

**Detailed Project Report: Bagru**  
**Part B: Costing and**  
**Estimations**

## Contents

1. Abstract Cost for FSM in Bagru.....	3
2. Annexure I: Abstract Cost for FSTP.....	5
3. Annexure II: O&M Costing.....	7
4. Annexure III: Income Generation for Bagru Nagarpalika.....	8
5. Annexure IV: Operations and Maintenance of FSTP.....	9
6. Annexure V: 10 Year Cash Flow – SFC Grants.....	11
7. Bill of Quantities .....	15

## 1. Abstract Cost for FSM in Bagru

<b>Abstract Costing for FSM Project/interventions in Bagru</b>		
<b>SI No</b>	<b>Description</b>	<b>Actual cost in INR</b>
1	<b>Faecal Sludge Treatment Plant(FSTP) - CAPEX</b>	₹ 18,290,205
2A	Faecal Sludge Treatment Plant(FSTP) - Operations and maintenance per year	₹ 1,365,532
2 B	<b>Faecal Sludge Treatment Plant(FSTP) - Operations and maintenance for 10 years</b>	₹ 13,655,319
3 A	Cesspool Vehicle - Operations and maintenance per year	₹ 1,280,419
3 B	<b>Cesspool Vehicle - Operations and Maintenance for 10 years</b>	₹ 12,804,192
	<b>Total Project Cost</b>	₹ 44,749,716

## 2. Annexure I: Abstract Cost for FSTP

<b>Abstract Costing of FSTP Bagru</b>			
<b>SI No</b>	<b>Description</b>	<b>Nos</b>	<b>Actual cost in INR</b>
<b>A</b>	<b>Treatment modules</b>		
1	Screening Chamber	1	₹ 20,564
2	Stabilisation Tank	1	₹ 1,528,212
3	Sludge Drying Bed	20	₹ 3,243,530
4	Planted Drying Bed	2	₹ 1,214,597
5	Integrated Settler & AF	1	₹ 552,202
6	Planted Gravel Filter	1	₹ 725,639
7	Polishing pond	1	₹ 421,806
	<b>Total A</b>		<b>₹ 7,706,550</b>
<b>C</b>	<b>Other civil, mechanical and electrical works</b>		
1	Operator Room		₹ 356,129
2	Guard Room		₹ 159,131
3	Sludge Storage House		₹ 436,399
4	Flexible Pavement		₹ 973,598
5	Additional work		₹ 3,461,033
7	Retaining wall+Ramp		₹ 219,801
8	Storm water drain		₹ 468,937
9	Compound Wall		₹ 603,874
10	Registars + solar drying bed		₹ 87,166
	<b>Total B</b>		<b>₹ 6,766,068</b>
	<b>Total (A+B)</b>		<b>₹ 14,472,618</b>

	Contingencies and unforeseen charges (5% of A+B)=C	₹ 723,631
	Sub Total(A+B+C)	₹ 15,196,249
	Work charge establishment (2% )	₹ 303,925
	GST (@18%)	₹ 2,790,031
	<b>Total Cost of FSTP</b>	<b>₹ 18,290,205</b>



#### 4. Annexure III: Income Generation for Bagru Nagarpalika

Particulars of Revenue Generation by ULB	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Income desludging operations	₹ 1,200,000	₹ 1,200,000	₹ 1,200,000	₹ 1,200,000	₹ 1,200,000	₹ 1,200,000	₹ 1,200,000	₹ 1,200,000	₹ 1,200,000	₹ 1,200,000
Sale of End Products	₹ 540,000	₹ 540,000	₹ 540,000	₹ 540,000	₹ 540,000	₹ 540,000	₹ 540,000	₹ 540,000	₹ 540,000	₹ 540,000
Taxes collected from households						₹ 966,000	₹ 966,000	₹ 966,000	₹ 966,000	₹ 966,000

## 5. Annexure IV: Operations and Maintenance of FSTP

O&M costing Bagru - 12 KLD									
S.no	Particulars	Specifications	Unit	Number of units	Reference	Unit rate in Rs.	Amount	Remarks	Amount per annum
<b>A</b>	<b>Operational cost</b>								
1	Operator	Semi-skilled manpower to guide discharge of FS into the treatment plant and carry out the required operational activities as suggested in the DPR	Mandays	300	RUIDP, SOR 2017. Basic rates, Labour, #247	₹ 500	₹ 150,000	Every year	₹ 150,000
2	SDB sludge removal	Removal of mature sludge from the SDB after maturation period and placing it for solar sterilisation	Cubic metre	360	RUIDP SOR 2017, 4.24	₹ 254	₹ 91,440	Every year starting from Year 2	₹ 91,440
3	Guard	Security for the treatment plant	Mandays	365	RUIDP, SOR 2017. Basic rates, Labour, #234	₹ 350	₹ 127,750	Every year	₹ 127,750
4	Electricity charges	1 - 0.5 HP pump, 3 tubelight, 1 fan, 2 exhaust fan	KwH	2675	JVVNL, rates	₹ 6	₹ 14,713	Every year	₹ 14,713
5	Safety equipments	All materials as specified in the DPR	Refer DPR				₹ 31,200	Every year	₹ 31,200



6	Maintain plants in landscaping and PGF	Mali for trimming and Dweeding of plants	Mandays	60	RUIDP, SOR 2017. Basic rates, Labour, #234	₹ 350	₹ 21,000	Every year	₹ 21,000
7	Testing of treated water	Testing of treated water for specifications as prescribed by Rajasthan staterd pollution control board	Per sample	12	RUIDP, SOR 2017, 5.6	₹ 6,240	₹ 74,880	Every year	₹ 74,880
<b>B</b>	<b>Maintenance cost</b>								
1	Replacement of filter materials - SDB	Removal of all filter materials and replacement with new filter media as per specifications provided in the design	Cubic metre	448		₹ 1,000	₹ 448,000	Once in 2 years	₹ 224,000
2	Replacement of filter material in PGF	Removal of all filter materials and replacement with new filter media as per specifications provided in the design	Cubic metre	44		₹ 1,000	₹ 44,000	Once in 2 years	₹ 22,000
3	Desludging of settled solids from settler and AF	Removal of settled sludge from settler and AF	Cubic metre	10	RUIDP SOR 2017, 4.24	₹ 254	₹ 2,540	once in 2 years	₹ 1,270



	Capex: 12 KLD treatment plant	₹ 18,290,20 5										
	Cesspool operation		₹ 542,540	₹ 569,667	₹ 598,150	₹ 628,058	₹ 659,461	₹ 692,434	₹ 727,055	₹ 763,408	₹ 801,579	₹ 841,658
	Treatment plant operations		₹ 848,497	₹ 890,922	₹ 935,468	₹ 982,241	₹ 1,031,35 3	₹ 1,082,92 1	₹ 1,137,06 7	₹ 1,193,92 0	₹ 1,253,61 7	₹ 1,316,29 7
	Subsidy - Househo lds desludgi ng		₹ 805,400	₹ 805,400	₹ 805,400	₹ 805,400	₹ 805,400					
	Subsidy - Tipping fee for desludgi ng operator s		₹ 180,000	₹ 180,000	₹ 180,000	₹ 180,000	₹ 180,000					
	Cesspool Truck operatio ns and mainten ance		₹ 1,347,94 0	₹ 1,375,06 7	₹ 1,403,55 0	₹ 1,433,45 8	₹ 1,464,86 1	₹ 692,434	₹ 727,055	₹ 763,408	₹ 801,579	₹ 841,658
	FSTP operatio ns and mainten ance		₹ 1,028,49 7	₹ 1,070,92 2	₹ 1,115,46 8	₹ 1,162,24 1	₹ 1,211,35 3	₹ 1,082,92 1	₹ 1,137,06 7	₹ 1,193,92 0	₹ 1,253,61 7	₹ 1,316,29 7



**Assumptions:**

- Inflation Rate = 5%
- Calculation of the present value has been done considering a discount rate of 5%

**Note:****1. Subsidy from ULB for HH**

- Subsidy from ULB for HH = Rs. 500 / HH
- Total Subsidy = No. of HHs \* Rs. 500 = 1610\*500 = Rs. 8, 05,400

**2. Subsidy from ULB for Truck Operators**

- Subsidy from ULB for Truck Operators = Rs. 150/load
- Total Subsidy = No. of loads \* Rs. 150 = 1200\*150 = 1, 80,000

**3. 3. Income for renting of trucks**

- Rent to be paid by the truck operator/month = Rs. 10,000

Total Rent obtained by the ULB= 12\*10,000 = Rs. 1,20,000

## 7. Bill of Quantities

### 1. Cost Estimate For Construction Of Screening Chamber

Sl.n	Item No	Description	Unit	Nos	L	B	D	Quantity	Rate	Amount
					mtr	mtr	mtr		Rs	Rs
<b>A</b>		<b>Rate for Earthwork-Excavation</b>								
a	RUIDP SOR 2017, item no 4.9 (page 10)	Earth work in excavation in open area, STP, WTP, Pumping station with mechanical means including dressing of sides and ramming of bottoms, including getting out the excavated material, disposal of excavated material lead upto 1000m at suitable site as per as per drawing and as per direction of Engineer. (Measurements for payment to be done as per standard drawings).								
	RUIDP SOR 2017, item no 4.9.1.1 (page 10)	In all types of soil upto 3m depth								
		Excavation (EGL +96.50m to Exc lvl +96.116m)	cum	1	1	3.50	1.050	0.384	1.41	

			cum						1.41	116.00	₹ 164
c		<b>Refilling filling with excavated earth</b>									
	<b>RUIDP 2017, item no 4.13 (page 12)</b>	<b>Earth filling with available surplus soil excavated from foundations and taken only from outside of building plinth in layers not exceeding 20cm in depth, consolidating each deposited layer including ramming and watering and consolidation with lead up to 50 m and lift upto 1.5 m.</b>									
		<b>Excavation</b>	<b>cum</b>						<b>1.41</b>		
		Deduct PCC for long wall footing	cum	1	-1	2.93	0.66	0.150	(0.29)		
		Deduct PCC for short wall footing	cum	1	-2	0.61	0.66	0.150	(0.12)		
		Deduct SBM masonry for long wall	cum	1	-1	2.73	0.46	0.234	(0.29)		
		Deduct SBM masonry for short wall	cum	1	-2	0.71	0.46	0.234	(0.15)		
		<b>Total</b>	<b>cum</b>						<b>0.55</b>		
		Refilling between masonry to support soling	cum	1	1	1.93	0.78	0.500	0.75		













		site for testing) and commissioning etc complete as directed by Engineer. Note : E/w to be measured and paid separately.								
	RUIDP SOR 2017, Item no. 17.25.2 Pg - 70	160 mm Nominal Dia	m	1	1	0.45		0.45	510.00	₹ 230
	RUIDP SOR 2017, item no 2005, pg-514	160 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834	each	1	1	1.00		1.00	1,041.00	₹ 1,041
	RUIDP SOR 2017, Item no. 17.25.1 Pg - 70	110 mm Nominal Dia	m	1	1	0.39		0.39	244.00	₹ 95
H	RUIDP SOR 2017, Item no. 39.35. Pg - 266	Wrought iron and mild steel welded work) (using angles, square bars, tees and channel grills, grating frames, gates and tree guards of any size and design etc. including cost of screens and								



**2. Measurement sheet of Stabilization Tank**

Sl. n	Item No	Description	Unit	Nos	L	B	D	Quantity	Rate	Amount
					mtr	mtr	mtr			
<b>A</b>		<b>Rate for Earthwork- Excavation</b>								
	RUIDP SOR 2017, item no 4.9 (page 10)	Earth work in excavation in open area, STP, WTP, Pumping station with mechanical means including dressing of sides and ramming of bottoms, including getting out the excavated material, disposal of excavated material lead upto 1000m at suitable site as per as per drawing and as per direction of Engineer. (Measurements for payment to be done as per standard drawings).								
	4.9.1	In all type of soil								
	4.9.1.1	Upto 3.0 m depth	cum	1	14.78	7.68	2.27	257.44		
		<b>Total</b>	<b>cu m</b>					<b>257.44</b>	116.00	<b>₹ 29,863</b>
<b>B</b>		<b>Refilling with excavated earth</b>								
	RUIDP 2017, item no 4.13 (page 12)	Earth filling with available surplus soil excavated from foundations and taken only from outside of building plinth in layers not exceeding 20cm in depth, consolidating each deposited layer including ramming and watering and consolidation with lead up to 50 m and lift upto 1.5 m.								
		<b>Excavated earth</b>	<b>cu m</b>					<b>257.44</b>		
		Deduct rubble solingfor CH1	cum	-1	5.52	2.37	0.15	(1.96)		

		Deduct rubble soling for CH2,3,4	cum	-1	11.02	6.28	0.15	(10.38)		
		Deduct PCC for CH1	cum	-1	5.52	2.37	0.10	(1.31)		
		Deduct PCC for CH2,3,4	cum	-1	11.02	6.28	0.10	(6.92)		
		Deduct Base slab for CH1	cum	-1	5.32	2.37	0.25	(3.15)		
		Deduct Base slab for CH2,3,4	cum	-1	10.82	6.08	0.25	(16.45)		
		Deduct module CH1	cum	-1	4.92	2.37	1.82	(21.17)		
		Deduct module CH2,3,4	cum	-1	10.42	5.68	1.82	(107.66)		
		<b>Total refilling with excavated earth</b>	cum					<b>88.46</b>	98.00	<b>₹ 8,669</b>
<b>C</b>		<b>Plain Cement Concrete (P.C.C),</b>								
	<b>RUIDP 2017, item no 21.1 ( Page 151)</b>	<b>Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - All work upto plinth level :</b>								
a	<b>RUIDP 2017, item no 21.1.3 (page 151)</b>	<b>1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)</b>								
		PCC for CH1	cum	1	5.52	2.37	0.10	1.31		
		PCC for CH2,3,4	cum	1	11.02	6.28	0.10	6.92		
			<b>cu m</b>					<b>8.23</b>	4280	<b>₹ 35,207</b>
b	<b>RUIDP 2017, item no 21.1.6 (page 151)</b>	<b>1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size).</b>								
		PCC slope in CH1	cum	0.5						





