Notice Inviting Tender

Date: 10 August 2022

महोदय/महोदय/ Madam/ Dear Sir

Tender for Appointment of Project Management Consultant (PMC) for Structural Audit and Structural Repairs Works at Regional Office & Staff Quarter Premises of NABARD at Madhya Pradesh Regional Office, Bhopal

The National Bank for Agriculture and Rural Development invites tender under two-bid system from Project management Consultants for rendering Services for “Conducting Structural Audit and Structural repair works at Regional Office and Staff Quarters at Madhya Pradesh Regional Office, Bhopal”. Applicants are requested to submit their tender under two-bid system in sealed envelope for the aforesaid work as per terms and conditions and other requirements as mentioned more specifically elsewhere in this tender document.

2. The tender documents can be downloaded from our web site www.nabard.org or Central Public Procurement Portal (CPPP). Properly filled Tenders shall be submitted after signing on each page of the tender, duly furnishing all the required information super-scribing as “Tender for Appointment of Project Management Consultant (PMC) for Structural Audit and Structural Repairs Works at Regional Office & Staff Quarter Premises of NABARD at Madhya Pradesh Regional Office, Bhopal” and should be addressed to “The Chief General Manager, National Bank for Agriculture and Rural Development, Madhya Pradesh Regional Office, E-5 Arera Colony, Bittan Market, Bhopal”, so as to reach this office latest by 1700 hours on 31 August 2022. The tenders shall be submitted in 'Original' to the Bank and dropped in the tender box.

3. The sealed Tenders shall be opened at 11:00 hours on 01 September 2022 in the presence of bidders/their authorized representatives, who choose to be present.

4. Pre-bid meeting is scheduled on 22 August 2022 at 11:00 hours. Venue for the same will be NABARD, Madhya Pradesh Regional Office, E-5 Arera Colony, Bittan Market, Bhopal-462016. You may attend the meeting after understanding the terms and conditions to seek clarification/s required, if any.
5. The bids shall be accepted only in respect of those bidders whose tenders are in line with the requirements as per Notice Inviting Tender, terms and conditions of the tender document and if the same is acceptable to the Bank. The decision of the Bank in this regard shall be binding on the bidders and not open to questions or appeals.

6. Tenders received after the prescribed time and date, on account of any reason whatsoever as also e-Mailed, telegraphic and faxed tenders shall not be considered.

7. The Bank reserves the right to accept any or reject all the tenders without assigning any reasons therefor.

8. Any conditional offer will not be accepted.

9. For any clarifications, you may contact 0755 – 2464775 or by sending e-mail at dpsp.bhopal@nabard.org.

(Avinash P. Sevalkar)
Deputy General Manager
NABARD
MPRO-Bhopal
TENDER DOCUMENT

Tender for Appointment of Project Management Consultant (PMC) for Structural Audit and Structural Repairs Works at Regional Office & Staff Quarter Premises of NABARD at Madhya Pradesh Regional Office, Bhopal

ISSUED TO

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Last Date for Submission of Tender: 31 August 2022 (05:00PM)
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Form of Tender

Issued to M/s. : 

Last date for submission : 

Application to be addressed to : 

Chief General Manager 
NABARD,  
..................................  
..................................  

I / We the undersigned have carefully gone through and clearly understood, after visiting the site and tender document comprising of the Form of tender, Instruction to Bidders, Notice inviting Tender, Pre-Qualification Criteria, and Scope of work, General conditions of Contract, Specifications conditions of contract and Schedule of Quantities/Bill of quantities.

I/We hereby offer to execute the works specified in the said 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 respects in accordance with such conditions so far as they may be applicable.

I / we do here by undertake to execute and complete the whole or part of the work (as desired by you) at the respective rates quoted in 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 mentioned in PART-A of the price bid within 30 days from the date of commencement. Date of commencement shall be either one-week from the date, the acceptance letter is to be issued to the consultant or day on which the consultant is instructed to take possession of site whichever is earlier.

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

a) Description of work: Tender for Appointment of Project Management Consultant for Structural Audit and Structural Repairs Works at Regional Office & Staff Quarters Premise, NABARD, Madhya Pradesh Regional Office, Bhopal

b) Time allowed for submission of Structural audit report: 30 days from the date of commencement which shall be either one-week, from the date of issue of work order/letter of acceptance of tender to the consultant or day on which the consultant will take possession of site whichever is earlier.

We understand that the time for completion shown above shall be reckoned from the date of commencement of the work.

Should this tender be accepted, 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.

I/We have read and understood the instructions and the terms and conditions contained in the application form. I/We do hereby declare that the information furnished in the application and in the supplementary sheets including Annexures from pages ____________ to ____________ are correct to the best of my/our knowledge and belief.

Signature: ________________________________
Name : ________________________________
Designation: ________________________________
Address : ________________________________
E-Mail id : ________________________________

Place:
Date:
Seal of applicant/company:
**Instructions to the Bidders**

**Tender for Appointment of Project Management Consultant (PMC) for Structural Audit and Structural Repairs Works at Regional Office & Staff Quarter Premises of NABARD at Madhya Pradesh Regional Office, Bhopal**

NABARD invites applications under “Two Bid System” in the prescribed forms for the aforesaid work in order to engage a reputed Consultancy Firm/Company engaged in conducting structural audit, Non-destructive testing (NDT) of structures & allied works of multi-storied buildings in Bhopal. Details of the building to be assessed are mentioned in the Annexure I.

Applications are invited from Consultants/ Agencies/Engineering Research Institutions with adequate qualified supporting staff and who 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 structural rehabilitation works and undertake Supervision of rehabilitation work) involving Residential/Official/Commercial RCC buildings of the Government/Semi-Government/Government Undertaking/Private Body.

