



**Tender for appointment of structural consultant
for conducting structural audit of NABARD's
Officers' Quarters in Block-19 & 20, Sector-01,
National Games Housing Complex, Khelgaon,
Ranchi**

Tender Schedule

Date of invitation of tender-	09 February 2024
Last date of submission of tender-	2 PM on 29 February 2024
Date of opening of technical bid-	3 PM on 29 February 2024
Date of opening of Financial Bid-	Will be communicated on finalisation of technical bid.

NOTICE INVITING TENDER

**Ref. No. NB. JHRO.DPSP/
09 February 2024**

/Structural Audit/2023-24

M/s...

Dear Sir

Tender for appointment of structural consultant for conducting structural audit of NABARD's Officers' Quarters in Block-19 & 20, Sector-01, National Games Housing Complex, Khelgaon, Ranchi

1. National Bank for Agriculture and Rural Development (NABARD) invites tenders for appointment of structural consultant for conducting structural audit of NABARD's Officers' Quarters in Block-19 & 20, Sector-01, National Games Housing Complex, Khelgaon, Ranchi.

Interested parties are requested to submit the Bids in sealed envelope for the aforesaid work as per detailed specifications and other requirements as mentioned more specifically elsewhere in this tender document.

2. This NIT (tender document) can be downloaded free of cost from our website at <https://www.nabard.org/English/Tenders.aspx> as well as CPPP portal.
3. Tenders in sealed envelopes super scribed "Tender for appointment of structural consultant for conducting structural audit of NABARD's Officers' Quarters in Block-19 & 20, Sector-01, National Games Housing Complex, Khelgaon, Ranchi" shall be submitted addressed by name to Chief General Manager, NABARD, Jharkhand Regional office, Near PHED water Tank, Bariatu- Booty Road, Ranchi-8350093. Last date for the submission of tender is 29 Feb 2024.
4. Envelope shall contain:
 - a) Duly filled in tenders with every page signed and stamped.
 - b) Power of attorney/authority letter authorizing the person to sign the tender.
5. A pre-bid meeting will be held in our office at **15 Feb 2024** with the prospective bidders, to clarify any issues pertaining to the tender. The bidders are expected to thoroughly read the tender document before being present for the pre-bid meeting, so as to understand all aspects

of the work. The clarifications/conditions, if any, sought by the tenderers shall be examined and discussed with the bidders and the conditions that are acceptable to the Bank shall be intimated to the bidders. The bidders will have to agree to the conditions which are acceptable to the Bank. No conditions/clarifications shall be entertained after the pre-bid meeting. Tenderers are advised to submit the duly filled in tenders after the Pre-Bid meeting without any additional condition.

6. Tender shall not contain any condition whatsoever and any conditional tender shall be rejected.
7. Tenders will be **opened on 29 Feb 2024 in our office** in presence of the representatives of the bidders, whoever are present. If the last date of receipt or opening of the tenders happens to be a holiday for NABARD, then the receipt and opening of the tenders shall be shifted to next working day without change of time and venue.
8. Tenders of only those tenderers will be considered, who are found to be eligible as per the eligibility criteria mentioned elsewhere in this tender document and who have complied with all the requirements in tender document. Bidders are requested to kindly visit our website regularly.
9. The bids shall remain valid and open for acceptance for 90 days from the date of opening of tender. If the tenderer withdraws his tender before the expiry of the said period or makes any modifications in terms and conditions of the tender which are not acceptable to the Bank, then the bank without prejudice to any other right or remedy will be at liberty to forfeit the earnest money.
10. NABARD reserves the right to accept or reject any /all tender/s in part or whole of any firm /firms without assigning any reasons for doing so.
11. Canvassing in connection with tenders is strictly prohibited and the tenders submitted by the tenderer who resort to canvassing will be liable to rejection.
12. NABARD also reserves the right to divide and distribute the work to more than one tenderer at its sole discretion.
13. For any clarification you may please call Shri S.Prusty, AGM, at 8850643225.

Sd/- (A.D.Surin)

Deputy General Manager

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PART-I (TECHNICAL BID)

FORM OF TENDER

The Chief General Manager

NABARD, Jharkhand Regional office
Near PHED water Tank
Bariatu-Booty Road
Ranchi-835009

Dear Sir

Tender for appointment of Structural Consultant for conducting Structural Audit of NABARD's Officers' Quarters in Block-19 & 20, Sector-01, National Games Housing Complex, Khelgaon, Ranchi

I / We have carefully gone through and clearly understood, after visiting the site, the tender document comprising of the Notice Inviting Tender, Form of Tender, Pre- Qualification Criteria, Scope of Work, General Conditions of Contract, Special Conditions of Contract and Schedule of Quantities/Bill of Quantities.

I/We hereby offer to execute the works specified in the Memorandum within the time specified, at the rates mentioned in the Financial/ Price Bid and in accordance with all aspects of the tender and with such materials as are provided for, by and in all other respect in accordance with such conditions so far as they may be applicable.

I / We do hereby undertake to execute and complete the whole or part of the work (as desired by you) at the respective rates quoted in the Price Bid.

In the event of this Tender being accepted I / we agree to enter into an agreement as and when required and execute the contract according to your Form of Agreement.

I / We further agree to complete the work included in the said Schedule of Quantities within 30 days from the date of commencement. Date of commencement shall be one-week from the date of issue of work order.

I / We agree to pay all applicable Government taxes prevailing from time to time.

MEMORANDUM

Description of work: Tender for appointment of Structural Consultant for conducting Structural Audit of NABARD's Officers' Quarters in Block-19 & 20 , Sector-01, National Games Housing Complex, Khelgaon, Ranchi.

Work completion period: 30 days from the date of commencement.

I/we hereby agree to abide by and fulfil the term and conditions of the tender annexed hereto so far as they may be applicable.

Our Bankers are:

i)

ii)

The names of partners of our firm
are: ii)

iii)

Name of the partner of the
firm Authorized to sign:

OR

Name of person having
Power of Attorney to sign.
the contract (certified copy
of the Power of Attorney
should be attached):

Yours faithfully,

Signature of Tenderer



2. PRE-QUALIFICATION NOTICE

NABARD invites applications under “Two Bid System” on prescribed forms for the under mentioned works from reputed Consultancy Firms/Companies/academic institutions engaged in conducting structural audit, Non-destructive testing of structures & allied works of multi-storied buildings.

Name of work	Appointment of structural consultant for conducting structural audit of NABARD’s Officers’ Quarters in Block-19 & 20, Sector-01, National Games Housing Complex, Khelgaon, Ranchi
Estimated cost	Rs. 1.5 Lakh
Earnest Money	Nil
Last date and time of submission of Tender	29 February 2024 till 02:00 PM - in the office of the Chief General Manager, NABARD, Near PHED water Tank, Bariatu-Booty Road, Ranchi-835009
Date from which Tender documents will be available	09 February 2024 at 02:00 PM and can be downloaded free of cost from our website at https://www.nabard.org/English/Tenders.aspx as well as CPPP portal.

Minimum Eligibility Criteria for pre-qualification of tenderers is as follows:

The Bidding Firm/Company: -

1. Should be member of Indian Associations/Societies of Structural Engineers & should be registered with Municipal Corporations/CPWD/State PWD or other similar government organisations/institutions.
2. Should have at least two qualified structural engineers (having experience of at least 10 years as structural engineer) on their rolls, details to be included. PMC should engage one qualified Civil Engineer for day-to-day supervision of work at the site. Engaged Civil Engineer by the PMC shall visit the site on daily basis during the Structural Repair works or whenever called by NABARD.
3. Should have at least 07 years of experience in the field of Consultancy and conducting of Structural Audit of various Buildings. Should have services of Licensed Structural Engineer registered with appropriate authority.
4. Should have experience of successfully conducting structural audit for government buildings, Banks/FIs premises, reputed private organisations etc. in the last 03 years (as on 31.03.2023).
 - a. Three similar works valuing not less than Rs.1,00,000/- per annum each **or**
 - b. Two similar works valuing not less than Rs.1,25,000/- each of the estimated cost **or**
 - c. One similar work valuing not less than Rs.1,50,000/- each.

Note: Certified copies of above work orders should be attached with technical bid as proof and originals may be furnished at the time of technical evaluation.

Above information shall be provided in the format mentioned in relevant annexure. Work Order/Agreement/Completion Certificates issued by the client should be enclosed with this tender and need to be produced in original before NABARD, whenever called for verification purposes.