	<b>RUIDP 2017, item no 23.1.1 (page 155)</b>	<b>1:1:2 (1 cement : 1 coarse sand : 2 graded stone aggregate 20 mm nominal size). (As per design mix)</b>								
		<b>BASE SLAB</b>								
		Base slab for CH1	cum	1	5.32	2.37	0.25		3.15	
		Base slab for CH2,3,4	cum	1	10.82	6.08	0.25		16.45	
		<b>RCC WALLS</b>								
		<b>CH1</b>								
		Long wall	cum	1	4.92	0.20	3.25		3.19	
		Short wall	cum	2	2.17	0.20	3.25		2.81	
		<b>CH2,3,4</b>								
		<b>External wall</b>								
		Long Wall	cum	2	10.42	0.20	3.25		13.53	
		Partition Wall	cum	1	7.68	0.20	3.25		4.98	
		Short Wall between CH1 & CH2	cum	1	5.28	0.20	3.25		3.43	
		Short Wall between CH3 & CH4	cum	1	5.28	0.20	3.25		3.43	
		Short Wall between CH2 & CH3	cum	1	5.28	0.20	3.25		3.43	
		External short wall @CH4	cum	1	5.28	0.20	3.25		3.43	
		short wall in CH1	cum	2	2.17	0.20	2.31		2.00	
		Ch2,3	cum	2	5.08	0.10	2.41		2.45	
		<b>Beam</b>								
		B1(200X400) @ CH1	cum	2	2.17	0.20	0.40		0.35	
		Beam @ CH2 & CH3 to support SBM wall	cum	2						



b		Walls	kg	1	125.00	42.67		5,333.58		
c		Beam	kg	1	125.00	0.65		81.40		
d		Top Slab	kg	1	125.00	9.18		1,147.80		
			<b>KG</b>					<b>9,011.76</b>		
			<b>MT</b>					<b>9.01</b>	51500	<b>₹ 464,106</b>
<b>G</b>		<b>Centering/ Shuttering</b>								
	<b>RUIDP SOR 2017, item no 22.1 (page 154)</b>	<b>Centring and shuttering with plywood or steel sheet upto two stories or height upto 7.5 metre above plinth level including strutting, propping etc. and removal of form for :</b>								
<b>a</b>	<b>RUIDP SOR 2017, item no 22.1.1 (page 154)</b>	<b>Foundations, footings, bases of columns, etc. for mass concrete</b>								
		BASE SLAB								
		Base slab for CH1 sides	sqm	2	5.32		0.25	2.66		
			sqm	2		2.37	0.25	1.18		
		Base slab for CH2,3,4 sides	sqm	2	10.82		0.25	5.41		
			sqm	2		6.08	0.25	3.04		
		Footing PCC for CH1	sqm	2	5.52		0.10	1.10		
			sqm	2		2.37	0.10	0.47		
		Footing PCC for CH2,3,4	sqm	2						

					11.02		0.10	2.20		
			sqm	2		6.28	0.10	1.26		
			sqm					<b>17.33</b>	162	<b>₹ 2,807</b>
<b>b</b>	<b>RUIDP SOR 2017, item no 22.1.2 (page 154)</b>	<b>Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc</b>								
		<b>RCC WALLS</b>								
		<b>CH1</b>								
		Long wall(B/F)	sqm	2	4.92		3.25	31.93		
		Short wall(B/F)	sqm	4	2.17		3.25	28.10		
		<b>CH2,3,4</b>								
		<b>External wall</b>								
		Long wall(B/F)	sqm	4	10.42		3.25	135.25		
		Short wall(B/F)	sqm	8	5.28		3.25	137.07		
		Partition Wall (B/F)	sqm	2	7.68		3.25	49.84		
		short wall in CH1	sqm	4	2.17		2.31	20.00		
		Ch2,3	sqm	4	5.08		2.41	48.97		
			sqm					<b>451.17</b>	240	<b>₹ 108,281</b>
<b>c</b>	<b>RUIDP SOR 2017, item no 22.1.3 (page 154)</b>	<b>Suspended floors, roofs, landings, balconies and access platform</b>								
		<b>Top Slab</b>								
		At CH1(sides)	sqm	1	4.92		0.15	0.74		
		sides	sqm	2						





		<b>Top Slab</b>							
		At CH1							
		Bottom	sqm	1	4.12	2.17		8.92	
		At CH2,3,	sqm	4	3.34	2.54		33.93	
		At CH4	sqm	1	5.28	1.94		10.24	
		Deduct Manhole covers							
		600 mm x 600 mm	sqm	-40	0.60	0.60		(14.40)	
		600mm dia	sqm	-17	3.14	0.09		(4.81)	
		Base slab for CH1	sqm	1	4.52	2.17		9.79	
		Base slab for CH2,3,	sqm	4	3.34	2.54		33.93	
		Base slab for CH4	sqm	1	5.28	1.94		10.24	
		<b>TOTAL</b>	<b>Sq m</b>					<b>526.93</b>	210
									<b>₹ 110,656</b>
<b>I</b>		<b>Waste water pipes</b>							



	RUIDP SOR 2017, Item no. 17.25. Pg - 70	Providing at site, lowering & laying in trenches, aligning & jointing of PVC-U pipes (SN 8) as per IS 15328 (amended up to date) and as per specifications with rubber rings with socket and spigot joint, (EPDM/SBR) for all depths for pipe length as per drawing and specification including hydraulic field testing (including the cost and conveyance of water to site for testing) and commissioning etc complete as directed by Engineer. Note : E/w to be measured and paid separately.							
	RUIDP SOR 2017, Item no. 17.25.1 Pg - 70	110 mm Nominal Dia	m	1	0.50		0.50	244	₹ 122
	RUIDP SOR 2017, Item no. 1882. Pg - 510	110 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	1	1.00		1.00	559	₹ 559
	RUIDP SOR 2017, Item no. 17.25.2 Pg - 70	160 mm Nominal Dia	m	4	0.30		1.20	510	₹ 612
	RUIDP SOR 2017, Item no. 17.25.2 Pg - 70	160 mm Nominal Dia	m	2	2.10		4.20	510	₹ 2,142
	RUIDP SOR 2017, Item no. 1885. Pg - 510	160 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	1	4.00		4.00	1466	₹ 5,864

	RUIDP SOR 2017, Item no. 17.25.2 Pg - 70	160 mm Nominal Dia	m	6	0.30			1.80	510	₹ 918
	RUIDP SOR 2017, Item no. 17.25.2 Pg - 70	160 mm Nominal Dia	m	6	2.10			12.60	510	₹ 6,426
	RUIDP SOR 2017, Item no. 1885. Pg - 510	160 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	1	6.00			6.00	1466	₹ 8,796
	RUIDP SOR 2017, Item no. 17.25.2 Pg - 70	160 mm Nominal Dia	m	6	0.30			1.80	510	₹ 918
	RUIDP SOR 2017, Item no. 17.25.2 Pg - 70	160 mm Nominal Dia	m	6	2.10			12.60	510	₹ 6,426
	RUIDP SOR 2017, Item no. 1885. Pg - 510	160 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	1	6.00			6.00	1466	₹ 8,796
	RUIDP SOR 2017, Item no. 17.25.1 Pg - 70	110 mm Nominal Dia	m	1	0.85			0.85	244	₹ 207
<b>J</b>		<b>Sludge pump</b>								



### 3. Cost Estimate For Construction Of Sludge Drying Beds

Sl. n	Item No	Description	Unit	Nos		L	B	D	Quantity	Rate	Amount
						mtr	mtr	mtr			
<b>A</b>		<b>Rate for Earthwork- Excavation</b>									
a	RUIDP SOR 2017, item no 4.9 (page 10)	Earth work in excavation in open area, STP, WTP, Pumping station with mechanical means including dressing of sides and ramming of bottoms, including getting out the excavated material, disposal of excavated material lead upto 1000m at suitable site as per as per drawing and as per direction of Engineer. (Measurements for payment to be done as per standard drawings).									
	RUIDP SOR 2017, item no 4.9.1.1 (page 10)	In all types of soil upto 3.0 m depth.									
		For set of 7 beds	cu m	1	2	35.21	10.500	0.723	534.59		
		For set of 6 beds	cu m	1	1	30.17	10.500	0.723	229.02		
			cu m						<b>763.61</b>	116.00	<b>₹ 88,579</b>
b		Refilling filling with excavated earth									
	RUIDP 2017, item no 4.13 (page 12)	Earth filling with available surplus soil excavated from foundations and taken only from outside of building plinth in layers not exceeding 20cm in depth, consolidating each deposited layer including ramming and watering and consolidation with lead up to 50 m and lift upto 1.5 m.									
		<b>Excavation</b>	<b>cu m</b>						<b>763.61</b>		
		Deduct soling (For set of 7 beds)	cu m	- 1	2	33.91	9.20	0.150	(93.59)		
		Deduct soling (For set of 6 beds)	cu m	- 1	1	28.87	9.20	0.150	(39.84)		



	( Page 151)											
	RUIDP 2017, item no 21.1.6 (page 151)	1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size).										
		PCC base slab above soling for set of 7 beds	cu m	1	2	33.51	8.80	0.150	88.47			
		PCC base slab above soling for set of 6 beds	cu m	1	1	28.47	8.80	0.150	37.58			
		PCC base slab above soling at registrar	cu m	1	2 0	1.83	0.95	0.150	5.22			
		PCC at slope above base slab	cu m	1	2 0	8.04	4.04	0.063	40.60			
		<b>TOTAL C</b>	cu m						<b>171.86</b>	3670	<b>₹ 630,732</b>	
D		<b>Centering/Shuttering</b>										
	RUIDP SOR 2017, item no 22.1 (page 154)	Centring and shuttering with plywood or steel sheet upto two stories or height upto 7.5 metre above plinth level including strutting, propping etc. and removal of form for :										
	RUIDP SOR 2017, item no 22.1.1 (page 154)	Foundations, footings, bases of columns, etc. for mass concrete										
		PCC side shuttering										
		PCC base slab above soling for set of 7 beds	sq m	2	2	33.51		0.150	20.11			
			sq m	2	2		8.800	0.150	5.28			

		PCC base slab above soling for set of 6 beds	sq m	2	1	28.47		0.150	8.54		
			sq m	2	1		8.800	0.150	2.64		
		PCC base slab above soling at registrar	sq m	1	2 0	1.83		0.150	5.49		
			sq m	2	2 0		0.950	0.150	5.70		
			sq m						<b>47.76</b>	162	<b>₹ 7,737</b>
<b>E</b>		<b>BRICK WORK</b>									
	<b>RUIDP SOR 2017, item no 24.5(page 159)</b>	<b>Brick work with FPS bricks of class designation 75 in superstructure above plinth level upto two stories in all shapes and sizes in</b>									
	<b>RUIDP SOR 2017, item no 24.5.1(pa ge 159)</b>	<b>Cement mortar 1:4 (1 cement : 4 coarse sand)</b>									
		Long wall( For set of 7 beds)	cu m	2	1	33.65	0.230	1.225	18.96		
		Long wall( For set of 6 beds)	cu m	1	1	28.61	0.230	1.225	8.06		
		Short wall (For set of 7 beds)	cu m	2	1 2	8.47	0.230	1.225	57.27		
		Short wall (For set of 6 beds)	cu m	1	1 0	8.47	0.230	1.225	23.86		
		Long wall near registrar( For set of 7 beds)	cu m	2	1	30.03	0.230	1.225	16.92		
		Long wall near registrar( For set of 6 beds)	cu m	1	1	25.74	0.230	1.225	7.25		
		For ramp(short wall)	cu m	1	2 0	1.00	0.230	0.875	4.03		
		For ramp(long wall)	cu	1	2						

			m		0	1.77	0.230	0.938	7.63		
		Registars (long wall)	cu m	1	2 0	1.53	0.230	1.225	8.62		
		Registars (short wall)	cu m	2	2 0	0.72	0.230	1.225	8.11		
			<b>cu m</b>						<b>160.72</b>	4500	<b>₹ 723,236</b>
<b>F</b>		<b>Plastering with mortar, 1:4</b>									
	RUIDP SOR 2017, item no 32.3(pag e 210)	Cement plastering including T&P, scaffolding, material and complete labpour, including cost of water, curing, racking of joints etc. with 20 mm cement plaster of mix :									
	RUIDP SOR 2017, item no 32.3.2(pa ge 210)	1:4 (1 cement : 4 fine/ coarse sand)									
		<b>External plastering</b>									
		Long wall (For set of 7 beds)	sq m	2	2	33.65		1.23	164.89		
		Short wall (For set of 7 beds)	sq m	2	2	9.30		1.23	45.57		
		Long wall (For set of 6 beds)	sq m	2	1	28.61		1.23	70.09		
		Short wall (For set of 7 beds)	sq m	2	1	9.30		1.23	22.79		
		Registars Short wall	sq m	2	2 0	0.95		1.23	46.55		
		<b>Internal walls</b>									
		SDB bed walls	sq m	1	2 0	20.08		1.23	491.96		
		Internal plastering between beds	sq m	1	1 1	17.94		1.23	241.74		
		At ramp top	sq	1	2						



			m		0	2.03	1.00	1.09	44.25		
		<b>Register</b>									
		Long wall	Sq m	2	2 0	1.04		1.23	50.96		
		Short wall	Sq m	2	2 0	0.70		1.23	34.30		
		<b>Total</b>	<b>Sq m</b>						<b>1,213.10</b>	210	<b>₹ 254,750</b>
G	RUIDP SOR 2017, item no 3428(pag e 544)	Brick Bat filling									
		Brickbat filling between beds	cu m	1	1 1	8.00	0.50	0.88	38.50		
		Brick bat filling at ramp	cu m	1	2 0	1.77	1.00	0.94	33.19		
		<b>Total</b>	<b>cu m</b>						<b>71.69</b>	400	<b>₹ 28,675</b>
<b>H</b>		<b>Waste water pipes</b>									
	RUIDP SOR 2017, Item no. 17.25. Pg - 70	Providing at site, lowering & laying in trenches, aligning & jointing of PVC-U pipes (SN 8) as per IS 15328 (amended up to date) and as per specifications with rubber rings with socket and spigot joint, (EPDM/SBR) for all depths for pipe length as per drawing and specification including hydraulic field testing (including the cost and conveyance of water to site for testing) and commissioning etc complete as directed by Engineer. Note : E/w to be measured and paid separately.									
a	RUIDP SOR 2017, Item no. 17.25.1 Pg - 70	110 mm Nominal Dia	m	1	2 0	8.59			171.80	244	<b>₹ 41,919</b>

b	RUIDP SOR 2017, Item no. 1882. Pg - 510	110 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	1	2	20.00			40.00	559	₹ 22,360
c	RUIDP SOR 2017, item no 2002, pg- 514	110 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834	each	1	4	20.00			80.00	378	₹ 30,240
d	RUIDP SOR 2017, Item no. 17.25.1 Pg - 70	110 mm Nominal Dia	m	1	1 7	4.1			69.70	244	₹ 17,007
e	RUIDP SOR 2017, Item no. 17.25.2 Pg - 70	160 mm Nominal Dia	m	1	2 0	8			160.00	510	₹ 81,600
I		<b>Aggregate</b>									
a	RUIDP SOR 2017, item no 2840 (page 532)	Aggregates 90 mm to 45 mm (hand broken)	cu m	1	2 0	3.00	2.00	0.263	31.50		
			cu m	1	2 0	6.00	4.00	0.263	126.00		
			<b>cu m</b>						<b>157.50</b>	460	₹ <b>72,450</b>





