SBI INFRA MANAGEMENT SOLUTIONS PVT. LTD.

(A Wholly Owned Subsidiary of SBI)
CIRCLE OFFICE LUCKNOW
Local Head Office Lucknow, M.G. Marg Lucknow

Part–I
(Technical Bid)

SBIIMS INVITES TENDERS ON BEHALF OF SBI FOR PROPOSED SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF AIR CONDITIONERS AT VARIOUS BRANCHES IN UNDER ADMINISTRATIVE CONTROLE OF RBO-V, SBI A.O. ALLAHABAD (PRAYAGRAJ).

THROUGH E-TENDER
TENDER ID: LUC201906069

TENDER SUBMITTED BY:

NAME :

ADDRESS :

GSTIN NO:

DATE:
SBIIMS on behalf of SBI invites tenders in two bid system from the OEMs and /OR their Authorised dealer of Carrier/Hitachi/Daikin/Mitsubishi Heavy Industries/ Toshiba/Trane/ Blue Star/Voltas for Supply Installation Testing and Commissioning for various branches in SBI at it's various Branches in under administrative control of RBO-V, SBI A.O. Allahabad (Prayagraj).

Please enclose valid authorization certificate from the company for Uttar Pradesh along with the Technical Bid other wise tender shall be treated as rejected. Details of the tender are as under:

<table>
<thead>
<tr>
<th></th>
<th>Name of Work</th>
<th>Proposed Supply, Installation, Testing &amp; Commissioning of Air conditioning Works at it's various Branches in under administrative control of RBO-V, SBI A.O. Allahabad (Prayagraj).</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>Date and Time for downloading tender documents</td>
<td>Tender document is available for download from Date. 14.06.2019 to Date. 01.07.2019 at Bank’s website <a href="http://www.sbi.co.in">www.sbi.co.in</a> under “procurement News” section.</td>
</tr>
<tr>
<td>3.</td>
<td>Cost of Tender Documents</td>
<td>Rs3000/- (Rupees ten thousand (Non-Refundable) amount to paid through SBI collect payment portal available at SBI site <a href="https://www.onlinesbi.com">https://www.onlinesbi.com</a>, The print out of the receipt should be submitted with the technical bid.</td>
</tr>
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<td></td>
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<td>Process flow for tender fee payment.</td>
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<td></td>
<td></td>
<td>➢ Open website <a href="http://www.onlinesbi.com%3E">www.onlinesbi.com&gt;</a> select “SB Collect”&gt;Proceed will lead to next page &gt; select “All India” &gt;Select “Commercial services”&gt;Select “SBI Infra Management Solutions”&gt;select Tender Application fees” &gt; Enter “Tender ID”&gt; Next page will be ready for making payments.</td>
</tr>
<tr>
<td>4.</td>
<td>Earnest Money Deposit (EMD)</td>
<td>Rs. 12,500/- (Rupees twelve thousand five hundred Only) in the Form of Demand Draft/Banker’s Cheque issued by any Nationalised / Scheduled Bank Drawn in favour of “SBI Infra Management Solutions Pvt. Ltd.” Payable at Lucknow, which is to be submitted along with the Technical Bid in a separate envelope super scribing “EMD” EMD shall be converted into Retention Money for successful Contractor, whose tender is accepted.</td>
</tr>
<tr>
<td>5.</td>
<td>Initial Security Deposit (ISD)</td>
<td>2% of awarded value of work including EMD.</td>
</tr>
<tr>
<td>6.</td>
<td>Retention Money</td>
<td>5 % (Including EMD+ISD)</td>
</tr>
<tr>
<td>7.</td>
<td>Last date, time and Mode of submission of Technical Bid document along with Authorization Letter, Tender fees and</td>
<td>The signed and stamped copy of Technical bid along with following documents in sealed envelope should reach to us on or before Dt. 01.07.2019 up to 03:00 PM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The signed and stamped copy of Technical bid along with following documents in sealed envelope should</td>
</tr>
</tbody>
</table>
| **EMD.** | reach to us on or before Dated. **01.07.2019** up to 03:30 PM.  
1) Signed and stamped copies of complete Tender Document (technical bid).  
2) EMD  
3) Authorization letter from OEM if bidder is a dealership firm to participate in this tender. Also scan copy of the same letter must be mailed from the OEMs official mail id to our official mail id: headluc.sbiims@sbi.co.in on or before the due date & time of opening of technical Bid.  
4) Tender Fees  
5) Authorization letter mentioning the name of the representative having Digital Certificate Signature (DSC) valid for 3 months for participation in e-tender. |
| **Address at which the Technical bid are to be submitted** | The sealed envelope comprising all documents as stated above in Sr. No. 7 to be submitted to the following address and it should reach us on or before **01.07.2019 up to 03:30 PM**  
The Vice President(SBIIMS), SBI Infra Management Solutions Pvt. Ltd. Circle Office Lucknow, Sixth Floor, Local Head Office M. G. Marg, Hazratganj Lucknow.  
Tenders received without any one or more document mentioned above shall be rejected and such bidders shall not have allowed to participate in online bidding note. |
| **Date and time of opening of technical Bid** | **01.07.2019 up to 04:00 PM** |
| **Last date, time of submission of Price Bid.** | Date and time for submission of price bid will be informed to the qualified contractor separately after scrutiny of their Technical bid. |
| **Date, time of opening of Price Bid.** | Date and time for opening of price bid will be informed to the qualified contractor separately after scrutiny of their Technical bid. |
| **Place of opening of Online Price Bid.** | SBI Infra Management Solutions Pvt. Ltd. Circle Office Lucknow, Sixth Floor, Local Head Office M. G. Marg, Hazratganj Lucknow.  
The online price bid of those bidder shall be opened, who are qualified in Technical bid (Part-1). |
| **Completion period** | 5 weeks |
| **Validity for Offer** | 3 (Three) Months from The Date of Opening of Price-Bid. |
| **Commencement of Work** | Within a week after receiving of Work Order |
| **Defects Liability Period** | 12 Months (Twelve months) |
| **Payments terms** | No advance payment shall be made. After completion of the work Bill along with all test certificates/challan/and work done from concern Branch is to be submitted. |
20. The contractor shall submit the Technical in sealed bid system kept.
Part A- Technical bid cover shall contain the following documents forwarding letter.
1) Signed and stamped copies of complete Tender Document (technical bid).
2) EMD
3) Authorization letter from OEM if bidder is a dealership firm to participate in this tender.
   Also scan copy of the same letter must be mailed from the OEMs official mail id to our official mail id: headluc.sbiims@sbi.co.in on or before the due date & time of opening of technical Bid.
4) Tender Fees receipt to be submitted.
5) Authorization letter mentioning the name of the representative having Digital Certificate Signature (DSC) valid for 3 months for participation in e-tender.

21. After opening and scrutiny of technical bid, technically qualified bidders will be intimated for date and time of price bidding through e-tendering. Bank/sbiims also reserve right to conduct e-reverse auction for price bidding at its discretion.

22. Tenders can be downloaded from the bank’s website www.sbi.co.in(link)<Procurement News>. It shall be responsibility of the contractor to arrange and ensure that all pages of technical and financial bid are properly bound separately. Tenders in loose pages may be disqualified.

23. The contractor shall sign and stamp each page of the tender document thereby ensuring the number and sequence of all pages.

24. No conditions other than mentioned in the tender will be considered, and if given they will have to be withdrawn before opening of the price-bid.

25. The SBIIMS reserve their rights to accept or reject any or all the tenders, either in whole or in part without assigning any reason for doing so and any claim / correspondence shall be entertained in this regard.

26. Tenders received without EMD and Application Fees shall be summarily rejected and such tenders shall not be allowed to participate in the online price bidding process.
27. In case the date of opening of tenders is declared as a holiday, the tenders will be opened on the next working day at the same time.

28. SBIIMS has the right to accept / reject any / all tenders without assigning any reasons and no correspondence shall be entertained in this regard.

- The signed copies of technical Bid documents, tender fees, authorization Letter, Technical Specification sheet and EMD should be submitted in sealed envelope, failing which tender summarily rejected.
- Payments towards the above work shall be made by SBI.
- SBIIMS reserves the right to increase or decrease the quantum of services, manpower to be provided and also reserves the right to reject, cancel or revise or accept any or all the tenders or part of tenders without giving any reasons thereto.
- SBIIMS reserves its rights to accept/reject any/all tender without assigning any reasons whatsoever and to increase or decrease the quantities of any item and contractor has to execute the same at the rate quoted and no correspondence shall be entertained in this regard.
- Conditional tenders are liable for rejection.

➢ **BIDDERS ARE ADVISED TO PLAN SITE VISIT OF ALL BRANCHES WELL BEFORE DATE OF PRICE BIDDING BEFORE QUOTING THEIR RATES.**

VICE PRESIDENT(CIVIL)
SBIIMS, LUCKNOW
SECTION – 1

INSTRUCTIONS TO THE TENDERERS

1.0 Scope of work

Sealed Tenders are invited for Proposed Supply, Installation, Testing & Commissioning of Air conditioning Works at VARIOUS BRANCHES/OFFICES IN SBI at it’s various Branches in under administrative control of RBO-V, SBI A.O. Allahabad (Prayagraj)

1.1 Site and its location

The proposed work is to be carried out at SBI Branches under administrative control of RBO-V, Administrative Office Prayagraj (Allahabad). List of branches is provided in TABLE-I

2.0 Tender documents

2.1 The work has to be carried out strictly according to the conditions stipulated in the tender consisting of the following documents and the most workmen like manner.

Instructions to tenderers, General conditions of Contract, Special conditions of Contract Priced bid

2.2 The above documents shall be taken as complementary and mutually explanatory of one another but in case of ambiguities or discrepancies, shall take precedence in the order given below:
   a) Price Bid
   b) Technical specifications
   c) Special conditions of contract
   d) General conditions of contract
   e) Instructions to Tenderers

2.3 Complete set of tender documents including relative drawings can be downloaded from the website www.sbi.co.in

2.4 The tender documents are not transferable.

3.0 Site Visit
3.1 The tenderer must obtain himself on his own responsibility and his own expenses all information and data that may be required for the purpose of filling this tender document and enter into a contract for the satisfactory performance of the work. The tenderer is requested satisfy himself regarding the availability of water, power, transport and communication facilities, the character quality and quantity of the materials, labour, the law and order situation, climatic conditions local authorities requirement, traffic regulations etc;

The tenderer will be fully responsible for considering the financial effect of any or all the factors while submitting his tender.

4.0 Earnest Money:

4.1 The tenderers are requested to submit the Earnest Money of Rs 12500/- (Twelve Thousand five hundred only) by means of Demand Draft / Pay Order (Valid for a period of 180 Days from the last date of submission of the tender) from any scheduled Nationalized Bank drawn in favour of SBI Infra Management Solutions Pvt. Ltd. and payable at Lucknow.

4.2 EMD in any other form other than as specified above will not be accepted. Tender not accompanied by the EMD in accordance with clause 4.1 above shall be rejected.

