100.31.1.6						
	Conveying and fixing C.I. sluice valves (with cap) by providing bolts, nuts, rubber insertions etc., complete, but excluding the cost of the valve (tail pieces, if required, will be paid separately): 250mm diameter, Class I.						
	250 mm sluice valve						
		1					1.000
	Total						**1.000**
						Total Quantity in no	**1.000**
2.040	100.31.1.5						
	Conveying and fixing C.I. sluice valves (with cap) by providing bolts, nuts, rubber insertions etc., complete, but excluding the cost of the valve (tail pieces, if required, will be paid separately): 200mm diameter, Class I.						
	200 mm Sluice valve						
		4					4.000
	Total						**4.000**
						Total Quantity in no	**4.000**
2.041	100.31.1.4						
	Conveying and fixing C.I. sluice valves (with cap) by providing bolts, nuts, rubber insertions etc., complete, but excluding the cost of the valve (tail pieces, if required, will be paid separately): 150mm diameter, Class I.						
	150 mm sluice valve						
		3					3.000

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	Total						**3.000**
						Total Quantity in no	**3.000**
2.042	100.31.1.2						
	Conveying and fixing C.I. sluice valves (with cap) by providing bolts, nuts, rubber insertions etc., complete, but excluding the cost of the valve (tail pieces, if required, will be paid separately): 100mm diameter, Class I.						
	100 mm Sluice valve						
		1					1.000
	Total						**1.000**
						Total Quantity in no	**1.000**
2.043	100.31.1.1						
	Conveying and fixing C.I. sluice valves (with cap) by providing bolts, nuts, rubber insertions etc., complete, but excluding the cost of the valve (tail pieces, if required, will be paid separately): 80mm diameter, Class I.						
	80 mm sluice valve						
		123					123.000
	Total						**123.000**
						Total Quantity in no	**123.000**
2.044	18.12.8						
	Providing and fixing G.I. pipes complete with G.I fittings including trenching and refilling etc. External work80 mm dia nominal bore						
	providing and fixing						
	Magna peak	1	4454.000				4454.000
	Puthadi	1	6243.000				6243.000
	Thodimala	1	10503.000				10503.000
	Total						**21200.000**
						Total Quantity in metre	**21200.000**
2.045	2.6.1						
	Earth work in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead up to 50 m and lift up to 1.5 m, disposed earth to be levelled and neatly dressed.All kinds of soil						
	Earth work						
	valve Chamber Size 1x1x1	70	1.600	1.600	1.500		268.800
	Total						**268.800**
						Total Quantity in cum	**268.800**

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
2.046	4.1.3						
	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:2:4 (cement : 2 coarse sand (zone-III) : 4 graded stone aggregate 20 mm nominal size)						
	Base CC						
	valve Chamber Size 1x1x1	70	1.600	1.600	0.100		17.920
	Total						**17.920**
						Total Quantity in cum	**17.920**
2.047	5.1.3						
	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level:1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)						
	RCC						
	Anchor Block 80x80x80	100	0.800	0.800	0.800		51.200
	Anchor Block 40x40x40	150	0.400	0.400	0.400		9.600
	Deduct pipe volume	-100	3.14*.125 *.125		0.800		-3.925
	Total						**56.875**
						Total Quantity in cum	**56.875**
2.048	5.1.2						
	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level:1:1:5:3 (1 cement 1.5 coarse sand :3 graded stone aggregate 20 mm nominal size						
	RCC						
	Base slab 1X1X1	70	1.500	1.500	0.150		23.625
	Long wall 1X1X1	70	5.000	0.250	1.000		87.500
	slab 1X1X1	210	0.500	1.500	0.250		39.375
	Total						**150.500**
						Total Quantity in cum	**150.500**
2.049	5.9.2						
	Centering and shuttering including strutting, etc. and removal of form for:Walls (any thickness) including attached pilasters, butteresses, plinth and string courses etc.						
	Centering and shuttering						
	Side wall Outer 1x1x1	70	6.000		1.150		483.000
	Side wall insde	70	4.000		1.000		280.000

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	Anchor block	100	3.200		0.800		256.000
	Anchor block	150	1.600		0.400		96.000
	Total						**1115.000**
						Total Quantity in sqm	**1115.000**
2.050	5.9.3						
	Centering and shuttering including strutting, etc. and removal of form for:Suspended floors, roofs, landings, balconies and access platform						
	Centering and shuttering						
	Cover slab side wall 1x1x1	210	4.000		0.250		210.000
	Total						**210.000**
						Total Quantity in sqm	**210.000**
2.051	5.22.6						
	Steel reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete upto plinth levelThermo - Mechanically Treated bars of grade Fe-500D or more						
	Reinforcement						
	For valve chamber	168.42				80.000000	13473.600
	For anchor block	56.875				20.000000	1137.500
	Total						**14611.100**
						Total Quantity in kilogram	**14611.100**
2.052	100.37.5.1						
	In situ fabrication of M.S. pipes of size 100mm (I.D.) using 8mm thick M.S. plate including cost and conveyance charges of M.S. plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an even shade over an under-coat of primer etc., complete.						
