

# **Request for Quotation (RFQ) for Supply, Installation, Commissioning, and Handover of Sewerage Pipelaying and Biodigester at Akbarnagar ULBs Bhagalpur.**

## **Introduction**

Jal Seva Charitable Foundation (JSCF) is a not-for-profit organization registered in India under Chapter 8 of the Companies Act, 2013. It operates as an associate member of WaterAid International and uses the 'WaterAid' brand in India. WaterAid India is dedicated to improving access to clean water, proper sanitation and good hygiene across the country. The organization addresses critical challenges such as water scarcity, inadequate sanitation and poor hygiene practices affecting millions of people nationwide.

WaterAid India's country office is headquartered in New Delhi, with regional offices in Bengaluru, Bhopal, Bhubaneswar, Hyderabad, Lucknow, Raipur and Patna. Currently, WaterAid India operates in more than 11 states with district and block-level teams actively engaged in urban and rural intervention. For more details, please visit: <https://www.wateraid.org/in/>

## **Project Background**

Since 2013, WaterAid has invested significantly across India to improve the lives of marginalized communities by strengthening WASH services. In Bihar targeted interventions have focused on addressing critical gaps in water supply, Gray and Black water Management and service delivery.

The project seeks to:

- Improve Gray and Black Water Management at Akarbarnagar ULB, Bhagalpur.
- Demonstrate a collaborative, community-led approach to inclusive, accountable, and sustainable governance in small towns.

## **Objective of the RFQ**

The objective of this RFQ is to invite quotations from eligible vendors/suppliers for the procurement, installation, and commissioning of:

- Primary and Secondary Sewerage Pipe Laying at Ward no 01, 05 and 10 of Akarbarnagar ULB.
- FRP Biodigester of Capacity 20 KLD at each Ward.

The selected vendor will be responsible for,

1. **Supply, Installation, Commissioning, and Handover**

- Supply and Laying of Primary Sewer Pipe laying With SWR Pipe 150 mm dia.
- Supply and Laying of Secondary Sewer Pipe Laying with SWR Pipe 100 mm dia.
- Brick Work Manhole at Interval of Max 30 meter or any Bend or Junction.
- Supply and Installation of 20 KLD FRP Biodigester with Micro Bio culture (Including Excavation, Bed Preparation, Backfilling)
- Construction of Twin Leach Pit with Brick Work.
- Handover to Urban Local Body as per the direction of Work Incharge.

## **2. Warranty & Support**

- Minimum 1-year comprehensive warranty on FRP Based Biodigester (parts, service and support).

## **3. Completion Period**

- 45 days from Date of release of PO

## **Technical Specifications**

### **A. Dismantling and Excavation**

- Prior to breaking the CC road, a road cutter shall be used for marking and cutting along the defined alignment. The use of a road cutter is essential to ensure straight and uniform cuts, thereby avoiding irregular or zigzag edges along the pathway.
- Excavation for Pipeline must be done in required gradient.

### **B. PCC**

- PCC in ratio 1:3:6 will be done for bed preparation of pipeline.
- Width of PCC Should be 75 mm + Pipe Dia + 75mm
- Thickness of PCC Should be 100 mm

### **C. Pipe laying**

- Laying of Pipe should be done strictly in slope to maintain gravity flow of Pipe.
- Primary Sewer Pipeline of 150 mm dia SWR Pipe of approved brand with all necessary fittings shall be laid.
- A sand filling layer of 100 mm thickness shall be provided above the pipeline to protect it from external loads and to minimize the risk of damage, cracking, or fracture.
- Jointing of Pipe should be done properly, and spigot and socket joint should be filled.

#### **D. Backfilling**

- After completion of pipe laying, backfilling shall be carried out in layers of 250 mm thickness. Each layer shall be compacted to achieve a minimum of 95% soil compaction.