Duly filled in applications as Technical Bid (Part-I) and Price Bid (Part-II) shall be submitted separately in two sealed envelopes, duly furnishing all the required information. The sealed envelope for technical bid with the superscription “Tender for Appointment of Project Management Consultant (PMC) for Structural Audit and Structural Repairs Works at Regional Office & Staff Quarter Premises of NABARD at Madhya Pradesh Regional Office, Bhopal”, sealed envelope for price bid with the superscription “Price Bid for Tender for Appointment of Project Management Consultant (PMC) for Structural Audit and Structural Repairs Works at Regional Office & Staff Quarter Premises of NABARD at Madhya Pradesh Regional Office, Bhopal” and should be addressed to the Chief General Manager, National Bank for Agriculture and Rural Development, Madhya Pradesh Regional Office, E-54 Arera Colony, Bittan Market, Bhopal so as to reach this office on or before 31 August 2022 (05:00 PM).

Technical bid will be opened on **01 September 2022 at 11:00 am**. The price bid will be open at a later date only for the technically qualified bidders. The date of opening of the price bid will be communicated to the qualified bidders after the scrutiny of the Technical Bid.

The Earnest Money Deposit of **Rs.30,000/- (Rs.Thirty Thousand only)** to be made by e-payment. Account details are as under:

- **Name of Account**: National Bank for Agriculture and Rural Development
- **Bank Name**: NABARD
- **Branch Name**: Head Office, Mumbai
- **Account Number (VAN)**: NABADMNO4
- **IFS Code**: NBRD0000002

NABARD reserves the right to accept any or reject all the applications/tenders without assigning any reasons therefore.
1. Intending bidder are required to submit their profile giving details in the enclosed pro-forma about their organization, experience, technical personnel in their organization, spare capacity, competence, etc.

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. Bidder should have successfully completed in last 5 Financial Years, at least three work-orders from reputed organizations in the field of Consultancy for Structural Audit of various Buildings which includes conducting NDT, preparation of BOQ with estimates, drawings/specifications based on NDT for reputed organizations. It is desirable that the firm should have completed one or two similar works and work order inclusive of NDT work along with completion certificate issued by clients. Copies should be attached.

4. Should submit audited balance sheets/P&L account and Income Tax clearance certificates for the last 3 financial years

5. Should be a member of the Indian Institute of Architects or Council of Architect or Institution of Engineers (India) or similar professional bodies in the field of expertise. The copy of the membership certificate to be furnished. The details is to be filled in Annexure A.

6. The application shall be signed by the person/persons on behalf of the organization having necessary Authorization/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).

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

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

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

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

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

12. Scale of fees including the charges for supervision shall be quoted by the applicant in the price bid separately in a sealed envelope as Part-II.

13. 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 thereof.

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

15. The Earnest Money Deposit of **Rs.30,000/- (Rs. Thirty Thousand Only only)** submitted along with the tender will be refunded after successful completion of the
work. The EMD of the successful bidder will be converted to RMD and returned upon successful completion of the deliverables.

16. Furnish a copy of PAN Card, GST registration, AADHAR Card, Bank account details like Cancelled cheque (including Account number, IFS code, account type etc.)

17. The submitted Bid shall not contain any conditions and in case any conditions are specified, the same shall not be taken into consideration for evaluation and the bid is liable to be rejected.

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

19. 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.

20. The bidder accepts to execute the following documents as part of the tender document:
   a) Undertaking as mentioned in Annexure-A
   b) Declaration as mentioned in Annexure-B
   c) Particulars of Registration as mentioned in Annexure-C
   d) Pre-Contract Integrity Pact in Annexure-F

Non submission of above mentioned documents will result in rejection of bids out rightly.

21. Successful bidder shall execute and Agreement as mentioned in Annexure-D and Indemnity Bond as mentioned in Annexure-E.

Note: Part-II sealed envelope will contain duly filled BoQ and no other document to be enclosed. Partial/incomplete BoQ will not be considered and stand rejected.

All the above conditions are acceptable to me/us.

Signature of the Applicant with full address and office seal
PRE-QUALIFICATION CRITERIA

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

The Bidding Firm/Company:-

1. Should be a member of Indian Associations/Societies of Structural Engineers or should be registered/empa nelled with any Municipal Corporations/CPWD/State PWD or other similar government organizations/institutions.

2. Should have at least two qualified Structural Engineers (having experience of at least 10 years as Structural Engineer) on their rolls, details may 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 the 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 and should have conducted structural audit, in last 07 years for Government Buildings, Banks/FIs premises, reputed private organizations etc. Details may be furnished for the same. Should have successfully completed in last 5 Financial Years, at least three 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 reputed organizations along with supervision of Structural Repair works. It is desirable that the firm should have completed one or two similar works and work order inclusive of NDT work and completion certificate issued by clients. Copies should be attached.

5. Having experience of similar works during the last 7 years, with work handled of the similar nature.

a) Similar single work covering an area of 80% (i.e. 17,600 sqm) of the built-up area (22,000 sqm) of Proposed work, Or

b) Two similar works of area 50% (i.e. 11,000 sqm) of the built up area (22,000) of the Proposed work, Or

c) Three similar works of area not less than 40% (i.e. 8,800 sqm) of the built-up area (22,000 sqm) of the proposed work

Note: Certified copies of above 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.
**SCOPE OF CONSULTANCY WORK**

1. To Conduct structural audit including detailed visual inspection and non-destructive test using digital rebound hammer in the buildings of Regional Office of NABARD located as mentioned below:

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Location</th>
<th>No. of Buildings/Blocks</th>
<th>No of floors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Office Premises E-5, Arera Colony, Bittan Market, Bhopal-462016</td>
<td>1 Block</td>
<td>G+5 Floor</td>
</tr>
<tr>
<td>2</td>
<td>Officers Quarters Sector-A, Shahpura, Bhopal</td>
<td>12 blocks</td>
<td>G+3 floors/ 8 Flats per block</td>
</tr>
<tr>
<td>3</td>
<td>Officers Quarters Sector-A, Shahpura, Bhopal</td>
<td>4 Bungalows</td>
<td>G+1 Floor</td>
</tr>
<tr>
<td>4</td>
<td>Officers Quarters Sector-A, Shahpura, Bhopal</td>
<td>1 Community Hall</td>
<td>1 Floor</td>
</tr>
<tr>
<td>5</td>
<td>Main underground water sump</td>
<td>1</td>
<td>NA</td>
</tr>
<tr>
<td>6</td>
<td>Staff Quarters, Sector-C, Shahpura, Bhopal</td>
<td>5 blocks</td>
<td>G+3 floors/ 8 Flats per block</td>
</tr>
</tbody>
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2. Tentative details for the number of tests to be carried out

