

## कोटेशन आमंत्रण

डीएसटी प्रायोजित प्रोजेक्ट के अंतर्गत **वाटर सेंटर**, मानव रचना इंटरनेशनल इंस्टिट्यूट ऑफ़ रिसर्च एंड स्टडीज द्वारा संचालित अनुसंधान परियोजना के अंतर्गत फरीदाबाद स्मार्ट सिटी एरिया में **2 भूजल रिचार्ज प्रणालियों** के निर्माण हेतु सील बंद **कोटेशन आमंत्रित है**। दो लिफाफा पद्धति आधारित कोटेशन जमा होने कि अन्तिम तिथि है **10 May 2024**. भूजल रिचार्ज प्रणाली के तहत किए जाने वाले कार्य का विवरण: 1. डिसिल्टेशन चैम्बर का निर्माण 2. कगोलेशन चैम्बरका निर्माण 3. रिचार्ज टूबवेल का निर्माण 4. बोरवेल जियोफिजिकल लॉगिंग 5. रिचार्ज टूबवेल का डेवलपमेंट एवं डिस्चार्ज माप आदि । इच्छुक अनुभवी एजेंसी विस्तृत जानकारी, नियम एवं शर्तों के लिए संपर्क करें :- **Address** The Director & PI-DST Project, MRCAWTM, AT 25, A -Block, MRIIRS, Sector 43 Faridabad 121010. [director.cawtm@mriu.edu.in](mailto:director.cawtm@mriu.edu.in) or 9968805450.





## Manav Rachna International Institute of Research and Studies,

(Deemed to be University under UGC Act 1956)

### Manav Rachna Center for Advance Water Technology and Management

AT25, A-block, MRIIRS Campus, Sector -43, Faridabad, India

## Invitation of Quotations

**Competitive Quotations** are invited from interested experienced parties/ agencies for construction of Two **Groundwater Recharge System**, at Faridabad Smart City area under a DST funded Research Project sanctioned to the PI, MRCAWTM, MRIIRS Faridabad. The sealed quotations are invited as per the two envelop system incorporating technical bid and financial bid separately (both the sealed envelopes must be kept together within a single envelop) to reach to the Director, MRCAWTM, MRIIRS and PI DST Project, AT25, A Block, MRIIRS Sector 43, Faridabad 121010 by 17.0 hrs on **10<sup>th</sup> May 2022**. The detailed scope of work and terms and conditions can be seen at Manav Rachna website or can be obtained from 9968805450 or [director.cawtm@mriu.edu.in](mailto:director.cawtm@mriu.edu.in).

**Name of the work:** Construction of Groundwater Recharge Systems including: -

1. Construction of storm water drains 2. Construction of De-siltation chamber 3. Construction of Coagulation chamber 4. Construction of gravel pack recharge tube well 5. Bore hole Geophysical logging 6. Well development and yield test with pump 7. other related works, etc if any as per BOQ and drawing.

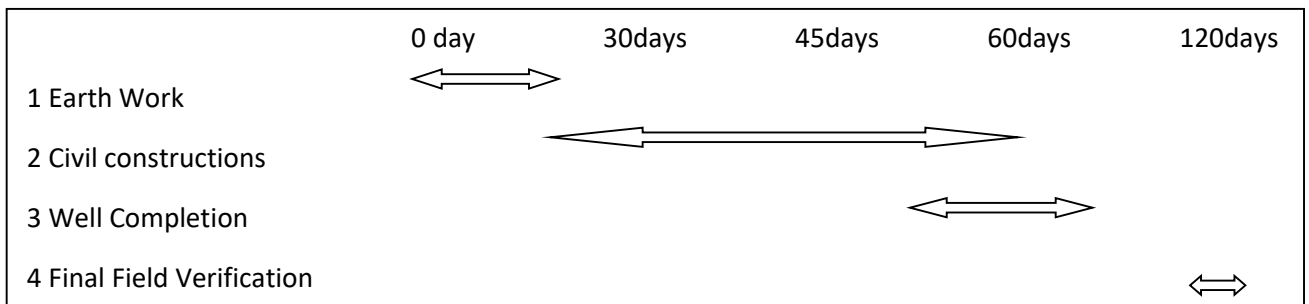
**Locations:** 1 In the park (opp HN 581) of Residential Colony, Sector 21C Faridabad  
2. In Hati park, Sector 30, Faridabad

