SRI AUROBINDO COLLEGE
University of Delhi
Malviya Nagar, New Delhi-110017

15.09.2022

TENDER NOTICE

The sealed quotations are invited for the structural audit of the two storey and main building of Sri Aurobindo College, Malviya Nagar, New Delhi-110017. The items of work are attached. Kindly provide your estimate as per the items within a week's time along with your profile and works done by you so far.

Detailed BOQ and the Terms and Conditions are attached.

The shortlisted firms will be invited for an interview.

Time bound work will be highly appreciated.

Sd/-
PRINCIPAL

AUROBINDO COLLEGE EXISTING SPS TWO STOREYED BLOCKS & MAIN BUILDING - STRUCTURAL STABILITY AUDIT BOQ

Scope Of Work : Assessment of structural condition of the Existing SPS Blocks building structures, including visual health Check-up, carrying out Non-destructive testing, review & evaluation of NDT test reports, recommendations / suggestions for repair & rehabilitation and submission of detailed report.

SPS Building housing Classrooms & labs, etc in 2 storeyed buildings & Main 3 Storeyed Building having Administrative Offices, Classrooms, Library, Labs, etc at Aurobindo College, Malviya Nagar, New Delhi, as per Layout Plan enclosed.

S. No	Items Of Work	Qty	Unit	Rate	Amount
A)	**Structural assessment by Non - Destructive Evaluation at the required locations by conducting the following tests at the required locations :**				
I	SPS (Semi Pucca Construction), 2 storeyed.				
II	Main Building in RCC framed structure with brick infill walls of Ground plus 2 floors.				
1	**Visual inspection** for surface damages, flaking, coloration, local weaknesses, etc and the visual inspection shall cover areas of high distress, abnormal variations in structure. Visual inspection would be documented in the form of worksheets, photographic records & distress over drawings(if available).				
	SPS (Semi Pucca Construction), comprising of RCC Columns & beams, with MS framing, with slabs of Red sandstone slabs & PCC levelling course on top. The buildings are 2 storeyed.	1	No		
	Main Building in RCC framed structure with brick infill walls of Ground plus 2 floors.	1	No		
2	**Rebound Hammer Test** : For determining the estimated compressive strength of concrete & uniformity of concrete in terms of surface hardness as per IS 13311(Part-2) - 1992. (Approx. test locations : 50 nos).				

3	**Ultrasonic Pulse Velocity Test** : For ascertaining the quality of concrete, soundness & density of concrete, uniformity of concrete interms of density as per IS 13311 (Part-1)-1992, ASTM: C597-83 : 6809 1981 and BS 1881: Part 203 & BS EN : 13791.				
4	**Carbonation Test** : Measurement of carbonation depth by phenolphthalein spray test at selected location on RCC members of the structures covered under the study to see the depth of carbonation. Ratio of carbonation depth to cover depth is also to check the intensity of carbonation attack on steel bars. (Approx. test locations: 25 nos).				
5	**Concrete cover thickness measurement** : by scanning the concrete surface with Profometer instrument for determining its concrete cover thickness (Approx. test locations: 25 nos).				
6	**Corrosion Test (Half Cell potential Test)** : Measuring the Half Cell Potential on concrete surface at suitable points for determining the probability of corrosion activity of embedded steel reinforcement in concrete with specified half cell electrode in accordance with ASTM C976-1980. (Approx. test locations: 10 nos).				
7	**Core Test** : Extracting the concrete core samples at select locations from RCC members of the structure covered under study and evaluating the properties fck value, grade of concrete in the laboratory from the core samples selected as per IS 456:2000 ; ISS16; 1959 ; without encountering any steel reinforcement within the RCC members at specified locations with portable power driven core cutting equipment. (Approx. test locations: 12 nos).				
8	**Determination of pH value (to check alkalinity of concrete)** of concrete sample using pH meter electrode (Approx. test Locations: 6 nos).				
9	**Chloride Content (by of mass of concrete)** to check the risk of corrosion due to present chloride & as per IS: 14959, IS 456:2000.				

10	**Thermographic imaging** : for inspection of moisture / dampness in the structures.				
	Steel Structure				
11	**Liquid penetrant testing** on ferrous & non-ferrous metals as per ASME Sec 5, 2001 ; ASTM-E165 for detecting flaws open to surface for the condition assessment of joints / weldings / surface cracks.				
12	**UT Thickness for Steel Section Size Assessment**: local thicknessof a solid / hollow element based on the time taken by the ultrasound wave to return to the surfaceas per ASTM E797 / E797M for assessment of section of steel members.				
B	**Preparing & submitting comprehensive report** consisting of findings from visual inspection, test date, interpretion of results, conclusions and final recommendations for improvement of the structures.				
C	**Repairing Methology** for structure serviceability & safety and futuristic protection of the structures. The recommendation for structural repair and rehabilitation to the structures shall have technical specifications, materials to be used.	1	No		
	Total				
	GST @ 18% is extra				

STRUCTURAL AUDITING

TERMS AND CONDITIONS

1. The Engineer/Supervisor must adhere to the following: (a) Acquaint themselves with the work and working conditions of the college (“Site”) as well as locality and; (b) Inspect and examine the Site and its surroundings. And no claim will be entertained for these issues.
2. The Engineer/Supervisor shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charges consequent on any misunderstanding or otherwise shall be allowed.
3. The Engineer/Supervisor shall be responsible for arranging and maintaining at his own cost all materials, transportation, consumables, manpower, testing & safety equipments, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work.
4. The Engineer/Supervisor shall be solely liable to procure and obtain all requisite licenses, permissions and/or approvals required to carry out the work at the Site.
5. College/ College management is not responsible for any accident / injury to the Engineer/Supervisor and/or his employees, staff, agent, agency, crew at Site. Engineer/Supervisor shall assume full responsibility for the safety of their crew, employees, staff, representatives, agents, etc and shall comply with all statutory / safety regulations / security requirements and follow industry best practices.
6. Any casualty or damage caused to the property or any person by any untoward incident at the Site, due to the work carried out by Engineer/Supervisor, shall be the sole responsibility of the Engineer/Supervisor. The liability for compensation on account of injury sustained by an employee, staff, crew, agents, representative, etc of the Engineer/Supervisor shall be exclusively that of the Supervisor/Engineer.
7. In the event any test(s) conducted on the Site are found to be leading to losses or damages, the responsibility of the same shall lie with the Engineer/Supervisor.