4.3 No interest will be paid on the EMD.

4.4 EMD of unsuccessful tenderer will be refunded within 30 days of award of Contract.

4.5 EMD of successful tenderer will be retained as a part of security deposit.

5.0 Initial/ Security Deposit

The successful tenderer will have to submit a sum equivalent to 2% of accepted tender value less EMD by means of DD drawn in favour of SBI Infra Management Solutions Pvt. Ltd. and payable at Lucknow within a period of 15 days of acceptance of tender.

6.0 Security Deposit

6.1 Total security deposit shall be 5% of contract value. Out of this 2% of contract value is in the form of Initial Security Deposit (ISD) which includes the EMD. Balance 3% shall be deducted from the running account bill of the work at the rate of 10% of the respective running account bill i.e., deduction from each running bill account will be @ 10% till Total Security Deposit (TSD) including ISD reaches to 5% of contract value. The 50% of the Total Security Deposit shall be paid to the contract on the basis of architect’s certifying the virtual completion. The balance 50% would be paid to the contractors after the defects liability period as specified in the contract.

7.0 Signing of contract Documents
The successful tenderer shall be bound to implement the contract by signing an agreement and conditions of contract attached herewith within 15 days from the receipt of intimation of acceptance of the tender by the Bank. However, the written acceptance of the tenders by the Bank will constitute a binding agreement between the Bank and successful tenderer whether such formal agreement is subsequently entered into or not.

8.0 Completion Period

Time is essence of the contract. The work should be completed in all respect accordance with the terms of contract within a period of 5 weeks days from the date of award of work.

9.0 Validity of tender

Tenders shall remain valid and open for acceptance for a period of 90 days from the date of opening price bid. If the tenderer withdraws his/her offer during the value period or makes modifications in his/her original offer which are not acceptable to Bank without prejudice to any other right or remedy the Bank shall be at liberty forfeit the EMD.

10.0 Liquidated Damages

The liquidated damages shall be 0.50% per week subject to a maximum of 5% of contract value.

11.0 Rate and prices:

11.1 In case of item rate tender

11.1.1 The tenderers shall quote their rates for individual items both in words and figure. In case of discrepancy between the rate quoted in words and figures, the unit rate quantity in words will prevail. If no rate is quoted for a particular item the contractor shall not be paid for that item when it is executed.

The amount of each item shall be calculated and the requisite total is given. In case of discrepancy between the unit rate and the total amount calculated from multiplication of unit rate and the quantity the unit rate quoted will govern and the amount will be corrected.

11.1.2 The tenderers need not quote their rates for which no quantities have been given. In case the tenderers quote their rates for such items those rates will be ignored and will not be considered during execution.

11.1.3 The tenderers should not change the units as specified in the tender. If any unit is changed the tenders would be evaluated as per the original unit and the contractor would be paid accordingly.
The tenderer should not change or modify or delete the description of the item. If any discrepancy is observed he should immediately bring to the knowledge of the Architect/ SBIIMS Pvt. Ltd.

11.1.4 Each page of the BOQ shall be signed by the authorized person and cutting or overwriting shall be duly attested by him.

11.1.5 Each page shall be totalled and the grand total shall be given.

11.1.6 The rate quoted shall be firm and shall include all costs, allowances, taxes, levies. except GST which shall be paid separately as per prevailing rates.

11.1.7 The SBIIMS Pvt. Ltd. reserve their rights to accept any tenders, either in whole or in part or may entrust the work in phases or may drop the part scope of work at any stage of the project within its sole discretion without assigning any reason(s) for doing so and no claim / correspondence shall be entertained in this regard.

11.1.8 In case it is decided by the SBIIMS Pvt. Ltd. to drop one or more buildings from the scope of work at any stage of the project, the contractor shall not be entitled to raise any claim/compensation for such deleted scope of work. Also, the SBIIMS Pvt. Ltd. may consider issuing work order for various buildings in phases but within a reasonable time interval and the contractor shall be bound to execute the same within the stipulated time period and as per rates quoted by them in this tender without any claim for price escalation.

SIGNATURE OF THE CONTRACTOR

WITH SEAL
GENERAL CONDITIONS OF CONTRACT

1.0 Definitions

“Contract” means the documents forming the tender and the acceptance thereof and the formal agreement executed between SBIIMS and the contractor, together with the documents referred therein including these conditions, the specifications, designs, drawings and instructions issued from time to time by the Architects/SBIIMSI and all these, documents taken together shall be deemed to form one contract and shall be, complementary to one another.

1.1 In the contract the following expressions shall, unless the context otherwise requires, have the meaning hereby respectively assigned to them.

1.1.1 ‘SBI’ shall mean State Bank of India (client) a body Corporate created under SBI Act 1955, having its Corporate Centre at State Bank Bhavan, Madame Cama Road, Mumbai 400021 and SBI Infra Management Solutions Pvt. Ltd. (SBIIMS), its wholly owned subsidiary having Head Office at Raheja Chambers, Free press Journal Marg, Nariman Point Mumbai 21 and includes the client’s representatives, successors and assigns.

1.1.2 ‘Architects/Consultants’ shall mean M/s. SBIIMS

1.1.3 ‘Site Engineer’ shall mean an Engineer appointed by the Bank as their representative to give instructions to the contractors.

1.1.4 ‘The Contractor’ shall mean the individual or firm or company whether incorporated or not, undertaking the works and shall include legal personal representative of such individual or the composing the firm or company and the permitted assignees of such individual or firms of company.

1.1.5 The expression ‘works’ or ‘work’ shall mean the permanent or temporary work described in the ‘Scope of Work” and/or to be executed in accordance with the contract and includes materials, apparatus, equipment, temporary supports, fittings and things of all kinds to be provided, the obligations of the contractor hereunder and work to be done by the contractor under the contract.

1.1.6 ‘Engineer’ shall mean the representative of the SBIIMS/Architect/consultant.

1.1.7 ‘Drawings’ shall mean the drawings prepared by the Architects and issued by the Engineer and referred to in the specifications and any modifications of such drawings as may be issued by the Engineer from time to time ‘Contract value shall mean the value of the entire work as stipulated in the letter of acceptance of tender subject to such additions
thereto or deductions there from as may be made under the provision herein after contained.

1.1.8 ‘Specifications’ shall mean the specifications referred to in the tender and any modifications thereof as may time to time be furnished or approved by the architect/consultant “Month” means calendar month.

1.1.9 “Week” means seven consecutive days.

1.1.10 “Day” means a calendar day beginning and ending at 00 Hrs and 24 hrs respectively.

CLAUSES:

1.0 Total Security Deposit
Total Security deposit comprise of:
• Earnest Money Deposit
• Initial Security Deposit
• Retention Money

a) Earnest Money Deposit:

The tenderer shall furnish EMD of Rs.12500 /-(Rupees Twelve thousands five hundreds only) in the form of Demand draft or bankers cheque drawn in favour of SBI Infra Management Solutions Pvt. Ltd., payable at “Lucknow” on any Scheduled Bank. No tender shall be considered unless the EMD is so deposited in the required form. No interest shall be paid on this EMD. The EMD of the unsuccessful tenderer shall be refunded within 30 days after the decision to award the contract is taken without interest. The EMD shall stand absolutely forfeited if the tenderer revokes his tender at any time during the period when he is required to keep his tender open for acceptance by the SBI or after it is accepted by the SBI the contractor fails to enter into a formal agreement or fails to pay the initial security deposit as stipulated or fails to commence the work within the stipulated time.

b) Initial Security Deposit (ISD):

The amount of ISD shall be 2% of accepted value of tender including the EMD. Balance of ISD (i.e. excluding EMD) is to be submitted in the form of D/D drawn on any scheduled Bank and shall be deposited within 15 days from the date of letter of acceptance of tender.

SECURITY DEPOSIT:

Total security deposit shall be 5% of the final value of the work. Out of this 2% of tender value (i.e. tender amount) is in the form of initial security deposit(ISD) which includes the EMD. Balance security deposit (i.e. 5% of final value of work less 2% of tender value already deposited as ISD) towards the work shall be deducted from the final bill of the work as Retention money. 5% of the retention money shall be paid after the defects liability period of 1 Year as specified in the contract. 50% of the total security i.e.2.5% of the final value of work shall be paid to the contractors on the basis of Project engineer-in-charge certifying the
virtual completion and its approval by SBIIMS. The balance 50% i.e. 2.5% of final value of work would be returned to the contractors after the defects liability period as specified in the contract. The retention money will be interest free.

c) Retention Money
Total security deposit shall be 5% of the final value of the work. Out of this 2% of tender value (i.e. tender amount) is in the form of initial security deposit(ISD) which includes the EMD. Balance security deposit (i.e. 5% of final value of work less 2% of tender value already deposited as ISD) towards the work shall be deducted from the running account bill of the work as Retention money at the rate of 10% of the respective running account bill i.e. deduction from each running bill account will be 10% till total 5% of final value of work as per final bill is reached. 50% of the total security i.e.2.5% of the final value of work shall be paid to the contractors on the basis of Project Engineer-in-Charge certifying the virtual completion and its approval by SBIIMS. The balance 50% i.e. 2.5% of final value of work would be paid to the contractors after the defects liability period as specified in the contract and after satisfactory completion of CVC Audit. In case CVC Audit is not conducted, 1.25% of final value of work will be retained for a maximum period of further one year (w.e.f. completion of defect liability period).

2.0 Language Errors, Omissions and Discrepancies

In case of errors, omissions and/or disagreement between written and scaled dimensions on the drawings or between the drawings and specifications etc, the following order shall apply.

i) Between scaled and written dimension (or description) on a drawing, the latter shall be adopted.
ii) Between the written or shown description or dimensions in the drawings and the corresponding one in the specification the former shall be taken as correct.
iii) Between written description of the item in the specifications and descriptions in bills of quantities of the same item, the latter shall be adopted.
iv) In case of difference between rates written in figures and words, the rate in words shall prevail.
v) Between the duplicate/subsequent copies of the tender, the original tender shall be taken as correct.

3.0 Scope of Work

The contractor shall carry out, complete and maintain the said work in every respect strictly in accordance with this contract and with the directions of and to the satisfaction of the SBIIMS /architect/consultant. The SBIIMS/ architect/consultant at the directions of the Bank from time to time issue further drawings and/or written instructions, details directions and explanations which are hereafter collectively referred to as SBIIMS/Architect’s/Consultant’s instructions in regard to : the variation or modification of the design, quality or quantity of work or the addition or omission or substitution of any work, any discrepancy in the drawings or between the BOQ and/or drawings and/or specifications, the removal from the site of any material brought thereon by the contractor and the substitution of any other materials thereof, the demolition, removal and/or re-execution of any work executed by him, the dismissal from the work of any person employed/engaged thereupon.
4.0 (i) Letter of Acceptance

Within the validity period of the tender the SBIIMS shall issue a letter of acceptance either directly or through the architect by registered post/e-mail/speed post or otherwise depositing at the address of the contractor as given in the tender to enter into a Contract for the execution of the work as per the terms of the tender. The letter of acceptance shall constitute a binding contract between the SBIIMS and the contractor.

ii) Contract Agreement

On receipt of intimation of the acceptance of tender from the SBIIMS/Architect the successful tenderer shall be bound to implement the contract and within fifteen days thereof, he shall sign an agreement in a non-judicial stamp paper of appropriate value (as per the Article of Agreement format earlier given in this document) with SBIIMS.

