INTERNATIONAL INSTITUTE OF INFORMATION TECHNOLOGY

TENDER DOCUMENT

FOR 1.15 Crores.

I-HUB DATA, IIIT-H GACHIBOWLI
# STANDARD BID DOCUMENT

## INDEX

<table>
<thead>
<tr>
<th>No</th>
<th>DETAILS</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>ADDENDUM</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>NOTICE INVITING TENDER (NIT)</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>INSTRUCTIONS TO TENDERERS.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A) General.</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>B) Tender Document</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>C) Preparation of Tenders</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>D) Submission of Tenders</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>E) Tender Opening and Evaluation.</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>F) Award of Contract.</td>
<td>9</td>
</tr>
<tr>
<td>4.</td>
<td>CONDITIONS OF CONTRACT.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>TENDER</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>A) General</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>B) Time for completion.</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>C) Quality Control</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>D) Cost Control</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>E) Finishing the Contract</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>F) Special conditions.</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td>TECHNICAL SPECIFICATIONS</td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>DRAWINGS</td>
<td>106</td>
</tr>
<tr>
<td></td>
<td>BILL OF QUANTITIES (BOQ)</td>
<td>136</td>
</tr>
<tr>
<td>8.</td>
<td>FORMATS OF SECURITIES</td>
<td></td>
</tr>
</tbody>
</table>

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INTERNATIONAL INSTITUTE OF INFORMATION TECHNOLOGY

Tender Notice No.01/I-HUB DATA,IIIT-H /22-23 Dated : 20.05.2022

OFFICER INVITING TENDERS: Academic Head, I-hub Data, IIIT-H Gachibowli.

1. Item wise rate sealed tenders are invited for the above-mentioned work from the prequalified bidders Selected/ Approved by the IIITH Gachibowli Hyderabad. The details of Tender conditions & terms can be obtained from the Academic Head I-HUB DATA, IIIT-H.

2. E.M.D. to be paid by way of unconditional and irrevocable Crossed Demand Draft only issued by any Nationalized Bank /scheduled bank for Rs.1,14,788/- drawn in favour of IIIT-H DATA I-HUB FOUNDATION along with bids and the balance EMD for Rs.1,72,182/- in shape of DD (Total 2.50% of contract value) in favour of IIIT DATA I-HUB FOUNDATION Hyderabad is to be paid at the time of concluding agreement.

3. Period of completion of work : 2 Months.

4. Mobilization Period : 10 days.

5. Date of receipt of applications for Tender Schedules. : From 20-07-2022 to 29-07-2022 Up to 5 pm.

6. Date of Pre bid meeting. : 27-07-2022 @ 11.30 AM

7. Date and time of Receipt of tenders: 30-07-2021 Up to 3.00 PM

8. Date and time of opening of tenders.: 30-07-2021 @ 3.30 PM.

Note: The dates stipulated above are firm and under no circumstances they will be relaxed unless otherwise extended by an official notification or happen to be Public Holidays.

9. Procedure for Tender Submission

1) The Tenderers shall submit their bids, in the Standard formats prescribed in the Tender documents.

2) The I-HUB DATA, IIIT-H will not hold any risk and responsibility for the loss of tender while submitting the bids.

3) The tenders not signed on all pages will not be accepted.

10. Any other condition regarding receipt of tenders in conventional method appearing in the tender documents may please be treated as not applicable.
INSTRUCTIONS TO TENDERERS
A – GENERAL


Funds releasing authority: Academic Head, I-hub Data, IIIT-H Gachibowli

Scope of work: SPACE DEVELOPMENT WORKS FOR TEACHING LABS AND STUDENT WORKSPACE IN VINDHYA BHAVAN

Period of completion: 2 Months.

1.1 The Academic Head I-HUB DATA, IIIT-H, Hyderabad invites tenders for the above works vide Tender Notice No.__________________./I-Hub0/2022-23 dated ____________________.

1.2 The successful tenderer is expected to complete the work within the time specified in the Tender Notice.

1.3 The successful (L1) Tenderer shall furnish the hard copies of all the documents/Certificates at the time of concluding the agreement.

1.4 Earnest Money Deposit in the shape of Crossed DD for 2.5% of contract value Rs.2.87Lakhs issued by any Nationalised Bank/scheduled bank in favour of IIIT-H DATA I-HUB FOUNDATION, Hyderabad valid for 2 Months from the date of NIT.

1.5 The Tenderer should submit signed undertaking of tender.

1.6 If the rates quoted by a tenderer is found to be either abnormally high or within the permissible ceiling limits prescribed but under collusion or due to unethical practices adopted at the time of tendering process; such tenders shall be rejected.

1.7 A tenderer submitting a Tender which the tender accepting authority considers excessive and/or indicative of insufficient knowledge of current prices or definite attempt of profiteering will render himself liable to be debarred permanently from tendering or for such period as the tender accepting authority may decide. The tenderer quoted rates should be based on the controlled prices for the materials, if any, fixed by the Institution or the reasonable prices permissible for the tenderer to charge a private purchaser under the provisions of clause-6 of the hoarding and profiteering prevention ordinance of 1943 as amended from time to time and on similar principle in regard to labour supervision on the construction.

1.8 CONDITIONAL TENDER
Conditional tenders are not accepted. Submission of tender would be construed as acceptance to all the terms and conditions of the tender which include conditions of contract, drawings and accompanying specifications.

2 One Tender per Tenderer:
2.1 Each Tenderer shall submit only one Tender for the work. A Tenderer who submits more than one Tender will cause disqualification of all the Tenders submitted by the Tenderer.
3 Cost of Tendering
3.1 The Tenderer shall bear all costs associated with the preparation and submission of his Tender and the tender inviting authority will in no case be responsible and liable for those costs.

4 Site Visit.
4.1 The Tenderer, at the Tenderer’s own responsibility and risk is advised to visit and examine the Site of Work and its surroundings before quoting the rates and obtain all information that may be necessary for preparing the Tender for entering into a contract, for construction of the work. The costs of visiting the site shall be at the Tenderer’s own expense.

B. TENDER DOCUMENT

5 Contents of Tender document.
5.1 One set of Tender documents, comprises the following:

1) Notice Inviting Tenders (NIT)
2) Instruction to Tenderer
3) Forms of Tender
4) Conditions of Contract.
5) Specifications.
6) Drawings.
7) Forms of Securities. i.e., EMD, Addl. Security etc. in the shape of DD.
8) Price Bid. (Bill of Quantities)

6 Clarification on Tender Documents
6.1 A prospective Tenderer requiring any clarification on Tender documents may contact the Tender Inviting Officer at the address indicated in the NIT. The Tender Inviting Officer will also respond to any request for clarification, received through post.

7 Amendment to Tender Documents
7.1 Before the last date for submission of Tenders, the Tender Inviting Officer may modify any of the Contents of the Tender Notice.

7.2 Any addendum/amendments issued by the Tender Inviting Officer shall be part of the Tender Document and it shall be attached to the Tender Notice.

7.3 To give prospective Tenderers reasonable time to take an addendum into account in preparing their bids, the Tender Inviting Officer may extend if necessary, the last date for submission of tenders.

C. PREPARATION OF TENDERS.

8 Language of the Tender.
8.1 All documents relating to the tender shall be in the English Language only.

9 Documents comprising of the Tender.
9.1 The bidders who are desirous of participating in tenderer shall submit hard copy of their price bid (BOQ) in sealed covering the standard prescribed format in the tender documents. The bidders should enclose attested copies of all the relevant certificates, documents etc.
9.2 If any of the certificates, documents etc., furnished by the bidder is found to be False/fabricated/bogus, the bidder will be black listed and the EMD forfeited.

9.3 The bids (BOQ) will be opened by Academic Head I-HUB DATA, IIIT-H or his authorized representative at the time and date as specified in the tender documents and all the rates quoted by the bidders will be read out. The clarifications, particulars if any required from the bidders will be obtained in the conventional method by addressing the bidders.

10.0 Bid Offer:

Bill of Quantities called Schedule “A” and the bid offer accompanies the tender document as Volume – II. It shall be explicitly understood that the Tender Inviting Officer does not accept any responsibility for the correctness or completeness of this schedule ‘A’ and this schedule ‘A’ is liable to alterations by omissions, deductions or additions at the discretion of the Academic Head I-HUB DATA, IIIT-H or as set forth in the conditions of the contract.

10.1 The tender form must be filled in English and entries must by hand and written in ink, neatly and legibly.

10.2 Each and every page of the tender document must be signed by the authorized person. The tenders must be submitted in the prescribed format only. The tenderer must quote the rates and amount in the schedule of quantities. The rates should be written both in words and figures without any erasures and alterations. However, if errors are made, the wrong figure & words must be neatly scored out under full signature of the tenderer and the correct figures and words neatly rewritten. Over writing is not permitted.

10.3 Error in the schedule of quantities, rates and amount shall be dealt with the following manner:

(i) In the event of discrepancy between the rates quoted in words and the rates in figures, the co-efficient of the total amount by the quantities shall be taken into consideration.

(ii) In the event of an error occurring in the amount of columns as result of wrong multiplications and extension or unit rate and quantities, the unit rate shall be regarded as firm and the amount shall me amended accordingly.

(iii) All errors in totaling in the amount column and in carrying forward, the totals shall be corrected.

10.4 The quantities indicated in the schedule of quantities are only probable quantities and are liable to alteration by omission, reduction or additions; payment shall be made on the basis of actual quantities of work done at the accepted rates.

10.5 No alterations which are made by the tenderer in the drawings, specifications or in probable quantities accompanying the tender will be recognized and if any such alterations are made the tender is likely to be invalidated.

10.6 Conditional tenders will not be entertained and are liable for rejection.

10.7 The tenderer must obtain for himself on his own responsibility and at his own expenses all the information necessary for the purpose of filling this
tender and to enter into a contract with I-HUB DATA,IIIT-H. He must examine the drawings, specifications, conditions etc., and must inspect the site of work and must acquaint himself with all local conditions and matters pertaining thereto before quoting the rates.

10.8 The tenderer shall also bear all expenses in connection with the preparations and submission of this tender.

10.9 The bid offer shall be for the whole work and rates quoted for all the items.

10.10 The contract price is inclusive of all overhead charges and include the following elements:

- Technical agents for site supervision. (Reimbursement to the technical agents provision is dispensed with where ‘over heads and contractor’s profit’ provision is included in the data rates)
- Documentation and “as built” drawings.
- Mobilisation/ De-Mobilisation of resources
- Labour camps with minimum amenities and transportation to work sites.
- Light vehicles for site supervision including administrative and managerial requirements.
- All Material Test Certificates need to be submitted before Execution of work. And they should be submitted during the time of R.A bill payment.
- Minor T & P and survey instruments and setting out works, including verification of line, dimensions, trial pits and bore holes, where required.
- Watch and ward.
- Traffic management during construction
- Expenditure on safeguarding environment
- Sundries
- Financing Expenditure,
- GST on the rates quoted will be paid separately.

11.0 Validity of Tenders:

11.1 Tenders shall remain valid for a period of not less than two months from the last date for receipt of Tender specified in NIT.

11.2 During the above-mentioned period no plea by the tenderer for any sort of modification of the tender based upon or arising out of any alleged misunderstanding of misconceptions or mistake or for any reason will be entertained.

11.3 In exceptional circumstances, prior to expiry of the original time limit, the Tender Inviting Officer may request the bidders to extend the period of validity for a specified additional period. Such request to the Tenderers shall be made in writing. A Tenderer may refuse the request without forfeiting his E.M.D. A Tenderer agreeing to the request will not be permitted to modify his Tender but will be required to extend the validity of his E.M.D. for a period of the extension.
12.0 Earnest Money Deposit

12.1 The Tenderer shall furnish, Earnest Money Deposit of Rs.2.87 lakhs along with hard copies of Tender documents. The DD shall be from a Nationalised Bank/Scheduled Bank in favour of IIIT-H I-HUB DATA FOUNDATION valid for a period of 2 Months.

12.2 The successful tenderer should however has to pay of contract value E.M.D. of Rs.2.87 (inclusive of Rs. Two Lakhs Eight Seven lakhs paid along with tender) at the time of signing the agreement in the shape of crossed Demand Draft only from any Nationalised Bank./Scheduled Bank.

13.0 Return of E.M.D. to unsuccessful tenderer.

13.1 The earnest money deposit will be refunded to the unsuccessful tenderer by registered post at the expiry of the period of validity of tender or the entrustment of the work to the successful tenderer whichever is earlier.

14.0 The earnest money deposited by the successful tenderer will not carry any interest and it will be dealt with as provided in the conditions stipulated in the tender.

The E.M.D. shall be forfeited.

(a) if the Tenderer withdraws the Tender during the validity period of Tender.

(b) in the case of a successful Tenderer, if he fails to sign the Agreement for whatever the reason.

In consideration of the Academic Head I-HUB DATA, IIIT-H, I-HUB DATA, IIIT-Hyderabad undertaking to investigate and to take into account each tender and in consideration of the work thereby involved, all earnest monies deposited by the tenderer will be forfeited to the Institution in the event of such tenderer either modifying or withdrawing his tender at his instance within the said validity period of three months.

15.0 Signing of Tenders

15.1 If the tender is made by an individual, it shall be signed with his full name and his address shall be given. If it is made by a firm, it shall be signed with the co-partnership name by a member of the firm, who shall also sign his own name, and the name and address of each member of the firm shall be given, if the tender is made by a Institution it shall be signed by a duly authorised officer who shall produce with his tender satisfactory evidence of his authorization. Such tendering Institution may be required before the contract is executed, to furnish evidence of its corporate existence. Tenders signed on behalf of G.P.A holder will be rejected.

15.2 The tender shall contain no alterations or additions, except those to comply with instructions issued by the tender inviting officer, or as necessary to correct errors made by the tenderer, in which case all such corrections shall be initialed by the person signing the tender.

15.3 No alteration which is made by the tenderer in the contract form, the conditions of the contract, the drawings, specifications or statements / formats or quantities accompanying the same will be authorized, and, if any such alterations are made the tender will be void.
D. SUBMISSION OF TENDERS.

16.0 Submission of Tenders:
16.1 The Tenderers who are desirous of participating in Tender shall submit price bid in the Standard formats prescribed in the Tender documents. The tenderers should enclose attested copies in support of their Tech.Bid.
16.2 The Institution will not hold any risk and responsibility for the loss of tenders in transit while submitting bids.
16.3 Any other condition regarding receipt of tenders in conventional method appearing in Tender document may be treated as non-applicable.

17.0 Last date / time for Submission of the Tenders.
17.1 Tenders must be submitted on the date and time specified in the Tender Notice / Tender Document.
17.2 The Academic Head I-HUB DATA, IIIT-H or his nominee may extend the date for receipt of Tenders by issuing an amendment in which case all rights and obligations of the Academic Head I-HUB DATA, IIIT-H and the Tenderers will remain same as previously.

18.0 Late Tenders.
18.1 Tenders will not be received after the last date/time prescribed in NIT / Tender Document.

19.0 Submission of Tenders:
The tenderer shall invariably ensure that the following documents are enclosed along with the tender. The sealed cover containing the tender should be super scribed the name of work, address of the tenderer and the details of EMD enclosed without which the tenders will not be entertained.

a) Copy of contractor’s registration certificate under appropriate class with Institution of Telangana / erstwhile Andhra Pradesh.
b) Copy of permanent account number (PAN) card and copy of latest Income Tax returns submitted along with proof of receipt.
c) Copy of GST Registration Certificate from Commercial Tax Institution and latest Commercial Taxes Clearance Certificate issued by Telangana State Institution.
d) EMD Deposit to be paid by way of crossed demand draft only
e) Signed undertaking of tender.

E. TENDER OPENING AND EVALUATION

20.0 Tender opening
20.1 The price bids (BOQ) will be opened by the Academic Head I-HUB DATA, IIIT-H or his nominee at the time and date as specified in the Notice Inviting Tender. The rates quoted by all the tenderers will be read out while opening the tender. The participant tenderers or their authorized representatives may note down the rates read out while opening the tenders.
20.2 Tenders shall be scrutinized in accordance with the conditions stipulated in the Tender document. In case of any discrepancy of non-adherence to conditions, the Tender accepting authority shall communicate the same which will be binding both on the tender Opening authority and the Tenderer. In case of any ambiguity or dispute, the decision taken by the Tender Accepting Authority on tenders shall be final.

21.0 Evaluation and Comparison of Price Bids
21.1 The Academic Head I-HUB DATA, IIIT-H or his nominee will evaluate and compare the price bids of all the Tenders received and opened.
21.2 Negotiations if required will be called for. However, good gesture rebate, if offered by the lowest tenderer prior to finalisation of tenders may be accepted by the tender accepting authority.
21.3 Selection of Tenderer among the lowest & equally quoted tenderers will be in the following orders:
a) The turnover on similar works and thereafter machinery available for the work and then the clean track record will be considered for selection.

22.0 Process to be Confidential.
22.1 Information relating to the examination, clarification, evaluation and comparison of Tenders and recommendations for the award of a contract shall not be disclosed to Tenderers or any other persons not officially concerned with such process until the award to the successful Tenderer has been announced by the tender accepting authority. Any effort by a Tenderer to influence the processing of Tenders or award decisions may result in the rejection of his Tender.
22.2 No Tenderer shall contact the Academic Head I-HUB DATA, IIIT-H or any authority concerned with finalisation of tenders on any matter relating to its Tender from the time of the Tender opening to the time the Contract is awarded. If the Tenderer wishes to bring additional information to the notice of the Academic Head I-HUB DATA, IIIT-H, he should do so in writing.
22.3 Before recommending / accepting the tender, the tender recommending / accepting authority shall verify the correctness of certificates submitted to meet the eligibility criteria and specifically experience. The authenticated agreements of previous works executed by the lowest tenderer shall be called for.
F. AWARD OF CONTRACT

23.0 Award Criteria

23.1 The Academic Head I-HUB DATA, IIIT-H or his nominee will award the contract on approval of the tender by Competent authority.

23.2 The tender accepting authority reserves the right to accept or reject any Tender or all tenders and to cancel the Tendering process, at any time prior to the award of Contract, without thereby incurring any liability to the affected Tenderer or Tenderers or any obligation to inform the affected Tenderer or Tenderers of the reasons for such action.

24.0 Notification of Award and Signing of Agreement.

24.1 The Tenderer whose Tender has been accepted will be notified of the award of the work prior to expiration of the Tender validity period by registered letter. This letter (hereinafter and in the Conditions of Contract called “Letter of Acceptance”) will indicate the sum that the Institution will pay the Contractor in consideration of the execution, completion, and maintenance of the Works by the Contractor as prescribed by the Contract (hereinafter and in the Contract called the “Contract Amount”).

24.2 When a tender is accepted, the concerned tenderer shall attend the office of the Academic Head I-HUB DATA, IIIT-H on the date fixed in the Letter of acceptance. Upon intimation being given by the Academic Head I-HUB DATA, IIIT-H, of acceptance of his tender, the tenderer shall make payment of balance E.M.D., and additional security deposit wherever needed by way of Demand Draft only. Failure to attend the Academic Head I-HUB DATA, IIIT-H’s office on the date fixed, in the written intimation, to enter into the required agreement shall entail forfeiture of the Earnest Money deposited. The written agreement to be entered into between the contractor and the Institution shall be the foundation of the rights and obligations of both the parties and the contract shall not be deemed to be complete until the agreement has first been signed by the contractor and then by the proper officer authorised to enter into contract.

24.3 The successful tenderer has to sign an agreement within a period of 15 days from the date of receipt of communication of acceptance of his tender. On failure to do so his tender will be cancelled duly forfeiting the E.M.D., paid by him without issuing any further notice and action will be initiated for blacklisting the tenderer.

25.0 Corrupt or Fraudulent Practices

25.1 The Institution requires that the bidders / suppliers / contractors under Institution financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts.

(a) Institution define for the purposes of the provision, the terms set forth below as follows:
(i) “Corrupt practices” means the offering, giving, receiving or soliciting of anything of value to influence the action of a Institution official in procurement process or in contract execution: and

(ii) “Fraudulent practice” means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the institution and includes collusive practice among Tenderers (prior to or after Tender submission) designed to establish in Tender prices at artificial non-competitive levels and to deprive the institution of the benefits of free and open competition.

(b) Will reject a proposal for award if it determines that the Tenderer recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question.

(c) Will blacklist / or debar a firm, either indefinitely or for a stated period of time, if at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing a Institution Contract.

(d) Furthermore, Tenderers shall be aware of the provisions stated in the General Conditions of Contract.

26.0 Rights of the Institution

26.1 The management of the Institution reserves the right to reject any or all of the tenders, without assigning any reason whatsoever.

26.2 In the event of any dispute regarding any of the tender conditions, the decision of the management shall be final.
TENDER

(To be submitted along with hard copies of work done certificates)

Date: ............... 

To
The Academic Head I-HUB DATA, IIIT-H,
IIIT,
Hyderabad .

Sir,
I / We do hereby tender and if this tender be accepted, undertake to execute the following work viz.: Space development works in I-hub Data in block-B3, Second floor, Vindhya & 3rd Nilgiri in the premises of IIIT-H, Gachibowli, Hyderabad-500 032. described in the specifications available in the tender and also in the office of the Academic Head I-HUB DATA, IIIT-H, Hyderabad with such variations by way of alterations or additions to, and omissions from the said works and method of payment as provided for in the “conditions of the contract” for the sum as quoted in the tender or such other sum as may be arrived under the clause of the standard preliminary specifications relating to “Payment on lump-sum basis or by final measurement at unit rates”

I/WE have also quoted the rates in Schedule ‘A’, annexed (in words and figures) for which I/We agree to execute the work when the lump sum payment under the terms of the agreement is varied by payment on measured quantities of work.

I/WE have quoted the rates in Schedule ‘A’ both in words & figures. In case of any discrepancy between the rates in words and figures, the rates quoted in words only shall prevail.

I/WE agree to keep the offer in this tender valid a period of TWO MONTHS mentioned in the tender notice and not to modify the whole or any part of it for any reason within above period. If the tender is withdrawn by me/us for any reasons whatsoever, the earnest money paid by me/us will be forfeited to Institution.

I/WE hereby distinctly and expressly, declare and acknowledge that, before the submission of my/our tender I/We have carefully followed the instructions in the tender notice and have read the A.P.S.S. and the preliminary specifications therein and the A.P.S.S. addenda volume and that I/We have made such examination of the contract documents and the plans, specifications and quantities and of the location where the said work is to be done, and such investigation of the work required to be done, and in regard to the material required to be furnished as to enable me/us to thoroughly understand the intention of same and the requirements, covenants, agreements, stipulations and restrictions contained in the contract, and in the said plans and specifications and distinctly agree that I/We will not hereafter make any claim or demand upon the institution based upon or arising out of any alleged misunderstanding or misconception /or mistake on my/or our part of the said requirement, covenants, agreements, stipulations, restrictions and conditions.
I / WE have enclosed crossed D.D.No…………………….., dated………… for Rs.2.87 Lakhs (Rupees Two lakhs eight seven thousand only) issued by …………………………..towards Earnest Money Deposit not to bear any interest.

I/WE shall not assign the contract or sublet any portion of the same. In case if it becomes necessary such subletting with the permission of the Engineer-in-Charge shall be limited to (1) Labour contract (2) Material contract (3) Transport contract (4) Engaging specialists for special items of work enjoined in A.P.S.S.

IF MY/OUR tender is not accepted the sum shall be returned to me/us on application when intimation is sent to me/us of rejection or at the expiration of three months from last date of receipt of this tender, whichever is earlier. If my/our tender is accepted the earnest money shall be retained by the Institution as security for the due fulfillment of this contract. If upon written intimation to me/us by the Academic Head I-HUB DATA, IIIT-H Office, I/We fail to attend the said office on the date herein fixed or if upon intimation being given to me/us by the Academic Head I-HUB DATA, IIIT-H or acceptance of my/our tender, and if I/We fail to make the additional security deposit or to enter into the required agreement as defined in tender conditions, then I/We agree the forfeiture of the earnest money. Any notice required to be served on me/us here under shall be sufficiently served on me/us if delivered to me/us personally or forwarded to me/us by post (registered or ordinary) or left at my/our address given herein. Such notice shall if sent by post be deemed to have been served on me/us at the time wherein due course of post it would be delivered at the address to which it is sent.

I/WE fully understand that the written agreement to be entered into between me/us and Institution shall be the foundation of the rights of the both the parties and the contract shall not be deemed to be complete until the agreement has first been signed by me/us and then by the proper officer authorised to enter into contract on behalf of institution.

I AM/WE ARE professionally qualified and my/our qualifications are given below:

<table>
<thead>
<tr>
<th>Name</th>
<th>Qualified</th>
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I/WE will employ the following technical staff for supervising the work and will see that technical staff is always at site during working hours, personally checking all items of works and pay extra attention to such works as required special attention (e.g) Reinforced cement concrete work.

<table>
<thead>
<tr>
<th>Name of technical staff proposed to be employed</th>
<th>Qualification.</th>
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I / WE declare that I/WE agree to recover the salaries of the technical staff actually engaged on the work by the institution, from the work bills, if I/We fail to employ technical staff as per the tender condition.
TENDERERS / CONTRACTOR'S CERTIFICATE.

(1) I/WE hereby declare that I/We have perused in detail and examined closely the Andhra Pradesh Standard Specifications, all clauses of the preliminary specifications with all amendments and have either examined all the standards specifications or will examine all the standard specifications for items for which I/We tender, before I/We submit such tender and agree to be bound and comply with all such specifications for this agreement which I/We execute in the Institution.

(2) I/WE certify that I/We have inspected the site of the work before quoting my rates, I /We have satisfied about the quality, availability and transport facilities for all the materials.

(3) I/WE am/are prepared to furnish detailed data in support of all my quoted rates, if and when called upon to do so without any reservations.

(4) I/WE hereby declare that I/We will pay an additional security deposit in terms of conditions, the difference between 85% of ECV and my/our tender amount, in case if my / our offer is less than 15% as per clause3.6.

(5) I/WE hereby declare that I am/We are accepting for the defect liability period as 24 months instead of 3 Months under clause 28 of APSS.

(6) a) I/WE declare that I/WE will procure the required construction materials including earth and use for the work after approval of the Engineer-in-Charge. The responsibility for arranging and obtaining the land for borrowing or exploitation in any other way shall rest with me/us for the materials for construction, I/WE shall ensure smooth and un-interrupted supply of materials.

b) I/WE declare that the responsibility for arranging and obtaining the land for disposal of spoil/soil not useful for construction purposes shall rest with me/us.

c) I/WE declare that I/WE shall not claim any compensation or any payment for the land so arranged for disposal of soil and the land for borrow area. My/our quoted rates are inclusive of the land so arranged and I/We will hand over the land so arranged for disposal of soil to the Institution after completion of work.

(7) I/WE declare that I/WE will execute the work as per the mile stone program, and if I/WE fail to complete the work as per the mile stone program I abide by the condition to the payment of penalty recover liquidated damages as per the tender conditions.

(8) I/WE declare that I/WE will abide for settlement of disputes as per the tender conditions.
DECLARATION OF THE TENDERER

1) I/WE have not been black listed in any institution/State/Central Govt due to any reasons.
2) I/WE have not been demoted to the next lower category for not filing the tenders after buying the tender schedules in a whole year and my/our registration has not been cancelled for a similar default in two consecutive years.
3) I/WE agree to disqualify me/us for any wrong declaration in respect of the above and to summarily reject my/our tender.

I / We, ....................... have gone through carefully all the Tender conditions and solemnly declare that I / we will abide by any penal action such as disqualification or black listing or determination of contract or any other action deemed fit, taken by the institution against us, if it is found that the statements, documents, certificates produced by us are false / fabricated.

Address of the Tenderer:
Phone No.:
Fax No.:

Signature of the Tenderer

Note: If the tender is made by an individual, it shall be signed with his full name and his address shall be given. If it is made by a firm, it shall be signed with the co-partnership name by a member of the firm, who shall also sign his own name, and the name and address of each member of the firm shall be given, if the tender is made by an Institution it shall be signed by a duly authorised officer who shall produce with his tender satisfactory evidence of his authorisation. Such tendering Institution may be required before the contract is executed, to furnish evidence of its corporate existence. Tenders signed on behalf of G.P.A. holder will be rejected.
CONDITIONS OF CONTRACT

A. GENERAL

1. Interpretation:
   1.1 In interpreting these Conditions of Contract, singular also means plural, male also
       means female, and vice-versa. Headings have no significance. Works have their
       normal meaning under the language of the contract unless specifically defined. The
       Engineers-in-charge will provide instructions clarifying queries about the
       conditions of Contract.

   1.2 The documents forming the Contract shall be interpreted in the following order of
       priority:
       1) Agreement
       2) Letter of Acceptance, notice to proceed with the works.
       3) Conditions of contract
       4) Specifications
       5) Drawings
       6) Bill of quantities (Price-bid)
       7) Any other document listed as forming part of the Contract.

2. Engineer-in-Charge's Decisions:
   2.1 Except where otherwise specifically stated, the Engineer-in-charge will decide the
       contractual matters between the institution and the Contractor in the role
       representing the Institution.

3. Delegation:
   3.1 The Engineer-in-charge may delegate any of his duties and responsibilities to
       other officers and may Cancel any delegation by an official order issued.

4. Communications:
   4.1 Communications between parties, which are referred to in the conditions, are
       effective only when in writing. A notice shall be effective only when it is delivered
       (in terms of Indian Contract Act)

5. Sub-contracting:
   5.1 If the prime contractor desires to sub-let a part of the work, he should submit the
       same at the time of filing tenders itself or during execution, giving the name of the
       proposed Sub-contractor, along with details of his qualification and experience. The
       Tender Accepting Authority should verify the experience of the Sub-contractor and if
       the Sub-contractor satisfies the qualification criteria in proportion to the value of work
       proposed to be sub-let, he may permit the same. The total value of works to be awarded
       on sub-letting shall not exceed 50% of contract value. The extent of subletting shall be
       added to the experience of the sub-contractor and to that extent deducted from that of
       the main contractor.

6. Other Contractors:
   6.1 The Contractor shall cooperate and share the Site with other contractors, Public
       authorities, utilities, and the institution. The Contractor shall also provide facilities
       and services for them as directed by the Engineer-in-charge.
7. Personnel:
7.1 The Contractor shall employ the required Key Personnel named in the Schedule of Key Personnel to carry out the functions stated in the Schedule or other personnel approved by the Engineer-in-charge. The Engineer-in-charge will approve any proposed replacement of Key Personnel only if their qualifications, abilities, and relevant experience are substantially equal to or better than those of the personnel listed in the Schedule.

7.2 Schedule of Key Personnel:
The successful tenderer shall have to employ the following technical staff on full time basis to be available at site.

1) 1 No. Project Manager with 10 years experience for B.Tech or 15 years experience for Diploma holders.
2) 1- Nos. (CIVIL) Graduate Engineers with 5 years experience
3) 1- Nos.(MEP) Graduate Engineers with 5 years experience
4) 1 No. EHS Engineer with 5 years experience
5) 1 No. Planning &Quality Engineer with 5 years experience

7.3 Employment of technical personnel shall be with reference to the estimate cost of work put to tender.

7.4 The appointment of technical staff shall be on full time basis.
The Technical staff shall be available at work site for supervising the work including quality checking of all items from time to time. Failure to employ the required technical personnel by the contractor, amounts will be recovered at the following rates from the contractor:

1. Project Manager: - Rs.35,000/- per month.
2. Engineer: - Rs.25,000/- per month

7.5 The Engineer-in-charge is the sole judge (a) to decide whether qualified technical staff is actually supervising the work and (b) to decide the actual period of absence of such staff which requires the above recovery to be enforced and his decision is final and binding on the contractor.

7.6 The technical agents appointed by the contractor shall have to maintain properly all the records required by the institution under safe custody at site, like checklists, calibration registers/records, Quality Test Registers, Test reports file, site order book, etc. and make signatures at appropriate places towards proof of verifications, conduction of tests, compliance to instructions etc.

7.7 The technical personnel should be on full time and available at site whenever required by Engineer in Charge to take instructions.

7.8 The names of the technical personnel to be employed by the contractor should be furnished in the statement enclosed separately.

7.9 In case the contractor is already having more than one work on hand and has undertaken more than one work at the same time, he should employ separate technical personnel on each work.

7.10 If the Engineer-in-charge asks the Contractor to remove a person who is a member of Contractor’s staff or his work force stating the reasons the Contractor shall ensure that the person leaves the site forthwith and has no further connection with the work in the contract.
8 **Contractor’s Risks:**
8.1 All risks of loss or damage to physical property and of personnel injury and death, which arise during and in consequence of the performance of the Contract are the responsibility of the Contractor.

9 **Insurance of the works:**

The contractor shall within 5 days from the date of commencement of the works insure the works at his cost and keep them insured until one month after works are taken over by the employer or three months after the date of completion whichever is earlier, against loss or damage by fire and usual risks other than fire against which insurers generally provided cover in a CONTRACTOR’S ALL RISK POLICY, with names of the employer and contractor for the full amount of the contract. The contractor shall deposit the policy and receipts for the premium paid with the institution. In default of the contractor insuring as provided above, the employer or the institution on his behalf may take the policy and the amount paid towards the policy will be recovered from the amount become due to the contractor. The contractor shall as soon as the claim under the policy is settled, or the work reinstated by the insurers should they elect to do so, proceed with due diligence with the completion of the works in the same manner as though the fine or other such risk had not occurred and in all respects under the same conditions of contract. The contractor in case of rebuilding or reinstatement after fire or other such risk shall be entitled to such extension of time for completion as decided by the institution.

10. **Provident Fund Registration and ESI**

10.1 CONTRIBUTION TOWARDS EMPLOYEE BENEFITS, FUNDS ETC.: The Contractor shall include in the Contract Price all expenses necessary to meet its obligations for making contributions toward employee benefits funds (Such as provident fund, ESI benefits, old age pension and/or any other benefits/compensation legally payable) in compliance with all the statutory regulations and requirements. All records in this connection shall be properly maintained by the Contractor and produced for scrutiny by the concerned authorities, the Project Manager and the Client whenever called for. The Contractor must register with concerned provident fund authority within 10 days (from the date of signing the agreement, if not done earlier.

11 **Site Inspections:**
11.1 The contractor should inspect the site and also proposed quarries of choice for materials source of water and quote his percentage including quarrying, conveyance and all other charges like seignorage etc.

11.2 The responsibility for arranging the land for borrow area rests with the Contractor and no separate payment will be made for procurement or otherwise. The contractor’s quoted rate will be inclusive of land cost.

12. **Contractor to Construct the Works:**
12.1 The Contractor shall construct and Commission the Work in accordance with the specifications and Drawings.
13. **Diversion of streams / Vagus / Drains.**

13.1 *Deleted*

13.2 No separate payment for bailing out of sub-soils, water drainage or locked up rain water for diversion, shoring, foundations, bailing of pumping water either from excavation soils from foundations or such other incidental will be paid. The percentage to be quoted by the contractor are for the finished item of work in situ and including all the incidental charges. The borrow pits are also to be dewatered by the contractor himself at his expense, if that should be found necessary.

13.3 The work of diversion arrangements should be carefully planned and prepared by the contractor and forwarded to the Center operation officer technically substantiating the proposals and approval of the Center operation officer obtained for execution.

13.4 The contractor has to arrange for bailing out water, protection to the work in progress and the portion of works already completed and safety measures for men and materials and all necessary arrangements to complete the work.

13.5 All the arrangements so required should be carried out and maintained at the cost of the contractor and no separate or additional payments is admissible.

13.6 *Deleted*

14. **Power Supply and Water Supply.**

14.1 a) Power Supply will be provided by IIIT at one point at site on chargeable basis, Further distribution along with Energy meter for usage in Contractor scope.

b) Water supply will be provided by I-HUB DATA, IIIT-H at one point at site on chargeable basis, Further distribution along with Water meter for usage in Contractor scope.

14.2 The contractor shall satisfy all the conditions and rules required as per Indian Electricity Act 1910 and under Rule-45(I) of the Indian Electricity Rules, 1956 as amended from time to time and other pertinent rules.

14.3 The power shall be used for bonafide Institution work only.

14.4 The contractor shall at all times during the currency of the contract, comply fully with all existing Acts, regulations and bylaws including all statutory amendments and reenactments of state or central govt., and other local authorities and any other enactment’s, notification and acts that may be passed in future either by the state or the central institution or local authority including Indian workmen’s compensation Act- 192, Control labour (Regulation and Abolition) Act- 1970, The child labour prohibition and regulation Act-1986 and equal remuneration Act-1976, Factories Act, minimum wage Act- 1948, provident fund regulations, Employees provident fund Act- 1952 schedules made under the same Act. The buildings and other construction workers (Regulation of employment and condition of service) Act- 1996, The Cess Act- 1996 and also applicable labour regulations, health and sanitary arrangement for workmen, insurance and other benefit and shall keep institution indemnified in case any action is commenced by competent authorities for contravention by the contractor.
14.5 The electrical contractor has to keep his license in currency till the work is completed. If the license is suspended during the period in which the work is in progress the contract will be terminated and awarded to some other agency recovering the extra cost if any.

14.6 The materials used in the work should be as per the list of materials enclosed. The institution reserves the right to insist upon using any of the materials from this list of approved materials.

14.7 The work shall be carried out strictly in conformity with (i) code of practice for Electrical wiring and fittings in Institution Buildings, (ii) The Indian standard specification (iii) The Institution specification. If the work carried out does not comply with the code of practice and the Institutional specifications and if the workmanship is unsatisfactory it will be binding on the contractor to redo the job without any extra cost and pay penalty as decided by the Institution towards inconvenience caused if any.

14.8 The work should be carried out under the direct supervision of persons holding a certificate of competency for the type of work involved.

14.9 After completion of work a plan of building installation should be prepared and furnished indicating the location of various main and sub boards and also the fittings together with a circuit diagram duly numbered (in the diagram). The final bill will not be paid till the above plan and the diagram is submitted and approved after verification. Such completion drawings shall be signed by the licenced electrical contractor through whom the work is executed.

14.10 Lugs should be provided for all earth connections.

14.11 The contractor himself should arrange for the transportation of men and materials to the work spot.

14.12 Deleted

14.13 On completion of the Electrical Installation a certificate shall be furnished by the Contractor countersigned by a licensed supervisor, that under direct supervision the installation was carried out. This certificate shall be in the prescribed form as required by the local supply authority. The contractor shall be responsible for getting the Electrical Installation inspected and approved by the local authority concerned.

14.14 The contractor shall pay for any inspection fees and for permits required for the installation of the work wherever necessary. The institution shall arrange only for payment of service connection charges and any other security deposit for getting electrical supply. On completion of the work, the contractor shall obtain and deliver to the Academic Head I-HUB DATA, IIIT-H, Gachibowli, Hyd, certificates of final inspection and approval by the local Electric Authority as may require. The institution shall have full powers to test the materials or work to be tested by an independent agency at the Electrical contractor’s expense in order to prove their soundness and adequacy.
14.15 Contractor shall provide everything necessary for the proper execution of works according to the intent and meaning of the drawings, specifications, schedule of quantities. Any discrepancy in the documents shall be brought to the notice of the Academic Head I-HUB DATA, IIIT-H, Gachibowli, Hyd and got clarified prior to taking up the installation.

14.16 Materials and Workmanship:
All materials and workmanship shall confirm to the specifications/makes, relevant IS standards and code of practice and comply with TSSEB/CEIG requirements as the case may be. Any work that is not up to the standards shall be dismantled and reconstructed by the contractor to the satisfaction of the institution.

15. Deleted

16. Monsoon Damages:
16.1 Damages due to rain or flood either in cutting or in banks shall have to be made good by the contractor till the work is handed over to the Institution. The responsibility of de-silting and making good the damages due to rain or flood rests with the contractor. No extra payment is payable for such operations and the contractor shall therefore, have to take all necessary precautions to protect the work done during the construction period.

