

CHAPTER NO. 28

WATER SUPPLY

Notes:-

- (i) (For labour rate items only) The rates for stringing out cast iron, A.C., P.V.C. and H.D.P.E. pipes and their specials etc. provided under this chapter which are in the wider sense labour rates in case of which the material is generally issued to the contractors free of cost from the stores of the Engineer-in-Charge or the nearest railway station, include the carriage of material within a radius of 5km of the site of works.
- (ii) The rates for excavation are applicable for excavation both manually as well as by mechanical means.
- (iii) The rates taken in the CSR are for above 80mm i/d water supply lines where department shall furnish excise duty certificate to the contractor. In case of works other than water supply, where these pipes are used and department does not furnish any excise duty exemption certificate, applicable excise duty will be paid extra.

Sr. No.	Description.	Unit	Plains		Sub-mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
28.1	Excavation for pipe lines in trenches and pits including trimming and dressing sides levelling of beds of trenches to correct grade, cutting joint holes, refilling consolidation and watering of refill in 15cm layers and restoration of unmettled or unpaved surface to its original condition including the cost of necessary shoring, timbering, dewatering of rain water, diversion for traffic, night signals, providing & fixing caution boards, crossing over trenches for access to the houses, watching, fencing, etc. and removal of surplus spoil out side/inside the town involving lead upto one kilometer.					
(a)	Earth work upto 1.5 m Depth for					
i	All classes of soil except rocky.	cum	177.10		194.81	
ii	For ordinary gravel soil involving pick work.	cum	208.75		229.63	
iii	For Semi Conglomerate or soil of the nature of pick jumper work.	cum	240.40		264.44	
(b)	Exceeding 1.5 m depth but not exceeding 2.25 m depth for					
i	All classes of soil except rocky.	cum	180.29		198.32	

Sr. No.	Description.	Unit	Plains		Sub-mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
	ii	For ordinary gravel soil involving pick work.	cum	218.62		240.48
	iii	For Semi Conglomerate or soil of the nature of pick jumper work.	cum	264.44		290.88
(c)	Exceeding 2.25 m depth upto 3.00 m depth for					
	i	All classes of soil except rocky.	cum	187.78		206.56
	ii	For ordinary gravel soil involving pick work.	cum	226.11		248.72
	iii	For Semi Conglomerate or soil of the nature of pick jumper work.	cum	279.43		307.37
(d)	Exceeding 2.25 m depth upto 3.00 m depth for					
	i	All classes of soil except rocky.	cum	197.61		217.37
	ii	For ordinary gravel soil involving pick work.	cum	235.94		259.53
	iii	For Semi Conglomerate or soil of the nature of pick jumper work.	cum	296.75		326.43
(e)	Exceeding 4.5 m depth upto 6.0 m depth for					
	i	All classes of soil except rocky.	cum	207.43		228.17
	ii	For ordinary gravel soil involving pick work.	cum	245.14		269.65
	iii	For Semi Conglomerate or soil of the nature of pick jumper work.	cum	314.07		345.48
(f)	Exceeding 6.0m depth upto 7.5 m depth for					
	i	All classes of soil except rocky.	cum	217.25		238.98

Sr. No.	Description.		Unit	Plains		Sub-mountainous	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
	ii	For ordinary gravel soil involving pick work.	cum	255.58		281.14	
	iii	For Semi Conglomerate or soil of the nature of pick jumper work.	cum	331.38		364.52	
28.2	Excavation for Pipe lines in trenches and Pits upto 1.5m Depth including trimming and dressing sides, levelling of beds of trenches to correct grade, cutting joint holes, refilling, consolidation and watering of refill in 15cm layers and Restoration of unmetalled or unpaved surface to its original condition, excluding cost of shoring timbering but including the cost of dewatering of rain water, diversion for traffic, night signals, providing & fixing caution boards, crossing over trenches for access to the houses, watching, fencing, etc., and removal of surplus soil out side/ inside the town involving lead upto one km.						
	(a)	In classes of soil except rocky.	cum	98.10		107.91	
	(b)	In ordinary gravel-soil involving pick work.	cum	129.75		142.73	
	(c)	In Semi Conglomerate or soil of the nature of pick jumper work.	cum	161.40		177.54	
28.3	Excavation for pipe lines in trenches and pits in open areas where disposal of surplus earth is done along the alignment including trimming and dressing sides, levelling of beds of trenches to correct grade, cutting joint holes, consolidation and watering of refill in refilling 15cm layers and restoration of unmetalled or unpaved surface to its original condition. The rate includes the cost of necessary timbering dewatering of rain water diversion for traffic night signals, providing & fixing caution boards, watching fencing etc.						
	(a)	Upto 1.5m depth					

Sr. No.	Description.		Unit	Plains		Sub-mountainous	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
	(i)	All classes of soil except rocky.	cum	157.11		172.82	
	(ii)	In ordinary gravel soil involving pick work.	cum	188.46		207.31	
	(iii)	In Semi Conglomerate or soil of the nature of pick jumper work.	cum	219.80		241.78	
	(b)	Exceeding 1.5m depth upto 2.25 m depth for					
	(i)	All classes of soil except rocky.	cum	160.86		176.95	
	(ii)	In ordinary gravel soil involving pick work.	cum	199.19		219.11	
	(iii)	In Semi Conglomerate or soil of the nature of pick jumper work.	cum	245.01		269.51	
	(c)	Exceeding 2.25m depth upto 3.0 m depth for					
	(i)	All classes of soil except rocky.	cum	168.35		185.19	
	(ii)	In ordinary gravel soil involving pick work.	cum	206.68		227.35	
	(iii)	In Semi Conglomerate or soil of the nature of pick jumper work.	cum	260.00		286.00	
	(d)	Exceeding 3.0m depth upto 4.50 m depth for					
	(i)	All classes of soil except rocky.	cum	178.18		196.00	
	(ii)	In ordinary gravel soil involving pick work.	cum	216.51		238.16	
	(iii)	In Semi Conglomerate or soil of the nature of pick jumper work.	cum	277.32		305.05	
	(e)	Exceeding 4.50 m depth upto 6.0 m depth for					

Sr. No.	Description.		Unit	Plains		Sub-mountainous	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
	(i)	All classes of soil except rocky.	cum	188.00		206.80	
	(ii)	In ordinary gravel soil involving pick work.	cum	226.33		248.96	
	(iii)	In Semi Conglomerate or soil of the nature of pick jumper work.	cum	294.63		324.09	
	(f)	Exceeding 6.0 m depth upto 7.50 m depth for					
	(i)	All classes of soil except rocky.	cum	197.82		217.60	
	(ii)	In ordinary gravel soil involving pick work.	cum	236.15		259.77	
	(iii)	In Semi Conglomerate or soil of the nature of pick jumper work.	cum	311.95		343.15	
28.4	Excavation for Pipe Lines in trenches and pits upto 1.5m Depth in open area where disposal of surplus earth is done alongwith alignment, including trimming and drsessing sides, levelling of beds of trenches to correct grade, cutting joint holes, refilling; consolidation and watering of refill in 15cm layers and Restoration of unmetalled or unpaved surface to its original condition excluding cost of shoring and timbering but including the cost of dewatering of rain water, diversion for traffic, night signals, providing & fixing caution boards, watching, fencing etc.						
	(a)	In all classes of soil except rocky.	cum	78.11		85.92	
	(b)	In ordinary gravel-soil involving pick work.	cum	109.46		120.41	
	(c)	In Semi Conglomerate or soil of the nature of pick jumper work.	cum	140.80		154.88	
28.5	Extra for disposal of surplus soil on Item No. 28.1 and 28.2 beyond one km.			Rate for this item will be given as per Chapter 5 of Carriage.			

