

## PREFACE TO CHAPTER 28, 29 AND 30 OF CSR

1 The Common Schedule of Rates was last revised and printed in the year 2010. The prices of labour and materials have registered substantial increase since then. Besides the cost, there has been spurt of new construction materials and addition of new items in the market. This has necessitated revision of existing CSR to include the above changes.

2 Chapters 28, 29 & 30 of the CSR-2010 deals with the works relating to the Water Supply, Sewerage and Sanitation Engineering. Due to availability of new sanitary items in the market, and increase in labour cost, it has become an absolute necessity to review the above Chapters. Accordingly, these Chapters have been reviewed and prepared incorporating all new items available in the market.

3 Although, this CSR (Chapter 28, 29 & 30) contains most of the items of the CSR-2010, the nomenclature of many items have been reviewed and updated wherever found essential. Items which are either obsolete or are not in use have been deleted. Several new items, based on new materials and new technologies being used in the Public Health Engineering, have also been included in this Document. The analysis of the existing items have been updated in conformity with execution of work.

4 The 'Basic Rates' taken in this CSR (Chapter 28, 29 & 30) are the prevailing market rates (with discounts as existing during the period from Jan 14 to Mar 14). Further, the rates are FOR at destination (except Cement, Steel, Sand, Bajri, Bricks etc.) and are inclusive of labour cess, Excise Duty (wherever applicable) and all other taxes prevailing in the State of Punjab.

All chapter related to civil works was approved by direction committee of Chief Engineer's and issued by Chief Engineer (H) PWD B&R Patiala vide their memo No. 6335 – 6417 dated 11-12-13. Accordingly basic rate of sand , Bajri Bricks, Cement, Steel Considered as per annexure - A and apply the same Premium as input for calculating the similar Component in Ch. 28,29 & 30 Subject to note – 1 and Note – 2 given as under :-

**Note :- 1.** Average rates have been taken for quarry material in CSR. However rates from the quarry having cheapest landed rates at particular location shall apply and the rates shall be correspondingly adjusted by giving a (+) or (-) loading to the average rates for the respective items. Rates of material at various quarries are attached at Annexure-I.

**Note :- 2.** Average rates have been taken for Bricks/Tiles in CSR. However rates for the respective district shall apply and the rates shall be correspondingly

adjusted by giving a (+) or (-) loading to the average rates for the respective items. Various distt. Rates of Bricks and Tiles are attached at Annexure-I.

All other clarification and Note given in preface of CSR-2010 are applicable to revised ch 28,29 & 30

5 The rates in the CSR (Chapter 28, 29 & 30) are only for preparation of Estimates. However, while allotting the work, the Engineer-in-Charge will personally verify the rates of all the items in the DNIT from the market, and the lowest rates which are prevailing at the time of allotment including discounts should only be considered.

6. It is once again reiterated that the onus lies on the Acceptance Officer of the Contract to verify the exact rates of items (prevailing at the time of allotment of Work). The rates vary on number of factors viz quantity of the total order, location of site of work etc. etc.

7 The labour rates taken in this CSR (Chapter 28,29 &30) are the minimum wages fixed by the Govt of Punjab as on Sep 13.

8 Although, due care has been taken to print the CSR (Chapter 28,29 &30) as correctly as possible. However, possibility of some errors having crept in inadvertently cannot be ruled out. Accordingly, any error or omission noticed, should be brought to the notice of the Chief Engineer (South), Water Supply and Sanitation Department, Patiala, for necessary rectification, if deemed necessary.

9 Any suggestion to improve the Document are solicited.

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**PREMIUM LIST ON CSR -2010 APPROVED BY DIRECTION COMMITTEE  
OF CHIEF ENGINEERS IN ITS MEETING HELD ON 11.12.2013**

**ANNEXURE-A**

**The Ceiling Premium on through rates are based on the following basic rates of material at source including VAT but excluding contractor's profit and labour cess**

1	Mild steel (Bars of all sizes)		
2	Tor steel (all sizes)/TMT (all sizes Fe.415)	Rs. 43000/-	Per M.T.
3	Tor steel (all sizes)/TMT (all sizes Fe.500)	Rs. 43000/-	Per M.T.
4	Tor steel (all sizes)/TMT (all sizes Fe.550)	Rs. 44000/-	Per M.T.
5	Structural Steel	Rs. 45500/-	Per M.T.
6	Cement including cost of bag	Rs. 45000/-	Per M.T.
7	Bitumen 25/85 grade for building works	Rs. 285/-	Per bag
8	Bricks first class at kiln site (Average rates of all distt.)	Rs. 68244/-	Per M.T.
9	Brick Tiles first class at kiln site (Average rates of all distt.)	Rs. 4560/-	Per 1000nos
	<b>Average rates of material of all the quarries</b>	Rs. 4760/-	Per 1000nos
10	Crushed Bajri 13.2mm		
11	Crushed Bajri 11.2mm	Rs. 465.55	per cum
12	Water born Bajri 13.2mm	Rs. 432.80	per cum
13	Water born Bajri 11.2mm	Rs. 385.15	per cum
14	Water born Bajri 6mm	Rs. 393.58	per cum
15	Stone metal 90-45mm	Rs. 349.30	per cum
16	Stone metal 40-63mm	Rs. 376.17	per cum
17	Stone metal 22.4 - 53mm	Rs. 403.63	per cum
18	Stone metal 25mm	Rs. 414.48	per cum
19	Stone metal 40mm	Rs. 395.55	per cum
20	Stone boulders 3.6 kg - 18 kg	Rs. 374.21	per cum
21	Stone boulders 18kg - 40kg	Rs. 304.62	per cum
22	Stone boulders above 40kg	Rs. 380.79	per cum
23	Gravel 75-25mm	Rs. 340.99	per cum
24	GSB G-1 and G-II	Rs. 299.15	per cum
25	Course sand	Rs. 270.91	per cum
		Rs. 396.42	per cum

**Note 1:** Average rates have been taken for quarry material in CSR. However rates from the quarry having cheapest landed rates at particular location shall apply and the rates shall be correspondingly adjusted by giving a (+) or (-) loading to the average rates for the respective items. Rates of material at various quarries are attached at Annexure-I.

**Note 2:** Average rates have been taken for Bricks/Tiles in CSR. However rates for the respective district shall apply and the rates shall be correspondingly adjusted by giving a (+) or (-) loading to the average rates for the respective items. Various distt. rates of Bricks and Tiles are attached at Annexure-I

11.12.2013

**PREMIUM LIST ON CSR -2010 APPROVED BY DIRECTION COMMITTEE  
OF CHIEF ENGINEERS IN ITS MEETING HELD ON 11.12.2013**

Rates in Rs. Per Cubic Metre									
Sr. No.	Description	Rates of material at various quarries including VAT but excluding contractor's profit and labour cess							Annexure-I
		Lohand Khand	Bharatgarh (Ropar)	Talwara & Kumahi Devi	Mirthal	Damtal	Pathankot	Haryana	
1	2	3	4	5	6	7	8	9	
1	<b>CRUSHED BAJRI</b>								
i	(12MM)/13.2MM	--	739.07	--	420.89	377.04	406.59	384.13	
ii	(10MM)/11.2MM	--	724.85	--	377.50	370.90	345.48	345.48	
2	<b>WATER BORNE BAJRI</b>								
i	(12MM)/13.2MM	--	608.40	--					
ii	(10MM)/11.2MM	--	616.98	--	359.90	309.61	323.91	323.91	
iii	(6mm)	--		--	364.18	323.91	329.91	329.91	
3	<b>STONE METAL</b>								
i	(53mm-22.4mm) hand broken crushed grade-III	--	736.79	--	359.90	313.51	327.77	334.42	
ii	(63mm-45mm) hand broken crushed grade-II	--	726.05	--	349.14	300.97	317.06	324.92	
iii	(90mm-40mm) hand broken crushed grade-I	--	643.80	--	336.34	283.97	302.06	314.68	
4	<b>SCREENING</b>								
i	12.5/13.2mm type 'A'	--	739.07	--	420.89	377.04	406.59	384.13	
ii	10mm/11.2mm type 'b'	--	724.85	--	377.50	370.90	345.48	345.45	
5	<b>BOULDERS</b>								
i	3.6 kg to 18 kg	430.31	--	301.62	266.38	242.16	290.97	296.26	
ii	18 kg to 40 kg	489.26	479.96	--	335.32	279.43	316.58	384.20	
iii	Above 40kg	--	--	--	357.67	305.51	316.58	384.20	
6	Gravel (75mm to 25mm)	--	342.77	--	287.47	290.59	287.47	287.47	
7	Stone Metal 40mm	--	575.40	--	388.41	281.21	310.63	315.41	
8	Stone Metal 25mm	--	670.11	--	388.41	306.55	278.48	334.19	
9	GSB course Grade-I&II	329.36	--	--	266.02	258.42	250.37	250.37	
10	Coarse Sand	--	521.60	--	365.12	365.12	365.12	365.12	

Rates of Bricks/tiles in various Distt at Kiln site including VAT but excluding contractor's profit and labour cess					
Sr. No	Name of District	Annexure-I			
		Bricks	Unit	Tiles	Unit
1	2	3	4	5	6
1	Amritsar, TarnTaran, Gurdaspur and Pathankot	5000/-	1000 Nos.	5200/-	1000 Nos.
2	Ferozepur and Faridkot	4500/-	1000 Nos.	4700/-	1000 Nos.
3	Moga, Ludhiana, Jalandhar and Kapurthala	4700/-	1000 Nos.	4900/-	1000 Nos.
4	Shri Muktsar Sahib and Fazilka	4400/-	1000 Nos.	4600/-	1000 Nos.
5	Patiala	4600/-	1000 Nos.	4800/-	1000 Nos.
6	Sangrur, Barnala and Bathinda	4200/-	1000 Nos.	4400/-	1000 Nos.
7	Manasa	4100/-	1000 Nos.	4300/-	1000 Nos.
8	Ropar, Shahid Bhagat Singh Nagar, Hoshiarpur and Fatehgarh Sahib	4600/-	1000 Nos.	4800/-	1000 Nos.
9	Mohali and Chandigarh	4900/-	1000 Nos.	5100/-	1000 Nos.



# CHAPTER-28

## WATER SUPPLY

**MATERIAL RATE LIST FOR CHAPTER- 28**

Sr. No.		Item Description	CSR Item No.	Make	Unit	Basic Rate	Less %	Basic Rate
1	a	C.I LA Pipe 80mm	28.7 A	CHANDRANCHA L	Meter	795	-6%	842.70
	b	C.I LA Pipe 100mm				979	-6%	1037.74
	c	C.I LA Pipe 150mm				1569	-6%	1663.14
	d	C.I LA Pipe 200mm				2297	-6%	2434.82
	e	C.I LA Pipe 250mm				3096	-6%	3281.76
	f	C.I LA Pipe 300mm				3932	-6%	4167.92
	g	C.I LA Pipe 350mm				5780	-6%	6126.80
	h	C.I LA Pipe 400mm				7034	-6%	7456.04
	i	C.I LA Pipe 450mm				8481	-6%	8989.86
	j	C.I LA Pipe 500mm				9929	-6%	10524.74
	k	C.I LA Pipe 600mm				13232	-6%	14025.92
2	a	D.I K7 Pipe 80mm	28.7 B (A)	ELECTROSTEEL			710.00	
	b	D.I K7 Pipe 100mm			882.00	5%	837.90	
	c	D.I K7 Pipe 150mm			1293.00	5%	1228.35	
	d	D.I K7 Pipe 200mm			1621.00	5%	1539.95	
	e	D.I K7 Pipe 250mm			2159.00	5%	2051.05	
	f	D.I K7 Pipe 300mm			2742.00	5%	2604.90	
	g	D.I K7 Pipe 350mm			3158.00	5%	3000.10	
	h	D.I K7 Pipe 400mm			3816.00	5%	3625.20	
	i	D.I K7 Pipe 450mm			4498.00	5%	4273.10	
	j	D.I K7 Pipe 500mm			5259.00	5%	4996.05	
	k	D.I K7 Pipe 600mm			6959.00	5%	6611.05	
	l	D.I K7 Pipe 700mm			9733.00	5%	9246.35	
	m	D.I K7 Pipe 750mm			11189.00	5%	10629.55	
	n	D.I K7 Pipe 800mm			12564.00	5%	11935.80	
	o	D.I K7 Pipe 900mm			15232.00	5%	14470.40	
	p	D.I K7 Pipe 1000mm			18223.00	5%	17311.85	
3	a	D.I K9 Pipe 80mm	28.7 B (B)	ELECTROSTEEL			745.00	
	b	D.I K9 Pipe 100mm			1021.00	5%	969.95	
	c	D.I K9 Pipe 150mm			1452.00	5%	1379.40	
	d	D.I K9 Pipe 200mm			1903.00	5%	1807.85	
	e	D.I K9 Pipe 250mm			2554.00	5%	2426.30	
	f	D.I K9 Pipe 300mm			3247.00	5%	3084.65	
	g	D.I K9 Pipe 350mm			3712.00	5%	3526.40	
	h	D.I K9 Pipe 400mm			4475.00	5%	4251.25	
	i	D.I K9 Pipe 450mm			5321.00	5%	5054.95	

Sr. No.		Item Description	CSR Item No.	Make	Unit	Basic Rate	Less %	Basic Rate
	j	D.I K9 Pipe 500mm				6304.00	5%	5988.80
	k	D.I K9 Pipe 600mm				8189.00	5%	7779.55
	l	D.I K9 Pipe 700mm				10527.00	5%	10000.65
	m	D.I K9 Pipe 750mm				12072.00	5%	11468.40
	n	D.I K9 Pipe 800mm				13339.00	5%	12672.05
	o	D.I K9 Pipe 900mm				16170.00	5%	15361.50
	p	D.I K9 Pipe 1000mm				19334.00	5%	18367.30
4		AC Pipe IS : 1592-2003 Class-15	28.9	Mohit	Meter			
	a	80 mm				85	10%	76.50
	b	100 mm				115	10%	103.50
	c	150 mm				240	10%	216.00
	d	200 mm				430	10%	387.00
	e	250 mm				568	0%	568.00
5		C.I D-Joint	28.10		Each			
	a	80 mm				480	50%	240.00
	b	100 mm				616	50%	308.00
	c	150 mm				1100	50%	550.00
	d	200 mm				1458	50%	729.00
	e	250 mm				2060	50%	1030.00
6		uPVC Pipe as per ISI-4985	28.13 A	Supreme	Meter			
	1	2.5 Kg/cm2						
	i	90 mm				170	50%	84.75
	ii	110 mm				246	50%	122.92
	lii	160 mm				509	50%	254.67
	iv	200 mm				805	50%	402.42
	v	250 mm				1259	50%	629.67
	2	4 Kg/cm2	28.13 A	Supreme	Meter			
	i	63 mm				129	50%	64.67
	ii	75 mm				182	50%	91.08
	iii	90 mm				247	50%	123.50
	iv	110 mm				364	50%	182.00
	v	160 mm				788	50%	393.83
	vi	200 mm				1266	50%	633.00
	vii	250 mm				1978	50%	988.92
	3	6 Kg/cm2	28.11 (B),28.12	Supreme	Meter			



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Sr. No.		Item Description	CSR Item No.	Make	Unit	Basic Rate	Less %	Basic Rate
	i	40 mm				76	50%	37.83
	ii	50 mm				117	50%	58.33
	iii	63 mm				187	50%	93.58
	iv	75 mm				261	50%	130.67
	v	90 mm				362	50%	180.92
	vi	110 mm				522	50%	261.17
	vii	140 mm				903	50%	451.67
	viii	160 mm				1115	50%	557.25
	ix	180 mm				1487	50%	743.25
	x	200 mm				1858	50%	928.92
	xi	225 mm				2352	50%	1176.00
	xii	250 mm				2891	50%	1445.25
	4	<b>8 Kg/cm<sup>2</sup></b>	28.11 (B),28.12	Supreme				
	i	63 mm				245	50%	122.42
	ii	75 mm				355	50%	177.33
	iii	90 mm				496	50%	248.08
	iv	110 mm				742	50%	370.83
	v	160 mm				1598	50%	799.17
	vi	200 mm				2482	50%	1241.08
	vii	250 mm				3915	50%	1957.67
	5	<b>10 Kg/cm<sup>2</sup></b>	28.11(A), 28.12,28.13 (A)	Supreme	Meter			
	i	20 mm				32	50%	16.17
	ii	25 mm				50	50%	25.08
	iii	32 mm				83	50%	41.25
	iv	40 mm				124	50%	61.92
	v	50 mm				193	50%	96.33
	vi	63 mm				285	50%	142.50
	vii	75 mm				407	50%	203.42
	viii	90 mm				568	50%	284.00
	ix	110 mm				848	50%	423.75
	x	160 mm				1787	50%	893.33
	xi	200 mm				2899	50%	1449.58
	xii	250 mm				4648	50%	2324.08
7		<b>uPVC Pipe as per ISI-4985</b>	28.13 (B)	KISAN	Meter			
	1	<b>2.5 Kg/cm<sup>2</sup></b>						
	i	90 mm				115	42%	66.62

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Sr. No.	Item Description	CSR Item No.	Make	Unit	Basic Rate	Less %	Basic Rate
	ii 110 mm				175	42%	101.44
	iii 140 mm				260	42%	150.97
	iv 160 mm				357	42%	207.00
	v 180 mm				438	42%	253.88
	vi 200 mm				582	42%	337.40
	vii 225 mm				706	42%	409.52
	viii 250 mm				882	42%	511.75
2	<b>4 Kg/cm<sup>2</sup></b>		KISAN	Meter			
	i 63 mm				90	42%	52.27
	ii 75 mm				123	42%	71.61
	iii 90 mm				180	42%	104.36
	iv 110 mm				254	42%	147.10
	v 140 mm				423	42%	245.47
	vi 160 mm				549	42%	318.64
	vii 180 mm				676	42%	392.34
	viii 200 mm				883	42%	512.00
	ix 225 mm				1128	42%	654.38
	x 250 mm				1376	42%	797.98
3	<b>6 Kg/cm<sup>2</sup></b>		KISAN	Meter			
	i 63 mm				124	42%	71.70
	ii 75 mm				179	42%	103.54
	iii 90 mm				252	42%	146.42
	iv 110 mm				376	42%	218.23
	v 140 mm				597	42%	346.38
	vi 160 mm				785	42%	455.09
	vii 180 mm				1000	42%	579.75
	viii 200 mm				1322	42%	766.75
	ix 225 mm				1623	42%	941.28
	x 250 mm				2065	42%	1197.42
4	<b>8 Kg/cm<sup>2</sup></b>		KISAN	Meter			
	i 63 mm				163	42%	94.72
	ii 75 mm				238	42%	138.22
	iii 90 mm				339	42%	196.48
	iv 110 mm				514	42%	298.14
	v 140 mm				830	42%	481.15
	vi 160 mm				1083	42%	627.99
	vii 180 mm				1357	42%	787.32
	viii 200 mm				1752	42%	1016.09

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Sr. No.		Item Description	CSR Item No.	Make	Unit	Basic Rate	Less %	Basic Rate
	ix	225 mm				2211	42%	1282.11
	x	250 mm				2762	42%	1602.00
	5	<b>10 Kg/cm2</b>		KISAN	Meter			
	i	63 mm				204	42%	118.43
	ii	75 mm				282	42%	163.56
	iii	90 mm				404	42%	234.12
	iv	110 mm				619	42%	358.78
	v	140 mm				970	42%	562.49
	vi	160 mm				1294	42%	750.48
	vii	180 mm				1635	42%	948.20
	viii	200 mm				2086	42%	1209.74
	ix	225 mm				2686	42%	1557.81
	x	250 mm				3353	42%	1945.02
8		<b>H.D.P.E. Pipes as per ISI - 4984-1995 PE-63</b>	28.14	Dura-Line	Meter			
	1	<b>4 Kg/cm2</b>						
	i	90 mm O/d				235.00	0%	235.00
	ii	110 mm O/d				352.00	0%	352.00
	2	<b>6 Kg/cm2</b>						
	i	90 mm O/d				332.00	0%	332.00
	ii	110 mm O/d				494.00	0%	494.00
9		<b>H.D.P.E. Pipes as per ISI - 4984 PE 80</b>	28.15	Dura-Line	Meter			
	1	<b>4 Kg/cm2</b>						
	i	50 mm O/d				74.00	0%	74.00
	ii	63 mm O/d				101	0%	101.00
	iii	75 mm O/d				138	0%	138.00
	iv	90 mm O/d				200	0%	200.00
	v	110 mm O/d				298	0%	298.00
	vi	125 mm O/d				383	0%	383.00
	vii	140 mm O/d				474	0%	474.00
	viii	160 mm O/d				621	0%	621.00
	ix	180 mm O/d				783	0%	783.00
	x	200 mm O/d				958	0%	958.00
	xi	225 mm O/d				1216	0%	1216.00
	xii	250 mm O/d				1504	0%	1504.00
	xiii	280 mm O/d				1873	0%	1873.00
	xiv	315 mm O/d				2382	0%	2382.00
	xv	355 mm O/d				3007	0%	3007.00

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Sr. No.		Item Description	CSR Item No.	Make	Unit	Basic Rate	Less %	Basic Rate
	xvi	400 mm O/d				3898	0%	3898.00
	xvii	450 mm O/d				4949	0%	4949.00
	xviii	500 mm O/d				6084	0%	6084.00
	xix	560 mm O/d				7631	0%	7631.00
	xx	630 mm O/d				9651	0%	9651.00
	xxi	710 mm O/d				12264	0%	12264.00
	xxii	800 mm O/d				15525	0%	15525.00
	xxiii	900 mm O/d				19670	0%	19670.00
	xxiv	1000 mm O/d				24222	0%	24222.00
	2	<b>6 Kg/cm2</b>	28.15	Dura-Line	Meter			
	i	40 mm O/d				58.00	0%	58.00
	ii	50 mm O/d				90.00	0%	90.00
	iii	63 mm O/d				140	0%	140.00
	iv	75 mm O/d				199	0%	199.00
	v	90 mm O/d				283	0%	283.00
	vi	110 mm O/d				425	0%	425.00
	vii	125 mm O/d				544	0%	544.00
	viii	140 mm O/d				681	0%	681.00
	ix	160 mm O/d				888	0%	888.00
	x	180 mm O/d				1118	0%	1118.00
	xi	200 mm O/d				1385	0%	1385.00
	xii	225 mm O/d				1745	0%	1745.00
	xiii	250 mm O/d				2154	0%	2154.00
	xiv	280 mm O/d				2693	0%	2693.00
	xv	315 mm O/d				3409	0%	3409.00
	xvi	355 mm O/d				4319	0%	4319.00
	xvii	400 mm O/d				5613	0%	5613.00
	xviii	450 mm O/d				7088	0%	7088.00
	xix	500 mm O/d				8761	0%	8761.00
	xx	560 mm O/d				10952	0%	10952.00
	xxi	630 mm O/d				13869	0%	13869.00
	xxii	710 mm O/d				17600	0%	17600.00
	xxiii	800 mm O/d				22325	0%	22325.00
	xxiv	900 mm O/d				28279	0%	28279.00
	xxv	1000 mm O/d				34937	0%	34937.00
	3	<b>8 Kg/cm2</b>	28.15	Dura-Line	Meter			
	i	32 mm O/d				47.00	0%	47.00
	ii	40 mm O/d				73.00	0%	73.00

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Sr. No.		Item Description	CSR Item No.	Make	Unit	Basic Rate	Less %	Basic Rate
	iii	50 mm O/d				115.00	0%	115.00
	iv	63 mm O/d				178	0%	178.00
	v	75 mm O/d				252	0%	252.00
	vi	90 mm O/d				361	0%	361.00
	vii	110 mm O/d				540	0%	540.00
	viii	125 mm O/d				694	0%	694.00
	ix	140 mm O/d				868	0%	868.00
	x	160 mm O/d				1131	0%	1131.00
	xi	180 mm O/d				1434	0%	1434.00
	xii	200 mm O/d				1767	0%	1767.00
	xiii	225 mm O/d				2229	0%	2229.00
	xiv	250 mm O/d				2757	0%	2757.00
	xv	280 mm O/d				3450	0%	3450.00
	xvi	315 mm O/d				4368	0%	4368.00
	xvii	355 mm O/d				5531	0%	5531.00
	xviii	400 mm O/d				7183	0%	7183.00
	xix	450 mm O/d				9090	0%	9090.00
	xx	500 mm O/d				11207	0%	11207.00
	xxi	560 mm O/d				14044	0%	14044.00
	xxii	630 mm O/d				17776	0%	17776.00
	xxiii	710 mm O/d				22543	0%	22543.00
	4	10 Kg/cm2	28.15	Dura-Line	Meter			
	i	25 mm O/d				35.00	0%	35.00
	ii	32 mm O/d				57.00	0%	57.00
	iii	40 mm O/d				88.00	0%	88.00
	iv	50 mm O/d				136.00	0%	136.00
	v	63 mm O/d				215	0%	215.00
	vi	75 mm O/d				303	0%	303.00
	vii	90 mm O/d				433	0%	433.00
	viii	110 mm O/d				642	0%	642.00
	ix	125 mm O/d				832	0%	832.00
	x	140 mm O/d				1044	0%	1044.00
	xi	160 mm O/d				1361	0%	1361.00
	xii	180 mm O/d				1719	0%	1719.00
	xiii	200 mm O/d				2119	0%	2119.00
	xiv	225 mm O/d				2682	0%	2682.00
	xv	250 mm O/d				3310	0%	3310.00
	xvi	280 mm O/d				4148	0%	4148.00

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Sr. No.		Item Description	CSR Item No.	Make	Unit	Basic Rate	Less %	Basic Rate
	xvii	315 mm O/d				5247	0%	5247.00
	xviii	355 mm O/d				6657	0%	6657.00
	xix	400 mm O/d				8625	0%	8625.00
	xx	450 mm O/d				10926	0%	10926.00
	xxi	500 mm O/d				13473	0%	13473.00
	xxii	560 mm O/d				16906	0%	16906.00
	xxiii	630 mm O/d				21359	0%	21359.00
10		<b>H.D.P.E. Pipes as per ISI - 4984 PE 100</b>	28.16	Dura-Line	Meter			
	A	<b>6 Kg/cm2</b>						
	a	50 mm O/d				75	0%	75.00
	b	63 mm O/d				117	0%	117.00
	c	75 mm O/d				168	0%	168.00
	d	90 mm O/d				236	0%	236.00
	e	110 mm O/d				347	0%	347.00
	f	125 mm O/d				449	0%	449.00
	g	140 mm O/d				565	0%	565.00
	h	160 mm O/d				735	0%	735.00
	i	180 mm O/d				927	0%	927.00
	j	200 mm O/d				1142	0%	1142.00
	k	225 mm O/d				1451	0%	1451.00
	l	250 mm O/d				1781	0%	1781.00
	m	280 mm O/d				2234	0%	2234.00
	n	315 mm O/d				2829	0%	2829.00
	o	355 mm O/d				3585	0%	3585.00
	p	400 mm O/d				4636	0%	4636.00
	q	450 mm O/d				5865	0%	5865.00
	r	500 mm O/d				7251	0%	7251.00
	s	560 mm O/d				9078	0%	9078.00
	t	630 mm O/d				11491	0%	11491.00
	u	710 mm O/d				14560	0%	14560.00
	v	800 mm O/d				18477	0%	18477.00
	w	900 mm O/d				23407	0%	23407.00
	x	1000 mm O/d				28863	0%	28863.00
	B	<b>8 Kg/cm2</b>	28.16	Dura-Line	Meter			
	a	40 mm O/d				61	0%	61.00
	b	50 mm O/d				94	0%	94.00
	c	63 mm O/d				150	0%	150.00
	d	75 mm O/d				211	0%	211.00

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Sr. No.	Item Description	CSR Item No.	Make	Unit	Basic Rate	Less %	Basic Rate
	e	90 mm O/d			302	0%	302.00
	f	110 mm O/d			449	0%	449.00
	g	125 mm O/d			579	0%	579.00
	h	140 mm O/d			726	0%	726.00
	i	160 mm O/d			946	0%	946.00
	j	180 mm O/d			1195	0%	1195.00
	k	200 mm O/d			1472	0%	1472.00
	l	225 mm O/d			1865	0%	1865.00
	m	250 mm O/d			2297	0%	2297.00
	n	280 mm O/d			2881	0%	2881.00
	o	315 mm O/d			3643	0%	3643.00
	p	355 mm O/d			4611	0%	4611.00
	q	400 mm O/d			5975	0%	5975.00
	r	450 mm O/d			7568	0%	7568.00
	s	500 mm O/d			9335	0%	9335.00
	t	560 mm O/d			11720	0%	11720.00
	u	630 mm O/d			14826	0%	14826.00
	v	710 mm O/d			18787	0%	18787.00
	w	800 mm O/d			23855	0%	23855.00
	x	900 mm O/d			30198	0%	30198.00
	C	10 Kg/cm <sup>2</sup>	28.16	Dura-Line	Meter		
	a	32 mm O/d			48.00	0%	48.00
	b	40 mm O/d			74.00	0%	74.00
	c	50 mm O/d			114.00	0%	114.00
	d	63 mm O/d			181	0%	181.00
	e	75 mm O/d			256	0%	256.00
	f	90 mm O/d			367	0%	367.00
	g	110 mm O/d			543	0%	543.00
	h	125 mm O/d			699	0%	699.00
	i	140 mm O/d			875	0%	875.00
	j	160 mm O/d			1141	0%	1141.00
	k	180 mm O/d			1448	0%	1448.00
	l	200 mm O/d			1786	0%	1786.00
	m	225 mm O/d			2254	0%	2254.00
	n	250 mm O/d			2776	0%	2776.00
	o	280 mm O/d			3477	0%	3477.00
	p	315 mm O/d			4389	0%	4389.00
	q	355 mm O/d			5602	0%	5602.00

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Sr. No.		Item Description	CSR Item No.	Make	Unit	Basic Rate	Less %	Basic Rate
	r	400 mm O/d				7257	0%	7257.00
	s	450 mm O/d				9154	0%	9154.00
	t	500 mm O/d				11310	0%	11310.00
	u	560 mm O/d				14169	0%	14169.00
	v	630 mm O/d				17932	0%	17932.00
	w	710 mm O/d				22796	0%	22796.00
	x	800 mm O/d				28923	0%	28923.00
11		<b>C-PVC Pipe as per IS 15778</b>	28.19,28.20 , 28.26	Supreme	Meter			
	a	SDR 11 CPVC pipes 16mm o/d				105.20	50%	52.60
	b	SDR 11 CPVC pipes 20mm o/d				158.80	50%	79.40
	c	CPVC SDR 11 25MM O/D				234.20	50%	117.10
	d	CPVC SDR 11 PIPE 32mm o/d				353.30	50%	176.65
	e	CPVC SDR 11 PIPE 40mm o/d				478.30	50%	239.15
	f	CPVC SDR 11 PIPE 50mm o/d				801.85	50%	400.93
	g	Schd 40 pipe, 65 mm i/d				1417.10	50%	708.55
	h	Schd 40 pipe, 80 mm i/d				1841.85	50%	920.93
	i	Schd 40 pipe, 100 mm i/d				2619.85	50%	1309.93
12		<b>C.I Double Flanged Pipes IS 7181 class -B</b>	28.21	Chandranchal	Meter			
	a	80 mm i/d				1217	-6%	1290.02
	b	100 mm i/d				1532	-6%	1623.92
	c	125 mm i/d				2003	-6%	2123.18
	d	150 mm i/d				2513	-6%	2663.78
	e	200 mm i/d				3613	-6%	3829.78
	f	250 mm i/d				4889	-6%	5182.34
	g	300 mm i/d				6303	-6%	6681.18
	h	350 mm i/d				8306	-6%	8804.36
	i	400 mm i/d				10131	-6%	10738.86
	j	450 mm i/d				12463	-6%	13210.78
	k	500 mm i/d				14557	-6%	15430.42
	l	600 mm i/d				21030	-6%	22291.80
13		<b>C.I Double Flanged Pipes 1536 Class- LA</b>	28.22	Chandranchal	Meter			
	a	80 mm i/d				1006	-6%	1066.36
	b	100 mm i/d				1115	-6%	1181.90
	c	125 mm i/d				1484	-6%	1573.04
	d	150 mm i/d				1788	-6%	1895.28
	e	200 mm i/d				2617	-6%	2774.02
	f	250 mm i/d				3527	-6%	3738.62

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Sr. No.		Item Description	CSR Item No.	Make	Unit	Basic Rate	Less %	Basic Rate
	g	300 mm i/d				4549	-6%	4821.94
	h	350 mm i/d				6580	-6%	6974.80
	i	400 mm i/d				8008	-6%	8488.48
	j	450 mm i/d				9655	-6%	10234.30
	k	500 mm i/d				11303	-6%	11981.18
	l	600 mm i/d				15063	-6%	15966.78
14		<b>D.I Double Flanged Pipes ( IS:8329-2000) K-9</b>	28.23	Chandranchal	Meter			
	a	80 mm i/d						1428.88
	b	100 mm i/d				1478	-6%	1566.68
	c	125 mm i/d				1876	-6%	1988.56
	d	150 mm i/d				2187	-6%	2318.22
	e	200 mm i/d				2879	-6%	3051.74
	f	250 mm i/d				3925	-6%	4160.50
	g	300 mm i/d				5021	-6%	5322.26
	h	350 mm i/d				6323	-6%	6702.38
	i	400 mm i/d				7615	-6%	8071.90
	j	450 mm i/d				9017	-6%	9558.02
	k	500 mm i/d				12121	-6%	12848.26
	l	600 mm i/d				15973	-6%	16931.38
	m	700 mm i/d				20940	-6%	22196.40
	n	800 mm i/d				26529	-6%	28120.74
	o	900 mm i/d				31949	-6%	33865.94
	p	1000 mm i/d				38303	-6%	40601.18
15		<b>S.V ISI 14846-2000 Class PN-1</b>	28.27 (A)	KARTAR	Each			
	a	80 mm i/d				4439	25%	3329.25
	b	100 mm i/d				6046	25%	4534.50
	c	125 mm i/d				7414	25%	5560.50
	d	150 mm i/d				8992	25%	6744.00
	e	200 mm i/d				15920	25%	11940.00
	f	250 mm i/d				23257	25%	17442.75
	g	300 mm i/d				29309	25%	21981.75
	h	350 mm i/d				52544	25%	39408.00
	i	400 mm i/d				63614	25%	47710.50
	j	450 mm i/d				74640	25%	55980.00
	k	500 mm i/d				123685	25%	92763.75
	l	600 mm i/d				143051	25%	107288.25
16		<b>S.V ISI 14846-2000 Class PN-1.6</b>	28.27 (B)	KARTAR				

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Sr. No.		Item Description	CSR Item No.	Make	Unit	Basic Rate	Less %	Basic Rate
	a	80 mm i/d				4792	25%	3594.00
	b	100 mm i/d				6522	25%	4891.50
	c	125 mm i/d				8008	25%	6006.00
	d	150 mm i/d				9702	25%	7276.50
	e	200 mm i/d				17174	25%	12880.50
	f	250 mm i/d				24880	25%	18660.00
	g	300 mm i/d				31365	25%	23523.75
	h	350 mm i/d				56336	25%	42252.00
	i	400 mm i/d				68702	25%	51526.50
	j	450 mm i/d				80583	25%	60437.25
17		<b>SV of premium ISI 14846-2000 PN 1.0</b>	28.27 (C)	KIRLOSKAR MAKE	Each			
	a	80 mm i/d				9911	0%	9911.00
	b	100 mm i/d				13254	0%	13254.00
	c	125 mm i/d				17904	0%	17904.00
	d	150 mm i/d				21406	0%	21406.00
	e	200 mm i/d				37715	0%	37715.00
	f	250 mm i/d				46915	0%	46915.00
	g	300 mm i/d				64596	0%	64596.00
	h	350 mm i/d				100914	0%	100914.00
	i	400 mm i/d				120169	0%	120169.00
	j	450 mm i/d				151853	0%	151853.00
	k	500 mm i/d				195597	0%	195597.00
	l	600 mm i/d				260303	0%	260303.00
18		<b>C.I Fire Hydrant (SIZE 80mm)</b>	28.28	Bir Valves	Each			
	a	C.I Fire Hydrants IS-908			Each	8134	30%	5693.80
	b	C.I Fire Hydrants S.V. Type IS-908			Each	14658	30%	10260.60
	c	C.I Fire Hydrants Stand Post Type IS-909			Each	18245	50%	9122.50
19		<b>Single Air Valve IS 14845</b>	28.29	Minar				
	a	C.I Single air valve screwed (Size 25mm)			Each	1625	25%	1218.75
	b	C.I Single air valve screwed (Size 32mm)			Each	1810	25%	1357.50
	c	C.I Single air valve screwed (Size 40mm)			Each	2225	25%	1668.75
	d	C.I Single air valve screwed (Size 50mm)			Each	2375	25%	1781.25
	e	C.I Single air valve screwed (Size 80mm)			Each	4625	25%	3468.75
20		<b>Double Air Valve IS 14845</b>	28.30	Minar				

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Sr. No.		Item Description	CSR Item No.	Make	Unit	Basic Rate	Less %	Basic Rate
	a	C.I Double air valve (Size 40mm)			Each	4700	25%	3525.00
	b	C.I Double air valve (Size 50mm)			Each	4950	25%	3712.50
	c	C.I Double air valve (Size 65mm)			Each	5215	25%	3911.25
	d	C.I Double air valve (Size 80mm)			Each	5800	25%	4350.00
	e	C.I Double air valve (Size 100mm)			Each	8320	25%	6240.00
21		Non-Return Valve (with rubbered sheet)	28.31 (A)	KARTAR	Each			
		Class PN 1.0						
	a	80 mm i/d				3975	25%	2981.25
	b	100 mm i/d				5078	25%	3808.50
	c	125 mm i/d				7597	25%	5697.75
	d	150 mm i/d				8847	25%	6635.25
	e	200 mm i/d				17342	25%	13006.50
	f	250 mm i/d				25810	25%	19357.50
	g	300 mm i/d				33430	25%	25072.50
	h	350 mm i/d				58050	25%	43537.50
	i	400 mm i/d				69454	25%	52090.50
	j	450 mm i/d				81658	25%	61243.50
	k	500 mm i/d				146425	25%	109818.75
22		Non-Return Valve (with brass sheet) (IS:5312/2004)	28.31(B)	KARTAR	Each			
		Class PN 1.0						
	a	80 mm i/d				4223	25%	3167.25
	b	100 mm i/d				5337	25%	4002.75
	c	125 mm i/d				7950	25%	5962.50
	d	150 mm i/d				9312	25%	6984.00
	e	200 mm i/d				17850	25%	13387.50
	f	250 mm i/d				26854	25%	20140.50
	g	300 mm i/d				34521	25%	25890.75
	h	350 mm i/d				60948.00	25%	45711.00
	i	400 mm i/d				72936.00	25%	54702.00
	j	450 mm i/d				85736.00	25%	64302.00
	k	500 mm i/d				146425.00	25%	109818.75
23		C.I Pipe line G.M Ferrule	28.34					
	a	10 mm medium						225.00
	b	15mm medium						257.00
	c	20mm medium						286.00
	d	15mm heavy						320.00

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
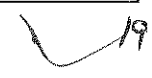
17

Sr. No.		Item Description	CSR Item No.	Make	Unit	Basic Rate	Less %	Basic Rate
	e	20 mm heavy						441.00
	f	25mm heavy						975.00
24		G.I Pipe class-B Grade (IS:1239)	28.35,28.36	Jindal Hissar	Meter			
	a	15 mm				86.00	0%	86.00
	b	20 mm				111.50	0%	111.50
	c	25 mm				156.20	0%	156.20
	d	32 mm				201.55	0%	201.55
	e	40 mm				230.30	0%	230.30
	f	50 mm				316.70	0%	316.70
25		PE-AL-PE Composite Pressure Pipe IS 15450	28.37, 28.38	Rate as per DSR	Meter			
	a	1216 16 mm O/d Pipe				95.00	0%	95.00
	b	1620 20 mm O/d Pipe				125.00	0%	125.00
	c	2025 25 mm O/d Pipe				160.00	0%	160.00
	d	2532 32 mm O/d Pipe				205.00	0%	205.00
	e	3240 40 mm O/d Pipe				300.00	0%	300.00
	f	4050 50 mm O/d Pipe				375.00	0%	375.00
26		PP-R Pipes (as per IS:15801-2008)	28.39 (A), 28.39 (B)	Supreme	Meter			
	a	PN-16 16 mm o/d						32.00
	b	PN-16 20 mm o/d				82	50%	41.05
	c	PN-16 25 mm o/d				127	50%	63.54
	d	PN-16 32 mm o/d				204	50%	102.09
	e	PN-16 40 mm o/d				306	50%	153.13
	f	PN-16 50 mm o/d				480	50%	239.88
27		G.I Union ( IS 1879 )	28.40	UNIK	Each			
	a	15 mm				82.8	20%	66.24
	b	20 mm				143	20%	114.40
	c	25 mm				185	20%	148.00
	d	32 mm				242	20%	193.60
	e	40 mm				330	20%	264.00
	f	50 mm				426	20%	340.80
	g	65 mm				680	20%	544.00
	h	80 mm				1035	20%	828.00
	i	100 mm				1610	20%	1288.00
28		Gun Metal (Heavy Metal) Peet valve (IS: 778)	28.43	KARTAR	Each			
	a	15 mm				439	25%	329.25

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Sr. No.		Item Description	CSR Item No.	Make	Unit	Basic Rate	Less %	Basic Rate
	b	20 mm				618	25%	463.50
	c	25 mm				859	25%	644.25
	d	32 mm				1331	25%	998.25
	e	40 mm				1770	25%	1327.50
	f	50 mm				2736	25%	2052.00
	g	65 mm				4331	25%	3248.25
	h	80 mm				6640	25%	4980.00
	i	100 mm				12903	25%	9677.25
29		Brass Ball valves with SS/brass Ball and spindle & teflon seats working parts	28.44	KARTAR	Each			
	a	15 mm				247	25%	185.25
	b	20 mm				335	25%	251.25
	c	25 mm				556	25%	417.00
	d	32 mm				938	25%	703.50
	e	40 mm				1163	25%	872.25
	f	50 mm				1932	25%	1449.00
30		Water Meter G.I. Pipe Line ( IS:779/94 )	28.46	KRANTI	Each			
	a	15 mm				1144	35%	743.60
	b	20 mm				2063.00	40%	1237.80
	c	25 mm				2906.00	40%	1743.60
31		M.S. Pipe (medium) IS-1239	28.70	jindal	Meter			
	a	80 mm (thickness 4.05 mm)				485.00	6%	455.90
	b	100 mm (thickness 4.50mm)				712.00	6%	669.28
	c	150 mm (thickness 4.85 mm)				1099.00	6%	1033.06
	d	200 mm (thickness 6.00 mm)				1848.00	6%	1737.12
32		<b>M.S. Pipe (heavy)</b> <b>(IS:1239/3589/4270)</b>	28.74A , 28.105, 28.106 , 28.107	Jindal	Meter			
	a	25 mm i/d 4.05 mm thick				170.60	6%	160.36
	b	32 mm i/d 4.05 mm thick				219.80	6%	206.61
	c	40 mm i/d 4.05 mm thick				255.70	6%	240.36
	d	50 mm i/d 4.47 mm thick				382.00	6%	359.08
	e	65 mm i/d 4.47 mm thick				474.50	6%	446.03
	f	80 mm i/d 4.85 mm thick				574.65	6%	540.17
	g	100 mm i/d 5.40 mm thick				846.60	6%	795.80
	h	150 mm i/d 5.40 mm thick				1240.55	6%	1166.12
	i	200 mm i/d 6.00 mm thick				1848.00	6%	1737.12



Sr. No.		Item Description	CSR Item No.	Make	Unit	Basic Rate	Less %	Basic Rate
	j	200 mm i/d 8.00 mm thick				2501.00	6%	2350.94
	k	250 mm i/d 8.00 mm thick				3134.00	6%	2945.96
	l	300 mm i/d 8.00 mm thick				3750.00	6%	3525.00
	m	300 mm i/d 9.50 mm thick				4390.00	6%	4126.60
	n	350 mm i/d 8.00 mm thick				4186.00	6%	3934.84
	o	350 mm i/d 9.50 mm thick				4926.00	6%	4630.44
33		<b>S.S Socket</b>	28.75 A	Jindal	Each			
	a	S.S Socket 150 mm				2000	0%	2000.00
	b	S.S Socket 200 mm				2900	0%	2900.00
	c	S.S Socket 250 mm				3000	0%	3000.00
	d	S.S Socket 300 mm				3100	0%	3100.00
34		<b>Steel Strainer (IS:8110-2000 )</b>	28.75 A	JOHNSON	Meter			
	a	150 mm Steel Strainer 0.15/0.20 5.4 mm thick				10875	25%	8156.25
	b	200 mm Steel Strainer 0.15/0.20 6.30 mm thick				14135	25%	10601.25
	c	250 mm Steel Strainer 0.15/0.20 7.30 mm thick				22275	25%	16706.25
	d	150 mm Steel Strainer 0.75/1.00 5.4 mm thick				9795	25%	7346.25
	e	200 mm Steel Strainer 0.75/1.00 6.30 mm thick				12225	25%	9168.75
	f	250 mm Steel Strainer 0.75/1.00 7.30 mm thick				21595	25%	16196.25
	g	300 mm Steel Strainer 0.75/1.00 8.00 mm thick				25685	25%	19263.75
35		<b>200mm inner dia. Electric Resistance welded (ERW) LOW CARBON GALAVANIZED CAGE TYPE VEE Wire WOUND SCREEN</b>	28.75B		EACH			8000
36		<b>Automatic electronic type water level indication system with gun metal float sensor</b>	28.90		EACH			8000
37		<b>uPVC Pipe as per IS-12818 For Bore well</b>	28.92	SUPREME	Meter			
	a	100 mm				834.67	50%	417.33
	b	150 mm				1747.00	50%	873.50
	c	200 mm				3154.33	50%	1577.17
38		<b>uPVC Medium Well screen pipes (ribbed) as per IS-12818</b>	28.93	SUPREME	Meter			

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Sr. No.		Item Description	CSR Item No.	Make	Unit	Basic Rate	Less %	Basic Rate
	a	100 mm				1033.67	50%	516.83
	b	150 mm				2274.67	50%	1137.33
	c	200 mm				2208.00	0%	2208.00
39		Pig lead			Kg			175.00
40		Spun Yarn			Kg			70.00
41		PVC Repair/service saddle	28.102					
		90 mm i/d		FINOLEX	EACH	106.8	10%	96.12
		110 mm i/d			EACH	122	10%	109.80
		160 mm i/d			EACH	184.3	10%	165.87
42		PVC Detachable Joints	28.103					
		90 mm i/d			EACH	90	0%	90.00
		110 mm i/d			EACH	110	0%	110.00
		160 mm i/d			EACH	150	0%	150.00
		210 mm i/d			EACH	250	0%	250.00
43		PRESSURE PUMPS	28.104 A					
	a	Pressure pump of 0.5 HP with 2700 LPH, 35meter head with C.I pump & 19 litre capacity Tank		UJALA	EACH	15867	10%	14280.30
	b	Pressure pump of 0.65 HP with 2700 LPH, 37meter head with SS pump & 19 litre capacity Tank		UJALA	EACH	17363	10%	15626.70
	c	Pressure pump of 1.0 HP with 3300 LPH, 50meter head with C.I pump & 19 litre capacity Tank		UJALA	EACH	17548	10%	15793.20
	d	Pressure pump of 0.8 HP with 4800 LPH, 40meter head with C.I pump & 19 litre capacity Tank		UJALA	EACH	20652	10%	18586.80
	e	Pressure pump of 1.0 HP with 4800 LPH, 45meter head with SS pump & 19 litre capacity Tank		UJALA	EACH	21980	10%	19782.00
	f	Pressure pump of 0.5 HP with 2000 LPH, 32meter head with C.I pump & 5 litre capacity Tank		UJALA	EACH	8193	10%	7373.70
44		PRESSURE PUMPS	28.104 B					
	a	Pressure pump of 0.7 HP with 3100 LPH, 25.6 meter head with SS pump & 24 litre capacity Tank		GRUNDFOS	EACH	31397	20%	25117.60

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Sr. No.		Item Description	CSR Item No.	Make	Unit	Basic Rate	Less %	Basic Rate
	b	Pressure pump of 0.7 HP with 4700 LPH, 20.3meter head with SS pump & 24 litre capacity Tank		GRUNDFOS	EACH	29303	20%	23442.40
	c	Pressure pump of 0.9 HP with 4700 LPH, 27.3meter head with SS pump & 24 litre capacity Tank		GRUNDFOS	EACH	35964	20%	28771.20
	d	Pressure pump of 0.7 HP with 2000 LPH, 25 meter head with SS pump & 18 litre capacity Tank		GRUNDFOS	EACH	28686	20%	22948.80
	e	Pressure pump of 0.4 HP with 2000 LPH, 18 meter head with SS pump & 8 litre capacity Tank		GRUNDFOS	EACH	26259	20%	21007.20
45		G.M Single headed hydrant valve	28.108	PADMINI	EACH	5370	0%	5370.00
46		G.M Double headed hydrant valve	28.109	PADMINI	EACH	10804	0%	10804.00
47		63 mm dia gun-metal Branch Pipe (ISI marked) with nozzle	28.110	PADMINI	EACH	1643	0%	1643.00
48		Single gunmetal suction collecting head, nose coupling	28.111	PADMINI	EACH	3475	0%	3475.00
49		gun-metal fire brigade inlet connection	28.112					
	a	Four Way inlet connection		PADMINI	EACH	7645	0%	7645.00
	b	Three Way inlet connection		PADMINI	EACH	6116	0%	6116.00
	c	Two Way inlet connection		PADMINI	EACH	5004	0%	5004.00
50		RRI FIRE hose Type A, IS:636, 63mm dia x 15m long with gunmetal male & female couplings	28.113	PADMINI	EACH	3820	0%	3820.00
51		CP HOSE ISI marked IS 63mm dia x 15 m long	28.114	PADMINI	EACH	3392	0%	3392.00
52		First Aid-fire Hose reel	28.115					
	a	Hose Reel Drum ( without Hose & Nozzle)		PADMINI	EACH	3033	0%	3033.00
	b	Hose Reel 20mm dia 30.Mtr long		PADMINI	EACH	3063	0%	3063.00
	c	Nozzle for Hose reel; Drum GM		PADMINI	EACH	430	0%	430.00
53		cabinet for hose fabricated out of 1.6mm thickness M.S. sheet with front glass door	28.117					
	a	900 mm wide x 600 mm high x 500 mm deep Size (for Yard Hydrant)			EACH	6000	30%	4200.00

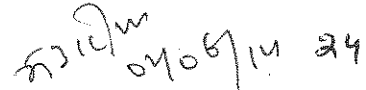
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Sr. No.		Item Description	CSR Item No.	Make	Unit	Basic Rate	Less %	Basic Rate
54	b	600 mm wide x 600 mm high x 300 mm deep Size - (for RRL Reel)			EACH	4700	30%	3290.00
	c	750 mm wide x 600 mm high x 250 mm deep Size			EACH	5000	30%	3500.00
	d	1200 mm wide x 900 mm high x 400 mm deep Size			EACH	8000	30%	5600.00
54		Air vessel made out of 250mm. Dia, 8 mm thick MS sheet, 1200mm height	28.118		EACH	19000	30%	13300.00
55		air vessel made out of 450mm. Dia, 8 mm thick MS sheet, 2000mm height	28.119		EACH	26000	30%	18200.00
56		Pressure switch in MS pipe line	28.120		EACH	2200	20%	1760.00
57		S.S Pressure Gauge	28.121					
58	a	Dial diameter 150mm calibration 0-16 Kg			EACH	850	20%	680.00
	b	Dial diameter 100mm calibration 0-16 Kg			EACH	600	20%	480.00
58		Pendant / Upright type sprinkler with quartzoid bulb, operating temperature 68 / 79 degree centigrade of 15 mm dia orifice sprinler head to approved by UL/SN	28.122	Newage	EACH	161	0%	161.00
59		Sidewall Sprinkler rated at 68 / 79degree centigrade, quartzoid bulb type, 15 mm dia orifice sprinler head to approved by UL/SN	28.123	Newage	EACH	192	0%	192.00
60		FIRE EXTINGUISHER, ABC Powder type (stored	28.124					
		2 Kg. Capacity		PADMINI	EACH	1250	0%	1250.00
		4 Kg. Capacity		PADMINI	EACH	1700	0%	1700.00
		6 Kg. Capacity		PADMINI	EACH	2250	0%	2250.00
61		FIRE EXTINGUISHER, CO2 type as per IS: 15683	28.125					
		2 Kg. Capacity		PADMINI	EACH	4050	0%	4050.00
		3 Kg. Capacity		PADMINI	EACH	4850	0%	4850.00
		4.5 Kg. Capacity		PADMINI	EACH	5740	0%	5740.00
62		FIRE EXTINGUISHER, Mechanical Foam Type 9 ltr IS: 15683	28.126	PADMINI	EACH	2300	0%	2300.00
63		control valve C/W water motor gong complete with alarm Valve, constant trim, water motor bell, 2No. Pressure Gauge. All parts UL Listed.	28.127	Newage				
		150 mm control valve			EACH	31100	10%	27990.00
		100 mm control valve			EACH	26600	10%	23940.00
64		BUTTERFLY VALVE PN 1.6	28.128					

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Sr. No.	Item Description	CSR Item No.	Make	Unit	Basic Rate	Less %	Basic Rate
65	80 mm i/d		Advance make	EACH	5420	10%	4878.00
	100 mm i/d			EACH	5990	10%	5391.00
	150 mm i/d			EACH	7000	10%	6300.00
	200 mm i/d			EACH	10600	10%	9540.00
66	cast iron flanged Y type strainer with stainless steel mesh in PN-1.0	28.129	KARTAR				
	150 mm i/d			EACH	8016	25%	6012.00
	200 mm i/d			EACH	16322	25%	12241.50
67	DUAL PLATE CHECK VALVE PN 1.6	28.130					
	80 mm i/d		KARTAR	EACH	2490	0%	2490.00
	100 mm i/d			EACH	3495	0%	3495.00
	150 mm i/d			EACH	6345	0%	6345.00
68	200 mm i/d			EACH	10635	0%	10635.00
	Cast Iron Foot valves flanged ends with rubber sheet as per IS 4038	28.131					
	a 50 mm i/d		KARTAR	EACH	1588	25%	1191.00
	b 65 mm i/d			EACH	1820	25%	1365.00
	c 80 mm i/d			EACH	2376	25%	1782.00
	d 100 mm i/d			EACH	3880	25%	2910.00
69	e 150 mm i/d			EACH	7112	25%	5334.00
	Vane type Water flow switch in MS Pipe line for a service pressure up to 450PSI , Minimum flow rate for alarm 10GPM (38 LPM ) , Minimum surge 18 FPS (5.5 m/s )	28.132					
	a For 50mm to 150 mm pipe line		SYSTEM SENSOR	EACH	6565.00	0%	6565.00
b For 200mm pipe line			EACH	7890.00	0%	7890.00	
69	Sprinkler flexible drops stainless steel SS 304 C/W ½ " NPT on reducer thread, with Max. working pressure of 175 PSI , Test pressure 875 PSI ( BURST ) etc.	28.133					
	a For 1000mm length		Newage	EACH	700.00	0%	700.00
	b For 1200mm length		Newage	EACH	780.00	0%	780.00
	c For 1500mm length		Newage	EACH	820.00	0%	820.00

  
 Chief Engineer (North) Punjab  
 Water Supply & Sanitation Deptt.  
 PATIALA.