17. The works to be Completed by the Intended Completion Date:
17.1 The Contractor may commence execution of the Works on the Start Date and shall carry out the Works in accordance with the program submitted by the Contractor, as updated with the approval of the Engineer-in-Charge, and complete the work by the Intended Completion Date.

18. Safety:
18.1 The Contractor shall be responsible for the safety of all activities on the Site.

19. Discoveries:
19.1 Anything of historical or other interest or of significant value unexpectedly discovered on the site is the property of the Academic Head I-HUB DATA, IIIT-H, IIIT, Gachibowli, Hyd. The Contractor is to notify the Engineer-in-Charge of such discoveries and carry out the Engineer-in-Charge’s instructions for dealing with them.

20. Possession of the Site.
20.1 The Institution shall give possession of the site to the Contractor. If possession of a part site is given, the Institution will ensure that the part site so handed over is amenable to carryout the work at site by the Contractor.

21. Access to the Site:
21.1 The Contractor shall provide the Engineer-in-Charge and any person authorised by the Engineer-in-Charge, access to the site and to any place where the work, in connection with the Contract, is being carried out or is intended to be carried out.

22. Instructions:
22.1 The Contractor shall carry out all instructions of the Engineer-in-charge and comply with all the applicable local laws where the Site is located.
23. Settlement of disputes:

23.1 If any dispute or difference of any kind whatsoever arises between the Academic Head, I-Hub Data, IIIT-H and the Contractor in connection with, or arising out of the Contract, whether during the progress of the works or after their completion and whether before or after the termination, abandonment or breach of the Contract, it shall in the first place, be referred to and settled by the Engineer-in-charge who shall, within a period of thirty days after being requested by the Contractor to do so, give written notice of his decision to the Contractor. Upon receipt of the written notice of the decision of the Engineer-in-Charge the Contractor shall promptly proceed without delay to comply with such notice of decision.

23.2 If the Engineer-in-Charge fails to give notice of his decision in writing within a period of thirty days after being requested or if the Contractor is dissatisfied with the notice of the decision of the Engineer-in-Charge, the Contractor may within thirty days after receiving the notice of decision appeal to the Institution which shall offer an opportunity to the contractor to be heard and to offer evidence in support of his appeal, the Institution shall give notice of his decision within a period of thirty days after the Contractor has given the said evidence in support of his appeal, subject to arbitration, as hereinafter provided. Such decision of the Institution in respect of every matter so referred shall be final and binding upon the Contractor and shall forthwith be given effect to by the Contractor, who shall proceed with the execution of the works with all due diligence whether he requires arbitration as hereinafter provided, or not. If the Institution has given written notice of his decision to the Contractor and no claim to arbitration has been communicated to him by the Contractor within a period of thirty days from receipt of such notice, the said decision shall remain final and binding upon the Contractor. If the Institution fail to give notice of his decision, as aforesaid within thirty days after being requested as aforesaid, or if the Contractor be dissatisfied with any such decision, then and in any such case the contractor within thirty days after the expiration of the first named period of thirty days as the case may be, require that the matter or matters in dispute be referred to arbitration as detailed below:

SETTLEMENT OF CLAIMS:

Settlement of claims for Rs.50,000/- and below by Arbitration. All disputes or difference arising of or relating to the Contract shall be referred to the adjudication as follows:

Claims up to a value of Rupees 10,000/-. Claims above Rs.10,000/- and up to Rupees 50,000/-.
- Academic Head I-HUB DATA, IIIT-H, IIIT, Gachibowli, Hyd, [of the same institutions]

The arbitration shall be conducted in accordance with the provisions of Indian Arbitration and Conciliation Act 1996 or any statutory modification thereof.

The arbitrator shall state his reasons in passing the award.
Claims above Rs.50,000/-.

All claims of above Rs.50,000/- are to be settled by a Civil Court of competent jurisdiction by way of civil suit and not by arbitration.

The contractor shall make a reference for adjudication under this clause within six months from the date of intimating the contractor of the preparation of final bill or his having accepted payment whichever is earlier.

B. TIME FOR COMPLETION

24. Program:
24.1 The total period of completion is **2 months** from the date of handing over of site to proceed including rainy season, and the contractor should take over the site within 7 Days from the date of concluding the agreement.

24.2 The attention of the tenderer is directed to the contract requirement at the time of beginning of the work, the rate of progress and the dates for the whole work and its several parts as per milestones. Time is the essence of the contract. The rate of progress and proportionate value of work done from time to time as will be indicated by the Engineer-in-charge’s Certificate for the value of work done and completion of milestones will be required.

24.3 The following rate of progress will be required to be maintained by the contractor as a minimum. The start date of this work is the date of handing over of site and the contractor should take over the site within 7 Days from the date of concluding the agreement. Contractor may give a separate time schedule for the completion of the whole work and the consideration will be given for accelerated programme. It is imperative that the work progress shall be ahead of the rate of progress given below.

Milestone dates:

<table>
<thead>
<tr>
<th>Physical stage of work to be completed:</th>
<th>Period from the date of signing the agreement.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milestone – I: ..</td>
<td>15 days from start date.</td>
</tr>
<tr>
<td>Completion of Dismantling Activity,</td>
<td></td>
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<tr>
<td>Mobilization of Materials.</td>
<td></td>
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<tr>
<td>Milestone – II: ..</td>
<td>30 days from start date.</td>
</tr>
<tr>
<td>Completion of Brick work, Door Windows, a</td>
<td></td>
</tr>
<tr>
<td>all type partitions</td>
<td></td>
</tr>
<tr>
<td>Milestone–III: ..</td>
<td>45 days from start date.</td>
</tr>
<tr>
<td>Completion of Gypsum false ceiling Flooring, Door, Electrical, HVAC, and Networking Works.</td>
<td></td>
</tr>
<tr>
<td>Milestone–IV: ..</td>
<td>60 days from start date.</td>
</tr>
<tr>
<td>Completion of Final Finishing, Testing and Commissioning.</td>
<td></td>
</tr>
</tbody>
</table>
24.4 Detailed program in terms of collection of necessary materials and labour and in terms of finished items of work, to confirmation of the above rate of progress shall be prepared by the contractor and got approved by the Engineer-in-charge concerned and which shall be strictly adhered to.

24.5 After signing the agreement, the contractor shall forthwith begin the work, shall regularly and continuously proceed with them. Work program of achieving of milestones (statement) should be submitted from time to time.

24.6 The contractor shall commence the works on site as specified under condition 24.1 and after the receipt by him of a written order to this effect from the Academic Head, I-hub data, IIIT-H and shall proceed with the same with due expedition and without delay, except as may be expressly sanctioned or ordered by the Academic Head I-HUB DATA, IIIT-H or his nominee, or be wholly beyond the contractor’s control.

24.7 Save in so far as the contractor may prescribe, the extent of portions of the site of which the contractor is to be given possession from time to time and the order in which such portions shall be made available to him and, Subject to any requirement in the contract as to the order in which the works shall be executed, the Academic Head I-HUB DATA, IIIT-H or his nominee will, with the Engineer-in-charge’s written order to commence the works, give to the contractor possession of so much of the site as may be required to enable the contractor to commence proceed with the execution of the works in accordance with the program if any, and otherwise in accordance with such reasonable proposals of the contractor as he shall by written notice to the Academic Head I-HUB DATA, IIIT-H or his nominee, may and will from time to time as the works proceed, give to the contractor possession of such further portions of the site as may be required to enable the contractor to proceed with the execution of the works with due dispatch in accordance with the said program or proposals as the case maybe ; if the contractor suffers delay or incurs cost from failure on the part of the Academic Head I-HUB DATA, IIIT-H or his nominee to give possession in accordance with the terms of this clause, the Academic Head I-HUB DATA, IIIT-H or his nominee shall grant an extension of time for the completion of works.

24.8 The contractor shall bear all costs and charges for special or temporary way leases required by him in connection with access to the site. The contractor shall also provide at his own cost any additional accommodation outside the site required by him for the purposes of the work.

Subject to any requirement in the contract as to completion of any section of the works before completion of the whole of the works shall be completed, in accordance with provisions of clauses in the Schedule within the time stated in the contract calculated from the last day of the period named in the statement to the tender as that within which the works are to be commenced or such extended time as may be allowed.

24.9 Delays and extension of time:
No claim for compensation on account of delays or hindrances to the work from any cause whatever shall lie, except as hereafter defined. Reasonable extension of time will be allowed by the Engineer-in-charge or by the office competent to sanction the extension, for unavoidable delays, such as may result from causes, which in the opinion of the Engineer-in-charge, are undoubtedly beyond the control of the contractor. The Engineer-in-charge shall assess the period of delay or hindrance caused by any written instructions issued by him, at twenty five per cent in excess or the actual working period so lost.
In the event of the Engineer-in-charge failing to issue necessary instructions and thereby causing delay and hindrance to the contractor, the latter shall have the right to claim an assessment of such delay by the Academic Head I-HUB DATA, IIIT-H whose decision will be final and binding. The contractor shall lodge in writing with the Engineer-in-charge, a statement of claim for any delay or hindrance referred to above, within 7 days from its commencement, otherwise no extension of time will be allowed.

Whenever authorized alterations or additions made during the progress of the work are of such a nature in the opinion of the Engineer-in-charge as to justify an extension of time in consequence thereof, such extension will be granted in writing by the Engineer-in-charge or other competent authority when ordering such alterations or additions.

25. Construction Program:

25.1 The Contractor shall furnish within 7 days of the order of the work a program showing the sequence in which he proposed to carry out the work, monthly progress expected to be achieved, also indicating date of procurement of materials plant and machinery. The schedule should be such that it is practicable to achieve completion of the whole work within the time limit fixed and in keeping with the Milestone program specified and shall obtain the approval of the Engineer-in-charge. Further rate of the progress as in the program shall be kept up to date. In case it is subsequently found necessary to alter this program, the contractor shall submit sufficiently in advance the revised program incorporating necessary modifications and get the same approved by the Engineer-in-charge. No revised program shall be operative without approval of Engineer-in-charge.

25.2 The Academic Head I-HUB DATA, IIIT-H shall have all times the right, without any way violating this contract, or forming grounds for any claim, to alter the order of progress of the works or any part thereof and the contractor shall after receiving such directions proceed in the order directed. The contractor shall also report the progress to the Academic Head I-HUB DATA, IIIT-H within 7 days of the Engineer-in-charge’s direction to alter the order of progress of works.

25.3 The Contractor shall give written notice to the Engineer-in-Charge whenever planning or progress of the works is likely to be delayed or disrupted unless any further drawings or order including a direction, instruction or approval is issued by the Engineer-in-Charge within a reasonable time. The notice shall include details of the drawing or order required and of why and by when it is required and of any delay or disruption likely to be suffered if it is late.

26. Speed of Work:

26.1 The Contractor shall at all times maintain the progress of work to confirm to the latest operative progress schedule approved by the Engineer-in-Charge. The contractor should furnish progress report indicating the program and progress once 7 days The Engineer-in-Charge may at any time in writing direct the contractor to slow down any part or whole of the work for any reason (which shall not be questioned) whatsoever, and the contractor shall comply with such orders of the Engineer-in-Charge. The compliance of such orders shall not entitle the contractor to any claim of compensation. Such orders of the Engineer-in-Charge for slowing down the work will however be duly taken into account while granting extension of time if asked by the contractor for which no extra payment will be entertained.
26.2 Delays in Commencement or progress or neglect of work and forfeiture of earnest money, Security deposit and withheld amounts:

If, at any time, the Engineer-in-Charge shall be of the opinion that the Contractor is delaying Commencement of the work or violating any of the provisions, the Contractor is neglecting or delaying the progress of the work as defined by the “Rate of progress” in the Articles of Agreement, he shall so advise the Contractors in writing and at the same time demand compliance in accordance with conditions of Tender notice. If the Contractor neglects to comply with such demand within seven days after receipt of such notice, it shall then or at any time thereafter, be lawful for the Engineer-in-Charge to take suitable action in accordance with Clause 60 of APSS.

27. Suspension of works by the Contractor:
27.1 If the Contractor shall suspend the works, or sublet the work without sanction of the Engineer-in-Charge, or in the opinion of the Engineer-in-Charge shall neglect or fail to proceed with due diligence in the performance of his part of the Contract as laid down in the Schedule rate of progress, or if he shall continue to default or repeat such default in the respects mentioned in clause 27 of the APSS, the Engineer-in-Charge shall take action in accordance with Clause 61 of APSS.
27.2 If the Contractor stops work for 28 days and the Stoppage has not been authorised by the Engineer-in-Charge the Contract will be terminated under Clause 61 of APSS.
27.3 If the Contractor has delayed the completion of works the Contract will be Terminated under Clause 61 of APSS.

28. Extension of the Intended Completion Date:
28.1 The Engineer-in-Charge shall recommend for extension to the Academic Head I-HUB DATA, IIIT-H, in accordance with the delegation of powers in force, the Intended Completion Date if a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date.
28.2 The Academic Head I-HUB DATA, IIIT-H shall decide whether and by how much to extend the Intended Completion Date within 7 days of the Contractor asking the Engineer for a decision upon the effect of a Variation and submitting full supporting information. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.

29. Delays Ordered by the Engineer-in-Charge:
29.1 The Academic Head I-HUB DATA, IIIT-H may instruct the Contractor to delay the start or progress of any activity within the Work.

30. Early Warning:
30.1 The contractor is to warn the Engineer-in-Charge at the earliest opportunity of specific likely future events or circumstances that may adversely affect the Execution of Works.
30.2 The Contractor shall co-operate with the Engineer-in-Charge in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Academic Head I-HUB DATA, IIIT-H.
31. **Management Meetings:**
31.1 The Academic Head I-HUB DATA, IIIT-H may require the Contractor to attend a management meeting. The business of a management meeting shall be to review the program for remaining work and to deal with matters raised in accordance with the early warning procedure.

C. **QUALITY CONTROL**

32 **Identifying Defects:**
32.1 The Engineer-in-Charge shall check the Contractor’s work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor’s responsibilities. The Engineer-in-Charge may instruct the Contractor to verify the Defect and to uncover and test any work that the Engineer considers may be a Defect.

33 **Tests:**
33.1 If the Engineer-in-Charge instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a Defect and the Contractor shall pay for the test and any samples.

34. **Correction of Defects:**
34.1 The Engineer-in-Charge shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins on Completion. The defect liability period shall be extended for as long as defects remain to be corrected by the Contractor.
34.2 Every time notice of a Defect is given, the Contractor shall correct the notified defect within the length of time specified by the Engineer-in-Charge’s notice.

35. **Uncorrected Defects:**
35.1 If the contractor has not corrected the defect within the time specified in the Engineer-in-Charge’s notice, the Engineer-in-Charge will assess the cost of having the defect corrected and the contractor will pay this amount.
35.2 The Engineer-in-Charge shall introduce O.K. cards and prescribed the formats there of. O.K. cards shall relate to all major components of the work. The contractor / his authorised representative shall be required to initiate and fill in and present the O.K. card to the construction staff who would check the respective items and send to the quality control staff for final check and clearance / O.K. Any defects pointed out by the construction supervision staff or by the Quality Control staff shall promptly be attended to by the contractors and the fact of doing so be duly recorded on the back of O.K. card.
35.3 The Engineer-in-Charge may also introduce checklists, which shall be kept in Bound registers by the construction supervision staff. The contractor may be required to fill up these lists in the first instance and shall be subsequently checked by the Construction / Quality Control engineers.

35.4 **Quality policy:**
35.4.1 The quality of construction shall be of highest standards.

    The materials, equipment, tools and plants and workmanship should be of high standards and acceptable quality conforming to the specifications.
The contractor attention is directed to the requirements of materials under the clause “Materials and Workmanship” in the preliminary specifications of APSS. Materials conforming to the latest relevant I.S. Specifications and other approved Codes and Specifications shall be used on the work.

35.4.2 Quality plan:

The contractor shall draw quality plan based on the Quality Management System of ISO 9001-2000 and submit the same to the Center operation officer I-Hub DATA, IIIT, Gachibowli before starting the work for his approval.

Quality plan for raw materials/ construction materials/ finished products/works:

It shall be responsibility of the contractor to arrange for testing of all materials procured for the works under such consignment or at regular intervals as may be specified in APSS at his cost and only after the engineer is satisfied fully with the test results the materials of those consignments will be allowed to be utilized on the work. The contractor shall maintain a record of test results which shall be made available to the engineers for the inspection.

The contractor shall collect various raw materials, construction materials well in advance before its use and shall get them tested as per the approved quality plan. No material shall be used unless it passes all the check/tests as per the acceptance criteria given and a record of all checks/tests/ verifications shall be maintained at site.

All the materials used in the works including electrical, Sanitary and water supply works should be as per the list of approved materials, makes and models as enclosed. The institution reserves the right to insist upon using any of the materials from these lists of approved materials.

For all fittings of electrical, sanitary and water supply items, fixtures to doors and windows, supply of steel windows and flush wood doors, paints etc., the product marked ISI should be used and shall be of reputed and approved brand/make.

Tests required to be conducted at outside laboratories shall be done at those labs which have availability of required instruments traceable to national standards and which are approved make by the Engineer-In-Charge. Reports obtained from such labs should indicate the calibration status and traceability to national standards of their equipment’s for accepting the results.

35.4.3 Quality control:

Establishment of Quality Control Laboratory: The contractor shall establish a quality control laboratory, at the site of work, equipped with calibrated equipment (as per list given below) to perform field tests, batch wise, for various materials, then and there itself, as per quality plan and standards or tie up with the reputed and well established quality control testing laboratories as suggested/approved by the institution / I-HUB DATA, IIIT-Herabad.

All Material Test Certificates need to be submitted before Execution of work. And, They should be submitted during the time of R.A bill payment.
35.4.4 Quality Registers

The contractor shall maintain the Quality Test Registers at site in the format specified and record therein the results of all the tests conducted. The relevant reports of the tests conducted shall be maintained in a separate file.

Return of Site documents:

All the site records/ documents mentioned therein shall be returned to the Engineer-in-charge in full shape after the satisfactory completion of the work.

35.4.5 Quality Control Inspections:

In addition to the normal inspections by the regular staff in charge of the construction of work, periodical inspection by the Academic Head I-HUB DATA, IIIT-H or his nominees, the work will also be inspected by the Architects and Project Management consultants for this project and any other authorized external quality control agencies. If any sub-standard materials, work or workmanship is noticed, action will be taken based on their observations and these will be affected by the Engineer-in-charge of the execution of the work.

35.4.6 Quality Audit:

The Institution may engage external agencies for conducting quality audit in which case the following methodology would be adopted:

i) The external agencies shall conduct quality control tests as per the standard procedures in the presence of Construction and Quality Control Engineers and the Contractor.

ii) The observations of the external agencies on the quality of work should be recorded then and there and signatures of all the concerned obtained as a token of acceptance of the observations.

iii) If any sub-standard materials, work or workmanship is noticed, action will be taken based on their observations and these will be affected by the Engineer-in-charge of the execution of the work.
D. COST CONTROL

36. Bill of Quantities:
36.1 The Bill of Quantities shall contain items for the construction work to be done by the Contractor.
36.2 The Contractor is paid for the quantity of the work done at the agreement rate in the Bill of Quantities for each item.

37. Supplemental items:
37.1 The contractor is bound to execute all supplemental works that are found essential, incidental and inevitable during execution of main work.
37.2 The payment of rates for such supplemental items of work will be regulated as under;

Supplemental items directly deducible from similar items in the original agreement.

37.2.1 The rates shall be derived by adding to or subtracting from the agreement rate of such similar item the cost of the difference in the quantity of materials, labour between the new items and similar items in the agreement worked out with reference to the Schedule of Rates adopted in the sanctioned estimate with which the tenders are accepted.

37.2.1.1 (a) Similar items but the rates of which cannot be directly deduced from the original agreement.
(b) Purely new items which do not correspond to any item in the agreement.

37.2.2 The rates of all such items shall be Estimated Rates.

38 Extra Items:
38.1 Extra items of work shall not vitiate the contract. The contractor shall be bound to execute all extra items of work not found in the agreement as directed by the Engineer-in-Charge. The rates for extra items shall be worked out by the Engineer-in-Charge as per the conditions of the Contract and the same are binding on the Contractor.
38.2 The contractor shall before the 15th day of each month, submit in writing to the Engineer-in-charge a statement of extra items if any that they have executed during the preceding month failing which the contractor shall not be entitled to claim any.

38.3 Entrustment of additional items:
38.3.1 Wherever additional items not contingent on the main work and outside the scope of original agreement are to be entrusted to the original contractor dispensing with bids and if the value of such items exceeds the limits upto which the officer is empowered to entrust works initially to contractor without calling for tenders, approval of competent authority shall be obtained. Entrustment of such items on nomination shall be the estimated rates or agreement rates/agreement rates.

38.3.2 Entrustment of the additional items contingent on the main work will be authorized by the officers upto the monetary limits upto which they themselves are competent to accept items in the original agreement so long as the rates for such items shall be worked out in accordance with the procedure - For all items of work in excess of the quantities shown in the Bill of Quantities of the Tenders, the rate payable for such items shall be estimate rates/agreement rates.
38.3.3 Entrustment of either the additional or supplemental items shall be subject to the provisions of the agreement entered into by a Competent Authority after the tender is accepted. The Academic Head I-HUB DATA, IIIT-H who entered into the agreement approves the rate for the items / variation in quantity in the current agreement. The items shall not be ordered by an officer on his own responsibility if the revised estimate or deviation statement providing for the same requires the sanction of competent authority.

39  Cash flow forecasts:
39.1 When the program is updated, the contractor is to provide the Engineer-in-charge with an updated cash flow forecast.

40  Payment Certificates:
40.1 The Contractor shall submit to the Engineer-in-charge monthly statements of the estimated value of the work completed less the cumulative amount certified previously.
40.2 The Engineer-in-charge shall check the Contractor's monthly statement within 14 days
40.3 The value of work executed shall be determined by the Engineer-in-charge.
40.4 The value of work executed shall comprise the value of the quantities of the items in the Bill of Quantities completed.
40.5 The Engineer-in-charge may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.

41  Payments:
PROCEDURE - I
41.1 Payment for the work done by the contractor will be made for the finished item of work based on the measurements recorded in measurement books by concerned officer of the Institution not lower in rank than a Assistant Engineer/AEE and check measured by concerned officer not lower in rank than a Deputy Executive Engineer. The minimum part bills should not be less than 50 lakhs. The measurement shall be recorded at various stages of the work done and also after work is completed. The contractor shall be present at the time of recording of each set of measurement and their check measurement and accept them then and there so as to avoid disputes at a later stage. If the contractor is not available at the work spot at the time of recording measurements or check measurements, the particulars of measurements shall be signed by the authorised agent of contractor based on which the contractor shall accept the set of measurements without any further dispute. If for any reason the contractor's authorised agent is also not available at site when the institution decides to suspend the work recording of measurements in the absence of the contractor or his authorised representative, the institution shall not entertain any claim from the contractor for any loss incurred by him on this account. The Contractor shall however note that the Institution cannot indefinitely wait for recording the measurement due to the absence of the Contractor and his authorised agent and check measure them even in the absence of the contractor.

(OR)
PROCEDURE II

Application and format of the computerized M.B.

(1) In works of estimated cost put to tender of Rs. 15 lakhs and above, approving authority, the conventional Measurement Books shall be replaced by a bound volume of computerized measurements to be furnished by the contractor, duly machine numbered for the pages, and with the Measurement Book number given by the Division Office. The pages of these Measurement Books shall be of A-4 size. All these Computerized Measurement Books belonging to a Division shall be serially numbered, and a record of these Computerized Measurement Books shall be maintained in a separate Register in the prescribed form.

(2) The same format as in the existing Measurement Books shall be used for the Computerized Measurement Books. The Measurements shall be carried forward from the previous recorded measurements as per the existing procedure.

(3) These measurement books will be retained by the Institution and will be the property of the Institution, I-Hub, IIIT-H

Mode of measurements

(1) The measurements shall be recorded and entered in computerized format in the first instance by the contractor, and a hard copy shall be submitted to the Institution. All entries shall be made exactly as per the existing procedures.

(2) These measurements shall then be 100% checked by the Assistant Engineer/Assistant Executive Engineer. If Assistant Engineer/Assistant Center operation officer is not available, the Deputy Center operation officer shall perform 100% check of the measurements. The contractor shall incorporate all such changes or corrections, as may be done during these checks, to his draft computerized measurements, and submit to the institution the corrected computerized measurements in the form of a book, duly hard bound in red colour on the lines of the conventional Measurement Books now in use, and with its pages machine numbered.

(3) The Deputy Center operation officer and the Center operation officer shall test check these computerized measurements as per the existing instructions. This book shall be treated as a Computerized Measurement Book.

(4) The Assistant Engineer/Assistant Executive Engineer, Deputy Center operation officer and the Center operation officer shall record the necessary certificates for their checks as per the existing procedure in this Computerized Measurement Books.

(5) The Computerized Measurement Books shall be allotted a serial number as per the Register of Computerized Measurement Books, separately.

Cutting or over-writing in the computerized Measurement Books not allowed.

(1) The Computerized Measurement Books given by the contractor, duly bound, with its pages machine numbered, shall have no cutting or over-writing without any loose sheets.
(2) It is the responsibility of the Assistant Engineer/Assistant Center operation officer or the Deputy Center operation officer as the case may be to ensure that the checks and tests checks done by them in the initial draft measurements are correctly incorporated in the Computerized Measurement Books before they record their certificates.

(3) In case of any error, the Computerized Measurement Books shall be cancelled, and the contractor shall re-submit a fresh Computerized Measurement Book. This should be done before the corresponding computerized bill is submitted to the Division for payment.

(4) The contractor shall submit as many copies of Computerized Measurement Books as may be required, and as are specified in the NIT/contract, for the purpose of reference and record in the various offices of the I-HUB DATA, Gachibowli

**Computerized bill to be submitted by the contractor**

(1) The contractor shall submit his running and final bills in a computerized form in the same format as the existing conventional bills, with all the pages machine numbered, and hard bound, and with all the entries made as per the existing procedure.

(2) The contractor shall submit as many copies of the computerized bills as required for the purpose of reference and record in the various offices of the institution.

(3) The bill shall be carried forward from the previous running account bills as per the existing procedure.

(4) These computerized bills shall be processed by the various offices for payment, as per the existing procedure.

**Review of Measurement Books**

(1) The MBs are required to be reviewed by the Divisional Accounts Officer under the supervision of Executive Engineer. The Deputy Executive Engineers are required to submit the Measurement Books in use in the Sub-Divisions to the Divisional Office, from time to time, so that at least once a year the entries recorded in each of the Books are subjected to a percentage check. The Divisional Accounts Officer should ensure that this annual review is conducted regularly and positively every year.

(2) The review by the Divisional Accounts Officer shall be in the following respects:-

i) To compare the books in use with the Register of Measurement Books maintained in prescribed form and to note necessary corrections in the Register.

ii) To see that no original sheet is torn out of a Measurement Book, nor any entry erased or disfigured, and that the corrections made therein are initialed.

iii) To see that pencil entries are not inked over.

iv) To test check the accuracy or calculations, and to ensure that the instructions regarding writing of Measurement Books, recording of measurements, and their test check are being followed properly.
On receipt of the MBs in the Divisional office, the Center operation officer should indicate in column 2 of the “Review Notes” in each Measurement Book as referred to in para (5) below as to which of the calculations are to be test checked by the Divisional Accounts Officer. The extent of this check will be determined by the Center operation officer having regard to the result of the last review and should cover complete set of measurements.

Payments based on the entries reviewed should be traced into various accounts and verified. Similarly, supplies or issue of materials should be traced into the various accounts, contractor’s ledger, etc. and verified.

The defects, discrepancies etc., noticed should be communicated to the Deputy Center operation officer concerned and summarized in the following form in the Measurement Book that has been test audited:

| Pages reviewed generally | Calculations selected by the Divisional Accounts officer for re-check | Defects and discrepancies noticed | Dated initials of
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>pages</td>
<td>Dated initials</td>
<td></td>
</tr>
</tbody>
</table>

The Measurement Book completed and returned for record during the year should also be similarly examined prior to their final record in the Divisional Office.

**Loss of Measurement Books**

1. When a Measurement Book is lost, an FIR should be lodged with the police.

2. An immediate report of the case together with an explanation of all parties concerned responsible for the loss should also be made promptly to the Academic Head I-HUB DATA, IIIT-H who is empowered to sanction the write off of the lost Measurement Books.

3. It is also necessary that the measurements in the lost Measurement Books should be re-constructed at the earliest.

**Standard Measurement Books (SMBs)**

1) **Purpose**

The Standard Measurement Books are maintained to record the measurements of permanent standing in a building and are required to be brought up to date from year on the basis of additions, etc. that are made to the building during a year. These are used for preparing the repairs estimates and contractors’ bills for such repairs so as to avoid taking detailed measurements on each occasion.

1) **Preparation and accounting of SMBs**

i) The Standard Measurement Books shall be prepared after the completion of the work by the construction Division that has executed the work. The preparation of these books will ordinarily be undertaken in accordance with the program for each Sub-Division or such other suitable unit as may be fixed by the Divisional Officer.
ii) All drawings, Standard Measurement Books etc. should be properly documented before handing over the building.

iii) All the Standard Measurement Books should be in the prescribed form and should contain pages in singleton. They should be numbered in an alphabetical series so as to be readily distinguishable from those assigned to ordinary Measurement Books.

iv) These will be accounted for in the same manner as ordinary Measurement Books in a register in prescribed form.

v) A similar register will be maintained in each Sub-Division showing the book belonging to it and reviewed as done in case of the ordinary Measurement Books.

2) Writing of Standard Measurement Books

i) The Standard Measurement Books should be written legibly in ink and certified as correct by the Executive Engineer. These should be maintained very carefully and accurately, as they may have to be produced as evidence in a Court of Law.

ii) The Standard Measurement Books should either be written by the Deputy Center operation officer himself or a Assistants Engineer/Assistant Center operation officer under his orders. Each set of measurements taken by the Assistant Engineer/Assistant Center operation officer should, however, be fully checked by the Deputy Executive Engineer, after which it should be examined by the Executive Engineer. He should declare in writing in the Book itself as finally approved by him for the purposes of preparing annual repair estimates and contractors' bills for the work done. Until this is done, the Book will not be assigned a number, and will not be entered in the Register of Standard Measurement Books.

iii) The Standard Measurement Books shall be brought up to date under the supervision of the Deputy Center operation officer with reference to the building or work concerned within one month of closing of the accounts of the estimate thereof. All such corrections shall be attested by the Deputy Executive Engineer and approved by the Executive Engineer.

3) Computerized SMBs

The Standard Measurement Books can also be in the Computerized Measurement Book form and shall fully correspond with the final computerized measurements for the various items as recorded in the Computerized Measurement Book used during the construction stage.

4) Check by superior officers

i) The Center operation officer shall check the compilation Standard Measurement Books from time to time by personally examining each book at least once a year. To this end, the program of work should ordinarily be as follows:

a) Soon after the close of the official year as possible, the Deputy Center operation officer concerned shall arrange for a personal examination of these books with a view to satisfying himself that they have been brought up to date with reference to the additions, alterations or special repairs carried out in the building or works during the
preceding year, and ensuring their submission on such dates as may be fixed for the purpose for the inspection of the Divisional Officer.

b) On receipt in the Division Office, the Books will be compared with the Register of Standard Measurement Books in order to ensure that all the Books have been submitted for inspection. These shall then be subjected to such scrutiny as the Divisional Officer may direct. A comparison of these Books with the accounts of expenditure and the record of connected measurements relating to estimates for additions/alterations or special repairs to building and works in the Division should, however, form a feature of the check to be applied.

ii) A record of the results of the scrutiny referred to above should invariably be retained and produced, if required, during the inspection of Academic Head I-HUB DATA, IIIT-H/Audit/Accounts Officer.

5) Submission of certificates

i) A report should be made to the Executive Engineer, so as to reach him not later than the 31st July of each year, with copy endorsed to the concerned Accounts Officer, certifying in clear terms:

a) That all the Standard Measurement Books of the Division have been inspected by the Executive Engineer.

b) That the entries made therein have not been tampered with

c) That all corrections due to additions or alterations to the building or work concerned have been carried out, and,

d) That the Books are reliable with up-to-date records.

ii) When a payment is based on Standard Measurements, the following certificate should invariably be recorded on the bill, in his own handwriting, by the Deputy Center operation officer preparing, examining or verifying it:

“Certified that the whole of the work billed for herein has been actually done, and that no portion thereof has been previously billed for in any shape.”

41.2 Payments and Certificates:

41.2.1 Initially 60% of the bill amount received will be paid within 10 days of the receipt of the bill. In case of balance 40% payment will be made within (30 days) of the receipt of the bill, duly taking into account the amount to be adjusted for recovery of advance payments, liquidated damages in terms of tender conditions and security deposit for the due fulfillment of the contract. Payment will be made to the Contractor under the certificate to be issued at reasonably frequent intervals by the Engineer-in-Charge, and intermediate payment will be the sum equal to 92½% of the value of work done as so certified and balance of 7½% will be withheld and retained as security for the due fulfillment of the contract under the certificate to be issued by the Engineer-in-Charge. On completion of the entire works the contractor will receive the final payment of sum of equal to 92½% of the total value of the work done.
41.2.2 In case of over payments or wrong payment if any made to the contractor due to wrong interpretation of the provisions of the contract, or Contract conditions etc., such unauthorised payment will be deducted in the subsequent bills or final bill for the work or from the bills under any other contracts with the Institution or at any time thereafter from the deposits available with the Institution.

41.2.3 Any recovery or recoveries advised by the I-HUB DATA Gachibowli either state or central, due to non-fulfillment of any contract entered into with them by the contractor shall be recovered from any bill or deposits of the contractor.

41.2.4 No claim shall be entertained, if the same is not represented in writing to the Engineer-in-Charge within 15 days of its occurrence.

41.2.5 The contractor is not eligible for any compensation for inevitable delay in handing over the site or for any other reason. In such case, suitable extensions of time will be granted after considering the merits of the case.

41.3 Intermediate Payments:
41.3.1 For intermediate Stage of work, only part rates as fixed by the Engineer-in-Charge will be paid.

41.3.2 Part rates shall be worked out for the work done portion based on the actual operations involved keeping in view the value of the balance work to be done, to avoid unintended benefit to the Contractor in initial Stage.

41.3.3 Full rate shall be paid when the work is completed to the full profile as noted in the drawings.

41.3.4 Where payment is intended for aggregates by Bill of Quantities item based on stack measurements, 10% of the quantity measured will be withheld. No payment or advance will be made for unfixed materials when the rates are for finished work in site.

41.3.5 The contractor shall supply hard copies of as built drawings drawn to scale in 5 sets along with soft copy within 28 days of the issue of certificate of completion of work failing which an amount of Rs.2.00 lakhs will be withheld from the amounts due to the contractor.

<table>
<thead>
<tr>
<th>Nature of contract</th>
<th>Class of bill</th>
<th>Amount of payment</th>
<th>Nature of Deduction</th>
<th>Refund or deduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Piece work contract</td>
<td>Intermedi ate Bill</td>
<td>(i) Total value of work done, if it is less than 20 times earnest money. (ii) Total value of work done less amount if any withheld for proper maintenance (L.S.) Contract.</td>
<td>5% of value of work in excess of 20 times earnest money to be held as security. To be credited to deposit only for the withheld amount excess Rs. 500/-. A suitable amount at the discretion of the Engineer for the proper maintenance.</td>
<td>To be refunded after final bill or deposit as stated in, otherwise to be refund in the final bill itself.</td>
</tr>
<tr>
<td>-do-</td>
<td>Final Bill</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L.S. contract (supply)</td>
<td>Intermedi ate Bill</td>
<td>90% of the value of work</td>
<td>10% of value towards security.</td>
<td>Nil</td>
</tr>
</tbody>
</table>

41.4 A LIST OF PAYMENTS AND DEDUCTIONS FROM BILLS
<table>
<thead>
<tr>
<th></th>
<th>Final Bill</th>
<th>Total value of work done</th>
<th>Nil</th>
<th>The 10% value withheld towards security to be refunded after expiry of Guarantee period.</th>
</tr>
</thead>
<tbody>
<tr>
<td>L.S. contract (Supply of materials and constructions) -do-</td>
<td>Intermedi ate Bill</td>
<td>92 ½% of value of work done.</td>
<td>7½% of value towards security.</td>
<td>Nil</td>
</tr>
<tr>
<td></td>
<td>Final Bill</td>
<td>92 ½% of value of work done less amount if any withheld for proper maintenance/rectifications.</td>
<td>7½% of value towards security.</td>
<td>1) 5% out of 7½% so far collected from bills to be refunded on completion of the whole works.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2) Balance 2 ½% to be refunded on expiry of defects liability period or on rectification of any defects that appears during the defects liability period which ever happens latter.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3) The E.M.D. collected at the time of entering into agreement is also returnable along with item (2) above.</td>
</tr>
</tbody>
</table>

42. **Recovery towards useful materials like earth, stone etc recovered from earthwork excavation:**

Recovery shall be made from the bills payable to the contractor towards the value of useful materials like sand, stone, clay, ballast, earth, trees and shrubs or other materials obtained in the excavation made or lying on the site of the work, either useful for reuse on the work or elsewhere. The recovery will be made based on the rates of Schedule of Rates adopted while preparing the estimate.

43. **Interest on Money due to the Contractor:**

43.1 No omission by the Engineer-in-Charge or the sub-divisional officer to pay the amount due upon certificates shall vitiate or make void the contract, nor shall the contractor be entitled to interest upon any guarantee fund or payments in arrear, nor upon any balance which may, on the final settlement of his accounts, found to be due to him.

44. **Certificate of Completion of works:**

44.1 Certificate of Completion of works:

44.1.1 When the whole of the work has been completed and has satisfactorily passed any final test that may be prescribed by the Contract, the Contractor may give a notice to that effect to the Engineer-in-Charge accompanied by an undertaking to carry out any rectification work during the period of maintenance, such notice and undertaking shall be in writing and shall be deemed to be request by the Contractor for the Engineer-in-Charge to issue a Certificate of completion in respect of the Works. The Engineer-in-Charge shall, within twenty one days of the date of delivery of such notice either issue to the Contractor, a certificate of completion stating the date on which, in his opinion, the works were completed in accordance with the Contract or give instructions in writing to the Contractor specifying all the Works which, in the Engineer-in-Charge’ opinion, required to be done by the Contractor before the issue of such Certificate. The Engineer-in-Charge shall also notify the Contractor of any defects in the Works affecting completion that may appear after such instructions and before completion of the Works specified there in. The Contractor shall be entitled to receive such Certificate of the Completion within twenty-one days of completion to the
satisfaction of the Engineer-in-Charge of the Works so specified and making
good of any defects so notified.

44.1.2 Similarly, the Contractor may request and the Engineer-in-Charge shall issue a
Certificate of Completion in respect of:

a) Any section of the Permanent works in respect of which a separate time
for completion is provided in the Contract, and

b) Any substantial part of the Permanent Works which has been both
completed to the satisfaction of the Engineer-in-Charge and occupied or
used by the Institution, I-HUB DATA, Gachibowli.

44.1.3 If any part of the Permanent Works shall have been completed and shall have
satisfactorily passed any final test that may be prescribed by the Contract, the
Engineer-in-Charge may issue such certificate, and the Contractor shall be
deemed to have undertaken to complete any outstanding work in that part of the
Works during the period of Maintenance.

45 Taxes:
45.1 The rates quoted by the contractor shall be deemed to be inclusive of all taxes
except GST.
45.2 GST will be paid extra/separately.
45.3 Any Central or State sales and other taxes on completed items of works of this
contract as may be levied and paid by the contractor are to be borne by himself /
herself.

46 Price Adjustment: No price adjustment will be allowed

47 Retention:
47.1 The institution shall retain from each payment due to the contractor @ the rate of
7.5% of bill amount until completion of the whole of the works in addition to 2.5%
paid at the time of agreement as EMD in shape of DD, thus total (7.5%+2.5%)
10% will be retained under deposit for a period of 24 months as defect liability
period.