Sr. No.	Description.	Unit	Plains		Sub-mountainous		
			Labour Rate	Through Rate	Labour Rate	Through Rate	
1	2	3	4	5	6	7	
28.6	Extra for cutting Through Cement Concrete Roads and their foundations including sorting and stacking the soling at the site of work as ordered by the Engineer-in-charge.						Rate for this item will be given as per Chapter 8 of dismantling.
28.7	Extra for cutting through metalled Roads and their foundation including sorting screening and stacking the soling stone and road metal at the site of work as ordered by the Engineer-in-charge.						Rate for this item will be given as per Chapter 24 of road work.
28.8	(a) Consolidation of road cuts with hammers, hand rollers and laying of flat brick soling/pavement (at formation level) complete so as to allow unobstructed traffic (with dismantled material at site).	sqm	4.75			5.23	
	(b) Recondition road cuts with hammers, hand rollers and laying of stone metal / bajri in soling / base coarse conforming to WBM specifications (at formation level) complete so as to allow unobstructed traffic (with dismantled material at site).	cum	196.08			215.69	
28.9 A	Providing, Stringing out, cutting, Jointing and testing of ISI Marked C.I. Pipes Class-LA per IS:1536 and laying the same in trenches to correct alignment and gradients, jointed with rubber tyton joints fitted complete including all cartage.						
	(a) 80mm i/d pipe line laid complete.	m	62.16	1022.66		68.38	1028.88
	(b) 100mm i/d pipe line laid complete.	m	80.79	1293.74		88.87	1301.82
	(c) 125mm i/d pipe line laid complete.	m	Deleted as this size is not in use nowadays				

Sr. No.	Description.						Unit	Plains		Sub-mountainous		
								Labour Rate	Through Rate	Labour Rate	Through Rate	
1	2						3	4	5	6	7	
	(d)	150mm	i/d	pipe	line	laid complete.	m	108.78	1931.27	119.66	1942.15	
	(e)	200mm	i/d	pipe	line	laid complete.	m	148.90	3085.83	163.79	3100.72	
	(f)	250mm	i/d	pipe	line	laid complete.	m	190.18	4056.82	209.20	4075.84	
	(g)	300mm	i/d	pipe	line	laid complete.	m	291.17	5401.54	320.29	5430.66	
	(h)	350mm	i/d	pipe	line	laid complete.	m	343.66	7069.64	378.03	7104.01	
	(i)	400mm	i/d	pipe	line	laid complete.	m	397.95	8402.14	437.75	8441.94	
	(j)	450mm	i/d	pipe	line	laid complete.	m	493.81	9975.69	543.19	10025.07	
	(k)	500mm	i/d	pipe	line	laid complete.	m	577.56	11996.46	635.32	12054.22	
	(l)	600mm	i/d	pipe	line	laid complete.	m	739.19	15955.77	813.11	16029.69	
Note (i)	In case ISI marked CI pipe class-A as per IS 7181 is used, the through rate will be increased by 10% in item no 28.9-A											
Note (ii)	In case ISI marked CI pipe class-B as per IS 7181 is used, the through rate will be increased by 20% in item no 28.9-A											
28.9 B	Providing, Stringing out, cutting, Jointing and testing of ISI marked D.I. Pipe as per IS 8329 and laying the same in trenches to correct alignment and gradients, jointed with rubber tyton joints fitted complete including all cartage.											
A	D.I. Pipe as per IS 8329 DI-K7											
	(a)	80mm	i/d	pipe	line	laid complete.	m	62.16	959.75	68.38	965.97	
	(b)	100mm	i/d	pipe	line	laid complete.	m	80.79	997.06	88.87	1005.14	
	(c)	125mm	i/d	pipe	line	laid complete.	m	Deleted as this size is not in use nowadays				
	(d)	150mm	i/d	pipe	line	laid complete.	m	108.78	1423.07	119.66	1433.95	

Sr. No.	Description.					Unit	Plains		Sub-mountainous		
							Labour Rate	Through Rate	Labour Rate	Through Rate	
1	2					3	4	5	6	7	
	(e)	200mm	i/d	pipe	line	laid	m	148.90	1767.83	163.79	1782.72
		complete.									
	(f)	250mm	i/d	pipe	line	laid	m	190.18	2278.33	209.20	2297.35
		complete.									
	(g)	300mm	i/d	pipe	line	laid	m	291.17	2934.92	320.29	2964.04
		complete.									
	(h)	350mm	i/d	pipe	line	laid	m	343.66	3673.73	378.03	3708.10
		complete.									
	(i)	400mm	i/d	pipe	line	laid	m	397.95	4357.15	437.75	4396.95
		complete.									
	(j)	450mm	i/d	pipe	line	laid	m	493.81	5190.69	543.19	5240.07
		complete.									
	(k)	500mm	i/d	pipe	line	laid	m	577.56	6082.15	635.32	6139.91
		complete.									
	(l)	600mm	i/d	pipe	line	laid	m	739.19	7987.61	813.11	8061.53
		complete.									
B	D.I. Pipe as per IS 8329 DI-K9										
	(a)	80mm i/d pipe line laid complete.					m	62.16	1072.97	68.38	1079.19
	(b)	100mm	i/d	pipe	line	laid	m	80.79	1112.61	88.87	1120.69
		complete.									
	(c)	125mm	i/d	pipe	line	laid	m	Deleted as this size is not in use nowadays			
		complete.									
	(d)	150mm	i/d	pipe	line	laid	m	108.78	1571.30	119.66	1582.18
		complete.									
	(e)	200mm	i/d	pipe	line	laid	m	148.90	1979.10	163.79	1993.99
		complete.									
	(f)	250mm	i/d	pipe	line	laid	m	190.18	2649.51	209.20	2668.53
		complete.									
	(g)	300mm	i/d	pipe	line	laid	m	291.17	3393.63	320.29	3422.75
		complete.									
	(h)	350mm	i/d	pipe	line	laid	m	343.66	4215.32	378.03	4249.69
		complete.									
	(i)	400mm	i/d	pipe	line	laid	m	397.95	5088.99	437.75	5128.79
		complete.									
	(j)	450mm	i/d	pipe	line	laid	m	493.81	6040.42	543.19	6089.80
		complete.									

Sr. No.	Description.	Unit	Plains		Sub-mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
	(k) 500mm i/d pipe line laid complete.	m	577.56	7134.98	635.32	7192.74
	(l) 600mm i/d pipe line laid complete.	m	739.19	9161.83	813.11	9235.75
28.10	Extra for fixing of double flanged pipes in vertical position for over head reservoir & stand pipes, scaffolding, derricks, Jim poles, tools and plants, ropes, guys, etc. Complete as desired by Engineer-in-Charge.					
	(a) 80mm i/d pipe line laid complete.	m	35.05		38.55	
	(b) 100mm i/d pipe line laid complete.	m	44.96		49.46	
	(c) 125mm i/d pipe line laid complete.	m	58.59		64.45	
	(d) 150mm i/d pipe line laid complete.	m	73.63		80.99	
	(e) 200mm i/d pipe line laid complete.	m	106.38		117.02	
	(f) 250mm i/d pipe line laid complete.	m	144.79		159.27	
	(g) 300mm i/d pipe line laid complete.	m	188.15		206.97	
	(h) 350mm i/d pipe line laid complete.	m	202.67		222.94	
	(i) 400mm i/d pipe line laid complete.	m	246.92		271.61	
	(j) 450mm i/d pipe line laid complete.	m	299.13		329.04	
	(k) 500mm i/d pipe line laid complete.	m	348.16		382.98	

Sr. No.	Description.		Unit	Plains		Sub-mountainous	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
	(l)	600mm i/d pipe line laid complete.	m	467.10		513.81	
28.11	Providing, Stringing out, cutting Jointing & testing A.C. Pipes ISI marked as per IS 1592-2003 class-15 with suitable A C coupling or CI D-joints along the trenches and laying the same into Trenches to correct alignment and gradients, including all carriage complete.						
	(a)	80mm i/d pipe	m	16.95	100.19	18.65	101.89
	(b)	100mm i/d pipe	m	21.64	129.78	23.80	131.94
	(c)	150mm i/d pipe	m	30.02	242.80	33.02	245.80
	(d)	200mm i/d pipe	m	44.68	436.38	49.15	440.85
	(e)	250mm i/d pipe	m	59.34	810.31	65.27	816.24
28.12	Providing, Stringing out P.V.C. Pipes as per ISI-4985 casting along the Trenches and laying the same in Trenches to correct alignment and gradients, cutting, jointing and testing including cost of specials complete as per specifications.						
	i	63mm o/d pipe of 10 Kgf. / sqcm	m	5.44	102.77	5.98	103.31
	ii	75mm o/d pipe of 10 Kgf. / sqcm	m	6.56	143.54	7.22	144.20
	iii	90mm o/d pipe of 10 Kgf. / sqcm	m	7.85	206.11	8.64	206.90
	iv	110mm o/d pipe of 10 Kgf. / sqcm	m	9.84	299.41	10.82	300.39
	v	160mm o/d pipe of 10 Kgf. / sqcm	m	13.11	618.69	14.42	620.00
	vi	200mm o/d pipe of 10 Kgf. / sqcm	m	18.65	1280.27	20.52	1282.14
	vii	250mm o/d pipe of 10 Kgf. / sqcm	m	23.46	2114.15	25.81	2116.50
	viii	63mm o/d pipe of 8 Kgf. / sqcm	m	Deleted As Rates for this size are not available			
	ix	75mm o/d pipe of 8 Kgf. / sqcm	m	Deleted As Rates for this size are not available			
	x	90mm o/d pipe of 8 Kgf. / sqcm	m	Deleted As Rates for this size are not available			
	xi	110mm o/d pipe of 8 Kgf. / sqcm	m	9.84	254.96	10.82	255.94

