

# National Institute of Plant Genome Research

Aruna Asaf Ali Marg, NIPGR Campus, New Delhi – 110067

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## NOTICE INVITING TENDER

Sealed item rate Tenders are invited on behalf of the Director, NIPGR, New Delhi, from approved & eligible contractors specialized in drilling of borewell registered with Central Ground Water Authority (CGWA)/DC (New Delhi) in respect of the following work, so as to reach his office on or before 29.09.2014 up to 3.00 P.M. The Tender shall be opened on the same day at 3.30 P.M. in presence of the intending tenderers.

## SCHEDULE OF QUANTITY

**Name of Work:** Drilling for ground water extraction from deep borewell at NIPGR Campus, New Delhi.

Sl. No.	Description	Qty.	UNIT	Rate (in Rs.)	Amount (in Rs.)
	As per enclosed Schedule of Quantity, Specifications for sinking of tubewell and Terms & Conditions				

- Encl.:** 1. Schedule of quantity.  
2. Specifications for sinking of tubewell  
3. Terms & conditions.

Consultant Engineer  
NIPGR, New Delhi

M/s \_\_\_\_\_

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Seal & Signature of Contractor

### Schedule of Quantity

**Name of Work:** Drilling for Ground water Extraction from Deep bore well at NIPGR Campus New Delhi.

Sl. No.	Items of work	Unit	Qty.	Rate	Amount
	<b>PART-A</b>				
1	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means 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.				
	Hard rock (blasting prohibited)	Cum	10		
2	Boring/drilling bore well of required dia for casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/ bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer -in-charge, upto 90 metre depth below ground level.				
	All Kind soil/Rocky strata including Boulders upto 300 mm dia .	Metre	90		
3	Boring/drilling bore well of required dia for casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer -in-charge, beyond 90 metre & upto 150 metre depth				
	All Kind soil/Rocky strata including Boulders upto 300 mm dia .	Metre	37		
4	Supplying, assembling, lowering and fixing in vertical position in bore well, ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/ plain ended casing pipes (make: Jindal, Tata) of required dia, conforming to IS:4270, of reputed & approved make, including painted with outside surface with two coats of anticorrosive paint of approved brand and manufacture, including required hire & labour charges, fittings & accessories, all complete, for all depths, as per direction of Engineer-in-charge.				
a)	150mm nominal size dia having minimum wall thickness 5.40mm	Metre	78		
b)	100mm nominal size dia having minimum wall thickness 5.40mm	Metre	6		
5	Supplying, assembling, lowering and fixing in vertical position in bore well, ERW (Electric Resistance Welded) FE 410 plain slotted (having slot of size 1.6/3.2 mm) mild steel threaded and socketed / plain bevel ended pipe (make: Jindal, Tata) of required dia, conforming to IS:4270, of reputed & approved make, including painted with outside surface with two coats of anticorrosive paint of approved brand and manufacture, including required hire & (make: Jindal, Tata) of required dia, conforming to IS:4270, of reputed & approved make, including				
a)	150mm nominal size dia having minimum wall thickness 5.40mm	Metre	12		
b)	100mm nominal size dia having minimum wall thickness 5.40mm	Metre	30		
6	Gravel packing in tube well construction in accordance with IS: 4097, including providing gravel fine/ medium/ coarse, in required grading & sizes as per actual requirement, all complete as per direction of Engineer-in-charge.	Cum	10		



