

W-5

TENDER DOCUMENT

**PROCUREMENT OF CIVIL WORKS
UNDER
NATIONAL SHOPPING PROCEDURES**

Rejuvenation of existing piezometers (Observation bore wells) of Ground water coming under jurisdiction of Yadagiri District under National Hydrology Project.

**Office of the
Executive Engineer
WRDO, I.I. Division No.3,
Kalaburagi-585101**



**GOVERNMENT OF KARNATAKA
(WATER RESOURCES DEPARTMENT)**

**OFFICE OF THE EXECUTIVE ENGINEER
IRRIGATION INVESTIGATION DIVISION NO.3,
KALABURAGI-585101 KARNATAKA
(Phone and fax: 08472 220377, Email: eeiidn3glb@gmail.com)**

INVITATION FOR TENDER UNDER NHP

No. EE./IIDn-3/KLB/TS-2/TENDER/2020-21/ 104

DATED:11-06-2020

Sub : INVITATION FOR TENDER FOR Rejuvenation of existing piezometers (Observation borewells) of Ground water coming under jurisdiction of Bidar, Kalaburagi, Yadgiri, Raichur Districts under National Hydrology Project

1. Most competitive Tender from registered agency with Karnataka ground water authority and PWD Class II and above (for work No.1) & Class III and above (for reaming works) contractors are invited for the following Works:-

Sl. no	Brief Description of the Works	Approximate value Of Works (Rs.in lakhs)	Period of Completion
1	Rejuvenation of existing piezometers (Observation Borewells) of Ground water coming under jurisdiction of Bidar District under National Hydrology Project	11.44	45 Days
2	Rejuvenation of existing piezometers (Observation Borewells) of Ground water coming under jurisdiction of Kalaburagi District under National Hydrology Project	4.01	45 Days
3	Rejuvenation of existing piezometers (Observation Borewells) of Ground water coming under jurisdiction of Yadagiri District under National Hydrology Project	2.56	45 Days
4	Rejuvenation of existing piezometers (Observation Borewells) of Ground water coming under jurisdiction of Raichur District under National Hydrology Project	8.05	45 Days

2. Government of India has received a credit from the International Development Association (IDA) in various currencies equivalent to US\$ 370 million towards the cost of the National Hydrology Project and intends to apply part of the proceeds of this credit to eligible payments under the contract for which this invitation for Tender is issued.
3. To assist you in the preparation of your Tender, we are enclosing the following:
- Drawings of the works;
 - Structural Details;
 - Bill of Quantities
 - Technical Specifications;

- v. Instructions to Bidders (in two sections A &B).
- vi. Draft Contract Agreement format which will be used for finalizing the agreement for this Contract.
4. The intended bidder can have access to e portal from **16-06.2020**.
5. Last date for submission offer latest by **4.00 pm** on **23-06-2020**
6. Tender documents can be downloaded from www.waterresources.kar.nic.in web site under national shopping procedure
7. Tender will be opened in the presence of Bidders or their representatives who Choose to attend at **11.00 am** on **25-06-2020** in the Office of Executive Engineer, Irrigation Investigation Division No.3, Kalaburagi.
8. We look forward to receiving your Tender and thank you for your interest in this project.

Sd/-
Executive Engineer.
I.I. Division No.3, Kalaburagi.

1. Copy submitted to The Chief Engineer, WRDO. Bengaluru, for Kind information
2. Copy submitted to The Superintending Engineer, Irrigation Investigation Circle, Yeramarus for Kind information
3. Copy submitted to The Director, Ground Water Directorate, 5th floor, South Block No-49, Khanija Bhavan race Course Road Bengaluru for vide publicity.
4. Copy to all Assistant Executive Engineers of this division for publicity.
5. Copy to Notice Board


Executive Engineer.
I.I. Division No.3, Kalaburagi.

Instructions to Bidders

SECTION - A

1. Scope of Works

The Executive Engineer, Irrigation Investigation Division No.3, Kalaburagi. invites Tender for the work as detailed in the table given below.

Sl.no	Brief Description of the Works	Approximate value Of Works (Rs.in lakhs)	Period of Completion
1	Rejuvenation of existing piezometers (Observation Borewells) of Ground water coming under jurisdiction of Yadagiri District under National Hydrology Project (Detailed Shedule-B and locations are enclosed in Annexures)	2.56	45 Days

The successful bidder will be expected to complete the works by the intended The successful bidder will be expected to complete the works by the intended completion date specified above.

