

**INDIAN INSTITUTE OF ASTROPHYSICS
2ND BLOCK, KORAMANGALA,
BENGALURU – 560034.**

TENDER DOCUMENT

***Name of Work:* Remodeling of Electronics lab-II at 1st floor of main lab building, IIA, Koramangala campus, Bengaluru.**

Tender Notice No.: 45/IIA/CIVIL/BANG/2021-22 Dated 26.07.2021

INDIAN INSTITUTE OF ASTROPHYSICS

Ph.080-2554 1200/1259/1359 , Fax: 25534043 Website: www.iiap.res.in



INDIAN INSTITUTE OF ASTROPHYSICS

2ND BLOCK, KORAMANGALA,

BENGALURU-560 034.

Tender Notice No.: 45/IIA/CIVIL/BANG/2021-22 Dated 26.07.2021

The Director, Indian Institute of Astrophysics invites sealed item rate tenders in the prescribed format for the following work from appropriate registered contractors in state PWD, CPWD, MES, Scientific institutions and private body contractors who have executed works of similar nature.

Sl. No.	Name of the work	Estimated cost in Rs.	Time for completion	EMD Rs.	Cost of tender document Rs.
1.	Remodeling of electronics lab-II at 1st floor of main lab building, IIA, Koramangala campus, Bengaluru.	13,05,000/-	03 Months	26,000/-	1,000/-

The Tender Document can be viewed and downloaded from our website www.iiap.res.in/tenders.htm. The interested tenderers may at their option download the same, as **“NO” hard copies of Tender document shall be provided from this office** and submit their offers along with EMD (refundable) & Tender fee (non-refundable) prescribed therein, only in the form of Demand Draft drawn in favor of **“Indian Institute of Astrophysics”** payable at Bangalore. The DD shall be valid for a period of ninety days (90) from the date of opening of bids.

The Offers containing complete tender document duly filled with price (Bill of Quantities) and complete credentials including experience certificates should be submitted in sealed cover super scribing the envelope with **“Remodeling of electronics lab-II at 1st floor of main lab building, IIA, Koramangala campus, Bengaluru”**. Notice No. and due date”, shall be submitted addressed to **The Director, Indian Institute of Astrophysics, 2nd Block, Koramangala, Bengaluru – 560 034. The last date of submission of bid is 27.08.2021 on or before 15:00 hrs.** The bids will be **opened at 15:30 hrs on the same day** in the presence of attending tenderers or their authorized representatives.

ELIGIBILITY CRITERIA

The firms who fulfill the following requirements shall be eligible to submit their bids. Joint ventures are not acceptable.

- (i) Tendering Company shall be professionally managed and resourceful for taking up similar jobs.
- (ii) The experience of having successfully completed similar work during last 7 years as on 30.06.2021 should be either of the following:

a) One similar completed work costing not less than the amount equal to 80% of the estimated cost.

OR

b) Two similar completed works costing not less than the amount equal to 50% of the estimated cost.

OR

c) Three similar completed works costing not less than the amount equal to 40% of the estimated cost.

Similar work shall mean:

Similar Building experience shall mean that the bidder shall have an experience in developing a laboratory building which includes civil, electrical, network, interior works, special works like ESD flooring, waterproofing etc. In support of this, the bidder must submit completion Certificate / work orders from the Client, and the same shall be included in the Bid as Supporting Documents.

Documentary Proof for Eligibility

Self attested/certified copy of work orders and completion certificates issued by the authority concerned to establish work experience shall be attached to the tender document. Photographs of such works shall be attached for reference. Copies of the Income Tax Returns along with Financial Statements such Balance Sheet, Assessment report issued by Income Tax dept, P&L Account etc for the last 3 Financial Years shall be attached to the tender document.

Valid Contract License issued by the competent authority shall be enclosed.

OTHER CONDITIONS

1. Technical & price Bids supported by the above information should be submitted in a Sealed envelope duly super scribed with the name of work, tender notice No., Last date of submission. The completed Bids will be received by this office **up to 15:00 Hrs. on 27.08.2021.**
2. If any information furnished by the tenderers is found incorrect at a later stage, the firm shall be liable to be debarred from tendering and taking up of work in I.I.A. The Institute reserves the right to verify the particulars furnished by the tenderers.
3. The firms should submit their offers along with EMD/Tender fee of prescribed amount up to **15:00 Hrs. on 27.08.2021.**
4. Incomplete Technical Bids are liable for rejection.
5. Late & / delayed offer will not be considered.
6. IIA is not responsible for any delay / loss of documents in transit.
7. The Tenders will be opened **on 27.08.2021 at 15:30** hours at **I.I.A, Bengaluru** in the presence of bidders or their authorized representatives. The representatives of the tenderers should bring authorization letter / identification while attending for opening of the tenders.

8. IIA reserves the right to reject any or all tenders without assigning any reasons.

9. **The lowest quoted bidder cannot claim as lowest bidder unless the bidder satisfies all the tender conditions, technical qualifications and eligibility with supported documents complete in all respect.**

Administrative Officer
IIA, Bengaluru -34.

INDIAN INSTITUTE OF ASTROPHYSICS
2nd Block, Koramangala, Bengaluru - 560 034.

Tender Notice No.: 45/IIA/CIVIL/BANG/2021-22 Dated 26.07.2021

M/s.

Dear Sir,

The Director, Indian Institute of Astrophysics, Bengaluru invites Sealed Tenders for the work of **“Remodeling of electronics lab-II at 1st floor of main lab building, IIA, Koramangala campus, Bengaluru”**. The Tender Terms enclosed herewith may be noted carefully. If you are in a position to quote for the work in accordance with the requirement, please submit your quotation in the attached Tender Form.

Your Tender must reach this office on or before the date and time indicated in the Tender Schedule.

Thanking you,

Yours faithfully,

Encl: as above.

Administrative Officer
For Director

3. INSTRUCTIONS TO THE TENDERERS

1. The tenderers should submit the entire tender document with duly filled with price and technical details of the firm. All the pages of document shall be duly signed.
2. **The rates quoted by the tenderer in the schedule shall be inclusive of all taxes and levies. Such rates should provide the break-up of the cost and applicable taxes, levies etc.**
3. The Offers should be submitted in sealed envelope super scribed with Tender for **“Remodeling of electronics lab-II at 1st floor of main lab building, IIA, Koramangala campus, Bengaluru”**. Notice No. and due date”.
4. If any clarification is required should be obtained before filling Tender Document.
5. If any discrepancy is there between figures and words for quoted rates, the lower of the two will be considered for the purpose of evaluation.
6. The tenderers who do not fulfill all or any of the tender conditions or if the tender is Incomplete in any respect, will be summarily rejected.
7. The Institute is not bound to accept the lowest tender.
8. Even though the Tenderers meet the above criteria, they are subject to be disqualified if they have (The Institute reserves the right to verify the particulars furnished by the tenderers.)
 - Made misleading or false representations in the forms, statements and attachments submitted in proof of the qualification requirement, Conditional bid / proposal: and / or
 - Record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures etc.
9. Any effort by the contractor to influence the client in the bid evaluation, bid comparison or contract award decision results in rejection of the contractors bid.
10. Financial offer will be considered if the bidders fulfill all the technical and financial eligibility criteria as per tender.
11. Late & / delayed offer will not be considered at all.
12. IIA is not responsible for any delay / loss of documents in transit.
13. No bids will be considered if prescribed Tender Fee and EMD are not found with the bid.
14. All overwriting and corrections shall be duly attested with stamp & signature.
15. Corrigendum's / modifications / corrections, if any, will be published in the website only.
16. The Director, Indian Institute of Astrophysics reserves the right to accept or reject the tenders in full or part without assigning any reason thereof.
17. Performance certificates of the completed works issued by the clients to be enclosed in the technical bid.