5. Should have annual turnover of at least Rs.1,50,000/- during each of the last three years.
6. Should have NABL accredited laboratory or should have tie up with NABL accredited Lab.
7. The tender is to be submitted in **3 sealed Envelopes**. **Envelope-1** will contain the duly signed & stamped Part-I of the tender document along with documents related to prequalification criteria, and EMD details. **Envelope-2** will contain only the Price Bid/Bill of Quantities (**as per relevant annexure**). Both the Envelope-1 and Envelope-2 are to be put in bigger **Envelope-3**, which should also be sealed and duly superscribed as **“Appointment of structural consultant for conducting structural audit of NABARD’s Officers’ Quarters in Block-19 & 20, Sector-01, National Games Housing Complex, Khelgaon, Ranchi”** with details of firm name.

NOTE: The Technical / PQ bid, and Financial Bid should be put in separate envelopes superscribed as technical and financial bid respectively and sealed. The Financial Bid of only those tenders who qualify technical bid / PQ Bid in terms of eligibility criteria will be opened.

3. BROAD SCOPE OF CONSULTANCY WORK

1. Conducting structural audit including detailed visual inspection, non-destructive tests in NABARD's Officers' Quarters in Block-19 & 20, Sector-01, National Games Housing Complex, Khelgaon, Ranchi:

S.No	Location of Premises	Building Details
1	NABARD's Officers' Quarters in Block-19 & 20, Sector-01, National Games Housing Complex, Khelgaon, Ranchi	1. 02 buildings 2. Area details: Stilt + 8 Floors 3. Total built up area of 6438.83 Sqm. 4. Year of construction – 2009 5. Age as on 31.12.2023: - 15 years 6. Year of Last structural Audit/Structural Repairs –Not done.

2. To carry out following additional non-destructive tests as under:

S. No.	Additional Tests	ND Tentative No of tests	Remarks
1.	Rebound Hammer Test	80	The Consultant after surveying the buildings will suggest the locations and no. of various tests required to be conducted. Thereafter, approval from NABARD for no. of tests to be conducted will be granted and the Consultant shall carry out the tests accordingly.
2.	Ultrasonic Pulse Velocity Test	80	
3.	Half Cell Potential Test for Corrosion mapping	35	
4.	Carbonation Depth Test	30	
5.	Core Test	06	

3. Submission of detailed report, which includes:
 - i. The findings from detailed visual inspection

- ii. Non-destructive test results and/or any other such test carried at site as per the scope of work.
 - iii. Suggested remedial measures / repairs.
 - iv. Bill of quantities for (iii) above.
4. Structural audit shall be carried out as a qualitative assessment in accordance with latest guidelines of Indian Society of structural Engineers. Visual health inspection of buildings covering internal, external, and common areas using light tapping hammer, marking in floor plans all the visible defects, deterioration, and quantification.
 5. Assessment of damages of RCC chambers through NDT (Non-Destructive Testing) with calibration chart for the site. Initially digital rebound hammer test will be conducted and if necessary Ultrasonic Pulse Velocity test, Half Cell Potential test, carbonation depth test, core test, chemical test etc. will be conducted, necessity of which will be decided after inspection by consultant subject to consultation with and approval by NABARD.
 6. Finding the probable causes of damages, seepage / leakages, and status of external plumbing installations.
 7. Preparation of detailed report based on findings of visual inspection, NDT (along with test results), suggesting/ phasing out priority wise repair/ remedial and retrofitting measures supported by photographs wherever necessary. The report should be prepared based on the following issues:
 - a. Description of building structure
 - b. Observations
 - c. Layout plans
 - d. Distress mapping plans
 - e. Non-destructive layout
 - f. Non-destructive test exhibits
 - g. Result and discussions
 - h. Summary
 - i. Conclusions
 - j. Recommendations
 - k. Detailed Repair Methodology
 - l. Bill of quantities
 - m. Exhibits, if any
 - n. Performa 'B' (Structural Safety Certificate) OR any other specific format prescribed by local govt. authority.
 8. Preparation of detailed estimate for proposed structural repairs/ restoration, rectification work of specialized nature with BOQ (Bill of Quantities), if structural repairs are required.
 9. Preparation of tender documents, drawings (main & working) etc., for proposed structural repairs/ restoration, rectification work. Evaluation of bids and recommendations.
 10. Supervision for Execution of repairs / renovation works through successful tenderer under their supervision, including main structure and all other connected services.
 11. Attending meetings with NABARD officials, wherever required, in respect to above work regarding making addition/alteration in the drawings, specifications, make etc.
 12. Selection of samples of materials to be incorporated in the work in consultation with Premises Department.
 13. Providing Structural Fitness Certificate / Structure Habitable Certificate/structural safety certificate as per requirement.

14. Penalty Clause

- a. Non-rectification of the faults coming under the scope of work and terms and conditions of the contract will entitle the bank to get the job done from any other vendor at the risk and cost of the successful tenderer. The decision of NABARD in this regard will be final and binding on the contractor.
- b. In case of non-compliance of contract obligations and also in case of any damages, breakage and loss or theft to the building fittings, assets and equipment attributable to staff or labour deployed by the contractor, the contractor will be responsible for repairing / replacing the same at his cost failing which the actual cost incurred towards repair/ replacement with suitable penalty shall be imposed on the contractor by the bank.
- c. In the event of any accident/ damage etc. caused due to negligence of staff deployed will be debited to the inefficiency of the contractor and he has to make good the loss.
- d. All the workmen deployed under the contract should have valid Identity Card issued by the Agency and should be in proper uniform having Agency/Firm/ Company's Name & Logo, embossed/embroidered on it.
- e. In the event of contractor not attending to a specific item of work required under the contract, pro-rata amount will be deducted from contractor's bills.

The offer shall include the professional charges for all the consultancy services mentioned above and be submitted as financial bid in separate sealed cover. The other details such as registration, qualification, work done details, etc. shall be submitted in a separate cover as technical/PQ bid.

INSTRUCTIONS TO THE PQ BIDDER

1. NABARD takes no responsibility for delay / loss in non-receipt of Tender Documents.
2. All PQ bid papers annexed along with the “**Technical/PQ Bid**” document should be **serially numbered on the top right-hand corner** of every page.
3. All pages of the PQ/Technical bid document should be duly signed and stamped by the authorised signatory of the applicant. The applicant should submit all requisite documents in support of information furnished in the Technical/PQ Bid document and should be attested by an authority competent to attest the documents. Failure to attach attested copies may lead to disqualification of the bidder.
4. Tenders should be on the specified form (Non-transferable) which may be either downloaded from our website www.nabard.org or from CPPP portal **between 09 Feb 2024 till 29 Feb 2024** and submit the completed document along with necessary papers in prescribed proforma **upto 02 PM on 29 Feb 2024** to, Chief General Manager, NABARD, Ranchi. Tenders should be submitted super-scribed with the name of the work, date, and time of opening on the envelope. will be opened on **29 Feb 2024 at 03 PM in** the presence of bidders who choose to be present.
5. The employer (NABARD) does not bind itself to accept the lowest or any TENDER, and NABARD reserves its right of accepting the whole or any part of the TENDER and the Bidder shall be bound to perform the same at the rate quoted.
6. The Bidder shall quote rates both in figures and words. On check if there are differences between the rates quoted by the Bidder in words and in figures, the rates in words will be considered as final.
7. Before quoting, the Bidder shall inspect the site, to fully acquaint himself about the condition in regard to accessibility of the site, working condition of site and locality including installations of tools and plants (T&P) etc., conditions affecting accommodations and movement of personnel etc. required for the satisfactory execution of the work contract. No claim whatsoever on such account shall be entertained by the Employer in any circumstances.
8. Bidder should attach required proofs (Photocopies) for the eligibility in support of works of similar nature, for a minimum value as indicated in Technical Bid should also be submitted.
9. All tender paper annexed along with the “Bid” should be serially numbered on the top right-hand corner of every page. All pages of the tender document should be duly signed and stamped by the authorized signatory of the applicant. The tender document should be submitted in original. Tender document not submitted in original will be treated as invalid



and rejected. The applicant should submit complete set of documents in support of information furnished in the Bid document.

