NABARD

NB. Kerala./ 416 /DPSP- SQ-50 /2021-22 18th June 2021

M/s

NOTICE INVITING TENDER

Dear Sir

Tender for Selection of Structural Consultant for the Preparation of As-Built CAD Drawing and Structural Audit (NDT) of NABARD Regional Office Building at Punnen Road, Statue, Trivandrum, Kerala

National Bank for Agriculture and Rural Development (NABARD) invites sealed offers/ tenders in two parts(Technical Bid and Price Bid) from all eligible bidders for the **Preparation of As-Built CAD Drawing and Structural Audit (NDT) of NABARD Regional Office Building at Punnen Road, Statue, Trivandrum, Kerala** as per the terms and conditions contained in the tender.

Applications are invited from Consultants/Engineering collages/Technical education institution/ Agencies/Engineering Research Institutions with adequate qualified supporting staff. The Tenderer should have successfully completed the Structural condition assessment through various NDTs for major complexes (including furnishing of detailed report of the test, BOQ for preparing tender documents for carrying out rehabilitation work and Supervision of rehabilitation work) involving Residential/Official/Commercial RCC buildings of the Government/Semi-Government/Government Undertaking/Pvt.Body and also should have licensed software for preparing the CAD drawing of the office building.

The tender Document may be obtained from the Bank's office located at National Bank for Agriculture and Rural Development. Kerala Regional Office, Punnen Road, Statue Thiruvananthapuram – 695001 or downloaded from https://www.nabard.org for free.

It may be noted that the tender document downloaded from the website is free of cost. If the bidder requires a hard copy of the tender document, then the cost for obtaining the tender document from NABARD office has to be deposited, through online payment, into

the account number below indicated. The proof of such deposit is to be bought to the office for purchase of the tender document.

Name of Account	NATIONAL BANK FOR AGRICULTURE AND RURAL DEVELOPMENT
Bank Name	NABARD
Branch Name	HEAD OFFICE MUMBAI
IFSC Code	NBRD0000002
Account Number	NABADMN30

The other details are given below:

Date of commencement of issue of tender	18th June 2021
Cost of tender document (non-refundable)	₹ 500/- but **no cost will be charged for the tender document downloaded from www.nabard.org**
Earnest Money Deposit (Bid Security)	₹ 10,800/- (EMD is mandatory for all the institution and agencies)
Last date for receipt of tender **queries**	12th July 2021
Last date and time for **receipt** of Bids	13th July 2021 , 14:00hrs
Date and time of opening of technical bid	13th July 2021 at 15:00hrs
Place of receiving and opening of tenders	Kerala Regional Office ,Punnen Road, Statue Thiruvananthapuram – 695001 Ph 0471-2701673 email-dpsp.trivandrum@nabard.org
Number of envelopes (non-window, sealed) to be submitted	Two (2) Envelopes a) Sealed envelope 1 containing technical bid of tender document +EMD to be deposited in the NABARD account indicated above and challan of deposit to be enclosed b) Sealed envelope 2 containing Price Bid All the envelopes to be placed in one sealed envelope with "Tender for Selection of Structural Consultant for the Preparation of As-Built CAD Drawing and Structural Audit (NDT) of NABARD Regional Office Building at Punnen Road, Statue, Trivandrum, Kerala" Super scribed on the top of the cover.

Bank reserves the right to change the dates mentioned in the tender document which will be displayed, as corrigendum/ amendment, at the above websites on

which tender documents are available. The Bidder may go through the above website for any corrigendum/ amendment issued if any.

Please note that all the information desired needs to be provided by the bidder in the formats specified by the Bank. The bidder shall bear all the costs associated with the preparation and submission of the bid and NABARD will, in no case, be responsible or liable for such costs, regardless of the conduct or outcome of tendering process.

Earnest Money Deposit must be deposited into the below indicated account number on or before 12th July 2021.

Name of Account	NATIONAL BANK FOR AGRICULTURE AND RURAL DEVELOPMENT
Bank Name	NABARD
Branch Name	HEAD OFFICE MUMBAI
IFSC Code	NBRD0000002
Account Number	NABADMN30

The online payment proof is to be kept along with tender offers in envelope-1 with the technical bid. Offers received without deposit of EMD & Cost of tender document before the date and time will be rejected.