**Terms and Conditions:** These works are to be carried out for a DST funded research project sanctioned to MRIIRS through the Principal Investigator Dr Arunangshu Mukherjee, Prof & Head, ES&E and Director, MRCAWTM, MRIIRS titled: *“Co-solving water logging and groundwater depletion issue in parts of Faridabad Smart City using Underground Taming of Flood water for Aquifer Storage and Recovery”*. The project is to be executed in collaboration with FSCL, Govt of Haryana:

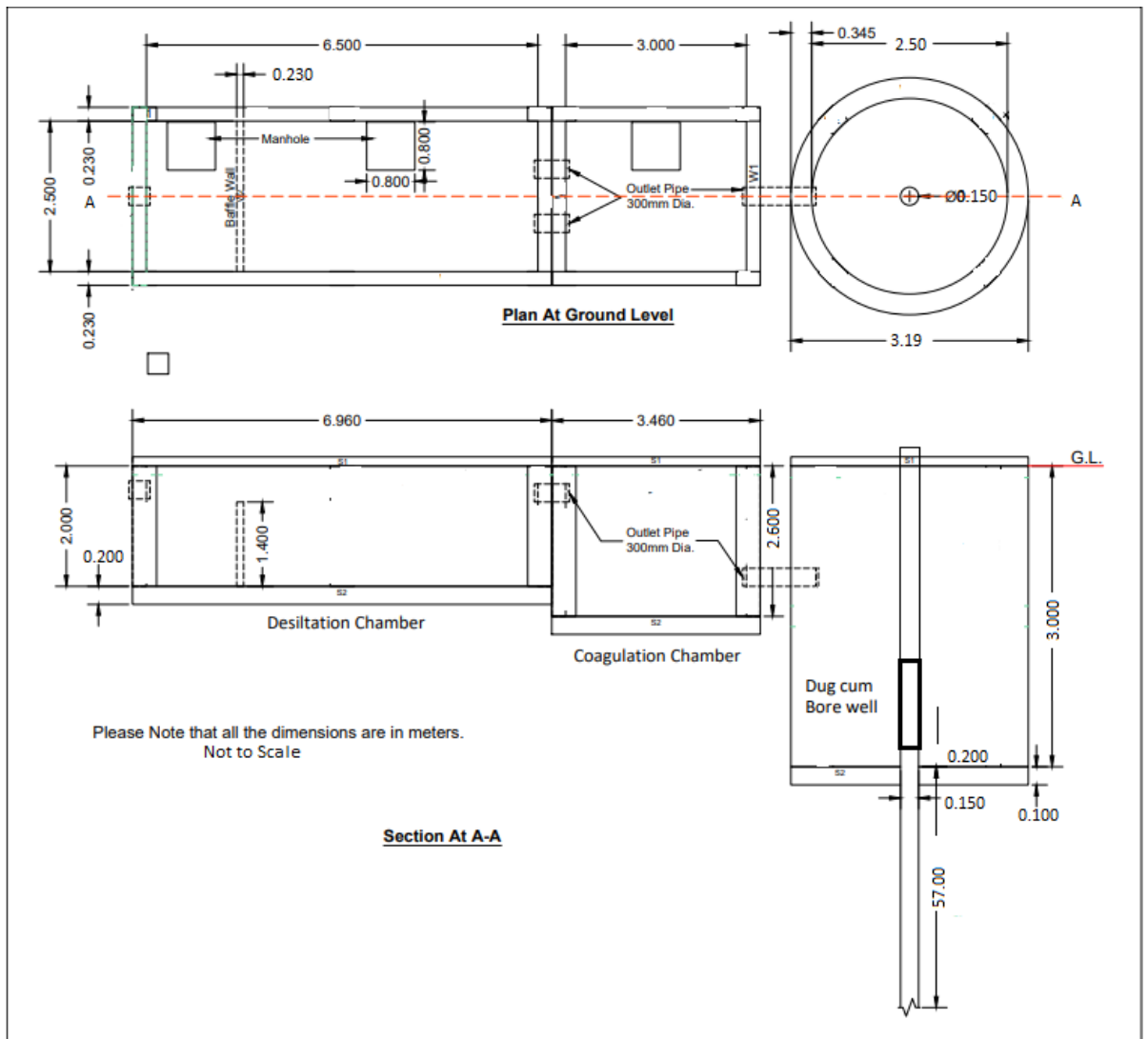
- Each quotation should have two parts 1. technical bid and 2. financial bid in two separate sealed envelopes kept in a single packet. Each envelop needs clear marking on the top. Financial bid must be submitted in the prescribed format only.
- The quotation can be submitted by 17.00hrs of 10<sup>th</sup> May 2024.
- The party/ agency should have at least 03 years of independent experience of executing construction of **Groundwater Recharge System** in Soft Rock terrain.
- Bidders must provide proof of such execution, preferably for government system.
- Bidder should have executed similar work independently of total value not less than of INR 05lakh in last three years