	.						
		1	10.000				10.000
	Total						**10.000**
						Total Quantity in metre	**10.000**
2.053	100.37.5.2						
	Fabricating M.S. flanges of diameter 100mm using 12mm thick M.S. plate including cost and conveyance charges of M.S. plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an even shade over an under-coat of primer etc., complete: For pipes fabricated with 8mm thick M.S. plates.						
	flanged joint						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
		4					4.000
	Total						**4.000**
						Total Quantity in no	**4.000**
2.054	100.37.5.3						
	Cutting 100mm (I.D.) M.S. pipes for making bends and other specials by gas cutting including cost of gas, all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.						
	.						
		6					6.000
	Total						**6.000**
						Total Quantity in no	**6.000**
2.055	100.37.5.4						
	Welding 100mm (I.D.) M.S. pipes for making bends and other specials by gas/electric welding machine including cost of gas and welding rods, all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.						
	.						
		6					6.000
	Total						**6.000**
						Total Quantity in no	**6.000**
2.056	100.37.5.5						
	Grinding cut and weld edges of 100mm (I.D.) M.S. pipes during fabrication work including all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.						
	.						
		12					12.000
	Total						**12.000**
						Total Quantity in no	**12.000**
2.057	100.37.6.1						
	In situ fabrication of M.S. pipes of size 150mm (I.D.) using 8mm thick M.S. plate including cost and conveyance charges of M.S. plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an even shade over an under-coat of primer etc., complete.						
	insitu fabrication of M.S Pipes of size 150mm						
		1	35.000				35.000
	Total						**35.000**
						Total Quantity in metre	**35.000**
2.058	100.37.6.2						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	Fabricating M.S. flanges of diameter 150mm using 12mm thick M.S. plate including cost and conveyance charges of M.S. plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an even shade over an under-coat of primer etc., complete: For pipes fabricated with 8mm thick M.S. plates.						
	M.S flanges of dia 150mm						
		8					8.000
	Total						**8.000**
						Total Quantity in no	**8.000**
2.059	100.37.6.3						
	Cutting 150mm (I.D.) M.S. pipes for making bends and other specials by gas cutting including cost of gas, all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.						
	Cutting of 150mm						
		16					16.000
	Total						**16.000**
						Total Quantity in no	**16.000**
2.060	100.37.6.4						
	Welding 150mm (I.D.) M.S. pipes for making bends and other specials by gas/electric welding machine including cost of gas and welding rods, all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.						
	Welding of 150mm						
		16					16.000
	Total						**16.000**
						Total Quantity in no	**16.000**
2.061	100.37.6.5						
	Grinding cut and weld edges of 150mm (I.D.) M.S. pipes during fabrication work including all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.						
	Grinding 150mm						
		32					32.000
	Total						**32.000**
						Total Quantity in no	**32.000**
2.062	100.37.7.1						
	In situ fabrication of M.S. pipes of size 200mm (I.D.) using 8mm thick M.S. plate including cost and conveyance charges of M.S. plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an even shade over an under-coat of primer etc., complete.						
	Insitu fabrication of M.S Pipes of size 200mm						
		1	15.000				15.000
	Total						**15.000**

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
						Total Quantity in metre	**15.000**
2.063	100.37.7.2						
	Fabricating M.S. flanges of diameter 200mm using 12mm thick M.S. plate including cost and conveyance charges of M.S. plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an even shade over an under-coat of primer etc., complete: For pipes fabricated with 8mm thick M.S. plates.						
	Fabricating M.S Flanges of 200mm						
		4					4.000
	Total						**4.000**
						Total Quantity in no	**4.000**
2.064	100.37.7.3						
	Cutting 200mm (I.D.) M.S. pipes for making bends and other specials by gas cutting including cost of gas, all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.						
	Cutting of 200mm						
		8					8.000
	Total						**8.000**
						Total Quantity in no	**8.000**
2.065	100.37.7.4						
	Welding 200mm (I.D.) M.S. pipes for making bends and other specials by gas/electric welding machine including cost of gas and welding rods, all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.						
	Welding of 200mm						
		8					8.000
	Total						**8.000**
						Total Quantity in no	**8.000**
2.066	100.37.7.5						
	Grinding cut and weld edges of 200mm (I.D.) M.S. pipes during fabrication work including all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.						
	Grinding 200mm						
		16					16.000
	Total						**16.000**
						Total Quantity in no	**16.000**
2.067	100.37.8.1						
	In situ fabrication of M.S. pipes of size 250mm (I.D.) using 8mm thick M.S. plate including cost and conveyance charges of M.S. plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an even shade over an under-coat of primer etc., complete.						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	Insitu fabrication of M.S Pipes of size 250mm						
		1	35.000				35.000
	Total						**35.000**
						Total Quantity in metre	**35.000**
2.068	100.37.8.2						
	Fabricating M.S. flanges of diameter 250mm using 12mm thick M.S. plate including cost and conveyance charges of M.S. plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an even shade over an under-coat of primer etc., complete: For pipes fabricated with 8mm thick M.S. plates.						