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Name of Test</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Re-bound Hammer test</td>
<td>1,200 nos.</td>
</tr>
<tr>
<td>2</td>
<td>Ultrasonic pulse velocity test</td>
<td>1,000 nos.</td>
</tr>
<tr>
<td>3</td>
<td>Concrete Core Cutting test</td>
<td>100 nos.</td>
</tr>
<tr>
<td>4</td>
<td>Half-cell potential test</td>
<td>430 nos.</td>
</tr>
<tr>
<td>5</td>
<td>Carbonation test</td>
<td>430 nos.</td>
</tr>
<tr>
<td>6</td>
<td>Concrete Chemical Test</td>
<td>200 nos.</td>
</tr>
</tbody>
</table>

3. Structural audit shall be carried out as a qualitative assessment in accordance with latest guidelines of BIS (Bureau of Indian Standards). Visual health inspection of buildings and related structures like sump etc. 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.

4. 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 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.
5. Finding the probable causes of damages, seepages/leakages and status of external plumbing installations.

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

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

8. Pre-repair:
   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.

9. During Repair:
   a. Daily Supervision of the repair works as per the structural audit report including day-to-day supervision, assuming full responsibility of the repair works based on the structural audit report, joint measurement, certification of bill, preparation of rate analysis.
   b. Any other services incidental to or connected with the said works usually and normally rendered by the consultants but not referred to in any of the items referred above.

10. Post Repair:
   a. Preparation of Checklist and checking before handover of site.
   b. Checking of building support system restoration.
   c. Submission of Structural Fitness Certificate to the authority and providing Virtual completion Certificate along with support to RO till the completion of DLP.

11. Site visit after completion of repair works

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

Detailed “Methodology for Structural Audit” is attached as Annexure-G and Format of Report Submission is Attached as Annexure-H.

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

Signature of the Applicant with full address and office seal
SPECIAL CONDITIONS AND STANDARD SPECIFICATION:

General

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

2. The consultant within the quoted rates will prepare working plan of NDTs and get the same approved from the Bank/Banks Engineer before execution. This will determine the final scope of work at the site.

3. The consultant at his own cost will immediately remove and clean the site/premises of all surplus/scrap material from the site after completing the structural audit/NDT, to avoid any inconvenience to NABARD staff. In case the instructions are not adhered NABARD will remove the materials/scrap and all expenses incurred will be deducted from the claims/retention money. A maximum time period of 48 hours will be given to clear the site.

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

5. The consultant shall take insurance covers (i.e. All Risk Policy) as specified elsewhere in the contract at his own cost. The policy shall be taken in joint names of the consultants and Employer.

6. 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.

7. 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.

8. Situations where NDT is an option to consider for investigation of in situ concrete:

8.1 to investigate the homogeneity of concrete mixing lack of grout in post tensioning ducts
8.2 to determine the density and strength of concrete in a structure
8.3 to determine the location of reinforcing bars and the cover over the bars
8.4 to determine the number and size/diameter of reinforcing bars
8.5 to determine the extent of defects such as corrosion
8.6 to determine the location of in-built wiring, piping, ducting, etc.
8.7 to determine whether internal defects such as voids, cracks, delamination’s, honeycombing, lack of bonding with reinforcing bars, etc. exist in concrete
8.8 to determine if there is a bond between epoxy bonded steel plates and concrete members.
9. **Tests to be undertaken:**

a. **Rebound Hammer Test:**

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. Test standard as per IS-13311, Part 2, IS 456, IS 8900.

b. **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), delamination or damaged material in concrete under test. Ultrasonic Pulse Velocity Test can also be used for the following applications:

i) Estimation of Strength of Concrete
ii) Establishing Homogeneity of Concrete
iii) Studies on Durability of Concrete
iv) Analysis of Surface Crack Depth
v) 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. Test standard as per IS 13311, Part 1, IS 456, IS 8900.

c. 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 of time 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. Test Standard ASTM C876-91, IS 456, IS890.

d. 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 de-passivation. 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 tests
- 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. Test standard IS 456, IS 516, IS 8900, NBC.

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

Signature of the Applicant with full address and office seal
Terms and Conditions

1) Completion Period of Structural audit: 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.

2) Mode of Payment:
For PART “A” shall be paid after the submission of:

Submission of visual inspection report
Submission of NDT analysis report and recommendation
Submission of final BOQ Tender document and acceptance of the same by NABARD.
For PART “B” shall be paid as per below –
15% of the Part B shall be paid after the awarding of the works to the selected Contractors and acceptance thereof.

25% of the Part B shall be paid after the execution of 50% of the work.
25% of the part B shall be paid after the completion of the work by the contractor.
20% of the part B shall be paid after submission of Structural fitness certificate to the local authority.
15% of the part B shall be paid after the expiry of the DLP of the contractor’s work and after completion of the recommended remedial measure during DLP.

2. All the Audit reports to be provided in triplicate in hard as well as soft copy.
3. 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.
4. All the necessary tools, tackles, instruments, material required for completion of audit shall be in the scope of work.
5. The decision of NABARD in awarding the work shall be final and cannot be subjected to arbitration.
6. The rates will be inclusive of all taxes and duties. Only GST on applicable rates shall be paid extra.

PLEASE REFER THE PRICE BID DOCUMENT FOR FURTHER TERMS & CONDITIONS.
I/we accept all the above Terms and Conditions in all respects without any reservation.