2. **Qualification of the bidder:** The bidder shall provide qualification information which shall include: -

- (a) Bidder or rig Agency must be registered with KPWD Class III & above registration.
- (b) Bidder or rig Agency should have own bore well drilling machine Rig-registered with Karnataka Ground Water Authority Bengaluru and form 7(a) issued by competent authority should be uploaded in e-proc.
- (c) Bidder Should have satisfactorily completed as a prime contractor at least one similar work with value equal to or more than 80% of the estimated cost or two works each of at least 60 % value of the estimated cost or three works each of at least 40 % of the estimated cost in the last five years.
- (d) The Bidder /rig Agency Shall furnish valid registration certificate of the PAN and GST.
- (e) Work done Certificate should be issued by competent authority not below the rank of Executive Engineer.
- (f) The bidder or rig agency should possess valid EPF registration.
- (g) The Average annual turnover on similar works shall be at least 100% of the estimated cost during last three years.
- (h) Report on his financial standing, Solvency of the amount equal to or greater than 40 % of the estimated cost as certified from a bank.
- (i) Details shall furnish of any litigation, current or during the last 3 years in which the bidder is involved, the parties' concerned and disputed amount in each case.

3. Submission of Tender

- a) The bidder is advised to visit the site of works at his own expense and obtain all information that may be necessary for preparing the Tender.
- b) Each bidder shall submit only one Tender.
- c) The Prices shall be quoted both in figure and words in Indian Rupees only.
- d) All duties, taxes and other levies payable by the contractor under the contract shall be included in the total price. However in addition to contract amount the GST will be given as applicable.
- e) The rates quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
- f) The rates shall be inclusive of transportation charges (Delivery at site), packing charges, Site clearance, dismantling charges and testing charges if any etc.
- g) Any released materials at site shall be handed over to the concerned Geologist
- h) The bidder shall deliver the performance security to the Executive Engineer, I.I. Division No.3, Kalaburagi (in the form of FDR drawn in favour of the Executive Engineer, I.I. Division No.3, Kalaburagi) for an amount equivalent of 5.0% of the estimated cost along with the Tender. This performance security shall be valid till 30 days from the date of acceptance of the bid.
- i) Rejuvenation of existing piezometers (Observation Borewells) of Ground water comes under jurisdiction of District under National Hydrology Project. The contractor should execute the work as per the instructions of the Executive Engineer, I.I. Division No.3, Kalaburagi

The Tender submitted by the bidder shall comprise the following: -

- (a) Qualification information form given in Section B duly completed
- (b) Tender in the format given in Section B and
- (c) Signed Bill of Quantities;

4. Validity of Tender

Tender shall remain valid for a period not less than 90 days after the deadline date specified for submission.

5. Opening of Tender

Tender will be opened in the presence of bidders or their representatives who choose to attend on the date and time and at the place specified in the letter of invitation.

6. Information relating to evaluation of Tender and recommendations for the award of contract shall not be disclosed to bidders or any other persons not officially concerned with the process until the award to the successful bidder is announced.

7. Evaluation of Tender

The Employer will evaluate and compare the Tender determined to be substantially responsive i.e. which

- (a) meet the qualification criteria specified in clause 2 and 3 above;
- (b) bids and related documents are properly signed by the bidder; and
- (c) conform to the terms and conditions, specifications and drawings without material deviations.
- (d) The Tender would be evaluated for all the item together

8. Award of contract

- (a) The Employer will award the contract to the bidder whose Tender has been determined to be substantially responsive and who has offered the lowest evaluated Tender price and who meets the specified qualification criteria.
- (b) The Executive Engineer has right to accept in part or in full any tender/Tender or reject any Tender/Tender without assigning any reason or cancelling the tendering

process and reject all tenders at any time prior to award of contract without incurring any liabilities, whatsoever to the affected tenderer or tenderers.

(c) The bidder whose bid is accepted will be notified of the award of contract by the Employer prior to expiration of the Tender validity period.

9. Performance Security

- a) Within 15 days of receiving letter of acceptance, the successful bidder shall deliver to the Executive Engineer, WRDO. I.I. Division No.3, Kalaburagi. The performance security for an amount equivalent to 5.0% of the contract price shall be submitted in the form of FDR in favour of the Executive Engineer, I.I.Division No.3, Kalaburagi. from a Nationalized/scheduled Indian bank or a foreign bank located in India and acceptable to the employer.
- b) The performance Security shall be valid for 30 days, from the date of expiry of defect liability period / period of maintenance of the work whichever is later.
- c) Failure of the successful bidder to comply with the requisite of the condition 9(a) stated above shall constitute sufficient grounds for cancellation of the award and to black list.

10. Period of Maintenance:

The "Period of Maintenance" for the work is six months from the date of taking over possession or one full monsoon season whichever occurs later. During the period of maintenance, the contractor will be responsible for rectifying any defects in construction free of cost to the Employer.

11. Purchase of all construction materials including cement and steel as per the specifications (ISI certification marked goods wherever available) shall be the responsibility of the contractor.

12. The contractor should look after any hindrance or issues with respect to the land, construction till the completion of the work.