Sr. No.	Description.		Unit	Plains		Sub-mountainous	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
	xii	160mm o/d pipe of 8 Kgf. / sqcm	m	13.11	529.78	14.42	531.09
	xiii	200mm o/d pipe of 8 Kgf. / sqcm	m	18.65	1057.99	20.52	1059.86
	xiv	250mm o/d pipe of 8 Kgf. / sqcm	m	23.46	1714.04	25.81	1716.39
	xv	63mm o/d pipe of 6 Kgf. / sqcm	m	5.44	70.32	5.98	70.86
	xvi	75mm o/d pipe of 6 Kgf. / sqcm	m	6.56	95.47	7.22	96.13
	xvii	90mm o/d pipe of 6 Kgf. / sqcm	m	7.85	135.21	8.64	136.00
	xviii	110mm o/d pipe of 6 Kgf. / sqcm	m	9.84	193.68	10.82	194.66
	xix	160mm o/d pipe of 6 Kgf. / sqcm	m	13.11	404.81	14.42	406.12
	xx	200mm o/d pipe of 6 Kgf. / sqcm	m	18.65	769.62	20.52	771.49
	xxi	250mm o/d pipe of 6 Kgf. / sqcm	m	23.46	1237.02	25.81	1239.37
	xxii	63mm o/d pipe of 4 Kgf. / sqcm	m	5.44	49.90	5.98	50.44
	xxiii	75mm o/d pipe of 4 Kgf. / sqcm	m	6.56	69.04	7.22	69.70
	xxiv	90mm o/d pipe of 4 Kgf. / sqcm	m	7.85	95.56	8.64	96.35
	xxv	110mm o/d pipe of 4 Kgf. / sqcm	m	9.84	136.00	10.82	136.98
	xxvi	160mm o/d pipe of 4 Kgf. / sqcm	m	13.11	283.46	14.42	284.77
	xxvii	200mm o/d pipe of 4 Kgf. / sqcm	m	18.65	530.51	20.52	532.38
	xxviii	250mm o/d pipe of 4 Kgf. / sqcm	m	23.46	846.52	25.81	848.87
	xxix	90mm o/d pipe of 2.50 Kgf. / sqcm	m	7.85	63.12	8.64	63.91
	xxx	110mm o/d pipe of 2.50 Kgf. / sqcm	m	9.84	91.55	10.82	92.53
	xxxi	160mm o/d pipe of 2.50 Kgf. / sqcm	m	13.11	184.93	14.42	186.24
	xxxii	200mm o/d pipe of 2.50 Kgf. / sqcm	m	18.65	352.68	20.52	354.55
	xxxiii	250mm o/d pipe of 2.50 Kgf. / sqcm	m	23.46	566.56	25.81	568.91
28.13	Providing, Stringing out H.D.P.E. Pipes as per ISI - 4984 casting along the Trenches and laying the same in Trenches to correct alignment and gradients, cutting, jointing and testing including cost of specials complete as per specifications.						

Sr. No.	Description.		Unit	Plains		Sub-mountainous	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
	i	90mm o/d pipe of 6 kg PE-63	m	12.45	449.81	13.70	451.06
	ii	110mm o/d pipe of 6 kg PE-63	m	15.77	664.61	17.35	666.19
	iii	90mm o/d pipe of 4 kg PE-63	m	12.45	321.25	13.70	322.50
	iv	110mm o/d pipe of 4 kg PE-63	m	15.77	477.16	17.35	478.74
28.14	Providing, Stringing out, cutting, Jointing and testing of Quick Coupling pipe IS 11722/86 and laying the same in trenches to correct alignment and gradients, jointed with coupler fitted including cost of specials and all cartage complete.						
	Quick Coupling Jointing pipe IS 11722/86						
	a	50.80mm o/d pipe lines laid complete	m	6.68	345.87	7.35	346.54
	b	63.50mm o/d pipe lines laid complete	m	6.85	449.69	7.54	450.38
	c	76.20mm o/d pipe lines laid complete	m	7.07	498.92	7.78	499.63
	d	101.60mm o/d pipe lines laid complete	m	8.24	656.91	9.06	657.73
	e	127.00mm o/d pipe lines laid complete	m	7.77	966.29	8.55	967.07
	f	152.40mm o/d pipe lines laid complete	m	10.56	1000.06	11.62	1001.12
	g	203.40mm o/d pipe lines laid complete	m	14.67	1796.80	16.14	1798.27
	h	254.00mm o/d pipe lines laid complete	m	19.49	2856.26	21.44	2858.21
	i	304.80mm o/d pipe lines laid complete	m	25.75	3829.18	28.33	3831.76
28.15	Supplying, fixing and jointing PVC specials complete as desired by Engineer-in-Charge (for pipe lines laid inside habitation only)		m	5% Extra will be taken for the respective i/d of pipe in item no 28.12.			

Sr. No.	Description.	Unit	Plains		Sub-mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
28.16	CONCEALED IN WALL:Providing & fixing CPVC (Chlorinate Polyvinyl Chloride) FlowGuard CTS SDR 11 pipes conforming to IS 15778 , for Hot & Cold Water Supply including jointing of all FlowGuard Plain & brass threaded fittings with FlowGuard Solvent Cement , testing of joints, also cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge. (Chases rates as per CSR item No 30.85 to be added)					
	a SDR -11 Pipe, 16mm o/d	m	38.91	141.04	42.80	144.93
	b SDR -11 Pipe,20mm o/d	m	38.91	163.07	42.80	166.96
	c SDR -11 Pipe, 25mm o/d	m	38.91	203.12	42.80	207.01
	d SDR -11 Pipe,32mm o/d	m	38.91	277.22	42.80	281.11
	e SDR -11 Pipe,40mm o/d	m	38.91	385.36	42.80	389.25
	f SDR -11 Pipe,50mm o/d	m	38.91	601.64	42.80	605.53
28.17	INTERNAL / EXPOSED:Providing & fixing CPVC (Chlorinate Polyvinyl Chloride) FlowGuard CTS SDR 11 pipes conforming to IS 15778 & SDR 11 fittings upto 50mm, & Schd 40 pipes as ASTM F 441 & CPVC Schd 80 fittings above 50 mm for Hot & Cold Water Supply including jointing of all FlowGuard Plain & brass threaded fittings with FlowGuard Solvent Cement testing of joints on walls, terrrace, ducts, shafts, ringline on terrace with all plugs, clamps complete as per direction of Engineer in Charge.					
	a SDR -11 Pipe, 16mm o/d	m	38.91	111.86	42.80	115.74
	b SDR -11 Pipe, 20mm o/d	m	38.91	127.60	42.80	131.50
	c SDR -11 Pipe, 25mm o/d	m	38.91	156.20	42.80	160.09
	d SDR -11 Pipe, 32mm o/d	m	38.91	209.13	42.80	213.02
	e SDR -11 Pipe, 40mm o/d	m	38.91	286.37	42.80	290.26
	f SDR -11 Pipe, 50mm o/d	m	38.91	440.86	42.80	444.75
	g Schd 40 pipe, 62.5mm i/d	m	49.98	1065.57	54.98	1070.57
	h Schd 40pipe, 75mm i/d	m	49.98	1370.25	54.98	1375.25
	l Schd 40 pipe , 100mm i/d	m	49.98	1926.68	54.98	1931.68
	j Schd 40 pipe , 150mm i/d	m	49.98	3939.27	54.98	3944.27
28.18	Providing, Stringing out, cutting, Jointing and testing of C.I. Double Flanged pipes with casted flanged as per IS:7181, Class-B and laying the same in trenches to correct alignment and gradients,jointed with nut bolts and rubber insertion fitted complete including all cartage.					