18. The committee constituted by the Director may inspect the previously completed or the ongoing works of the bidders to assess their technical suitability for the tendered work.
19. All the pages of the tender document to be signed by the contractor and submit them in the respective sealed covers.
20. The successful contractor will have to execute an Agreement with the Institute within 21 days of receipt of Letter of Intent / Work Order.
21. The lowest quoted bidder cannot claim as lowest bidder unless the bidder satisfies all the tender conditions, technical qualifications and eligibility with supported documents complete in all respect.
22. **All the bidders are requested to visit the site before quoting the rates. The complete document shall be read and understood in all respect. If any clarification is required, the same may got cleared before submitting their offers in writing by contacting the following persons:**

M.V.Ramaswamy
Ph. No. 080-2254 1207
Mobile: 9742410480
E-mail.: mramaswamy@iiap.res.in

23. All the bidders are requested to visit Institute website www.iiap.res.in/tenders.htm till last date of submission of bids for latest updates on addendum, corrigendum, extensions etc. which will be notified only in website. No individual information will be provided.

INDIAN INSTITUTE OF ASTROPHYSICS
2ND BLOCK, KORAMANGALA,
BENGALURU – 560 034.

Name of Work: **“Remodeling of Electronics Lab-II at 1st Floor of Main Lab Building, IIA, Koramangala campus, Bengaluru”**

Tender Notice No.: 45/IIA/CIVIL/BANG/2021-22 Dated 26.07.2021

Name of

The Firm:

Address:

Phone No:

Last date for submission: 27.08.2021 up to 15:00 hrs

FORMAT FOR SUBMISSION OF TECHNICAL & ORGANIZATIONAL DETAILS.

NAME OF THE FIRM :

1. OFFICE SET UP OF THE FIRM

1.1 Office Address:

.....
.....

1.2 Year of Establishment:

1.3 Contact Person Shri

With Designation

Ph No.....

Fax No.....

E-mail.....

1.4 Details of registration if any:

.....

1.5 Organizational setup of the firm

Total staff strength both technical

And Administration with their name, age

Qualification and experience :

1.6 PAN (photocopy to be enclosed)

GSTIN No (photocopy to be enclosed)

1.7 Details of the staff as per the following format.

Sl. No	Profession/discipline	Name	Age	Qualification	Experience (total years)	Field of experience
	Civil					

2 TENDERER'S EXPERIENCE

Details of Works carried out and on hand during last five years with details such as name of work, year of completion, client name and address, cost of work, time period of construction, nature of work, etc., (It shall enclose a certificate from the owner that the service rendered by the firm has been satisfactory)

Sl. No.	Name & description of work	Value of work and date.	Period of construction and date.	Client persons to whom reference may be made.

3. TOOLS AND EQUIPMENT LIST

The tenderer shall indicate herein below the equipment he has in possession and the equipment he proposes to bring to the site, in case the work is awarded to him.

Sl. No	Type and Description of the equipment.	Numbers the bidder has in possession	Numbers he proposes to bring on to site

Tenderers hereby confirms that the quantity and type of tools he will employ for construction will not be less than those listed above and agree to bring more equipment if so warranted in the opinion of the Engineer-in-charge.

4. FINANCIAL

Bank Name: _____

Branch: _____

Account No.: _____

Average Annual Turnover for last 5 Years: _____

5. INSURANCE

Accident Insurance

Insured with: _____

Policy No.: _____

6. Details of Arbitration cases :

7. Any other detail you would like to
intimate in support of your technical bid
for appointment :

Signature of the authorized

Person with seal of the firm

(Note: Attach separate sheet for furnishing information in case the space in the format is insufficient)

INDIAN INSTITUTE OF ASTROPHYSICS
2ND BLOCK, KORAMANGALA,
BENGALURU – 560034.

PRICE BID

Name of Work: “Remodeling of Electronics Lab-II at 1st Floor of Main Lab Building, IIA, Koramangala campus, Bengaluru”

Tender Notice No.: 45/IIA/CIVIL/BANG/2021-22 Dated 26.07.2021

Name of

The Firm: _____

Address: _____

Phone No: _____

Last date for submission: 27.08.2021 at 15:00 hrs

Tender for the “Remodeling of Electronics Lab-II at 1st Floor of Main Lab Building, IIA, Koramangala campus, Bengaluru”

Conditions of contract

Sealed item rate tenders are invited by Indian institute of Astrophysics for the above mentioned work

Estimated cost : **Rs. 13,05,000.00 (Rupees thirteen Lakhs five thousand only)**

Time of completion : **Three (03) Months.**

Period of commencement : 7 days from the date of receipt of work order

Retention money/Security Deposit : 5% to be deducted from each RA bill and final bill, shall be released after one year of completion of work, deducting the cost if any towards the cost of defects rectified by employer due to lack of response of the contractor on completion of defects liability period and on certification by the engineer –in charge.

Defects liability period : 12 Months.

Amount of liquidated damage : Liquidated Damages will be deducted from the bill amount while making final payment for delay in completion of work if any, as per the extant rules of the CPWD.

Escalation : In view of the short duration of the contract, no escalation will be paid to the contractor on account of changes in the market prices of any items of work or changes in the cost of living indices etc.

Tax deduction at source : Statutory taxes will be deducted while making payment from time to time as applicable.

The Director, Indian institute of Astrophysics reserves the right to reject any or all the tenders without assigning any reason whatsoever.

The tenderer shall be responsible for arranging and maintaining at his own cost all **materials, tools and plants, water, electricity**, facilities **for workers, safety norms** and all other services required for executing the work.

Timely completion of work and quality of workmanship are of prime importance and the work shall be completed within the stipulated period. Cement consumption must match with standard theoretical calculations. Recovery to be effected in the event of not fulfilling the cement consumption. The waterproofing is the main work for which five year performance guarantee need to be provided by the applicator.

I/ We have read the tender notice, specifications, schedule, drawings, general rules and all other contents of the tender conditions, and Understand that you are not bound to accept the lowest or any tender you may receive.

I/ we hereby tender for the execution for the work specified above within the time specified above, at the rates specified in the attached bill of quantities and in all respects with these specifications, design, drawings and instructions.

I/we agree that should I/we fail to commence the work specified in the above memorandum an amount equal to amount of earnest money mentioned in the form of invitation of tender shall be absolutely forfeited to the Director.

Dated: -----

Signature of the contractor with stamp

General conditions of contract.

Item rate tender for works.

- The institute reserves the right to alter the scope /or reduce quantum of work before issue of work order and the contractor shall not have any claim what so ever on this account.

- Rates quoted by the contractor in item rate tender in figures and words shall be accurately filled in so that there is no discrepancy in the rates written in figures and words. However if a discrepancy is found, the rates which correspond with the words worked out by the contractor shall be taken as correct.

- If the amount of an item is not worked out properly by the contractor or it does not correspond with the rate written either in figures or words, then the rate quoted by the contractor in the words shall be taken as correct.

- When the **rates quoted by the contractor in figures and in words** tally but the amount is not worked out correctly the rate quoted in words by the contractor will be taken as correct and not the amount.

- The contractor shall take all precautionary measures to prevent entry of dust, dirt and noise pollution to the adjacent buildings and keep the premises neat and tidy, remove surplus materials and rubbish and shall not cause inconvenience to the staff of IIA. If the contractor or his working people or servants shall break, deface, injure or destroy any part of a building in which they may be working or any buildings, road, kerbs, fence, enclosure, water pipes cables, drains, electric and telephone posts or wire, trees grass or garden. The cost of any such damage and risks arising out of this shall be entirely borne by the contractor.

- A bill shall be submitted by the contractor each month on or before the date fixed by the Engineer- in charge. All the measurements of the work may be recorded jointly by the Engineer-in charge and the contractor or their respective representatives. The measurements will be taken at site, as per latest IS code of practice for measurements. All measurements shall be taken with steel tapes only.

- The Engineer- in -Charge shall have full powers to the removal from the premises of all materials and bad workmanship, which in his opinion are not in accordance with the specifications.

- ❑ The Engineer –in- Charge may require the contractor to dismiss or remove from the site of the work any person or persons in the contractors employ upon the work who may be in competent or misconduct himself.

- ❑ For working on Sundays, holidays and late hours prior permission will be accorded by the Engineer-in charge on the application made by the contractor.

- ❑ All works to be executed under the contract shall be executed under the direction and subject to the approval in all respects of the Engineer-in charge who shall be entitled to direct at what point or points and in what manner they are to be commenced and from time to time carried on.