Technical specifications, terms and conditions, various formats and proforma for submitting the tender offer are described in the tender document and its enclosures/ annexures.

The technical bid will be opened in the presence of the bidders or their representatives who choose to attend the opening of tender on the above mentioned date, time and place. The details of the representative who are going to participate in tender opening is to be emailed to dpsp.trivandrum@nabard.org on or before 12th July 2021, only that personnel will be allowed in the premises in view of COVID protocol.

Yours Faithfully

Ramalingam K
Deputy General Manager

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Tender for Selection of Structural Consultant for the Preparation of As-Built CAD Drawing and Structural Audit(NDT) of NABARD Regional Office Building at Punnen Road, Statue, Trivandrum, Kerala

NABARD

PART- 1

TECHNICAL BID

NATIONAL BANK FOR AGRICULTURE AND RURAL DEVELOPMENT (NABARD), KERALA REGIONAL OFFICE, PUNNEN ROAD, THIRUVANANTHAPURAM, KERALA – 695001

(Last date of receipt of Tender: 14:00 Hours on 13th July 2021)

(Date of Opening of Technical Bid: 15:00 Hours on 13th July 2021)

(Date of Opening of Price Bid: Will be communicated after finalization of technical bid)

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FORM OF TENDER

18th June 2021

The Chief General Manager
NABARD, Kerala Regional Office
Punnen Road,
Thiruvananthapuram - 695001

Dear Sir,

Tender for Selection of Structural Consultant for the Preparation of As-Built CAD Drawing and Structural Audit (NDT) of NABARD Regional Office Building at Punnen Road, Statue, Trivandrum, Kerala

Having examined the Technical bid and price bid of tender document relating to the works specified in the Memorandum hereinafter set out, having visited and examined the site of the works specified in the said Memorandum and having acquired the requisite information relating thereto as affecting the tender, I/We hereby offer to execute the works specified in the said Memorandum within the time specified, at the rates mentioned in the Price Bid and in accordance with all respects of the tender, by and in all other respects in accordance with such conditions so far as they may be applicable.

MEMORANDUM

a) Description of work	:Tender for Selection of Structural Consultant for the Preparation of As-Built CAD Drawing and Structural Audit (NDT) of NABARD Regional Office Building at Punnen Road, Statue, Thiruvanthapurm, Kerala
b) Earnest Money	: ₹ 10,800/-

Should this tender be accepted, I/We hereby agree to abide by and fulfil the terms and provisions or the said Conditions of the tender annexed hereto so far as they may be applicable or in default thereof to forfeit the EMD and pay to the National Bank for Agriculture and Rural Development, the amount mentioned in the said tender conditions.

Our Bankers are:

i)

ii)

The names of partners of our firm are:

i)

ii)

iii)

Name of the partner of the firm
Authorized to sign:

OR
Name or person having Power of Attorney to sign the contract (*Certified copy of the Power of Attorney should be attached*):

Yours faithfully,

Signature of Tenderer

GENERAL INSTRUCTIONS TO THE TENDERER

1. The applicant is advised to visit the site at their cost and thoroughly understand the nature and scope of the works and be familiar with the site conditions before quoting.

2. In deciding the selection of a Consultant, great emphasis will be given on the ability and competence of applicants to render required services within the specified time frame.

3. The **pre-qualification criteria's** that has to be mandatorily complied is that

    - **Experience:** The applicant should have successfully completed in last 7 Financial Years, at least **one work** at minimum of ₹ 5.33lakh or **two works** at minimum of ₹ 3.33lakh each or **three works** at ₹ 2.33lakh each in the field of Consultancy for Preparation of As-built CAD drawing and Structural Audit of various major structural high rise Buildings. Completion certificate issued by the client should be enclosed.

    - **Annual Turnover:** The applicant should submit audited balance sheets / P&L account and Income Tax clearance certificates for the last 3 financial years. The firm should have an average annual turnover of ₹ 2.00 lakh in the last three years.

    - **Professional competency:** Should be a member of the **Indian Institute of Architects or Council of Architect or Institution of Engineers (India) or national accredited board**. The copy of the membership certificate to be furnished. The details is to be filled in Annexure A.