**4. Cost Estimate For Construction Of Planted Drying Beds**

Sl. n	Item No	Description	Unit	Nos		L	B	D	Quantity	Rate	Amount
						mtr	mtr	mtr		Rs	Rs
<b>A</b>		<b>Rate for Earthwork-Excavation</b>									
a	RUIDP SOR 2017, item no 4.9 (page 10)	Earth work in excavation in open area, STP, WTP, Pumping station with mechanical means including dressing of sides and ramming of bottoms, including getting out the excavated material, disposal of excavated material lead upto 1000m at suitable site as per as per drawing and as per direction of Engineer. (Measurements for payment to be done as per standard drawings).									
	RUIDP SOR 2017, item no 4.9.1.1 (page 10)	In all types of soil upto 3m depth									
		PDB excavation (EGL +96.50m to Exc lvl +94.25m)	cum	1	1	16.98	10.640	2.250	406.50		

		Register excavation	cum	1	2	2.50	1.07	1.370	7.33		
			cum						<b>413.83</b>	<b>116.00</b>	<b>₹ 48,004</b>
b		<b>Refilling filling with excavated earth</b>									
	<b>RUIDP 2017, item no 4.13 (page 12)</b>	<b>Earth filling with available surplus soil excavated from foundations and taken only from outside of building plinth in layers not exceeding 20cm in depth, consolidating each deposited layer including ramming and watering and consolidation with lead up to 50 m and lift upto 1.5 m.</b>									
		<b>Excavation</b>	<b>cum</b>						<b>413.83</b>		
		Deduct PCC for long wall footing	cum	1	- 2	16.08	1.40	0.100	(4.50)		
		Deduct PCC for short wall footing	cum	1	- 3	6.94	1.40	0.100	(2.91)		
		Deduct RCC footing for long wall	cum	1	- 2	15.88	1.20	0.375	(14.29)		
		Deduct RCC footing for short wall	cum	1	- 3	7.14	1.20	0.375	(9.64)		
		Deduct long wall upto soling bed	cum	1	- 2	14.98	0.30	0.400	(3.60)		
		Deduct short wall upto soling bed	cum	1	- 3	8.04	0.30	0.400	(2.89)		
		Deduct PDB module below EGL	cum	1	- 1	14.98	8.64	1.375	(177.96)		
		Deduct rubble soling at registrar	cum	1	- 2	1.84	1.24	0.300	(1.37)		
		Deduct PCC bed at	cum	1	-						









	<b>RUIDP 2017, item no 23.19.6(pag e 157)</b>	<b>Thermo- Mechanically Treated bars.</b>									
		Footing @ 125kg/cum	kg	1	1	125.00	23.93		2,991.38		
		walls @ 125kg/cum	kg	1	1	125.00	38.58		4,822.58		
		<b>Total reinforcement</b>	kg						<b>7,813.96</b>		
			MT						<b>7.81</b>	<b>51,500.00</b>	<b>₹ 402,419</b>
		<b>Centering/ Shuttering</b>									
	<b>RUIDP SOR 2017, item no 22.1 (page 154)</b>	<b>Centring and shuttering with plywood or steel sheet upto two stories or height upto 7.5 metre above plinth level including strutting, propping etc. and removal of form for :</b>									
	<b>RUIDP SOR 2017, item no 22.1.1 (page 154)</b>	<b>Foundations, footings, bases of columns, etc. for mass concrete</b>									
		side shuttering of footing for long wall (outer side)	sqm	1	2	15.88		0.375	11.91		
		side shuttering of footing for long wall (inner side)	sqm	1	2	12.28		0.375	9.21		
		side shuttering of	sqm	1	2				5.36		

		footing for external short wall (inner side)				7.14		0.375			
		side shuttering of footing for external short wall (outer side)	sqm	1	2	9.54		0.375	7.16		
		side shuttering of footing for internal short wall	sqm	2	1	7.14		0.375	5.36		
		side shuttering for PCC long wall footing(outer side)	sqm	1	2	16.08		0.100	3.22		
		side shuttering for PCC long wall footing(inner side)	sqm	1	2	11.88		0.100	2.38		
		side shuttering for PCC external short wall footing(inner side)	sqm	1	2	6.94		0.100	1.39		
		side shuttering for PCC external short wall footing(outer side)	sqm	1	2	9.74		0.100	1.95		
		side shuttering for PCC internal short wall footing	sqm	1	2	6.94		0.100	1.39		
		PCC at registrar(long side)	sqm	1	2	1.84		0.100	0.37		
		PCC at registrar(shorter side)	sqm	2	2		1.24	0.100	0.50		
			<b>sqm</b>						<b>50.17</b>	<b>162.00</b>	<b>₹ 8,127</b>
	<b>RUIDP SOR 2017, item no 22.1.2 (page 154)</b>	<b>Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc</b>									
		External long wall shuttering (outer side)	sqm	1	2	14.98		2.378	71.24		
		External long wall	sqm	1	2				66.96		





	RUIDP SOR 2017, Item no. 17.25. Pg - 70	Providing at site, lowering & laying in trenches, aligning & jointing of PVC-U pipes (SN 8) as per IS 15328 (amended up to date) and as per specifications with rubber rings with socket and spigot joint, (EPDM/SBR) for all depths for pipe length as per drawing and specification including hydraulic field testing (including the cost and conveyance of water to site for testing) and commissioning etc complete as directed by Engineer. Note : E/w to be measured and paid separately.									
	RUIDP SOR 2017, Item no. 17.25.1 Pg - 70	110 mm Nominal Dia	m	2	2	0.51			2.04	<b>244.00</b>	<b>₹ 498</b>
	RUIDP SOR 2017, item no 2002, pg- 514	110 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834	each	1	1	2			2.00	<b>378.00</b>	<b>₹ 756</b>
	RUIDP SOR 2017, Item no. 1882. Pg - 510	110 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	1	1				1.00	<b>559.00</b>	<b>₹ 559</b>











	<b>RUIDP 2017, item no 4.13 (page 12)</b>	<b>Earth filling with available surplus soil excavated from foundations and taken only from outside of building plinth in layers not exceeding 20cm in depth, consolidating each deposited layer including ramming and watering and consolidation with lead up to 50 m and lift upto 1.5 m.</b>								
		Excavated earth	cum					209.45		
		Deduct rubble soling below PCC bed	cum	-1	10.80	2.84	0.15	(4.60)		
		Deduct PCC	cum	-1	10.80	2.84	0.10	(3.07)		
		Deduct PCC for distribution chamber	cum	-1	2.84	0.94	0.10	(0.27)		
		Deduct RCC Base Slab	cum	-1	10.60	2.64	0.20	(5.60)		
		Deduct RCC Base Slab for distribution chamber	cum	-1	2.64	0.84	0.20	(0.44)		
		Deduct the settler & AF module below EGL	cum	-1	10.40	2.44	3.14	(79.68)		
		Deduct distribution chamber module below EGL	cum	-1	2.44	0.74	1.36	(2.46)		
		Total refilling	<b>cum</b>					<b>113.33</b>	98.00	<b>₹ 11,107</b>
<b>B</b>		<b>Plain Cement Concrete (P.C.C), 1:4:8</b>								
1	<b>RUIDP 2017, item no 21.1 ( Page 151)</b>	<b>Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - All work upto plinth level :</b>								

	<b>RUIDP 2017, item no 21.1.7 (page 151)</b>	<b>1:4:8 (1 Cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size).</b>								
		PCC for integrated settler and AF	cum	1	10.80	2.84	0.10	3.07		
		PCC for distribution chamber	cum	1	2.84	0.94	0.10	0.27		
		<b>TOTAL B</b>	<b>cum</b>					<b>3.33</b>	<b>3,360.00</b>	<b>₹ 11,203</b>
<b>C</b>		<b>Stone Soling</b>								
	<b>RUIDP 2017, item no 30.34 (page 200)</b>	<b>Random rubble dry stone Kharanja (soling) under floor.</b>								
		Rubble soling below PCC bed	cum	1	10.80	2.84	0.15	4.60		
			<b>cum</b>					<b>4.60</b>	<b>1,360.00</b>	<b>₹ 6,257</b>
<b>D</b>		<b>Reinforced Cement Concrete (R.C.C), M25</b>								



<b>E</b>		<b>Reinforcement</b>								
	RUIDP 2017, item no 23.19(pag e 157)	Reinforcement for R.C.C. work at all levels including straightening, cutting, bending, placing in position and binding all complete.								
	RUIDP 2017, item no 23.19.6(pag e 157)	Thermo-Mechanically Treated bars.								
		Reinforcement at 125kg/cum	kg	1	125.00	29.75		3,719.14		
		Total for reinforcement	KG					<b>3,719.1</b>		
			<b>MT</b>					<b>3.72</b>	51,500.00	<b>191535.45</b>
<b>F</b>		<b>Centering/ Shuttering</b>								
	RUIDP SOR 2017, item no 22.1 (page 154)	Centring and shuttering with plywood or steel sheet upto two stories or height upto 7.5 metre above plinth level including strutting, propping etc. and removal of form for :								

a	RUIDP SOR 2017, item no 22.1.1 (page 154)	Foundations, footings, bases of columns, etc. for mass concrete								
		PCC side shuttering								
		PCC for integrated settler and AF	sqm	2	10.80		0.10	2.16		
			sqm	2		2.84	0.10	0.57		
		PCC for distribution chamber	sqm	1	2.84		0.10	0.28		
			sqm	2		0.94	0.10	0.19		
		Base slab( Side)	sqm	2	10.60		0.20	4.24		
			sqm	2		2.64	0.20	1.06		
		Base slab( Side) for distribution chamber	sqm	1	2.64		0.20	0.53		
			sqm	2		0.84	0.20	0.34		
			<b>sqm</b>					<b>9.36</b>	162.00	<b>₹ 1,516</b>
b	RUIDP SOR 2017, item no 22.1.2 (page 154)	Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc								
		<b>RCC walls</b>								
		Long Wall ( outer side shuttering)	sqm	2	10.40		3.14	65.31		
		Long wall ( inner side shuttering)	sqm	2	9.20		3.14	57.78		
		External Short wall(inner side	sqm	2						

		shuttering)			2.04		3.14	12.81		
		External Short wall(outer side shuttering)	sqm	2	2.44		3.14	15.32		
		Internal Short wall(inner side shuttering)	sqm	8	2.04		3.14	51.24		
		Distribution long wall(outer side shuttering)	sqm	1	2.44		1.40	3.40		
		Distribution long wall(inner side shuttering)	sqm	1	2.04		1.40	2.85		
		Distribution short wall(inner side shuttering)	sqm	2	0.54		1.40	1.51		
		Distribution short wall(outer side shuttering)	sqm	2	0.74		1.40	2.06		
			<b>sqm</b>					<b>212.29</b>	240.00	<b>₹ 50,949</b>
<b>c</b>	<b>RUIDP SOR 2017, item no 22.1.3 (page 154)</b>	<b>Suspended floors, roofs, landings, balconies and access platform</b>								
		Top slab(sides)	sqm	2	11.14		0.15	3.34		
			sqm	2		2.44	0.15	0.73		
		Bottom	sqm	1	9.74	2.04		19.87		
		deduct area for manhole openings	Sqm	-14	0.60	0.60		(5.04)		
			sqm					<b>18.90</b>	287.00	<b>₹ 5,425</b>
<b>G</b>		<b>BRICK WORK</b>								



	RUIDP SOR 2017, item no 24.5(page 159)	Brick work with FPS bricks of class designation 75 in superstructure above plinth level upto two stories in all shapes and sizes in								
	RUIDP SOR 2017, item no 24.5.1(page 159)	Cement mortar 1:4 (1 cement : 4 coarse sand)								
		supporting wall for perforated wall	cum	9	1.840	0.150	0.500	1.24		
		<b>Total</b>	<b>cum</b>					<b>1.24</b>	4,500.00	<b>₹ 5,589</b>
<b>H</b>		<b>Plastering with mortar, 1:4</b>								
	RUIDP SOR 2017, item no 32.3(page 210)	Cement plastering including T&P, scaffolding, material and complete labpour, including cost of water, curing, racking of joints etc. with 20 mm cement plaster of mix :								
	RUIDP SOR 2017, item no 32.3.2(page 210)	1:4 (1 cement : 4 fine/ coarse sand)								
		External plastering	sqm	1	27.16		3.325	90.31		
		Internal plastering								
i		Settler	sqm	1	11.36		3.18	36.07		
		Partition wall in settler	sqm	2						