10. **“JVs/ Consortiums/ MOUs shall not be considered.”**
11. Canvassing in connection with the Tenders is prohibited and the Tenders submitted by the consultant who resorts to canvassing are liable for rejection.
12. The Audit reports in hard copy should be submitted in hard.
13. As the buildings are old, NABARD may not be able to provide all DATA, Drawings & Documents related to the buildings. However, the data available with us shall be made available to the consultant. All the necessary works related to the Job component shall be under the scope of the party.
14. This tender is not an offer by National Bank for Agriculture and Rural Development (NABARD), but an invitation to receive offer from bidders/firm/agency etc. No contractual obligation whatsoever shall arise from this tender process unless and until a formal contract is signed and executed by duly authorized officers of NABARD, Jharkhand RO with the selected bidder/firm/agency.

4. GENERAL CONDITIONS OF CONTRACT

1. Definitions

“The Contract” means the documents forming the tender and acceptance thereof and the formal agreement executed between NABARD and the Consultant, together with the documents referred to therein including the conditions, the specifications, designs, drawings, and instructions issued by the Employer from time to time and all these documents taken together, shall be deemed to form one contract and shall be complementary to one another.

In the contract the following expressions shall, unless the context otherwise requires, have the meaning hereby respectively assigned to them.

- a) **“NABARD / Employer”** means NABARD having its Registered & Corporate Office at C-24, G Block, BKC, Bandra East, Mumbai 400 051 and includes its representatives, successors, and assigns.
- b) **“Corporate Office”** means the Regional Office of NABARD at Bariatu-Booty Road, Ranchi-835009 and includes any other offices as prescribed by NABARD from time to time for that purpose.
- c) **“Sanctioning Authority”** means authority nominated to exercise power of approval, sanction and acceptance concerning administrative, financial and technical aspects of transactions done on behalf of NABARD.
- d) **“Employer”** means NABARD and includes its representatives, successors and assigns.
- e) **“Bank’s Representative”** means Representative appointed by the Employer as their representative to give instructions and supervise the work of the consultant at site.
- f) **“The Consultant or Consultants”** means the firm or agency or individual engaged by the Employer to execute the work. It shall also include their legal representative(s), successors or assigns.
- g) **“Contract Value”** means the value of the entire work as stipulated in the work order conveying acceptance of the tender, subject to such additions thereto or deductions there from, as may be made under the provision herein after contained.
- h) **“Tendered Value”** means the value of the entire work as stipulated in the work order.
- i) **“Works” or “Work”** means the consultancy work described in the “Scope of Work” and/or to be executed in accordance with the contract and includes materials, apparatus, equipment, temporary supports, fittings and things of all kinds to be provided, the obligations of the consultant hereunder and work to be done by the consultant under the contract.

- j) **“The Site”** means the premises, into or through which work is to be executed under the contract or any adjacent premises, which may be allotted or used for the purpose of carrying out the contract.
- k) **“Drawings”** means the drawings prepared by Consultant/NABARD and issued to the Bank’s Representative and referred to in the specifications and any modifications of such drawings as may be issued by the Consultant/Employer / Bank’s Representative from time to time.
- l) **“Specifications”** means the specifications referred to in the tender and any modifications thereof as may be furnished or approved by the Employer from time to time.
- m) **“Market Rate”** means the rate as decided by the Employer on the recommendations of Bank’s Representative based on the cost of materials and labour at the site where the work is to be executed plus the percentage mentioned elsewhere to cover, all overheads and profits.
- n) **“Schedule(s)” referred** to in these conditions mean the relevant schedule(s) annexed to the tender papers.
- o) **“Local Controlling Authority”** means the Local Municipal Authority or any other appropriate statutory authority.

2. Work to be carried out: The work to be carried out under the contract shall, except as otherwise provided in these conditions, include all Manpower, Materials, Tools, Plants, Tackles, Equipment and Transport which may be required in preparation of and for and in the full and entire execution and completion of the work.

3. Sufficiency of Tender: The Consultant shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the rates and prices quoted in the Schedule of Quantities, which rates and prices shall, except as otherwise provided, cover all his obligations under the Contract and all matters and things necessary for the proper completion and rectification of the works.

Scope of Work: The consultant shall carry out the said work in every respect in strict accordance with this contract and with the directions of and to the satisfaction of the Employer to be communicated through NABARD.

- 4. Rates of Payment:** The rates given in the BOQ tendered by the consultant/agency and as accepted by NABARD will form the basis of payment for such items under this contract.
- i. No price variation or escalation on any account whatsoever & the compensation for force majeure etc. shall be payable under the contract.
 - ii. The rates for any item of work not included in the Schedule of items, Rates, and quantities and which the consultant may be called upon to do by NABARD shall be fixed by the supplementary written agreement between the consultant and NABARD before the particular item or items of work is/are executed.
 - iii. Should there arise any items which may be necessary for the smooth completion of work, but which does not appear in the Schedule of items, rates and Quantities

attached with the Tender, items rate will be fixed by analysis of actual inputs of all types including labour and material.

- iv. Payment for the work done will be made to the consultant only when the formal agreement has been executed between the parties, and as per the Payment Schedule. iv. **Payment Schedule:** Full payment shall be made after satisfactory completion of work. Please note that no advance payment will be made on any account.

7. **Work Order:** Within the validity period of the tender, the Employer shall issue a work order/letter of acceptance of tender by registered post or otherwise dispatching at the address of the consultant as given in the tender to enter into a contract for execution of the work as per the terms of the tender. The work order shall constitute a binding contract between the Employer and the Consultant.

8. **Contract Document:** On receipt of work order from the Employer, the successful tenderer shall be bound to implement the contract, and within seven days thereof, he shall sign an agreement on a non-judicial stamp paper of appropriate value. The consultant shall be furnished, one certified copy of the contract documents together with all drawings as may be forming part of the tender papers. None of these documents shall be used for any purpose other than that of this contract.

9. **Language:** The language in which the contract documents shall be drawn, shall be English.

10. **Liquidated Damages:** If the consultant fails to maintain the required progress as per the stipulated time period or to complete the work and clear the site on or before the schedule date of completion, he shall, without prejudice to any other right or remedy available under the law, to the Employer on account of such breach, pay as agreed compensation, the amount calculated at the rate of 0.25% of the contract amount per week subject to a maximum of 5% of the contract amount. The amount of compensation may be adjusted or set off against any sum payable to the Consultant under this contract with the Employer.

11. **Escalation:** No escalation and payment due to increase in prices / wages will be made to the consultant. The rates quoted by the consultant shall remain firm throughout till completion of the work and nothing extra beyond unit rates shall be paid on account of any reason whatsoever.

12. **Ownership of drawings:** All drawings, specifications and copies thereof furnished by the Employer are the properties of the Employer. They are not to be used on any other work.

13. **Materials, Appliances and Employees:** The consultant shall, at his own expense, provide all material, appliances and employees required for testing and carrying out the works and no material required for carrying out the work shall be supplied by the Employer. If tests are to be carried out in external labs, all costs such as testing cost, consultancy fee, taxes, transportation, or any other incidental charges shall be borne by the consultant.

14. Consultant/Agency to supply tools & plants etc.: The consultant shall provide at his own cost all materials, plant, tools, appliances, implements, ladders, cordage, tackle, scaffolding, and temporary works required for the proper execution of the work.

15. Protection of works and property: The consultant shall continuously maintain adequate protection of all his work from damage and shall protect the Employer's properties from injury or loss arising in connection with the contract. He shall make good any such damage, injury, loss resulting due to his fault or negligence except due to causes beyond his control. He shall take adequate care and steps for protection of the other floors and adjacent properties. The consultant shall take all precautions for safety and protection of his employees on the works and shall comply with all applicable provisions of Government and local bodies safety laws and building codes to prevent accidents, or injuries to persons or property in or adjacent to his place of work.

16. Assignment and subletting: The whole of work included in the contract shall be executed by the consultant and he shall not directly entrust and engage or indirectly transfer assign or sublet the contract or any part or share thereof or interest therein.

17. Consultant's superintendence: The consultant shall give necessary personal superintendence during the works. The consultant shall depute necessary technical staff for execution of the work.

18. Quantities: The rates quoted for various items shall remain valid for variation of quantity (either upwards or downwards) against individual item to any extent. The payment to the consultant shall be made as per the actual work executed and quoted unit rates for individual items. The quantities in the BOQ are only indicative and may increase or decrease, however the rate quoted shall remain firm. However, increase in quantity, if any, shall, be affected (and eligible for payment) only with prior written approval of the Employer.