4. The application shall be signed by the person/persons on behalf of the organisation having necessary Authorisation/Power of Attorney to do so. Each page of the application shall be signed. (Copy of Power of Attorney/Memorandum of Association shall be furnished along with application).

5. If the space in the proforma & Statement, is insufficient for furnishing full details, such information shall be supplemented on separate sheets of paper stating therein the part of the proforma and serial number. Separate sheets shall be used for each part of application.

6. Applications containing false and/or incomplete information are liable for rejection.

7. While filling up the application with regard to the list of important projects completed or on hand, the applicants shall only include major works.

8. The applicant must have qualified and experienced Engineers in the respective discipline.

9. The applicant must have successfully assessed the condition through NDTs for major Residential/Official/Commercial RCC buildings

10. The applicant should have licensed software tools for preparation of the required As-Built CAD drawings for the buildings.

11. Scale of fees including the charges for supervision shall be quoted by the applicant in the price bid separately attached in a sealed envelope as Part-II. No additional claim will be entertained.

12. Decision of the Bank in regard to determining the qualification of the Consultants shall be final. The Bank is not bound to assign any reasons therefor.

13. Price bids of only those consultants qualified in the Technical bid will be opened for selection of consultant.

14. The Bids should not contain any conditions. In case any conditions are specified, the same shall not be taken into consideration for evaluation and the bid is liable to be rejected.

15. Validity of the offer shall be 90 days from the date of opening of the price bid. (Part -2).

16. NABARD reserves the right to accept or reject any or all tenders, without assigning any reasons whatsoever. The work may be divided and awarded separately among the tenderers either in part or whole, at the sole discretion of NABARD.

17. Specifications and Method of Measurements shall be followed. However, in the absence of the same and / or in case of any discrepancy, the decision of NABARD will be final.

18. Income Tax, GST, and other taxes as applicable will be deducted from total payment due to the Consultancy.

19. The rates quoted should include all the tax, profits, and incidental expense if any. No separate claim will be entertained over and above the tendered rates.

20. The entire work is required to be completed as specified in the tender.

21. Any act of indiscipline / misconduct / theft / pilferage / careless activities on the part of any employee engaged by the Consultancy resulting in any loss to NABARD in kind or cash will be viewed seriously and NABARD will have the right to claim damages or levy fine and / or terminate the Contract forthwith, if necessary.

22. In case of any default or failure on Consultancy's part to comply with all / any one of the Terms / Conditions, NABARD reserves to itself the right to take necessary steps to remedy the situation including, inter-alia, the deduction of appropriate amount/ s from dues otherwise payable to Consultant and / or by taking recourse to appropriate recovery proceedings.

23. If any dispute arises on any matter concerning this Contract, the decision of NABARD shall be final and binding.

24. The Contract can be terminated by NABARD on 15 days' notice if services are found to be unsatisfactory and if there is no improvement even after issue of three notices to the consultant.

25. The Consultant shall provide everything necessary for the proper execution of the works. NABARD will not supply any 'T & P' and materials or any other equipment, materials, labor, etc. and no payment in this respect will be made by NABARD.

26. The Consultant shall not directly or indirectly transfer, assign or sublet the Contract or any part of it, without written permission of NABARD.

27. The Earnest Money Deposit (EMD)/ Security Deposit (SD) will not bear any interest. If the bidder withdraws his tender before expiry of the validity period of the bidder or if the Consultant fails to execute / complete the works satisfactorily, NABARD has the right to forfeit the EMD / SD.

28. Any Tender were the EMD has not been deposited to NABARD account through online transfer on or before the due date, will be rejected.

29. The EMD of all the unsuccessful bidders will be refunded.

30. Validity of Tender: Three months from the date of opening of Tender. We accept all the above Terms and Conditions in all respects without any reservation.

(SIGNATURE OF THE TENDERER)

Place: Name:

Date: Seal:

SCOPE OF CONSULTANCY WORK

A. Preparation of As-Built CAD Drawing

1. Preparation of As-Built CAD Drawing of the NABARD Regional Office based on the existing structural and architectural drawings and by incorporating the alterations present in the building.
2. Preparation of CAD diagram of land/plot layout of ground floor, basement floor and each floors individually.