#### **E. Manhole Construction**

- Manholes of minimum 600 mm diameter shall be constructed at intervals of 30 m to facilitate the removal of blockages and to provide connections between the main pipeline and household service lines.
- For sewer pipelines up to a depth of 1 m, the manhole diameter shall be 600 mm. For depths exceeding 1 m, the manhole diameter shall be increased to 900 mm.
- Manholes shall be constructed using first-class bricks. Both the internal and external surfaces shall be plastered with cement mortar, followed by neat cement punning to ensure a smooth and impermeable finish.

#### **F. Secondary Sewer Pipeline.**

- Secondary sewer pipelines of 100 mm diameter SWR Pipes of approved brand with all necessary fittings shall be laid to connect individual household outlets to the main sewer line through manholes, maintaining the required gradient and proper jointing.

#### **G. Road Restoration**

- After completion of Pipe laying Road Restoration with M20 1:1.5:3(1 Cement: 1.5 coarse sand:3 graded stone aggregate 20 mm nominal size) grade concrete will be done. Curing Should be done to obtain strength of Concrete using Gunny bags for a minimum period of 7 days.

#### **H. Bio Digester**

- A 20 KLD FRP Biodigester including Micro Bio culture with PCC base as attached in estimate should be installed and sewer including Gray water and black water should be collected and decomposed in digester.

#### **I. Soak Pit**

- Water after discharged from Biodigester should be routed through Soak Pit to earth

### **Deliverables of Documents**

- Invoices of Pipes and Biodigester.
- Invoices of Construction Materials used as cement , steel.
- Warranty card of Biodigester mentioning functional efficiency of Biodigester.
- O&M manuals of Bio-digester.

## **Bidder Eligibility Criteria**

- Must be a registered company/entity/LLP/Proprietor in India with valid GST and PAN.
- Must have experience in similar works (sewerage/drainage Pipeline /biodigester) of Minimum 50 % Value.
- Experience with government/ULB/NGO projects preferred.
- Technical Person- At least 1 no of Project Engineer / Site Engineer and 1 Surveyor for Levels Marking of Pipes and Manhole.

Qualification - B.Tech / Diploma in Civil Engineering

Experience - 3-5 Years.

## **Submission of Quotation**

Interested vendors are invited to submit their quotations with the following details:

- Company profile and legal documents (Registration, PAN, GST).
- Technical proposal with compliance to specifications.
- Financial quotation with itemized cost (supply, installation, warranty).
- Past project references and client testimonials.
- Delivery timeline (from date of purchase order).

**Deadline for Submission:** 10 April'2026 up 5:00 PM

**Mode of Submission:** Soft copy via email to [WAIProcurementBihar@wateraid.org] and hard copy to [To: State Programme Director, Jal Seva Charitable Foundation, H.No - 96, Second Floor, WaterAid, 1E, New Patliputra Colony, Patna - 800013 (Bihar)]

## **Evaluation Criteria**

The contract shall be awarded to the technically qualified bidder quoting the lowest financial bid (L1).

## **Queries and Clarifications**

For any queries regarding the RFQ, may contact:  
WAIProcurementBihar@wateraid.org with the subject line: "RFQ for Sewerage Pipeline with Biodigester Ward no 01,05 and 10 of Akbarnagar, Bhagalpur " Please note that no queries will be addressed after 27th March 2025.

Note:-

**Payment Terms: -**

This is a item rate work, payment shall be made based on the actual quantities of work executed.

A sum equivalent to **5%** of the total contract value shall be retained by the Employer as Retention Money.

This retained amount shall be released only after successful completion of the Operation and Maintenance (O&M) period of **6 months** from the date of completion of the work, subject to satisfactory performance and certification by the Engineer-in-Charge.