	Fabricating M.S Flanges of 250mm						
		8					8.000
	Total						**8.000**
						Total Quantity in no	**8.000**
2.069	100.37.8.3						
	Cutting 250mm (I.D.) M.S. pipes for making bends and other specials by gas cutting including cost of gas, all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.						
	Cutting of 250mm						
		8					8.000
	Total						**8.000**
						Total Quantity in no	**8.000**
2.070	100.37.8.4						
	Welding 250mm (I.D.) M.S. pipes for making bends and other specials by gas/electric welding machine including cost of gas and welding rods, all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.						
	Welding of 250mm						
		8					8.000
	Total						**8.000**
						Total Quantity in no	**8.000**
2.071	100.37.8.5						
	Grinding cut and weld edges of 250mm (I.D.) M.S. pipes during fabrication work including all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.						
	Grinding 250mm						
		16					16.000
	Total						**16.000**
						Total Quantity in no	**16.000**
2.072	100.37.9.1						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	In situ fabrication of M.S. pipes of size 300mm (I.D.) using 8mm thick M.S. plate including cost and conveyance charges of M.S. plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an even shade over an under-coat of primer etc., complete.						
	Insitu fabrication of M.S Pipes of size 300mm						
		1	20.000				20.000
	Total						**20.000**
						Total Quantity in metre	**20.000**
2.073	100.37.9.2						
	Fabricating M.S. flanges of diameter 300mm using 12mm thick M.S. plate including cost and conveyance charges of M.S. plate, all fabrication charges, charges of painting the steel work with two or more coat deluxe multi surface paint to give an even shade over an under-coat of primer etc., complete: For pipes fabricated with 8mm thick M.S. plates.						
	Fabricating M.S Flanges of 300mm						
		4					4.000
	Total						**4.000**
						Total Quantity in no	**4.000**
2.074	100.37.9.3						
	Cutting 300mm (I.D.) M.S. pipes for making bends and other specials by gas cutting including cost of gas, all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.						
	Cutting of 300mm						
		8					8.000
	Total						**8.000**
						Total Quantity in no	**8.000**
2.075	100.37.9.4						
	Welding 300mm (I.D.) M.S. pipes for making bends and other specials by gas/electric welding machine including cost of gas and welding rods, all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.						
	Welding of 300mm						
		8					8.000
	Total						**8.000**
						Total Quantity in no	**8.000**
2.076	100.37.9.5						
	Grinding cut and weld edges of 300mm (I.D.) M.S. pipes during fabrication work including all labour and hire charges of tools etc., complete: For pipes fabricated with 8mm thick M.S. plates.						
	Grinding 300mm						
		16					16.000
	Total						**16.000**

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
						Total Quantity in no	**16.000**
2.077	100.59.1						
	Cutting the bituminous / concrete roads with cutting machine for a minimum depth of 200mm along the sides of proposed alignment of the pipe to be laid without causing any damage to other utilities, including the charges for hire and conveyance of tools and plant, cost of consumables and charges for lighting, watching, ribbon fencing, caution boards, traffic diversion, and as per the direction of departmental officers etc. complete, before carrying out the demolition of bituminous / concrete road by mechanical means and carrying out the excavation.						
	Cutting the bituminous / concrete roads						
		2	3400.000				6800.000
	Total						**6800.000**
						Total Quantity in metre	**6800.000**
2.078	15.59						
	Dismantling of flexible pavement (bituminous courses) by mechanical means and disposal of dismantled material up to a lead of 1 kilo metre, as per direction of Engineer-in-charge.						
	Dismantling of flexible pavement						
		1	4800.000	1.000	0.200		960.000
	Total						**960.000**
						Total Quantity in cum	**960.000**
2.079	15.2.2						
	Demolishing cement concrete manually / by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in-Charge.Nominal concrete 1:4:8 leaner mix (including equivalent design mix)						
	Demolishing cement concrete						
		1	2000.000	0.600	0.150		180.000
	Total						**180.000**
						Total Quantity in cum	**180.000**
2.080	16.83						
	Taking out existing CC interlocking paver blocks from footpath/ central verge, including removal of rubbish etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.						
	interlock removal						
		1	1000.000	0.900			900.000
	Total						**900.000**
						Total Quantity in sqm	**900.000**
2.081	16.84						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	Laying old cement concrete interlocking paver blocks of any design/ shape laid in required line, level, curvature, colour and pattern over and including 50 mm thick compacted bed of coarse sand, filling the joints with fine sand etc. all complete as per the direction of Engineer-in-charge. (Old CC paver blocks shall be supplied by the department free of cost.)						