3. Architectural Drawing to be preprared:

- Architectural plan for each floor including mezzanine floor G+7, basements, parking structures.
- Elevation of the office building from all four sides.
- **20 Sectional views** (Top view, left and right views) that covers every stair, hollow spaces, lift shaft, air shaft, electrical, HVAC ducts, overhangs more than one meter should include separate section views fully detailed in conjunctions with the structural drawings.
- CAD drawing of the structural glass work in the building derived from the site detail and the physical drawing available.

4. Structural Drawing:

- Prepare detailed structural drawing of the entire office building from available physical drawing or scanned photocopy.
- **25 Sectional views** of the building comprising of the top, right, left, foundation detailing, structural members like column, beam, slab, glass etc.
- Necessary changes required shall be revised according to the As-built drawing.

5. The final as built drawings should be prepared with the supervision of both qualified architects and structural consultant with minimum of 5 years of experience with similar kind of building.

6. Method of Measurement: Measurement will be as per the units indicated in the price bid. **T**he built up area as per the As built drawing finalized in consultation with NABARD officers. Here NABARD decision will be final.

7. Alteration

Necessary alteration found after scrutiny of the 1st draft drawings, should be incorporated with the final CAD drawing as advised by NABARD.

8. Hard Copy and Soft Copy
   - Auto CAD DWG and PDF format Soft copy of the reproduce drawing should be submitted to NABARD.
   - Two set of hardcopies, one in color and other in blueprint should be produced in A3 size paper and A1 size paper as required.

- The soft copy of all the drawing showing the elevation, plan, floor layout, sectional views etc to be submitted in appropriate medium with no extra cost. As copy of the same is to be emailed to dpsp.trivandrum@nabard.org

9. Software license and usage
   Any person or company engaged in BIM/CAD services should produce a legal copy of the end user license agreement purchase proof or subscription. The employer will not be liable for any use of illegal software.

B. Conduct of Structural Audit of NABARD Regional Office

1. Conducting structural audit including detailed visual inspection and non-destructive test using digital rebound hammer in the office premises of NABARD Regional Office (Basement+G+7).

2. The structural consultant has to carry out visual inspection of the office building in coordination with the officers of NABARD and submit the report with regards to the findings in the visual inspection. 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. Preliminary report after conducting visual inspection is to be submitted by incorporating the findings in the aforesaid locations.

3. After the visual inspection based on the distress identifies the tentative number of NDT is to be carried out

SI No	Name of Test	No of Test Proposed
1	Re-bound Hammer test	50
2	Ultra sound pulse velocity test	50
3	Core test	10
4	Half-cell potential test	15
5	Carbonisation test	15
6	Chemical test	10

4. Structural audit shall be carried out as a qualitative assessment in accordance with latest guidelines of Indian Society of structural engineers.

5. Assessment of damages of RCC members through NDT (Non-destructive Testing) with calibration chart for the site, through rebound hammer test ,Ultrasonic Pulse Velocity test, Half Cell Potential test, carbonation depth test, core test, chemical test etc, necessity of which will be decided after visual inspection. The numbers given in the price bid is tentative and NABARD reserves the right to increase and decrease the number of test as per the joint inspection carried out by the representative of the agency and the officer in-charge / Banks Engineer of NABARD.

6. Finding the probable causes of damages, seepage / leakages and status of external plumbing installations.

7. Preparation of detailed report based on visual inspection, NDT, suggesting/ phasing out priority wise repair/ remedial and retrofitting measures.

8. Preparation of detailed estimate for proposed structural repairs of specialized nature with BOQ (Bill of Quantities) along with the rate analysis for the item of works proposed to be carried out for rectification procedure.

9. Obtaining necessary permission from appropriate Municipal Authority etc. as per requirement or if needed.

10. Preparation of tender documents, drawings (main & working) etc. and assisting NABARD in publishing of notice inviting tender for the proposed remedial measures.

11. Assistance for Execution of repairs / renovation works through successful tenderer under supervision, including main structure and all other connected services.

12. Attending meetings with NABARD officials, wherever required, in respect to above work regarding making addition/alteration in the drawings, specifications, make etc.