5.0 Ownership of drawings

All drawings, specifications and copies thereof furnished by the SBIIMS, through its architect/consultants are the properties of the SBIIMS. They are not to be used on other work.

6.0 Detailed drawings and instructions

The SBIIMS through its architects/consultants shall furnish with reasonable promptness additional instructions by means of drawings or otherwise necessary for the proper execution of the work. All such drawings and instructions shall be consistent with the contract documents, true developments thereof and reasonably inferable there from. The work shall be executed in conformity therewith and the contractor shall prepare a detailed programme schedule (i.e. BAR/PERT Chart) indicating therein the date of start and completion of various activities on receipt of the work order and submit the same to the SBIIMS through the Architect/Consultant.

7.0 Copies of Agreement:

Out of Six copies, two copies of agreement/tender document duly signed by both the parties with the drawings shall be handed over to the contractors, two copies to SBI and one copy each shall be for the use of SBIIMS and Architect.

8.0 Liquidated Damages:

If the contractor fails to maintain the required progress in terms of clause 29 of GCC or to complete the work and clear the site including vacating their office on or before the contracted or extended date or completion without justification in support of the cause of delay, he may be called upon without prejudice to any other right of remedy available under the law to the SBI on account of such breach to pay a liquidated damages at the rate of 0.5% of the final value of work per week subject to a maximum of 5% of the final value of work.

9.0 Materials, Appliances and Employees
Unless or otherwise specified the contractor shall provide and pay for all materials, labour, water, power, tools, equipment transportation and any other facilities that are required for the satisfactory execution and completion of the work. Unless or otherwise specified all materials shall be new and both workmanship and materials shall be best quality. The contractor shall at all times enforce strict discipline and good order among his employees/workers and shall not employ on the work any unfit person/worker or anyone not skilled in the work assigned to him. Workman whose work or behaviour is found to be unsatisfactory by the SBIIMS /Architect, he shall be removed from the site immediately.

10.0 Permits, Laws and Regulations

Permits and licences required for the execution of the work shall be obtained by the contractor at his own expenses. The contractor shall give notices and comply with the regulations, laws/ labour laws, and ordinances rules, applicable to the contractor. If the contractor observes any discrepancy between the drawings and specifications, he shall promptly notify the SBIIMS in writing under intimation of the Architect/Consultant. If the contractor performs any act which is against the law, rules and regulations he shall meet all the costs arising there from and shall indemnify the SBIIMS any legal actions arising there from.

11.0 Setting out Work

The contractor shall set out the work and shall be responsible for the true and perfect setting out of the same and for the correctness of the positions, levels, dimensions, and alignment of all parts thereof and get it approved by the architect/consultant before proceeding with the work. If at any time any error in this respect shall appear during the progress of the works, irrespective of the fact that the layout had been approved by the architect/consultant the contractor shall be responsible for the same and shall at his own expenses rectify such error, if so, required to satisfaction of the SBIIMS.

12.0 Protection of works and property

The contractor shall continuously maintain adequate protection, of all his work from damage and shall protect the SBI’s properties from injury or loss arising in connection with contract. He shall make good any such damage, injury, loss due to his fault or negligence except which are due to causes beyond his control. He shall take adequate care and steps for protection of the adjacent properties. The contractor shall take all precautions for safety and protection of his employees on the works and shall comply with all applicable provisions of Government and local bodies’ safety laws and relevant building codes to prevent accidents, or injuries to persons or property of about or adjacent to his place of work. The contractor shall take insurance covers as per clause 25.0 at his own cost. The policy may be taken in joint names of the contractors and the SBIIMS and the original policy may be lodged with the SBIIMS.

13.0 Inspection of Work

SBIIMS/SBI/Architect/Consultant or their representatives shall at all reasonable time have free access to the work site and/or to the workshop, factories or other places where
materials are lying or from where they are obtained and the contractor shall give every
facility to the SBIIMS /SBI/Architect/Consultant and their representatives necessary for
inspection and examination and test of the materials and workmanship. No person unless
authorized by the SBIIMS /SBI/Architect/Consultant except the representative of Public
authorities shall be allowed on the work at any time. The proposed work either during its
construction stage or its completion can also be inspected by the Chief Technical
Examiner’s organization a wing of Central Vigilance Commission.

14.0 Assignment and subletting

The whole of work included in the contract shall be executed by the contractor and he shall
not directly entrust and engage or indirectly transfer assign or underlet the contract or any
part or share thereof or interest therein without the written consent of the SBIIMS /SBI
through the architect and no undertaking shall relieve the contractor from the responsibility
of the contractor from active superintendence of the work during its progress.

15.0 Quality of Materials, Workmanship & Test

All materials and workmanship shall be best of the respective kinds described in the contract
and in accordance with SBIIMS/Architect's instructions and shall be subject from time to
time to such tests as the SBIIMS /Architect may direct at the place of manufacture or
fabrication or on the site or an approved testing laboratory.

The contractor shall provide such assistance, instruments, machinery, labour and materials.
Contractor to made arrangement of laboratory on site, where weight of various materials like
aluminium extrusions etc. can be done, Contractor should also make available a 3.00 meter,
15.00 meters & a 50.00 meters tape, a Vernier Calliper & Micrometre so any measurements/
tests can be taken on sites itself.

(ii) Samples

All samples of adequate numbers, size, shades & pattern as per specifications shall be
supplied by the contractor without any extra charges. If certain items proposed to be used
are of such nature that samples cannot be presented or prepared at the site detailed
literature/test certificate of the same shall be provided to the satisfaction of the
SBIIMS/Architect. Before submitting the sample/literature the contractor shall satisfy himself
that the material/equipment for which he is submitting the samples/literature meet with the
requirement of tender specification. Only when the samples are approved in writing by the
SBIIMS /Architect the contractor shall proceed with the procurement and installation of the
particular material/equipment.

The approved samples shall be signed by the SBIIMS. /Architect for identification and shall
be kept on record at site office until the completion of the work for inspection/comparison at
any time. The SBIIMS/Architect shall take reasonable time to approve the sample. Any
delay that might occur in approving the samples for reasons of its not meeting the
specifications or other discrepancies inadequacy in furnishing samples of best qualities from
various manufacturers and such other aspects causing delay on the approval of the
materials/equipment etc. shall be to the account of the contractor.
(iii) Cost of tests

a) The cost of making any test shall be borne by the contractor if such test is intended by or provided for in the specifications or BOQ.

(iv) Cost of test not provided for

If any test is ordered by the SBIIMS/Architect which is either:
(a) If so intended by or provided for or (in the cases above mentioned) is not so particularized or through so intended or provided for but ordered by the SBIIMS/Architect which is either to be carried out by an independent person at any place other than the site or the place of manufacture or fabrication of the materials tested or any Government/approved laboratory, then the cost of such test shall be borne by the contractor.

16.0 Obtaining Information related to execution of work

No claim by the contractor for additional payment shall be entertained which is consequent upon failure on his part to obtain correct information as to any matter affecting the execution of the work nor any misunderstanding or the obtaining incorrect information or the failure to obtain correct information relieve him from any risks or from the entire responsibility for the fulfilment of contract.

17.0 Contractor’s superintendence

The contractor shall give necessary personal superintendence during the execution of the works and as long, thereafter, as the SBIIMS/Architect may consider necessary until the expiry of the defects liability period, stated hereto.

18.0 Quantities

i) The bill of quantities (BOQ) unless or otherwise stated shall be deemed to have been prepared in accordance with the Indian Standard Method of Measurements. The rate quoted shall remain valid for variation of quantity against individual item to any extent subject to maximum variation of the contract value by 25%. The entire amount paid under Clause 20 hereof as well as amounts of prime cost and provisional sums, if any, shall be excluded.

ii) Variation exceeding 25%: The items of work executed in relation to variation exceeding 25% shall be paid on the basis of provisions of clause 21(e) hereof.

19.0 Works to be measured

The SBIIMS/SBI/Architect may from time to time intimate to the contractor that he required the work to be measured and the contractor shall forthwith attend or send a qualified representative to assist the SBIIMS/SBI/Architect in taking such measurements and calculation and to furnish all particulars or to give all assistance required by any of them.
Such measurements shall be taken in accordance with the Mode of measurements detailed in the specifications. The representative of the SBIIMS/SBI/ Architect shall take joint measurements with the contractor’s representative and the measurements shall be entered in the measurement book.

The contractor or his authorized representative shall sign all the pages of the measurement book in which the measurements have been recorded in token of his acceptance. All the corrections shall be duly attested by both representatives. No over writings shall be made in the measurement book. Should the contractor not attend or neglect or omit to depute his representative to take measurements then the measurements recorded by the representative of the SBIIMS/SBI/ Architect shall be final. All authorized extra work, omissions and all variations made shall be included in such measurements.

20.0 Variations:

No alteration, omission or variation ordered in writing by the SBIIMS /SBI/Architect shall vitiate the contract. In case the SBIIMS /SBI/Architect thinks proper at any time during the progress of works to make any alteration in, or additions to or omission from the works or any alteration in the kind or quality of the materials to be used therein, the Architect/Consultant shall give notice thereof in writing to the contractor or shall confirm in writing within seven days of giving such oral instructions the contractor shall alter to, add to, or omit from as the case may be in accordance with such notice but the contractor shall not do any work extra to or make any alteration or additions to or omissions from the works or any deviation from any of the provisions of the contract, stipulations, specifications or contract drawings without previous consent in writing of the Architect/Consultant and the value of such extras, alterations, additions or omissions shall in all cases be determined by the Architect/Consultant and the same shall be added to or deducted from the contract value, as the case may be.

21.0 Valuation of Variations

No claim for an extra shall be allowed unless it shall have been executed under the authority of the SBIIMS/Architect with the concurrence of the SBI as herein mentioned. Any such extra is herein referred to as authorized extra and shall be made in accordance with the following provisions.

i) The net rates or prices in the contract shall determine the valuation of the extra work where such extra work is of similar character and executed under similar conditions as the work priced herein.

ii) Rates for all items, wherever possible should be derived out of the rates given in the priced BOQ.

b) The net prices of the original tender shall determine the value of the items omitted, provided if omissions do not vary the conditions under which any remaining items of works are carried out, otherwise the prices for the same shall be valued under sub clause (c) hereunder.
c) Where the extra works are not of similar character and/or executed under similar conditions as aforesaid or where the omissions vary the conditions under which any remaining items or works are carried out, then the contractor shall within 7 days of the receipt of the letter of acceptance inform the SBIIMS/Architect of the rate which he intends to charge for such items of work, duly supported by analysis of the rate or rates claimed and the SBIIMS/Architect shall fix such rate or prices as in the circumstances in his opinion are reasonable and proper, based on the market rate.

d) Where extra work cannot be properly measured or valued the contractor shall be allowed day work prices at the net rates stated in the tender of the BOQ or, if not, so stated then in accordance with the local day work rates and wages for the district; provided that in either case, vouchers specifying the daily time (and if required by the SBIIMS /SBI/Architect) the workman’s name and materials employed be delivered for verifications to the Architect/Consultant at or before the end of the week following that in which the work has been executed.

e) It is further clarified that for all such authorized extra items where rates cannot be derived from the tender, the contractor shall submit rates duly supported by rate analysis worked on the “market rate basis” for material, labour, hire/running charges of equipment and wastages etc. plus 15% towards establishment charges, contractor’s overheads and profit. Such items shall not be eligible for escalation.