47.2 a) On completing of the whole work 5% of the deposit amount will be released 12
months after the completion date of work with all respects.
b) Remaining 5% of the deposit along with the 5% furnished as above, will be
releases 24 months after completion date of work in all respects. when the
Defects Liability Period has passed and the Engineer-in-Charge has certified that
all the Defects notified by the Engineer-in-Charge to the Contractor before the
end of this period have been corrected i.e. when defect liability.

48 Liquidated Damages:
48.1 If for any reason, which does not entitle the contractor to an extension of item, the
rate of progress of works, or any section is at any time, in the opinion of the
Academic Head I-HUB DATA, IIIT-H too slow to ensure completion by the
prescribed time or extended time for completion Academic Head I-HUB DATA, I-
HUB DATA,IIIT-H -H shall so notify the contractor in writing and the contractor
shall there upon take such steps as are necessary and the Academic Head I-
HUB DATA, IIIT-H may approve to expedite progress so as to complete the
works or such section by the prescribed time or extended time. The contractor
shall not be entitled to any additional payment for taking such steps. If as a result
of any notice given by the Academic Head I-HUB DATA, IIIT-H under this clause
the contractor shall seek the Academic Head I-HUB DATA, IIIT-H’s permission to
do any work at night or on Sundays, if locally recognised as days of rest, or their locally recognised equivalent, such permission shall not be unreasonably refused.

48.2 If the contractor fails to complete whole of the works or any part thereof or section of the works within the stipulated periods of individual mile stones (including any bonafide extensions allowed by the competent authority without levying liquidated damages), the Academic Head I-HUB DATA, IIIT-H may without prejudice to any other method of recovery will deduct for the period of delays subject to a maximum of 10% of the contract value from any monies in his hands due or which may become due to the contractor. The payment or deductions of such damages shall not relieve the contractor from his obligation to complete the works, or from any other of his obligations and liabilities under the contract.

48.3 The liquidated damages for the whole of the work are as follow:

For milestone 1: Rs 20,000/- Per day
For milestone 2: Rs 20,000/- Per day
For milestone 3: Rs 20,000/- Per day
For milestone 4: Rs 20,000/- Per day

48.4 The maximum amount of liquidated damages for the whole of the works is ten percent of final contract price. However if the entire construction work is completed in all respects within the agreement period. The entire liquidated amount recovered from the running bill will be released without any interest.

48.5 In case of failure of any safety rules penalty at Rs.500/- per person will be levied.

49 **Mobilization Advance:** No mobilization Advance will be paid.

49 **Securities:**

50 **Cost of Repairs:**

51.1 Loss or damage to the Works or materials to the Works between the Start Date and the end of the Defects Correction Periods shall be remedied by the Contractor at the Contractor’s cost if the loss or damage arises from the Contractor’s acts or omissions.

51.2 During the period of defects liability the contractor has to engage one work inspector for maintenance of Electrical and Civil works, i.e., for a period of 24 months after the completion of work in all respects.
E. FINISHING OF THE CONTRACT

51 Completion:
52.1 The Contractor shall request the Engineer-in-Charge to issue a Certificate of completion of the Works and the Engineer-in-Charge will do so upon deciding that the work is completed.

52 Taking Over:
53.1 The I-HUB DATA,IIIT-H Gachibowli, Hyderabad shall takes over the Site and the Works within seven days of the Engineer-in-Charge issuing a certificate of Completion.

53 Final Account:
54.1 The Contractor shall supply to the Engineer-in-Charge a detailed account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The Engineer-in-Charge shall issue a Defects Liability Certificate and certify any final payment that is due to the Contractor within 56 days of receiving the Contractor's account if it is correct and complete. If it is not, the Engineer-in-Charge shall issue within 56 days a schedule that states the scope of the corrections or additions that are necessary. If the final Account is still unsatisfactory after it has been resubmitted, the Engineer-in-Charge shall decide on the amount payable to the Contractor and issue a payment certificate within 56 days of receiving the Contractor's revised account.

54 Termination:
55.1 The Institution may terminate the Contract if the contractor causes a fundamental breach of the Contract.
55.2 Fundamental breaches of Contract include, but shall not be limited to the following:
   a) The Contractor stops work for 15 days when no stoppage of work is shown on the current program and the stoppage has not been authorised by the Engineer-in-Charge.
   b) The Contractor is made bankrupt or goes into liquidation other than for a reconstruction or amalgamation.
   c) The Engineer-in-Charge gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Engineer-in-Charge;
   d) The Contractor does not maintain a security which is required and
   e) The Contractor has delayed the completion of works by the number of days for which the maximum amount of liquidated damages can be paid as defined.
   f) If the contractor, in the judgment of the Institution has engaged in corrupt or fraudulent practices in competing for or in the executing the contract.
   g) The Contractor has contravened Sub-Clause 5 of Conditions of Contract and sublet the work.
   h) The Contractor does not adhere to the agreed construction program (Clause 24.1, 24.2, 24.3 of Conditions of Contract) and also fails to take satisfactory remedial action as per agreements reached in the management meetings (Clause 31.1) for a period of 15 days.
   i) The Contractor fails to carry out the instructions of Engineer-in-Charge within a reasonable time determined by the Engineer-in-Charge.
For the purpose of this paragraph: “corrupt practice” means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution. “Fraudulent practice” means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment to the Institution and includes collusive practice among Tenderers (prior to or after Tender submission) designed to establish Tender prices at artificial non-competitive levels and to deprive the Institution of the benefits of free and open competition.

54.6 Notwithstanding the above the Institution may terminate the contract for convenience.

54.7 If the Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secured, leave the Site as soon as reasonably possible.

55 Payment upon Termination:

56.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Engineer-in-Charge shall issue a certificate for the value of the work done less advance payments received upon the date of the issue of the certificate, less other recoveries due in terms of the Contract, less taxes due to be deducted at source as per applicable law and less the percentage to apply to the work not completed. Additional Liquidated Damages shall not apply. If the total amount due to the Institution exceeds any payment due to the Contractor the difference shall be a debt payable to the Institution I-HUB DATA, IIIT-H.

56 Property:

57.1 All materials on the Site, Plant, Equipment, Temporary Works and Works are deemed to be the property of the Institution if the Contract is terminated because of Contractor's default.

57 Release from Performance:

58.1 If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of either the Institution or the Contractor the Engineer-in-Charge shall certify that the contract has been frustrated. The Contractor shall make the site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all works carried out before receiving it and for any work carried out after wards to which commitment was made.
F. SPECIAL CONDITIONS

58 Water Supply:
Water supply will be provided by I-HUB DATA, IIIT-H at one point at site on chargeable basis. Further distribution along with Water meter for usage in Contractor scope.

60 Electrical Power:
Power Supply will be provided by I-HUB DATA, IIIT-H at one point at site on chargeable basis. Further distribution along with Energy meter for usage in Contractor scope. In case of failure of electricity, the Contractor has to make alternative arrangements for supply of electricity by Diesel Generator sets of suitable capacity at place of work. If the supply is arranged by the I-HUB DATA, IIIT-H, necessary Tariff rates shall have to be paid based on the prevailing rates.

The contractor shall satisfy all the conditions and rules required as per Indian Electricity Act 1910 and under rule –45(I) of the Indian Electricity Rules, 1956 as amended from time to time and other pertinent rules.

The power shall be used for I-HUB DATA, IIIT-Hyderabad works only.

60.1 Electric Power for Domestic Supply:

a) The contractor has to make his own arrangements for the supply of electric power for domestic purposes and the charges for this purpose have to be paid by him at the rates as fixed by the Telangana State Electricity Board from time to time.

b) The contractor will have to make his own arrangements to lay and maintain the necessary distribution lines and wiring for the workers camp at his own cost. The layout and the methods of laying the lines and wiring shall have the prior approval of the Engineer-in-Charge. All camp area shall be properly electrified. All lines, streets, approaches for the camp etc., shall be sufficiently lighted for the safety of staff and labour of the contractor, at the cost of the Contractor and it will be subject to the approval of the Engineer-in-Charge.

61 Land: Institutional Land (IIIT Hyderabad Campus, Gachibowli)

61.1 Land for Contractor’s use:
The contractor will be permitted to use Institution land for execution of work. The contractor shall have to make his own arrangements for acquiring and clearing the site, leveling, providing drainage and other facilities for labour staff colonies, site office, work-shop or stores and for related activities. The Contractor shall apply to the Institution within a reasonable time after the award of the contract and atleast10 days in advance of its use, the details of land required by him for the work at site and the land required for his camp and should any private land which has not been acquired, be required by the contractor for his use. The same may be acquired by the contractor at his own cost by private negotiations and no claim shall be admissible to him on this account.

The Engineer-in-Charge reserves the right to refuse permission for use of any institution land for which no claim or compensation shall be admissible to the contractor. The contractor shall, however, not be required to pay cost or any rent for the Institution land given to him.
61.2 Surrender of Occupied Land:

a) The Institution land as here in before mentioned shall be surrendered to the Engineer-in-Charge within seven days, after issue of completion certificate. Also no land shall be held by the contractor longer than the Engineer-in-Charge shall deem necessary and the contractor shall on the receipt of due notice from the Engineer-in-Charge, vacate and surrender the land which the Engineer-in-Charge may certify as no longer required by the Contractor for the purpose of the work.

b) The contractor shall make good to the satisfaction of the Engineer-in-Charge any damage to areas, which he has to return or to other property or land handed over to him for purpose of this work. Temporary structures may be erected by the contractor for storage sheds, offices, residences etc., for non-commercial use, with the permission of the Engineer-in-charge on the land handed over to him at his own cost. At the completion of the work these structures shall be dismantled site cleared and handed over to the Engineer-in-charge. The land required for providing amenities will be given free of cost from Institution lands if available otherwise the contractor shall have to make his own arrangements.

61.3 Contractor not to dispose off Spoil etc. :-
The contractor shall not dispose off or remove except for the purpose of fulfillment of this contract, sand, stone, clay ballast, earth, trees and shrubs or other materials obtained in the excavation made or lying on the site of the work, and all such materials and produce shall remain property of the Institution. The Institution may upon request from the contractor, or if so stipulated in the conditions of the contract allow the contractor to use any of the above materials for the works either free of cost or after payment as may be specifically mentioned or considered necessary during the execution of the work.

62 Roads:
In addition to existing public roads and roads Constructed by Institution, if any, in work area all additional approach roads inside work area and camp required by the Contractor shall be constructed and maintained by him at his own cost. The layout design, construction and maintenance etc. of the roads shall be subject to the approval of the Engineer-in-Charge. The contractor shall permit the use of these roads by the Institution free of charge.

It is possible that work at, or in the vicinity of the work site will be performed by the Institution or by other contractors engaged in work for the Institution during the contract period. The contractor shall without charge permit the institution and such other contractor and other workmen to use the access facilities including roads and other facilities, constructed and acquired by the contractor for use in the performance of the works.

The contractor’s heavy construction traffic or tracked equipment shall not traverse any public roads or bridges unless the contractor has made arrangement with the authority concerned. In case contractor’s heavy construction traffic or tracked equipment is not allowed to traverse any public roads or bridges and the contractor is required to make some alternative arrangements, no claim on this account shall be entertained.

The contractor is cautioned to take necessary precautions in transportation of construction materials to avoid accidents.
65 **Labour:**
The contractor shall, make his own arrangements for the engagement of all staff and labour, local or other, and for their payment, housing, feeding and transport.

Labour importation and amenities to labour and contractor’s staff shall be to the contractor’s account. His quoted percentage shall include the expenditure towards importation of labour amenities to labour and staff;

The contractor shall, if required by the Engineer-in-Charge, deliver to the Engineer-in-Charge a written in detail, in such form and at such intervals as the Engineer-in-Charge may prescribe, showing the staff and the numbers of the several classes of labour from time to time employed by the contractor on the Site and such information pertaining to Contractor’s Equipment as the Engineer-in-Charge may require.

65.1 **Transportation of Labour:**
The contractor shall make his own arrangement for the daily transportation of the labour and staff from labour camps colonies to the work spot and no labour or staff of the contractor shall stay at the work spot. No extra payment will be made to the contractor for the above transportation of the labour and his quoted percentage to the work shall include the transportation charges of labour from colonies to work spot and back.

The contractor will always duly observe the provisions of employment of children Act XXVI of 198 and any enactment or modification of the same and will not employ or permit any person to do any work for the purpose under the provisions of this agreement in contravention of said Act. The contractor here by agrees to indemnify the institution from and against all claims, penalties which may be suffered by the institution, or any person employed by the institution by any default on the part of the contractor in the observance and performance of the provisions of the employment of children Act. XXVI of 198 or any enactment or modification of the same.

As per Govt. memo No.721/Gr.(1)/81-5, dt:17.11.87. The contractor shall obtain the insurance at his own cost to cover the risk on the works to labour engaged by him during period of execution against fire and other usual risks and produce the same to the Engineer-in-charge concerned before commencement of work.
Safety Measures:

66.1 The contractor shall take necessary precautions for safety of the workers and preserving their health while working in such jobs, which require special protection and precautions. The following are some of the measures listed but they are not exhaustive, and contractor shall add to and augment these precautions on his own initiative where necessary and shall comply with directions issued by the Engineer-in-charge or on his behalf from time to time and at all times.

66.2 Providing protective footwear to workers situations like mixing and placing of mortar or concrete, sand in quarries and places where the work is done under much wet conditions.

66.3 Providing protective headwear to workers at places like underground excavations to protect them against rock falls.

66.4 Providing masks to workers at granulates or at other locations where too much fine dust is floating about and sprinkling water at frequent intervals by water hoses on all stone crushing area and storage bins abate to dust.

66.5 Getting the workers in such jobs periodically examined for chest trouble due to too much breathing in to fine dust.

66.6 Taking such normal precautions like fencing and lighting in excavation of trenches, not allowing rolls and metal parts of useless timber spread around, marking danger areas for blasting providing whistles etc.

66.7 Supply work men with proper belts, ropes etc., when working in precarious slopes and heights etc.

66.8 Avoiding un-insulated electrical wire etc., as they would electrocute the workers.

66.9 Taking necessary steps towards training the workers concerned on the machinery before they are allowed to handle them independently and taking all necessary precautions in and around the areas where machines hoists and similar units are working.

66.10 Providing security fence around the work site with GI colour coated sheets of min. 20' height with suitable supports.

66.11 COVID 19- PROTOCOLS

a. Declaration form to be filled by every employee.
b. Hand sanitizers to be provided.
c. Body Temperature check with thermometer
d. Nose mask to be provided.
e. Stay in a well-ventilated room with a window that can be opened.
f. Do not share dishes, drinking glasses, cups, eating utensils, towels, bedding or other items with other people.
66.12 **HOW TO PREVENT SPREADING OF VIRUS AND BE SAFE?**

a. Avoid close contact with people who are sick. Maintain at least two-meter distance.
b. Use face mask at work place every time.
c. Don’t touch staircase handle during the usage.
d. Sanitize yours hand, tools and mobile time to time.
e. Install Aarogya setu app in your mobile phone.
f. Avoid touching your eyes, nose, and mouth.
g. Leave site if unhealthy.
h. Cover your cough or sneeze with a tissue, then dispose the tissue safely.
i. Wash your hands often with soap and water for at least 20 seconds, especially after using washroom, before eating, and coughing, or sneezing.
j. If you have a fever, cough and difficulty in breathing, seek medical attention immediately.

67 **Fair Wage Clause:**

67.1 The contractor shall pay not less than fair wages to labourers engaged by him on the work.

67.2 “Fair” wages means wages whether for time of piecework notified by the Institution from time in the area in which the work is situated.

67.3 The contractor shall not with-standing the revisions of any contract to the contrary cause to be paid to the labour, in directly engaged on the work including any labour engaged by the sub-contractor in connection with the said work, as if the labourers had been directly employed by him.

67.4 In respect of labour directly or indirectly employed in the works for the purpose of the contractors part of the agreement the contractor shall comply with the rules and regulations on the maintenance of suitable records prescribed for this purpose from time to time by the Institution. He shall maintain his accounts and vouchers on the payment of wages to the labourers to the satisfaction of the Engineer-in-charge.

67.5 The Engineer-in-charge shall have the right to call for such record as required to satisfy himself on the payment of fair wages to the labourers and shall have the right to deduct from the contract amount a suitable amount for making good the loss suffered by the worker or workers by reason of the “fair wages” clause to the workers.

67.6 The contractor shall be primarily liable for all payments to be made and for the observance of the regulations framed by the Govt., from time to time without prejudice to his right to claim indemnity from his sub-contractors.

67.7 As per contract labour (Regulation and abolition) Act. 1970 the contractor has to produce the license obtained from the licensing officers of the labourinstitution along with the tender or at the time of agreement.

67.8 Any violation of conditions above shall be deemed to be a breach of his contract.

67.9 Equal wages are to be paid for both men and women if the nature of work is same and similar.

67.10 The contractor shall arrange for the recruitment of skilled and unskilled labour local and imported to the extent necessary to complete the work within the agreed period as directed by the Engineer-in-charge in writing.
Indemnity Bond:
The tenderers should submit Indemnity Bond at the time of the Agreement as specified below.


I _______________________________ contractor S/o. __________________ aged ______________________________ Resident of ______________________ do hereby bind myself to pay all the claims may come (a) under Workmen’s Compensation Act. 1933 with any statutory modification thereof and rules there under or otherwise for or in respect of any damage or compensation payable in connection with any accident or injury sustained (b) under Minimum wages Act 1948 (c) under payment of wages Act.1936 (d) under the Contractor labour (Regulation and Abolition) Act. 1970 by workmen engaged for the performance of the business relating to the above contract ie., Failing such payment of claims of workmen engaged in the above work, I abide in accepting for the recovery of such claims, effected from any of my assets with the I-Hub DATA, IIIT, Gachibowli and with other Institutions

Compliance With Labour Regulations:
During continuance of the contract, the contractor and his sub-contractors shall abide at all times by all existing labour enactments and rules made there under, regulations, notifications and bye laws of the State or Central Institution or local authority and any other labour law (including rules), regulations, bye laws that may be passed or notifications that may be issued under any labour law in future either by the State or the Central Institution or the local authority and also applicable labour regulations, health and sanitary arrangements for workmen, insurance and other benefits. Salient features of some of the major labour laws that are applicable to construction industry are given below. The contractor shall keep the Institution indemnified in case any action is taken against Institution by the competent authority on account of contravention of any of the provisions of any Act or rules made thereunder, regulations or notifications including amendments. If the Institution is caused to pay or reimburse, such amounts as may be necessary to cause or observe, or for non-observance of the provision stipulated in the notifications/bye laws/Acts/Rules/regulations including amendments, if any, on the part of the contractor, the Institution shall have the right to deduct any money due to the contractor including his amount of performance security. The Institution shall also have right to recover from the contractor any sum required or estimated to be required for making good the loss or damage suffered by the Institution.

The employees of the Contractor and the Sub-contractor in no case shall be treated as the employees of the Institution at any point of time.

Salient features of some major labour laws applicable to establishment engaged in buildings and other construction work:

(a) Workmen compensation Act 192: The Act provides for compensation in case if injury by accident arising out of and during the course of employment.
(b) Payment of Gratuity Act 1972: Gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if any employee has completed 5 years’ service or more, or on death, the rate of 15 days wages for every completed year of service. The Act is applicable to all establishments, employing 10 or more employees.

(c) Employees P.F. and Miscellaneous provision Act 1952: The Act provides for monthly contributions by the Institution plus workers @ 10% or 8%. The benefits payable under the Act are:

(i) Pension or family pension on retirement or death, as the case may be.

(ii) Deposit linked insurance on the death in harness of the worker.

(iii) Payment of P.F. accumulation on retirement/death etc.

(d) Maternity Benefit Act 1951: The Act provides for leave and some other benefits to women employees in case of confinements or miscarriage etc.

(e) Contract Labour (Regulation & Abolition) Act 1970: The Act provides for certain welfare measures to be provided by the contractor to contract labour and in case the Contractor fails to provide, the same are required to be provided by the Principal Institution by Law. The Principal Institution is required to take certificate of Registration and the contractor is required to take license from the designated Officer before concluding agreement. The Act is applicable to the establishments or Contractor of Principal Institution if they employ 20 or more contract labour.

(f) Minimum wages Act 1948: The Institution is supposed to pay not less than the Minimum wages fixed by appropriate Institution as per provisions of the Act if the employment is a scheduled employment construction of Buildings, Roads, Runways are scheduled employments.

(g) Payment of wages Act 196: It lays down as to by what date the wages are to be paid, when it will be paid and what deductions can be made form the wages of the workers.

(h) Equal Remuneration Act 1979: The Act provides for payment of equal wages for work of equal nature to Male or Female workers and for not making discrimination against Female employee in the matters of transfers, training and promotions etc.

(i) Industrial Disputes Act 1947: The Act lays down the machinery and procedure for resolution of Industrial disputes, in what situations a strike or lock-out becomes illegal and what are the requirements for laying off or retrenching the employees or closing down the establishment.

(j) Industrial Employment (Standing Orders) Act 1946: It is applicable to all establishments employing 100 or more workmen (employment size reduced by some of the State and Central Institution to 50). The Act provides for laying down rules governing the conditions of employment by the Institution on matters provided in the Act and get the same certified by the designated Authority.

(k) Trade Unions Act 1926: The Act lays down the procedure for registration of trade unions of workmen and Institutions. The Trade Unions registered under the act have been given certain immunities from civil and criminal liabilities.

(m) Inter-State Migrant workmen’s (Regulation of Employment & Conditions of service) Act 1979. The Act applicable to an establishment, which employs 5 or more inter-state migrant workmen through an intermediary (who has recruited workmen in one state for employment in the establishment situated in another State). The inter State migrant workmen, in an establishment to which this Act becomes applicable, are required to be provided certain facilities such as housing, medical aid, travelling expenses from home upto the establishment and back, etc.

(n) The Building and Other Construction workers (regulation of Employment and conditions of service) Act 1996 and the Cess Act of 1996: All the establishments who carryon any building or other construction work and employs 10 or more workers are covered under this Act. All such establishments are required to pay cess at the rate not exceeding 2% of the cost of construction as may be modified by the Government. The Government of the establishment is required to provide safety measures at the Building or construction work and other welfare measures, such as Canteens, First-aid facilities, Ambulance, Housing accommodations for workers near the work place etc. The government to whom the Act applies has to obtain a registration certificate from the Registering Officer appointed by the Institution.

(o) Factories Act 1948: The Act lays down the procedure for approval of plans before setting up a factory, health and safety provisions, welfare provisions, working hours, annual earned leave and rendering information regarding accidents or dangerous occurrences to designated authorities. It is applicable to premises employing 10 person or more with aid of power or 20 or more persons without the aid of power engaged in manufacturing process.

(p) Payment of bonus act 1965: The Act Is applicable to all establishments employing 20 or more employees. The Act provides for payment of annual bonus subject to a minimum of 8.% of wages and maximum of 20% of wages to employees drawing Rs. 500/- per month or less. The bonus to be paid to employees getting Rs.2500/- per months or above and upto Rs.500/- per month shall be worked out by taking wages as Rs.2500/- per monthly only. The Act does not apply to certain establishments. The newly set-up establishments are exempted for five years in certain circumstances. Some of the State Institutions have reduced the employment size from 20 to 10 for the purpose of applicability of this Act.
71 Liabilities of the Contractor:
71.1 Accident Relief and workmen compensation:
The contractor should make all necessary arrangements for the safety of workmen on the occurrence of the accident, which results in the injury or death of any of the workmen employed by the contractor, the contractor shall within 24 hours of the happenings of the accident and such accidents should intimate in writing to the concerned Asst. Engineer / Asst. Center operation officer of the Institution the act of such accident. The contractor shall indemnify Institution against all loss or damage sustained by the Institution resulting directly or indirectly from his failure to give intimation in the manner aforesaid including the penalties or fines if any payable by Institution as a consequence of Institution failure to give notice under workmen’s compensation Act or otherwise conform to the provisions of the said Act. in regard to such accident.

71.2 In the event of an accident in respect of which compensation may become payable under the workmen’s compensation Act VIII 2 whether by the contractor, by the Institution it shall be lawful for the Engineer-in-charge to retain such sum of money which may in the opinion of the Engineer-in-charge be sufficient to meet such liability. The opinion of the Engineer-in-charge shall be final in regard to all matters arising under this clause.

71.3 The contractor shall at all times indemnify the Institution against all claims which may be made under the workmen’s compensation act or any statutory modification thereafter or rules thereunder or otherwise consequent of any damage or compensation payable in consequent of any accident or injuries sustained or death of any workmen engaged in the performance of the business relating to the contractor.

72 Contractor’s Staff, Representatives and Labour:
(a) The contractor shall, at all times, maintain on the works, staff of qualified Engineers, and Supervisors of sufficient experience of similar other jobs to assure that the quality of work turned out shall be as intended in the specifications. The contractor shall also maintain at the works, a Work Manager or sufficient status, experience and office and duly authorise him to deal with all aspects of the day-today work. All communications to any commitments by the Work Manager shall be considered as binding on the Contractor.

(b) The Contractor shall at all times submit details of skilled and unskilled labour and equipment employed to the Engineer-in-Charge in prescribed proforma as he may require to assess and ensure the proper progress of work.

73 Accommodation and food:
73.1 The contractor should arrange accommodation he needs, at his own cost. The contractor shall make his own arrangements for supply of food grains, fuel and other provision to his staff and labourers including controlled commodities.

74 Relationship :
74.1 Contractor shall have to furnish information along with tender, about the relationship he is having with any officer of the Institution.
75 Protection of adjoining premises:
75.1 The contractor shall protect adjoining sites against structural, decorative and other damages that could be caused by the execution of these works and make good at his cost any such damages.

76 Work during night or on Sundays and holidays:
76.1 The works can be allowed to be carried out during night, Sundays or authorised holidays in order to enable him to meet the schedule targets and the work shall require almost round the clock working keeping in view:

(i) The provisions of relevant labour laws being adhered to:

(ii) Adequate lighting, supervision and safety measures are established to the satisfaction of the Engineer-in-Charge and

(iii) The construction program given by the Contractor and agreed upon by the Engineer-in-Charge envisages such night working or working during Sundays or authorised holidays.

77 Layout of materials stacks:
77.1 The contractor shall deposit materials for the purpose of the work on such parts only of the ground as may be approved by the Engineer-in-Charge before starting work. A detailed survey, clearly indicating position and areas where materials shall be stacked and sheds built is to be conducted by the contractor at his own cost and only after obtaining necessary approval of the plan for use of sites by the Engineer-in-Charge, the Contractor can use the sites accordingly.

79 Plant and Equipment:
79.1 The contractor shall have sufficient plant, equipment and labour and shall work such hours and shifts as may be necessary to maintain the progress on the work as per the approval progress schedule. The working and shifts hours shall comply with the Govt. Regulations in force.

79.2 It is to expressly and clearly understood that contractor shall make his own arrangements to equip himself with all machinery and special tools and plant for the speedy and proper execution of the work and the Institution does not undertake responsibility towards their supply.

79.3 The Institution shall supply such of the machinery that may be available on hire basis but their supply cannot be demanded as matter of right and no delay in progress can be attributed to such non-supply of the plant by the Institution and the Institution cannot be made liable for any damage to the contractor. The Contractor shall be responsible for safe custody of the Institution machinery supplied to him (which will be delivered to contractor at the machinery yard at site of work) and he has to make good all damages and losses if any other than fire, wear and tear to bring it to the conditions that existed at the time of issue to the contractor before handing over the same to the Institution. The hire charges for the machinery handed over to the contractor will be recovered at the rate prevalent at the time of supply. The contractor will have to execute supplemental agreement with Engineer-in-charge at the time of supply of the machinery.
79.4 The acceptance of Institution machinery on hire is optional to the contractor.

80 Steel forms:
80.1 Steel forms should be used for all items involving and use of centering and shuttering shall be leak proof and shall be single plane without any dents and undulations.

81 Inconvenience to public:
81.1 The contractor shall not deposit materials at any site, which will cause inconvenience to public. The Engineer-in-Charge may direct the contractor to remove such materials or may undertake the job at the cost of the contractor.

82 Conflict of interest:
82.1 Any bribe, commission, gift or advantage given, promised or offered by on behalf of contractor or his partner, agent or servant or any one on his behalf to any officer, servant, representatives, agents of Engineer-in-Charge, or any persons on their behalf, in relation to the obtaining or to execution of this, or any other contract with Engineer-in-Charge shall in addition to any criminal liability, which it may occur, subject to the cancellation of this or all other contracts and also to payment of any loss or damage resulting from any such cancellation. Engineer-in-Charge shall then be entitled to deduct the amount, so payable from any money, otherwise due to the contractor under this or any other contract.

83 Contract documents and materials to be treated as confidential:
83.1 All documents, correspondences, decisions and orders, concerning the contract shall be considered as confidential and/or restricted in nature by the contractor and he shall not divulge or allow access to them by any unauthorised person.

84 General obligations of Contractor:
84.1 The contractor shall, subject to the provision of the contract and with due care and diligence, execute and maintain the works in accordance with specifications and drawings.

84.2 The contractor shall promptly inform the Institution and the Engineer-in-Charge of any error, omission, fault, defect in the design of or specifications for the works which are discovered when reviewing the contract documents or in the process of execution of the works.

85 Disputes
If Contractor believes that a decision taken by the Engineer-in-Charge was either outside the authority given to the Engineer-in-Charge by the Contract or that the decision was wrongly taken, the decision shall be referred to the technical expert within 14 days of the notification of the Engineer-in-Charge’s decisions on occurrence of such event.

85.1 Procedures for disputes:
   a) The technical expert shall give a decision in writing within 28 days after receipt of a notification of a dispute.
   b) The Technical expert shall be paid daily at the rate specified in the contract data together with reimbursable expenses of the types specified in the contract Data and the cost shall be divided equally between the employer and the contractor, whatever decision is reached by the technical expert. Either party may refer a decision of the technical expert to an Arbitrator within 28 days of the technical expert’s written decision. If
neither party refers the dispute to arbitration within the above 28 days, the technical expert’s decision will be final and binding.

c) Appointing Authority for the Technical Expert:
   Chairman, Institute of Engineers,
   Telangana State Centre, Khairatabad,
   Hyderabad.

d) The Technical expert’s daily fee is Rs.1,000/- together with reimbursable expenses as of the type like stationery, typing, postage, conveyance etc. Arbitration takes place in Hyderabad.

e) Replacement of Technical Expert:
   Should the Technical expert resign or die, or should the employer and the contractor agree that the Technical Expert is not fulfilling his functions in accordance with the provisions of the contract, a new Technical expert will be jointly appointed by the employer and the contractor. In case of disagreement between the employer and contractor, within 30 days, the Technical expert shall be designated by the Appointing Authority designated in the Contract data at the request of either part, within 14 days of receipt of such request.

85.2 Pending finalisation of disputes, the contractor shall proceed with execution of work with all due diligence.

86 Security measures:

a) Security requirements for the work shall be in accordance with the Institution / I-HUB DATA,IIIT-H general requirements including provisions of this clause and the Contractor shall conform to such requirements and shall be held responsible for the actions of all his staff, employees and the staff and employees of his sub-contractors.

b) All contractors’ employees, representatives and sub-contractor’s employees shall wear identifications badges provided by the contractor. Badges shall identify the contractor, showing employee’s number and shall be worn at all times while at the site. Individual labour will not be required to wear identification badges.

c) All vehicles used by the contractor shall be clearly marked with contractor’s name.

d) The contractor shall be responsible for the security of the works for the duration of the contract and shall provide and maintain continuously adequate security personnel to fulfill these obligations. The requirements of security measures shall include, but not limited to maintenance of order on the site, provision of all lighting, fencing, guard flagmen and all other measures necessary for the protection of the works within the colonies, camps and elsewhere on the site, all materials delivered to the site, all persons employed in connection with the works continuously throughout working and non working period including nights, Sundays and holidays for duration of the contract.

e) Other contractors working on the site concurrently with the contractor will provide security for their own plant and materials. However, their security provisions shall in no way relieve the contractor of his responsibilities in this respect.

f) Separate payment for provision of security services will not be made and its cost shall be deemed to have been included in the offer of the tenderer.
87 **Fire fighting measures:**

a) The contractor shall provide and maintain adequate fire fighting equipment and take adequate fire precaution measures for the safety of all personnel and temporary and permanent works and shall take action to prevent damage to destruction by fire of trees shrubs and grasses.

b) Separate payment will not be made for the provision of fire prevention measures.

88 **Provisions of Health and Sanitation:**

The contractor shall implement the sanitary and watch and ward rules and regulations for all forces employed under this contract and if the Contractor fails to enforce these rules, the Engineer-in-Charge may enforce them at the expenses of the Contractor.

The contractors special attention is invited to clause 7, 8, 9 and 51 of the preliminary specification to the A.P.S.S. and he is requested to provide at his own expenses the following amenities to the satisfaction of Engineer-in-charge concerned.

88.1 **First Aid:** At the work site there shall be maintained in a readily accessible place, first aid appliances and medicine including adequate supply of sterilized dressing and sterilized cotton wool. The appliance shall be kept in good order. They shall be placed under the charge of a responsible person, who shall be readily available during working hours.

88.2 **Drinking water:**

Water of good quality for drinking purpose shall be provided for the worker on a scale of not less than 2 gallons per head per day.

a) Where drinking water is obtained from an intermittent public water supply each work site shall be provided with a storage tank, where such drinking water shall be stored.

b) Every water supply storage shall be at a distance of not less than 10 M. from any latrine drain or other source of pollution where water has to be drained. Any existing well, which is within such proximity of any latrine, drain or other source of pollution, the well shall be properly chlorinated before water is drawn from it for drinking. All such wells shall be dust and water proof.

c) A reliable pump shall be fitted to each inner well. The trap door shall be kept locked and opened only for inspection or cleaning which shall be done at least once a month.

89 **Training of personnel:**

89.1 The contractor, shall, if and as directed by the Engineer-in-Charge provide free of any charge adequate facilities, for vocational training of Institution Officers, students, Engineers, supervisors, foremen, skilled workmen etc. not exceeding six in number at any one time on the contractor’s work. Their salaries, allowances etc. will be borne by the I-HUB DATA,IIIT-H , Gachibowli, Hyd and the training schemes will be drawn up by the Engineer-in-Charge in consultation with the contractor.
90  **Ecological balance:**

a) The contractor shall maintain ecological balance by preventing de-forestation, water pollution and defacing of natural landscape. The contractor shall so conduct his construction operation as to prevent any unnecessary destruction, scarring, or defacing of the natural surroundings in the vicinity of the work. In respect of the ecological balance, Contractor shall observe the following instructions.

   i) Where unnecessary destruction, scarring, damage or defacing may occur, as result of the operation, the same shall be repaired replanted or otherwise corrected at the contractor's expense. The contractor shall adopt precautions when using explosives, which will prevent scattering of rocks or other debris outside the work area. All work area including borrow areas shall be smoothened and graded in a manner to conform to the natural appearances of the landscape as directed by the Engineer-in-Charge.

   ii) All trees and shrubbery which are not specifically required to be cleared or removed for construction purposes shall be preserved and shall be protected from any damage that may be caused by the contractor's construction operation and equipment. The removal of trees and shrubs will be permitted only after prior approval by the Engineer-in-Charge. Special care shall be exercised where trees or shrubs are exposed to injuries by construction equipment, blasting, excavating, dumping, chemical damage or other operation and the contractor shall adequately protect such trees by use of protective barriers or other methods approval by the Engineer-in-Charge. Trees shall not be used for anchorages. The contractor shall be responsible for injuries to trees and shrubs caused by his operations. The term “injury” shall include, without limitation bruising, scarring, tearing and breaking of roots, trunks or branches. All injured trees and shrubs be restored as nearly as practicable without delay to their original condition at the contractor’s expense.

   iii) The contractor’s construction activities shall be performed by methods that will prevent entrance or accidental spillage of solid matter contaminants, debris and other objectionable pollutants and wastage into river. Such pollutant and waste include earth and earth products, garbage, cement concrete, sewage effluent, industrial wastes, radio-active substances, mercury, oil and other petroleum products, aggregate processing, mineral salts and thermal pollution. Pollutants and wastes shall be disposed off in a manner and at sites approved by the Engineer-in-Charge.

   iv) In conduct of construction activities and operation of equipment’s the contractor shall utilise such practicable methods and devices as are reasonably available to control, prevent and otherwise minimize the air pollution. The excessive omission of dust in to the atmosphere will not be permitted during the manufacture, handling and storage of concrete aggregates and the contractor shall use such methods and equipment as a necessary for collection and disposal or prevention of dust during these operations. The contractor’s methods of storing and handling cement shall also include means of eliminating atmospheric discharges of dust,
equipment and vehicles that give objectionable omission of exhaust gases shall not be operated. Burning of materials resulting from clearing of trees, bushes, combustible construction materials and rubbish may be permitted only when atmospheric conditions for burning are considered favourable.

b) Separate payment will not be made for complying with the provisions of this clause and all cost shall be deemed to have been included in the unit rates and prices included in the contract if any provision is not complied with within a reasonable time even after issue of a notice in this respect, the necessary operations would be carried out by the Engineer-in-Charge at the cost of the Contractor, Orders of the Engineer-in-Charge in this respect would be final and binding on the contractor.

91 Preservation of existing vegetation:
   a) The contractor will preserve and protect all existing vegetation such as trees, on or adjacent to the site which do not unreasonably interfere with the construction as may be determined by the Engineer-in-Charge. The contractor will be held responsible for all unauthorised cutting or damage of trees, including damage due to careless operation of equipment, stockpiling of materials or trecking of grass areas by equipment. Care shall be taken by the Contractor in felling tress authorised for removal to avoid any unnecessary damages to vegetation and tress that are to remain in place and to structures under construction or in existence and to workmen.

b) All the produce from such cutting of trees by the contractor shall remain the property of I-HUB DATA,IIIT-H , Gachibowli, Hyd and shall be properly stacked at site, approved by the Engineer-in-Charge. No payment whatsoever, shall be made for such cutting and its stacking by the Contractor. If any produce from such cutting is not handed over to the I-HUB DATA,IIIT-H , Gachibowli, Hyd by the contractor, he shall be charged for the same at the rates to be decided by the Engineer-in-Charge. The recovery of this amount shall be made in full from the intermediate bill that follows.

c) The contractor shall also make arrangements of fuel deposits for supply of required fuel for the labourer to be employed for cooking purpose at his own cost in order to prevent destruction of vegetation growth in the surrounding area of the work site.

92 Possession prior to completion:
   92.1 The Engineer-in-charge shall have the right to take possession of or use any completed part of work or works or any part thereof under construction either temporarily or permanently. Such possession or use shall not be deemed as an acceptance of any work either completed or not completed in accordance with the contract with in the interest of Clause 28 of APSS except where expressly otherwise specified by the Engineer-in-charge.
93 Payment upon termination:
93.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Engineer-in-Charge shall issue a certificate for the value of the work done less advance payments received upon the date of the issue of the certificate, less other recoveries due in terms of the Contract, less taxes due to be deducted at source as per applicable law and less the percentage to apply to the work not completed. Additional Liquidated Damages shall not apply. If the total amount due to the Institution exceeds any payment due to the Contractor the difference shall be a debt payable to the Institution. In case of default for payment within 28 days from the date of issue of notice to the above effect, the contractor shall be liable to pay interest at 12% per annum for the period of delay.

94 Access to the contractor’s books:
94.1 Whenever it is considered necessary by the Engineer-in-Charge to ascertain the actual cost of execution of any particular extra item of work or supply of the plant or material on which advance is to be made or of extra items or claims, he shall direct the contractor to produce the relevant documents such as payrolls, records of personnel, invoices of materials and any or all data relevant to the item or necessary to determine its cost etc. and the contractor shall when so required furnish all information pertaining to the aforesaid items in the mode and manner that may be specified by the Engineer-in-Charge.