	Laying paver blocks						
		1	1000.000	0.900		0.800000	720.000
	Total						**720.000**
						Total Quantity in sqm	**720.000**
2.082	16.68						
	Providing and laying 60 mm thick factory made cement concrete interlocking paver block of M - 30 grade made by block making machine with strong vibratory compaction, of approved size, design & shape, laid in required colour and pattern over and including 50 mm thick compacted bed of coarse sand, filling the joints with fine sand etc. all complete as per the direction of Engineer-in-charge.						
	Laying new paver block						
		1	1000.000	0.900		0.200000	180.000
	Total						**180.000**
						Total Quantity in sqm	**180.000**
3	Providing FHTCs						
3.001	100.60.13.4.2						
	Providing 15mm (1/2 inch) house connection with 15mm water meter from existing AC / GI mains up to 125 mm dia., up to a length of 5m using 20mm (1/2 inch) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PP PN 16 Compression / GM / Brass specials viz. brass ferrule, brass hexagonal nipple, GM full way wheel valve, bend, MTA, FTA, couplers, GI / MS Service Saddle of suitable size etc. and connecting with the mains, testing the joints etc. complete including trenching and refilling in all kinds of soil up to a depth of 1.50m for main line tracing and trench of average cross section 0.3m x 0.75m for laying connection pipe and service pipe, fixing water meter, lighting, watching, providing caution boards, traffic control etc. complete including cost of materials, hire for tools, cost of consumables and labour charges, including the cost of tested Class B Multijet water meter with ISI mark and weather resistant PP / PE meter box of minimum size 300mm x 200mm x 150mm, but excluding charges for cutting the concrete / tarred / bituminous roads etc, and as per the direction of the departmental officers.						
	Providing 15mm (1/2 inch) house connection						
	80 mm GI	435					435.000
	Total						**435.000**
						Total Quantity in no	**435.000**
3.002	100.60.13.6.2						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	Providing 20mm (3/4 inch) house connection with 15mm water meter from existing AC / GI mains up to 125 mm dia., up to a length of 5 m using 25mm (3/4 inch) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PP PN 16 Compression / GM / Brass specials viz. brass ferrule, brass hexagonal nipple, GM full way wheel valve, bend, MTA, FTA, couplers, GI / MS Service Saddle of suitable size etc. and connecting with the mains, testing the joints etc. complete including trenching and refilling in all kinds of soil up to a depth of 1.50m for main line tracing and trench of average cross section 0.3m x 0.75m for laying connection pipe and service pipe, fixing water meter, lighting, watching, providing caution boards, traffic control etc. complete including cost of materials, hire for tools, cost of consumables and labour charges, including the cost of tested Class B Multijet water meter with ISI mark and weather resistant PP / PE meter box of minimum size 300mm x 200mm x 150mm, but excluding charges for cutting the concrete / tarred / bituminous roads etc, and as per the direction of the departmental officers.						
	Providing 20mm (3/4 inch) house connection						
	80 mm GI	515					515.000
	Total						**515.000**
						Total Quantity in no	**515.000**
3.003	100.60.13.1.2						
	Providing 15mm (1/2 inch) house connection with 15mm water meter from existing PVC / HDPE mains up to 110 mm dia., up to a length of 5m using 20mm (1/2 inch) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PP PN 16 Compression / GM / Brass specials viz. brass ferrule, brass hexagonal nipple, GM full way wheel valve, bend, MTA, FTA, couplers, PVC Service Saddle of suitable size etc. and connecting with the mains, testing the joints etc. complete including trenching and refilling in all kinds of soil up to a depth of 1.50m for main line tracing and trench of average cross section 0.3m x 0.75m for laying connection pipe and service pipe, fixing water meter, lighting, watching, providing caution boards, traffic control etc. complete including cost of materials, hire for tools, cost of consumables and labour charges, including the cost of tested Class B Multijet water meter with ISI mark and weather resistant PP / PE meter box of minimum size 300mm x 200mm x 150mm, but excluding charges for cutting the concrete / tarred / bituminous roads etc, and as per the direction of the departmental officers.						
	Providing 15mm (1/2 inch) house connection						
	90 mm HDPE	1150					1150.000
	Total						**1150.000**
						Total Quantity in no	**1150.000**
3.004	100.60.13.3.2						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	Providing 20mm (3/4 inch) house connection with 15mm water meter from existing PVC / HDPE mains up to 110 mm dia., up to a length of 5m using 25mm (3/4 inch) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PP PN 16 Compression / GM / Brass specials viz. brass ferrule, brass hexagonal nipple, GM full way wheel valve, bend, MTA, FTA, couplers, PVC Service Saddle of suitable size etc. and connecting with the mains, testing the joints etc. complete including trenching and refilling in all kinds of soil up to a depth of 1.50m for main line tracing and trench of average cross section 0.3m x 0.75m for laying connection pipe and service pipe, fixing water meter, lighting, watching, providing caution boards, traffic control etc. complete including cost of materials, hire for tools, cost of consumables and labour charges,including the cost of tested Class B Multijet water meter and weather with ISI mark resistant PP / PE meter box of minimum size 300mm x 200mm x 150mm, but excluding charges for cutting the concrete / tarred / bituminous roads etc, and as per the direction of the departmental officers.						
