



ALL INDIA INSTITUTE OF MEDICAL SCIENCES, RAIPUR

OFFICE OF
THE EXECUTIVE ENGINEER
PROJECT CELL AIIMS, RAIPUR

NOTICE INVITING e-TENDER

N.I.T. NO. 08/EE/AIIMS/RPR/2019-20

NAME OF WORK: -“Supply, Installation, testing & commissioning of Inverter VRF /VRV Air Conditioning System at School of public Health, Medical College AIIMS Raipur”

ESTIMATED COST: **Rs. 70, 66,660.00/-**

EARNEST MONEY: **Rs. 1, 41,333.00/-**

CONTRACT PERIOD: **60 Days**

Executive Engineer (Civil)

AIIMS, Raipur

Instructions for Online Bid Submission

The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal.

More information useful for submitting online bids on the CPP Portal may be obtained at:

<https://eprocure.gov.in/eprocure/app>.

REGISTRATION:

- 1) Bidders are required to enrol on the e-Procurement module of the Central Public Procurement Portal (URL: <https://eprocure.gov.in/eprocure/app>) by clicking on the link “Online bidder Enrolment” on the CPP Portal which is free of charge.
- 2) As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
- 3) Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
- 4) Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class II or Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / nCode / eMudhra etc.), with their profile.
- 5) Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.
- 6) Bidder then logs in to the site through the secured log-in by entering their user ID / password and the password of the DSC / e-Token.

SEARCHING FOR TENDER DOCUMENTS:

- 1) There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, Organization Name, Location, Date, Value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as Organization Name, Form of Contract, Location, Date, Other keywords etc. to search for a tender published on the CPP Portal.
- 2) Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved to the respective ‘My Tenders’ folder. This would enable the CPP Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.
- 3) The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

PREPARATION OF BIDS:

- 1) Bidder should take into account any corrigendum published on the tender document before submitting their bids.
- 2) Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the Number of covers in which the bid documents have to

be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.

- 3) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF/JPG formats. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.
- 4) To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy etc.) has been provided to the bidders. Bidders can use “My Space” or “Other Important Documents” area available to them to upload such documents. These documents may be directly submitted from the “My Space” area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

SUBMISSION OF BIDS:

- 1) Bidder should log into the site well in advance for bid submission so that they can upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.
- 2) The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.
- 3) Bidder has to select the payment option as “offline” to pay the tender fee / EMD as applicable and enter details of the instrument.
- 4) Bidder should prepare the EMD as per the instructions specified in the tender document. The original should be posted/couriered/given in person to the concerned official, latest by the last date of bid submission or as specified in the tender documents. The details of the DD/any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise the uploaded bid will be rejected.
- 5) Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BoQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BoQ file, open it and complete the white coloured (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BoQ file is found to be modified by the bidder, the bid will be rejected.
- 7) The server time (which is displayed on the bidders’ dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.
- 8) The documents being submitted by the bidders would be encrypted using PKI encryption all techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128-bit encryption technology. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key.
- 9) Further this key is subjected to asymmetric encryption using buyers/bid opener’s public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.
- 10) The uploaded tender documents become readable only after the tender opening by the authorized bid openers.

- 11) Upon the successful and timely submission of bids (i.e. after Clicking “Freeze Bid Submission” in the portal), the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.
- 12) The bid summary has to be printed and kept as an acknowledgement of the submission of the bid. This acknowledgement may be used as an entry pass for any bid opening meetings.

ASSISTANCE TO BIDDERS:

- 1) Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.
- 2) Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk number 0120-4200462, 0120-4001002.
- 3) For any further assistance, please contact to the office of Executive Engineer, AIIMS Raipur.

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ALL INDIA INSTITUTE OF MEDICAL SCIENCES, RAIPUR

NOTICE INVITING e-TENDER

(a)	Name of Work	“Supply, Installation, testing & commissioning of Inverter VRF /VRV Air Conditioning System at School of public Health, Medical College AIIMS Raipur”.
(b)	NIT No.	08/EE/AIIMS/RPR/2019-20
(c)	Contract Period	60 Days
(d)	Estimated Cost	Rs.70,66,660.00/-(Rupees Seventy Lacs Sixty Six Thousand Six Hundred Sixty) Only
(e)	Earnest Money Deposit(EMD)	Rs. 1, 41,333.00/- (Rupees One Lac Forty One Thousand Three Hundred Thirty Three)Only (to be submitted in the form of DD/FDR/BG) in favour of AIIMS, Raipur.
(f)	Performance Guarantee	5% of Tendered value.
(g)	Security Deposit	2.5% of the Tendered Value.
(h)	Tender documents may be	AIIMS web site www.aiimsraipur.edu.in and CPPP site https://eprocure.gov.in/eprocure/app (for reference only)
(i)	Last Date &Time of Submission	By 09-10-2019 up to 14:00 Hours through online.
(j)	Date & Time for opening of Technical Bid	On 10-10-2019 at 15:30 Hours.
(k)	Opening of Online Financial Bids	Financial Bid will be open whose technical bid found eligible.

1. The indenting Bidder must read the Terms & conditions carefully. He/ She should only submit bid if consider himself/herself eligible and bidder in possession of all the documents required.
2. Information and Instructions for bidders posted on website shall form part of bid document.
3. The Bid documents consisting of specifications, the schedule of quantities of various types of items to be executed and the set of terms & conditions of the contract to be complied with and other necessary documents can be seen and downloaded from website www.aiimsraipur.edu.in Or <https://eprocure.gov.in/eprocure/app>.

Executive Engineer (Civil)

AIIMS, Raipur

INFORMATION AND INSTRUCTIONS FOR BIDDERS FOR e-TENDERING

The Executive Engineer (Civil), AIIMS, Raipur on behalf of Director, AIIMS, Raipur invites online Item Rate bids in two bid system (Technical cum Eligibility & Financial) from eligible and experienced contractors of appropriate list of CPWD, M.E.S., BSNL, Railway and Chhattisgarh State P.W.D. (B&R) for the following work(s):-The intending bidder must read the terms and conditions of Tender document carefully. Bidder may submit bid having all required documents.

SL. No.	Description	Details
(a)	NIT No.	08/EE/AIIMS/RPR/2019-20
(b)	Name of Work:	"Supply, Installation, testing & commissioning of Inverter VRF /VRV Air Conditioning System at School of public Health, Medical College AIIMS Raipur."
(c)	Estimated Cost	Rs.70,66,660.00/-(Rupees Seventy Lacs Sixty Six Thousand Six Hundred Sixty) Only
(d)	Earnest Money	Rs. 1, 41,333.00/-(Rupees One Lac Forty One Thousand Three Hundred Thirty Three)Only (to be submitted in the form of DD/FDR/BG) in favour of AIIMS, Raipur.
(e)	Period of Completion	60 Days
(f)	Last date and time of online submission of tender	By 09-10-2019 up to 14:00 Hours through online.
(g)	Time and date of online opening of Technical Bid	On 10-10-2019 at 15:30 Hours.
(h)	Time and date of opening of Online Financial Bids	Financial Bid will be open whose technical bid found eligible.
(j)	Period during which hard copies of EMD (in Original), Registration Certificates, Undertaking and other Documents to be submitted to Division office by the Bidders for reference. However, the Eligibility will be considered as per uploaded documents.	Original EMD to be submitted during Office hours before the last date of opening of technical Bids.

- Intending bidders shall have to register at CPPP portal to participate in the tendering process. For details kindly visit website [http:// eprocure.gov.in/e-procure/app](http://eprocure.gov.in/e-procure/app) or In case the bidder requires any elucidation regarding the tender documents, may contact to the office of Executive Engineer, AIIMS Raipur before the opening of tender date.
- For e-tendering of this tender, downloaded from AIIMS Raipur website and Central Public Procurement Portal (CPPP) e-Procurement website.
- The intending bidders must have valid class-III digital signature to submit the bid. Manual bid shall not be accepted in any circumstance. The complete bidding process is online bidding; Bidder should have valid digital Signature Certificate (DSC) for online submission of bids.
- Tenderers are advised to follow the instructions provided in the 'Instructions to the Tenderer for the e-submission of the bids online through the Central Public Procurement Portal for e Procurement at <https://eprocure.gov.in/eprocure/app>.
- The bid can be submitted only after uploading the mandatory scanned documents up to 100 dpi Copies of eligibility documents and EMD as specified on the e-tendering website within the period of tender submission. Bidders can upload documents in the form of JPG format, PDF format and any other format as permissible by the e-tendering portal.
- Deleted