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SECTION – B

- 1. Format for Qualification Information.**
- 2. Format for Submission of Tender.**
- 3. Format of Letter of Acceptance.**

QUALIFICATION INFORMATION

1 For Individual Bidders

1.1 Principal place of business: _____

Power of attorney of signatory of Tender.
[Attach copy]

1.2 Total value of Civil Engineering construction work performed in the last five years (in Rs. Lakhs)

20	_____
20	_____
20	_____
20	_____
20	_____

1.3 Work performed as prime contractor (in the same name) on works of a similar nature over the last five years.

<u>Project Name</u>	<u>Name of Employer</u>	<u>Description of work</u>	<u>Contract No.</u>	<u>Value of contract (Rs. Lakhs)</u>	<u>Date of issue of work order</u>	<u>Stipulated period of completion</u>	<u>Actual date of completion</u>	<u>Remarks explaining reasons for delay and work completed</u>

Existing commitments and on-going works:

<u>Description of Work</u>	<u>Place & State</u>	<u>Contract No. & Date</u>	<u>Value of Contract (Rs. Lakh)</u>	<u>Stipulated period of completion</u>	<u>Value of works* remaining to be completed (Rs. Lakhs)</u>	<u>Anticipated date of completion</u>
(1)	(2)	(3)	(4)	(5)	(6)	(7)

* Enclose a certificate from Engineer concerned.

1.4 Proposed subcontracts and firms involved.

Sections of the works	Value of Sub-contract	Sub-contractor (name & address)	Experience in similar work
*	*	*	*
*	*	*	*
*	*	*	*
	*	*	*

1.5 Evidence of access to financial resources to meet the requirements of working capital : cash in hand, lines of credit, etc. List them below and attach copies of support documents.

1.6 Name, address, and telephone, telex, and fax numbers of the Bidders' bankers who may provide references if contacted by the Employer.

1.7 Information on litigation history in which the Bidder is involved.

Other party(ies)	Employer	Cause of dispute	Amount involved	Remarks showing present status

TENDER

*

Description of the Works : Rejuvenation of existing piezometers (Observation Borewells) of Ground water coming under jurisdiction of Yadagiri District under National Hydrology Project

To:

Subject :

Reference : Letter No.....dated.....from.....

Sir,

We offer to execute the Works described in your letter referred to above in accordance with the Conditions of Contract enclosed therewith at percentage above / below the estimated rates, i.e., for a total Contract Price of -

Rs.** _____ [in figures]
Rs. _____ [in words].

This Tender and your written acceptance of it shall constitute a binding contract between us. We understand that you are not bound to accept the lowest or any Tender you receive.

We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in bribery.

We hereby confirm that this Tender is valid for 90 days as required in Clause 4 of the Instructions to Bidders.

Yours faithfully,

Authorized Signature : _____ Date: _____

Name & Title of Signatory : _____

Name of Bidder : _____

Address : _____

* To be filled in by the Employer before issue of the Letter of Invitation.

** To be filled in by the Bidder, together with his particulars and date of submission at the bottom of this Form.

**LETTER OF ACCEPTANCE
CUM NOTICE TO PROCEED WITH THE WORK
(LETTERHEAD OF THE EMPLOYER)**

Dated : _____

To : _____ [Name and address of the Contractor]

Dear Sirs,

This is to notify you that your Tender dated _____ for execution of the _____ for the contract price of Rupees _____ [amount in words and figures], is hereby accepted by us.

You are hereby requested to furnish performance security for an amount of Rs. _____ (equivalent to 5% of the contract price) within 15 days of the receipt of the letter. The Performance Security in the form of Bank guarantee or a Bank draft in favour of(Employer) shall be valid till the expiry of the period of maintenance i.e. upto _____. Failure to furnish the Performance Security will entail cancellation of the award of contract.

You are also requested to sign the agreement form and proceed with the work not later than _____ under the instructions of the Engineer, _____ and ensure its completion within the contract period.

With the issuance of this acceptance letter and your furnishing the Performance Security, contract for the above said work stands concluded.

Yours faithfully,

**Authorized Signature
Name and title of Signatory**

**Draft Agreement form for
Construction through National Shopping**

ARTICLES OF AGREEMENT

This deed of agreement is made in the form of agreement on _____ day
_____ month _____ 20 ____, between the
_____ (Employer) or his authorized representative (hereinafter
referred to as the first party) and _____ (Name of the Contractor), S/O
_____ resident of _____ (hereinafter referred to as the second party),
to execute the work of construction of _____ (hereinafter referred to
as works) on the following terms and conditions.

2. Cost of the Contract

The total cost of the works (hereinafter referred to as the "total cost") is Rs. _____ as reflected in Annexure - 1.

3.1 Payments under its contract:

Payments to the second party for the construction work will be released by the first party in the following manner :-

100% payment will be made after completion of the work

3.2 Payments will be made by the first party :

- (a) on the second party submitting an invoice for an equivalent amount ;
- (b) on certification of the invoice by the Geologist nominated by the first party with respect to quality of works in the format in Annexure - 2;

4. Notice by Contractor to Engineer

The second party, on the works reaching each stage of construction, issue a notice to the first party or the Engineer/Geologist nominated by the first party (who is responsible for supervising the contractor, administering the contract, certifying the payments due to the contractor, issuing and valuing variations to the contract, awarding extensions of time etc.), to visit the site for certification of stage completion. Within 15 days of the receipt of such notice, the first party or the engineer/Geologist nominated by it, will ensure issue of stage completion certificate after due verification.