**Checklist for Quality control of Work: -**

<b>Pipe</b>	<b>ISI Marked Astral, Supreme, Ashirvad, Plasto, Prince</b>
<b>Cement</b>	<b>OPC 53 Grade , UltraTech, ACC, JSW, LAFARGE</b>
<b>Steel</b>	<b>Grade -FE 500/550 Tata, Jindal, Sail, JSW.</b>
<b>Brick</b>	<b>First Class.</b>

Bid Format

Name:

Address:

Phone number:

Previous Experience Details:

PAN Card details:

GST number if available:

### Financial Quote

Sr. No.	Description of items / Activities	No	L	B	D	Total Quantity	Unit	Unit Rate (INR)	Amount (INR)
1	Dismantling cement concrete Road including disposal of material within 50 metre lead								
	For Pipe laying	1	150	0.4	0.2	10.5			
	For Manhole (600 Dia)	4	1.2	1.2	0.2	1.152			
	For Manhole (900 Dia)	4	1.5	1.5	0.2	1.8			
	For Secondary Sewer line	1	125	0.3	0.2	7.5			
						20.952	Cum		
2	Earth work in excavation over areas including disposal of excavated earth , lead upto 50 m and lift upto 1.5 m; disposed earth to be levelled and neatly dressed.(including restoring of any pipe/utility damaged during excavation)								
	Excavation for Pipe laying	1	200	0.4	1.2	84			
	Excavation for Manhole (600 Dia)	4	1.2	1.2	0.85	4.896			
	Excavation for Manhole (900 Dia)	4	1.5	1.5	1.5	13.5			
	Excavation for Secondary Sewer line	1	125	0.3	0.15	5.625			
						108.021	Cum		
3	Backfilling of trench with Excavated Earth in layers not exceeding 200 mm, watering and compaction as direction by Engineer in charge								
	For Main Pine line ((84-(200*0.35*0.4*)) = (84-28))	1				56	Cum		
	For Secondary Sewer line ((11.25-(125*3.14*0.05*0.05))	1				10.26	Cum		

4	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering-all work upto plinth level.1:3:6(1 Cement: 3 coarse sand:6 graded stone aggregate 20 mm nominal size)								
	PCC Below Pipe laying (Main Pipe)	1	200	0.3	0.1	6.00			
	PCC Below Pipe laying (Secondary Pipe)	1	120	0.25	0.1	3.00			
	PCC For Manhole Base (600 mm dia)	2	1.2	1.2	0.15	0.43			
	PCC For Manhole Base (900 mm dia)	6	1.5	1.5	0.15	2.03			
						11.46	Cum		
5	Supply and Laying of SWR Pipe 150 MM Dia including fittings, jointings of pipe and all	1	150			150	RM		
6	Supply and laying of SWR Pipe 100 mm dia including fitting and jointing all for connecting house hold to Manhole/Main Chamber	1	125			125	RM		
7	Sand filling with local sand above pipe line for Main Pipe line	1	200	0.4	0.25	17.5	Cum		
	Deduction of pipe volume = $200 \times 3.14 \times 0.075 \times 0.075$					-3.5	Cum		
	Sand filling with local sand above pipe line for Secondary Sewer Pipe line	1	125	0.3	0.2	7.5	Cum		
	Deduction of Pipe volume= $125 \times 3.14 \times 0.05 \times 0.05$					-0.981	Cum		
						20.519	Cum		

8	Supply and installation including excavation,PCC for bed (100 mm thick M15 grade )and backfilling for Bio Digester Tank of FRC Material with enzyme, Necessary fittings, vent pipe and and complete all respect at Specified location of capacity 20 KLD Suitable for Gray and Black water including loading, unloading and transportation at site. (Quotation attached)	1						LS		
9	Brick work with bricks of class designation First class in foundations and plinth and superstructure in Cement mortar 1 :4 (1 cement: 4 coarse sand )									
	For Manhole Wall	4	5.71	0.2	1.2	6.309	Cum			
	For Manhole Wall	4	4.77	0.2	0.8	3.513	Cum			
10	Providing designation 100 A one brick flat soling joints filled with local sand including cost of watering, taxes, royalty all complete as per building specification and direction of E/I,									
	Below Manhole Base (for 600 dia )	4	1.00	1.00		4.00	SQM			
	Below Manhole Base (for 900 dia )	4	1.50	1.50		9.00	SQM			
11	Cement Plaster with 1:4 (1cement :4 Sand ) ratio inside and outside of Manhole with neat cement punning									
	Inside of Manhole (for 600 mm dia )	4	1.88		0.8	6.03	SQM			
	Inside of Manhole (for 900 mm dia)	4	2.83		1.2	13.56	SQM			
	Outside of Manhole (for 600 mm dia )	4	3.33		0.8	10.65	SQM			
	Outside of Manhole (for 900 mm dia)	4	4.27		1.2	20.50	SQM			
	Construction of Benching in Manhole	8					LS			