Chapter 28

WATER SUPPLY

Note: 1	Contractor must provide and maintain sign boards, fencing of trenches, indicators for work under execution, diversion of traffic, night signals, fixing of caution boards and any other safety measure required at site. The contractor is also responsible for protection of existing services i.e. telephone cables, electric lines, water supply lines and gas lines etc.
Note: 2	Until and unless specified in DNIT, the maximum width of trenches for payment purposes shall be as given in PWD specification book. If actual width of trench is less than the specified, the actual quantity of excavation shall be paid. If the actual width of trench is greater than specified, standard specified section will be paid.
Note: 3	Nothing extra will be payable in respect of item No. 28.1 to 28.2 for any seepage of water during excavation work above spring level.
Note: 4	The rates of item No. 28.1 to 28.2 includes the cost of removing trees, roots, kankars and other hard materials during excavation.
Note: 5	If any excavation is abandoned due to change in alignment necessitated by any obstruction such as pipes, electric/ telephone cables or any other reason, the contractor will be paid for the actual work done in that trench and back fillings etc.
Note: 6	Where Engineer in charge so directs, earth filling in trenches will be carried out by mechanical rammers and extra for compaction of earth will be paid separately.
Note: 7	No extra shall be payable in respect of item 28.1 to 28.2 due to other unforeseen difficulties, hardness of soil or any other factors. The rates in these chapters does not include cutting through metalled roads and sorting, stacking of road metal, which will be paid separately.
Note: 8	Excavation from items 28.1 to 28.2 is to be done as per PWD specifications, standard sections and contract drawings. In case of unavoidable circumstances where excavation is required with open cuttings, concerned Superintending Engineer to his satisfaction depending upon the nature of soil and site conditions is competent to grant prior approval for open cutting along with the side slopes. This approval will be for particular street/ lane but not for the whole area. Section approved by the Superintending Engineer will be final.
Note: 9	If road cutting is involved in excavation, then its width should not be more than 115 mm beyond edge of excavated trenches on each side. Where width of road cut is required to be increased than the standard widths, prior approval of the Superintending Engineer is required. In case road cut done at site is more than norms/as approved by the Superintending Engineer, excess road cut will not be payable. On the other hand cost of reconditioning of excess road cut must be recovered from the contractor.
Note: 10	Excavation work will be done manually in built up street/ lane where wall to wall width is upto 3.0 metre. Where as in open area or built up street/ lane having wall to wall width more than 3.0 metre, excavation will be done by mechanical means. In case of unavoidable circumstances, if manual excavation is required other than specified above, Superintending Engineer is competent to permit after his personal satisfaction subject to prior approval on the record. If prior approval is not accorded for manual excavation then contractor will be paid as excavation by mech. means and the contractor will have no claim for that.
Note: 11	Where and which type of timbering is required to support sides of trench in particular street/ lane, will be decided by the Engineer in charge depending upon nature of soil and sites conditions before laying water supply lines and will also put on record the nature of soil and site condition, for first 1.5 metre depth of trench and further for subsequent band of 1.80 metre depths. In a particular strip if nature of soil changes within the strip, then timbering be decided for this whole strip as required for the worst soil met in that strip.
Note: 12	Removal of surplus spoils/earth from the site of work if required, will be decided by the Engineer in charge. He must take up tentative quantities in writing with Local Administrations (M.C./ N.A.C./ Panchayat/ Owner of the project) so that surplus spoils/ earth may be filled in public place (the destination/ destinations). Before so fillings, levels of site be recorded with respect to fixed bench mark near site and then again levels be recorded after filling. Record actual measurement of earth filling and lead in measurement book (loading or unloading will not be payable). If local administration do not respond to repeated requests, then Engineer in charge will decide the destination in public interest and the record the reasons of his choice and contractor will be paid accordingly.
Note: 14	All water supply lines will be got tested by contractor before back filling. If there is any leakage or damage during execution or after commissioning, the same will be rectified by the contractor at his own cost, loss or damage what so ever may be, shall be borne by the contractor.

Note: 15	Where ever at road crossings the required cover on pipe is less and are subjected to heavy vehicular traffic, bridging on wells and drains for crossings etc, pipes be protected by providing PCC or RCC enclosures depending upon the site requirements.
Note: 16	When lump sum rate is quoted by the contractor for any item of excavation work covered in CSR, the work will be got executed as per PWD specifications and payment will be made only for sections as per standad norms or sections taken in tender documents if any. Nothing extra will be payable to contractor due to increase in section or change in nature of soil or change in nature of timbering what so ever may be required to be done for the specified excavation work except dewatering of sub soil water if required.
Note: 17	Dewatering of sub soil water if required at site, will be physically checked by Engineer in charge at site with respect to bench mark before dewatering process and will record in measurement book at regular intervals fortnightly along with the RDs and paid accordingly. The decision of Engineer in charge will be final and binding on the contractor.
Note: 18	Material defect, execution defect or other defects if any on the part of the contractor, found at later stage which could not be traced while execution of work and are not part of maintenance, will remain the responsibility of the contractor to set right the same at his own cost, though he may have taken all his dues.
Note: 19	Through rates in Chapter 28 of PWD (CSR) are only for estimation purpose. The Allotment Authority (before the allotment of the works) will have to verify the prevailing lowest and reasonable rates from the open market after taking into account all discounts etc. offered by the supplier/manufacturer for supply in bulk. The entire responsibility of rates approved will be on the allotting authorities irrespective of the recommendations received by the allotting authority.



**CHAPTER NO. 28**

**WATER SUPPLY (PROPOSED)**

<b>Note :- 1.</b>		The rates for stringingout cast iron,A.C., P.V.C. ,D.I and H.D.P.E. pipes etc. provided under this chapter includes the cost of jointing of pipes only. However the payment of joints due to fixing of specials in the pipe line shall be paid extra.				
Sr. No.	Description.	Unit	For Plain		For Sub-mountainous region	
			Labour Rates	Through Rates	Labour Rates	Through Rates
1	2	3	4	5	6	7
28.1	Excavation manually in trenches for pipe lines with straight or open cutting in streets and lanes in builtup area where width of street / Lane from wall to wall is less than 3 meter including trimming and dressing sides levelling of beds of trenches to correct grade, cutting joint holes, refilling consolidation,watering , including the cost of dewatering of rain water, diversion for traffic, night signals. Providing & fixing caution boards, watching, fencing, etc. and removal of surplus soil from the site upto 15 meter distance complete in all respects.					
	Note: 1) Extra for handling earth beyond 15 metre :- Handling of earth beyond specified lead as described in item's description if any, will be pre-approved by the Engineer-in-charge depending upon site conditions and will be paid extra for additional chains as per chapter 5. 2) If excavation requires timbering & shoring , then payment shall be made as per chapter -29					
(a)	Earth work upto 1.5 m. Depth					
i	All classes of soil except rocky	Cum.	104.50		115.00	
ii	For Ordinary soil having gravel upto 40%	Cum.	138.00		152.00	
iii	For semi conglomerate soil of having gravel/Boulder upto 50%	Cum.	138.00		152.00	
(b)	Exceeding 1.5 m depth but not exceeding 2.25 m depth					
i	All classes of soil except rocky	Cum.	108.50		119.00	
ii	For Ordinary soil having gravel upto 40%	Cum.	142.00		156.00	
iii	For semi conglomerate soil of having gravel/Boulder upto 50%	Cum.	145.70		160.27	
(c)	Exceeding 2.25 m depth upto 3.00 m depth					
i	All classes of soil except rocky	Cum.	120.00		132.00	
ii	For Ordinary soil having gravel upto 40%	Cum.	164.00		181.00	
iii	For semi conglomerate soil of having gravel/Boulder upto 50%	Cum.	220.00		242.00	



Sr. No.	Description.	Unit	For Plain		For Sub-mountainous region	
			Labour Rates	Through Rates	Labour Rates	Through Rates
1	2	3	4	5	6	7
(d)	Exceeding 3.00 m depth upto 4.50 m depth					
	i All classes of soil except rocky	Cum.	149.00		164.00	
	ii For Ordinary soil having gravel upto 40%	Cum.	205.00		225.00	
	iii For semi conglomerate soil of having gravel/Boulder upto 50%	Cum.	283.00		311.00	
(e)	Exceeding 4.5 m depth upto 6.0 m depth					
	i All classes of soil except rocky	Cum.	194.00		213.00	
	ii For Ordinary soil having gravel upto 40%	Cum.	261.00		287.00	
	iii For semi conglomerate soil of having gravel/Boulder upto 50%	Cum.	372.00		409.00	
(f)	Exceeding 6.0m depth upto 7.5 m depth					
	i All classes of soil except rocky	Cum.	216.00		238.00	
	ii For Ordinary soil having gravel upto 40%	Cum.	283.00		311.00	
	iii For semi conglomerate soil of having gravel/Boulder upto 50%	Cum.	406.00		446.50	
28.2	Excavation by mechanical means(JCB or Hydraulic excavator) in trenches for pipe lines with straight or open cutting in streets or open area including trimming and dressing sides levelling of beds of trenches to correct grade, cutting joint holes, refilling consolidation, watering , 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 15 meter complete in all respect.					
(a)	Earth work upto 1.5 m. Depth for					
	i All classes of soil except rocky	Cum.	57.50		63.00	
	ii For Ordinary soil having gravel upto 40%	Cum.	70.00		76.50	
	iii For semi conglomerate soil of having gravel/Boulder upto 50%	Cum.	75.00		82.00	
(b)	Exceeding 1.5 m depth but not exceeding 2.25 m depth					
	i All classes of soil except rocky	Cum.	57.50		63.00	
	ii For Ordinary soil having gravel upto 40%	Cum.	70.00		76.50	

Sr. No.	Description.	Unit	For Plain		For Sub-mountainous region	
			Labour Rates	Through Rates	Labour Rates	Through Rates
1	2	3	4	5	6	7
	iii For semi conglomerate soil of having gravel/Boulder upto 50%	Cum.	75.00		82.00	
(c)	Exceeding 2.25 m depth upto 3.00 m depth					
	i All classes of soil except rocky	Cum.	67.00		74.00	
	ii For Ordinary soil having gravel upto 40%	Cum.	79.00		87.00	
	iii For semi conglomerate soil of having gravel/Boulder upto 50%	Cum.	107.00		118.00	
(d)	Exceeding 3.00 m depth upto 4.5 m depth					
	i All classes of soil except rocky	Cum.	76.00		84.00	
	ii For Ordinary soil having gravel upto 40%	Cum.	83.50		92.00	
	iii For semi conglomerate soil of having gravel/Boulder upto 50%	Cum.	130.00		143.00	
(e)	Exceeding 4.5 m depth upto 6.0 m depth					
	i All classes of soil except rocky	Cum.	94.00		104.00	
	ii For Ordinary soil having gravel upto 40%	Cum.	122.00		134.00	
	iii For semi conglomerate soil of having gravel/Boulder upto 50%	Cum.	167.00		184.00	
(f)	Exceeding 6.0m depth upto 7.5 m depth					
	i All classes of soil except rocky	Cum.	104.00		114.00	
	ii For Ordinary soil having gravel upto 40%	Cum.	131.00		144.00	
	iii For semi conglomerate soil of having gravel/Boulder upto 50%	Cum.	182.00		200.00	
28.3 A	Extra for disposal of surplus soil on item No 28.1 and 28.2 beyond 15 meters		Rate for this item will be given as per chapter of Carriage.			
28.3 B	Extra for lowering the sub soil water level		Rate for this item will be given as per chapter -29.			
28.4	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.			

Sr. No.	Description.	Unit	For Plain		For Sub-mountainous region	
			Labour Rates	Through Rates	Labour Rates	Through Rates
1	2	3	4	5	6	7
28.5	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.			
28.6 (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).	SqMtr.	Rate for this item will be given as per Chapter 24 of road work.			
28.6 (b)	Recondition road cuts with hammers, hand rollers and laying of stone metal / bajri in soling / base coarse confirming to WBM specifications (at formation level) complete so as to allow unobstructed traffic (with dismantled material at site).	Cum	Rate for this item will be given as per Chapter 24 of road work.			
28.7 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 lines laid complete	Mtr	21.00	1082.00	23.00	1084.00
(b)	100mm i/d pipe lines laid complete	Mtr	27.00	1342.00	30.00	1345.00
(c)	150mm i/d pipe lines laid complete	Mtr	37.00	2135.00	40.00	2138.00
(d)	200mm i/d pipe lines laid complete	Mtr	49.50	3098.00	54.50	3103.00
(e)	250mm i/d pipe lines laid complete	Mtr	63.00	4153.00	69.50	4159.00
(f)	300mm i/d pipe lines laid complete	Mtr	121.00	5303.00	133.00	5315.00
(g)	350mm i/d pipe lines laid complete	Mtr	132.00	7654.00	145.00	7667.50
(h)	400mm i/d pipe lines laid complete	Mtr	160.00	9316.50	176.00	9332.50
(i)	450mm i/d pipe lines laid complete	Mtr	194.00	11224.00	213.50	11243.00
(j)	500mm i/d pipe lines laid complete	Mtr	227.00	13126.00	249.50	13148.50
(k)	600mm i/d pipe lines laid complete	Mtr	295.00	17425.00	325.00	15454.50
Note (i)	In case ISI marked CI pipe class-A as per IS 1536 is used, the through rate will be increased by 10% in item no 28.7-A					
Note (ii)	In case ISI marked CI pipe class-B as per IS 1536 is used, the through rate will be increased by 20% in item no 28.7-A					
28.7 B	Providing, Stringing out, cutting, Jointing and testing of ISI Marked D.I. Pipe (S&S) 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					

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Sr. No.	Description.	Unit	For Plain		For Sub-mountainous region	
			Labour Rates	Through Rates	Labour Rates	Through Rates
1	2	3	4	5	6	7
(a)	80mm i/d pipe lines laid complete	Mtr	18.95	847.50	21.00	849.50
(b)	100mm i/d pipe lines laid complete	Mtr	21.50	999.50	23.50	1001.50
(c)	150mm i/d pipe lines laid complete	Mtr	26.50	1460.00	29.00	1463.00
(d)	200mm i/d pipe lines laid complete	Mtr	31.50	1829.00	35.00	1832
(e)	250mm i/d pipe lines laid complete	Mtr	37.50	2431.50	41.50	2435.50
(f)	300mm i/d pipe lines laid complete	Mtr	64.00	3104.50	70.50	3111.00
(g)	350mm i/d pipe lines laid complete	Mtr	77.00	3578.50	84.50	3586.00
(h)	400mm i/d pipe lines laid complete	Mtr	89.00	4397.00	98.00	4406.00
(i)	450mm i/d pipe lines laid complete	Mtr	102.00	5090.00	112.50	5100.00
(j)	500mm i/d pipe lines laid complete	Mtr	117.50	5949.00	129.50	5961.00
(k)	600mm i/d pipe lines laid complete	Mtr	147.00	7864.00	162.00	7878.50
(l)	700mm i/d pipe lines laid complete	Mtr	184.50	10977.00	203.00	10995.50
(m)	750mm i/d pipe lines laid complete	Mtr	202.50	12609.50	223.00	12630.00
(n)	800mm i/d pipe lines laid complete	Mtr	226.50	14158.00	249.00	14181.00
(o)	900mm i/d pipe lines laid complete	Mtr	269.00	17159.00	195.50	1718.5.50
(p)	1000mm i/d pipe lines laid complete	Mtr	314.50	20521.00	346.00	20553.00
<b>B</b>	<b>D.I. Pipe as per IS 8329 DI-K9</b>					
(a)	80mm i/d pipe lines laid complete	Mtr	20.00	889.50	22.00	891.50
(b)	100mm i/d pipe lines laid complete	Mtr	23.00	1155.00	25.00	1157.00
(c)	150mm i/d pipe lines laid complete	Mtr	29.00	1639.00	32.00	1642.00
(d)	200mm i/d pipe lines laid complete	Mtr	35.00	2145.00	38.50	2149.00
(e)	250mm i/d pipe lines laid complete	Mtr	42.50	2874.50	47.00	2879.00
(f)	300mm i/d pipe lines laid complete	Mtr	74.00	3674.00	81.00	3681.00
(g)	350mm i/d pipe lines laid complete	Mtr	89.00	4205.00	98.00	4214.00
(h)	400mm i/d pipe lines laid complete	Mtr	103.50	5066.00	114.00	5076.00

Sr. No.	Description.	Unit	For Plain		For Sub-mountainous region	
			Labour Rates	Through Rates	Labour Rates	Through Rates
1	2	3	4	5	6	7
	(i) 450mm i/d pipe lines laid complete	Mtr	120.00	6020.50	132.00	6032.53
	(j) 500mm i/d pipe lines laid complete	Mtr	138.00	7128.00	151.50	7142.00
	(k) 600mm i/d pipe lines laid complete	Mtr	174.00	9254.00	191.00	9271.50
	(l) 700mm i/d pipe lines laid complete	Mtr	218.00	11891.00	240.00	11913.00
	(m) 750mm i/d pipe lines laid complete	Mtr	241.50	13627.50	265.50	13652.00
	(n) 800mm i/d pipe lines laid complete	Mtr	268.00	15059.00	295.00	15086.00
	(o) 900mm i/d pipe lines laid complete	Mtr	319.00	18249.00	351.00	18281.00
	(p) 1000mm i/d pipe lines laid complete	Mtr	374.00	21812.50	411.50	21850.00
28.8	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 lines laid complete	Mtr	55.50		61.00	
	(b) 100mm i/d pipe lines laid complete	Mtr	73.00		80.00	
	(c) 125mm i/d pipe lines laid complete	Mtr	100.00		110.00	
	(d) 150mm i/d pipe lines laid complete	Mtr	125.00		138.00	
	(e) 200mm i/d pipe lines laid complete	Mtr	181.00		199.00	
	(f) 250mm i/d pipe lines laid complete	Mtr	244.00		269.00	
	(g) 300mm i/d pipe lines laid complete	Mtr	315.50		347.00	
	(h) 350mm i/d pipe lines laid complete	Mtr	356.50		392.00	
	(i) 400mm i/d pipe lines laid complete	Mtr	395.50		435.00	
	(j) 450mm i/d pipe lines laid complete	Mtr	435.78		479.50	
	(k) 500mm i/d pipe lines laid complete	Mtr	476.50		524.00	
	(l) 600mm i/d pipe lines laid complete	Mtr	514.00		565.00	
28.9	Providing, Stringing out, cutting Jointing & testing A.C. Pipes ISI marked as per IS 1592-2003 class-15 with suitable A C coupling along the trenches and laying the same into Trenches to correct alignment and gradients, including all carriage complete.					
	(a) 80mm i/d pipe	Mtr	22.00	114.00	24.00	116.00
	(b) 100mm i/d pipe	Mtr	31.50	156.00	34.50	159.00
	(c) 150mm i/d pipe	Mtr	40.50	300.00	44.50	304.00
	(d) 200mm i/d pipe	Mtr	65.00	530.00	72.00	537.00
	(e) 250mm i/d pipe	Mtr	93.50	776.00	102.50	785.00

Sr. No.	Description.	Unit	For Plain		For Sub-mountainous region	
			Labour Rates	Through Rates	Labour Rates	Through Rates
1	2	3	4	5	6	7
28.10	Supplying and fixing of ISI Marked CI D-joint (complete with nut, bolts & rubber ring) as per IS:8794 for repair of pipe line including cutting, jointing and testing etc. but excluding cost of excavation complete.		NEW ITEM			
a	80 mm	Each	123.00	398.00	135.00	410.00
b	100 mm	Each	148.00	500.00	162.50	515.00
c	150 mm	Each	164.50	794.00	181.00	810.00
d	200 mm	Each	181.00	1015.00	199.00	1033.00
e	250 mm	Each	197.00	1140.00	217.00	1160.00
28.11	Providing, laying, jointing, fixing and testing ISI Marked uPVC Pipe with G.I. specials as per ISI-4985, including cost of G.I. specials such as tees, bends, sockets, elbows etc. testing inside building complete.					
A	<b>uPVC Pipe 10 Kg/cm<sup>2</sup></b>					
a	20mm i/d	Mtr.	44.50	68.50	49.00	73.00
b	25mm i/d	Mtr.	55.50	93.00	61.00	98.50
c	32mm i/d	Mtr.	65.50	127.00	72.00	133.50
d	40mm i/d	Mtr.	70.50	162.50	77.35	169.50
e	50mm i/d	Mtr.	76.00	219.50	83.50	227.00
B	<b>uPVC Pipe 6 Kg/cm<sup>2</sup></b>					
a	40mm i/d	Mtr.	70.50	126.50	77.50	133.50
b	50mm i/d	Mtr.	76.00	163.00	83.50	170.50
28.12	Providing and laying, jointing, fixing and testing ISI Marked uPVC Pipe Lines as per ISI 4985-2000, including specials such as tees, bends, sockets, elbow etc., cutting, testing (including cost of specials) in the ground complete in all respects.					
A	<b>uPVC Pipe 10 Kg/cm<sup>2</sup></b>					
a	20mm i/d	Mtr.	15.00	34.50	16.50	36.00
b	25mm i/d	Mtr.	19.50	49.50	21.50	51.50
c	32mm i/d	Mtr.	27.00	76.50	30.00	79.50
d	40mm i/d	Mtr.	31.00	105.50	34.00	108.50
e	50mm i/d	Mtr.	32.50	148.00	35.50	151.00
B	<b>uPVC Pipe 6 Kg/cm<sup>2</sup></b>					
a	40mm i/d	Mtr.	28.50	74.00	31.00	76.50
b	50mm i/d	Mtr.	29.50	99.50	32.50	102.50
28.13 A	Providing, Stringing out P.V.C. Pipes ISI Marked as per ISI-4985 (Premium Make such as Supreme / Finolex/Prince) casting along the Trenches and laying the same in Trenches to correct alignment and gradients, cutting, jointing and testing complete as per specifications.		NEW ITEM			
i	63mm o/d pipe of 10 Kg. / sqcm	Mtr	7.00	178.50	8.00	179.00
ii	75mm o/d pipe of 10 Kg. / sqcm	Mtr	8.50	253.00	9.50	253.50
iii	90mm o/d pipe of 10 Kg. / sqcm	Mtr	10.00	351.50	11.00	352.50

Sr. No.	Description.		Unit	For Plain		For Sub-mountainous region	
				Labour Rates	Through Rates	Labour Rates	Through Rates
1	2		3	4	5	6	7
	iv	110mm o/d pipe of 10 Kgf. / sqcm	Mtr	12.50	521.50	14.00	523.00
	v	160mm o/d pipe of 10 Kgf. / sqcm	Mtr	16.50	1090.00	18.50	1092.00
	vi	200mm o/d pipe of 10 Kgf. / sqcm	Mtr	24.50	1766.50	27.00	1769.00
	vii	250mm o/d pipe of 10 Kgf. / sqcm	Mtr	31.50	2824.00	34.50	2827.00
	viii	110mm o/d pipe of 8 Kgf. / sqcm	Mtr	12.50	458.00	14.00	459.50
	ix	160mm o/d pipe of 8 Kgf. / sqcm	Mtr	16.50	977.00	18.50	978.50
	x	200mm o/d pipe of 8 Kgf. / sqcm	Mtr	24.50	1516.00	27.00	1518.50
	xi	250mm o/d pipe of 8 Kgf. / sqcm	Mtr	31.50	2383.50	34.50	2386.50
	xii	63mm o/d pipe of 6 Kgf. / sqcm	Mtr	7.00	119.50	8.00	120.50
	xiii	75mm o/d pipe of 6 Kgf. / sqcm	Mtr	8.50	165.50	9.50	166.50
	xiv	90mm o/d pipe of 6 Kgf. / sqcm	Mtr	10.00	227.50	11.00	228.50
	xv	110mm o/d pipe of 6 Kgf. / sqcm	Mtr	12.50	326.50	14.00	327.50
	xvi	160mm o/d pipe of 6 Kgf. / sqcm	Mtr	16.50	559.50	18.50	561.00
	xvii	200mm o/d pipe of 6 Kgf. / sqcm	Mtr	24.50	1140.50	27.00	1143.00
	xviii	250mm o/d pipe of 6 Kgf. / sqcm	Mtr	31.50	1768.00	34.50	1771.00
	xix	63mm o/d PVC pipe of 4 Kgf. / sqcm	Mtr	7.00	85.00	8.00	85.50
	xx	75mm o/d PVC pipe of 4 Kgf. / sqcm	Mtr	8.50	118.00	9.50	118.50
	xxi	90mm o/d pipe of 4 Kgf. / sqcm	Mtr	10.00	158.50	11.00	159.50
	xxii	110mm o/d PVC pipe of 4 Kgf. / sqcm	Mtr	12.50	231.00	14.00	232.50
	xxiii	160mm o/d PVC pipe of 4 Kgf. / sqcm	Mtr	16.50	490.00	18.50	491.50
	xxiv	200mm o/d PVC pipe of 4 Kgf. / sqcm	Mtr	24.50	785.00	27.00	787.50
	xxv	250mm o/d PVC pipe of 4 Kgf. / sqcm	Mtr	31.50	1219.50	34.50	1222.50
	xxvi	90mm o/d PVC pipe of 2.5 Kgf. / sqcm	Mtr	10.00	112.00	11.00	113.00
	xxvii	110mm o/d PVC pipe of 2.5 Kgf. / sqcm	Mtr	12.50	160.50	14.00	161.50
	xxviii	160mm o/d PVC pipe of 2.5 Kgf. / sqcm	Mtr	16.50	322.50	18.50	324.50
	xxix	200mm o/d pipe of 2.5 Kgf. / sqcm	Mtr	24.50	508.00	27.00	510.50
	xxx	250mm o/d PVC pipe of 2.5 Kgf. / sqcm	Mtr	31.50	788.00	34.50	791.00
28.13 B	Providing, Laying, fixing & jointing of P.V.C. Pipes as per ISI-4985 (ISI marked with the prior approval of Engineer-in-Charge) along the Trenches and laying the same in Trenches to correct alignment and gradients, cutting, jointing and testing complete as per specifications.						
	i	63mm o/d pipe of 10 Kgf. / sqcm	Mtr	7.00	149.50	8.00	150.00
	ii	75mm o/d pipe of 10 Kgf. / sqcm	Mtr	8.50	205.00	9.50	206.00
	iii	90mm o/d pipe of 10 Kgf. / sqcm	Mtr	10.00	291.50	11.00	292.50

Sr. No.	Description.	Unit	For Plain		For Sub-mountainous region	
			Labour Rates	Through Rates	Labour Rates	Through Rates
1	2	3	4	5	6	7
	iv 110mm o/d pipe of 10 Kgf. / sqcm	Mtr	12.50	443.50	14.00	445.00
	v 160mm o/d pipe of 10 Kgf. / sqcm	Mtr	16.50	918.50	18.50	920.00
	vi 200mm o/d pipe of 10 Kgf. / sqcm	Mtr	24.50	1478.00	27.00	1480.50
	vii 250mm o/d pipe of 10 Kgf. / sqcm	Mtr	31.50	2368.50	34.50	2371.50
	viii 110mm o/d pipe of 8 Kgf. / sqcm	Mtr	12.50	371.00	14.00	372.00
	ix 160mm o/d pipe of 8 Kgf. / sqcm	Mtr	16.50	771.50	18.50	773.00
	x 200mm o/d pipe of 8 Kgf. / sqcm	Mtr	24.50	1245.50	27.00	1248.00
	xi 250mm o/d pipe of 8 Kgf. / sqcm	Mtr	31.50	1956.00	34.50	1959.50
	xii 63mm o/d pipe of 6 Kgf. / sqcm	Mtr	7.00	93.50	8.00	94.00
	xiii 75mm o/d pipe of 6 Kgf. / sqcm	Mtr	8.50	133.00	9.50	133.50
	xiv 90mm o/d pipe of 6 Kgf. / sqcm	Mtr	10.00	186.00	11.00	187.00
	xv 110mm o/d pipe of 6 Kgf. / sqcm	Mtr	12.50	275.00	14.00	276.00
	xvi 160mm o/d pipe of 6 Kgf. / sqcm	Mtr	16.50	563.50	18.50	565.00
	xvii 200mm o/d pipe of 6 Kgf. / sqcm	Mtr	24.50	946.00	27.00	948.50
	xviii 250mm o/d pipe of 6 Kgf. / sqcm	Mtr	31.50	1470.00	34.50	1473.00
	xix 63mm o/d PVC pipe of 4 Kgf. / sqcm	Mtr	7.00	70.00	8.00	70.50
	xx 75mm o/d PVC pipe of 4 Kgf. / sqcm	Mtr	8.50	94.50	9.50	95.50
	xxi 90mm o/d pipe of 4 Kgf. / sqcm	Mtr	10.00	135.50	11.00	136.50
	xxii 110mm o/d PVC pipe of 4 Kgf. / sqcm	Mtr	12.50	189.50	14.00	190.50
	xxiii 160mm o/d PVC pipe of 4 Kgf. / sqcm	Mtr	16.50	399.50	18.50	401.50
	xxiv 200mm o/d PVC pipe of 4 Kgf. / sqcm	Mtr	24.50	640.00	27.00	642.00
	xxv 250mm o/d PVC pipe of 4 Kgf. / sqcm	Mtr	31.50	990.00	34.50	993.50
	xxvi 90mm o/d PVC pipe of 2.5 Kgf. / sqcm	Mtr	10.00	90.00	11.00	91.00
	xxvii 110mm o/d PVC pipe of 2.5 Kgf. / sqcm	Mtr	12.50	134.50	14.00	135.50
	xxviii 160mm o/d PVC pipe of 2.5 Kgf. / sqcm	Mtr	16.50	265.50	18.50	267.00
	xxix 200mm o/d pipe of 2.5 Kgf. / sqcm	Mtr	24.50	430.00	27.00	432.50
	xxx 250mm o/d PVC pipe of 2.5 Kgf. / sqcm	Mtr	31.50	646.00	34.50	649.50
28.14	Providing, laying, fixing & jointing of ISI Marked H.D.P.E. Pipes as per ISI - 4984-1995 (Premium make such as Duraline/Reliance with the approval of Engineer-in-charge) along the Trenches and laying the same in Trenches to correct alignment and gradients, cutting, jointing and testing complete as per specifications.					
	i 90mm o/d H.D.P.E pipe of 6 Kg. PE-63	Mtr	8.50	407.50	9.50	408.00
	ii 110mm o/d H.D.P.E pipe of 6 Kg. PE-63	Mtr	9.50	603.00	10.50	604.00
	iii 90mm o/d H.D.P.E pipe of 4 Kg. PE-63	Mtr	8.50	291.00	9.50	291.50
	iv 110mm o/d H.D.P.E pipe of 4 Kg. PE-63	Mtr	9.50	432.50	10.50	433.50



Sr. No.	Description.	Unit	For Plain		For Sub-mountainous region	
			Labour Rates	Through Rates	Labour Rates	Through Rates
1	2	3	4	5	6	7
28.15	Providing, Laying, fixing & jointing of ISI Marked H.D.P.E. Pipes as per ISI - 4984-1995 casting (Premium make such as Dura-line/Reliance with the approval of Engineer-in-charge) along the Trenches and laying the same in Trenches to correct alignment and gradients, cutting, jointing and testing complete as per specifications.					
<b>A</b>	<b>H.D.P.E pipe of 10 Kg. PE-80</b>					
(a)	25mm o/d	Mtr	4.00	46.00	4.50	46.50
(b)	32 mm o/d	Mtr	4.50	73.00	5.00	73.50
(c)	40 mm o/d	Mtr	5.50	111.00	6.00	111.50
(d)	50 mm o/d	Mtr	6.00	169.50	7.00	170.00
(e)	63 mm o/d	Mtr	7.00	265.00	7.50	266.00
(f)	75 mm o/d	Mtr	7.50	372.00	8.50	372.50
(g)	90 mm o/d	Mtr	8.50	528.50	9.50	529.50
(h)	110 mm o/d	Mtr	9.00	780.50	10.00	781.50
(i)	125 mm o/d	Mtr	10.00	1009.50	11.00	1010.50
(j)	140 mm o/d	Mtr	10.50	1266.00	11.50	1266.00
(k)	160 mm o/d	Mtr	11.50	1646.50	12.50	1648.00
(l)	180 mm o/d	Mtr	12.00	2077.50	13.50	2079.00
(m)	200 mm o/d	Mtr	13.00	2559.00	14.00	2560.00
(n)	225 mm o/d	Mtr	13.50	3236.00	15.00	3237.50
(o)	250 mm o/d	Mtr	14.50	3991.50	16.00	3993.00
(p)	280 mm o/d	Mtr	15.00	4999.00	16.50	5000.50
(q)	315 mm o/d	Mtr	16.00	6320.50	17.50	6322.00
(r)	355 mm o/d	Mtr	16.50	8015.50	18.00	8017.00
(s)	400 mm o/d	Mtr	17.50	10380.50	19.00	10382.50
(t)	450 mm o/d	Mtr	18.00	13146.00	20.00	13148.00
(u)	500 mm o/d	Mtr	19.00	16207.00	20.50	16209.00
(v)	560 mm o/d	Mtr	19.50	20333.00	21.50	20335.00
(w)	630 mm o/d	Mtr	20.50	25684.00	22.50	25686.00
<b>B</b>	<b>H.D.P.E pipe of 8 Kg. PE-80</b>					
(a)	32 mm o/d	Mtr	4.50	61.00	5.00	61.50
(b)	40 mm o/d	Mtr	5.50	93.00	6.00	93.50
(c)	50 mm o/d	Mtr	6.00	144.50	7.00	145.00
(d)	63 mm o/d	Mtr	7.00	221.00	7.50	221.50
(e)	75 mm o/d	Mtr	7.50	310.50	8.50	311.50
(f)	90 mm o/d	Mtr	8.50	442.00	9.50	443.00
(g)	110 mm o/d	Mtr	9.00	658.00	10.00	659.00
(h)	125 mm o/d	Mtr	10.00	844.00	11.00	845.00
(i)	140 mm o/d	Mtr	10.50	1053.50	11.50	1054.50
(j)	160 mm o/d	Mtr	11.50	1370.50	12.50	1371.50
(k)	180 mm o/d	Mtr	12.00	1735.00	13.50	1736.50
(l)	200 mm o/d	Mtr	13.00	2136.00	14.00	2137.50
(m)	225 mm o/d	Mtr	13.50	2692.00	15.00	2693.00
(n)	250 mm o/d	Mtr	14.50	3327.00	16.00	3328.50
(o)	280 mm o/d	Mtr	15.00	4160.50	16.50	4162.00
(p)	315 mm o/d	Mtr	16.00	5264.00	17.50	5266.00

Sr. No.	Description.	Unit	For Plain		For Sub-mountainous region	
			Labour Rates	Through Rates	Labour Rates	Through Rates
1	2	3	4	5	6	7
(q)	355 mm o/d	Mtr	16.50	6662.50	18.00	6664.00
(r)	400 mm o/d	Mtr	17.50	8648.00	19.00	8650.00
(s)	450 mm o/d	Mtr	18.00	10940.00	20.00	10942.00
(t)	500 mm o/d	Mtr	19.00	13484.50	20.50	13486.50
(u)	560 mm o/d	Mtr	19.50	16894.00	21.50	16896.00
(v)	630 mm o/d	Mtr	20.50	21379.00	22.50	21381.00
<b>C</b>	<b>H.D.P.E pipe of 6 Kg. PE-80</b>					
(a)	40 mm o/d	Mtr	5.50	75.00	6.00	75.50
(b)	50 mm o/d	Mtr	6.00	114.50	7.00	115.00
(c)	63 mm o/d	Mtr	7.00	175.00	7.50	176.00
(d)	75 mm o/d	Mtr	7.50	247.00	8.50	247.50
(e)	90 mm o/d	Mtr	8.50	348.50	9.50	349.50
(f)	110 mm o/d	Mtr	9.00	520.00	10.00	520.50
(g)	125 mm o/d	Mtr	10.00	663.50	11.00	664.50
(h)	140 mm o/d	Mtr	10.50	829.00	11.50	830.00
(i)	160 mm o/d	Mtr	11.50	1078.50	12.50	1079.50
(j)	180 mm o/d	Mtr	12.00	1355.50	13.50	1356.50
(k)	200 mm o/d	Mtr	13.00	1677.00	14.00	1678.50
(l)	225 mm o/d	Mtr	13.50	2110.50	15.00	2111.50
(m)	250 mm o/d	Mtr	14.50	2602.50	16.00	2604.00
(n)	280 mm o/d	Mtr	15.00	3251.00	16.50	3252.50
(o)	315 mm o/d	Mtr	16.00	4112.00	17.50	4113.50
(p)	355 mm o/d	Mtr	16.50	5208.00	18.00	5207.50
(q)	400 mm o/d	Mtr	17.50	6761.50	19.00	6763.50
(r)	450 mm o/d	Mtr	18.00	8534.50	20.00	8536.50
(s)	500 mm o/d	Mtr	19.00	10545.50	20.50	10547.50
(t)	560 mm o/d	Mtr	19.50	13179.00	21.50	13181.00
(u)	630 mm o/d	Mtr	20.50	16684.50	22.50	16686.50
<b>D</b>	<b>H.D.P.E pipe of 4 Kg. PE-80</b>					
(a)	50 mm o/d	Mtr	6.00	95.00	7.00	95.50
(b)	63 mm o/d	Mtr	7.00	128.50	7.50	129.00
(c)	75 mm o/d	Mtr	7.50	173.50	8.50	174.50
(d)	90 mm o/d	Mtr	8.50	248.50	9.50	249.50
(e)	110 mm o/d	Mtr	9.00	367.00	10.00	368.00
(f)	125 mm o/d	Mtr	10.00	470.00	11.00	471.00
(g)	140 mm o/d	Mtr	10.50	580.00	11.50	581.00
(h)	160 mm o/d	Mtr	11.50	757.50	12.50	758.50
(i)	180 mm o/d	Mtr	12.50	953.50	14.00	954.50
(j)	200 mm o/d	Mtr	13.00	1164.00	14.00	1165.00
(k)	225 mm o/d	Mtr	13.50	1474.50	15.00	1476.00
(l)	250 mm o/d	Mtr	14.50	1821.50	16.00	1823.00
(m)	280 mm o/d	Mtr	15.50	2266.00	17.00	2267.50
(n)	315 mm o/d	Mtr	16.00	2878.00	17.50	2879.50
(o)	355 mm o/d	Mtr	16.50	3629.50	18.00	3631.50

Sr. No.	Description.	Unit	For Plain		For Sub-mountainous region	
			Labour Rates	Through Rates	Labour Rates	Through Rates
1	2	3	4	5	6	7
(p)	400 mm o/d	Mtr	17.50	4701.00	19.00	4702.50
(q)	450 mm o/d	Mtr	18.00	5964.50	20.00	5966.50
(r)	500 mm o/d	Mtr	19.00	7329.00	20.50	7331.00
(s)	560 mm o/d	Mtr	19.50	9188.50	21.50	9190.50
(t)	630 mm o/d	Mtr	20.50	11616.50	22.50	11618.50
28.16	Providing, Laying, fixing & jointing of ISI Marked H.D.P.E. Pipes as per ISI - 4984 (Premium make such as Duraline/Reliance with the approval of Engineer-in-charge) along the Trenches and laying the same in Trenches to correct alignment and gradients, cutting, jointing and testing complete as per specifications.					
<b>A</b>	<b>H.D.P.E pipe of 10 Kg. PE-100</b>					
(a)	32 mm o/d	Mtr	4.50	62.50	5.00	63.00
(b)	40 mm o/d	Mtr	5.50	94.50	6.00	95.00
(c)	50 mm o/d	Mtr	6.00	143.00	7.00	143.50
(d)	63 mm o/d	Mtr	7.00	224.50	7.50	225.00
(e)	75 mm o/d	Mtr	7.50	315.50	8.50	316.00
(f)	90 mm o/d	Mtr	8.50	449.50	9.50	450.00
(g)	110 mm o/d	Mtr	9.00	661.50	10.00	662.50
(h)	125 mm o/d	Mtr	10.00	850.00	11.00	851.00
(i)	140 mm o/d	Mtr	10.50	1062.00	11.50	1063.00
(j)	160 mm o/d	Mtr	11.50	1382.50	12.50	1383.50
(k)	180 mm o/d	Mtr	12.00	1752.00	13.50	1753.00
(l)	200 mm o/d	Mtr	13.00	2159.00	14.00	2160.00
(m)	225 mm o/d	Mtr	13.50	2722.00	15.00	2723.50
(n)	250 mm o/d	Mtr	14.50	3350.00	16.00	3351.50
(o)	280 mm o/d	Mtr	15.00	4193.00	16.50	4194.50
(p)	315 mm o/d	Mtr	16.50	5290.00	18.00	5291.50
(q)	355 mm o/d	Mtr	16.50	6747.50	18.00	6749.50
(r)	400 mm o/d	Mtr	17.50	8737.00	19.00	8738.50
(s)	450 mm o/d	Mtr	18.00	11017.00	20.00	11019.00
(t)	500 mm o/d	Mtr	19.00	13608.50	20.50	13610.00
(u)	560 mm o/d	Mtr	19.50	17044.00	21.50	17046.00
(v)	630 mm o/d	Mtr	20.50	21566.50	22.50	21568.50
<b>B</b>	<b>H.D.P.E pipe of 8 Kg. PE-100</b>					
(a)	40 mm o/d	Mtr	5.50	78.50	6.00	79.00
(b)	50 mm o/d	Mtr	6.00	119.00	7.00	119.50
(c)	63 mm o/d	Mtr	7.00	187.00	7.50	188.00
(d)	75 mm o/d	Mtr	7.50	261.00	8.50	262.00
(e)	90 mm o/d	Mtr	8.50	371.50	9.50	372.00
(f)	110 mm o/d	Mtr	9.00	548.50	10.00	549.50
(g)	125 mm o/d	Mtr	10.00	705.50	11.00	706.50
(h)	140 mm o/d	Mtr	10.50	883.00	11.50	884.00
(i)	160 mm o/d	Mtr	11.50	1148.00	12.50	1149.00
(j)	180 mm o/d	Mtr	12.00	1448.00	13.50	1449.00
(k)	200 mm o/d	Mtr	13.00	1781.50	14.00	1783.00

Sr. No.	Description.	Unit	For Plain		For Sub-mountainous region	
			Labour Rates	Through Rates	Labour Rates	Through Rates
1	2	3	4	5	6	7
(l)	225 mm o/d	Mtr	13.50	2254.50	15.00	2256.00
(m)	250 mm o/d	Mtr	14.50	2774.50	16.00	2775.50
(n)	280 mm o/d	Mtr	15.00	3477.00	16.50	3478.50
(o)	315 mm o/d	Mtr	16.00	4393.00	17.50	4394.50
(p)	355 mm o/d	Mtr	16.50	5557.00	18.00	5558.50
(q)	400 mm o/d	Mtr	17.50	7196.50	19.00	7198.50
(r)	450 mm o/d	Mtr	18.00	9111.50	20.00	9113.00
(s)	500 mm o/d	Mtr	19.00	11235.00	20.50	11237.00
(t)	560 mm o/d	Mtr	19.50	14101.50	21.50	14103.50
(u)	630 mm o/d	Mtr	20.50	17834.50	22.50	17836.50
<b>C</b>	<b>H.D.P.E pipe of 6 Kg. PE-100</b>					
(a)	50 mm o/d	Mtr	6.00	96.50	7.00	97.00
(b)	63 mm o/d	Mtr	7.00	147.50	7.50	148.00
(c)	75 mm o/d	Mtr	7.50	209.50	8.50	210.50
(d)	90 mm o/d	Mtr	8.50	292.00	9.50	293.00
(e)	110 mm o/d	Mtr	9.00	426.00	10.00	427.00
(f)	125 mm o/d	Mtr	10.00	549.50	11.00	550.50
(g)	140 mm o/d	Mtr	10.50	689.50	11.50	690.50
(h)	160 mm o/d	Mtr	11.50	894.50	12.50	895.50
(i)	180 mm o/d	Mtr	12.00	1126.00	13.50	1127.00
(j)	200 mm o/d	Mtr	13.00	1385.00	14.00	1386.50
(k)	225 mm o/d	Mtr	13.50	1757.00	15.00	1758.50
(l)	250 mm o/d	Mtr	14.50	2154.50	16.00	2155.50
(m)	280 mm o/d	Mtr	15.00	2699.50	16.50	2701.00
(n)	315 mm o/d	Mtr	16.00	3415.00	17.50	3416.50
(o)	355 mm o/d	Mtr	16.50	4324.00	18.00	4326.00
(p)	400 mm o/d	Mtr	17.50	5587.50	19.00	5589.50
(q)	450 mm o/d	Mtr	18.00	7065.00	20.00	7067.00
(r)	500 mm o/d	Mtr	19.00	8731.00	20.50	8733.00
(s)	560 mm o/d	Mtr	19.50	10927.00	21.50	10929.00
(t)	630 mm o/d	Mtr	20.50	13827.00	22.50	13829.50
28.17	Providing, Stringing out, cutting, Jointing and testing of THIN WALLED FLEXIBLE QUICK COUPLING PIPES as per IS 11722/86 (ISI marked with the prior approval of Engineer-in-Charge) laying the same in trenches to correct alignment and gradients, jointed with coupler including cost of specials and all cartage complete.					
	<b>Quick Coupling Jointing pipe IS 11722/86</b>					
a	50.80mm o/d pipe lines laid complete	Mtr	7.00	391.00	7.50	391.50
b	63.50mm o/d pipe lines laid complete	Mtr	7.00	512.50	7.50	513.00
c	76.20mm o/d pipe lines laid complete	Mtr	7.00	566.50	8.00	567.50
d	101.60mm o/d pipe lines laid complete	Mtr	8.00	752.00	9.00	753.00
e	127.00mm o/d pipe lines laid complete	Mtr	7.50	917.50	8.50	918.50
f	152.40mm o/d pipe lines laid complete	Mtr	10.00	1102.00	11.00	1103.00

Sr. No.	Description.		Unit	For Plain		For Sub-mountainous region	
				Labour Rates	Through Rates	Labour Rates	Through Rates
1	2		3	4	5	6	7
	g	203.40mm o/d pipe lines laid complete	Mtr	13.00	2062.50	14.50	2063.50
	h	254.00mm o/d pipe lines laid complete	Mtr	16.50	3279.00	18.50	3281.00
	i	304.80mm o/d pipe lines laid complete	Mtr	21.00	4394.50	23.00	4396.50
28.18	Supplying, fixing and jointing PVC / H.D.P.E pipe's specials complete as desired by Engineer-in-Charge.		Mtr				
	a	For pipe lines laid inside habitation	Mtr	5% Extra will be taken for the respective i/d of pipe.			
	b	For pipe lines laid outside habitation & in the open area/ field	Mtr	2% Extra will be taken for the respective i/d of pipe.			
28.19	CONCEALED IN WALL: Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes as per IS 15778 (ISI marked with the prior approval of Engineer-in-Charge), having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings i/c fixing the pipe with clamps at 1.00 m spacing including jointing of pipes & fittings, with one step CPVC solvent cement and testing of pipes complete as per direction of Engineer-in-Charge.						
	a	CPVC SDR 11 Pipe & fitting 16mm o/d	Mtr	65.50	170.50	72.00	177.00
	b	SDR 11 CPVC pipes & fittings 20mm o/d	Mtr	65.50	224.50	72.00	231.00
	c	CPVC SDR 11 Pipe & fitting 25mm o/d	Mtr	65.50	300.00	72.00	306.50
	d	CPVC SDR 11 Pipe & fitting 32mm o/d	Mtr	65.50	419.00	72.00	425.50
	e	CPVC SDR 11 Pipe & fitting 40mm o/d	Mtr	65.50	544.00	72.00	550.50
	f	CPVC SDR 11 Pipe & fitting 50mm o/d	Mtr	65.50	868.00	72.00	874.50
28.20	INTERNAL - EXPOSED ON WALL : Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes as per IS 15778 (ISI marked with the prior approval of Engineer-in-Charge), having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings including fixing the pipe with clamps at 1.00 m spacing including jointing of pipes & fittings with one step PVC solvent cement and testing of pipes complete as per direction of Engineer-in-Charge.						
	(a)	SDR 11 CPVC pipes & fittings 16mm o/d	Mtr	65.50	140.50	72.00	147.00
	(b)	SDR 11 CPVC pipes & fittings 20mm o/d	Mtr	65.50	179.00	72.00	185.50
	(c)	SDR 11 CPVC pipes & fittings 25mm o/d	Mtr	65.50	233.00	72.00	239.50
	(d)	SDR 11 CPVC pipes & fittings 32mm o/d	Mtr	65.50	318.00	72.00	324.50
	(e)	SDR 11 CPVC pipes & fittings 40mm o/d	Mtr	65.50	407.50	72.00	414.00
	(f)	SDR 11 CPVC pipes & fittings 50mm o/d	Mtr	65.50	639.00	72.00	645.50
	(g)	CPVC Pipe Schd 40 & Schd 80 fittings 65mm i/d	Mtr	83.50	1097.00	92.00	1105.50
	(h)	CPVC Pipe Schd 40 & Schd 80 fittings 80mm i/d	Mtr	83.50	1401.00	92.00	1409.00
	(i)	CPVC pipes Schd 40 & Schd 80 fittings 100mm i/d	Mtr	83.50	1957.00	92.00	1965.50