- ❑ The contractor shall treat all materials obtained during dismantling of a structure, excavation of the site for a work etc as institute’s property and such materials shall be disposed off to the best advantage of the institute.

- ❑ The contractor shall execute the whole and every part of the work in the most substantial and workman like manner and in strict accordance with the specifications of the CPWD / DOS / Bureau of Indian Standards. In case of any class of work for which there is no such specifications the contractor shall carry out the work in all respects in accordance with the instructions in writing of the Engineer- in charge.

- ❑ The Engineer-in charge shall have powers to make any alterations in, omissions from, additions to or substitutions for the original specifications, drawings, designs and instructions that may appear to him necessary or advisable during the progress of the work and the contractor shall carry out the work in accordance. The rates for such additional, altered or substituted items of work shall be worked out in accordance with the standard procedure followed in CPWD / DOS.

- ❑ If at any time after the commencement of the work, the Director shall for any reason whatsoever not require the whole thereof as specified in the tender to be carried out, the Engineer- in-Charge shall give notice in writing of the fact to the contractor who shall have no claim to payment of compensation whatsoever on account of any profit or advantage which he might have derived from the execution of the work in full, but which he did not derive in consequence of the full amount of the work not having been carried out, neither shall he have any claim for compensation by reason of any alterations having been made in the original specifications , drawings ,designs and instructions which shall involve any curtailment of the work as originally contemplated.

- The contractor shall obtain a valid license under the Contract Labour (R&A) act 1970 and the contract labour (Regulation & Abolition) central rules, 1971 before the commencement of the work and continue to have a valid license until the completion of the work. No labour below the age of eighteen years shall be employed on the work. The contractor shall pay to labour employed by him either directly or through sub contractors, wages not less than fair wages as defined in the provision of the contract labour (R&A) act 1970 and the contract labour (R&A) central rules 1971 wherever applicable.

- The contractor shall at his own expenses arrange for the safety provision as per safety code framed from time to time and shall at his own expenses provide for all facilities in connection therewith.

- The contractor shall comply with all the provisions of the payment of wages act 1936, Minimum Wages Act 1948, Employees liability act 1938, Workmen's Compensation act 1923, Industrial Disputes Act 1961 and the Contractors Labour (R&A) Act 1970 or the modifications thereof or any other laws relating thereto and the rules made there under from time to time. The regulations aforesaid shall be deemed to be a part of this contract and any breach thereof shall be deemed to be a breach of this contract. Security deposit will not be refunded till clearance certificate from Labour Officer is obtained by contractor.

- The contractor shall make his /their own arrangements for water required for the works and nothing extra will be paid for the same, as the water available from the institute source may not be sufficient to meet the construction.

- The contractor shall have all the tools and plants necessary to carry out the work such as concrete mixer, vibrator and hoist. The contractor shall employ one graduate engineer during the execution of the work

- Certified plumbers should be employed by the contractor on the plumbing and sanitary work.

- The standard sectional weights referred to as standard tables in para 5.3.4 (TABLE 5.4) in CPWD specifications for works 2019 vol. 1 to be considered for conversion of length of various sizes of M.S bars and tor steel bars in to weight.

- The entire work is to be completed within the period stipulated i.e. **Three (03) months** from the 7th day of issue of Letter of Intent/Work Order. The period includes monsoon period also. Time shall be the essence of the contract. After the work awarded, the contractors shall furnish detailed time schedules for the approval of the Engineer-in charge which after approval shall form part of the contract and are to be strictly adhere to.

- The maintenance period for the work shall be twelve (12) months and any defects noticed during the period shall have to be rectified by contractor at his cost, failing which the action taken for maintenance Engineer-in charge shall be final over which the contractor will not have any claim.

- ❑ The contractor shall extend all co-operations to the contractors executing works such as electrical, air conditioning etc who might be working at the site and shall permit to use scaffolding etc already put up by him.
- ❑ The Engineer-in charge will have the right to get any item of the work included in this tender or not executed through other agencies. Schedule of probable quantities in respect of the work and specifications are enclosed. The schedules of probable quantities are liable to alterations by emission, deduction or additions at the discretion of the Engineer-in charge.
- ❑ The rates quoted by the tenderer in the schedule shall be inclusive of all taxes and levies. Such rates should provide the break-up of the cost and applicable taxes, levies etc.
- ❑ Samples of all materials to be incorporated in the works shall be submitted to the Engineer-in charge for his approval without claiming any extra cost. Materials not confirming strictly to the samples are liable to be rejected.
- ❑ The employment of any sub-contractors will be subjected to the approval of the Engineer-in-charge. If at any time during the progress of the work the Engineer-in charge determines that any sub-contractor is incompetent or undesirable the contractor shall take steps immediately to cancel such sub-contractor. The contractor shall be entirely responsible for all the work included in the contract whether executed by him or through his sub-contractors. In particular it may be noted that the contractor shall obtain steel doors and windows from a reputed manufacturer and before placing order for these, the contractor shall obtain the concurrence of the department for the agency from whom he proposes to obtain steel doors and windows.
- ❑ The contractor shall prepare a CPM /PERT /BAR chart/ detailed estimate programme within a week's time of issue of Work Order.
- ❑ All materials and articles brought by the contractor to the work site shall have to be declared at the security gate. Similarly no materials shall be taken out from the departmental premises without proper gate pass which will be issued by the Engineer-in charge.
- ❑ Unless otherwise provided in the schedule of quantities the rates tendered by the contractor shall be all inclusive and shall apply to all heights, lifts, leads and depths of the building and nothing extra shall be payable to him on this account.
- ❑ Sample of various materials required for testing shall be provided free of charge by the contractor. Testing charges, if any unless otherwise provided, shall be borne by the department. All other expenditure required to be incurred for taking the samples, conveyance, packing etc. shall be borne by contractor himself. In case of concrete and reinforced concrete work, the contractor shall be required to make arrangement for carrying out compression strength tests at his own cost including preparation of cubes curing etc. complete.

- ❑ For the purpose of recording measurements and preparing running account bills, the abbreviated nomenclature shall be accepted along with the item number.
- ❑ The contractor shall along the tender submit a schedule of machinery to be used on the work in support of his assurance to adhere to the time schedule specified in the proforma given.
- ❑ I /We declare that the work will be carried out as per the specifications in tender document and as per the specifications said above. The items of work not covered in the specifications said above will be carried out as per the specifications in the relevant CPWD specifications, and if not covered in CPWD specifications the work will be carried out as in the relevant IS specifications, and if not covered in the any of the above, the work will be carried out as directed in writing by the Engineer- in charge.
- ❑ I / We declare that the rates quoted by me/us are on the basis of the above.

Dated: -----

Signature of the contractor with stamp

TENDER FORM

To,

The Director,
Indian institute of Astrophysics,
Koramangala,
Bengaluru - 560034

Dear Sir,

Sub: Tender for project: “Remodeling of Electronics Lab-II at 1st Floor of Main Lab Building, IIA, Koramangala campus, Bengaluru”

With reference to the tender invited by you for the above proposed work, I/we write this after having:

- a). Examined the designs, drawings, detailed specifications to tenders, sample agreement, the general conditions of contract and special conditions of contract annexed there to (here in after called ‘the contract documents’) relating to construction.
- b). Visited and examined the site of the proposed work and acquired the requisite information relating to or affecting the tender. We are agreed to the decisions of the pre bid meeting by signing and stamping the minutes of the meeting which is enclosed along with this tender.

I/We undersigned hereby offer to construct the proposed work in strict accordance with the contract document for the consideration to be calculated in terms of the priced schedule of quantities.

I/We undertake to complete the whole of the works as per the attached schedule from the date of issue of intimation by you that our tender has been accepted and up on being permitted to enter site. I/We further undertake that on failure, subject to the conditions of contract relating to extension of time, I/We shall be agreed ‘Liquidated damages’ for the period during which the work shall remain incomplete.

I/We hereby deposit with you as earnest money **Rs..... (RUPEES**
.....ONLY) [Carrying no interest]
and I/We fail to take up the contract when called up on to do so.

Our Bankers are

1.

2.