Sr. No.	Description.		Unit	Plains		Sub-mountainous	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
	a	80mm i/d pipe lines laid complete	m	264.82	1722.81	291.30	1749.29
	b	100mm i/d pipe lines laid complete	m	339.62	2173.20	373.58	2207.16
	c	125mm i/d pipe lines laid complete	m	408.81	2806.38	449.69	2847.26
	d	150mm i/d pipe lines laid complete	m	492.63	3358.14	541.89	3407.40
	e	200mm i/d pipe lines laid complete	m	665.45	4784.53	732.00	4851.08
	f	250mm i/d pipe lines laid complete	m	879.43	6454.04	967.37	6541.98
	g	300mm i/d pipe lines laid complete	m	1094.23	8280.76	1203.65	8390.18
	h	350mm i/d pipe lines laid complete	m	1271.17	10611.45	1398.29	10738.57
	i	400mm i/d pipe lines laid complete	m	1447.13	12838.94	1591.84	12983.65
	j	450mm i/d pipe lines laid complete	m	1883.48	16332.89	2071.83	16521.24
	k	500mm i/d pipe lines laid complete	m	2181.14	19087.22	2399.25	19305.33
	l	600mm i/d pipe lines laid complete	m	2710.61	26017.58	2981.67	26288.64
28.19	Providing, Stringing out, cutting, Jointing and testing of C.I. Double Flanged pipes with screwed flanged as per IS:1536, class-LA and laying the same in trenches to correct alignment and gradients, jointed with nut bolts and rubber insertion fitted complete including all cartage.						
	a	80mm i/d pipe lines laid complete	m	264.82	1493.77	291.30	1520.25
	b	100mm i/d pipe lines laid complete	m	337.85	1779.84	371.64	1813.63
	c	125mm i/d pipe lines laid complete	m	408.81	2295.34	449.69	2336.22
	d	150mm i/d pipe lines laid complete	m	492.63	2806.46	541.89	2855.72
	e	200mm i/d pipe lines laid complete	m	665.45	4022.28	732.00	4088.83
	f	250mm i/d pipe lines laid complete	m	879.43	5369.16	967.37	5457.10
	g	300mm i/d pipe lines laid complete	m	1094.23	6860.95	1203.65	6970.37
	h	350mm i/d pipe lines laid complete	m	1271.17	8703.98	1398.29	8831.10

Sr. No.	Description.		Unit	Plains		Sub-mountainous	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
	i	400mm i/d pipe lines laid complete	m	1447.13	10681.51	1591.84	10826.22
	j	450mm i/d pipe lines laid complete	m	1883.48	13269.13	2071.83	13457.48
	k	500mm i/d pipe lines laid complete	m	2181.14	15631.88	2399.25	15849.99
	l	600mm i/d pipe lines laid complete	m	2710.61	20697.87	2981.67	20968.93
28.20	Providing, Stringing out, cutting, Jointing and testing of D.I. Double Flanged pipes with screwed flanged as per IS:8329-2000, Class-K9 and laying the same in trenches to correct alignment and gradients, jointed with nut bolts and rubber insertion joints fitted complete including all cartage.						
	a	80mm i/d pipe lines laid complete	m	264.82	1800.40	291.30	1826.88
	b	100mm i/d pipe lines laid complete	m	339.62	1957.70	373.58	1991.66
	c	125mm i/d pipe lines laid complete	m	408.81	2556.49	449.69	2597.37
	d	150mm i/d pipe lines laid complete	m	492.63	2893.89	541.89	2943.15
	e	200mm i/d pipe lines laid complete	m	665.45	3764.92	732.00	3831.47
	f	250mm i/d pipe lines laid complete	m	879.43	5077.32	967.37	5165.26
	g	300mm i/d pipe lines laid complete	m	1094.23	6496.45	1203.65	6605.87
	h	350mm i/d pipe lines laid complete	m	1271.17	8052.57	1398.29	8179.69
	i	400mm i/d pipe lines laid complete	m	1447.13	9620.03	1591.84	9764.74
	j	450mm i/d pipe lines laid complete	m	1883.48	11633.81	2071.83	11822.16
	k	500mm i/d pipe lines laid complete	m	2181.14	12702.43	2399.25	12920.54
	l	600mm i/d pipe lines laid complete	m	2710.61	13233.07	2981.67	13504.13
28.21	Supplying and laying C.I. specials complete as desired by Engineer-in-Charge conforming to ISI specifications						
	a	C.I. specials upto 300mm i/d	kg	2.36	53.06	2.60	53.30
	b	C.I. specials above 300mm i/d	kg	2.36	65.14	2.60	65.38

Sr. No.	Description.	Unit	Plains		Sub-mountainous		
			Labour Rate	Through Rate	Labour Rate	Through Rate	
1	2	3	4	5	6	7	
28.22	Supplying and laying D.I. specials/fittings as per IS:9527-2000, class K-12 suitable for tyten joint with external bitumen coating and inside cement mortar lining, scaffolding, derricks, Jim poles, tools and plants, ropes, guys, etc. Complete.						
	a	D.I. specials upto 300mm i/d	kg	2.36	104.99	2.60	105.23
	b	D.I. specials above 300mm i/d	kg	2.36	171.37	2.60	171.61
28.23	Providing & fixing CPVC (Chlorinate Polyvinyl Chloride) FlowGuard CTS SDR 11 pipes conforming to IS 15778 & SDR 11 fittings upto 50mm, & Schd 40 pipes as ASTM F 441 & CPVC Schd 80 fittings above 50 mm for Hot & cold water supply including laying in ring lines, trenching, refilling (as per PWD specifications) & testing of joints all complete as per manufacturers specifications and approved practices						
	a	SDR -11 Pipe, 16mm o/d	m	31.61	107.48	34.77	110.64
	b	SDR -11 Pipe, 20mm o/d	m	31.61	123.84	34.77	127.00
	c	SDR -11 Pipe, 25mm o/d	m	31.61	154.49	34.77	156.76
	d	SDR -11 Pipe, 32mm o/d	m	31.61	208.64	34.77	211.80
	e	SDR -11 Pipe, 40mm o/d	m	31.61	288.97	34.77	292.13
	f	SDR -11 Pipe, 50mm o/d	m	31.61	449.18	34.77	452.79
	g	Schd 40 pipe, 62.5mm i/d	m	40.86	1097.08	44.94	1101.16
	h	Schd 40 pipe, 75mm i/d	m	40.86	1413.94	44.94	1418.02
	i	Schd 40 pipe , 100mm i/d	m	40.86	1992.63	44.94	1996.71
	j	Schd 40 pipe , 150mm i/d	m	40.86	4085.72	44.94	4089.80
28.24	Providing & fixing sluice valves ISI marked 14846-2000, socketted or flanged, jointing with tyton joints including all carriage complete.						
A	Class PN-1 as per ISI						
	a	80mm i/d Sluice Valves Socketted or Flanged	each	159.54	2324.61	175.49	2340.56
	b	100mm i/d Sluice Valves Socketted or Flanged	each	184.98	3028.64	203.48	3047.14
	c	125mm i/d Sluice Valves Socketted or Flanged	each	Deleted as this size is not in use nowadays			
	d	150mm i/d Sluice Valves Socketted or Flanged	each	240.34	4703.23	264.37	4727.26
	e	200mm i/d Sluice Valves Socketted or Flanged	each	298.48	7685.13	328.33	7714.98
	f	250mm i/d Sluice Valves Socketted or Flanged	each	378.39	11981.90	416.23	12019.74
	g	300mm i/d Sluice Valves Socketted or Flanged	each	540.92	14581.85	595.01	14635.94