- Bidder has to follow the latest Haryana Schedule Rate
- Financial bid will be open/consider only if technical bid is acceptable as per the terms and conditions.
- L1 principal will be applied among the financial bids
- The quotation must be **valid for next 12 months**
- 20% of the payment will be released after actual execution of each step 1. Earth works, 2. Civil constructions, 3. Well construction and 4. Completion of work at each site.
- Final 20% payment will be made only after field verification of satisfactory working of Groundwater Recharge System during monsoon.
- TDS will be deducted as per the government norms from each payment.

**Time line**



**Drawing**



**Financial Bid Format**

1. Name of the firm/ agency with Address—				
2. GST Number-				
SN	Location of GWR System	Cost INR	GST (%) as applicable	Total Amount INR
1	In the park of Colony (oppHN581), Sector 21C Faridabad			
2	In Hati park of colony, Sector 30, Faridabad			

Detailed Estimate/abstract for proposed Groundwater Recharge System: Faridabad Smart City for one each at Sector 21C and 30

Rates of items of estimate is based on Haryana SOR 2021

Note: All dimensions are in metre

S. No.	PARTICULAR OF ITEM	No.	Length	Breath	D/H	Qty.	Unit	
1	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.							
	4.14.1 All kinds of soil.							
	<b>Items serial no. 4.14.1 SOR page no 142</b>							
	1) Desilting Chamber 6.5 m X 2.5 m X 2.0 m	1	7.5	3.5	2.3	60.375	Cum.	
	2) Coagulation Chamber 3 m X 2.5 m X 2.5 m	1	3.96	3.5	2.8	38.808	Cum.	
	3) Dugwell 3.25 m dia X 5.0 m deep	1		18.8	5.3	99.89	Cum.	
	4) Drain for Surface Water Recharge Supply 100 m long	1	100.0	1.1	1.0	110	Cum.	
						<b>199.08</b>	Cum.	
2	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work below plinth level and up to Floor IV level:							
	1:3:6 (1 Cement : 3 coarse sand (zone-III): 6 graded cum stone aggregate 40 mm nominal size)							
	<b>Items serial no. 6.1.5 SOR page no 158</b>							
	1) Desilting Chamber 6.5 m X 2.5 m X 2.0 m	1	7.1	3.2	0.1	2.23	Cum.	
	2) Coagulation Chamber 2.5 m X 2.5 m X 2.0 m	1	3.56	3.2	0.1	1.12	Cum.	
	3) Dugwell 3.25 m dia X 3 m deep	1		13.5	0.1	1.35	Cum.	
	4) Drain for Surface Water Recharge Supply 100 m long	1	100.0	1.1	0.1	11.00	Cum.	
						<b>4.70</b>	Cum.	
3	Brick work with common burnt clay modular bricks of class designation 7.5 in foundation and plinth in:							
	Cement mortar 1:4 (1 cement: 4 coarse sand)							
	<b>Items serial no. 7.20.1 SOR page no 174</b>							
	1) Desilting Chamber 6.5 m X 2.5 m X 2.0 m Wall	2	6.16	0.23	2	5.67	Cum.	
		2	2.5	0.23	2	2.30	Cum.	
	2) Coagulation Chamber 2.5 m X 2.5 m X 2.0 m Wall							
		2	2.66	0.23	2.5	3.06	Cum.	
		2	2.5	0.23	2.5	2.88	Cum.	
	3) Dugwell 3.5 m dia X 9.0 m deep Wall		11.2883	0.345	5.0	19.47	Cum.	
	Deduction Columns	4	0.345	0.345	5.0	-2.38	Cum.	
	Deduction Tie beam	2	11.2883	0.345	0.3	-2.69		
						<b>28.31</b>	Cum.	