Place:

Date:

Signature of the tenderer

Name of the partners of the firm

Or

Name of the person having power of attorney to sign the contract

SPECIAL CONDITIONS

GENERAL:

SPECIAL CONDITIONS OF CONTRACT shall be read in conjunction with GENERAL CONDITIONS OF CONTRACT and both form an integral part of contract. Where the two are at variance, the conditions stipulated in this as SPECIAL CONDITIONS shall supersede relevant GENERAL CONDITIONS.

1. SPECIAL CONDITIONS:

HELMETS :

As a measure of safety, persons employed on the site, Engineers and Supervisors shall wear a helmet of approved make at all times when they are at the site. No visitors shall be allowed on work site without wearing helmet.

Contractors shall make arrangements to provide safety helmets to all the persons employed on the site, Engineers and Supervisors at his cost.

Contractors shall display safety and warning signs at strategic locations at the site.

CHILD LABOUR:

Contractor or his Sub-contractor shall not employ any child labourers on the work site, either permanently or temporarily. It shall be the responsibility of the main Contractor to make sure that no child labour is employed at the site. Contractor shall indemnify the Employer against any consequences statutory or otherwise, that may arise out of employing child labour on the site.

TEMPORARY ELECTRICAL WIRING:

It shall be the responsibility of the main Contractor to make sure that the temporary wiring for construction activity shall adhere to minimum safety precautions as per Electricity Act. All wires / cables shall be drawn on wooden poles properly fixed and shall be drawn overhead.

2. LABOUR SHEDS:

Labour sheds shall be constructed with non-combustible materials like GI sheets or Asbestos sheets. Contractor will not be permitted to use combustible materials such as palm leaves etc., for the construction of the labour sheds.

3. MATERIALS SUPPLY / PROCUREMENT:

No materials will be supplied by the owner. If any increase on the material procurement cost/ labour, P&M will not be entertained for any kind of escalation till completion of the project.

4. BILLING CERTIFICATION & PAYMENT OF BILLS:

BILLING:

The contractor shall prepare measured bills after completing the quantum of work as per the standard format and submit the same to the Institute for checking and issue of Certificates for Payment. A proper tax invoice (with breakup of the cost and taxes) shall be submitted and bill shall be settled within 30 days of receipt at IIA. Running account bills shall be prepared and submitted and payment is subject to consideration of the engineer in Charge/IIA.

PAYMENT OF BILLS:

The contractor shall be paid by the Employer from time to time based on the certificate from the architect/project in charge for running bill accounts and final bill.

5. REPAIR OF WORKS DONE BY OTHER AGENCIES:

The civil contractor shall make up any deficiency in the finishing of the areas damaged by other agencies in a workmanlike manner to achieve uniform finishing of the building at no extra cost.

6. MATERIAL TESTS:

The contractor shall provide such assistance, instruments, machines, labour and materials as are normally required for examining, measuring and testing.

The contractor shall install a compression testing machine at site to test concrete cubes and solid blocks.

The contractor shall maintain a record of all the test results in an approved format and periodically submit the same for Architect's/Employer's scrutiny.

7. PLANT & MACHINERY:

The contractor is obliged to furnish to the Employer detailed list of equipment, plant, machinery & personnel proposed to be deployed in this project.

8. CLIENT'S & ARCHITECT'S OFFICES & FACILITIES:

The contractor shall supply, erect and satisfactorily maintain in good repair until final completion of works, a well lighted temporary site office.

The contractor shall provide at all times for the duration of the contract survey instruments for the exclusive use of consultants as directed by consultants for carrying out of his duties in connection with the contract.

Such instruments which must be approved by the Architect shall include but not limited to the following:

- One theodolite & tripod capable of reading to 20 seconds
- One level with horizontal circle and tripod.
- Two metric leveling staffs not less than 3.5mtr high.
- One 100 metre rustless steel band, one 30 metre rustless steel tape and two 30 metre linen tapes.
- An adequate number of ranging rods drop arrows, wooden setting-out pegs, etc.

The contractor shall be solely responsible for all such instruments and equipment's and shall ensure that they are at all times in good repair and adjustment.

9. SANITATION & DRAINAGE DURING CONSTRUCTION:

The contractor shall provide sanitation and drainage facilities on the site as stated subsequently.

The contractor shall strictly control the labour so that the site is not polluted, made dirty or littered with debris, wastes or the likes. Any person found creating mess or litter or pollution shall be removed from the site immediately at contractor's cost.

The contractor shall provide sanitation facilities at convenient locations on site to preserve the cleanliness of the site. The effluent shall be directed as follows:

- Waste water : Collection and pumping out and disposal off the site in approved manner.
- Sewage : Septic tank provision - sludge to be collected and disposed off at intervals as directed.

The location of the above provisions shall be as marked on the site mobilization scheme drawing.

10. DISCREPANCIES:

The contractor shall bring to the notice of the Architect any discrepancies within or between contract drawings and/or the other contract documents prior to preparation of working drawings and commencement of work and shall not proceed with work until the Architect gives clarifications and instructions to proceed.

11. REPORTS BY CONTRACTOR:

- 11.1 The contractor shall file daily category-wise labour return. The report shall indicate scheduled requirement against actual strength.
- 11.2 The contractor shall prepare weekly reports of planned and actual progress of work and subsequent week's scheduled work. These will also include material procurement status. These reports shall be submitted to Architect and shall be reviewed during weekly co-ordination meeting.
- 11.3 The contractor shall submit monthly report along with monthly bills.
- 11.4 Further progress charts and schedules shall be prepared by the contractor as directed by the Architect.
- 11.5 The contractor shall submit re-conciliation statement of all the materials supplied by the Client, if any, along with every running & final bill.

12. FORCE MAJEURE:

If the work(s) be delayed by:-

- (i) Force majeure, or
- (ii) Abnormally bad weather, or
- (iii) Serious loss or damage by fire, or
- (iv) Civil commotion, local commotion of workmen, strike or lockout, affecting any of the trades employed on the work, or
- (v) Delay on the part of other contractors or tradesmen engaged by Engineer-in-Charge in executing work not forming part of the Contract, or
- (vi) Non-availability of stores, which are the responsibility of Government to supply or
- (vii) Non-availability or break down of tools and Plant to be supplied or supplied by Government or

- (viii) Any other cause which, in the absolute discretion of the Engineer-in-Charge is beyond the Contractor's control.

Then upon the happening of any such event causing delay, the Contractor shall immediately give notice thereof in writing to the authority as indicated in Schedule but shall nevertheless use constantly his best endeavours to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of the Engineer-in-Charge to proceed with the works.

13. **PERFORMANCE GUARANTEE:**

To ensure due performance of the contract, performance security or Performance Bank Guarantee (PBG) is to be obtained from the successful bidder awarded the contract. Performance security should be for an amount of three (3) percent of the value of the contract or as per the prevailing notification on the date of work order.

In works contract it is usual to take three percent of contract value Performance Security. Performance security may be furnished in the form of an account payee demand draft, fixed deposit receipt from a commercial bank, bank guarantee issued/ confirmed from any of the commercial bank in India or online payment in an acceptable form, safeguarding the client's interest in all respects.

Performance Security is to be furnished by a specified date generally 21 (twenty-one) days after notification of the award and it should remain valid for a period of 60 (sixty) days beyond the date of completion of all contractual obligations of the contractor, including Defect Liability Period (DLP).

The performance security will be forfeited and credited to the procuring entity's account in the event of a breach of contract by the contractor. It should be refunded to the contractor without interest, after he duly performs and completes all obligations under the contract but not later than 365 days of completion of the Defect Liability Period (DLP). Return of Bid/ Performance Securities should be monitored and delays should be avoided. If feasible, so as to make the process transparent and visible.

14. **ARBITRATION:**

All disputes or differences which may arise between the IIA and the contractor, with regard to the meaning or interpretation or matter or things done or to be done in pursuance thereof, shall be resolved as per the Indian Arbitration Act 1996 by the Sole Arbitrator. The Director IIA is the sole arbitrator and his decision shall be final and binding on both the parties.