7. After submission of bid online, it can be revised any number of times before specified time on last date of submission of bid. While submitting the revised bid, bidder can revise the percentage rate any number of times but before last time and date of submission of bid as notified.
8. Financial bids shall be opened online only for bidders for whom EMD and other documents are found in order and who are found to be eligible to bid for work. On opening date, the bidder can log in and see the bid opening process. After opening of bid he/she will receive the competitor bid sheets.
9. If the bidder is found ineligible after opening of bid, bid shall become invalid.
10. If any discrepancy is noticed between the eligibility documents as uploaded at the time of submission of bid and hard copies as submitted physically by the bidder, the bid shall become invalid.
11. The Bidders shall have to submit original instrument for EMD and self-certified copies of all the scanned and uploaded documents during Office hours before opening of Bid.
12. The Eligibility bid shall be opened first on due date and time as mentioned above. The time and date of opening of financial bid of contractors qualifying the eligibility bid shall be communicated to them at a later date.
13. The department reserves the right to reject any prospective application without assigning any reason and to restrict the list of qualified contractors to any number deemed suitable by it, if too many bids are received satisfying the laid down criteria.
14. Performance Guarantee- The successful contractor will be required to furnish a Performance guarantee of 5% of Tendered Value after receiving notification of award in the form of Fixed Deposit Receipt or Bank Guarantee from any Nationalized Bank duly pledged in the name of the "All India Institute of Medical Sciences, Raipur" which shall be kept valid for a period of Six (06) months beyond completion of all the contractual obligations. The Performance Guarantee can be forfeited in the event of any breach or negligence or non-observance of any condition of contract or for unsatisfactory performance or non-observance of any condition of the contract. Performance Security will be released after successful completion of work under the contract. In case the contractor fails to deposit the said performance guarantee within the period including the extended period if any, the Earnest Money deposited by the contractor shall be forfeited automatically without any notice to the contractor. The earnest money deposited along with tender shall be returned after receiving the aforesaid performance guarantee.
15. Intending Bidders are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their bids, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their bid. A bidder shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. The bidders shall be responsible for arranging and maintaining at his own cost, all materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a bid by a bidder implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions.
16. The Tender paper/documents can be seen/downloaded from Official website & submitted through Online or Site.
17. The competent authority on behalf of the Director, AIIMS, Raipur does not bind itself to accept the lowest or any other bid and reserves to itself the authority to reject any or all the bids received without the assignment of any reason. All bids in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidder shall be summarily rejected.
18. Canvassing whether directly or indirectly, in connection with bidders is strictly prohibited and the bids submitted by the contractors who resort to canvassing will be liable to rejection.
19. The Competent Authority, The Engineer-In-Charge reserves to himself the right of accepting the whole or any part of the bid and the bidder shall be bound to perform the same at the rate quoted.
20. The contractor shall not be permitted to bid for works in the AIIMS, Raipur responsible for award and execution of contracts, in which his near relative is posted as an officer in any capacity between the grades of Superintending Engineer and Junior Engineer (both inclusive). He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any gazetted officer in the AIIMS, Raipur. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of this Department.
21. No Engineer of gazetted rank or other Gazetted Officer employed in Engineering or Administrative duties in an Engineering Department of the Government of India is allowed to work as a contractor for a period of one year

after his retirement from Government service, without the prior permission of the Government of India in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government of India as aforesaid before submission of the bid or engagement in the contractor's service.

22. The bid for the works shall remain open for **acceptance for a period of 75 days** from the date of opening of bids.
23. This notice inviting bid shall form a part of the contract document. The successful bidder/ contractor, on acceptance of his bid by the Accepting Authority shall within 15 days from the stipulated date of start of the work, sign the contract consisting of "The Notice Inviting bid, all the documents including additional conditions, specifications and drawings, GCC, if any, forming part of the bid as uploaded at the time of invitation of bid and rate quoted online at the time of submission of bid and acceptance thereof together with any correspondence leading thereto.

24. Eligibility Criteria for bidders.

- (1) The Applicant should have Experience of having successfully completed works during the last (07) **Seven Years** ending previous day of last date of submission of tender.
- (a) Three similar completed works costing not less than the amount equal to 40% of estimated Cost Put to tender,
Or
- (b) Two similar completed works, costing not less than the amount equal to 60% of the estimated Cost put to tender,
Or
- (c) One similar completed work of aggregate cost not less than the amount equal to 80% of the estimated cost.

"Similar works" means works of supply, Installation, testing & commissioning of Inverter VRF /VRV Air Conditioning System.

The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum; calculated from the date of completion to last date of receipt of tenders.

27. Method of application:

- a) If the bidder is an individual, the application shall be signed by him above his full type written name and current address.
- b) If the bidder is a proprietary firm, the application shall be signed by the proprietor above his full type written name and the full name of his firm with its current address.
- c) If the bidder is a firm in partnership, the application shall be signed by all the partners of the firm above their full type written names and current addresses, or, alternatively, by a partner holding power of attorney for the firm. In the later case a certified copy of the power of attorney should accompany the application. In both cases a certified copy of the partnership deed and current address of all the partners of the firm should accompany the application.
- d) If the bidder is a limited company or a corporation, the application shall be signed by a duly authorized person holding power of attorney for signing the application accompanied by a copy of the power of attorney. The bidder should also furnish a copy of the Memorandum of Articles of Association duly attested by a Public Notary.

List of Mandatory Documents to be filled in by the bidders in various forms to be scanned and uploaded within the period of bid submission

1	Treasury challan/Demand draft/Pay order or Banker's Cheque / Deposit at Call Receipt/Fixed Deposit Receipt of a Scheduled Bank/ Bank Guarantee of any Scheduled Bank against EMD
2	Letter of transmittal (Annexure-A)
3	Enlistment Order of the Contractor
4	Certificates of Work Experience issued by Executive Engineer or equivalent rank.
5	Registration with EPFO and ESIC
6	Vendor Details as per (Annexure-B)
7	Structure & Organization (Annexure-C)
8	Affidavit for "No back to back execution of work" as per the provisions of clause 1.2.3 of CPWD-6 (Annexure-D)
9	GST Registration Certificate of the State in which the work is to be taken up, if already obtained by the bidder.
10	Declaration by Bidder (Annexure-E)
11	Integrity Pact (Annexure-F)
13	Consent Letter (Annexure-G)

LETTER OF TRANSMITTAL (Annexure-A)

From:

To

The Executive Engineer

.....

Subject: *Submission of bids for the work of*

Sir,

Having examined the details given in the bid document for the above work, I/we hereby submit the relevant information.

1. I/we hereby certify that all the statement made and information supplied in the enclosed forms A to H and accompanying statement are true and correct.
2. I/we have furnished all information and details necessary for eligibility and have no further pertinent information to supply.
3. I/we submit the requisite certified solvency certificate and authorize the Executive Engineer.....to approach the Bank issuing the solvency certificate to confirm the correctness thereof. I/we also authorize Executive Engineer to approach individuals, employers, firms and corporation to verify our competence and general reputation.
4. I/we submit the following certificates in support of our suitability, technical knowledge and capability for having successfully completed the following eligible similar works:

Name of work	Certificate from
--------------	------------------

Certificate: It is certified that the information given in the enclosed eligibility bid are correct. It is also certified that I / We shall be liable to be debarred, disqualified / cancellation of enlistment in case any information furnished by me / us is found to be incorrect.

Enclosures: Seal of bidderDate of submission:

Signature(s) of Bidder(s).

Annexure-B

FORM FOR DETAILED INFORMATION BY BIDDER

1.	Name of the Bidder	
2.	Permanent Account No (PAN)	
3.	Particulars of Bank Account	
	a) Name of the Bank	
	b) Name of the Branch	
	c) Branch Code	
	d) Address	
	e) City Name	
	f) Telephone No	
4.	Legal status of the bidder (attach copies of original document defining the legal	
	a) An Individual	
	b) A proprietary firm	
	c) A firm in partnership	
	d) A limited company or Corporation	
4	Valid Email ID of the Bidder	
5.	Complete Postal Address of the bidder	

(Authorized Signature of the Bidder with Seal)

Annexure-C

STRUCTURE & ORGANISATION

1. (a) Name
(b) Address of the bidder
2. (a) Telephone no.
(b) Telex no.
(c) Fax no.
(d) E-mail
3. Legal status of the bidder (attach copies of original document defining the legal status)
 - (a) An Individual
 - (b) A proprietary firm
 - (c) A firm in partnership
 - (d) A limited company or Corporation
4. Particulars of registration with various Government Bodies (attach attested photocopy)

Organization/Place of registration

Registration No.

- 1.
5. Names and titles of Directors & Officers with designation to be concerned with this work.
6. Designation of individuals authorized to act for the organization
7. Has the bidder, or any constituent partner in case of partnership firm / Limited Company / Joint Venture, ever been convicted by the court of law? If so, give details.
8. In which field of Civil Engineering construction the bidder has specialization and interest?
9. Any other information considered necessary but not included above.

Signature of Bidder(s)

AFFIDAVIT

I/We undertake and confirm that eligible similar works(s) has/have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of department, then I/We shall be debarred for bidding in CPWD in future forever. Also, if such a violation comes to the notice of department before the date of start of work, the Engineer-In-Charge shall be free to forfeit the entire amount of earnest money deposit/ performance guarantee. (Scanned copy of this affidavit to be uploaded at the time of submission of bid).

NOTE 1: Affidavit to be furnished on a Non-Judicial stamp paper worth Rs. 100/- to be made under the witness of a Public Notary.

NOTE 2: "A work is said to have been executed on "back to back "basis when the entire work or substantial part of the work forming the basis for evaluation of the eligibility of the bidder is got executed by the bidder through another contractor either by direct nomination or by call of tender".

.....

Signed by an Authorized Officer of the firm
with stamp

Witness:

Signature of Public Notary

DECLARATION

It is to certify that:

- 1) I /We have gone through CPWD W-8 amended up to correction Slip No.6 as available on website <https://eprocure.gov.in/eprocure/app> / www.aiimsraipur.edu.in or in the office of Executive Engineer and I/We agree with the terms and conditions of it and understood that it will form part of the agreement.
- 2) I hereby certify that none of my Relative(s) as defined in Paragraph 14 of CPWD W-6 is/are employed in AIIMS Civil Zone, Chhattisgarh. In case at any stage, it is found that the information given by me is false/incorrect, AIIMS shall have the absolute right to take any action as deemed fit without any prior intimation to me”.
- 3) I/We undertake and confirm that eligible similar Work(s) has/have not been gotexecuted through another contractor on back to back basis. Further, it is stated that, if such a violation comes to the notice of Department, than I/We shall be debarred for bidding in AIIMS in future forever. Also, if such a violation comes to the notice of AIIMS, Raipur before date of start of work, the Executive Engineer shall be free to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee.
- 4) I / We have signed (with stamp) all the pages of the tender document before submitting the same.
- 5) All the information and documents given/ uploaded for bids are true.
- 6) I / We have submitted the EMD.
- 7) I / We have provided our e-Mail id for any communication in this regard.
- 8) I have read carefully & understood the important instructions to the all tenderers.