13. Selection of samples of materials to be incorporated in the work in consultation with Premises section.

14. Quality check and certification of bills including extra items justifications and reasonability of its rates.

15. Final report on the restoration work proposed to be executed. The report should contain the following.
    a. The findings from detailed visual inspection
    b. Non-destructive test results
    c. Detailed description of the structural assessment based on the visual inspection and the NDT results.
    d. Suggested remedial measures
    e. Bill of quantities

16. **Pre-repair Planning.**
    a. Evaluation of methodology and repair strategy.
    b. Detailed estimation of quantities.
    c. Estimated value of project and Bill of quantities (BOQ)
    d. Preparation of Tender Documents.
    e. Assistance for Short listing of qualified bidders.
    f. Assistance for Pre-qualification of tenders (Bidders).
    g. Assistance for scrutiny of tenders & comparative statement.
    h. Project planning, Bar-chart, progress report, alternate arrangement for support system, safety etc.

17. **During Repair (Repair) /Re-Development Work.**

a. Quality checking and quality assurance with reports.

a. Certification for quality compliance of work
b. Rejection/Devaluation of inferior work.
c. Joint measurement.
d. Correspondence and reporting.
e. Routine meeting with Officers.
f. Certification of bills for payment as well as extra items & its rate justifications

18. Post Repair

a. Fittness certificate to be issued after completion of the suggested repair works by undertaking 1/3 number NDT testing as done in the initial phase.
b. Preparation of Checklist and checking before handover of site
c. Checking of building support system restoration.

19. Site visit after completion of repair works

Issue a structural fitness certificate after the satisfactory completion of the retrofit and rehabilitation works is mandatory.

All the above scope of work are acceptable to me/us.

Signature of the Applicant with full address and office seal

TECHNICAL SPECIFICATION

1. The rates quoted by the Consultant/s shall be all inclusive rates. No software updation or material price variation or wages escalation on any account whatsoever the compensation for Force majure etc. shall be payable under the contract.

2. The consultant within the rates quoted prepare working plan for NDT and get the same approved from Banks Engineer before execution. This will determine the final scope of work at the site. No leads/lifts, loading/unloading, handling, rehandling, stacking at site, toll tax, octroi, sales tax and royalty or any other charges levied or leviable by the State Government or Local Bodies shall be paid by NABARD.

3. 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, and to the traveling public.
4. The consultant will also, at the direction of the site in-charge, rehandle 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 or to the traveling public without any extra cost.
5. In case of default, NABARD may get the work done at the cost of the consultant by giving him 48hours notice in normal case or without any notice in case of an emergency which is causing complaints from office occupant.

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

7. 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 underlet the contract or any part or share thereof or interest therein without the written consent of the Employer through the Engineer and no undertaking shall relieve the consultant from the responsibility of the consultant from active superintendence of the work during its progress.

8. The consultant shall give necessary personal superintendence during the execution of the works. The consultant shall depute necessary technical staff for supervision of work.

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

10. 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, delaminations, 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.

11. Test to be undertaken:

a. <u>Rebound Hammer Test</u> :

Rebound Hammer test is conducted to assess the relative strength and elasticity of concrete onsite 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 amount 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.

b. <u>Ultrasonic Pulse Velocity (UPV) Test</u>

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), 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 and 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 be inspected is carried out. It works on single homogenous material.

c. <u>Electrochemical Half-cell Potentiometer Test</u>

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 of time and deterioration can be noted. Areas of usage include marine structures, bridge decks, abutments and so on. Used in conjunction with other tests, it has been found helpful when investigating concrete contaminated by salts.

d. <u>Carbonation Test</u>

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.

e. **Concrete Core Extraction and Testing**

In most structural investigations, 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 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.

Completion Period: 30 days for conducting the Structural audit as per the scope and submission of detailed report of observations and recommendations along with submission of detailed tender documents.

12. All the Audit reports to be provided in triplicate in hard as well as soft copy.

13. Since this is an old building, NABARD will be able to provide only hard copy of the old Documents & Drawings that are available related to the buildings. Any other materials or documents necessary for completing the structural assessment work shall be in the scope of the party.
14. All the necessary tools, tackles, instruments, material required for completion of audit shall be in the scope of work.
15. The decision of NABARD in awarding the work shall be final and cannot be subjected to arbitration.
16. PLEASE REFER THE PRICE BID DOCUMENT FOR FURTHER TERMS & CONDITONS.

All the above special condition and standardization are acceptable to me/us.