In case any dispute or difference shall arise between the IIA and the contractor either during the progress or after the completion or abandonment of the works as to the construction of this contract or as to any matter or thing of whatsoever nature arising there under or in connection therewith, then such dispute or difference shall be and is hereby referred to the Arbitration of a common Arbitrator, if agreed upon or otherwise to two Arbitrators one to be appointed by each party to the dispute and the Arbitration shall be governed by the Arbitration Act, for the time being in force.

EPOXY BASED ANTISTATIC FLOORING SPECIFICATIONS

Providing and applying 3 mm thick epoxy resin based antistatic flooring, self levelling with smooth finish, in required shade and of required conductor loading. Epoxy based flooring should be applied in several layers in order to insure permanent connection for the elimination of static electricity between the supporting base and the surface and should conform to IS: 9197. The entire job is to be undertaken by manufacturer's trained and skilled technicians to lay the epoxy-based floor as per IS: 4631.

The top layer of epoxy resin in 3 or more coats in the desired colour and shade is applied so as to achieve the required thickness, shade and finish. The mechanical parametric properties to be achieved are as follows.

Resistance to compression 800 Kgf/Cm²

Resistance to deflection 400 Kgf/Cm²

Resistance to abrasion 0.35 g/h

Fire behavior Class IV/1

Resistance to current leakage 1.10 Ohms

ANTISTATIC EPOXY FLOOR TOPPINGS

MATERIAL DESCRIPTION

The heavy-duty abrasion, chemical resistant & antistatic epoxy screed flooring shall be an epoxy Self leveling screed, which is laid to a thickness of 3mm. This shall be HSCC/Tech Specs RIMS Imphal Page - 33 extremely monolithic, seamless, joint less and is ideally suited for areas requiring Resistance to leakage of Current of 10 4 to 10 8 ohms.

- a. A coat of primer as mentioned below shall be applied over clean, dry concrete surface:
 - ANTISTATIC EPOXY PRIMER - Component A (Resin) (182gm)
 - ANTISTATIC EPOXY PRIMER - Component B (Hardener) (68gm)

- b. While the primer coat is still tacky, a 3 component, antistatic chemical resistant epoxy SCREED AS BASE COAT is to be applied with following materials @2.0kg/sqm
 - Component A (Resin) (0.84kg)
 - Component B (Hardener) (0.32kg)
 - Component C (Graded Filler) (0.84kg)

- c. Over this a 2 component final top coat of antistatic SCREED AS is to be applied @3.5kg per sqm in two layers
 - Component A (Resin) (2.87kg)

- Component B (Hardener) (0.63kg)

- a. The system so devised should follow the antistatic specifications of ASTM D257 (Surface Resistivity) or BS 2050 (electrical Resistance) The static decay Test should be around 0.02sec. the manufacturer should have Test Reports from some prestigious institutions like Central Power Research Institute or ERTL

APPLICATION LAYING PROCEDURE

The concrete should be properly cleaned and must be free from oil, grease, cement laitance, dust and other surface contaminants. The moisture content of the concrete must be checked and if found higher than 4% the concrete should be subjected to blow lamps, etc. to reduce the moisture contents.

Grooves of size 2mmX2mm at the edges of room along the perimeter and across the room are to be cut

A copper strip of approx 3/20 gauges is to be laid in the groove in a slight tension manner with help of U nails. After lying of Copper wire the entire groove is to be filled with antistatic Epoxy putty comprising of Part A, Part B and Part C.

After fixing the wire and putty apply antistatic Primer @250gms per sqm with component A and B in ratio as mentioned above.

Allow the primer to dry and when it is tack free Mix component A & B & C of screed AS Basecoat and apply on the surface @2.0kg per sqm for approximately a thickness of 1mm.

After this application allow the Basecoat to dry for 24 hrs and then apply the top coat of self leveling SCREED AS on top of the Basecoat after mixing component A & B. The Application of Top coat has to be either in single layer or double layer @ 3.5kg per sqm to give overall thickness of the self leveling Antistatic screed as 3mm. After spreading of screed spread the material with notch trowel and spike the entire surface with specially designed Spike rollers to remove any air bubbles entrapped within the screed.

After the entire Self Leveling screed has been trowel and spiked allows it dry and cure. For soft Foot traffic movement curing of a minimum of 48hrs is recommended and for other regular use of the area a minimum of 7 days of curing is advisable.

SPECIAL NOTE TO THE BIDDERS

1. The bidders are requested to visit the site and to get complete knowledge about the site conditions before quoting the rates.
2. The availability of materials, transportation of materials etc. to be ascertained before quoting the rate.
3. No labour will be allowed to work/stay beyond working hours and during institute holidays. If need to work/stay beyond working hours/on holidays, prior permission from the Engineer in Charge/Scientist in Charge should be obtained in writing.
4. No water and electricity will be supplied by IIA and separate arrangement has to be made by the contractor.
5. Quality and time for completion are the main essence of the contractor and contractor has to keep in mind while quoting the rates.
6. **Since the area under renovation is scientific activity area, proper care to be taken to avoid disturbance to the working personnel. The laboratory space proposed for renovation is in the building where major scientific faculty are working and hence proper care to be taken in view of safety and security. The works like drilling, hammering which are bound to make sound should be avoided during office hours or should be done only with prior permission.**
7. All the debris shall be kept in one place as directed by the Engineer in Charge and disposed off outside the campus on working days for which no additional cost will be paid. Working area/surrounding area shall be kept neat and clean every day after the work is completed.
8. All the materials shall be approved by IIA by providing sample/ mock up before executing the complete work. Clarification regarding tender clauses, technical specification, rate analysis etc. will be confirmed by referring to CPWD guidelines, works manual, specifications and analysis of rate which is binding on the contractor. Indian Standards (IS) shall be followed for execution of works.
9. The lowest quoted bidder cannot claim as lowest bidder unless the bidder satisfies all the tender conditions, technical qualifications and eligibility with supported documents complete in all respect.
10. **Please find the check list enclosed in the last page of this tender document and comply accordingly. (No document will be considered without check list compliance)**

COVID-19 Guidelines for Construction Workers

- ❖ IIA is committed for protecting the health and safety of construction workers and workplaces during the COVID-19 pandemic. The contractor is hereby informed to adhere the following steps to reduce risk of spread to the corona virus for construction workers and cooperate with the security of the Institute.
- ❖ Instruct workers who are sick/ having symptoms to stay away from site.
- ❖ Implement physical distancing practices to maintain at least 2 mts between co-workers/contractors/visitors, including while inside work trailers.
- ❖ Minimize close discussions at site among workers and visitors (including toolbox talks and safety meetings).
- ❖ Provide and have all workers wear face coverings (i.e., cloth face coverings or surgical masks) that have at least two layers of tightly woven breathable fabric, unless their work task requires a respirator. Face coverings should be provided at no cost to workers.
- ❖ Continue to use other normal control measures, including personal protective equipment, necessary to protect workers from other job hazards associated with construction activities.
- ❖ Provide and ensure workers use the supplies necessary for good hygiene practices. If workers do not have immediate access to soap and water, use alcohol-based hand sanitizers that contain at least 60 percent ethanol or 70% isopropanol.
- ❖ Do not allow workers to share tools and equipment. If sharing cannot be eliminated, clean and disinfect between each use.
- ❖ Clean and disinfect portable jobsite toilets and fill hand sanitizer dispensers regularly.
- ❖ IIA will take safety measures in view of COVID-19 at main gate by way of thermal scanning and hand sanitization for which all workers should cooperate.