					2.00		3.18	12.70		
		Bottom of settler	sqm	1	3.60	2.00		7.20		
		AF	sqm	1	15.04		3.18	47.75		
		short walls in AF	sqm	2	2.00		3.18	12.70		
		Bottom of AF	sqm	1	5.40	2.00		10.80		
		Distribution chamber	sqm	1	5.16		1.38	7.10		
		Distribution chamber bottom	sqm	1	2.04	0.54		1.10		
		<b>Total</b>	<b>Sq m</b>					<b>225.72</b>	210.00	<b>₹ 47,402</b>
<b>I</b>		<b>Waste water pipes</b>								
	RUIDP SOR 2017, Item no. 17.25 Pg - 70	Providing at site, lowering & laying in trenches, aligning & jointing of PVC-U pipes (SN 8) as per IS 15328 (amended up to date) and as per specifications with rubber rings with socket and spigot joint, (EPDM/SBR) for all depths for pipe length as per drawing and specification including hydraulic field testing (including the cost and conveyance of water to site for testing) and commissioning etc complete as directed by Engineer. Note : E/w to be measured and paid separately.								
a	RUIDP SOR 2017, Item no. 17.25.1 Pg - 70	110 mm Nominal Dia	m	1	0.30			0.30	244.00	<b>₹ 73</b>

b	RUIDP SOR 2017, Item no. 1882. Pg - 510	110 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	1	1.00			1.00	559.00	₹ 559
c	RUIDP SOR 2017, Item no. 17.25.1 Pg - 70	110 mm Nominal Dia	m	5	0.30			1.50	244.00	₹ 366
d	RUIDP SOR 2017, Item no. 17.25.1 Pg - 70	110 mm Nominal Dia	m	5	0.80			4.00	244.00	₹ 976
e	RUIDP SOR 2017, Item no. 1882. Pg - 510	110 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	1	5.00			5.00	559.00	₹ 2,795
f	RUIDP SOR 2017, Item no. 17.25.1 Pg - 70	110 mm Nominal Dia	m	5	0.30			1.50	244.00	₹ 366
g	RUIDP SOR 2017, Item no. 17.25.1 Pg - 70	110 mm Nominal Dia	m	5	2.40			12.00	244.00	₹ 2,928
h	RUIDP SOR 2017, Item no. 1882. Pg - 510	110 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2	5.00			10.00	559.00	₹ 5,590

i	RUIDP SOR 2017, Item no. 17.25.1 Pg - 70	110 mm Nominal Dia	m	10	0.30			3.00	244.00	₹ 732
j	RUIDP SOR 2017, Item no. 17.25.1 Pg - 70	110 mm Nominal Dia	m	10	2.40			24.00	244.00	₹ 5,856
k	RUIDP SOR 2017, Item no. 1882. Pg - 510	110 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	1	10.00	i		10.00	559.00	₹ 5,590
l	RUIDP SOR 2017, Item no. 1882. Pg - 510	110 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	1	5.00			5.00	559.00	₹ 2,795
m	RUIDP SOR 2017, Item no. 17.25.1 Pg - 70	110 mm Nominal Dia	m	5	0.80			4.00	244.00	₹ 976
n	RUIDP SOR 2017, Item no. 17.25.1 Pg - 70	110 mm Nominal Dia	m	5	0.30			1.50	244.00	₹ 366
o	RUIDP SOR 2017, Item no. 17.25.2 Pg - 70	160 mm Nominal Dia	m	4	2.60			10.40	510.00	₹ 5,304



**6. Measurement sheet of Planted Gravel Filter**

Sl. n	Item No	Description	Unit	Nos		L	B	D	Quantity	Rate	Amount
						mtr	mtr	mtr			
<b>A</b>		<b>Rate for Earthwork- Excavation</b>									
a	RUIDP SOR 2017, item no 4.9 (page 10)	Earth work in excavation in open area, STP, WTP, Pumping station with mechanical means including dressing of sides and ramming of bottoms, including getting out the excavated material, disposal of excavated material lead upto 1000m at suitable site as per as per drawing and as per direction of Engineer. (Measurements for payment to be done as per standard drawings). In all type of soil -									
	RUIDP SOR 2017, item no 4.9. 1.1 (page 10)	Upto 3.0 m depth Total earthwork excavation	Cu m	1	1	15.21	8.54	2.50	324.47		
			cu m						324.47	116.00	₹ 37,639
<b>b</b>		<b>Refilling</b>									
	RUIDP 2017, item no 4.13 (page 12)	Earth filling with available surplus soil excavated from foundations and taken only from outside of building plinth in layers not exceeding 20cm in depth, consolidating each deposited layer including ramming and watering and consolidation with lead up to 50 m and lift upto 1.5 m.									
		Excavated Earth	cu m						324.47		



	<b>RUIDP 2017, item no 21.1.7 (page 151)</b>	<b>1:4:8 (1 Cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size).</b>									
		Footing PCC	cu m	1	1	13.71	7.04	0.10	9.65		
		Footing above brick bat filling	cu m	1	1	6.00	0.44	0.08	0.20		
		<b>TOTAL</b>	cu m						<b>9.85</b>	<b>3,360.00</b>	<b>₹ 33,095</b>
D		<b>Reinforced Cement Concrete (R.C.C), M25</b>									
	<b>RUIDP SOR 2017, item no 23.1 (page 155)</b>	<b>Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centring, shuttering, finishing and reinforcement</b>									
	<b>RUIDP 2017, item no 23.1.1 (page 155)</b>	<b>1:1:2 (1 cement : 1 coarse sand : 2 graded stone aggregate 20 mm nominal size). (As per design mix)</b>									
		Base slab	cu m	1	1	13.51	6.84	0.20	18.48		
		Long wall	cu m	1	2	13.21	0.25	2.30	15.19		
		Short wall	cu m	1	2	6.04	0.25	2.30	6.95		
		precast manhole slabs	cu m	1	1	6.40	0.67	0.08	0.32		
			cu m	1	2	1.14	0.64	0.08	0.11		







	<b>RUIDP SOR 2017, item no 24.5(page 159)</b>	<b>Brick work with FPS bricks of class designation 75 in superstructure above plinth level upto two stories in all shapes and sizes in</b>									
	<b>RUIDP SOR 2017, item no 24.5.1(pa ge 159)</b>	<b>Cement mortar 1:4 (1 cement : 4 coarse sand)</b>									
		Distribution chamber wall	<b>cu m</b>	1	1	6.04	0.23	0.97	1.35		
		Registrar	<b>cu m</b>	1	1	1.67	0.100	0.975	0.16		
			<b>cu m</b>						<b>1.51</b>	<b>4,500.00</b>	<b>₹ 6,797</b>
<b>H</b>		<b>Plastering with mortar, 1:4</b>									
	<b>RUIDP SOR 2017, item no 32.3(page 210)</b>	<b>Cement plastering including T&amp;P, scaffolding, material and complete labpour, including cost of water, curing, racking of joints etc. with 20 mm cement plaster of mix :</b>									
	<b>RUIDP SOR 2017, item no 32.3.2(pa ge 210)</b>	<b>1:4 (1 cement : 4 fine/ coarse sand)</b>									
		<b>External plastering</b>	<b>sq m</b>	1	1	39.50		2.30	90.85		

		<b>Internal plastering</b>									
		Distribution chamber	sq m	1	1	12.88		0.45	5.80		
		Distribution chamber bottom	sq m	1	1	6.00	0.40		2.40		
		PGF	sq m	1	1	36.00		2.30	82.80		
		Bottom	sq m	1	1	12.00	6.00		72.00		
		registar	sq m	1	1	3.08		0.98	3.00		
		Registar bottom	sq m	1	1	1.00	0.50		0.50		
		<b>TOTAL</b>	<b>Sq m</b>						<b>257.35</b>	<b>210.00</b>	<b>₹ 54,043</b>
<b>I</b>		<b>Waste Water Pipes</b>									
	RUIDP SOR 2017, Item no. 17.25 Pg - 70	Providing at site, lowering & laying in trenches, aligning & jointing of PVC-U pipes (SN 8) as per IS 15328 (amended up to date) and as per specifications with rubber rings with socket and spigot joint, (EPDM/SBR) for all depths for pipe length as per drawing and specification including hydraulic field testing (including the cost and conveyance of water to site for testing) and commissioning etc complete as directed by Engineer. Note : E/w to be measured and paid separately.									
	RUIDP SOR 2017, Item no. 17.25.1 Pg - 70	110mm Nominal Dia	m	1	1	0.45			0.45	<b>244.00</b>	<b>₹ 110</b>

RUIDP SOR 2017, Item no. 1882. Pg - 510	110 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	ea ch	1	1	1.00			1.00	<b>559.00</b>	₹ <b>559</b>
<b>RUIDP SOR 2017, Item no. 2377 Pg - 523</b>	Chlorinated Polyvinyl - chloride (CPVC) pipe 50 mm outer dia.	m	1	12	0.25			3.00	<b>432.00</b>	₹ <b>1,296</b>
RUIDP SOR 2017, Item no. 17.25.2 Pg - 70	160mm Nominal Dia	m	1	4	0.85			3.40	<b>510.00</b>	₹ <b>1,734</b>
RUIDP SOR 2017, item no 2245(Pg 521)	160 mm dia End Cap (class V, 10kg/sqcm) confirming to IS:7834	ea ch	1	1	4.00			4.00	<b>407.00</b>	₹ <b>1,628</b>
RUIDP SOR 2017, Item no. 17.25.2 Pg - 70	160mm Nominal Dia	m	1	1	5.20			5.20	<b>510.00</b>	₹ <b>2,652</b>
RUIDP SOR 2017, item no 2002, pg-514	110 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834	ea ch	1	2	3.00			6.00	<b>378.00</b>	₹ <b>2,268</b>



ii	RUIDP SOR 2017, item no 2830 (page 532)	Aggregates 25 mm to 10 mm	cu m	1	2	6.00	5.07	0.47	28.59	<b>700.00</b>	<b>₹ 20,016</b>
iii	RUIDP SOR 2017, item no 2821 (page 531)	Aggregates 10 mm to 5 mm	Cu m	1	2	6.00	5.22	0.13	8.14	<b>630.00</b>	<b>₹ 5,130</b>
<b>K</b>	<b>RUIDP SOR 2017, item no 3428(pag e 544)</b>	<b>Brick Bat Filling</b>	cu m	1	1	6.00	0.44	0.45	1.17	<b>400.00</b>	<b>₹ 470</b>
<b>L</b>		<b>Plants</b>									
	RUIDP SOR 2017, item no 39.41 (page 266)	Supply and planting following in poly bags / earthen pots well branched, well established & free from disease of 300 mm min. height ground covers at site in 0.3 m dia holes, 0.3 m deep dug in the ground, mixing the soil with decayed farm yard/sludge manure, backfilling the hole watering etc as required									
	RUIDP SOR 2017, item no 39.41.7 (page 267)	Rhoeo spathacea 'Compacta' ( Oyster, Boat Lily)	Sqm	1	1	12.00	6.00		72.00	<b>111.00</b>	<b>₹ 7,992</b>
<b>M</b>		<b>Valves</b>									
	Quotation attached	Ball valves for inlet, outlets and at diversion chambers	No s	1	4				4.00	<b>550.00</b>	<b>₹ 2,200</b>







	<b>RUIDP 2017, item no 4.13 (page 12)</b>	<b>Earth filling with available surplus soil excavated from foundations and taken only from outside of building plinth in layers not exceeding 20cm in depth, consolidating each deposited layer including ramming and watering and consolidation with lead up to 50 m and lift upto 1.5 m.</b>									
		Excavated Earth	cum						<b>292.33</b>		
		Deduct PCC for 225mm thick edge wall	cum	1	-2	8.34	1.48	0.10	(2.46)		
		Deduct PCC for curved wall	cum	1	-2	6.11	1.00	0.10	(1.22)		
		Deduct PCC for toe wall	cum	1	-2	6.11	0.83	0.15	(1.51)		
		Deduct RCC base slab for 225mm thick edge wall	cum	1	-2	8.14	1.28	0.25	(5.19)		
		Deduct RCC base slab for curved wall	cum	1	-2	6.31	0.80	0.25	(2.52)		
		Deduct RCC edge wall(225mm thick)	cum	1	-2	6.00	0.23	2.39	(6.44)		
		Deduct RCC curved wall	cum	1	-2	7.00	0.20	1.45	(4.06)		
		Deduct toe wall(1st layer)	cum	1	-2	7.00	0.68	0.38	(3.54)		
		Deduct toe wall(2nd layer)	cum	1	-2	7.00	0.38	0.67	(3.52)		
		Deduct module below EGL	cum	1	-1	6.98	7.17	3.21	(160.65)		
			cum						<b>101.21</b>	98.00	₹ <b>9,919</b>

B		<b>Rubble Soling</b>										
	<b>RUIDP 2017, item no 30.34 (page 200)</b>	<b>Random rubble dry stone Kharanja (soling) under floor.</b>										
		Rubble soling bed between RCC wall	cum	1	1	6.58	2.77	0.15	2.73			
		Rubble soling bed to support stairs	cum	1	2	7.10	2.05	0.15	4.37			
			cum						<b>7.10</b>	1,360.00	₹	<b>9,654</b>
C		<b>Plain Cement Concrete</b>										
	<b>RUIDP 2017, item no 21.1 (Page 151)</b>	<b>Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - All work upto plinth level :</b>										
	<b>RUIDP 2017, item no 21.1.7 (page 151)</b>	<b>1:4:8 (1 Cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size).</b>										
		PCC for 225mm thick edge wall	cum	1	2	8.34	1.48	0.10	2.46			
		PCC for curved wall	cum	1	2	6.11	1.00	0.10	1.22			
		PCC for toe wall	cum	1	2	6.11	0.83	0.15	1.51			
		Total PCC	Cum						<b>5.19</b>	3,360.00	₹	<b>17,450</b>
	<b>RUIDP 2017, item no 21.1.6 (page 151)</b>	<b>1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size).</b>										
		PCC bed between RCC wall	cum	1	1	6.58	2.77	0.10	1.82			
		PCC bed to support stairs	cum	1	1	7.10	2.05	0.10	1.46			
			<b>cum</b>						<b>3.28</b>	3,670.00	₹	<b>12,026</b>









			sqm	1	2	7.00		1.45	20.30		
			sqm	1	2	6.00		2.20	26.40		
			<b>sqm</b>						<b>46.70</b>	150.00	<b>₹ 7,005</b>
I		<b>Waste water pipes</b>									
	RUIDP SOR 2017, Item no. 17.25 Pg - 70	Providing at site, lowering & laying in trenches, aligning & jointing of PVC-U pipes (SN 8) as per IS 15328 (amended up to date) and as per specifications with rubber rings with socket and spigot joint, (EPDM/SBR) for all depths for pipe length as per drawing and specification including hydraulic field testing (including the cost and conveyance of water to site for testing) and commissioning etc complete as directed by Engineer. Note : E/w to be measured and paid separately.									
	RUIDP SOR 2017, Item no. 17.25.1 Pg - 70	110mm Nominal Dia	m	1	2	4.00			8.00	244.00	<b>₹ 1,952</b>