19. Works to be measured: The Bank's Representative shall, except as otherwise provided, ascertain, and determine by measurement the value in accordance with the contract. Recording of measurements of any item of work in the measurement book and / or its payment in the interim, on account or final bill shall not be considered as conclusive evidence as to the sufficiency of any work or material to which it relates, nor shall it relieve the consultant from liabilities.

20. Certificate of payment: Payment on account of amount admissible shall be made on certification of the Bank's Representative to which the consultant is considered entitled at such rates as defined in Bill of Quantities. The amount admissible shall be paid by 15th working day after the day of certification of the bill by the Bank's Representative and submission of same to employer subject to the bill is found to be in order by the Employer with no discrepancies. The Employer shall recover the statutory recoveries from the certificate of payment. The Bank's Representative shall have the power to withhold the respective amount, if the work or any part thereof is not carried out to their satisfaction. NABARD shall deduct the sales tax/turn over tax or any other tax from the consultant's bill at the rate as applicable as per rules framed by concerned Govt. /local bodies from time to time and remit it to concerned department and shall issue a certificate regarding tax/duties/levies so deducted on demand by the consultant.

21. Dismantled material as Employer property: The consultant shall treat all useful materials obtained during testing of the building/premises as Employer's property and such materials shall be disposed of to the best advantage of Employer according to the instructions in writing issued by the Employer. Debris/waste material shall be disposed of outside the NABARD premises at the area approved by the Municipal Corporation.

22. Permits, Laws and Regulations: Permits and licenses required for execution of the work shall be obtained by the consultant at his own expenses. The consultant shall give necessary notices and comply with the local regulations, laws, and ordinances, rules, applicable for execution of the work. If the consultant performs any act, which is against the local law, rules, and regulations, he shall meet all the costs and consequences arising therefrom and shall indemnify the Employer against any legal action arising therefrom. The rates quoted by the consultant are inclusive of obtaining such approval(s) and nothing extra beyond quoted rates shall be paid to the consultant on this account.

23. Local Laws, Acts, Regulations: The consultant shall strictly adhere to all prevailing labour laws inclusive of Contract Labour (Regulation and Abolition Act of 1970) and other safety regulations. The consultant shall comply with the provisions of all labour legislations including the latest requirements of all the Acts, laws, and any other regulations that are applicable to the execution of the project.

24. Time for completion: Time is the essence of the contract and shall be strictly observed by the consultant. The entire work shall be completed within a period of **30 days** from the date of issue of work order. The consultant shall a certificate declaring completion of the entire work and the Employer will issue 'virtual completion certificate' if the work is found to be satisfactorily executed.

25. Extension of Time:

- a) If the work(s) be delayed by:
- i. Force majeure, or
 - ii. Abnormally bad weather, or
 - iii. Seriou's loss or damage by fire, or
 - iv. Civil commotion, location commotion of workmen, strike, or lockout, affecting any of the trades employed on the work, or
 - v. Any other causes which, in the absolute discretion of the Employer is beyond the Consultant's control.

Then upon the happening of any such event causing delay, the consultant shall immediately give notice thereof in writing (within 7 days of happening of the event) to the Employer but shall nevertheless use constantly his best efforts to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of the Employer to proceed with the works.

b) Request for extension of time, to be eligible for consideration, shall be made by the consultant in writing within two days of the happening of the event causing delay. The Consultant may indicate in such a request the period for which extension is desired.

c) In any such case, the Employer on the basis of recommendations of the Bank's Representative, will give a fair and reasonable extension of time for completion of work. Such

extension shall be communicated to the Consultant by the Employer in writing. Non application by the consultant for extension of time shall not be a bar for giving a fair and reasonable extension by the Employer and this shall be binding on the consultant.

26. When Contract can be terminated: Subject to other provisions contained in this clause, the Employer may, without prejudice to his any other right or remedy against the consultant in respect of any delay, inferior workmanship, any claims for damages and / or any other provisions of this contract or otherwise, and whether the date of completion has or has not elapsed, by notice in writing absolutely terminate the contract in any of the cases.

27. Suspension of work: The consultant shall, on receipt of the order in writing of the Employer (whose decision shall be final and binding on the consultant) suspend the progress of works or any part thereof for such time and in such manner as the Employer / Consultant may consider necessary so as not cause any damage or injury to the work already done or endanger the safety thereof for any of following reasons.

- a) On account of any default on the part of the consultant, or
- b) For safety of the works or part thereof.

The consultant shall, during such suspension, properly protect and secure the works to the extent necessary and carry out the instructions given in that behalf by the Employer.

28. Cancellation of contract in full or part If Consultant:

- i. at any time makes default in proceeding with the works or any part of the work with the due diligence and continues to do so after a notice in writing of 7 days from the Employer: or
- ii. commits default to complying with any of the terms and conditions of the contract and does not remedy it or take effective steps to remedy it within 7 days after a notice in writing is given to him in that behalf by the Employer or
- iii. fails to complete the work, on or before the stipulated date of completion, and does not complete them within the period specified in a notice given in writing in that behalf by the Employer or

The Employer may, without prejudice to any other right or remedy which shall have accrued or shall accrue hereafter to Employer, by a notice in writing to cancel the contract as a whole or only such items of work in default from the Contract.

The Bank's Representative shall on such cancellation by the Employer have powers to: take possession of the site and any materials etc. thereon; and / or carryout the incomplete work by any means at the risk and cost of the consultant.

On cancellation of the contract in full or in part, the Employer through Bank's Representative shall determine what amount, if any, is recoverable from the consultant for completion of the works or part of the works or in case the works or part of the works is not to be completed, the loss or damage suffered by Employer. In determining the amount, credit shall be given to the consultant for the value of the work executed by him up to the time of cancellation, the value of consultant's materials taken over and incorporated in the work and use of plant and machinery belonging to the consultant.

Any excess expenditure incurred or to be incurred by Employer in completing the works or part of the works or the excess loss or damages suffered or may be suffered by Employer as aforesaid after allowing such credit shall without prejudice to any other right or remedy available to Employer in law, be recovered from any moneys due to the consultant on any account, and if such moneys are not sufficient the consultant shall be called upon in writing and shall be liable to pay the same within 30 days.

If the consultant shall fail to pay the required sum within the aforesaid period of 30 days, the Employer shall have the right to sell any or all of the consultants' unused materials etc. and apply the proceeds of sale thereof towards the satisfaction of any sums due from the consultant under the contract and if thereafter, there be any balance outstanding from the consultant, it shall be recovered in accordance with the provisions of the contract.

Any sums in excess of the amount due to Employer and unsold material etc., shall be returned to the consultant, provided always that if cost or anticipated cost of completion by Employer of the works or part of the works is less than the amount which the consultant would have been paid had he completed the works or part of the works, such benefit shall not accrue to the consultant.

33. Settlement of Disputes and Arbitration: All disputes or differences of any kind whatsoever which shall at any time arise between the parties hereto touching or concerning the works or the execution thereof of this contract or effect thereof or to the rights or liabilities of the parties or arising out of or in relation thereto whether during or after determination foreclosure or breach of the contract (other than those in respect of which the decision of any person is by the contract expressed to be final and binding) shall after written notice by either party to the contract to the other of them and to the Employer hereinafter mentioned be referred for adjudication to a sole Arbitrator to be appointed as hereinafter provided.

For the purpose of appointing the sole Arbitrator referred to above, the Employer will send within thirty days of receipt of the notice, to the consultant a panel of three names of persons who shall be presently unconnected with the organization for which the work is executed from the following categories of Arbitrators": -

- a. Retired High Court/Supreme Court Judge who have experience in handling Arbitration Cases.
- b. Member of Council of Arbitrators
- c. Fellow of the Institution of Engineers
- d. Eminent Retired Chief Engineer from State/Central PWD/Public Sector Undertaking of good reputation and integrity.
- e. Fellow of Indian Institute of Consultants

The consultant shall on receipt of the names as aforesaid, select any one of the person's names to be appointed as a sole Arbitrator and communicate his name to the Employer within thirty days of receipt of the names. The Employer shall thereupon without any delay appoint the said person as the Sole Arbitrator. If the consultant fails to communicate such selection as provided above within the period specified, the Employer should make the selection and appoint the selected person as the Sole Arbitrator.