22.0 Final Measurement:

The measurement and valuation in respect of the contract shall be completed within one month of the virtual completion of the work.

23.0 Virtual Completion Certificate (VCC)

On successful completion of entire works covered by the contract to the full satisfaction of the SBIIMS/SBI, the contractor shall ensure that the following works have been completed to the satisfaction of the SBIIMS /SBI

a) Clear the site of all scaffolding, wiring, pipes, surplus materials, contractor’s labour, equipment and machinery.

b) Demolish, dismantle and remove the contractor’s site office, temporary works, structures including labour sheds/camps and constructions and other items and things whatsoever brought upon or erected at the site or any land allotted to the contractor by the SBI and not incorporated in the permanent works.

c) Remove all rubbish, debris etc from the site and the land allotted to the contractor by the SBI and shall clear, level and dress, compact the site as required by the SBI.

d) Shall put the SBIIMS /SBI in undisputed custody and possession of the site and all land allotted by the SBI.

e) Shall hand over the work in a peaceful manner to the SBIIMS /SBI.
f) All defects/imperfections have been attended and rectified as pointed out by the SBIIMS /SBI to the full satisfaction of SBIIMS /SBI. Upon the satisfactory fulfilment by the contractor as stated above, the contractor shall be entitled to apply to the Architect / Consultant for the certificate. If the SBIIMS/Architect/Consultant is satisfied of the completion of the work, relative to which the completion certificate has been sought, the SBIIMS/Architect/Consultant shall within fourteen (14) days of the receipt of the application for virtual completion certificate, issue a VCC in respect of the work for which the VCC has been applied. This issuance of a VCC shall be without prejudice to the SBIIMS /SBI’s rights and contractor’s liabilities under the contract including the contractor’s liability for defects liability period nor shall the issuance of VCC in respect of the works or work at any site be construed as a waiver of any right or claim of the SBIIMS against the contractor in respect of works or work at the site and in respect of which the VCC has been issued.

24.0 Work by other agencies

The SBIIMS /SBI/Architect reserves the rights to use premises and any portion of the site for execution of any work not included in the scope of this contract which it may desire to have carried out by other persons simultaneously and the contractor shall not only allow but also extend reasonable facilities for the execution of such work. The contractor however shall not be required to provide any plant or material for the execution of such work except by special arrangement with the SBIIMS /SBI. Such work shall be carried out in such manners not to impede the progress of the works included in the contract.

25.0 Insurance of Works

25.1 Without limiting his obligations and responsibilities under the contract the contractor shall ensure in the joint names of the SBIIMS and the contractor against all loss or damages from whatever cause arising other than the excepted risks, for which he is responsible under the terms of contract and in such a manner that the SBIIMS and contractor are covered for the period stipulated in clause 27 & 28 of GCC and are also covered during the period of maintenance for loss or damage arising from a cause, occurring prior to the commencement of the period of maintenance and for any loss or damage occasioned by the contractor in the course of any operations carried out by him for the purpose of complying with his obligations under clause.

a) The works for the time being executed to the estimated current Contract value thereof, or such additional sum as may be specified together with the materials for incorporation in the works at their replacement value.

b) The constructional plant and other things brought on to the site by the contractor to the replacement value of such constructional plant and other things.

c) Such insurance shall be affected with an insurer and in terms approved by the SBIIMS which approval shall not be unreasonably withheld and the contractor shall whenever required produce to the SBIIMS/Architect the policy of insurance and the receipts for payment of the current premiums.

25.2 Damage to persons and property
The contractor shall, except if and so far as the contract provides otherwise indemnify the SBIIMS against all losses and claims in respect of injuries or damages to any person or material or physical damage to any property whatsoever which may arise out of or in consequence of the execution and maintenance of the works and against all claims proceedings, damages, costs, charges and expenses whatsoever in respect of or in relation thereto except any compensation of damages for or with respect to:

a) The permanent use or occupation of land by or any part thereof.

b) The right of SBIIMS /SBI to execute the works or any part thereof, on, over, under, in or through any lands.

c) Injuries or damages to persons or properties which are unavoidable result of the execution or maintenance of the works in accordance with the contract.

d) Injuries or damage to persons or property resulting from any act or neglect of the SBIIMS /SBI, their agents, employees or other contractors not being employed by the contractor or in respect of any claims, proceedings, damages, costs, charges and expenses in respect thereof or in relation thereto or where the injury or damage was contributed to by the contractor, his servants or agents such part of the compensation as may be just and equitable having regard to the extent of the responsibility of the SBIIMS /SBI, their employees, or agents or other employees, or agents or other contractors for the damage or injury.

25.3 Contractor to indemnify SBIIMS /SBI
The contractor shall indemnify the SBIIMS /SBI against all claims, proceedings, damages, costs, charges and expenses in respect of the matters referred to in the provision subclause 25.2 of this clause.

25.4 Contractor’s superintendence
The contractor shall fully indemnify and keep indemnified the SBIIMS/SBI against any action, claim, or proceeding relating to infringement or use of any patent or design or any alleged patent or design rights and shall pay any royalties which may be payable in respect of any article or part thereof included in the contract. In the event of any claim made under or action brought against SBIIMS /SBI in respect of such matters as aforesaid the contractor shall be immediately notified thereof and the contractor shall be at liberty, at his own expenses to settle any dispute or to conduct any litigation that may arise there from, provided that the contractor shall not be liable to indemnify the SBIIMS /SBI if the infringement of the patent or design or any alleged patent or design right is the direct result of an order passed by the SBIIMS/SBI/Architect in this behalf.

25.5 Third Party Insurance
25.5.1 Before commencing the execution of the work the contractor but without limiting his obligations and responsibilities under clause 25 of GCC shall insure against his liability for any material or physical damage, loss, or injury which may occur to any property including that of SBI, or to any person, including any employee of the SBIIMS/SBI, by or arising out of the execution of the works or in the carrying out of the contract, otherwise than due to the matters referred to in the provision to clause 25 thereof.
25.5.2 Minimum Amount of Third Party Insurance

Such insurance shall be affected with an insurer and in terms approved by the SBIIMS/SBI which approval shall not be reasonably withheld and for at least the amount stated below. The contractor shall, whenever required, produce to the SBIIMS/SBI/Architect the policy or policies of insurance cover and receipts for payment of the current premiums. The minimum insurance cover for physical property, injury, and death is Rs.5.0 lacs per occurrence with the number of occurrences limited to four. After each occurrence contractor will pay additional premium necessary to make insurance valid for four occurrences always.

25.7 Accident or Injury to Workmen

25.7.1 The SBIIMS/SBI shall not be liable for or in respect of any damages or compensation payable at law in respect or in consequence of any accident or injury to any workmen or other person in the employment of the contractor or any sub-contractor, save and except an accident or injury resulting from any act or default of the SBIIMS/SBI or their agents, or employees. The contractor shall indemnify and keep indemnified SBIIMS/SBI against all such damages and compensation, save and except as aforesaid and against all claims, proceedings, costs, charges and expenses whatsoever in respect thereof or in relation thereto this sub-clause shall be satisfied if the sub-contractor shall have insured against the liability in respect of such persons in such manner that SBIIMS/SBI is indemnified under the policy but the contractor shall require such sub-contractor to produce to the SBIIMS/SBI/Architect when required such policy of insurance and the receipt for the payment of the current premium.

25.7.2 Insurance against accidents etc to workmen

The contractor shall insure against such liability with an insurer approved by the SBIIMS/SBI during the whole of the time any person employed by him on the works and shall, when required, produce to the architect/consultant such policy of insurance and receipt for payment of the current premium. Provided always that, in respect of any persons employed by any sub-contractor the contractor’s obligation to insure as aforesaid under this sub-clause shall be satisfied if the sub-contractor shall have insured against the liability in respect of such persons in such manner that SBIIMS/SBI is indemnified under the policy but the contractor shall require such sub-contractor to produce to the SBIIMS/SBI/Architect when required such policy of insurance and the receipt for the payment of the current premium.

Remedy on Contractor’s failure to insure

If the contractor fails to effect and keep in force the insurance referred to above or any other insurance which he may be required to effect under the terms of contract, then and in any such case the SBI may effect and keep in force any such insurance and pay such premium or premiums as may be necessary for that purpose and from time to time deduct the amount so paid by the SBI as aforesaid and also deduct 15% of contract value from any amount due or which may become due to the contractor, or recover the same as debt from the contractor. Without prejudice to the other rights of the SBIIMS/SBI against contractors, in respect of such default, the SBI shall be entitled to deduct from any sums payable to the
contractor the amount of any damages costs, charges, and other expenses paid by the SBI and which are payable by the contractors under this clause. The contractor shall upon settlement by the insurer of any claim made against the insurer pursuant to a policy taken under this clause, proceed with due diligence to rebuild or repair the works destroyed or damaged. In this event all the monies received from the insurer in respect of such damage shall be paid to the contractor and the contractor shall not be entitled to any further payment in respect of the expenditure incurred for rebuilding or repairing of the materials or goods destroyed or damaged.

26.0 Commencement of Works

The date of commencement of the work will be reckoned as the recorded date of handing over site by the SBIIMS/SBI or 7 days from the date of receipt of Letter of Acceptance from SBIIMS, whichever is later.

27.0 Time for completion

Time is the essence of the contract and shall be strictly observed by the contractor. The entire work shall be completed within a period of 1 calendar month from the date of commencement. If required in the contract or as directed by the SBIIMS/Architect, the contractor shall complete certain portions of work before completion of the entire work. However, the completion date shall be reckoned as the date by which the whole work is completed as per the terms of the contract.

28.0 Extension of Time

If, in the opinion of the Architect/Consultant, the work be delayed for reasons beyond the control of the contractor, the Architect/Consultant may submit a recommendation to the SBIIMS to grant a fair and reasonable extension of time for completion of work as per the terms of contract. If the contractor needs an extension of time for the completion of work or if the completion of work is likely to be delayed for any reasons beyond the due date of completion as stipulated in the contract, the contractor shall apply to the SBIIMS through the Architect/Consultant in writing at least 15 days before the expiry of the scheduled time and while applying for extension of time he shall furnish the reasons in detail and his justification if any, for the delays. The architect/consultant shall submit their recommendations to the SBIIMS in the prescribed format for granting extension of time. While granting extension of time the contractor shall be informed the period extended time which will qualify for levy of liquidated damages. For the balance period in excess of original stipulated period and duly sanctioned extension of time by the SBIIMS the provision of liquidated damages as stated under clause 8 of GCC shall become applicable. Further contract shall remain in force even for the period beyond the due date of completion irrespective whether the extension is granted or not.