Sr. No.	Description.		Unit	For Plain		For Sub-mountainous region	
				Labour Rates	Through Rates	Labour Rates	Through Rates
1	2		3	4	5	6	7
	(j)	Schd 40 pipe , 150mm i/d	Mtr	Deleted			
28.21	Providing, Stringing out, cutting, Jointing and testing of C.I. Double Flanged pipes with casted flanged as per IS:7181, Class-B (ISI marked with the prior approval of Engineer-in-Charge) 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	Mtr	34.00	1559.00	37.50	1562.50
	b	100mm i/d pipe lines laid complete	Mtr	44.50	1977.00	49.00	1981.00
	c	125mm i/d pipe lines laid complete	Mtr	49.00	2567.50	53.50	2572.50
	d	150mm i/d pipe lines laid complete	Mtr	59.50	3233.50	65.50	3239.50
	e	200mm i/d pipe lines laid complete	Mtr	79.50	4623.50	87.50	4631.50
	f	250mm i/d pipe lines laid complete	Mtr	100.50	6254.50	110.50	6264.50
	g	300mm i/d pipe lines laid complete	Mtr	170.50	8077.50	187.50	8094.50
	h	350mm i/d pipe lines laid complete	Mtr	203.50	10625.00	223.50	10645.50
	i	400mm i/d pipe lines laid complete	Mtr	246.50	13002.00	271.00	13027.00
	j	450mm i/d pipe lines laid complete	Mtr	299.50	15988.00	329.50	16018.00
	k	500mm i/d pipe lines laid complete	Mtr	349.00	18632.50	383.50	18667.00
	l	600mm i/d pipe lines laid complete	Mtr	459.50	26845.00	505.00	26891.00
28.22	Providing, Stringing out, cutting, Jointing and testing of C.I. Double Flanged pipes with screwed flanged as per IS:1536, class-B (ISI marked with the prior approval of Engineer-in-Charge) and laying the same in trenches to correct alignment and gradients, including cost of nut bolts and rubber insertion complete including all cartage.						
	a	80mm i/d pipe lines laid complete	Mtr	30.50	1294.50	33.50	1297.50
	b	100mm i/d pipe lines laid complete	Mtr	40.00	1456.50	44.00	1460.50
	c	125mm i/d pipe lines laid complete	Mtr	43.00	1920.00	47.50	1924.00
	d	150mm i/d pipe lines laid complete	Mtr	52.50	2329.00	57.50	2334.50
	e	200mm i/d pipe lines laid complete	Mtr	69.00	3381.00	76.00	3388.00
	f	250mm i/d pipe lines laid complete	Mtr	87.00	4555.50	95.50	4564.00
	g	300mm i/d pipe lines laid complete	Mtr	140.00	5877.00	154.00	5891.00
	h	350mm i/d pipe lines laid complete	Mtr	165.00	8451.50	181.50	8468.00
	i	400mm i/d pipe lines laid complete	Mtr	199.50	10328.50	219.50	10348.50
	j	450mm i/d pipe lines laid complete	Mtr	243.00	12457.50	267.00	12481.50
	k	500mm i/d pipe lines laid complete	Mtr	283.50	14541.00	311.50	14569.00
	l	600mm i/d pipe lines laid complete	Mtr	367.50	19370.50	404.00	19407.50

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Sr. No.	Description.	Unit	For Plain		For Sub-mountainous region	
			Labour Rates	Through Rates	Labour Rates	Through Rates
1	2	3	4	5	6	7
28.23	Providing, Stringing out, cutting, Jointing and testing of ISI Marked 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	Mtr	29.00	1715.50	32.00	1718.00
	b 100mm i/d pipe lines laid complete	Mtr	40.00	1905.50	44.00	1909.50
	c 125mm i/d pipe lines laid complete	Mtr	42.50	2404.00	46.50	2408.50
	d 150mm i/d pipe lines laid complete	Mtr	51.00	2821.50	56.00	2826.50
	e 200mm i/d pipe lines laid complete	Mtr	65.50	3701.50	72.00	3708.00
	f 250mm i/d pipe lines laid complete	Mtr	81.00	5042.00	89.00	5050.00
	g 300mm i/d pipe lines laid complete	Mtr	116.50	6437.50	128.00	6449.00
	h 350mm i/d pipe lines laid complete	Mtr	144.50	8113.00	159.00	8127.50
	i 400mm i/d pipe lines laid complete	Mtr	168.00	9798.00	184.50	9815.00
	j 450mm i/d pipe lines laid complete	Mtr	208.50	11633.50	229.50	11654.50
	k 500mm i/d pipe lines laid complete	Mtr	242.00	15511.50	266.00	15535.50
	l 600mm i/d pipe lines laid complete	Mtr	311.50	20441.00	343.00	20472.00
28.24	Supplying and laying C.I. specials as per IS:1538 complete as desired by Engineer-in-Charge conforming to ISI specifications. Note: If C.I specials of ISI Marked is used instead of specials					
	a C.I. specials upto 300mm i/d	Kg.	2.50	65.50	3.00	66.00
	b C.I. specials above 300mm i/d	Kg.	3.00	83.50	3.50	83.50
28.25	Supplying and laying D.I. specials/fittings as per IS:9523-2000 (ISI marked with the prior approval of Engineer-in-Charge), class K-12 suitable for tyton joint with external bitumen coating and inside cement mortar lining, scaffolding, tools and plants, ropes, guys, etc. Complete in all respects.					
	a D.I. specials upto 300mm i/d	Kg.	2.50	97.50	3.00	98.00
	b D.I. specials above 300mm i/d	Kg.	3.00	147.50	3.50	147.50
28.26	<b>EXTERNAL IN THE GROUND : Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes as per IS 15778 (ISI marked with the prior approval of Engineer-in-Charge), having thermal stability for hot &amp; cold water supply including all CPVC plain &amp; brass threaded fittings. This includes jointing of pipes &amp; fittings with one step CPVC solvent cement, &amp; testing of joints excluding cost of excavation complete as per direction of Engineer-in-Charge.</b>					
	a CPVC SDR 11 pipes & fittings 16mm o/d	Mtr	52.00	130.00	57.00	135.50
	b CPVC SDR 11 Pipe & fittings 20mm o/d	Mtr	52.00	170.00	57.00	175.00

Sr. No.	Description.	Unit	For Plain		For Sub-mountainous region	
			Labour Rates	Through Rates	Labour Rates	Through Rates
1	2	3	4	5	6	7
	c CPVC SDR 11 pipe & Fittings 25mm o/d	Mtr	52.00	226.00	57.00	231.50
	d CPVC SDR 11 pipe & fittings 32mm o/d	Mtr	52.00	314.50	57.00	320.00
	e CPVC SDR 11 pipes & fittings 0/d 40mm	Mtr	52.00	407.50	57.00	413.00
	f CPVC SDR 11 pipe & fittings 50mm o/d	Mtr	52.00	648.50	57.00	653.50
	g CPVC SChd 40pipe & Schd 80 fittings ( 62.5 mm i/d)	Mtr	52.00	1106.00	57.00	1111.00
	h CPVC SChd 40pipe & Schd 80 fittings ( 75 mm i/d)	Mtr	60.50	1430.50	66.50	1436.50
	i CPVC SChd 40pipe & Schd 80 fittings ( 100 mm i/d)	Mtr	60.50	2009.00	66.50	2015.00
	j Schd 40 pipe , 150mm i/d	Mtr	Deleted			
28.27	Providing & fixing C.I/D.I Flanged end, stem of SS (AIS 1410) and Bronze(gunmetal) working parts Sluice Valves ISI marked 14846-2000, including jointing , testing & cost of Nut ,Bolt & insertion sheet, all carriage complete (with the approval of Engineer in-charge).					
<b>A</b>	<b>Class PN-1 as per ISI</b>					
	(a) 80mm i/d Sluice Valves flanged	Each	257.50	4178.50	283.50	4204.50
	(b) 100mm i/d Sluice Valves flanged	Each	300.00	5700.00	330.00	5730.00
	(c) 150mm i/d Sluice Valves flanged	Each	389.00	8475.00	428.00	8513.50
	(d) 200mm i/d Sluice Valves flanged	Each	482.00	14568.50	530.50	14617.00
	(e) 250mm i/d Sluice Valves flanged	Each	606.50	21165.50	667.00	21226.00
	(f) 300mm i/d Sluice Valves flanged	Each	739.50	26515.50	813.50	26589.50
	(g) 350mm i/d Sluice Valves flanged	Each	870.00	46796.00	956.50	46882.50
	(h) 400mm i/d Sluice Valves flanged	Each	1030.50	56890.50	1134.00	56993.50
	(i) 450mm i/d Sluice Valves flanged	Each	1072.00	66667.50	1179.00	66774.50
	(j) 500mm i/d Sluice Valves flanged	Each	1104.50	108816.00	1215.00	108926.50
	(k) 600mm i/d Sluice Valves flanged	Each	1376.50	126244.50	1514.00	126382.00
<b>B</b>	<b>Class PN-1.6 as per ISI</b>					
	(a) 80mm i/d Sluice Valves flanged	Each	257.50	4481.50	283.50	4507.50
	(b) 100mm i/d Sluice Valves flanged	Each	300.00	6108.50	330.00	6138.50
	(c) 150mm i/d Sluice Valves flanged	Each	389.00	9084.00	428.00	9123.00
	(d) 200mm i/d Sluice Valves flanged	Each	482.00	16645.00	530.50	16693.00
	(e) 250mm i/d Sluice Valves flanged	Each	606.50	22558.50	667.00	22619.00
	(f) 300mm i/d Sluice Valves flanged	Each	739.50	28280.00	813.50	28354.00
	(g) 350mm i/d Sluice Valves flanged	Each	870.00	50050.00	956.50	50137.00
	(h) 400mm i/d Sluice Valves flanged	Each	1030.50	61257.50	1134.00	61360.50
	(i) 450mm i/d Sluice Valves flanged	Each	1072.00	71768.00	1179.00	71875.50

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Sr. No.	Description.	Unit	For Plain		For Sub-mountainous region	
			Labour Rates	Through Rates	Labour Rates	Through Rates
1	2	3	4	5	6	7
<b>C</b>	<b>Special quality Sluice Valve (PN 1.0/PN 1.6) of premium range such as make kirlosker as approved by Engineer-in-Charge.</b>					
	(a) 80mm i/d Sluice Valves flanged	Each	257.50	11710.50	283.50	11736.00
	(b) 100mm i/d Sluice Valves flanged	Each	300.00	15678.00	330.00	15708.00
	(c) 125mm i/d Sluice Valves flanged	Each	326.50	21160.00	359.00	21192.50
	(d) 150mm i/d Sluice Valves flanged	Each	389.00	25253.00	428.00	25292.00
	(e) 200mm i/d Sluice Valves flanged	Each	482.00	44064.00	530.50	44112.00
	(f) 250mm i/d Sluice Valves flanged	Each	606.50	54891.50	667.00	54952.00
	(g) 300mm i/d Sluice Valves flanged	Each	739.50	75280.00	813.50	75354.00
	(h) 350mm i/d Sluice Valves flanged	Each	870.00	117179.00	956.50	117266.00
	(i) 400mm i/d Sluice Valves flanged	Each	1030.50	139807.00	1134.00	139910.00
	(j) 450mm i/d Sluice Valves flanged	Each	1072.00	176378.00	1179.00	176485.00
	(k) 500mm i/d Sluice Valves flanged	Each	1104.50	226491.00	1215.00	226601.50
	(l) 600mm i/d Sluice Valves flanged	Each	1376.50	301343.50	1514.00	301481.50
28.28	Providing & fixing Fire Hydrants with jointing including all carriages complete. (without Fire Hydrant surface box) Size 80mm complete in all respect.					
	(a) C.I Fire Hydrants 1S-908	Each	201.00	6825.00	221.00	6845.00
	(b) C.I Fire Hydrants S.V. Type IS-909	Each	201.00	12051.00	221.00	12071.00
	(c) C.I Fire Hydrants Stand Post Type IS-908	Each	207.50	10755.00	228.00	10776.00
28.29	Providing & fixing Single air valve ISI Marked as per IS-14845 including jointing, cost of nut bolts & rubber insertion all carriages complete.					
	(a) C.I Single air valve screwed (Size 25mm)	Each	201.00	1704.00	221.00	1724.00
	(b) C.I Single air valve screwed (Size 32mm)	Each	201.00	1863.00	221.00	1883.00
	(c) C.I Single air valve screwed (Size 40mm)	Each	201.00	2219.00	221.00	2239.00
	(d) C.I Single air valve screwed (Size 50mm)	Each	201.00	2348.00	221.00	2368.00
	(e) C.I Single air valve screwed (Size 80mm)	Each	201.00	4279.00	221.00	4299.00
28.30	Providing & fixing double air valve ISI Marked as per IS-14845 including jointing all carriages complete.					
	(a) C.I Double air valve (Size 40mm)	Each	201.00	4435.00	221.00	4455.00
	(b) C.I Double air valve (Size 50mm)	Each	201.00	4649.50	221.00	4669.50
	(c) C.I Double air valve (Size 65mm)	Each	201.00	4877.00	221.00	4897.00

Sr. No.	Description.		Unit	For Plain		For Sub-mountainous region	
				Labour Rates	Through Rates	Labour Rates	Through Rates
1	2		3	4	5	6	7
	(d)	C.I Double air valve (Size 80mm)	Each	201.00	5379.00	221.00	5399.00
	(e)	C.I Double air valve (Size 100mm)	Each	201.00	7541.50	221.00	7561.50
28.31	Proving & fixing ISI Marked Non-return valves flanged end class PN-1.0 as per IS:5312/2004 in pipe lines including jointing & cost of Nut Bolt , rubber insertion etc. complete. Note: If Non-return valves class PN-1.6 is used instead of class PN-1.0 , than 5% will be paid extra.						
<b>A</b>	<b>Class PN-1.0 as per ISI with rubber Flap</b>						
	(a)	80mm i/d Non-return valve	Each	257.50	3780.50	283.50	3806.00
	(b)	100mm i/d Non-return valve	Each	300.00	4869.50	330.00	4899.50
	(c)	125mm i/d Non-return valve	Each	326.50	7192.00	359.00	7224.50
	(d)	150mm i/d Non-return valve	Each	389.00	8350.50	428.00	8389.50
	(e)	200mm i/d Non-return valve	Each	482.00	15789.00	530.50	15837.50
	(f)	250mm i/d Non-return valve	Each	606.50	23356.50	667.00	23417.50
	(g)	300mm i/d Non-return valve	Each	870.00	30182.50	956.50	30269.50
	(h)	350mm i/d Non-return valve	Each	942.50	51594.00	1036.50	51688.00
	(i)	400mm i/d Non-return valve	Each	1030.50	61902.50	1134.00	62005.50
	(j)	450mm i/d Non-return valve	Each	1072.00	72690.50	1179.00	72798.00
	(k)	500mm i/d Non-return valve	Each	1104.50	128332.50	1215.00	128443.00
<b>B</b>	<b>Class PN-1.0 as per ISI with gun metal flap</b>						
	(a)	80mm i/d Non-return valve	Each	257.50	3993.00	283.50	4019.00
	(b)	100mm i/d Non-return valve	Each	300.00	5091.50	330.00	5121.50
	(c)	125mm i/d Non-return valve	Each	326.50	7495.00	359.00	7527.50
	(d)	150mm i/d Non-return valve	Each	389.00	8749.50	428.00	8788.50
	(e)	200mm i/d Non-return valve	Each	482.00	16225.00	530.50	16273.50
	(f)	250mm i/d Non-return valve	Each	606.50	24252.50	667.00	24313.50
	(g)	300mm i/d Non-return valve	Each	870.00	31119.00	956.50	31206.00
	(h)	350mm i/d Non-return valve	Each	942.50	54081.00	1036.50	54175.00
	(i)	400mm i/d Non-return valve	Each	1030.50	64891.00	1134.00	64994.00
	(j)	450mm i/d Non-return valve	Each	1072.00	76190.50	1179.00	76298.00
	(k)	500mm i/d Non-return valve	Each	1104.50	128332.50	1215.00	128443.00
28.32	Providing, fixing and jointing Cast Iron surface box for Sluice valve, Air valve, Fire hydrant etc. including all carriages complete.		Kg.	4.00	67.00	4.50	67.00
28.33	Providing & Fixing C.I indicating plates of size 100mm x 100 mm for SV/FH including synthetic enamel paint & letters in white enamel paint, fixing in the ground with angle iron of size 25x25x5mm, 230mm height from ground including concrete block complete in all respect as directed by Engineer-in-charge		Each	53.50	191.00	59.00	196.00

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Sr. No.	Description.	Unit	For Plain		For Sub-mountainous region	
			Labour Rates	Through Rates	Labour Rates	Through Rates
1	2	3	4	5	6	7
28.34	Providing ISI Marked G.M ferrule as per IS:2692, 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	102.50	360.00	113.00	370.50
	(b) 15mm i/d Ferrule medium	Each	118.00	412.00	129.50	423.50
	(c) 20mm i/d Ferrule medium	Each	240.50	568.00	264.50	592.00
	(d) 15mm i/d Ferrule heavy duty	Each	118.00	484.00	129.50	496.00
	(e) 20mm i/d Ferrule heavy duty	Each	240.50	745.00	264.50	769.50
	(f) 25mm i/d Ferrule heavy duty	Each	325.50	1441.00	358.00	1473.50
28.35	Providing ,laying, jointing, fixing and testing ISI Marked G.I. Pipe (as per IS 1239) B-Class Premium make such as (Jindal Hisar) including cost of specials (such as tees, bends, sockets, elbows etc.) ,painting with anti corrosive bitumastic paint, testing, cutting, threading inside building complete.					
	a 15mm i/d	Mtr	48.00	175.00	52.50	179.50
	b 20mm i/d	Mtr	55.00	218.00	60.50	223.50
	c 25mm i/d	Mtr	61.50	289.00	68.00	295.00
	d 32mm i/d	Mtr	75.50	367.50	83.00	375.00
	e 40mm i/d	Mtr	82.00	415.50	90.50	423.50
	f 50mm i/d	Mtr	89.00	546.00	98.00	555.00
28.36	Providing and laying, jointing, fixing, testing ISI Marked G.I. Pipe (as per IS 1239) B- Class,premium make such as (Jindal Hisar) 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	Mtr	18.00	128.00	19.50	128.00
	b 20mm i/d	Mtr	19.50	160.00	21.50	162.00
	c 25mm i/d	Mtr	26.50	223.00	29.00	226.00
	d 32mm i/d	Mtr	40.50	294.50	44.50	298.50
	e 40mm i/d	Mtr	42.50	332.50	46.50	336.50
	f 50mm i/d	Mtr	44.50	443.00	48.50	447.50
	g 65mm i/d	Mtr	47.00	511.50	51.50	518.00
	h 80mm i/d	Mtr	48.00	658.50	52.50	663.00
	i 100mm i/d	Mtr	61.50	955.50	68.00	961.50

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Sr. No.	Description.	Unit	For Plain		For Sub-mountainous region	
			Labour Rates	Through Rates	Labour Rates	Through Rates
1	2	3	4	5	6	7
28.37	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 including testing of pipes complete as per direction of the engineer in charge.					
	Concealed work- including cutting chase & making good the wall etc.					
	(a) 1216 (16 mm o/d) pipe	Mtr	61.50	251.50	67.50	258.00
	(b) 1620 (20 mm o/d) pipe	Mtr	62.00	312.50	68.50	319.00
	(c) 2025 (25 mm o/d) pipe	Mtr	63.00	383.50	69.50	389.50
	(d) 2532 (32 mm o/d) pipe	Mtr	64.00	474.50	70.00	480.50
	(e) 3240 (40 mm o/d) pipe	Mtr	64.50	665.50	71.00	671.50
	(f) 4050 (50 mm o/d) pipe	Mtr	65.50	816.50	72.00	823.00
28.38	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 & 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. Internal work - Exposed on wall					
	a) 1216 (16 mm o/d) pipe	Mtr	38.00	179.50	42.00	183.50
	b) 1620 (20mm o/d) pipe	Mtr	39.00	225.00	43.00	229.00
	c) 2025 (25mm o/d) pipe	Mtr	39.50	278.00	43.50	281.50
	d) 2532 (32mm o/d) pipe	Mtr	40.50	345.50	44.50	349.50
	e) 3240 (40mm o/d) pipe	Mtr	41.50	487.50	45.50	491.50
	f) 4050 (50mm o/d) pipe	Mtr	42.00	600.00	46.50	604.00
28.39 A	Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes (as per IS:15801-2008) 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 including testing of pipes complete as per direction of Engineer in Charge.					
	Concealed work- including cutting chase & making good the wall etc.					
	a) PN - 16 Pipe, 16mm o/d	Mtr	56.00	120.00	61.50	125.50
	b) PN - 16 Pipe, 20mm o/d	Mtr	57.50	139.50	63.50	145.50
	c) PN - 16 Pipe, 25mm o/d	Mtr	59.00	186.50	65.00	192.50
	d) PN - 16 Pipe, 32mm o/d	Mtr	60.00	264.50	66.00	270.50
	e) PN - 16 Pipe, 40mm o/d	Mtr	61.00	367.50	67.00	373.50
	f) PN - 16 Pipe, 50mm o/d	Mtr	61.50	542.00	68.00	548.00

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Sr. No.	Description.	Unit	For Plain		For Sub-mountainous region	
			Labour Rates	Through Rates	Labour Rates	Through Rates
1	2	3	4	5	6	7
28.39 B	Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes (as per IS:15801-2008) 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. Internal work - Exposed on wall					
	(a) PN- 16 Pipe, 16 mm o/d	Mtr	48.00	95.50	53.00	100.50
	(b) PN- 16 Pipe, 20 mm o/d	Mtr	49.00	110.00	53.50	114.50
	(c) PN- 16 Pipe, 25 mm o/d	Mtr	49.50	144.00	54.50	149.00
	(d) PN- 16 Pipe, 32 mm o/d	Mtr	50.00	202.00	55.00	207.00
	(e) PN- 16 Pipe, 40 mm o/d	Mtr	50.50	278.00	55.50	283.00
	(f) PN- 16 Pipe, 50 mm o/d	Mtr	50.50	407.50	56.00	412.50
28.40	Providing, fixing and jointing G.I Union Couplings(of approved make with the approval EIC) as per IS 1879 in G.I. Pipe lines complete in all respect.					
	a) 15mm i/d G.I. Union	Each	11.00	86.50	12.00	88.00
	b) 20mm i/d G.I. Union	Each	14.50	145.50	16.00	146.50
	c) 25mm i/d G.I. Union	Each	15.50	184.50	17.00	186.00
	d) 32mm i/d G.I. Union	Each	17.50	239.00	19.00	240.50
	e) 40mm i/d G.I. Union	Each	17.50	319.50	19.00	321.50
	f) 50mm i/d G.I. Union	Each	19.00	409.00	21.00	410.50
	g) 65mm i/d G.I. Union	Each	22.50	645.00	24.50	647.00
	h) 80mm i/d G.I. Union	Each	23.00	970.50	25.00	972.50
	i) 100mm i/d G.I. Union	Each	23.00	1497.00	25.50	1499.50
28.41	Providing and placing in position hand pump of approved quality for 40 mm diametre G.I. pipe complete with all accessories.	Each	82.00	803.00	90.50	811.50
28.42	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	80.50	710.00	88.50	718.00
	b) In 63.50mm outside diametre pipe line	Each	82.00	819.00	90.50	827.50
	c) In 76.20 mm outside diametre pipe line	Each	98.50	883.50	108.50	893.50
	d) In 101.60mm outside diametre pipe line	Each	100.00	1053.50	110.50	1063.50
	e) In 152.40mm outside diametre pipe line	Each	102.50	1477.00	113.00	1487.50
28.43	Providing, fixing and jointing ISI Marked Gun-Metal peet valves (Heavy Pattern) as per IS 778 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	20.00	396.50	22.00	398.50
	b) 20mm i/d Gun Metal peet valve heavy pattern.	Each	24.00	554.50	26.50	557.00
	c) 25mm i/d Gun Metal peet valve heavy pattern.	Each	27.00	764.50	30.00	767.00

Sr. No.	Description.	Unit	For Plain		For Sub-mountainous region	
			Labour Rates	Through Rates	Labour Rates	Through Rates
1	2	3	4	5	6	7
	d) 32mm i/d Gun Metal peet valve heavy pattern.	Each	31.00	1173.50	34.00	1176.50
	e) 40mm i/d Gun Metal peet valve heavy pattern.	Each	36.50	1555.50	40.00	1559.00
	f) 50mm i/d Gun Metal peet valve heavy pattern.	Each	48.50	2396.50	53.50	2401.50
	g) 65mm i/d Gun Metal peet valve heavy pattern.	Each	62.50	3779.50	68.50	3785.50
	h) 80mm i/d Gun Metal peet valve heavy pattern.	Each	72.50	5771.50	80.00	5778.50
	i) 100mm i/d Gun Metal peet valve heavy pattern.	Each	72.50	11146.50	80.00	11154.00
28.44	Providing, fixing and jointing Brass Ball valves screwed with SS/BRASS ball & spindle & Teflon seats, on G.I. Pipe lines including all carriages complete.		NEW ITEM			
	a 15mm i/d Brass Ball valves	Each	37.50	249.50	41.00	253.00
	b 20mm i/d Brass Ball valves	Each	45.50	333.00	50.00	337.50
	c 25mm i/d Brass Ball valves	Each	51.50	528.50	56.50	533.50
	d 32mm i/d Brass Ball valves	Each	58.50	863.50	64.50	869.50
	e 40mm i/d Brass Ball valves	Each	68.50	1066.50	75.50	1073.50
	f 50mm i/d Brass Ball valves	Each	91.50	1749.50	100.50	1758.50
28.45	Making connection with the existing G.I. branch main up to 40mm size pipe including cutting of existing pipe line, threading of pipe lines from both ends and fixing of G.I Tee etc. in the pipe line (including cost of G.I Tee) complete in all respects.	Each	246.50	306.00	271.00	330.50
28.46	Providing, fixing & jointing water meter of approved make as per IS:779/94 in G.I. pipe line including cutting and threading pipe including cost of water meter but excluding cost of specials in all respect complete.					
	a 15mm size	Each	287.50	1138.50	316.50	1167.00
	b 20mm size	Each	296.00	1712.00	325.50	1742.00
	c 25mm size	Each	308.00	2303.50	339.00	2334.00
28.47	Providing & fixing Cast Iron surface box for Peet Valve, Stop Cock including all carriages complete.	Kg.	11.50	74.50	12.50	75.50
28.48	Providing and filling sand grading as per specifications or fine grade around the various sizes of G.I. pipes in external work.	Cum.	18.50	472.00	20.00	473.50
28.49	Bailing out water from the trenches for making new connections in existing pipe lines including cleaning trimming and dressing the trenches to correct alignment and grade as required by the Engineer-in-charge.					
	a Connection with pipe line Upto 300mm i/d	Each connection.	608.50		669.00	
	b Connection with pipe line beyond 300mm i/d	Each connection.	912.50		1003.50	

Sr. No.	Description.	Unit	For Plain		For Sub-mountainous region	
			Labour Rates	Through Rates	Labour Rates	Through Rates
1	2	3	4	5	6	7
28.50	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 diametre C.I. pipe.	Mtr	4.50	5.00	5.00	5.50
	b 100mm diametre C.I. pipe.	Mtr	6.00	6.50	7.00	7.00
	c 125mm diametre C.I. pipe.	Mtr	7.50	8.00	8.00	8.50
	d 150mm diametre C.I. pipe.	Mtr	9.00	9.50	10.00	10.50
	e 200mm diametre C.I. pipe.	Mtr	11.50	12.50	13.00	13.50
	f 250mm diametre C.I. pipe.	Mtr	14.50	16.00	16.00	17.50
	g 300mm diametre C.I. pipe.	Mtr	16.00	18.00	17.50	19.50
	h 350mm diametre C.I. pipe.	Mtr	17.50	20.50	19.00	22.00
	i 400mm diametre C.I. pipe.	Mtr	19.50	23.00	21.50	25.00
	j 450mm diametre C.I. pipe.	Mtr	20.50	25.50	22.50	27.50
	k 500mm diametre C.I. pipe.	Mtr	22.00	28.00	24.50	30.00
	l 600mm diametre C.I. pipe.	Mtr	25.50	34.00	28.00	36.50
28.51	Providing and placing in horizontal layers filtering media screened, washed and cleaned as described below:-					
	(a) Top Layer: 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.	576.00	1143.00	633.50	1201.00
	(b) Second Layer :----- Coarse sand screened, cleaned and washed and graded from 3mm to 6mm (from Pathankot or approved equivalent quarry).	Cum.	624.50	1191.50	687.00	1254.00
	(c) Third Layer :----- Bajri screened, cleaned and washed and graded from 6mm to 20mm (from Pathankot or approved equivalent quarry).	Cum.	335.00	954.00	368.50	987.50
	(d) Fourth Layer :----- Bajri (Coarse) screened, cleaned and washed and graded from 20mm to 25mm (from Pathankot or approved equivalent quarry).	Cum.	335.00	901.00	368.50	934.50
	(e) Bottom Layer :----- Broken stone, screened, cleaned and washed and graded from 50mm to 75mm (from Pathankot or approved equivalent quarry).	Cum.	335.00	870.50	368.50	904.00
28.52	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	Mtr	1.50	4.00	1.50	4.50
	b 25mm & 32mm i/d G.I. Pipe	Mtr	2.00	5.50	2.00	5.50

Sr. No.	Description.	Unit	For Plain		For Sub-mountainous region	
			Labour Rates	Through Rates	Labour Rates	Through Rates
1	2	3	4	5	6	7
	c 40mm & 50mm i/d G.I. Pipe	Mtr	3.00	8.50	3.00	9.00
28.53	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.					
	a 15mm & 20mm i/d G.I. Pipe	Mtr	1.00	2.00	1.00	2.00
	b 25mm & 32mm i/d G.I. Pipe	Mtr	1.00	2.50	1.00	2.50
	c 40mm & 50mm i/d G.I. Pipe	Mtr	1.50	4.00	2.00	4.50
28.54	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	Mtr	1.50	3.50	1.50	4.00
	b 25mm & 32mm i/d G.I. Pipe	Mtr	2.00	5.00	2.00	5.00
	c 40mm & 50mm i/d G.I. Pipe	Mtr	3.00	7.50	3.00	8.00
28.55	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	Mtr	1.00	2.00	1.00	2.00
	b 25mm & 32mm i/d G.I. Pipe	Mtr	1.50	2.50	1.50	2.50
	c 40mm & 50mm i/d G.I. Pipe	Mtr	2.00	4.00	2.50	4.00
28.56	Cutting holes upto 23cm square through B.B. in cement walls or stone masonry wall in cement for pipes, and making good the same & finishing according to existing finish where required.					
	a Through wall 11.43 cm thick	Each	112.50		123.50	
	b Through wall 22.86 cm thick	Each	160.50		176.50	
	c Through wall 34.29 cm thick	Each	195.50		215.00	
	d Through wall 45.72 cm thick	Each	264.00		290.50	
	e Through wall 57.15 cm thick	Each	283.00		311.00	
	f Through wall 68.58 cm thick	Each	332.00		365.00	
28.57	Cutting holes upto 23cm square for pipes in flooring and roofs of bricks, tiles with lime concrete or cement concrete and making good the same & finishing according to existing finish where required.					
	a Through floor or roof 7.5cm thick	Each	58.00		63.50	



Sr. No.	Description.	Unit	For Plain		For Sub-mountainous region	
			Labour Rates	Through Rates	Labour Rates	Through Rates
1	2	3	4	5	6	7
	b Through floor or roof 11.5cm thick	Each	96.00		106.00	
	c Through floor or roof 15.00cm thick	Each	116.50		128.00	
	d Through floor or roof 19.00cm thick	Each	129.50		142.00	
	e Through floor or roof 22.50cm thick	Each	131.50		144.50	
28.58	Cutting holes upto 23cm square for pipes in floor and roofs of cement concrete, reinforced concrete or reinforced brick work and making good the same & finishing according to existing finish where required.					
	a Through floor or roof 7.5cm thick	Each	52.50		58.00	
	b Through floor or roof 11.5cm thick	Each	66.00		72.50	
	c Through floor or roof 15.00cm thick	Each	104.50		115.00	
	d Through floor or roof 19.00cm thick	Each	105.00		115.50	
	e Through floor or roof 22.50cm thick	Each	107.50		118.00	
28.59	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 pipes, valves and specials	Each	24.00		26.50	
	(b) 65mm i/d of pipes, valves and specials	Each	24.50		27.00	
	(c) 80mm i/d of pipes, valves and specials	Each	46.50		51.00	
	(d) 100mm i/d of pipes, valves and specials	Each	48.00		52.50	
	(e) 125mm i/d of pipes, valves and specials	Each	50.00		55.00	
	(f) 150mm i/d of pipes, valves and specials	Each	71.00		78.00	
	(g) 175mm i/d of pipes, valves and specials	Each	87.00		96.00	
	(h) 200mm i/d of pipes, valves and specials	Each	104.50		115.00	
	(i) 225mm i/d of pipes, valves and specials	Each	116.00		128.00	
	(j) 250mm i/d of pipes, valves and specials	Each	133.00		146.50	

Sr. No.	Description.	Unit	For Plain		For Sub-mountainous region	
			Labour Rates	Through Rates	Labour Rates	Through Rates
1	2	3	4	5	6	7
(k)	300mm i/d of pipes, valves and specials	Each	159.50		175.50	
(l)	350mm i/d of pipes, valves and specials	Each	190.50		209.50	
(m)	375mm i/d of pipes, valves and specials	Each	196.50		216.00	
(n)	400mm i/d of pipes, valves and specials	Each	207.00		227.50	
(o)	450mm i/d of pipes, valves and specials	Each	265.00		291.50	
(p)	500mm i/d of pipes, valves and specials	Each	307.00		337.50	
(q)	525mm i/d of pipes, valves and specials	Each	329.00		362.00	
(r)	550mm i/d of pipes, valves and specials	Each	361.00		397.00	
(s)	600mm i/d of pipes, valves and specials	Each	393.00		432.50	
28.60.	Dismantling flanged Joints for Cast iron Pipes, Valves and specials complete in all respects.					
a	50mm, 65mm, 80mm, 100mm internal diametre of pipe, valves or special.	Each	13.00		14.50	
b	125mm, 150mm, 175mm, 200mm, 225mm and 250mm internal diametre of pipe, valves or special.	Each	27.00		30.00	
c	300mm, 350mm and 375mm internal diametre of pipe, valves or special.	Each	54.00		59.50	
d	400mm and 450mm internal diametre of pipe, valves or special.	Each	82.00		90.50	
e	500mm and 525mm internal diametre of pipe, valves or special.	Each	90.50		99.50	
f	550mm and 600mm internal diametre of pipe, valves or special.	Each	98.50		108.50	
28.61	Taking out dismantled Cast Iron flanged or socketed / G.I/D.I Pipes valves and, specials etc. out side from the trenches and Stacking the same as desire by Engineer-in-charge complete in all respects.					
a	Upto 100 mm internal diametre of pipe.	Mtr	6.50		7.00	
b	Upto 200 mm internal diametre of pipe.	Mtr	7.00		8.00	

Sr. No.	Description.		Unit	For Plain		For Sub-mountainous region	
				Labour Rates	Through Rates	Labour Rates	Through Rates
1	2		3	4	5	6	7
	c	Upto 300 mm internal diametre of pipe.	Mtr	8.50		9.00	
	d	Upto 450 mm internal diametre of pipe.	Mtr	9.50		10.50	
	e	Upto 600 mm internal diametre of pipe.	Mtr	10.50		11.50	
28.62		Dismantling cast Iron surface boxes for sluice valves/Air valve and fire hydrants complete in all respects.	Each	46.50		51.00	
28.63		Dismantling, disjoints, removal of G.I. pipe lines, specials, valves and fittings complete in all respects.					
	a	15mm internal diametre pipe line.	Mtr	13.50		15.00	
	b	20mm internal diametre pipe line.	Mtr	16.50		18.00	
	c	25mm internal diametre pipe line.	Mtr	22.00		24.00	
	d	32mm internal diametre pipe line.	Mtr	30.00		33.00	
	e	40mm internal diametre pipe line.	Mtr	30.50		33.50	
	f	50mm internal diametre pipe line.	Mtr	31.00		34.00	
	g	65mm internal diametre pipe line.	Mtr	31.00		34.50	
	h	80mm internal diametre pipe line.	Mtr	37.50		41.00	
	i	100mm internal diametre pipe line.	Mtr	41.00		45.00	
28.64		Construction of Gravel Pit outside the Pump Chamber. (0.90m Dia.) as per standard design & drawings of public health department.	Each	4648.00	13610.50	5112.50	14075.50
28.65		CONSTRUCTION OF V-NOTCH HAUDI.(size 1.80 m x 0.90 m) excluding cost V-notch as per standard design & drawings of public health department.	Each	3582.00	11780.50	3940.50	12139.00
28.66		Construction of masonry Sluice Valve Chamber excluding Sluice valve cover as per standard design & drawings of public health department.					
	a	Size 0.6 m. x 0.6 m.	Each	1086.50	4818.00	1195.00	4926.50
	b	Size 0.9 m. x 0.9 m.	Each	1560.00	6716.00	1715.50	6872.00
28.67		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 pump/tube well is lowered and tested.					
	a	Upto 6 mtr depth.	Mtr	312.50		344.00	

Sr. No.	Description.		Unit	For Plain		For Sub-mountainous region	
				Labour Rates	Through Rates	Labour Rates	Through Rates
1	2		3	4	5	6	7
	b	Beyond 6 mtr and upto 12 mtr depth.	Mtr	368.50		405.50	
	c	Beyond 12 mtr and upto 18 mtr depth.	Mtr	426.50		469.00	
28.68	Providing and placing in position filters of 40 mm diameter G.I. pipe with brass strainer of approved quality.		Mtr	93.00	551.00	102.50	560.00
28.69	Providing and fixing and lowering G.I Pipe (Medium) 40 mm i/d with filter excluding cost of filter for shallow tube well including cleaning and priming the tube well.		Mtr	43.50	312.00	47.50	316.50
28.70	Providing, laying, fixing and testing M.S. pipe lines as per IS-1239 and specials such as tees, bends, sockets, elbows etc. in trenches in the ground including cutting, threading and testing etc. complete.						
	a	80 mm internal diameter (thickness 4.05 mm)	Mtr	68.50	628.00	75.50	635.00
	b	100mm internal diameter (thickness 4.50 mm)	Mtr	68.50	889.00	75.50	896.00
	c	150mm internal diameter (thickness 4.85 mm)	Mtr	102.50	1368.50	113.00	1379.00
	d	200mm internal diameter (thickness 6.00 mm)	Mtr	102.50	2228.50	113.00	2238.50
28.71	Hand boring Horizontly for crossing of pipe under road or any other obstacle by using Auger/Bocki method.Including excavation , stringing and jointing of pipe upto 160mm complete		Mtr	570.00		627.00	
28.72	Boring with casing pipe for tubewell in all soils except ordinary hard rocks requiring blasting including removing the casing pipe after the tube well is lowered & tested , equipment as requirred such as hand boring machine and its accessory, transportation to site and vice versa etc. complete in all respect.						
	a	<b>Boring with 150mm id Housing Pipe</b>					
		Upto 150 m depth BGL.	Mtr.	647.00		711.50	
	b	<b>Boring with 200mm id Housing Pipe</b>					
		Upto 150 m depth BGL.	Mtr.	674.50		742.00	
	c	<b>Boring with 250mm id Housing Pipe</b>					
		Upto 150 m depth BGL.	Mtr.	689.50		758.50	
	d	<b>Boring with 300mm id Housing Pipe</b>					
		Upto 150 m depth BGL.	Mtr.	703.50		774.00	
28.73	Extra for Boring beyond 150 m depth			30% Extra will be taken for the respective i/d of boring of item No.28.72			

Sr. No.	Description.	Unit	For Plain		For Sub-mountainous region	
			Labour Rates	Through Rates	Labour Rates	Through Rates
1	2	3	4	5	6	7
28.74 A	Supplying, lowering of MS Pipe as per IS:4270-2001 including MS sockets having dimensions as per IS code duly welded with MS electrode to have extra strength to lower the pipe into tubewell bore.					
(a)	100mm nominal diameter (weight 14.5 kg per metre) 5.40 mm thickness	Mtr.	245.50	1194.00	270.00	1218.50
(b)	150mm nominal diameter (weight 21.6 kg per metre) 5.4 mm thickness	Mtr.	246.00	1640.00	270.50	1664.50
(c)	200mm nominal diameter (weight 33.6 kg per metre) 6.4mm thickness	Mtr.	246.50	2437.00	271.50	2461.50
(d)	200mm nominal diameter (weight 41.6 kg per metre) 8.0 mm thickness	Mtr.	246.50	3057.00	271.50	3081.50
(e)	250mm nominal diameter (weight 52.3 kg per metre) 8.0 mm thickness	Mtr.	248.00	3790.50	273.00	3815.00
(f)	300mm nominal diameter (weight 62.3 kg per metre) 8.0 mm thickness	Mtr.	248.50	4512.00	273.50	4537.00
(g)	300mm nominal diameter (weight 77.4 kg per metre) 9.50 mm thickness	Mtr.	249.50	5211.50	274.00	5236.50
28.74 B	Supplying, lowering of MS Pipe as per IS: 4270-2001 including MS sockets having dimensions as per IS code duly welded with MS electrode to have extra strength to lower the pipe into tubewell bore complete in all respect.					
(a)	323.9 mm outer diameter (weight 47.04 kg per metre) minimum 6.0 mm thickness	Mtr.	249.50	3374.50	274.00	3399.50
(b)	355.6 mm outer diameter (weight 51.72 kg per metre) minimum 6.0 mm thickness	Mtr.	253.00	3705.00	278.50	3730.00
28.75 A	Supplying, lowering of Stainless Steel Cage type wire wound screen as per IS:8110-2000 or latest with SS socket to connect Strainer to Strainer Duly welded with suitable grade S.S welding electrode.to lower the strainer into tubewell bore.					
(a)	150mm internal diameter (slot size 0.15/0.20mm) 5.4 mm thickness	Mtr.	260.50	10535.00	287.00	10561.50
(b)	200mm internal diameter (slot size 0.15/0.20mm) 6.30 mm thickness	Mtr.	265.50	13740.00	292.00	13767.00
(c)	250mm internal diameter (slot size 0.15/0.20mm) 7.30 mm thickness	Mtr.	280.00	20886.00	308.00	20914.00
(d)	150mm internal diameter (slot size 0.75/1.0mm) 5.4 mm thickness	Mtr.	260.50	9594.50	287.00	9620.50
(e)	200mm internal diameter (slot size 0.75/1.0mm) 6.30 mm thickness	Mtr.	265.50	12076.50	292.00	12103.00
(f)	250mm internal diameter (slot size 0.75/1.0mm) 7.30 mm thickness	Mtr.	280.00	20293.50	308.00	20321.50

Sr. No.	Description.	Unit	For Plain		For Sub-mountainous region	
			Labour Rates	Through Rates	Labour Rates	Through Rates
1	2	3	4	5	6	7
(g)	<b>300mm internal diameter (slot size 0.75/1.0mm) 8.00 mm thickness</b>	Mtr.	289.50	23866.00	318.50	23895.00
28.75 B	Supplying, lowering 200mm inner dia Electric Resistance welded (ERW) LOW CARBON GALAVANIZED CAGE TYPE VEE Wire WOUND SCREEN . It shall be of Continuous trapezoidal wire spirally wound around fabricated cage. The screen must Consist of 'V' shaped (Wedge) profile wire of various dimensions as per IS:8110-					
	<b>200mm internal diameter (slot size 0.75/1.0mm) 7.30 mm thickness</b>	Mtr.	280.00	9739.00	308.00	9767.00
28.76	Supplying, lowering & fixing of M.S Special socket to connect S.S Strainer to M.S Pipe duly welded with suitable grade welding electrode complete in all respect.					
(a)	<b>100mm internal diameter</b>	Each	57.50	412.50	63.50	418.00
(b)	<b>150mm internal diameter</b>	Each	65.50	537.00	72.50	544.00
(c)	<b>200mm internal diameter</b>	Each	74.00	664.50	81.50	672.00
(d)	<b>250mm internal diameter</b>	Each	82.00	789.50	90.50	797.50
(e)	<b>300mm internal diameter</b>	Each	123.00	949.50	135.50	962.00
28.77	Supplying & fixing of M.S Clamp of size 150mm X 12mm made out of MS Flat 1.52m long, suitable to fit Housing pipe including the cost Nut & Bolts of Suitable size complete in all respect.	Each	41.00	2807.00	45.00	2811.50
28.78	Supplying at site Wooden Box of suitable size with Lid & locking arrangement for preserving strata sample collected from the bore.	Each	41.00	499.00	45.00	503.00
28.79 A	Supplying & Fixing of bail plug of M.S pipe complete with inverted U-hook attached to the bottom plug complete in all respect.					
(a)	<b>100mm internal diameter (weight 14.5 kg per metre) 5.40 mm thickness</b>	mtr	35.00	978.00	38.50	981.50
(b)	<b>150mm internal diameter (weight 21.6 kg per metre) 5.4 mm thickness</b>	mtr	36.00	1417.00	39.50	1421.00
(c)	<b>200mm internal diameter (weight 41.6 kg per metre) 8.0 mm thickness</b>	mtr	37.00	2189.50	41.00	2193.00
(d)	<b>250mm internal diameter (weight 52.3 kg per metre) 8.00 mm thickness</b>	mtr	38.00	3527.50	42.00	3531.00
(e)	<b>300mm internal diameter (weight 62.3 kg per metre) 8.0 mm thickness</b>	mtr	38.00	4213.00	42.00	4217.00
28.79 B	Supplying & Fixing of M.S pipe bail plug suitable for 200 mm dia UPVC casing pipe having thickness of socket as 12 mm ,length 100 mm & base plate of 8 mm thick complete in all respect.	each	82.00	746.50	90.50	755.00
28.79 C	Providing and fixing M.S. taper / reducer made out of 6 mm thick M.S. sheet complete in all respect.					
a	<b>Reducer 350mm x 200 mm</b>	EACH	164.50	2748.50	181.00	2765.00
b	<b>Reducer 300mm x 200 mm</b>	EACH	164.50	2621.50	181.00	2637.50

Sr. No.	Description.	Unit	For Plain		For Sub-mountainous region	
			Labour Rates	Through Rates	Labour Rates	Through Rates
1	2	3	4	5	6	7
c	Reducer 250mm x 150 mm	EACH	164.50	2493.00	181.00	2509.50
28.80	Supplying & Fixing of well cap having thread to fix on housing pipe complete in all respect.					
(a)	100mm internal diameter	EACH	57.50	235.00	63.50	240.50
(b)	150mm internal diameter	EACH	65.50	371.50	72.50	378.50
(c)	200mm internal diameter	EACH	74.00	715.50	81.50	723.00
(d)	250mm internal diameter	EACH	82.00	1070.00	90.50	1078.00
(e)	300mm internal diameter	EACH	90.50	1477.00	99.50	1486.00
(f)	350mm internal diameter	EACH	90.50	1779.00	99.50	1788.00
28.81	Development and Stabilizing of the tubewell with air compressor of required capacity as directed by the engineer-in-charge including cost of tools, appliances & consumable to the satisfaction of Engineer-in-charge.					
(a)	Capacity of Air compressor 300 cfm at 250 PSI	Hour	2089.00		2298.00	
(b)	Capacity of Air compressor 500 cfm at 150 PSI	Hour	3289.00		3618.00	
28.82	Development and Stabilizing of the tubewell with submersible pump of required capacity as directed by the engineer-in-charge including cost of tools, appliances & consumable to the satisfaction of Engineer-in-charge.	Hour	1155.00		1270.00	
28.83	Collection of water sample from different strata and testing of sample from approved laboratory (Physical & chemical Analysis)	Each	253.00		278.00	
28.84	Testing of water sample for Heavy metal from approved laboratory (Toxic material such as Arsenic, lead, mercury, pesticide etc.)	Each	5119.00		5631.00	
28.85 A	Drilling of 675mm dia bore with Reverse Rotary Rig in all kinds of soil including the cost of consumable stores, fuel oil and transportation of rig to the site. complete in all respect.					
(a)	Drilling of 675mm dia bore with Reverse Rotary Rig Upto 150 m depth BGL.	Mtr	932.50		1026.00	
(b)	Drilling of 675mm dia bore with Reverse Rotary Rig Beyond 150 m depth up to 300 Mtr	Mtr	1218.50		1340.50	
(c)	Drilling of 675mm dia bore with Reverse Rotary Rig Beyond 300 m depth up to onward depth	Mtr	1504.50		1655.00	
28.85 B	Drilling of 650mm dia bore with Reverse Rotary Rig in all kinds of soil including the cost of consumable stores, fuel oil and transportation of rig to the site. complete in all respect.					
(a)	Drilling of 650mm dia bore with Reverse Rotary Rig Upto 150 m depth BGL.	Mtr	914.50		1006.00	

Sr. No.	Description.	Unit	For Plain		For Sub-mountainous region	
			Labour Rates	Through Rates	Labour Rates	Through Rates
1	2	3	4	5	6	7
(b)	Drilling of 650 mm dia bore with Reverse Rotary Rig Beyond 150 m depth up to 300 Mtr	Mtr	1189.50		1308.50	
(c)	Drilling of 650mm dia bore with Reverse Rotary Rig Beyond 300 m depth BGL up to onward depth	Mtr	1464.50		1611.00	
28.85 C	Drilling of 600mm dia bore with Reverse Rotary Rig in all kinds of soil including the cost of consumable stores, fuel oil and transportation of rig to the site. complete in all respect.					
(a)	Drilling of 600mm dia bore with Reverse Rotary Rig Upto 150 m depth BGL.	Mtr	896.50		986.00	
(b)	Drilling of 600mm dia bore with Reverse Rotary Rig Beyond 150 m depth BGL up to 300 Mtr	Mtr	1164.00		1280.50	
(c)	Drilling of 600mm dia bore with Reverse Rotary Rig Beyond 300 m depth BGL to onward depth	Mtr	1408.00		1549.00	
28.86	Making temporary water supply arrangement for drilling of tubewell with reverse rotary rig till completion of bore & packing of gravel					
	Depth of temporary bore up to 90 m	Mtr	440.00		484.00	
28.87	Making electric Logging of borehole with electronic well logger including cost of equipment at site etc.complete in all respect	Each	14043.00		15447.50	
28.88	Supplying at quarry site of gravel of 1/16" to 1/8" sizes including pouring and packing in the annular space between the pipes assembly and the bore.The gravel should be free from, dust,dirt, or the vegetable manner as per IS 4097/1967 with latest amendments (to be paid as per actual length of pipe)	Cum	60.50	518.00	66.50	524.50
28.89	Supplying and fixing mild steel centering guides made out of 32mm x 6mm thick M.S. bar complete in all respects.	Each	38.50	286.50	42.50	290.50
28.90	Supplying,fixing and testing at site Automatic electronic type water level indication system with gun metal float sensor and electrical cable suitable for three phase pump submersible / monoblock to be fixed on existing panel for OHSRs complete in all respects.	Each	771.50	9926.00	848.50	10003.00
28.91	Boring/drilling bore well of required dia for casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer – in-charge, upto 90 metre depth below ground level.	Each	191.00		210.00	
<b>A</b>	<b>All types of soil.</b>					
(a)	300 mm dia.	Mtr	405.00		445.50	
(b)	350 mm dia.	Mtr	443.00		487.00	
(c)	400 mm dia.	Mtr	567.00		623.50	
<b>B</b>	<b>Rocky Strata including Boulders</b>	Mtr				
(a)	300 mm dia.	Mtr	892.00		981.00	