If the Employer fails to send to the consultant the panel of three names as aforesaid within the period specified, the consultant shall send to the Employer a panel of three names of

persons who shall all be unconnected with either party. If the Employer fails to select a person and appoint him as the Arbitrator within 30 days of receipt of the panel and inform the consultant accordingly, the consultant shall be entitled to appoint one of the persons from the panel as the Sole Arbitrator and communicate his name to the Employer. The Employer shall on receipt appoint one of them as the Arbitrator.

If the Arbitrator so appointed is unable or unwilling to act or resigns his appointment or vacates his office due to any reason whatsoever, another Sole Arbitrator shall be appointed as aforesaid.

The work under the Contract shall, however, continue during the arbitration proceedings and no payment due or payable to the consultant shall be withheld on account of such proceedings.

The Arbitrator shall be deemed to have entered on the reference on the date he issued notice to both the parties fixing date of the first hearing.

The Arbitrator may from time to time, with the consent of the parties, extend the time for making and publishing the award.

The arbitrator shall give a separate award in respect of each dispute or difference referred to him. The Arbitrator shall decide each dispute in accordance with the terms of the contract and give a reasoned award. The venue of arbitration shall be such a place as may be fixed by the Arbitrator at his Sole discretion.

The award of the Arbitrator shall be final and binding on the both the parties.

Subject to the aforesaid provisions to the Arbitration Act. 1992 or any statutory modification or re-enactment thereof and the rules made there under, and for the time being in force, shall apply to the arbitration proceedings under this clause.

The Employer and the consultant hereby also agree that arbitration under clause shall be condition precedent to any right to action under the contract with regard to the matters hereby expressly agreed to be so referred to arbitration.

34. Force Majeure:

a) Neither consultant nor NABARD shall be considered in default in performance of their obligations if such performance is prevented or delayed by events such as war, hostilities, revolution, riots, civil commotion, strikes, lockout, conflagrations, epidemics, accidents, fire, storms, floods, droughts, earthquakes or ordinances or any act of God or for any other cause beyond the reasonable control of the party affected or prevented or delayed. However, a notice is required to be given within 7 days from the happening of the event with complete details, to the other party to the contract, if it is not possible to serve a notice, within the shortest possible period without delay.

b) As soon as the cause of force majeure has been removed, the party whose ability to perform its obligations has been affected, shall notify the other of such cessation and the actual delay incurred in such affected activity adducing necessary evidence in support thereof.

c) From the date of occurrence of a case of force majeure, obligations of the party affected shall be suspended during the continuance of any inability so caused. With the cause itself and inability resulting therefrom having been removed, the agreed time of completion of the respective obligations under this agreement shall stand extended by a period equal to the period of delay occasioned by such events.

d) Should one or both parties be prevented from fulfilling the contractual obligations by a state of force majeure lasting to a period of 6 months or more, the two parties shall mutually decide regarding the future execution of this contract.

35. Consultant liable for damages, defects during defects liability period: If the consultant or his working people shall break, deface, injure or destroy any part of the building in which they may be working, or any building, enclosure, water pipe, cables, drains, electric or telephone post or wires, contiguous to the premises on which the work or any part is being executed, the consultant shall, upon receipt of a notice in writing on that behalf through the Bank's Representative, make the same good at his own expense or in default, the Employer cause the same to be made good by other workmen and deduct the expense from any sums that may be due or at any time thereafter may become due to the consultant, or from his security deposit.

36. Accidents: The consultant shall immediately on occurrence of any accident at or about the site or in connection with the execution of the work report such accident to the Employer. The consultant shall also report such accident immediately to the competent authority whenever such report is required to be lodged by the law and take appropriate actions thereof.

37. Work and Services to be provided by the Employer: The Employer will provide electric power and water at one point in the building for proper execution of the work. The Employer depending on the availability will provide one lockable storage space. However, the security of the materials and equipment brought to site by the consultant shall be the responsibility of the consultant as stipulated elsewhere in these conditions of contract. Also, accommodation required for the contract labour shall be arranged by the consultant himself outside the NABARD premises.

38. Price Escalation: The accepted price of the successful tenderer shall be firm and free from any variation till the completion of the work in all respects and handing over to the Employer.

39. The Bidder shall not be entitled to hold any claim against Buyer for noncompliance due to lack of any kind of pre-requisite information as it is the sole responsibility of the Bidder to obtain all the necessary information with regard to site, surrounding, working conditions, weather etc. on its own before submission of the bid.

40. The Contractor shall have whole/ sole responsibility for any damage / loss of life and property of NABARD on the part of any employee engaged by the Contractor resulting in any loss to NABARD or any of its clients. The contractor shall fully compensate NABARD for such damage/loss. The decision of NABARD in this regard shall be final and binding.

41. The contractor shall indemnify NABARD against all claims, demands proceedings, damages, costs, charges, and expenses whatsoever in respect thereof or in relation thereto. The contractor shall defend all actions arising from such claims, before any such infringement and receive their

permission to proceed, and shall himself pay all royalties, license fees, damages, costs and charges of all and every sort that may be legally incurred in respect thereof. The persons including the supervisors, if deployed by the Contractor for duty in the said premises shall not be deemed to be the employees of the National Bank in any manner and they shall not be eligible for any benefits like subsidized food etc. which the National Bank provides to its employees. The obligation, if any, for these benefits shall be the sole responsibility and rests entirely with the contractor. The contractor, before starting the work of execution of the service contract as described under scope of work, is required to submit a “Letter of Indemnity and Undertaking”. A specimen of such letter is enclosed as Annexure II.

42. TDS/Income Tax/GST-TDS: Applicable TDS/ Income Tax/GST TDS of value of work shall be deducted from the final bill.

44. Penalty Clause

- a) Non-rectification of the faults coming under the scope of work and terms and conditions of the contract will entitle the bank to get the job done from any other vendor at the risk and cost of the successful tenderer. The decision of NABARD in this regard will be final and binding on the contractor.
- b) In case of non-compliance of contract obligations and also in case of any damages, breakage and loss or theft to the building fittings, assets and equipment attributable to staff or labour deployed by the contractor, the contractor will be responsible for repairing / replacing the same at his cost failing which the actual cost incurred towards repair/ replacement with suitable penalty shall be imposed on the contractor by the bank.
- c) In the event of any accident/ damage etc. caused due to negligence of staff deployed will be debited to the inefficiency of the contractor and he has to make good the loss.
- d) All the workmen deployed under the contract should have valid Identity Card issued by the Agency and should be in proper uniform having Agency/Firm/ Company’s Name & Logo, embossed/embroidered on it.
- e) In the event of contractor not attending to a specific item of work required under the contract, pro-rata amount will be deducted from contractor’s bills.

45. Termination of the contract by the Employer: If the consultant being a company go into liquidation whether voluntary or compulsory or being a firm shall be dissolved or being an individual shall be adjudicated insolvent or shall make an assignment or a composition for the benefit of the greater part, in number of amount of his creditors or shall enter into a Deed or arrangement with his creditors, or if the Official Assignee in insolvency, or the Receiver of the consultant in insolvency, shall repudiate the contract, or if a receiver of the consultant’s firm appointed by the court shall be unable within fourteen days after notice to him requiring him to do so, to show to the reasonable satisfaction of the employer that he is able to carry out and fulfill the contract, and if so required by the employer to give reasonable security therefore, or if the consultant shall suffer execution to be issued, or shall suffer any payment under this contract to be attached by or on behalf of and of the creditors of the consultant, or shall assign, charge or encumber this contract or any payments due or which may become due to consultant, there under, or shall neglect or fail to observe and perform all or any of the acts matters

of things by this contract, to be observed and performed by the consultant within three clear days after the notice shall have been given to the consultant in a manner hereinafter mentioned requiring the consultant to observe or perform the same or shall use improper materials of workmanship in carrying on the works, or shall in the opinion of the employer not exercise such due diligence and make such progress as would enable the work to be completed within due time agreed upon, and shall fail to proceed to the satisfaction of the employer after three clear days' notice requiring the consultant so to do shall have been given to the consultant as hereinafter mentioned or shall abandon the contract, then and in any of the said cases, the Bank may notwithstanding previous waiver determine the contract by a notice in writing to the effect as hereinafter mentioned, but without thereby effecting the powers of the employer of the obligations and liabilities of the consultant the whole of which shall continue in force as fully as if the contract, had not been so determine and as if the works subsequently executed by or on behalf of the consultant (without thereby creating any trust in favour of the consultant) further the employer or his agent, or servants, may enter upon and take possession of the work and all plants tools scaffolding sheds machinery, steam, and other power, utensils and materials lying upon premises or the adjoining lands or roads and sell the same as his own property or may employ the same by means of his own servants and workmen in carrying on and completing the works or by employing any other consultants or other persons or person to complete the works, and the consultant shall not in any way interrupt or do any act, matter or thing to prevent or hinder such other consultants or other persons or person employed from completing and finishing or using the materials and plants for the works when the works shall be completed, or as soon thereafter as conveniently may be the employer shall give notice in writing to the consultant to remove his surplus materials and plants and should the consultant not remove his surplus materials after receipt of notice by him the employer may sell the same by Public Auction and shall give credit to the consultant for the amount so realized. Any expenses or losses incurred by the consultant for the amount so realized. Any expenses or losses incurred by the employer in getting the amount payable to the consultant by way of selling his tools and plants or due on account of work carried out by the consultant prior to engaging other consultants or against the Security Deposit.