29.0 Rate of progress:

Whole of the materials, plant and labour to be provided by the contractor and the mode, manner and speed of execution and maintenance of the works are to be of a kind and conducted in a manner to the satisfaction of the SBIIMS/SBI/Architect. Should the rate of
progress of the work or any part thereof be at any time be in the opinion of the SBI/Architect too slow to ensure the completion of the whole of the work by the prescribed time or extended time for completion the SBI/Architect shall thereupon take such steps as considered necessary to expedite progress so as to complete the works by the prescribed time or extended time. Such communications from the SBI/Architect neither shall relieve the contractor from fulfilling obligations under the contract nor he shall be entitled to raise any claims arising out of such directions.

30.0 Work during nights and holidays

Subject to any provision to the contrary contained in the contract no permanent work shall save as herein provided be carried on during the night or on holidays without the permission in writing of the SBI/Architect, save when the work is unavoidable or absolutely necessary for the saving of life or property or for the safety of the work in which case the contractor shall immediately advise the SBI/Architect. However the provision of the clause shall not be applicable in the case of any work which becomes essential to carry by rotary or double shifts in order to achieve the progress and quality of the part of the works being technically required and continued with the prior approval of the SBI/Architect at no extra cost to the SBI.

All work at night after obtaining approval from competent authorities shall be carried out without unreasonable noise and disturbance so as to avoid disputes with the neighbours.

31.0 No compensation for restrictions of work

If at any time after acceptance of the tender SBI shall decide to abandon or reduce the scope of work for any reason whatsoever and hence not require the whole or any part of the work to be carried out, the SBI Architect shall give notice in writing to that effect to the contractor and the contractor shall act accordingly in the matter. The contractor shall have no claim to any payment of compensation or otherwise whatsoever, on account of any profit or advantage which he might have derived from the execution of the work fully but which he did not derive in consequence of the foreclosure of the whole or part of the work. Provided that the contractor shall be paid the charges on the cartage only of materials actually and bona fide brought to the site of the work by the contractor and rendered surplus as a result of the abandonment, curtailment of the work or any portion thereof and then taken back by the contractor, provided however that the SBI/Architect shall have in such cases the option of taking over all or any such materials at their purchase price or a local current rate whichever is less. In case of such stores having been issued from SBI stores and returned by the contractor to stores, credit shall be given to him at the rates not exceeding those at which were originally issued to the contractor after taking into consideration and deduction for claims on account of any deterioration or damage while in the custody of the contractor and in this respect the decision of SBI/Architect shall be final.

32.0 Suspension of work

i) The contractor shall, on receipt of the order in writing of the SBI/Architect (whose decision shall be final and binding on the contractor) suspend the progress of works or any
part thereof for such time and in such manner as SBIIMS /SBI/Architect may consider necessary so as not cause any damage or injury to the work already done or endanger the safety thereof for any of following reasons. a) On account of any default on the part of the contractor, or b) For proper execution of the works or part thereof for reasons other than the default of the contractor, or c) For safety of the works or part thereof.

The contractor shall, during such suspension, properly protect and secure the works to the extent necessary and carry out the instructions given in that behalf by the SBIIMS /SBI/Architect.

ii) If the suspension is ordered for reasons (b) and (c) in sub-Para (i) above:

The contractor shall be entitled to an extension of time equal to the period of every such suspension. No compensation whatsoever shall be paid on this account.

33.0 Action when the whole security deposit is forfeited

In any case in which under any clause or clauses of this contract, the Contractor shall have rendered himself liable to pay compensation amounting to the whole of his security deposit the Architect/Consultant shall have the power to adopt any of the following course as they may deem best suited to the interest of the SBIIMS /SBI.

a) To rescind the contract (of which rescission notice in writing to the contractor by the Architect/Consultant shall be conclusive evidence) and in which case the security deposit of the contractor shall be forfeited and be absolutely at the disposal of SBIIMS.

b) To employ labour paid by the SBI and to supply materials to carry out the work, or any part of the work, debiting the contractor with the cost of the labour and materials (the cost of such labour and materials as worked out by the SBIIMS/Architect shall be final and conclusive against the contractor) and crediting him with the value of the work done, in all respects in the same manner and at the same rates as if it had been carried out by the contractor under the terms of this contract the certificate of Architect/Consultant as to the value of work done shall be final and conclusive against the contractor.

c) To measure up the work of the contractor, and to take such part thereof as shall be unexecuted, out of his hands, and to give it to another contractor to complete in which case any expenses which may be incurred in excess of the sum which would have been paid to the original contractor, if the whole work had been executed by him (of the amount of which excess the certificates in writing of the Architects/ Consultant shall be final and conclusive) shall be borne by original contractor and may be deducted from any money due to him by SBI under the contract or otherwise, or from his security deposit or the proceeds of sale thereof, or sufficient part thereof.

In the event of any of above courses being adopted by the SBIIMS the contractor shall have no claim to compensation for any loss sustained by him by reasons of his having purchased or procured any material or entered into any engagements or make any advances on account of, or with a view to the execution of the work or the performance of the contract and in case the contract shall be rescinded under the provision aforesaid, the contractor shall not be entitled to recover or to be paid any sum or any work thereto for actually performed under this contract, unless, and until the Architect/Consultant/SBIIMS will have
certified in writing the performance of such work and the value payable in respect thereof, and he shall only be entitled to be paid the value so certified.

34.0 Owner’s Right to Terminate the Contract

If the contractor being an individual or a firm commit any ‘Act of Insolvency’ or shall be adjusted an insolvent or being an incorporated company shall have an order for compulsory winding up voluntarily or subject to the supervision of Government and of the Official Assignee of the liquidator in such acts of insolvency or winding up shall be unable within seven days after notice to him to do so, to show to the reasonable satisfaction of the SBIIMS /Architect that he is able to carry out and fulfill the contract, and to give security therefore if so required by the SBI. Or if the contractor (whether an individual firm or incorporated Company) shall suffer execution to be issued or shall suffer any payment under this contract to be attached by or on behalf of any of the creditors of the contractor.

Or shall assign or sublet this contract without the consent in writing of the SBIIMS through the Architect/Consultant or shall charge or encumber this contract or any payment due to which may become due to the contractor there under. a) Has abandoned the contract; or b) Has failed to commence the works,

Or has without any lawful excuse under these conditions suspended the progress of the works for 14 days after receiving from the SBIIMS through the Architect/Consultant written notice to proceed, or c) Has failed to proceed with the works with such diligence and failed to make such due progress as would enable the works to be completed within the time agreed upon, or has failed to remove the materials from the site or to pull down and replace work within seven days after written notice from the SBIIMS /SBI through the Architect/Consultant that the said materials were condemned and rejected by the Architect/ Consultant under these conditions;

Or has neglected or failed persistently to observe and perform all or any of the acts, matters or things by this contract to be observed and performed by the contractor for seven days after written notice shall have been given to the contractor to observe or perform the same or has to the detriment of good workmanship or in defiance of the SBIIMS /SBI’s or Architect’s/Consultant’s instructions to the contrary subject any part of the contract. Then and in any of said cases the SBIIMS /SBI and or the Architect/Consultant, may not notwithstanding any previous waiver, after giving seven days' notice in writing to the contractor, determine the contract, but without thereby affecting the powers of the SBI or the Architect/Consultant or the obligation and liabilities of the contractor the whole of which shall continue in force as fully as if the contract had not been so determined and as if the works subsequently had been executed by or on behalf of the contractor. And, further the SBIIMS. /SBI through the Architect/Consultant, their agents or employees may enter upon and take possession of the work and all plants, tools, scaffoldings, materials, sheds, machineries lying upon the premises or on the adjoining lands or roads, use the same by means of their own employees or workmen in carrying on and completing the work or by engaging any other contractors or persons to complete the work and the contractor shall not in any way interrupt or do any act, matter or thing to prevent or hinder such other contractor or other persons employed for completing and finishing or using the materials and plant for the
works. When the works shall be completed or as soon thereafter as convenient to the SBIIMS/SBI or the Architect/Consultant shall give a notice in writing to the contractor to remove his surplus materials and plants and should the contractor fail to do so within 14 days after receipt thereof by him the SBIIMS/SBI sell the same by public auction after due publication and shall adjust the amount realized by such auction. The contractor shall have no right to question any of the act of the SBIIMS/SBI incidental to the sale of the materials etc.

35.0 Certificate of Payment

Payment will be made as per terms mentioned in the NIT.
• The prices in the Price Schedule shall be exclusive of GST or any other applicable taxes as may be levied by the Government from time-to-time and the same shall be charged in addition to the applicable rate.
• The SBIIMS/SBI shall make all endeavour to make payments within 20-30 days from the date of the receipt of the invoice, to the Contractor.
• All payments shall be made in Indian Currency by means of an Account Payee Cheques/RTGS/NEFT only.
• SBIIMS/SBI shall be entitled to deduct in accordance with Applicable Law, Income Tax or withholding tax or other deductions (as the case may be), from any payments made to the Contractor, and the amount so deducted shall be deemed to be a payment made to the Contractor. SBIIMS/SBI shall provide a certificate certifying the deduction so made.
• No payment shall be made in advance nor will any loan from any bank or financial institution be recommended on the basis of the order of award of work.
• Payment will be made as per the actual work done at site based on final measurement. The measurement will be taken in presence of representatives from both SBI/SBIIMS and contractor.

36.0 Settlement of Disputes and Arbitration

Except where otherwise provided in the contract all questions and disputes to the meaning of the specifications, design, drawings and instructions herein before mentioned and as to the quality of workmanship or materials used on the work or as to any other question, claim, right, matter or thing whatsoever in any way arising out of or relating to the contract, designs, drawings specifications, estimates, instructions orders or these conditions or otherwise concerning the work or the execution or failure to execute the same whether arising during the progress of the work or after the cancellation, termination, completion or abandonment thereof shall be dealt with as mentioned hereinafter:

i) If the Contractor considers that he is entitled to any extra payment or compensation in respect of the works over and above the amounts admitted as payable by the authorized person of SBI/SBIIMS or in case the Contractor wants to dispute the validity of any deductions or recoveries made or proposed to be made from the contract or raise any dispute, the Contractor shall forthwith give notice in writing of his claim, or dispute to the respective Circle/Vice President, SBIIMS, of respective Circle Office, within 30 days from the date of disallowance thereof or the date of deduction or recovery. The said notice shall give full particulars of the claim, grounds on which it is based and detailed calculations of the amount claimed and the Vendor shall not be entitled to raise any claim nor shall the
SBI/SBIIMS be in any way liable in respect of any claim by the Contractor unless notice of such claim shall have been given by the Contractor to the V.P of respective Circle, SBIIMS, of respective Circle Office, in the manner and within the time as aforesaid. The Vendor shall be deemed to have waived and extinguished all his rights in respect of any claim not notified to the respective Circle/Vice President, SBIIMS, of respective Circle Office, in writing in the manner and within the time aforesaid.

ii) The Circle/Vice President, SBIIMS, of respective Circle Office, shall give his decision in writing on the claims notified by the Contractor. The Contractor may within 30 days of the receipt of the decision of the Circle/Vice President, SBIIMS of respective Circle Office, submit his claims to the conciliating authority namely the Circle Development Officer of respective Circle /C.O.O. SBIIMS, Head Office, Raheja Chambers, Free Press Journal Marg, Mumbai. for conciliation along with all details and copies of correspondence exchanged between him and the SBIIMS.

iii) If the conciliation proceedings are terminated without settlement of the disputes, the Contractor shall, within a period of 30 days of termination thereof give a notice to the concerned Chief General Manager/M.D. & C.E.O. of the SBIIMS for appointment of an arbitrator to adjudicate the notified claims falling which the claims of the Contractor shall be deemed to have been considered absolutely barred and waived.

iv) Except where the decision has become final, binding and conclusive in terms of the contract, all disputes or differences arising out of the notified claims of the Contractor as aforesaid and all claims of the SBI/SBIIMS shall be referred for adjudication through arbitration to the Sole Arbitrator appointed by the Chief General Manager/ M.D. & C.E.O. and who will be an officer not less than the rank of Deputy General Manager of SBI/SBIIMS. If the arbitrator so appointed is unable or unwilling to act or resigns his appointment or vacates his office due to any reason whatsoever another sole arbitrator shall be appointed in the manner aforesaid by the said Chief General Manager /M.D. & C.E.O. of the SBIIMS Such person shall be entitled to proceed with the reference from the stage at which it was let by his predecessor.