Sr. No.	Description.	Unit	For Plain		For Sub-mountainous region	
			Labour Rates	Through Rates	Labour Rates	Through Rates
1	2	3	4	5	6	7
(b)	350 mm dia.	Mtr	918.00		1009.50	
(c)	400 mm dia.	Mtr	999.00		1099.00	
28.92	Supplying, assembling, lowering and fixing in vertical position in bore well, unplasticized PVC medium well casing (CM) pipe of required dia, conforming to IS: 12818-2010, including required hire and labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer – in-charge.					
(a)	100 mm nominal size dia.	Mtr	16.50	518.00	18.00	519.50
(b)	150 mm nominal size dia.	Mtr	17.00	1066.50	19.00	1068.50
(c)	200 mm nominal size dia.	Mtr	18.00	1913.00	19.50	1914.50
28.93	Supplying, assembling, lowering and fixing in vertical position in bore well unplasticized PVC medium well screen (RMS) pipes with ribs, conforming to IS:12818, including hire & labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer-in-charge.					
(a)	100 mm nominal size dia.	Mtr	32.50	653.50	36.00	657.00
(b)	150 mm nominal size dia.	Mtr	40.00	1406.50	44.00	1410.50
(c)	200 mm nominal size dia.	Mtr	47.50	2700.50	52.00	2705.00
28.94	Providing and fixing factory made precast RCC perforated drain covers, having concrete of strength not less than M-25, of size 1000 x 450x50 mm, reinforced with 8 mm dia four nos longitudinal & 9 nos cross sectional T.M.T. hoop bars, including providing 50 mm dia perforations @ 100 to 125 mm c/c, including providing edge binding with M.S. flats of size 50 mm x 1.6 mm complete, all as per direction of Engineer -in-charge.	Each	74.00	989.50	81.50	997.00
28.95 A	Jointing P.V.C. / H.D.P.E Pipes and specials with PVC coupling and cement solvent excluding the cost of PVC coupling and cement solvent, including testing etc. complete in all respect.		NEW ITEM			
(a)	20 mm o/d pipe and specials	each	6.50		7.00	
(b)	25 mm o/d pipe and specials	each	7.50		8.00	
(c)	32 mm o/d pipe and specials	each	8.00		8.50	
(d)	40 mm o/d pipe and specials	each	8.00		9.00	
(e)	50 mm o/d pipe and specials	each	8.50		9.50	
(f)	63 mm o/d pipe and specials	each	9.00		10.00	
(g)	75 mm o/d pipe and specials	each	10.00		11.00	
(h)	90 mm o/d pipe and specials	each	10.50		11.50	
(i)	110 mm o/d pipe and specials	each	10.50		11.50	
(j)	125 mm o/d pipe and specials	each	11.00		12.00	
(k)	140 mm o/d pipe and specials	each	11.50		12.50	
(l)	160 mm o/d pipe and specials	each	12.00		13.00	

Sr. No.	Description.	Unit	For Plain		For Sub-mountainous region	
			Labour Rates	Through Rates	Labour Rates	Through Rates
1	2	3	4	5	6	7
	(m) 180 mm o/d pipe and specials	each	12.50		13.50	
	(n) 200 mm o/d pipe and specials	each	12.50		14.00	
	(o) 225 mm o/d pipe and specials	each	13.00		14.50	
	(p) 250 mm o/d pipe and specials	each	13.50		15.00	
	(q) 280 mm o/d pipe and specials	each	14.00		15.50	
	(r) 315 mm o/d pipe and specials	each	14.50		16.00	
	(s) 355 mm o/d pipe and specials	each	15.00		16.50	
	(t) 400 mm o/d pipe and specials	each	15.00		16.50	
	(u) 450 mm o/d pipe and specials	each	15.50		17.00	
	(v) 500 mm o/d pipe and specials	each	16.00		17.50	
	(w) 560 mm o/d pipe and specials	each	16.50		18.00	
	(x) 630 mm o/d pipe and specials	each	17.00		18.50	
28.95 B	Cutting P.V.C. / H.D.P.E Pipes and specials and chipping or filing the cut surface to a uniform finish complete: -		NEW ITEM			
	(a) 20 mm o/d pipe	each	3.00		3.50	
	(b) 25 mm o/d pipe	each	3.50		4.00	
	(c) 32 mm o/d pipe	each	4.00		4.00	
	(d) 40 mm o/d pipe	each	4.00		4.50	
	(e) 50 mm o/d pipe	each	5.00		5.00	
	(f) 63 mm o/d pipe	each	5.00		5.50	
	(g) 75 mm o/d pipe	each	5.50		6.00	
	(h) 90 mm o/d pipe	each	6.00		6.50	
	(i) 110 mm o/d pipe	each	6.50		7.00	
	(j) 125 mm o/d pipe	each	7.00		7.50	
	(k) 140 mm o/d pipe	each	7.50		8.00	
	(l) 160 mm o/d pipe	each	8.00		8.50	
	(m) 180 mm o/d pipe	each	8.00		9.00	
	(n) 200 mm o/d pipe	each	8.50		9.50	
	(o) 225 mm o/d pipe	each	9.00		10.00	
	(p) 250 mm o/d pipe	each	9.50		10.50	
	(q) 280 mm o/d pipe	each	10.00		11.00	
	(r) 315 mm o/d pipe	each	10.50		11.50	
	(s) 355 mm o/d pipe	each	11.00		12.00	
	(t) 400 mm o/d pipe	each	11.00		12.50	
	(u) 450 mm o/d pipe	each	11.50		13.00	

Sr. No.	Description.		Unit	For Plain		For Sub-mountainous region	
				Labour Rates	Through Rates	Labour Rates	Through Rates
1	2		3	4	5	6	7
	(v)	500 mm o/d pipe	each	12.00		13.00	
	(w)	560 mm o/d pipe	each	12.50		13.50	
	(x)	630 mm o/d pipe	each	13.00		14.00	
28.96 A	Jointing of C.I. Pipes as per IS:1536, Valves and specials with lead caulked joints ,excluding cost of lead and yarn but including cost of labour fuel and tools etc tested complete.		NEW ITEM				
	(a)	80mm i/d pipe lines	each	85.50		94.00	
	(b)	100mm i/d pipe lines	each	118.00		130.00	
	(c)	150mm i/d pipe lines	each	152.50		167.50	
	(d)	200mm i/d pipe lines	each	193.50		213.00	
	(e)	250mm i/d pipe lines	each	231.00		254.00	
	(f)	300mm i/d pipe lines	each	284.50		313.00	
	(g)	350mm i/d pipe lines	each	318.00		350.00	
	(h)	400mm i/d pipe lines	each	383.50		422.00	
	(i)	450mm i/d pipe lines	each	463.00		509.50	
	(j)	500mm i/d pipe lines	each	518.00		570.00	
	(k)	600mm i/d pipe lines	each	663.50		730.00	
28.96 B	Jointing of C.I. Pipes as per IS:1536, Valves and specials with lead caulked joints ,including cost of lead , yarn and cost of labour fuel and tools etc with testing complete.		NEW ITEM				
	(a)	For 80mm i/d pipe lines	each	61.50	472.00	68.00	478.00
	(b)	For 100mm i/d pipe lines	each	82.00	630.00	90.50	638.00
	(c)	For 150mm i/d pipe lines	each	98.50	924.50	108.50	934.00
	(d)	For 200mm i/d pipe lines	each	123.00	1212.00	135.50	1224.50
	(e)	For 250mm i/d pipe lines	each	148.00	1512.50	162.50	1527.50
	(f)	For 300mm i/d pipe lines	each	189.00	1856.00	208.00	1875.00
	(g)	For 350mm i/d pipe lines	each	205.50	2158.00	226.00	2178.50
	(h)	For 400mm i/d pipe lines	each	246.50	2633.50	271.00	2658.50
	(i)	For 450mm i/d pipe lines	each	304.00	3127.50	334.50	3158.00
	(j)	For 500mm i/d pipe lines	each	353.50	3586.50	388.50	3622.00
	(k)	For 600mm i/d pipe lines	each	452.00	4444.50	497.00	4489.50
28.97	Cutting of C.I. Pipes , specials and chipping or filing the surface to a uniform finish.		NEW ITEM				
	(a)	80mm i/d pipe lines	each	29.50		32.50	
	(b)	100mm i/d pipe lines	each	38.00		41.50	
	(c)	150mm i/d pipe lines	each	48.50		53.50	
	(d)	200mm i/d pipe lines	each	65.00		71.50	
	(e)	250mm i/d pipe lines	each	83.00		91.00	
	(f)	300mm i/d pipe lines	each	93.50		103.00	
	(g)	350mm i/d pipe lines	each	111.00		122.50	

Sr. No.	Description.		Unit	For Plain		For Sub-mountainous region	
				Labour Rates	Through Rates	Labour Rates	Through Rates
1	2		3	4	5	6	7
	(h)	400mm i/d pipe lines	each	136.00		149.50	
	(i)	450mm i/d pipe lines	each	163.00		179.50	
	(j)	500mm i/d pipe lines	each	179.50		197.50	
	(k)	600mm i/d pipe lines	each	225.50		248.00	
28.98	Jointing of A.C. Pipes and specials with A.C coupling or C.I detachable joint, fitting with bolts and nuts of grooved ends ,excluding cost of C.I D-Joint, A.C coupling rubber rings , bolts & nuts including testing etc complete in all respect		NEW ITEM				
	(a)	80mm i/d pipe lines	each	41.00		45.00	
	(b)	100mm i/d pipe lines	each	61.50		68.00	
	(c)	150mm i/d pipe lines	each	96.00		105.50	
	(d)	200mm i/d pipe lines	each	164.50		180.50	
	(e)	250mm i/d pipe lines	each	246.50		271.00	
28.99	Cutting of A.C. Pipes and specials and chipping or filing the cut surface to a uniform finish complete in all respect		NEW ITEM				
	(a)	80mm i/d pipe lines	each	21.00		23.50	
	(b)	100mm i/d pipe lines	each	25.50		28.00	
	(c)	150mm i/d pipe lines	each	30.00		33.00	
	(d)	200mm i/d pipe lines	each	34.50		37.50	
	(e)	250mm i/d pipe lines	each	38.50		42.50	
28.100	Jointing of D.I. Pipe and Specials with rubber tyton joints fitted complete excluding the cost rubber gasket including testing etc complete in all respect						
	(a)	80mm i/d pipe lines	Each	57.50		63.50	
	(b)	100mm i/d pipe lines	Each	61.50		68.00	
	(c)	150mm i/d pipe lines	Each	65.50		72.50	
	(d)	200mm i/d pipe lines	Each	70.00		77.00	
	(e)	250mm i/d pipe lines	Each	74.00		81.50	
	(f)	300mm i/d pipe lines	Each	82.00		90.50	
	(g)	350mm i/d pipe lines	Each	90.50		99.50	
	(h)	400mm i/d pipe lines	Each	98.50		108.50	
	(i)	450mm i/d pipe lines	Each	107.00		117.50	
	(j)	500mm i/d pipe lines	Each	115.00		126.50	
	(k)	600mm i/d pipe lines	Each	123.00		135.50	
	(l)	700mm i/d pipe lines	Each	131.50		144.50	
	(m)	750mm i/d pipe lines	Each	139.50		153.50	
	(n)	800mm i/d pipe lines	Each	156.00		171.50	

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Sr. No.	Description.		Unit	For Plain		For Sub-mountainous region	
				Labour Rates	Through Rates	Labour Rates	Through Rates
1	2		3	4	5	6	7
	(o)	900mm i/d pipe lines	Each	172.50		190.00	
	(p)	1000mm i/d pipe lines.	Each	189.00		208.00	
28.101	Cutting of D.I. Pipe and specials and chipping or filing the cut surface to a uniform finish complete in all respect						
	(a)	80mm i/d pipe lines	Each	38.00		41.50	
	(b)	100mm i/d pipe lines	Each	42.00		46.00	
	(c)	150mm i/d pipe lines	Each	48.50		53.50	
	(d)	200mm i/d pipe lines	Each	53.00		58.00	
	(e)	250mm i/d pipe lines	Each	58.00		64.00	
	(f)	300mm i/d pipe lines	Each	65.00		71.50	
	(g)	350mm i/d pipe lines	Each	74.50		81.50	
	(h)	400mm i/d pipe lines	Each	82.50		90.50	
	(i)	450mm i/d pipe lines	Each	93.00		102.50	
	(j)	500mm i/d pipe lines	Each	101.50		111.50	
	(k)	600mm i/d pipe lines	Each	114.50		126.00	
	(l)	700mm i/d pipe lines	Each	125.50		138.00	
	(m)	750mm i/d pipe lines	Each	133.50		147.00	
	(n)	800mm i/d pipe lines	Each	144.50		159.00	
	(o)	900mm i/d pipe lines	Each	152.50		168.00	
	(p)	1000mm i/d pipe lines	Each	167.50		184.00	
28.102	Supplying and Fixing PVC Repair/service saddle for repair of PVC pipe line excluding the cost of excavation complete in all respects.						
	a	90 mm i/d	Each	87.00	197.00	96.00	206.00
	b	110 mm i/d	Each	109.00	234.50	120.00	245.50
	c	160 mm i/d	Each	131.00	320.50	144.00	333.50
28.103	Supplying and Fixing PVC Detachable joint for reappear of PVC pipe line excluding the cost of excavation complete in all respects.						
	a	90 mm i/d	Each	43.50	146.50	48.00	151.00
	b	110 mm i/d	Each	65.50	191.50	72.00	198.00
	c	160 mm i/d	Each	87.00	259.00	96.00	267.50
	d	250 mm i/d	Each	109.00	395.00	120.00	406.00
28.104 A	Providing and installing in position of domestic water pressure boosting pump of approved make (To the approval of Engineer-in-charge) including all pump accessories but excluding cost of G.I pipe & specials complete in all respects.						

Sr. No.	Description.	Unit	For Plain		For Sub-mountainous region	
			Labour Rates	Through Rates	Labour Rates	Through Rates
1	2	3	4	5	6	7
	a) Pressure pump of 0.5 HP with 2700 LPH, 35meter head with C.I pump & 19 litre capacity Tank	Each	821.50	17163.00	903.50	17245.00
	b) Pressure pump of 0.65 HP with 2700 LPH, 37meter head with SS pump & 19 litre capacity Tank	Each	821.50	18703.50	903.50	18786.00
	c) Pressure pump of 1.0 HP with 3300 LPH, 50meter head with C.I pump & 19 litre capacity Tank	Each	821.50	18894.00	903.50	18976.50
	d) Pressure pump of 0.8 HP with 4800 LPH, 40meter head with C.I pump & 19 litre capacity Tank	Each	821.50	22091.00	903.50	22173.00
	e) Pressure pump of 1.0 HP with 4800 LPH, 45meter head with SS pump & 19 litre capacity Tank	Each	821.50	23458.50	903.50	23541.00
	f) Pressure pump of 0.5 HP with 2000 LPH, 32meter head with C.I pump & 5 litre capacity Tank	Each	821.50	9259.50	903.50	9341.50

28.104 B	Providing and installing in position premium range water pressure boosting pump of GRUNDFOS make or equivalent (To the approval of Engineer-in-charge) including all pump accessories but excluding cost of G.I pipe & specials complete in all respects.					
	a) Pressure pump of 0.7 HP with 3100 LPH, 25.6 meter head with SS pump & 24 litre capacity Tank	Each	821.50	29564.50	903.50	29646.50
	b) Pressure pump of 0.7 HP with 4700 LPH, 20.3meter head with SS pump & 24 litre capacity Tank	Each	821.50	27647.50	903.50	27729.50
	c) Pressure pump of 0.9 HP with 4700 LPH, 27.3meter head with SS pump & 24 litre capacity Tank	Each	821.50	33745.50	903.50	33827.50
	d) Pressure pump of 0.7 HP with 2000 LPH, 25 meter head with SS pump & 18 litre capacity Tank	Each	821.50	27082.50	903.50	27164.50
	e) Pressure pump of 0.4 HP with 2000 LPH, 18 meter head with SS pump & 8 litre capacity Tank	Each	821.50	24860.50	903.50	24943.00

28.105	Providing, laying, fixing, testing and commissioning of 'C' Class heavy duty MS Pipe conforming to Indian Standard IS : 1239/3589 including fittings like tees, bends, sockets, elbows, flanges, tapers, nuts bolts, gaskets etc. in ground with anti corrosive treatment with wrapping coating tape (4mm pypkote tape) as per IS : 10221 including cost of primer etc. excluding cost of excavation and refilling complete in all respects.					
	a 100mm internal diameter	Mtr	148.00	1504.00	163.00	1519.00
	b 150mm internal diameter	Mtr	203.00	2186.50	223.00	2207.00
	c 200mm internal diameter	Mtr	257.50	3145.00	283.50	3170.50

28.106	Providing, laying, fixing, testing and commissioning of 'C' Class heavy duty MS Pipe conforming to Indian Standard IS : 1239/3589 including fittings like tees, bends, sockets, elbows, flanges, tapers, nuts bolts, gaskets etc. on surface and providing angle iron support or cement concrete block as support including painting with two or more coats of synthetic enamel paint of required shade complete in all respects.					
	a 100mm internal diameter	Mtr	148.00	1325.50	163.00	1340.00
	b 150mm internal diameter	Mtr	203.00	1928.00	223.00	1948.50
	c 200mm internal diameter	Mtr	257.50	2825.50	283.50	2851.50

28.107	Providing, laying, fixing, testing and commissioning of 'C' Class heavy duty MS Pipe conforming to Indian Standard IS : 1239/3589 including fittings like tees, bends, sockets, elbows, flanges, tapers, nuts bolts, gaskets etc. fixing the pipe on the wall / ceiling with suitable clamps and painting with two or more coats of synthetic enamel paint of required shade complete in all respects.					
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Sr. No.	Description.	Unit	For Plain		For Sub-mountainous region	
			Labour Rates	Through Rates	Labour Rates	Through Rates
1	2	3	4	5	6	7
	a 25mm internal diameter	Mtr	34.50	272.50	38.00	275.50
	b 32mm internal diameter	Mtr	38.00	344.00	41.50	348.00
	c 40mm internal diameter	Mtr	51.00	407.50	56.00	412.50
	d 50mm internal diameter	Mtr	69.50	601.00	76.00	608.00
	e 65mm internal diameter	Mtr	88.50	749.00	97.50	758.00
	f 80mm internal diameter	Mtr	109.50	909.50	120.50	920.50
	g 100mm internal diameter	Mtr	148.00	1325.50	163.00	1340.00
	h 150mm internal diameter	Mtr	203.00	1928.00	223.00	1948.50
	i 200mm internal diameter	Mtr	257.50	2825.50	283.50	2851.50
28.108	Supplying, Installation, Testing and Commissioning of G.M Single headed hydrant valve with instantaneous Gun metal peet coupling of 63 mm dia with cast iron wheel ISI marked conforming to IS 5290 (TypeA) with blank Gunmetal Cap and chain including orifice plate made of 6mm th Stainless steel to keep the pressure not more than 3.5 per sqcm at any point complete in all respects.	Each	123.00	6394.00	135.50	6406.50
28.109	Supplying, Installation, Testing and Commissioning of G.M Double headed hydrant valve with instantaneous Gun metal peet coupling of 63 mm dia with cast iron wheel ISI marked conforming to IS 5290 (TypeA) with blank Gunmetal Cap and chain including orifice plate made of 6mm th Stainless steel to keep the pressure not more than 3.5 per sqcm at any point complete in all respects.	Each	123.00	12612.50	135.50	12625.00
28.110	Supplying, Installation, Testing and Commissioning 63 mm dia gun-metal Branch Pipe (ISI marked) with 20mm (nominal internal dia) size Gun metal nozzle confirming to IS 903, suitable for instantaneous connection to interconnect hose pipe coupling as required.	Each	49.50	1929.50	54.00	1934.50
28.111	Supplying, Installation, Testing and Commissioning of Single suction collecting head with cast iron body, nose coupling (draw out connection) with female outlet complete bolts, nuts and rubber insertions, but without 100mm dia. MS suction pipe (with puddle flange) with a foot valve, complete as required.	Each	164.50	4325.00	181.00	4341.50
28.112	Providing and fixing fire brigade inlet connection of cast iron body with Gun metal 63mm dia instantaneous type male coupling with built in check valves and 150mm dia flanged outlet complete with bolts, nuts and rubber insertions as per IS:904. (to be connected to static tank).					
	a Four Way inlet connection	Each	246.50	9179.00	271.00	9203.50

Sr. No.	Description.		Unit	For Plain		For Sub-mountainous region	
				Labour Rates	Through Rates	Labour Rates	Through Rates
1	2		3	4	5	6	7
	b	Three Way inlet connection	Each	246.50	7429.50	271.00	7454.00
	c	Two Way inlet connection	Each	246.50	6157.00	271.00	6181.50
28.113	Supplying, Installation, Testing and Commissioning of RRL FIRE hose Type A, IS:636, 63mm dia x 15m long with gunmetal male & female couplings (ISI marked) bound & riveted to hose pipes with copper rivets and copper wire as required.		Each	82.00	4453.50	90.50	4461.50
28.114	Supplying, Installation, Testing and Commissioning of Non-percolating flexible CP HOSE as per IS:8423 / 1994 ISI marked 63mm dia x 15 m long complete with instantaneous type gun-metal 63 mm dia male & female coupling (IS: 903) bound and riveted to hose pipes.		Each	82.00	3963.50	90.50	3972.00
28.115	Supplying, Installation, Testing and Commissioning of First Aid-fire Hose reel with MS construction spray painted in post office red, conforming to IS 884 with upto date amendments, complete with rubber hose pipe (IS:444/1987) 20mm dia 30 meter long type-2, hose reel Drum with bracket as per IS:884, 20mm dia GM nozzle and 20mm dia GM gate valve as required complete with G.I pipe		Each	493.00	8846.00	542.00	8895.50
28.116	Supplying, Installation, Testing and Commissioning standard Fire Man's axe with heavy insulated rubber conforming to IS 936 complete in all respect.		Each	19.50	706.00	21.00	708.00
28.117	Supplying, Installation, Testing and Commissioning of weather proof cabinet for hose fabricated out of 1.6mm thickness M.S. sheet with front glass door having locking arrangement, suitable to accommodate all the necessary pipes, accessories, fittings etc including painting the metal portion with one coat of ready mixed primer paint and two coats of synthetic enamel paint of approved shade and quality, sign writing etc.						
	a	900 mm wide x 600 mm high x 500 mm deep Size (for Yard Hydrant)	Each	328.50	5135.00	361.50	5167.50
	b	600 mm wide x 600 mm high x 300 mm deep Size - (for RRL Reel)	Each	246.50	4011.50	271.00	4036.00
	c	750 mm wide x 600 mm high x 250 mm deep Size	Each	246.50	4251.50	271.00	4276.50
	d	1200 mm wide x 900 mm high x 400 mm deep Size	Each	246.50	6654.50	271.00	6679.50
28.118	Supplying & fixing air vessel made out of 250mm. Dia, 8 mm thick MS sheet, 1200mm height with air release valves on top and flanged connection to risers, drain arrangements with 25 mm dia gunmetal wheel valves, with required accessories, pressure gauge and painting with synthetic enamel paint of approved shade as required		Each	493.00	15712.50	542.00	15762.00
28.119	Supplying & fixing air vessel made out of 450mm. Dia, 8 mm thick MS sheet, 2000mm height with air release valves on top and flanged connection to risers, drain arrangements with 50 mm dia gunmetal wheel valves, with required accessories, pressure gauge and painting with synthetic enamel paint of approved shade as required		Each	575.00	21402.00	632.50	21459.50
28.120	Providing and fixing of Pressure switch of approved make in MS pipe line suitable for line pressure up 15kg/cm <sup>2</sup> & including connection with main panel etc. as required complete in all respect		Each	246.50	3376.00	271.00	3401.00



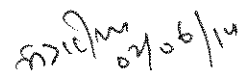
Sr. No.	Description.		Unit	For Plain		For Sub-mountainous region	
				Labour Rates	Through Rates	Labour Rates	Through Rates
1	2		3	4	5	6	7
28.121	Providing and fixing S.S Pressure Gauge complete as required complete in all respect.						
	a	Dial diameter 150mm calibration 0-16 Kg	Each	101.50	879.50	111.50	889.50
	b	Dial diameter 100mm calibration 0-16 Kg	Each	101.50	650.50	111.50	661.00
28.122	Supplying an Fixing Pendant / Upright type sprinkler with quartzoid bulb, operating temperature 68 / 79 degree centigrade of 15 mm dia orifice sprinler head to approved by UL/SN		Each	33.00	217.00	36.00	220.00
28.123	Supplying and Fixing Sidewall Sprinkler rated at 68 / 79degree centigrade, quartzoid bulb type, 15 mm dia orifice sprinler head to approved by UL/SN complete in all respect.		Each	33.00	252.00	36.00	256.00
28.124	Providing and fixing of FIRE EXTINGUISHER, ABC Powder type (stored pressure) as per IS: 15683 complete with all accessories as per Manufactures Specification. ISI Mark complete in all respect.						
	a	2 Kg. Capacity	Each	87.00	1597.50	96.00	1606.50
	b	4 Kg. Capacity	Each	87.00	2112.50	96.00	2121.50
	c	6 Kg. Capacity	Each	87.00	2742.00	96.00	2750.50
28.125	Providing and fixing of FIRE EXTINGUISHER, CO2 type as per IS: 15683 complete with all accessories as per Manufactures Specification. ISI Mark complete in all respect.						
	a	2 Kg. Capacity	Each	87.00	4802.00	96.00	4810.50
	b	3 Kg. Capacity	Each	87.00	5717.50	96.00	5726.00
	c	4.5 Kg. Capacity	Each	87.00	6735.50	96.00	6744.50
28.126	Providing and fixing of FIRE EXTINGUISHER, Mechanical Foam Type 9 ltr IS: 15683 Stored Pressure type complete with all accessories as per Manufactures Specification. ISI Mark of approved make complete in all respect.		Each	87.00	2799.00	96.00	2808.00
28.127	Supplying and Installation control valve C/W water motor gong complete with alarm Valve, constant trim, water motor bell, 2No. Pressure Gauge. All parts UL listed. Make Newage complete in all respect.						
	a	150 mm control valve	Each	305.00	32335.00	335.50	32366.50
	b	100 mm control valve	Each	305.00	27700.50	335.50	27731.00
28.128	Supplying, Laying, Testing and Commissioning of ISI marked BUTTERFLY VALVE PN 1.6, with Gun metal seal duly ISI marked complete with rubber insertion, nuts, bolts and washers, matching flanges of required thickness, etc. complete as per specifications.						
	a	80 mm i/d	Each	164.50	5857.50	181.00	5874.00
	b	100 mm i/d	Each	205.50	6585.50	226.00	6606.00
	c	150 mm i/d	Each	246.50	7824.00	271.00	7849.00
	d	200 mm i/d	Each	287.50	11627.50	316.50	11656.50

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Sr. No.	Description.	Unit	For Plain		For Sub-mountainous region	
			Labour Rates	Through Rates	Labour Rates	Through Rates
1	2	3	4	5	6	7
28.129	Supplying, Installation, Testing and Commissioning of cast iron flanged Y type strainer with stainless steel mesh in PN-1.0 including cost of Nut Bolt , rubber insertion complete in all respects.					
	a) 150 mm i/d	Each	123.00	7371.50	135.50	7383.50
	b) 200 mm i/d	Each	164.50	14596.00	181.00	14612.50
28.130	Proving & fixing Dual plate check valve flanged end class PN-1.6 as per IS with nitrile seat SS shaft & springs in pipe lines including jointing & cost of Nut Bolt , rubber insertion etc. complete.					
	(a) 80mm i/d check valve .	Each	164.50	3125.00	181.00	3141.50
	(b) 100mm i/d check valve	Each	205.50	4416.00	226.00	4436.50
	(c) 150mm i/d check valve	Each	246.50	7875.50	271.00	7900.50
	(d) 200mm i/d check valve	Each	287.50	12880.50	316.50	12909.50
28.131	Providing and fixing in position Cast Iron Foot valves flanged ends with rubber sheat as per IS 4038 including cost of Nut Bolt , rubber insertion complete in all respect					
	a) 50mm i/d Cast Iron Foot valves	Each	87.00	1455.50	96.00	1464.50
	b) 65mm i/d Cast Iron Foot valves	Each	87.00	1654.50	96.00	1663.50
	c) 80mm i/d Cast Iron Foot valves	Each	109.00	2153.50	120.00	2164.50
	d) 100mm i/d Cast Iron Foot valves	Each	131.00	3466.50	144.00	3479.50
	e) 150mm i/d Cast Iron Foot valves	Each	152.50	6262.00	168.00	6277.00

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Sr. No.	Description.	Unit	For Plain		For Sub-mountainous region	
			Labour Rates	Through Rates	Labour Rates	Through Rates
1	2	3	4	5	6	7
28.132	Providing and fixing Vane type Water flow switch in MS Pipe line for a service pressure up to 450PSI , Minimum flow rate for alarm 10GPM (38 LPM ) , Minimum surge 18 FPS (5.5 m/s ) including connection with panel complete in all respect					
	a For 50mm to 150 mm pipe line	Each	2523.50	11523.50	2776.00	11776.00
	b For 200mm pipe line	Each	2729.00	13245.00	3001.50	13518.00
28.133	Providing and fixing Sprinkler flexible drops stainless steel SS 304 C/W ½ " NPT on reducer thread, with Max. working pressure of 175 PSI , Test pressure 875 PSI ( BURST ) with branch line ( inlet ) 1" NPT female thread , 01 No reducer , 01 no nipple , 02 no side brackets, 01 no centre brackets etc. complete set , unbraided UL listed complete in all respect.					
	a 1000 mm length	Each	82.00	883.00	90.00	892.00
	b 1200 mm length	Each	82.00	975.00	90.00	983.00
	c 1500 mm length	Each	82.00	1021.00	90.00	1029.00

  
 Chief Engineer (North) Punjab  
 Water Supply & Sanitation Deptt.  
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# CHAPTER-29

## SEWERAGE & DRAINAGE

Chapter 29

**SEWERAGE AND DRAINS**

Note: 1	Contractor must provide, fix and maintain sign boards, fencing of trenches indicator for the work under execution, provision for diversion for traffic, protection of existing services i.e. telephone cables, electric lines, water supply lines and gas lines etc. night signals, profiles, pegs, sighting rods, fixing and maintenance of caution boards and any other safety measure required at site.
Note: 2	Until unless specified in DNIT, the maximum width of trenches for payment purposes shall be as given in PWD specification book, If actual width of trench is less than the specified, in this case the actual volume of excavation shall be paid. If the actual width of trench is greater than specified in this case only standard specified section will be paid.
Note: 3	Nothing extra will be payable in respect of item No. 29.1 to 29.5 for any seepage of water during excavation work above spring level.
Note: 4	The rates of item No. 29.1 to 29.5 includes and cover the cost of removing trees, roots, kankars and other hard materials met in excavation
Note: 5	If excavation for any sewer is carried out by 'cut and cover' i.e. sinking shaft and tunneling in between, the contractor shall be paid for such work as if the trench had been opened for full length, but no extra will be allowed other than the full measurement of trench. it will be entirely on the discretion of Engineer in charge to permit the excavation by cut and cover method. Back filling of shafts and tunnels must all times be carried throughly and to the satisfaction of Engineer in charge.
Note: 6	If any excavation is abandoned due to change in alignment of sewer necessiated by any obstruction such as pipes, electric/ telephone cables or other reason what so ever may be, the contractor will be paid actual work done in that trench and back fillings etc.
Note: 7	Where Engineer in charge so directs earth filling in trenches will be carried out by mechanical rammers, extra for compaction rate will be payable under road chapter.
Note: 8	No extra shall be payable in respect of item 29.1 to 29.5, due to other unforeseen difficulties, hardness of soil, or surface and other factors. This rate does not include cutting through metallated roads and sorting stacking of road metal, which will be paid separately.
Note: 9	Excavation from items 29.1 to 29.5 is to be done as per PWD specifications, standard sections and contract drawings. In case of unavoidable circumstances where excavation is required with open cuttings, concerned Superintending Engineer to his satisfaction depending upon the nature of soil and site conditions is competent grant prior approval for open cutting along with the side slopes. This approval will be for particular street/ lane but not for the whole area. Section approved by the Suprintending Engineer will be final.
Note: 10	If road cutting is involved in excavation, then it's width should not be more than 115 mm beyond edge of excavated trenches on each side. where width of road cut is required to be increased than the standard widths, prior approval of the Superintending Engineer is required. In case road cut done at site is more than norms/ approved by the Superintending Engineer, excess road cut will not be payable. On the other hand cost of reconditioning of excess road cut must be recovered from the contractor.
Note: 11	Excavation work will be done manually in built up street/ lane where wall to wall width is upto 3.0 metre. Where as in open area or built up street/ lane having wall to wall width more than 3.0 metre, excavation will be done by mechanical means. In case of unavoidable circumstances, if, manual excavation is required other than the specified above, Superintending Engineer is competent to permit after his personnel satisfaction subject to prior approval on the record. If prior approval is not accorded for manual excavation then contractor will be paid as excavation by mech. means and the contractor will have no claim for that.
Note: 12	Where and which type of timbering is required to support sides of trench in particular street/ lane, will be decided by the Engineer in charge depending upon nature of soil and site conditions before laying sewer and .will also put on record the nature of soil and site condition, that is for first 2.0 metre depth of trench and further for subsequent band of 1.80 metre depths. In a particular strip if nature of soil changes within the strip, then timbering be decided for this whole strip as required for the worst soil met in that strip.

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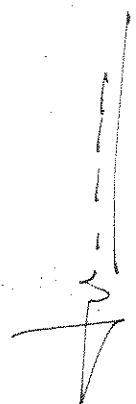
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Note: 13	Removal of surplus spoils/earth from the site of work if required, will be decided by the Engineer in charge. He must take up tentative quantities in writing with Local Administrations (M.C./N.A.C./ Panchayat/ Owner of the project) so that surplus spoils/ earth may be filled in public place (the destination/ destinations). Before so fillings, levels of site be recorded with respect to fixed bench mark near site and then again levels be recorded after filling. Record actual measurement of earth filling and lead in measurement book (loading or unloading will not be payable). If local administration do not response to repeated requests, then Engineer in charge will decide the destination in public interest and the record the reasons of his choice and paid accordingly.
Note: 14	For RCC pipe sewers, width of khutti will be 1.25D (here D is outer diameter of pipe's barrel), depth of khutti will be 0.5D, excavated bed of khutti will be 0.25D below the barrel of pipe. As such packing below pipes will be 0.25D thick at centre and 0.5D at outer edges with top surface horizontal. Each pipe can rest on both ends at precasted PCC blocks of PCC 1:2:4 having length equal to 0.5D, width 0.1D and depth 0.25D and local sand can be used as packing material in stead of lean concrete. Where as in case of PVC/ UPVC/ HDPE pipes used for sanitary/ storm sewers/ rising mains, nominal section local dry sand 100 mm thick in bed and hounches can be used instead of lean concreats. Since these pipes have lengths from 5.0 to 6.0 metres, hence 3 Nos PCC:1:2:4 blocks of size 100x100 mm and length 0.5 D can be used to support each pipe).Local sand and PCC blocks will be paid separately.
Note: 15	To protect entry of earth, slush or mud into sewer lines/manhole chambers is contractor's responsibility. If any mud, slush, debris etc. enters into sewers/ manholes that will be removed by contractor at his own cost. Before commissioning Engineer in charge should confirm and record that sewer lines are free from any type of debris/ earth/ slush etc. If contractor fails to do so, then it should be got done at the risk and cost of the contractor.
Note: 16	RCC plain ended pipes are strictly prohibited for sewerage works. Where RCC plain pipes are used for some works other than sewerage, these will also be covered under rates of S/S pipes but including the cost of RCC collar. For a collar two socket joints will be paid. In case spun yarn is used instead of rubber ring nothing extra will be paid as rubber ring jointing is saved in that case.
Note: 17	All the sewer lines will be got tested by contractor before filling. If there is any leakage or damage during execution or after commissioning, the same will be rectified by the contractor at his own cost, loss or damage what so ever may be borne by the contractor.
Note: 18	Dewatering of sub soil water if required at site, will be physically checked by Engineer in charge at site with respect to bench mark before dewatering process and will be recorded in site order book at regular intervals fortnightly along with the RDs by SDE and paid accordingly. The decision of Engineer in charge will be final and binding on the contractor.
Note: 19	Material defect, execution defect or other defects such as gradient etc if any on the part of the contractor, found at later stage which could not be traced while execution due to hidden work and are not part of maintenance, will remain the responsibility of the contractor to set right the same at his own cost though he may have taken his all dues.
Note: 20	Additional 1:2 cement sand mortar on tyton rubber joint of RCC pipes will be provided only if Engineer in charge permits so in writing considering the requirements, other wise contractor will have no right to claim payment of cement sand mortar joint on tytone rubber joints. No cement sand mortar joint will be paid on tytone rubber joints in of RCC S/S flush jointing pipes.
Note: 21	If any plastic encapsulated orange colour safety footstep is fitted by the contractor in wall without providing required PCC block, not only payment of PCC is to be deducted from the items rate but nothing is to be paid for footstep so fixed and the work stands rejected. Any masonry work carried out by contractor without fixing step simultaneously in the walls were required, would be stand rejected because steps fitted on later stage will have loose grip and cause high risk to lives of sewermen.
Note: 22	The rates in CSR items are for "ISI" marked steel reinforced RCC pipes only having sockets extended out side pipe's barrel. These rates do not cover unreinforced CC pipes and steel reinforced RCC s/s pipes having male/ female barrel flush joints. Unreinforced cement concrete pipes can only be used where BIS code permits so and that too with prior approval of allotting authority not less than Chief Engineer or Superintending Engineer (where S.E. is the highest technical post ). The rates of Unreinforced cement concrete pipes and Reinforced pipes having S/S flush joints be reduced than of CSR as per difference of the lowest rates in market.
Note: 23	The Sewerage work shall not be treated as completed until it's proper functioning is physically checked by the Engineer in charge and is duly certified.
Note: 24	The complete rates of manhole chambers and cast in situ sewers given in CSR and its RCC slabs are only for estimation purposes, however payment of manhole chambers and cast in situ sewers are to be made only as per individual items rates in PWD Common Schedule.


Note: 25	Steel reinforcement provided in RCC slabs and other works should be as per structural design and be recorded at the spot as actual in measurement book before pouring cement concrete and payment will be made only for actual steel consumed at site. Only Fe 500 is permitted for RCC works.
Note: 26	Steel shuttering is to be used for RCC slabs of manhole chambers at bottom, sides and openings. Use of kucha shuttering or wooden shuttering is strictly prohibited. RCC slabs casted by using kucha or wooden shuttering will stand rejected and be recasted by using steel shuttering, nothing shall be paid for the rejected slabs on the other hands such slabs must be recasted by using steel shutterings.
Note: 27	For jointing in SW and RCC s/s pipes (without rubber ring) by using spun Jute yarn and cement sand mortar, the one fourth length of groove inbetween socket and spigot is to be packed with spun Jute yarn fully grouted in neat cement slurry and the remaining three fourth groove length is to be filled with prescribed cement sand mortar with help of tools.
Note 28	Untill otherwise specified, the labour rate for various items of construction includes handling of material within 100 metres. Through rate includes all rehandling of materials at site of work and no payment is due to the contractor on this count.
Note 29	Through rates, given in the schedule, includes the carriage of material as follow: - (a) For material such as timber, mild steel, electric goods, all types of pipes, all types of manhole covers, all types of road gullies, PVC foot steps, ventilating column pipes, cement and spun yarn etc. which have to be arranged by the contractor, the entire carriage is included in the rate irrespective of the lead. Only for the materials bricks, brick ballast, bajri, sand, stone, bitumen and cinder, extra lead involved beyond 5 km is payable as per carriage rates. -----(b) For bricks through rate includes carriage within radius of 5 km of site of work, if the source of bricks is within that limit. In case the source is beyond 5 km of the site of work, the through rate includes carriage upto first 5 km measured from source of bricks irrespective of the fact weather this initial distance consists of Katcha and pucca or partly katcha and pucca. The lead beyond this initial 5 km will be payable at the rates provided in Schedule of rates for the corresponding subsequent kilometres. For this purpose the source of bricks shall be the nearest possible working kilen or dump from where the bricks can be obtained and source shall be certified as such by the Sub Divisional Engineer in writting before releasing the payment.
Note 30	The through rate includes all octroi charges, toll tax, VAT, Labour Welfare Cess, turnover tax and other local taxes etc., what so ever paid by the contractor to bring the material at site of work.
Note 31	Through rates include the wastage and beaking of various materials during construction.
Note 32	Unless otherwise specified, the labour rate includes the cost of water, tools and plants, labour and material of scaffolding and cost of good earth for mud mortar or mud plaster where required.
Note 33	In case of works below ground level like basement of buildings and public health works such as sewers and disposal works etc., the rates upto 4.0 metre below the ground level shall be the same as for works in superstructure or first story. For depths greater than 4.0 metres, additional rates for subsequent story will be added. For works which are not deeper than 1.50 metre from the ground level, ordinary rates for works in foundation and plinth shall apply
Note 34	Where description of any item is too long, only essential portion may be written in estimates, tender contracts and measurement books, although it will be deemed to cover the entire item as described fully in Common shedule of rates, PWD specification and BIS codes.
Note 35	Abrivation of units, wherever occurring in Punjab PWD Common Schedule of Rates 2010 will be applicable in revised CSR Chapter 29
Note 36	The CSR item rates are driven on the basis of daily wages fixed by Labour Department as per minimum wages as on Sept 2013.
Note 37	Hire charges rates include all operational and maintenance charges such as cot of fuel, lubricants, stores, establishment, depreciation and intrest charges. These rates are for estimation purpose and not for hiring private machinery from the market for which competitive tenders/ quotations shall be called and approved by the competent authority. The output of machinery/ equipments are for the compact quantities of the ralevent items and not for loose quantities.
Note 38	The rates of materials adopted for analysing the rates of various items of works includes cost of any cases/ drums/ containers/ or any type of bags etc. and are not for obtaining supplies from the market.
Note 39	For excavation works covered under chapter 29 separate rates have been given for streches at various depths of excavation below ground levels and are to be paid accordingly. In these chapter no lift will be converted into horizontal lead.

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Note 40	Unless otherwise stated, the dismantling rates include sorting and stacking dismantled material and removing the same within the distance of 150 metres. The rate cover the the cost of all tools and plants, ladders, scaffolding and other adjuncts required or dismantling, while dismantling also to take all necessary precautions of public property and keeping down the dust and nuisance etc.
Note 41	The rates are including cost of steel shoring. So only steel shoring is to be used.
Note 42	The labour rates as well as through rates includes cost of curing and protection in bad weather conditions.
Note 43	The rates in these chapters are by automatic batch mixing plants or B.M.C. by using vibrator. For M20 and rich C.C. mix should be got designed from competent lab with cement, fine and coarse ingredients along with water ratio to be used.
Note 44	The rates of brick work covered under chapter 29 are by using first class bricks. Second class bricks will not be permitted even by reducing the item rate.
Note 45	Through rates of mild steel placed in RCC where not covered through rate of RCC, includes wastage and cost of binding wire.
Note 46	The rates of all items in CSR are in Indian Rupees, including all taxes and contractors profit.

  
 Chief Engineer Punjab,  
 Water Supply & Sanitation Deptt.,  
 PATIALA.

  
 Superintending Engineer,  
 W/S & Sanitation Circle,  
 Patiala

  
 M/R W/S Patiala Distt.  
 Patiala



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<b>Wages</b>				
<b>Wages adopted in analysis are as per M.O.L. dated Sept. 2013.</b>				
<b>S.No</b>	<b>Description</b>	<b>Daily Rs.</b>	<b>Hour Rs.</b>	<b>Remarks if any</b>
1	Skilled- Majdoor	305.14		
2	Semi- Skilled Majddor	270.64		
3	U-Sk.Maz.Men/women	240.64		
4	Fitter- 1st Class	305.14		
5	Fitter - 2nd class			
6	Fitter - Helper	270.64		
7	Masson - 1st class	305.14		
8	Masson - 2nd class			
9	Carpentor	305.14		
10	Blacksmith	305.14		
11	Pump Operator			
12	Assistant Pump Oper.	305.14		
13	Sewerman	270.64		
<b>Hire charges of Machinery</b>				
<b>S.No.</b>	<b>Machinery</b>	<b>Daily Rs.</b>	<b>Hour Rs.</b>	<b>Remarks</b>
1	3D JCB	5600		Rates are for working hours at site, includes cost of fuel, lubricants, operation & maintain. Operator, helper and T&P etc.
2	Crane 3 Tonne cap.	3000	390	
3	Crane 12 Tonne cap.		650	
4	Crane 25 Tonne cap.		800	
5	Crane 35 Tonne cap.		932	
6	Loader			
7	Auger Boring Machine	5000		
8	Desilting machines set	2000		

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### Analysis of Rate Form work for RCC cum brick circular sewers/ RCC Caste in situ sewers

Code No.	Form work for RCC cum brick circular sewers/ RCC Caste in situ sewers	Unit	Quantity
	Unit :-	Sqm	1.000
	Taking output : - 1.2 metre length of 760 mm i/d RCC cum Brick circular sewer 300 uses	m	1.200
	<b>Materials: -</b>		
	Mild steel sheets 3mm thick for		
	Shuttering for PCC = L*1/2*22/7*D		
	1.2x0.5x3.142x1.215 = 2.290 sqm		
	Shuttering for RCC top face = 1.2x0.5x3.142x1.215 = 2.290 sqm		
	Shuttering for RCC at bottom 1.2x0.5x3.143x1.01 = 1.90 sqm		
	Shuttering for Brick arch = L*1/2*22/7*D		
	= 1.2x0.5x3.142x0.78 = 1.47 sqm		
	<b>Total = 7.95 Sqm</b>		
	Weight of sheet 3 mm thick M.S. sheet @ 24.75 Kg/sqm A = 196.76 Kg		
	Equal angle 40x40 x5 mm for frame work		
	PCC Longitudnal = 2x1.2 = 2.40 m		
	Width wise = 2x1.14 = 2.28 m		
	2 Semi circle = 3.142x1.215 = 3.81 m		
	RCC at top face Longitudnal = 2x1.2 = 2.40 m		
	Width wise = 2x1.14 = 2.28 m		
	2 Semi circle = 3.142x1.215 = 3.81 m		
	RCC at bottom Longitudnal = 2x1.20 = 2.40 m		
	Width wise = 2x0.93 = 1.86 m		
	2 Semi circles = 3.142x1.01 = 3.170 m		
	Brick arch Longitudnal = 2x1.2 = 2.4 m		
	Width wise = 2x0.70 = 1.40 m		
	2 Semi circle = 3.142x0.785 = 2.67 m		
	<b>Total = 30.88 m</b>		
	Weight of angle 3 kg/m B = 92.64 Kg		
	Total weight A+B = 289.40 Kg		
	Add 5% wastage = 14.47 Kg		
	<b>Grand Total weight = 303.87 Kg</b>		303.87
	Cost of MS sheet and engle iron including all taxes Rs. 65/- per kg		19751.55
	Add 10% cost of febrication on material		1975.16
	<b>TOTAL</b>		21726.71
	Less cost of scrap after full use 30% of value		5925.47
	<b>Net cost of form work</b>		15801.24
	Sundries @ 3%		474.04
	Add contractor's profit @ 10%		1627.53
	Add Labour cess 1 % on Rs		179.03

Code No.	Form work for RCC cum brick circular sewers/ RCC Caste in situ sewers		Unit	Quantity
	TOTAL	18081.83		
	Cost of 1.2 m length of shuttering 300 uses	50.23		
	Cost of 1m or 7.95 sqm form work for I use	6.32		
	Cost of 1 sqm for one use	6.32	6.32	6.318
	<b>Labour: -</b>			
	Labour for 1.2 m form work, putting moulds in position and shifting complete in all respects			
	Fitter 1no.	0.25	76.285	
	Mazdoor unskilled	0.25	240.64	
	Total		136.445	
	Sundries @ 3%		4.09335	
	Add contractor's profit @ 21.5%		30.21575	
	Add Labour cess 1 % on Rs		1.707541	
	Labour for 1.20m form work fixing and removing		172.4616	
	Labour for per m length or 7.95 sqm form work fixing and removing		143.718	
	Labour for 1 sqm form work for 760mm i.d. RCC cum brick circular sewer		18.07774	
			18.07774	18.078
	Cost of providing , fixing and removal of per sqm form work of sewer			
	Providing and fixing per Sqm Form Work			24.396
			<b>Say</b>	<b>24.40</b>

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**RCC cum brick circular sewers as per standard sections and specifications**

**A - Where sewer is to remain under dry conditions**

Sewer id	PCC 1:2:4	Formwork	BW in 1:2 cm	BW in 1:5 cm	12.5mm CP 1:2 cm	RCC	TMT qtl. Incl. 10% waste
760	0.35	6.64	0.323	0.24	2.45	0.35	0.1096
915	0.39	7.61	0.379	0.27	2.94	0.40	0.1214
990	0.42	8.08	0.406	0.28	3.17	0.42	0.1294
1065	0.44	8.55	0.434	0.30	3.41	0.44	0.1373
1145	0.46	9.05	0.463	0.31	3.66	0.47	0.1621
1220	0.48	9.53	0.490	0.32	3.90	0.49	0.1704
1295	0.51	10.00	0.517	0.35	4.13	0.52	0.1788
1370	0.53	10.47	0.544	0.36	4.37	0.54	0.1871
1450	0.56	10.97	0.573	0.38	4.62	0.57	0.1957
1525	0.58	11.13	0.600	0.40	4.85	0.59	0.2041

**B - Where sewer is to remain partially immersed under sub soil water**

Sewer id	PCC 1:2:4	Formwork	BW in 1:2 cm	BW in 1:5 cm	12.5 mmCP 1:2	RCC	TMT
760	0.35	6.69	0.240	0.24	2.45	0.38	0.1989
915	0.40	7.67	0.268	0.27	2.94	0.44	0.2258
990	0.42	8.14	0.282	0.29	3.17	0.46	0.2411
1065	0.44	8.61	0.295	0.30	3.41	0.49	0.2565
1145	0.49	9.36	0.310	0.33	3.66	0.70	0.3242
1220	0.52	9.83	0.323	0.34	3.90	0.74	0.3409
1295	0.54	10.31	0.337	0.36	4.13	0.78	0.3576
1370	0.57	10.78	0.350	0.37	4.37	0.81	0.3699
1450	0.59	11.28	0.365	0.38	4.62	0.85	0.3872
1525	0.62	11.75	0.378	0.40	4.85	0.88	0.4038

**C - Where sewer is to remain fully immersed under sub soil water**

Sewer id	PCC 1:2:4	Formwork	BW in 1:2 cm	BW in 1:5 cm	12.5 mmCP 1:2	RCC	TMT
760	0.36	6.79	0.240	0.25	2.45	0.44	0.2654
915	0.42	7.92	0.268	0.29	2.94	0.60	0.3078
990	0.45	8.39	0.282	0.30	3.17	0.63	0.3265
1065	0.47	8.86	0.295	0.31	3.41	0.67	0.3409
1145	0.49	9.36	0.310	0.33	3.66	0.70	0.4823
1220	0.52	9.83	0.323	0.34	3.90	0.74	0.5088
1295	0.54	10.31	0.337	0.36	4.13	0.78	0.5310
1370	0.57	10.78	0.350	0.37	4.37	0.81	0.5532
1450	0.59	11.28	0.365	0.38	4.62	0.85	0.5764
1525	0.62	11.75	0.378	0.40	4.85	0.88	0.5986