Sr. No.	Description.		Unit	Plains		Sub-mountainous	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
	h	350mm i/d Sluice Valves Socketted or Flanged	each	540.92	21396.33	595.01	21450.42
	i	400mm i/d Sluice Valves Socketted or Flanged	each	644.16	37134.56	708.58	37198.98
	j	450mm i/d Sluice Valves Socketted or Flanged	each	669.77	65934.34	736.75	66001.32
	k	500mm i/d Sluice Valves Socketted or Flanged	each	690.95	117787.95	760.05	117857.05
	l	600mm i/d Sluice Valves Socketted or Flanged	each	856.19	136287.65	941.81	136373.27
B	Special quality make such as kirlosker or equivalent as approved by Engineer-in-Charge.						
	a	80mm i/d Sluice Valves Socketted or Flanged	each	159.54	7965.02	175.49	7980.97
	b	100mm i/d Sluice Valves Socketted or Flanged	each	184.98	11978.45	203.48	11996.95
	c	125mm i/d Sluice Valves Socketted or Flanged	each	201.91	16524.63	222.10	16544.82
	d	150mm i/d Sluice Valves Socketted or Flanged	each	240.34	19606.98	264.37	19631.01
	e	200mm i/d Sluice Valves Socketted or Flanged	each	298.48	32676.15	328.33	32706.00
	f	250mm i/d Sluice Valves Socketted or Flanged	each	378.39	41486.16	416.23	41524.00
	g	300mm i/d Sluice Valves Socketted or Flanged	each	540.92	59262.21	595.01	59316.30
	h	350mm i/d Sluice Valves Socketted or Flanged	each	540.92	90740.44	595.01	90794.53
	i	400mm i/d Sluice Valves Socketted or Flanged	each	644.16	107891.91	708.58	107956.33
	j	450mm i/d Sluice Valves Socketted or Flanged	each	669.77	141651.23	736.75	141718.21
	k	500mm i/d Sluice Valves Socketted or Flanged	each	690.95	191038.80	760.05	191107.90
	l	600mm i/d Sluice Valves Socketted or Flanged	each	856.19	259412.98	941.81	259498.60
28.25	Providing & fixing Fire Hydrants jointing with flanged joint including all carriages complete.(without Fire Hydrant surface box)						
	a	Fire Hydrants SV type as per IS-909	each	123.41	6537.38	135.75	6549.72
	b	Fire Hydrants Ordinary type as per IS	each	123.41	4271.61	135.75	4283.95

Sr. No.	Description.	Unit	Plains		Sub-mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
28.26	Providing & fixing Single air valve as per IS-14845 jointing with tyten joint including all carriages complete.	each	430.53	4578.73	473.58	4621.78
28.27	Providing & fixing double air valve jointing with tyten joint including all carriages complete.	each	170.56	4387.42	187.62	4404.48
28.28	Extra for fixing Non-return valves in pipe lines jointing with tyten joint including all carriages complete.					
A	Class PN-1.6 as per ISI with rubber seat					
	a 80mm i/d Non-return valve	each	159.54	2373.82	175.49	2389.77
	b 100mm i/d Non-return valve	each	184.98	3021.77	203.48	3040.27
	c 125mm i/d Non-return valve	each	201.91	4237.96	222.10	4258.15
	d 150mm i/d Non-return valve	each	240.34	4982.44	264.37	5006.47
	e 200mm i/d Non-return valve	each	298.48	7972.36	328.33	8002.21
	f 250mm i/d Non-return valve	each	378.39	13264.69	416.23	13302.53
	g 300mm i/d Non-return valve	each	540.92	15798.27	595.01	15852.36
	h 350mm i/d Non-return valve	each	540.92	41291.66	595.01	41345.75
	i 400mm i/d Non-return valve	each	644.16	59802.59	708.58	59867.01
	j 450mm i/d Non-return valve	each	669.77	83748.13	736.75	83815.11
	k 500mm i/d Non-return valve	each	690.95	111373.98	760.05	111443.08
B	Class PN-1.6 as per ISI with gun metal seat					
	a 80mm i/d Non-return valve	each	159.54	4021.65	175.49	4037.60
	b 100mm i/d Non-return valve	each	184.98	4974.00	203.48	4992.50
	c 125mm i/d Non-return valve	each	201.91	6713.15	222.10	6733.34
	d 150mm i/d Non-return valve	each	240.34	7907.35	264.37	7931.38
	e 200mm i/d Non-return valve	each	298.48	14848.64	328.33	14878.49
	f 250mm i/d Non-return valve	each	378.39	21971.90	416.23	22009.74

Sr. No.	Description.		Unit	Plains		Sub-mountainous	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
	g	300mm i/d Non-return valve	each	540.92	28840.20	595.01	28894.29
	h	350mm i/d Non-return valve	each	540.92	52888.30	595.01	52942.39
	i	400mm i/d Non-return valve	each	644.16	61013.29	708.58	61077.71
	j	450mm i/d Non-return valve	each	669.77	75348.75	736.75	75415.73
	k	500mm i/d Non-return valve	each	690.95	109711.27	760.05	109780.37
28.29	Providing, fixing and jointing Cast Iron surface box for Sluice valve, Air valve, Fire hydrant etc. including all carriages complete.		kg	2.35	53.85	2.59	54.09
28.30	Boring with 100 mm diametre casing pipe for hand pump/ tube well in all soils except ordinary hard rocks requiring blasting including removing the casing pipe after the hand pipe/tube well is lowered and tested.						
	a	Upto 6 ms depth.	m	199.02		218.92	
	b	Beyond 6 ms and upto 12 ms depth.	m	237.18		260.90	
	c	Beyond 12 ms and upto 18 ms depth.	m	277.08		304.79	
28.31	Providing and placing in position filters of 40 mm diametre G.I. pipe with brass strainer of approved quality.		m	55.59	398.89	61.15	404.45
28.32	Providing and fixing to filter and lowering to proper levels 40 mm G.I. pipe for tube well including cleaning and priming the tube well.		m	24.93	251.93	27.42	254.42
28.33	Providing ferrule, drilling and tapping cast iron pipe lines of all diametres and screwing in Ferrule and connections complete in all respect.						
	a	10mm i/d Ferrule medium	each	64.02	270.00	70.42	276.40
	b	15mm i/d Ferrule medium	each	73.30	302.17	80.63	309.50
	c	15mm i/d Ferrule heavy duty	each	73.30	359.38	80.63	366.71
	d	20mm i/d Ferrule heavy duty	each	151.84	552.36	167.02	567.54
	e	25mm i/d Ferrule heavy duty	each	205.68	1063.93	226.25	1084.50

Sr. No.	Description.		Unit	Plains		Sub-mountainous	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
28.34	Providing and laying, jointing fixing and testing G.I. Pipe lines B-Class including cost of specials such as tees, bends, sockets, elbows etc. testing, cutting, threading Inside building complete.						
	a	15mm i/d	m	45.14	151.56	49.65	156.07
	b	20mm i/d	m	50.75	186.93	55.83	192.01
	c	25mm i/d	m	60.62	253.33	66.68	259.39
	d	32mm i/d	m	69.69	311.49	76.66	318.46
	e	40mm i/d	m	71.82	352.30	79.00	359.48
	f	50mm i/d	m	85.38	449.16	93.92	457.70
28.35	Providing, laying, jointing, fixing and testing H.D.P.E. / PVC Pipe lines, with G.I. specials such as tees, bends, sockets, elbows etc. testing inside building complete.						
A	H.D.P.E. / PVC pipe 10 Kgf/m						
	a	20mm i/d	m	31.93	71.98	35.12	75.17
	b	25mm i/d	m	39.33	107.99	43.26	111.92
	c	32mm i/d	m	46.14	149.13	50.75	153.74
	d	40mm i/d	m	47.74	205.09	52.51	209.86
	e	50mm i/d	m	57.91	301.08	63.70	306.87
B	H.D.P.E. / PVC pipe 6 Kgf/m						
	a	32mm i/d	m	46.14	114.80	50.75	119.41
	b	40mm i/d	m	47.74	152.16	52.51	156.93
	c	50mm i/d	m	57.91	219.55	63.70	225.34
C	H.D.P.E. / PVC pipe 4 Kgf/m						
	a	40mm i/d	m	47.74	124.98	52.51	129.75
	b	50mm i/d	m	57.91	173.77	63.70	179.56

Sr. No.	Description.		Unit	Plains		Sub-mountainous	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
28.36	Providing and laying, jointing, fixing, testing G.I. Pipe Lines B- Class, including cost of Specials such as tees, bends, sockets elbow etc., cutting, threading and testing in trenches in the ground complete.						
	a	15mm i/d	m	13.00	104.64	14.30	105.94
	b	20mm i/d	m	16.31	134.13	17.94	135.76
	c	25mm i/d	m	20.40	187.97	22.44	190.01
	d	32mm i/d	m	30.67	241.44	33.74	244.51
	e	40mm i/d	m	31.85	276.65	35.04	279.84
	f	50mm i/d	m	33.02	351.13	36.32	354.43
	g	65mm i/d	m	33.02	433.61	36.32	436.91
	h	80mm i/d	m	35.38	557.72	38.92	561.26
	i	100mm i/d	m	41.60	800.89	45.76	805.05
28.37	Providing and laying, jointing, fixing and testing H.D.P.E. / PVC Pipe Lines as per ISI, Specials tees, bends, sockets, elbow etc., cutting, testing including cost of specials in the trenches in the ground complete.						
A	H.D.P.E. / PVC pipe 10 Kg/m						
	a	20mm i/d	m	10.87	44.51	11.96	45.60
	b	25mm i/d	m	13.60	71.27	14.96	72.63
	c	32mm i/d	m	20.45	106.96	22.50	109.01
	d	40mm i/d	m	21.23	153.40	23.35	155.52
	e	50mm i/d	m	22.02	226.28	24.22	228.48
B	H.D.P.E. / PVC pipe 6 Kg/m						
	a	32mm i/d	m	20.45	78.12	22.50	80.17
	b	40mm i/d	m	21.23	108.94	23.35	111.06