	<b>RUIDP SOR 2017, item no 4.9 (page 10)</b>	<b>Earth work in excavation in open area, STP, WTP, Pumping station with mechanical means including dressing of sides and ramming of bottoms, including getting out the excavated material, disposal of excavated material lead upto 1000m at suitable site as per as per drawing and as per direction of Engineer. (Measurements for payment to be done as per standard drawings).</b>									
	<b>RUIDP SOR 2017, item no 4.9.1.1 (page 10)</b>	upto 3m depth in all type of soil									
		Excavation for long wall	cum	1	2	6.46	1.95	1.58	39.68		
		Excavation for short wall	cum	1	2	2.56	1.95	1.58	15.72		
		Excavation for kitchen partition wall	cum	1	1	1.00	1.00	0.55	0.55		
		Excavation for bedroom partition wall	cum	1	1	2.00	1.00	0.55	1.10		
		Excavation for bathroom (long	cum	1	1	2.12	1.00	0.55	1.17		

		wall)									
		Excavation for bathroom (short wall)	cum	1	1	0.40	1.00	0.55	0.22		
		<b>Total</b>	<b>cum</b>						<b>58.44</b>	116.00	<b>₹ 6,779</b>
		<b>Refilling with excavated earth</b>									
	<b>RUIDP 2017, item no 4.13 (page 12)</b>	<b>Earth filling with available surplus soil excavated from foundations and taken only from outside of building plinth in layers not exceeding 20cm in depth, consolidating each deposited layer including ramming and watering and consolidation with lead up to 50 m and lift upto 1.5 m.</b>									
		Excavated earth	cum						58.441		
		Deduct PCC for footing(long wall)	cum	-1	2	6.16	0.950	0.150	(1.756)		
		Deduct PCC for footing(short wall)	cum	-1	2	4.26	0.950	0.150	(1.214)		
		Deduct PCC for footing of kitchen partition wall	cum	-1	1	1.00	0.600	0.100	(0.060)		
		Deduct PCC for footing of bedroom partition wall	cum	-1	1	2.00	0.600	0.100	(0.120)		

		Deduct PCC for footing of bathroom long wall	cum	-1	1	2.12	0.600	0.100	(0.127)		
		Deduct PCC for footing of bathroom short wall	cum	-1	1	0.75	0.600	0.100	(0.045)		
		Deduct SSM footing 1st layer(long wall)	cum	-1	2	5.96	0.750	0.375	(3.353)		
		Deduct SSM footing 1st layer(short wall)	cum	-1	2	4.46	0.750	0.375	(2.509)		
		Deduct SSM footing 2nd layer(long wall)	cum	-1	2	5.81	0.600	0.375	(2.615)		
		Deduct SSM footing 2nd layer(short wall)	cum	-1	2	4.61	0.600	0.375	(2.075)		
		Deduct SSM footing 3rd layer(long wall)	cum	-1	2	5.66	0.450	0.525	(2.674)		
		Deduct SSM footing 3rd layer(short wall)	cum	-1	2	4.76	0.450	0.525	(2.249)		
		Deduct SSM footing 4th layer(long wall)	cum	-1	2	5.56	0.350	0.150	(0.584)		
		Deduct SSM footing 4th layer(short wall)	cum	-1	2	4.86	0.350	0.150	(0.510)		
		Deduct SSM footing 1st layer of kitchen partition wall	cum	-1	1	1.00	0.450	0.375	(0.169)		
		Deduct SSM footing 1st layer of bedroom partition wall	cum	-1	1	2.00	0.450	0.375	(0.338)		

		Deduct SSM footing 1st layer of bathroom long wall	cum	-1	1	2.12	0.450	0.375	(0.358)		
		Earth filling at floor	cum	1	1	5.00	5.000	0.350	8.750		
			<b>cum</b>						<b>46.438</b>	98.00	<b>₹ 4,551</b>
<b>B</b>		<b>PLAIN CEMENT CONCRETE</b>									
	<b>RUIDP 2017, item no 21.1 ( Page 151)</b>	<b>Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - All work upto plinth level :</b>									
	<b>RUIDP 2017, item no 21.1.6 (page 151)</b>	<b>1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size).</b>									
		PCC for footing(long wall)	cum	1	2	6.16	0.95	0.15	1.76		
		PCC for footing(short wall)	cum	1	2	4.26	0.95	0.15	1.21		
		PCC for footing of kitchen partition wall	cum	1	1	1.00	0.60	0.10	0.06		
		PCC for footing of bedroom partition wall	cum	1	1	2.00	0.60	0.10	0.12		
		PCC for footing of bathroom long wall	cum	1	1	2.12	0.60	0.10	0.13		
		PCC for footing of bathroom short	cum	1	1	0.75	0.60	0.10	0.04		

		wall									
		PCC bed	cum	1	1	5.00	5.00	0.10	2.50		
		<b>Total PCC</b>	<b>Cum</b>						<b>5.82</b>	3,670.00	<b>₹ 21,365</b>
<b>C</b>		<b>Reinforced Cement Concrete (R.C.C), M25</b>									
	<b>RUIDP SOR 2017, item no 23.1 (page 155)</b>	<b>Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centring, shuttering, finishing and reinforcement</b>									
	<b>RUIDP 2017, item no 23.1.1 (page 155)</b>	<b>1:1:2 (1 cement : 1 coarse sand : 2 graded stone aggregate 20 mm nominal size). (As per design mix)</b>									
		Plinth Beam (230X150) long wall	cum	1	2	5.460	0.350	0.150	0.573		
		Plinth Beam (230X150) short wall	cum	1	2	5.00	0.350	0.150	0.525		
		Plinth Beam (230X150) kitchen partition wall	cum	1	1	1.000	0.230	0.150	0.035		
		Plinth Beam (230X150) bedroom partition	cum	1	1	2.000	0.230	0.150	0.069		



		Total reinforcement at 125 kg/cum	kg	1	1	125.00	5.71		714.01		
			kg						714.01		
		<b>TOTAL REINFORCEMENT</b>	<b>MT</b>						<b>0.71</b>	51,500.00	<b>₹ 36,771</b>
<b>E</b>		<b>Centering/ Shuttering</b>									
	RUIDP SOR 2017, item no 22.1 (page 154)	Centring and shuttering with plywood or steel sheet upto two stories or height upto 7.5 metre above plinth level including strutting, propping etc. and removal of form for :									
<b>a</b>	RUIDP SOR 2017, item no 22.1.1 (page 154)	Foundations, footings, bases of columns, etc. for mass concrete									
		PCC for footing(long wall) sides	sqm	2	2	6.16		0.15	3.70		
			sqm	2	2		0.95	0.15	0.57		
		PCC for footing(short wall)	sqm	1	2	4.26		0.15	1.28		
		PCC for footing of kitchen partition wall	sqm	1	2	1.00		0.10	0.20		
			sqm	1	1						



							0.60	0.10	0.06		
		PCC for footing of bedroom partition wall	sqm	1	2	2.00		0.10	0.40		
			sqm	1	1		0.60	0.10	0.06		
		PCC for footing of bathroom long wall	sqm	2	1	2.12		0.10	0.42		
			sqm	1	1		0.60	0.10	0.06		
		PCC for footing of bathroom short wall	sqm	1	1	0.75		0.10	0.07		
		PCC bed	sqm	1	1	5.00	5.00		25.00		
			sqm						<b>31.82</b>	162.00	<b>₹ 5,155</b>
b	<b>RUIDP SOR 2017, item no 22.1.5(page 154)</b>	<b>Lintels, beams, plinth beams, girders, bressumers and cantilevers</b>									
		Plinth Beam (230X150) long wall	sqm	1	2	5.460		0.150	1.638		
			sqm	1	2	5.000		0.150	1.500		
		Plinth Beam (230X150) short wall	sqm	1	2	5.00		0.150	1.500		
			sqm	1	2	5.46		0.150	1.638		
		Plinth Beam (230X150) kitchen partition wall	sqm	1	2	1.000		0.150	0.300		

		Plinth Beam (230X150) bedroom partition wall	sqm	1	2	2.000		0.150	0.600		
		Plinth Beam (230X150) bathroom long wall	sqm	1	2	2.120		0.150	0.636		
		Plinth Beam (230X150) bathroom short wall	sqm	1	2	1.400		0.150	0.420		
		Beam B1(230 X325)	sqm	1	2	5.000		0.325	3.250		
			sqm	1	1	5.000	0.230		1.150		
		Lintel beam for Door	sqm	1	2	1.400		0.150	0.420		
			sqm	1	1	1.000	0.230		0.230		
			sqm	1	2	0.230		0.150	0.069		
		Lintel beam for Door D1	sqm	1	2	1.000		0.150	0.300		
			sqm	1	1	0.800	0.230		0.184		
			sqm	1	2	0.230		0.150	0.069		
		Lintel beam for window	sqm	2	2	1.100		0.150	0.660		
			sqm	1	2	0.900	0.230		0.414		
			sqm	2	2	0.230		0.150	0.138		
		Chajja	sqm	1	3	1.100	0.450		1.485		
			sqm	2	3		0.450	0.088	0.236		
			sqm	1	3	1.100	0.050		0.165		

			sqm						17.00	269.00	₹ 4,574
c	22.1.3 (page 154)	Suspended floors, roofs, landings, balconies and access platform									
		Top Slab(sides)	sqm	1	2	5.460		0.125	1.37		
		sides	sqm	1	2		5.460	0.125	1.37		
		Bottom	sqm	1	1	5.0	5.000		25.00		
			<b>sqm</b>						<b>27.73</b>	287.00	₹ 7,959
F		<b>BRICK WORK</b>									
	RUIDP SOR 2017, item no 24.5(page 159)	Brick work with FPS bricks of class designation 75 in superstructure above plinth level upto two stories in all shapes and sizes in									
	RUIDP SOR 2017, item no 24.5.1(page 159)	Cement mortar 1:4 (1 cement : 4 coarse sand)									
		Long wall	cum	2	1	5.46	0.230	3.060	7.69		
		Short wall	cum	2	1	5.00	0.230	3.060	7.04		

		kitchen partition wall	cum	1	1	1.00	0.115	2.000	0.23		
		Bedroom partition wall	cum	1	1	2.00	0.115	2.000	0.46		
		Bathroom long wall	cum	1	1	2.12	0.115	3.360	0.82		
		Bathroom short wall	cum	1	1	1.40	0.115	3.360	0.54		
		Deduction for window	cum	-3	1	0.90	0.230	1.200	(0.75)		
		Deduction for main door	cum	-1	1	1.20	0.230	2.100	(0.58)		
		Deduction for toilet door	cum	-1	1	0.80	0.115	1.900	(0.17)		
		Deduction of ventilator	cum	-2	1	0.60	0.230	0.400	(0.11)		
		Step at main door(1st step)	cum	1	1	1.40	0.900	0.150	0.19		
		Step at main door(2nd step)	cum	1	1	1.40	0.600	0.150	0.13		
		Step at main door(3rd step)	cum	1	1	1.40	0.300	0.150	0.06		
		<b>Total</b>	<b>cum</b>						<b>15.54</b>	4,500.00	<b>₹ 69,937</b>
<b>G</b>		<b>Stone Masonry</b>									
	<b>RUIDP SOR 2017, item no 25.1.2(page 163)</b>	<b>Random rubble masonry with hard stone in foundation and plinth : Cement mortar 1:4 (1 cement : 4 coarse sand)</b>									
		SSM footing 1st layer(long wall)	cum	1	2	5.96	0.750	0.375	3.353		
		SSM footing 1st layer(short wall)	cum	1	2	4.46	0.750	0.375	2.509		



	RUIDP SOR 2017, item no 32.3 (page 210)	Cement plastering including T&P, scaffolding, material and complete labpour, including cost of water, curing, racking of joints etc. with 20 mm cement plaster of mix									
	RUIDP SOR 2017, item no 32.3.2 (page 210)	1:4 (1 cement : 4 fine/ coarse sand)									
		<b>External plastering</b>									
		Long wall	sqm	1	2	5.46	3.06		33.42		
		Short wall	sqm	1	2	5.46	3.06		33.42		
		Deduction of window	sqm	1	- 3	0.90	1.20		(3.24)		
		Deduction of Door	sqm	1	- 1	1.20	2.10		(2.52)		
		Deduction of ventilator	sqm	1	- 2	0.60	0.40		(0.48)		
		<b>Internal plastering</b>									
		Long wall	sqm	1	2	5.00	3.060		30.60		
		Short wall	sqm	1	2	5.00	3.060		30.60		
		Beam B1 sides	sqm	1	2	5.00	0.375		3.75		

		Slab Bottom	sqm	1	1	5.00	5.000		25.00		
		Deduction of window	Sqm	1	-3	0.90	1.20		(3.24)		
		Deduction of Door	sqm	1	-1	1.20	2.10		(2.52)		
		Deduction of toilet door	sqm	1	-1	0.80	1.90		(1.52)		
		Toilet internal walls	sqm	1	1	7.04	3.060		21.54		
		Deduction of ventilator	sqm	1	-2	0.60	0.40		(0.48)		
		Deduction of toilet door	sqm	1	-1	0.80	1.90		(1.52)		
		<b>Total plastering</b>	sqm						<b>162.80</b>	210.00	₹ <b>34,189</b>
<b>I</b>		<b>White wash</b>									
	<b>RUIDP SOR 2017, item no 32.26 (page 212)</b>	White washing with lime to give an even shade:	sqm			162.80			162.8	16.00	₹ <b>2,605</b>





b	<p>RUIDP SOR 2017, item no 36.1 (page 242)</p>	<p>Providing and fixing water closet squatting pan (Indian type W.C. pan ) with 100mm sand cast Iron P or S trap, 10 litre low level white P.V.C. flushing cistern with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete including cutting and making good the walls and floors wherever required :</p>									
	<p>RUIDP SOR 2017, item no 36.1.1(page 242)</p>	<p>White Vitreous china Orissa pattern W.C. pan of size 580x440mm with integral type foot rests.</p>	each.	1	1				1.0	3,570.00	₹ 3,570
K		<p><b>Door and Windows</b></p>									
	<p>RUIDP SOR 2017, item no 29.5(page 192)</p>	<p>Providing and fixing 1mm thick M.S. sheet door with frame of 40x40x6mm angle iron and 3mm M.S. gusset plates at the junctions and corners, all</p>	sqm	1	1	1.2		2.1	2.5		

	necessary fittings complete, including applying a priming coat of approved steel primer.									
<b>RUIDP SOR 2017, item no 29.5.1(page 192)</b>	Using M.S. angels 40x40x6 mm for diagonal braces.	sqm	1	1	0.8		1.9	1.5		
		sqm						4.040	2,790.00	₹ <b>11,272</b>
<b>RUIDP SOR 2017, item no 40.36(pag e 272)</b>	Providing and fixing double leaf Window wooden shutters made of Ist grade wood as per traditional design (Deshi pattern) planks thickness 25mm and width of Binies, Andheri 35mm and 25mm, including Adwa etc. with fittings (nails, sankal, kunda, cheri, handle and patti etc.) as per existing matching/ as per approved design with moulding/ carving complete in all respect : Sheesham wood grade Ist. MP teak wood grade 1st	sqm	3	1	0.90		1.200	3.2		