5. Completion time

The works should be completed in 30 days (one month) from the date of this Agreement. In exceptional circumstances, the time period stated in this clause may be extended in writing by mutual consent of both the parties.

- 6.** If any of the compensation events mentioned below would prevent the work being completed by the intended completion date, the first party will decide on the intended completion date being extended by a suitable period:

- a) The first party does not give access to the site or a part thereof by the agreed period.
 - b) The first party orders a delay or does not issue completed drawings, specifications or instructions for execution of the work on time.
 - c) Ground conditions are substantially more adverse than could reasonably have been assumed before issue of letter of acceptance and from information provided to second party or from visual inspection of the site.
7. Any willful delay on the part of the second party in completing the construction within the stipulated period will render him liable to pay liquidated damages. @ Rs. *_(As per the actual situation varies upto 1000 rs per day which will be deducted from payments due to him. The first party may cancel the contract and take recourse to such other action as deemed appropriate once the total amount of liquidated damages exceeds 2 % of the contract amount.

(Note : The amount of liquidated damages per day should be determined at 0.05 % of the contract value of the works and indicated here).

8. Duties and responsibilities of the first party (Engineer/ Senior Geologist)

- The first party shall be responsible for providing regular and frequent supervision and guidance to the second party for carrying out the works as per specifications. This will include written guidelines and regular site visit of the authorized personnel of the first party, for checking quality of material and construction to ensure that it is as per the norms.
- The first party shall supply 3 sets of drawings, specifications and guidelines to the second party for the proposed works.
- Possession of the site will be handed over to the second party within 10 days of signing of the agreement.
- The Engineer or such other person as may be authorized by the first party shall hold meeting once in a month where the second party or his representative at site will submit the latest information including progress report and difficulties if any, in the execution of the work. The whole team may jointly inspect the site on a particular day to take stock of activities.
- The Engineer shall record his observations/instructions at the time of his site visit in a site register maintained by the second party. The second party will carry out the instructions and promptly rectify any deviations pointed out by the engineer. If the deviations are not rectified, within the time specified in the Engineer's notice, the first party as well as the engineer nominated by it, may instruct stoppage or suspension of the construction. It shall thereupon be open to the first party or the engineer to have the deviations rectified at the cost of the second party.

9. Duties and responsibilities of the second party

9.1 The second party shall:

- a) take up the works and arrange for its completion within the time period stipulated in clause 5;
- b) employ suitable skilled persons to carry out the works ;
- c) regularly supervise and monitor the progress of work ;

- d) abide by the technical suggestions / direction of supervisory personnel including engineers etc. regarding construction ;
- e) be responsible for bringing any discrepancy to the notice of the representative of the first party and seek necessary clarification ;
- f) ensure that the work is carried out in accordance with specifications, drawings and within the total of the contract amount without any cost escalation;
- g) keep the first party informed about the progress of work ;
- h) Be responsible for all security and watch and ward arrangements at site till handing over of the bore well with safety box and platform to the first party ; and
- i) maintain necessary insurance against loss of materials/cash, etc. or workman disability compensation claims of the personnel deployed on the works as well as third party claims.
- f) Pay all duties, taxes and other levies payable by construction agencies as per law under the contract (First party will effect deduction from running bills in respect of such taxes as may be imposed under the law).

10. Variations / Extra Items

The works shall be carried out by the second party in accordance with the approved drawings and specifications. However, if, on account of site conditions or any other factors, variations are considered necessary, the following procedure shall be followed:-

- a) The second party shall provide the Engineer with a Tender for carrying out the Variation when requested to do so by the Engineer. The Engineer shall assess the Tender, which shall be given within seven days of the request before the Variation is ordered.
- b) If the Tender given by the second party is unreasonable, the Engineer may order the Variation and make a change to the Contract Price which shall be based on Engineer's own forecast of the effects of the Variation on the Contractor's costs.
- c) The second party shall not be entitled to additional payment for costs which could have been avoided by giving early warning.

11. Securities

The Performance Security shall be provided to the Employer no later than the date specified in the Letter of Acceptance and shall be issued in an amount and form and by a bank or surety acceptable to the Employer. The Performance Security shall be valid until a date 30 days from the date of issue of the Certificate of Completion in the case of a Bank Guarantee.

12. Termination

12.1 The Employer may terminate the Contract if the other party causes a fundamental breach of the Contract.

12.2 Fundamental breaches of Contract include, but shall not be limited to the following:

- (a) the contractor stops work for 28 days and the stoppage has not been authorized by the Engineer;
- (b) the Contractor has become bankrupt or goes into liquidation other than for a reconstruction or amalgamation;

- (c) the Engineer gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Engineer;
- (d) the Contractor does not maintain a security which is required;

12.3 Notwithstanding the above, the Employer may terminate the Contract for convenience.

12.4 If the Contract is terminated the Contractor shall stop work immediately, make the Site safe and secure and leave the Site as soon as reasonably possible.