Place	Signature
Date	Name & Address (Seal)

ANNEXURE I

Details of the Building

Name of the Building	Date of Completion / Possession	Total Built-up Area in Sq.ft	Detail of floors
NABARD Regional Office , Punnen Road, Statue, Thiruvananthapuram – 695 001	12/10/2003	97000	Basement+G+7 floors

ANNEXURE -II

ARTICLES OF AGREEMENT

(On a Rs 200/- Non- Judicial stamp paper)

THIS ARTICLES OF AGREEMENT made on the _____ day of the month _____between the National Bank for Agriculture and Rural Development having its Kerala Regional Office at Thiruvananthapuram- 695001 (hereinafter referred to as "the Employer") on the one part

and

_____
_____
_____
_____
_____
_____
_____

(hereinafter referred to as "the Consultant") on the other.

WHEREAS the Employer is desirous of carrying out the..... .... has caused specifications describing the work to be done.

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 the subject to the Conditions set forth herein and to the conditions set forth in the Special Conditions and in the Schedule of Quantities and Conditions of Contract (all of which are collectively hereinafter referred to as "the said Conditions") in the said specifications and included in the Schedules of Quantities at the respective rates therein set forth amounting to the sum as therein arrived at or such other sum as shall become payable thereunder (herein after referred to as "the said Contract Amount").

NOW IT IS HEREBY AGREED AS FOLLOWS

1. In consideration of the said Contract Amount to be paid at the times and in the manner set forth in the said Conditions, the Consultant shall upon and subject to the said Conditions execute and complete the work described in the said Specifications and the Schedule of Quantities.

2. The Employer shall pay the Consultant the said Contract Amount, or such other sum as shall become payable, at the times and in the manner specified in the said conditions.

3. .In the said conditions herein before mentioned, the Chief General Manager, NABARD Kerala Regional Office, Thiruvananthapuram shall act on behalf of the employer.

4. 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.

5. The agreement and documents mentioned herein shall form the basis of this Contract.

6. This Contract is neither a fixed Lump sum Contract nor a piece work Contract but is a Contract to carry out consultancy work to be paid for according to actual measured quantities at the rates contained in the Schedule of Rates/BOQ and probable quantities or as provided in the said conditions.

7. The Consultant shall make good any damages done to walls, floors, etc., after the completion of such works.

8. The Employer reserves to itself the right of altering the nature of the work by adding to or omitting any items of work or having portions of the same carried out without prejudice to this Contract.

9. Time shall be considered as the essence of this Contract and the Consultant hereby agrees to commence the work soon after the site is handed over to him or from tenth day after the date of issue of formal work orders as provided for in the said Conditions whichever is later and to complete the entire work within the stipulated time subject nevertheless to the provisions for extension of time.

10. All payments by the Employer under this contract will be made only at Thiruvananthapuram.

11. All disputes arising out of or in any way connected with this agreement shall be deemed to have arisen at Thiruvananthapuram, and only Courts at Thiruvananthapuram shall have jurisdiction to determine the same. It is agreed that the Consultant shall not delay the carrying out of the works by reason of any such matter, question or disputes being referred to the Courts.

12. That the several parts of the Contract have been read by the Consultant and fully understood by the Consultant.

<u>Signature Clause:</u>

SIGNED AND DELIVERED BY

By the hand of shri

_____

(Name and Signature)

_____ in the presence of

(1)_____

Address _____

(2) _____

Address _____

(Witness)

SIGNED AND DELIVERED BY THE NATIONAL BANK FOR AGRICULTURE AND RURAL DEVELOPMENT

By the hand of Shri

_____

(Name and Designation)

_____ in the presence of

(1)_____

Address _____

(2)

_____Address

_____ (witness)

ANNEXURE-III

VIRTUAL COMPLETION CERTIFICATE

Having executed the work in terms of the contract, we hereby certify and affirm that we have virtually completed the contracted works.

We hereby certify that the work has been executed wholly to our satisfaction and with materials and workmanship in accordance with the contract.

We do certify further that we have executed the work in accordance with the applicable laws and without any transgression of such laws.