Signature of the Tenderer_____

Address

5. SPECIAL CONDITIONS AND STANDARD SPECIFICATION:

1.0 GENERAL.

1.1 The rates quoted by the Consultant/s shall be all inclusive of all rates. The consultant within the rates quoted shall prepare working plan for NDT and get the same approved from Bank's Representative before execution. This will determine the final scope of work at the site. No leads/lifts, loading/unloading, handling, re-handling, stacking at site, GST, toll tax, octroi, sales tax, VAT and royalty or any other charges levied or leviable by the State Government or Local Bodies shall be paid by NABARD. The rates quoted shall be inclusive of all scaffolding, hoists, hoisting equipment's, tools, equipment's, testing equipment's etc., required for the smooth execution and completion of the work.

2.1 The consultant will remove all surplus and released material from the site of work after NDT to avoid any hindrance/inconvenience to other agencies working in the adjoining area. The consultant will also, at the direction of the site in charge, re-handle his material in use or likely to be used in future to relocate the same to avoid any inconvenience to other agencies working in the adjoining area.

In case of default, NABARD may get the work done at the cost of the consultant by giving him 48 hours' notice in normal case or without any notice in case of an emergency, which is causing complaints from flat/apartment occupant, and recover such costs from any payment due to the Consultants.

2.2 In case of any dispute regarding interpretation of any of the Special Condition of Contract, decision of the Chief General Manager, NABARD will be final and binding on the consultant/s.

3.0 Situations where NDT is an option to consider for investigation of *in-situ* concrete:

- to investigate the homogeneity of concrete mixing lack of grout in post tensioning ducts
- to determine the density and strength of concrete in a structure
- to determine the location of reinforcing bars and the cover over the bars to determine the number and size/diameter of reinforcing bars.
- to determine the extent of defects such as corrosion
- to determine the location of in-built wiring, piping, ducting, etc.
- to determine whether internal defects such as voids, cracks, delamination, honeycombing, lack of bonding with reinforcing bars, etc. exist in concrete.
- to determine if there is a bond between epoxy bonded steel plates and concrete members.

Permeability of Concrete is important when dealing with durability of Concrete (Concrete durability depends largely on the ease or difficulty) with which fluids (water, carbon dioxide, oxygen) in the form of liquid or gas can migrate through the hardened concrete mass), particularly in those used for water retaining structures or watertight sub-structures. Structures exposed to harsh environmental

conditions also require low porosity as well as permeability. Such adverse elements can result in degradation of reinforced concrete. Permeability test measures the ease with which liquids, ions and gasses movement can occur by **flow, diffusion, and absorption**. Generally, the overall potential for moisture and ion ingress in concrete by these three modes is referred to as its **permeability**.

Rebound Hammer Test: Rebound Hammer test is conducted to assess the relative strength and elasticity of concrete on site based on the hardness at or near its exposed surface. Depending on the age of the concrete structure and carbonation effect some specialized investigation is suggested before conducting the test. It consists essentially of a metal plunger, one end of which is held against the concrete surface while the free end is struck by a spring-loaded mass, which rebounds to a point on a graduated scale. The point is indicated by an index rider. The number of rebound increases with increase in concrete strength for a particular concrete mix. It measures the surface hardness of concrete and provides an estimation of surface compressive strength, uniformity, and quality of concrete. User expertise is low and can be readily operated by field personnel.

It gives accurate assessment of the strength of the surface layer of material. The entire structure can be tested in its 'as-built' condition. It can be very costly and time consuming as instrumentation is required to measure response. It requires careful planning and can damage structure. The member must be isolated from the rest of the structure prior to the test.

Ultrasonic Pulse Velocity (UPV) Test: Ultrasonic Pulse Velocity Test is conducted as per IS 13111 – 1992 to assess the quality of concrete, which is suspected to have low compaction, voids (porosity), and delamination or damaged material in concrete under test. Ultrasonic Pulse Velocity Test can also be used for the following applications:

- Estimation of Strength of Concrete
- Establishing Homogeneity of Concrete
- Studies on Durability of Concrete
- Analysis of Surface Crack Depth
- Determination of Dynamic Modulus of Elasticity

Voltage pulses are generated and transformed into wave bursts of mechanical energy by the transmitting transducer (which must be coupled to the specimen surface through a suitable medium). A receiving transducer is coupled to the specimen at a known distance to measure the interval between the transmission and reception of a pulse. There are three practical arrangements for measuring pulse velocity, namely direct, diagonal, and surface techniques. The direct approach provides the greatest sensitivity and is therefore superior to the other arrangements. Determination of the variability and quality of concrete by measuring pulse velocity. Using transmission method, the extent of such defects such as voids, honeycombing, cracks, and segregation may be determined. This technique is also useful when examining fire damaged concrete. Low level is required to make measurements. However, expertise is needed to interpret the results. Excellent for determining the quality and uniformity of concrete. It can rapidly survey large areas and thick members. Path lengths of 10m to 15m can be inspected with suitable equipment. Proper surface preparation is required. The work is very time

consuming as it takes only point measurements. Skill is required in the analysis of results as moisture variations and presence of metal reinforcement can affect results. The interpretation of ultrasonic test results based on published graphs and tables can be misleading. It is therefore necessary that correlation with the concrete to be inspected is carried out. It works on single homogeneous material.

Electrochemical Half-cell Potentiometer Test: Electrochemical Half-cell Potentiometer test provides a relatively quick method of assessing reinforcement corrosion over a wide area without the need of wholesale removal of the concrete cover. The method of half-cell potential measurements normally involves measuring the potential of an embedded reinforcing bar relative to a reference half-cell placed on the concrete surface. The half-cell is usually a copper/copper sulphate or silver/silver chloride cell but other combinations are used. The concrete functions as an electrolyte and the risk of corrosion of the reinforcement in the immediate region of the test location may be related empirically to the measured potential difference. In some circumstances, useful measurements can be obtained between two half-cells on the concrete surface. ASTM C876 - 91 gives a Standard Test Method for Half-Cell Potentials of Uncoated Reinforcing Steel in Concrete. Quantitative measurements are made so that a structure can be monitored over a period and deterioration can be noted. Areas of usage include marine structures, bridge decks, and abutments and so on. Used in conjunction with other tests, it has been found helpful when investigating concrete contaminated by salts.

Carbonation Test: The method of testing consists of determining the depth of the carbonated layer on the surface of hardened concrete by means of an indicator. Carbonation of concrete occurs when the carbon dioxide, in the atmosphere in the presence of moisture, reacts with hydrated cement minerals to produce carbonates, e.g., calcium carbonate. The carbonation process is also called depassivation. Carbonation penetrates below the exposed surface of concrete extremely slowly. The significance of carbonation is that the usual protection of the reinforcing steel generally present in the concrete due to the alkaline conditions caused by the hydrated cement paste is neutralized by carbonation. Thus, if the entire concrete covering the reinforcing steel is carbonated, corrosion of the steel would occur if moisture and oxygen could reach the steel. The time required for carbonation can be estimated knowing the concrete grade and using the equation.

Concrete Core Extraction and Testing: In most structural investigations or diagnoses extraction of core samples is unavoidable and often essential. Cores are usually extracted by drilling using a diamond tipped core cutter cooled with water. Broken samples, for example, due to popping, spalling and delamination, are also commonly retrieved for further analysis as these samples may provide additional evidence as to the cause of distress. The selection of the locations for extraction of core samples is made after non-destructive testing which can give guidance on the most suitable sampling areas.