95 Drawing to be kept at site:
95.1 One copy of the drawings furnished to the contractor shall be kept by the contractor on the site and the same shall at all reasonable time be available for inspection and use by the Engineer-in-Charge and the Engineer-in-Charge’s representative and by any other persons authorised by the Engineer-in-Charge in writing.

96 B.I.S. [I.S.I.], NBC books and APSS to be kept at site:
96.1 A complete set of Indian Standard specification referred to in “Technical Specifications” and A.P.S.S. shall be kept at site for reference.

97 Variations by way of modification, omissions or additions:
97.1 For all modifications, omissions from or additions to the drawings and specifications, the Engineer-in-charge will issue revised plans, or written instructions, or both and no modification, omission or addition shall be made unless so authorised and directed by the Center operation officer in writing.

The Engineer-in-Charge shall have the privilege of ordering modifications, omission or additions at any time before the completion of the work and such orders shall not operate to annual those portions of the specifications with which said changes do not conflict.

Engineer-in-Charge’s Decision:
It shall be accepted as in separable part of the contract that in matters regarding materials, workmanship, removal of improper work, interpretation of the contract drawings and contract specification, mode of the procedure and the carrying out of the work, the decision of the Engineer-in-Charge, which shall be given in writing shall be binding on the contractor.
98 Site Order Book:
98.1 An order book shall be kept at the I-HUB DATA, IIIT-H, Gachibowli, Hyd office on the site of the work. As far as possible all orders regarding the work are to be entered in this book. All entries shall be signed and dated by the I-HUB DATA, IIIT-H, Gachibowli, Hyd officer who issues such orders and by the contractor or by his representative. The order book shall not be removed from the work spot except with the written permission of the Executive Engineer.

99 Care and diversion of river/stream:
99.1 The contractor shall submit details regarding the diversion and care of river or stream during construction of the work along with a separate print-out of the time table showing earliest and latest start and finish dates of various activities. He should submit a detailed layout plan with drawings for the diversion and care of river of stream during construction of work. The above arrangements shall be at contractor's cost.

100 Income tax:
   a) During the currency of the contract, deduction of income tax at 2.24% or amended from time to time shall be made from the gross value of each bill of the contract, the contract value of which is in excess of Rs.10,000/- for deduction of tax at rates stipulated under section 194-C(4) of Income Tax Act, 1961 shall be followed.

   b) Income Tax clearance certificate should be furnished before the payment of final bill.

   c) The contractor’s staff, personnel and labour will be liable to pay personnel income taxes in respect of their salaries and wages as are chargeable under the laws and regulations for the time being in force, and the contractor shall perform such duties in regard to such deductions thereof as may be imposed on him by such laws and regulations.
101. GST on works contracts:

i) The rates quoted by the contractor is exclusive of GKSt and all of other taxes on all materials that the contractor will have to purchase for performance of this contract.

ii) GST component will be released to the contractor along with their bills.

102. Labour CESS: As per the Building and other Construction Workers Welfare CESS Act, 1996, Section 3 of CESS Act, read with rule 4(3) of the cases rules and in accordance with S.O.No.2899, dt.28-03-1996 of Institution of India, 1% CESS will be deducted from the bills paid for works from the contractor. The deducted amount will be remitted by way of challan to be payable in any branches of Andhra Bank to the savings Bank Account No. 805015 of the labour Commissioner office Extension counter (code No. 9039) as per the procedure prescribed under G.O.Ms.No.42 of LET&F Institution, dt.30-04-2007.

103. Contractor Deliverables:

103.1 During Tendering Stage:
   a. List of long lead items - Delivery timeline
   b. Macro Work Schedule

103.2 During Negotiation:
   a. Rate analysis as per Client requirement.

103.3A) During finalization of Contract:
   a. Micro Work Schedule
   b. Organization Chart
   c. Project Rooster
   d. Man-Power Schedule
   e. Man-Power Resource Planning.

B) During Construction:
   a. Shop Drawings.
   b. Daily, Weekly and Monthly Progress Reports.
   c. Weekly EHS Report
   d. Material Tracker.

C) Post-Construction:
   a. Testing and Commissioning Reports.
   b. Handling Over Documents.
   c. As-built Drawings.
   d. Guarantee and Warranty certificates.
   e. Manuals for all Equipment’s.
   f. Training report for Facility Team.
   g. Contact details of all Suppliers.
1. SPECIFICATIONS OF INTERIOR & FURNISHING

(A) GENERAL:

1. Without forgoing the requirements of the conditions of Tender and the Conditions of Contract the works in general shall confirm to the “Latest Specifications” published by CPWD, New Delhi and the “Specifications for works” stated in this tender. In case items not covered by the general specifications referred above, reference shall be made to the appropriate I.S. Code. If there is any difference in the particular specifications of individual item of work and the description of item as given in the Schedule of quantity, the latter shall prevail. In case of any work for which there is no specification in I.S. specifications or in the specifications forming part of tender documents or in case there is any variation, such work shall be carried out in all respects in accordance with the instructions to be issued by the Architects. The term Resident Engineer appearing in the specifications shall mean the representative of Architect as consistent with the conditions and other stipulations of this contract. The term Department shall mean the Employer. Any reference to ISI shall also mean reference to its successor Bureau of Indian Standards. All corrections to “Latest Specifications” or revisions of I. S. shall be deemed to apply to this contract.

2. Materials bearing Green rated certification mark shall only be used in the works.

3. Where the Contractor is required to do, perform, execute (etc.) any work or service or the like, it shall be deemed to be at his own cost. Absence of terms providing supplying, installing, fixing, etc. shall not even remotely entitle the Contractor to any additional payment thereof.

   a. The rates accepted in the Schedule of Quantities apply to all floors, heights, depths, leads, lifts, spans, sizes, shapes, locations, etc. unless a distinction has been included in the very Schedule.

   b. The Specifications and the Schedules may have been divided into various sub-heads for convenience only. This does not limit applicability of one to the other nor does it absolve the Contractor of his responsibility to complete any trade/item of work as reasonably inferred from one or more of such sub-heads.

   c. The Schedule of Quantities is not necessarily based on “Schedule of Rates – Delhi 2002 or any of its later/earlier versions. Hence the Schedule of Quantities shall be read and construed according to explanations given herein and intentions gathered there from. A mere parallel drawn from the said Schedule of Rates shall therefore not form a basis for a variation and, or additional payment.
d. Screws, bolts, nuts, washers, hold fasts, lugs, anchors, clamps, plugs, suspenders, brackets, straps and fasteners of the like are deemed to be included in the rates of various items unless the Schedule of Quantities expressed a different intention.

e. Resetting any displacements, making good holes/chases and such other incidental jobs are included in rates of respective items for which these are required.

a) Concrete work (Plain or reinforced):

1. Centering, shuttering, staging, form work, strutting, propping (their provision and removal) shall not be paid for separately unless exclusion thereof is specifically described in the item.

2. The rates of concrete work do not include rendering or plastering but hacking and preparing surface for receiving the finishes shall be done as early as possible.

3. Any chamfers, grooves, drips, etc. which are generally and customarily required shall be provided in the concrete work integrally or otherwise without extra charges as directed by the Architect.

b) Finishing:

1. Items of plastering apply to all locations including rough sides of walls, curved surfaces, all heights, etc. without limiting generally of para 1.4.

2. Preparation of surfaces including raking out joints, hacking, brushing, watering, etc. is included.

3. Drip moldings shall not be payable extra.

4. Grooves shall be provided in plaster as directed by Architect at corners of ceiling slabs around the columns & beams at no extra cost.

5. Strips of G.I. chicken mesh 250mm wide shall be provided in plaster at all junctions (which are flush) between masonry/columns, masonry/beans.

SERVICES

1.0 General

The Drwgs. for services are diagrammatic but shall be followed as closely as actual construction permits. Any deviations from the Drwgs. shall be in conformity with architectural & structural drawings. The dimensions designated by the manufacturers shall take precedence over the drawings.

1.1 At completion of work the Contractor shall submit one set of tracings and two sets of prints of “As- Built- Drawings”. These drawings shall, among others, include invert levels, pipe runs, diameters, location of valves, access panels, layout of equipment, piping connections and such other information for maintenance & future extensions. Guarantees given by manufacturers shall be assigned to the Employer along with names & addresses of manufacturers, suppliers and information about spare parts.
1.2 All site tests shall be carried out with prior intimation to the Engineer-in-charge. All defects shall be rectified, and tests conducted again to the satisfaction of the Engineer-in-charge. In addition to the test required by the specifications, the Contractor shall also conduct tests required by the Architect and by the municipal or other Authorities.

1.3 All work shall be executed by competent and licensed persons as per standard specifications of PS to TSSS/PWD/CPWD/NBC of India. The contractor shall maintain liaison with Municipal and other controlling Authorities. He shall obtain their approvals and certificates as required by the bye – laws at appropriate stages.

1.4 No cutting / chasing shall be done in load bearing structural members without prior approval of the Engineer-in-charge. Sleeves and openings shall be provided during the progress of construction in preference to cutting at later date.

1.5 The architect may require typical mockup(s) to be installed in advance for approval. Undamaged materials from the mockup shall be allowed to be reused in the work.

1.6 Unless otherwise described in the item CI / SCI pipes and fittings shall be a spigot and socket type.

1.7 G.I. pipe spouts shall be paid as per item of G.I. pipes (internal work). Cutting and making good is included. The free ends may be skew cut.

1.8 Wherever use of G.I. pipes is called for the same shall be medium class (class B)

2. Material:

2.1 The materials shall conform to the specifications and in absence thereof to Indian Standards. The products should bear the green rating Mark.

2.2 The maker of materials for use in this work are broadly approved as per list given below. The Contractor shall, however, get particular makes and samples approved before ordering.

2.3 Notwithstanding any interim or final approval, the Contractor remains responsible for satisfactory performance of all fittings & fixtures. The liability of the Contractor is not limited by any approval of the make of materials.

2.4 The item rate of mirror includes extra packing piece of AC plain sheet, where required due to offset between plaster & glazed tiles surface.

3. Testing:

3.1 The sand cast iron soil, waste and vent pipes and fittings including joints shall be tested by Pumping.
3.2 smoke into the pipe at the lowest end.

3.3 All G.I pipes and fittings including joints shall be tested to hydraulic pressure of 6 kg / cm² (60 meters) avoiding water hammer. The test pump having been stopped the test pressure should maintain without loss for at least half an hour. The pipes and fittings shall be tested in sections as the work of laying proceeds keeping the joints exposed for inspection during the testing.

3.4 All stone ware pipes shall be tested with water pressure of 1.5m head of water at the highest point of the section under test.

INTERIOR MATERIAL SPECIFICATION

1. FLOORING

- DOUBLE CHARGED VITRIFIED TILES – FLOORING
Providing and Laying Double Charged /stain free vitrified tiles of size 600 x 600 mm and thickness between 10 mm 1st quality conforming to IS:13711, IS:13712, IS:13630 (Parts 1 to 15) of any colour and finish in all shades, design, set over a minimum base coat of CM(1:5) 50 mm thick using screened sand with cement slurry of honey like consistency spread at the rate of 3.30 kgs per 1sqm and jointing with white cement paste mixed with pigment of matching shade to match the shade of tiles to full depth, including cost and conveyance of all materials like tiles, cement, sand and water etc. to site and overheads & contractors profit complete excluding cost of seigniorage charges etc., complete for finished item of work. Basic Rate Rs.72/-per sft.

- DOUBLE CHARGED VITRIFIED TILES – SKIRTING
Providing skirting to internal walls with Double Charged /stain free soluble salt porcelain vitrified tiles of size 600 x 600 mm and thickness between 10 mm 1st quality conforming to IS:13711, IS:13712, IS:13630 (Parts 1 to 15) of any colour and finish in all shades, design set over a minimum base coat of CM(1:5) 50 mm thick using screened sand with cement slurry of honey like consistency spread at the rate of 3.30 kgs per 1sqm and jointing with white cement paste mixed with pigment of matching shade to match the shade of tiles to full depth, including cost and conveyance of all materials like tiles, cement, sand and water etc. to site and overheads & contractors profit complete excluding cost of seigniorage charges etc., complete for finished item of work. The skirting should flush online with plastering Basic Rate Rs.72/-per sqft.

2) CEILING:

GYPSUM FALSE CEILING
Providing and fixing Gypsum False Ceiling which includes G.I. Perimeter Channels of size 0.55mm thick (having One Flange of 20mm and another flange of 30mm and a web of 27mm) along with perimeter of ceiling, screw fixed to brick wall / partition with the help of Nylon sleeves and screws at 610mm centres. Then suspending G.I. intermediate channels of size 45mm (0.9mm thick with two flanges of 15mm each) from the soffit at 1220mm centres with ceiling angle of width 25mm X 10mm X 0.55mm thick fixed to soffit with G.I. cleat and steel expansion fasteners.
Ceiling section of 0.55mm thick having knurled web of 51.5mm and two flanges of 26mm each with lips of 10.5mm are then fixed to the intermediate channel with the help of connecting clips and in direction perpendicular to the intermediate channel at 457 mm centres. 12.5mm tapered edge Gyp board (conforming to IS 2095-1982) is then screw fixed to ceiling section with 25mm drywall screws at 230mm centres. Screw fixing is done mechanically with drilling machine with suitable attachment. Finally, tapered edges of the Gyp boards are to be jointed and finished so as to have a flush look which includes filling and finishing with jointing compound, joint paper tape and two coats of dry wall topcoat suitable for Gyp board (as per recommended practice of BPB India gypsum) etc complete as per the recommended practices of India Gypsum. Rate to be included all kinds of profiles and cut outs required for light fixtures, Speakers, Smoke detector, trap doors and AC grill in the ceiling.

The rate shall be inclusive of preparing the surface, providing and applying 2 coats of proper putty and primer and 3 coats of Plastic Emulsion paint, roller applied Acrylic emulsion of approved quality / colour to Architect's approval. All complete including return air slits etc. & A/C boxing wherever indicated. Including cost and conveyance of all materials, labour, scaffolding & etc., complete Note: Marking of Electrical, Fire Alarm & Air-conditioning & co-ordination with marking of fixtures to be considered. Ceiling to be measured only on the horizontal surfaces of the ceiling and the verticals (till 200mm ht) shall be included in arriving at cost.

**MODULAR FALSE CEILING WITH VINYL FACE**
Providing and fixing in true horizontal level modular false ceiling using 24mm prelude 38H grids and laying Gypsum tiles with Vinyl face and silver foil backing tiles of size 600x600x9mm.
Rate including Necessary scaffolding of required Height.
Rate including Silicon or Approved adhesive and necessary hardware for installation.
Rate including provision for Backlit lighting as per Drawing.
Note: Marking of Ele., Fire Alarm & Air-conditioning & co-ordination with marking of fixtures to be considered. Ceiling to be measured only on the horizontal surfaces of the ceiling.

3) **PAINTING**

**TEXTURE PAINT**
Providing and applying Birla wall care putty or equivalent or Asian make trowel applied texture of average 2 to 3 mm thickness with 2 coats of acrylic emulsion paint of approved brand and shade over a base coat of approved primer grade 1 over plastered surface to prepare the surface even and smooth after thoroughly brushing the surface to remove all dirt and remains of loose powdered materials, applying emery paper, Sand the surface, clean & wipe off loose dust, applying putty/ texture paint filler by putty knife / muslin pad, air dry for 2-3 hrs for the surface preparation including cost and conveyance of all materials to work site and all operational, incidental, labour charges etc. complete for finished item of work for walls - including cost of access scaffolding for - Providing Putty/ Texture with primer and Acrylic emulsion paint to walls

**EMULSION PAINT**
Painting to Existing walls with 2 coats of Premium acrylic emulsion paint of approved brand and shade over an existing painted surface 2coats, in all to give an even shade after thoroughly brushing the surface to remove all dirt and remains of loose powdered materials, including cost and conveyance of all materials to work site and all operational, incidental, labour charges etc.
complete for finished item of work as per SS 912 for external walls complete for finished item of work.
LAMINATE
Providing and Fixing Laminate up to 1.5 mm thick to the existing doors, Removing and Refaxing of Doors and hardware Complete for finished item of work.

LIST OF MATERIALS OF APPROVED BRANDS INTERIOR WORKS

NOTE: The Contractor shall quote for the best of the materials as specified below. The Contractor shall obtain prior approval from Architect before placing order for the specific materials/agencies. In case of non-availability of any of the approved/specified materials/Agency, during the execution of the work, the Architects may approve suitable equivalent brand/Agency and his decision shall be final and binding on the contractor and the price variations, if any, shall be adjusted accordingly.

<table>
<thead>
<tr>
<th>SR NO.</th>
<th>MATERIALS</th>
<th>BRANDS</th>
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<tbody>
<tr>
<td>1</td>
<td>PLYWOOD</td>
<td>GREENPLY /AUSTINPLY / CENTURY / DECORPLY OR EQUIVALENT</td>
</tr>
<tr>
<td>2</td>
<td>LAMINATES</td>
<td>GREENLAM / ROYAL TOUCH / DURIAN / ARCHID / BLOOM / CENTURY / MERINO/ EBANO OR EQUALANT</td>
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<tr>
<td>3</td>
<td>VENEERS</td>
<td>GREEN/ CENTURY.</td>
</tr>
<tr>
<td>4</td>
<td>BINDING MATERIALS</td>
<td>FEVICOL / MOVICO / ARALDITE / JIVANJHOR / MICROPURE / VAMICOL.</td>
</tr>
<tr>
<td>5</td>
<td>HARDWARE:LOCKS, CHANNELS,</td>
<td>GODREJ / TRISTAR / DORSET / NIMMI / JYOTHI, HETTICH, HAFFLE, EBCO, BLUM</td>
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<td>7</td>
<td>KEY BOARDS CHANNELS</td>
<td>HETTICH, HAFFLE., EBCO, BLUM</td>
</tr>
<tr>
<td>8</td>
<td>HANDLES, FITTINGS</td>
<td>KIRCHEFF / DORSET / HATRDWIN / KICH, HETTICH, HAFELE, LABACHA, LEVI</td>
</tr>
<tr>
<td>9</td>
<td>KNOBS</td>
<td>GODREJ /DORSET / KICH, /DORMA</td>
</tr>
<tr>
<td>10</td>
<td>LOCKS</td>
<td>GODREJ, DORSET. EUOROPA</td>
</tr>
<tr>
<td>11</td>
<td>GLASS</td>
<td>SAINT GOBIAN / MODI GUARD WAVE</td>
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<tr>
<td>12</td>
<td>PUTTY</td>
<td>BIRLA /ASIAN/JK</td>
</tr>
<tr>
<td>13</td>
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<td>PRIMERS</td>
<td>ICI / ASIAN PAINTS / WOODERITE</td>
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<td>MDF BOARD</td>
<td>NUWUD, GREEN PANELMAX EXTERIOR GRADE</td>
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<td>ACOUSTIC WORKS</td>
<td>SONSEST/ARMSTRONG/ANUTONE</td>
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<td>CONDUIT, PIPES &amp; FITTINGS (PVC)</td>
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<td>SWITCHES/ SOCKETS</td>
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<td>BOSCH</td>
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<td>Door Set SS Bearing Hinge Series 102x76 x2.5x12</td>
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2. ELECTRICAL SPECIFICATIONS

A. Internal Electrical Works

1. Point Wiring
Supplying and wiring for light points and 6A 2/3 pin sockets with 3 runs of 1.5 sq.mm FRLS PVC insulated 1100V grade copper wires for phase, neutral and earth in 25mm dia PVC FRLS conduit of thick 1.8mm (HMS) concealed in the slab/floor/walls/surface mounted above false ceiling including all accessories such as bends, junction boxes etc. The cost should include modular type 6A switches, front plates, metal boxes, ceiling roses or holders as required and with all complete with all necessary supports, accessories & hardware as per the drawings as required to make the installation complete including chasing of walls, testing, commissioning and termination of wires on both ends (which includes bi-metallic lugs, ferrules, ties, insulation tapes etc.)
Note: Cove LED slim light & linear lighting - first point is considered as primary and from there every 5 mtrs length is considered as one secondary light point.
Make: Sudhakar pipes.

2. Power Receptacles
Supply, installation, testing & commissioning only of Power receptacles including front plate, earth connector combined mounted on a suitable anodised metal box of approved make with complete with all necessary supports, accessories as per the drawings as required to make the installation complete at various locations without wiring (Independent).
Make: Legrand

3. Lighting & Power circuits
Supplying and laying of lighting and power circuits with wires/cables in concealed or surface/open conduit system or on cable tray. The wiring shall be carried out using PVC insulated and round sheathed 1100 Voltage grade, multistrand copper conductor flexible cables/wires for phase, neutral and earth. The cost of 1.8 mm thick (HMS) FRLS PVC conduit shall include with necessary accessories, insulated G.I fish wire, fixing hardware, modular type back boxes etc. complete with all necessary supports, accessories as per the drawings as required.
Note: End terminations with Bi-metallic lugs using crimping tool, insulation tapes, identification ferrules, ties and neat dressing etc. in respective DBs to make the installation complete in all respects.
Make: Finolex wires

4. Sub-mains
4.1 Supply, laying, testing and commissioning only of following size 1100 Voltage grade XLPE insulated armoured aluminium/copper conductor underground cable, in existing cable tray or in built up cable trench or already laid RCC Hume pipe complete with all necessary supports, accessories as per the drawings as required. The cable shall conform to IS: 7098/Part-I.
4.2 Supply & fixing only of End terminations with Double compression type Brass gland, Bi-metallic lugs using crimping tool, insulation tape, identification tags etc. including earthing of Gland, complete with all necessary supports, accessories as required.
4.3 Supplying and laying only of sub-mains in concealed or surface/open conduit system or on cable tray. The wiring shall be carried out using PVC insulated and round sheathed 1100 Voltage grade, multistrand copper conductor flexible cables for phase, neutral and earth. The cost of 1.8mm thick (HMS) FRLS PVC conduit shall include with necessary accessories, fixing hardware, complete. Make: Finolex cables, Dowell’s lugs.

5. Distribution Boards
Supply, installation, testing & commissioning only of following type Readymade Distribution Boards, with Double Door arrangement with magnetic lock complete with following switch gears. The DB shall be IP 43, powder coated type using CRCA sheet steel enclosure & impact resistance to be IK 09. The DBs shall have separate Earth & Neutral bus bars suitable for phase wise RCCB protection, incl. all interconnections. etc. complete with all necessary supports, accessories as per the Drgs. as required. This includes ferrules, neat dressing of wires with cable ties, circuit number stickers & circuit diagram as per SLD and detail sticker on rear side of DB etc.

6. Light Fixtures
Supply, installation, testing & commissioning only of the following indoor lighting fixtures of approved or equivalent make including supply of LED drivers, lamps, rims to be fixed in false ceiling, mounting bracket to be fixed on roof/walls including all necessary supports directly suspended from ceiling without down rods but including clamps, hardware, complete with all necessary supports, accessories as per the drawings as required to make the installation complete.
Makes:
Light fixtures - UniLED / Atlantis / Osram Drivers - Meanwell / Osram / Philips (0.9 pf) CRI > 85 (will be verified) Construction - Aluminium IP Rating - IP20/44 Life - 50000 burning hours Colour – White
Makes: Philips/osram

7. Conduits, accessories & Floor Boxes
7.1 Supply and laying only of FRLS PVC conduit of 1.8mm thick (HMS) with all required conduit accessories like bends, junction boxes, G.I fish wire, end closers, base saddles & clamps, G.I strip group clamp including all hardware (only for extra requirements, points &ckts are already included in the respective items).
7.2 Supply and laying only of the following corrugated Flexible conduit pipes (FRPP) complete with necessary accessories.
7.3 Supply and fixing only of the following flush type of modular back boxes where required to be used as junction box.
7.4 Supply and fixing of floor mounting junction boxes made out of 14-gauge anodised metal sheet with top removable cover sheet with screwing arrangement and having openings on all 4 sides.
7.5 Supply and fixing of 8 (2 x 4) modules Pop-up type flush-mounting boxes for floor with Metal flush- mounting boxes (Legrand make) suitable to mount 2 nos. 6A 2/3 pin multi standard sockets controlled by 2 nos. 6A switches and 2 nos. Data outlets complete in enclosure.
7.6 Supply and fixing of Floor boxes for screed floor (3 Compartment) Size: 265 x 265 x 65mm (Legrand make) suitable to mount 4 nos. 6A 2/3 pin multi standard sockets controlled by 4 nos. 6A switches and 2 nos. Data outlets complete in enclosure for seminar hall.

7.7 Supply and erection of 16 SWG MS Powder coated trunking system with 18 SWG MS cover matching with readymade DB colour including fixing brackets as required for the following sizes around DBs for wires management.

Make: DLP trunking/Legrand trunking.

B. External Electrical Works

8. MV Panels
Supply, installation, testing & commissioning only of floor mounting, free standing cubicle type Panel with dust & vermin proof generally conforming to IS: 8623 (Part-1), 1993 & BIS IS: 2147, 1962 & should be fabricated out of 14-gauge CRCA sheet as per IEE regulations.

Note: All panel's incoming feeder should be provided with potential free contacts & control wiring suitable for remote start / stop push buttons to stop the supply in the event of fire.

8.1 Main Distribution Panel
Incoming:
1 no. 800A FP ACB MDO (50kA) with microprocessor releases for overload, short circuit and earth faults

Bus bar:
A set of 800A Aluminium bus bar with complete interconnections for both phase and neutral of E 91E grade.
1 x 100 x 6 mm for phase
1 x 100 x 6 mm for neutral

Metering units:
1 no. Multi-function Meter digital type with RS-485 connectivity and required no. of 800/5A CTs to measure all parameters.
1 no. CT 400/5A for APFC panel relay voltage sensing preferably connected on Y-phase of 800A ACB incoming Bus link
3 nos. LED based indication lamps with MCB protection. 1 set of ON/OFF/Trip lamps
1 no. 40A FP MCB (10kA), C curve for voltage sensing for DG set Auto Start / Auto Stop command.

Surge protection Device (SPD):
1 set of OBOBettermann make VSP of Class B+C/Type I +II, Model: V25-B+B+C/3+NPE+FS Lightning surges of 10/350 μs and Switching surges of 8/20μs waveform.
3 phase, 415 V application, 3 nos. of Line to Neutral and 1 no of Neutral to Earth
1 no. 32A TP MPCB for SPD protection (View glass to be provided on front facial of door) Incoming: 4r x 6.0 sq. mm Cu FRLS wires from bus bar to MPCB and MPCB to SPD. Earthing should be done with 16 sq. mm Cu wire (less than 0.5m from earth bar)
Make: Panels as per IEE regulations,

8.2  AC Panel-1 & 2

**Incoming:**
1 no. 125A TP MCCB (35kA)

**Bus bar:**
A set of 125A Aluminium bus bar with complete interconnections for both phase and neutral of E 91E grade.
1 x 25 x 6mm for phase 1 x 25 x 6mm for neutral

**Metering Units:**
1 no. Voltmeter (0 to 500V) with selector switch of (96 x 96) size. 1 no. Ammeter (0 to 125A) with selector switch of (96 x 96) size. 3 nos. CTs 125/5A, CL-1, 15VA burden
3 nos. LED based phase indication lamps with MCB protection. 1 set of ON/OFF/Trip lamps

**Outgoings:**
5 nos. 63A TP MCCB (25kA)

Make: Panels as per IEE regulations,

8.3  AC Panel-3 & 4

**Incoming:**
1 no. 200A TP MCCB (35kA)

**Bus bar:**
A set of 200A Aluminium bus bar with complete interconnections for both phase and neutral of E 91E grade.
1 x 40 x 6mm for phase 1 x 40 x 6mm for neutral

**Metering Units:**
1 no. Voltmeter (0 to 500V) with selector switch of (96 x 96) size. 1 no. Ammeter (0 to 200A) with selector switch of (96 x 96) size. 3 nos. CTs 200/5A, CL-1, 15VA burden
3 nos. LED based phase indication lamps with MCB protection. 1 set of ON/OFF/Trip lamps

**Outgoings:**
6 nos. 63A TP MCCB (25kA)

Make: Panels as per IEE regulations,
9. MV Cables
9.1 Supply, laying, testing and commissioning only of following size 1100 Voltage grade XLPE insulated armoured aluminium/ copper conductor underground cable, in existing cable tray or in built up cable trench or already laid RCC Hume pipe complete with all necessary supports, accessories as per the drawings & technical specification as required. The cable shall conform to IS 7098/Part I.
9.2 Supply & fixing only of End terminations with Double compression type Brass gland, Bi-metallic lugs using crimping tool, insulation tape, identification tags etc. including earthing of Gland, complete with all necessary supports, accessories as required.
Terminating Lugs- Aluminium lugs for aluminium conductor cables and copper lugs for copper conductor cables.

10. Earthing
10.1 Supply, installation, testing & commissioning only of standard Cast Iron Pipe earth stations as per IS:3043, 1987 with 100mm ID 12.5mm thick cast iron pipe with flange of 10ft long and 12mm dia holes made at 250mm centre to centre along, 3/4" G.I Pipe one foot long reducer and funnel mesh, spreading a homogeneous mixture of salt, charcoal around the pipe etc., 18"x18" cast iron cover including all necessary civil works, complete with all necessary supports, accessories as per the drawings as required.
10.2 Supply, installation, testing & commissioning only of plate earth electrode of copper 600x600x3.15mm as per IS:3043, 1987 including suitable HDBC tape upto top and 3/4" dia G.I pipe, funnel with mesh, spreading a homogeneous mixture of salt, charcoal around the plate/pipe etc, 18"x18" cast iron cover including all necessary civil works, complete with all necessary supports, accessories as per the drawings as required.
10.3 Supply, laying and fixing of G.I/HDBC earth strips of following sizes including all hardware, bus bar insulators, sleeves when exposed to metallic surfaces with necessary interconnections with earth station and equipment, complete with all necessary supports, accessories as per the drawings as required.

11. Cable Trays
11.1 Supply and fixing only of 2mm thk. perforated type hot dip galvanized (min 80 micronthk) cable trays including all the of necessary accessories, anchor bolts, 10mm threaded down rods, grouting and all G.I hardware materials, steel supports etc. complete with all necessary supports, accessories as per the drawings as required.
11.2 Supply and fixing only of 2mm thk. Plain/Solid type Hot Dip Galvanized sheet (GI) Powder coated Enamel Painted Cable Tray cover suitable for 300 x 75 mm cable tray including all necessary fixing accessories, G.I hardware etc. to complete for terrace area cable trays.

12. Miscellaneous
12.1 Supply, fabrication and fixing of M.S angles, channels for support of terrace cable trays, Panels, DBs, etc. including supply of all consumables for welding and also welding machine along with wiring connections to be arranged by the contractor only. Power supply will be provided at one point by the client.
12.2 Supply and fixing only of adaptor boxes, cable end boxes fabricated out of 14-gauge CRCA sheet duly painted with a coat of primer & 2 coats of enamel paint of colour shade matching with interiors / DB including G.I nut & bolts, of suitable size with 32/25mm dia knock outs all-round and with openable cover for pipe junctions or (size as per site condition) with all other accessories to make the installation complete.

12.3 Safety accessories:

12.3.1 Supply and fixing of CO2-5Kg Fire extinguishers with ISI mark (all floors panel rooms & AV room)

Make: Ceasefire / Firex / Safex.

12.3.2 Supply and laying only of 3.3 kV, 2.5 mm thick rubber mats with ISI mark in front of the Panels, DBs, and UPS etc. as per IEE regulations. Size: 1m x 1m

12.3.3 Supply and installation of fire safety charts as per specifications and IEE rules in vernacular and English

12.3.4 Supply only of First aid kit

12.3.5 Supply only of Hand gloves

12.3.6 Supply and fixing of Fire buckets with round bottom duly filled with fine river sand mounted steel stand

C. Electrical Works

13. Distribution Boards

Supply, installation, testing & commissioning only of following type Readymade Distribution Boards, with Double Door arrangement with magnetic lock complete with following switch gears. The DB shall be IP 43, powder coated type using CRCA sheet steel enclosure & impact resistance to be IK 09. The DBs shall have separate Earth & Neutral bus bars suitable for phase wise RCCB protection, including all interconnections etc. complete with all necessary supports, accessories as per the drawings as required.

Make: Legrand- DBs

14. M.V Cables

14.1 Supply, laying, testing, and commissioning only of following size 1100 Voltage grade XLPE insulated armoured aluminium/copper conductor underground cable, in existing cable tray or in built up cable trench or already laid RCC Hume pipe complete with all necessary supports, accessories as per the drawings as required. The cable shall conform to IS 7098/Part I.

14.2 Supply & fixing only of End terminations with single compression type Brass gland, Bi- metallic lugs using crimping tool, insulation tape, identification tags etc. including earthing of Gland, complete with all necessary supports, accessories as required.

14.3 Supplying and laying only of sub-mains in concealed or surface/open conduit system or on cable tray. The wiring shall be carried out using PVC insulated and round sheathed 1100 Voltage grade, multistrand copper conductor flexible cables/wires for phase, neutral and earth. The cost of 1.8mm thick (HMS) FRLS PVC conduit shall include with necessary accessories, fixing hardware, complete.
15. Earthing

15.1 Supply, installation, testing & commissioning only of plate earth electrode of copper 600x600x3.15mm as per IS: 3043, 1987 including suitable HDBC tape up to top and 3/4" dia G.I pipe, funnel with mesh, spreading a homogeneous mixture of salt, charcoal around the plate/pipe etc., 18"x18" cast iron cover including all necessary civil works, complete with all necessary supports, accessories as per the drawings as required.

15.2 Supply, laying and fixing of G.I/HDBC earth strips of following sizes including all hardware, bus bar insulators, sleeves when exposed to metallic surfaces with necessary interconnections with earth station and equipment, complete with all necessary supports, accessories as per the drawings as required.

Earthing: As per IS specifications.

16. Special Lightning Protection System

16.1 Supply, installation, testing & commissioning only of Advanced Lightning Protection rod with stainless steel body, working on the principal of Early Streamer Emission (ESE) technology, having a coverage radius of 79 metres when mounted at a height of 5 mtrs under LEVEL-I Protection and anticipation emission time of 72 microseconds, complying to NF C 17-102.

16.2 Supply, installation, testing & commissioning only of suitable Mast (4.5 mtrs) for mounting Lightning Protection rod.

16.3 Supply, installation, testing & commissioning only of electro-mechanical Counter.

16.4 Supply, installation, testing & commissioning only of readymade earth electrode of low carbon rod of 17.2mm dia, coated with 250 microns thick copper of 3 metre. long with clamps and all required excavation or bore drilling, Eco safe back fill compound, and providing masonry enclosure with 18"x18" cast iron cover having. locking arrangement and watering pipe etc. as required.

16.5 Supplying and laying only of down conductor for earthing with 1 core x 70 sq.mm 1.1 kV grade, PVC insulated multistrand copper conductor flexible cable (YY) in suitable size FRLS grade PVC conduit with all installation materials including end termination.

16.6 Supplying and laying only of 25 x 3mm HDBC strip for interconnection between the electrodes and run horizontally up to the duct where the down conductor terminate to the earth bus with porcelain-based insulator at every 1 mtr for fixing the tape to the walls and structures.
NOTES:
1. All Cu wires should be of FRLSH PVC insulated of 1100V grade, as per 694:1990.
2. All rigid PVC pipes should be of FRLS with ISI mark, IS:9537 Part 3-1983
3. 1.8mm thk conduits for concealed in the slab/floor/recessed in walls/surface mounted above false ceiling to be laid.
4. Total work should be carried out as per IEE regulations and to meet CEIG requirements, maintaining safety standards etc.
5. Onsite pre-commissioning tests like meggering of cables & earth pits have to be conducted and all test reports, test certificates to be submitted.
6. The quote should include one year warranty after commissioning / charging of the installation.
7. Under warranty period, all minor or major issues raised in operation should be attended by the contractor's qualified technical person immediately on call from the client.
8. Client reserve the right to decide or procure part materials required to execute the job.

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SIGNATURE&SEAL
CONTRACTOR

SIGNATURE &SEAL
I-HUB DATA IIIT-H
3. HVAC SPECIFICATIONS

A. **High side work for VRF Indoor & Outdoor Units**

   a. 18 HP Unit
   b. 16 HP Unit
   c. 14 HP Unit
   d. 12 HP Unit
   e. 10 HP Unit

Approved Makes: Carrier/ Blue Star/ Voltas/ Midea

2. Supply, Installation, Testing & Commissioning of Ceiling mounted Cassette type unit with 4-way throw c/w inbuilt drain pumps and Fresh air connection provision and cordless remote - 3’ x 3’ size.
   a. 4.0 tr 4-way Cassette with min of 753cfm delivered.
   b. 3.0 tr 4-way Cassette with min of 659cfm delivered.

**NOTE: BIDDERS CAN OFFER NEAREST TR UNIT - SHOULD BE EQUAL TO OR MORE THAN HP LISTED**

3. Supply of TFA Ducted type Indoor units for VRF connectivity comprising with pre-filter, fan section with low noise fan, (Including supply of corded remote for each unit)
   a. 8.0 tr TFA Ducted Unit with min of 1324cfm delivered.
   b. 6.0 tr TFA Ducted Unit with min of 1200cfm delivered.

4. Supply of Ducted type Indoor units for VRF connectivity comprising with pre-filter, fan section with low noise fan, (Including supply of corded remote for each unit)
   a. 8.0tr Histatic Ducted with min of 2117cfm delivered.
   b. 6.0tr Histatic Ducted with min of 2000cfm delivered.

SITC of Double skin construction Floor mounted AIR HANDLING UNITS with 25 mm thick Sandwiched PUF insulation (as per specification). Each complete with DIDW Centrifugal Fan, DX coil of copper tube & aluminum fins construction with Hydraufllic coating, coil size shall be selected for a maximum face velocity of 500 FPM. TEFC squirrel cage induction motor, centrifugal fan belt drive and spring isolators, Limit switches, Emergency Light, Guard for inspection door, motor shall be EFF-1, suitable for VFD operations & 415+/-10% volts, 50 cycles, 3 phase ac supply.

Approved Makes: Zeco/ Edgetech/ Systemair/ Vayhan

5. 20tr/ 6500cfm/ 65mm static
6. Supply & Commissioning of Refnet joints
7. Central Controller with Touch Panel for programming to control & monitoring all Indoor units.
B. Low side VRF Works

1. Lifting, Shifting, Positioning, Installation & Commissioning of VRF Outdoor units, necessary control panel, hanging / structural supports.
2. Lifting, Shifting, Positioning, Installation & Commissioning of VRF Indoor units, necessary control panel, hanging / structural supports.
3. Pressure testing with Nitrogen Gas, Vacuumizing including all consumables.
4. Gas charging and commissioning
5. Remote cabling of 2C x 0.75 Sqmm between each IDU & its wired remote

Copper Pipe

6. Supply, Installation, Testing & Commissioning of copper refrigerant piping duly insulated with nitrile insulation of 19mm thickness for Gas Pipe and 13mm thickness for Liquid Pipe / Including supports Clamps etc. and incl bends, couplings and necessary fittings, for R- 410A; Site Pressure tested to 550 psig;

Approved Makes: Mandev/ Rajco/ Mexiflow/ Approved make of manufacturer {with approval certificate}
   a. Dia - 6.4mm; Thickness - 0.8mm - 28 Rmt.
   b. Dia - 9.5mm; Thickness - 0.8mm - 467 Rmt.
   c. Dia - 12.7mm; Thickness - 0.8mm - 131 Rmt.
   d. Dia - 15.9mm; Thickness - 1.0mm - 586 Rmt.
   e. Dia - 19.1mm; Thickness - 0.8mm - 79 Rmt.
   f. Dia - 22.2mm; Thickness - 0.8mm - 68 Rmt.
   g. Dia - 28.6mm; Thickness - 0.8mm - 346 Rmt.
   h. Dia - 34.9mm; Thickness - 0.8mm - 36 Rmt.

NOTE: VENDOR TO GUARANTEE THAT PIPING WILL NOT EXCEED QUANTITIES LISTED

Cabling

7. Supply, Installation, Testing & Commissioning of control cum Transmission wiring between ODU & IDU of copper 2 core 1.5 Sqmm copper cabling.