13. Payment upon Termination

13.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Engineer shall issue a certificate for the value of the work done less advance payments received up to the date of the issue of the certificate, less other recoveries due in terms of the contract, less taxes due to be deducted at source as per applicable law.

13.2 If the Contract is terminated at the Employer's convenience, the Engineer shall issue a certificate for the value of the work done, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works and less advance payments received up to the date of the certificate, less other recoveries due in terms of the contract and less taxes due to be deducted at source as per applicable law.

14. Dispute settlement

If over the works, any dispute arises between the two parties, relating to any aspects of this Agreement, the parties shall first attempt to settle the dispute through mutual and amicable consultation.

In the event of agreement not being reached, the matter will be referred for arbitration by a Sole Arbitrator not below the level of retired Superintending Engineer, PWD to be appointed by the first party. The Arbitration will be conducted in accordance with the Arbitration and Conciliation Act, 1996. The decision of the Arbitrator shall be final and binding on both the parties.

BILL OF QUANTITIES

Sl. No.	Description of Work	Unit	Qty.	Quoted by bidder		Amount
				Rate		
				In figure (Rs.)	In Words	
1	Cleaning of bore wells including yield testing of bore well either using slow or fast Rig for not more than 2 hours at the final depth with a minimum working of 2 hours continuously with air compressor or suitable pump as per specification including cost of Transportation charges, crew charges, cost of consumables etc., complete	Each	5.00	15946		79730
2	Supply of ISI mark 175 mm nominal bore, plain end steel casing pipe grade of steel Fee 410 of wall thickness 5.4 mm thick confirming to IS 4270:2001 and latest amendments, electric resistance welded steel tube material and confirming to IS 1387/1993 and manufactured by basic open hearth electric or basic oxygen process in random length of 5 to 7 mtrs, both ends threaded confirming to IS 554/1985 one end fixed with socket confirming to IS 4270:2001 and other end with screwed pipes. All pipes shall be reasonably free from defects. The tube shall be reasonably straight should be with ISI marking weighing 25.1 kg / per mtr (inclusive of all taxes and duties) prices include collar - medium duty.	Rmtr	4	1325		5300
3a	Plat Form : Earthwork in excavation for structures as per drawing and technical specifications clause 305.1 including setting out, construction of shoring and bracing, removal of stumps and other deleterious material and disposal upto a lead of 50m, dressing of sides and bottom and backfilling in trenches with excavated suitable material. In ordinary soil upto 3 m depth.	Cum	04	241		104.11
3b	Plat Form : Providing concrete for plain / reinforced concrete in open foundations complete as per drawings and Technical specifications Clause 802, 803, 1202 and 1203. PCC grade M-10, nominal mix 1:3:6 (hand mixing)	Cum	04	4825		2084.40
3c	Plat Form : Plain/reinforced cement concrete in substructure complete as per drawings and	Cum	04	5096		5136.77

	technical specification Clauses 802, 804, 805, 806, 807, 1202 and 1206 For height up to 5 m, PCC grade M-15, nominal mix 1:2.5:5 (hand mixing)					
4	Providing and fixing including transportation of M.S safety box of size 0.5m x 0.5 m x 0.5 m to the casing pipe of the observation bore well should be fabricated using 10 gauge mild steel sheet with M.S angle 1" all-round, with tapering top cover and front door having opening type as per drawing and should be properly painted with 2 coats of good quality enamel metal paint of dark blue color with labelling on one side of the box using yellow paint with the following.	Each	09	14750		132750
	TOTAL					
	GST					
	GRAND TOTAL					

Gross Total Cost : Rs.

We agree to execute the works in accordance with the approved drawings and technical specifications at percentage above/below the estimated rates, i.e., for a total contract price of Rs.(amount in figures) (Rs. amount in words).

Signature of Contractor

Format of certificate

Certified that the works upto ----- level in respect of construction of ----- at ----- have been executed in accordance with the approved drawing and technical specifications.

Signature
Name & Designation
(Official address)

Place :
Date :

Office seal

Annexure-3
TECHNICAL SPECIFICATION

(A) Technical Specifications of Materials

S.No	Material	Quantity
1	ISI marked 175 mm nominal bore medium block ERW 2.5 mm thickness mild steel casing pipes.	As per recommendation of the OIC looking to the design & depth of the observation bore well.
2.	Cement concrete platform (1:3:6) measuring 0.6 m x 0.6 m x 1.0 m	One for each observation bore well
3.	MS sheet safety box measuring 0.5 m x 0.5 m x 0.5 m fabricated with 10 gauge MS sheet and 1" MS angle with inner door lock system.	One for each observation bore well

All materials required in these works shall be inspected by OIC before the usage.