Signature of the Consultant / Tenderer:

Name:

Address:

Seal:

Place:

Date:

ANNEXURE - IV

LETTER OF INDEMINITY AND UNDERTAKING

(to be submitted by the successful Tenderer)

The Chief General Manager,
National Bank for Agriculture and Rural Development
Kerala Regional Office,
Punnen Road, Statue, Post Box No.220
Thiruvananthapuram -695001

Dear Sir,

"**Tender for Reconstruction of Tender for Selection of Structural Consultant for the Preparation of As-Built CAD Drawing and Structural Audit (NDT) of NABARD Regional Office Building at Punnen Road, Statue, Trivandrum, Kerala"**

WHEREAS the National Bank for Agriculture and Rural Development, a corporation established under the National Bank for Agriculture and Rural Development Act, 1981 (hereinafter referred to as 'NABARD') has expressed desire to avail _____(type of procurement) at ___(place) as per the Schedule hereunder written and which are hereinafter for brevity sake referred to as _____, subject to our furnishing declarations and indemnity as contained hereafter.

NOW THEREFORE THIS LETTER OR INDEMNITY WITNESSETH THAT:

We, the_____(Tenderer) hereby declare and certify that we are the rightful owners/ licensees of the said article/ service/ solution offered for sale to NABARD and that the sale of the said article/ service/ solution to NABARD by us and the use thereof by NABARD does not infringe the property or other intellectual property or copy rights of any other person and that the same does not infringe the Copy of Rights Act, 1957 or any other Act for the time being in force.

We, the said_____(Tenderer) hereby agree to indemnify and keep indemnified and harmless NABARD, its Officers, servants, agents and other authorized persons against any action that may be brought against us for infringement of the right of property or other intellectual property or copy rights in respect of the said systems package supplied by us to NABARD and will defend the same at our cost and consequences and will pay or reimburse NABARD, its officers, servants, agents and other authorized persons from all costs and other expenses that they may be put to or incur in that connection in accordance with the terms as provided for within the end User License Agreement that accompanies the said systems.

We, the said_____(Tenderer) hereby also agree to indemnify and keep indemnified and harmless NABARD, its Officers, servants, agents and other authorized persons against any third party claims in respect of any damages or compensation payable in consequences of any accident or injury sustained or suffered by our employees or agents, or by any other third party resulting from or by any action, omission, or operation conducted by or on behalf of us and against any and all claims by employees, workmen, consultants, suppliers, agent(s), employed, engaged, or otherwise working for us, in respect of any and all claims under the Labour Laws including wages, salaries, remuneration, compensation or like.
SCHEDULE (Please list all the hardware supplied to NABARD for providing this service on a separate sheet)

Yours faithfully

(Name and Designation) of

Annexure V
Basic Information

S.No.	Particulars	Tenderers Response
1.	Name of the Applicant/ Organization and address of Registered Office	
2.	Year of establishment	
3	Type of the Organisation (like Sole Proprietorship, Partnership, Private Limited Company, Limited Company, or Cooperative Society, etc.)	
4.	Name of the Proprietor/ Partners/ Directors of the Organisation/ Firm	1. 2. 3. 4. 5.
5.	Details of Registration a) Whether registered as partnership firm or company, etc. b) Name of Registering Authority c) Registration No. d) Date of Registration	 a) b) c) d)
6.	Whether registered/ empaneled for similar works with: a) Government/ Semi-Government/ Municipal Authorities or any other Public Organisation (Yes/No) b) If yes, name of authority; and c) Since when	 a) b) c)
7.	Details of experience in the field of civil construction	
8.	a) Areas of business activities, other than civil construction, if any, and b) Place and address of such business	a) b)
9.	a) Address of office through which the proposed work of the Bank will be handled; and b) Name & designation of Officer-in-charge	
10.	Adequate and satisfactory evidence to indicate financial capacity of the person/ Organisation to undertake the said construction work	
11.	a) Names of bankers b) Full address of bankers	
12.	Yearly turnover of the Organisation during the last three years	2018-19 Rs. .....lakh 2019-20 Rs. .....lakh 2020-21 Rs. .....lakh

13.	Will the applicant be able to provide Bank Guarantee or other equivalent form of security from a scheduled nationalized bank? (Yes/No)	
14.	Number of supplementary sheets attached	
15.	a) Whether any civil suit/ litigation has arisen in the contracts executed by the applicant during the last five years (Yes/No) b) If yes, please give following information (suit-wise/ project-wise): i) Name of the Project & Organisation ii) Nature of work iii) Work Order No. and Date iv) Present stage of work v) Value of contract vi) Brief details of litigation	

Notes: Please attach self-certified copies of the following documents:

a) Latest Income Tax Clearance Certificate
b) Audited Balance Sheet and Profit & Loss Account for the past three years.