LIST OF APPROVED MATERIALS

CIVIL

Sl. No	Material	Make
1	Steel	SAIL – TMT, VIZAG STEEL
2	Cement	ACC/Birla/L&T
3	Acrylic Exterior Emulsion	Asian Paints
4	Plastic Emulsion Paint	Asian Paints
5	Enamel Paint	Asian Paints
6	Gypsum/Mineral board	Gyproc (Saint-Gobain) / Armstrong
7	Glass	Saint Gobain, Modi
8	Flush Door	Century/Greenply/ Kuttly's Bond Wood/Hunsur Board
9	M.S. sections	Zindal/Tata/Vizag steel
10	Veneer/laminate/ply	Century/Greenlam/merino
11	Door Fittings	Godrej/Dorma/Hettich

WATER SUPPLY AND SANITARY WORKS

Sl.No.	Material	Make
1	PVC	Astral/Ashirvad/Kisan/Supreme
2	CPVC	Astral/Ashirvad/Supreme/Prince
3	C.P. Fittings	Jaguar/approved equivalent
4	Bathroom accessories	Jaguar/approved equivalent

BILL OF QUANTITIES

Bill of Quantities for the work of “Remodeling of Electronics Lab-II at 1st Floor of Main Lab Building, IIA, Koramangala campus, Bengaluru”

(NOTE: Rates shall be quoted after reading the complete Specifications and understanding site conditions)

Sl. No	Description	Quantity	Unit	Rate (Rs.)		Amount (Rs.)
				In words	In Figures	
A) Civil works						
1	Dismantling aluminium/ Gypsum partitions, doors, windows, fixed glazing and false ceiling including disposal of unserviceable material and stacking of serviceable material within 50 meters lead as directed by Engineer-in-charge.	28.00	sqm			
2	Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking within 50 metres lead :					
2.1	Of area beyond 3 sq. Metres	2.00	Each			

Sl. No	Description	Quantity	Unit	Rate (Rs.)		Amount (Rs.)
				In words	In Figures	
3	Providing and fixing partition frame work consisting of outer 75x50 mm & inner 50x50 mm sal wood frame work at spacing not exceeding 600mm c/c fixed to the bottom and ceiling, the partition shall be skinned on both sides using 12mm ply + 3.5mm thick commercial plywood with 4mm grove up to 7'-0" or ceiling height of approved brand termite and water resistance, and top covered with 1mm thick laminate of approved quality, complete including cost and conveyance of all materials, labour for all items of work, HOM of equipment as per specification. Note: The frame work shall be rigid & provide supports/fixtures by anchoring to walls and floor at 600mm intervals. The panels may be partly glass and partly wood which will be finalised during execution the rate shall include the cost of necessary lippings/beadings, fixtures, etc.,. Complete.	30.00	sqm			
4	Providing and fixing ISI marked flush door shutters conforming to IS: 2202 (Part I) non-decorative type, core of block board construction with frame of 1st class hard wood and well matched commercial 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters: Note: Rate is including lipping with 2nd class teak wood battens 25 mm thick & provision of viewing panel of size about 0.5 sqm shall be made.					

Sl. No	Description	Quantity	Unit	Rate (Rs.)		Amount (Rs.)
				In words	In Figures	
4.1	35 mm thick including ISI marked Stainless Steel butt hinges with necessary screws	8.00	sqm			
5	Conference Table: Providing and fabricating the conference table finished of 40mm thick block board with 1 mm thick laminate the edges will have 40mm x 6mm solid beach wood beading with melamine polish The shape, size details etc. will be as per the drawing and may vary marginally as per site conditions. The shape of the table is rectangular and size is 9'-0"x5'-0"x2'-6" mm with provision of networking popup sockets, wire management etc. The specification of the table will be as per drawing.	1.00	Each			
6	storage unit -wooden - one side laminate: providing and fixing wood storage unit upto lintel height with one side laminate with 18mm Plywood with edge bound for body, 18mm Plywood with open able shutters and individual locking system for shutter, 9mm Plywood with edge bound for rear portion with hafele fitting hinges , hafele locks, minifix assembly, screw legs, handles and tower bolts depth 450mm to 600 mm and melamine polishing for beading. Complete as per specifications and as directed by engineer-in charge.	15.00	sqm			

Sl. No	Description	Quantity	Unit	Rate (Rs.)		Amount (Rs.)
				In words	In Figures	
7	Providing and fixing panelling or panelling and glazing in panelled or panelled and glazed shutters for doors, windows and clerestory windows (Area of opening for panel inserts excluding portion inside grooves or rebates to be measured). Panelling for panelled or panelled and glazed shutters 25 mm to 40 mm thick :					
7.1	Ply wood 5 ply, 9 mm thick					
7.1.1	Decorative plywood both side decorative veneer (Type - I) conforming to IS 1328 BWR type	5.00	Sqm			
8	Providing and fixing aluminium extruded section body tubular type universal hydraulic door closer (having brand logo with ISI, IS : 3564, embossed on the body, door weight upto 36 kg to 80 kg and door width from 701 mm to 1000 mm), with double speed adjustment with necessary accessories and screws etc. complete. Make : Dorma/Godrej/Hettich	4.00	Each			
9	Providing and fixing bright finished brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles of approved quality with necessary screws etc. complete.	4.00	Each			

Sl. No	Description	Quantity	Unit	Rate (Rs.)		Amount (Rs.)
				In words	In Figures	
10	Providing and fixing UPVC (Unplasticized Poly-Vinyl Chloride) fixed cum openable windows multichambered and stiffened / reinforced framed windows using 112 mm x 52 mm size sections around as main frames and shutters made with the profile sections of size 68 mm x 42 mm, including the cost and fixing of 5 mm thick clear float glass in shutters and SS Mesh in mesh Shutters of Size 60 mm x 35 mm with necessary beading, the corners of all the profiles of frames and shutters shall have well defined welded corner joints without any gaps, fixing the window unit to the existing masonry with anchor fasteners as required. The shutters shall have necessary handles and other associated fittings to facilitate smooth operation. The gaps between the window frames and masonry walls shall be filled with silicon or with any other suitable filler materials. Both the Frame and the Shutters shall be Reinforced with GI Profiles of thickness 1.25mm.	7.00	Sqm			

Sl. No	Description	Quantity	Unit	Rate (Rs.)		Amount (Rs.)
				In words	In Figures	
11	<p>Roller blind (roller blind decorative fabric should be made up of 25% to 50% polyester, 50% to 75% PVC), it should have specific low emissivity treatment and lead free with Greenguard certification. It should have 3% - 5% openness, including antimicrobial additive preferably Microban. The fabric should be 0.76mm - 0.99mm thick, mesh weight should be 16.40 - 16.70 (oz/yd²), Flame retardant, Jacquard weave with 10 years of warranty against any distortion in fabric due to any reason. UV blockage should be approx 95% Roller Blind tube is made of Aluminum with a diaM of 38mm Anodized, bottom rail is power coated & mechanism of plastic with chain and metal bracket, sturdy fixing arrangement as per direction of Engineer in Charge.</p>	9.00	Sqm			

Sl. No	Description	Quantity	Unit	Rate (Rs.)		Amount (Rs.)
				In words	In Figures	
12	Providing & applying 3mm Self-levelling antistatic Epoxy flooring system including surface preparation by diamond grinding physical key with the base floor, filling the construction joints with epoxy mortar, followed by priming the surface with epoxy primer (200 microns), laying of self-smoothing epoxy screed of required thickness and laying of solvent free epoxy self smoothing floor topping (1000 microns) in desired shade (application shall be done by trained and certified labour by the manufacturing company and complete as per detail manufacturers specification.) complete to the entire satisfaction of the client. Specifications: A copper strip grid of 1 X 1 m shall be laid over the base court. The copper strip shall be not less than 0.025 mm thick, 20mm wide. Provision shall be made to connect to common earthing busbar at regular intervals. It shall follow as per ASTM D257 & IS: 9197	72.00	sqm			

Sl. No	Description	Quantity	Unit	Rate (Rs.)		Amount (Rs.)
				In words	In Figures	
13	<p>FALSE CEILING: False ceiling suspension system: False ceiling (Tiles, Panels) shall be suspended with the frame work and Accessories complete from roof slabs, beams etc., by means of 4 mm dia. Galvanized rods, spring steel clips, hanger, Tee Runner, Ultra Look Tee Runner and edge trim etc., The Suspension system consists of Grip bolt of size 50mm in length and dia. of 9.5mm with 16mm long treads for fixing 9.2mm dia. Nut, the thickness of the nut is 5.2mm, this is also fixed with washer of 18.50 mm in dia. and the thickness of the washer is 0.8mm, this grip bolt in fixed on to the RCC slab, by making holes with special hammering machine and with the help of nut and washer, dip Galvanized Iron Rod of 4mm dia. is rounded, then it is been twisted, so that it with-rest above the washer and later on the nut is been tightened and the grip bolt expands inside the RCC slab and holds the G.I Rod 4mm thick straight, this G.I supporting rod of 4mm thick is also twisted on the other side of fixed "j" bolt, this "j" bolt consists of 3mm thick with a length of 133mm, this "j" bolt is later on twisted by 26mm, this "j" bolt has a treated portion of 47mm and this is provided with a nut of 3.63mm thick and the dia. of the nut is 6.9mm, this nut has a washer and this washer has a dia.of 19 mm and the thickness of 0.6mm</p>					