	19.2(page 104)	Providing, lowering, laying in trenches, aligning, fixing in position and jointing uPVC pipe fittings/ accessories of class III (6 Kg/sqcm) confirming to IS:7834 suitable for potable water with rubber rings joints in uPVC pipe line at all levels/ depth including all material, labour, hydraulic testing and commissioning as per Technical Specifications and as per direction of Engineer.								
	19.2.1 (page 104)	Equal Tee (Moulded) welded with socket								
a	19.2.1.5 (page 104)	160 mm Dia	each	3				3.00	1,810.00	₹ 5,430
N		<b>Ladder</b>								

	19.65	Providing, fabricating and erecting MS ladder of 450mm wide made of 65 x 65 x 6mm angle iron and 20mm MS bars for walkway to top of the OHSR including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer complete in all respect as per specifications and the direction of the	m	1	1	3.00			3.00	1,390.00	₹ 4,170
<b>O</b>		<b>Electrical works</b>									
	<b>55.4 &amp; 55.4.1</b>	P & F double ball bearing capacitor start ceiling fan of approved make complete with regulator and other accessories as required. (for estimation purpose only) <del>900 mm sweep</del>	each	1.00					1.00	₹ 1,481.00	₹ 1,481
	55.5	P & F 1.6 mm thick M.S. Recessed fan box, hexagonal/round of size 100 mm dia, depth 75mm, 12 mm dia rod fan hook with 100 mm length	each	1.00					1.00	₹ 114.00	₹ 114

		extended on each side .									
	57.1.2	P & F strip type flourscent tube fitting fabricated from (CRCA sheet and finished with powder coating / stove enamelled paint)/(extruded non corrosive UV resist EP channel) complete with accessories like (OCCB, starter, starter seat)/ EB, rotor holder, terminal block duly prewired with copper conductor including making connection, testing etc. as required. ( without tube): 1x 36 watts with OCCB	each	2.00					2.00	₹ 277.00	₹ 554
	57.7.1.2	P & F Fluorescent tube rod in existing fixtures as Required. Flourscent powder coated. 36/40 watts	each	2.00					2.00	₹ 36.00	₹ 72

	57.27.2	<p>P &amp; F of IP65 IK10 rated LED bulk head type light fixture made from CRCA sheet steel housing suitable for mounting LED tube system (integral driver), Power consumption of 10-15W , 500-600 lumens system lumen efficiency 70 lm/ watt output suitable for 1x100 W GLS/ 9W CFL bulk head fixtures, life time of 50000 burning hours with 70% initial lumen maintained. CCT 3000° K, 4000° K and 6000° K. Fixture shall be in compliance with CE &amp; KEMA standards. LED Bulk head luminaire 9/10W</p>	each	1.00					₹ 1,271.00	₹ <b>1,271</b>
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	54.1	Pipe Earthing as per IS:3043 with perforated 3.0 Mtr. Long, 40 mm dia. ' B ' class G.I. Pipe including all accessories like nut, bolts, reducer, nipple, wire meshed funnel, and C.C. finished chamber covered with hinged type with locking arrangement C.I. Cover, C.I. Frame of size 300mm x 300 mm and embodying the pipe complete with alternate layers salt and coke/ charcoal, testing of earth resistance as required.	each	1.00				1.00	₹ 3,000.00	₹ <b>3,000</b>
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	41.1.3	<p>Wiring of light point / fan point / exhaust fan point / call bell point with 1.5 sq. mm FR PVC insulated unsheathed 1.1kV grade flexible copper conductor and 1.5 sq.mm FR PVC insulated copper earth conductor (IS:694) of approved make in double lock/ ISI marked single lock pvc casing capping &amp; it's accessories, 18 SWG M.S. box with earth terminal, screwless cage connectors for neutral looping in switch board &amp; false ceiling point, 6 A switch 3.0 mm thick phenolic laminated sheet, zinc plated / brass screws, cup washers , making connections, testing etc. as required. long point upto 10 m</p>	per point	4.00					₹ 487.00	₹ <b>1,948</b>
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47.1	P & F ISI marked (IS :3854) 6 amp. flush type switch including cutting hole in tile and making connection testing etc. as required.	each	4.00					4.00	₹ 17.00	₹ 68
47.18	P & F ISI marked flush type 120/280 watt rotary step fan regulator including making connection testing etc. as required.	each	1.00					1.00	₹ 221.00	₹ 221
45.1.3	P & F 18 SWG Sheet steel boxes duly finished with two coats of red oxide and with earthing terminal of following sizes (nominal size) on surface or in recessed as required. Size: 150 x 75 x 60 mm	each	1.00					1.00	₹ 57.00	₹ 57
46.1.1.1	P&F 240/415 V MCB of breaking capacity not less than 10 KA (B/ C/ D tripping characteristic) ISI marked IS 8828(1996)]/ conforming to IEC 60898 in existing board/sheets including making connections with	each	1.00					1.00	₹ 225.00	₹ 225







<b>B</b>		<b>PLAIN CEMENT CONCRETE</b>									
	<b>RUIDP 2017, item no 21.1 ( Page 151)</b>	<b>Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - All work upto plinth level :</b>									
	<b>RUIDP 2017, item no 21.1.6 (page 151)</b>	<b>1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size).</b>									
		PCC for footing(long wall)	cum	1	2	3.66	0.95	0.15	1.04		
		PCC for footing(short wall)	cum	1	2	1.76	0.95	0.15	0.50		
		PCC bed	cum	1	1	2.50	2.50	0.10	0.63		
		<b>Total PCC</b>	<b>Cum</b>						<b>2.17</b>	<b>3,670.00</b>	<b>₹ 7,963</b>
<b>C</b>		<b>Reinforced Cement Concrete (R.C.C), M25</b>									
	<b>RUIDP SOR 2017, item no 23.1 (page 155)</b>	<b>Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centring, shuttering, finishing and reinforcement</b>									
	<b>RUIDP 2017, item no 23.1.1 (page 155)</b>	<b>1:1:2 (1 cement : 1 coarse sand : 2 graded stone aggregate 20 mm nominal size). (As per design mix)</b>									
		Plinth Beam	cum	1	2	2.960	0.350	0.150	0.311		



		propping etc. and removal of form for :									
a	<b>RUIDP SOR 2017, item no 22.1.1 (page 154)</b>	<b>Foundations, footings, bases of columns, etc. for mass concrete</b>									
		PCC for footing(long wall) sides	sqm	2	2	3.66		0.15	2.20		
			sqm	2	2		0.95	0.15	0.57		
		PCC for footing(short wall)	sqm	1	2	1.76		0.15	0.53		
		PCC bed	sqm	1	1	2.50	2.50		6.25		
			sqm						<b>9.54</b>	162.00	<b>₹ 1,546</b>
b	<b>RUIDP SOR 2017, item no 22.1.5(page 154)</b>	<b>Lintels, beams, plinth beams, girders, bressumers and cantilevers</b>									
		Plinth Beam (230X150) long wall	sqm	1	2	2.960		0.150	0.888		
			sqm	1	2	2.500		0.150	0.750		
		Plinth Beam (230X150) short wall	sqm	1	2	2.96		0.150	0.888		
			sqm	1	2	2.50		0.150	0.750		
		Lintel beam for Door	sqm	1	2	1.400		0.150	0.420		
			sqm	1	1	1.000	0.230		0.230		
			sqm	1	2	0.230	0.150		0.069		
		Lintel beam for window	sqm	2	2	1.100		0.150	0.660		
			sqm	1	2	0.900	0.230		0.414		



			sqm	2	2	0.230	0.150		0.138		
		Chajja	sqm	1	3	1.100	0.450		1.485		
			sqm	2	3		0.450	0.088	0.236		
			sqm	1	3	1.100	0.050		0.165		
			sqm						<b>7.09</b>	269.00	₹ 1,908
<b>c</b>	<b>22.1.3 (page 154)</b>	<b>Suspended floors, roofs, landings, balconies and access platform</b>									
		Top Slab(sides)	sqm	1	2	2.960		0.125	0.74		
		sides	sqm	1	2		2.960	0.125	0.74		
		Bottom	sqm	1	1	2.96	2.960		8.76		
			<b>sqm</b>						<b>10.24</b>	287.00	₹ 2,939
<b>F</b>		<b>BRICK WORK</b>									
	<b>RUIDP SOR 2017, item no 24.5(page 159)</b>	<b>Brick work with FPS bricks of class designation 75 in superstructure above plinth level upto two stories in all shapes and sizes in</b>									
	<b>RUIDP SOR 2017, item no 24.5.1(page 159)</b>	<b>Cement mortar 1:4 (1 cement : 4 coarse sand)</b>									
		Long wall	cum	2	1	2.96	0.230	3.000	4.08		
		Short wall	cum	2	1	2.50	0.230	3.000	3.45		
		Deduction for window	cum	-3	1	0.90	0.230	1.200	(0.75)		
		Deduction for main door	cum	-1	1	1.20	0.230	2.100	(0.58)		





	<b>RUIDP SOR 2017, item no 32.26.1 (page 212)</b>	<b>White washing with lime to give an even shade:</b>  New work (three or more coats)	sqm			60.25		60.25	16.00	₹ 964
J		<b>Door and Windows</b>								
	29.5(page 192)	Providing and fixing 1mm thick M.S. sheet door with frame of 40x40x6mm angle iron and 3mm M.S. gusset plates at the junctions and corners, all necessary fittings complete, including applying a priming coat of approved steel primer.	sqm	1		1.2		2.1	2.52	
	29.5.1(page 192)	Using M.S. angels 40x40x6 mm for diagonal braces.	sqm	1	1	0.8		1.9	1.52	
			sqm					4.04	2,790.00	₹ 11,272



L		<b>Waste water pipes</b>								
		Providing, lowering, laying in trenches, aligning, fixing in position and jointing uPVC pipe fittings/ accessories of class III (6 Kg/sqcm) confirming to IS:7834 suitable for potable water with rubber rings joints in uPVC pipe line at all levels/ depth including all material, labour, hydraulic testing and commissioning as per Technical Specifications and as per direction of Engineer.								
a	19.2.1.5 (page 104)	160 mm dia	each	3				3.00	1,810.00	₹ 5,430
O		<b>Electrical works</b>								

57.1.2	P & F strip type fluorescent tube fitting fabricated from (CRCA sheet and finished with powder coating / stove enamelled paint)/(extruded non corrosive UV resist EP channel) complete with accessories like (OCCB, starter, starter seat)/ EB, rotor holder, terminal block duly prewired with copper conductor including making connection, testing etc. as required. ( without tube): 1x 36 watts with OCCB	each	2.00					2.00	₹ 277.00	₹ 554
57.7.1.2	P & F Fluorscent tube rod in existing fixtures as required. Flourscent powder coated 36/40 watts	each	2.00					2.00	₹ 36.00	₹ 72
57.27.2	P & F of IP65 IK10 rated LED bulk head type ligh fixture made from CRCA sheet steel housing suitable for mounting LED tube system (integral driver), Power consumption of 10-15W , 500-600 lumens system lumen efficiency 70 lm/ watt output suitable for 1x100 W GLS/ 9W CFL bulk head fixtures, life time of 50000 burning	each	1.00					1.00	₹ 1,271.00	₹ 1,271







		depth, consolidating each deposited layer including ramming and watering and consolidation with lead up to 50 m and lift upto 1.5 m.								
		Excavated Earth	cum					<b>33.37</b>		
		DeDUCT Pcc for footing	cum	-6	1.45	1.45	0.10	(1.26)		
		Deduct RCC footing(rectangular portion)	cum	-6	1.25	1.25	0.15	(1.41)		
		Deduct RCC footing(trapezoidal portion)	cum	-6	0.33	2.43	0.23	(1.09)		
		Note: Area of excavation= $\frac{1}{3}(A1+A2+\text{sqrt}A1*A2)*h$								
		Deduct pedastal	cum	-6	0.30	0.30	1.15	(0.62)		
			<b>cum</b>					<b>28.99</b>	98.00	₹ <b>2,841</b>
<b>B</b>		<b>Plain Cement Concrete</b>								
	RUIDP 2017, item no 21.1 ( Page 151)	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - All work upto plinth level :								
	RUIDP 2017, item no 21.1.7 (page 151)	1:4:8 (1 Cement : 4 fine/ coarse sand : 8 graded stone aggregate 40mm nominal size).								
		PCC for column footing	cum	6	1.45	1.45	0.10	1.26		
		Total PCC	cum					<b>1.26</b>		₹ <b>4,239</b>

									3,360.00	
	RUIDP 2017, item no 21.1.6 (page 151)	1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size).								
		PCC bed	cum	2	5.60	5.00	0.10	5.60		
			cum					5.60	3,670.00	₹ 20,552
C		<b>Rubble Soling</b>								
	RUIDP 2017, item no 30.34 (page 200)	Random rubble dry stone Kharanja (soling) under floor.								
		Soling above PCC bed	cum	2	5.60	5.00	0.15	8.40		
			cum					8.40	1,360.00	₹ 11,424
D		<b>Reinforced Cement Concrete (R.C.C), M25</b>								