Place
Date
Signature
Name & Address
(Seal)
## Details of the Building

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Location</th>
<th>No. of Buildings/Blocks</th>
<th>No of floors</th>
<th>Total Built-up Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Office Premises E-5, Arera Colony, Bittan</td>
<td>1 Block</td>
<td>G+5 Floor</td>
<td>5,820 sqm</td>
</tr>
<tr>
<td></td>
<td>Market, Bhopal-462016</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2.</td>
<td>Officers Quarters Sector-A, Shahpura, Bhopal</td>
<td>12 blocks</td>
<td>G+3 floors/8 Flats per block</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Officers Quarters Sector-A, Shahpura, Bhopal</td>
<td>4 Bunglows</td>
<td>G+1 Floor</td>
<td>10,917 sqm</td>
</tr>
<tr>
<td>4.</td>
<td>Officers Quarters Sector-A, Shahpura, Bhopal</td>
<td>1 Community Hall</td>
<td>1 Floor</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Main underground water sump</td>
<td>1</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Staff Quarters Sector-C, Shahpura, Bhopal</td>
<td>5 blocks</td>
<td>G+3 floors/8 Flats per block</td>
<td>4,959 sqm</td>
</tr>
</tbody>
</table>
Pro-forma 1: Information to be furnished by the Consultants/ Agencies/ Engineering Research Institutions:

<p>| | |</p>
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Name and registered address</td>
</tr>
<tr>
<td>2</td>
<td>Organizational set up of the firm including names, qualifications and experience of partners/Associates and staff : Details to be furnished in the prescribed pro-forma (Statement I)</td>
</tr>
<tr>
<td>3</td>
<td>Whether Registered as a fellow or a member of any of the Institutions like Institution of Engineers, Indian Council of Architecture. Yes/No</td>
</tr>
<tr>
<td>4</td>
<td>Experience as practicing consultant/Designer (give number of years) :</td>
</tr>
<tr>
<td>5</td>
<td>Important major structures where NDT conducted during last 5 years by the firm. The full postal address of the clients (including their contact telephone numbers) for whom the works have been executed shall also be given : Details to be furnished in the prescribed pro-forma (Statement II)</td>
</tr>
<tr>
<td>6</td>
<td>Important major buildings on which the firm is engaged at present. The full address of the clients and their contact telephone numbers shall be indicated against each project : Details to be furnished in the prescribed pro-forma (Statement III)</td>
</tr>
<tr>
<td>7</td>
<td>Turnover of the firm during last 5 years (yearwise). Copy of IT return for the last 3 years may be furnished. :</td>
</tr>
<tr>
<td>8</td>
<td>PAN No.</td>
</tr>
<tr>
<td>9</td>
<td>GST No.</td>
</tr>
</tbody>
</table>

Signature of the applicant with full address and office seal
Note: Statements I, II & III are enclosed.
**STATEMENT - I**

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

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Name</th>
<th>Age</th>
<th>Qualification</th>
<th>Consultancy experience</th>
<th>Nature of works handled</th>
<th>Name of the projects handled</th>
<th>Date from which employed in the present organisation</th>
<th>Indicate special experience, if any</th>
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<tbody>
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</tr>
</tbody>
</table>

* Use separate/additional sheets as per the requirement

- The Personnel to be associated with the current tender works may be highlighted.

Signature of the applicant with full address and office seal

**Note:** Indicate other points (including clients’ certificates), if any, relating to your technical and managerial competency which you would like to bring to our notice.
**STATEMENT - II**

List of important Projects (structural condition assessment) 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 office, etc.), with area in Sqft. | Name of the owner and indicate whether it is a State Govt./Govt. of India undertaking or Pvt. body with full address and telephone numbers. | Completion Period | Any other relevant information |
|---------|----------------------------------|--------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
|         |                                  |                                                                                |                                                                                 |                   |
| 1       |                                  |                                                                                |                                                                                 | Stipulated       | Actual                  |

* Use separate/additional sheets as per the requirement

Signature of the applicant with full address and office seal
**STATEMENT - III**

List of important projects ON HAND being executed by the organization*

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Name of Project and location</th>
<th>Nature of work involved in the contract (e.g. residential, offices, etc.) with area in Sqft.</th>
<th>Name of owner and indicate whether it is a State Govt./Semi-Govt./Govt. of India Undertaking or Pvt. Body with full address and telephone numbers.</th>
<th>Stipulated date of completion</th>
<th>Expected date of completion</th>
<th>Present stage of work with reasons if the work is getting delayed</th>
<th>Any other relevant information</th>
</tr>
</thead>
<tbody>
<tr>
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</tr>
</tbody>
</table>

* Use separate/additional sheets as per the requirement
UNDEARTAKING

The Chief General Manager
NABARD
Madhya Pradesh Regional Office
Bhopal

I/We---------------------------------------------------------------
I/We have read the various conditions to Technical bid attached here to and hereby agree to abide by the said conditions. I/We offer to do this work of “Appointment of Project Management Consultant for Structural Audit and Structural Repairs Works at Regional Office and Staff Quarters Premises at Madhya Pradesh Regional Office, Bhopal” 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 Price Bid will be opened only if we qualify as per the stipulations in the Technical bid document.

I/We also hereby agree to abide by the:

a) Scope of Consultancy Work
b) terms and Conditions of the work and also other conditions if any stipulated in the tender.
c) Execute the Pre Contract Integrity Pact as pert the pro-forma given in Annexure-F.

In the absence of the same documents along with technical bid, the bid will be summarily rejected.

Signature

Address (complete postal address to be given)

---------------------------------------------------------------------

---------------------------------------------------------------------

Dated:__________________________________________
DECLARATION

I/We agree to notify the officer accepting this application and of National Bank for Agriculture and Rural Development, 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 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 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 this document 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 C

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

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Name and address of authority(ies) with whom the firm is registered</th>
<th>REGISTRATION DETAILS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Year</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Is copy of letter enclosed</td>
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<td>(1)</td>
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<td>(3)</td>
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<td>(4)</td>
</tr>
</tbody>
</table>

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

SIGNATURE and SEAL
Annexure-D

ARTICLES OF AGREEMENT
(On Rs.200/- Stamp Paper)

ARTICLES OF AGREEMENT made on .......... day of ........ month of 2022 between the National Bank for Agriculture and Rural Development, a body constituted by the NABARD Act 1981 and having its Head Office at C-24, G Block, Bandra-Kurla Complex, Bandra(E) Mumbai-400051 and Regional Office at E-5 Arera Colony, Bittan market, Bhopal-462016 (hereinafter called the 'Employer') which expression shall, unless repugnant to the context mean and include its successors and assigns of the one part and M/s (hereinafter called "PMC") which expression shall unless repugnant to the context mean and include its successors and assigns of the other part.