Date.....

Contractor

E-Mail: _____

(Sign with Seal)

INTEGRITY PACT

To,

Sub: NIT No. **08/EE/AIIMS/RPR/2019-20 for the work of “Supply, Installation, testing & commissioning of Inverter VRF /VRV Air Conditioning System at School of public Health, Medical College AIIMS Raipur.”**

Dear Sir,

It is here by declared that AIIMS is committed to follow the principle of transparency, equity and competitiveness in public procurement.

The subject Notice Inviting Tender (NIT) is an invitation to offer made on the condition that the Bidder will sign the integrity Agreement, which is an integral part of tender / bid documents, failing which the tenderer / bidder will stand disqualified from the tendering process and the bid of the bidder would be summarily rejected.

This declaration shall form part and parcel of the Integrity Agreement and signing of the same shall be deemed as acceptance and signing of the Integrity Agreement on behalf of the AIIMS Raipur.

Yours faithfully,

Executive Engineer

Project Cell, AIIMS Raipur

To,

The Executive Engineer,

Project Cell, AIIMS Raipur

Sub: Submission of Tender for the work **“Supply, Installation, testing & commissioning of Inverter VRF /VRV Air Conditioning System at School of public Health, Medical College AIIMS Raipur.”**

Dear Sir,

I / We acknowledge that AIIMS is committed to follow the principles thereof as enumerated in the Integrity Agreement enclosed with the tender/bid document.

I / We agree that the Notice Inviting e-Tender is an invitation to offer made on the condition that I/We will sign the enclosed integrity Agreement, which is an integral part of tender documents, failing which I/We will stand disqualified from the tendering process. I/We acknowledge that THE MAKING OF THE BID SHALL BE REGARDED AS AN UNCONDITIONAL AND ABSOLUTE ACCEPTANCE of this condition of the NIT.

I/We confirm acceptance and compliance with the Integrity Agreement in letter and spirit and further agree that execution of the said Integrity Agreement shall be separate and distinct from the main contract, which will come into existence when tender/bid is finally accepted by AIIMS Raipur. I/We acknowledge and accept the duration of the Integrity Agreement, which shall be in the line with Article 1 of the enclosed Integrity Agreement.

I/We acknowledge that in the event of my/our failure to sign and accept the Integrity Agreement, while submitting the tender/bid, AIIMS Raipur shall have unqualified, absolute and unfettered right to disqualify the tenderer/bidder and reject the tender/bid in accordance with terms and conditions of the tender/bid.

Yours faithfully

(Duly authorized signatory of the Bidder)

CONSENT LETTER

I/We hereby give my/ our consent to work as electrical contractor till the completion of work and I/we will be responsible for necessary action to hand over the work and for rectification of defects and repair during the maintenance period. I/we will execute the work as per CPWD specification and the conditions of the works as mentioned in tender document.

I/we will also engage suitable Engineer for the work as per condition of work. I further certify that the above particulars pertaining to me are correct.

Signature of bidder

To be signed by the bidder and same signatory competent / authorized to sign the relevant contract on behalf of AIIMS Raipur.

INTEGRITY AGREEMENT

This Integrity Agreement is made at..... on this..... day of.....2019

BETWEEN

AIIMS Raipur through Executive Engineer,..... ,
(Name of Division)

AIIMS,....., (Hereinafter referred as the
(Address of Division)

'Principal / Owner', which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

AND

(Name and Address of the Individual/firm/Company)
through.....(hereinafter referred to as the
(Details of duly authorized signatory)

"Bidder/Contractor" and which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

Preamble

WHEREAS the Principal /Owner has floated the e-Tender (NIT No:**08/EE/AIIMS/RPR/2019-20**) (hereinafter referred to as "**Tender/Bid**") and intends to award, under laid down organizational procedure, contract for "**Supply, Installation, testing & commissioning of Inverter VRF /VRV Air Conditioning System at School of public Health, Medical College AIIMS Raipur.**" Hereinafter referred to as the "**Contract**".

AND WHEREAS the Principal / Owner values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relation with its Bidder(s) and Contractor(s).

AND WHEREAS to meet the purpose aforesaid both the parties have agreed to enter into this Integrity Agreement (hereinafter referred to as "**Integrity Pact**" or "**Pact**"), the terms and conditions of which shall also be read as integral part and parcel of the Tender/Bid documents and Contract between the parties.

NOW, THEREFORE, in consideration of mutual covenants contained in this Pact, the parties hereby agree as follows and this Pact witnesses as under:

Article 1: Commitment of the Principal / Owner

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

- (a) No employee of the Principal/Owner, personally or through any of his/her family members, will in connection with the Tender, or the execution of the Contract, demand, take a promise for or accept, for

self or third person, any material or immaterial benefit which the person is not legally entitled to.

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

(c) The Principal / Owner shall endeavor to exclude from the Tender process any person, whose conduct in the past has been of biased nature.

- 2) If the Principal/Owner obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal code (IPC) / Prevention of Corruption Act, 1988 (PC Act) or is in violation of the principles herein mentioned or if there be a substantive suspicion in this regard, the Principal / Owner will inform the Chief Vigilance Officer and in addition can also initiate disciplinary actions as per its internal laid down policies and procedures.

Article 2: Commitment of the Bidder (s) / Contractor (s)

- 1) It is required that each Bidder / Contractor (including their respective officers, employees and agents) adhere to the highest ethical standards, and report to the Government / Department all suspected acts of fraud or corruption or Coercion or Collusion of which it has knowledge or becomes aware, during the tendering process and throughout the negotiation or award of a contract.
- 2) The Bidder(s) / Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the Tender process and during the Contract execution:

- a) The Bidder(s) / Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal / Owner's employees involved in the Tender process or execution of the Contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the Tender process or during the execution of the Contract.

The Bidder(s) / Contractor (s) will not enter with other Bidder (s) into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to cartelize in the bidding process.

- b) The Bidder(s) / Contractor(s) will not commit any offence under the relevant IPC/PC Act. Further the Bidder(s) / Contractor(s) will not use improperly, (for the purpose of competition or personal gain), or pass on to others, any information or documents provided by the Principal/Owner as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
- c) The Bidder(s)/ Contractor(s) of foreign origin shall disclose the names and addresses of agents / representatives in India, if any. Similarly Bidder(s)/Contractor(s) of Indian Nationality shall disclose names and addresses of foreign agents/representatives, if any. Either the Indian agent on behalf of the foreign principal or the foreign principal directly could bid in a tender but not both. Further, in cases where an agent participate in a tender on behalf of one manufacturer, he shall not be allowed to quote on behalf of another manufacturer along with the first manufacturer in a subsequent/parallel tender for the same item.

- d) The Bidder(s)/ Contractor(s) will, when presenting his bid, disclose (with each tender as per Performa enclosed) any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the Contract
- 3) The Bidder(s) / Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.
- 4) The Bidder(s) / Contractor(s) will not, directly or through any other person or firm indulge in fraudulent practice means a willful misrepresentation or omission of facts or submission of fake / forged documents in order to induce public official to act in reliance thereof, with the purpose of obtaining unjust advantage by or causing damage to justified interest of others and/or to influence the procurement process to the detriment of the Government interests.
- 5) The Bidder(s) / Contractor(s) will not, directly or through any other person or firm use Coercive Practices (means the act of obtaining something, compelling an action or influencing a decision through intimidation, threat or the use of force directly or indirectly, where potential or actual injury may befall upon a person, his / her reputation or property to influence their participation in the tendering process).

Article 3: Consequences of Breach

Without prejudice to any rights that may be available to the Principal/Owner under law or the Contract or its established policies and laid down procedures, the Principal / Owner shall have the following rights in case of breach of this Integrity Pact by the Bidder(s)/Contractor(s) and the Bidder / Contractor accepts and undertakes to respect and uphold the Principal / Owner's absolute right:

- 1) If the Bidder (s) / Contractor(s), either before award or during execution of Contract has committed a transgression through a violation of Article 2 above

or

in any other form, such as to put his reliability or credibility in question, the Principal/Owner after giving 14 days notice to the contractor shall have powers

to

disqualify the Bidder(s)/Contractor(s) from the Tender process or terminate / determine the Contract, if already executed or exclude the Bidder/Contractor

from

future contract award processes. The imposition and duration of the exclusion will be determined by the severity of transgression and determined by the Principal / Owner. Such exclusion may be forever or for a limited period as decided by the Principal/Owner.

- 2) **Forfeiture of EMD/Performance Guarantee/Security Deposit:**

If the Principal/Owner has disqualified the Bidder(s) from the Tender process prior to the award of the Contract or terminated/determined the Contract or has accrued the right to terminate/determine the Contract according to Article 3(1), the Principal/Owner apart from exercising any legal rights that may have accrued to the Principal/Owner, may in its considered opinion forfeit the entire amount of Earnest Money Deposit, Performance Guarantee and Security Deposit of the Bidder / Contractor.