(B) Detailed Technical Specifications:

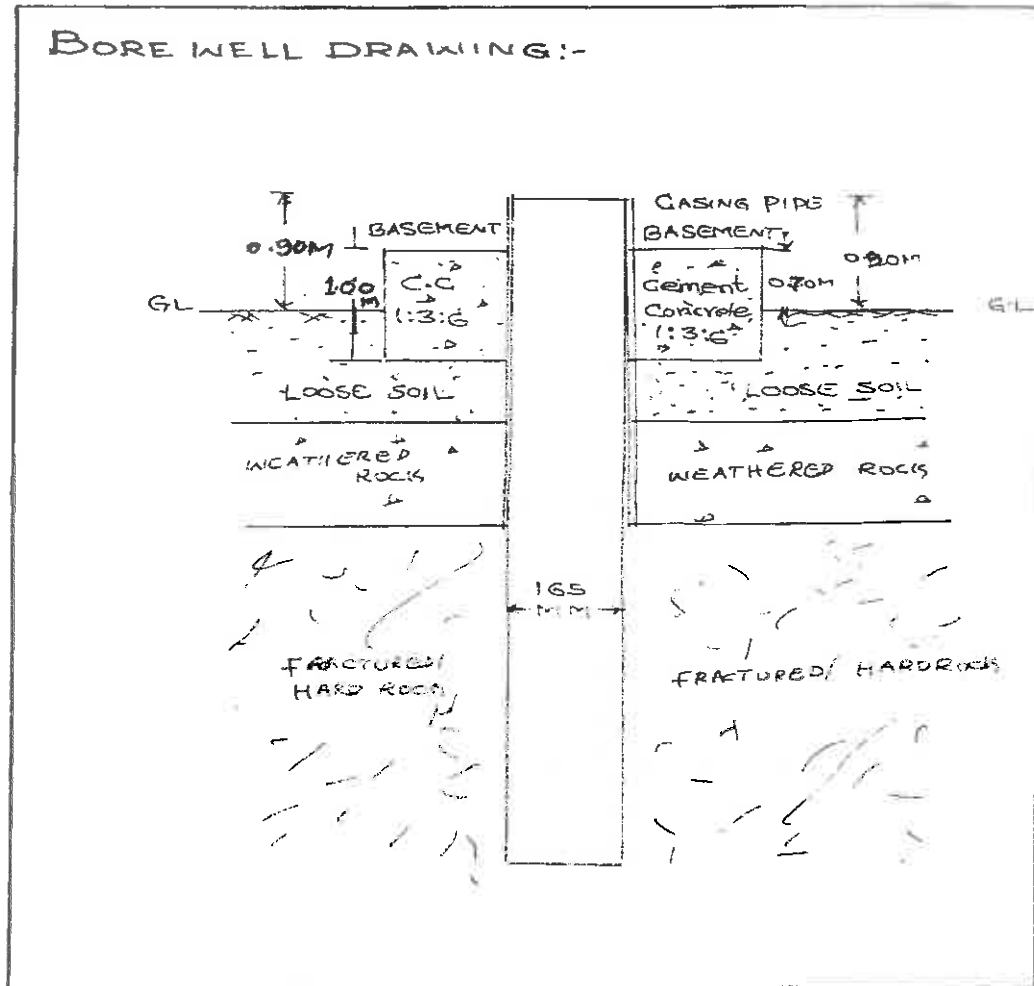
1. **Diameter and Depth of Bore well:** 165 mm (6 ½") Dia bore well to be drilled at each location as per instruction of the Officer In charge (OIC) at the site. The final depth of drilling shall be decided by the OIC.
2. **Casing**
 - a) ISI marked 175mm nominal bore medium block ERW 2.5 mm thickness casing pipes shall be provided to the required depth as per the direction of the Officer-in-charge at site.
 - b) The pipes shall be Block Electric resistance continuous welded mild steel tubes medium grade confirming to IS 1239/1990 (Part I) Amendment 1-5 with further amendments, if any, in lengths of 6 meters. Both ends shall be threaded conforming to IS 554/1985.
 - c) A minimum length of 0.90 m of casing pipe or more should be left above ground level and the top end provided with an appropriate MS cap as directed by the Officer-in-charge.
 - d) Casing should be installed on compact rock properly and as per instructions of the Officer-in-charge and in a manner that there is no leakage of air during drilling and there should not be any annular space between the casing pipes and bore hole wall to avoid entry of foreign materials.
 - e) Jointing of casing pipes shall be by appropriate MS Collars and by welding properly.
 - f) The drilling agency shall ascertain the stability of the casing pipe.