Approved Makes: As approved by manufacturer.

Drain

8. Supply, Installation, Testing & Commissioning of Drain Piping of CPVC SDR13.5 of minimum 2.5mm thickness; with 6 mm thick nitrile foam insulation & all fittings, supports and clamps up to 50 mm dia. incl. drilling, wall chipping etc. and conceal the wall opening. Approved Makes:
   - CPVC - Finolex/ Supreme/ Ashirvad/ Astral,
   - Insulation - K - Flex/ Armaflex
   a. 32mm with 6mm insulation
   b. 40mm with 6mm insulation
C. Low side Ancillary Works

**Ducting**

1. Fabrication, Supply, Installation, Testing & Commissioning Regular rectangular GI sheet metal duct, supports, adjustable splitter damper, guide vanes incl. air balancing with necessary connections etc., confirming to SMACNA Incl. necessary civil works as per site condition-Smacna250PA.
   Approved Makes: Radiant/ Vedha
   a. 26 G
   b. 24 G
   c. 22 G

**Insulation**

2. Supply, installation and commissioning of Acoustic Insulation of Supply Air Ducting as per specifications for 1st 3 meter in Rectangular ducting using 25mm 48 kg/cum with 24g Perforated Al sheet finish. Approved Makes: UP Twiga/ K-Wool.

3. Thermal Insulation of duct using Close Cell Nitrile rubber 9 mm WITH FOIL FINISH, Rectangular ducting. (Class 'O'). Approved Makes: K - Flax/ Armaflex

**Air Terminals & Dampers**

4. SITC of Aluminum powder coated Fresh Air & Return Air Louvers of non- vision type.
5. SITC of Aluminum powder coated Louvers for Toilet Exhaust.
   Approved Makes: Air Master / Ravistar-Systemair / Dynacraft / Cosmos / Ruskin Titus
8. Supply, Installation & adjusting of GSS made Volume Control Damper with opposed blades as per tender specification, frame shall be made of 18G and blades shall be made of 20G.
   Approved Makes: Air Master / Ravistar-Systemair / Dynacraft / Cosmos / Ruskin Titus
9. Minor civil works including breaking and making good openings for ducting, ref and drain piping.
10. Supply & Installation of Collar Damper
   Approved Makes: Air Master / Ravistar-Systemair / Dynacraft / Cosmos / Ruskin Titus
Fans: BLDC

<table>
<thead>
<tr>
<th>S.NO</th>
<th>PARAMETERS</th>
<th>SPECIFICATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>TYPE OF MOTOR</td>
<td>BLDC MOTOR</td>
</tr>
<tr>
<td>2</td>
<td>WINDING MATERIAL</td>
<td>SUPER ENAMELLED COPPER WIRE</td>
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<tr>
<td>3</td>
<td>CLASS OF INSULATION</td>
<td>“B”</td>
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<tr>
<td>4</td>
<td>CERTIFICATION</td>
<td>5-STAR RATED, BEE (BUREAU OF ENERGY EFFICIENCY)</td>
</tr>
<tr>
<td>5</td>
<td>RATED VOLTAGE</td>
<td>230 V, SINGLE PHASE A.C</td>
</tr>
<tr>
<td>6</td>
<td>TEST VOLTAGE</td>
<td>230 V</td>
</tr>
<tr>
<td>7</td>
<td>RATED FREQUENCY</td>
<td>50 Hz</td>
</tr>
<tr>
<td>8</td>
<td>RATED POWER</td>
<td>26 W (+10% OR-10%)</td>
</tr>
<tr>
<td>9</td>
<td>RATED SPEED</td>
<td>350 RPM (+10% OR-10%)</td>
</tr>
<tr>
<td>10</td>
<td>POWER FACTOR</td>
<td>0.90 MIN</td>
</tr>
<tr>
<td>11</td>
<td>AIR DELIVERY</td>
<td>220 Mtr³/Minutes (CMM)</td>
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<tr>
<td>12</td>
<td>SERVICE RATIO</td>
<td>8.46</td>
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<tr>
<td>13</td>
<td>TEMPERATURE RISE</td>
<td>40 degree C MAX</td>
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<tr>
<td>14</td>
<td>SPEED CONTROL</td>
<td>5 STEP-SPEED CONTROLS (Capacitive Regulator)</td>
</tr>
<tr>
<td>15</td>
<td>NUMBER OF BLADES</td>
<td>3 Nos</td>
</tr>
<tr>
<td>16</td>
<td>LOW VOLTAGE STARTING</td>
<td>185 V (MAX)</td>
</tr>
<tr>
<td>17</td>
<td>INSULATION RESISTANCE</td>
<td>MORE THAN 2 MEGA OHMS</td>
</tr>
<tr>
<td>18</td>
<td>LEAKAGE CURRENT</td>
<td>210 MICRO AMP. MAX</td>
</tr>
<tr>
<td>19</td>
<td>TOTAL HARMONIC DISTORTION (THD)</td>
<td>Less than 10%.</td>
</tr>
</tbody>
</table>

ERV 8 - New filters after commissioning

11. Supply & Replacement of MERV 8 with full Set new filters (TEST CERTIFICATE TO BE PROVIDE ALONG WITH FILTER)
One set for Commissioning & 2nd set after commissioning of AC’s.
Approved Makes: Dyna / Aerosol/ AAF/Thermodyne/ Spectrum
a. for Cassette Indoor Unit - 35 nos x 2 sets
b. for Ducted Indoor unit - 9 nos x 2 sets

INDOOR AIR QUALITY TEST

12. Carrying out detailed Indoor air test for following ALL floor (5000 SFT PER SAMPLE). Approved Makes: VITRO LABS / CARE LABS

Note: Vendor should look into the following before quoting.
The test should be carried out by qualified technicians and calibrated equipment, the necessary Safety and other compliances should be followed.
Sample to be carried in handy samplers.
Following parameter to be provided along with the Indoor Air Quality Report.

a. Respirable Suspended Matter (RSPM) PM 10 (Internal)
b. Respirable Suspended Matter (RSPM) PM 2.5 (Internal)
c. Carbon dioxide (CO2)
d. Carbon Monoxide (CO)
e. Total Volatile organic compounds (TVOC)
f. Oxygen (O2)
g. Nitrogen Dioxide (NO2)
h. Formaldehyde (CH2O)
i. Temperature
j. Relative Humidity (RH)
k. Hydrogen Sulphide (H2S)
l. Sulphur dioxide (SO2)
m. Yeast N Mould
n. Ammonia (NH3)
o. Total Bacterial Count
p. Ozone (O3)

13. S I T & C of Electrical panel for AHU/ Fans REMOTE OPERATION, Wall mounted/ floor mounted control panels including anchoring into the wall, wiring and earthing, suitable for motor duty and able to withstand fault level of 25 KA. digital voltmeter and ammeter /kwh Meter. Manual /Auto selector switch shall be provided to facilitate remote operation through BMS. Panel shall be IP-44 Type indoor installation.
Approved Makes: PANEL - Thittanix /Arostar.

14. Armoured Copper conductor cables XLPE Cables termination using double compression brass cable glands with earth tags, crimping type tinned copper lugs, GI earthing BELOW 7.5KW (8SWG-2RUNS) clamps consumables for the following size of cables.
Approved Makes: Cable - Universal / Polycab / KEI / Havells/ Rajaniganda.
a. 4 core 2.5sq mm Copper cable with armour casing
b. 6 core 2.5sq mm Copper cable with armour casing

15. Nitrile Rubber/ XLPE Insulation sheet of 25mm thickness; closed Cell insulation of Class ‘O’. The Nitrile Rubber is to be stuck to the underdeck of the roof with SR 505 adhesive of Fevicol or approved equal make. The sheet shall be tied with Lacing wire and GI washers. These shall be made of 24 G GI sheet, to 10mm dia& 25mm long rawl plugs fixed to the roof before sticking the Nitrile Rubber. The entire insulation will be held in place with chicken wire mesh.
Approved Makes: K-Flex/ Armaflex

16. MS Platform for AHU support with Ladder access and safety railing including welding and other support works.

17. VFD of 10 HP installed in IP 55 enclosure. Approved Makes: Danfoss
Insulation Boxing for AHU’s

18. Supply of PCGI/PCGI - 100mm PUF insulated panels with Thermal break to be used as side walls including floor panels & ceiling panels with joint arrangement, flashings etc. including Door arrangement with hinges & lock & key arrangement to match side walls with proper gasket to reduce leaks. This should support and house the 20tr AHU.

Cable tray

19. Width up to 300mm - thickness of metal sheet will be 1.2mm {18 SWG}; of width from 300mm to 600mm - thickness of metal sheet will be 1.6mm {16 SWG}; of width over 600mm - thickness of metal sheet will be 2.0mm {14 SWG}; Pre galvanized sheet complete with screwed type cover of thickness 1.2mm as specified with counter sunk type screws. The dimension of the same shall be as follows along with powder-coat paint.

Approved Makes: Profab
a. 150 mm
b. 300 mm
c. 450 mm
d. 600 mm

D. Electrical works:

1.1 LT PANEL / MCC / STARTERS
Supply installation testing commissioning of Main Ventilation Panel fitted with PLC having feeders & VFD's as per attached SLD. The panels shall be fitted with necessary controllers like PLC (Programmable logic controllers) and MLC (Master Logic Controller) with required no of control relays, rectifiers, SMPS, auto manual selector, terminals, Sequencing Timer, Internal wiring etc. Starter’s rating shall be as per SLD. Necessary A/M switches and auxiliary contacts shall be provided for connecting with BMS. Panel shall be suitable for indoor installation (IP 54).

For Normal Mode fans complete with Variable frequency drives, Metering, all accessories, controls, harmonic filters for fan drive motors.

The system shall be complete in all respects and suitable for basement ventilation systems during normal and fire mode operation.

1.2 Supply, fixing, testing and commissioning of illuminated ON/OFF push button stations Indoor IP 54 type complete etc. OFF Push button shall be Mushroom head emergency push button with lockable type complete housed in poly corbonated enclosure.

2. LT CABLES & END TERMINATIONS
2.1 Cu. Ar. Cables
a. 3C x 25 sq.mm Cu. Ar. XLPE cable
b. 3C x 6 sq.mm Cu. Ar. XLPE cable
c. 3C x 4 sq.mm Cu. Ar. XLPE cable
d. 4C x 16 sq.mm. Cu. Ar. XLPE cables
e. 8C x 2.5 sq.mm. Cu. Ar. XLPE cables
2.2 Cu Control Cables: 4Cx2.5 sq.mm Cu. PVC cable (From PB Stn. Motorized Damper)

3. CABLE TRAYS
3.1 Ladder Type cable trays
   f. 600 mm x 50mm wide tray with supports.
   g. 450 mm x 50 mm wide tray with supports.
   h. 300 mm x 50 mm wide tray with supports.
   i. 150 mm x 50 mm wide tray with supports.

4. EARTHING: GI EARTHING CONDUCTOR: 8 SWG Cu Wire

4. FIRE FIGHTING SPECIFICATIONS

A. Hydrant Piping & Hydrant Accessories (YARD HYDRANT)
1. Supply, installation, testing and commissioning of Hydrant valves 63mm dia oblique type, single outlet, Conforming to IS:5290 with ISI marking & required fittings & accessories.
2. Supply & installation of 18 SWG MS horseboxes of 750x 600 x 250 mm with front glass & key suitable to accommodate 2 hoses of 15m long & one branch pipes with required supports.
3. Supply and installation of 63 mm dia 15.00 Mtrs long Controlled Percolating type Hose with SS coupling binded on both sides with GI wire conforming to IS:8423, respectively.
4. Supply, installation, testing and commissioning of 25mm dia Ball valve conforming to IS:884 and with required fittings.
5. Supply and installation of SS branch pipe with nozzle conforming to IS:903 with ISI mark
6. Supply, installation, testing and commissioning of CI Butterfly Valves PN 16 as 150 mm per IS 13059 with required fittings like flanges, Nuts & bolts, gaskets etc.
7. Supply, installation, testing and commissioning of CI Butterfly Valves PN 16 as 100 mm per IS 13059 with required fittings like flanges, Nuts & bolts, gaskets etc.
8. Supplying, installing, testing and commissioning of fire brigade inlet connection of 4 way with 4 nos 63 mm dia built - in Gun metal Non- return valves instantaneous coupling type arranged on 150 mm dia. Pipe manifold and connected to wet riser main. with mounting supports etc. complete.
9. Supply, fabrication, testing and commissioning of GI Medium grade piping 150 mm dia as per IS: 1239 complete with necessary fittings for aboveground piping.
10. Supply, fabrication, testing and commissioning of M.S. Black ERW Medium grade piping 80 mm dia as per IS: 1239 complete with necessary fittings for aboveground piping.
   Approved Makes: Jindal/TATA
11. Supply, fabrication, testing and commissioning of GI Medium grade piping 100 mm dia as per IS: 1239 complete with necessary fittings for aboveground piping.
   Approved Makes: Jindal/TATA
12. Supply, fabrication, testing and commissioning of GI Medium grade piping 80 mm dia as per IS: 1239 complete with necessary fittings for aboveground piping.
   Approved Makes: Jindal/TATA
B. Fire Extinguishers
1. Supply and installation of Water Co2 9 Ltrs fire extinguisher with fixing hangers, screws to required size etc. - wall mounted type.
2. Supply and installation of 4.5 Kgs CO2 type cylindrical shape fire extinguisher with fixing hangers, hose, brackets, screws to required size etc., complete as per IS:2878 - wall mounted type.
3. Supply and installation of MS Fire Buckets of 9.00 Ltrs capacity with 4 Bucket Stand
4. Supply and installation of ABC Type Fire Extinguisher 4 Kg Capacity
5. Glow Sign Boards

6. Suction Line
   Supply, installation testing & commissioning of following for the suction line of fire pumps.
   a. GI Pipe B Class: 200mm & 150mm dia. Approved Makes: TATA/Jindal
   b. CI Foot valves with required fittings like flanges, nut & bolts, gaskets, etc. 80 & 150mm dia.

7. Delivery Line
   a. Supply, installation testing & commissioning of following for Delivery line of fire pumps.
      GI Pipe B Class: 80, 100 and 150mm dia. Approved Make: Jindal/TATA
   b. CI Butterfly Valves as per IS 13059 with required fittings like flanges, Nuts & bolts, gaskets etc., 80 & 150mm dia.
   c. CI Non-Return Valves as per IS 5312 with required fittings like flanges, Nuts & bolts, gaskets etc., 80 & 150mm dia.

8. Cable for Pumps
   Supply, installation testing & commissioning of following for the fire pumps Cabling L/S * Wiring from Pumps to panel below 6Mtrs only.

   Supply, installation testing & commissioning of following for Auto ON/OFF of fire pumps.
   a. Pressure switch with required fittings.
   b. Pressure gauge with required fittings.
   c. Supply, installation, testing & commissioning of 15mm dia Ball valve conforming to IS:884 and with required fittings.

10. Supply, installation, testing & commissioning of 6mm thick M.S. Air cushion vessel of 300 dia x 1000mm long etc., complete with 25mm dia gunmetal air release valve automatic action, spring loaded at 7 ksc& pressure gauge etc., Complete with necessary valves.
MINOR CIVIL WORKS

1. 12 mm cement plaster of mix. 1:4 (1 cement: 4 fine sand)

2. Painting with 1st quality acrylic paint (ready mixed) having VOC content less than 50 gms/litre of approved manufacturer of required shade and color complete, as per manufacturer's specification.

3. Demolishing R.C.C. work manually/ by mechanical means including stacking of steel bars & disposal of unserviceable material within 50 mts lead as per direction of Engr-in-Charge.

4. Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking within 50 mts lead of area 3 sq. metres and below.

Networking Specifications

- Strictly should follow the list of makes given by I-HUB DATA,IIIT-H -H and There should be no deviation from given list of makes.
- Bidders who will be able to produce MAF Should participate only.
- Bidders should submit Technical Data Sheet to us and take approvals from Architect, Networking Consultant and Client before equipment's are purchased.
- Actives & Passives must be with 3-year warranty.
- Cabling must be with 3 Years warranty.
- The vendor should submit the quotes along with MAF, otherwise, the tender will be rejected.

Telephone and Data

- Supply, installation, testing & commissioning only of RJ-11 telephone socket jack type, front plate mounted on a suitable M.S anodised metal box of approved make complete with all necessary supports, accessories as per the drawings as required to make the installation complete for telephone/intercom.
- Supply, installation, testing & commissioning only of UTP CAT-6 information RJ-45 outlets, front plate mounted on a suitable M.S anodised metal box of approved make complete with all necessary supports, accessories as per the drawings as required to make the installation complete.
- Supplying and laying of CAT-6 UTP cable for Telephone, Data & Wi-Fi access points in 25mm dia recessed PVC FRLS conduit of thickness 1.8mm (HMS) in slabs/floor/walls/surface/open conduit above false ceiling including all accessories such as bends, junction boxes etc. complete with all necessary supports, accessories as per the drawings as required from Network rack at first floor electrical room.
• Supply, installation, testing and commissioning only of indoor Telephone junction Box with 10 pair Krone make connectors made out of 16-gauge CRCA sheet, finished with powder coated paint, with hinged gasketed door, air vents with rodent proof nets with suitable arrangements for incoming cable from bottom/outgoing cables from top to be provided at first floor electrical room and another at stilt floor to receive external source.

• Supply & laying only of 10 pair jelly filled armoured telephone cable of 0.51mm thk. from Telephone junction Box at stilt floor to 10 pair Telephone junction boxes at first floor in existing pipe/cable tray.

• Supply & laying only of data (internet) cable (armoured Single Mode 4 Fiber cable) from external source to network rack in existing pipe/cable tray (item will be operated depending on service provider).

<table>
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<tr>
<th>S.No</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>6-core Outside Plant Cable - Corrugated Steel tape Armored, HDPE Sheath, Loose-tube, Gel-filled, 9/125 SM, OS2, with attenuation less than 0.34 dB/km including suitable dia conduit / 40mm HDPE pipe</td>
</tr>
<tr>
<td>2</td>
<td>24-fiber LC-Style, Singlemode , 19-inch, 1U Rack mount Patch Panel pre-loaded with LC duplex SM adapter, 24 LC, SM OS2 Pigtails, Splice tray &amp; Splice protectors</td>
</tr>
<tr>
<td>3</td>
<td>12-fiber LC-Style, Singlemode , 19-inch, 1U Rack mount Patch Panel pre-loaded with LC duplex SM adapter, 12 LC, SM OS2 Pigtails, Splice tray &amp; Splice protectors</td>
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<tr>
<td>4</td>
<td>LC-LC Singlemode Duplex, LSZH Sheath, G657.A1 Patch Cord, 3 Meter</td>
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<tr>
<td>5</td>
<td>4-pair, CAT6 U/UTP (650 MHZ tested with Cross (+) filler pair separator &amp; LSZH sheath), 23 AWG, UTP Cable (305 mt. Roll), Meets or exceeds ANSI/TIA-568-C.2 and CENELEC EN 50288-6-1, Flame test method on IEC 60332-3-22</td>
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<tr>
<td>6</td>
<td>Cat6 UTP Jack with Strain relief and bend limiting mechanism for cables, Yellow Color -User Side</td>
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<tr>
<td>7</td>
<td>Single/Dual Port face plate of size 3x3, Material should be ABS /UL94 V-0 with shutter of ABS UL94V-0 having spring shutter of steel, stainless. Holder, Jack of ABS UL 94V-0, Cover label of Acrylic UL94V-0</td>
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<tr>
<td>8</td>
<td>Cat 6, 24-port unloaded Modular Straight Jack Panel with labels, clear label covers and rear cable support bar, Height, 1U + 425 CAT6 IO's</td>
</tr>
<tr>
<td>9</td>
<td>Cat6 UTP Jack with Strain relief and bend limiting mechanism for cables, Yellow Color -Panel Side</td>
</tr>
<tr>
<td>10</td>
<td>Cat 6 Equipment Cord, 4-Pair stranded Unshielded conductors, LSZH sheath, Transparent plug and boot design provide additional space between adjacent plugs, 7 Feet Patch Cords Yellow Work Area</td>
</tr>
<tr>
<td>11</td>
<td>Cat 6 Equipment Cord, 4-Pair stranded Unshielded conductors, LSZH sheath, Transparent plug and boot design provide additional space between adjacent plugs 3 Feet Patch Cords Yellow Rack</td>
</tr>
</tbody>
</table>

### Racks
- Netrack / Netfox

| 12 | 12U Wall Mount Rack, 2 Fans, 2 cable manager and 20nos Fastners |
| 13 | 6 Port PDU C13/C14 Type with Power Cables |
| 14 | 17U Floor Mount Rack, 2 Fans, 2 cable manager and 40nos Fastners |
| 15 | 6 Port PDU C13/C14 Type with Power Cables |
| 16 | 24U Floor Mount Rack, 2 Fans, 2 cable manager and 40nos Fastners |
| 17 | 6 Port PDU C13/C14 Type with Power Cables |
| 18 | 12U Floor Mount Rack, 2 Fans, 2 Shelf and 40nos Fastners 600x600 For AV |
| 19 | 6 Port PDU C13/C14 Type with Power Cables |

### Active Components
- CISCO / ARUBA

<p>| 20 | 48 Port - 1 Giga Copper Ports with 4 10G SFP Ports Layer-2 Managable Switch, 3 Years Support 8x5xNBD |</p>
<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>48 Port POE + - 1 Giga Copper Ports with 4 10G SFP Ports Layer-2 Managable Switch 3 Years Support 8x5xNBD</td>
</tr>
<tr>
<td>22</td>
<td>SFP Transceivers 1G MMF/SMF, 1310nm. Layer 2 Switch with 3 Years Support 8x5xNBD GLC-GE-DR-LX</td>
</tr>
<tr>
<td>23</td>
<td>Wire AP 802.11a/b/g/n/ac/ax; 4x4:4 MU-MIMO; 20 MHz (2.4GHz) 20/40/80/160 MHz (5GHz); 5 GHz (4x4) Flexible Radio with 2.4 or 5 GHz (4x4), Cisco RF ASIC, and IoT-ready</td>
</tr>
</tbody>
</table>

7. UPS Specifications

- Inbuilt Isolation transformer is required.
- Strictly should follow the list of makes given by I-HUB DATA,IIIT-H and There should be no deviation from given list of makes.
- Bidders should submit Technical Data Sheet to us and take approvals from Architect, UPS Consultant and Client before equipment’s are purchased.

UPS & Inverter

- Supply, installation, testing and commissioning only of 10 KVA / 9 KW ONLINE UPS with 3 Phase input / 1 Phase output & Built-in Static Bypass switch for unbalanced mixed loads with 12V 42AH - 16 nos. SMF Battery bank for 30minutes backup on full load including rack and all required accessories to make the installation complete for UPS sockets, ELV equipment & Drain pumps.
- Load Crest Factor 3: 1
- Double Conversion Online, Sine wave
- Overload operation: 60 seconds @ 125% and 30 seconds @ 150%
- Operating Temperature: 0 - 40 °C
- Audible noise at 1 meter from surface of unit: 58.0dBA
- Protection Class: IP 20
- The UPS shall have all other devices required for safe operation and maintenance, including circuit breakers, switches, battery charger, battery management system etc.
- Supply, installation, testing and commissioning only of 3 KVA sine wave Inverter with 1 Phase input / 1 Phase output with 12V 100AH - 4 nos. semi tubular inverter Battery bank for 60 minutes backup including rack and all required accessories to make the installation complete for emergency lighting.
1.0 DRAWINGS:

1.1 The plans can be liable to altered during the execution of work as per necessity of site conditions. The rates quoted by the contractor for various items shall hold good for execution of work even with altered plans.

1.2 One set of drawings, on the basis of which actual execution of the work is to proceed shall be furnished free of cost to the contractor by the Academic Head I-HUB DATA, IIIT-H progressively according to the work program submitted by the contractor and accepted by the Academic Head I-HUB DATA, IIIT-H. Drawings for any particular activity shall be issued to the contractor at least 10 days in advance of the scheduled date of the start of the activity. However, no extra claims by the contractor toward any delay in issue of drawing or issue of any revision / change to the drawings issued earlier shall be admissible. The Center operation officer shall intimate the contractor 7 days in advance regarding any delay to issue of drawings, for any particular stage of works. If work gets affected due to delay to issue of drawings, for any particular stage of work the contractor shall be granted extension of time in terms of condition 14.7 of tender notice.

1.3 Signed drawings above shall not be deemed to be an order for work unless they entered in the agreement or schedule of drawings under proper alterations of the contractor and Center operation officer unless they have been sent of the contractor by the Center operation officer with a covering letter confirming that the drawing in and authority for work in contract.

2.0 DISCREPANCIES:

2.1 In case of discrepancies between documents the following order of procedure shall apply:-

2.1.1 Between the written description of written dimensions in the drawings and the corresponding one in the specifications, the latter shall apply.

2.1.2 Figured dimensions shall supersede scaled dimensions. The drawings on a larger scale shall take precedence over those on a smaller scale.

2.1.3 Drawings issued as construction drawings from time to time shall supersede tender drawings and also the correspondence drawings previously issued.

Note: The contractor should not execute any component of work without obtaining the working drawings. Any work done without drawings shall be at the contractors’ responsibility only. Acceptance for such work will be at the discretion of the Executive Engineer.

3.0 SECRECY CLAUSE:

The drawings and specifications made available to the tenderer shall exclusively be used on the work and they are retained from passing on each plan to any unauthorised hand either in parts or in full under the provisions of Section-3 and 5 of the official secrets Act 1923. Any violation in this regard will entail suitable action under appropriate clause or official secret Act 1923.
BILL OF QUANTITIES
AND
PRICE BID

BILL OF QUANTITIES

PREAMBLE

1. The Bill of Quantities shall be read in conjunction with the instructions to Tenderers, General and Special conditions of Contract Technical Specifications and Drawings.

2. The quantities given in the Bill of Quantities are estimated and provisional and are given to provide common basis for tendering. The quantities given here are not necessarily show the actual quantities of work to be done. The basis of payment will be actual quantities of work ordered and carried out as measured by the Contractor and verified by the Engineer and valued at the agreement rates in the Bill of Quantities where applicable, and otherwise at such rates and prices as the Engineer-in-Charge may fix within the terms of Contract.

3. The estimate rates in the Bill of Quantities shall, except in so-far as it is otherwise provided under the Contract include cost of all constructional material, labour, machinery, transportation, erection, maintenance, profit, together with all general risks, liabilities and obligations set out or implied in the Contract.

4. The plans enclosed with the tender are liable to be altered during execution of work as per necessity of site conditions. The rates quoted by the tenderer shall hold good for execution of work even with altered plans.

5. The whole cost of complying with the provisions of the Contract shall be included in the estimated rates for items provided in the Bill of Quantities and where no items are provided in the Bill of Quantities, their cost shall be deemed to be distributed among the estimate rates entered for the related items of work.

6. General directions and descriptions of work and materials are not necessarily repeated nor summarized in the Bill of Quantities. References to the relevant sections of the Contract documentation shall be made before entering estimate rate against each item in the Bill of Quantities.

7. The method of measurements of completed work for payment shall be in accordance with the relevant B.I.S. Codes & A. P. S. Specifications.

8. All items of work are to be executed as per the drawings / specifications supplied with the contract documents.

If there is any contradiction between the drawings and the text of the specifications, the later shall prevail.
9. The Tenderer should inspect and select the quarries of his choice before he quotes the tender percentage in the Schedule of Bill of Quantities and satisfy himself about the availability of required quantum of materials.

10. Diversion drains should be excavated before completion of the embankments and the useful soils should be used in the nearby embankments.

11. The actual mix proportion by weight to be adopted during execution will be got designed in the laboratories to suit the grade of concrete and mortar to be used. It will be the responsibility of the contractor to manufacture concrete and mortar of required strength.

12. The quantum of measurement for all items of earthwork involving conveyance manually or by machinery shall be as assessed by level measurement. The measurements for the embankment will be for the consolidated banks only.

13. Wherever bailing out of water is involved either for excavation or for foundations or for constructions, the percentage quoted shall take into account the de-watering charges necessary. No separate payment will be made for de-watering.

14. Wherever embankment work is involved, useful soils approved by the Engineer-in-Charge from the cutting reaches and diversion drains shall be taken and used for forming nearby embankments soils used for constructions will be at free of cost.

15. The quoted rates shall also include the work of any kind necessary for the due and satisfactory construction, completion and maintenance of the works according to the drawings and these specifications and further drawings and orders that may be issued by the Engineer-in-Charge from time to time. The quoted rates shall include compliance by the Contractor with all the general conditions of contract, whether specifically mentioned or not in the various clauses of these specifications, all materials, machinery, plant, equipment, tools, fuel, water, strutting, timbering, transport, offices, stores, workshop staff, labour and the provision of proper and sufficient protective works, diversions, temporary fencing and lighting. It shall also include safety of workers, first aid equipment, suitable accommodation for the staff and workmen, with adequate sanitary arrangements, the effecting and maintenance of all insurance, the payment of all wages, salaries, fees or other charges arising out of the execution of works and the regular clearance of rubbish, reinstatement and clearing-up of the site as may be required on completion of works safety of the public and protection of the works and adjoining land. The work of Building in quality control / assurance shall be deemed to be covered in the quoted rates.

16. The Contractor shall ensure that, the quoted rates shall cover all stages of work such as setting out, selection of materials, selection of construction methods, selection of equipment and plant, deployment of personnel and supervisory staff, quality control testing etc. The work quality assurance shall be deemed to be covered in the tender percentage.
17. The special attention of the tenderer is drawn to the conditions in the tender notices wherein reference has been made to the Andhra Pradesh Standard Specifications [APSS] and the Standard preliminary specifications containing therein. These preliminary specifications shall apply to the agreement to be entered into between the contractor and the Institution of Telangana and shall form an in-separable condition of the contract along with the estimate. All these documents taken together shall be deemed to form one contract and shall be complimentary to another.

18. The tenderer shall examine, closely the A.P.S.S. / MOST and also the standard preliminary specifications contained therein and sign the Executive Engineer's office copy of the APSS / MOST and its addenda volume in token of such study before submitting his quoted rates which shall be for finished work in-situ. He shall also carefully study the drawings and additional specifications and all the documents, which form part of the agreement to be entered into by the successful tenderer. The APSS / MOST and other documents connected with contract such as estimate plans, specifications, can be seen on all working days in the office of the Academic Head I-HUB DATA, IIIT-H, IIIT, Gachibowli, Hyderabad.

19. The tenderers attention is directed to requirements for materials under the clause 'materials and workmanship' in the preliminary specifications of APSS. Materials conforming to the Bureau of Indian Standards specifications, APSS etc., shall be used on the work and the tenderers shall quote his overall quoted rates accordingly.

20. The tenderer has to do his own testing of materials and satisfy himself that they conform to the specifications of respective I.S.I. Codes before tendering.

21. The contractor shall himself procure the required construction materials of approved quality including the earth for formation of embankment and water from quarries / sources of his choice. All such quarries / sources of materials required for the work shall be got approved by the Engineer-in-Charge in writing well before their use of the work.

22. The contractor shall himself procure the steel, cement, Bitumen, Blasting materials, sand, metal, soils, etc., and such other materials required for the work well in advance. The contractor has to bear the cost of materials for conveyance. The I-HUB DATA, IIIT-H, Gachibowli, Hyderabad will not take any responsibility for fluctuations in market in cost of the materials, transportation and for loss of materials etc.

23. Inspection of site and quarries by the tenderer: Every tenderer is expected before quoting his rates, to inspect the site of proposed work. He should also inspect the quarries and satisfy himself about the quality, and availability of materials. The best class of materials to be obtained from quarries, or other sources shall be used on the work. In every case the materials must comply with the relevant standard specifications. Samples of materials as called for in the standard specifications or in this tender notice, or as required by the Executive Engineer, in any case, shall be submitted for the Executive Engineer’s approval before the supply to site of work is begun.
24. The tenderer’s particular attention is drawn to the sections and clauses in the A.P. standard specification dealing with
   a. Test, inspection and rejection of defective materials and work.
   b. Carriage
   c. Construction plant
   d. Water and lighting
   e. Cleaning up during the progress and for delivery.
   f. Accidents
   g. Delays
   h. Particulars of payments.

   The contractor should closely peruse all the specification clauses, which govern the overall rates he is tendering.

25. The defect liability period of contract in terms of GO Ms.No.8, T,R&B Dept., dt:8.1.2003 is twenty four months.

26. The estimate rates for items shown in the Schedule “A” include all construction materials. No escalation in rates will be paid unless specified in the tender document. The tenderer has to quote an rates considering all the aspects of the tender to complete the finished item of work as per the APSS / MOST / B.I.S. specifications, the special specifications appended, Drawings etc.

27. If there is any contradiction between APSS / MOST and B.I.S. specifications, listed and detailed technical specifications, the latter shall prevail.

28. In case of a job for which specifications are not available with the Schedule or in APSS / MORT&H or B.I.S. code and are required to be prescribed, such work shall be carried out in accordance with the written instructions of the Engineer-in-charge.

29. The contractor should use the excavated useful soils and stone for construction purpose. Soils used for construction either for homogeneous section in hearting or in casing zone based on the suitability will be at free of cost and the cost of stone used for construction purpose will be recovered from the contractor’s bill.

   The contractor should quote his tender rates keeping in view of the above aspects.

30. Additions and alternations by the Tenderer in the Schedule of quantities will disqualify the tender.

31. In the case of discrepancies between the written description of the item in the Schedule “A” and the detailed description in the specification of the same item, the latter shall be adopted.
32. It is to be expressly understood that the measured work is to be taken according to the actual quantities when in place and finished according to the drawings or as may be ordered from time to time by the Center operation officer and the cost calculated by measurement or weight at their respective rates without any additional charge for any necessary or contingent works connected with the work. The rates quoted are for works in situ and complete in every respect.

33. For all items of work in excess of the quantities indicated the rates payable for such excess quantities will be as per agreement rates.

34. For all items of work, intermediate payment will be made provisionally as per relevant clause. Full-accepted agreement rates will be paid only after all the items of works are completed.

35. The contractor is bound to execute all supplemental works that are found essential incidental and inevitable during execution of main work.

36. The payment of rates for supplement items of work will be regulated as under.

Supplemental items directly deductible from similar items in the original agreement.

The rates shall be derived by adding to or subtracting from the agreement rate of such similar item the cost of the difference in the quantity of materials labour between the new items and similar items in the agreement worked out with reference to the schedule of rates adopted in the sanctioned estimate with which the tenders are compared.

a) Similar items but the rates of which cannot be directly deducted from the original agreement.

b) Purely new items which do not correspond to any item in the agreement. The rate of all such items shall be as per agreement rates.

37. **ENTRUSTMENT OF ADDITIONAL ITEMS.**

a) Where ever additional items not contingent on the main work and outside the scope of original agreement are to be entrusted to the original contractor dispensing with tenders and if the value of such items exceeds the limits up to which the officer is empowered to entrust works initially to contractor without calling for tenders approval of next higher authority shall be obtained. Entrustment of all such items on nomination shall be rates not exceeding the agreement rates.
b) Entrustment of supplement items contingent on the main work will be authorised by the officers up to the monetary limits up to which they themselves are competent to accept items in the original agreement so long as the total amounts up to which they are competent to accept in an original agreement rates for such items shall be worked.

c) Entrustment of either the additional supplemental items shall be further subject to the provisions under para 176(b) of APWD Code Viz., the items shall not be ordered by an officer on his own responsibility if the revised estimate or deviation statement providing for the same requires the sanction of higher authority.

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**BILL OF QUANTITIES**

[Part-I]

Name of the Work: **PROPOSED INTERIOR WORKS FOR EXISTING BUILDING OF VINDHYA-B3 SECOND FLOOR AND NILGIRI BLOCK THIRD FLOOR , THE PREMISES OF INTERNATIONAL INSTITUTE OF INFORMATION TECHNOLOGY, GACHIBOWLI, HYDERABAD-500 032**

<table>
<thead>
<tr>
<th>S. No</th>
<th>Approximate Quantity</th>
<th>Description of work</th>
<th>Specification No. / APSS / BIS / MOST</th>
<th>Unit</th>
<th>Rate to be quoted in figures and words Rs.</th>
<th>Amount in Rs.</th>
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Schedule - 'A 'Enclosed
BILL OF QUANTITIES

(PART- II)

Details of Maximum amount Reimbursable to the contractor.

“The rates to be quoted for the “BOQ” (Schedule – “A”) are including overhead charges and contractors profit but excluding GST”.

Reimbursement of GST will be as per Clause 102 of the Conditions of Contract.

The contract price is inclusive of all overhead charges and include the following elements:

- Site accommodation, setting up plant, access road, water supply, electricity, Security site boundary fence of height not less than 20’ with GI corrugated sheets and general site arrangements.
- Office furniture, equipment and communications
- Expenditure on:
  - Corporate office of contractor
  - Technical agents for site supervision. (Reimbursement to the technical agents provision is dispensed with where ‘over heads and contractor’s profit’ provision is included in the data rates)
  - Documentation and “as built” drawings
  - Mobilisation/ de-mobilisation of resources
  - Labour camps with minimum amenities and transportation to work sites.
  - Light vehicles for site supervision including administrative and managerial requirements.
  - Laboratory equipment and quality control including field and laboratory testing. (For all the works costing more than Rs. 2.00 Crores contractors have to establish Quality Control laboratory)
  - Minor T & P and survey instruments and setting outworks, including verification of line, dimensions, trial pits and bore holes, where required.
  - Watch and ward
  - Traffic management during construction
  - Expenditure on safeguarding environment
  - Sundries
  - Financing Expenditure
  - Work Insurance

---
FOOT NOTE TO SCHEDULE “A”

1. All the items of work will have to be executed as per standard specifications laid down in APSS, BIS, NBC and the special specifications and general features of design attached herewith. The quoted rates offer shall include all operations described in the specifications and general features.

2. All the rates quoted in the Schedule ‘A’ shall be through rates in rupees and paise for finished item of work inclusive of all charges such as leads, lifts, classifications and incidental charges etc. except GST.

3. The quantities given here are those upon which the lumpsum cost of the work is based, but they are subjected to alternation, omission, deduction, or addition as provided for in the condition of the contract and not necessarily shown the actual quantities of work to be done.

4. It is to be expressly understood that the measured work is to be taken net (not withstanding any custom or practice to the contrary) according to the actual quantities placed and finished according to the drawing or as may be ordered from time to time by the Engineer-In-Charge and the cost calculated by measurement or weight at the respective prices without any additional charge for any necessary or contingent works, connected therewith. The rate shown is for the works in situ and complete in every respect.

5. All items of work will have to be executed as per standard specification laid down in A.P.S.S. the special specification and general features of design attached herewith. The quoted rates shall include all operation described in the said specification and general features and shall be inclusive of all charges such as leads, lifts, classification, incidental charges, hire and operational charges of all T & P, security measures etc., complete except GST.

6. Vernacular signature should be translated into English.

7. Additions and alternations in schedule or conditions will disqualify the tender.

8. Steel centering should be used for all members involving the use of centering.

9. The tenderer should inspect the site & checkup the possible water source for carrying out work though out the year, monsoons or non-monsoons irrespective of the quantum of rainfall and quote their offer accordingly. No subsequent claims for extra water leads will be entertained under any circumstances.

10. The contractor will not be entitled to claim any interest on arrears which he may get on the final settlement of accounts.

11. The contractor shall make his own arrangement for the acquisition of stone and other quarries etc.

12. Metal and chips of the specified gauges will have to be stacked separately in the standard size after screening as per specifications before using on work.

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ARTICLES OF AGREEMENT

Articles of Agreement made this __________________ day of __________________ 2021 between the International Institute of Information Technology, (Hereinafter called ‘Academic Head I-HUB DATA, IIIT-H, IIITH’ on which expression shall where the context so admits include his successors in office and assigns) of one Part and

M/s ___________________________ (Hereinafter called the ‘Contractor’ which expression shall where the context so admits include heirs, executors, administrators and legal representatives) of the other part.