Sr. No.	Description.		Unit	Plains		Sub-mountainous	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
	c	50mm i/d	m	22.02	157.79	24.22	159.99
C	H.D.P.E. / PVC pipe 4 Kgf/m						
	a	40mm i/d	m	21.23	86.11	23.35	88.23
	b	50mm i/d	m	22.02	119.35	24.22	121.55
28.38	<p>Providing and fixing Polyethelene-Aluminium-Polyethelene (PE-AL-PE) Composite Pressure Pipes conforming to IS - 15450 U.V. stabilised with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80°C including all special fittings of composite material (engineering plastic blend and brass inserts wherever required) e.g. elbows , tees, reducers, couplers & connectors etc. with clamps at 1.00 m spacing. This includes the costs of cutting chases and including testing of joints complete as per direction of the engineer in charge. Concealed work including cutting chases and making goo/d the wall etc.</p>						
	a	1216 (16 mm o/d) pipe	m	38.91	213.14	42.80	217.03
	b	1620 (20 mm o/d) pipe	m	38.91	253.19	42.80	257.08
	c	2025 (25 mm o/d) pipe	m	38.91	317.27	42.80	321.16
	d	2532 (32 mm o/d) pipe	m	38.91	417.40	42.80	421.29
	e	3240 (40 mm o/d) pipe	m	38.91	539.56	42.80	543.45
	f	4050 (50 mm o/d) pipe	m	38.91	709.77	42.80	713.66

Sr. No.	Description.	Unit	Plains		Sub-mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
28.39	Providing and fixing Polyethelene-Aluminium-Polyethelene (PE-AL-PE) Composite Pressure Pipes conforming to IS - 15450 - 2004 U.V. stabilised with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80° C including all special fittings of composite material (engineering plastic blend and brass inserts wherever required) e.g. elbows ,tees ,reducers, couplers & connectors etc. with trenching, refilling and testing of joints complete as per direction of the engineer in charge. External work					
	a 1216 (16 mm o/d) pipe	m	31.61	161.03	34.77	164.19
	b 1620 (20 mm o/d) pipe	m	31.61	190.79	34.77	193.95
	c 2025 (25 mm o/d) pipe	m	31.61	238.39	34.77	241.55
	d 2532 (32 mm o/d) pipe	m	31.61	312.77	34.77	315.93
	e 3240 (40 mm o/d) pipe	m	35.15	407.06	38.67	410.58
	f 4050 (50 mm o/d) pipe	m	35.15	533.51	38.67	537.03
28.40 A	Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes SDR 7.4 U V stabilized & anti - microbial fusion welded, having thermal stability for hot & cold water supply including all PP-R plain & brass threaded polypropylene random fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes the cost of cutting chases and making goo/d the same including testing of joints complete as per direction of Engineer in Chajge. (Concealed work including cutting chases and making goo/d the walls etc.).					
	a PN - 16 Pipe, 16mm o/d	m	38.91	102.99	42.80	106.88
	b PN - 16 Pipe, 20mm o/d	m	38.91	135.03	42.80	138.92
	c PN - 16 Pipe, 25mm o/d	m	38.91	189.10	42.80	192.99

Sr. No.	Description.		Unit	Plains		Sub-mountainous	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
	d	PN - 16 Pipe, 32mm o/d	m	38.91	283.23	42.80	287.12
	e	PN - 16 Pipe, 40mm o/d	m	38.91	427.41	42.80	431.30
	f	PN - 16 Pipe, 50mm o/d	m	38.91	605.64	42.80	609.53
28.40 B	Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes SDR 7.4 U V stabilized & anti - microbial fusion welded, having thermal stability for hot & cold water supply including all PP-R plain & brass threaded polypropylene random fittings i/c trenching .refilling & testing of joints complete as per direction of Engineer in Charge. External work						
	a	PN - 16 Pipe, 16mm o/d	m	31.61	79.21	34.77	82.37
	b	PN - 16 Pipe, 20mm o/d	m	31.61	103.02	34.77	106.18
	c	PN - 16 Pipe, 25mm o/d	m	31.61	143.18	34.77	146.34
	d	PN - 16 Pipe, 32mm o/d	m	31.61	213.10	34.77	216.26
	e	PN - 16 Pipe, 40mm o/d	m	31.61	320.21	34.77	323.37
	f	PN - 16 Pipe, 50mm o/d	m	31.61	452.61	34.77	455.77
28.41	Providing, fixing and jointing Union Couplings in G.I. Pipe lines.						
	a	15mm i/d G.I. Union	each	7.06	72.29	7.77	73.00
	b	20mm i/d G.I. Union	each	9.32	121.46	10.25	122.39
	c	25mm i/d G.I. Union	each	9.32	152.36	10.25	153.29
	d	32mm i/d G.I. Union	each	11.29	165.78	12.42	166.91
	e	40mm i/d G.I. Union	each	11.29	184.08	12.42	185.21
	f	50mm i/d G.I. Union	each	11.29	231.00	12.42	232.13
	g	65mm i/d G.I. Union	each	14.12	430.66	15.53	432.07
	h	80mm i/d G.I. Union	each	14.12	638.92	15.53	640.33

Sr. No.	Description.		Unit	Plains		Sub-mountainous	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
	i	100mm i/d G.I. Union	each	14.12	918.14	15.53	919.55
28.42	Providing and placing in position hand pump of approved quality for 40 mm diametre G.I. pipe complete with all accessories.		each	49.05	649.83	53.96	654.74
28.43	Providing water connection with grooved coupler and service coupler in Quick coupling pipe line complete in all respect.						
	a	In 50.80mm outside diametre pipe line	each	51.22	680.20	56.34	685.32
	b	In 63.50mm outside diametre pipe line	each	51.22	788.29	56.34	793.41
	c	In 76.20mm outside diametre pipe line	each	64.02	848.18	70.42	854.58
	d	In 101.60mm outside diametre pipe line	each	64.02	1017.37	70.42	1023.77
	e	In 152.40mm outside diametre pipe line	each	64.02	1437.61	70.42	1444.01
28.44	Provo/ding, fixing and jointing gun-metal peet valves (Heavy Pattern) with hand wheels, on G.I. Pipe lines laid in the ground or inside buildings including all carriages complete.						
	a	15mm i/d Gun Metal peet valve heavy pattern.	each	12.83	393.89	14.11	395.17
	b	20mm i/d Gun Metal peet valve heavy pattern.	each	15.68	534.06	17.25	535.63
	c	25mm i/d Gun Metal peet valve heavy pattern.	each	17.65	817.54	19.42	819.31
	d	32mm i/d Gun Metal peet valve heavy pattern.	each	20.17	1163.36	22.19	1165.38
	e	40mm i/d Gun Metal peet valve heavy pattern.	each	23.53	1540.91	25.88	1543.26
	f	50mm i/d Gun Metal peet valve heavy pattern.	each	31.37	2381.82	34.51	2384.96
	g	65mm i/d Gun Metal peet valve heavy pattern.	each	40.33	4080.96	44.36	4084.99

Sr. No.	Description.		Unit	Plains		Sub-mountainous	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
	h	80mm i/d Gun Metal peet valve heavy pattern.	each	47.05	5590.19	51.76	5594.90
	i	100mm i/d Gun Metal peet valve heavy pattern.	each	47.05	11153.92	51.76	11158.63
28.45	Providing, fixing & jointing screw down stop cocks of gun-metal or hard brass on G.I.Pipe lines laid in the ground or inside buildings including all carriages complete.						
	a	15mm i/d Screw down stop cock of gun metal or hard brass.	each	12.83	221.10	14.11	222.38
	b	20mm i/d Screw down stop cock of gun metal or hard brass.	each	15.68	313.21	17.25	314.78
	c	25mm i/d Screw down stop cock of gun metal or hard brass.	each	16.61	462.90	18.27	464.56
28.46	Blank						
28.47	Blank						
28.48	Blank						
28.49	Making connection with the existing G.I. branch main up to 40mm size including cutting and threading pipe etc. complete excluding cost of tee and ling screw, but including all carriages complete.		each	183.94	238.86	202.33	257.25
28.50	Providing, fixing & jointing water meter in G.I. pipe line including cutting and threading pipe and making long screw etc. complete including cost of G.I. Jam nut complete.						
	a	15mm size	each	192.07	907.28	211.28	926.49
	b	20mm size	each	192.07	1296.35	211.28	1315.56