- 3) **Criminal Liability:**

If the Principal/Owner obtains knowledge of conduct of a Bidder or Contractor, or of an employee or a representative or an associate of a Bidder or Contractor which constitutes corruption within the meaning of Indian Penal code (IPC)/Prevention of Corruption Act, or if the Principal/Owner has substantive suspicion in this regard, the Principal/Owner will inform the same to law enforcing agencies for further investigation.

Article 4: Previous Transgression

- 1) The Bidder declares that no previous transgressions occurred in the last 5 years with any other Company in any country confirming to the anticorruption approach or with Central Government or State Government or any other Central/State Public Sector Enterprises in India that could justify his exclusion from the Tender process.
- 2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the Tender process or action can be taken for banning of business dealings/ holding listing of the Bidder/Contractor as deemed fit by the Principal/ Owner.
- 3) If the Bidder/Contractor can prove that he has resorted / recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal/Owner may, at its own discretion, revoke the exclusion prematurely.

Article 5: Equal Treatment of all Bidders/Contractors/Subcontractors

- 1) The Bidder(s) / Contractor(s) undertake(s) to demand from all subcontractors a commitment in conformity with this Integrity Pact. The Bidder / Contractor shall be responsible for any violation(s) of the principles laid down in this agreement/Pact by any of its Sub- contractors/sub-vendors.
- 2) The Principal / Owner will enter into Pacts on identical terms as this one with all Bidders and Contractors.
- 3) The Principal / Owner will disqualify Bidders, who do not submit, the duly signed Pact between the Principal/Owner and the bidder, along with the Tender or violate its provisions at any stage of the Tender process, from the Tender process.

Article 6- Duration of the Pact

This Pact begins when both the parties have legally signed it. It expires for the Contractor / Vendor 12 months after the completion of work under the contract or till the continuation of defect liability period, whichever is more and for all other bidders, till the Contract has been awarded.

If any claim is made/lodged during the time, the same shall be binding and continue to be valid despite the lapse of this Pacts as specified above, unless it is discharged/determined by the Competent Authority, AIIMS Raipur.

Article 7- Other Provisions

- 1) This Pact is subject to Indian Law, place of performance and jurisdiction is the **Headquarters of the Division** of the Principal / Owner, who has floated the Tender.
- 2) Changes and supplements need to be made in writing. Side agreements have not been made.
- 3) **If the Contractor is a partnership or a consortium, this Pact must be signed by all the partners or by one or more partner holding power of attorney signed by all partners and consortium members. In case of a Company, the Pact must be signed by a representative duly authorized by board resolution.**
- 4) Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- 5) It is agreed term and condition that any dispute or difference arising between the parties with regard to the terms of this Integrity Agreement / Pact, any action taken by the Owner/Principal in accordance with this **Integrity Agreement/ Pact or interpretation** there of shall not be subject to arbitration.

Article 8- LEGAL AND PRIOR RIGHTS

All rights and remedies of the parties hereto shall be in addition to all the other legal rights and remedies belonging to such parties under the Contract and/or law and the same shall be deemed to be cumulative and not alternative to such legal rights and remedies aforesaid. For the sake of brevity, both the Parties agree that this Integrity Pact will have precedence over the Tender / Contract documents with regard any of the provisions covered under this Integrity Pact.

IN WITNESS WHEREOF the parties have signed and executed this Integrity Pact at the place and date first above mentioned in the presence of following witnesses:

(For and on behalf of Principal/ Owner)

(For and on behalf of Bidder/ Contractor)

WITNESSES:

1. (Signature, name and address)
2. (Signature, name and address)

Place:-

Dated:

अखिलभारतीयआयुर्विज्ञानसंस्थान,रायपुर (छत्तीसगढ़)

All India Institute of Medical Sciences, Raipur (Chhattisgarh)

Tatibandh, GE Road,

Raipur-492 099 (CG)

www.aiimsraipur.edu.in

Percentage Rate Tender/Item Rate Tender & Contract for Works

Tender for the work of : **“Supply, Installation, testing & commissioning of Inverter VRF /VRV Air Conditioning System at School of public Health, Medical College AIIMS Raipur.”**

e- T E N D E R

I/We have read and examined the notice inviting tender, schedule, A,B,C,D,E & F, specifications applicable, Drawings & Designs, General Rules and Directions, Conditions of Contract, clauses of contract, Special conditions, Schedule of Rate & other documents and Rules referred to in the conditions of contract and all other contents in the tender document for the work.

I/We hereby tender for the execution of the work specified for the AIIMS Raipur within the time specified in Schedule 'F', viz., schedule of quantities and in accordance in all respects with the specifications, designs, drawings and instructions in writing referred to in Rule-1 of General Rules and Directions and in Clause 11 of the CPWD General Conditions of contract and with such materials as are provided for, by, and in respects in accordance with, such conditions so far as applicable.

I/We agree to keep the tender open for (Seventy-Five)**75 days** from the due date of opening of financial bid and not to make any modification in its terms and conditions.

A sum of **Rs.1,41,333.00/-** is hereby forwarded in Receipt Treasury Challan/ Deposit at Call Receipt of a Scheduled Bank/ Fixed Deposit Receipts of a Scheduled Bank/ Demand Draft of a Scheduled Bank/ Bank Guarantee issued by a Scheduled Bank as earnest money. A copy of the earnest money in Receipt Treasury Challan/ Deposit at Call Receipt of a Scheduled Bank/ Fixed Deposit Receipts of a Scheduled Bank/ Demand Draft of a Scheduled Bank/ Bank Guarantee issued by a Scheduled Bank is submitted with tender. If I/We, fail to furnish the prescribed performance guarantee within prescribed tender, I/we agree that the said President of India or his successors, in office shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Further, if I/We fail to commence work as specified, I/We agree that President of India or his successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said performance guarantee absolutely. The said Performance Guarantee shall be guarantee to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the General Conditions of Contracts (CPWD). Further, I/we agree that in case of forfeiture of earnest money or performance guarantee as aforesaid, I/We shall be debarred for participation in the re-tendering process of the work.

I/We undertake and confirm that eligible similar work(s) has / have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of Department, then I/We shall be debarred for tendering in AIIMS Raipur in future forever. Also, if such a violation comes to the notice of Department before date of start of work, The Engineer – in – Charge shall be free to forfeit the entire amount of Earnest Money Deposited / Performance Guarantee.

I/We hereby declare that I/we shall treat the tender documents drawings and other records connected with the work as secret/confidential documents and shall not communicate information/derived there from to any person other than a person to whom I/We am/are authorized to communicate the same or use the information in any manner prejudicial to the safety of the State.

Dated:
Witness:

Signature of Contractor:

Postal Address:
E-Mail id:

Address:
Occupation :

To be filled in by the contractor/witness as applicable

ACCEPTANCE

The above tender (as modified vide letters mentioned hereunder) is accepted by me for and on behalf of the AIIMS Raipur for a sum of ₹ *

(Rupees _____ * _____)

The letters referred to below shall form part of this contract Agreement:-

a) _____

b) _____

c) _____

For & on behalf of the AIIMS Raipur.

Signature.....

Dated:

Designation.....

GENERAL PARTICULAR & ADDITIONAL CONDITIONS OF CONTRACT

GENERAL CONDITIONS

1. Name of Work: **“Supply, Installation, testing & commissioning of Inverter VRF /VRV Air Conditioning System at School of public Health, Medical College AIIMS Raipur.”**
2. For all items of Electrical; CPWD specifications with up to date correction slips up to receipt of tender shall be followed. For the items which are not covered under CPWD specifications, B.I.S. specifications shall apply. In this regard the decision of Engineer-in- charge shall be final.
3. Wherever any reference is made of any Indian Standard, it shall be taken as reference to the latest edition with all amendments / revision issued thereto up to the date of receipt of tenders.
4. Unless otherwise specified, the agreement rates for all items of work of the schedule of quantities are for all heights, depths, leads and lifts involved in the execution of work.
5. Other agencies working at site will also simultaneously execute the work entrusted to them and the contractor shall offer necessary co-operation wherever required to other agencies.
6. On account of security consideration, there could be some restrictions on the working hours, movement of vehicles for transportation of materials. The contractor shall be bound to follow all such restrictions and adjust the program for execution accordingly, for which nothing extra shall be paid.
7. The work shall be carried out in a manner complying in all respects with the requirements of relevant bye laws of the local bodies, Labour Laws, minimum wages act, workmen compensation act and other statutory laws enacted by Central Govt. as well as State Govt.
8. All melba/rubbish/silt/waste, garbage etc. generated due to any operation from buildings/houses/hostels and other open spaces whatsoever shall be disposed off on daily basis by the contractor to the specified common disposal point. After the collection of full truck load of the said Melba (approx. 4.5 cubic meters), the same shall be disposed off by the contractor to the authorized municipal dumping ground and nothing extra shall be paid on this account. In case of non- removal/disposal in the specified period, the same would be disposed at risk & cost of contractor.
9. No residential accommodation shall be provided to any of the staff engaged by the contractor. The contractor shall not be allowed to erect any temporary set up for staff in the campus.
10. No claims of the labours shall be entertained by the Department including that of providing employment, regularization of services etc.
11. All required register will be issued by Engineer-in-Charge/Executive Engineer duly marked in chronological order but the contractor will have to arrange all such registers/stationery etc. Nothing extra shall be paid on this account.
12. The contractor shall have registration with Employee's Provident Fund Commissioner and Employee's state Insurance Corporation for safe guarding interest of his workmen. He shall obtain all other necessary approvals from statutory bodies as per law in vogue.
13. All T&P, scaffoldings, ladders/Hydra etc, instruments/meters required for execution of the work shall be arranged by the contractor.
14. The contractor shall make all safety arrangement required for the labour engaged by him at his own cost. All consequences due to negligence or due to lapse of security/safety or otherwise shall remain with the contractor. The department shall not be responsible for any mishap, injury, accident or death of the contractor's staff. No claim in this regard shall be entertained / accepted by the department. Also Contractor is responsible to the damage caused to any man/material other than his team during execution and AIIMS will not be responsible for that.
15. Contractor shall be fully responsible for any damages caused to govt. property or allotter's property by his or his labour in carrying out the work and shall be rectified by the contractor at his own cost.