Sl. No.	Items of work	Unit	Qty.	Rate	Amount
7	Development of tube well in accordance with IS : 2800 (part I) and IS:11189, to establish maximum rate of usable water yield without sand content (beyond permissible limit), with required capacity air compressor, running the compressor for required time till well is fully developed, measuring yield of well by "V" notch method or any other approved method, measuring static level & draw down etc. by step draw down method, collecting water samples & getting tested in approved laboratory for disinfection of tubewell, all complete, including hire & labour charges of air compressor, tools & accessories etc., all as per requirement and direction of Engineer-in-charge.	Hours	80		
8	Providing and fixing suitable size threaded mild steel cap or spot welded plate to the top of bore well housing/ casing pipe, removable as per requirement, all complete for borewell of:				
a)	150 mm dia	Each	1		
9	Providing and fixing M.S. clamp of required dia to the top of casing/housing pipe of tubewell as per IS: 2800 (part I), including necessary bolts & nuts for required size complete.				
	150 mm clamp	Each	1		
10	Providing and fixing Bail plug/ Bottom plug of required dia to the bottom of pipe assembly of tubewell as per IS:2800 (part I).				
	100 mm dia	Each	1		
11	Geological surveying for indicating the location of Bore well digging for max. possibility for water aquifer as per site condition all complete. At Three Location	Each	1		
		<b>TOTAL AMOUNT(A)</b>			
	<b>PART-B</b>				
12	Providing & lowering of KSB make Submersible Pump Set.				
	Model : CORA 4C/15, Three Phase				
	Total Head in mtrs.: 150mtr, No. of stages:20, Motor rating:2.25kw(3.00hp), Method of starting:D.O.L., Size of cable:4.00sqmm wire.	Each	1		
13	Collecting samples of water as required and getting them tested for bacteriological & chemical from a Govt. recognised test house and submitting the test report.	Each	2		
14	Providing & fixing feeder pillar size-300mmx500mmx300mm deep made out of 16swg, M.S. Sheet complete with Hut Slope Top- Locking arrangement duly fitted 12mm Thick backlite sheet and transparent glass window top to check including making C.C. making complete as required.	Each	1		
15	S/I/T/C of D.O.L. Starter for 3.00 Hp submersible pump comprising of all protection which are over load, over voltage, earth fault & single phasing all complete as per direction of Engineer-in-charge.	Each	1		
16	Providing & Installation of water Metre flange type suitable for 50mm dia G. I. pipe Line, with reading 1.00lakh K.L. all complete as per instruction of -Engineer-in-charge.	Each	1		
17	Providing & Fixing of 50mm G. I. Check valve complete as required.	Each	1		
18	Providing & lowering of 50 mm dia pipe made out G I medium class jindal pipe including all fittings, flanges all complete as per direction of Engineer-in-charge.	Each	90		





## SPECIFICATIONS FOR SINKING OF TUBEWELL

### 1.1 Type of well

Tube well shall be bored by a 'DTH' DRILL rig with 150 mm dia (6") blind and slotted pipe and 150 mm dia housing pipe.

### 1.2 Drilling

Drilling shall be of 150 mm dia bore to an approximate depth of 60 m. or more. The depth may be increased or decreased as per actual strata encountered at site.

### 1.3 Housing / well pipes

Well pipes shall be 150 mm dia E.R.W. G.I. pipes with 5.4 mm wall thickness and matching fittings as per agreement. A bail plug with hook shall be provided at the bottom.

### 1.4 Slotted pipes

Slotted pipes shall be 150 mm dia E.R.W. G.I. pipes with slots, medium class (IS : 8110) with 5.4 mm wall thickness and matching fittings.

### 1.5 Well pipes shall be provided opposite sections with overbouden and slotted pipes opposite aquafiers to be determined at site.

### 1.6 Quoted rates

Rates for above items shall be inclusive of all accessories, threading sockets and labour for extraction of boring casing pipe and lowering tubewell assembly.

### 1.7 Verticality

Well assembly shall be truly vertical as per latest I.S. 2800 and verticality certificate shall be furnished by the contractor.

### 1.8 Development

The well shall be developed by an air compressor for a period of at least eighty hours. This period may however be extended in case the development has not been satisfactory.

### 1.9 Data

The contractor shall provide necessary data regarding yield and depression.

### 1.10 Water tests

Contractor shall get the water tested for its quality from approved Govt. laboratory after development of the well. Tests shall be bacteriological and chemical.

### 1.11 Sanitary sealing

The annular space between the bore and its housing pipe shall be grouted with cement concrete 1:2:4 to a depth of 5 m below the ground level or upto first clay bed whichever is obtained first.



### 1.12 Strata chart

Contractor shall maintain strata chart in a standard tubewell form at the site and shall give the following information:

- a) Description and depth of strata
- b) Spring level below ground
- c) Aquifer opposite which slotted pipes have been placed.
- d) Rate of progress of drilling.
- e) Full particulars of final test.
- f) Four copies of strata sheets, yield and reports of water quality tests shall be handed over on completion of the well.