WHEREAS the International Institute of Information Technology, (herein after called the Academic Head I-HUB DATA, IIIT-H) are desirous of “Space development works in I-hub Data in block-B3, Second floor, Vindhya & 3rd Nilgiri in the premises of IIIT-H, Gachibowli, Hyderabad-500 032.” and have caused an estimate of probable quantities contained in Schedule A, drawings and specifications describing the work to be done.

AND whereas the said Schedule A, drawings numbered serially from ___________________________ (Schedule B) and the specifications (Schedule C) have been signed by the parties hereto.

AND WHEREAS the contractor has deposited with IIIT-H DAT I-HUB Foundation along with tender, the sum of Rs.3,85,000/- (Rupees Three lakhs Eighty Five thousand only) vide D.D.No._________________________ dated_________________________ drawn on _____________ Bank, _______________ towards EMD for the due fulfillment of the contract to the satisfaction of the Academic Head I-HUB DATA, IIIT-H.

AND WHEREAS the contractor has deposited with IIITH the sum of Rs._________________________/- (Rupees_________________________ only) vide DD No._________________________ dated_________________________ drawn on _______________ Bank, _______________ towards balance EMD for the due fulfillment of the contract to the satisfaction of the Academic Head I-HUB DATA, IIIT-H, IIITH.

AND WHEREAS the contractor has agreed 7.50% of the value of the work done to be retained from each bill as Security for due fulfillment of the contract.

AND WHEREAS the contractor has also signed the copy of the Telangana State detailed standard specifications and addenda Volume thereto maintained by the
authority who registered him/them in the appropriate class in acknowledgement of being bound by all conditions of the clauses of the Standard Preliminary Specifications for items of work described by a Standard Specification Number in Schedule-A in addition to having signed the “Tenderers” and Contractor certificate in acknowledgement of being bound by all the conditions of the Standard Preliminary Specifications and all the Standard Specifications for item of work, described by the Standard Specification Number in Schedule A.

AND WHEREAS the contractor has agreed to execute upon and subject to the conditions set forth in the preliminary specification of the Telangana State detailed standard specifications and such other conditions as are contained in all the specifications forming part of this contract (herein after referred to as the said conditions) the works shown upon the drawings and described in the said specifications and set forth in Schedule A as the “Probable quantities” and comply with the rate of progress noted at the end of this Articles of Agreement for a sum of Rs________________ (Rupees______________________________________ only) or such other sum as may be arrived at under the Clauses of the Standard Preliminary Specifications relating to payment on or by final measurement at unit prices.

NOW IT IS HEREBY AGREED AS FOLLOWS

1) In consideration of the payment of the said sum of Rs_____________ or such other sum as may be arrived at under the clauses of the Standard Preliminary Specifications relating to payment on by final measurement at unit price, the contractor will upon and subject to the said conditions execute and complete the works shown upon the said drawings and described in the said specifications and to the extent of probable quantities shown in the Schedule ‘A’ with such variations by way of alterations additions to, or deductions from the said works and method of payment there for as are provided for the said conditions.

2) The term Center operation officer in the said conditions shall mean the officer of the I-HUB DATA,IIIT-H in charge of the Division having jurisdiction for the time being over the work, who shall be competent to exercise all the powers and privileges reserved herein in favour of the Institution with the previous sanction of or subject to ratification by the Academic Head I-HUB DATA, IIIT-H of the Institution in cases where such sanctions or ratification may be necessary.

3) The plans, agreement and documents above mentioned shall form the basis of this contract and the decision of the said Center operation officer as to the materials, workmanship and to the intended interpretation of clauses of the Agreement or any other document attached here to shall be final and binding on both parties.

4) The said contract comprises of the building work above mentioned and all subsidiary works connected there with within the same site as may be ordered to be done from time to time by the said Executive Engineer, even though such works may not be shown on the drawing or described in the said specifications of the priced schedule of quantities.
5) The Academic Head I-HUB DATA, IIIT-H through the Center operation officer reserves to himself the right of altering the drawings and nature of the work and adding or omitting any items of work or of having portions of the same carried out institutionally or otherwise and such alterations or variations shall be carried out without prejudice to this contract.

6) If at any time after the commencement of the work, the Academic Head I-HUB DATA, IIIT-H for any reason whatsoever does not require part thereof as specified in the tender to be carried out the Center operation officer/ Academic Head I-HUB DATA, IIIT-H shall give notice in writing of the fact of the Contractor who shall have no claim to any 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 consequences 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.

7) Time shall be considered as essence of the Agreement and the contractor hereby agrees to commence the work as soon as his Agreement is accepted by the Academic Head I-HUB DATA, IIIT-H and the site (or premises) is handed over to him as provided for in the said conditions and agrees to complete the work within the period of **2 Months** from the date of such handing over of the site (or premises) and to show progress as defined in the tabular statement Rate of progress, subject nevertheless to the provisions for extension of time contained in Clause 59 of the Standard Preliminary Specifications.

8) The Arbitrator for fulfilling the duties set forth in the arbitration clauses of the standard preliminary specifications shall be as defined with tender conditions vide item No.23 of conditions of contract (A.General) enclosed to the contract.

9) The said conditions shall be read and construed as forming part of the agreement and the parties have to respectively abide by and submit themselves to the conditions and stipulations and perform the agreement in their parties respectively.

10) Upon the terms and conditions of this agreement being fulfilled and performed to the satisfaction of the Institution, the balance amount including any deposit of the contractor shall be returned after the expiry of liability period i.e. 24 months + defects correction period whichever is later after virtual completion of work as per drawings and tender conditions.

11) Payment will be made to the contractor under the certificate to be issued at reasonably frequent intervals by the Executive Engineer. Intermediate payments will be made by the Center operation officer of a sum equal to 92½ percent of the value of work as so certified and the balance of 7½ percent will be withheld and retained as a security for the due fulfillment of the contract. Under the certificate to be issued by the Center operation officer on the completion of the entire work, the contractor will receive final payment of all the money due or payable to him under or by virtue of the contract except deposit retained as security and a sum
equal to 2 ½ percent of the total value of the work done provided there is no recovery from
or forfeiture to be made under clause 60 of the PS to APSS. The amount with
held from the final bill will be retained under “Deposits” and paid to the contractor
together with the EMD retained as security after a period of 24 months after all
defects shall have been made good according to the true intent and meaning thereof.

12) Under provisions of sections 194 (c) in the Income Tax Act under the Finance Bill,
Income Tax as prescribed by the Institution from time to time, on each and every
payment made to the contractor will be deducted at source and will be credited to
the Income Tax Institution and necessary certificates will be issued to the
contractor.

13) All disputes arising out or in any way connected with this agreement shall be
deemed to have arisen in Hyderabad and only the court in Hyderabad city shall
have jurisdiction to determine the same.

In witness whereof the Contractor __________________________ has here into
set his hands and Academic Head I-HUB DATA, IIIT-H, IIIT, Gachibowli, Hyd on
behalf of and by the order and direction of the IIIT, Gachibowli, Hyd has hereinto
set his hand the day and year first above written.

Signed by Contractor _________________

Address:

Signed by Academic Head I-HUB DATA, IIIT-H___________________

In the presence of witnesses:  1)

2)
AREA : 2291 SFT
PER STUDENT : 54/SFT
SEATING CAPACITY : 42NOS

GENERAL NOTES:
· ALL DIMENSIONS ARE IN INCHES.
· ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE COMMENCEMENT OF WORK.
· DO NOT SCALE FROM THE DRAWINGS.
· REFER TO DETAIL DRAWINGS, STRUCTURAL AND SERVICES DRAWINGS BEFORE COMMENCEMENT OF WORK.

NOTE:
· Any disturbance between Drawing & Site Conditions respective to dimensions need to be highlighted before construction.

ARCHITECTURE AND DESIGN OFFICE

LEGEND:
IIIT/ID/TF/NB
IIIT/ID/TF/NB/AS BLT
TENDER DRAWINGS

NOTE:
IIIT, NILIGIRI BLOCK
THIRD FLOOR
THIRD FLOOR - NILIGIRI BLOCK
STUDENT WORKSTATIONS
AS BUILT PLAN
PROPOSED RENOVATION OF INTERIORS FOR IIIT, NILIGIRI BLOCK

ARCHITECT’S SIGN. & STAMP:
ACADEMIC HEAD
I-HUB DATA,IIIT-H

Drawing is licensed by the ADO and is issued on the condition that it is not copied, reproduced, or disclosed to any unauthorized party, either wholly or in part without written permission of ADO.
AREA: 2291 SFT
PER STUDENT: 54/SFT
SEATING CAPACITY: 42NOS

CLINENT:
PROJECT:
TITLE:

GENERAL NOTES:
· ALL DIMENSIONS ARE IN INCHES.
· ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE COMMENCEMENT OF WORK.
· ALL DIMENSIONS TO BE USED.
· REFER ANY DISCREPANCY TO THE ARCHITECT.
· DO NOT SCALE FROM THE DRAWINGS.
· REFER TO DETAIL DRAWINGS, STRUCTURAL AND SERVICES DRAWINGS BEFORE COMMENCEMENT OF WORK.

Drawing is reserved by the A&DO and is issued on the condition that is not copied, reproduced, or disclosed to any unauthorized party, either wholly or in part without written permission of A&DO.

ARCHITECT’S SIGN. & STAMP:

CONTRACTOR

ACADEMIC HEAD
I-HUB DATA,IIIT-H
GENERAL NOTES:
- All dimensions are in inches.
- All dimensions to be checked on site before commencement of work.
- Written dimensions only to be used.
- Refer any discrepancy to the architect.
- Do not scale from the drawings.
- Refer to detail drawings, structural and services drawings before commencement of work.

Drawing is reserved by the A&DO and is issued on the condition that is not copied, reproduced, or disclosed to any unauthorized party, either wholly or in part, without written permission of A&DO.

LEGEND:

NOTE:
Any disturbance between Drawing & Site Conditions respective to dimensions need to be highlighted before construction.

CLIENT: IIIT, NILIGIRI BLOCK
PROJECT: THIRD FLOOR
TITLE: THIRD FLOOR - NILIGIRI BLOCK
STUDENT WORKSTATIONS
PROPOSED RENOVATION OF INTERIORS
FOR IIIT, NILIGIRI BLOCK

ARCHITECT’S SIGN. & STAMP:

CONTRACTOR

ACADEMIC HEAD
I-HUB DATA,IIIT-H

DRAWING:

NOTE:

AREA: 2291 SFT
PER STUDENT: 54/SFT
SEATING CAPACITY: 42NOS

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GENERAL NOTES:

- All dimensions are in inches.
- All dimensions to be checked on site before commencement of work.
- Written dimensions only to be used.
- Refer to detail drawings, structural and services drawings before commencement of work.
- Do not scale from the drawings.
- Refer to detail drawings, structural and services drawings before commencement of work.

NOTE:

- Carpet area = 2291 sq.ft
- No. of Ph.D.'s - 04 nos.
- No. of workstations - 46 nos.

Any disturbance between drawing & site conditions respective to dimensions need to be highlighted before construction.

Client: IIIT, Nilgiri Block

Project: Proposed renovation of interiors for IIIT, Nilgiri Block

Title: Third Floor - Nilgiri Block

Student Workstations

Furniture Layout

No. of Ph.D.'s - 04 nos.

No. of Workstations - 46 nos.

CARPET AREA = 2291 SQ.FT

NOTE:

13-6-2022
IIIT, NILIGIRI BLOCK
THIRD FLOOR

THIRD FLOOR - NILIGIRI BLOCK
STUDENT WORKSTATIONS
FURNITURE LAYOUT

PROJECT NO: IIIT/ID/TF/NB
DRAWING NO: IIIT/ID/TF/NB/P.
CHECKED: LAKSHMI
SIGNED: BASHIRUNNISA

TENDER DRAWINGS

ACADEMIC HEAD
I-HUB DATA,IIIT-H
GENERAL NOTES:
- All dimensions are in inches.
- All dimensions are to be checked on site before commencement of work.
- Written dimensions only to be used.
- Refer any discrepancy to the architect.
- Do not scale from the drawings.
- Refer to detail drawings, structural and services drawings before commencement of work.

NOTE:
- Any disturbance between Drawing & Site Conditions respective to dimensions need to be highlighted before construction.

NOTE:
- Drawing area of TF-NB = 2091 SQ FT

LEGEND:
- IIIT/ID/TF/NB
- IIIT/ID/TF/NB/FL

NOTE:
- 21-3-2022

IIIT, NILIGIRI BLOCK
THIRD FLOOR

THIRD FLOOR - NILIGIRI BLOCK
STUDENT WORKSTATIONS
FLOORING LAYOUT

PROPOSED RENOVATION OF INTERIORS
FOR IIIT, NILIGIRI BLOCK

REFERENCES:
- ARCHITECT'S SIGN & STAMP
- CONTRACTOR
- ACADEMIC HEAD
- I-HUB DATA, IIIT-H
ALL DIMENSIONS ARE IN INCHES.
ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE COMMENCEMENT OF WORK.
REFER ANY DISCREPANCY TO THE ARCHITECT.
DO NOT SCALE FROM THE DRAWINGS.
REFER TO DETAIL DRAWINGS, STRUCTURAL AND SERVICES DRAWINGS BEFORE COMMENCEMENT OF WORK.

NOTE:
CARPET AREA OF TF-NB = 2291 SQ. FT

Any disturbance between Drawing & Site Conditions respective to dimensions need to be highlighted before construction.

CLIENT: IIIT, NILIGIRI BLOCK
THIRD FLOOR

PROJECT:
PROPOSED RENOVATION OF INTERIORS FOR IIIT, NILIGIRI BLOCK

TITLE:
THIRD FLOOR - NILIGIRI BLOCK
STUDENT WORKSTATIONS
HVAC LAYOUT

NOTE:
CARPET AREA OF TF-NB = 2291 SQ. FT
GENERAL NOTES:
· All dimensions are in inches.
· All dimensions to be checked on site before commencement of work.
· Written dimensions only to be used.
· Refer any discrepancy to the architect.
· Do not scale from the drawings.
· Refer to detail drawings, structural, and services drawings before commencement of work.

Drawing is reserved by the A&DO and is issued on the condition that it is not copied, reproduced, or disclosed to any unauthorized party, either wholly or in part without written permission of A&DO.

NOTE:
CARPET AREA OF TF-NB = 2291 SQ.FT
LINEAR LIGHT LENGTHS ARE 2' AND 4'

ARCHITECT'S SIGN. & STAMP:

NOTE:
Any disturbance between Drawing & Site Conditions respective to dimensions need to be highlighted before construction.

CLIENT:
IIIT, NILIGIRI BLOCK
THIRD FLOOR

PROJECT:
PROPOSED RENOVATION OF INTERIORS FOR IIIT, NILIGIRI BLOCK

TITLE:
THIRD FLOOR - NILIGIRI BLOCK
STUDENT WORKSTATIONS

ARCHITECT'S SIGN. & STAMP: LAKSHMI

Academic Head
I-HUB DATA, IIIT-H

ELECTRICAL LAYOUT
STUDENT WORK STATION

REFERENCES LINE

BEAM @1'-6"
BELOW FROM SLAB

BEAM @10'
BELOW FROM SLAB

NOTE:
CEILING FAN
SUSPENDED LINEAR LIGHT

TENDER DRAWINGS

ACADEMIC HEAD
I-HUB DATA, IIIT-H
GENERAL NOTES:
· ALL DIMENSIONS ARE IN INCHES.
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· DO NOT SCALE FROM THE DRAWINGS.
· REFER TO DETAIL DRAWINGS, STRUCTURAL AND SERVICES DRAWINGS BEFORE COMMENCEMENT OF WORK.

NOTE:
Any disturbance between Drawing & Site Conditions respective to dimensions need to be highlighted before construction.

CLIENT: IIIT, NILIGIRI BLOCK
PROJECT: THIRD FLOOR
TITLE: PROPOSED RENOVATION OF INTERIORS FOR IIIT, NILIGIRI BLOCK
STUDENT WORKSTATIONS

SECTION- AA'
+11' 6" TF - SLAB LVL
WINDOW
COLUMN
+2' TF - FFL

SECTION- BB'
+11' 6" SF - SLAB LVL
PIN-UP BOARDS
COLUMN
+2' TF - FFL

CONTRACTOR

ACADEMIC HEAD
I-HUB DATA, IIIT-H
PROJECT NO: 
DRAWING NO: 
REV.DATE: 
SCALE: 
CHECKED: LAKSHMI 
CLIENT: 
PROJECT: 
TITLE: 
GENERAL NOTES: 
· All dimensions are in inches. 
· All dimensions to be checked on site before commencement of work. 
· Written dimensions only to be used. 
· Refer any discrepancy to the architect. 
· Do not scale from the drawings. 
· Refer to detail drawings, structural and services drawings before commencement of work. 

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NOTE: 
· Any disturbance between Drawing & Site Conditions respective to dimensions need to be highlighted before construction.

CLIENT: AGRICULTURE - E SAGU VINDYA - B3 - SECOND FLOOR
PROJECT: PROPOSED RENOVATION OF INTERIORS FOR AGRICULTURE - E SAGU VINDYA
TITLE: SECOND FLOOR - VINDYA BLOCK STUDENT WORKSTATIONS AS BUILT PLAN
ARCHITECT'S SIGN. & STAMP: 

NOTE:

LEGEND:
IIIT/ID/SF/V-B3
IIIT/ID/SF/V-B3/AS
BLT
TENDER DRAWINGS
N
NOTE:
Any disturbance between Drawing & Site Conditions respective to dimensions need to be highlighted before construction.

ARCHITECTURE AND DESIGN OFFICE
ACADEMIC HEAD I-HUB DATA,IIIT-H

CONTRACTOR
GENERAL NOTES:

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- Refer to detail drawings, structural and services drawings before commencement of work.

LEGEND:

- Wall to be dismantling
- Door to be dismantling

NOTE:

- Any disturbance between Drawing & Site Conditions respective to dimensions need to be highlighted before construction.

CLIENT:
AGRICULTURE - E SAGU VINDYA - B3 - SECOND FLOOR

PROJECT:
PROPOSED RENOVATION OF INTERIORS FOR AGRICULTURE - E SAGU VINDYA

TITLE:
SECOND FLOOR - VINDYA BLOCK STUDENT WORKSTATIONS Dismantling Plan

ARCHITECT'S SIGN. & STAMP:

NOTE:

Any disturbance between Drawing & Site Conditions respective to dimensions need to be highlighted before construction.

CONTRACTOR:

ACADEMIC HEAD
I-HUB DATA,IIIT-H
· All dimensions are in inches.
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NOTE:
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CLIENT: AGRICULTURE - E SAGU VINDYA - B3 - SECOND FLOOR

PROJECT: PROPOSED RENOVATION OF INTERIORS FOR AGRICULTURE - E SAGU VINDYA

TITLE: SECOND FLOOR - VINDYA BLOCK STUDENT WORKSTATIONS BRICK MARKING LAYOUT

ARCHITECT'S SIGN & STAMP:

ACADEMIC HEAD I-HUB DATA, IIIT-H

CONTRACTOR

TENDER DRAWINGS
- ALL DIMENSIONS ARE IN INCHES.
- ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE COMMENCEMENT OF WORK.
- WRITTEN DIMENSIONS ONLY TO BE USED.
- REFER ANY DISCREPANCY TO THE ARCHITECT.
- DO NOT SCALE FROM THE DRAWINGS.
- REFER TO DETAIL DRAWINGS, STRUCTURAL AND SERVICES DRAWINGS BEFORE COMMENCEMENT OF WORK.

LEGEND:
IIIT/ID/SF/V-B3
IIIT/ID/SF/V-B3/FU.

NOTE:
- Any disturbance between Drawing & Site Conditions respective to dimensions need to be highlighted before construction.

CLIENT: AGRICULTURE - E SAGU VINDYA - B3 - SECOND FLOOR
PROJECT: PROPOSED RENOVATION OF INTERIORS FOR AGRICULTURE - E SAGU VINDYA
TITLE: SECOND FLOOR - VINDYA BLOCK STUDENT WORKSTATIONS FURNITURE LAYOUT

ARCHITECTS SIGN. & STAMP:

TENDER DRAWINGS

CONTRACTOR

ACADEMIC HEAD I-HUB DATA,IIIT-H

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LEGEND:

NOTE:
Any disturbance between Drawing & Site Conditions respective to dimensions need to be highlighted before construction.

CLIENT:
AGRICULTURE - E SAGU
VINDYA - B3 - SECOND FLOOR

PROJECT:
PROPOSED RENOVATION OF INTERIORS FOR AGRICULTURE - E SAGU VINDYA

TITLE:
SECOND FLOOR - VINDYA BLOCK
STUDENT WORKSTATIONS
FLOORING LAYOUT

ARCHITECT'S SIGN & STAMP:

CONTRACTOR

ACADEMIC HEAD
I-HUB DATA, IIIT-H

NOTE:

21-3-2022
AGRICULTURE - E SAGU
VINDYA - B3 - SECOND FLOOR
GENERAL NOTES:
- All dimensions are in inches.
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- Written dimensions only to be used.
- Refer any discrepancy to the architect.
- Do not scale from the drawings.
- Refer to detail drawings, structural and services drawings before commencement of work.

LEGEND:
- **BRICK WALL**
- **GLASS PARTITION UPTO 8' LVL.ABOVE THE GYPSUM PARTITION FOR WORKSTATION AND CABINS**
- **ACOUSTIC PARTITION FOR CONFERENCE ROOM**
- **FULL-HEIGHT SOLID PARTITION**

NOTE:
- Any disturbance between Drawing & Site Conditions respective to dimensions need to be highlighted before construction.

CLIENT:
- AGRICULTURE - E SAGU
- VINDYA - B3 - SECOND FLOOR

PROJECT:
- PROPOSED RENOVATION OF INTERIORS FOR AGRICULTURE - E SAGU VINDYA

TITLE:
- SECOND FLOOR - VINDYA BLOCK STUDENT WORKSTATIONS PARTITION DETAILS LAYOUT

ARCHITECT'S SIGN. & STAMP:
- BASHEERUNNISA

PARTITION DETAILS LAYOUT

- WORKSTATIONS
- CABIN - 1 10'9"x8'7"
- CABIN - 2 10'9"x9'2"
- CABIN - 3 10'9"x8'9"
- CABIN - 4 10'9"x9'2"
- CABIN - 5 10'9"x8'9"
- CABIN - 6 10'11"x8'9"

- WORKSTATIONS COMMUNITY CENTER 21'3"x15'0"

- CABIN - 7 10'9"x9'6"
- CABIN - 8 10'9"x9'4"

- WORKSTATIONS
- CABIN - 1 10'9"x8'7"
- CABIN - 2 10'9"x9'2"
- CABIN - 3 10'9"x9'8"
- CABIN - 4 10'8"x8'9"
- CABIN - 5 10'11"x8'9"
- CABIN - 6 10'8"x8'9"

- WORKSTATIONS
- CABIN - 1 10'2"x8'4"
- CABIN - 2 10'1"x8'4"
- CABIN - 3 10'2"x8'4"
- CABIN - 4 10'2"x8'4"

- PARTITION DETAILS LAYOUT
- SERVER ROOM 10'2"x9'4"
- UPS ROOM 10'2"x9'4"

- WORKSTATIONS
- CABIN - 1 10'9"x8'7"
- CABIN - 2 10'9"x9'2"
- CABIN - 3 10'9"x9'8"
- CABIN - 4 10'8"x8'9"
- CABIN - 5 10'11"x9'2"
- CABIN - 6 10'11"x9'2"

- WORKSTATIONS
- CABIN - 1 10'2"x8'4"
- CABIN - 2 10'1"x8'4"
- CABIN - 3 10'2"x8'4"
- CABIN - 4 10'2"x8'4"
ALL DIMENSIONS ARE IN INCHES.
ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE COMMENCEMENT OF WORK.
WRITTEN DIMENSIONS ONLY TO BE USED.
REFER ANY DISCREPANCY TO THE ARCHITECT.
DO NOT SCALE FROM THE DRAWINGS.
REFER TO DETAIL DRAWINGS, STRUCTURAL AND SERVICES DRAWINGS BEFORE COMMENCEMENT OF WORK.

LEGEND:
- CEILING FAN
- SUSPENDED LINEAR LIGHT WIDTH - 2'
- SUSPENDED LINEAR LIGHT WIDTH - 4'

NOTE:
- CARPET AREA OF SF-V = 3490 SQ.FT
- LINEAR LIGHT LENGTHS ARE 2' AND 4'

NOTE:
Any disturbance between Drawing & Site Conditions respective to dimensions need to be highlighted before construction.

CLIENT:
AGRICULTURE - E SAGU
VINDYA - B3 - SECOND FLOOR

PROJECT:
PROPOSED RENOVATION OF INTERIORS FOR AGRICULTURE - E SAGU VINDYA

TITLE:
SECOND FLOOR - VINDYA BLOCK
STUDENT WORKSTATIONS
ELECTRICAL LAYOUT

ARCHITECT'S SIGN. & STAMP:

ACADEMIC HEAD
I-HUB DATA,IIIT-H

CONTRACTOR

DRAWN: BASHEERUNNISA
CHECKED: LAKSHMI

TENDER DRAWINGS

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- Refer to detail drawings, structural and services drawings before commencement of work.

LEGEND:
- SET/IT/ID/SF/V-B3
- SET/IT/ID/SF/V-B3/RCP
- CARPET AREA OF SF-V = 3490 SQ.FT
- LINEAR LIGHT LENGTHS ARE 2’ AND 4’

NOTE:
- Any disturbance between Drawing & Site Conditions respective to dimensions need to be highlighted before construction.

CLIENT:
AGRICULTURE - E SAGU VINDYA - B3 - SECOND FLOOR

PROJECT:
PROPOSED RENOVATION OF INTERIORS FOR AGRICULTURE - E SAGU VINDYA

TITLE:
SECOND FLOOR - VINDYA BLOCK STUDENT WORKSTATIONS RCP LAYOUT

ARCHITECT’S SIGN. & STAMP:

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NOTE:
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CLIENT:
AGRICULTURE - E SAGU VINDYA - B3 - SECOND FLOOR

PROJECT:
PROPOSED RENOVATION OF INTERIORS FOR AGRICULTURE - E SAGU VINDYA

TITLE:
SECOND FLOOR - VINDYA BLOCK STUDENT WORKSTATIONS SECTIONS

ARCHITECT'S SIGN & STAMP:

CONTRACTOR

ACADEMIC HEAD
I-HUB DATA,IIIT-H

DRAWING NO: IIIT/ID/SPV-B3
REV DATE: 22-6-2022
CHECKED: LAKSHMI

TENDER DRAWINGS
GENERAL NOTES:
- All dimensions are in inches.
- All dimensions to be checked on site before commencement of work.
- Do not scale from the drawings.
- Refer to detail drawings, structural and services drawings before commencement of work.
- Do not disclose to any unauthorized party either wholly or in part without written permission of A&D Office.

LEGEND:
- Ceiling Fan
- Suspended Linear Light

NOTE:
- Carpet area of TF-NB = 2291 SQ FT
- Linear light lengths are 2' and 4'

Any disturbance between Drawing & Site Conditions respective to dimensions need to be highlighted before construction.

CLIENT: IIIT, NILIGIRI BLOCK
THIRD FLOOR

PROJECT: PROPOSED RENOVATION OF INTERIORS FOR IIIT, NILIGIRI BLOCK

TITLE: THIRD FLOOR - NILIGIRI BLOCK
STUDENT LIGHTING LAYOUT

ARCHITECT’S SIGN & STAMP:

CONTRACTOR

TENDER DRAWINGS

ACADEMIC HEAD
1-HUB DATA, IIIT-H

III/ID/TF/NB/ELEC.
GENERAL NOTES:
- All dimensions are in inches.
- All dimensions are to be checked on site before commencement of work.
- Written dimensions only to be used.
- Refer to detail drawings, structural, and services drawings before commencement of work.
- Do not scale from the drawings.
- Refer any discrepancy to the architect.

NOTE:
- Carpet area of TF-NB = 2291 sq ft
- Grid ceiling area of TF-NB = 2291 sq ft

Any disturbance between Drawing & Site Conditions respective to dimensions need to be highlighted before construction.

CLIENT: IIIT, NILIGIRI BLOCK

PROJECT: PROPOSED RENOVATION OF INTERIORS FOR IIIT, NILIGIRI BLOCK

TITLE: THIRD FLOOR - NILIGIRI BLOCK
STUDENT POWER LAYOUT

ARCHITECT'S SIGN & STAMP:

ACADEMIC HEAD
I-HUB DATA, IIIT-H

TENDER DRAWINGS

IIT HYDERABAD
ARCHITECTURE & DESIGN OFFICE

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- All written dimensions only to be used.
- Refer any discrepancy to the architect.
- Do not scale from the drawings.
- Refer to detail drawings, structural and services drawings before commencement of work.

NOTE:
- Carpet area of TF-NB = 2291 SQ FT
- Grid ceiling area of TF-NB = 2291 SQ FT

STATEMENT:
- Any disturbance between drawing & site conditions respective to dimensions needs to be highlighted before construction.

CLIENT:
IIT, NILIGIRI BLOCK
THIRD FLOOR

PROJECT:
PROPOSED RENOVATION OF INTERIORS FOR IIT, NILIGIRI BLOCK

TITLE:
THIRD FLOOR - NILIGIRI BLOCK
STUDENT FLOORING RACEWAY LAYOUT

ARCHITECT'S SIGN. & STAMP:
GENERAL NOTES:
- All dimensions are in inches.
- All dimensions must be checked on site before commencement of work.
- Dimensions are to be used for planning and design purposes only.
- Refer any discrepancy to the architect.
- Do not scale from the drawings.
- Refer to detail drawings, structural, and service drawings before commencement of work.

NOTE:
- Carpet area of TF-NB = 2291 SQ FT
- Grid ceiling area of TF-NB = 2291 SQ FT

ARCHITECT'S SIGN & STAMP:

ARCHITECTURE AND DESIGN OFFICE

CONTRACTOR

ACADEMIC HEAD
I-HUB DATA, IIIT-H

NOTE:
Any disturbance between Drawing & Site Conditions respective to dimensions need to be highlighted before construction.

CLIENT: IIIT, NILIGIRI BLOCK
THIRD FLOOR

PROJECT:
PROPOSED RENOVATION OF INTERIORS FOR IIIT, NILIGIRI BLOCK

TITLE:
THIRD FLOOR - NILIGIRI BLOCK
STUDENT WORKSTATIONS

HVAC LAYOUT

SYMBOL DESCRIPTION

HVAC LAYOUT
STUDENT WORK STATION

REFERENCE LINE

LIGHTING DB

POWER DB

UPS DB

SYMBOL DESCRIPTION

400 CFM FRESH AIR IN LINE FAN WITH LOUVER_400X200
TRAP DOOR REQUIRED

SYMBOL DESCRIPTION

Y4/PDB

Y5/PDB

R6/PDB

R5/PDB

R4/PDB

B5/PDB

B4/PDB

TRAP DOOR REQUIRED

SYMBOL DESCRIPTION

400 CFM FRESH AIR IN LINE FAN WITH LOUVER_400X200

SYMBOL DESCRIPTION

Y4/PDB

Y5/PDB

R6/PDB

R5/PDB

R4/PDB

B5/PDB

B4/PDB

REFERENCE LINE

ARCHITECT'S SIGN & STAMP:

ARCHITECTURE AND DESIGN OFFICE

CONTRACTOR

ACADEMIC HEAD
I-HUB DATA, IIIT-H

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LEGEND:

NOTE:
- Any discrepancy between drawing & site conditions respective to dimensions need to be highlighted before construction.

CLIENT: AGRICULTURE - E SAGU VINDYA - B3 - SECOND FLOOR

PROJECT: PROPOSED RENOVATION OF INTERIORS FOR AGRICULTURE - E SAGU VINDYA

TITLE: SECOND FLOOR - VINDYA BLOCK STUDENT FLOORING RACEWAY LAYOUT

ARCHITECT'S SIGN. & STAMP:

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ELECTRICAL SCHEMATIC LAYOUT

TITLE: I-HUB DATA, IIT-H

DRAWN: SATISH ISSUE DATE: 29-06-2022 REV. DATE:

SCALE: N T S CHECKED: LAKSHMI REV. NO:

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REFER TO DETAIL DRAWINGS, STRUCTURAL AND SERVICES DRAWINGS BEFORE COMMENCEMENT OF WORK.

NOTE:
Any disturbance between Drawing & Site Conditions respective to dimensions need to be highlighted before construction.

CLIENT: AGRICULTURE - E SAGU VINDYA - B3 - SECOND FLOOR
PROJECT: PROPOSED RENOVATION OF INTERIORS FOR AGRICULTURE - E SAGU VINDYA
TITLE: SECOND FLOOR - VINDYA BLOCK STUDENT AC ELECTRICAL LAYOUT
ARCHITECT'S SIGN. & STAMP: ACADEMIC HEAD I-HUB DATA, IIIT-H

Refer to the drawing for detailed information on dimensions and layout, including room sizes, types of workstations, and other architectural elements.
## SUMMARY SHEET

Name of work: Space Development works in I-HUB in 3rd floor Nilgiri & B3-Second floor, Vindhya Bhavan in IIIT-H campus.

<table>
<thead>
<tr>
<th>S. No</th>
<th>Works</th>
<th>Nilgiri</th>
<th>Vindhya Bhavan</th>
<th>Total Amount (Rs.)</th>
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<tbody>
<tr>
<td>A</td>
<td>Civil Works</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Electrical</td>
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<td></td>
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</tr>
<tr>
<td>C</td>
<td>HVAC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>VRF - Equipment (HVAC)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>b</td>
<td>Low side works (HVAC)</td>
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</tr>
<tr>
<td>c</td>
<td>Ancillary Works (HVAC)</td>
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<td>D</td>
<td>Networking AND UPS</td>
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<tr>
<td>E</td>
<td>Interiors Fitout</td>
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</table>

**Grand Total Amount Rs.**

Plus GST

Contractor

Academic Head I-HUB Data
<table>
<thead>
<tr>
<th>S.N o</th>
<th>Description</th>
<th>Unit</th>
<th>Qty</th>
<th>Rate Rs.</th>
<th>Amount Rs.</th>
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<tbody>
<tr>
<td>A</td>
<td>Civil works</td>
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</tr>
<tr>
<td>1</td>
<td>BRICK WORK</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>CONSTRUCTION OF 9&quot; BRICK WALL</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Brick masonry for panel walls (23.0 cm thick) in superstructure with CM (1:8) prop: (Cement : Screened sand) using Common burnt clay bricks of class as per Table- I of IS:1077-1992, Non- Modular or traditional size 23 x 11 x 7 cms from approved source having minimum crushing strength of 40 Kg/Sqcm. including cost and conveyance of all materials like cement, screened sand, bricks, water etc., to site, including sales &amp; other taxes excluding GST on all materials and such as labour charges, like mixing cement mortar, scaffolding charges, constructing masonry, lift charges, curing, etc., and overheads &amp; contractors profit complete for finished item of work. (APSS No. 501 &amp; 504).</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Nilgiri Third Floor - 319, 321</td>
<td></td>
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<tr>
<td></td>
<td>Corridor Openings</td>
<td>Cum</td>
<td>0.75</td>
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<tr>
<td></td>
<td>window proposed</td>
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<td>0.21</td>
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<td>Total</td>
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<td>2</td>
<td>PLASTER</td>
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<td>Plastering 12mm thick in two coats using screened sand with base coat of 8mm thick in CM (1:6) and top coat of 4mm thick in CM (1:4) with dubara sponge finishing including cost and conveyance of all materials like cement, sand, water etc., to site, including sales &amp; other taxes excluding GST on all materials, and all operational, incidental charges on materials and including cost of all labour charges for mixing mortar, finishing, scaffolding, lift charges, curing, including cutting grooves as directed by Engineer-in-charge etc., and overheads &amp; contractors profit complete for finished item of work. (SS 901,903 &amp; 904). INTERNAL &amp; EXTERNAL</td>
<td></td>
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<td></td>
<td>Nilgiri Third Floor - 319, 321</td>
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<tr>
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<td>Entrance corridor</td>
<td>Sqm</td>
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<td>window proposed</td>
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<td>R.C.C.Lintel</td>
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<td>Nilgiri Third Floor - 319, 321</td>
<td>Cum</td>
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<td>4</td>
<td>CORE CUTTING FOR AIR CONDITIONING</td>
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<td>Nilgiri Third Floor - 319, 321</td>
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<tr>
<td>S.N</td>
<td>Description</td>
<td>Unit</td>
<td>Qty</td>
<td>Rate Rs.</td>
<td>Amount Rs.</td>
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<td>---------</td>
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<tr>
<td>5</td>
<td>Cutting holes in RCC slab floor &amp; repairs Labour charges only</td>
<td></td>
<td>6</td>
<td>2.0125</td>
<td>12.075</td>
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<td>0.25875</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>Cum</td>
<td></td>
<td></td>
<td>17.97</td>
</tr>
<tr>
<td>6</td>
<td>DISMANTLING OF EXISTING BRICK WALL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dismantling, clearing away and carefully stacking useful materials for re-use</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>disposal of unserviceable materials with 100m lead as directed by Executive</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Engineer duly taking actual premeasurements before dismantling including all</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>labour charges, overheads &amp; contractor profit etc., complete (Rate should be</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>inclusive of clearing from the site)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Nilgiri Third Floor - 319, 321</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>DISMANTLING OF EXISTING PARTITIONS/FALSE CEILING</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dismantling aluminium/ gypsum partitions, doors and windows, fixed glazing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>and false ceiling, including disposal of unservicable surplus material and</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>stacking of serviceable material as directed by client</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nilgiri Third Floor - 319, 321</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>DISMANTLING OF EXISTING DOORS AND WINDOWS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dismantling doors, windows and clerestory window shutters (aluminium/wood)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>shutter including chowkhats, architrave, holdfasts etc., complete and</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>stacking within 50 metres lead</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Area not Exceeding 3sqm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nilgiri Third Floor - 319, 321 door</td>
<td>Each</td>
<td>5.76</td>
<td>1.98</td>
<td></td>
</tr>
<tr>
<td></td>
<td>window</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>7.74</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>DISMANTLING OF ALL THE EXISTING ELECTRICALS, NETWORKING, UPS AND RELATED</td>
<td>R/O</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>EXISTING SWITCH BOARDS AND WIRING (Rate should be inclusive of clearing from</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>the site)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nilgiri Third Floor - 319, 321</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>TOTAL AMOUNT FOR CIVIL WORKS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>B Electrical works</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>DISTRIBUTION BOARDS. (Legrand/Schneider/ABB)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lighting</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CONTRACTOR