	Providing 20mm (3/4 inch) house connection						
	90 mm HDPE	1204					1204.000
	Total						**1204.000**
						Total Quantity in no	**1204.000**
3.005	100.60.13.7.2						
	Providing 15mm (1/2 inch) house connection with 15mm water meter from existing CI mains up to 125 mm dia., up to a length of 5 m using 20mm (1/2 inch) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PP PN 16 Compression / GM / Brass specials viz. brass ferrule, brass hexagonal nipple, GM full way wheel valve, bend, MTA, FTA, couplers etc. and connecting with the mains, testing the joints etc. complete including trenching and refilling in all kinds of soil up to a depth of 1.50m for main line tracing and trench of average cross section 0.3m x 0.75m for laying connection pipe and service pipe, fixing water meter, lighting, watching, providing caution boards, traffic control etc. complete including cost of materials, hire for tools, cost of consumables and labour charges, including the cost of tested Class B Multijet water meter with ISI mark and weather resistant PP / PE meter box of minimum size 300mm x 200mm x 150mm, but excluding charges for cutting the concrete / tarred / bituminous roads etc, and as per the direction of the departmental officers						
	15 mm Connection						
	100 mm DI Pipe	150					150.000
	Total						**150.000**
						Total Quantity in no	**150.000**
3.006	100.60.13.9.2						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	Providing 20mm (3/4 inch) house connection with 15mm water meter from existing CI mains up to 125 mm dia., up to a length of 5 m using 25mm (3/4 inch) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PP PN 16 Compression / GM / Brass specials viz. brass ferrule, brass hexagonal nipple, GM full way wheel valve, bend, MTA, FTA, couplers etc. and connecting with the mains, testing the joints etc. complete including trenching and refilling in all kinds of soil up to a depth of 1.50m for main line tracing and trench of average cross section 0.3m x 0.75m for laying connection pipe and service pipe, fixing water meter, lighting, watching, providing caution boards, traffic control etc. complete including cost of materials, hire for tools, cost of consumables and labour charges, including the cost of tested Class B Multijet water meter with ISI mark and weather resistant PP / PE meter box of minimum size 300mm x 200mm x 150mm, but excluding charges for cutting the concrete / tarred / bituminous roads etc, and as per the direction of the departmental officers						
	20mm connection						
		165					165.000
	Total						**165.000**
						Total Quantity in no	**165.000**
3.007	100.60.14.7.2						
	Providing 15mm (1/2 inch) house connection with 15mm water meter from existing CI mains from 150mm to 200mm dia., up to a length of 5 m using 20mm (1/2 inch) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PP PN 16 Compression / GM / Brass specials viz. brass ferrule, brass hexagonal nipple, GM full way wheel valve, bend, MTA, FTA, couplers etc. and connecting with the mains, testing the joints etc. complete including trenching and refilling in all kinds of soil up to a depth of 1.50m for main line tracing and trench of average cross section 0.3m x 0.75m for laying connection pipe and service pipe, fixing water meter, lighting, watching, providing caution boards, traffic control etc. complete including cost of materials, hire for tools, cost of consumables and labour charges, including the cost of tested Class B Multijet water meter with ISI mark and weather resistant PP / PE meter box of minimum size 300mm x 200mm x 150mm, but excluding charges for cutting the concrete / tarred / bituminous roads etc, and as per the direction of the departmental officers.						
	Providing 15mm (1/2 inch) house connection						
	150 mm DI	51					51.000
	200 mm DI	21					21.000
	Total						**72.000**
						Total Quantity in no	**72.000**
3.008	100.60.14.9.2						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	Providing 20mm (3/4 inch) house connection with 15mm water meter from existing CI mains from 150mm to 200mm dia., up to a length of 5 m using 25mm (3/4 inch) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PP PN 16 Compression / GM / Brass specials viz. brass ferrule, brass hexagonal nipple, GM full way wheel valve, bend, MTA, FTA, couplers etc. and connecting with the mains, testing the joints etc. complete including trenching and refilling in all kinds of soil up to a depth of 1.50m for main line tracing and trench of average cross section 0.3m x 0.75m for laying connection pipe and service pipe, fixing water meter, lighting, watching, providing caution boards, traffic control etc. complete including cost of materials, hire for tools, cost of consumables and labour charges, including the cost of tested Class B Multijet water meter with ISI mark and weather resistant PP / PE meter box of minimum size 300mm x 200mm x 150mm, but excluding charges for cutting the concrete / tarred / bituminous roads etc, and as per the direction of the departmental officers.						