4	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement-All work up to plinth level:						
	1:1.5:3 (1 cement : 1.5 coarse sand(zone-111) : 3 cum graded stone aggregate 20 mm nominal size)						
	<b>Items serial no. 6.14.1 SOR page no 160</b>						
	Drain side wall	2	100.00	0.9	0.125	22.5	Cum.
	Bottom of drain	1	100.00	0.9	0.075	6.75	Cum.
	Columns C1	6	0.45	0.23	2	1.242	
		4	0.45	0.23	2.5	1.035	
	C2	4	0.345	0.345	5	2.3805	
	Beams B1	2	6.96	0.23	0.3	0.96048	
	B2	4	2.5	0.23	0.3	0.69	
	B3	2	3.46	0.23	0.3	0.47748	
	B4	2	11.2883	0.23	0.3	1.557785	
	Slabs, Desiltation Chamber S1	1	6.96	2.96	0.15	3.09024	
	Coagulation Chamber	1	3.46	2.96	0.15	1.53624	
	Dug Cum Bore Well	1		12.186026	0.15	1.827904	
	S2	1	6.96	2.96	0.3	6.18048	
	Coagulation Chamber	1	3.46	2.96	0.3	3.07248	
	Dug Cum Bore Well	1		12.186026	0.3	3.655808	
						<b>27.71</b>	Cum.
5	Steel reinforcement for R.C.C. work, where not included in the complete rate of RCC, including straightening, cutting, bending, placing in position, binding, wastage, overlaps, welded joints, spacer bars, chairs, stays, hangers and annealed steel wire etc.						
	complete in all respect below plinth level						
	Column C1 Longitudinal bars	6	4	0.00011304	2.2	0.005969	46.85
	Stirrups of 8mm @ 200c/c	6	11	0.00005024	1.69	0.005604	43.99
	Column C1 (Coagulation Chamber)	4	4	0.00011304	2.7	0.004883	38.33
	Stirrups of 8mm @ 200c/c	4	14	0.00005024	1.69	0.004755	37.32
	Column C2 Longitudinal bars	4	4	0.00011304	5.2	0.009405	73.83
	Stirrups @ 200 c/c	4	26	0.00005024	1.88	0.009823	77.11
	Beam B1 Top Bars	2	2	0.00011304	7	0.003165	24.85
	Bottom bars	2	2	0.00020096	7	0.005627	44.17
	Stirrups of 8mm @ 200c/c	2	36	0.00005024	1.36	0.00492	38.62
	Beam B2 Top Bar	4	2	0.00011304	2.6	0.002351	18.46
	Bottom bars	4	2	0.00020096	2.6	0.00418	32.81
	Stirrups of 8mm @ 200c/c	4	11	0.00005024	1.36	0.003006	23.6
	Beam B3 Top Bar	2	2	0.00011304	3.46	0.001564	12.28
	Bottom bars	2	2	0.00020096	3.46	0.002781	21.83
	Stirrups of 8mm @ 200c/c	2	16	0.00005024	1.36	0.002186	17.16
	Beam B4 Top Bar	2	3	0.00011304	11.29	0.007657	60.11
	Bottom bars	2	3	0.00020096	11.29	0.013613	106.9