- 3.
- For purposes of drilling, approach road, water for the drilling crew, Camp etc., are to be arranged by the Drilling contractor at their own cost.
 - Drilling contractor will indicate static water level and discharge measured over 90° 'V' notch plate at different depth and on Completion depth. Necessary arrangements are to be made for Verification by Officer-in-charge for checking of depth, casing, static water level, discharge and any other requirement as shall be felt necessary from time to time.
 - Formation samples at intervals of 6m are to be collected during drilling and properly packed in polythene bags and labelled names, depth and handed over to Officer-in-charge after completion of work.
 - Technical problems during drilling like jamming of drill string, damage to button bits/Hammer/Drill rod/Casing of overburden, stoppage of work due to unforeseen reason etc., would be the responsibility of the drilling contractor and no compensation of any kind would be paid by the department.
4. **Platform:** A cement concrete platform (1:3:6) measuring 0.6mX0.6mX1.0m (0.70m above ground level and 0.3 m below ground level) should be constructed around the periphery of the well casing and proper curing done for strength and longevity as per the drawing attached.
5. **Safety box:** A MS sheet safety box measuring 0.5mX0.5mX0.5m size, should be fabricated and fitted around casing. The safety box should be fabricated with 10-gauge M.S sheet and 1" M.S angle. The top cover should be tapering on four sides. The top cover and front door having opening type with inner door lock system (as per drawing) and safety box should be properly painted. The following letters should be written on front side of the box "Govt. of Karnataka, Ground Water Directorate, district (respective district name) OB well"

1. DRAWINGS

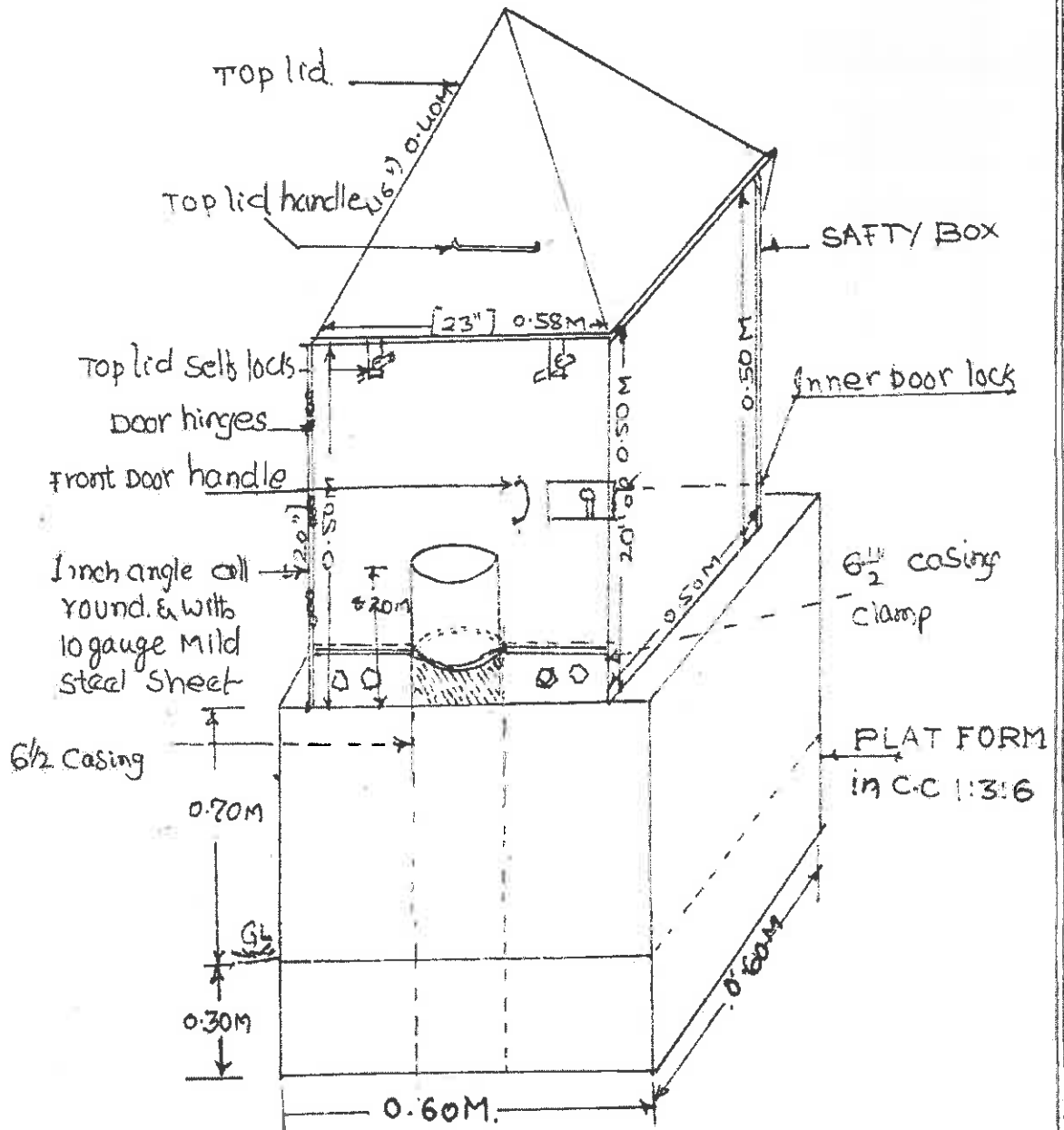
- a) Drawing No 1: Borewell Drawing.
- b) Drawing No 2: Design of Borewell, platform and Safety Box.