Academic Head I-HUB Data
<table>
<thead>
<tr>
<th>S. No</th>
<th>Description</th>
<th>Unit</th>
<th>Qty</th>
<th>Rate Rs.</th>
<th>Amount Rs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Supply and fixing 4 WAY TPN Distribution board with IP-42 protection (Metal Door) suitable for 3 phase 32A FP MCB as incomer and 10kA 12 Nos. of 6-32A SP MCBs as outing going including internal connection and labour charges for surface / flush mounting etc., complete.</td>
<td>Nos</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b</td>
<td>Supply and fixing 8 WAY TPN Distribution board with IP-42 protection (Metal Door) suitable for 3 phase 40A FP MCB as incomer and 10kA 24 Nos. of 6-32A SP MCBs as outing going including internal connection and labour charges for surface / flush mounting etc., complete.</td>
<td>Nos</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c</td>
<td>Supply and fixing 6 WAY TPN Distribution board with IP-42 protection (Metal Door) suitable for 3 SUBMAINS/CIRCUIT MAINS /POWER WIRING. Makes: Finolex / Polycab</td>
<td>Nos</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d</td>
<td>Supply and fixing of 6 Way VTPN DB with IP 43 Protection as per IS:13032 and suitable for VTPN DB.</td>
<td>Nos</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supply and fixing of the following MCB's in the Existing Panel including required wiring/Busbar Modification.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>1 no. 4P ELCB 0-300mA upto the rating of 40-63A with metal enclosures - VRV outdoor</td>
<td>Nos</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b</td>
<td>1 no. 4P MCB upto the rating of 40-63A</td>
<td>Nos</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c</td>
<td>1 no. SP MCB upto the rating of 6-32A</td>
<td>Nos</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SUPPLIES / CIRCUIT MAINS / POWER WIRING. Makes: Finolex / Polycab</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>Supply and run of 3Rx of 36/0.3mm (2.5 Sqmm) FRLS PVC insulated 1100V grade as per IS:694/1990 specification for Copper cable in existing pipe for mains including all labour charges etc., complete. (Lighting)</td>
<td>Mtrs</td>
<td>140</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b</td>
<td>Supply and run of 3Rx of 36/0.3mm (2.5 Sqmm) FRLS PVC insulated 1100V grade as per IS:694/1990 specification for Copper cable in existing pipe for mains including all labour charges etc., complete. (Ac Indoor Units)</td>
<td>Mtrs</td>
<td>175</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c</td>
<td>Supply of 2.5 Sqmm (36/0.3mm)3 Core PVC Insulated Sheathed Multi Core Bright Annealed Bare Copper Conductor Heavy Duty Industrial Cables for Voltage Grade upto 1100 Volts as per IS: 694:1990 including all transportation charges etc complete. (UPS &amp; RP) Workstaions</td>
<td>Mtrs</td>
<td>640</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S.N.</td>
<td>Description</td>
<td>Unit</td>
<td>Qty</td>
<td>Rate Rs.</td>
<td>Amount Rs.</td>
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</tr>
<tr>
<td></td>
<td>Supply of 4 Sqmm (56/0.3mm) 3 Core PVC Insulated Sheathed Multi Core Bright Annealed Bare Copper Conductor Heavy Duty Industrial Cables for Voltage Grade upto 1100 Volts as per IS: 694:1990 including all transportation charges etc complete. (general Power)</td>
<td>Mtrs</td>
<td>120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>POINT WIRING. Makes wires: Finolex / Polycab; Modular Switch, Socket, Metal box &amp; Cover frame Make: Legrand Myrius/Schneider Opel; Ceiling Rose Make: Anchor / Gold Medal Olive / Million Zoom</td>
<td>Nos</td>
<td>49</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Wiring with 3 runs of 22/0.3mm (1.5 Sqmm) FRLS PVC insulated 1100V grade as per IS:694/1990 specification for Copper cable in existing pipe with 6A / 10A 1 Way 1 Module Modular Switch control with 6 Module Hot Dip Galvanized modular type Metal Box covered with 6 Modular Cover Frame, 3 Plate Jumbo Ceiling Rose including all labour charges etc., complete for light, bell, fan and exhaust fan points in Non-Residential Buildings.</td>
<td>Nos</td>
<td>16</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Wiring with 3 runs of 22/0.3mm (1.5 Sqmm) FRLS PVC insulated 1100V grade as per IS:694/1990 specification for Copper cable in existing pipe Plate Jumbo Ceiling Rose including all labour charges etc., complete for light, bell, fan and exhaust fan points in Non-Residential Buildings.</td>
<td>Nos</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Power Sockets</td>
<td>Each</td>
<td>65</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Modular Switch, Socket, Metal box &amp; Cover frame Make: Legrand Myrius/Schneider Opel;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supply and fixing of 6A / 10A 3/2 Pin 2 Module Modular Socket with shutter-1 No and 6A / 10A 1 Way 1 Module Modular Switch controls-1Nos duly recessed in wall with 3 Module Hot Dip Galvanized Modular Metal Box size covered with 3 Modular Cover Frame including earth connections and all labour charges etc., complete.</td>
<td>Each</td>
<td>52</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supply and fixing of 6A / 10A 3/2 Pin 2 Module Modular Socket with shutter-2 Nos and 6A / 10A 1 Way 1 Module Modular Switch controls-2Nos duly recessed in wall with 6 Module Hot Dip Galvanized Modular Metal Box size covered with 6 Modular Cover Frame including earth connections and all labour charges etc., complete. [ For computer switch board].</td>
<td>Each</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S.N. No</td>
<td>Description</td>
<td>Unit</td>
<td>Qty</td>
<td>Rate Rs.</td>
<td>Amount Rs.</td>
</tr>
<tr>
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</tr>
<tr>
<td></td>
<td>Supply and fixing of 6A / 10A 3/2 Pin 2 Module Modular Socket with shutter with 6A / 10A 1 Way 1 Module Modular Switch control on a Common switch board with with 3 Module Hot Dip Galvanized Modular Metal Box covered with 3 Modular Cover Frame with earth continuity including wire leads, earth connections along with all labour charges etc., complete.</td>
<td>Each</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supply and Fixing of 16/20A 2 Module Modular Socket with shutter and 16/20A 1 Way 1 Module Modular Switch duly recessed in wall with 3 Module Hot Dip Galvanized Modular Metal Box size covered with 3 Modular Cover Frame including earth connections and all labour charges etc., complete [ Power plug]</td>
<td>Each</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td><strong>MV CABLES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supply &amp; laying of -------------- XLPE insulated, 1100V grade armoured alluminium cable with ISI mark as per specification confirming to IS:7098 (Part - I) Makes Polycab / Finolex Glands &amp; Lugs: DOWELLS/SMI/HMI</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>3.5CX50 SQ.MM AL. ARMD CABLE</td>
<td>Mtrs</td>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b</td>
<td>4Cx16 Sq.mm Copper Flexible cable</td>
<td>Mtrs</td>
<td>60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c</td>
<td>4Cx10 Sq.mm Copper Flexible cable</td>
<td>Mtrs</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d</td>
<td>4Cx6 Sq.mm Copper Flexible cable</td>
<td>Mtrs</td>
<td>25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e</td>
<td>3Cx6 Sq.mm Copper Flexible cable</td>
<td>Mtrs</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f</td>
<td>1Rx10 Sq.mm Copper Flexible cable</td>
<td>Mtrs</td>
<td>60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td><strong>End Terminations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>3.5CX50 SQ.MM AL. ARMD CABLE</td>
<td>No</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b</td>
<td>4Cx16 Sq.mm Copper Flexible cable</td>
<td>No</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c</td>
<td>4Cx10 Sq.mm Copper Flexible cable</td>
<td>No</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d</td>
<td>4Cx6 Sq.mm Copper Flexible cable</td>
<td>No</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f</td>
<td>3Cx6 Sq.mm Copper Flexible cable</td>
<td>No</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td><strong>GI /Copper strip</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supply and laying of following size strips including excavation and refilling of earth when laid in ground and with all fixing accessories when laid inside the building including all necessary interconnections with earth station and equipment.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S.N.</td>
<td>Description</td>
<td>Unit</td>
<td>Qty</td>
<td>Rate Rs.</td>
<td>Amount Rs.</td>
</tr>
<tr>
<td>------</td>
<td>------------------------------------------------------------------------------</td>
<td>------</td>
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<td>----------</td>
<td>------------</td>
</tr>
<tr>
<td>a</td>
<td>Providing independent earthing by excavating a pit to a depth of 2.25 Mtr in all soils as per size specified in the data for Sophisticated Electronic equipment with 600mm x 600mm x 3.15 mm thick copper plate rigidly fixed to 40mm dia ‘B’ Class G.I Pipe of 2.5 Mtr length as per National Electric Code and earth connection from electrode G.I strip of 25 mm x 5 mm x 200 mm length to be bolted with nut bolts to G.I. pipe including 25 mm x 3 mm copper strip of 6 Mtrs length connected from plate to G.I. strip including filling with 20 Kg Salt and 40 Kg Charcoal or 40 Kg bentonite powder from the bottom of the pipe and providing CC / Brick masonry chamber 450 mm x 450 mm x 400 mm and covered with R.C.C. Slab including all accessories and labour charges etc complete as per IS specification 732/1982 (Part II).</td>
<td>Each</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b</td>
<td>Busbar of 0.5 Mtr length made out of 25 x 6 mm Cu. strip with drill holes of M8 at 25 mm interval mounted on insulators with metal Enclosure.</td>
<td>Each</td>
<td>45</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>8 SUBSTATION ACCESSORIES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>Safety Accessories: Supply and fixing of following accessories. All accessories shall bear ISI certification mark</td>
<td>Each</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b</td>
<td>Supply &amp; Fixing of 4.5 Kg, CO2 Type Fire Extinguisher, Trolley Mounted, Easy Weight Management, Used Unused Mechanism, Squeeze Grip, Gross Weight 19.1 Kg, Empty Weight 14.6 Kg, Can Height 860 MM, Diameter 140 MM, Discharge time minimum 13 Secs, Controllable discharge mechanism, Range minimum 2 Meters, Applicable on Class B, C &amp; electrically started Fire, B Rating 13B, Can Construction : Hot Spinning / Forging, Valve Construction : Forging &amp; Machining, Internal Coating of Can : Not Applicable, External Coating of Can : Spray Painting, Sheet metal thickness : 4.5 MM, ISI &amp; CE Approved, 2 Year Warranty Including transportation, all taxes and all labour charges etc complete <em>(ELEC-10.5.3.b)</em> Make: Kanex/Safex</td>
<td>Each</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S.N.</td>
<td>Description</td>
<td>Unit</td>
<td>Qty</td>
<td>Rate Rs.</td>
<td>Amount Rs.</td>
</tr>
<tr>
<td>------</td>
<td>-----------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>c</td>
<td>Shock treatment chart as approved by the Electrical Inspectorate mounted on teak wood frame and suitable for wall mounting in 3 languages (Tamil, English &amp; Hindi)</td>
<td>Each</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>DATA/VOICE/Raceways/Cable Trays/TV Conduits/Wiring</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supply and Fixing of heavy grade, FRLS with IS:9537 part 3 rigid PVC pipe (ISI MARK) surface mounted with all required accessories fixing of chromium plated metallic base saddles including all labour charges etc., complete [for run of mains, power plugs, computer boards and AC circuits] Makes : Sudhakar</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>Supply &amp; laying of Al Raceways including floor chipping for laying in floor/ceiling with required accessories (Tata/Jindal)</td>
<td>Mtr</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b</td>
<td>Supply &amp; fixing of G.I. Junction box of 2mm thick for direct access to cables at the intersection of Raceways. (Tata/Jindal)</td>
<td></td>
<td>70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>Supply, Transportation and Installation of hot dip GI perforated cable tray without cover along with coupler plates, T’s, Bends, Reducers, Anchor bolts, nuts, washers and slotted channels / Angle Iron Channels etc complete and the tray should be fitted on the wall / Ceiling etc. complete for finished item of work. (Tata/Jindal/essar)</td>
<td>RMT</td>
<td>25</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Light Fixtures</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supply, Transportation and Installation of following light fixtures with required accessories</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S. No</td>
<td>Description</td>
<td>Unit</td>
<td>Qty</td>
<td>Rate Rs.</td>
<td>Amount Rs.</td>
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</tr>
<tr>
<td>a</td>
<td>Supply &amp; Installation of 15w Down light round circular White powder coated, elegantly designed pressure die-cast aluminium heat sink for efficient dissipation &amp; white finish polycarbonate ring for holding the diffuser High efficiency long life SMD LED mounted on MCPCB with high LED efficacy of 140 lm/W used to enhance the lumen output of 1350 Lumens with system efficacy of 95 LM/W. High reflective polycarbonate conical shaped reflector to enhance the lumen output of the fixture. High quality polycarbonate opal concave diffuser to enhance the aesthetic of the fixture and to provide glare free uniform light distribution. Powered by integral SMPS based constant current electronic driver with lower THD: &lt;10, Output Short Circuit Protection, Surge Voltage Protection with 2.5 kv and other safety tests as per IS 15885 Part 2/ Sec 13. Operating temperature :- 10 °C to +45 °C &amp; Operating voltage range : 140 V - 270 V Average life L70B50: 50000 hours with IP20 with power factor PF: 0.95 CCT : 5700k CRI: ≥80 this should be with BIS &amp; NABL certified with LM79 &amp; LM80 Reports.</td>
<td>Each</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b</td>
<td>4 Feet, 18W LED Tube light in box with complete lamps &amp; all accessories with Electonic Control Gear.</td>
<td>Each</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c</td>
<td>Supply &amp; Installation of 1200mm suspended linear light</td>
<td>Each</td>
<td>8</td>
<td></td>
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</tr>
<tr>
<td>d</td>
<td>Supply &amp; Installation of 600mm suspended linear light</td>
<td>Each</td>
<td>45</td>
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<td></td>
</tr>
<tr>
<td>e</td>
<td>Supply &amp; Installation of 1200mm BLDC Ceiling Mounted fan as per Architect Preference with</td>
<td>Each</td>
<td>12</td>
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<td></td>
</tr>
<tr>
<td>f</td>
<td>Supply &amp; Installation of 600mm x 600 Suspended 42w grid ceiling lights</td>
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<td>0</td>
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</table>

**TOTAL AMOUNT FOR ELECTRICAL WORKS**
<table>
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<tr>
<th>S.N</th>
<th>Description</th>
<th>Unit</th>
<th>Qty</th>
<th>Rate Rs.</th>
<th>Amount Rs.</th>
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<tbody>
<tr>
<td>C</td>
<td><strong>VRF - Equipment (HVAC)</strong></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1</td>
<td>Supply, Installation, Testing &amp; Commissioning of Variable Refrigerent Flow</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Outdoor units comprising of Inverter Scroll compressors, suitable for R410</td>
<td></td>
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<tr>
<td></td>
<td>A and 415 V+/- 10%, 50 Hz, 3 phase A/C supply.</td>
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<tr>
<td>a</td>
<td>18 HP Unit</td>
<td>Nos</td>
<td>1</td>
<td></td>
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<tr>
<td>b</td>
<td>16 HP Unit</td>
<td>Nos</td>
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</tr>
<tr>
<td>2</td>
<td>Supply, Installation, Testing &amp; Commissioning of Ceiling mounted Cassette</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>type unit with 4-way throw c/w inbuilt drain pumps and Fresh air connection</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>provision and cordless remote - 3' x 3' size</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>a</td>
<td>4.15tr 4-way Cassette</td>
<td>Nos</td>
<td>0</td>
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<tr>
<td>b</td>
<td>3.31tr 4-way Cassette</td>
<td>Nos</td>
<td>0</td>
<td></td>
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</tr>
<tr>
<td>c</td>
<td>2.65tr 4-way Cassette</td>
<td>Nos</td>
<td>6</td>
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</tr>
<tr>
<td>d</td>
<td>2.08tr 4-way Cassette</td>
<td>Nos</td>
<td>1</td>
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<td>3</td>
<td>Supply, Installation, Testing &amp; Commissioning of Ceiling mounted Cassette</td>
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</tr>
<tr>
<td></td>
<td>type unit with 4-way throw c/w inbuilt drain pumps and Fresh air connection</td>
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<tr>
<td></td>
<td>provision and cordless remote - 2' x 2' - Compact size</td>
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<tr>
<td>a</td>
<td>1.65tr 4-way Cassette</td>
<td>Nos</td>
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<td>b</td>
<td>1.04tr 4-way Cassette</td>
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<td>4</td>
<td>Supply, Installation, Testing &amp; Commissioning of Wall mounted Split</td>
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<tr>
<td>a</td>
<td>2.08tr Hiwall Split</td>
<td>Nos</td>
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<tr>
<td>5</td>
<td>Refnet joints</td>
<td>Nos</td>
<td>6</td>
<td></td>
<td></td>
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<tr>
<td>6</td>
<td>Central Controller</td>
<td>Nos</td>
<td>R/O</td>
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</table>

**TOTAL FOR VRF (HIGH SIDE) WORKS**
<table>
<thead>
<tr>
<th>S.No</th>
<th>Description</th>
<th>Unit</th>
<th>Qty</th>
<th>Supply Rate</th>
<th>Supply Amount</th>
<th>Installation Rate</th>
<th>Installation Amount</th>
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<tbody>
<tr>
<td>C</td>
<td>Low side works (HVAC)</td>
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<tr>
<td>1</td>
<td>Lifting, Shifting, Positioning &amp; Installation of VRF Indoor units, necessary control panel, hanging / structural supports.</td>
<td>Nos</td>
<td>7</td>
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<td>2</td>
<td>Lifting, Shifting &amp; Positioning of VRF Outdoor unit</td>
<td>Nos</td>
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<td>3</td>
<td>Pressure testing with Nitrogen Gas, Vaccumising including all consumables</td>
<td>Lot</td>
<td>1</td>
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<td></td>
<td></td>
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<td>4</td>
<td>Gas charging and commissioning</td>
<td>Lot</td>
<td>1</td>
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<td></td>
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<tr>
<td></td>
<td><strong>Copper Pipe</strong></td>
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<tr>
<td>5</td>
<td>Supply, Installation, Testing &amp; Commissioning of copper refrigerant piping duly insulated with nitrile insulation of 19mm thickness for Gas Pipe and 13mm thickness for Liquid Pipe / including supports Clamps etc and incl bends, couplings and necessary fittings, for R-410A; Site Pressure tested to 550 psi;</td>
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<tr>
<td>a</td>
<td>Dia - 6.4mm; Thickness - 0.8mm</td>
<td>Rmt</td>
<td>21</td>
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<tr>
<td>b</td>
<td>Dia - 9.5mm; Thickness - 0.8mm</td>
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<tr>
<td>c</td>
<td>Dia - 12.7mm; Thickness - 0.8mm</td>
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<tr>
<td>d</td>
<td>Dia - 15.9mm; Thickness - 1.0mm</td>
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<td>27</td>
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<td>e</td>
<td>Dia - 19.1mm; Thickness - 0.8mm</td>
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<td>f</td>
<td>Dia - 22.2mm; Thickness - 0.8mm</td>
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<td>Dia - 25.4mm; Thickness - 0.88mm</td>
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<td>h</td>
<td>Dia - 28.6mm; Thickness - 1.0mm</td>
<td>Rmt</td>
<td>R/O</td>
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<tr>
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<td><strong>Cabling</strong></td>
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<td>6</td>
<td>Supply, Installation, Testing &amp; Commissioning of control cum Transmission wiring between ODU &amp; IDU of copper 2 core 1.5 Sqmm copper cabling</td>
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<tr>
<td>7</td>
<td>Supply, Installation, Testing &amp; Commissioning of Drain Piping of CPVC SDR13.5 of minimum 2.5mm thickness; with 6 mm thick nitrile foam insulation &amp; all fittings, supports and clamps up to 50 mm dia. including drilling, wall chipping etc. and conceal the wall opening.</td>
<td></td>
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<tr>
<td>a</td>
<td>25mm with 6mm insulation</td>
<td>Rmt</td>
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<td>b</td>
<td>32mm with 6mm insulation</td>
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<tr>
<td>c</td>
<td>40mm with 6mm insulation</td>
<td>Rmt</td>
<td>19</td>
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<tr>
<td></td>
<td><strong>Unit Accessories</strong></td>
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<tr>
<td>8</td>
<td>Supply, Installation, Testing &amp; Commissioning of Scanner/ Voltage Corrector for out door units (along with contactor and wiring)</td>
<td>Nos</td>
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<td></td>
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<tr>
<td>9</td>
<td>Supply, Installation, Testing &amp; Commissioning of Outdoor unit stands with support frames.</td>
<td>Nos</td>
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<td></td>
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</tr>
<tr>
<td>S.No</td>
<td>Description</td>
<td>Unit</td>
<td>Qty</td>
<td>Supply Rate</td>
<td>Supply Amount</td>
<td>Installation Rate</td>
<td>Installation Amount</td>
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<tr>
<td></td>
<td>Supply, Installation, Testing &amp; Commissioning of Thermal Insulation of Copper pipe with Armachek GC</td>
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<td>10</td>
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<td>48</td>
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<td><strong>TOTAL FOR LOW SIDE WORKS</strong></td>
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<tr>
<td></td>
<td><strong>C</strong>  Ancillary Works (HVAC)</td>
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<tr>
<td></td>
<td>Insulated Flexible Ducting</td>
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</tr>
<tr>
<td>1</td>
<td>Factory Fabricated Insulated {25mm Glass Wool} Flexible made out aluminium for connecting from main duct to diffuser box. The length of the flexible duct shall max 1.5 m</td>
<td></td>
<td></td>
<td>Rate</td>
<td>Amount</td>
<td>Rate</td>
<td>Amount</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Rmt 11</td>
<td></td>
<td>Rmt 2</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Rmt 21</td>
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<td>Rmt</td>
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<tr>
<td>2</td>
<td><strong>SITC of PVC pipe for connecting to Inline fan for supply of Fresh air</strong></td>
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<tr>
<td>3</td>
<td><strong>SITC of Butterfly Dampers</strong> for connecting to Inline fan for supply of Fresh air</td>
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<td>4</td>
<td><strong>Inline Fans</strong></td>
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<td></td>
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</tr>
<tr>
<td></td>
<td>Supply, installing, testing and commissioning of Inline Fan complete with suitable motor, minimum fan efficiency shall be 65%, fire resistive flexible connection with nut bolts at outlet, vibration isolators, inlet dampers etc</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Fan noise level shall select for less than 60dB</td>
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<td>5</td>
<td><strong>For Fresh Air</strong></td>
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<td>6</td>
<td><strong>SITC of Canvas Connections for Inline fans</strong> - 0.63 mm Thick Canvas ; Fireproof Fabric</td>
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<tr>
<td>7</td>
<td><strong>Cable tray</strong> - of width upto 300mm - thickness of metal sheet will be 1.2mm [18 SWG]; of width from 300mm to 600mm - thickness of metal sheet will be 1.6mm [16 SWG]; of width over 600mm - thickness of metal sheet will be 2.0mm [14 SWG]; Pregalvanised sheet complete with screwed type cover of thickness 1.2mm as specified with counter sunk type screws. The dimension of the same shall be as follows along with powder-coat paint.</td>
<td></td>
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<td>Rate 11</td>
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<td><strong>TOTAL FOR ANCILLARY WORKS</strong></td>
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<td></td>
<td><strong>D</strong>  NETWORKING &amp; UPS</td>
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<td><strong>I</strong>  UPS System</td>
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<td>S. No.</td>
<td>Description</td>
<td>Unit</td>
<td>Qty</td>
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<td>Supply Amount</td>
<td>Installation Rate</td>
<td>Installation Amount</td>
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<tr>
<td>1</td>
<td>Supply and installation of UPS with batteries and battery rack</td>
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</tr>
<tr>
<td></td>
<td>15KVA Double Conversion Online UPS System, 3 - phase input &amp; 3-phase output along with Inbuilt Isolation Transformer. 20 nos of 12V.75AH SMF battery along with battery rack, Inter connecting cables and Installation. (Make: Schnieder/ Vertiv)</td>
<td></td>
<td>1</td>
<td>Set</td>
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<td>II NETWORKING SYSTEM (Supply and Installation)</td>
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<td>Supply of LAN Cable cat -6 UTP cable Makes : AMP / Molex</td>
<td>Mtrs</td>
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<td>Works Space</td>
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</tr>
<tr>
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<td>Supply of Cat 6 RJ-45 information outlets including plate. Makes : AMP / Molex</td>
<td>NOS</td>
<td>56</td>
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<tr>
<td></td>
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<tr>
<td>3</td>
<td>Supply of 15U wall mounting net work rack with power spike including all accessories.</td>
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<tr>
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<td>Works Space</td>
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<tr>
<td>4</td>
<td>Supply and installation of IP 20, IK 08 17U 600mm Width x 800mm Deep Floor mounting net work rack with all accessories like front and rear doors, fans, castors, cable manager, shelf, power distribution unit, hardware packet. Mod cap floor stand : Modular construction of the rack made of 4 vertical , A Horizontal and 4 depth alloy extruded multi folded hallow profiles bolted and joined together with links and corner blocks. 3 Pairs of support channels to equate the load evenly and castor provision at bottom side. Painting shade : Combination of RAL 7035 / 7037 fine texture - 60 to 80 microns. or RAL 9005 fine texture - 60 to 80 microns complies with standards : UL 2416, Din 41494, IEC EN 60529, IEC EN 62262, IEC EN 60068-2-11, ISO 90012008. Makes : HCL / Val / Rittal / APW.</td>
<td>NOS</td>
<td>0</td>
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<tr>
<td>5</td>
<td>Supply of 24 port patch panels</td>
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</tr>
<tr>
<td>6</td>
<td>Supply of 7ft length moulded patch cord. Makes : AMP / Molex</td>
<td>NOS</td>
<td>56</td>
<td></td>
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<tr>
<td></td>
<td>Works Space</td>
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<tr>
<td>7</td>
<td>Supply of 3ft length moulded patch cord. Makes : AMP / Molex</td>
<td>NOS</td>
<td>56</td>
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<tr>
<td></td>
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<tr>
<td>8</td>
<td>Supply of 6C (Indoor / Out door), Single mode armoured, Optic fibre cable in suitable dia conduit/HDPE pipe. Makes :AMP / Molex</td>
<td>Mtrs</td>
<td>50</td>
<td></td>
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<tr>
<td>9</td>
<td>Supply of Pigtais for fibre core connectivity. Makes : AMP / Molex</td>
<td></td>
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<tr>
<td>S.No</td>
<td>Description</td>
<td>Unit</td>
<td>Qty</td>
<td>Supply Rate</td>
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<td>Installation Rate</td>
<td>Installation Amount</td>
</tr>
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<tr>
<td></td>
<td>Works Space</td>
<td>NOS</td>
<td>R/o</td>
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<tr>
<td>10</td>
<td>Supply of 6 Port fibre distribution unit. (FDU / LIU) loaded with couplers etc complete. Makes : AMP / Molex</td>
<td>Works Space</td>
<td>NOS</td>
<td>6</td>
<td>R/o</td>
<td></td>
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<tr>
<td></td>
<td>Works Space</td>
<td>NOS</td>
<td>1</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Splicing of fiber core</td>
<td>Works Space</td>
<td>NOS</td>
<td>3</td>
<td></td>
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<tr>
<td>12</td>
<td>Supply of 24 Port manageable switches Makes : CISCO</td>
<td>Works Space</td>
<td>NOS</td>
<td>3</td>
<td></td>
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<td>13</td>
<td>Fluke Testing</td>
<td>Works Space</td>
<td>SET</td>
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**TOTAL AMOUNT FOR NETWORKING WORKS**
<table>
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<tr>
<th>S.No</th>
<th>Description</th>
<th>Unit</th>
<th>Qty</th>
<th>Rate</th>
<th>Amount</th>
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<tbody>
<tr>
<td>1</td>
<td><strong>VITRIFIED TILES FLOORING</strong></td>
<td></td>
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<tr>
<td></td>
<td>Providing and laying of full body</td>
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<tr>
<td></td>
<td>vitrified tiles of 600mm x 600mm</td>
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<tr>
<td></td>
<td>over the existing floor tiles with</td>
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<td></td>
<td>water absorption less than 0.08%</td>
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<tr>
<td></td>
<td>and confirming to IS:15622, of</td>
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<tr>
<td></td>
<td>approved brand and manufacturer, in</td>
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<tr>
<td></td>
<td>all colours and shade, in skirting</td>
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<td></td>
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</tr>
<tr>
<td></td>
<td>laid with cement based high polymer</td>
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<tr>
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<td>modified quick set tile adhesive</td>
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<tr>
<td></td>
<td>(water based) conforming to IS:15477</td>
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<tr>
<td></td>
<td>in average 6mm thickness, including</td>
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<td></td>
<td>3 mm spacer joint between tile to</td>
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<tr>
<td></td>
<td>tile filled with epoxy grouting</td>
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<tr>
<td></td>
<td>(spacers to be removed before</td>
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<tr>
<td></td>
<td>filling the joints), (As per</td>
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<td>[Buildings (Part-III) SoR 2020-21:</td>
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<tr>
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<td>Sl No 51 TBSCC-II-7 Pg No 51] Basic</td>
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<tr>
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<td>Price Rs.850 per Sqm)</td>
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<td>Nilgiri - Third floor</td>
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<td>218</td>
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<tr>
<td>2</td>
<td><strong>SKIRTING</strong></td>
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<tr>
<td></td>
<td>Removing of old skirting, Supply</td>
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<tr>
<td></td>
<td>and installation of 100mm height</td>
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<td></td>
<td>new Tile skirting with necessary</td>
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<td>laticrete and spacing will be</td>
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<tr>
<td></td>
<td>filled with epoxy grout. The</td>
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<tr>
<td></td>
<td>specification of new tiles to</td>
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<tr>
<td></td>
<td>match with the above item no. 4.1</td>
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<td>Nilgiri - Third floor</td>
<td>Rmt.</td>
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<tr>
<td></td>
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<td><strong>PAINTING</strong></td>
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<tr>
<td></td>
<td>Providing and applying Wall putty</td>
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<tr>
<td></td>
<td>of White Cement or Polymer or</td>
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<td></td>
<td>Cement based of average 1 to 2 mm</td>
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<td></td>
<td>thickness over plastered surface to</td>
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<td></td>
<td>prepare the surface even and smooth</td>
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<td></td>
<td>after thoroughly brushing the</td>
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<tr>
<td></td>
<td>surface to remove all dirt and</td>
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<tr>
<td></td>
<td>remains of loose powdered materials,</td>
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<tr>
<td></td>
<td>applying emery paper, Sand the</td>
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<tr>
<td></td>
<td>surface, clean &amp; wipe off loose</td>
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<tr>
<td></td>
<td>dust, applying knifing paste filler</td>
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<td></td>
<td>by putty knife / muslin pad, air</td>
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<tr>
<td></td>
<td>dry for 2 - 3 hrs, sand with 180</td>
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<tr>
<td></td>
<td>and 320 No., emery paper for the</td>
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<td></td>
<td>surface preparation including cost</td>
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<td></td>
<td>and conveyance of all materials to</td>
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<tr>
<td></td>
<td>work site and all operational,</td>
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<td></td>
<td>incidental, labour charges, overheads and contractors profit etc., complete</td>
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<tr>
<td></td>
<td>for finished item of work in all</td>
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<tr>
<td></td>
<td>floors for Internal walls and</td>
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<tr>
<td></td>
<td>ceiling</td>
<td></td>
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<tr>
<td></td>
<td>Nilgiri - Third floor walls</td>
<td></td>
<td>204.82</td>
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<tr>
<td></td>
<td>Nilgiri - Third floor ceiling</td>
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<td>21.00</td>
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<tr>
<td></td>
<td>Nilgiri - Third floor beams</td>
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<td>217.50</td>
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<td>Total</td>
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<td>Amount</td>
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<td>5.80</td>
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<td>39.15</td>
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<td>10.01</td>
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<td></td>
<td><strong>Total</strong></td>
<td></td>
<td></td>
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<td>334.455</td>
</tr>
</tbody>
</table>

3 Painting walls

Supply & application of one coat water based cement primer of interior grade I and two coats of acrylic emulsion paint having VOC (Volatile Organic Compound) content less than 50 grams/litre for internal walls including cost and conveyance of all materials to site, sales & other taxes, incidental, operational and all labour charges etc., and overheads & contractors profit complete for finished item of work in all floors. (Painting to the false ceiling and wall)

Nilgiri - Third floor  same as putty  Sqm  225.82

3 Painting ceiling - samw as putty  Sqm  334.50

4 DOORS

Double Leaf Flush Door with Vision Panel (As per Drawing) -

SIZE : 1200x 2400mm(4'x8')
No. of Leaves: 2
Door Frame: 4” x 2 1/2 “ Thk 2nd Class BTC.
Shutter: 45mm thick Solid Core Flush door with Vision Panel, Exposed Surface Finished with Approved Laminate
Finish: 1mm thick approved Laminate finish.
Hinge type: 4nos. SS Ball bearing Butt hinges for each shutter.
Hardware : DORMA or Equivalent
Lockset: Dorma
Door handle - Dorma with key opening on the outside and thumb turn on inside; DORMA ‘TH’ Type 123
Door Closer : Concealed type of DORMA ITS 96 2-4
DRO DOWN Seal: / Dorma/h/Haffele
Security System: NA
All as per the design and instructions of the Architect/design incharge

Nilgiri - Third floor  Nos  3

5 Pinup boards
<table>
<thead>
<tr>
<th>S.No</th>
<th>Description</th>
<th>Unit</th>
<th>Qty</th>
<th>Rate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Providing and fixing fabric wall covering with gripper profile on all around the fabric surface as per detail elevations for enclosed rooms. Fabric sample shall be approved by Design consultant or Project Architect. The Fabric covering shall be cladded over soft board and gripper conceal profile on all corners. The rate shall be inclusive of 4mm plywood backing required in scheduled dry wall partition to mount soft board and gripper profile. The back support/plywood shall be placed below top layer of gypsum board over GI frame work of drywall partition type.</td>
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<td></td>
<td>Sample of complete system from gripper along with soft board mock-up need to be done for Design consultant review and approval.</td>
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<td></td>
<td>Fabric Paneling- Base rate shall be 85/- sqft</td>
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<td></td>
<td>Nilgiri - Third floor</td>
<td>Sqm</td>
<td>21.6</td>
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</tr>
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**TOTAL AMOUNT FOR INTERIOR FITOUT WORKS**
Name of work: Space development works for I-HUB DATA in B3 2nd floor Vindhya Bhavan in III-H campus.

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<tr>
<th>S.NO</th>
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<th>Unit</th>
<th>Qty</th>
<th>Rate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CIVIL WORKS</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>CONSTRUCTION OF 9&quot; BRICK WALL</td>
<td></td>
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<tr>
<td></td>
<td>Brick masonry for panel walls (23.0 cm thick) in superstructure with CM (1:8) prop: (Cement : Screened sand) using Common burnt clay bricks of class as per Table- I of IS:1077-1992, Non-Modular or traditional size 23 x 11 x 7 cms from approved source having minimum crushing strength of 40 Kg/Sqcm. including cost and conveyance of all materials like cement, screened sand, bricks, water etc., to site, including sales &amp; other taxes excluding GST on all materials and such as labour charges, like mixing cement mortar, scaffolding charges, constructing masonry, lift charges, curing, etc., and overheads &amp; contractors profit complete for finished item of work. (APSS No. 501 &amp; 504).</td>
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<tr>
<td>2</td>
<td>PLASTER</td>
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<td></td>
<td>Plastering 12mm thick in two coats using screened sand with base coat of 8mm thick in CM (1:6) and top coat of 4mm thick in CM (1:4) with dubara sponge finishing including cost and conveyance of all materials like cement, sand, water etc., to site, including sales &amp; other taxes excluding GST on all materials, and all operational, incidental charges on materials and including cost of all labour charges for mixing mortar, finishing, scaffolding, lift charges, curing, including cutting grooves as directed by Engineer-in-charge etc., and overheads &amp; contractors profit complete for finished item of work. (SS 901,903 &amp; 904). INTERNAL &amp; EXTERNAL</td>
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<tr>
<td>3</td>
<td>R.C.C.Lintel</td>
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<tr>
<td></td>
<td>Vindya Second Floor - E Sagu</td>
<td>Cum</td>
<td>R/O</td>
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<tr>
<td>4</td>
<td>CORE CUTTING FOR AIR CONDITIONING</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Cutting holes in RCC slab floor &amp; repairs Labour charges only (If requires)</td>
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</table>

Vindya Second Floor - E Sagu

Sqm

R/O
<table>
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<th>S.NO</th>
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<th>Unit</th>
<th>Qty</th>
<th>Rate</th>
<th>Amount</th>
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<tbody>
<tr>
<td>5</td>
<td>DISMANTLING OF EXISTING BRICK WALL</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Dismantling, clearing away and carefully stacking useful materials for re-use and disposal of unserviceable materials with 100m lead as directed by Executive Engineer duly taking actual premeasurements before dismantling including all labour charges, overheads &amp; contractor profit etc., complete (Rate should be inclusive of clearing from the site)</td>
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<tr>
<td>Vindya Second Floor - E Sagu</td>
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<tr>
<td>6</td>
<td>DISMANTLING OF EXISTING PARTITIONS/FALSE CEILING</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Dismantling aluminium/ gypsum partitions, door s and windows, <strong>fixed glazing and false ceiling</strong> including disposal of unservicable surplus material and stacking of serviceable material as directed y client.</td>
<td></td>
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<td>Vindya Second Floor - E Sagu</td>
<td>Sqm</td>
<td>66.00</td>
<td>158.40</td>
<td>79.20</td>
<td>18.15</td>
</tr>
<tr>
<td>7</td>
<td>DISMANTLING OF EXISTING DOORS AND WINDOWS</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Dismantling doors, windows and clerestory window shutters(aluminium/wood) shutter including chowkhat, architrave, holdfasts etc. complete and stacking within 50 metres lead</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vindya Second Floor - E Sagu</td>
<td>Each</td>
<td>4.80</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>DISMANTLING OF ALL THE EXISTING ELECTRICALS, AC UNITS, NETWORKING, UPS AND RELATED EXISTING SWITCH BOARDS AND WIRING (Rate should be inclusive of clearing from the site)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vindya Second Floor - E Sagu</td>
<td>R/O</td>
<td></td>
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</tr>
</tbody>
</table>