	Stirrups of 8mm @ 200c/c	2	58	0.00005024	1.68	0.009791	76.86
	Slab Longitudinal bars, Desiltation chamber	2	48	0.00005024	2.96	0.014276	112.1
	Lateral bars	2	21	0.00005024	6.96	0.014686	115.3
	Slab Longitudinal bars, Coagulation chamber	2	25	0.00005024	2.96	0.007436	58.37
	Lateral bars	2	21	0.00005024	3.46	0.007301	57.31
	Slab Longitudinal & lateral bars, Dug Cum Bore Well	4	28	0.00005024	3.25	0.018287	143.6
						Total weight	1282
	Mild steel and Medium Tensile steel bars					1290.00	kg
	<b>Items serial no. 6.33.1 SOR page no 164</b>						
6	Centering and shuttering including strutting, propping etc. and removal of form work for :						
	Retaining walls, return walls, walls (any thickness) sqm including attached pilasters, buttresses, plinth and string courses fillets, kerbs and steps etc.	No of Items	No. of Sides				
	<b>Items serial no. 6.29.2 SOR page no 163</b>						
	Drain side wall	4	100.00	-	0.9	360	sqm
	Desiltation tank Columns	6	4	0.400	2	19.2	sqm
	Coagulation chamber Columns	4	4	0.400	2.5	16	sqm
	Dough Well Columns	4	4	0.345	5	27.6	sqm
	Desiltation tank Beams	2	3.0	0.300	6.96	12.528	sqm
		2	3.0	0.300	2.96	5.328	sqm
	Coagulation chamber beams	2	3	0.300	3.46	6.228	sqm
		2	3	0.300	2.96	5.328	sqm
	Dough Well beams	2	3.0	0.345	11.29	23.3703	sqm
	Desiltation tank Slab	1	1.0	7.0	2.96	20.6	
	Coagulation chamber Columns	1	1.0	3.5	2.96	10.2	
	Dough Well	1	1.0	0.8	3.94	3.1	
						<b>146.4</b>	sqm
7	12 mm cement plaster finished with a floating coat of neat cement of mix :						
	1 :4 (1 cement: 4 fine sand)						
	<b>Items serial no. 11.11.2 SOR page no 219</b>						
	Desiltation Chamber walls and floors						
	Wall	2	6.5	-	2	26.00	sqm
	Wall	2	2.5	-	2	10.00	sqm
	Roof	2	6.5	2.5	-	32.50	sqm
	Coagulation Chamber wall and floor						
	Wall	2	3.0	-	2.5	15.00	sqm
	Wall	2	2.5	-	2.5	12.50	sqm
	Roof	2	3	2.5	-	15.00	sqm
	Dough well wall and floor						
	Wall	1	8.2915625	-	5.0	41.46	sqm
	Floor	2	8.3	-	-	16.58	sqm
	Drain for surface recharge water Walls	2	100.00		0.9	180.00	sqm

	drain	Bed of	1	100.00	0.9		90.00	sqm
							<b>169.04</b>	sqm
8	Manhole Cover for tanks		3					
	<b>Item No. 22.201.1</b>						(price increased proportional to size)	
9	Bending and fixing iron rungs							
	<b>Items serial no. 14.19 SOR page no 282</b>		11					
			11					
10	Boring with 100 mm diameter casing pipe for hand pump / tube well, in all soils except ordinary hard rocks requiring blasting, including removing the casing pipe after the hand pump / tube well is lowered and tested :							
	Up to 6 metres depth		1	5.0				m
	Beyond 6 m and up to 12 m depth		1	6.0				m
	Beyond 12 m and up to 18 m depth		1	6.0				m
	Beyond 18m		1	39.0				m
	<b>Items serial no. 33.1 SOR page no 676</b>							
11	Supplying, assembling, lowering and fixing in vertical position in bore well, Unplasticized PVC medium well casing (CM) pipe of required dia, conforming to IS: 12818, including required hire and labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer -in-charge. 100mm size		1	51.0				m
	<b>Item No. 33.8 Page 677</b>							
	Considering 25% as the labour component, additional GST applicable							
12	Graval packing( 8--10mm size) in about 60 m well		1					
13	Well Development for 48 hrs by compressor		1					
14	Yield Test ( 500 mits by lowering of suitable size pump) 8.2 hrs		1					
15	Bore hole Geophysical logging- including, SP, short normal and long normal resistivity logging, Gama logging ,caliper log etc of 70-m		1					
16	Additional GST as Applicable							