WHEREAS The Employer is desirous of getting executed the work of Conducting Structural Audit and Consultancy Services for Structural repairs of its Office & Residential buildings located at Bhopal, Madhya Pradesh.

The Consultant has agreed to execute the said works "Conducting Structural Audit and Consultancy Services for Structural repairs of its Office & Residential buildings located at Bhopal, Madhya Pradesh" subject to the provisions hereinafter contained and subject also to the Instructions to the applicants, Price Bid, all of which are hereinafter collectively referred to as 'the said conditions', and the term & condition and Scope of consultancy referred to above at or for the respective rates set out in the price bid annexed hereto, amounting to the sum as hereunder arrived at or such other sum as may become payable hereunder (herein under referred to as the said contract amount).

NOW THEREFORE THIS AGREEMENT WITNESSETH THAT:

1. In consideration of the said Contract Amount to be paid by the Employer to the consultant at the time and in the manner set forth in the said conditions and in accordance with the schedule of payments, the Consultant shall upon completion subject to the said conditions execute and complete the work as described in the said Price Bid.

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

3. Quotation documents containing letter to the Consultant, Instructions to the applicants of Contract, Annexure, Statements I,II, and III of Technical Bid, Specifications with scope of consultancy and price bid as per the rates entered therein in the Price Bid, shall be read and stamped forming part of this agreement and the parties hereto shall positively abide by and submit themselves to the conditions and specifications and perform the agreements on their part respectively in conditions contained.

4. This Contract is neither a fixed lump sum Contract nor an item rate Contract, but is a Contract to carry out work to be paid for according to actual measured quantities and rates contained in the price bid and probable quantities provided in the said Conditions.
5. The Employer reserves to itself the right of altering nature of the work by adding to, reducing or omitting any items of work or having portions of the same carried out without prejudice to this Contract.
6. The Consultant should have experienced and competent staff which will enable them to ensure proper quality throughout the consultancy assignment such as tests, analysis of report, preparation of BOQ, monitoring the execution of work and Post condition assessment.
7. The Consultant covenants and warrants that completed items of work will be in conformity with the Scope of consultancy/work and the terms and conditions of Contract and will be of proper quality and description.
8. Time shall be considered as the essence of this Agreement and Consultant hereby agrees to give his effort and cooperation to complete the work at the earliest/as per contract provisions for execution from the date of issue of work order, nevertheless to the provisions of extension of time as contained in the said conditions.
9. All payments by the Employer under this contract as per clause No. 12 of the Instructions to the bidders of Price Bid will be made at Bhopal by e-payment to the PMC Bank Account only.
10. All disputes arising out of or in any way connected with this agreement shall be deemed to have arisen at Bhopal and only court at Bhopal shall have jurisdiction to determine the same.
11. This agreement shall be signed in duplicate, the original document shall be kept in the custody of the Employer and the duplicate with the Consultant. Stamp duty shall be borne and paid by Consultant and Employer in equal proportion.

IN WITNESS WHEREOF the Employer has set its hands hereunto through its duly authorized official and the consultant has caused these presents under its common seal/by its duly authorized representative at the place and on the date and year first hereinabove written.

As witness our hands are affixed this ____ Day of______ month of 2022

Signed and sealed by the said Employer in the presence of

Witness No.1
Witness No.2

Signed and Sealed by the said Consultant in the presence of

Witness No.1
Witness No.2
Annexure-E

INDEMNITY BOND
(On Rs.100/- Stamp Paper)

KNOW all men by these presents that I, Shri.................................................. of M/s ___________________________ do hereby execute Indemnity Bond in favour of National Bank for Agriculture and Rural Development (NABARD), having their Registered Office at C-24, G Block, Bandra-Kurla Complex, Bandra(E) Mumbai-400051 and Regional Office at E-5, Arera Colony, Bittan Market, Bhopal-462016 and M/s. ___________________________ having their office at ___________________________ this ........... day of ............ 2022.

WHEREAS NABARD have appointed M/s ___________________________ as the consultant for their proposed work relating to conducting Structural Audit and Structural Repair works at Madhya Pradesh Regional Office, Bhopal.

THIS DEED WITNESSETH AS FOLLOWS:-

I/We M/s ___________________________ hereby do Indemnify, and same harmless NABARD against and from

1. Any third party claims, civil or criminal complaints liabilities, site mishaps and other accidents or disputes and/or damages occurring or arising out of any mishaps at the site due to faulty work, negligence and/or for violating any law, rules and regulations in force, for the time being while executing/executed works by me/us.

2. Any damages, loss or expenses due to or resulting from negligence or breach of duty on the part of me/us or any sub-contractor/s if any, servants or agents.

3. Any claim by an employee of mine/ours or of sub-contractor/s, if any, under the Workmen Compensation Act and Employers Liability Act, 1939 or any other law, rules and regulations in force for the time being and any Acts replacing and/or amend the same or any of the same as may be in force at the time and under any law in respect of injuries to persons or property arising out of and in the course of the execution of the contract work and/or arising out of and in the course of employment of any workmen/employee.

4. Any act or omission of mine/ours of sub-contractor/s if any, our/their servants or agents which may involve any loss, damage liability, civil or criminal action.

IN WITNESS WHEREOF THE M/s ___________________________ has set his/their hands on this ........... day of ............ 2022.

SIGNED AND DELIVERED BY THE AFORESAID M/s ___________________________

IN THE PRESENCE OF WITNESS:

(1)

(2)

Seal and Sign of the bidder
Annexure-F

PRE CONTRACT INTEGRITY PACT

(To be submitted on Rs. 200 Stamp Paper only on first page and remaining document on normal A4 size pages duly signed by the bidder)

Between

National Bank for Agriculture and Rural Development (NABARD) hereinafter referred to as “The Principal”

And

…………………………………………. hereinafter referred to as “The Bidder/Contractor”

Preamble

The Principal intends to award, under laid down organizational procedures, contract/s for ……………………………….. . The Principal values full compliance with all relevant laws of the land, rules, regulation, and economic use of resources and of fairness /transparency in its relations with its Bidder(s) and/or Contractor(s).