	Providing 20mm (3/4 inch) house connection						
	150 mm DI	77					77.000
	200 mm DI	31					31.000
	Total						**108.000**
						Total Quantity in no	**108.000**
3.009	100.60.21.1.1						
	Providing 15mm (1/2 inch) GM Air Valve in the water meter assembly for 15mm water connection, using 20mm (1/2 inch) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PP PN 16 Compression specials including cost of materials, consumables, hire for tools and labour charges etc. complete and as per the directions of the department officers.						
	Providing 15mm (1/2 inch) GM Air Valve						
		1807					1807.000
	Total						**1807.000**
						Total Quantity in no	**1807.000**
3.010	100.60.21.2.1						
	Providing 20mm (3/4 inch) GM Air Valve in the water meter assembly for 20mm water connection, using 25mm (3/4 inch) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PP PN 16 Compression specials including cost of materials, consumables, hire for tools and labour charges etc. complete and as per the directions of the department officers.						
	Providing 20mm (3/4 inch) GM Air Valve						
		1992					1992.000
	Total						**1992.000**
						Total Quantity in no	**1992.000**
3.011	100.60.23.3.1						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	Providing 15mm PVC Tap in the water meter assembly for 15mm (1/2 inch) water connection, using 20mm (1/2 inch) Indian Standard uPVC Class 6 pipes, uPVC specials and PP PN 16 Compression specials including cost of materials, consumables, hire charges for tools and labour charges etc. complete and as per the direction of departmental officers.						
	Providing 15mm PVC Tap in the water meter assembly						
		1807					1807.000
	Total						**1807.000**
						Total Quantity in no	**1807.000**
3.012	100.60.23.4.1						
	Providing 15mm PVC Tap in the water meter assembly for 20mm (3/4 inch) water connection, using 25mm (3/4 inch) Indian Standard Class 6 uPVC pipes, uPVC specials and PP PN 16 Compression specials including cost of materials, consumables, hire charges for tools and labour charges etc. complete and as per the direction of departmental officers.						
	Providing 15mm PVC Tap in the water meter assembly						
		1992					1992.000
	Total						**1992.000**
						Total Quantity in no	**1992.000**
3.013	100.60.15.1.2						
	Providing additional length of house connection pipe using 20mm (1/2 inch) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PN16 specials and testing the joints etc., by trenching and refilling in all kinds of soil with trench of average cross section 0.3m x 0.75m for laying of connection pipe and service pipe, lighting, watching, providing caution boards, traffic control etc., hire for tools, cost of consumables and labour charges etc. complete, but excluding the cost of cutting of concrete / tarred / bituminous roads, and excluding cost of materials etc., and as per the directions of the department officers.						
	Providing additional length of house connection						
		1807	24.000				43368.000
	Total						**43368.000**
						Total Quantity in metre	**43368.000**
3.014	100.60.15.2.1						
	Providing additional length of house connection pipe using 25 mm (3/4 inch) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PN 16 specials and testing the joints etc., by trenching and refilling in all kinds of soil with trench of average cross section 0.3m x 0.75m for laying of connection pipe and service pipe, lighting, watching, providing caution boards, traffic control etc., including cost of materials, hire for tools, cost of consumables and labour charges etc. complete, but excluding the cost of cutting of concrete / tarred / bituminous roads etc., and as per the directions of the department officers.						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	Providing additional length of house connection						
		1992	48.000				95616.000
	Total						**95616.000**
						Total Quantity in metre	**95616.000**
3.015	15.2.1						
	Demolishing cement concrete manually / by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in-Charge.Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix)						
	Demolishing cement concrete						
		1050	3.000	0.300	0.150		141.750
	Total						**141.750**
						Total Quantity in cum	**141.750**
3.016	100.59.1						
	Cutting the bituminous / concrete roads with cutting machine for a minimum depth of 200mm along the sides of proposed alignment of the pipe to be laid without causing any damage to other utilities, including the charges for hire and conveyance of tools and plant, cost of consumables and charges for lighting, watching, ribbon fencing, caution boards, traffic diversion, and as per the direction of departmental officers etc. complete, before carrying out the demolition of bituminous / concrete road by mechanical means and carrying out the excavation.						
	Cutting the bituminous / concrete roads with cutting machine for a minimum depth of 200mm						
		500	6.000				3000.000
	Total						**3000.000**
						Total Quantity in metre	**3000.000**
3.017	15.59						
	Dismantling of flexible pavement (bituminous courses) by mechanical means and disposal of dismantled material up to a lead of 1 kilo metre, as per direction of Engineer-in-charge.						