For instance, a cover meter can be used to ensure there are no reinforcing bars where the core is to be taken; or the ultrasonic pulse velocity test can be used to establish the areas of maximum and minimum pulse velocity that could indicate the highest and lowest compressive strength areas in the structure.

Moreover, using non-destructive tests, the number of cores that need to be taken can be reduced or minimized. This is often an advantage since coring is frequently viewed as being destructive. Also, the cost of extracting cores is quite high and the damage to the concrete is severe.

The extracted cores can be subjected to a series of tests and serve multiple functions such as:

- confirming the findings of the non-destructive test
- identifying the presence of deleterious matter in the concrete ascertaining the strength of the concrete for design purposes predicting the potential durability of the concrete
- confirming the mix composition of the concrete for dispute resolution
- Determining specific properties of the concrete not attainable by non-destructive methods such as intrinsic permeability.

This test is used to determine the compressive strength of a concrete core, which has usually been extracted from an existing structure. The value of compressive strength can then be used in conjunction with other measured properties to assess the condition of the concrete.

Using a masonry saw, the core is first trimmed to the correct test length, which varies upon the standard being adopted. Following trimming, the core will have its ends either ground perfectly flat or be capped in a material to produce a smooth bearing surface. After the prescribed curing has taken place, the specimen is then crushed to failure noting the maximum load achieved. From the values of load and dimensions, the compressive strength of the core can be calculated.

SAFETY CODE

1. There shall be maintained in a readily accessible place first aid appliances including adequate supply of sterilized dressings and cotton wool.
2. An injured person shall be taken to a public hospital without loss of time, in case where they injury necessitates hospitalization.
3. Suitable and strong scaffolds should be provided for workmen for all works that cannot safely be done from ground.
4. No portable single ladder shall be over 8 meters in length. The width between the said rails shall not be less than 30 cm (clear) and the distance between two adjacent rungs shall not be more than 30 cm. When a ladder is used an extra mazdoor shall be engaged for holding the ladder.
5. The excavated material shall not be placed within 1.5 meters of the edge of the trench or half of the depth of trench whichever is more. All trenches and excavations shall be provided with necessary fencing and lighting.

6. Every opening in the floor of a building or in a working platform be provided with suitable means to prevent the fall of persons or materials by providing suitable fencing or railing whose minimum height shall be one meter.
7. No floor, roof or other part of the structure shall be so overloaded with debris or materials as to render it unsafe.
8. Workers employed on mixing and handling material such as asphalt, cement, mortar or concrete and lime mortar shall be provided with protective footwear and rubber hand-gloves.
9. Those engaged in welding works shall be provided with welder's protective eye-shields and gloves.
10. (i) No paint containing lead or lead products shall be used except in the form of paste or readymade paint.
(ii) Suitable face masks be supplied for use by the workers when paint is applied in the forms of spray or surface having lead paint is being dry rubbed and scraped.
11. Overalls shall be supplied by the Contractor to the painters and adequate facilities shall be provided to enable the working painters to wash during the periods of cessation of work.
12. Hoisting machines and Tackle used in the works, including their attachments anchorage and supports shall be in perfect condition.

The ropes used in hoisting or lowering material or as a means of suspension shall be of durable quality and adequate strength and free from defects.

6. ARTICLE OF AGREEMENT

Articles of Agreement made this ___day of _____ 2024 between the ___ hereinafter called the EMPLOYER, which expression shall include its successors and assigns and persons for the time being of the management of the Employer of the one part and _____ hereinafter called the consultant which expression shall include his / their respective Heirs, successors, executors, administrators and assigns of the other part.

Whereas the Employer is desirous of conducting Structural Audit of NABARD's Officers' Quarters in Block-19 & 20, Sector-01, National Games Housing Complex, Khelgaon, Ranchi has caused specifications describing the work to be done.

And whereas the tendered rates as submitted by the consultant were accepted by the Employer, on the terms and conditions hereinafter agreed at:

And whereas the said specifications and the schedule of quantities have been signed by or on behalf of the parties hereto.

And whereas the Consultant has agreed to execute, upon and subject to the conditions set forth herein and to the conditions set forth in the invitation to tender, General Instructions and Conditions of the tender, and schedule of quantities and Conditions of Contract (all contained in the bid document of which are collectively hereinafter referred to as the said conditions), the works described in the said schedule of quantities at the respective rates herein set forth amounting to the sum as therein arrived at or such other sum as shall become payable there under (hereinafter referred to as "the said contract amount").

NOW IT IS HEREBY AGREED AND DECLARED BY AND BETWEEN THE PARTIES HERE TO FOLLOWS:

In consideration of the said Contract amount to be paid at the time and in the manner set forth in the said conditions, execute and complete the work shown upon the drawings and described in the said specifications and the schedule of quantities.

The Employer shall pay the Consultant they said Contract amount, or such other sum shall become payable at the times and in the manner hereinafter specified in the said conditions.

The said Conditions and Appendix thereto shall be read and construed as forming part of this agreement, and the parties hereto shall respectively abide by, submit themselves to the said conditions and perform the agreements on their part respectively in the said conditions contained.

The agreement and documents mentioned herein shall form the basis of this and the decision of the Employer as mentioned in the said conditions, in reference to all matters of dispute be final and binding on all parties.

This contract is neither a fixed lump sum contract nor a piece work contract but is a contract to carry out the work in respect of the entire buildings to be paid for according to schedule of rates and probable quantities or as provided in the said conditions.

In all matters of co-ordination, the Employer's decision shall be final and binding on all parties.

The Employer reserves to itself the right of altering nature of the work, adding to or omitting any item of work from the contract or having a portion of the same carried out through other agencies without prejudice to this contract.

Time shall be considered as the essence of this agreement and the consultant hereby agrees to commence the work soon after the site is handed over to him or from the seventh day of the date of issue of formal work order as provided for in the said conditions and to complete the entire work within 30 days from the date of issue of work order, nevertheless to the provisions for extension of time.

All payments by the Employer under this contract shall be made only at Ranchi. Further all disputes arising out of or in any way connected with this agreement shall be deemed to have arisen in Ranchi and only courts in Ranchi shall have jurisdiction to entertain and determine the same.

The several parts of this contract have been read by us and fully understood by us.

In witness thereof the parties hereto have set their respective hands on the day and the year in above written

Signed by the said consultant.

Signed by the Employer

In the presence of:

Witness 1:

Name:

Address:

Witness 2:

Name:

Address:



UNDERTAKING

The Chief General Manager,
NABARD,
Near PHED water Tank
Bariatu-Booty Road
Ranchi-835009

I/We-----
have read the various conditions to PQ/Technical bid attached here to and hereby agree to abide by the said conditions.

I/We offer to do this work of **“Consultancy and conducting Structural Audit, NDT of the Buildings of NABARD’s Officers’ Quarters in Block-19 & 20, Sector-01, National Games Housing Complex, Khelgaon, Ranchi”** as detailed under scope of work in the event we are pre-qualified for the purpose and hereby bind myself/ ourselves to complete the work in all respects.

We agree to the condition that our Financial Bid will be opened only if we qualify as per the stipulations in the PQ/Technical bid document.

I/We also hereby agree to abide by the General Condition of Contract and to carry out the consultancy work according to the Special Conditions of Contract and specifications for material and testing works as laid down by NABARD.