In order to achieve these goals, the Principal will appoint Independent External Monitors (IEMs) who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section 1 – Commitments of the Principal

(1) The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:-

a. No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.

b. The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will, in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.

c. The Principal will exclude from the process all known prejudiced persons.

(2) If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the IPC/PC Act, or if there be a substantive suspicion in this regard, the Principal will inform the Chief Vigilance Officer and in addition can initiate disciplinary actions.

Section 2 – Commitments of the Bidder(s)/Contractor(s)

(1) The Bidder(s) / Contractor(s) commit themselves to take all measures necessary to prevent corruption. The Bidder(s) / Contractor(s) commit themselves to observe the following principles during participation in the tender process and during the contract execution:

a. The Bidder(s) / Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal’s employees involved in the tender process or the execution of the contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.
b. The Bidder(s)/Contractor(s) will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.

c. The Bidder(s)/Contractor(s) will not commit any offence under the relevant IPC/PC Act; further the Bidder(s) / Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

d. The Bidder(s)/Contractor(s) of foreign origin shall disclose the name and address of the Agents/representatives in India, if any. Similarly the Bidder(s)/Contractors(s) of Indian Nationality shall furnish the name and address of the foreign principals, if any.

e. The Bidder(s) /Contractor(s) will, when presenting their bid, disclose any and all payments made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.

f. Bidder(s) /Contractor(s) who have signed the Integrity Pact shall not approach the Courts while representing the matter to IEMs and shall wait for their decision in the matter.

(2) The Bidder(s) /Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

Section 3 – Disqualification from tender process and exclusion from future contracts

If the Bidder(s) /Contractor(s), before award or during execution has committed a transgression through a violation of Section 2, above or in any other form which put their reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s) /Contractor(s) from the tender process.

Section 4 – Compensation for Damages

(1) If the Principal has disqualified the Bidder(s) from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit/Bid Security.

(2) If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to Section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages of the Contract value or the amount equivalent to Performance Bank Guarantee.

Section 5 – Previous transgression

(1) The Bidder declares that no previous transgressions occurred in the last three years with any other Company in any country conforming to the anti-corruption approach or with any Public Sector Enterprise in India that could justify his exclusion from the tender process.

(2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process.

Section 6 – Equal treatment of all Bidders / Contractors/ Subcontractors

(1) In case of Sub-contracting, the Principal Contractor shall take the responsibility of the adoption of Integrity Pact by the Sub-contractor.

(2) The Principal will enter into agreements with identical conditions as this one with all Bidders and Contractors
(3) The Principal will disqualify from the tender process all bidders who do not sign the Pact or violate its provisions.

**Section 7 – Criminal charges against violating Bidders(s) / Contractor(s)/ Subcontractor(s)**

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the same to the Chief Vigilance Officer.

**Section 8 – Independent External Monitor**

(1) The Principal appoints competent and credible Independent External Monitor for this Pact after approval by the Central Vigilance Commission. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.

The Independent External Monitor appointed for NABARD is:

i) Shri P K Sangewar  
H no. 12-5-65/1, Flat no. 109, Shri Harsha Sethuram Unique, Vijaypuri Colony, South Lalaguda, Secundearbad, Telangana-500017

(2) The Monitor is not subject to instructions by the representatives of the parties and performs his/her functions neutrally and independently. The Monitor would have access to all Contract documents, whenever required. It will be obligatory for him / her to treat the information and documents of the Bidders /Contractors as confidential. He / she reports to the Chairman, NABARD.

(3) The Bidder(s)/Contractor(s) accepts that the Monitor has the right to access without restriction to all Project documentation of the Principal including that provided by the Contractor. The Contractor will also grant the Monitor, upon his/her request and demonstration of a valid interest, unrestricted and unconditional access to their project documentation. The same is applicable to Sub-contractors.

(4) The monitor is under contractual obligation to treat the information and documents of the Bidder(s) /Contractor(s) / Sub-contractor(s) with confidentiality. The Monitor has also signed declarations on ‘Non-disclosure of Confidential Information and of ‘Absence of Conflict of Interest’. In case of any conflict of interest arising at a later date, the IEM shall inform Chairman, NABARD and recuse himself/herself from that case.

(5) The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the Project, provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.

(6) As soon as the Monitor notices, or believes to notice, a violation of this agreement, he/she will so inform the Management of the Principal and request the Management to discontinue or take corrective action, or to take other relevant action. The monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.

(7) The monitor will submit a written report to the Chairman, NABARD within 8 to 10 weeks from the date of reference or intimation to him by the Principal and, should the occasion arise, submit proposal for correcting problematic situations.
(8) If the Monitor has reported to the Chairman, NABARD, a substantiated suspicion of an offence under the relevant IPC/PC Act, and the Chairman NABARD has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer, the Monitor may also transmit this information directly to the Central Vigilance Commissioner.

(9) The word ‘Monitor’ would include both singular and plural.

**Section 9 – Pact Duration**

This Pact begins when both parties have legally signed it. It expires for the Contractor 12 months after the last payment under the contract, and for all other Bidders 6 months after the contract has been awarded. Any violation of the same would entail disqualification of the bidders and exclusion from future business dealings.

If any claim is made/lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharge/determined by the Chairman of NABARD.

**Section 10 – Other provisions**

(1) This agreement is subject of Indian Law, Place of performance and jurisdiction is the Head Office of the Principal, i.e. Mumbai.

(2) Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.

(3) If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.

(4) Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

(5) Issues like Warranty/Guarantee etc. shall be outside the purview of IEMs.

(6) In the event of any contradiction between the Integrity Pact and its Annexure, if any, the Clause in the Integrity Pact will prevail.