16. GST and other Taxes as applicable shall be recovered/ paid from the contractor's bill as per Govt. of India/AIIMS Rules. GST amount will be reimbursed only after submission of GST deposition proof.
17. Chases, holes & drilling works etc. shall be done using power operated tools in the cost of Contract. No extra will be paid for the same.
18. Deleted
19. Deleted
20. The agency shall restore back the premises and other articles provided by the department to the department at the time of closure of the contract.
21. In the case of discrepancy between the schedule of quantities, the Specifications and/or the Drawings, the following order of preference shall be observed :-
- (a) Description of schedule of quantities.
 - (b) Additional specifications and special conditions, if any.
 - (c) Contract clauses of General conditions of contract for Central P.W.D. works. (iv) CPWD specifications.
 - (d) Architectural drawings.
 - (e) Indian standards specifications/ BIS. (vii) Sound engineering practice. Any reference made to any Indian standards specifications in these documents, shall imply to the latest version of that standard, including such revisions/amendments as issued by the Bureau of Indian Standards up to last date of receipt of tenders. The contractor shall keep at his own cost all such publications of relevant Indian Standards applicable to the work at site.
22. The contractor and /or his authorized agent should see the site order book every day and get the compliance of instruction given by the JE/AE/Engineer-in-charge(E-I/C) as per time schedule.
23. The contractor will not pitch up tents for laborers, materials and his stores etc.
24. No permanently / temporary huts / structures shall be constructed by the contractor at the site of work or at any government land / premises. Such structures, if any, found at the site or at AIIMS, Raipur land shall be demolished and removed at the cost of the agency without any notice.
25. Any damage to the building structure, fittings or any other articles etc. done by the contractor or his workman during the execution of the work shall be made good by the contractor at his own cost.
26. The contractor shall clear the site properly after the completion of the work.
27. The Agency shall be solely responsible for compliance to the provisions of various Labour and industrial laws, such as, wages, allowances, compensations, EPF, Bonus, Gratuity, ESI etc. relating to personnel deployed by it at AIIMS, Raipur site or for any accident caused to them and the institute shall not be liable to bear any expense in this regard. The Agency shall make payment of wages to workers engaged by it by the stipulated date irrespective of any delay in settlement of its bill by AIIMS, Raipur for whatever reason. The Agency shall also be responsible for the insurance of its personnel. The Agency shall specifically ensure compliance of applicable various Laws / Acts.
28. Breach of Terms and Conditions: Noncompliance of any terms and conditions enumerated in the contract shall be treated as breach of contract. Or In Case of breach of any terms and conditions as mentioned above, the Competent Authority, will have the right to reject the bid at any stage without assigning any reason thereof and nothing will be payable by AIIMS, Raipur in that event the EMD shall also stand forfeited.
29. Termination of Contract: AIIMS, Raipur would have the right to terminate the contract by giving one month's notice before the expiry of the term, in case the work performance is not up to the standard, or in case there is any violation of AIIMS, Raipur rules & regulations, or if there is any lapse in compliance of any labour legislation, or if there is any incident of indiscipline on the part of the Tenderer or his staff and the agreement may be terminated by either party by giving one month's notice to the institution. The decision of AIIMS, Raipur's management in this regard would be final and binding on the Tenderer. In such an event, AIIMS, Raipur shall have

the right to engage any other tenderer to carry out the task.

30.Arbitration: The Arbitration shall be held in accordance with the provision of the Arbitration and conciliations Act, 1996 and the venue of arbitration shall be at Raipur. The decision of the Arbitrator shall be final and binding on the both parties.

31.Dispute Settlement: It is mutually agreed that all differences and disputes arising out of or in connection with this agreements shall be settled by mutual discussions and negotiations if such disputes and differences cannot be settled and resolved by discussions and negotiations then the same shall be referred to the sole Arbitrator appointed by the Director, AIIMS, RAIPUR whose decision shall be final and binding on both the parties. The contract shall be governed by laws and procedures established by Govt. of India, within the framework of applicable legislation and enactment made from time to time concerning such commercial dealings/ processing.

32.Guidelines issued by Hon'ble National Green Tribunal in O.A. No. 21 of 2015 and O.A. No. 95 of 2014 in the matter of VardhamanKaushik Vs. Union of India & other and Sanjay KulshreshthaVs Union of India &ors : Air Pollution of Dust from Construction and Demolition activity reg. issued vide letter No. DPCC/EIA/Ref-001 to 172/NGT-21/2015/225-408 dt. 17/04/2015 shall be complied by the Bidders.

Executive Engineer (Civil)

AIIMS, Raipur

FORM OF PERFORMANCE GUARANTEE BANK GUARANTEE

(On a stamp paper of appropriate value from any Nationalized Bank or Scheduled Bank)

To
Executive Engineer,
AIIMS RAIPUR,
TATIBANDH,
RAIPUR – 492099

Dear Sir,

In consideration of the AIIMS RAIPUR, having offered to except the terms and conditions of the proposed agreement between..... &M/S_____ (hereinafter referred to as "the said Contractor (s)", which expression shall include his successor and assignees) for the work of _____ Contract No _____ in terms inter alia, of the _____ Letter No. _____ dated _____ and the General Conditions of Contract and upon the condition of the Contractor's furnishing Security for the performance of the Contractor's obligations and discharge of the Contractor's liability under and in connection with the said Contract upto a sum of Rs. _____ (Rupees _____ only) amounting to _____ percent of the total Contract value.

- 1 We, _____ (hereinafter called 'The Bank' which expression shall include its successors and assignees) hereby jointly and severally undertake to guarantee the payment to the Employer in rupees forthwith on demand in writing and without protest or demur or any and all moneys payable by the Contractor to the Employer in respect of or in connection with the said Contract inclusive of all the Employer's losses and damages and costs, (inclusive between attorney and client) charges and expenses and other moneys payable in respect of the above as specified in any notice of demand made by the Employer to the Bank with reference to this guarantee upto an aggregate limit of Rs. _____ (Rupees _____ only).
- 2 We _____ Bank Ltd. further agree that the Employer shall be sole judge of and as to whether the said Contractor has committed any breach or breaches of any of the terms and conditions of the said Contract and the extent of loss, damage, cost, charges and expenses caused to or suffered by or that may be caused to or suffered by the Employer on account thereof and the decision of the Employer that the said Contractor has committed such breach or breaches and as to the amount or amounts of loss, damage, costs, charges and expenses caused to or suffered by the Employer from time to time shall be final and binding on us.
- 3 The Employer shall be at liberty without reference to the Bank and without affecting the full liability of the Bank hereunder to take any other Security in respect of the Contractor's obligations and liabilities hereunder or to vary the Contract or the work to be done there under vis-a-vis the Contractor or to grant time or indulgence to the Contractor or to reduce or to increase or otherwise vary the prices of the total Contract value or to release or to forbear from enforcement of all or any of the Security and/or any other Security(ies) now or hereafter held by The Employer and no such dealing(s) reduction(s) increase(s) or other indulgence(s) or arrangements with the Contractor or release or forbearance whatsoever shall absolve the bank of the full liability to the Employer hereunder or prejudice the rights of the Employer against the bank.
- 4 This guarantee shall not be determined or affected by the liquidation or winding up, dissolution, or change of constitution or insolvency of the Contractor but shall in all respects and for all purposes be binding and operative until payment of all monies payable to the Employer in terms thereof.
- 5 The bank hereby waives all rights at any time inconsistent with the terms of this guarantee and the obligations of the Bank in terms hereof shall not be anywise affected or suspended by reason of any dispute or disputes having been raised by the Contractor stopping or preventing or purporting to stop or prevent any payment by the Bank to the Employer in terms hereof.