12	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering-all work upto plinth level.1:1.5:3(1 Cement: 1.5 coarse sand:3 graded stone aggregate 20 mm nominal size)								
	Top Slab for Manhole (for 600 mm dia)	4	1.1	1.1	0.15	0.67	Cum		
	Top Slab for Manhole (for 900 mm dia)	4	1.4	1.4	0.15	1.11	Cum		
	Manhole Cover (560 mm dia)	8	3.1	0.1	0.15	0.30	Cum		
	Road Restoration work for main pipe with M20 Concrete	1	200	0.4	0.2	14.00	Cum		
	Road Restoration work for secondary pipe line With M20 Concrete	1	125	0.3	0.15	5.63	Cum		
13	Supply, Cutting and Binding of Reinforcement for Cover and Slab					120	Kg		
14	Supply and laying of Granular sub base by providing close grade material mixing in a mechanical mix plant at OMC, carriage of Mixed material to work site, spreading in uniform layer and compacting with vibratory roller to achieve the desired density.								
	For Main Pipe Line	1	200	0.3	0.15	9	Cum		
15	Supply and fixing of CI Steel Frame around manhole cover and Concrete Base (fixed with welding Reinforcement of cover )	8				8	Nos		
16	Supply and Installation of PVC Rungs for Foot Rest in Manhole made of 10 mm rod (Width 165 mm)	16				16	Nos		
17	Supply and installation of 2 nos Hooks of 12 mm steel in Manhole cover	10				10	Nos		
18	Brick Chamber at outflow from bio digester (Size 450 X 450 X 450) mm for installation of Valve.	1					LS		
19	Supply and Installation of Non return Valve of CI material to prevent backflow of Sewer in to system	1					LS		

20	Display Board indicating Project Details (IC) and Water aid logo, Slogan writing	1					LS		
21	Leach Pit (Separate Estimate attached below)	2					Nos		

Leach Pit with Brick work									
Sr. No.	Description of items / Activities	No	L	B	D	Total Quantity	Unit	Unit Rate (INR)	Amount (INR)
1	Earth work in excavation over areas (exceeding 30 cm in depth. 1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50 m and lift upto 1.5 m; disposed earth to be levelled and neatly dressed and backfilling as required.	0.79	2	2	2.5	7.85	Cum		
2	PCC at foundation bed, below brick Work (1:3:6) M10	1	7.72	0.3	0.08	0.17	Cum		
3	Honey comb Brick masonry with bricks corbelling at top having crushing strength not less than 75 Kg/cm <sup>2</sup> in cement mortar (1:6) in foundation, plinth as per the direction of Engineer in charge per E-in-charge.	1	7.72	0.230	2.5	4.44	Cum		
4	RCC precast cover slab in two halves of 75 mm thick with M20 Grade concrete including complete structure etc.	1				1	No's		
<b>Total</b>									

Note :-The quantities mentioned in the above BOQ are applicable for one ward only. Same quantities of items shall be replicated for the remaining two wards.

<b>Sr. No.</b>	<b>Item Description</b>	<b>Quantity (In No.)</b>	<b>Unit Cost (INR)</b>	<b>Total Cost (INR)</b>
1	Supply Sewer Network with 20 KLD FRP Biodigester and Twin Leach Pit	03		
<b>Total Estimated Budget</b>				

Authorized Signatory with Rubber Stamp  
Name & Address of the bidder