	Dismantling of flexible pavement						
		500	6.000	0.600	0.200		360.000
	Total						**360.000**
						Total Quantity in cum	**360.000**
4	Road restoration charges PWD/SH/NH						
4.001	3.6						
	Excavation for roadwork in soil with hydraulic excavator of 0.9 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to the embankment location within all lifts and lead upto 1000m						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	Excavation						
	Berm PWD	1	20000.000	0.500	0.200		2000.000
	Berm SH/NH	1	12000.000	0.500	0.200		1200.000
	CC pavement PWD /NH	1	2000.000	0.500	0.350		350.000
	Tar cut PWD	1	4800.000	0.600	0.400		1152.000
	Bitumen Cutting SH/NH	1	2000.000	0.600	0.400		480.000
	Interlock	1	1000.000	0.900	0.200		180.000
	Total						**5362.000**
						Total Quantity in cum	**5362.000**
4.002	4.2.A.1						
	Construction of granular sub-base by providing graded material, spreading in uniform layers with a motor grader on a prepared surface, mixing by mix in-place method with rotavator at OMC, and compacting with a vibratory roller to achieve the desired density, complete as per clause 401. Grading-III -For lower sub-base - Mix in Place Method						
	GSB						
	Berm PWD	1	20000.000	0.500	0.200		2000.000
	Berm SH/NH	1	12000.000	0.500	0.200		1200.000
	CC pavement PWD /NH	1	2000.000	0.500	0.150		150.000
	Tar cut PWD	1	4800.000	0.600	0.200		576.000
	Bitumen Cutting SH/NH	1	2000.000	0.600	0.200		240.000
	Interlock	1	1000.000	0.900	0.200		180.000
	Total						**4346.000**
						Total Quantity in cum	**4346.000**
4.003	4.12						
	Providing, laying, spreading and compacting graded stone aggregate to Wet Mix Macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver in sub- base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density.						
	WMM						
	TAR CUT PWD	1	4800.000	0.600	0.200		576.000
	BITTUMEN CUTTING SH	1	2000.000	0.600	0.200		240.000
	Total						**816.000**

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
						Total Quantity in cum	**816.000**
4.004	5.1.a						
	Providing and applying primer coat with bitumen emulsion (SS) on prepared surface of granular Base including clearing of road surface and spraying primer at the rate of 0.70 - 1.0 kg/sqm using mechanical means.						
	Primer coat						
	TAR CUT PWD	1	4800.000	1.000			4800.000
	BITUMEN CUTTING SH	1	2000.000	1.500			3000.000
	Total						**7800.000**
						Total Quantity in sqm	**7800.000**
4.005	5.2.b						
	Providing and applying tack coat with bitumen emulsion (RS) using emulsion pressure distributor at the rate of 0.25 - 0.30 kg per sqm on the prepared Granular Surface cleaned with mechanical broom.						
	Tack coat						
	tack coat	1	4800.000	1.000			4800.000
	BM&BC	1	2000.000	1.500			3000.000
	Total						**7800.000**
						Total Quantity in sqm	**7800.000**
4.006	5.3.2.a						
	Providing and laying bituminous macadam with 80-100 TPH hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading premixed with a bituminous binder (VG 30), transported to the site, laid over a previously prepared surface with paver finisher to the required grade, level, and alignment and rolled as per clauses 501.6 and 501.7 to achieve the desired compaction For Grading II - (19 mm nominal size)						
	BM						
	BM	1	2000.000	1.500	0.050		150.000
	Total						**150.000**
						Total Quantity in cum	**150.000**
4.007	5.2.a						
	Providing and applying tack coat with bitumen emulsion(RS) using emulsion pressure distributor at the rate of 0.20 - 0.30 kg per sqm on the prepared bituminous surface cleaned with mechanical broom.						
	Tack coat						
	For BM and BC	1	2000.000	1.500			3000.000
	Total						**3000.000**
						Total Quantity in sqm	**3000.000**
4.008	5.6.2.a						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	Providing and laying bituminous concrete with 80-100 TPH hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with a bituminous binder(NRMB) @ 5.4 percent of mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level, and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 507 complete in all respects For Grading - II (13.2 mm Nominal Size)						
	BC						
	BC	1	2000.000	1.500	0.030		90.000
	Total						**90.000**
						Total Quantity in cum	**90.000**
4.009	5.7.1						
	Providing, laying and rolling of close-graded premix surfacing material of 20 mm thickness composed of 11.2 mm to 0.09 mm (Type-A) aggregates using viscosity grade bitumen (VG - 30) to the required line, grade, and level to serve as wearing course on a previously prepared base, including mixing in a suitable HMP of appropriate capacity not less than 75 tonnes/hour., laying and rolling with a Smooth wheeled roller 8-10 tonne capacity, and finishing to the required level and grade.						
	Close graded premix						
	TAR CUT PWD	1	4800.000	1.000			4800.000
	Total						**4800.000**
						Total Quantity in sqm	**4800.000**
4.010	5.8.a						
	Providing and laying surface dressing as wearing course in single coat using crushed stone aggregates of specified size on a layer of bituminous binder (VG 30) laid on the prepared surface and rolling with 8-10 tonne smooth wheeled steel roller. Grading I - 19 mm nominal chipping size						
	Seal coat						
	TAR CUT PWD	1	4800.000	1.000			4800.000
	Total						**4800.000**
						Total Quantity in sqm	**4800.000**
4.011	12.4						
	Plain cement concrete 1:3:6 nominal mix in foundation with crushed stone aggregate 40 mm nominal size mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days.						