Drawing No.1



DESIGN OF BOREWELL, PLATFORM AND SAFETY BOX


Drawing No:2



Annexure-IV
SCHEDULE-B

Sl.No.	Description of Work	Unit	Qty.
1	2	3	4
1	Cleaning of bore wells including yield testing of bore well either using slow or fast Rig for not more than 2 hours at the final depth with a minimum working of 2 hours continuously with air compressor or suitable pump as per specification including cost of Transportation charges, crew charges, cost of consumables etc., complete	Each	13.00
2	Supply of ISI mark 175 mm nominal bore, plain end steel casing pipe grade of steel Fee 410 of wall thickness 5.4 mm thick confirming to IS 4270:2001 and latest amendments, electric resistance welded steel tube material and confirming to IS 1387/1993 and manufactured by basic open hearth electric or basic oxygen process in random length of 5 to 7 mtrs, both ends threaded confirming to IS 554/1985 one end fixed with socket confirming to IS 4270:2001 and other end with screwed pipes. All pipes shall be reasonably free from defects. The tube shall be reasonably straight should be with ISI marking weighing 25.1 kg / per mtr (inclusive of all taxes and duties) prices include collar - medium duty.	Rmtr	4.3
3a	Plat Form : Earthwork in excavation for structures as per drawing and technical specifications clause 305.1 including setting out, construction of shoring and bracing, removal of stumps and other deleterious material and disposal upto a lead of 50m, dressing of sides and bottom and backfilling in trenches with excavated suitable matierial. In ordinary soil upto 3 m depth.	Cum	04
3b	Plat Form : Providing concrete for plain / reinforced concrete in open foundations complete as per drawings and Technical specifications Clause 802, 803, 1202 and 1203. PCC grade M-10, nominal mix 1:3:6 (hand mixing)	Cum	04
3c	Plat Form : Plain/reinforced cement concrete in substructure complete as per drawings and technical specification Clauses 802, 804, 805, 806, 807, 1202 and 1206 For height up to 5 m, PCC grade M-15, nominal mix 1:2.5:5 (hand mixing)	Cum	04
4	Providing and fixing including transportation of M.S safety box of size 0.5m x 0.5 m x 0.5 m to the casing pipe of the observation bore well should be fabricated using 10 gauge mild steel sheet with M.S angle 1" all-round, with tapering top cover and front door having opening type as per drawing and should be properly painted with 2 coats of good quality enamel metal paint of dark blue color with labelling on one side of the box using yellow paint with the following.	Each	09

DTP for the work of Rejuvenation of existing piezometers (Observation Borewells) of Ground water coming under jurisdiction of Yadagiri District under National Hydrology Project, Karnataka. From Pg No 01 to Pg no 23 is here by Approved.



Executive Engineer
I.I. Division No.3, Kalaburagi

Annexure-V

Measurements

Item 1.

Cleaning of Borewell

Sl.no	Dist	Taluk	Village	Aquifer (Shallow or Deep)	Remarks
Ydgir District					
1		Shayapur	Hattigudur	Shallow	
2		Yadgiri	Ashnal	Deep	
3		Yadgiri	Balichakra	Deep	
4		Yadgiri	Gunjnoor cross	Deep	
5		Yadgiri	Nandepalli	Deep	
		TOTAL	5.00		

Item 2

Casing

Sl No	District	Taluk	Village (Location)	Existing casing height above Ground Level (in Mtrs)	Casing height to be raised (in Mtrs)	Remarks
1	3	4	5	10	18	
Yadgir District						
1		Shayapur	Hattigudur	0.60	1	
2		Yadgiri	Ashnal	0.50	1	
3		Yadgiri	Gunjnoor cross	0.90	1	
4		Yadgiri	Nandepalli	0.90	1	
Total					4.0	

Item 3a,3b,3c**Plat Form**

SI No	District	Taluk	Village (Location)	Plat form Size	Remarks
1	2	3	4	5	6
Yadgir District					
1		Shahapur	Hattigudur	0.6*0.6	
2		Yadgir	Ashnal	0.6*0.6	
3		Yadgir	Gunjinoor cross	0.6*0.6	
4		Yadgir	Nandepalli	0.6*0.6	

Item 4**Safety Box**

SI No	District	Taluk	Village (Location)	Remarks
1	2	3	4	6
Yadgir District				
1		Shayapur	Hattigudur	
2		Yadgiri	Ashnal	
3		Yadgiri	Gunjinoor cross	
4		Yadgiri	Nandepalli	
5		Yadgiri	Gurmikhal	
6		Yadgiri	Allipura	
7		Surpur	Thinthini	
8		Surpur	Narayampura	
9		Surpur	Madanur	
		TOTAL	9	