- 6 The amount stated in any notice of demand addressed by the Employer to the Bank as liable to be paid to the Employer by the Contractor or as suffered or incurred by the Employer on account of any losses or damages or costs, charges and/or expenses shall be conclusive evidence of the amount so liable to be paid to the Employer or suffered or incurred by the Employer as the case may be and shall be payable by the Bank to The Employer in terms hereof.
- 7 This guarantee shall be a continuing guarantee and shall remain valid and irrevocable for all claims of the Employer and liabilities of the Contractor arising upto and until midnight of _____.
- 8 This guarantee is valid till _____ (date to be mentioned) (Sixty days beyond the stipulated date of completion or the extended period, thereof)
- 9 This guarantee shall be in addition to any other guarantee or Security whatsoever that the Employer may now or at any time anywise may have in relation to the Contractor's obligations/or liabilities under and/or in connection with the said Contract, and the Employer shall have full authority to have recourse to or enforce this Security in preference to any other guarantee or Security which the Employer may have or obtain and no forbearance on the part of the Employer in enforcing or requiring enforcement of any other Security shall have the effect of releasing the Bank from its full liability hereunder.
- 10 It shall not be necessary for the Employer to proceed against the said Contractor before proceeding against the Bank and the Guarantee herein contained shall be enforceable against the Bank notwithstanding that any Security which The Employer may have obtained or obtain from the Contractor shall at the time when proceedings are taken against the said bank hereunder be outstanding or unrealized.
- 11 We, the said Bank undertake not to revoke this guarantee during its currency except with the consent of the Employer in writing and agree that any change in the constitution of the said Contractor or the said bank shall not discharge our liability hereunder.
- 12 We _____ the said Bank further that we shall pay forthwith the amount stated in the notice of demand notwithstanding any dispute/difference pending between the parties before the arbitrator and/or that any dispute is being referred to arbitration.
- 13 Notwithstanding anything contained herein above, our liability under this guarantee shall be restricted to Rs. _____ (Rupees _____) and this guarantee shall remain in force till _____ and unless a claim is made on us within 3 months from that date, that is before _____ all the claims under this guarantee shall be forfeited and we shall be relieved of and discharged from our liabilities there under.

Dated _____ day of _____ 20

For and on behalf of Bank.

Issued under sea

SPECIAL CONDITIONS OF CONTRACT

1. GENERAL

1.1 Wherever any reference to any Indian Standard Specifications of BIS or other International standards of ASTM / BS/EN occurs in the documents relating to this contract, the same shall be inclusive of all amendments issued there-to or revisions thereof, if any, up to the date of receipt of tenders.

1.2 The contractor shall work according to the programme of work as approved by the Engineer-in-charge, for which purpose, the contractor shall submit a programme of the work within 07 days from the stipulated date of start of the work based on computer software such as MS Project etc. and shall update the same every fortnight.

The contractor shall submit monthly progress report of the work in a computerized form. The progress report shall contain the following, apart from whatever else may be required as specified:

- (i) Project information, giving the broad features of the contract of the work under the contract, and the broad structural or other details.
- (ii) Introduction, giving a brief scope of the work under the contract, and the broad structural or other details.
- (iii) Deleted
- (iv) Progress chart of the various components of the work that are planned and achieved, for the month as well as cumulative upto the month, with reasons for deviations, if any, in a tabular format.
- (v) Plant and machinery statement, indicating those deployed in the work, and their working status.
- (vi) Man-power statement, indicating individually the names of all the staff deployed in the work, along with their designations.
- (vii) Financial statement, indicating the broad details of all the running account payments received upto date, such as gross value of work done, advances taken, recoveries effected, amounts withheld, net payments, details of cheque payments received, etc.
- (viii) A statement showing the extra and substituted items submitted by the contractor, and the payments received against them, items pending for sanction/decision by the Department, broad details of the Bank Guarantees, indicating clearly their validity periods, broad details of the insurance policies taken by the contractor, if any, the advances received and adjusted.
- (ix) Progress photographs, in colour, of the various items/components of the work done upto date, to indicate visually the actual progress of the work.
- (x) Quality assurance and quality control tests conducted during the month, with the results thereof.
- (xi) Videography at various stages of construction right from the day of start of work to date of completion/occupation, covering all major events, inspections, visits by dignitaries etc.

1.3 The contractor shall take instructions from the Engineer-in-charge for stacking of materials at site. No excavated earth or building materials shall be stacked on areas where the buildings, roads, services or compound walls are to be constructed.

1.4 If as per Municipal or prevailing rules of the secured campuses owned by paramilitary forces, Institutions etc, the huts for labour are not to be erected at the site of work by the contractors, the contractors shall provide such accommodation at such locations as are acceptable to local bodies with all provisions concerning labour safety & sanitation as contained in the relevant clause of the contract, for which nothing shall be payable.

1.5 Unless otherwise provided in the Schedule of quantities, the rates tendered by the contractor shall be all inclusive and shall apply to all heights, lifts, leads and depths of the building and nothing shall be payable to him on this account.

1.6 The working drawings appearing at para 8.1(iii) of conditions of contract in the form CPWD-7/8, shall mean to include both architectural and structural drawings respectively. The structural and architectural drawings shall be properly correlated before executing the work. In case of any difference noticed between architectural and structural drawings, final decision, in writing of the Engineer-in-charge shall be obtained by the contractor before proceeding further.

- 1.7 Some restrictions may be imposed by the security staff etc. on the working and for movement of labour, materials etc. The contractor shall be bound to follow all such restriction / instructions including issue of identity cards to all persons authorized by him to do work / visit the work site and nothing shall be payable on this account.
- 1.8 The contractor shall make his own arrangements for obtaining electric connections, if required, and make necessary payments directly to the department concerned.
- 1.9 The contractor shall conduct his work, so as not to interfere with or hinder the progress or completion of the work being performed by other contractor (s) or by the Engineer-in-Charge and shall as far as possible arrange his work and shall place and dispose off the materials being used or removed, so as not to interfere with the operations of other contractors, or he shall arrange his work with that of the others in an acceptable and coordinated manner and shall perform it in proper sequence to the complete satisfaction of Engineer-in-Charge. The contractor shall be responsible for any damage due to hindrance caused by him.
- 1.10 Cast iron pipes and fittings without ear shall be used. However, pipes and fittings with ears may be accepted without any extra payment. In such cases, clamps are not required and no extra payment shall be made for fixing the pipes in a different manner.
- 1.11 Any cement slurry added over base surface for bond or for continuation of concreting, for protecting reinforcement bars, its cost shall be deemed to have been included in the respective items, unless specified otherwise and nothing extra shall be payable nor extra cement shall be considered in the cement consumption on this account.
- 1.12 Stacking of materials and excavated earth including its disposal shall be done as per the directions of the Engineer-in-Charge. Double handling of materials or excavated earth if required at any stage shall have to be done by the contractor at his own cost.
- 1.13 No claim for idle establishment & labour, machinery & equipments, tools & plants and the like, for any reason whatsoever, shall be admissible during the execution of work as well as after its completion.
- 1.14 Only Star headed Stainless Steel screws shall be used unless otherwise specified.
- 1.15 Work shall be carried out in professional manner with finished product serving the intended purpose with specified strength, durability and aesthetics.
- 1.16 Work activities shall be executed in well thought out sequences such that consequent activities not adversely affecting previously done work. Nothing extra shall be payable to protect the works already done.
- 1.17 The contractor shall prepare all the needed shop drawings well in advance and get them approved before placing the order and execution of the item.
- 1.18 The contractor shall, at his risk and cost, make all arrangements and shall provide all facilities as the Engineer-in-Charge may require for collecting, and preparing the required number of samples for such tests at such time and to such place or places as may be directed by the Engineer - in -Charge and bear all charges and cost of testing unless specifically provided for otherwise elsewhere in the contract or specifications.

2. RATES

- 2.1 The rates quoted by the Contractor are deemed to be inclusive of site clearance, setting out work, profile, setting lay out on ground, establishment of reference bench mark(s), installing various signage, taking spot levels, survey with total station, construction of all safety and protection devices, compulsory use of helmet and safety shoes, and other appropriate safety gadgets by workers, imparting continuous training for all the workers, barriers, preparatory works, construction of clean, hygienic and well ventilated workers housings in sufficient numbers as per drawing supplied by Engineer in charge, working during monsoon or odd season, working beyond normal hours, working at all depths, height, lead, lift, levels and location etc. and any other unforeseen but essential incidental works required to complete this work. Nothing extra shall be payable on this account and no extension of time for completion of work shall be granted on these accounts.
- 2.2 The rates quoted by the tenderer, shall be firm and inclusive of all taxes and levies.
- 2.3 No foreign exchange shall be made available by the Department for importing (purchase) of equipment, plants, machinery, materials of any kind or any other items required to be carried out during execution of the

work. No delay and no claim of any kind shall be entertained from the Contractor, on account of variation in the foreign exchange rate.

- 2.4 All ancillary and incidental facilities required for execution of work like labour camp, stores, fabrication yard, offices for Contractor, watch and ward, temporary ramp required to be made for working at the basement level, temporary structure for plants and machineries, water storage tanks, installation and consumption charges of temporary electricity, telephone, water etc. required for execution of the work, liaison and pursuing for obtaining various No Objection Certificates, completion certificates from local bodies etc., protection works, testing facilities / laboratory at site of work, facilities for all field tests and for taking samples etc. during execution or any other activity which is necessary (for execution of work and as directed by Engineer-in-Charge), shall be deemed to be included in rates quoted by the Contractor, for various items in the schedule of quantities. Nothing extra shall be payable on these accounts. Before start of the work, the Contractor shall submit to the Engineer-in-Charge, a site / construction yard layout, specifying areas for construction, site office, positioning of machinery, material yard, cement & other storage, fabrication yard, site laboratory, water tank etc.
- 2.5 For completing the work in time, the Contractor might be required to work in two or more shifts (including night shifts). No claim whatsoever shall be entertained on this account, not with-standing the fact that the Contractor may have to pay extra amounts for any reason, to the labourers and other staff engaged directly or indirectly on the work according to the provisions of the labour and other statutory bodies regulations and the agreement entered upon by the Contractor with them.
- 2.6 All material shall only be brought at site as per program finalized with the Engineer-in-Charge. Any pre-delivery of the material not required for immediate consumption shall not be accepted and thus not paid for.