**D - For all types of sewers 1600 mm id and above.**

Sewer id	PCC 1:2:4	Formwork	BW in 1:2 cm	BW in 1:5 cm	12.5 mmCP 1:2	RCC	TMT
1600	0.67	12.54	0.627	0.43	5.09	1.29	1.2920
1675	0.70	13.01	0.654	0.44	5.33	1.34	1.3243
1750	0.73	13.48	0.681	0.46	5.56	1.38	1.3566
1830	0.77	14.17	0.710	0.48	5.81	1.67	1.4040
1905	0.79	14.65	0.737	0.49	6.05	1.72	1.4363
1980	0.83	15.12	0.764	0.51	6.28	1.78	2.2899
2060	0.85	15.62	0.793	0.52	6.54	1.84	2.3511
2135	0.89	16.22	0.820	0.54	6.77	2.07	2.4237
2285	0.97	17.35	0.874	0.58	7.24	2.48	2.5340
2440	2.07	18.38	0.930	0.61	7.73	2.74	2.8672

**DETAILED ANALYSIS OF MATERIALS RATES USED FOR DRIVING PUNJAB PWD C.S.R. RATES OF SEWERAGE WORKS 2014**

All the materials should be of ISI standards and fully marked along with the approved makes as said in description against each item

Details of rates

Item No.	Material	Unit	Details of rates										G.Total	Remarks
			Rates destin.	Rates Ex-Fac.	VAT /CST	If extra carriage	Total	3% Sundr.	10% C.Prof	1% L.Cess				
1	PVC Steps as IS:1786	Each	90		2			92	2.76	9.48	1.04	105.28		
2	RCC Road Gully													
	a 450mm x 450mm	Each						690	20.7	71.07	7.82	789.59		
	b 600mm x 300mm	Each						625	18.75	64.38	7.08	715.21		
	c 600mm x 450mm	Each						820	24.6	84.46	9.29	938.35		
3	RCC Manhole cover with frames													
	as per IS:12592-2002													
	560 mm id opening													
	a i Extra heavy duty	Each	1200		24			1224	36.72	126.07	13.87	1400.66		
	ii Heavy duty	Each	1058		21			1079	32.37	111.14	12.23	1234.73		
	iii Medium duty	Each	880		18			898	26.94	92.49	10.17	1027.61		
	iv Light duty	Each	750		15			765	22.95	78.80	8.67	875.41		
	b 500 mm id opening													
	i Extra heavy duty	Each	1150		23			1173	35.19	120.82	13.29	1342.30		
	ii Heavy duty	Each	1000		20			1020	30.6	105.06	11.56	1167.22		
	iii Medium duty	Each	800		16			816	24.48	84.05	9.25	933.77		
	iv Light duty	Each	670		13			683	20.49	70.35	7.74	781.58		
	c 450 mm id opening													
	i Extra heavy duty	Each	1030		21			1051	31.53	108.25	11.91	1202.69		
	ii Heavy duty	Each	950		19			969	29.07	99.81	10.98	1108.86		
	iii Medium duty	Each	730		15			745	22.35	76.74	8.44	852.53		
	iv Light duty	Each	600		12			612	18.36	63.04	6.93	700.33		
	d 455x610 mm rectangular													
	i Extra heavy duty	Each	1330		27			1357	40.71	139.77	15.37	1552.86		
	ii Heavy duty	Each	1120		22			1142	34.26	117.63	12.94	1306.82		
	iii Medium duty	Each	848		17			865	25.95	89.10	9.80	989.85		
	iv Light duty	Each	710		14			724	21.72	74.57	8.20	828.49		
4	RCC Manhole cover only													
	as per IS:12592-2002 for													
	560 mm id opening circular													

7

All the materials should be of ISI standards and fully marked along with the approved makes as said in description against each item

Details of rates

Item No.	Material	Unit	Rates destin.	Rates Ex-Fac.	VAT /CST	If extra carriage	Total	3% Sundr.	10% C.Prof	1% L.Cess	G.Total	Remarks
	i Extra heavy duty	Each	870		17		887	26.61	91.36	10.05	1015.02	
	ii Heavy duty	Each	810		16		826	24.78	85.08	9.36	945.22	
	iii Medium duty	Each	630		13		643	19.29	66.23	7.29	735.80	
	iv Light duty	Each	550		11		561	16.83	57.78	6.36	641.97	
b	<b>500 mm id opening circular</b>											
	i Extra heavy duty	Each	810		16		826	24.78	85.08	9.36	945.22	
	ii Heavy duty	Each	770		15		785	23.55	80.86	8.89	898.30	
	iii Medium duty	Each	590		12		602	18.06	62.01	6.82	688.89	
	iv Light duty	Each	530		11		541	16.23	55.72	6.13	619.08	
c	<b>450 mm id opening circular</b>											
	i Extra heavy duty	Each	740		15		755	22.65	77.77	8.55	863.97	
	ii Heavy duty	Each	700		14		714	21.42	73.54	8.09	817.05	
	iii Medium duty	Each	510		10		520	15.6	53.56	5.89	595.05	
	iv Light duty	Each	500		10		510	15.3	52.53	5.78	583.61	
d	<b>455x610 mm rectang. opening</b>											
	i Extra heavy duty	Each	957		19		976	29.28	100.53	11.06	1116.87	
	ii Heavy duty	Each	891		18		909	27.27	93.63	10.30	1040.20	
	iii Medium duty	Each	693		14		707	21.21	72.82	8.01	809.04	
	iv Light duty	Each	605		12		617	18.51	63.55	6.99	706.05	
5	<b>Stone Ware Pipes as per</b>											
	<b>IS:651-2007</b>											
a	100 mm id	Mtr.	91.67		6		98	2.94	10.09	1.11	112.14	
b	150 mm id	Mtr.	158.33		10		168	5.04	17.30	1.90	192.25	
c	200 mm id	Mtr.	200		12		212	6.36	21.84	2.40	242.60	
d	250 mm id	Mtr.	383.33		23		406	12.18	41.82	4.60	464.60	
e	300 mm id	Mtr.	583.33		35		618	18.54	63.65	7.00	707.20	
f	400 mm id	Mtr.	1500		91		1591	47.73	163.87	18.03	1820.63	
g	450 mm id	Mtr.	1750		106		1856	55.68	191.17	21.03	2123.88	

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All the materials should be of ISI standards and fully marked along with the approved makes as said in description against each item

Details of rates

Item No.	Material	Unit	Rates destin.	Rates Ex-Fac.	VAT /CST	If extra carriage	Total	3% Sundr.	10% C.Prof	1% L.Cess	G.Total	Remarks
6	600 mm id	Mtr.										
29.65	UPVC Pipes IS:15328-2003											
	class SN-8	Mtr.										
a	110 mm o/d	Mtr.					245	7.35	25.24	2.78	280.36	
b	125 mm o/d	Mtr.					282	8.46	29.05	3.20	322.70	
c	160 mm o/d	Mtr.					525	15.75	54.08	5.95	600.77	
d	200 mm o/d	Mtr.					825	24.75	84.98	9.35	944.07	
e	250 mm 0/d	Mtr.					1275	38.25	131.33	14.45	1459.02	
f	315 mm o/d	Mtr.					1984	59.52	204.35	22.48	2270.35	
7	HDPE Pipes as per IS: 14333											
	PE100, class PN-6											
a	110 mm o/d	Mtr.					431	12.93	44.39	4.88	493.21	
b	125 mm o/d	Mtr.					552	16.56	56.86	6.25	631.67	
c	160 mm o/d	Mtr.					902	27.06	92.91	10.22	1032.19	
d	200 mm o/d	Mtr.					1407	42.21	144.92	15.94	1610.07	
e	250 mm 0/d	Mtr.					2188	65.64	225.36	24.79	2503.79	
f	315 mm o/d	Mtr.					3464	103.92	356.79	39.25	3963.96	
g	400 mm o/d	Mtr.					5704	171.12	587.51	64.63	6527.26	
h	500 mm o/d	Mtr.					8902	267.06	916.91	100.86	10186.83	
i	630 mm o/d	Mtr.					14093	422.79	1451.58	159.67	16127.04	
j	710 mm o/d	Mtr.					17884	536.52	1842.05	202.63	20465.20	
k	800 mm o/d	Mtr.					22686	680.58	2336.66	257.03	25960.27	
l	900 mm o/d	Mtr.					28736	862.08	2959.81	325.58	32883.47	
m	1000 mm o/d	Mtr.					35501	1065.03	3656.60	402.23	40624.86	
8	RCC Spun Pipes s/s with rubber											
29.69	ring as per IS:458-2003											
	Class - P1											
a												

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All the materials should be of ISI standards and fully marked along with the approved makes as said in description against each item

Item No.	Material	Details of rates											Remarks	
		Unit	Rates destin.	Rates Ex-Fac.	VAT /CST	If extra carriage	Total	3% Sundr.	10% C.Prof	1% L.Cess	G.Total			
	i	100 mm id	Mtr.	330		20			350	10.5	36.05	3.97	400.52	
	ii	150 mm id	Mtr.	375		23			398	11.94	40.99	4.51	455.44	
	iii	200 mm id	Mtr.	420		25			445	13.35	45.84	5.04	509.23	
	iv	250 mm id	Mtr.	480		29			509	15.27	52.43	5.77	582.46	
	v	300 mm id	Mtr.	660		40			700	21	72.10	7.93	801.03	
	vi	400 mm id	Mtr.	870		53			923	27.69	95.07	10.46	1056.22	
	vii	450 mm i/d	Mtr.	1020		62			1082	32.46	111.45	12.26	1238.17	
	viii	500 mm i/d	Mtr.	1260		76			1336	40.08	137.61	15.14	1528.82	
	ix	600 mm id	Mtr.	1830		111			1941	58.23	199.92	21.99	2221.14	
	x	700 mm i/d	Mtr.	2070		125			2195	65.85	226.09	24.87	2511.80	
	xi	800 mm i/d	Mtr.	2580		156			2736	82.08	281.81	31.00	3130.89	
	xii	900 mm i/d	Mtr.	3600		218			3818	114.54	393.25	43.26	4369.05	
	xiii	1000 mm i/d	Mtr.	4050		245			4295	128.85	442.39	48.66	4914.90	
	xiv	1100 mm id	Mtr.	4800		290			5090	152.7	524.27	57.67	5824.64	
	xv	1200 mm i/d	Mtr.	5220		316			5536	166.08	570.21	62.72	6335.01	
b		<b>Class - P2</b>												
	i	100 mm id	Mtr.											
	ii	150 mm id	Mtr.											
	iii	200 mm id	Mtr.											
	iv	250 mm id	Mtr.											
	v	300 mm id	Mtr.											
	vi	400 mm id	Mtr.											
	vii	450 mm i/d	Mtr.											
	viii	500 mm i/d	Mtr.											
	ix	600 mm id	Mtr.											
	x	700 mm i/d	Mtr.											
	xi	800 mm i/d	Mtr.											
	xii	900 mm i/d	Mtr.											

J



All the materials should be of ISI standards and fully marked along with the approved makes as said in description against each item

Details of rates

Item No.	Material	Unit	Rates destin.	Rates Ex-Fac.	VAT /CST	If extra carriage	Total	3% Sundr.	10% C.Prof	1% L.Cess	G.Total	Remarks
	xiii 1000 mm i/d	Mtr.										
c	<b>Class - P3</b>											
	i 100 mm id	Mtr.										
	ii 150 mm id	Mtr.										
	iii 200 mm id	Mtr.										
	iv 250 mm id	Mtr.										
	v 300 mm id	Mtr.										
	vi 400 mm id	Mtr.										
	vii 450 mm i/d	Mtr.										
	viii 500 mm i/d	Mtr.										
	ix 600 mm id	Mtr.										
	x 700 mm i/d	Mtr.										
	xi 800 mm i/d	Mtr.										
d	<b>Class - NP1</b>											
	i 100 mm id	Mtr.										
	ii 150 mm id	Mtr.										
	iii 200 mm id	Mtr.										
	iv 250 mm id	Mtr.										
	v 300 mm id	Mtr.										
	vi 400 mm id	Mtr.										
	vii 450 mm i/d	Mtr.										
e	<b>Class - NP2</b>											
	i 100 mm id	Mtr.	264		16		280	8.4	28.84	3.17	320.41	
	ii 150 mm id	Mtr.	300		18		318	9.54	32.75	3.60	363.90	
	iii 200 mm id	Mtr.	336		20		356	10.68	36.67	4.03	407.38	
	iv 250 mm id	Mtr.	384		23		407	12.21	41.92	4.61	465.74	
	v 300 mm id	Mtr.	528		32		560	16.8	57.68	6.34	640.82	
	vi 400 mm id	Mtr.	696		42		738	22.14	76.01	8.36	844.52	

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All the materials should be of ISI standards and fully marked along with the approved makes as said in description against each item

Details of rates

Item No.	Material	Unit	Rates destin.	Rates Ex-Fac.	VAT /CST	If extra carriage	Total	3% Sundr.	10% C.Prof	1% L.Cess	G.Total	Remarks
vii	450 mm i/d	Mtr.	816		49		865	25.95	89.10	9.80	989.85	
viii	500 mm i/d	Mtr.	1008		61		1069	32.07	110.11	12.11	1223.29	
ix	600 mm id	Mtr.	1464		89		1553	46.59	159.96	17.60	1777.14	
x	700 mm i/d	Mtr.	1656		100		1756	52.68	180.87	19.90	2009.44	
xi	800 mm i/d	Mtr.	2064		125		2189	65.67	225.47	24.80	2504.94	
xii	900 mm i/d	Mtr.	2880		174		3054	91.62	314.56	34.60	3494.78	
xiii	1000 mm i/d	Mtr.	3240		196		3436	103.08	353.91	38.93	3931.92	
xiv	1100 mm id	Mtr.	3840		232		4072	122.16	419.42	46.14	4659.71	
xv	1200 mm i/d	Mtr.	4416		267		4683	140.49	482.35	53.06	5358.90	
xvi	1400 mm i/d	Mtr.	5760		348		6108	183.24	629.12	69.20	6989.57	
xvii	1600 mm i/d	Mtr.	7200		436		7636	229.08	786.51	86.52	8738.10	
xviii	1800 mm i/d	Mtr.	8640		523		9163	274.89	943.79	103.82	10485.50	
xix	2000 mm i/d	Mtr.	10200		617		10817	324.51	1114.15	122.56	12378.22	
xx	2200 mm i/d	Mtr.	12000		726		12726	381.78	1310.78	144.19	14562.74	
f	Class - NP3											
i	100 mm id	Mtr.	340		21		361	10.83	37.18	4.09	413.10	
ii	150 mm id	Mtr.	365		22		387	11.61	39.86	4.38	442.86	
iii	200 mm id	Mtr.	466		28		494	14.82	50.88	5.60	565.30	
iv	250 mm id	Mtr.	605		37		642	19.26	66.13	7.27	734.66	
v	300 mm id	Mtr.	844		51		895	26.85	92.19	10.14	1024.18	
vi	400 mm id	Mtr.	1544		93		1637	49.11	168.61	18.55	1873.27	
vii	450 mm i/d	Mtr.	1837		111		1948	58.44	200.64	22.07	2229.15	
viii	500 mm i/d	Mtr.	2130		129		2259	67.77	232.68	25.59	2585.04	
ix	600 mm id	Mtr.	2554		155		2709	81.27	279.03	30.69	3099.99	
x	700 mm i/d	Mtr.	3102		188		3290	98.7	338.87	37.28	3764.85	
xi	800 mm i/d	Mtr.	3824		231		4055	121.65	417.67	45.94	4640.26	
xii	900 mm i/d	Mtr.	4714		285		4999	149.97	514.90	56.64	5720.51	
xiii	1000 mm i/d	Mtr.	5420		328		5748	172.44	592.04	65.12	6577.61	

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Details of rates

Item No.	Material	Unit	Rates destin.	Rates Ex-Fac.	VAT /CST	If extra carriage	Total	3% Sundr.	10% C.Prof	1% L.Cess	G.Total	Remarks
	xiv 1100 mm id	Mtr.	6268		379		6647	199.41	684.64	75.31	7606.36	
	xv 1200 mm i/d	Mtr.	6830		413		7243	217.29	746.03	82.06	8288.38	
	xvi 1400 mm i/d	Mtr.	8865		536		9401	282.03	968.30	106.51	10757.85	
	xvii 1600 mm i/d	Mtr.	11246		680		11926	357.78	1228.38	135.12	13647.28	
	xviii 1800 mm i/d	Mtr.	13835		837		14672	440.16	1511.22	166.23	16789.61	
	xix 2000 mm i/d	Mtr.	17221		1042		18263	547.89	1881.09	206.92	20898.90	
	xx 2200 mm i/d	Mtr.	22385		1354		23739	712.17	2445.12	268.96	27165.25	
	xxi 2400 mm i/d	Mtr.	25455		1540		26995	809.85	2780.49	305.85	30891.19	
	xxii 2600 mm i/d	Mtr.	28525		1726		30251	907.53	3115.85	342.74	34617.13	
9	<b>Class - NP4</b>											
	i 100 mm id	Mtr.	380		23		403	12.09	41.51	4.57	461.16	
	ii 150 mm id	Mtr.	403		24		427	12.81	43.98	4.84	488.63	
	iii 200 mm id	Mtr.	536		32		568	17.04	58.50	6.44	649.98	
	iv 250 mm id	Mtr.	718		43		761	22.83	78.38	8.62	870.84	
	v 300 mm id	Mtr.	1071		65		1136	34.08	117.01	12.87	1299.96	
	vi 400 mm id	Mtr.	1593		96		1689	50.67	173.97	19.14	1932.77	
	vii 450 mm i/d	Mtr.	1873		113		1986	59.58	204.56	22.50	2272.64	
	viii 500 mm i/d	Mtr.	2191		133		2324	69.72	239.37	26.33	2659.42	
	ix 600 mm id	Mtr.	2956		179		3135	94.05	322.91	35.52	3587.47	
	x 700 mm i/d	Mtr.	3631		220		3851	115.53	396.65	43.63	4406.81	
	xi 800 mm i/d	Mtr.	4409		267		4676	140.28	481.63	52.98	5350.89	
	xii 900 mm i/d	Mtr.	5824		352		6176	185.28	636.13	69.97	7067.38	
	xiii 1000 mm i/d	Mtr.	6590		399		6989	209.67	719.87	79.19	7997.72	
	xiv 1100 mm id	Mtr.	7666		464		8130	243.9	837.39	92.11	9303.40	
	xv 1200 mm i/d	Mtr.	8352		505		8857	265.71	912.27	100.35	10135.33	
	xvi 1400 mm i/d	Mtr.	11980		725		12705	381.15	1308.62	143.95	14538.71	
	xvii 1600 mm i/d	Mtr.	14760		893		15653	469.59	1612.26	177.35	17912.20	
	xviii 1800 mm i/d	Mtr.	18935		1146		20081	602.43	2068.34	227.52	22979.29	

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Details of rates

Item No.	Material	Unit	Rates destin.	Rates Ex-Fac.	VAT /CST	If extra carriage	Total	3% Sundr.	10% C.Prof	1% L.Cess	G.Total	Remarks
	xix 2000 mm i/d	Mtr.	23300		1410		24710	741.3	2545.13	279.96	28276.39	
	xx 2200 mm i/d	Mtr.	29990		1814		31804	954.12	3275.81	360.34	36394.27	
	xxi 2400 mm i/d	Mtr.	31854		1927		33781	1013.43	3479.44	382.74	38656.61	
	xxii 2600 mm i/d	Mtr.	38544		2332		40876	1226.28	4210.23	463.13	46775.63	
9	29.64											
	RCC Spun Pipes s/s with HDPE											
	lining as per IS:458-2003 & R. ring											
a	Class - P1											
	i 100 mm id	Mtr.						0	0.00	0.00	0.00	
	ii 150 mm id	Mtr.						0	0.00	0.00	0.00	
	iii 200 mm id	Mtr.						0	0.00	0.00	0.00	
	iv 250 mm id	Mtr.						0	0.00	0.00	0.00	
	v 300 mm id	Mtr.						0	0.00	0.00	0.00	
	vi 400 mm id	Mtr.						0	0.00	0.00	0.00	
	vii 450 mm i/d	Mtr.						0	0.00	0.00	0.00	
	viii 500 mm i/d	Mtr.						0	0.00	0.00	0.00	
	ix 600 mm id	Mtr.						0	0.00	0.00	0.00	
	x 700 mm i/d	Mtr.						0	0.00	0.00	0.00	
	xi 800 mm i/d	Mtr.						0	0.00	0.00	0.00	
	xii 900 mm i/d	Mtr.						0	0.00	0.00	0.00	
	xiii 1000 mm i/d	Mtr.						0	0.00	0.00	0.00	
	xiv 1100 mm id	Mtr.						0	0.00	0.00	0.00	
	xv 1200 mm i/d	Mtr.						0	0.00	0.00	0.00	
b	Class - P2											
	i 100 mm id	Mtr.						0	0.00	0.00	0.00	
	ii 150 mm id	Mtr.						0	0.00	0.00	0.00	
	iii 200 mm id	Mtr.						0	0.00	0.00	0.00	
	iv 250 mm id	Mtr.						0	0.00	0.00	0.00	
	v 300 mm id	Mtr.						0	0.00	0.00	0.00	

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Details of rates

Item No.	Material	Unit	Rates destin.	Rates Ex-Fac.	VAT /CST	If extra carriage	Total	3% Sundr.	10% C.Prof	1% L.Cess	G.Total	Remarks
	vi	400 mm id	Mtr.					0	0.00	0.00	0.00	
	vii	450 mm i/d	Mtr.					0	0.00	0.00	0.00	
	viii	500 mm i/d	Mtr.					0	0.00	0.00	0.00	
	ix	600 mm id	Mtr.					0	0.00	0.00	0.00	
	x	700 mm i/d	Mtr.					0	0.00	0.00	0.00	
	xi	800 mm i/d	Mtr.					0	0.00	0.00	0.00	
	xii	900 mm i/d	Mtr.					0	0.00	0.00	0.00	
	xiii	1000 mm i/d	Mtr.					0	0.00	0.00	0.00	
	c	<b>Class - P3</b>										
	i	100 mm id	Mtr.					0	0.00	0.00	0.00	
	ii	150 mm id	Mtr.					0	0.00	0.00	0.00	
	iii	200 mm id	Mtr.					0	0.00	0.00	0.00	
	iv	250 mm id	Mtr.					0	0.00	0.00	0.00	
	v	300 mm id	Mtr.					0	0.00	0.00	0.00	
	vi	400 mm id	Mtr.					0	0.00	0.00	0.00	
	vii	450 mm i/d	Mtr.					0	0.00	0.00	0.00	
	viii	500 mm i/d	Mtr.					0	0.00	0.00	0.00	
	ix	600 mm id	Mtr.					0	0.00	0.00	0.00	
	x	700 mm i/d	Mtr.					0	0.00	0.00	0.00	
	xi	800 mm i/d	Mtr.					0	0.00	0.00	0.00	
	d	<b>Class - NP1</b>										
	i	100 mm id	Mtr.					0	0.00	0.00	0.00	
	ii	150 mm id	Mtr.					0	0.00	0.00	0.00	
	iii	200 mm id	Mtr.					0	0.00	0.00	0.00	
	iv	250 mm id	Mtr.					0	0.00	0.00	0.00	
	v	300 mm id	Mtr.					0	0.00	0.00	0.00	
	vi	400 mm id	Mtr.					0	0.00	0.00	0.00	
	vii	450 mm i/d	Mtr.					0	0.00	0.00	0.00	

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Details of rates

Item No.	Material		Unit	Rates destin.	Rates Ex-Fac.	VAT /CST	If extra carriage	Total	3% Sundr.	10% C.Prof	1% L.Cess	G.Total	Remarks
e		<b>Class - NP2</b>											
	i	100 mm id	Mtr.						0	0.00	0.00	0.00	
	ii	150 mm id	Mtr.						0	0.00	0.00	0.00	
	iii	200 mm id	Mtr.						0	0.00	0.00	0.00	
	iv	250 mm id	Mtr.						0	0.00	0.00	0.00	
	v	300 mm id	Mtr.						0	0.00	0.00	0.00	
	vi	400 mm id	Mtr.						0	0.00	0.00	0.00	
	vii	450 mm i/d	Mtr.						0	0.00	0.00	0.00	
	viii	500 mm i/d	Mtr.						0	0.00	0.00	0.00	
	ix	600 mm id	Mtr.						0	0.00	0.00	0.00	
	x	700 mm i/d	Mtr.						0	0.00	0.00	0.00	
	xi	800 mm i/d	Mtr.						0	0.00	0.00	0.00	
	xii	900 mm i/d	Mtr.						0	0.00	0.00	0.00	
	xiii	1000 mm i/d	Mtr.						0	0.00	0.00	0.00	
	xiv	1100 mm id	Mtr.						0	0.00	0.00	0.00	
	xv	1200 mm i/d	Mtr.						0	0.00	0.00	0.00	
	xvi	1400 mm i/d	Mtr.						0	0.00	0.00	0.00	
	xvii	1600 mm i/d	Mtr.						0	0.00	0.00	0.00	
	xviii	1800 mm i/d	Mtr.						0	0.00	0.00	0.00	
	f	xix	2000 mm i/d	Mtr.						0	0.00	0.00	0.00
xx		2200 mm i/d	Mtr.						0	0.00	0.00	0.00	
		<b>Class - NP3</b>											
i		100 mm id	Mtr.						0	0.00	0.00	0.00	
ii		150 mm id	Mtr.						0	0.00	0.00	0.00	
iii		200 mm id	Mtr.						0	0.00	0.00	0.00	
iv		250 mm id	Mtr.						0	0.00	0.00	0.00	
v		300 mm id	Mtr.						0	0.00	0.00	0.00	
vi	400 mm id	Mtr.						0	0.00	0.00	0.00		
				2100		127		2227	66.81	229.38	25.23	2548.42	

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All the materials should be of ISI standards and fully marked along with the approved makes as said in description against each item

Details of rates

Item No.	Material		Unit	Rates destin.	Rates Ex-Fac.	VAT /CST	If extra carriage	Total	3% Sundr.	10% C.Prof	1% L.Cess	G.Total	Remarks
	vii	450 mm i/d	Mtr.	2530		153		2683	80.49	276.35	30.40	3070.24	
	viii	500 mm i/d	Mtr.	2960		179		3139	94.17	323.32	35.56	3592.05	
	ix	600 mm id	Mtr.	3550		215		3765	112.95	387.80	42.66	4308.40	
	x	700 mm i/d	Mtr.	4770		289		5059	151.77	521.08	57.32	5789.17	
	xi	800 mm i/d	Mtr.	5702		345		6047	181.41	622.84	68.51	6919.76	
	xii	900 mm i/d	Mtr.	6786		411		7197	215.91	741.29	81.54	8235.74	
	xiii	1000 mm i/d	Mtr.	7704		466		8170	245.1	841.51	92.57	9349.18	
	xiv	1100 mm id	Mtr.	9236		559		9795	293.85	1008.89	110.98	11208.71	
	xv	1200 mm i/d	Mtr.	10071		609		10680	320.4	1100.04	121.00	12221.44	
	xvi	1400 mm i/d	Mtr.	13785		834		14619	438.57	1505.76	165.63	16728.96	
	xvii	1600 mm i/d	Mtr.	16473		997		17470	524.1	1799.41	197.94	19991.45	
	xviii	1800 mm i/d	Mtr.	19329		1169		20498	614.94	2111.29	232.24	23456.48	
	xix	2000 mm i/d	Mtr.	24141		1461		25602	768.06	2637.01	290.07	29297.14	
	xx	2200 mm i/d	Mtr.	27797		1682		29479	884.37	3036.34	334.00	33733.70	
	xxi	2400 mm i/d	Mtr.	30961		1873		32834	985.02	3381.90	372.01	37572.93	
	xxii	2600 mm i/d	Mtr.	37538		2271		39809	1194.27	4100.33	451.04	45554.63	
g		<b>Class - NP4</b>											
	i	100 mm id	Mtr.						0	0.00	0.00	0.00	
	ii	150 mm id	Mtr.						0	0.00	0.00	0.00	
	iii	200 mm id	Mtr.						0	0.00	0.00	0.00	
	iv	250 mm id	Mtr.						0	0.00	0.00	0.00	
	v	300 mm id	Mtr.						0	0.00	0.00	0.00	
	vi	400 mm id	Mtr.	2210		134		2344	70.32	241.43	26.56	2682.31	
	vii	450 mm i/d	Mtr.	2680		162		2842	85.26	292.73	32.20	3252.19	
	viii	500 mm i/d	Mtr.	3150		191		3341	100.23	344.12	37.85	3823.21	
	ix	600 mm id	Mtr.	3906		236		4142	124.26	426.63	46.93	4739.81	
	x	700 mm i/d	Mtr.	5208		315		5523	165.69	568.87	62.58	6320.13	
	xi	800 mm i/d	Mtr.	6562		397		6959	208.77	716.78	78.85	7963.39	

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All the materials should be of ISI standards and fully marked along with the approved makes as said in description against each item

Details of rates

Item No.	Material	Unit	Rates destin.	Rates Ex-Fac.	VAT /CST	If extra carriage	Total	3% Sundr.	10% C.Prof	1% L.Cess	G.Total	Remarks
xii	900 mm i/d	Mtr.	7612		461		8073	242.19	831.52	91.47	9238.18	
xiii	1000 mm i/d	Mtr.	8730		528		9258	277.74	953.57	104.89	10594.21	
xiv	1100 mm id	Mtr.	10564		639		11203	336.09	1153.91	126.93	12819.93	
xv	1200 mm i/d	Mtr.	11514		697		12211	366.33	1257.73	138.35	13973.41	
xvi	1400 mm i/d	Mtr.	15836		958		16794	503.82	1729.78	190.28	19217.88	
xvii	1600 mm i/d	Mtr.	18501		1119		19620	588.6	2020.86	222.29	22451.75	
xviii	1800 mm i/d	Mtr.	22314		1350		23664	709.92	2437.39	268.11	27079.43	
xix	2000 mm i/d	Mtr.	26507		1604		28111	843.33	2895.43	318.50	32168.26	
xx	2200 mm i/d	Mtr.	31121		1883		33004	990.12	3399.41	373.94	37767.47	
xxi	2400 mm i/d	Mtr.	36195		2190		38385	1151.55	3953.66	434.90	43925.11	
xxii	2600 mm i/d	Mtr.	41815		2530		44345	1330.35	4567.54	502.43	50745.31	
10	RCC ventilating column											
a	11 m height	Each		16000	800	480	17280	518.4	1779.84	195.78	19774.02	
b	9 m height	Each		12500	625	375	13500	405	1390.50	152.96	15448.46	
11	Cement bag 50 Kg	Each					285	8.55	29.36	3.23	326.13	
12	Sand	cum					396.42	11.89	40.83	4.49	453.64	
13	Spun yarn	kg					70	2.1	7.21	0.79	80.10	

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### Cement Jointing of RCC s/s Pipes of all classes on tytone rubber joint

RCC, NP-1, NP-2 & P-1

Pipe /d	Barr Thick	Joint Thick	C.Grav.Dia	Perifery	Joint Sec	Mort. Vol	bag/cum	Cem Bag	Cem Bags % Joints	Sand Cum % Joints
100	25	32.5	171.775	539.889	528.125	0.000285	13.63	0.0039	0.39	0.027
150	25	32.5	221.775	697.039	528.125	0.000368	13.63	0.0050	0.50	0.035
200	25	32.5	271.775	854.189	528.125	0.000451	13.63	0.0061	0.61	0.043
250	25	32.5	321.775	1011.339	528.125	0.000534	13.63	0.0073	0.73	0.051
300	30	35	383.45	1205.183	612.5	0.000738	13.63	0.0101	1.01	0.070
350	32	37	438.79	1379.117	684.5	0.000944	13.63	0.0129	1.29	0.090
400	32	37	488.79	1536.267	684.5	0.001052	13.63	0.0143	1.43	0.100
450	35	40	546.8	1718.592	800	0.001375	13.63	0.0187	1.87	0.131
500	35	40	596.8	1875.742	800	0.001501	13.63	0.0205	2.05	0.143
600	40	44	709.48	2229.896	968	0.002159	13.63	0.0294	2.94	0.206
700	40	44	809.48	2544.196	968	0.002463	13.63	0.0336	3.36	0.235
800	45	50	923.5	2902.561	1250	0.003628	13.63	0.0495	4.95	0.346
900	50	56	1037.52	3260.925	1568	0.005113	13.63	0.0697	6.97	0.488
1000	55	60	1150.2	3615.079	1800	0.006507	13.63	0.0887	8.87	0.621
1100	60	65	1263.55	3971.338	2112.5	0.008389	13.63	0.1143	11.43	0.800
1200	65	71	1377.57	4329.703	2520.5	0.010913	13.63	0.1487	14.87	1.041
1400	75	81	1604.27	5042.221	3280.5	0.016541	13.63	0.2255	22.55	1.578
1600	80	87	1818.29	5714.885	3784.5	0.021628	13.63	0.2948	29.48	2.064
1800	90	99	2046.33	6431.615	4900.5	0.031518	13.63	0.4296	42.96	3.007
2000	100	109	2273.03	7144.133	5940.5	0.042440	13.63	0.5785	57.85	4.049
2200	110	119	2499.73	7856.651	7080.5	0.055629	13.63	0.7582	75.82	5.308
2400	120	129	2726.43	8569.169	8320.5	0.071300	13.63	0.9718	97.18	6.803
2600	130	139	2953.13	9281.688	9660.5	0.089666	13.63	1.2221	122.21	8.555

J

**Cement Jointing of RCC s/s Pipes on tytone rubber joint**

RCC, NP-3 & NP-4												
Pipe I/d	Barr Thick	Joint Thick	C.Grav.Dia	Perifery	Joint Sec	Mort. Vol	bag/cum	Cem Bag	Cem Bags% joint	Sand Cum% joint		
100	25	32.5	171.775	539.889	528.125	0.000285	13.63	0.004	0.39	0.027		
150	25	32.5	221.775	697.039	528.125	0.000368	13.63	0.005	0.50	0.035		
200	30	38	285.46	897.201	722	0.000648	13.63	0.009	0.88	0.062		
250	30	38	335.46	1054.351	722	0.000761	13.63	0.010	1.04	0.073		
300	50	48	432.16	1358.279	1152	0.001565	13.63	0.021	2.13	0.149		
350	55	48	492.16	1546.859	1152	0.001782	13.63	0.024	2.43	0.170		
400	60	48	552.16	1735.439	1152	0.001999	13.63	0.027	2.72	0.191		
450	65	50	613.5	1928.231	1250	0.002410	13.63	0.033	3.29	0.230		
500	70	50	673.5	2116.811	1250	0.002646	13.63	0.036	3.61	0.252		
600	75	50	783.5	2462.541	1250	0.003078	13.63	0.042	4.20	0.294		
700	85	55	906.85	2850.230	1512.5	0.004311	13.63	0.059	5.88	0.411		
800	95	65	1033.55	3248.448	2112.5	0.006862	13.63	0.094	9.35	0.655		
900	100	70	1146.9	3604.707	2450	0.008832	13.63	0.120	12.04	0.843		
1000	115	80	1283.6	4034.355	3200	0.012910	13.63	0.176	17.60	1.232		
1100	115	80	1383.6	4348.655	3200	0.013916	13.63	0.190	18.97	1.328		
1200	120	90	1500.3	4715.443	4050	0.019098	13.63	0.260	26.03	1.822		
1400	135	90	1730.3	5438.333	4050	0.022025	13.63	0.300	30.02	2.101		
1600	140	95	1943.65	6108.892	4512.5	0.027566	13.63	0.376	37.57	2.630		
1800	150	95	2163.65	6800.352	4512.5	0.030687	13.63	0.418	41.83	2.928		
2000	170	100	2407	7565.201	5000	0.037826	13.63	0.516	51.56	3.609		
2200	185	105	2640.35	8298.620	5512.5	0.045746	13.63	0.624	62.35	4.365		
2400	200	110	2873.7	9032.039	6050	0.054644	13.63	0.745	74.48	5.214		
2600	215	115	3107.05	9765.458	6612.5	0.064574	13.63	0.880	88.01	6.161		

z

### Cement Jointing of RCC s/s Pipes on tytone rubber joint

#### RCC, P-2

Pipe i/d	Barr Thick	Joint Thick	C.Grav.Dia	Perifery	Joint Sec	Mort. Vol	bag/cum	Cem Bag	Cem Bag % joint	Sand Cum % joint
100	25	32.5	171.775	539.889	528.125	0.000285	13.63	0.004	0.39	0.027
150	25	32.5	221.775	697.039	528.125	0.000368	13.63	0.005	0.50	0.035
200	30	38	285.46	897.201	722	0.000648	13.63	0.009	0.88	0.062
250	30	38	335.46	1054.351	722	0.000761	13.63	0.010	1.04	0.073
300	40	51	414.17	1301.736	1300.5	0.001693	13.63	0.023	2.31	0.162
350	45	57	478.19	1502.951	1624.5	0.002442	13.63	0.033	3.33	0.233
400	50	61	540.87	1699.954	1860.5	0.003163	13.63	0.043	4.31	0.302
450	50	61	590.87	1857.104	1860.5	0.003455	13.63	0.047	4.71	0.330
500	55	67	654.89	2058.319	2244.5	0.004620	13.63	0.063	6.30	0.441
600	65	79	782.93	2460.749	3120.5	0.007679	13.63	0.105	10.47	0.733
700	70	84	896.28	2817.008	3528	0.009938	13.63	0.135	13.55	0.948
800	80	96	1024.32	3219.438	4608	0.014835	13.63	0.202	20.22	1.415
900	100	108	1172.36	3684.727	5832	0.021489	13.63	0.293	29.29	2.050
1000	100	120	1280.4	4024.297	7200	0.028975	13.63	0.395	39.49	2.764

#### RCC, P-3

Pipe i/d	Barr Thick	Joint Thick	C.Grav.Dia	Perifery	Joint Sec	Mort. Vol	bag/cum	Cem Bag	Cem Bags	Sand Cum
100	25	32.5	171.775	539.889	528.125	0.000285	13.63	0.004	0.39	0.027
150	25	32.5	221.775	697.039	528.125	0.000368	13.63	0.005	0.50	0.035
200	35	45	300.15	943.371	1012.5	0.000955	13.63	0.013	1.30	0.091
250	35	45	350.15	1100.521	1012.5	0.001114	13.63	0.015	1.52	0.106
300	45	60	430.2	1352.119	1800	0.002434	13.63	0.033	3.32	0.232
350	55	75	510.25	1603.716	2812.5	0.004510	13.63	0.061	6.15	0.430
400	60	80	573.6	1802.825	3200	0.005769	13.63	0.079	7.9	0.550
450	70	95	653.65	2054.422	4512.5	0.009271	13.63	0.126	12.64	0.885
500	75	100	717	2253.531	5000	0.011268	13.63	0.154	15.36	1.075
600	90	120	860.4	2704.237	7200	0.019471	13.63	0.265	26.54	1.858
700	105	140	1003.8	3154.943	9800	0.030918	13.63	0.421	42.14	2.950
800	120	160	1147.2	3605.650	12800	0.046152	13.63	0.629	62.91	4.403

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**JOINTING OF SW PIPES Type SP-1**

**Total consumption of cement, sand and spun yarn in 100 joints using 1:1 cm complete in all respects**

Pipe i/d										Spun Kg	Cem Bag	Sand Cum
100										0.97	2.00	0.060
150										1.71	3.00	0.090
200										2.18	4.00	0.120
250										3.25	5.00	0.150
300										3.92	6.50	0.195
350										4.6	9.00	0.270
400										6.9	11.00	0.330
450										7.66	13.00	0.390
500										10.56	16.00	0.480
600										17.05	20.00	0.600

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J

Labour chart laying, cutting & jointing RCC s/s pipes with tytone ruber ring and cement jointing, testing complete NP-4.														
Analysis (Manual along with Mechanical where required)														
mm i/d	Pipe Length metre	Fitter Ist				Un. Skill.Maj				Crane			100 No Cem. Sand Jointing	
		Nos	day	Total	Nos	day	Total	Tones	Total Hour	Fitter ind	Un.Skill. Maj			
NP-4														
100	2	1	0.48	0.48	1	1	1	0	0	1.1	1.1	0	0	1.1
150	2	1	0.6	0.6	1	1.2	1.2	0	0	1.34	1.34	0	0	1.34
200	2	1	0.66	0.66	1	1.4	1.4	0	0	1.47	1.47	0	0	1.47
250	2	1	0.81	0.81	1	2.25	2.25	0	0	1.8	1.8	0	0	1.8
300	2.5	1	0.9	0.9	1	2.75	2.75	0	0	2.34	2.34	0	0	2.34
<b>Unit = 40 metre (Manu. / Mech.)</b>														
400	2.5	1	0.5	0.5	2	0.5	1	3T	4	4.35	4.35	3T	4	4.35
450	2.5	1	0.5	0.5	2	0.5	1	3T	4	4.7	4.7	3T	4	4.7
500	2.5	1	0.5	0.5	2	0.5	1	3T	4	5.36	5.36	3T	4	5.36
600	2.5	1	0.52	0.52	2	0.52	1.04	3T	4.25	6	6	3T	4.25	6
700	2.5	1	0.54	0.54	3	0.54	1.62	3T	4.5	6.7	6.7	3T	4.5	6.7
800	2.5	1	0.6	0.6	3	0.6	1.8	3T	4.75	8.7	8.7	3T	4.75	8.7
900	2.5	1	0.62	0.62	3	0.62	1.86	3T	5	10.38	10.38	3T	5	10.38
<b>Unit = 50 metre (Manu. / Mech.)</b>														
1000	2.5	1	0.5	0.5	4	0.5	2	12T	4.5	11.4	11.4	12T	4.5	11.4
1100	2.5	1	0.62	0.62	4	0.62	2.48	12T	5	12.4	12.4	12T	5	12.4
1200	2.5	1	0.7	0.7	4	0.7	2.8	12T	5.5	13.4	13.4	12T	5.5	13.4
1400	2.5	1	0.75	0.75	4	0.75	3	12T	6	15.4	15.4	12T	6	15.4
<b>Unit = 90 metre (Manu. / Mech.)</b>														
1600	2.5	2	1.5	3	6	1.5	9	25T	12	16	16	25T	12	16
1800	2.5	2	1.75	3.5	6	1.75	10.5	25T	14	18	18	25T	14	18
2000	2.5	2	2	4	8	2	16	25T	16	20.68	20.68	25T	16	20.68
2200	2.5	2	2.25	4.5	10	2.25	22.5	25T	18	25.46	25.46	25T	18	25.46
2400	2.5	2	2.5	5	11	2.5	27.5	35T	20	30.82	30.82	35T	20	30.82
2600	2.5	2	3	6	12	3	36	35T	24	37.5	37.5	35T	24	37.5

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**CHAPTER NO. 29  
SEWERAGE AND DRAINAGE**

96

**ABSTRACT**

Sr. No.	Code No.	Description	Unit	Labour Rate	Through Rate
1	2	3	4	5	6
29.1 A		Excavation manually in trenches with straight or open cutting in built up street/ lane having wall to wall width of street/ lane upto 3.0 metre, for intramural sullage drains, extramural intercepting drains and outfall drains, storm water channels and other work contingent or incident thereto, to full dimensions and depth as shown on the drawings or as shall be required by Engineer-in-charge including dressing to correct sections and dimensions according to templates and levels, dewatering of rain water, diversion of traffic. Providing and fixing and maintenance of caution boards, fencing, night signals, for leads upto 15m and for all lifts and subsequent refilling, watering and dressing upto ground level, including removal of surplus spoil from the site upto 15 metre distance complete in all respects.			
		Depths upto 2. metre B.G.L.			
(a)		For all classes of soil except rocky	cum	--	100.75
(b)		For ordinary gravel soil having gravel upto 40%			
		Unit :-	cum	--	136.62
(c)		For semi conglomerate soil of having gravel/boulder above 40% upto 50%			
		Unit :-	cum	--	140.55
29.1 B		Excavation in trenches with straight or open cutting in streets, lanes or in open areas for intramural sullage drains, intramural intercepting drains and outfall drains storm water channels and other work contingent or incident thereto, by mechanical means (JCB or Hydraulic excavator) including manually dressing of bed, trimming of sides and sides slopes to full dimensions and depth as shown on the drawings or as shall be required by Engineer-in-charge including dressing to correct sections and dimensions according to templates and levels, dewatering of rain water, diversion of traffic, providing and fixing and maintenance of caution boards, fencing, night signals, watching etc. subsequent refilling, watering and dressing upto ground level for lead upto 15 m and for all lifts including disposing surplus soils up to 15 metre complete in all respects.			
(a)		For all kinds of soil except rocky.			
		Depth upto 2.0 m B.G.L.			
		Unit :-	cum	--	54.220
(b)		For Ordinary soil having gravel upto 40%			
		Unit :-	cum	--	64.30
(c)		For semi conglomerate soil having gravels/ boulders abaaue 40 % upto 50 %.			
		Unit :-	cum	--	68.88
29.2		Earth work in excavation for storage and sedimentation tanks, high level tanks, filter beds, clear water reservoirs, pump houses, sumps, screening chambers and other similar works having straight or open cuttings in foundations trenches etc. with 3D Excavator/ JCB including manually dressing of bed, trimming of sides and side slopes to full dimension and depth as shown on the drawings or as shall be required by Engineer-in-charge, including dressing of bottom and sides of trenches, stacking the excavated soil clear from the excavation and subsequent filling around plinth/structures including watering dressing and disposal of surplus soils as directed upto 15 metre complete in all respects			
A		Depth upto 1.50 m B.G.L.			
(a)		For all kinds of soil except of rocky.			
		Unit :-	cum	--	47.16
(b)		For ordinary soil having gravel upto 40%			
		Unit :-	cum	--	58.82
(c)		For semi conglomerate soil having gravel/boulder above 40% upto 50%			
		Unit :-	cum	--	63.81
B		Where depths of excavation exceeds 2.0 metre below ground levels or total quantity of excavation is more than 100 cum	Total excavation will be paid as per chapter 6.21 and quantity of back filling quantity as per item 4.1(a)		
29.3		Extra for rehandling earth beyond 15 metre on item No. 29.1, 29.2A, 29.4 and 29.5	Extra for rehandling of earth if any beyond specified lead, will be payable under item 5.1(i) for 2nd, 3rd and susequent chain upto 0.5 km with the prior approved by the Engineer in charge depending upon site conditions. In case rehandling exceeds 0.5 km distance payment will be made as per item 5.2(i) after deducting the cost of first chain of 30 metre.		

f

Sr. No.	Code No.	Description	Unit	Labour Rate	Through Rate
1	2	3	4	5	6
29.4		Excavation manually in trenches with straight or open cutting in a built up street/ lanes having wall to wall width upto 3 metre for sewers and manholes to full depths as shown in drawings, including shoring, dressing to correct sections and dewatering of rain water, provision for diversion for traffic, protection of existing services i.e. telephone cables ,electric lines, water supply lines and gas lines etc. night signals, profiles, pegs, sight rails, boning rods, fixing and maintenance of caution boards, fencing, refilling trenches, watering, dressing and restoration of surface to original level and removal of surplus spoils from the site of works upto 15 metre, for all works other than connections to complete in all respects.			
<b>A</b>		<b>For depths not exceeding 2.0 metre B.G.L.</b>			
(a)		For all classes of soil except rocky			
		Unit :-	cum	--	111.67
(b)		For ordinary gravel soil having gravel upto 40%			
		Unit :-	cum	--	147.09
(c)		For semi conglomerate soil of having gravel/boulder above 40 % upto 50%			
		Unit :-	cum	--	151.03
<b>B</b>		<b>For overall depth, exceeding 2 m , but not exceeding 3 m. B.G.L.</b>			
(a)		For all classes of soil except rocky			
		Unit :-	cum	--	123.48
(b)		For ordinary soil having gravel upto 40%			
		Unit :-	cum	--	170.71
(c)		For semi conglomerate soil having gravel/boulder above 40 % upto 50%			
		Unit :-	cum	--	229.75
<b>C</b>		<b>For depth exceeding 3.0 m but not exceeding 4.5 m B.G.L.</b>			
(a)		For all classes of soil except rocky			
		Unit :-	cum	--	138.24
(b)		For ordinary soil having gravel upto 40%			
		Unit :-	cum	--	191.91
(c)		For semi conglomerate soil having gravel/boulder above 40 % upto 50%			
		Unit :-	cum	--	267.06
<b>D</b>		<b>For depth exceeding 4.5 m but not exceeding 6.0 m B.G.L.</b>			
(a)		For all classes of soil except rocky			
		Unit :-	cum	--	181.18
(b)		For ordinary soil having gravel upto 40%			
		Unit :-	cum	--	245.59
(c)		For semi conglomerate soil having gravel/boulder above 40% upto 50%			
		Unit :-	cum	--	352.94
<b>E</b>		<b>For depth exceeding 6.0 m but not exceeding 7.5 m B.G.L.</b>			
(a)		For all classes of soil except rocky			
		Unit :-	cum	--	202.65
(b)		For ordinary soil having gravel upto 40%			
		Unit :-	cum	--	267.06
(c)		For semi conglomerate soil having gravel/boulder above 40 % upto 50%			
		Unit :-	cum	--	385.14
<b>F</b>		<b>For depth exceeding 7.5 m but not exceeding 9 m B.G.L.</b>			
(a)		For all classes of soil except rocky			
		Unit :-	cum	--	234.85
(b)		For ordinary soil having gravel upto 40%			
		Unit :-	cum	--	299.26
(c)		For semi conglomerate soil having gravel/boulder above 40 % upto 50%			
		Unit :-	cum	--	420.93
29.5		Excavation in trenches with straight or open cutting in streets, lanes or in open area with 3D/JCB or excavator including manually dressing bed, trimming sides and side slopes for sewers and manholes to full depths as shown in drawings,including, dressing to correct sections and dewatering, provision for diversion for traffic, protection of existing services i.e. telephone cables, electric lines, water supply lines and gas lines etc. night signals, profiles, pegs, sight rails, boning rods, watching, etc., fixing and maintenance of caution boards, fencing, refilling trenches, watering, ramming and restoration of surface to original level and removal of surplus spoil from the site of works, upto one chain (15m) complete in all respects.			
<b>A</b>		<b>For depth not exceeding 3 m. B.G.L.</b>			
(a)		For all classes of soil except rocky			
		Unit :-	cum	--	65.55

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Sr. No.	Code No.	Description	Unit	Labour Rate	Through Rate
1	2	3	4	5	6
(b)		For ordinary soil having gravel upto 40%			
		Unit :-	cum	--	77.69
(c)		For semi conglomerate soil having gravel/ boulder above 40 % upto 50%			
		Unit :-	cum	--	107.37
<b>B</b>		<b>For depth exceeding 3.0 m but not exceeding 4.5 m B.G.L.</b>			
(a)		For all classes of soil except rocky			
		Unit :-	cum	--	66.43
(b)		For ordinary soil having gravel upto 40%			
		Unit :-	cum	--	72.74
(c)		For semi conglomerate soil having gravel/boulder above 40 % upto 50%			
		Unit :-	cum	--	117.70
<b>C</b>		<b>For depth exceeding 4.5 m but not exceeding 6.0 m B.G.L.</b>			
(a)		For all classes of soil except rocky			
		Unit :-	cum	--	82.73
(b)		For ordinary soil having gravel upto 40%			
		Unit :-	cum	--	109.38
(c)		For semi conglomerate soil having gravel/boulder above 40 % upto 50%			
		Unit :-	cum	--	152.68
<b>D</b>		<b>For depth exceeding 6.0 m but not exceeding 7.5 m B.G.L.</b>			
(a)		For all classes of soil except rocky			
		Unit :-	cum	--	91.89
(b)		For ordinary soil having gravel upto 40%			
		Unit :-	cum	--	117.70
(c)		For semi conglomerate soil having gravel/boulder above 40 % upto 50%			
		Unit :-	cum	--	166.83
<b>E</b>		<b>For depth exceeding 7.5 m but not exceeding 9.0 m B.G.L.</b>			
(a)		For all classes of soil except rocky			
		Unit :-	cum	--	104.38
(b)		For ordinary soil having gravel upto 40%			
		Unit :-	cum	--	131.03
(c)		For semi conglomerate soil having gravel/boulder above 40 % upto 50%			
		Unit :-	cum	--	184.32
<b>29.6</b>		<b>Extra over and above the rate of item No. 29.2, 29.4, 29.5 ( a to e) for lowering sub-soil water level from its natural level, as decided by the Engineer-in-charge, by every 0.30 m depth (upto requisite depth), including cost of bore holes machinery and carrying out the work in safe manner complete in all respects.</b>			
(a)		For pipe sewers having i/d below 760 mm .			
		Unit :-	m	--	185.10
(b)		For pipe sewers having i/d above 760 mm			
		Unit :-	m	--	236.91
(c)		For cast in situ sewers of all sizes			
		Unit :-	m	--	406.14
<b>29.7A</b>		<b>Wet earth work</b>			
		i) Extra for wet earth work from bottom of excavation upto level of sub soil water per 30 cm depth or part there off.	cum	--	4.86
<b>29.7 B</b>		<b>Extra for filling earth in 15 cm layers and compaction.</b>			
(i)		For item No 29.1 and 29.2			
		unit	cum	--	5.37
(ii)		For item No 29.4 and 29.5			
		unit	cum	--	7.16
<b>29.7 C</b>		<b>Extra for disposal of surplus spoils/ earth earth if any beyond 15 metre as covered in item No. 29.1 to 29.5</b>			
		unit	cum		Extra for disposal of surplus spoils/ earth beyond specified lead, will be payable under item 5.1(i) for 2nd, 3rd and susequent chain upto 0.5 km, where total lead exceeds 0.5 km the payment will be made as per item 5.2(i) after deducting the cost of first chain( in this case loading and unloading will not be payable)