________________________________________  ____________________________________
(For & On behalf of the Principal)  (For & on behalf of the Bidder/Contractor)

(Office Seal)  (Office Seal)

Place________________________
Date_______________________

Witness 1:
(Name & Address) __________________________________________________________________
________________________________________________________________________________

Page 32 of 43
Witness 2:
(Name & Address) ____________________________
________________________
________________________
________________________
METHODOLOGY FOR STRUCTURAL AUDIT

1) Process of Structural Audit
The detailed Architectural and Structural plans of the buildings must be made available to the Structural Auditors, if not available, alternate proposal may be formulated. For conducting Structural Audit and necessary repair works. The following steps are required to be carried out:

1) Visual Inspection
2) Non Destructive Testing (NDT)
3) Audit Report with Analysis
4) Finalization of repair methodology
5) Schedule of Quantities (BoQs) with estimates for structural repairs
6) Execution of Structural repair Works
7) Issue of safety certificate

2) Contents of Structural Audit Report
Structural audit report is prepared by the Consultant containing the following information:
1) Recommendations for repairs based on the assessment of deterioration, breakage, and faulty materials
2) Retrofitting and restoration measures to bring the damaged components up to the required standard
3) Measures to strengthen the current components of the building to make it more resistant to collapse and to increase its load bearing capacity
4) The consultant should provide BoQ (Bill of Quantities) including the cost of labour, materials, and equipment in the audit report for effective structural rehabilitation of the building.
5) The consultant will supervise the structural repair works and recommend any deviations/ additions/ alterations, etc., if required, during execution stage.
6) The consultant will submit/arrange to submit requisite safety certificate.

3) Preparation of Structural Audit Report
This is the final stage of structural Audit in which summarization of observations made in visual inspection and NDT test report. Following points to be kept in view at this stage as they help in completing the required Structural Audit Report:
1. Description of building structure
2. Observations
3. Layout plans
4. Distress mapping plans
5. Non-destructive layout
6. Non-destructive test exhibits
7. Result and discussions
8. Summary
9. Conclusions
10. Recommendations
11. Detailed Repair Methodology
12. Bill of quantities
13. Exhibits, if any

Description of building structures consists of brief details of existing structure such as location of building, age of building etc. while in observations, all the visually inspected damages and distresses are noted down.

Distress mapping plans are the documents prepared at the site in the form of floor plans showing the type and extent of distress, statistically records of relevant data, location and observations etc. These have to be bifurcated by type of structural members i.e. beams, columns and slabs. These are useful for finalising the bill of quantities of various repair items and extent of repair work and required for study of damaged patterns.

It is helpful to divide the structural members under the same categories such as same exposure condition for proper understanding of causes of distress. Grouping of structural member can be done under the following points:

1. External structure members such as beams and columns would be subjected to the more atmospheric pressure, environmental attack and weathering effect than the internal structural members.

2. The members subjected to the dampness/leakage/drying/wetting near or around the area of the toilet duct would be going under the same type of distress.

3. Also the building top whether it is flat roof or sloping roof would be falling under a different group.

Based on the collection of preliminary inspection and visual inspection carried at site, the consultant should categorize the damages or distresses into various types. For example Beam crack, column crack, slab crack, floor damage, leakages from external wall, dampness in wall, leakages through beams and slab, dampness in slab, leakages from top slab etc. This helps to decide the repair requirement and to access the right repair methodology.
Suggested Format for Structural Audit Report

Name of the Building: ___________________
Description: ___________________
Address: ___________________
Name of Client: ___________________
Age of the Building: ___________________
Contact Person: ___________________
Tel. No: ___________________
Inspection Report Date: ___________________
INSPECTED BY (Name, designation, mobile and Email): ___________________

<table>
<thead>
<tr>
<th>NO.</th>
<th>DESCRIPTION</th>
<th>LOCATION</th>
<th>EXTENT OF DAMAGE</th>
<th>MEASURES FOR REPAIR</th>
</tr>
</thead>
</table>
| 1.  | FOUNDATION STRATA  
VISUAL INSPECTION  
SETTLEMENT OF COLUMNS  
SETTLEMENT OF WALLS  
CRACKS IN COLUMNS, WALLS, JOINTS AT PLINTH | | | |
| 2.  | SUPER STRUCTURE INSPECTION  
CRACKS IN COLUMNS/ RUSTING OF STEEL / EXPOSED STEEL  
CRACKS IN BEAMS / RUSTING OF STEEL / EXPOSED STEEL  
CRACKS IN SLABS / RUSTING OF STEEL / EXPOSED STEEL  
CRACKS IN EXTERNAL WALLS  
CRACKS IN INTERNAL WALLS | | | |
<table>
<thead>
<tr>
<th></th>
<th>LEAKAGES &amp; DAMPNESS IN EXTERNAL WALLS</th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>4.</td>
<td>TOILET LEAKAGES, CRACKS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>TERRACE WATERPROOFING INSPECTION</td>
<td></td>
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<tr>
<td>6.</td>
<td>LEAKAGE &amp; DAMPNESS ON THE TOP FLOOR SLAB</td>
<td></td>
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<tr>
<td>7.</td>
<td>INSPECTION OF WATER TANK ABOVE TERRACE</td>
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<tr>
<td>8.</td>
<td>INSPECTION OF UNDERGROUND WATER TANK</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>LEAKAGES &amp; DAMAGES: PLUMBING LINES/ WATERLINES, DRAINAGE LINES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>BUILDING LAST REPAIRED DETAILS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>DATE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>COST OF REPAIR WORK</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>ITEMS OF REPAIR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>DATE OF CONSTRUCTION OF BUILDING</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>R.C.C./ LOAD BEARING STRUCTURE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>ARCHITECTURAL PLANS AVAILABLE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17.</td>
<td>STRUCTURAL PLANS AVAILABLE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18.</td>
<td>BUILDING PLAN APPROVAL DATE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19.</td>
<td>OCCUPATION CERTIFICATE DATE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20.</td>
<td>CONCLUSION</td>
<td></td>
<td></td>
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</tbody>
</table>
Tender for Appointment of Project Management Consultant for Structural Audit and Structural Repairs Works at Regional Office & Staff Quarters Premises at Madhya Pradesh Regional Office, Bhopal