It is a term of this contract that the party invoking arbitration shall give a list of disputes with amounts claimed in respect of each dispute along with the notice for appointment of arbitrator.

It is also a term of this contract that no person other than a person appointed by such Chief General Manager/M.D. & C.E.O. of the SBIIMS as aforesaid should act as arbitrator.

The conciliation and arbitration shall be conducted in accordance with the provisions of the Arbitration & Conciliation Act 1996 or any or any accordance modification or re-enactment thereof and the rules made there under.

It is also a term of the contract that the Arbitrator shall be deemed to have entered on the reference on the date he issues notice to both the parties calling them to submit their statement of claims and counter statement of claims. The venue of the arbitration shall be such place as may be fixed by the arbitrator in his sole discretion. The Cost of the reference and of the award shall be in the discretion of the arbitrator who may direct to any by whom and in what manner, such costs or any part thereof, shall be paid and fix or settle the amount of costs to be so paid

37.0 Water Supply (Not Applicable)
38.0 Power supply

The contractor shall make his own arrangements for power and supply/distribution system for driving plant or machinery for the work and for lighting purpose at his own cost. The cost of running and maintenance of the plants are to be included in his tender prices. He shall pay all fees and charges required for the power supply and include the same in his tendered rates and hold the owner free from all such costs. He has to obtain necessary approvals from the appropriate authorities, if required.

39.0 Treasure Trove etc.

Any treasure trove, coin or object antique which may be found on the site shall be the property of SBI and shall be handed over to the SBIIMS immediately.

40.0 Method of Measurement

Unless otherwise mentioned in the schedule of quantities or in mode of measurement, the measurement will be on the net quantities or work produced in accordance with up to date. Rules laid down by the Bureau of Indian Standards. In the event any dispute/disagreement the decision of the Architect/Consultant shall be final and binding on the contractor.

41.0 Maintenance of Registers

The contractor shall maintain the following registers as per the enclosed format at site of work and should produce the same for inspection of SBIIMS./ SBI/Architect/Consultant whenever desired by them. The contractor shall also maintain the records/registers as required by the local authorities/Government from time to time.

42.0 Force Majeure

42.1 Neither contractor nor SBIIMS shall be considered in default in performance of their obligations if such performance is prevented or delayed by events such as war, hostilities revolution, riots, civil commotion, strikes, lockout, conflagrations, epidemics, accidents, fire, storms, floods, droughts, earthquakes or ordinances or any act of god or for any other cause beyond the reasonable control of the party affected or prevented or delayed. However, a notice is required to be given within 30 days from the happening of the event with complete details, to the other party to the contract, if it is not possible to serve a notice, within the shortest possible period without delay.

42.2 As soon as the cause of force majeure has been removed the party whose ability to perform its obligations has been affected, shall notify the other of such cessation and the actual delay incurred in such affected activity adducing necessary evidence in support thereof.
42.3 From the date of occurrence of a case of force majeure obligations of the party affected shall be suspended during the continuance of any inability so caused. With the cause itself and inability resulting there from having been removed, the agreed time of completion of the respective obligations under this agreement shall stand extended by a period equal to the period of delay occasioned by such events.

42.4 Should one or both parties be prevented from fulfilling the contractual obligations by a state of force majeure lasting to a period of 6 months or more the two parties shall mutually decide regarding the future execution of this agreement.

43.0 Local Laws, Acts, Regulations

The contractor shall strictly adhere to all prevailing labour laws inclusive of contract labour (regulation and abolition act of 1970) and other safety regulations. The contractor shall comply with the provision of all labour legislation including the latest requirements of all the Acts, laws, any other regulations that are applicable to the execution of the project.


vii) Personal Injuries (Compensation Insurance) Act 1963 and any other modifications

viii) Employees’ Provident Fund and Miscellaneous Provisions Act 1952 and amendment thereof

ix) Shop and Establishment Act  ix) Any other Act or enactment relating thereto and rules framed there under from time to time.

44.0 SAFETY CODE:

Safety as per annexure given should be followed.

45.0 Accidents

The contractor shall immediately on occurrence of any accident at or about the site or in connection with the execution of the work report such accident to the Architect/Consultant. The contractor shall also report immediately to the competent authority whenever such report is required to be lodged by the law and take appropriate actions thereof.

SPECIAL CONDITION OF CONTRACT

The required shutdown for executing the above works shall be obtained from the CDC in charge and all precautionary measures have to be taken to avoid shutdowns and mishaps as the panels are very critical and live. Further in view of the criticality of the CDC power, shutdown may be given only in the nights and holidays and the contractor shall plan and
mobilize the men and material accordingly for smooth execution of the work in coordination with the other agencies.

LETTER OF DECLARATION

To,
The Vice President,
Circle Head Office,
SBI Infra Management Solutions Pvt. Ltd.,
Sixth Floor, Local Head Office,
M.G. MARG
Lucknow 226001
Dear Sir,

PROPOSED SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF AIR CONDITIONERS AT VARIOUS BRANCHES IN UNDER ADMINISTRATIVE CONTROL OF RBO-V, SBI A.O. ALLAHABAD (PRAYAGRAJ).

Having examined the terms & conditions, drawings, specifications, design relating to the works specified in the memorandum hereinafter set out and having visited and examined the site of the works specified in the said memorandum and having acquired the requisite information relating thereto and affecting the quotation, I/We hereby offer to execute the works specified in the said memorandum within the time specified in the said memorandum on the item rate basis mentioned in the attached schedule and in accordance in all respect with the specifications, design, drawings and instructions in writing referred to in conditions of Tender, the articles of agreement, conditions of contract and with such conditions so far as they may be applicable.

MEMORANDUM

(a) Description of work

PROPOSED SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF AIR CONDITIONERS AT VARIOUS BRANCHES IN UNDER ADMINISTRATIVE CONTROL OF RBO-V, SBI A.O. ALLAHABAD (PRAYAGRAJ).

(b) Earnest Money

Rs. /- (……………………only) by means of Demand Draft / Pay Order from any scheduled Nationalized Bank drawn in favour of “SBI Infra Management Solutions Pvt. Ltd.” and payable in “Lucknow”.

(c) Time allowed for completion of work from the date of issue of work order.

As per NIT from the date of commencement as per tender.
SAFETY CODE, SAFETY MEASURES AT SITE:

1. All personnel at site should be provided with Helmets and Safety Boots with some Identification Mark. Visitors also should be provided with Helmets. It should be ensured that these are used properly.

2. First Aid Box should be kept at site with all requisite materials.

3. No one should be allowed to inspect / work at a height without Safety Belt.

4. Suitable scaffolds should be provided for workmen for all Works that cannot safely be done from the ground, or from solid construction except such short period Work as can be done safely from ladders. When a ladder is used an extra Mazdoor shall be engaged for holding the ladder and if the ladder is used for carrying materials as well as suitable footholds and handholds shall be provided on the ladder and the ladder shall be given an inclination not steeper than ¼ to 1 (¼ horizontal and 1 vertical).

5. Scaffolding or staging more than 3.5 meters above the ground or floors, swung or suspended from an overhead support or erected with stationary support shall have a guard rail properly attached, bolted, braced and otherwise secured at least 1 Meter high above the floor or platform of such scaffolding or staging and extending along the entire length of the outside and ends thereof with only such openings as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying from the building or structure.

6. Working platforms, Gangways, and Stairways should be so constructed that they do not sag unduly or unequally, and if the height of the platform or the Gangway or the Stairway is more than 3-5 Meters above ground level or floor level they should be closely boarded, should have adequate width and should be suitably fenced, as described.

7. Every opening in the floor of a building or in a working platform be provided with suitable means to prevent the fall of persons or materials by providing suitable fencing or railing whose minimum height shall be 1 Meter.

8. Safe means of access shall be provided to all working platforms and other working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9 Meters in length while the width between side rails in rung ladder shall in no case be less than 30cms for ladder upto and including Meters in length. For longer ladders this width should be increased at least 6mm for each additional 30 cms. Uniform step spacing shall not exceed 30 cms.

9. Adequate precautions shall be taken to prevent danger from electrical equipment. For electrical on line works gloves, rubber mats, and rubber shoes shall be used.

10. All trenches 1.2 Meters or more in depth shall at all times be supplied with at least one ladder for each 30 Meters length or fraction thereof. Ladder shall be extended from bottom
of the trench to at least 1 Meter above the surface of the ground. The sides of the trenches, which are 1.5 Meters or more in depth shall be stepped back to give suitable slope, or securely held by timber bracing, so as to avoid the danger of sides collapsing. The excavated materials shall not be placed within 1.5 Meters of the edge of the trench or half of the depth of the trench whichever is more cuttings shall be done from top to bottom. Under no circumstances undermining or under cutting shall be done.

11. Before any demolition work is commenced and also during the process of the work:-

a) All roads and open areas adjacent to the Work Site shall either be closed or suitably protected.

b) No electrical cable or apparatus which is liable to be a source of danger over a cable or apparatus used by the operator shall remain electrically charged.

c) All practical steps shall be taken to prevent danger to persons employed from risk or fire or explosion or flooding. No floor, roof or other part of the building shall be so over-loaded with debris or materials as to render it unsafe.

d) All necessary personal safety equipment as considered adequate by the Site Engineer should be kept available for the use of the persons employed on the Site and maintained in a condition suitable for immediate use; and the Contractor should take adequate steps to ensure proper use of equipment by those concerned.

e) Workers employed on mixing Asphalitic materials, cement and lime mortars shall be provided with protective footwear and protective goggles.

f) Those engaged in white washing and mixing or stacking of cement bags or any materials which is injurious to the eyes shall be provided with protective goggles.

g) Those engaged in welding works shall be provided with Welder's protective eye-shields.

h) Stone breakers shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.

i) When workers are employed in sewers and manholes, which are in use, the Contractor shall ensure that the manhole covers are opened and are ventilated at least for an hour before the workers are allowed to get into the manholes and the manholes so opened shall be cordoned off with suitable railing and provided with warning signals and boards to prevent accident to the Public.