Sr. No.	Description.		Unit	Plains		Sub-mountainous	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
	c	25mm size	each	192.07	1686.57	211.28	1705.78
28.51	Providing & fixing Cast Iron surface box for Peet Valve, Stop Cock including all carriages complete.		kg	7.80	59.30	8.58	60.08
28.52	Providing and filling sand grading as per specifications or fine grade around the various sizes of G.I. pipes in external work.		cum	26.30	265.36	28.93	267.99
28.53	Bailing out water from the trenches for making new connections in fully charged pipe lines including cleaning trimming and dressing the trenches to correct alignment and grade as required by the Engineer-in-charge. Size of the main with which connection is to be made.						
	a	Upto 200mm i/d	each connection.	832.64		915.90	
	b	Exceeding 200mm i/d but not exceeding 300mm i/d	each connection.	1040.81		1144.89	
	c	Exceeding 300mm i/d but not exceeding 450mm i/d	each connection.	1248.97		1373.87	
	d	Exceeding 450mm i/d but not exceeding 600mm i/d	each connection.	1561.23		1717.35	
28.54	Blank						
28.55	Disinfecting water mains by flushing with water containing bleaching powder at 0.5 gms per litre of water and cleaning the same with fresh water, operation to be repeated three times including getting the sample of water from the disinfected main tested in the municipal laboratory.						
	a	80mm i/d C.I. pipe.	m	3.66	3.82	4.03	4.19
	b	100mm i/d C.I. pipe.	m	4.80	5.03	5.28	5.51

Sr. No.	Description.	Unit	Plains		Sub-mountainous		
			Labour Rate	Through Rate	Labour Rate	Through Rate	
1	2	3	4	5	6	7	
	c	125mm i/d C.I. pipe.	m	5.96	6.31	6.56	6.91
	d	150mm i/d C.I. pipe.	m	7.10	7.63	7.81	8.34
	e	200mm i/d C.I. pipe.	m	9.39	10.30	10.33	11.24
	f	250mm i/d C.I. pipe.	m	11.69	13.13	12.86	14.30
	g	300mm i/d C.I. pipe.	m	12.83	14.89	14.11	16.17
	h	350mm i/d C.I. pipe.	m	13.97	16.77	15.37	18.17
	i	400mm i/d C.I. pipe.	m	15.12	18.80	16.63	20.31
	j	450mm i/d C.I. pipe.	m	16.25	20.90	17.88	22.53
	k	500mm i/d C.I. pipe.	m	17.42	23.16	19.16	24.90
	l	600mm i/d C.I. pipe.	m	19.70	27.95	21.67	29.92
28.56	Providing, laying, fixing and testing M.S. pipe lines and specials tees, bends, sockets, elbows etc. in trenches in the ground cutting, threading and testing etc. as per IS-1239 complete.						
	a	100mm internal diameter	m	42.68	799.65	46.95	803.92
	b	150mm internal diameter	m	64.02	1186.61	70.42	1193.01
28.57	Providing and placing in horizontal layers filtering mei/d screened, washed and cleaned as described below :-						
	(a)	Top layer :----- Fine sand screened, cleaned and washed and graded (effective size 0.2 to 0.4mm with uniformity coefficient 2.00 to 3.00) from Pathankot or other approved source.	cum	323.95	610.88	356.35	643.28

Sr. No.	Description.	Unit	Plains		Sub-mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
	(b) Second Layer :----- Coursed sand screened, cleaned and washed and graded from 3mm to 6mm (from Pathankot or approved equivalent quarry).	cum	349.98	751.54	384.98	786.54
	(c) Third Layer :----- Bajri screened, cleaned and washed and graded from 6mm to 20mm (from Pathankot or approved equivalent quarry).	cum	193.84	835.07	213.22	854.45
	(d) Fourth Layer :----- Bajri (Coursed) screened, cleaned and washed and graded from 20mm to 25mm (from Pathankot or approved equivalent quarry).	cum	193.84	816.41	213.22	835.79
	(e) Bottom Layer :----- Broken stone, screened, cleaned and washed and graded from 50mm to 75mm (from Pathankot or approved equivalent quarry).	cum	193.84	802.09	213.22	821.47
28.58	Painting G.I. Pipes and Specials with synthetic enamel Paint in all shades as per I.S.I. specification on existing or new work, two coats paints including cleaning rubbing surface, etc.					
	a 15mm & 20mm i/d G.I. Pipe	m	1.01	3.32	1.11	3.42
	b 25mm & 32mm i/d G.I. Pipe	m	1.31	4.32	1.44	4.45
	c 40mm & 50mm i/d G.I. Pipe	m	2.05	6.75	2.26	6.96
28.59	Repainting G.I. Pipes and Specials with synthetic enamel Paint in all shades as per I.S.I. specification on existing work, one coats paints including cleaning rubbing surface, etc.					

Sr. No.	Description.		Unit	Plains		Sub-mountainous	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
	a	15mm & 20mm i/d G.I. Pipe	m	0.64	1.67	0.70	1.73
	b	25mm & 32mm i/d G.I. Pipe	m	0.83	2.18	0.91	2.26
	c	40mm & 50mm i/d G.I. Pipe	m	1.30	3.41	1.43	3.54
28.60	Painting G.I. Pipes and Specials with Aluminium Paint in all shades as per I.S.I. specification on existing or new work, two coats paints including cleaning rubbing surface, etc.						
	a	15mm & 20mm i/d G.I. Pipe	m	1.23	2.67	1.35	2.79
	b	25mm & 32mm i/d G.I. Pipe	m	1.60	3.48	1.76	3.64
	c	40mm & 50mm i/d G.I. Pipe	m	2.50	5.43	2.75	5.68
28.61	Repainting G.I. Pipes and Specials with Aluminium Paint in all shades as per I.S.I. specification on existing work, one coats paints including cleaning rubbing surface, etc.						
	a	15mm & 20mm i/d G.I. Pipe	m	0.75	1.44	0.83	1.52
	b	25mm & 32mm i/d G.I. Pipe	m	0.97	1.87	1.07	1.97
	c	40mm & 50mm i/d G.I. Pipe	m	1.52	2.92	1.67	3.07
28.62	Cutting holes upto 23cm square through B.B. in mud walls for pipes, and making goo/d including repointing, replastering and finishing according to existing finish where required.						
	a	Through wall 11.43 cm thick	each	32.01		35.21	
	b	Through wall 22.86 cm thick	each	49.85		54.84	
	c	Through wall 34.29 cm thick	each	63.77		70.15	

Sr. No.	Description.	Unit	Plains		Sub-mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
	d	Through wall 45.72 cm thick	each	83.85		92.24
	e	Through wall 57.15 cm thick	each	102.85		113.14
	f	Through wall 68.58 cm thick	each	122.12		134.33
28.63	Cutting holes upto 23cm square thorough B.B. in cement walls or stone masonry wall in cement for pipes, and making goo/d including repointing, replastering and finishing according to existing finish where required.					
	a	Through wall 11.43 cm thick	each	68.06		74.87
	b	Through wall 22.86 cm thick	each	95.31		104.84
	c	Through wall 34.29 cm thick	each	123.45		135.80
	d	Through wall 45.72 cm thick	each	155.87		171.46
	e	Through wall 57.15 cm thick	each	168.02		184.82
	f	Through wall 68.58 cm thick	each	195.94		215.53
28.64	Cutting holes upto 23cm square for pipes in flooring and roofs of bricks, tiles with lime concrete or cement concrete and making good including repointing, replastering and colour or white washing where required.					
	a	Through floor or roof 7.5cm thick	each	35.05		38.56
	b	Through floor or roof 11.5cm thick	each	57.29		63.02
	c	Through floor or roof 15.00cm thick	each	69.02		75.92
	d	Through floor or roof 19.00cm thick	each	75.94		83.53
	e	Through floor or roof 22.50cm thick	each	77.16		84.88