Sl. No	Description	Quantity	Unit	Rate (Rs.)		Amount (Rs.)
				In words	In Figures	
	and all this components are chromodised, later on G.I supporting rod of 4mm thick dia. is twisted and fixed inside the nut and washer, then to maintain a good, straight level of the false ceiling, the nut in "j" bolt is then moved up or down for proper level. The Galvanized Iron 4mm dia. been cut to size of length required as per site requirement.					
13.1	FALSE CEILING - Providing and fixing Saint Gobin TileGrid Ceiling of GYPROC SAINT-GOBAIN Mineral fiber ceilings of 'CELOTEX PIN' with narrow Reveal edge corner bevel 14mm grid (bolt slot) in aluminum powder coated sections supported from ceiling (1.2m x1.2m grid for support rods) with GI framework of every 50mmx50mm grid junction, proper leveling and finished of the joints & top surface as per manufactures specifications. All edges shell be perfectly straight. G.I angle shall be embedded within, at the edge and the surface finished flush with surrounding surfaces complete as directed. Cost include removal of existing grid false ceiling and cart away the debris from the site	72.00	Sqm			

Sl. No	Description	Quantity	Unit	Rate (Rs.)		Amount (Rs.)
				In words	In Figures	
14	Providing waterproof treatment to roof slab using 2 coats of acrylic co polymer elastomeric ISOPROOF sealer and protector. The surface shall be prepared free of tar, dust, fungus, loose particles etc. The surface shall be applied with basecoat of crystallization liquid then ISOPROOF, wetting agent and liquid (1:1:6) over the prepared surface. In addition the surface shall be provided with polysulphide/acrylic sealant to V grooves making haunch at junction of parapet and roof slab and at damaged portion using patching mortar to drain off rainwater. Over this one coat of flexible cementitious membrane (FCM) , spreading 2 layers of 40gsm non woven geotextile membrane as reinforcing material (over FCM) with one primer coat of ISOPROOF and applying second coat confirming to ASTM D 412-1992. The work shall be carried out as per the directions of Engineer in charge.	45.00	sqm			
15	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.	125.00	sqm			
16	Applying priming coat:					
16.1	With ready mixed white or pink or Grey primer of approved brand and manufacture on plastered wall surface	125.00	sqm			

Sl. No	Description	Quantity	Unit	Rate (Rs.)		Amount (Rs.)
				In words	In Figures	
17	Wall painting with premium acrylic emulsion paint of interior grade, having VOC (Volatile Organic Compound) content less than 50 grams/ litre of approved brand and manufacture, including applying additional coats wherever required to achieve even shade and colour.					
17.1	Two coats	125.00	sqm			
18	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade :					
18.1	Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture	12.00	sqm			
19	Melamine polishing on wood work (one or more coat) for doors	25.00	sqm			
20	Providing and injecting approved grout in proportion recommended by the manufacturer into cracks/honey-comb area of concrete/masonry by suitable gun/pump at required pressure including cutting of nipples after curing etc. complete as per directions of Engineer-in-Charge.(The payment shall be made on the basis of actual weight of approved grout injected.)					

Sl. No	Description	Quantity	Unit	Rate (Rs.)		Amount (Rs.)
				In words	In Figures	
20.1	Stirrer mixed Acrylic Polymer of approved make @ 2% of weight of cement used) modified Cement slurry made with non shrink compound in concrete/RCC work	100.00	Kgs			
21	Making groove cutting in walls & Floor for laying of conduits for electrical & networking and making the surface good by using CM 1:3 with GI mesh.	35.00	Rm			
22	Making holes in wall and fixing PVC pipe of 3" for A/c outlet provision and finishing the surface with CM 1:3	3.00	Each			
23	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.					
23.1	All kind of soil. Rate shall be for each pit of size 1 x 1 x 3 m	2.00	Each			

Sl. No	Description	Quantity	Unit	Rate (Rs.)		Amount (Rs.)
				In words	In Figures	
24	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	2.00	Cum			
Civil - Sub Total (A)						
<u>B) Electrical works</u>						
All Wires: Finolex FRLS						
All switch boxes, cover plates, switches, sockets: Roma modular						
1	Office Lighting: Supply and installation of Philips 2ft x 2ft, 36 Watts cold white, complete LED luminaire (Light Fitting type RC370B) or equivalent, suitable for grid ceiling. Wiring for light fixtures from the existing lights points/controls and extention wiring wherever required. Flexible hose industrial grade to be used for the wiring above ceiling.	8.00	no			
2	UPS outlet #1: Supply and fixing of distribution boxes/switch plates suitable for cutouts made in the work stations each consisting of one number of 16A modular switch and 2 nos of 6/16 amps modular sockets.	7.00	set			

Sl. No	Description	Quantity	Unit	Rate (Rs.)		Amount (Rs.)
				In words	In Figures	
3	UPS outlet #2: Supply and fixing of distribution boxes/switch plates suitable for cutouts made in the work stations each consisting of one number of 16A modular switch and 3 nos of 6/16 amps modular sockets.	3.00	set			
4	UPS wiring: wiring for 6/16A switch socket using FRLS insulated copper conductor single core cable (with 2x4.0Sqmm and 1x 2.5 sqmm for earthing) in surface / flexible hose/recesssed PVC conduit. Drawing power supply from the respective MCB/DB and distribution all the outlets.	250.00	m			
5	RAW power outlet#1: Supply and fixing of distribution boxes/switch plates suitable for cutouts made in the work stations each consisting of one number of 16A modular switch and 1 nos of 6/16 amps modular sockets.	7.00	set			
6	RAW power outlet#2: Supply and fixing of distribution boxes/switch plates suitable for cutouts made in the work stations each consisting of one number of 16A modular switch and 3 nos of 6/16 amps modular sockets.	4.00	set			

Sl. No	Description	Quantity	Unit	Rate (Rs.)		Amount (Rs.)
				In words	In Figures	
7	Raw power wiring: wiring for 6/16A switch socket using FRLS insulated copper conductor single core cable (with 2x4.0sqmm and 1x 2.5 sqmm for earthing) in surface / flexible hose/recessed PVC conduit. Drawing power supply from the respective MCB/DB and distribution all the outlets.	250.00	m			
8	HVAC Circuit single phase : Wiring using 3 x 4.0 sqmm PVC insulated FRLS wire drawn in 20mm dia 2mm thick PVC FRLS conduit/ PVC from the distribution board HVAC socket, drawing power from the respective MCB with independent phase and neutral from DP MCB from main DB.	30.00	m			
9	HVAC outlet: Supplying and fixing 20 A, 240 V, SPN Industrial type socket outlet, with 2 pole and earth, metal enclosed plug top alongwith 20 A "C" curve, SP MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket outlet and complete with connections, testing and commissioning etc. as required.	3.00	set			
10	Pop Up Box/Cable Cubby: Supplying and fixing of pop up type power socket box .It must have Hydraulic with HDMI, TELEPHONE,AUDIO, LAN & POWER port. Ports Available : 4 x Power, 4 x LAN (data voice), 1 x HDMI, 1 x VGA, 1 x Telephone port	1.00	no			

Sl. No	Description	Quantity	Unit	Rate (Rs.)		Amount (Rs.)
				In words	In Figures	
	Audio 3.5, 1 x USB, or better. Size of Panel: 265 x 117 x 2mm or better as per requirement. Out of Box Size: 222 x 108 x 67mm or better as per requirement.					
11	Asseby table Power up Box :Supply and fixing of distribution boxes/switch plates suitable for cutouts made in the work stations each consisting of 6 number of 16A modular switch and 6 nos of 6/16 amps modular sockets with individual control	2.00	no			
12	Industrial Sockets : Supplying and fixing 30 A, 415 V, TPN Industrial type socket outlet, with 4 pole and earth, metal enclosed plug top alongwith 30 A "C" curve, TPMCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required.	2.00	no			
13	Industrial Sockets Wiring : wiring with FRLS insulated copper conductor single core cable (with 1x6.0Sqmm for each phase and 1x 4 sqmm for earthing) in surface / flexible hose/recessed PVC conduit. Drawing power supply from the respective MCB/DB and distribution all the outlets.	80.00	m			