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Sr. No.	Code No.	Description	Unit	Labour Rate	Through Rate
1	2	3	4	5	6
29.8		Providing and fixing timbering on face of trenches if required for sewers and manholes for item 29.4 and 29.5 irrespective of the depth, measuring each timbered surfaces of trench on which timbering is done.			
<b>A</b>		<b>TYPE-I Simple form of timbering.</b>			
(i)		For trench having width upto 1.0 metre.			
		Unit	sqm	6.50	19.19
(ii)		For trench having width above 1.0 m and upto 2.0 metre.			
		Unit	sqm	6.50	26.86
(iii)		For trench having width above 2.0 m and upto 3.0 metre.			
		Unit :-	sqm	6.50	34.53
(iv)		For trench having width above 3.0 m and upto 4.0 metre.			
		Unit :-	sqm	6.50	42.23
<b>B</b>		<b>Type-II, Poling board frame type timbering.</b>			
(i)		For trench having width upto 1.0 metre			
		Unit :-	sqm	11.14	27.28
(ii)		For trench having width above 1.0 m and upto 2.0 metre			
		Unit :-	sqm	11.14	33.87
(iii)		For trench having width above 2.0 m upto 3.0 metre			
		Unit :-	sqm	11.14	40.46
(iv)		For trench having width above 3.0 m upto 4.0 metre			
		Unit :-	sqm	11.14	47.05
<b>C</b>		<b>Close board frame type (confined) timbering.</b>			
(i)		For trench having width upto 1.0 metre			
		Unit :-	sqm	14.86	34.93
(ii)		For trench having width above 1.0 m upto 2.0 metre			
		Unit :-	sqm	14.86	41.55
(iii)		For trench having width above 2.0 m upto 3.0 metre			
		Unit :-	sqm	14.86	48.14
(iv)		For trench having width above 3.0 m upto 4.0 metre			
		Unit :-	sqm	14.86	54.73
29.9		Providing & fixing pile driven type close board timbering and withdrawing the same as per specifications & desired by Engineer-in-charge required in running sandy strata complete in all respect. measuring surface area of trench on which timbering is done.			
(a)		For trenches having width upto 2.0 m			
		Unit:	sqm	28.26	51.23
(b)		For trenches having width above 2.00 m upto 3.00 m			
		Unit:	sqm	28.26	51.52
(c)		For trenches having width above 3.00 m upto 4.00 m			
		Unit:	sqm	28.26	51.82
29.10			<b>DELETED</b>		
29.11		Dismantling existing drains of different size cunnets, section only excluding recovery of all useable materials, stacking the same within 100 metre from site of dismantled works and disposal of all rubbish off site of works.			
(a)		House connection drains.			
		Unit :-	m	--	11.45
(b)		Type I drain.			
		Unit :-	m	--	17.63
(c)		Type II Drain			
		Unit :-	m	--	41.12
(d)		Type III Drain			
		Unit :-	m	--	52.31
(e)		Type IV Drain			
		Unit :-	m	--	61.26
29.12		Tega 7.5 cm thick formed of first class bricks on end laid in cement sand mortar 1:5 and projecting to a maximum height of not more than 12.5 cm above top of drain along house sides of drains where required for protection of house walls.			
		Unit :-	m	9.73	66.35

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Sr. No.	Code No.	Description	Unit	Labour Rate	Through Rate
1	2	3	4	5	6
29.13		Tega 11.50 cm thick formed of first class bricks on end laid in cem. sand Mortar 1:5			
		Unit :-	m	14.78	100.79
29.14		First class flat brick 7.50 cm thick laid in reimbursements in and on cement mortar 1:5 on sides of drains and in other work where required over lime concrete or other foundations. All joints to be left completely filled and struck flush.			
		Unit :-	sqm	42.09	287.07
29.15		First class flat brick 7.5 cms thick laid in re-imburement in and on 1:6 cement sand mortar.			
		Unit :-	sqm	42.09	278.66
29.16		First class flat brick 7.50 cm thick laid in reimbursement in and on 1:5 cement sand mortar.			
		Unit :-	sqm	42.09	287.07
29.17		First class for brick 7.50 cm thick laid in reimbursements in and on 1:4 cement sand mortar.			
		Unit :-	sqm	42.09	297.17
29.18		First class brick on edge 11.50 cm thick laid in reimbursements in and on cement mortar 1:4 on sides of drains and in other work where required over lime concrete or other foundation, all joints to be left complete filled and struck flush.			
		Unit :-	sqm	64.54	455.66
29.19		First class brick on edge 11.50 cm thick laid in reimbursements in and on 1:6 cement sand mortar.			
		Unit :-	sqm	64.54	427.28
29.20		First class brick on edge 11.50 cm thick laid in reimbursements in and on 1:5 cement sand mortar.			
		Unit :-	sqm	64.54	440.18
29.21		First class brick on edge 11.50 cm thick laid in reimbursements in and on 1:4 cement sand mortar.			
		Unit :-	sqm	64.54	455.66
29.22		First class dry flat brick flooring and paving in ordinary bonded courses or in herring bond or other special courses or bond laid to template over rammed and dressed foundations and to correct longitudinal and cross slopes as shall be required by the Engineer-in-Charge. All joints shall be thoroughly filled with dry sand grouting which shall be applied to a thickness of not less 20mm over the surface of the flooring and brushed into the joints. All joints shall be fully filled with sand.			
		Unit :-	sqm	28.10	225.90
29.23		First class dry brick on edge flooring or paving in ordinary bonded courses or in herring bond or other special courses or bond, laid as described in item no. 29.22.			
		Unit :-	sqm	48.11	364.85
29.24			Deleted		
29.25		First class flat brick paving or flooring laid over and in cement sand mortar 1:6 in ordinary bonded courses or in herring bone or other special courses, to templates, over dressed foundation and to correct longitudinal and cross slopes as shall be required by the Engineer-in-charge. All joints shall be filled with mortar and struck flushed as the work proceeds.			
		Unit :-	sqm	42.09	278.66
29.26		First class flat brick paving or flooring laid over and in cement sand mortar 1:5 in ordinary bonded courses or in herring bone or other special courses, to templates, over dressed foundation and to correct longitudinal and cross slopes as shall be required by the Engineer-in-charge. All joints shall be filled with mortar and struck flushed as the work proceeds.			
		Unit :-	sqm	42.09	287.07
29.27			Deleted		
29.28		First class brick on edge paving or flooring laid over and in cement sand mortar 1:6 in ordinary bonded courses or in herring bone or other special courses, to templates, over dressed foundation and to correct longitudinal and cross slopes as shall be required by the Engineer-in-charge. All joints shall be filled with mortar and struck flushed as the work proceeds.			
		Unit :-	sqm	64.54	427.28

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Sr. No.	Code No.	Description	Unit	Labour Rate	Through Rate
1	2	3	4	5	6
29.29		First class brick on edge paving or flooring laid over and in cement sand mortar 1:5 in ordinary bonded courses or in herring bone or other special courses, to templates, over dressed foundation and to correct longitudinal and cross slopes as shall be required by the Engineer-in-charge. All joints shall be filled with mortar and struck flushed as the work proceeds.			
		Unit :-	sqm	64.54	440.18
29.30		First class brick on edge paving or flooring laid over and in cement sand mortar 1:4 in ordinary bonded courses or in herring bone or other special courses, to templates, over dressed foundation and to correct longitudinal and cross slopes as shall be required by the Engineer-in-charge. All joints shall be filled with mortar and struck flushed as the work proceeds.			
		Unit :-	sqm	64.54	455.66
29.31		Extra over and above the rates for items No. 29.22 to 29.30 inclusive for pitching on the slope to sullage drains above cunnettes and to storm water channels, etc. where required.			
		Unit :-	sqm	--	9.97
29.32					DELETED
29.33					DELETED
29.34					DELETED
29.35					DELETED
29.36		Providing & fixing 560 mm, 500 mm and 450 mm internal diametre circular or 450 mm x 600 mm clear inside opening rectangular RCC manhole cover and frame ISI marked as per IS:12592-2002 including carriage from the stores of the Engineer-in-charge to site of work, loading, unloading including stacking and setting the same to correct lines over manholes including cement concrete coping (M:20) around the frame etc. Dia of steel for lifting hook is 16mm. (for EHD and HD).			
<b>A</b>		<b>560 mm id R.C.C. Manhole cover with frame</b>			
(a)		Extra heavy duty			
		Unit :-	each	124.25	1844.55
(b)		Heavy duty			
		Unit :-	each	124.25	1678.62
(c)		Medium duty			
		Unit :-	each	124.25	1471.49
(d)		Light duty			
		Unit :-	each	124.25	1319.30
<b>B</b>		<b>500mm i/d RCC Manhole cover with frame</b>			
(a)		Extra heavy duty			
		Unit :-	each	124.25	1747.41
(b)		Heavy duty			
		Unit :-	each	124.25	1572.33
(c)		Medium duty			
		Unit :-	each	124.25	1338.88
(d)		Light duty			
		Unit :-	each	124.25	1186.69
<b>C</b>		<b>450 mm i/d RCC Manhole cover with frame</b>			
(a)		Extra heavy duty			
		Unit :-	each	124.25	1494.62
(b)		Heavy duty			
		Unit :-	each	124.25	1400.78
(c)		Medium duty			
		Unit :-	each	124.25	1144.45
(d)		Light duty			
		Unit :-	each	124.25	992.26
<b>D</b>		<b>450x600 mm clear inside opening rectangular RCC Manhole cover with frame</b>			
(a)		Extra heavy duty			
		Unit :-	each	124.25	1844.78
(b)		Heavy duty			
		Unit :-	each	124.25	1598.75

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Sr. No.	Code No.	Description	Unit	Labour Rate	Through Rate
1	2	3	4	5	6
(c)		Medium duty			
		Unit :-	each	124.25	1281.77
(d)		Light duty			
		Unit :-	each	124.25	1120.42
29.37		Providing orange colour safety footrest of minimum 6mm thick plastic encapsulated as per IS:10910 on 12mm dia steel bar confirming to IS: 1786 having minimum cross section as 23mm x 25mm and over all minimum length 283mm and width as 165mm with minimum 112mm space between protruded legs having 2mm tread on top surface by ribbing or chequering besides necessary and adequate anchoring projections on tail length on 138 mm as per standard drawing and suitable to with stand the bend test and chemical resistance test as per specification and having manufacturer's permanent identification mark to be visible even after fixing, including fixing in manholes with 230x150x75cm cement concrete block 1:2:4 (1 cement: 2 sand: 4 stone aggregate) complete as per design.			
		Unit :-	each	30.64	144.74
29.38		Providing and fixing RCC manhole covers only			
<b>A</b>		<b>560 mm opening's R.C.C. Manhole cover</b>			
(i)		Extra heavy duty			
		Unit :-	each	30.42	1045.44
(ii)		Heavy duty			
		Unit :-	each	30.42	975.64
(iii)		Medium duty			
		Unit :-	each	30.42	766.22
(iv)		Light duty			
		Unit :-	each	30.42	672.39
<b>B</b>		<b>500 mm opening's R.C.C. Manhole cover</b>			
(i)		Extra heavy duty			
		Unit :-	each	30.42	975.64
(ii)		Heavy duty			
		Unit :-	each	30.42	928.72
(iii)		Medium duty			
		Unit :-	each	30.42	719.31
(iv)		Light duty			
		Unit :-	each	30.42	649.50
<b>C</b>		<b>450 mm opening's R.C.C. Manhole cover</b>			
(i)		Extra heavy duty			
		Unit :-	each	30.42	894.39
(ii)		Heavy duty			
		Unit :-	each	30.42	847.47
(iii)		Medium duty			
		Unit :-	each	30.42	625.47
(iv)		Light duty			
		Unit :-	each	30.42	614.03
<b>D</b>		<b>450x600 mm opening's rectangular RCC Manhole cover</b>			
(i)		Extra heavy duty			
		Unit :-	each	30.42	1147.29
(ii)		Heavy duty			
		Unit :-	each	30.42	1070.62
(iii)		Medium duty			
		Unit :-	each	30.42	839.46
(iv)		Light duty			
		Unit :-	each	30.42	736.47
29.39				Deleted	

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Sr. No.	Code No.	Description	Unit	Labour Rate	Through Rate
1	2	3	4	5	6
29.40		Providing and Erection of cast RCC ventilating column having minimum 200mm internal diameter including excavation, bases, columns, caps, cowls or wire domes, etc. complete including carriage from the stores of the Engineer-in-Charge of works, to sites of works, loading and unloading fixing and jointing and setting the same in position complete in all respects.			
(a)		11 m. Height Including cost of ventilation shaft			
		Unit :-	each	2961.73	34286.34
(b)		9.10 m. Height Including cost of ventilation shaft			
		Unit :-	each	2885.70	29884.75
29.41				Deleted	
29.42				Deleted	
29.43				Deleted	
29.44				Deleted	
29.45		Finishing RCC vent shafts minimum 200mm internal Diameter with exterior decorative cement based paints on new work two coats to give an even finish.			
(a)		11 m. Height R.C.C. ventilator shaft			
		Unit :-	each	625.11	1523.36
(b)		9 m. Height R.C.C. ventilator shaft			
		Unit :-	each	511.74	1247.10
29.46		Finishing RCC vent shaft of minimum 200mm internal Diameter with exterior decorative cement based paints on old work one coat to give an even shade.			
(a)		11 m. Height R.C.C. ventilator shaft			
		Unit :-	each	416.58	664.77
(b)		9 m. Height R.C.C. ventilator shaft			
		Unit :-	each	341.04	544.22
29.47		Construction of standard RCC cum bricks circular sewers complete in all respects as per drawing design and specifications PCC 1:2:4, RCC M-20, brick work of inner ring in 1:2 cement sand mortar, outer ring in 1:5 cement sand mortar, total inner plaster 12.5 mm thick using 1:2 cement sand mortar with 1 mm thick neat cement rendering, steel reinforcement TMT Fe 500, 3mm thick steel form work, complete in all respects by using mechanical mixer and vibrator.			
A		<b>Type - I (Sewer for lower sub soil water tables / dry conditions)</b>			
(a)		760 mm i/d P.T. sewer			
		Unit :-	m	--	6919.53
		Through Rate			
(b)		915 mm i/d P.T. sewer			
		Unit :-	m	--	20578.01
		Through Rate			
(c)		990 mm i/d P.T. sewer			
		Unit :-	m	--	8266.48
		Through Rate			
(d)		1065 mm i/d P.T. sewer			
		Unit :-	m	--	8522.89
		Through Rate			
(e)		1145 mm i/d P.T. sewer			
		Unit :-	m	--	8759.92
		Through Rate			
(f)		1220 mm i/d P.T. sewer			
		Unit :-	m	--	9852.19
(g)		1295 mm i/d P.T. sewer			
		Unit :-	m	--	10407.62
(h)		1370 mm i/d P.T. sewer			
		Unit :-	m	--	10915.25
(i)		1450 mm i/d P.T. sewer			
		Unit :-	m	--	11433.37
(j)		1525 mm i/d P.T. sewer			
		Unit :-	m	--	11934.76

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Sr. No.	Code No.	Description	Unit	Labour Rate	Through Rate
1	2	3	4	5	6
B		<b>Type - II ( Sewers partially immerged under Sub Soil water )</b>			
		<b>PCC 1:2:4, RCC M-25, Brick work of inner ring in 1:2 cement sand mortar, Outer ring in 1:5 cement sand mortar, total inner plaster 12.5 mm thick using 1:2 cement sand mortar with 1 mm thick neat cement rendering on it, steel reinforcement TMT Fe 500, 3mm thick steel form work, complete in all respects by using mechanical mixer and vibrator</b>			
(a)		760 mm i/d P.T. sewer			
		Unit :-	m	--	7256.44
(b)		915 mm i/d P.T. sewer			
		Unit :-	m	--	8225.40
(c)		990 mm i/d P.T. sewer			
		Unit :-	m	--	8716.79
(d)		1065 mm i/d P.T. sewer			
		Unit :-	m	--	9188.36
(e)		1145 mm i/d P.T. sewer			
		Unit :-	m	--	9321.33
(f)		1220 mm i/d P.T. sewer			
		Unit :-	m	--	11655.57
(g)		1295 mm i/d P.T. sewer			
		Unit :-	m	--	12188.96
(h)		1370 mm i/d P.T. sewer			
		Unit :-	m	--	12734.74
(i)		1450 mm i/d P.T. sewer			
		Unit :-	m	--	13289.68
(j)		1525 mm i/d P.T. sewer			
		Unit :-	m	--	13840.71
C		<b>Type - III (Sewers to remain immersed under high sub soil water table)</b>			
		<b>Using PCC 1:2:4, RCC M-25, Brick work of inner ring in 1:2 cement sand mortar, Outer ring in 1:5 cement sand mortar, total inner plaster 12.5 mm thick using 1:2 cement sand mortar with 1 mm thick neat cement rendering on it, steel reinforcement TMT Fe 500, 3mm thick steel form work complete in all respects by using mechanical mixer and vibrator</b>			
(a)		760 mm i/d P.T. sewer			
		Unit :-	m	--	7969.26
(b)		915 mm i/d P.T. sewer			
		Unit :-	m	--	9650.54
(c)		990 mm i/d P.T. sewer			
		Unit :-	m	--	10224.71
(d)		1065 mm i/d P.T. sewer			
		Unit :-	m	--	10743.30
(e)		1145 mm i/d P.T. sewer			
		Unit :-	m	--	12052.44
(f)		1220 mm i/d P.T. sewer			
		Unit :-	m	--	12661.74
(g)		1295 mm i/d P.T. sewer			
		Unit :-	m	--	13228.45
(h)		1370 mm i/d P.T. sewer			
		Unit :-	m	--	13833.28
(i)		1450 mm i/d P.T. sewer			
		Unit :-	m	--	14423.76
(j)		1525 mm i/d P.T. sewer			
		Unit :-	m	--	15008.12

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105

Sr. No.	Code No.	Description	Unit	Labour Rate	Through Rate
1	2	3	4	5	6
D		Type - III (Sewers for all conditions i.e. Dry, semi immersed or fully immersed)			
		Using PCC 1:2:4, RCC M-25, brick work of inner ring in 1:2 cement sand mortar, outer ring in 1:5 cement sand mortar, total inner plaster 12.5 mm thick using 1:2 cement sand mortar with 1 mm thick neat cement rendering on it, steel reinforcement TMT Fe 500, 3mm thick steel form work , complete in all respects by using mechanical mixer and vibrator			
(a)		1600 mm i/d P.T. sewer			
		Unit :-	m	--	22802.49
(b)		1675 mm i/d P.T. sewer			
		Unit :-	m	--	23577.09
(c)		1750 mm i/d P.T. sewer			
		Unit :-	m	--	24491.92
(d)		1830 mm i/d P.T. sewer			
		Unit :-	m	--	26533.43
(e)		1905 mm i/d P.T. sewer			
		Unit :-	m	--	27342.54
(f)		1980 mm i/d P.T. sewer			
		Unit :-	m	--	33094.72
(g)		2060 mm i/d P.T. sewer			
		Unit :-	m	--	34090.21
(h)		2135 mm i/d P.T. sewer			
		Unit :-	m	--	36125.35
(i)		2285 mm i/d P.T. sewer			
		Unit :-	m	--	39625.87
(j)		2440 mm i/d P.T. sewer			
		Unit :-	m	--	47589.11
29.48		<b>Construction of Standard RCC cum Bricks Circular Half Cup Sewers(under manhole chambers) complete in all respects as per drawing and design</b>			
		Using PCC 1:2:4, RCC M-20, Brick work of inner ring in 1:2 cement sand mortar, Outer ring in 1:5 cement sand mortar, total inner plaster 12.5 mm thick using 1:2 cement sand mortar with 1 mm thick neat cement rendering on it, steel reinforcement TMT Fe 500, 3mm thick steel form work , complete in all respects by using mechanical mixer and vibrator			
A		Type - I (For lower sub soil water / dry conditions)			
(a)		760 mm i/d P.T. sewer			
		Unit :-	m	--	3568.07
(b)		915 mm i/d P.T. sewer			
		Unit :-	m	--	4073.43
(c)		990 mm i/d P.T. sewer			
		Unit :-	m	--	4341.47
(d)		1065 mm i/d P.T. sewer			
		Unit :-	m	--	4423.04
(e)		1145 mm i/d P.T. sewer			
		Unit :-	m	--	4922.19
(f)		1220 mm i/d P.T. sewer			
		Unit :-	m	--	5174.16
(g)		1295 mm i/d P.T. sewer			
		Unit :-	m	--	5442.80
(h)		1370 mm i/d P.T. sewer			
		Unit :-	m	--	5716.52
(i)		1450 mm i/d P.T. sewer			
		Unit :-	m	--	5992.79
(j)		1525 mm i/d P.T. sewer			
		Unit :-	m	--	6235.26

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106

Sr. No.	Code No.	Description	Unit	Labour Rate	Through Rate
1	2	3	4	5	6
B		<b>Type - II (Sewers partialy immersed under Sub Soil water table)</b>			
		Using PCC 1:2:4, RCC M-25, Brick work of inner ring in 1:2 cement sand mortar, Outer ring in 1:5 cement sand mortar, total inner plaster 12.5 mm thick using 1:2 cement sand mortar with 1 mm thick neat cement rendering on it, steel reinforcement TMT Fe 500, 3mm thick steel form work , complete in all respects by using mechanical mixer and vibrator			
(a)		760 mm i/d P.T. sewer			
		Unit :-	m	--	3794.94
(b)		915 mm i/d P.T. sewer			
		Unit :-	m	--	4306.87
(c)		990 mm i/d P.T. sewer			
		Unit :-	m	--	4571.18
(d)		1065 mm i/d P.T. sewer			
		Unit :-	m	--	4814.45
(e)		1145 mm i/d P.T. sewer			
		Unit :-	m	--	5809.02
(f)		1220 mm i/d P.T. sewer			
		Unit :-	m	--	6103.68
(g)		1295 mm i/d P.T. sewer			
		Unit :-	m	--	6381.49
(h)		1370 mm i/d P.T. sewer			
		Unit :-	m	--	6685.79
(i)		1450 mm i/d P.T. sewer			
		Unit :-	m	--	6970.17
(j)		1525 mm i/d P.T. sewer			
		Unit :-	m	--	7266.83
C		<b>Type - III (Sewers to remain immersed under high sub soil water)</b>			
		Using PCC 1:2:4, RCC M-25, Brick work of inner ring in 1:2 cement sand mortar, Outer ring in 1:5 cement sand mortar, total inner plaster 12.5 mm thick using 1:2 cement sand mortar with 1 mm thick neat cement rendering on it, steel reinforcement TMT Fe 500, 3mm thick steel form work , complete in all respects by using mechanical mixer and vibrator			
(a)		760 mm i/d P.T. sewer			
		Unit :-	m	--	4154.89
(b)		915 mm i/d P.T. sewer			
		Unit :-	m	--	5031.32
(c)		990 mm i/d P.T. sewer			
		Unit :-	m	--	5345.08
(d)		1065 mm i/d P.T. sewer			
		Unit :-	m	--	5651.53
(e)		1145 mm i/d P.T. sewer			
		Unit :-	m	--	6282.59
(f)		1220 mm i/d P.T. sewer			
		Unit :-	m	--	6606.77
(g)		1295 mm i/d P.T. sewer			
		Unit :-	m	--	6901.24
(h)		1370 mm i/d P.T. sewer			
		Unit :-	m	--	7235.05
(i)		1450 mm i/d P.T. sewer			
		Unit :-	m	--	7537.21
(j)		1525 mm i/d P.T. sewer			
		Unit :-	m	--	7850.53

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107

Sr. No.	Code No.	Description	Unit	Labour Rate	Through Rate
1	2	3	4	5	6
D		Type - III (Bigger dia sewers for conditions dry, semi immerse and fully immersed under high water)			
		Using PCC 1:2:4, RCC M-25, brick work of inner ring in 1:2 cement sand mortar, outer ring in 1:5 cement sand mortar, total inner plaster 12.5 mm thick using 1:2 cement sand mortar with 1 mm thick neat cement rendering on it, steel reinforcement TMT Fe 500, 3mm thick steel form work, complete in all respects by using mechanical mixer and vibrator			
(a)		1600 mm i/d P.T. sewer			
		Unit :-	m	--	11784.01
(b)		1675 mm i/d P.T. sewer			
		Unit :-	m	--	12193.42
(c)		1750 mm i/d P.T. sewer			
		Unit :-	m	--	12631.37
(d)		1830 mm i/d P.T. sewer			
		Unit :-	m	--	13726.83
(e)		1905 mm i/d P.T. sewer			
		Unit :-	m	--	14154.16
(f)		1980 mm i/d P.T. sewer			
		Unit :-	m	--	17061.98
(g)		2060 mm i/d P.T. sewer			
		Unit :-	m	--	17569.37
(h)		2135 mm i/d P.T. sewer			
		Unit :-	m	--	18626.39
(i)		2285 mm i/d P.T. sewer			
		Unit :-	m	--	20441.78
(j)		2440 mm i/d P.T. sewer			
		Unit :-	m	--	26437.35
29.49	A	<b>Construction of RCC circular storm sewers cast in situ without having any cover and is subjected to direct heavy traffic complete as per drawings and designs</b>			
		Using PCC 1:6:12 cement sand and stone aggregate, RCC M-25, Mild steel reinforcement TMT Fe 500, steel form work, 12.5 mm thick cement plaster 1:2 with 1 mm thick neat cement rendering by using mechanical mixer and vibrator complete in all respects.			
(a)		36" ( 915 mm ) i/d RCCStorm Sewer			
		Unit :-	m	--	8792.85
(b)		48" ( 1220 mm ) i/d RCCStorm Sewer			
		Unit :-	m	--	12831.61
(c)		51" ( 1295 mm ) i/d RCCStorm Sewer			
		Unit :-	m	--	14678.50
(d)		57" ( 1448 mm ) i/d RCCStorm Sewer			
		Unit :-	m	--	17546.58
(e)		63" ( 1600 mm ) i/d RCCStorm Sewer			
		Unit :-	m	--	19691.12
(f)		84" ( 2133 mm ) i/d RCCStorm Sewer			
		Unit :-	m	--	23015.15
(g)		93" ( 2362 mm ) i/d RCCStorm Sewer			
		Unit :-	m	--	32878.32
(h)		102" ( 2590 mm ) i/d RCCStorm Sewer			
		Unit :-	m	--	41865.39
B		<b>Construction of RCC circular half cup storm sewers in manhole chambers without having cover and subjected to direct heavy load of traffic complete as per drawings and designs</b>			
		PCC 1:6:12 cement sand and stone aggregate, RCC M-25, steel reinforcement TMT Fe 500, steel form work, 12.5 mm thick cement plaster 1:2 with 1 mm thick neat cement rendering by using mechanical mixer and vibrator complete in all respects.			
(a)		36" ( 915 mm ) i/d RCCStorm Sewer			
		Unit :-	m	--	5176.60
(b)		48" ( 1220 mm ) i/d RCCStorm Sewer			

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Sr. No.	Code No.	Description	Unit	Labour Rate	Through Rate
1	2	3	4	5	6
		Unit :-	m	--	7426.69
(c)		51" ( 1295 mm ) i/d RCCstorm Sewer			
		Unit :-	m	--	8455.47
(d)		57" ( 1448 mm ) i/d RCCstorm Sewer			
		Unit :-	m	--	10013.68
(e)		63" ( 1600 mm ) i/d RCCstorm Sewer			
		Unit :-	m	--	11240.83
(f)		84" ( 2133 mm ) i/d RCCstorm Sewer			
		Unit :-	m	--	13447.20
(g)		93" ( 2362 mm ) i/d RCCstorm Sewer			
		Unit :-	m	--	18702.73
(h)		102" ( 2590 mm ) i/d RCCstorm Sewer			
		Unit :-	m	--	23497.42
29.50				Deleted	
29.51				Deleted	
29.52				Deleted	
29.53				Deleted	
29.54				Deleted	
29.55				Deleted	
29.56				Deleted	
29.57				Deleted	
29.58				Deleted	
29.59				Deleted	
29.60				Deleted	
29.61				Deleted	
29.62				Deleted	
29.63		Providing, lowering, cutting & jointing salt glazed stone ware pipes and specials ISI marked as per IS: 651-2007 class Sp-1 into trenches for all depths and laying out the same to correct alignment, gradients, levels etc., cutting of concrete beds and joints holes, supporting the pipes and specials, in correct position in a suitable rigid manner while the same are being jointed and until the surrounding benching, haunching and envelopes are completed including jointing of pipes and specials in trenches, using cement sand mortar 1:1 and best spun Jute yarn as per IS:1887, finishing and trowelling of each joint at an angle of 45 degree with the longitudinal axes of pipe, watering, keeping the joint covered and wetted till the same are cured, testing the sewerage line for leakage and making all leakages and defects good as laid in the contract specification, chipping and finishing the cut surface to uniform finish to the entire satisfaction of engineer-in-charge including all cartage etc complete in all respects.			
(a)		100 mm i/d pipes	m	55.49	185.90
(b)		150 mm i/d pipes	m	79.10	300.30
(c)		200 mm i/d pipes	m	90.46	370.90
(d)		250 mm i/d pipes	m	113.51	634.20
(e)		300 mm i/d pipes	m	124.95	908.80
(f)		400 mm i/d pipes	m	131.70	2115.20
(g)		450 mm i/d pipes	m	145.57	2459.90
(h)		600 mm i/d pipes	m	182.85	5098.10
29.64		Providing, lowering in trenches to correct gradient and allignments, jointing with tytone rubber joint and cutting of RCC S/S pipes having inside HDPE. lining ISI marekd as per ISI code IS:458-2003 into trenches for all depths and laying out the same to correct alignment, gradients, levels etc.,cutting of concrete beds and joints holes, supporting the pipes and specials in correct position in a suitable rigid manner while the same are being jointed and until the surrounding benchings, haunches and envelopes are completed. The pipes shall rest on the beds at all joints through their lengths and to ensure this, testing the pipes for leakage and making good the same leakage and all defects to the entire satisfaction of the Engineer incharge including all cartage etc copmplete in all respects.			
(i)		RCC pipes with inside HDPE lining class- NP-3			
(a)		400 mm i/d pipes.	m	62.62	2738.50
(b)		450 mm i/d pipes	m	62.75	3286.50
(c)		500 mm i/d pipes	m	63.10	3834.80
(d)		600 mm i/d pipes	m	67.02	4590.80

J

60

Sr. No.	Code No.	Description	Unit	Labour Rate	Through Rate
1	2	3	4	5	6
(e)		700 mm i/d pipes	m	75.05	6153.70
(f)		800 mm i/d pipes	m	80.42	7346.20
(g)		900 mm i/d pipes	m	84.50	8732.00
(h)		1000 mm i/d pipes	m	89.97	9906.60
(i)		1100 mm i/d pipes	m	102.03	11871.20
(j)		1200 mm i/d pipes	m	112.81	12945.30
(k)		1400 mm i/d pipes	m	122.62	17688.00
(l)		1600 mm i/d pipes	m	178.10	21058.00
(m)		1800 mm i/d pipes	m	207.78	24706.80
(n)		2000 mm i/d pipes	m	250.98	30850.20
(o)		2200 mm i/d pipes	m	297.56	35530.50
(p)		2400 mm i/d pipes	m	376.15	39619.00
(q)		2600 mm i/d pipes	m	461.51	48040.80
(II)		<b>RCC pipes with inside HDPE lining class- NP-4</b>			
(a)		400 mm i/d pipes	m	62.62	2879.10
(b)		450 mm i/d pipes	m	62.75	3477.60
(c)		500 mm i/d pipes	m	63.10	4077.50
(d)		600 mm i/d pipes	m	67.02	5043.80
(e)		700 mm i/d pipes	m	75.05	6711.20
(f)		800 mm i/d pipes	m	80.42	8442.00
(g)		900 mm i/d pipes	m	84.50	9784.60
(h)		1000 mm i/d pipes	m	89.97	11213.90
(i)		1100 mm i/d pipes	m	102.03	13563.00
(j)		1200 mm i/d pipes	m	112.81	14784.90
(k)		1400 mm i/d pipes	m	122.62	20301.40
(l)		1600 mm i/d pipes	m	178.10	23627.70
(m)		1800 mm i/d pipes	m	207.78	28490.70
(n)		2000 mm i/d pipes	m	250.98	33848.90
(o)		2200 mm i/d pipes	m	297.56	39743.60
(p)		2400 mm i/d pipes	m	376.15	46253.50
(q)		2600 mm i/d pipes	m	461.51	53462.20
29.65		Providing, laying in trenches to correct gradient and alignment and jointing of UPVC pipes having ISI specification IS:15328-2003 class-SN-8 marked make Supreme, Finolex, Kissan, Jain, Prince or equivalent good on them and laying the same in trenches to correct alignment and gradients, cutting and jointing, testing for water tightness and making good the leakages and defects including cost of specials (Specials and Solvent should be of same make as that of pipes) complete in all respects.			
(a)		110 mm o/d pipes	m	4.20	298.60
(b)		125 mm o/d pipes	m	4.20	343.00
(c)		160 mm o/d pipes	m	5.57	636.40
(d)		200 mm o/d pipes	m	6.96	998.20
(e)		250 mm o/d pipes	m	8.58	1540.60
(f)		315 mm o/d pipes	m	11.69	2395.60
29.66		Providing, laying in trenches and jointing of HDPE pipes having ISI specification IS:14333, PE100, class PN-6 marked on them, make Reliance/ Hasti / Dura-Line , laying the same in trenches to correct alignment and gradients, cutting and jointing testing for water tightness and making good the leakages and defects including cost of specials complete in all respects.			
		<b>PE100, class PN-6</b>			
(a)		110 mm o/d pipes	m	4.20	497.40
(b)		125 mm o/d pipes	m	4.20	635.90
(c)		160 mm o/d pipes	m	5.57	1037.80
(d)		200 mm o/d pipes	m	6.96	1617.00
(e)		250 mm o/d pipes	m	8.81	2512.60
(f)		315 mm o/d pipes	m	11.25	3975.20
(g)		400 mm o/d pipes	m	13.62	7483.00

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110

Sr. No.	Code No.	Description	Unit	Labour Rate	Through Rate
1	2	3	4	5	6
(h)		500mm o/d pipes	m	17.25	10204.10
(i)		630 mm o/d pipes	m	19.56	16146.60
(j)		710 mm o/d pipes	m	26.54	20491.70
(k)		800mm o/d pipes	m	32.24	29739.40
(l)		900 mm o/d pipes	m	36.72	37666.30
(m)		1000 mm o/d pipes	m	41.21	46529.50
29.67			Deleted		
29.68		Extra over the rate laid down in this schedule for cement concrete work for making and finishing benching and complicated floor work in manholes including formation of channels and bulldozing and smooth finishing the surface accurately to template.	sqm		36.40
29.69		Providing, lowering in trenches to correct gradient and alignment, jointing with tyton rubber joint and cutting of reinforced cement concrete spigot and socketed pipes and specials with rubber ring ISI markd as per IS code IS 458-2003 into trenches for all depths and laying out the same to correct alignment, gradients, levels etc. cutting of concrete beds and joints holes, supporting the pipes and specials in correct position in a suitable rigid manner while the same are being jointed and until the surrounding benchings, haunches and envelopes are completed. The pipes shall rest on the beds at all joints through their lengths and fixing of rubber ring, facing, testing the pipes for leakage and making good the same leakage and all defects to the entire satisfaction of the Engineer-in-charge including all cartage etc.			
(I)		<b>RCC Pipes class P1</b>			
(a)		100 mm i/d pipes	m	16.50	437.00
(b)		150 mm i/d pipes	m	20.29	498.50
(c)		200 mm i/d pipes	m	23.16	557.90
(d)		250 mm i/d pipes	m	33.78	645.40
(e)		300 mm i/d pipes	m	40.14	881.20
(f)		400 mm i/d pipes	m	62.62	1171.70
(g)		450 mm i/d pipes	m	62.75	1362.80
(h)		500 mm i/d pipes	m	63.10	1668.40
(i)		600 mm i/d pipes	m	67.02	2399.20
(j)		700 mm i/d pipes	m	75.05	2712.40
(k)		800 mm i/d pipes	m	80.42	3367.90
(l)		900 mm i/d pipes	m	84.50	4672.00
(m)		1000 mm i/d pipes	m	89.97	5250.60
(n)		1100 mm i/d pipes	m	102.03	6217.90
(o)		1200 mm i/d pipes	m	112.81	6764.60
(II)		<b>RCC Pipes s/s class-NP2</b>			
(a)		100 mm i/d pipes	m	16.50	352.90
(b)		150 mm i/d pipes	m	20.29	402.40
(c)		200 mm i/d pipes	m	23.16	450.90
(d)		250 mm i/d pipes	m	33.78	522.80
(e)		300 mm i/d pipes	m	40.14	713.00
(f)		400 mm i/d pipes.	m	62.62	949.40
(g)		450 mm i/d pipes	m	62.75	1102.10
(h)		500 mm i/d pipes	m	63.10	1347.60
(i)		600 mm i/d pipes	m	67.02	1933.00
(j)		700 mm i/d pipes	m	75.05	2185.00
(k)		800 mm i/d pipes	m	80.42	2710.60
(l)		900 mm i/d pipes	m	84.50	3754.00
(m)		1000 mm i/d pipes	m	89.97	4218.50
(n)		1100 mm i/d pipes	m	102.03	4994.70
(o)		1200 mm i/d pipes	m	112.81	5739.70
(p)		1400 mm i/d pipes	m	122.62	7461.70
(q)		1600 mm i/d pipes	m	178.10	9304.60
(r)		1800 mm i/d pipes	m	207.78	11159.30
(s)		2000 mm i/d pipes	m	250.98	13179.30
(t)		2200 mm i/d pipes	m	297.56	15507.50
(III)		<b>RCC Pipes class NP3</b>			

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Sr. No.	Code No.	Description	Unit	Labour Rate	Through Rate
1	2	3	4	5	6
(a)		100 mm i/d pipes	m	16.50	450.30
(b)		150 mm i/d pipes	m	20.29	485.30
(c)		200 mm i/d pipes	m	23.16	616.70
(d)		250 mm i/d pipes	m	33.78	805.20
(e)		300 mm i/d pipes	m	40.14	1115.50
(f)		400 mm i/d pipes.	m	62.62	2029.60
(g)		450 mm i/d pipes	m	62.75	2403.40
(h)		500 mm i/d pipes	m	63.10	2777.40
(i)		600 mm i/d pipes	m	67.02	3322.00
(j)		700 mm i/d pipes	m	75.05	4028.10
(k)		800 mm i/d pipes	m	80.42	4952.70
(l)		900 mm i/d pipes	m	84.50	6091.00
(m)		1000 mm i/d pipes	m	89.97	6996.50
(n)		1100 mm i/d pipes	m	102.03	8088.70
(o)		1200 mm i/d pipes	m	112.81	8815.60
(p)		1400 mm i/d pipes	m	122.62	11418.40
(q)		1600 mm i/d pipes	m	178.10	14431.90
(r)		1800 mm i/d pipes	m	207.78	17743.60
(s)		2000 mm i/d pipes	m	250.98	22078.70
(t)		2200 mm i/d pipes	m	297.56	28670.10
(u)		2400 mm i/d pipes	m	376.15	32640.30
(v)		2600 mm i/d pipes	m	461.51	36617.20
<b>(IV)</b>		<b>RCC Pipes s/s , class NP4</b>			
(a)		100 mm i/d pipes	m	16.50	500.70
(b)		150 mm i/d pipes	m	20.29	533.40
(c)		200 mm i/d pipes	m	23.16	705.60
(d)		250 mm i/d pipes	m	33.78	948.20
(e)		300 mm i/d pipes	m	40.14	1405.10
(f)		400 mm i/d pipes.	m	62.62	2092.00
(g)		450 mm i/d pipes	m	62.75	2449.00
(h)		500 mm i/d pipes	m	63.10	2855.50
(i)		600 mm i/d pipes	m	67.02	3833.90
(j)		700 mm i/d pipes	m	75.05	4702.20
(k)		800 mm i/d pipes	m	80.42	5698.90
(l)		900 mm i/d pipes	m	84.50	7505.30
(m)		1000 mm i/d pipes	m	89.97	8487.60
(n)		1100 mm i/d pipes	m	102.03	9870.60
(o)		1200 mm i/d pipes	m	112.81	10754.90
(p)		1400 mm i/d pipes	m	122.62	15388.30
(q)		1600 mm i/d pipes	m	178.10	18886.40
(r)		1800 mm i/d pipes	m	207.78	24208.40
(s)		2000 mm i/d pipes	m	250.98	28527.40
(t)		2200 mm i/d pipes	m	297.56	38309.30
(u)		2400 mm i/d pipes	m	376.15	40750.80
(v)		2600 mm i/d pipes	m	461.51	49316.10
<b>29.70</b>		<b>Extra for providing 1:2 cement sand mortar on tytone rubber joint of RCC pipes having sockets extended out of barrel, In trenches including facing trowelling and finishing the joints at the angle of 45 degree with faces of socket keeping joints wet till cured, testing the pipe joints for leakproof and making good all leakage and defects as per specifications.</b>			
(i)		<b>NP1, NP2 and P-1 S/S joints pipes having internal dia meter:-</b>			
(a)		100mm i/d pipe	each	7.59	9.00
(b)		150mm i/d pipe	each	9.24	11.00
(c)		200mm i/d pipe	each	10.14	12.30
(d)		250 mm id pipe	each	12.42	15.00
(e)		300mm i/d pipe	each	16.14	19.70

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Sr. No.	Code No.	Description	Unit	Labour Rate	Through Rate
1	2	3	4	5	6
(f)		400mm i/d pipe	each	30.01	35.10
(g)		450mm i/d pipe	each	32.42	39.10
(h)		500mm i/d pipe	each	36.98	44.30
(i)		600mm i/d pipe	each	41.39	51.90
(j)		700mm i/d pipe	each	46.22	58.20
(k)		800mm i/d pipe	each	60.02	77.70
(l)		900mm i/d pipe	each	71.61	96.60
(m)		1000mm i/d pipe	each	78.64	110.40
(n)		1100mm i/d pipe	each	85.54	126.50
(o)		1200mm i/d pipe	each	92.44	145.70
(p)		1400mm i/d pipe	each	106.24	186.90
(q)		1600mm i/d pipe	each	110.38	215.90
(r)		1800mm i/d pipe	each	124.17	277.90
(s)		2000mm i/d pipe	each	142.66	349.70
(t)		2200mm i/d pipe	each	175.63	447.00
(II)		<b>NP-3 &amp; NP4 Pipes S/S joints having internal dia meter of pipe:-</b>			
(a)		100mm i/d pipe	each	7.59	8.90
(b)		150mm i/d pipe	each	9.24	10.90
(c)		200mm i/d pipe	each	10.14	13.00
(d)		250mm i/d pipe	each	12.42	15.80
(e)		300mm i/d pipe	each	16.14	23.10
(f)		400mm i/d pipe	each	30.01	38.90
(g)		450mm i/d pipe	each	32.42	43.10
(h)		500mm i/d pipe	each	36.98	48.70
(i)		600mm i/d pipe	each	41.39	55.10
(j)		700mm i/d pipe	each	46.22	65.40
(k)		800mm i/d pipe	each	60.02	90.50
(l)		900mm i/d pipe	each	71.61	110.90
(m)		1000mm i/d pipe	each	78.64	136.00
(n)		1100mm i/d pipe	each	85.54	147.40
(o)		1200mm i/d pipe	each	92.44	177.30
(p)		1400mm i/d pipe	each	106.24	204.20
(q)		1600mm i/d pipe	each	110.38	232.90
(r)		1800mm i/d pipe	each	124.17	260.60
(s)		2000mm i/d pipe	each	142.66	310.80
(t)		2200mm i/d pipe	each	175.63	379.00
(u)		2400mm i/d pipe	each	212.61	455.50
(v)		2600mm i/d pipe	each	258.69	545.70
29.71	A	Making soak pit 2.5 m outer Diametre 3.0 metre deep 230mm thick 1:5 brick work honey comb with bricks of 1st Class and S.W. drain pipe 100 mm Diametre, 1.8 m long complete as per standard design.	each		31915.00
	B	Constructing soak pit 1.20x1.20x1.6 m deep, 230mm thick 1:5 brick work honey comb with bricks of 1st Class filled with brickbats including S.W. drain pipe 100 mm Diametre and 1.20 m long complete as per standard design.	each		14998.50
29.74		Providing & Fixing RCC Road Gully grating & frame			
	(a)	450mm x 450mm	each	205.39	995.00
	(b)	600mm x 300mm	each	205.39	920.60
	(c)	600mm x 450mm	each	205.39	1143.70
29.78		Constructing Punjab Standard Drain, type house connection complete consisting of cement concrete drain moulded and laid over lime concrete foundation, rendered and finished smooth with 6mm thick rendering concrete to be of 1:2½:5 parts by volume of cement :sand: stone bajri and rendering to be 1:1 cement sand mortar.	m	55.48	138.00
29.79		Constructing Punjab standard drain type I as above.	m	71.28	207.12
29.80		Constructing Punjab standard drain type II as above.	m	141.31	484.00
29.81		Constructing Punjab standard drain type III as above.	m	204.93	623.60
29.82		Constructing Punjab standard drain type IV as above.	m	264.02	999.10

J

Sr. No.	Code No.	Description	Unit	Labour Rate	Through Rate
1	2	3	4	5	6
29.83			DELETED		
29.84		Constructing brick masonry manhole in cement mortar 1:5 ( 1 cement : 5 coarse sand ) R.C.C. top slab 20cm thick using M-20 mix by using mixer and vibrator, TMT Fe500 @ 63.464 kg/per cum, foundation concrete 1:4:8 mix (1 cement: 4 coarse sand : 8 graded stone aggregate 40mm nominal size) inside plastering 12mm thick with cement mortar 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement and making 40mm thick benching in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement, Orange coloured PVC steps including RCC cover with frame complete as per standard design complete in all respects.			
(a)		Inside size 75x120 cm with depth 120 cm between bottom of top slab and invert ( with MH cover &	each		12175.40
(b)		frame Heavy duty) Inside size 90x150 cm with depth 120 cm between bottom of top slab and invert ( with MH cover &	each		15347.50
(c)		frame Extra Heavy duty) Inside size 120x180 cm with depth 120 cm between bottom of top slab and invert ( with MH cover &	each		19205.30
(d)		frame Extra Heavy duty) Inside size 150x180 cm with depth 120 cm between bottom of top slab and invert ( with MH cover &	each		21565.40
29.85		Constructing brick masonry manhole in cement mortar 1:5 ( 1 cement : 5 coarse sand ) with RCC core wall between masonry, R.C.C. top slab 20mm thick using M-20 mix, foundation concrete 1:4:8 mix (1 cement: 4 coarse sand : 8 graded stone aggregate 40mm nominal size) inside plastering 12mm thick with cement mortar 1:3 (1 cement: 3 coarse sand) finished with floating coat of neat cement and making benching in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement, Orange coloured PVC steps including RCC cover with frame internal dimensions.complete as per standard design. (In water logged area).			
(a)		Inside size 75x120 cm with depth 120 cm between bottom of top slab and invert ( with MH cover &	each		25278.80
(b)		frame Medium duty) Inside size 90x150 cm with depth 120 cm between bottom of top slab and invert ( with MH cover &	each		29385.80
(c)		frame Heavy duty) Inside size 120x180 cm with depth 120 cm between bottom of top slab and invert ( with MH cover &	each		35329.50
(d)		frame Extra Heavy duty) Inside size 150x180 cm with depth 120 cm between bottom of top slab and invert ( with MH cover &	each		39415.60
29.86		Extra payable for every 0.30 m additional depth of manhole chamber in item 29.85 upto 1.80 m increase in depth.			
(a)		Inside size 75x120 cm	0.30 m		3989.80
(b)		Inside size 90x150 cm	0.30 m		4544.00
(c)		Inside size 120x180 cm	0.30 m		5477.00
(d)		Inside size 150x180 cm	0.30 m		5894.40
29.87		Extra payable for every 0.30 m additional depth of manhole chamber in item 29.84 upto 1.80 m increase in depth.			
(a)		Inside size 75x120 cm	0.30 m		1612.60
(b)		Inside size 90x150 cm	0.30 m		1889.50
(c)		Inside size 120x180 cm	0.30 mt		2297.00
(d)		Inside size 150x180 cm	0.30 m		2481.60
29.88		Extra payable for every 0.30 m additional depth of manhole chamber in item 29.84 beyond 1.80 m upto 3.60 m beyond additional depth.			
(a)		Inside size 75x120 cm	0.30 m		2454.70
(b)		Inside size 90x150 cm	0.30 m		2846.40
(c)		Inside size 120x180 cm	0.30 mt		3368.70


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Sr. No.	Code No.	Description	Unit	Labour Rate	Through Rate
1	2	3	4	5	6
(d)		Inside size 150x180 cm	0.30 m		3668.10
29.89		Construction of brick masonry inspection chambers size as given below upto 0.60 metre average depth in 1:5 cement sand mortar, lime concrete with 40 per cent lime mortar 2:3 in foundation, cement concrete 1:2:4 benching 12.50mm thick cement plaster 1:2 with a floating coat of 1mm thick of neat cement, R.C.C. 1:2:4 slabs 100mm thick cement concrete topping 50mm thick with 455mm x 455mm, 455mm x 610mm inside light duty C.I. inspection chamber cover and frame (Weight as per I.S.I specifications) painted with 3 coats of black bitumastic paint conforming to I.S.I complete as per standard design.			
(a)		Size 450 mm x 450 mm inside with RCC 455 mm x 455 mm cover and frame medium duty double seal	each		3338.80
(b)		450mm x 600mm inside with 455mm x 610mm cover and frame medium duty double seal	each		4106.90
(c)		600mm x 900mm inside with 455mm x 455mm cover and frame medium duty double seal	each		5525.80
29.90		Extra for every 0.30 metre depth of inspection chamber.			
(a)		450mm x 450mm inside	0.30 m		832.20
(b)		450mm x 600mm inside	0.30 m		925.90
(c)		600mm x 900mm inside	0.30 mt		1247.30
29.91		Constructing Brick masonry ventilating chambers as per standard drawing including dressing of beds and sides of chamber to exact profiles 15cm. Lime concrete 16:24:100 (as specified in item No. 10.3) in foundation, first class brick work laid in cement sand mortar 1:5, cement concrete 1:2:4 for reinforced concrete work in slab, 12.5mm thick cement plaster 1:2 rendered with a floating coat of neat cement 1mm thick over exposed brick tablet and inside walls, lime pointing 2:3 on outside complete and as required by the Engineer-In-Charge.	each		9414.30
29.92		Constructing brick masonry road gully chambers as per standard drawings (as per sizes given below) including dressing of beds and sides of chambers to exact profiles, 15cm thick lime concrete 16:24:100 (as per specified in item No. 10.3) in foundation, first class brick work laid in cement sand mortar 1:5, 40mm thick cement concrete 1:2:4 topping inside the chamber with a floating coat of 1.5mm thick neat cement laid in one operation to the topping, the entire inner surface of the chamber rendered with neat cement not less than 12.50mm in thickness of 1:2 cement sand plaster and finished with a floating coat of neat cement 1mm thick left absolutely smooth polished and correct to template including cost of precasted RCC road gully grating and frame including paint with coal tar (as specified in item No. 29.74) complete and to the requirement of the Engineer-In-Charge.			
A		Single Road Gully chamber			
(a)		Size 610mm x 457mm x 800mm	each		4422.30
(b)		Size 610mm x 457mm x 1105mm	each		5350.20
B		Double Road Gully Chamber			
(a)		Size 1448mm x 457mm x 800mm	each		7667.50
(b)		Size 1448mm x 457mm x 1105mm	each		9188.40
29.93		Reduction for every 7.50cm depth of road gully chamber from the rate of item No. 29.92 above :-			
(a)		Single Road Gully Chamber	each		241.60
(b)		Double Road Gully Chamber	each		384.50
29.94		Making connection of drain or sewer line with existing manhole including breaking into and making good the walls, floors with cement concrete 1:2:4 mix (1 cement: 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) cement plastered on both sides with cement mortar 1:2 (1 cement : 2 coarse sand) finished with a floating coat of neat cement and making necessary channels for the drain etc. complete.			
(a)		For pipes 100 to 250 mm Diametre	each	76.03	144.90
(b)		For pipes 300 to 450 mm Diametre	each	76.03	189.50
29.95			DELETED		


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Sr. No.	Code No.	Description	Unit	Labour Rate	Through Rate
1	2	3	4	5	6
29.96		Dismantling of manhole chamber including R.C.C. top slab, G.I. cover with frame including stacking of useful materials near the site including disposal of unserviceable material within 100 m. as desired by Engineer-in-charge.			
(a)		Rectangular manhole 75x120 cm and 1.20 m deep	each		964.20
(b)		Rectangular manhole 90x150 cm and 1.20 m deep	each		1309.60
(c)		Rectangular manhole 120x180 cm and 1.20 m deep	each		1676.70
(d)		Rectangular manhole 150x180 cm and 1.20 m deep	each		1907.40
29.97		Extra for depth of manholes dismantled for additional depth of 0.300 m. including disposal of dismantled material within 100 m. as desired by Engineer-in-charge.			
(a)		Rectangular manhole 75x120 cm	each		189.50
(b)		Rectangular manhole 90x150 cm	each		164.50
(c)		Rectangular manhole 120x180 cm	each		202.90
(d)		Rectangular manhole 150x180 cm	each		319.20
29.98		Raising R.C.C. slab of all thickness on Man hole chamber to desired height and placing back in position after raising the Manhole (Raising depth of Brick Work and Plaster will be paid extra as per C&R Item.)			
		Manhole chamber having inside size 75x120 cm upto 150x180cm	each		741.50
29.99		Dismantling of old S.W. pipes including breaking of joints and bed concrete stacking of useful materials and disposal of unserviceable materials within 100 m. as desired by Engineer-in-Charge.			
(a)		100 mm Diameter	m		28.10
(b)		150 mm Diameter	m		32.20
(c)		200 mm Diameter	m		34.25
(d)		250 mm Diameter	m		38.30
(e)		300 mm Diameter	m		38.30
(f)		400 mm Diameter	m		48.20
(g)		450 mm Diameter	m		50.30
29.100		Dredging all types of main sewers 750 mm and onwards internal dia by silt clearing machines adopting all safety measures and disposal of silt upto 5km complete in all respects.	m		217.70
29.101		Dredging of manhole including all safety measures, cost of container T & P and disposal of silt upto 5km complete in all respects.	cum		1394.40
(a)		Depth upto 3 m.	cum		2145.40
(b)		Depth above 3 m			
29.102		Making connection of newly laid sewer to walls of existing manhole of fully charge sewer including cost of plugging sewer, desilting, removal of sullage water and making good of khuzda			
(a)		Sewer connections upto 300 mm id	each		442.20
(b)		Sewer connections above 300 mm id upto 700 mm id	each		770.60
(c)		All types of sewer connections 700 mm id and above	each		1541.50
29.103		Extra for making connections of all sizes newly laid sewers within benching of fully charged sewers including plugging of sewer, dewatering & desilting of manholes etc. complete in all respects.			
(a)		with existing sewer of 300 mm id and below	each		1305.40
(b)		With existing sewer above 300 mm id upto 700 mm id	each		2052.80
(c)		with existing sewer of 700 mm id and above	each		4840.40

  
 Chief Engineer Punjab,  
 Water Supply & Sanitation Deptt.,  
 PATIALA.