**TOTAL AMOUNT FOR CIVIL WORKS**

**ELECTRICAL WORKS**

1 DISTRIBUTION BOARDS. (Legrand/Schneider/ABB)

<p>| Lighting |      |      |      |        |
| Supply and fixing 4 WAY TPN Distribution board with IP-42 protection (Metal Door) suitable for 3 phase 32A FP MCB as incomer and 10kA 12 Nos. of 6-32A SP MCBs as outing going including internal connection and labour charges for surface / flush mounting etc., complete. | Nos | 1 |</p>
<table>
<thead>
<tr>
<th>S.NO</th>
<th>Description</th>
<th>Unit</th>
<th>Qty</th>
<th>Rate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>b</td>
<td>Supply and fixing 6 WAY TPN Distribution board with IP-42 protection (Metal Door) suitable for 3 phase 40A FP MCB as incomer and 10kA 18 Nos. of 6-32A SP MCBs as outgoing including internal connection and labour charges for surface / flush mounting etc., complete.</td>
<td>Nos</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AC DB</td>
<td></td>
<td>Nos</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c</td>
<td>Supply and fixing 8 WAY TPN Distribution board with IP-42 protection (Metal Door) suitable for 3 phase 25A FP MCB as incomer and 10kA 24 Nos. of 6-32A SP MCBs as outgoing including internal connection and labour charges for surface / flush mounting etc., complete.</td>
<td>Nos</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UPS DB</td>
<td></td>
<td>Nos</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d</td>
<td>Supply and fixing 6 WAY TPN Distribution board with IP-42 protection (Metal Door) suitable for 3 phase 40A FP MCB as incomer and 10kA 18Nos. of 6-32A SP MCBs as outgoing including internal connection and labour charges for surface / flush mounting etc., complete.</td>
<td>Nos</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VTPN DB.</td>
<td></td>
<td>Nos</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e</td>
<td>Supply and fixing of 8 Way VTPN DB with IP 43 Protection as per IS:13032 and suitable for accommodating 63A TP MCB-2, 40A TP MCB-5, 32A TP MCB-1 Nos as out goings and 125A 4 pole MCCB as Incommer etc complete</td>
<td>Nos</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1</td>
<td>Supply and fixing of the following MCB's in the Existing Panel including required wiring/Busbar Modification.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>1 no. 4P ELCB 0-300mA upto the rating of 40-63A with metal enclousers - VRV outdoor</td>
<td>Nos</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b</td>
<td>1 no. 4P MCB upto the rating of 40-63A</td>
<td>Nos</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c</td>
<td>1 no. SP MCB upto the rating of 6-32A</td>
<td>Nos</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>SUBMAINS/CIRCUIT MAINS /POWER WIRING..Makes: Finolex / Polycab</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>Supply and run of 3Rx of 36/0.3mm (2.5 Sqmm) FRLS PVC insulated 1100V grade as per IS:694/1990 specification for Copper cable in existing pipe for mains inclusing all labour charges etc., complete (Lighting)</td>
<td>Mtrs</td>
<td>165</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b</td>
<td>Supply and run of 3Rx of 36/0.3mm (2.5 Sqmm) FRLS PVC insulated 1100V grade as per IS:694/1990 specification for Copper cable in existing pipe for mains inclusing all labour charges etc., complete. (Ac Indoor Units)</td>
<td>Mtrs</td>
<td>365</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S.NO</td>
<td>Description</td>
<td>Unit</td>
<td>Qty</td>
<td>Rate</td>
<td>Amount</td>
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</tr>
<tr>
<td>c</td>
<td>Supply of 2.5 Sqmm (36/0.3mm)3 Core PVC Insulated Sheathed Multi Core Bright Annealed Bare Copper Conductor Heavy Duty Industrial Cables for Voltage Grade upto 1100 Volts as per IS: 694:1990 including all transportation charges etc complete. (UPS &amp; RP) Workstaions</td>
<td>Mtrs</td>
<td>720</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d</td>
<td>Supply of 4 Sqmm (56/0.3mm)3 Core PVC Insulated Sheathed Multi Core Bright Annealed Bare Copper Conductor Heavy Duty Industrial Cables for Voltage Grade upto 1100 Volts as per IS: 694:1990 including all transportation charges etc complete. (general Power)</td>
<td>Mtrs</td>
<td>145</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>POINT WIRING. Makes wires: Finolex / Polycab ; Modular Switch, Socket, Metal box &amp; Cover frame Make: Legrand Myrius/Schneider Opel; Ceiling Rose Make:Anchor / Gold Medal Olive / Million Zoom</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>Wiring with 3 runs of 22/0.3mm (1.5 Sqmm) FRLS PVC insulated 1100V grade as per IS:694/1990 specification for Copper cable in existing pipe with 6A / 10A 1 Way 1 Module Modular Switch control with 6 Module Hot Dip Galvanized modular type Metal Box covered with 6 Modular Cover Frame, 3 Plate Jumbo Ceiling Rose including all labour charges etc., complete for light, bell, fan and exhaust fan points in Non-Residential Buildings.</td>
<td>Nos</td>
<td>51</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b</td>
<td>Wiring with 3 runs of 22/0.3mm (1.5 Sqmm) FRLS PVC insulated 1100V grade as per IS:694/1990 specification for Copper cable in existing pipe Plate Jumbo Ceiling Rose including all labour charges etc., complete for light, bell, fan and exhaust fan points in Non-Residential Buildings.</td>
<td>Nos</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td><strong>Power Sockets</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Modular Switch, Socket, Metal box &amp; Cover frame Make: Legrand Myrius/Schneider Opel;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>Supply and fixing of 6A / 10A 3/2 Pin 2 Module Modular Socket with shutter-1 No and 6A / 10A 1 Way 1 Module Modular Switch controls-1Nos duly recessed in wall with 3 Module Hot Dip Galvanized Modular Metal Box size covered with 3 Modular Cover Frame including earth connections and all labour charges etc., complete.</td>
<td>Each</td>
<td>84</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S.NO</td>
<td>Description</td>
<td>Unit</td>
<td>Qty</td>
<td>Rate</td>
<td>Amount</td>
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</tr>
<tr>
<td>b</td>
<td>Supply and fixing of 6A / 10A 3/2 Pin 2 Module Modular Socket with shutter-2 Nos and 6A / 10A 1 Way 1 Module Modular Switch control-2Nos duly recessed in wall with 6 Module Hot Dip Galvanized Modular Metal Box size covered with 6 Modular Cover Frame including earth connections and all labour charges etc., complete.[ For computer switch board].</td>
<td>Each</td>
<td>68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c</td>
<td>Supply and fixing of 6A / 10A 3/2 Pin 2 Module Modular Socket with shutter with 6A / 10A 1 Way 1 Module Modular Switch control on a Common switch board with 3 Module Hot Dip Galvanized Modular Metal Box covered with 3 Modular Cover Frame with earth continuity including wire leads, earth connections along with all labour charges etc., complete.</td>
<td>Each</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d</td>
<td>Supply and Fixing of 16/20A 2 Module Modular Socket with shutter and 16/20A 1 Way 1 Module Modular Switch duly recessed in wall with 3 Module Hot Dip Galvanized Modular Metal Box size covered with 3 Modular Cover Frame including earth connections and all labour charges etc., complete.[ Power plug]</td>
<td>Each</td>
<td>22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td><strong>MV CABLES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>Supply &amp; laying of --------------- XLPE insulated, 1100V grade armoured alluminium cable with ISI mark as per specification confirming to IS:7098 (Part - I) Makes Polycab / Finolex Glands &amp; Lugs: DOWELLS/SMI/HMI</td>
<td>Mtrs</td>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b</td>
<td>3.5CX50 SQ.MM AL. ARMD CABLE</td>
<td>Mtrs</td>
<td>75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c</td>
<td>4Cx16 Sq.mm Copper Flexible cable</td>
<td>Mtrs</td>
<td>80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d</td>
<td>4Cx10 Sq.mm Copper Flexible cable</td>
<td>Mtrs</td>
<td>60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e</td>
<td>3Cx6 Sq.mm Copper Flexible cable</td>
<td>Mtrs</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td><strong>End Terminations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>3.5CX50 SQ.MM AL. ARMD CABLE</td>
<td>No</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b</td>
<td>4Cx16 Sq.mm Copper Flexible cable</td>
<td>No</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c</td>
<td>4Cx10 Sq.mm Copper Flexible cable</td>
<td>No</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d</td>
<td>4Cx6 Sq.mm Copper Flexible cable</td>
<td>No</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e</td>
<td>3Cx6 Sq.mm Copper Flexible cable</td>
<td>No</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td><strong>GI /Copper strip</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S.NO</td>
<td>Description</td>
<td>Unit</td>
<td>Qty</td>
<td>Rate</td>
<td>Amount</td>
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<tr>
<td></td>
<td>Supply and laying of following size strips including excavation and refilling of earth when laid in ground and with all fixing accessories when laid inside the building including all necessary interconnections with earth station and equipments.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>Providing independent earthing by excavating a pit to a depth of 2.25Mtr in all soils as per size specified in the data for Sophisticated Electronic equipment with 600mm x 600mm x 3.15mm thick copper plate rigidly fixed to 40mm dia 'B' Class G.I Pipe of 2.5Mtr length as per National Electric Code and earth connection from electrode G.I strip of 25mmx 5mmx 200mm length to be bolted with nutbolts to G.I.pipe including 25mm x 3mm copper strip of 6Mtrs length connected from plate to G.I strip including filling with 20Kg Salt and 40Kg Charcoal or 40Kg bentonite powder from the bottom of the pipe and providing CC / Brick masonry chamber 450mmX450mmX400mm and covered with R.C.C. Slab including all accessories and labour charges etc complete as per IS specification732/1982 (Part II).</td>
<td>Each</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b</td>
<td>Busbar of 0.5 Mtr length made out of 25 x 6 mm Cu. strip with drill holes of M8 at 25mm interval mounted on insulators with metal Enclosure.</td>
<td>Each</td>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SUBSTATION ACCESSORIES</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>Safety Accessories: Supply and fixing of following fixing accessories. All accessories shall bear ISI certification mark</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Class-A confirming to IS:15652 approved tested quality rubber mat 100V grade ISI approved of 2 mm thick and 1meter wide &amp; 2 meter length installed in front of the power distribution boards (Make: Electromat or equivalent )</td>
<td>Each</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S.NO</td>
<td>Description</td>
<td>Unit</td>
<td>Qty</td>
<td>Rate</td>
<td>Amount</td>
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<tr>
<td></td>
<td><strong>b</strong> Supply &amp; Fixing of 4.5Kg, CO2 Type Fire Extinguisher, Trolley Mounted, Easy Weight Management, Used Unused Mechanism, Squeeze Grip, Gross Weight 19.1 Kg, Empty Weight 14.6 Kg, Can Height 860MM, Diameter 140MM, Discharge time minimum 13 Secs, Controllable discharge mechanism, Range minimum 2 Meters, Applicable on Class B,C &amp; electrically started Fire, B Rating 13B, Can Construction : Hot Spinning / Forging, Valve Construction : Forging &amp; Machining, Internal Coating of Can : Not Applicable, External Coating of Can : Spray Painting, Sheet metal thickness : 4.5MM, ISI &amp; CE Approved, 2 Year Warranty Including transportation, all taxes and all labour charges etc complete.(ELEC-10.5.3.b) Make: Kanex/Safex</td>
<td>Each</td>
<td>6</td>
<td></td>
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</tr>
<tr>
<td></td>
<td><strong>c</strong> Shock treatment chart as approved by the Electrical Inspectorate mounted on teak wood frame and suitable for wall mounting in 3 languages (Tamil, English &amp; Hindi)</td>
<td>Each</td>
<td>2</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td><strong>9</strong> Supply and Fixing of heavy grade, FRLS with IS:9537 part 3 rigid PVC pipe (ISI MARK) surface mounted with all required accessories fixing of chromium plated metallic base saddles including all labour charges etc., complete [for run of mains,power plugs ,computer boards and AC circuits] Makes : Sudhakar</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td><strong>a</strong> 25mm</td>
<td>Mtr</td>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>b</strong> 32mm</td>
<td>Mtr</td>
<td>95</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>10</strong> Supply &amp; laying of Al Raceways including floor chipping for laying in floor/ceiling with required accessories (Tata/Jindal)</td>
<td>Mtr</td>
<td>130</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>a</strong> 100mm x 38mm x 2mm</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td><strong>11</strong> Supply &amp; fixing of G.I. Junction box of 2mm thick for direct acces to cables at the inter section of Raceways.(Tata/Jindal)</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td><strong>a</strong> 372mm x 52mm</td>
<td>Each</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>b</strong> 222mm x 52mm</td>
<td>Each</td>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>c</strong> 172mm x 52mm</td>
<td>Each</td>
<td>41</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S.NO</td>
<td>Description</td>
<td>Unit</td>
<td>Qty</td>
<td>Rate</td>
<td>Amount</td>
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<tr>
<td>12</td>
<td>Supply, Transportation and Installation of hot dip Gi perforated cable tray without cover along with coupler plates, T's, Bends, Reducers, Anchor bolts, nuts, washers and slotted channels / Angle Iron Channels etc complete and the tray should be fitted on the wall / Ceiling etc. complete for finished item of work. (Tata/Jindal/essar)</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td><strong>a</strong> 300mm x 50mm x 1.6mm thick</td>
<td>RMT</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>b</strong> 150mm x 50mm x 1.6mm thick</td>
<td>RMT</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>c</strong> 150mm x 75mm X 1.6mm thick raceway with cover</td>
<td>Mtrs</td>
<td>25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td><strong>Light Fixtures</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Supply, Transportation and Installation of following light fixtures with required accessories</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>a</strong> Supply &amp; Installation of 15w Down light round circular White powder coated, elegantly designed pressure die-cast aluminium heat sink for efficient dissipation &amp; white finish polycarbonate ring for holding the diffuser High efficiency long life SMD LED mounted on MCPCB with high LED efficacy of 140 lm/W used to enhance the lumen output of 1350 Lumens with system efficacy of 95 LM/W. High reflective polycarbonate conical shaped reflector to enhance the lumen output of the fixture. High quality polycarbonate opal concave diffuser to enhance the aesthetic of the fixture and to provide glare free uniform light distribution Powered by integral SMPS based constant current electronic driver with lower THD: &lt;10, Output Short Circuit Protection, Surge Voltage Protection with 2.5 kv and other safety tests as per IS 15885 Part 2/ Sec 13. Operating temperature :- 10 °C to +45 °C &amp; Operating voltage range : 140 V - 270 V Average life L70B50: 50000 hours with IP20 with power factor PF: 0.95 CCT : 5700k CRI: ≥80 this should be with BIS &amp; NABL certified with LM79 &amp; LM80 Reports.</td>
<td>Each</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>b</strong> 4 Feet, 18W LED Tube light in box with complete lamps &amp; all accessories with Electronic Control Gear.</td>
<td>Each</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>c</strong> Supply &amp; Installation of 1200mm suspended linear light</td>
<td>Each</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>d</strong> Supply &amp; Installation of 600mm suspended linear light</td>
<td>Each</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>e</strong> Supply &amp; Installation of 1200mm BLDC Ceiling Mounted fan as per Architect Preference with remote</td>
<td>Each</td>
<td>25</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>f</strong> Supply &amp; Installation of 600mm x 600 Suspended 42w grid ceiling lights</td>
<td>Each</td>
<td>35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S.No</td>
<td>Description</td>
<td>Unit</td>
<td>Qty</td>
<td>Rate</td>
<td>Amount</td>
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<td>------------------------------------------------------------------------------</td>
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<td>--------</td>
</tr>
<tr>
<td>C</td>
<td>HVAC - VRF (HIGH SIDE WORKS)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Supply, Installation, Testing &amp; Commissioning of Variable Refrigerent Flow</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Outdoor units comprising of Inverter Scroll compressors, suitable for R410</td>
<td></td>
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<tr>
<td></td>
<td>A and 415 V+/- 10%, 50 Hz, 3 phase A/C supply.</td>
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<tr>
<td></td>
<td>a 18 HP Unit</td>
<td>Nos</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>b 16 HP Unit</td>
<td>Nos</td>
<td>1</td>
<td></td>
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</tr>
<tr>
<td>2</td>
<td>Supply, Installation, Testing &amp; Commissioning of Ceiling mounted Cassette</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>type unit with 4-way throw c/w inbuilt drain pumps and Fresh air connection</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>provision and cordless remote - 3' x 3' size</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a 4.15tr 4-way Cassette</td>
<td>Nos</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>b 3.31tr 4-way Cassette</td>
<td>Nos</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>c 2.65tr 4-way Cassette</td>
<td>Nos</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>d 2.08tr 4-way Cassette</td>
<td>Nos</td>
<td>5</td>
<td></td>
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</tr>
<tr>
<td>3</td>
<td>Supply, Installation, Testing &amp; Commissioning of Ceiling mounted Cassette</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>type unit with 4-way throw c/w inbuilt drain pumps and Fresh air connection</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>provision and cordless remote - 2' x 2' - Compact size</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a 1.65tr 4-way Cassette</td>
<td>Nos</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>b 1.04tr 4-way Cassette</td>
<td>Nos</td>
<td>4</td>
<td></td>
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</tr>
<tr>
<td>4</td>
<td>Supply, Installation, Testing &amp; Commissioning of Wall mounted Split</td>
<td></td>
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<tr>
<td></td>
<td>a 2.08tr Hiwall Split</td>
<td>Nos</td>
<td>4</td>
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<td></td>
<td>BIDDERS CAN OFFER NEAREST TR UNIT - SHOULD BE_EQUAL TO OR MORE THAN HP LISTED</td>
<td></td>
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<tr>
<td>5</td>
<td>Refnet joints</td>
<td>Nos</td>
<td>17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Central Controller</td>
<td>Nos</td>
<td>R/O</td>
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TOTAL AMOUNT FOR ELECTRICAL WORKS

TOTAL AMOUNT FOR HVAC - VRF (HIGH SIDE WORKS)
<table>
<thead>
<tr>
<th>S No</th>
<th>Description</th>
<th>Unit</th>
<th>Qty</th>
<th>Supply Rate</th>
<th>Supply Amount</th>
<th>Installation Rate</th>
<th>Installation Amount</th>
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<tbody>
<tr>
<td>C</td>
<td>HVAC - VRF (LOW SIDE WORKS)</td>
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<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>1</td>
<td>Lifting, Shifting, Positioning &amp; Installation of VRF Indoor units, necessary</td>
<td>Nos</td>
<td>18</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>control panel, hanging / structural supports.</td>
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<tr>
<td>2</td>
<td>Lifting, Shifting &amp; Positioning of VRF Outdoor unit</td>
<td>Nos</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Pressure testing with Nitrogen Gas, Vacuumising including all consumables</td>
<td>Lot</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Gas charging and commissioning</td>
<td>Lot</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Copper Pipe</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Supply, Installation, Testing &amp; Commissioning of copper refrigerant piping</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>duly insulated with nitrile insulation of 19mm thickness for Gas Pipe</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>and 13mm thickness for Liquid Pipe / Including supports Clamps etc and incl</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>bends, couplings and necessary fittings, for R-410A; Site Pressure tested</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>to 550 psig;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a Dia - 6.4mm; Thickness - 0.8mm</td>
<td>Rmt</td>
<td>87</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>b Dia - 9.5mm; Thickness - 0.8mm</td>
<td>Rmt</td>
<td>37</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>c Dia - 12.7mm; Thickness - 0.8mm</td>
<td>Rmt</td>
<td>21</td>
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<tr>
<td></td>
<td>d Dia - 15.9mm; Thickness - 1.0mm</td>
<td>Rmt</td>
<td>39</td>
<td></td>
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<tr>
<td></td>
<td>e Dia - 19.1mm; Thickness - 0.8mm</td>
<td>Rmt</td>
<td>33</td>
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<td>f Dia - 22.2mm; Thickness - 0.8mm</td>
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<td>19</td>
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<tr>
<td></td>
<td>g Dia - 25.4mm; Thickness - 0.88mm</td>
<td>Rmt</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>h Dia - 28.6mm; Thickness - 1.0mm</td>
<td>Rmt</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Cabling</td>
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</tr>
<tr>
<td>6</td>
<td>Supply, Installation, Testing &amp; Commissioning of control cum Transmission</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td></td>
<td>wiring between ODU &amp; IDU of copper 2 core 1.5 Sqmm copper cabling</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rmt 189</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Drain</td>
<td></td>
<td></td>
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<tr>
<td>7</td>
<td>Supply, Installation, Testing &amp; Commissioning of Drain Piping of CPVC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SDR13.5 of minimum 2.5mm thickness; with 6 mm thick nitrile foam insulation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>&amp; all fittings, supports and clamps up to 50 mm dia. including drilling,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>wall chipping etc. and conceal the wall opening.</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>a 25mm with 6mm insulation</td>
<td>Rmt</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>b 32mm with 6mm insulation</td>
<td>Rmt</td>
<td>89</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>c 40mm with 6mm insulation</td>
<td>Rmt</td>
<td>37</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Unit Accessories</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>8</td>
<td>Supply, Installation, Testing &amp; Commissioning of Scanner/ Voltage Corrector</td>
<td>Nos</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>for out door units (along with contactor and wiring)</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Supply, Installation, Testing &amp; Commissioning of Outdoor unit stands with</td>
<td>Nos</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>support frames.</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>10</td>
<td>Supply, Installation, Testing &amp; Commissioning of Thermal Insulation of</td>
<td>Rmt</td>
<td>65</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Copper pipe with Armachek GC</td>
<td></td>
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</table>

TOTAL AMOUNT FOR HVAC - VRF (LOW SIDE WORKS)
<table>
<thead>
<tr>
<th>S No</th>
<th>Description</th>
<th>Unit</th>
<th>Qty</th>
<th>Supply Rate</th>
<th>Supply Amount</th>
<th>Installation Rate</th>
<th>Installation Amount</th>
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<tbody>
<tr>
<td>C</td>
<td>ANCILLARY</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Insulated Flexible Ducting</td>
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<tr>
<td>1</td>
<td>Factory Fabricated Insulated {25mm Glass Wool}</td>
<td>Rmt</td>
<td></td>
<td>28</td>
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<tr>
<td></td>
<td>Flexible made out aluminium for connecting from main duct to diffuser box. The length of the flexible duct shall max 1.5 m</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>a</td>
<td>150mm dia</td>
<td>Rmt</td>
<td></td>
<td>28</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b</td>
<td>75 mm dia</td>
<td>Rmt</td>
<td></td>
<td>5</td>
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</tr>
<tr>
<td>2</td>
<td>SITC of PVC pipe for connecting to Inline fan for supply of Fresh air</td>
<td>Rmt</td>
<td></td>
<td>38</td>
<td></td>
<td></td>
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<tr>
<td>a</td>
<td>100 mm</td>
<td>Rmt</td>
<td></td>
<td>38</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b</td>
<td>75 mm</td>
<td>Rmt</td>
<td></td>
<td>8</td>
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</tr>
<tr>
<td>3</td>
<td>SITC of Butterfly Dampers for connecting to Inline fan for supply of Fresh air</td>
<td>Nos</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>150 mm dia</td>
<td>Nos</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inline Fans</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>4</td>
<td>Supply, installing, testing and commissioning of Inline Fan complete with suitable motor, minimum fan efficiency shall be 65%, fire resistive flexible connection with nut bolts at outlet, vibration isolators, inlet dampers etc</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Fan noise level shall select for less than 60dB</td>
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<td>5</td>
<td>For Fresh Air-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>a</td>
<td>800 CFM Vs 30mm static double skin with speed regulator/ single phase</td>
<td>Nos</td>
<td></td>
<td>1</td>
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<tr>
<td>b</td>
<td>600 CFM Vs 30mm static double skin with speed regulator/ single phase</td>
<td>Nos</td>
<td></td>
<td>0</td>
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<tr>
<td>6</td>
<td>SITC of Canvas Connections for Inline fans - 0.63 mm Thick Canvas; Fireproof Fabric</td>
<td>Nos</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>Inline Fans - Fresh Air</td>
<td>Nos</td>
<td></td>
<td>2</td>
<td></td>
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<tr>
<td>7</td>
<td>Cable tray - of width upto 300mm - thickness of metal sheet will be 1.2mm [18 SWG]; of width from 300mm to 600mm - thickness of metal sheet will be 1.6mm [16 SWG]; of width over 600mm - thickness of metal sheet will be 2.0mm [14 SWG]; Pregalvanised sheet complete with screwed type cover of thickness 1.2mm as specified with counter sunk type screws. The dimension of the same shall be as follows along with powder-coat paint.</td>
<td>Rmt</td>
<td></td>
<td>17</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>a</td>
<td>150 mm</td>
<td>Rmt</td>
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<td>17</td>
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TOTAL AMOUNT FOR HVAC ANCILLARY WORKS
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<th>Description</th>
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<th>Qty</th>
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<th>Installation</th>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Rate</td>
<td>Amount</td>
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<td></td>
<td></td>
<td>Rate</td>
<td>Amount</td>
</tr>
<tr>
<td>D</td>
<td>NETWORKING &amp; UPS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>UPS System</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supply and installation of UPS with batteries and battery rack</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>15KVA Double Conversion Online UPS System, 3 - phase input &amp; 3-phase output along with Inbuilt Isolation Transformer. 20 nos of 12V.75AH SMF battery along with battery rack, Inter connecting cables and Installation. (Make: Schnieder/ Vertiv) (Warranty: 2 Years)</td>
<td>Set</td>
<td>1</td>
<td></td>
<td></td>
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<tr>
<td>II</td>
<td>NETWORKING SYSTEM (Supply and Installation)</td>
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</tr>
<tr>
<td>1</td>
<td>Supply of LAN Cable cat -6 UTP cable Makes : AMP / Molex</td>
<td>Mtrs</td>
<td>2150</td>
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<td></td>
</tr>
<tr>
<td>2</td>
<td>Supply of Cat 6 RJ-45 information outlets including plate. Makes : AMP / Molex</td>
<td>NOS</td>
<td>75</td>
<td></td>
<td></td>
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<tr>
<td>3</td>
<td>Supply of 15U wall mounting net work rack with power spike including all accessories.</td>
<td>NOS</td>
<td>0</td>
<td></td>
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</tr>
<tr>
<td>4</td>
<td>Supply and installation of IP 20, IK 08 17U 600mm Width x 800mm Deep Floor mounting net work rack with all accessories like front and rear doors, fans, castors, cable manager, shelf, power distribution unit, hardware packet. Mod cap floor stand : Modular construction of the rack made of4 vertical,4 Horizontaland 4 depth alloy extruded multi folded hallow profiles bolted and joined together with links and corner blocks. 3 Pairs of support channels to equate the load evenly and castor provision at bottom side. Painting shade : Combination of RAL 7035 / 7037 fine texture - 60 to 80 microns. or RAL 9005 fine texture - 60 to 80 microns complies with standards : UL 2416, Din 41494, IEC EN 60529, IEC EN 62262, IEC EN 60068-2-11, ISO 90012008. Makes : HCL / Val / Rittal / APW.</td>
<td>NOS</td>
<td>1</td>
<td></td>
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</tr>
<tr>
<td>5</td>
<td>Supply of 24 port patch panels</td>
<td>NOS</td>
<td>4</td>
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</tr>
<tr>
<td>6</td>
<td>Supply of 7ft length moulded patch cord. Makes : AMP / Molex</td>
<td>NOS</td>
<td>75</td>
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<td></td>
</tr>
<tr>
<td>7</td>
<td>Supply of 3ft length moulded patch cord. Makes : AMP / Molex</td>
<td>NOS</td>
<td>75</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S No</td>
<td>Description</td>
<td>Unit</td>
<td>Qty</td>
<td>Supply</td>
<td>Installation</td>
</tr>
<tr>
<td>------</td>
<td>------------------------------------------------------------------------------</td>
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<td>Amount</td>
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<td></td>
<td></td>
<td>Rate</td>
<td>Amount</td>
</tr>
<tr>
<td>8</td>
<td>Supply of 6C (Indoor / Out door), Single mode armoured, Optic fibre cable</td>
<td>Mtrs</td>
<td>50</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>in suitable dia conduit/HDPE pipe. Makes :AMP / Molex</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Supply of Pigtaills for fibre core connectivity. Makes : AMP / Molex</td>
<td>NOS</td>
<td>R/o</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Supply of 6 Port fibre distribution unit. (FDU / LIU) loaded with</td>
<td>NOS</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>couplers etc complete. Makes : AMP / Molex</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Splicing of fiber core</td>
<td>NOS</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Supply of 24 Port manageble switches Makes : CISCO</td>
<td>NOS</td>
<td>4</td>
<td></td>
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<tr>
<td>13</td>
<td>Fluke Testing</td>
<td>SET</td>
<td>1</td>
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</table>

**TOTAL AMOUNT FOR NETWORKING & UPS**
<table>
<thead>
<tr>
<th>S.No</th>
<th>Description</th>
<th>Unit</th>
<th>Qty</th>
<th>Rate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1a</td>
<td>ALUMINIUM GLASS PARTITION</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Providing &amp; Fixing of Single glazed modular system consisting of Aluminium section of 25<em>75</em>1.5 mm thick. All sections duly sand blast anodised up to 20-25 microns with 6063-T6 grade and required accessories ie glass to glass aluminium I sections, T section &amp; 90 degree sections &amp; Glass packing to adjust the floor level. Ceiling profile, Floor profile and wall profile are 25 mm visible face and 75 mm wide with 12mm toughened glass &amp; insertion of Thermo plastic gasket to adhere the glass firm &amp; airtight. Sound Reduction from 32 to 35 db (Kubik, , Vintage or equivalent make)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Vindya Second Floor - E Sagu</td>
<td>Sqmt</td>
<td>50.64</td>
<td>36</td>
<td>17.28</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>12.96</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>11.52</td>
<td></td>
<td>5.76</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td>99.36</td>
</tr>
<tr>
<td>1b</td>
<td>Supply and pasting of Plain Frosted Film Stickring on the glass upto 1050mm height without any cutting or print (3M or equivalent)</td>
<td></td>
<td>60.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.2</td>
<td>GLASS DOOR (1.0m x 2.4m)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Providing &amp; Fixing of Door of width 45 X 75 mm with 6063-T6/20-25 Microns with Sand Blast Anodized Aluminium Sections having door profile with 12 mm Toughened Glass with Hardware (Handle ,Lock,dropdownseal, Exoposed Doorcloser ,Hinges)</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Vindya Second Floor - E Sagu</td>
<td>nos</td>
<td>11.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>GYPSUM FALSE CEILING</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S.No</td>
<td>Description</td>
<td>Unit</td>
<td>Qty</td>
<td>Rate</td>
<td>Amount</td>
</tr>
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<td>------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>2.1</td>
<td>Supplying and fixing Gyp Board Suspended regular single layer false ceiling (GS-MFSC-4.1) using 12.5 mm thick Gyp Board conforming to IS 2095 - 1993 fixing to Gyp steel GI perimeter channels of size 20 mm x 27 mm x 30 mm(web) of 0.55 mm thick along the perimeter of ceiling screw fixed to brick work/partition at 610 mm c/c and suspending the frame work using Intermediate channels (45 mm x 15mm x 15mm x 0.9 mm) from soffit at 1220 mm c/c with ceiling angle (25 mm x 10 mm x 0.55 mm) fixed with GI Cleat and steel expansion fasteners &amp; connecting clip to the ceiling channels (with knurled web of 51.5 mm x 26 mm x 10.5 mm x 0.55 mm) fixed in direction perpendicular to the intermediate channel at 457 mm c/c and fixing the 12.5 mm tapered edge Gypboard with 25 mm drywall screws at 230 mm c/c &amp; jointing and finishing using joint compound and paper tape to have a flush look including filling the tapered &amp; square edges with jointing compound, two coats of drywall topcoat including overheads and contractor profit etc., complete for finished item of work</td>
<td>Sqm</td>
<td>70.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2.2 Gypsum above glass partition- Supplying and fixing of full height partitions with 12.5mm thick gypsum board on both sides of the G.I framework.

<table>
<thead>
<tr>
<th>Vindya Second Floor - E Sagu</th>
<th>18.90</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>20.93</td>
</tr>
<tr>
<td></td>
<td>16.20</td>
</tr>
<tr>
<td></td>
<td>4.86</td>
</tr>
<tr>
<td></td>
<td>3.24</td>
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<td>2.97</td>
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<td></td>
<td>4.32</td>
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<td></td>
<td>2.16</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>73.58</strong></td>
</tr>
</tbody>
</table>

3 VITRIFIED TILES FLOORING
3.1 FLOORING
<table>
<thead>
<tr>
<th>S.No</th>
<th>Description</th>
<th>Unit</th>
<th>Qty</th>
<th>Rate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Providing and laying of full body vitrified tiles of 600mm x 600mm over the existing floor tiles with water absorption less than 0.08% and confirming to IS:15622, of approved brand and manufacturer, in all colours and shade, in skirting laid with cement based high polymer modified quick set tile adhesive (water based) conforming to IS:15477 in average 6mm thickness, including 3 mm spacer joint between tile to tile filled with epoxy grouting (spacers to be removed before filling the joints), (As per Buildings (Part-III) SoR 2020-21: Sl No 51 TBSCC-II-7 Pg No 51] Basic Price Rs.850 per Sqmt) Thickness of adhesive 10 - 15mm</td>
<td>Sqmt.</td>
<td>52</td>
<td>59.28</td>
<td>3201.76</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>5.928</td>
<td>8.64</td>
<td>51.64</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>171.325</td>
<td>63.25</td>
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<td><strong>Total</strong></td>
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<td><strong>354.5</strong></td>
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</tr>
<tr>
<td>3.2</td>
<td><strong>SKIRTING</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Removing of old skirting, Supply and installation of 100mm height new Tile skirting with necessary laticrete and spacing will be filled with epoxy grout. The specification of new tiles to match with the above item no. 4.1</td>
<td>Rmt.</td>
<td></td>
<td></td>
<td>132.3</td>
</tr>
<tr>
<td></td>
<td>Vindya Second Floor - E Sagu</td>
<td></td>
<td>columns</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>upS</td>
<td></td>
<td>Rmt.</td>
<td></td>
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</tr>
<tr>
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<td><strong>Total</strong></td>
<td></td>
<td><strong>132.3</strong></td>
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<tr>
<td>4</td>
<td><strong>PAINTING</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S.No</td>
<td>Description</td>
<td>Unit</td>
<td>Qty</td>
<td>Rate</td>
<td>Amount</td>
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<tr>
<td>4.1</td>
<td>WALLS - Providing and applying Wall putty of White Cement or Polymer or Cement based of average 1 to 2 mm thickness over plastered surface to prepare the surface even and smooth after thoroughly brushing the surface to remove all dirt and remains of loose powdered materials, applying emery paper, Sand the surface, clean &amp; wipe off loose dust, applying knifing paste filler by putty knife / muslin pad, air dry for 2 - 3 hrs, sand with 180 and 320 No., emery paper for the surface preparation including cost and conveyance of all materials to work site and all operational, incidental, labour charges, over heads and contractors profit etc., complete for finished item of work in all floors for Internal walls and ceiling</td>
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<tr>
<td></td>
<td>For walls</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Vindya Second Floor - E Sagu - Walls</td>
<td>Sqm</td>
<td>325.00</td>
<td>69.60</td>
<td>470.20</td>
</tr>
<tr>
<td></td>
<td>ups</td>
<td></td>
<td>75.60</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>duct windows</td>
<td></td>
<td>36.00</td>
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<td></td>
<td></td>
<td></td>
<td>434.20</td>
</tr>
<tr>
<td></td>
<td>Ceiling</td>
<td>Sqm</td>
<td>52.00</td>
<td>59.28</td>
<td>8.64</td>
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<td>beams</td>
<td>Sqm</td>
<td>32.40</td>
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<td>4.32</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>371.14</td>
</tr>
<tr>
<td>4.2</td>
<td>Luppum coat and painting for Gypsum Partitions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>corridor ceiling</td>
<td>Sqm</td>
<td>68.58</td>
<td>64.01</td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>12.60</td>
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<td></td>
<td></td>
<td>12.60</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>6.93</td>
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<td></td>
<td></td>
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<td>46.90</td>
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<td>35.70</td>
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<td></td>
<td></td>
<td></td>
<td>247.32</td>
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<tr>
<td>4.3</td>
<td>Painting for walls only</td>
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</table>

**CONTRACTOR**

**ACADEMIC HEAD I-HUB DATA**
<table>
<thead>
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<th>S.No</th>
<th>Description</th>
<th>Unit</th>
<th>Qty</th>
<th>Rate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Supply &amp; application of one coat water based cement primer of interior grade I and two coats of acrylic emulsion paint having VOC (Volatile Organic Compound) content less than 50 grams/litre for internal walls including cost and conveyance of all materials to site, sales &amp; other taxes, incidental, operational and all labour charges etc., and overheads &amp; contractors profit complete for finished item of work in all floors. (Painting to the false ceiling and wall)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Vindya Second Floor - E Sagu same as putty</td>
<td>Sqm</td>
<td>1</td>
<td></td>
<td>434.20</td>
</tr>
<tr>
<td>4.4</td>
<td>Painting for ceiling - Same as putty</td>
<td>Sqm</td>
<td></td>
<td></td>
<td>371.14</td>
</tr>
<tr>
<td>5</td>
<td>LAMINATION TO EXISTING CUPBOARD DOORS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Providing and Fixing Laminate up to 1 mm thick to front side of the existing doors, removing and refixing of doors and necessary hardware SS304 hinges 100 mm long, 2 Nos., 150 mm long SS tower bolts and cupboard lock, 2 Nos. 150mm long S.S handles including fixing the fixtures to door with required no. of screws, bolts and nuts, complete for finished item of work, including transport, material, lifting and laour charges,. (All the necessary hardware SS304 hinges 100 mm long, 2 Nos., 150 mm long SS tower bolts and cupboard lock, 2 Nos. 150mm long S.S handles including fixing the fixtures to door with required no. of screws, bolts and nuts, complete for finished item of work, including transport, material, lifting and laour charges,.</td>
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<td></td>
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<tr>
<td></td>
<td>Vindya Second Floor - E Sagu</td>
<td>Sqm</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>DOORS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Double Leaf Flush Door with Vision Panel (As per Drawing)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S.No</td>
<td>Description</td>
<td>Unit</td>
<td>Qty</td>
<td>Rate</td>
<td>Amount</td>
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<tr>
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<td>-----------------------------------------------------------------------------</td>
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<td>--------</td>
</tr>
<tr>
<td>1</td>
<td>SIZE : 1200x 2400mm(4x8')</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>No. of Leaves: 2</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Door Frame: 4” x 2 1/2 &quot; Thk 2nd Class BTC.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Shutter: 45mm thick Solid Core Flush door with Visoin Panel, Exposed Surface Finished with Approved Laminate</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Finish: 1mm thick approved Laminate finish.</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Hinge type: 4nos. SS Ball bearing Butt hinges for each shutter.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Hardware : DORMA or Equivalent</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Lockset: Dorma</td>
<td></td>
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<tr>
<td></td>
<td>Door handle - Dorma with key opening on the outside and thumb turn on inside;</td>
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</tr>
<tr>
<td></td>
<td>DORMA ‘TH’ Type 123</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Door Closer : Concealed type of DORMA ITS 96 2-4</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>DRIO DOWN Seal: / Dorma/h/Haffele</td>
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<tr>
<td></td>
<td>Security System: NA</td>
<td></td>
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<tr>
<td></td>
<td>All as per the design and instructions of the Architect/design incharge</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Vindya Second Floor - E Sagu</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td><strong>CONSTRUCTION PARTITION</strong></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Providing and making 100mm thick gyp still ULTRA stud partition, base frame made of48mm (.5mm thk) G1 vertical &amp; 50mm floor &amp; ceiling section 12.5 mm thk double layer gypsum board on both side including 50mm thk glass wool wrapped with RP tissue to be held in position G1 binding wire tied to G1 frame. All gaps/ holes should be close with Sealent.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Vindya Second Floor - E Sagu</td>
<td>Sqm</td>
<td>21.44</td>
<td></td>
<td>45.86</td>
</tr>
<tr>
<td></td>
<td>deduct</td>
<td></td>
<td>17.6</td>
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<td>2.52</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td></td>
<td>36.52</td>
<td></td>
<td></td>
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<tr>
<td>8</td>
<td>Door with vision panel (Acoustic) Size: 1050x 2400 mm.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Door frame:- Anodized aluminium frame 45x80mm. Make ; Alloy / cubic</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Shutter:- 38mm hollow core shutter with laminate finish</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Concealed door closer (Hafele 931.84.039/269 or equivalent make ) No.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S.No</td>
<td>Description</td>
<td>Unit</td>
<td>Qty</td>
<td>Rate</td>
<td>Amount</td>
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<td>------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>9</td>
<td><strong>Hinge</strong>: SS finish - Brass Butt hinge with Cylinder thickness not exceeding 6mm dia with necessary SS screws and hardware. (Janata/ Tara or equivalent make) No.4</td>
<td></td>
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<td></td>
<td>ML-1: SS matt finish Mortise door handle as selected by Architect/Interior Designer No.1</td>
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<td></td>
<td>300mm - Aluminum: Matt black finish Tower Bolt No.1</td>
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<td></td>
<td>SS Matt finish Cylinder with a key hole on front side and knob on the rear side of shutter as specified in detail. No.1</td>
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<td></td>
<td>12mm clear toughened glass for Vision panel of size 8’ x 12’. No.1</td>
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<td></td>
<td>Vindya Second Floor - E Sagu</td>
<td>Each</td>
<td>1</td>
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<td></td>
<td>Vindya Second Floor - E Sagu</td>
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<tr>
<td>10</td>
<td><strong>Pinup boards</strong></td>
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<td></td>
<td>Providing and fixing fabric wall covering with gripper profile on all around the fabric surface as per detail elevations for enclosed rooms. Fabric sample shall be approved by Design consultant or Project Architect. The Fabric covering shall be cladded over soft board and gripper conceal profile on all corners. The rate shall be inclusive of 4mm plywood backing required in schedule dry wall partition to mount soft board and gripper profile. The back support/plywood shall be placed below top layer of gypsum baord over GI frame work of drywall partition type.</td>
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<td>Sample of complete system from gripper along with soft board mock-up need to be done for Design consultant review and approval.</td>
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<td></td>
<td>Fabric Paneling- Base rate shall be 85/- sqft</td>
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<td></td>
<td>Vindya Second Floor - E Sagu</td>
<td>Sqm</td>
<td>11.52</td>
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<td></td>
<td></td>
<td>Sqm</td>
<td>7.2</td>
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<td></td>
<td></td>
<td>Sqm</td>
<td>2.88</td>
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<tr>
<td></td>
<td><strong>Total</strong></td>
<td></td>
<td></td>
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<td>21.6</td>
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</tbody>
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**TOTAL AMOUNT FOR INTERIOR FITOUT WORKS**