3. CLEANLINESS OF SITE

The Contractor shall not stack building material / malba / muck/ rubbish on the land or road of the local development authority or on the land owned by the others, as the case may be. So the muck, rubbish etc. shall be removed periodically as directed by the Engineer-in-Charge, from the site of work to the approved dumping grounds as per the local byelaws and regulations of the concerned authorities and all necessary permissions in this regard from the local bodies shall be obtained by the Contractor. Nothing extra shall be payable on this account. In case, the Contractor is found stacking the building material / malba as stated above, the Contractor shall be liable to pay the stacking charges / penalty as may be levied by the local body or any other authority and also to face penal action as per the rules, regulations and bye-laws of such body or authority. The Engineer –in-Charge shall be at liberty to recover, such sums due but not paid to the concerned authorities on the above counts, from any sums due to the Contractor including amount of the Security Deposit and performance guarantee in respect of this contract agreement.

4. INSPECTION OF WORK

In addition to the provisions of relevant clauses of the contract, the work shall also be open to inspection by the Engineer-In-Charge, AIIMS Raipur and other senior officers of AIIMS Raipur and his authorized representative. The contractor shall at times during the usual working hours and at all times at which reasonable notices of the intention of the Engineer-in-Charge or other officers as stated above to visit the works shall have been given to the Contractor, either himself be present to receive the orders and instructions or have a responsible Site Engineer duly accredited in writing, to be present for that purpose Senior Officers of AIIMS Raipur Authorities shall also be inspecting the on-going work at site at any time with or without prior intimation.

5. CO-OPERATION WITH OTHER CONTRACTORS/SPECIALIZED AGENCIES / SUB - CONTRACTORS

- 5.1 The Contractor shall take all necessary precautions to prevent any nuisance or inconvenience to the owners, tenants or occupants of the adjacent properties and to the public in general .The Contractor shall take all care, as not to damage any other adjacent property or other services running adjacent to the plot. If any damage is done, the same shall be made good by the Contractor at his own cost and to the entire satisfaction of the Engineer-in-Charge. The Contractor shall use such methodology and equipments for execution of the work, so

as to cause minimum environmental pollution of any kind during construction. Further, the Contractor shall take all precautions to abide by the environmental related restrictions imposed by Pollution control board.

Utmost care shall be taken to keep the noise level to the barest minimum so that no disturbance as far as possible is caused to the occupants / users of adjoining buildings. No claim what so ever on account of site constraints mentioned above or any other site constraints, inadequate availability of skilled, semi-skilled or unskilled workers in the near vicinity, non-availability of construction machinery spare parts and any other constraints not specifically stated here, shall be entertained from the Contractor. Therefore, the Tenderers are advised to visit site and get first-hand information of site constraints. Accordingly, they should quote their tenders. Nothing extra shall be payable on this account.

- 5.2 The Contractor shall cooperate with and provide the facilities to the sub-Contractors and other agencies working at site for smooth execution of the work. The contractor shall indemnify STC, BSF, authorities.

Against any claim(s) arising out of such disputes. The Contractor shall:

- (i) Allow use of scaffolding, toilets, sheds etc.
 - (ii) Properly co-ordinate their work with the work of other Contractors.
 - (iii) Provide control lines and benchmarks to his Sub-Contractors and the other Contractors.
 - (iv) Provide electricity and water at mutually agreed rates.
 - (v) Provide hoist and crane facilities for lifting material at mutually agreed rates.
 - (vi) Co-ordinate with other Contractors for leaving inserts, making chases, alignment of services etc. at site.
 - (vii) Adjust work schedule and site activities in consultation with the Engineer-in-Charge and other Contractors to suit the overall schedule completion.
 - (viii) Resolve the disputes with other Contractors/ sub-contractors amicably and the Engineer-in-Charge shall not be made intermediary or arbitrator.
- 5.3 The work should be planned in a systematic manner so as to ensure proper co-ordination of various disciplines viz. sanitary & water supply, drainage, rain water harvesting, electrical, firefighting, information technology, communication & electronics and any other services.
- 5.4 Other agencies will also simultaneously execute and install the works of sub-station / generating sets, air-conditioning, lifts, etc. for the work and the contractor shall afford necessary facilities for the same. The contractor shall leave such recesses, holes, openings trenches etc. as may be required for such related works (for which inserts, sleeves, brackets, conduits, base plates, clamps etc. shall be supplied free of cost by the department unless otherwise specifically mentioned) and the contractor shall fix the same at time of casting of concrete, stone work and brick work, if required, and nothing extra shall be payable on this account.
- 5.5 The contractor shall conduct his work, so as not to interfere with or hinder the progress or completion of the work being performed by other contractor(s) or by the Engineer-in-Charge and shall as far as possible arrange his work and shall place and dispose off the materials being used or removed so as not to interfere with the operations of other contractor or he shall arrange his work with that of the others in an acceptable and in a proper co-ordinated manner and shall perform it in proper sequence to the complete satisfaction of others.

6. Scope of Work

The work comprises broadly the following items:

- (1) Supply, installation, testing and commissioning of VRV/ VRF Air conditioning system comprising of Outdoor units and ceiling suspended unit.
- (2) Supply, installation, testing and commissioning of remote controller.
- (3) Insulation/acoustic, treatment of equipment, enclosures, piping as specified.
- (4) Supply, laying and commissioning of electrical power cables in tray/wall/duct/conduit as required.
- (5) Supply, installation, testing and commissioning of necessary controls and safeties along with control wiring.
- (6) All the civil work relating to air conditioning job.
- (7) Painting and final finishing of all the works related to vrv/ vrf work.
- (8) System balancing and prescribed seasonal performance test of all the equipment/system.

(9) Any other work not covered above to make complete system and comply with the full intent of this contract.

7. SAFETY MEASURES AT CONSTRUCTION SITE

In order to ensure safe construction, following shall be adhered for strict compliance at the site:-

- (i) The work site shall be properly barricaded.
- (ii) Adequate signages indicating 'Work in Progress – Inconvenience caused is Regretted' or Diversion Signs shall be put on the sites conspicuously visible to the public even during night hours. These are extremely essential where works are carried out at public places in use by the public.
- (iii) The construction malba at site shall be regularly removed on daily basis.
- (iv) All field officials and the workers must be provided with safety helmets, safety shoes and safety belts.
- (v) Proper MS pipe scaffoldings with work – platforms and easy-access ladders shall be provided at site to avoid accidents.

Necessary First-Aid kit shall be available at the site.

The above provisions shall be followed in addition to the provisions of General Condition of Contract.

8. Field testing instruments

(Following instruments in sufficient quantity as directed by the Engineer- in- Charge shall be made available by the contractor. It shall be ensured that the instruments always remain in serviceable condition else the same will be replaced. In case of non-availability of instrument Engineer-In-Charge will purchase the same and the invoice amount will be deducted from the bill and will be bound to contractor in the interest of work.

- (1) Steel tapes – 3 m / 5m / 7.5m / 15m / 30m
- (2) Vernier Calipers.
- (3) Micrometer screw 25 mm gauge.
- (4) A good quality plumb bob.
- (5) Spirit level, minimum 30 cms long with 3 bubbles for horizontal vertical.
- (6) Wire gauge (circular type) disc.
- (7) Foot rule.
- (8) Long nylon thread.
- (9) Rebound hammer for testing concrete
- (10) Dynamic penetrometer.
- (11) Magnifying glass
- (12) Screw driver 30 cms long
- (13) Ball pin hammer, 100 gms.
- (14) Plastic bags for taking samples
- (15) Moisture meter for timber
- (16) Earth resistance tests (for Electrical Divisions)
- (17) Multimeter, Meggar (for Electrical Divisions)
- (18) Total station

9. TESTING OF MATERIALS

- (1) The contractor shall arrange carrying out of all tests required under the agreement through the laboratory as approved by the Engineer-in-Charge and shall bear all charges in connection therewith including fee for testing unless specified otherwise. In all cases cost of samples and to & fro carriage shall be borne by the contractor.
- (2) Even ISI marked materials may be subjected to quality test at the discretion of the Engineer-in-Charge besides testing of other materials as per the specifications described for the item/material. Whenever ISI

marked materials are brought to the site of work the contractor shall, if required by the Engineer-in-Charge, furnish manufacturer test certificate or test certificate from approved testing laboratory to establish that the material procured by the contractor for incorporation in the work satisfy the provisions of IS codes relevant to the material and/or the work done.

- (3) Substandard Material/Work: In case any material/work is found substandard the same shall be rejected by the Engineer-in-Charge and the same shall be removed from the site of work within 48 hour, failing which the same shall be got removed by the Engineer-in-Charge at the risk and cost of the contractor without giving any further notice and time.

10. TENDER DRAWINGS, DRAWINGS FOR APPROVAL & COMPLETION DRAWINGS

(1) Drawings for approval on award of the work

- (a) The contractor shall prepare & submit three sets of following drawings and get them approved from the Engineer-in-Charge before the start of the work. The approval of drawings, however, does not absolve the contractor not to supply the equipment's/materials as per agreement, if there is any contradiction between the approved drawings and agreement.
- (b) Layout drawings of the equipment's to be installed including control cables, fuel/copper pipes and supports/structure for ducting & piping, Indoor and bus ducts/cable trays.
- (c) Drawings including section, showing the details of erection of entire equipment's.
- (d) Electrical wiring diagrams from engine-alternator set to electrical control panel.
- (e) Electrical/control cables and equipment's.
- (f) Dimensional drawings of acoustic enclosure/engine-alternator set and electrical control panel.
- (g) Drawings showing details of Copper pipes, cable, Grills, Diffuser etc.
- (h) Any other drawings relevant to the work.