	RUIDP SOR 2017, item no 23.1 (page 155)	Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centring, shuttering, finishing and reinforcement – All work upto plinth level	cum							
	RUIDP 2017, item no 23.1.1 (page 155)	1:1:2 (1 cement : 1 coarse sand : 2 graded stone aggregate 20 mm nominal size). (As per design mix)								
		Plinth beam- long wall TB1(300X375)	cum	2	9.83	0.30	0.38	2.21		
		Plinth beam- Short wall	cum	3	5.23	0.30	0.38	1.77		
		Column	cum	3	0.45	0.30	3.50	1.42		
			cum	3	0.45	0.30	3.00	1.22		
		Footing	cum	6	1.25	1.25	0.15	1.41		
			cum	6	0.33	2.43	0.23	1.09		
		<b>Total RCC</b>	<b>cum</b>					<b>9.11</b>	5,030.00	₹ <b>45,813</b>
<b>E</b>		<b>Reinforcement</b>								
	RUIDP 2017, item no 23.19(page 157)	Reinforcement for R.C.C. work at all levels including straightening, cutting, bending, placing in position and binding all complete								
	RUIDP 2017, item no 23.19.6(page 157)	Thermo-Mechanically Treated bars.								
		Total Reinforcement	KG	125.000	9.11			1,138.5		
			MT					1.1		₹ <b>58,633</b>

									51,500.00	
<b>F</b>		<b>Centering/ Shuttering</b>								
	RUIDP SOR 2017, item no 22.1 (page 154)	Centering and shuttering with plywood or steel sheet upto two stories or height upto 7.5 metre above plinth level including strutting, propping etc. and removal of form for :								
	RUIDP SOR 2017, item no 22.1.1 (page 154)	Foundations, footings, bases of columns, etc. for mass concrete								
		Column Foting	Sqm	6	5.00		0.15	4.5		
			Sqm	6	3.50		0.23	4.7		
		PCC for footing	Sqm	6	5.80		0.10	3.5		
		<b>Total</b>	<b>Sqm</b>					<b>12.7</b>	162.00	₹ <b>2,058</b>
	RUIDP SOR 2017, item no 22.1.5(page 154)	Lintels, beams, plinth beams, girders, bressumers and cantilevers								
		Plinth beam- long wall	Sqm	4	9.83		0.38	14.74		
		Plinth beam- Short wall	Sqm	6	5.23		0.38	11.77		

		Beam Bottom long side	Sqm	2	9.83		0.30	5.90		
		Beam Bottom Short side	Sqm	3	5.23		0.30	4.71		
		<b>Total for shuttering</b>	<b>Sqm</b>					<b>37.1</b>	269.00	₹ <b>9,982</b>
	RUIDP SOR 2017, item no 22.1.6(pg 154)	<b>Columns, Pillars, Piers, Abutments, Posts and Struts.</b>								
		Column	sqm	3	1.20		4.83	17.37		
			sqm	3	1.20		4.33	15.57		
			sqm					<b>32.94</b>	254.00	₹ <b>8,367</b>
<b>G</b>		<b>BRICK WORK</b>								
	RUIDP SOR 2017, item no 24.5(page 159)	Brick work with FPS bricks of class designation 75 in superstructure above plinth level upto two stories in all shapes and sizes in								
	RUIDP SOR 2017, item no 24.5.1(page 159)	Cement mortar 1:4 (1 cement : 4 coarse sand)								
		Long walll	cum	1	9.83	0.23	3.50	7.91		
		Short wall	cum	2	5.23	0.23	3.25	7.82		
		Total	cum					<b>15.73</b>	4,500.00	₹ <b>70,776</b>
<b>H</b>		<b>Plastering with mortar,</b>								

		<b>1:4</b>								
	RUIDP SOR 2017, item no 32.3 (page 210)	Cement plastering including T&P, scaffolding, material and complete labpour, including cost of water, curing, racking of joints etc. with 20 mm cement plaster of mix								
	RUIDP SOR 2017, item no 32.3.2 (page 210)	<b>1:4 (1 cement : 4 fine/ coarse sand)</b>								
		<b>External Plastering</b>								
		Long wall	sqm	1	10.73		3.50	37.54		
		Short walls	sqm	2	5.83		3.25	37.90		
		<b>Internal Plastering</b>								
			sqm	1	16.20		3.25	52.65		
			sqm	1	10.60		3.25	34.45		
			<b>sqm</b>					<b>162.53</b>	210.00	₹ <b>34,132</b>
I		<b>Roof</b>								
	RUIDP SOR 2017, item no 29.2(page no 192)	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	kg	1	1,470.00			1,470.00	69.00	₹ <b>101,430</b>







		power roller to achieve the desired density, complete as per MoRT&H specification clause - 401 including all material, labour, machinery, lighting, guarding and maintenance of diversion.								
	<b>RUIDP SOR 2017, item no 7.1.1 Pg 21</b>	Grading - I Material								
		4m road	cum	1	157.84	4.00	0.20	126.27		
		road at ramp	cum	1	42.00	4.00	0.20	33.60		
		<b>TOTAL</b>	<b>cum</b>					<b>159.87</b>	1070	<b>₹ 171,063</b>
<b>C</b>		<b>Wet Mix Macadam</b>								
	<b>RUIDP SOR 2017, item no 7.6 Pg 22</b>	Providing, laying, spreading (with paver finisher only) and compacting wet mix macadam (WMM) base course comprising of graded stone aggregate and granular material conforming to MORT&H specifications (Table 400-II) in layers of equal compacted thickness each consolidated, including pre-mixing the material with water at OMC in mechanical mixer (Pug Mill), carriage of mixed material by tippers to site, laying in uniform layers in base course on a well prepared sub-base/ base								

		course and compacting with power vibratory-roller to achieve the desired density complete as per MoRT&H specification clause - 406 including all material, labour,machinery, lighting, guarding and maintenance of diversion.								
		4m road	Cum	1	157.84	5.00	0.25	197.30		
		road at ramp	cum	1	42.00	4.00	0.25	42.00		
		Total	<b>cum</b>					<b>239.30</b>	1360	<b>₹ 325,448</b>
<b>D</b>		<b>Prime Coat</b>								
	<b>RUIDP SOR 2017, item no 8.1 Pg 23</b>	Providing and applying primer coat over prepared surface of granular base with bitumen emulsion as per IS : 8887 and approved quality @ 0.6 kg/sqm with the help of spray set fitted on bitumen Container (boiler) after cleaning the surface including removing of binding material and other foreign matter with wire brushes and small picks, sweeping with brooms or soft brushes and finally dusting with old gunny bags and compressed air to receive bituminous treatment complete as per clause 502 of MoRT&H specification								

		including all material, labour, machinery, lighting, guarding and maintenance of diversion								
		5m road	Sqm	1	157.84	5.00		789.20		
		road at ramp	sqm	1	42.00	4.00		168.00		
			sqm					<b>957.20</b>	20	<b>₹ 19,144</b>
<b>F</b>		<b>Bituminous Macadam</b>								
	<b>RUIDP SOR 2017, item no 8.5.1 Pg 23</b>	Providing and laying bituminous macadam in 50/75 mm compacted thickness on prepared surface with specified graded crushed stone aggregates as per Table 500-4, Grading-II for base/ binding course, loading of aggregate with F.E. loader, heating and mixing of stone aggregate and bitumen in computerized hot mix plant, transported to site by tippers to paver, laid over a previously prepared surface with paver finisher fitted with electronic sensing device to the required grade, level and alignment and rolling with power roller and								

		vibratory compactor as per clauses 501.6 and 501.7 to achieve the desired compaction complete as per clause 504 of MoRT&H specification and including all material, labour, machinery, lighting, guarding and maintenance of diversion but excluding cost of primer/ tack coat. With Bitumen VG-grade 30 @ 3.3% (percentage by weight of total mix)								
		4m road	Cum	1	157.84	5.00	0.05	39.46		
		road at ramp	cum	1	42.00	4.00	0.05	8.40		
		Total	cum					<b>47.86</b>	4,730.00	<b>₹ 226,378</b>
<b>G</b>		<b>Bituminous Concrete</b>								

**RUIDP  
SOR  
2017,  
item no  
8.10.1  
Pg  
25**

Providing and laying 30-45 mm compacted thickness Bituminous Concrete as per design mix (approved by Engineer) on prepared surface with specified grade stone aggregate as per Table - 500-18 with bitumen for wearing course including loading of aggregate with F.E. loader and hot mixing of stone aggregate and bitumen (including cost of anti-stripping compound wherever required) in computerised hot mix plant, transporting the mixed material by tippers to paver and laying with paver finisher fitted with electronic sensing device (as per clause 504-3.5) to the required level and grade and compacting by power rollers and vibratory rollers or 150 to 250 KN pneumatic tyred roller with TP = 0.7 Mpa, to achieve the desired density complete as per clause 509 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion but excluding primer/tack coat. Grade-II with Bitumen VG-grade 30 @ 6% (percent by weight of total mix)

	4m road	Cum	1	157.84	5.00	0.03	19.73		
	road at ramp	cum	1	42.00	4.00	0.03	4.20		







i	<b>RUIDP SOR 2017, item no 34.7.6(page 226)</b>	50 mm nominal outer dia .Pipes.	m	5				5.00	819.00	4095
ii	<b>RUIDP SOR 2017, item no 34.7.5(page 226)</b>	40 mm nominal outer dia .Pipes.	m	75				75.00	561.00	42075
iii	<b>RUIDP SOR 2017, item no 34.7.4(page 226)</b>	32 mm nominal outer dia .Pipes.	m	50				50.00	410.00	20500
	<b>RUIDP SOR 2017, item no 34.48 (page 233)</b>	Providing and fixing C.P. brass bib cock of approved quality conforming to IS:8931								
iv	<b>RUIDP SOR 2017, item no 34.48.1(pag e 233)</b>	15 mm nominal bore.	each	8				8.00	377.00	3016
<b>C</b>		<b>Water Storage Tank - Underground Sump</b>								

	34.47 (page 233)	Providing and placing on terrace (at all floor levels) polyethylene water storage tank ISI : 12701 marked with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank	Per litre	1	2000			2,000.00	6.50	13000
	RUIDP SOR 2017, item no 4.9 (page 10)	Earth work in excavation in open area, STP, WTP, Pumping station with mechanical means including dressing of sides and ramming of bottoms, including getting out the excavated material, disposal of excavated material lead upto 1000m at suitable site as per as per drawing and as per direction of Engineer. (Measurements for payment to be done as per standard drawings).								
	RUIDP SOR 2017, item no 4.9.1.1 (page 10)	In all types of soil upto 3m depth								
		Excavation for sump tank	cum	1	1.41	1.41	1.8	3.58		
		Excavation for tank	cum	1	3.14	0.59	2.1	3.91		
			cum					7.49	116.00	868.63
		soling								
	RUIDP 2017, item no 30.34 (page 200)	Random rubble dry stone Kharanja (soling) under floor.	cum	1	1.4	1.4	0.1	0.20	1,360.00	266.56

		PCC bed								
	RUIDP 2017, item no 21.1 ( Page 151)	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - All work upto plinth level :								
	RUIDP 2017, item no 21.1.7(pag e 151)	1:4:8 (1 Cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size).	cum	1	1.4	1.4	0.1	0.20	3,360.00	658.56
		Shuttering								
	RUIDP SOR 2017, item no 22.1 (page 154)	Centring and shuttering with plywood or steel sheet upto two stories or height upto 7.5 metre above plinth level including strutting, propping etc. and removal of form for :								
	RUIDP SOR 2017, item no 22.1.1 (page 154)	Foundations, footings, bases of columns, etc. for mass concrete	sqm	4	1.4		0.1	0.56	162.00	90.72
		Brick work								
	RUIDP SOR 2017, item no 24.5(page 159)	Brick work with FPS bricks of class designation 75 in superstructure above plinth level upto two stories in all shapes and sizes in								
	RUIDP SOR 2017, item no 24.5.1(page 159)	Cement mortar 1:4 (1 cement : 4 coarse sand)								
		Brick work to support concrete rings	cum	1	3.14	0.7	0.1			985.18





	<b>20.7.3</b>	Supply and fixing of tube well cover of M.S. sheet (6mm thick) with nuts and bolts complete for casing size: 150 mm dia	each	1.00				1.00	236.00	236
	<b>20.8</b>	Supply and fixing of MS clamp set of 50 x 6 mm flat iron with nuts and bolts etc for holding the riser pipe assembly of submersible pump set	each set	1.00				1.00	260.00	260
	<b>20.9</b>	Installation of submersible motor pump set in tube well complete (labour charges only) including transportation of tripod, pulley block, and any other material required for lowering purpose	each	1.00				1.00	3,509.00	3509
	<b>20.10.1</b>	Providing and lowering of GI flange pipe B class including rubber washer and nuts of 8 mm dia complete in all respect - 50 mm dia	metre	32.00				32.00	539.00	17248
<b>4</b>		<b>Supply of pumps</b>								
	<b>Quotation attached</b>	<b>2HP Borewell solar pump system</b>	Nos	1.00					187,500.00	
		<b>5% GST</b>							9,375.00	
		<b>Total Cost</b>	Nos	1.00				1.00	196,875.00	196875
	<b>Quotation attached</b>	<b>1HP sump solar pumping system</b>	Nos	1.00				1.00	150,000.00	
		<b>5% GST</b>							7,500.00	
		<b>Total Cost</b>	Nos	1.00				1.00	157,500.00	157500

		Dewatering pump for reusing final treated water for gardening purpose, to be mounted on a mobile platform. Power power: 2 Hp	Nos	1.00				1.00	12,000.00	12000
		Fountain Pump	Nos	1.00				1.00	45,000.00	45000
5		<b>Precast Culvert</b>								
	RUIDP SOR 2017, item No 3121 page 538	Precast RCC M-40 grade Box culvert section designed for 'AA' class loading as per IRC specification size 600mm x 600mm	m	1	45.00			45.00	3949	177705
6	Quotation attached	Providing & installation of Solar street light including transportation	Nos	4				4.00	15698	62792
7	Quotation attached	Solar sludge sterilisation unit for 5 ton per day capacity	Unit	1				1.00	2,515,000	2515000
8	RUIDP SOR 2017, Item no. 17.25.1 Pg - 70	Providing at site, lowering & laying in trenches, aligning & jointing of PVC-U pipes (SN 8) as per IS 15328 (amended up to date) and as per specifications with rubber rings with socket and spigot joint, (EPDM/SBR) for all depths for pipe length as per drawing and specification including hydraulic field testing (including the cost and conveyance of water to site for testing) and commissioning etc complete as directed by Engineer.  Note : E/w to be measured and paid separately.								