ISSUED TO

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.................................................................
Tender for Appointment of Project Management Consultant (PMC) for Structural Audit and Structural Repairs Works at Regional Office & Staff Quarter Premises of NABARD at Madhya Pradesh Regional Office, Bhopal

PRICE BID

(Numbers of tests are indicative in nature to be decided by the RO as per the site conditions)

<table>
<thead>
<tr>
<th>Part A</th>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>Sl. No.</strong></td>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>1</td>
<td>Mobilization and Demobilization including setting up of necessary equipment, machineries etc. Skilled personnel required for testing and conducting all tests as mentioned below including necessary arrangement for scaffolding. Conducting detailed survey of Office building, Staff quarters buildings at Sector-A &amp; C by NDT - External faces, common areas e.g. Terrace, staircase, water tanks, lift machine rooms, basement etc.</td>
</tr>
<tr>
<td>2</td>
<td><strong>Doing NDT Test</strong></td>
</tr>
<tr>
<td>a</td>
<td><strong>Rebound Hammer Test:</strong> Preparing the surface of RCC structural members such as beams, columns, slabs etc. by chipping the plastered surface/ finishing/cladding to expose the concrete, smoothening the area using carborandum stone all in terms of relevant IS code and conducting rebound hammer test all as per IS 13311-1992(Part 2), IS456, IS8900 as directed including analysis of the test result &amp; preparation of separate report for each building with observations and recommendations for remedial measures.(1 set = 06 observations)</td>
</tr>
<tr>
<td>b</td>
<td><strong>UPV (Ultrasonic Pulse Velocity) Test:</strong> Preparing the surface of RCC structural members such as beams, columns, slabs etc.</td>
</tr>
</tbody>
</table>
by chipping the plastered surface/finishing/cladding to expose the concrete, smoothening the area using carborandum stone all in terms of relevant IS code all as per IS 13311-1992(Part 1), IS 456, IS 8900 as directed including analysis of the test result & preparation of separate report for each building with observations and recommendations for remedial measures. (1 set = 3 observations at spacing of 300mm)

c **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.  

| 430 | No |

d **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. ASTM C 876-91, IS 456, IS 8900)

| 430 | No |

e **Core Test:** Preparing the structural members as directed to expose the concrete, cleaning the area with blower /wire brush and

<p>| 100 | No |</p>
<table>
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<tr>
<th></th>
<th>Description</th>
<th>Type</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>f</td>
<td>Chemical Test for Chloride (Cl), pH value, sulphate Test Standard: As 1012.20, BS 1881 Part 124, Part 121, IS 14959 Part 2, IS 456</td>
<td>100</td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td>Preparation of structural audit report which includes</td>
<td>1</td>
<td>Lump sum</td>
</tr>
<tr>
<td></td>
<td>a. The findings from detailed visual inspection as in item 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. Non-destructive test results</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>c. Suggested remedial measures all based on the visual inspection, NDT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Preparing the bill of quantity and the tender document for the proposed structural rehabilitation works to be taken up based on the outcome of the aforesaid testing.</td>
<td>1</td>
<td>Lump sum</td>
</tr>
<tr>
<td>5</td>
<td>Examination and assessment of condition of existing bricks in superstructure and foundation including assessing the condition of existing plaster, brick joints, damp proof course in ground floors and providing suitable feedback and remedies in the report.</td>
<td>1</td>
<td>Lump Sum</td>
</tr>
<tr>
<td>6</td>
<td>Assessments of condition of RCC overhead tanks, columns, beams, lintels, slabs, sunshades, parapets, chaajas etc. offering special comments on the condition of these tanks. A detailed report is required to be furnished with solutions if any.</td>
<td>1</td>
<td>Lump Sum</td>
</tr>
</tbody>
</table>

**Total**

Total for ‘Part- A’ in words = Rupees


<table>
<thead>
<tr>
<th>II</th>
<th>PART B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Charges for site visits during the execution of the repair works at each locations based on the structural audit report/detailed BOQ vide item 3 &amp; 4 of part A. Supervision of the repair works as per the structural audit report including day-to-day supervision, assuming full responsibility of the repair works based on the structural audit report, joint measurement, certification of bill, preparation of rate analysis. Any other services incidental to or connected with the said works usually and normally rendered by the consultants but not referred to in any of the items referred above. This also includes submitting copy of Structural fitness certificate to the local authority as per the format prescribed by the local authority. Satisfactorily completion of defect liability period (DLP) of structural repair or any remedial measure suggested within DLP.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total for Part “B” in Rs</th>
<th>Total in words</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rupees</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total = Part A + Part B</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GST @ 18%</td>
<td></td>
</tr>
<tr>
<td>Grand Total</td>
<td></td>
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</tbody>
</table>

Grand Total Amount in words: ________________________________

**Note:**

I. Consultancy Fees to be quoted inclusive of all expenditure related to consultancy assignment as per scope of work and tender conditions including all taxes except GST.

II. The L1 consultant shall be finalized based on the Grand total amount – Part A + Part B.

Performing visual survey of the structure and recording/mapping on draining of spalled concrete, cracked concrete, honey combing, reinforcement. Corrosion, delaminated concrete etc. Performing soundness of concrete using a hand hammer to check portions of the structure that give a good ringing sound upon hammering, taking photographs/video to collect evidence of damaged structure.
1. The consultants in their own interest are advised to make a survey all the buildings, have a visual inspection of the masonry walls,

2. Various structural members including overhead tanks etc. of all buildings before quoting the rates.

3. Rated quoted should be inclusive of all taxes, duties etc. Only GST at prevailing rates shall be paid extra on applicable rates.

4. Please furnish a copy of PAN Card, AADHAR Card, Bank account details like Cancelled cheque (including Account number, IFS code, account type etc.)

Name of the person authorized to sign and submit the Tender

Date: 
Place:

Yours faithfully,

Email Id: 
Phone no: 
Signature:
Seal:

Place :-
Date:-

Name, Address and Seal of the Consultant