	CC 40mm						
	CC Pavement PWD/NH/SH	1	2000.000	0.500	0.100		100.000
	Total						**100.000**
						Total Quantity in cum	**100.000**
4.012	12.8.B.1						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	Plain/Reinforced Cement Concrete in Open Foundation complete as per Drawing and Technical Specifications PCC Grade M20 						
	PCC/RCC						
	CC Pavement PWD/NH/SH	1	2000.000	0.500	0.050		50.000
	Total						**50.000**
						Total Quantity in cum	**50.000**
5	Road restoration charges LSGD						
5.001	3.5.3						
	Excavation in Soil using Hydraulic Excavator and Tippers with disposal upto 1000 m Excavation for roadwork in soil with hydraulic excavator of 0.9 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross-sections, and transporting to the embankment location with a lift upto 1.5 m and lead upto 1000 m as per Technical Specification Clause 302.3						
	Excavation						
	For tar Road	1	3000.000	0.600	0.400		720.000
	For Concrete Road	1	3000.000	0.500	0.350		525.000
	Total						**1245.000**
						Total Quantity in cum	**1245.000**
5.002	4.1.A.1						
	Granular Sub-base with Well Graded Material (Table 400.1) (A) By Mix in Place Method Construction of granular sub-base by providing well graded material, spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with smooth wheel roller to achieve the desired density, complete as per Technical Specification Clause 401. (i) For Grading I Material						
	GSB						
	For tar Road	1	3000.000	0.600	0.200		360.000
	For Concrete Road	1	3000.000	0.500	0.200		300.000
	Total						**660.000**
						Total Quantity in cum	**660.000**
5.003	4.9						
	Wet Mix Macadam Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the material with water at OMC in mechanical mixer (Pug Mill), carriage of mixed material by tipper to site, laying in uniform layers in sub-base/base course on a well prepared sub-base and compacting with smooth wheel roller of 80 to 100kN weight to achieve the desired density including lighting, barricading and maintenance of diversion, etc as per Tables 400.11 & 400.12 and Technical Specification Clause 406. By Mechanical Means with 1 km lead						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	WMM						
	For tar Road	1	3000.000	0.600	0.200		360.000
	Total						**360.000**
						Total Quantity in cum	**360.000**
5.004	5.1.1a						
	Prime Coat :- Low porosity Providing and applying primer coat with bitumen emulsion (SS-1) on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.70-1.0 kg/sqm using mechanical means as per Technical Specification Clause 502						
	prime coat						
	For tar Road	1	3000.000	1.000			3000.000
	Total						**3000.000**
						Total Quantity in sqm	**3000.000**
5.005	5.2.3a						
	Tack Coat Providing and applying tack coat with Bitumen emulsion (RS-1) using emulsion distributor at the rate of 0.25 to 0.30 kg per sqm on the prepared granular surfaces treated with primer & cleaned with Hydraulic broom as per Technical Specification Clause 503.						
	TACK COAT						
	Tar Road	1	3000.000	1.000			3000.000
	Total						**3000.000**
						Total Quantity in sqm	**3000.000**
5.006	5.9.1.2a						
	20mm thick Open-Graded Premix Carpet using Bituminous (penetration grade/modified bitumen) Binder - Bitumen S-65 Providing, laying and rolling of open-graded premix carpet of 20 mm thickness composed of 13.2 mm to 5.6 mm aggregates either using penetration grade bitumen or emulsion to required line, grade and level to serve as wearing course on a previously prepared base, including mixing in a suitable plant, laying and rolling with a three wheel 80-100 kN static roller capacity, finished to required level and grades to be followed by seal coat of either Type A or Type B or Type C as per Technical Specification Clause 508. Case - I By Manual Means (II) Bitumen (S-65)						
	OGPC						
	For tar Road	1	3000.000	1.000			3000.000
	Total						**3000.000**
						Total Quantity in sqm	**3000.000**
5.007	5.12.A.3.2a						
	Seal Coat - Manual Means - Type C - Bitumen S-65 Providing and laying seal coat sealing the voids in a bituminous surface laid to the specified levels, grade and cross fall using Type A, Type B and Type C as per Technical Specification Clause 510 A. By Manual Means :- Case - III : Type C (II) Bitumen (S-65)						

Sl No	Specification	No	Length	Width	Depth	Cf	Quantity
	Seal coat						
	For tar Road	1	3000.000	1.000			3000.000
	Total						**3000.000**
						Total Quantity in sqm	**3000.000**
5.008	11.4.3.1						
	Providing concrete for plain/reinforced concrete in open foundations complete as per drawings and technical specifications Clause 802, 803, 1202 & 1203 III. P.C.C. grade M 20 (i) Nominal mix (1:2:4)						
	cement concrete						
	For concrete road	1	3000.000	0.500	0.150		225.000
	Total						**225.000**
						Total Quantity in cum	**225.000**