	RUIDP SOR 2017, Item no. 17.25.1 Pg - 70	110 mm Nominal Dia	m	1	170.00			170.00	244	41480
<b>Total</b>										<b>₹ 3,461,033</b>





	<b>RUIDP 2017, item no 4.13 (page 12)</b>	Earth filling with available surplus soil excavated from foundations and taken only from outside of building plinth in layers not exceeding 20cm in depth, consolidating each deposited layer including ramming and watering and consolidation with lead up to 50 m and lift up to 1.5 m.								
		Refilling at Ramp	cum	1	10.62	4.00	0.28	11.68		
			cum	1	8.20	4.00	0.14	4.51		
		At pathway	cum	1	15.25	7.90	0.79	95.18		
		<b>Total refilling with excavated earth</b>	<b>Cu m</b>					<b>111.37</b>	<b>98.00</b>	<b>₹ 10,913.99</b>
<b>C</b>		<b>Plain Cement Concrete</b>								
	<b>RUIDP 2017, item no 21.1 ( Page 151)</b>	<b>Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level :</b>								
	<b>RUIDP 2017, item no 21.1.7 (page 151)</b>	<b>1:4:8 (1 Cement : 4 fine/ coarse sand : 8 graded stone aggregate 40mm nominal size).</b>								
		At retaining wall	cum	1	47.77	1.20	0.10	5.73		
			<b>cum</b>					<b>5.73</b>	<b>3,360.00</b>	<b>₹ 19,260.86</b>
<b>D</b>		<b>Random rubble stone</b>								

		<b>masonry</b>								
	RUIDP SOR 2017, item no 25.1.2(pag e 163)	Random rubble masonry with hard stone in foundation and plinth : Cement mortar 1:4 (1 cement : 4 coarse sand)								
		<b>Retaining wall</b>	cum	1	47.57	0.75	1.00	35.68		
			<b>cum</b>					<b>35.68</b>	<b>3,450.00</b>	<b>₹ 123,087.38</b>
<b>E</b>		<b>Interlock Pathway</b>								
	RUIDP SOR 2017, item no 9.10(page 30)	Providing and fixing of precast concrete interlocking tiles of desired shape of M 30 grade manufactured from fully computerized automatic stationery hydraulic vibro pressed machine and fully computerized automatic batching plant of class A1/A2 as per BS 6717:2001. The CC interlocking paving blocks be laid on average 50mm. thick bed of coarse sand and the joint is to be filled with fine sand. Laying procedure on compacted sub-base as defined. Complete job is to be executed as per the instruction of Engineer incharge. The rates to be inclusive of all lead & Lifts etc. complete as per specifications. Tensile splitting strength, abrasion and braking load etc. as per BS 6717:2001, Grey cement.								



**14. Measurement sheet of storm water drain**

Sl.n	Item No	Description	Unit	Nos	L	B	D	Quantity	Rate	Amount
					mtr	mtr	mtr			
<b>A</b>		<b>Rate for Earthwork- Excavation</b>								
	<b>RUIDP SOR 2017, item no 4.9.1.1 (page 10)</b>	<b>Earth work in excavation in open area, STP, WTP, Pumping station with mechanical means including dressing of sides and ramming of bottoms, including getting out the excavated material, disposal of excavated material lead upto 1000m at suitable site as per as per drawing and as per direction of Engineer. (Measurements for payment to be done as per standard drawings). In all type of soil upto 3.0 m depth</b>								
		Drain length	cum	1	1	233.43	1.540	0.56	199.51	
		<b>Total</b>	<b>cum</b>						<b>199.51</b>	116.00
										<b>₹ 23,143</b>
		<b>Refilling with excavated earth</b>								
	<b>RUIDP 2017, item no 4.13 (page 12)</b>	<b>Earth filling with available surplus soil excavated from foundations and taken only from outside of building plinth in layers not exceeding 20cm in depth, consolidating each deposited layer including ramming and watering and consolidation with lead up to 50 m and lift upto 1.5 m.</b>								
		Excavated earth	cum						199.51	
		Deduct PCC	cum	-1	1	232.63	1.200	0.050	(13.96)	
		Deduct drain	cum	-1	1	232.43	1.000	0.505	(117.38)	
			<b>cum</b>						<b>68.18</b>	98.00
										<b>₹ 6,681</b>

<b>B</b>		<b>PLAIN CEMENT CONCRETE</b>									
	RUIDP 2017, item no 21.1 ( Page 151)	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - All work upto plinth level :									
	RUIDP 2017, item no 21.1.7 (page 151)	1:4:8 (1 Cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size).									
		PCC Sec 2- sec 3	cum	1	1	232.63	1.200	0.050	13.96		
		<b>Total PCC</b>	<b>Cum</b>						<b>13.96</b>	3,360.00	<b>₹ 46,898</b>
<b>C</b>		<b>Centering/ Shuttering</b>									
	RUIDP SOR 2017, item no 22.1 (page 154)	Centring and shuttering with plywood or steel sheet upto two stories or height upto 7.5 metre above plinth level including strutting, propping etc. and removal of form for :									
<b>a</b>	RUIDP SOR 2017, item no 22.1.1 (page 154)	<b>Foundations, footings, bases of columns, etc. for mass concrete</b>									
		PCC for foorting(long wall) sides	sqm	1	2	232.63		0.05	23.26		
			sqm	1	2		1.20	0.05	0.12		
			sqm						<b>23.38</b>	162.00	<b>₹ 3,788</b>

<b>D</b>		<b>BRICK WORK</b>									
	RUIDP SOR 2017, item no 24.5(page 159)	Brick work with FPS bricks of class designation 75 in superstructure above plinth level upto two stories in all shapes and sizes in									
	RUIDP SOR 2017, item no 24.5.1(page 159)	Cement mortar 1:4 (1 cement : 4 coarse sand)									
		wall	cum	1	2	232.43	0.230	0.505	53.99		
		<b>Total</b>	<b>cum</b>						<b>53.99</b>	4,500.00	<b>₹ 242,971</b>
<b>E</b>		<b>Plastering</b>									
	RUIDP SOR 2017, item no 32.3(page 210)	Cement plastering including T&P, scaffolding, material and complete labpour, including cost of water, curing, racking of joints etc. with 20 mm cement plaster of mix :									
	RUIDP SOR 2017, item no 32.3.2(page 210)	1:4 (1 cement : 4 fine/ coarse sand)									
		External plastering	sqm	1	2	232.43		0.505	234.75		
		wall top	sqm	1	2	232.43	0.230		106.92		
		Internal plastering	sqm	1	2	232.43		0.51	234.75		
		Bottom	sqm	1	1						













	<b>RUIDP 2017, item no 4.13 (page 12)</b>	Earth filling with available surplus soil excavated from foundations and taken only from outside of building plinth in layers not exceeding 20cm in depth, consolidating each deposited layer including ramming and watering and consolidation with lead up to 50 m and lift										
		Excavated earth for registers	cum						8.77			
		Deduct soling of RE1	cum	-1	1	1.90	1.900	0.100	(0.36)			
		Deduct soling of RE2	cum	-1	1	1.90	1.900	0.100	(0.36)			
		Deduct PCC for RE1	cum	-1	1	1.70	1.700	0.100	(0.29)			
		Deduct PCC for RE2	cum	-1	1	1.70	1.700	0.100	(0.29)			
		Deduct RE1 below EGL	cum	-1	1	1.50	1.500	0.490	(1.10)			
		Deduct RE2 below EGL	cum	-1	1	1.50	1.500	1.090	(2.45)			
		<b>cum</b>							<b>3.91</b>	98.00	₹	<b>383</b>
<b>B</b>		<b>PLAIN CEMENT CONCRETE</b>										
	<b>RUIDP 2017, item no 21.1 ( Page 151)</b>	<b>Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - All work upto plinth level :</b>										
	<b>RUIDP 2017, item no 21.1.6 (page 151)</b>	<b>1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size).</b>										
		PCC for RE1	cum	1	1	1.70	1.70	0.10	0.29			











Rate Analysis for Precast Slab							
<p><b>Manufacturing, supplying and fixing Precast Reinforced Cement Concrete slabs of following thickness in RCC 1:2:4 (one cement, two sand and four aggregates), using following HBGS jelly including cost of reinforcement steel in position, cost of moulding charges, casting of slab, finishing, curing and fixing in position in all floors etc., complete complying with standard specification and as directed.</b></p>							
SI No	Item No in SR	Description	unit	Qty	Rate	per	Amount in Rs
		Considering 1cum					
<b>A</b>		<b>Material</b>					
1	3239(page 540)	Cement OPC	kg	316.8	5.2	kg	1647.36
2	2874(page 532)	Sand	cum	0.44	900	cum	396
3	2830(page 532)	Aggregates 25 mm to 10 mm	cum	0.88	700	cum	616
4	23.19.1(page 157)	mild steel & medium tensile bars @125kg/cum including straighting, cutting, bending	Qtl	1.25	5000	Qtl	6250
5	1388(page 499)	Binding wire	kg	0.5	48	kg	24
6		Timber planks, nails for side shuttering		lump sum	1500		1500
		<b>TOTAL A</b>					<b>10433.36</b>
<b>B</b>		<b>Labour</b>					
1	0203(page 474)	Mason	Nos	1	500	day	500
2	0230(page474)	Bhisti (including curing )	Nos	1	300	day	300
3	0216(page 474)	Mazdoor/Helper	Nos	3	350	day	1050

		<b>TOTAL B</b>					<b>1850</b>
		<b>TOTAL (A+B)</b>					<b>12283.36</b>
<b>C</b>		<b>water charges@ 5% of (A+B)</b>					<b>614.168</b>
		<b>TOTAL (A+B+C)</b>					<b>12897.53</b>
<b>D</b>		<b>Contractor's profit @ 10%</b>					<b>1289.75</b>
		<b>TOTAL COST OF PRECAST SLAB FOR 1cum=(A+B+C+D)</b>					<b>14187.28</b>
		<b>Rate per cum in Rs</b>					<b>14187</b>
		<b>Rate of 1 precast slab (1.19X0.70X0.10)</b>	cum	0.08	14187	Rs	<b>1181.78</b>
		<b>Rate of 1 precast slab (0.60X0.24X0.10)</b>	cum	0.01	14187	Rs	<b>204.29</b>
		<b>Rate of 1 precast slab (0.60X0.60X0.10)</b>	cum	0.04	14187	Rs	<b>510.73</b>

<b>Rate Analysis for Rubble Soling</b>							
<b>Supplying and filling 40mm down size aggregates along with watering and ramming as specified by EIC</b>							
<b>Sl No</b>	<b>Item No in SR</b>	<b>Description</b>	<b>unit</b>	<b>Qty</b>	<b>Rate</b>	<b>per</b>	<b>Amount in Rs</b>
		Considering 1cum					
<b>A</b>		<b>Material</b>					
1	2834(page 532)	Aggregates 45 mm to 22.4 mm	cum	0.35	630	cum	220.5
2	2830(page 532)	Aggregates 25 mm to 10 mm	cum	0.35	700	cum	245
3	2825(page 531)	Aggregates 13.2 mm to 10 mm	cum	0.15	700	cum	105
4	2828(page 531)	2.36mm nominal size	cum	0.15	630	cum	94.5

	0144(page 471)	Compactor	Hr	2	50	Hr	100
		<b>TOTAL A</b>					<b>765</b>
<b>B</b>		<b>Labour</b>					
1	0208(page 474)	Mason (IInd class)	Nos	1	400	day	400
2	0244(page 474)	Skilled Labour( for operating compactor)	Nos	0.25	400	day	100
3	0216(page 474)	Helper	Nos	2	350	day	700
		<b>TOTAL B</b>					<b>1200</b>
		<b>TOTAL (A+B)</b>					<b>1965</b>
<b>C</b>		<b>water charges@ 5% of (A+B)</b>					<b>98.25</b>
		<b>TOTAL (A+B+C)</b>					<b>2063.25</b>
<b>D</b>		<b>Contractor's profit @ 10%</b>					<b>206.33</b>
		<b>TOTAL COST OF RUBBLE SOLING FOR 1cum=(A+B+C+D)</b>					<b>2269.58</b>
		<b>Rate per cum in Rs</b>					<b>2270</b>

<b>Rate Analysis for AC sheet roofing</b>							
<b>Providing and fixing 6mm thick AC sheet for roofing as per drawing including fixtures, labour cost, complete.(As per instruction of site engineer)</b>							
<b>Sl No</b>	<b>Item No in SR</b>	<b>Description</b>	<b>unit</b>	<b>Qty</b>	<b>Rate</b>	<b>per</b>	<b>Amount in Rs</b>
		For 100sqm					
<b>A</b>		<b>Material</b>					
1	0007(page IV)	AC sheet 6mm thick semi corrugated(45 Nos including overlapping)	sqm	142	200	sqm	28400

2	0152(page XVII)	G.I pipe 32mm dia B class	m	104	223	m	23192
3	573(page X)	MS clamps	kgs	10	54	kg	540
		<b>TOTAL A</b>					<b>52132</b>
<b>B</b>		<b>Labour</b>					
1	46 (page LVI)	Fitter class I	Nos	2	265	day	530
2	124 (page LIX)	unskilled labour	Nos	4	260	day	1040
		<b>TOTAL B</b>					<b>1570</b>
		<b>TOTAL (A+B)</b>					<b>53702</b>
<b>C</b>		<b>Contractor's profit @ 10%</b>					<b>5370.20</b>
		<b>TOTAL COST OF AC SHEET ROOFING FOR 100sqm=(A+B+C)</b>					<b>59072.20</b>
		<b>Rate of AC sheet roofing for 1sqm</b>	<b>Rs</b>				<b>590.722</b>
			<b>Rs</b>				<b>591.00</b>