  
 Superintending Engineer  
 W.S. & Sanitation Circle,  
 Ferozepur

  
 J.S. & Sanitation Engineer  
 W/S & S.S. Circle, Patiala  
 दि. 2  
 दि. 2

Standard cross-section of all types of SW pipe sewers along with factor for lean conc., cement bags and spun yarn per unit												
Pipe id mm	Pipe Thick mm	Wt./ pipe Kg app.	Type	Khutti		Lean Concrete		CC Cum/ metre length	Cem bags % joints	Spun Yarn % joints		
				b' width in cm	d' depth in cm	e' thick in cm	c' hounch in cm					
100	12	8	I	32.4	16.2	10.0	10.0	0.026	2.00	0.97		
			II	27.4	12.5	9.5	7.5	0.012				
			III	30.4	16.0	10.0	9.0	0.014				
			IV	42.4	42.4	15.0	15.0	0.053				
150	15	14	I	41.2	20.6	11.5	11.5	0.038	3.00	1.71		
			II	33.2	14.5	10.0	7.5	0.015				
			III	36.2	20.5	11.5	9.0	0.020				
			IV	48.2	48.2	15.0	15.0	0.065				
200	16	20.5	I	48.4	24.2	12.5	12.5	0.052	4.00	2.18		
			II	41.4	17.5	11.5	9.0	0.022				
			III	43.4	25.5	14.0	10.0	0.029				
			IV	53.4	53.4	15.0	15.0	0.076				
250	20	31	I	54.0	27.0	12.5	12.5	0.061	5.00	3.25		
			II	47.0	20.0	12.5	9.0	0.029				
			III	52.0	29.5	15.0	11.5	0.039				
			IV	59.0	59.0	15.0	15.0	0.089				

(Continue P-2) 1/6

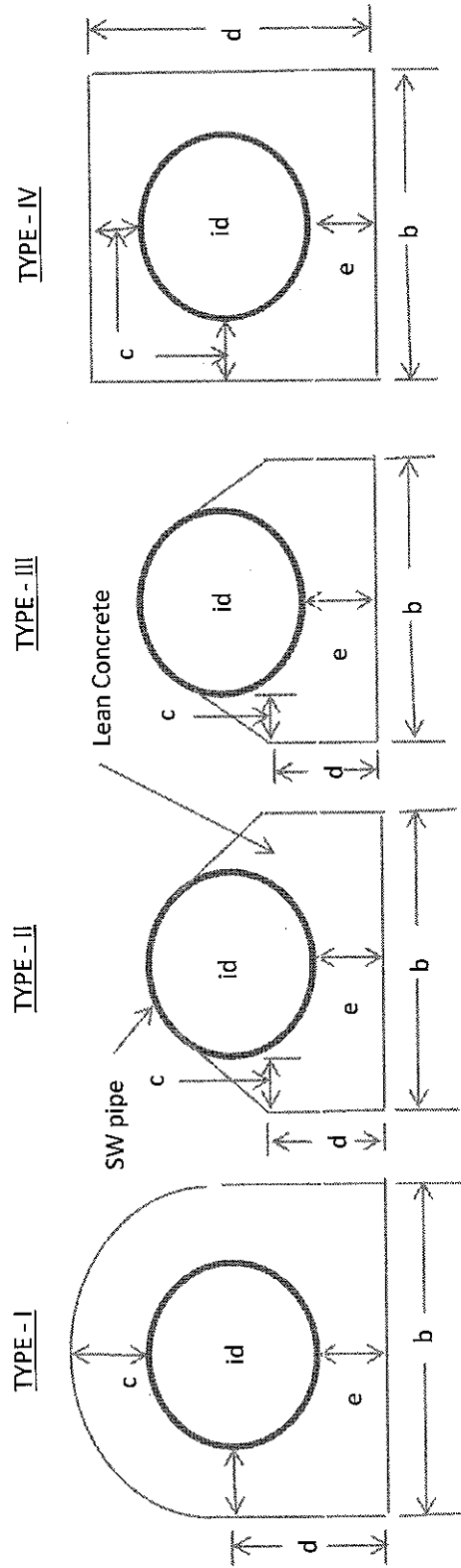
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Pipe id mm	Pipe Thick mm	Wt./ pipe Kg app.	Type	Khutti		Lean Concrete		CC Cum/ metre length	Cem bags % joints	Spun Yarn % joints
				b' width in cm	d' depth in cm	e' depth in cm	c' hounch in cm			
300	25	43	I	65.0	32.5	15.0	15.0	0.088	6.50	3.92
			II	55.0	24.0	15.0	10.0	0.040		
			III	58.0	32.5	15.0	11.5	0.041		
			IV	65.0	65.0	15.0	15.0	0.103		
400	35	80	I	77.0	38.5	15.0	15.0	0.332	11.00	6.90
			II	70.0	27.0	15.0	11.5	0.170		
			III	70.0	38.5	15.0	11.5	0.200		
			IV	77.0	77.0	15.0	15.0	0.400		
450	37	98	I	82.6	41.3	15.0	15.0	0.123	13.00	7.66
			II	75.6	28.0	15.0	11.5	0.062		
			III	77.6	41.5	15.0	13.5	0.072		
			IV	82.6	82.6	15.0	15.0	0.146		
600	43	142	I	96.5	99.2	15.0	15.0	0.473	20.00	17.05
			II	93.4	53.0	15.0	12.5	0.162		
			III	95.4	50.0	15.0	13.5	0.338		
			IV	96.5	96.5	15.0	15.0	0.564		

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(NOT TO SCALE)

**CROSS - SECTIONS OF S.W. PIPE SEWERS**



2

# CHAPTER-30

## SANITARY INSTALLATION

## Basic Rate of Material for Chapter No. 30 (SANITARY INSTALLATIONS)

Sr. No	Item Description	Make	Unit	Net rate
1	2	3	4	5
1	W.C. Indian type Pan 580mm	Hindware	Each	902.00
2	Vitreous China ware pair of footrest.	Hindware	Each Pair	148.00
3	Cistern PVC 10 Ltr. Capacity ISI marked IS 7231:1994	Hindware	Each	787.00
4	Cistern chinware 10 Ltr. Capacity ISI marked with PVC internal fitting	Hindware	Each	2214.00
5	Cistern chinware (Dual flush) 10 Ltr. Capacity ISI marked with PVC internal fitting	Hindware	Each	2624.00
6	CP Brass Flush Pipe 32mm dia		Each	390.00
7	Accessory fittings in Chinaware flushing cistern 10 Litres capacity.	Hindware	Each	763.00
8	Cistern chinware (Dual flush) 10 Ltr. Capacity ISI marked with PVC internal fitting	Hindware	Each	1246.00
	PVC accessory fittings for dual flush suitable for extended wall mounted Chinaware flushing cistern.	Hindware	Each	1673.00
8 a)	Concealed Cistern including handle	Hindware	Each	6695.00
9	Angle Iron support 32 x 32 x 5 mm for wash basin/Chinaware Cistern.		Each Pair	85.00
10	Angle Iron support 40 x 40 x 5 mm for sink		Each Pair	200.00
11	W.C. Indian type Orisa 580mm (White)	Hindware	Each	1525.00
12	W.C. Anglo Indian With P Trap or S Trap	Hindware	Each	3264.00
13	Seat and Lid in coloured plastic (solid)	Hindware	Each	459.00
14	Seat and Lid in black plastic (solid)		Each	325.00
15	Seat cover for wall hanging/Anglo Indian seat	Hindware	Each	631.00
16	C.P brass Long bend 32mm		Each	600.00
17	C.P brass Short bend 32mm		Each	290.00
18	P.V.C Long bend 32mm		Each	80.00
19	P.V.C Short bend 32mm		Each	40.00

*[Signature]*  
HOM.

Sr. No	Item Description	Make	Unit	Net rate
1	2	3	4	5
20	Chinaware E.W.C. With S Trap	Hindware	Each	1337.00
21	Chinaware extended wall mounted E. W.C. type suite single syphonic matching cistern 10 Ltr. Capacity and P.V.C cover.	Hindware	Each	8241.00
22	Chinaware wall mounted E.W.C type suite single syphonic without cistern and matching P.V.C cover.	Hindware	Each	4510.00
23	Brass Studs for wall mounted E.W.C		Each Pair	500.00
24	Brass Studs for wash basin		Each Pair	50.00
25	C.P Brass metro pole flush valve push type 32mm dia	Jaquar	Each	2520.00
26	Jet spray with 1mtr long PVC pipe and C.P. nuts, CP brass patti	Viking	Each	316.00
27	Jet spray with 1 mtr long PVC pipe and PTMT nuts, CP brass patti	Prayag	Each	192.00
28	Urinals			
	Indian make flat back or angular lipped front urinals size 460x350x260mm	Hindware	Each	976.00
	Indian make large flat back or angular lipped front urinal 610 mm high x 410mm x 380mm	Hindware	Each	3231.00
	Vitreous Chinaware white urinal with concealed or in built P-trap	Hindware	Each	6421.00
29	Chinaware white lavatory suites			
	Size 450 mm x 300 mm	Hindware	Each	828.00
	Size 550 mm x 400 mm	Hindware	Each	976.00
	Size 630 mm x 450 mm	Hindware	Each	2214.00
	Size 510mm x 400mm	Hindware	Each	853.00
	Size 560mm x 430mm	Hindware	Each	1296.00
	Size 560mm x 410mm (above counter oval)	Hindware	Each	1673.00
	Size 49cm dia (above counter round)	Hindware	Each	2173.00
	Size 630mm x 500mm (above counter)	Hindware	Each	3182.00
	Size 560mm x 450mm (Under counter oval)	Hindware	Each	1673.00
	Size 44cm dia (Under counter round)	Hindware	Each	1738.00
30 (A)	Chinaware standard pedestal	Hindware	Each	1550.00

  
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Sr. No	Item Description	Make	Unit	Net rate
<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
30 (B)	Chinaware partition			
	size 680mm x 300mm	Hindware	Each	1451.00
	size 835mm x 355mm	Hindware	Each	3141.00
31	Marble partition 15mm x 20mm thick			
	size 375mm x 750mm		Each	690.00
32	Granite partition 15mm x 20mm thick			
	size 375mm x 750mm		Each	1185.00
33	C.P. brass waste 32mm dia	Viking	Each	229.00
34	C.P. brass waste 40mm dia	Viking	Each	316.00
35	C.P. brass waste dome type 32mm	Viking	Each	295.00
36	C.P. brass Spreader	Viking	Each	296.00
37	PTMT 15 mm Urinal spreader size 95x69x100 mm	Prayag	Each	137.00
38	PTMT urinal cock 15 mm nominal bore, 80mm long 42 mm high and 30mm wide	Prayag	Each	105.00
39	CP Brass Flexible tube Connection 300mm long		Each	170.00
40	C.P. brass Urinal cup set of two		Each	60.00
41	C.P. Pillar cock	ESS ESS (Croma range)	Each	692.00
	Auto close pillar cock	ESS ESS	Each	1764.00
	Auto close Bib Cock	ESS ESS	Each	1652.00
	Urinal angle valve	ESS ESS	Each	1684.00
42	C.P brass basin mixer	ESS ESS (Croma range)	Each	2288.00
43	C.P brass elbow pillar tap	ESS ESS (Croma range)	Each	1616.00
44	G.I. waste pipe 32 mm dia		Each	170.00
45	G.I waste pipe 40 mm dia waste pipe		Each	200.00
46	P.V.C waste pipe		Each	70.00
47	chromium plated brass, Bottle trap 32mm dia.	ESS ESS (Croma range)	Each	880.00



Sr. No	Item Description	Make	Unit	Net rate
1	2	3	4	5
48	PTMT Bottle Trap for Wash basin and sink 31mm dia	Prayag	Each	383.00
49	Chinware Sink			
	a) 610x450x200mm	Hindware	Each	4699.00
	b) 610x450x250mm	Hindware	Each	5240.00
50	Best quality stainless steel sinks 1mm thickness , grade 304 (18/8)			
a	Size 600 mm x 450 mm x 225 mm (Net size excluding flat edge) including waste coupling.	Diamond make	Each	6195.00
b	Size 530 mm x 450 mm x 175 mm (Net size excluding flat edge) including waste coupling.	Diamond make	Each	5700.00
c	Sink with drain board overall size 1050x450mm bowl size 425x350x188mm	Diamond make	Each	6710.00
d	Double bowl Overall size 1100x475 bowl size 463x388x200mm	Diamond make	Each	12375.00
e	Double bowl sink Overall size 1300x500 bowl size 550x400x230mm	Diamond make	Each	13395.00
51	Chinaware white laboratory sinks			
a)	Size 450 mm x 300 mm x 150 mm	Hindware	Each	2042.00
b)	Size 530mmx430mmx180mm	Hindware	Each	3149.00
52	C.P brass shower including arm with 15mm i/d inlet.		Each	720.00
53	Paper holders			
	C.P. Brass toilet paper holder.	ESS ESS (Croma range)	Each	788.00
	Vitreous China ware white toilet paper holder.	Hindware	Each	394.00
54	Grab Bar			
	450mm	ESS ESS (Croma range)	Each	1132.00
55	Best Indian make towel rails			
	15mm dia c.p brass adjustable			
	600 mm long	ESS ESS (Croma range)	Each	1084.00
56	Acrylic towel rails with 20mm dia rail			
	600 mm long		Each	275.00
	C.P. brass towel bracket (610mm long)	ESS ESS (Croma range)	Each	2480.00

Sr. No	Item Description	Make	Unit	Net rate
1	2	3	4	5
57	C.P brass towel ring.	ESS ESS (Croma range)	Each	648.00
58	CP Acrylic shelve with CP bracket and C.P. guard rail			
	C.P. brass Acrylic Shelf Size 560mmx130mm	ESS ESS (Croma range)	Each	1380.00
	C.P. brass Acrylic Corner Size 300mm x 300mm		Each	1500.00
59	Indian make soap dish			
	C.P Brass Soap dish	ESS ESS (Croma range)	Each	592.00
60	Best indian make bevelled edge 5mm thick mirror with 4 no S/S studs			
	Indian Make			
	600 mm x 450 mm		Each	510.00
	550 mm x 400 mm		Each	460.00
	Size 1500mmx600mm		sqm	1460.00
61	Khunti			
	C.P. Brass khunti			
	With 3 pegs		Each	395.00
	With 4 pegs		Each	440.00
	With 6 pegs		Each	475.00
62	Aluminium Khunti			
	With 3 pegs		Each	85.00
	With 4 pegs		Each	132.00
	With 6 pegs		Each	180.00
63	C.P. Brass flange	Viking	Each	38.00
64	C.P. Brass extension piece, 25mm long to 50mm long	Viking	Each	59.00
65	15 mm i/d C.P. brass bib cock of best quality			
	Bib cock long nose/long body without flange	ESS ESS (Croma range)	Each	864.00
	Bib cock without flange	ESS ESS (Croma range)	Each	668.00
	Bib cock push type	Viking	Each	532.00
	Brass Bib cock/Stop cock 15mm x 400 gm		Each	330.00
	Brass Nozel Bib cock 15mm x 250 gm		Each	280.00
	PTMT Tap / Bib Cock	Prayag	Each	132.00
	PTMT Pillar Tap	Prayag	Each	198.00
	PTMT Push Cock	Prayag	Each	103.00

Sr. No	Item Description	Make	Unit	Net rate
1	2	3	4	5
	C.I. 15mm i/d bib tap with stainless steel spindle	ISI marked	Each	98.00
	C.I. 20 mm i/d bib tap with stainless steel spindle	ISI marked	Each	188.00
	C.I.25mm i/d bib tap with stainless steel spindle	ISI marked	Each	309.00
	<b>C.P. Brass fittings:</b>			
	Providing and fixing in position best Indian make C.P. Brass Pillar Cock	ESS ESS (Victorian range)	Each	1328.00
	C.P. brass Bib cock with Wall flange	ESS ESS (Victorian range)	Each	1228.00
	C.P.brass 15mm Angular stop cock with Wall flange	ESS ESS (Victorian range)	Each	1008.00
	15mm Concealed stop cock with adjustable wall flange.	ESS ESS (Victorian range)	Each	1316.00
	C.P. brass Central hole basin mixer without popup system with 450mm long flexible hose	ESS ESS (Victorian range)	Each	3288.00
	C.P. Brass Wall mixer with Non telephonic shower arrangement.	ESS ESS (Victorian range)	Each	3296.00
	C.P brass Sink mixer with swinging spout.(Wall mounted)	ESS ESS (Victorian range)	Each	3308.00
	C.P brass Sink mixer with regular spout table mounted with 450mm long flexible hose	ESS ESS (Victorian range)	Each	3536.00
	C.P. brass Sink Cock with regular swinging spout and wall mounted	ESS ESS (Victorian range)	Each	1908.00
	C.P. brass overhead shower 3 flow with shower arm with 15mm i/d Inlet.	ESS ESS	Each	1436.00
	<b>C.P. Brass Accessories:</b>			
	C.P. brass towel Rails size 15mm dia 610mm long	ESS ESS (Victorian range)	Each	1316.00
	C.P brass towel ring	ESS ESS (Victorian range)	Each	752.00
	C.P. brass soap dish	ESS ESS (Victorian range)	Each	852.00
	C.P. brass toilet paper holder	ESS ESS (Victorian range)	Each	968.00
	CP brass Acrylic Shelf size 460mmx130mm	ESS ESS (Victorian range)	Each	1720.00
	C.P. brass towel bracket (610mm long)	ESS ESS (Victorian range)	Each	3020.00
65 a)	Single lever concealed divertor of bath and shower system	ESS ESS (Croma range)	Each	3512.00

Sr. No	Item Description	Make	Unit	Net rate
1	2	3	4	5
	Single lever concealed divertor for bath and shower system (high flow)	ESS ESS (New dune)	Each	4216.00
	Single lever concealed divertor for bath and shower system (3 inlet flow)	ESS ESS (New dune)	Each	4312.00
65 a)	CP Brass bath tub spout with wall flange	ESS ESS (Croma range)	Each	972.00
66	C.P.brass stop cock			
	15 mm stop cock			
	stop cock male & female.end	ESS ESS (Croma range)	Each	600.00
	Concealed stop cock with flange.	ESS ESS (Croma range)	Each	960.00
	Angle valve	ESS ESS (Croma range)	Each	648.00
67	C.P. brass 20 mm			0.00
	Concealed Stop cock with flange.	ESS ESS (Croma range)	Each	1000.00
68	PTMT stop cock			
	15 mm stop cock			
	stop cock male & female end	Prayag	Each	132.00
	Concealed stop cock with flange.	Prayag	Each	189.00
	Angle valve	Prayag	Each	155.00
	20 mm stop cock			
	stop cock male & female end	Prayag	Each	150.00
	Concealed Stop cock with flange.	Prayag	Each	205.00
69	C.P.brass liquid soap container of best quality		Each	575.00
70	Acrylic liquid soap container of best quality		Each	345.00
71	15 mm C.P brass laboratory cock swan neck of best quality			
	One way	Viking	Each	968.00
	Two way	Viking	Each	1256.00
	Three way	Viking	Each	1752.00
72	C.P brass wall mixer 15 mm.			
	With telephonic shower	ESS ESS (Croma range)	Each	3036.00
	Without telephonic shower	ESS ESS (Croma range)	Each	2308.00
73	PVC flexible tube connection			
	Size 15mmx300mm with CP brass nut	Viking	Each	104.00
	Size 15mmx375mm with CP brass nut		Each	104.00
	Size 15mmx450mm with CP brass nut	Viking	Each	104.00
	Size 15mmx300mm with PTMT nut	Prayag	Each	45.00
	Size 15mmx375mm with PTMT nut	Prayag	Each	53.00
	Size 15mmx450mm with PTMT nut	Prayag	Each	61.00

*[Signature]* 125

Sr. No	Item Description	Make	Unit	Net rate
1	2	3	4	5
	Size 15mmx600mm with CP brass nut	Viking	Each	114.00
	Size 15mmx900mm with CP brass nut	Viking	Each	131.00
	Size 15mmx600mm with PTMT nut	Prayag	Each	71.00
	Size 15mmx900mm with PTMT nut	Prayag	Each	98.00
74	CP Copper tube connection			
	size 15mmx300mm with CP brass nut	Viking	Each	192.00
	size 15mmx375mm with CP brass nut	Viking	Each	211.00
	size 15mmx450mm with CP brass nut	Viking	Each	222.00
	size 15mmx600mm with CP brass nut	Viking	Each	282.00
75	4mm thick hardboard sheet		sqm	160.00
76	Sink Mixer with swivel spout (Wall Mounted)	ESS ESS (Croma range)	Each	2352.00
	C.P brass Sink mixer swinging spout (table mounted) with 450mm long flexible hose	ESS ESS (Croma range)	Each	2360.00
	C.P. brass Sink Cock swinging casted spout (table mounted)	ESS ESS (Croma range)	Each	1444.00
77	Sink cock	ESS ESS (Croma range)	Each	1152.00
78	Mirror with Plastic moulded frame including screws size 550mmx400mm		Each	200.00
	Mirror 5mm thick Size 1500mmx600mm		Each	900.00
	Polystyrene moulding frame of 40 to 50mm size		Each	200.00
79	Stainless Steel Health/Faucet	Jaquar	Each	810.00
80	CP Hexa Nipple 15mm	Viking	Each	46.00
81	Senso urinal	Hindware	Each	12931.00
82	Auto cistern for Urinal	Hindware	Each	1058.00
83	Chinaware extended wall mounted E.W.C. type suite single syphonic with matching chinaware cistern 10 ltr. Capacity. (without cistern fitting)	Hindware	Each	5937.00
84	Chinaware wall mounted E.W.C type suite single syphonic cistern (without cistern fitting)	Hindware	Each	3682.00
85	C.P. brass screw		Each	20.00

Sr. No	Item Description	Make	Unit	Net rate
1	2	3	4	5
86	Sockets, threading & clamps etc		Each	100.00
87	Vitreous Chinware flushing cistern 10 Litres capacity . (without cistern fitting)	Hindware	Each	1451.00
88	Vitreous Chinware dual flushing cistern 10 Litres capacity. (without cistern fitting)	Hindware	Each	1378.00
89	C.P. brass overhead shower 1 flow with shower arm with 15mm i/d Inlet.	ESS ESS (Croma range)	Each	984.00
	C.P. brass overhead shower 1 flow without shower arm with 15mm i/d Inlet.	ESS ESS (Croma range)	Each	664.00
90	Vitreous Chinware auto cistern (without cistern fitting)	Hindware	Each	984.00
91	HCI Pipe			
	150mm i/d	NECO	Mtr.	1456.20
	100mm i/d	NECO	Mtr.	803.70
	75mm i/d	NECO	Mtr.	686.70
	50mm i/d	NECO	Mtr.	530.10
92	Centrifugally Cast Iron Pipe			
	150mm i/d	NECO	Mtr.	1464.30
	100mm i/d	NECO	Mtr.	848.70
	75mm i/d	NECO	Mtr.	691.20
93	SWR UPVC Soil waste pipe			
	Type A			
	160mm o/d	Supreme	Mtr.	377.25
	110mm o/d	Supreme	Mtr.	150.75
	90mm o/d	Supreme	Mtr.	133.50
	75mm o/d	Supreme	Mtr.	84.00
	Type B			
	160mm o/d	Supreme	Mtr.	469.50
	110mm o/d	Supreme	Mtr.	234.00
	90mm o/d	Supreme	Mtr.	187.50
	75mm o/d	Supreme	Mtr.	158.25
94	CI Gully Trap Cover	NECO	Each	501.30
95	HCI Grating 150mm x 150mm		Each	70.00
96	PVC Grating 150mm x 150mm		Each	55.00
97	Pig Lead		Kg.	175.00
	Spun Yarn		Kg.	70.00
	Fuel Wood		Qtl.	1000.00
	Kerosene Oil		Ltr.	50.00
98	Drip Seal (PJS -43)		Kg.	80.00
99	MS Holder Bats Clamps			
	100mm i/d		Each	115.00
	75mm i/d		Each	100.00
100	HCI Floor Trap			
	75mm i/d Deep Seal	NIC	Each	580.50
	75mm i/d Shallow Seal	NIC	Each	409.50
	100mm i/d Shallow Seal	NIC	Each	535.50
101.00	SS Grating with Frame	Viking	Each	62.40
102	HCI Specials for Soil Waste Pipes			

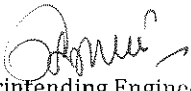
Sr. No	Item Description	Make	Unit	Net rate
1	2	3	4	5
	For 100mm i/d Pipes			
	HR Bend	NECO	Each	473.40
	Single Junction With Door	NECO	Each	684.90
	Single Junction Plain	NECO	Each	608.40
	Bend With Door	NECO	Each	473.40
	Bend Plain	NECO	Each	426.60
	Cowl	NECO	Each	356.40
	Door piece		Deleted	
	Collar	NECO	Each	356.40
	Off Set With 75mm Projection	NECO	Each	423.00
	Off Set With 100mm Projection		Deleted	
	Off Set With 150mm Projection	NECO	Each	545.40
	P Trap	NECO	Each	732.60
	100mm i/d Tail Piece 300mm		Deleted	
	100mm i/d Tail Piece 600mm		Deleted	
	100mm i/d Tail Piece 900mm		Deleted	
	100mm i/d Tail Piece 1200mm		Deleted	
	For 75mm i/d Pipes			
	HR Bend	NECO	Each	385.20
	Single Junction With Door	NECO	Each	456.30
	Single Junction Plain	NECO	Each	420.30
	Bend With Door	NECO	Each	385.20
	Bend Plain	NECO	Each	334.80
	Cowl	NECO	Each	264.60
	Door piece		Deleted	
	Collar	NECO	Each	221.40
	Off Set With 75mm Projection	NECO	Each	336.60
	Off Set With 100mm Projection		Deleted	
	Off Set With 150mm Projection	NECO	Each	454.50
	75mm i/d Tail Piece 300mm		Deleted	
	75mm i/d Tail Piece 600mm		Deleted	
	75mm i/d Tail Piece 900mm		Deleted	
	75mm i/d Tail Piece 1200mm		Deleted	
103	Centrifugally Cast Iron Specials for soil waste			
	For 100mm i/d Pipes			
	HR Bend	NECO	Each	477.00
	Single Junction With Door	NECO	Each	595.80
	Single Junction Plain	NECO	Each	516.60
	Bend With Door	NECO	Each	432.00
	Bend Plain	NECO	Each	386.10
	Cowl	NECO	Each	327.60
	Door piece		Deleted	
	Collar	NECO	Each	308.70
	Off Set With 75mm Projection	NECO	Each	357.30
	Off Set With 100mm Projection		Deleted	
	Off Set With 150mm Projection	NECO	Each	504.90
	P Trap	NECO	Each	650.70
	100mm i/d Tail Piece 300mm		Deleted	
	100mm i/d Tail Piece 600mm		Deleted	
	100mm i/d Tail Piece 900mm		Deleted	
	100mm i/d Tail Piece 1200mm		Deleted	
	For 75mm i/d Pipes			
	HR Bend	NECO	Each	371.70
	Single Junction With Door	NECO	Each	380.70
	Single Junction Plain	NECO	Each	332.10
	Bend With Door	NECO	Each	311.40

Sr. No	Item Description	Make	Unit	Net rate
1	2	3	4	5
	Bend Plain	NECO	Each	262.80
	Cowl	NECO	Each	247.50
	Door piece		Deleted	
	Collar	NECO	Each	197.10
	Off Set With 75mm Projection	NECO	Each	268.20
	Deleted			
	Off Set With 150mm Projection	NECO	Each	347.40
	75mm i/d Tail Piece 300mm		Deleted	
	75mm i/d Tail Piece 600mm		Deleted	
	75mm i/d Tail Piece 900mm		Deleted	
	75mm i/d Tail Piece 1200mm		Deleted	
104	SWR UPVC Specials for Soil waste pipe			
	<b>160mm o/d</b>			
	Single Junction With Door	Supreme	Each	351.75
	Single Junction Plain	Supreme	Each	392.25
	Bend With Door	Supreme	Each	270.75
	Bend Plain	Supreme	Each	243.00
	Cowl	Supreme	Each	48.75
	Collar	Supreme	Each	190.50
	Single Y-junction	Supreme	Each	512.25
	Reducing tee ring type 160mmx110mm	Supreme	Each	342.00
	Reducing plug tee ring type 160mmx110mm	Supreme	Each	357.75
	Reducing single Y 160mmx110mm	Supreme	Each	394.50
	<b>110mm o/d</b>			
	Door cap	Supreme	Each	39.00
	Single Junction With Door	Supreme	Each	142.50
	Single Junction Plain	Supreme	Each	120.75
	Bend With Door	Supreme	Each	110.25
	Bend Plain	Supreme	Each	87.75
	Cowl	Supreme	Each	21.75
	Reducer 110mm x 75mm	Supreme	Each	65.25
	Collar	Supreme	Each	60.00
	P Trap/Floor trap 110mm x110mm	Supreme	Each	256.50
	P Trap/floor trap 110mm x75mm	Supreme	Each	237.75
	Single Y-junction	Supreme	Each	141.00
	Single Y-junction with plug	Supreme	Each	225.00
	Double Y-junction	Supreme	Each	214.50
	Double Y-junction with plug	Supreme	Each	291.75
	110mm x75mm reducer tee	Supreme	Each	131.25
	Cross tee/Double tee	Supreme	Each	148.50
	Nahani trap with jali 110mmx110mm	Finolex	Each	86.04
	Nahani trap with jali 110mmx90mm	Finolex	Each	71.37
	Nahani trap with jali 110mmx75mm	Finolex	Each	64.62

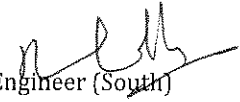


Sr. No	Item Description	Make	Unit	Net rate
1	2	3	4	5
	Reducing tee ring type 110mmx90mm with 90mm o/d	Supreme	Each	159.00
	Door cap	Supreme	Each	32.25
	Single Junction With Door	Supreme	Each	136.50
	Single Junction Plain	Supreme	Each	118.50
	Bend With Door	Supreme	Each	97.50
	Bend Plain	Supreme	Each	81.75
	Cowl	Supreme	Each	21.75
	Cross plain tee	Supreme	Each	140.25
	Collar	Supreme	Each	65.70
	Single Y-junction	Supreme	Each	130.50
	75mm o/d			
	Door cap	Supreme	Each	29.25
	Single Junction With Door	Supreme	Each	71.25
	Single Junction Plain	Supreme	Each	59.25
	Bend With Door	Supreme	Each	59.25
	Bend Plain	Supreme	Each	42.75
	Cowl	Supreme	Each	12.75
	Collar	Supreme	Each	32.25
	P Trap/Floor trap 75mmx75mm	Supreme	Each	132.00
	Single Y-junction	Supreme	Each	74.25
	Single Y-junction with plug	Supreme	Each	124.50
	Double Y-junction	Supreme	Each	115.50
	Double Y-junction with plug	Supreme	Each	162.00
	Cross tee/Double tee	Supreme	Each	109.50
105	Water Proofing Treatment in dpressed Toilet			
106	Water Proofing Treatment in WC portion of			
107	Cutting Opening in Marble for WHB & Sink			
108	Cutting Chase in Brick Walls		Rmt.	
109	Dismantling HCI Pipes		Rmt.	
110	Dismantling HCI Special		Each	
111	Dismantling Sanitary Fixtures & Fittings			
112	Dismantling MS Clamps		Each	
113	Painting HCI Pipe with Black Bitumastic Paint		Rmt.	
114	Painting HCI Pipe with Black Bitumastic Paint		Rmt.	
115	Painting HCI Pipes with Synthetice Enamel Paint		Rmt.	
116	Painting HCI Pipes with Synthetice Enamel Paint		Rmt.	
117	Dismantling Wall Tiles			
118	Dismantling Floor Tiles			
119	Automatic Brass Ball Cock with rod and Plastic Plastic Ball Valve with Plastic Ball			
	15mm i/d	Prayag	Each	185.12
	20mm i/d	Prayag	Each	275.90
	25mm i/d	Prayag	Each	528.66

Sr. No	Item Description	Make	Unit	Net rate
1	2	3	4	5
	32mm i/d	Prayag	Each	728.02
	40mm i/d	Prayag	Each	881.10
	50mm i/d	Prayag	Each	1317.20
	Brass Ball cock with rod and Plastic Ball			
	15mm i/d	Viking	Each	328.00
	20mm i/d	Viking	Each	368.00
	25mm i/d	Viking	Each	736.00
	32mm i/d	Viking	Each	1085.60
	40mm i/d	Viking	Each	1296.00
	50mm i/d	Viking	Each	2400.00
120	HDPE Water Storage Tank			
	Triple Layer		Ltr.	9.50
	Double Layer		Ltr.	6.60
	HDPE Water Storage Tank Cover			
	Upto 500 ltr capacity tank		Each	250.00
	For 1000 ltr capacity tank and above		Each	350.00
121	Tank Nipple	New Item	Each	
	15 mm i/d	SVW	Each	55.95
	20 mm i/d	SVW	Each	83.25
	25 mm i/d	SVW	Each	129.75
	32 mm i/d	SVW	Each	184.50
	40 mm i/d	SVW	Each	244.50
	50 mm i/d	SVW	Each	397.50
122	Gully Trap with Chamber			
	100mm i/d S.W. Gully Trap		Each	160.00
	100mm i/d H.C.I. Gully Trap	NIC	Each	801.00
	150mm i/d S.W. Gully Trap		Each	190.00
123	China Ware White Channel 600mm x 100mm	CERA	Each	412.50
124	Deleted			
125	Storage Type Automatic Electric Water Heater			
	25 Ltr. Cap.	Recold	Each	7105.50
	35 Ltr. Cap.	Recold	Each	7875.00
	50 Ltr. Cap.	Venus	Each	10755.00
	Brass Studs (Pair)	Viking	Each	80.00

  
 Superintendent Engineer,  
 W/S & Sanitation Circle,  
 Patiala

Superintendent Engineer,  
 W/S & Sanitation Circle,  
 Chandigarh

  
 Chief Engineer (South)  
 W/S & Sanitation Punjab  
 Patiala

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CHAPTER NO. 1

DAILY WAGES

Sr. No.	Description	Activities	Unit	Rates
1	2		3	4
L-1	Air-Conditioner/Refrigerator Mechanic		Per Day	223.36
L-2	Bajri Spreader (Tarring Work)		Per Day	151.44
L-3	Bar Bender		Per Day	190.00
L-4	Bhisti with Mushak		Per Day	173.76
L-5	Blacksmith (1st Class)		Per Day	223.36
L-6	Blacksmith (2nd Class)		Per Day	190.00
L-7	Blaster		Per Day	151.44
L-8	Boatman		Per Day	168.08
L-9	Breaker (Hole driller)		Per Day	151.44
L-10	Brick Layerer (1st Class)		Per Day	305.14
L-11	Brick Layerer (2nd Class)		Per Day	270.64
L-12	Bucketman (Tarring work)		Per Day	151.44
L-13	Carpenter (1st Class)		Per Day	223.36
L-14	Carpenter (2nd Class)		Per Day	190.00
L-15	Driver (L.M.V.)		Per Day	200.00
L-16	Driver (H.M.V.)		Per Day	223.36
L-17	Diver		Per Day	335.06
L-18	Electrician		Per Day	164.69
L-19	Electrical/Mechanical/Chargeman		Per Day	164.69
L-20	Fitter, Turner & Fitter Pipe (1st Class)		Per Day	223.36
L-21	Fitter, Turner & Fitter Pipe (2nd Class)		Per Day	190.00
L-22	Fitter Helper		Per Day	136.69
L-23	Floor Polisher		Per Day	173.76
L-24	Glazier (Glassman) / Grinder (for rubbing) /		Per Day	164.69
L-25	Hammer Man		Per Day	151.44
L-26	Handle Man (Tarring work)		Per Day	151.44
L-27	Lineman (1st Class)		Per Day	181.86
L-28	Lineman (2nd Class)		Per Day	174.53
L-29	Mate / Supervisor		Per Day	151.44
L-30	Mason for plaster of paris work (1st Class)		Per Day	223.36
L-31	Mazdoor (Skilled - Upper)		Per Day	305.14
L-32	Mazdoor (Skilled - Lower) / Mali		Per Day	270.64
L-33	Mazdoor (Semi skilled - Upper)		Per Day	270.64
L-34	Mazdoor (Semi skilled - Lower) / Dresser		Per Day	240.64
L-35	Mazdoor (Un-skilled) / Chowkidar / Cleaner		Per Day	240.64
L-36	Helper (Skilled worker - Upper)		Per Day	305.14
L-37	Helper (Skilled worker - Lower) / Welder		Per Day	270.64
L-38	Mazdoor (Woman)		Per Day	136.69

Sr. No.	Description	Activities	Unit	Rates
1	2		3	4
L-39	Operator		Per Day	223.36
L-40	Painter (1st Class)		Per Day	305.14
L-41	Painter (2nd Class)		Per Day	270.64
L-42	Para Medical Personnal		Per Day	225.00
L-43	Plumber (1st Class)		Per Day	344.84
L-44	Plumber (2nd Class)		Per Day	270.64
L-45	Spray (for Tar, Bitumen, etc.)		Per Day	151.44
L-46	Stone Chisler with Cutter (1st Class)		Per Day	223.36
L-47	Sewerman		Per Day	160.96
L-48	Well Sinker		Per Day	335.06
L-49	White Washer (1st Class)		Per Day	173.76
L-50	White Washer (2nd Class)		Per Day	151.44



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Sr. No.	Description	Activities	Unit	Rates
1	2		3	4
1.25	Chowkidar		Per Day	
1.26	Cleaner all types		Per Day	
1.33	Driller for blasting		Per Day	
1.43	Fitter and Turner (1st Class)		Per Day	
1.44	Fitter and Turner (2nd Class)		Per Day	
1.61	Mali Hedge Cutter		Per Day	
	Medical Officer		Per Day	
1.84	Plasterer Mason (1st Class)		Per Day	
1.85	Plasterer Mason (2nd Class)		Per Day	
1.105	Welder		Per Day	

**CHAPTER NO. 30**  
**SANITARY INSTALLATIONS**


**Notes :-**

(i)	All the labour rates provided under this chapter includes the carriage of material within a distance of 100mtr from the site.
(ii)	The labour as well as through rates provided under this chapter include the wastage and breakage of various material during construction
(iii)	Provision has been made under this chapter for sanitary fittings of approved make presently available in the market. In this connection the Superintending Engineer will circulate from time to time the list of sanitary fittings of best Indian manufacture (approved by the department). Sanitary fittings of approved make (to the approval of Engineer-in-charge) will only be allowed to be used while executing the work.
(iv)	Material defect, execution defect or other defects if any on the part of the contractor, found at later stage which could not be traced while execution of work and are not part of maintenance, will remain the responsibility of the contractor to set right the same at his own cost, though he may have taken all his dues.
(v)	Through rates in Chapter 28 of PWD (CSR) are only for estimation purpose. The Allotment Authority (before the allotment of the works) will have to varify the prevailing lowest and reasonable rates from the open market after taking into account all discounts etc. offered by the supplier/manufacturer for supply in bulk. The entire responsibility of rates approved will be on the allotting authorities irrespective of the recommendations received by the allotting authority.


Sr. No.	Description	Unit	Plains		Sub-Mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
30.1	Providing and fixing in position Chinaware Indian type water closet size 580mm of approved make (to the approval of the Engineer-in-charge) consisting of pair of Chinaware foot rest, 10 ltr. PVC flushing cistern including cost of PVC long bend 32 mm dia complete in all respect and to the entire satisfaction of Engineer-in-charge.	each	1123.50	3640.00	1235.50	3752.50
30.2	Providing and fixing in position Chinaware Indian Orisa water closet size 580mm of approved make (to the approval of the Engineer-in-charge) consisting of 10 ltr. PVC flushing cistern including cost of PVC long bend 32 mm dia complete in all respect and to the entire satisfaction of Engineer-in-charge.	each	1123.50	4183.50	1235.50	4296.00
30.3	Providing and fixing in position Chinaware Anglo Indian water closet with P trap or S trap of approved make (to the approval of the Engineer-in-charge) consisting of 10 ltr. PVC flushing cistern, PVC short bend 32 mm dia including cost of seat cover complete in all respect and to the entire satisfaction of Engineer-in-charge.	each	1039.50	6397.00	1143.50	6501.00
30.4	Providing and fixing in position Chinaware European type water closet P trap or S trap of approved make (to the approval of the Engineer-in-charge) consisting of 10 ltr. PVC flushing cistern, PVC short bend 32 mm dia including cost of seat cover complete in all respect and to the entire satisfaction of Engineer-in-charge.	each	1039.50	3995.50	1143.50	4099.00

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Sr. No.	Description	Unit	Plains		Sub-Mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
30.5	Providing and fixing in position Chinaware wall hunged European type water closet with P trap or S trap of approved make (to the approval of the Engineer-in-charge) with or without 10 ltr. chinaware matching flushing cistern and seat cover complete in all respect and to the entire satisfaction of Engineer-in-charge.					
	a Chinaware extended wall mounted E.W.C. with matching chinaware cistern and seat cover complete in all respect.	each	1123.50	11126.00	1235.50	11238.50
	b Chinaware wall mounted E.W.C without cistern including seat cover complete in all respect.	each	1014.50	6747.50	1116.00	6849.00
30.6 (A)	Providing and fixing PVC flushing cistern 10 Litres capacity of approved make(to the approval of the Engineer-in-charge) including PVC fittings complete.	each	123.00	1024.00	135.50	1036.00
30.6 (B)	i) Providing and fixing vitreous Chinware flushing cistern 10 Litres capacity of approved make(to the approval of the Engineer-in-charge) including PVC fittings and brackets complete.	each	205.50	2836.00	226.00	2857.00
	ii) Providing and fixing vitreous Chinware flushing cistern 10 Litres capacity (dual flush) of approved make(to the approval of the Engineer-in-charge) including PVC fittings and brackets complete.	each	205.50	3305.50	226.00	3326.00
	iii) Providing and fixing vitreous Chinware auto flushing cistern for urinal of approved make(to the approval of the Engineer-in-charge) complete in all respect.	each	205.50	1513.50	226.00	1534.00
	iv) Providing and fixing PVC accessory fittings in Chinaware flushing cistern 10 Litres capacity complete.	each	82.00	955.50	90.50	963.50
	v) Providing and fixing PVC accessory fittings for dual flush Chinaware flushing cistern 10 Litres capacity complete.	each	205.50	1631.00	226.00	1652.00
	vi) Providing and fixing PVC accessory fittings for dual flush suitable for extended wall mounted Chinaware flushing cistern complete.	each	205.50	2120.00	226.00	2140.50
30.6 (C)	Providing and fixing in position concealed cistern including flushing plate of approved make (to the approval of the Engineer-in-charge) complete in all respect.	each	796.50	8629.50	876.00	8709.00

  
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Sr. No.	Description	Unit	Plains		Sub-Mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
30.7 (A)	Providing and fixing C.P. brass 32mm long bend complete	each	30.50	717.00	33.50	720.00
30.7 (B)	Providing and fixing C.P. brass 32mm short bend complete	each	30.50	362.50	33.50	365.50
30.7 (c)	Extra for providing and fixing C.P. Brass long flush bend 32mm instead of PVC long bend.	each	---	595.00	---	595.00
30.7 (D)	Extra for providing and fixing C.P. Brass short flush bend 32mm instead of PVC short bend.	each	---	286.00	---	286.00
30.8	Providing and fixing jet spray with 2'-6" long PVC pipe.					
	a With C.P. Brass nut	each	82.00	444.00	90.50	452.00
	b With PTMT nut	each	82.00	302.00	90.50	310.00
30.9	Providing and fixing plastic hygenic seat cover with lid complete.					
	(a) White plastic hygenic seat cover with lid complete.	each	57.50	583.00	63.50	588.50
	(b) Black plastic hygenic seat cover with lid complete.	each	57.50	429.50	63.50	435.00
	(c) Plastic hygenic seat cover (premium quality) for wall hanging/Anglo Indian seat.		<b>New item added</b>			
		each	57.50	779.50	63.50	785.50
30.10	(a) Providing and fixing in position Chinaware Indian type water closet size 580mm of approved make (to the approval of the Engineer-in-charge) including Chinaware foot rest complete in all respect.		<b>New item added</b>			
		each	976.00	2500.50	1073.50	2598.00
	(b) Providing and fixing in position Chinaware Indian Orisa water closet size 580mm of approved make (to the approval of the Engineer-in-charge) complete in all respect.	each	976.00	3044.00	1073.50	3141.50
	(c) Providing and fixing in position Chinaware Anglo Indian water closet with P trap or S trap of approved make (to the approval of the Engineer-in-charge) complete in all respect.	each	628.50	4364.00	691.50	4426.50
	(d) Providing and fixing in position Chinaware European type water closet P trap or S trap of approved make (to the approval of the Engineer-in-charge) complete in all respect.	each	628.50	2158.50	691.50	2221.50

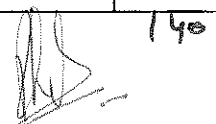
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Sr. No.	Description	Unit	Plains		Sub-Mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
30.11	Providing and fixing in position Metropole flush valve 32mm size dual flow (Concealed body) with exposed shut off provision and round plate complete in all respect.	each	164.50	3048.00	181.00	3064.50
30.12	Providing and fixing in position CP Brass Grab Bar of approved make (to the approval of the Engineer-in-charge) fixed in to wall with brass screws complete in all respect.					
	450 mm	each	102.50	1398.00	113.00	1408.50
30.13	Extra cost for pastel colour instead of white W.C. vitreous fixtures.					
	(a) Chinaware Indian type water closet size 580mm	each	---	796.00	---	796.00
	(b) Chinaware Indian Orisa water closet size 580mm	each	---	1095.00	---	1095.00
	(c) Chinaware Anglo Indian water closet with P trap or S trap	each	---	2189.50	---	2189.50
	(d) Chinaware European type water closet P trap or S trap	each	---	976.50	---	976.50
	(e) Chinaware extended wall mounted E.W.C. with matching chinaware cistern 10 ltr. Capacity.	each	---	3736.50	---	3736.50
	(f) Chinaware wall mounted E.W.C.	each	---	2317.50	---	2317.50
30.14	(a) Extra for providing and fixing 10 litres capacity Chinaware low level flushing cistern with PVC internal fitting, instead of 10 litres capacity PVC flushing cistern.	each	---	1633.00	---	1633.00
	(b) Extra for providing and fixing 10 litres capacity Chinaware low level dual flushing cistern with PVC internal fitting, instead of 10 litres capacity PVC flushing cistern.		<b>New item Added</b>			
		each	---	2102.00	---	2102.00
30.15	Providing & fixing in position vitreous Chinaware white flat back or angular lipped front urinal of approved make (to the approval of the Engineer-in-charge) of size 460 x 350 x 260 mm with C.P. brass tube connection 300 mm long complete in all respect.	each	821.50	2293.00	903.50	2375.50
30.16	Providing and fixing in position vitreous Chinaware white large flat back or angular lipped front urinal 610 mm high of approved make (to the approval of the Engineer-in-charge) (610 mm x 410 mm x 380mm) consisting of C.P. waste 32 mm dia and C.P. brass spreader, complete.	each	821.50	5195.00	903.50	5277.50