Sl. No	Description	Quantity	Unit	Rate (Rs.)		Amount (Rs.)
				In words	In Figures	
14	UPS Main DB : Supply and Installation of 12 way (4+36), TPN, vertical type, MCB DB, double door	1.00	no			
15	UPS Main DB wiring: wiring with FRLS insulated copper conductor single core cable (with 1x6.0Sqmm for each phase and 1x 4 sqmm for earthing) in surface / flexible hose/recessed PVC conduit. Drawing power supply from the respective MCB/DB and distribution all the outlets.	240.00	m			
16	Raw Power Main DB : Supply and Installation of 12 way (4+36), TPN, vertical type, MCB DB, double door	1.00	no			
17	RAW Power Main DB wiring: wiring with FRLS insulated copper conductor single core cable (with 1x6.0Sqmm for each phase and 1x 4 sqmm for earthing) in surface / flexible hose/recessed PVC conduit. Drawing power supply from the respective MCB/DB and distribution all the outlets.	80.00	m			
18	Cable Trunking for Main DB's : Supplying and erecting PVC box trunking of size 100x50 mm.with accessories on wall/ceiling.	90.00	m			

Sl. No	Description	Quantity	Unit	Rate (Rs.)		Amount (Rs.)
				In words	In Figures	
19	Telephone: Supply and drawing of 2 pair Telephone cable through suitable cable trunking from the existing junction box and providing modular type outlet.	2.00	point			
20	Earthing Strip : Supplying and laying 25 mm X 5 mm copper strip on surface as strip earth electrode, including connection/terminating with nut, bolt, spring, washer etc. as required.(Jointing shall be done by overlapping and with 2 sets of brass nut bolt & spring washer spaced at 50mm)	60.00	m			
21	Earth Pit : Earthing with copper earth plate 600 mm X 600 mm X 3 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long (GI class B heavy duty) etc. with charcoal/ coke and salt as required.	2.00	Set			
22	LAN Cable: Supplying and drawing of UTP 4 pair CAT 6 LAN Cable in the existing surface/ recessed Steel/ PVC conduit as required (2 run of cable)	68.00	m			

Sl. No	Description	Quantity	Unit	Rate (Rs.)		Amount (Rs.)
				In words	In Figures	
23	Internet and LAN cable: Supplying and fixing of modular RJ-45 internet sockets with suitable mounting box (modular type) including all interconnections as required with front plate D link or equivalent make, laying/concealing of CAT-6 LAN cables in pvc pipes complete in all respects from existing LAN switch/rack to I/O points	16.00	point			
Electrical - Sub Total (B)						
Sub total (A+B)=C						
GST on(C) @.....% = (D)						
Grand total (C+D) = E Rs.						

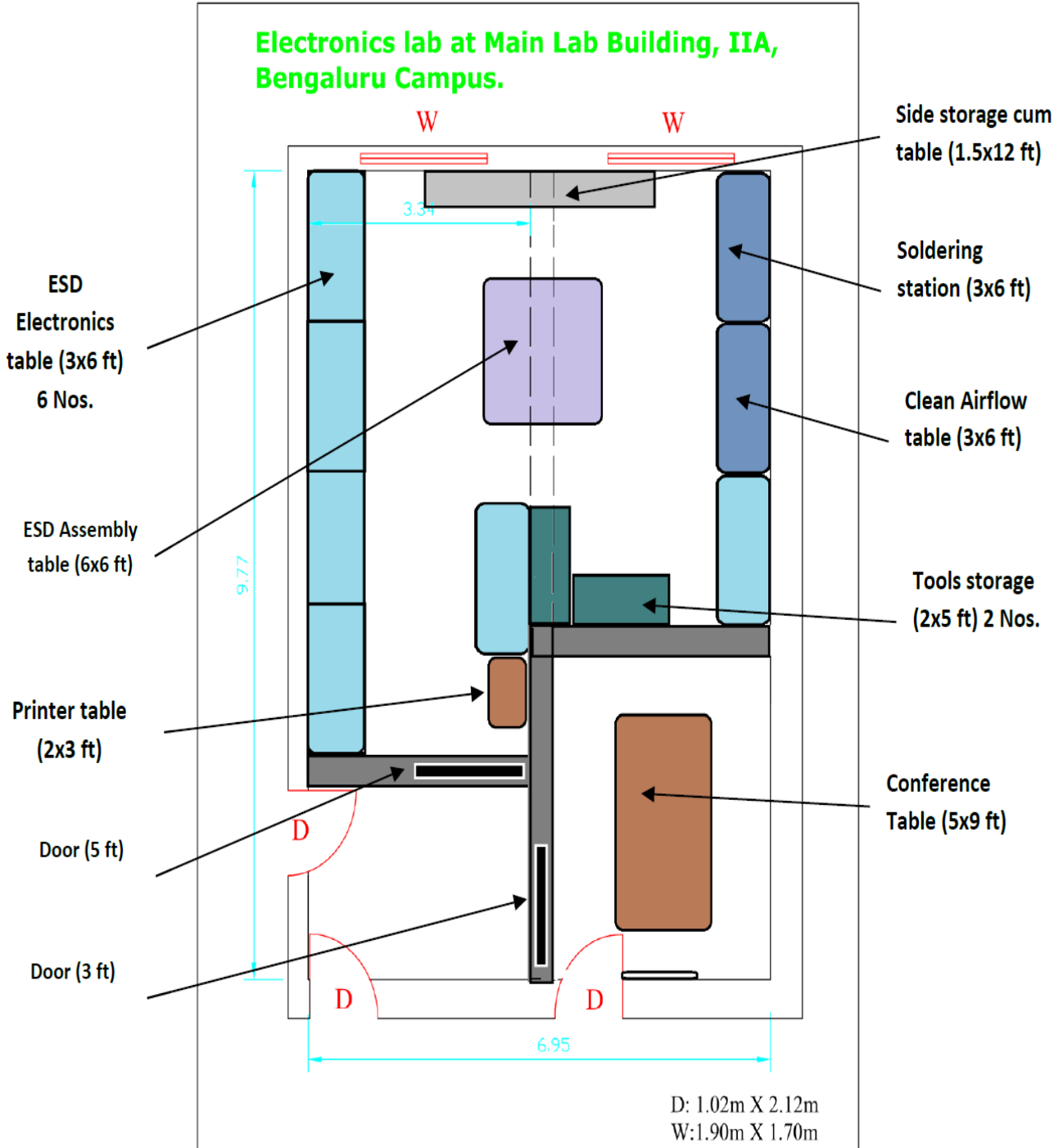
Grand Total amount in words.....
.....

Date:

Signature of the contractor with seal

Place:

TYPICAL DESIGN OF PROPOSED LABORATORY



CHECK LIST

ALL THE BIDDERS ARE REQUESTED TO COMPLETE THE CHECK LIST WITH NECESSARY DOCUMENTS AND COMPLY ACCORDINGLY

Sl.No.	Document to be furnished	YES/NO	REMARKS
1	Tender document fee (Non Refundable)		
2	Earnest Money Deposit (Refundable)		
3	Complete tender document duly signed by contractor/authorized representative. Power of Attorney to be attached in case of partnership firm)		
4	Please mention the name of the work, tender number, contractor address etc. on cover/envelop		
5	Valid Contractor License issued by PWD/CPWD etc.		
6	PAN Details		
7	GST Details with latest 3 GST paid receipts		
8	Relevant Experience Certificate as per tender conditions issued by the officer not less than the rank of Executive Engineer. Photographs of works shall be attached for reference.		
9	Financial Documents like turnover certificate, IT returns for last 3 Financial Years, assessment order issued by Income Tax dept.		

Signature of the Contractor with Stamp