### 2.0 Payment to Contractor due to failure of well

2.1 In case the bore has to be abandoned on account of unsatisfactory yield, the contractor shall be paid as follows:-

- a) The cost of transportation of drilling equipment at rates quoted under relevant items. This shall be paid once only irrespective of the number of borings done at site.
- b) Labour rate for boring as per depth of bore actually done at site. No other claims shall be entertained.
- c) No payment will be made for any housing or well. Piping unless especially instructed by the Engineer-in-charge in writing before the same is installed in the well.

2.2 No payment will be admissible on any account in case of failure of well is due to collapse, failure to penetrate through rock and failure of contractors equipment.

### 3. Strata

3.1 All kinds of soil, soft laterite and hard rocks shall be deemed to have been included in the offered rates.

**Seal & Sign of Agency**

**Consultant Engineer**

NIPGR, New Delhi

## **Terms & Condition**

**Name of work:** Drilling for Ground water Extraction from Deep bore well at NIPGR Campus New Delhi.

1. The contractor should visit the site and make them self-acquainted with the location of site. The Department shall not entertain any extra claim later on.
2. The site of work is at NIPGR Campus, Aruna Asaf Ali Marg New Delhi-110067.
3. The maximum diameter of Tube well is restricted to 6"x4" only.
4. The contractor shall make his own arrangement for the security of material at site.
5. The contractor shall arrange all T&P and nothing extra will be paid.
6. The contractor must get the prior approval of materials from the Engineer- In -Charge.
7. The rates shall be inclusive of Transportation, loading, unloading and handling charges of material.
8. Make of G.I. pipes are Jindal Hisar, and as per ISI approved.
9. The rates shall be inclusive of all taxes including VAT .
10. The contractor shall follow all labour laws as prevailing in Delhi.
11. All works shall be completed to the entire satisfaction of the Engineer-in-charge.
12. The management reserves the right to reject / accept any or all tender without assigning any reason.
13. The management also reserves the right to reduce / increase the scope of work as required.
14. In case of any dispute the decision of the Institute shall be final & binding on the contractor.
15. **Drilling Agency should have registered with the Central Ground water Authority/DC (New Delhi) and submit the copy of registration certificate.**
16. Agency shall furnish the information to DJB & DC (New Delhi) before starting the work at site regarding himself through Institute.
17. Agency shall have to inform the area sub divisional Magistrate about the date and time of Drilling and name of agency involved before the start of construction of Tube well.
18. The details of drilling strata encountered such as depth, pipe, details of tube well yields etc. are to be furnished to DJB within one week of Completion of the Construction of Tube well through Institute.
19. Payment shall be made on pro-rata basis and Final payment will be made after completion of work.
20. The work shall be completed in all respects within **Two months** from the date of issue of work order. Being a time bound, contract, and the contractor shall be liable to pay penalty @ ₹.5000/- (₹.Five Thousand only) per day subject to maximum of 10% of quoted amount if the work is not completed within stipulated time of Completion.
21. The Contractor shall be responsible for any damages and site clearance and nothing extra will be paid. In case the site clearance and damages are not attended, a recovery amounting to Rs. 1,000/- (Rs. One thousand only) shall be made.
22. The quotation must be accompanied with EMD of ₹.14900.00 (₹ Fourteen thousand & Nine hundred only). The earnest money (EMD) shall be in the form of DD of scheduled bank drawn in favour of "Director NIPGR" New Delhi. **Without EMD quotation shall not be considered.**
23. **The EMD shall be enclosed in a separate envelop duly marked EMD which shall be opened first.**
24. Agency must have the work experience of Drilling of Bore well. The agency shall have completed satisfactory two work of Drilling for each amounting of Rs.3.60 lakhs in last five years ending 30<sup>th</sup> September 2014 with the Government/public sector Undertaking/Government Institute and Universities. Completion certificate must be submitted with tender.

25. Security deposit @ 10% shall be deducted from the bill and shall be refunded after the completion of defect liability period of Six Months. The EMD will however be adjusted towards security deposit. .
26. **PAN/TIN** issued by the respective departments must be mentioned while quoting the rates.
27. All papers attached with this tender should be signed & returned in original.

**Consultant Engineer**

**NIPGR, New Delhi**

**PIN:**

**TIN**

**Seal & Signature of Contractor**