Signature of the bidder/s

Address with telephone Number
(Complete postal address to be given)

Dated:

APPLICATION FORM

I / We am / are desirous of participating in the PQ/Technical bid for the work of Consultancy and conducting Structural Audit, NDT of various Buildings of NABARD in JAIPUR, as detailed under scope of work, and hereby apply for the same. I/we give the following details for your consideration:

Sl. No.	Item	Information to be filled in by applicant	
1.	Name of the Consultancy firm		
2.	Full Address		
3.	Telephone Number: Office / Residence		
	Mobile Number:		
	Fax No.		
	E-Mail address		
4.	Month and year in which the firm / company was formed / incorporated in present name		
5.	i. Number of years in the Business of Structural Audit, NDT and consultancy works (Enclose relevant Registration certificate/Proof)		
	ii. What is the constitution of firm viz. Sole Proprietor, Partnership, Pvt. Ltd., Public Ltd., etc.		
6.	Enclose copy of partnership deed, Articles of Association or Affidavit / Registration of sole proprietorship		
7.	i. Annual Turn Over for last Three Years (enclose Audited	Financial Year	Annual Turn-over (In Rs lakh)
		2020-2021	
		2021-2022	

	Balance Sheets to support figures)	2022-2023	
	ii. Evidence or proof to be enclosed to support the amounts of yearly turnover	Certificate enclosed for Assessment years	
8.	Full particulars about similar works completed (i.e., work-orders in the field of Consultancy for Structural Audit of various Buildings including conducting NDT, preparation of BOQ with estimates, drawings/specifications based on NDT for Organizations / PSUs / Institutes / Banks).		
9.	Whether all documents have been submitted as per tender		
10.	Any other information the applicant might like to give.		
11	Civil suit / litigation, if any		

Other Details of the applicant

Particulars	Information to be filled in by applicant
Name of the Firm/ Agency/Contractor	
Category (Individual/partnership/pro prietary/company etc.)	
Name of the Account Holder	
Registered Address of the Firm	
Name of the Bank's branch and Address	

Bank's Code and Branch's Code	
IFSC Code of the Bank's Branch	
Type of Account (Current/Saving/Cash credit)	
Account Number	
PAN	
Service Tax Registration Number	
GSTIN	
TAN Number	
Other details if any	

Please enclose:

- i. A self-attested copy of cancelled cheque of the bank account,
- ii. A self-attested copy of PAN.
- iii. A self-attested copy of GSTIN.

Place:

Date:

(Signature and Full Name of the authorized person with seal
on behalf of Firm/Agency/Contractor)



DECLARATION

I/We agree to notify the Officer of National Bank for Agriculture and Rural Development, accepting this application, of any changes in the foregoing particulars as and when they occur and to verify and confirm these.

I / We understand and agree that the competent authority of National Bank for Agriculture and Rural Development has the right as he may decide, not to issue PQ/Technical bid form in any particular case and also to suspend, remove or blacklist my / our name from National Bank for Agriculture and Rural Development's list of Consultants in the event of my / our submitting non-bonafide PQ/Technical bids, or for technical or other delinquency in regard to which the decision of competent authority of National Bank for Agriculture and Rural Development shall be final and conclusive.

I / We certify that the particulars furnished in the enrolment forms are correct and that should it be found that I/We have given a false certificate or that if I / We fail to notify the fact of my / our subsequent amalgamation with another Consultant or firm, the National Bank for Agriculture and Rural Development may remove my / our name from the list of Consultants and any contract that I/We may be holding at the time may be rescinded.

PLACE:

DATE:

SIGNATURE & SEAL OF APPLICANT

Annexure A

PARTICULARS OF REGISTRATION AS CONSULTANT FOR STRUCTURAL AUDIT OF BUILDING, NDT, AND ALLIED WORKS

Sr. No.	Name and address of authority(ies) with whom the firm is registered.	REGISTRATION DETAILS	
		Year	Is copy of letter enclosed

****Copy of License issued by competent authority of govt. should be enclosed.***

SIGNATURE & SEAL OF CONSULTANT

Annexure B

LIST OF ALL STRUCTURAL AUDIT WORKS, NDT AND ALLIED WORKS COMPLETED DURING LAST FIVE YEARS

Sr. No.	Name & Location of work	Cost of work	Name of owner	Full address	Name of the contact person from owner's side for whom work was executed	Contact no. of the contact person of the owner (Mandatory)	Email id of the contact person (Mandatory)	Completion period		Whether the work was left incomplete (Reasons if any for delay in completion of work) or contract was terminated from either side (give full details)	Any other relevant information
								Stipulated	Actual		
1	2	3	4	5	6	7	8	9	10	11	12

NOTE: To enable us to process your application, please ensure that complete present Postal Address including Pin Code and latest Telephone Numbers / Fax Numbers / Email Address etc. are furnished under Column Nos. 2 above and “Completion Certificate” from client / owner for each work listed above has been enclosed, bearing above details.

SIGNATURE & SEAL OF CONSULTANT

Annexure C

List of technical personnel, giving the technical qualifications, experience, including that in the present organization

Sr. No.	Name	Qualification	Consultancy experience (year)	Nature of the work/ project handled	Name of the organisation employed including present organisation	Date of joining employment	Special experience	Remarks if any
1	2	3	4	5	6	7	8	9

SIGNATURE & SEAL OF APPLICANT

PART-II

PRICE BID

Tender for appointment of Structural Consultant for conducting Structural Audit of NABARD's Officers' Quarters in Block-19 & 20, Sector-01, National Games Housing Complex, Khelgaon, Ranchi.

A. STRUCTURAL AUDIT OF NABARD OFFICERS' QUARTERS					
Sl. No.	Description	Quantity	Rate (Rs.)	Unit	Total Amount (Rs.)
1	Conducting detailed survey of building by visual inspection & submission of preliminary report covering a. External faces, common areas e.g., Terrace, staircase, water tanks etc.	Lump sum		Lump sum	
2.a	Rebound Hammer Test: Preparing the surface of RCC structural members such as beams, columns, slabs etc. by chipping the plastered surface/finishing/cladding to expose the concrete, smoothing the area using carborundum stone all in terms of relevant IS code and conducting rebound hammer test all as per IS 13311-1992(Part 2) or as directed by consultant including analysis of the test result & preparation of separate report for each building with observations and recommendations for remedial measures if any.	80		Per No.	

<p>2.b</p>	<p>UPV (Ultrasonic Pulse Velocity) Test: Preparing the surface of RCC structural members such as beams, columns, slabs etc. by chipping the plastered surface/finishing/cladding to expose the concrete, smoothing the area using carborundum stone all in terms of relevant IS Code and conducting UPV all as per IS 13311-1992 (Part 1) or as directed by consultant including analysis of the test result & preparation of separate report for each building with observations and recommendations for remedial measures if any.</p>	<p>80</p>		<p>Per No.</p>	
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<p>2.c</p>	<p>Half Cell Potential Test for Corrosion mapping: Preparing the structural members as directed to expose the reinforcement steel, cleaning the area with blower/wire brush and carrying out half-cell potentiometer test for measuring the level of corrosion of reinforcement steel in the RCC member including analysis of the test result & preparation of separate report for each building with observations and recommendations for remedial measures if any.</p>	<p>35</p>		<p>Per No.</p>	
<p>2.d</p>	<p>Carbonation Depth Test: Preparing the surface of RCC structural member such as beams, columns, slabs, water tank walls & slab etc. by chipping the plastered surface/finishing/cladding to expose the concrete, cutting etc. as per relevant code and conducting carbonation test at various depth as directed by consultant using phenolphthalein of Specified concentration to assess depth of carbonation including analysis of the test result & preparation of separate report for each building with observations and recommendations for remedial measures if any.</p>	<p>30</p>		<p>Per No.</p>	

2.e	Core Test (To be conducted if beam or roof slab shows any sign of distress): Deciding the location by using “ Rebar Locator/Cover Meter ” and preparing the structural members as directed to expose the concrete, cleaning the area with blower /wire brush, and taking out the concrete sample with cutter and testing as per standard specification including analysis of the test result & preparation of separate report for each building with observations and recommendations for remedial measures, if any.	06		Per No.	
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3	Consultancy charges for preparation of Detailed structural audit report and issuance of Certificate regarding Structural Safety of the building. The Detailed structural audit report should include: <ul style="list-style-type: none"> • The findings from detailed visual inspection • Non-destructive test results and/or any other such test carried at site as per the scope of work. • Suggested remedial measures • Bill of quantities. • Providing Structural Fitness Certificate / Structure Habitable Certificate as per requirement. 	Lump sum		Lump sum	
4	Repair and painting of the patches that were damaged during the execution of various tests.	Lump Sum		Lump sum	
5	Total				
6	GST				
7	Gross Total (Sr. No. 5+ Sr. No.6)				
8	Gross Total in words:				

The number of core tests will be carried out by adjusting number of carbonation test/Half-cell potential test. If it is required to conduct additional tests than the amount corresponding to the particular test + GST shall be paid extra over the Gross Amount.

Note: - The quantity / number of various tests as mentioned above are indicative only. The Consultant will suggest the locations and no. of various tests required after surveying the buildings. Thereafter, after approval from NABARD of no. of tests to be conducted, the Consultant shall carry out the tests.

Consultant/Agency to supply tools & plants etc.: The consultant shall provide at his own cost all materials, plant, tools, appliances, implements, ladders, cordage, tackle, scaffolding, and temporary works required for the proper execution of the work.

DATE:

PLACE:

SIGN AND SEAL OF THE BIDDER