12. Use of hoisting machines and tackle including their attachments, anchorage and support shall conform to the following standard or conditions:-

a) These shall be of good mechanical construction, sound material and adequate strength and free from patent defect and shall be kept in good repairs and in good working order.

b) Every rope used in hoisting or lowering materials or as a means of suspension shall be of durable quality and adequate strength, and free from patent defects.
c) Every crane driver or hoisting appliance operator shall be properly qualified and no person under the age of 21 years should be in-charge of any hoisting machine including any scaffold, winch or give signals to the operator.

d) In case of every hoisting machine and of every chain ring hook, shackle swivel and pulley block used in hoisting or lowering or as means of suspension the safe working load shall be ascertained by adequate means.

e) Every hoisting machine and all gear referred to above shall be plainly marked with the safe working load. In case of hoisting machine having a variable safe working load, each safe working load of the conditions under which it is applicable shall be clearly indicated. No part of any machine or of any gear referred to above in this paragraph shall be loaded beyond the safe working load except for the purpose of testing.

f) Motor, Gearing, Transmission, Electric wiring and other dangerous parts of hoisting appliances should be provided with efficient safeguards, hoisting appliances should be provided with such means as will reduce to the minimum the risk of accidental descent of the load, adequate precautions should be taken to reduce to the minimum the risk of any part of a suspended load becoming accidentally displaced.

g) When workers are employed on electrical installation, which are already energized, insulating mats, wearing apparel such as gloves, rubber footwear etc.

Address: _______________________

Signature of Tenderer:

Date:
FIRE SAFETY:

i. Cutting / drilling machine and other electrically operated equipment used at site shall be plugged into correctly rated electrical outlets.

ii. Only ISI marked 3 pin plug and other appliances and equipment shall be used.

iii. Electrical power cables/wires used shall not have any joints and shall be properly rated.

iv. All electrical appliances i.e. welding, drilling, cutting machine etc. shall be safely and Securely earthed to prevent leakage current while in operation.

v. Before commencing the welding work, fire section shall be informed and required precautions should be taken.

vi. Two buckets of water, sand and a fire cloth of suitable size shall be kept in an easily accessible area on the site.

vii. Fire extinguishers recommended by fire officers shall be kept on the site.

viii. Used paint drums shall be stored in specified store only after closing them properly.

ix. Personal protective equipment such as safety shoes, hand gloves, welder’s mask, ear plug etc. depending upon the requirement of the work shall be provided by the contractor to the workmen to prevent occupational health hazards.

x. The safety belt shall be provided by the contractor and used by the workmen while working from height for more than 10’ from Ground level.

xi. None of the passages near lift lobby and staircases shall be used for stacking / dumping any kind of materials/waste.

xii. Any debris/ waste generated from the work shall be collected on daily basis, removed from site and stored at the designated place in proper manner.

xiii. Battery operated emergency light/torches shall be provided by the contractor to the workmen while working beyond office hours.

Place:

Date: SIGNATURE AND SEAL OF THE CONTRACTOR
TABLE - I

AIR CONDITIONING WORKS AT VARIOUS BRANCH IN RBO-V, A.O. PRAYAGRAJ (ALLAHABAD):

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Branch Code</th>
<th>NAME OF BRANCH</th>
<th>NO. OF ACs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>16460</td>
<td>Lal Gopal Ganj</td>
<td>4</td>
</tr>
<tr>
<td>2.</td>
<td>155</td>
<td>Phulpur</td>
<td>3</td>
</tr>
<tr>
<td>3.</td>
<td>14902</td>
<td>Holagargh</td>
<td>2</td>
</tr>
<tr>
<td>4.</td>
<td>9248</td>
<td>Chivaiya</td>
<td>3</td>
</tr>
<tr>
<td>5.</td>
<td>15513</td>
<td>Jasra</td>
<td>3</td>
</tr>
<tr>
<td>6.</td>
<td>9308</td>
<td>Bashahi</td>
<td>2</td>
</tr>
<tr>
<td>7.</td>
<td>11253</td>
<td>Shankargargh</td>
<td>2</td>
</tr>
<tr>
<td>8.</td>
<td>14901</td>
<td>Kaudihar</td>
<td>3</td>
</tr>
<tr>
<td>9.</td>
<td>11257</td>
<td>Jhanghai</td>
<td>4</td>
</tr>
<tr>
<td>10.</td>
<td>9690</td>
<td>Ismailpur</td>
<td>1</td>
</tr>
<tr>
<td>SI. NO.</td>
<td>DESCRIPTION</td>
<td>QUANTITY</td>
<td>UNIT</td>
</tr>
<tr>
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<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
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<td>-------</td>
</tr>
<tr>
<td>1.</td>
<td>Supply, installation, testing &amp; commissioning (SITC) of 1.5TR high wall/split type, 3 star (highest star rating in this segment), BEE rated, mounted type air conditioner, wireless remote controlled with auto restart feature complete in all respect with indoor, outdoor unit, copper condenser &amp; copper cooling coil interconnecting piping, wiring/ installation / drain pipe etc. (Upto 5 meters length) Machine shall have copper condensor Unit (R-410 A &amp; R-32 Refrigerent Only). Item should also include 4 KVA hi/lo cut off, TDR relay start stabilizer. Complete in all respect Acceptable Makes of AC: Daikin/Hitachi/Carrier/BlueStar/Voltas/Toshiba Make of Stabilizer: Servel/V Guard / Stambh/ Inmag.</td>
<td>27.00</td>
<td>Nos.</td>
</tr>
<tr>
<td>2.</td>
<td>Refrigerant piping-insulated 0.80mm wall thickness copper tube of Totaline / Mandav make only between indoor to outdoor unit beyond 3 Rmt dist. of 1.5 TR Hi-wall split unit The copper piping shall be insulated with 6 mm thick Nitrile rubber insulated of ‘O’ Class of K Flax/Armaflex/ Superion Make. Photograph of Copper Piping With cross section photo of Piping need to be attached with bill. (As per site Requirement).Complete in all respect.</td>
<td>155.00</td>
<td>Mtr</td>
</tr>
<tr>
<td>3.</td>
<td>25/32 mm Dia UPVC drain pipe with insulation of Dutron/Supreme/Astral make - schedule 40 pipe, white in colour, joint properly glued with UPVC adhesive for water outlet from indoor unit. (drain pipe concealed in inside wall)(As per site Requirement).Complete in all respect.</td>
<td>125.00</td>
<td>Mtr</td>
</tr>
<tr>
<td>4.</td>
<td>3 core Interconnecting standard wire/cable between indoor and outdoor units for 1.5 tr with 4.0 Sq.mm or as per OEM instructed standard size, copper flexible cable of Finolex/ RR Kable /CEI make FRLS).Complete in all respect.</td>
<td>125.00</td>
<td>Mtr.</td>
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<td></td>
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<tr>
<td><strong>5.</strong></td>
<td>Supply and installation of robust MS angle for 1.5 tr AC for outdoor unit of Item no.1, two MS flat fabricated floor/wall mounting stand suitable for outdoor units, painted with one coat of primer and two coats of synthetic enamel outdoor type paint including its grouting and making good of damages, complete in all respects. Complete in all respect.</td>
<td>27</td>
<td>No.</td>
</tr>
</tbody>
</table>

- Rate quoted shall includes all Taxes such including transportation charges. Excluding GST, GST will be Paid Extra as per Applicable Norms.

- 1 Years of M/C warranty with 4 free services and 5 years warranty for compressor shall be provided by the supplier.

- All Civil work such as Masonary works like breaking away and making good of walls, floors slab etc. Required to be executed in the A.C system installation is the part of the project. (Rate quoted shall included in Low side work items) scope of the Entire Job Shall be Executed in Total Co. Ordination with the Other Agencies Working on this Project more particulary with the False Ceiling and Electrical work.

- **IF THE CONTRACTOR HAS NOT CARRIED OUT AIR CONDITIONING WORK AS PER STANDARD SPECIFICATION THEN CONTRACTOR IS LIABLE TO REMOVE AND REWORK AS PER STANDARD SPECIFICATION AND WHATSOEVER THE DAMAGE IN CONNECTION WITH CIVIL/ FURNITURE/ ELECTRICAL WORK WILL BE BEAR BY CONTRACTOR. IF CONTRACTOR WILL NOT DONE REWORK THEN WHATSOEVER BEEN THE COST FOR REWORK WILL BE DEDUCTED FROM CONTRACTOR'S BILL.**
SPECIFICATIONS FOR INDOOR UNITS:

Wall Mounted Units.

➢ Wall mounted units must be compact & stylish design that does not detract from the Décor of the room.
➢ The unit shall be precharged with first charge of R 32 / R 134A / R 407 / R 410 refrigerant. Additional charge shall be added as per refrigerant piping at site.
➢ Each indoor unit must have electronic expansion valve operated by microprocessor thermostat based temperature control to deliver cooling/ heating as per the heat load of the room.
➢ The unit must have provision of adding drain pump kit if required & specified. The drain pump must be suitable to lift drain up to 1000 mm from the bottom of the unit.
➢ Unit must be insulated with sound absorbing thermal insulation material, polystyrene/Polyethylene foam. The noise level of unit at the highest operating level shall not exceed 46 dB(A), at a vertical distance of 1.5 m from the grille of the unit.
➢ The unit shall be supplied with Resin Net filter with Mold Resistance. The filter shall be easy to remove, clean & re install.
➢ The unit grille must be washable with soap solution.
➢ It shall be possible to set minimum 5 steps of discharge angle by remote controller.
➢ It shall be possible to fit drain pipe from either side of the unit (Left or right)
➢ The unit will be connected in series to a suitable outdoor unit & it must be possible to operate the unit independently, through cored/ cordless remote specified in the bill of quantities. The unit will be further connected to Intelligent Building Management System (To be supplied by other vendors) & it shall be possible to operate the unit through this IBMS system.
➢ The unit shall be supplied with following from the factory with following:
  Operation Manual
  Installation Manual
  Installation panel
  Paper pattern for installation
  Insulation tape/ Clamps/ Screws
A – 1: COPPER TUBING.
The parent material used for air conditioning system refrigerant tubing should be Copper tubes, tubes and fittings conforming to following specifications:

1. Material composition should be conforming to C-1220 (JIS-H-3300) or C-12200 (ASTM). It should have a minimum Copper content of 99.9% and Phosphorus content between 0.015% and 0.040%. It should have low residue (below 0.038 gm/sq mtr). The material should also be as per the RoHS norms specified by EU; that is, Mercury, Chromium and Lead contents below 1000 ppm, and Cadmium content below 100 ppm.

2. Physical properties of the material should conform to JIS-H-3300 or ASTM-B-68 & B-75, should be tested for Tensile / elongation / hardness / grain size tests as per ASTM B –280.

3. Dimensional tolerance should be as per JIS-H-3300 or ASTM-B-251. The tubes should be tested using non-destructive Eddy current test before the final anneal, as per JIS- H-3300 or ASTM-E-243.

4. Heat treatment should be carried out in non-oxidizing atmosphere to ensure oxygen free and Cuprous oxide-free surface.

5. Proper certificates describing composition and results of all tests carried out must be supplied with each consignment. These certificates, along with check results for dimensional and thickness accuracy are recommended to be carried out for every delivered lot, should be maintained till handing over of the project.