Place:
DATE:

(SIGNATURE OF THE TENDERER)
ADDRESS:

NAME & SEAL

Annexure VI

PREVIOUS EXPERIENCE- EXECUTED

a) List of important Projects (structural condition assessment & Preparation of As-Built CAD drawing) executed by the Organization during the last five years*

Sr. No.	Name of the Project and Location	Nature of work involved in the contract (e.g. residential, offices, industrial, etc. and No.of storeys)	Name and full postal address of the owner and Also indicate whether Government or Semi- Govt. or Private body	Contract Amount (Rs.)
1	2	3	4	5
1.				
2.				
3.				
4.				
5.				
6.				
7.				

Sr. No.	Completion period (Stipulated)	Completion period (Actual)	Whether work was left incomplete or contract was terminated from either side? Give full details.	Any other relevant information
1	6	7	8	9
1.				
2.				
3.				
4.				
5.				
6.				
7.				

Place:
DATE:

(SIGNATURE OF THE TENDERER)
ADDRESS:

NAME & SEAL

Annexure VII

PREVIOUS EXPERIENCE- ON HAND

b) List of important projects **ON HAND being executed by the organization** (with emphasis on structural condition assessment & Preparation of As-Built CAD drawing

Sr. No.	Name of the Project and Location	Nature of work involved in the contract (e.g. residential, offices, industrial, etc. and No.of storeys)	Name and full postal address of the owner and Also indicate whether Government or Semi-Govt. or Private body	Contract Amount (Rs.)
1	2	3	4	5
1.				
2.				
3.				
4.				
5.				
6.				
7.				

Sr. No.	Completion period (Stipulated)	Completion period (Expected)	Present stage of work with reasons if the work is getting delayed	Any other relevant information
1	6	7	8	9
1.				
2.				
3.				
4.				
5.				
6.				
7.				

Place:
DATE:

(SIGNATURE OF THE TENDERER)
ADDRESS:

NAME & SEAL

Annexure VIII

LIST OF AVAILABLE EQUIPMENTS & SOFTWARE , ETC.

Sr.No.	Name of Equipment &Software and Accessories	Total No.of units/.Sq.mt	No.of units/Sq.mt. that can be spared for Bank's work
1	2	3	4

Signature of the Applicant

Place:
DATE:

(SIGNATURE OF THE TENDERER)
ADDRESS:

NAME & SEAL

Annexure IX

TECHNICAL PERSONNEL AND SPECIAL EXPERIENCE

1. List of applicant's technical personnel, giving details about their technical qualifications and experience including that in the applicant's organization

Sr. No.	Name	Age	Qualifications	Consultancy Experience	Nature of experience
1	2	3	4	5	6

Sr. No.	Names of projects handled	Date from which employed with the applicant	Indicate special experience, if any
1	7	8	9

2. Indicate other points, if any, to show applicant's technical and managerial competency to indicate any important point in applicant's favour

3. No.of supplementary sheets attached.....

Place:
DATE:

(SIGNATURE OF THE TENDERER)
ADDRESS:

NAME

ANNEXURE- X
PROFORMA FOR ELECTRONIC PAYMENT

Details of Bank account to be furnished by the consultant/ service provider for effecting payment

Name and address of consultant/ service provider with phone nos.

.....
.....
.....

1	Name of the account holder (As appearing in the Bank account)	
2	Name of the Bank	
3	Name of the Branch	
4	Account number	
5	RTGS/ NEFT/ IFS Code	
6	Type of account (Savings, current, etc.)	
7	PAN Number	
8	GSTN Number	

Please attach (1) a photocopy of one cancelled cheque leaf of the above Bank account and (2) copy of PAN card and (3) allotment letter / registration letter under GSTN.

Place:
DATE:

(SIGNATURE OF THE TENDERER)
ADDRESS:

NAME

Annexure XI

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

S.No.	Name and address of authority(ies) with whom the firm is registered	REGISTRATION DETAILS	
		Year Is copy of letter enclosed	
(1)	(2)	(3)	(4)

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

SIGNATURE and SEAL