Sr. No.	Description.	Unit	Plains		Sub-mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
28.65	Cutting holes upto 23cm square for pipes in floor and roofs of cement concrete, reinforced concrete or reinforced brick work and making goo/d including repointing, replastering, replacing bitumen and colour or white washing where required.					
	a Through floor or roof 7.5cm thick	each	32.95		36.25	
	b Through floor or roof 11.5cm thick	each	41.03		45.13	
	c Through floor or roof 15.00cm thick	each	62.52		68.77	
	d Through floor or roof 19.00cm thick	each	62.93		69.22	
	e Through floor or roof 22.50cm thick	each	64.15		70.57	
28.66	Dismantling lead Caulked Joints of cast iron Socketted Pipes, Valves and Specials by heating the Joints including the cost of Labour, Fuel and tools, etc., collecting the lead taken out from the joints and ride back the same to the Engineer-in-charge.					
	(a) 50mm i/d of pipe, valve or special	each	21.92		24.11	
	(b) 65mm i/d of pipe, valve or special	each	21.92		24.11	
	(c) 80mm i/d of pipe, valve or special	each	34.80		38.28	
	(d) 100mm i/d of pipe, valve or special	each	34.80		38.28	
	(e) 125mm i/d of pipe, valve or special	each	47.53		52.28	
	(f) 150mm i/d of pipe, valve or special	each	59.83		65.81	
	(g) 175mm i/d of pipe, valve or special	each	70.42		77.46	

Sr. No.	Description.	Unit	Plains		Sub-mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
	(h) 200mm i/d of pipe, valve or special	each	85.12		93.63	
	(i) 225mm i/d of pipe, valve or special	each	92.40		101.64	
	(j) 250mm i/d of pipe, valve or special	each	110.65		121.72	
	(k) 300mm i/d of pipe, valve or special	each	143.05		157.36	
	(l) 350mm i/d of pipe, valve or special	each	169.75		186.73	
	(m) 375mm i/d of pipe, valve or special	each	182.03		200.23	
	(n) 400mm i/d of pipe, valve or special	each	187.77		206.55	
	(o) 450mm i/d of pipe, valve or special	each	270.85		297.94	
	(p) 500mm i/d of pipe, valve or special	each	304.93		335.42	
	(q) 525mm i/d of pipe, valve or special	each	326.60		359.26	
	(r) 550mm i/d of pipe, valve or special	each	355.63		391.19	
	(s) 600mm i/d of pipe, valve or special	each	391.92		431.11	
28.67	Dismantling flanged Joints for Cast iron Pipes, Valves and specials including ride back of bolts, Nuts and washers to the Engineer-in-charge.					
	a 50mm, 65mm, 80mm, 100mm internal diametre of pipe, valves or special.	each	7.86		8.65	

Sr. No.	Description.		Unit	Plains		Sub-mountainous	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
	b	125mm, 150mm, 175mm, 200mm, 225mm and 250mm internal diametre of pipe, valves or special.	each	16.17		17.79	
	c	300mm, 350mm and 375mm internal diametre of pipe, valves or special.	each	49.05		53.96	
	d	400mm and 450mm internal diametre of pipe, valves or special.	each	54.44		59.88	
	e	500mm and 525mm internal diametre of pipe, valves or special.	each	61.32		67.45	
	f	550mm and 600mm internal diametre of pipe, valves or special.	each	75.12		82.63	
28.68	Taking out dismantled Cast Iron Socketted or Flanged Pipes valves and, specials etc. out side from the trenches and Stacking and ride back as desired by the Engineeer-in-charge.						
	a	50mm internal diametre of pipe.	m	4.77		5.25	
	b	65mm internal diametre of pipe.	m	5.01		5.51	
	c	80mm internal diametre of pipe.	m	5.97		6.57	
	d	100mm internal diametre of pipe.	m	7.31		8.04	
	e	125mm internal diametre of pipe.	m	7.31		8.04	
	f	150mm internal diametre of pipe.	m	8.10		8.91	
	g	175mm internal diametre of pipe.	m	10.01		11.01	

Sr. No.	Description.		Unit	Plains		Sub-mountainous	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
	h	200mm internal diametre of pipe.	m	10.80		11.88	
	i	225mm internal diametre of pipe.	m	12.71		13.98	
	j	250mm internal diametre of pipe.	m	15.24		16.76	
	k	300mm internal diametre of pipe.	m	18.11		19.92	
	l	350mm internal diametre of pipe.	m	21.42		23.56	
	m	375mm internal diametre of pipe.	m	24.74		27.21	
	n	400mm internal diametre of pipe.	m	28.57		31.43	
	o	450mm internal diametre of pipe.	m	29.74		32.71	
	p	500mm internal diametre of pipe.	m	34.97		38.47	
	q	525mm internal diametre of pipe.	m	39.02		42.92	
	r	550mm internal diametre of pipe.	m	39.02		42.92	
	s	600mm internal diametre of pipe.	m	53.30		58.63	
28.69	Dismantling sluice valves socketted or flanged including ride back as desired by Engineer-in Charge.						
	a	50mm internal diametre of valves	each	49.91		54.90	

Sr. No.	Description.			Unit	Plains		Sub-mountainous	
					Labour Rate	Through Rate	Labour Rate	Through Rate
1	2			3	4	5	6	7
	b	65mm	internal diameter of valves	each	53.44		58.78	
	c	80mm	internal diameter of valves	each	56.97		62.67	
	d	100mm	internal diameter of valves	each	54.75		60.23	
	e	125mm	internal diameter of valves	each	61.81		67.99	
	f	150mm	internal diameter of valves	each	64.68		71.15	
	g	175mm	internal diameter of valves.	each	73.30		80.63	
	h	200mm	internal diameter of valves.	each	79.70		87.67	
	i	225mm	internal diameter of valves	each	79.70		87.67	
	j	250mm	internal diameter of valves	each	79.70		87.67	
	k	300mm	internal diameter of valves	each	79.70		87.67	
	l	350mm	internal diameter of valves	each	79.70		87.67	
	m	375mm	internal diameter of valves.	each	79.70		87.67	
	n	400mm	internal diameter of valves.	each	79.70		87.67	
	o	450mm	internal diameter of valves.	each	79.70		87.67	
	p	500mm	internal diameter of valves.	each	79.70		87.67	
	q	525mm	internal diameter of valves	each	79.70		87.67	
	r	550mm	internal diameter of valves.	each	79.70		87.67	
	s	600mm	internal diameter of valves.	each	79.70		87.67	

Sr. No.	Description.	Unit	Plains		Sub-mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
28.70	Dismantling fire hydrants of all sizes, including dismantling the joints including ride back as desired by Engineer-in-Charge.	each	54.27		59.70	
28.71	Dismantling single or double air valves, all sizes, including dismantling joints including ride back as desired by Engineer-in-Charge.	each	49.05		53.96	
28.72	Dismantling cast Iron surface boxes for sluice valves and fire hydrants including ride back as desired by Engineer-in-Charge.	each	30.90		33.99	
28.73	Dismantling cast Iron single air valve surface boxes including ride back as desired by Engineer-in-Charge.	each	32.83		36.11	
28.74	Dismantling cast Iron double air valve surface boxes including ride back as desired by Engineer-in-Charge.	each	82.06		90.27	
28.75	Dismantling, disjoining, removal of G.I. pipe lines, specials, valves and fittings including ride back as desired by Engineer-in-Charge.					
	a 15mm internal diameter pipe line.	m	9.91		10.90	
	b 20mm internal diameter pipe line.	m	11.72		12.89	
	c 25mm internal diameter pipe line.	m	15.17		16.69	
	d 32mm internal diameter pipe line.	m	19.82		21.80	
	e 40mm internal diameter pipe line.	m	22.64		24.90	
	f 50mm internal diameter pipe line.	m	22.64		24.90	

Sr. No.	Description.		Unit	Plains		Sub-mountainous	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
	g	65mm internal diameter pipe line.	m	24.52		26.97	
	h	80mm internal diameter pipe line.	m	26.57		29.23	
	i	100mm internal diameter pipe line.	m	30.66		33.73	
28.76	Construction of Gravel Pit outside the Pump Chamber.		each	3065.96	9045.71	3372.56	9352.31
28.77	Construction of V-Notch haudi.		each	3524.83	10245.95	3877.31	10598.43
28.78	Construction of masonry Sluice Valve Chamber complete in all respects as per standard drawing.						
	a	Size 0.6 m. x 0.6 m.	each	536.09	2868.98	589.70	2922.59
	b	Size 0.9 m. x 0.9 m.	each	767.39	3983.56	844.13	4060.30