6. Tubes should have 360 degree concentric wall thickness along their entire length.

7. Wall thickness for soft tubes (bright annealed mirror finish) should be 0.8 mm for ¼”, 3/8” & ½” tubes, 1.0 mm for 5/8” tubes, 1.2 mm for ¾” tubes. Wall thickness for hard tubes should be 1 mm for 7/8”, 1” and 1.1/8” tubes, 1.1 mm for 1.1/4”, 1.2 mm for 1.3/8” and 1.3 mm for 1.5/8” tubes.

8. Wall thickness for elbows and fittings should be minimum 0.2 mm more than corresponding tube / tube size.

9. For 1/4” to sizes up to ¾”, pulley type benders should be used for soft tubes and brazed joints should be avoided as far as possible. Similarly, for half hard tubes of size 3/4” or more, one side expanded tubes must be used and use of couplings should be avoided as far as possible.
A - 2: TUBING DESIGN:

1. Contractor should study the tender / GFC drawings carefully, and should carry out detailed survey of site, relating the drawings with site, and understand the system design and site limitations.

2. Contractor should also collect final architectural and reflected ceiling plans from client and study the drawings for any mismatches with the HVAC drawings received.

3. Contractor should discuss any such mis-matches and any doubts regarding system design with the consultant and get all doubts clarified.

4. Before commencement of tubing work, proper shop drawings must be generated by the contractor, and same should be got approved from the consultant. The drawings must clearly indicate schematic flow diagrams for various circuits, tube sizes, description and quantities for refrigerant joints, indoor and outdoor unit models and room / block / floor names, tube routes, levels for horizontal tubes, details regarding insulation type and thickness and surface treatment for insulation, typical and critical sections and any other details to explain the entire tubing layout to the installer.

5. Tube sizing and routing must be carried out taking into consideration various site constraints and system manufacturer’s recommendations.

6. Care should be taken to design tubing as per the manufacturer’s recommendation for maximum tubing total length, maximum tubing length after first tapping, vertical height difference between outdoor and indoor units etc. and necessary corrections should be carried out in outdoor unit capacity if required.

A – 3: REFRIGERANT TUBING INSTALLATION WORK:

1. The installer must first study the shop drawings in detail with respect to the site condition and point out any fouling / alternatives to the agency prepare shop drawing and necessary revisions must be carried out in the drawings, to be approved by consultant.

2. The layout must be marked on the true ceiling and any civil openings required should be marked and got done from concerned agency.

3. Supports as described in BOQ / specifications should be installed, leaving adjustable free length for supports.

4. Before installation, the tubes and tubes must not be removed from their original packing. Proper storage of tubing is a must to maintain the temper of the tubes / tubes. Any abrasion on ends / surface, or any in grace of dirt / dust must be avoided. Proper Polyethylene sheets should be used for covering the tubes and tubes, while wooden pellets and soft expanded Polyethylene / rubber sheets should be used as floor supports.

5. Necessary loops / slopes must be followed as recommended by system manufacturer.

6. Tubes must be cut to required sizes using cutting tools recommended by system manufacturer.

7. Using proper quality of brazing set, Oxygen / Acetylene and Copper brazing rods having minimum 2% Silver content.

8. During brazing, Nitrogen must be filled in the Copper tubing at a mild positive pressure and must be kept bleeding out continuously, to prevent any oxidation of parent material.
9. After tubing work, each circuit should be pressure tested as per the system manufacturer’s recommendation and as per the procedure described in the following paragraphs. A certificate mentioning the test pressure, time of first and final pressure readings, make, model, serial number, range and least count of the gauge used, along with a copy of valid calibration certificate must be maintained, duly signed by the inspecting technician, and client /PMC representative.

10. After pressure testing, insulation must be completed as per the material, make and thickness mentioned in the approved shop drawing. The joints of insulation must be sealed by minimum 50 mm wide Aluminium adhesive tape. Care should be taken to avoid any air gaps between tube / tube and insulation sleeves, and between two insulation sleeve joints.

11. Proper tagging must be carried out to trace the tubing to respective indoor and outdoor circuits.

12. The tubes exposed to sunlight must be covered / cladded / treated to prevent damage from UV radiation and bird pecks / tampering, as mentioned in the BOQ. The cladding should be made out of 26 G Aluminium sheet or G.S.S. sheet. While cladding, care should be taken to avoid penetrating the insulation by screws. Short screws Of metallic straps should be used for securing cladding sheets. Instead of cladding, glass cloth, with two coats of protective resin should be used.

13. While charging refrigerant, manufacturer’s recommendations must be strictly followed, and charging must be carried out using proper charging hose, gauge manifold with calibrated gauges and electronic weigh scale. Further leak check using a gas leak detector should be carried out. Charging must be carried out after proper evacuation of the tubing. The quantity of refrigerant to be charged should be calculated by totalizing the liquid tube volume as per the manufacturer’s recommendation.

A – 4 : RECOMMENDATIONS FOR PRESSURE TESTING:

Refrigerant tubes carry refrigerant at pressures different from atmospheric pressure. When pressure inside tubes is more than atmospheric pressure, refrigerant may escape to the atmosphere, causing commercial loss due to loss of refrigerant, inefficient system performance or even system breakdown and contamination of surroundings. When pressure inside the tubes is less than atmospheric pressure, such as in case of suction tubes of some low temperature refrigeration machines, or during pump-down cycle of normal air-conditioning systems, leakages in tubes leads to ingress of air and moisture, causing severe system damage. Therefore, it is a must that the refrigerant tubing is thoroughly tested for leakages. Pressure testing for any tubing must be carried out at a pressure higher than the maximum operating pressure within the system. It is recommended that the pressure recommended by manufacturer be followed very strictly. Testing at lower pressures may lead to non-detection of some small leakages, while testing at higher pressures may lead to damage to some factory manufactured components within the system. Generally, for R-410 systems a pressure of around 650psig is used. Nitrogen is the most common gas used for carrying out pressure testing. It has numerous advantages, some of which are listed below:

1. Nitrogen is easily available as a commercial gas packed in easy to handle cylinders.
2. Nitrogen, being the most abundant component of the atmosphere, is safe for leaking out without contaminating the atmosphere.
3. Nitrogen is less costly as compared with other gases.
4. Nitrogen is safe for handling and testing.
5. Nitrogen does not readily react with system components Pressure gauge/s used for testing must be calibrated and a calibration certificate with traceability to a Government (National) Physical Laboratory must be documented. The gauge should be capable of measuring pressure at least 10% above the reading to be recorded.

A - 5: PROCEDURE FOR CARRYING OUT PRESSURE TEST
Ensure that the tubing to be tested is properly secured/supported and the openings have been sealed off as per manufacturer's recommendation.

2) Install pressure gauge/s at strategic location/s where it shall not be tampered with, at the same time, should be easily visible.

3) Install a valve and connecting tubing so that the open end of the tube reaches the cylinder outlet without moving the cylinder.

4) Connect the tube to the cylinder and after ensuring proper connection, crack open the cylinder valve, keeping an eye on the pressure gauge. Let the pressure rise to around 10 psig.

5) Check for proper sealing of all flanged/flare nut joints or valves/valve glands looking for noise of escaping Nitrogen and seal same.

6) Open the cylinder valve again and raise the pressure to 200 psig.

7) Check the tube line for major leakages at brazed joints, elbows, valve glands, equipment end connections and tube seams with the help of soap water. Make up the leaks by tightening nuts. If the leaks are in brazed joints, flush out Nitrogen and carry out necessary re-brazing.

8) Open the cylinder valve again and increase the pressure to 150 psig less than the final test pressure. Repeat leak check as above.

9) Open the cylinder valve again and slowly raise the pressure to the manufacturer recommended pressure. Carry out a thorough leak check.

10) Record the pressure and time. Let the pressure stand for 24 hours without tampering. Check the pressure again after 24 hours. If pressure has dropped, the tubing should be checked very thoroughly for minor leakages. It is important to follow this 24 hours period as it gives enough time to detect minute leakages, and it removes the doubt created by thermal expansion of Nitrogen (as after exact 24 hours, ambient conditions are generally same).

11) In case of tubing extending to lengths more than 30 m and/or having more than 20 site fabricated joints, the pressure should be recorded after 24 hours as well as after 48 hours, so that all leakages are detected and made up.

12) After detecting and making up any leak, the pressure testing must be carried out once again from beginning.
A – 6: DOCUMENTATION RECOMMENDED FOR ENSURING PROPER QUALITY ASSURANCE:

1. Manufacturer’s certificate with every Delivery Challan declaring composition of parent material.
2. Pressure test report signed by Equipment manufacturer/Consultant.
3. All necessary test reports issued by the Manufacturers

GENERAL:
ACR GRADE COPPER TUBES AND FITTINGS: SIZES AND SPECIFICATIONS
Tube material Specification:
(CFC: free refrigerant compatible tubes produced using Total loss lubricants)
1. De-oxidized High Phosphorized copper (DHP grade) raw material, with Chemical Composition of Copper = 99.9 %; Phosphorus = 0.015 to 0.040 % Page | 57
2. 360 degree concentric Wall thickness along the entire length of the tubes
3. Half hard drawn copper tubes should confirm to ASTM B75/ASTM280 (C12200) / JIS H:3300(C1220) / BS2871 part 3 (C106). Use Half Hard Temper Type for tube sizes above19.1 mm.
4. Soft copper tubes, bright annealed (mirror finish) should confirm to ASTM B68 / JIS H: 3300
5. Super clean quality with low residual content below the permissible levels of 0.038 g/m2 for compatibility with use of CFC-free refrigerant.
7. 100 % Eddy Current Tested Tubes are to be used
8. Proper packaging, Storage and Traceability of the tubes

INSULATION TO REFRIGERANT PIPING:
FR nitrile rubber / cross linked closed cell polyethylene tube insulation of 13mm up to 1”dia pipes and 19mm thick for 1” and above shall be used for copper piping both for suction line and liquid line. All joints shall be sealed with self-adhesive tape or with heat.

11. COMMUNICATION CABLE AND CONTROL CABLING:
Communication cable and control cabling: Communication cable and control cabling should be of non-polar shielded 2 core cable shall be laid in 20 mm dia PVC conduits of required size. PVC conduit should be clamped neatly maintaining a distance from power cables, Cable terminations and dressing shall be done properly and neatly.

12. DRAIN PIPING:
PVC drain piping shall be used for the drain piping. Proper care shall be taken to lay the drain piping with sufficient slope and should be clamped or supported at 1.5 m interval. All drain pipe joints shall be done with adhesive. Drain piping should be tested for leaks before commissioning. After testing for leaks, drain pipe shall be insulated with 9 mm thick nitrile rubber tube insulation. Insulation shall be finished with self-adhesive black cotton tape.

NB. 1) The contractor should obtain prior approval from Employer / Consultants before placing order for any specific materials. Employer may / delete any of the makes or brands out of the above list.
2) All materials should conform to relevant standards and codes of BIS.
3) Materials with I.S.I. mark shall be used duly approved by the SBIIMS Engineer / Architect.

Note: - If any material is found to be not up to the mark, the contractor will have to produce original bills/certificate from the manufacturer or his authorized Distributor for authenticity and genuineness of the material for consideration and as per make approved by the SBIIMS. The same will not be considered for payment.