Sr. No.	Description	Unit	Plains		Sub-Mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
30.17 A	Providing and fixing in position vitreous Chinaware white senso urinal of approved make (to the approval of Engineer-in-charge) complete in all respect.		<b>New item Added</b>			
		each	821.50	16295.00	903.50	16377.50
30.17 B	Providing and fixing in position vitreous Chinaware white urinal with built in water seal, outlet to wall and water inlet from back of approved make (to the approval of Engineer-in-charge) complete in all respect.	each	821.50	8169.50	903.50	8251.50
30.18	Extra cost for pastel colour instead of vitreous Chinaware white Urinal fixtures.					
	(a) Chinaware white flat back or angular lipped front urinal size 460mmx350mmx260mm	each	---	614.50	---	614.50
	(b) Chinaware white large flat back or angular lipped front urinal 610 mm high (610 mm x 410 mm x 380mm)	each	---	2033.50	---	2033.50
	(c) Chinaware white senso urinal		<b>New item Added</b>			
		each	---	8138.50	---	8138.50
	(d) Chinaware white urinal with built in water seal, outlet to wall and water inlet from back		<b>New item Added</b>			
		each	---	4041.50	---	4041.50
30.19	(a) Extra for providing and fixing G.I. 32mm waste pipe for urinal including elbow, reducer etc complete in all respect.	each	82.00	391.00	90.50	399.50
	(b) Extra for providing and fixing G.I. 40mm waste pipe including elbow, reducer etc complete in all respect.	each	82.00	425.50	90.50	433.50
30.20	Providing and fixing PVC waste pipe 32mm complete in all respect.	each	41.00	121.00	45.00	125.50
30.21 (A)	Providing and fixing partition for different type of urinals.					
	i) 15 to 20 mm thick Dungri marble partition size 375mm x 750mm	each	193.00	1062.50	212.00	1082.00
	ii) 15 to 20 mm thick Granite stone partition size 375mm x 750mm	each	193.00	1629.00	212.00	1648.50
30.21 (B)	Vitreous white Chinaware Partition					
	i) Small partitions size 680mm x 300mm	each	205.50	1866.00	226.00	1886.50
	ii) Large partitions size 835mm x 355mm	each	205.50	3799.50	226.00	3820.50

Sr. No.	Description		Unit	Plains		Sub-Mountainous	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
30.21 (C)	i)	Extra cost for pastel colour for Vitreous Chinaware white small partition of size 680mmx300mm	each	---	913.00	---	913.00
	ii)	Extra cost for pastel colour for Vitreous Chinaware white large partition of size 835mmx355mm	each	---	1977.00	---	1977.00
30.22	a)	Providing and fixing standard size C.P brass flush pipe complete with fittings for urinals complete.	each	57.50	504.00	63.50	509.50
	b)	Providing and fixing C.P brass spreader complete with fittings for urinals complete.	each	57.50	396.00	63.50	402.00
30.23	Extra cost for pastel colour for cistern						
	a)	Vitreous Chinaware flushing cistern 10 Litres capacity	each	---	913.00	---	913.00
	b)	Vitreous Chinaware dual flushing cistern 10 Litres capacity	each	---	867.50	---	867.50
	c)	Vitreous Chinaware auto cistern	each	---	619.50	---	619.50
30.24	Providing and fixing Stainless steel health faucet complete in all respect.			<b>New item Added</b>			
			each	82.00	1009.00	90.50	1017.50
30.25		Blank					
30.26		Blank					
30.27		Blank					
30.28		Blank					
30.29		Blank					
30.30		Blank					
30.31		Blank					
30.32		Blank					
30.33 A		Providing and fixing PTMT 15 mm Urinal spreader of approved make (to the approval of Engineer-in-charge) size 95x69x100 mm with 1/2" BSP thread and shapes, weighing not less than 60gms. complete in all respect.	each	51.50	208.00	56.50	213.50
30.33 B		Providing and fixing PTMT urinal cock of approved make (to the approval of Engineer-in-charge) 15 mm nominal bore, 80mm long, 42 mm high and 30mm wide with BSP female threads weighing not less than 48gms of approved quality and colour complete in all respect.	each	51.50	171.50	56.50	176.50
30.34		Blank					
30.35		Blank					




Sr. No.	Description	Unit	Plains		Sub-Mountainous		
			Labour Rate	Through Rate	Labour Rate	Through Rate	
1	2	3	4	5	6	7	
30.36	Providing and fixing in position vitreous chinaware white lavatory suites of approved make (to the approval of Engineer-in-charge) including brass studs without CP fittings complete in all respect.		<b>New item Added</b>				
	i Size 450mmx300mm	each	411.00	1415.50	452.00	1456.50	
	ii Size 550 mm x 400 mm	each	411.00	1585.00	452.00	1626.00	
	iii Size 630 mm x 450 mm	each	411.00	3001.50	452.00	3042.50	
	iv Size 510mmx400 mm	each	411.00	1444.00	452.00	1485.00	
	v Size 560mm x 430mm	each	411.00	1951.00	452.00	1992.00	
	vi Size 560mm x 410mm (above counter oval)	each	411.00	2325.50	452.00	2366.50	
	vii Size 49 cm dia (above counter round)	each	411.00	2897.50	452.00	2938.50	
	viii Size 630mm x 500mm (above counter oval)	each	411.00	4052.00	452.00	4093.00	
	ix Size 560mm x 450mm (Under counter oval)	each	411.00	2325.50	452.00	2366.50	
	x size 44cm dia (under counter round)	each	411.00	2399.50	452.00	2440.50	
30.37	Providing and fixing in position vitreous chinaware white lavatory suites of approved make (to the approval of Engineer-in-charge) consisting of C.P. brass waste 32mm dia with one C.P. brass pillar tap complete in all respect.						
	i Size 450mmx300mm	each	575.00	2731.00	632.50	2788.50	
	ii Size 550 mm x 400 mm	each	575.00	2900.50	632.50	2958.00	
	iii Size 630 mm x 450 mm	each	575.00	4317.00	632.50	4374.50	
	iv Size 510mmx400 mm	each	575.00	2759.50	632.50	2817.00	
	v Size 560mm x 430mm	each	575.00	3266.50	632.50	3324.00	
	vi Size 560mm x 410mm (above counter oval)	each	633.00	3601.50	696.00	3664.50	
	vii Size 49 cm dia (above counter round)	each	633.00	4173.50	696.00	4237.00	
	viii Size 630mm x 500mm (above counter oval)	each	633.00	5328.00	696.00	5391.50	
	ix Size 560mm x 450mm (Under counter oval)	each	633.00	3601.50	696.00	3664.50	
	x Size 44cm dia (under counter round)	each	633.00	3675.50	696.00	3739.00	
30.38	Extra cost for pastel colour instead of white vitreous Chinaware Lavatory suites.						
	i Lavatory suites Size 450mmx300mm	each	---	521.00	---	521.00	
	ii Lavatory suites Size 550mmx400mm	each	---	614.50	---	614.50	
	iii Lavatory suites Size 630mmx450mm	each	---	1393.50	---	1393.50	
	iv Lavatory suites Size 510mmx400mm	each	---	537.00	---	537.00	
	v Lavatory suites Size 560mmx430mm	each	---	815.50	---	815.50	

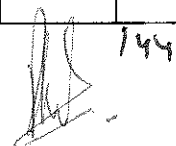
Sr. No.	Description		Unit	Plains		Sub-Mountainous	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
	vi	Lavatory suites Size 560mmx410mm (above counter oval)	each	---	1053.00	---	1053.00
	vii	Lavatory suites Size 49 cm dia (above counter round)	each	---	1367.50	---	1367.50
	viii	Lavatory suites Size 630mmx500mm (above counter oval)	each	---	2002.50	---	2002.50
	ix	Lavatory suites Size 560mmx450mm (under counter oval)	each	---	1053.00	---	1053.00
	x	Size 44cm dia (under counter round)	each	---	1094.00	---	1094.00
30.39 A	Providing and fixing in position 15mm C.P. Brass Pillar Cock of approved make (to the approval of Engineer-in-charge)		each	54.50	846.50	60.00	852.00
30.39 B	Providing and fixing in position C.P. Brass Auto close Pillar Cock of approved make (to the approval of Engineer-in-charge)		each	54.50	2073.00	60.00	2078.50
30.39 C	Providing and fixing in position C.P. Brass Auto close bib Cock of approved make (to the approval of Engineer-in-charge)		each	54.50	1945.00	60.00	1950.50
30.39 D	Providing and fixing in position C.P. Brass Urinal angle valve of approved make (to the approval of Engineer-in-charge)		each	54.50	1981.50	60.00	1987.00
30.40 A	Providing and fixing in position C.P. brass centre hole basin mixer of approved make (to the approval of Engineer-in-charge) complete in all respect.		each	87.00	2705.50	96.00	2714.00
30.40 B	Providing and fixing in position C.P. brass centre hole basin mixer of approved make (to the approval of Engineer-in-charge) instead of C.P. brass pillar tap complete in all respect.		each	87.00	1913.50	96.00	1922.00
30.41	Providing and fixing in position C.P elbow action pillar tap or C.P elbow action bib cock of approved make (to the approval of Engineer-in-charge) complete in all respect.		each	54.50	1903.50	60.00	1909.00
30.42 A	Providing and fixing in position 32 mm dia G.I waste pipe embedded in wall upto floor level including cost of fittings complete as required by the Engineer-in-charge.		each	145.50	591.50	160.00	606.50
30.42 B	Providing and fixing 40 mm i/d G.I waste pipe embedded in walls upto floor level as required by the Engineer-in-Charge		each	151.00	631.50	166.00	646.50

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Sr. No.	Description	Unit	Plains		Sub-Mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
30.43 A	Providing and fixing vitreous chinaware standard pedestal of approved make (to the approval of Engineer-in-charge) for wash hand basin complete in all respect.	each	43.50	1817.50	48.00	1821.50
30.43 B	Extra cost for pastel colour instead of white vitreous Chinaware pedestal for wash hand basin.	each	---	975.50	---	975.50
30.44 A	Providing and fixing in position C.P. brass, bottle trap 32mm dia with 40 mm seal of approved make (to the approval of Engineer-in-charge) complete in all respect.	each	87.00	1094.00	96.00	1103.00
30.44 B	Providing and fixing PTMT Bottle trap 31mm single piece moulded with height of 270mm, effective length of tail pipe 260mm from the centre of the waste coupling 77mm breadth with 25mm minimum water seal, weighing not less than 260gms of approved make (to the approval of Engineer-in-charge) for wash hand basin and sink complete in all respect.	each	87.00	525.50	96.00	534.00
30.45	Providing & fixing in position 15 mm i/d C.P brass wall mixer of approved make (to the approval of Engineer-in-charge ) complete in all respect.					
	(a) With Telephonic Shower	each	82.00	3556.50	90.50	3564.50
	(b) Without Telephonic shower.	each	82.00	2723.50	90.50	2731.50
30.46	Providing and fixing in position vitreous Chinaware sinks of approved make (to the approval of Engineer-in-charge) consisting of 40mm i/d C.P. brass waste, pair of brackets complete in all respect.					
	a) Size 610mmx450mmx200mm	each	789.50	6757.50	868.50	6836.50
	b) Size 610 mm x 450 mm x 250 mm	each	789.50	7376.50	868.50	7455.50
30.47	Providing and fixing in position stainless steel sinks of approved make (to the approval of Engineer-in-charge) 1mm thick, grade-304 (18/8) with waste coupling complete in all respect.					
	a) Size 600 mm x 450 mm x 225 mm (Net size excluding flat edge)	each	1091.50	8409.50	1200.50	8518.50
	b) Size 530 mm x 450 mm x 175 mm (Net size excluding flat edge)	each	1091.50	7843.00	1200.50	7952.00
	c) Sink with drain board overall size 1050x450mm, bowl size 425mmx350mmx188mm	each	1091.50	9113.50	1200.50	9222.50

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Sr. No.	Description		Unit	Plains		Sub-Mountainous	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
	d	Double bowl sink overall size 1100x475mm, bowl size 463mmx388mmx200mm	each	1091.50	15596.00	1200.50	15705.00
	e	Double bowl sink overall size 1300mmx500mm, bowl size 550mmx400mmx230mm	each	1091.50	16877.50	1200.50	16986.50
30.48	A	Providing & fixing in position C.P. brass Sink Cock with swinging spout (wall mounted) of approved make (to the approval of Engineer-in-charge) complete in all respect.		<b>New item Added</b>			
			each	54.50	1373.00	60.00	1378.00
30.48	(B)	Providing & fixing in position C.P. brass Sink Cock swinging casted spout (table mounted) of approved make (to the approval of Engineer-in-charge) complete in all respect.		<b>New item Added</b>			
			each	54.50	1707.00	60.00	1712.50
30.49	(A)	Providing & fixing in position C.P. brass Sink mixer swivel spout (Wall mounted) of approved make (to the approval of Engineer-in-charge) complete in all respect.		<b>New item Added</b>			
			each	87.00	2778.50	96.00	2787.50
30.49	(B)	Providing & fixing in position C.P. brass Sink mixer swinging spout (table mounted) with 450mm long flexible hose of approved make (to the approval of Engineer-in-charge) complete in all respect.		<b>New item Added</b>			
			each	87.00	2788.00	96.00	2796.50
30.50		Providing & Fixing in position CP Brass bath tub spout with wall flange of approved make (to the approval of Engineer-in-charge) complete in all respect.	each	54.50	1167.00	60.00	1172.00
30.51		Blank					
30.52		Providing and fixing in position vitreous Chinaware white laboratory sinks of approved make (to the approval of Engineer-in-charge) consisting of a pair of brackets, C.P. brass waste 40mm complete in all respect.					
	(a)	Size 450 mm x 300 mm x 150 mm	each	1091.50	4018.50	1200.50	4128.00
	(b)	Size 530 mm x 430 mm x 180 mm	each	1091.50	5285.50	1200.50	5394.50
30.53		Blank					
30.54		Blank					
30.55		Blank					




Sr. No.	Description	Unit	Plains		Sub-Mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
30.56 A	Providing and fixing in position C.P. brass overhead shower 1 flow with shower arm with 15mm i/d inlet of approved make (to the approval of Engineer-in-charge) complete in all respect.	each	65.50	1192.00	72.50	1198.50
30.56 B	Providing and fixing in position C.P. brass overhead shower 1 flow without shower arm with 15mm i/d inlet of approved make (to the approval of Engineer-in-charge) complete in all respect.	each	65.50	825.50	72.50	832.00
30.57	Providing and fixing in position paper holders of approved make (to the approval of Engineer-in-charge ) fixed in to wall with C.P brass screws complete in all respect.					
	(a) C.P. brass toilet paper holder	each	65.50	967.50	72.50	974.00
	(b) Vitreous Chinaware white toilet paper holder	each	65.50	516.50	72.50	523.00
	(c) Extra cost for pastel colour instead of White Toilet paper holder	each	---	248.00	---	248.00
30.58	Providing and fixing in position towel rails / ring of approved make (to the approval of Engineer-in-charge ) fixed in with rawl plugs embedded in walls with brass screws complete in all respect.					
	(a) C.P. brass towel Rails size 15mm dia 600mm long	each	123.00	1363.50	135.50	1376.00
	(b) C.P brass towel ring	each	65.50	807.50	72.50	814.00
	(c) Acrylic towel Rails size 20mm dia 600mm long	each	123.00	438.00	135.50	450.50
	(d) C.P. brass towel bracket (610mm long)	each	123.00	2961.00	135.50	2973.50
30.59	Providing and fixing in position C.P. Acrylic shelf with C.P.bracket and guard rails of approved make (to the approval of Engineer-in-charge ) fixed in with rawl plugs and C.P brass screws complete in all respect.					
	(a) CP brass Acrylic Shelf size 560mmx130mm	each	65.50	1645.00	72.50	1651.50
	(b) CP Acrylic Corner Shelf size 300mmx300mm	each	65.50	1782.00	72.50	1789.00
30.60	Providing and fixing in position C.P. brass soap dish of approved make (to the approval of Engineer-in-charge ) fixed into wall with rawl plugs and C.P brass screws complete in all	each	65.50	743.00	72.50	750.00



Sr. No.	Description	Unit	Plains		Sub-Mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
30.61	Providing & Fixing in position 5mm thick bevelled edge mirror of superior glass (of approved make) complete with 4mm thick hard board backing fixed in with rawl plugs 50mm, C.P. brass screws and washers and S/S Studs on top complete in all respect (as required by the Engineer-in- Charge)					
	(a) Size 600mmx450mm	each	205.00	844.00	226.00	864.00
	(b) Size 550mmx400mm	each	205.00	787.00	226.00	807.00
	(c) Size 1500mmx600mm or any other size	sqm	274.00	2148.00	301.00	2175.00
30.62 A	Providing & Fixing in position plastic moulded frame mirror Size 550mmx400mm with 4mm thick hard board backing of required shape fixed in position with rawl plugs, C.P. brass screws and washers complete in all respect	each	123.00	352.00	135.50	364.50
30.62 B	Providing & Fixing in position mirror of superior glass Size 1500mm x600mm or any other required size (of approved quality) and of required shape and size with high quality polystyrene moulding frame of 40 to 50mm size (of approved quality and shade) with 4mm thick hardboard backing fixed in with rawl plugs 50mm, C.P. brass screws and washers complete in	mtr	274.00	2682.00	301.00	2709.50
30.63	Providing & Fixing in position C.P./Aluminium Khunti of approved make (to the approval of Engineer-in-charge ) fixed into wall with C.P. brass screws and rawl plugs etc. complete in all respect.					
	(a) C.P. Brass khunti with 3 pegs	each	65.50	518.00	72.50	524.50
	(b) C.P. Brass khunti with 4 pegs	each	65.50	569.00	72.50	576.00
	(c) C.P. Brass khunti with 6 pegs	each	65.50	609.50	72.50	616.00
	(d) Aluminium khunti with 3 pegs	each	65.50	163.00	72.50	169.50
	(e) Aluminium khunti with 4 pegs	each	65.50	217.00	72.50	223.50
	(f) Aluminium,khunti with 6 pegs	each	65.50	271.50	72.50	278.50
30.64 A	Providing & Fixing in position C.P. Brass flange of approved make (to the approval of Engineer-in-charge ) under various fixtures complete in all respect.	each	8.50	52.00	9.50	53.00
30.64 B	Providing & Fixing in position C.P. Brass extension piece 25mm long to 50mm long of approved make (to the approval of Engineer-in-charge )with various fixtures complete in all respect.	each	22.00	89.50	24.00	91.50

Sr. No.	Description	Unit	Plains		Sub-Mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
30.64 C	Providing & Fixing in position C.P. Brass Hexa Nipple 15mm of approved make (to the approval of Engineer-in-charge ) complete in all respect.	each	22.00	74.50	24.00	76.50
30.65 A	Providing & Fixing in postion 15 mm i/d bib cock of approved make (to the approval of Engineer-in-charge ) complete in all respect.					
	(i) C.P. brass Bib cock long nose/ long body without flange	each	54.50	1043.00	60.00	1048.50
	(ii) C.P. brass Bib cock without flange	each	54.50	819.00	60.00	824.50
	(iii) C.P. brass Bib cock push type	each	54.50	663.50	60.00	668.50
	(iv) Brass Bib cock/Stop cock 15mm x 400gm	each	30.50	408.00	33.50	411.00
	(v) Brass Nozel Bib cock 15mm x 250gm.	each	30.50	351.00	33.50	354.00
	(vi) PTMT Tap/Bib cock	each	30.50	181.50	33.50	184.50
	(vii) PTMT Pillar tap	each	30.50	257.00	33.50	260.00
	(viii) PTMT push cock	each	30.50	148.50	33.50	151.50
30.65 B	Providing & Fixing in postion C.I.bib cock as per IS:210 with stainless steel spindle of approved make (to the approval of Engineer-in-charge ) complete in all respect.					
	(i) 15mm i/d	each	30.50	142.50	33.50	145.50
	(ii) 20mm i/d	each	30.50	245.50	33.50	248.50
	(iii) 25mm i/d	each	30.50	384.00	33.50	387.00
30.66	Providing & Fixing in postion stop cock / Angle valve of approved make (to the approval of Engineer-in-charge ) complete in all respect.					
	(a) C.P.brass 15mm stop cock Male and female end	each	54.50	741.00	60.00	746.50
	(b) C.P.brass 15mm Concealed stop cock with flange.	each	87.00	1185.50	96.00	1194.50
	(c) C.P.brass 15mm Angle valve without flange	each	54.50	796.00	60.00	801.50
	(d) C.P.brass 20mm concealed stop cock with flange	each	87.00	1231.50	96.00	1240.00
	(e) PTMT 15mm stop cock Male and female end	each	54.50	205.50	60.00	211.00
	(f) PTMT 15mm Concealed stop cock with flange.	each	87.00	303.50	96.00	312.00
	(g) PTMT 15mm Angle valve	each	43.50	221.00	48.00	225.50
	(h) PTMT 20mm stop cock	each	43.50	215.00	48.00	219.50
	(i) PTMT 20mm concealed stop cock with flange	each	87.00	322.00	96.00	330.50



Sr. No.	Description	Unit	Plains		Sub-Mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
30.67	Providing & Fixing in position liquid soap container of approved make (to the approval of Engineer-in-charge ) complete in all respect.					
	(a) C.P. brass liquid soap container	each	65.50	723.50	72.50	730.50
	(b) Acrylic liquid soap container	each	65.50	460.50	72.50	467.00
30.68	Providing & fixing 15 mm C.P brass laboratory cock swan neck of approved make (to the approval of Engineer-in-charge ) complete in all respect.					
	(a) Laboratory cock swan neck One Way	each	65.50	1173.50	72.50	1180.00
	(b) Laboratory cock swan neck Two Way	each	65.50	1503.00	72.50	1509.50
	(c) Laboratory cock swan neck Three Way	each	65.50	2070.50	72.50	2077.00
30.69	Providing and fixing in position premium range C.P. Brass Fittings and accessories of approved make (to the approval of Engineer-in-charge ) complete in all respect.					
	<b>Note:- To be provided only for VIP Installations and with prior approval of the Engineer-in-charge.</b>					
	<b>A) C.P. Brass fittings:</b>					
	i) C.P. Brass Pillar Cock	each	54.50	1574.00	60.00	1579.50
	ii) C.P. brass Bib cock with wall flange	each	54.50	1459.50	60.00	1465.00
	iii) C.P.brass 15mm Angular stop cock with Wall flange	each	54.50	1208.00	60.00	1213.50
	iv) C.P.brass 15mm Concealed stop cock with adjustable wall flange.	each	87.00	1593.00	96.00	1602.00
	v) C.P. brass Central hole basin mixer without popup system with 450mm long flexible hose	each	87.00	3849.50	96.00	3858.50
	vi) C.P. Brass Wall mixer with Non telephonic shower arrangement.	each	82.00	3854.00	90.50	3862.00
	vii) C.P brass Sink mixer with swinging spout.(wall mounted)	each	87.00	3872.50	96.00	3881.50
	viii) C.P brass Sink mixer with regular spout table mounted with 450mm long flexible hose	each	87.00	4133.50	96.00	4142.00
	ix) C.P. brass Sink Cock with regular swinging spout and wall mounted	each	54.50	2238.00	60.00	2243.50
	x) C.P. brass overhead shower 3 flow with shower arm with 15mm i/d inlet.	each	65.50	1709.00	72.50	1715.50
	<b>B) C.P. Brass Accessories:</b>					
	i) C.P. brass towel rail size 15mm dia 610mm long	each	123.00	1629.00	135.50	1641.50
	ii) C.P brass towel ring	each	65.50	926.50	72.50	933.00

Sr. No.	Description		Unit	Plains		Sub-Mountainous	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
	iii)	C.P. brass soap dish	each	65.50	1040.50	72.50	1047.50
	iv)	C.P. brass toilet paper holder	each	65.50	1173.50	72.50	1180.00
	v)	CP brass Acrylic Shelf size 460mmx130mm	each	65.50	2034.00	72.50	2040.50
	vi)	C.P. brass towel bracket (610mm long)	each	123.00	3579.00	135.50	3591.50
30.70	Providing and fixing divertors of approved make (to the approval of Engineer-in-charge ) for bath and shower system complete in all respect.						
	a)	Single lever concealed divertor for bath and shower system	each	147.50	4166.50	162.50	4181.00
	b)	Single lever concealed divertor for bath and shower system (high flow)	each	147.50	4972.00	162.50	4987.00
	c)	Single lever concealed divertor for bath and shower system (3 inlet flow)	each	147.50	5082.00	162.50	5096.50
30.71	Blank						
30.72	Providing & fixing in position PVC flexible tube connection of approved make (to the approval of Engineer-in-charge ) complete in all respect.						
	(a)	PVC tube connection of size 15 mm x 300 mm with C.P. Brass nut	each	41.00	160.00	45.00	164.00
	(b)	PVC tube connection of size 15 mm x 375 mm with C.P. Brass nut	each	41.00	160.00	45.00	164.00
	(c)	PVC tube connection of size 15 mm x 450 mm with C.P. Brass nut	each	41.00	160.00	45.00	164.00
	(d)	PVC tube connection of size 15 mm x 300 mm with PTMT nut	each	41.00	92.50	45.00	96.50
	(e)	PVC tube connection of size 15 mm x 375 mm with PTMT nut	each	41.00	101.50	45.00	106.00
	(f)	PVC tube connection of size 15 mm x 450 mm with PTMT nut	each	41.00	111.00	45.00	115.00
	(g)	PVC tube connection of size 15 mm x 600 mm with C.P. Brass nut		<b>New item Added</b>			
			each	41.00	171.50	45.00	175.50
	(h)	PVC tube connection of size 15 mm x 900 mm with C.P. Brass nut		<b>New item Added</b>			
			each	41.00	191.00	45.00	195.00
	(i)	PVC tube connection of size 15 mm x 600 mm with PTMT nut		<b>New item Added</b>			
			each	41.00	122.50	45.00	126.50
	(j)	PVC tube connection of size 15 mm x 900 mm with PTMT nut		<b>New item Added</b>			
			each	41.00	153.00	45.00	157.50

Sr. No.	Description	Unit	Plains		Sub-Mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
30.73	Providing & fixing in position C.P. copper tube connection of approved make (to the approval of Engineer-in-charge ) complete in all respect.					
	(a) C.P. copper tube connection of size 15 mm x 300 mm with C.P. Brass nut	each	41.00	261.00	45.00	265.00
	(b) C.P. copper tube connection of size 15 mm x 375 mm with C.P. Brass nut	each	41.00	282.50	45.00	286.50
	(c) C.P. copper tube connection of size 15 mm x 450 mm with C.P. Brass nut	each	41.00	295.00	45.00	299.50
	(d) C.P. copper tube connection of size 15 mm x 600 mm with C.P. Brass nut	each	41.00	364.00	45.00	368.00
30.74	Providing and fixing in position H.C.I. soil waste vent or antisiphonage pipes to I.S.I. specification (IS:1729) of approved make (to the approval of Engineer-in-charge ) including cutting, jointing, wastage, but excluding cost of lead jointing.					
	(i) (a) 150mm i/d H.C.I. pipe line laid complete	m	81.50	1831.00	89.50	1839.00
	(b) 100mm i/d H.C.I. pipe line laid complete	m	81.50	1047.00	89.50	1055.00
	(c) 75mm i/d H.C.I. pipe line laid complete	m	81.50	906.50	89.50	914.50
	(d) 50mm i/d H.C.I. pipe line laid complete	m	81.50	718.50	89.50	726.50
30.74	Providing and fixing in position Centrifugally cast iron soil waste vent or antisiphonage pipes to I.S.I. specification (IS:3989) of approved make (to the approval of Engineer-in-charge ) including cutting, jointing, wastage, but excluding cost of lead jointing.					
	(a) 150mm i/d Centrifugally cast iron pipe line laid complete	m	81.50	1841.00	89.50	1849.00
	(b) 100mm i/d Centrifugally cast iron pipe line laid complete	m	81.50	1101.00	89.50	1109.00
	(c) 75mm i/d Centrifugally cast iron pipe line laid complete	m	81.50	912.00	89.50	920.00
30.74	Providing and fixing in position SWR UPVC soil waste vent or antisiphonage pipes as per IS - 13592 of approved make (to the approval of Engineer-in-charge )including cutting, jointing, wastage, but excluding cost of lead jointing.					
A	Type A					
	(a) 160mm o/d SWR UPVC pipe line laid complete	m	81.50	534.50	89.50	542.50

Sr. No.	Description		Unit	Plains		Sub-Mountainous	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
	(b)	110mm o/d SWR UPVC pipe line laid complete	m	81.50	262.50	89.50	270.50
	(c)	90mm o/d SWR UPVC pipe line laid complete	m	81.50	241.50	89.50	250.00
	(d)	75mm o/d SWR UPVC pipe line laid complete	m	81.50	182.50	89.50	190.50
<b>B</b>	<b>Type B</b>						
	(a)	160mm o/d SWR UPVC pipe line laid complete	m	81.50	645.50	89.50	653.50
	(b)	110mm o/d SWR UPVC pipe line laid complete	m	81.50	362.50	89.50	370.50
	(c)	90mm o/d SWR UPVC pipe line laid complete	m	81.50	306.50	89.50	314.50
	(d)	75mm o/d SWR UPVC pipe line laid complete	m	81.50	271.50	89.50	279.50
30.75	Providing and fixing in position C.I. gully trap cover weighing approximately 7.26 kg and frame for gully trap chamber clear opening size 300mm x 300mm and out side size 330mmx330mm including painting the exposed surface with 3 coats of black bitumastic superior paint of approved make (to the approval of Engineer-in-charge )		each	104.00	677.50	114.50	688.00
30.76	Providing and fixing in position grating of approved make (to the approval of Engineer-in-charge ) size 150mm x 150mm for gully trap.						
	(a)	H.C.I. grating including painting with black bitumastic superior paint of approved manufacture three coats.	each	13.00	93.00	14.50	94.50
	(b)	PVC grating	each	13.00	76.00	14.50	77.50
30.77 A	Providing lead caulked joints to H.C.I. pipes and specials conforming to I.S.I. Specification (IS:1729) of approved make (to the approval of Engineer-in-charge ) including cost of lead yarn, fuel and tools etc.						
	(a)	150mm i/d (1.60 kg.)	each	123.00	451.50	135.50	464.00
	(b)	100mm i/d (1.36 kg.)	each	107.00	385.50	117.50	396.50
	(c)	75mm i/d (1.13 kg.)	each	82.00	315.00	90.50	323.00
30.77 B	Providing drip seal joints to H.C.I. pipes and specials including cost of drip seal, yarn and tools etc of approved make (to the approval of Engineer-in-charge )						
	a)	150mm i/d	each	70.00	105.50	77.00	112.50
	b)	100mm i/d	each	61.50	91.00	68.00	97.00
	c)	75mm i/d	each	53.50	75.50	58.50	80.50

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Sr. No.	Description	Unit	Plains		Sub-Mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
30.78	Providing & Fixing in position M.S or heavy flat iron clamps made out of M.S flat iron not less than 5 mm of the approved design for fixing C.I. soil waste, vent or antisiphonage pipes to walls complete in all respects including cutting and making good the walls and floors etc. and painting.					
	(a) M.S. Holder bats clamps for 100mm i/d H.C.I. pipes	each	33.00	164.50	36.00	168.00
	(b) M.S. Holder bats clamps for 75mm i/d H.C.I. pipes	each	33.00	147.50	36.00	150.50
30.79	Providing and fixing H.C.I. Floor traps conforming to I.S.I. Specification (IS:1729) of approved make (to the approval of Engineer-in-charge) of the self cleaning design with C.P. brass hinged grating with frame with or without vent arm and including cement concrete 1:2:4 under and around the floor trap where required upto floor level complete in all respects including cutting and making good the walls and floors,etc. minimum depth of water should be 150mm with a minimum seal 50mm.					
	(a) With 75mm i/d outlet deep seal	each	77.00	902.00	85.00	909.50
	(b) With 75mm i/d outlet shallow seal	each	77.00	706.00	85.00	714.00
	(c) With 100mm i/d outlet shallow seal	each	77.00	850.50	85.00	858.00
30.80	Providing and fixing in position S.S. Grating with frame of approved make (to the approval of Engineer-in-charge) complete in all respect (Previously item no.30.104)	each	20.50	92.00	22.50	94.00
30.81	Providing and fixing in position H.C.I specials for soil waste vent or anti syphonage pipes to I.S.I specifications (IS:1729) of approved make (to the approval of Engineer-in-charge) including cutting and wastage etc. cutting holes in walls roofs or floors etc. and making good to its original condition but excluding cost of lead joining.					
	(a) For 100mm i/d pipes					
	(i) Heal Rest Bend	each	41.00	583.00	45.00	587.00
	(ii) Single junction with door	each	41.00	825.00	45.00	829.00
	(iii) Single junction plain	each	41.00	737.50	45.00	741.50
	(iv) Bend with plug	each	41.00	583.00	45.00	587.00

Sr. No.	Description	Unit	Plains		Sub-Mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
	(v) Bend plain	each	41.00	529.50	45.00	533.50
	(vi) Cowls	each	7.50	415.50	8.50	416.50
	(vii) Door piece	each	Deleted			
	(viii) Collars	each	41.00	449.00	45.00	453.00
	(ix) Off sets 75mm projection	each	41.00	525.00	45.00	529.50
	(x) Deleted					
	(xi) Off sets 150mm projection	each	41.00	665.00	45.00	669.50
	(xii) P-Trap	each	41.00	879.50	45.00	883.50
(b)	<b>For 75mm i/d pipes</b>					
	(i) Heal Rest Bend	each	41.00	482.00	45.00	486.00
	(ii) Single junction with door	each	41.00	563.50	45.00	567.50
	(iii) Single junction plain	each	41.00	522.00	45.00	526.00
	(iv) Bend with plug	each	41.00	482.00	45.00	486.00
	(v) Bend plain	each	41.00	424.00	45.00	428.50
	(vi) Cowls	each	7.50	310.50	8.50	311.50
	(vii) Deleted					
	(viii) Collars	each	41.00	294.50	45.00	298.50
	(ix) Off sets 75mm projection	each	41.00	426.50	45.00	430.50
	(x) Deleted					
	(xi) Off sets 150mm projection	each	41.00	561.00	45.00	565.50
30.81	(ii) Providing and fixing in position Centrifugally cast iron specials for soil waste vent or anti syphonage pipes to I.S.I specifications (IS:3989) of approved make (to the approval of Engineer-in-charge) including cutting and wastage etc. cutting holes in walls roofs or floors etc. and making good to its original condition but excluding cost of lead joining.					
A	<b>For 100mm i/d pipes</b>					
	(i) Heal Rest Bend	each	41.00	566.50	45.00	570.50
	(ii) Single junction with door	each	41.00	723.00	45.00	727.00
	(iii) Single junction plain	each	41.00	632.50	45.00	636.50



Sr. No.	Description	Unit	Plains		Sub-Mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
	(iv) Bend with plug	each	41.00	535.50	45.00	539.50
	(v) Bend plain	each	41.00	483.00	45.00	487.00
	(vi) Cowls	each	7.50	382.50	8.50	383.50
	(vii) Deleted					
	(viii) Collars	each	41.00	394.50	45.00	398.50
	(ix) Off sets 75mm projection	each	41.00	398.50	45.00	402.50
	(x) Deleted					
	(xi) Off sets 150mm projection	each	41.00	619.00	45.00	623.00
	(xii) P-Trap	each	41.00	785.50	45.00	790.00
<b>B</b>	<b>For 75mm i/d pipes</b>					
	(i) Heal Rest Bend	each	41.00	466.50	45.00	470.50
	(ii) Single junction with door	each	41.00	476.50	45.00	481.00
	(iii) Single junction plain	each	41.00	421.00	45.00	425.00
	(iv) Bend with plug	each	41.00	397.50	45.00	401.50
	(v) Bend plain	each	41.00	342.00	45.00	346.00
	(vi) Cowls	each	7.50	291.00	8.50	291.50
	(vii) Deleted					
	(viii) Collars	each	41.00	266.50	45.00	270.50
	(ix) Off sets 75mm projection	each	41.00	348.00	45.00	352.00
	(x) Deleted					
	(xi) Off sets 150mm projection	each	41.00	438.50	45.00	442.50
30.81	Providing and fixing in position SWR UPVC specials for soil waste vent or anti syphorage pipes as per as per IS - 14735 of approved make (to the approval of Engineer-in-charge) including cutting and wastage etc. cutting holes in walls roofs or floors etc. and making good to its original condition but excluding cost of lead joining.					
<b>A</b>	<b>For 160mm o/d</b>					
	(i) Single Junction With Door	Each	41.00	443.50	45.00	447.50
	(ii) Single Junction Plain	Each	41.00	490.00	45.00	494.00
	(iii) Bend With Door	Each	24.50	334.50	27.00	337.00

Sr. No.	Description		Unit	Plains		Sub-Mountainous	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
	(iv)	Bend Plain	Each	24.50	302.50	27.00	305.00
	(v)	Cowl	Each	7.50	63.50	8.50	64.50
	(vi)	Collar	Each	24.50	242.50	27.00	245.00
	(vii)	Single Y-junction	Each	41.00	627.50	45.00	631.50
	(viii)	Reducing tee ring type 160mmx110mm	Each	57.50	449.00	63.50	454.50
	(ix)	Reducing Door tee ring type 160mmx110mm	Each	57.50	467.00	63.50	472.50
	(x)	Reducing single Y 160mmx110mm	Each	57.50	509.00	63.50	514.50
<b>B</b>	<b>For 110mm o/d pipes</b>						
	(i)	Door cap	each	22.00	66.50	24.00	68.50
	(ii)	Single Junction With Door	each	41.00	204.00	45.00	208.50
	(iii)	Single Junction Plain	each	41.00	179.50	45.00	183.50
	(iv)	Bend With Door	each	24.50	151.00	27.00	153.50
	(v)	Bend Plain	each	24.50	125.00	27.00	127.50
	(vi)	Cowl	each	7.50	32.50	8.50	33.50
	(vii)	Reducer 110mm x 75mm	each	16.50	91.00	18.00	92.50
	(viii)	Collar	each	24.50	93.50	27.00	96.00
	(ix)	P Trap/Floor trap 110mm x110mm	each	41.00	334.50	45.00	338.50
	(x)	P Trap/floor trap 110mm x75mm	each	41.00	313.00	45.00	317.50
	(xi)	Single Y-junction	each	41.00	202.50	45.00	206.50
	(xii)	Single Y-junction with Door	each	41.00	298.50	45.00	302.50
	(xiii)	Double Y-junction	each	57.50	303.00	63.50	308.50
	(xiv)	Double Y-junction with Door	each	57.50	391.50	63.50	397.00
	(xv)	110mm x75mm reducer tee	each	41.00	191.50	45.00	195.50
	(xvi)	Cross tee/Double tee	each	57.50	227.50	63.50	233.00
	(xvii)	Nahani trap with jali 110mmx110mm	each	41.00	139.50	45.00	143.50
	(xviii)	Nahani trap with jali 110mmx90mm	each	41.00	123.00	45.00	127.00
	(xix)	Nahani trap with jali 110mmx75mm	each	41.00	115.00	45.00	119.00
	(xx)	Reducing tee ring type 110mmx90mm with door bend	each	41.00	223.00	45.00	227.00
<b>C</b>	<b>For 90mm o/d pipes</b>						
	(i)	Door cap	each	22.00	58.50	24.00	61.00
	(ii)	Single junction with door	each	41.00	197.50	45.00	201.50
	(iii)	Single junction plain	each	41.00	176.50	45.00	181.00
	(iv)	Bend with door	each	24.50	136.00	27.00	138.50
	(v)	Bend plain	each	24.50	118.00	27.00	120.50
	(vi)	Cowls	each	7.50	32.50	8.50	33.50
	(vii)	Cross plain tee	each	57.50	218.00	63.50	224.00
	(viii)	Collars	each	24.50	100.00	27.00	102.50
	(ix)	Single Y-junction	each	41.00	190.50	45.00	194.50
<b>D</b>	<b>For 75mm o/d pipes</b>						
	(i)	Door cap	each	22.00	55.50	24.00	57.50
	(ii)	Single Junction With Door	each	41.00	122.50	45.00	126.50
	(iii)	Single Junction Plain	each	41.00	109.00	45.00	113.00
	(iv)	Bend With Door	each	24.50	92.50	27.00	95.00
	(v)	Bend Plain	each	24.50	73.50	27.00	76.00
	(vi)	Cowl	each	7.50	22.50	8.50	23.00
	(vii)	Collar	each	24.50	61.50	27.00	64.00
	(viii)	P Trap/Floor trap 75mmx75mm	each	41.00	192.00	45.00	196.50
	(ix)	Single Y-junction	each	41.00	126.00	45.00	130.00
	(x)	Single Y-junction with Door	each	41.00	183.50	45.00	187.50
	(xi)	Double Y-junction	each	57.50	189.50	63.50	195.50
	(xii)	Double Y-junction with Door	each	57.50	243.00	63.50	248.50
	(xiii)	Cross tee/Double tee	each	41.00	166.50	45.00	170.50


Sr. No.	Description	Unit	Plains		Sub-Mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
30.82	Providing and laying water proofing treatment to vertical and horizontal surfaces of depressed portions of W.C., kitchen and the like consisting of: i) Ist course of applying cement slurry @ 4.4 Kg/ sqm mixed with water proofing compound conforming to IS : 2645 in recommended proportions including rounding off junction of vertical and horizontal surface. ii) IInd course of 20 mm cement plaster 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound in recommended proportion including rounding off junction of vertical and horizontal surface. iii) IIIrd course of applying blown or residual bitumen applied hot at 1.7 kg per sqm of area. iv) IVth course of 400 micron thick PVC sheet. (Overlaps at joints of PVC sheet should be 100 mm wide and pasted to each other with bitumen @ 1.7 Kg/sqm).	10sqm	1754.00	4781.00	1929.50	4956.00
30.83	Providing and laying water proofing treatment in sunken portion of WCs, bathroom etc., by applying cement slurry mixed with water proofing cement compound consisting of applying : a) First layer of slurry of cement @ 0.488 kg /sqm mixed with water proofing cement compound @ 0.253 kg/sqm. This layer will be allowed to air cure for 4 hours. b) Second layer of slurry of cement @ 0.242 kg/ sqm mixed with water proofing cement compound @ 0.126 kg/ sqm. This layer will be allowed to air cure for 4 hours followed with water curing for 48 hours. The rate includes preparation of surface, treatment and sealing of all joints, corners, junctions of pipes and masonry with polymer mixed slurry.	10sqm	1626.50	2596.50	1789.00	2759.50
30.84	Providing opening of required size & shape for wash basin/ kitchen sink in kitchen platform, vanity counter and similar location in marble/ granite/ stone work, including necessary holes for pillar taps etc. including moulding, rubbing and polishing of cut edges etc. complete.	each	758.50		834.00	
30.85	Cutting chase in brick walls in cement or in floor for embedding G.I. or C.I pipes line and making good the same to its original condition.					
	(a) Size 75 mm x 75 mm	m	55.50		61.00	
	(b) Size 150 mm x 150 mm	m	92.50		102.00	
	(c) Size 75 mm x 50 mm	m	46.50		51.00	
	(d) Size 225 mm x 225 mm	m	139.00		152.50	


Sr. No.	Description	Unit	Plains		Sub-Mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
30.86	Dismantling H.C.I Soil pipes including disposal as desired by the Engineer-in-Charge.					
	(a) 100mm i/d H.C.I. pipe	m	19.50		21.50	
	(b) 75mm i/d H.C.I. pipe	m	19.00		20.50	
	(c) 50mm i/d H.C.I. pipe	m	18.50		20.00	
30.87	Dismantling H.C.I specials including dismantling of lead joints including cartage / disposal within 5 Km.					
	(a) 100mm i/d H.C.I. specials	each	31.00		34.50	
	(b) 75mm i/d H.C.I. specials	each	24.50		27.00	
	(c) 50mm i/d H.C.I. specials	each	24.50		27.00	
30.88	Dismantling Sanitary fixtures such as Eurpoean/Indian/Orissa W.C., PVC / China ware cistern, Wash Hand Basin, Urinal Pot, Sinks and CP Fittings and disposal of dismantled material within a distance of 100 Mtr. complete in all respect as required by Engineer-in-Charge.					
	(a) Eurpoean/Indian/Orissa W.C.,	each	164.50		181.00	
	(b) PVC / China Ware Cistern	each	123.00		135.50	
	(c) Wash Hand Basin / Urinal Pot	each	82.00		90.50	
	(d) Stainless Steel Sink /Mosaic Sink	each	246.50		271.00	
	(e) CP Bib Cock/Angle Cock/Stop Cock/Shower/Bottle Trap	each	24.50		27.00	
	(f) Wall mixer / Sink Mixer / Basin Mixer / Concealed Stop Cock	each	41.00		45.00	
	(g) Bathroom Assessories such as Soap Dish, Towel Rail, Towel Ring, Towel Bracket, Mirror, Toilet Paper Holder, Seat Cover, Jet Pressure and all other accessories.	each	16.50		18.00	
30.89	Dismantling heavy flat iron clamps including cartage / disposal within 5 Km.					
	(a) 100mm i/d Clamps	each	16.50		18.00	
	(b) 75mm i/d Clamps	each	16.50		18.00	
	(c) 50mm i/d Clamps	each	16.50		18.00	
30.90	Painting H.C.I soil waste and vent pipes and fitting with black bitumastic ISI marked paint of approved make (to the approval of Engineer-in-charge) one coat on old work.					

Sr. No.	Description	Unit	Plains		Sub-Mountainous	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
	(a) 100mm i/d H.C.I. Pipe	m	6.00	11.00	7.00	11.50
	(b) 75mm i/d H.C.I. Pipe	m	4.50	8.00	5.00	8.50
30.91	Painting H.C.I soil waste and vent pipes and fitting with black bitumastic ISI marked paint of approved make (to the approval of Engineer-in-charge) two coats on new work.					
	(a) 100mm i/d H.C.I. Pipe	m	9.50	20.00	10.50	21.00
	(b) 75mm i/d H.C.I. Pipe	m	7.00	14.50	8.00	15.00
30.92	Painting H.C.I soil waste and vent pipes and fitting with I.S.I marked quality synthetic enamel paints in all shades of approved make (to the approval of Engineer-in-charge) on old work one coat paint including rubbing down old work.					
	(a) 100mm i/d H.C.I. Pipe	m	5.50	10.50	6.00	11.00
	(b) 75mm i/d H.C.I. Pipe	m	4.00	7.50	4.50	8.00
30.93	Painting H.C.I soil waste and vent pipes and fitting with I.S.I marked quality synthetic enamel paints in all shades of approved make (to the approval of Engineer-in-charge) on old work two coat paint including rubbing down old work.					
	(a) 100mm i/d H.C.I. Pipe	m	9.50	18.50	10.50	19.50
	(b) 75mm i/d H.C.I. Pipe	m	7.00	13.50	7.50	14.00
30.94	Dismantling of wall tiles at any floor of the building, laid in cement mortar including scraping of cement plaster and disposal of malba at a suitable place within a distance of 100 Mtrs of the complex complete in all respect.	sqm	83.00		91.00	
30.95	Dismantling of floor tiles at any floor of the building, laid in cement mortar including dismantling of cement concrete base and disposal of malba at a suitable place within a distance of 100 Mtrs of the complex complete in all respect.	sqm	73.50		80.50	
<b>Internal Water Supply</b>						
30.96	<b>Providing and fixing in position automatic brass Ball Cock in tanks.</b>					
	A Plastic Ball Cock with rod and Plastic Ball					
	(i) 15mm i/d	each	41.00	253.00	45.00	257.00

Sr. No.	Description		Unit	Plains		Sub-Mountainous	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
	(ii)	20mm i/d	each	41.00	357.00	45.00	361.00
	(iii)	25mm i/d	each	41.00	646.00	45.00	650.00
	(iv)	32mm i/d	each	61.50	894.50	68.00	901.00
	(v)	40mm i/d	each	61.50	1070.00	68.00	1076.00
	(vi)	50mm i/d	each	61.50	1569.00	68.00	1575.00
	<b>B</b>	<b>Brass Ball Cock with rod and Plastic Ball</b>					
	(i)	15mm i/d	each	41.00	416.50	45.00	420.50
	(ii)	20mm i/d	each	41.00	462.00	45.00	466.50
	(iii)	25mm i/d	each	41.00	883.50	45.00	887.50
	(iv)	32mm i/d	each	61.50	1304.00	68.00	1310.00
	(v)	40mm i/d	each	61.50	1544.50	68.00	1551.00
	(vi)	50mm i/d	each	61.50	2808.00	68.00	2814.00
30.97	A	Providing & placing in position on terrace (at all floor levels) HDPE water storage tanks of approved make (to the approval of Engineer -in-charge) with cover with suitable locking arrangement and making necessary holes for inlet, outlet and over flo pipes but without fittings and base support for tank.					
	(i)	Triple Layer Tanks	Litre	0.40	11.00	0.40	11.50
	(ii)	Double Layer Tanks	Litre	0.40	8.00	0.40	8.00
30.97	B	Providing & fixing in position on terrace (at all floor levels) HDPE tank cover for water storage tanks of approved make (to the approval of Engineer -in-charge) complete in all respect.					
	(i)	Upto 500 ltr capacity tank	each	38.00	324.00	41.50	328.00
	(ii)	For 1000 ltr capacity tank and above	each	38.00	438.50	41.50	442.00
30.98		Providing and fixing in position G.I. Tank Nipple of approved make (to the approval of Engineer-in-charge) in PVC Water storage tanks complete in all respect.					
	(a)	G.I. tank nipple 15mm i/d	each	16.50	80.50	18.00	82.00
	(b)	G.I. tank nipple 20mm i/d	each	16.50	111.50	18.00	113.50
	(c)	G.I. tank nipple 25mm i/d	each	20.50	169.00	22.50	171.00
	(d)	G.I. tank nipple 32mm i/d	each	24.50	236.00	27.00	238.50
	(e)	G.I. tank nipple 40mm i/d	each	41.00	321.00	45.00	325.00
	(f)	G.I. tank nipple 50mm i/d	each	41.00	496.00	45.00	500.00
<b>DRAINAGE</b>							
30.99		Providing and fixing in position gully traps fixed in cement concrete 1:4:8 complete with Grating 150mm x 150mm, cover and frame clear opening 300mm x 300mm and out of side size 330mm x 330mm and chamber including cost of all bricks work in cement mortar 1:5 cement concrete 1:2:4 in coping around cover and frame etc. as per standard design minimum depth of water should be 150 mm with a minimum seal 50mm.					

Sr. No.	Description		Unit	Plains		Sub-Mountainous	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
	(a)	100mm internal Diametre S.W.gully trap with H.C.I. grating and cast iron cover weighing approximately 7.26 kg. and frame clear opening 300mm x 300mm and out of side size 330mm x 330mm	each	288.00	1680.00	317.00	1708.50
	(b)	100mm internal Diametre H.C.I. gully trap with H.C.I. grating and cast iron cover weighing approximately 7.26 kg. and frame clear opening 300mm x 300mm and out of side size 330mm x 330mm	each	288.00	2413.50	317.00	2442.00
	(c)	150mm internal Diametre S.W.gully trap with H.C.I. grating and cast iron cover weighing approximately 7.26 kg. and frame clear opening 300mm x 300mm and out of side size 330mm x 330mm	each	288.00	1714.00	317.00	1743.00
30.100	Providing and fixing in position vitreous Chinaware white channel of approved make (to the approval of Engineer-in-charge) of size 600mmx100mm including laying and fixing in cement concrete 1:2:4 complete in all respect.		each	46.50	538.50	51.00	543.50
30.101	Deleted						
30.102	Providing and fixing in position storage type automatic electric water heater pressure / non pressure type thermostatically controlled, single phase, vertical wall mounted of approved make (to the approval of Engineer-in-charge) with thermostats, inner container of stainless steel complete with 1 Mtr. three core flexible cord with plug, non return valve and pressure release valve complete including fixing and testing complete in all respect.						
	(a)	25 litre capacity water heater	each	328.50	8551.00	361.50	8584.00
	(b)	35 litre capacity water heater	each	493.00	9596.00	542.00	9645.50
	(c)	50 litre capacity water heater	each	534.00	12933.00	587.50	12986.00

  
 Superintending Engineer,  
 W/S & Sanitation Circle,  
 Patiala

  
 Chief Engineer (South)  
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