(2) Drawings/Documents to be furnished on completion of installation.

The sets of following laminated drawings shall be submitted by the contractor while handing over installation to the Department.

- (a) VRV / VRF Ac System installation drawing giving complete details of all the equipment's include their foundation.
- (b) Diagram and layout of all piping Size, Indoor Size with CFM /Diffuser ,Grills and their layout.
- (c) Control wiring drawings with all control components and sequence of operation.

(3) Manufacturer's technical catalogues of all equipment's and accessories.

Operation and Maintenance Manual of all major equipment's, detailing all adjustments, operation and maintenance procedure.

(4) AFTER SALES SERVICES

The contractor shall ensure adequate and prompt after sales service free of cost during guarantee period, and against payment after the guarantee period is over, in the form of maintenance, spares and personnel as and when required during normal life span of the equipment's and shall minimize the breakdown period. In case of equipment supplied by other manufactures the firm furnishes a guarantee from the manufacturer for the same before the VRV/VRF Ac System installation is taken over.

(5) GUARANTEE

All equipment's shall be guaranteed, against unsatisfactory performance and/or break down due to defective design, workmanship or material, for a period of 12 months from the date of taking over the installation by the department. The equipment's or components, or any part thereof, so found defective during guarantee period shall be forthwith repaired or replaced free of cost, to the satisfaction of the Engineer-in-Charge. In case it is felt by the department that undue delay is being caused by the contractor in attending the defect/fault removed, the same will be got done by the department at the risk cost of the contractor. The decision of the Engineer-in-Charge in this regard shall be final.

Warranty period of Compressor: - 5 yrs

TECHNICAL SPECIFICATIONS

SPECIFICATION OF VRV/VRVAC SYSTEM AND INSTALLATION STANDARDS

VARIABLE REFRIGERANT VOLUME/ FLOW TYPE SYSTEM (VRV/VRF/FLOW System)

The system selected should be modular system, with number of indoors connected to centrally located outdoor units. The outdoor units for all the system shall be air cooled type and mounted on ground floor.

All the VRV/VRF air conditioners shall be fully factory assembled, wired, internally piped & tested. The outdoor unit shall be pre charged with first charge of R -410A/407A refrigerant. Additional charge shall be added as per refrigerant piping at site. All the units shall be suitable for operation with 415 V + 10%, 50 Hz + 3%, 3 Phase supply for outdoor units & 220 V + 10%, 50 Hz+ 3%, 1 Phase supply for indoor units.

The VRV/VRF system shall provide stable, trouble free & safe operation, with flexibility of operating desired indoor units. The outdoor units must be capable of delivering exact capacity proportional to the number of indoor units switched on & the heat load in the air conditioned area. The proportional operation shall be achieved by varying speed of the compressor in the outdoor units.

The operation of the VRV/VRF system shall be through independent wired/ wireless remote controllers as specified.

The system shall be multi-split system with inverter driven scroll compressor for application with R410A/407A refrigerant and shall be composed of ceiling type indoor units / 4-way cassette type indoor units / 2-way cassette type indoor units / wall type indoor unit / floor type indoor unit with a distributed refrigeration cycle, electrical components and enclosing cabinets. Both indoor units and outdoor unit shall be properly assembled, internally piped and wired, thoroughly tested and charged with refrigerant at factory and shall be topped up at site after erection.

Additional charge of refrigerant should be supported by engineering calculation. Each refrigeration cycle shall be equipped with scroll compressor, a solenoid valve, a heat exchanger, an accumulator, and a 4- way valve and flare connection parts.

SPECIFICATION OF OUTDOOR UNITS:

The outdoor units are to be installed at ground floor of the building. Outdoors units of the VRV/VRF system shall be air cooled type. All the compressors of the outdoor units must be hermetically sealed scroll type. Each module of outdoor unit must have separate 1# inverter compressor, suitable to operate at heat load proportional to indoor requirement. —Anti Corrosive|| treatment (Blue Fins) for Al. fins of Condenser Coils is mandatory. The treatment should be suitable for areas of high pollution and salt laden air. The outdoor units must be suitable for up to 150 m refrigerant piping between outdoor unit & the farthest indoor units, total piping of 300 m for all the indoor units. Allowable level difference between outdoor unit & indoor units shall be 50 m in case of outdoor unit on top & 40 m in case of outdoor unit at bottom. Allowable level difference between various indoor units connected to one out door unit shall be up to 15 m. Back up operation, in case of failure of one of the compressors of out door unit, for single module outdoor units or failure of one of the modules in case of multiple module outdoor units shall be possible. The VRV/VRF outdoor unit shall always be supplying at least 33% of back up operation, of the full load capacity. The outdoor unit shall employ system of equal run time for all the compressors, inverter or on/ off type, within each out door unit – Single Module or Multi Module.

The outdoor units shall be suitable to operate within an ambient temperature range of – 5 Deg C to 43 Deg C, in cooling mode & – 20 Deg C to 15 Deg C in heating mode.

Air cooled condenser shall have Axial Flow, upward throw fan, directly coupled to fan motors with minimum IP 55 protection. The outdoor unit condenser fan shall be able to develop external static pressure up to 6 mm of H₂O.

Starter for the Outdoor Unit compressor shall —Direct on Line|| type. Inverter compressor of the unit shall start first & at the minimum frequency, to reduce the inrush current during starting. Refrigerant control in the outdoor unit

shall be through Electronic Expansion Valve. Complete refrigerant circuit, oil balancing/ equalizing circuit shall be factory assembled & tested. The compressor(s) shall be hermetically sealed scroll and designed for continuous operation even at high ambient temperatures of RAIPUR. All condensing unit should have a combination of fixed speed and invertors driven scroll compressor. All invertors driven scroll compressor should have protection for electronic circuits and elimination of electromagnetic sound, which may interfere with the control function of the machine. The unit shall have safety device such as high-pressure switch, fan motor safety thermostat, invertors overload protector, fusible plugs and fuses for trouble free operation of the unit. The condenser shall be air cooled, made of Copper tubes with extended Aluminium fins. The condenser coil shall be multi-pass, cross-finned tube type, equipped with highly efficient Aluminium fins, mechanically bonded to oxygen free copper tubes. The coil shall be cleaned, dehydrated and tested for leakage at the factory. The Cabinets shall be fabricated out of heavy gauge steel, properly formed for close fit and structural rigidity. All access panels shall be so constructed as to be quickly and easily removable. All outside surface shall be finished with powder coating for protection against humid weather. The condenser fans shall be stepped control depending on no. of compressor operational & ambient condition, driven and designed to achieve low condensing temperatures & operate continuously and silently . One out-door unit should be capable to be connected up-to 16 nos. various indoor unit.

Outdoor units shall be complete with following safety devices:

- High pressure switch
- Fan driver overload protector
- Over current relay
- Inverter Overload Protector
- Fusible Plug
- Installation manual
- Operation Manual
- Connection Pipes
- Clamps

SPECIFICATIONS FOR INDOOR UNITS

The cooling coils shall be made of Copper Tubing having extended Aluminium fins. The evaporator coil shall be multi-pass, cross finned tube type, equipped with highly efficient Aluminium fins, and mechanically bonded to seamless, oxygen free copper tubes. The coil shall be cleaned, dehydrated and tested for leakage at factory. The cooling coils circuit shall be fed with liquid refrigerant through the expansion device and distributor. The indoor unit shall have two-speed fan motor. The blower shall be statically and dynamically balanced and designed for silent operation at required airflow rates against required static pressure. The filters shall be washable synthetic media type arranged for convenient cleaning and replacement. The drain pan shall be fabricated out of heavy sheet steel, insulated with 1/4" expanded polyethylene sheet. The casing shall be of heavy gauge G.I., duly powder coated for weather protection. All indoor units to be supplied with EU-3 i.e. 20 micron filters.

CASSETTE TYPE INDOOR UNITS

Regular Cassette Unit

Compact Cassette Unit

These units shall be installed between the bottom of finished slab & top of false ceiling. The maximum allowable height for the cassette type units shall be 250 mm. The unit must have in built drain pump, suitable for vertical lift of 750 mm. The unit casing shall be Galvanized Steel Plate. Unit must be insulated with sound absorbing thermal insulation material, Polyurethane foam. The noise level of unit at the highest operating level shall not exceed 68 dB(A), at a vertical distance of 1.5 m from the grille of the unit. Unit shall have provision of connecting fresh air without any special chamber & without increasing the total height of the unit (250 mm maximum). The unit shall be supplied with suitable decorative panel. The unit shall be supplied with Resin Net filter with Mold Resistance. The

filter shall be easy to remove, clean & reinstall. The unit will be connected in series to a suitable out door unit & it must be possible to operate the unit independently, through corded/ cordless remote.

Operation Manual Installation Manual Paper pattern for installation Drain hose/ Clamp metal/ Washer fixing plate/ Sealing pads/ Clamps/ Screws/ Washer for hanging bracket/ Insulation for fitting The unit must be available in following capacity –

- (1) 2.0TR-695CFM WithRefnets& Remote Controller
- (2) 2.8 TR-945CFM WithRefnets& Remote Controller
- (3) 3.2TR-1095CFM WithRefnets& Remote Controller

CEILING MOUNTED BUILT – IN TYPE

These units shall be ceiling suspended with suitable supports to take care of operating weight of the unit, without causing any excessive vibration & noise. The cold air supplied by these units will be supplied to the area to be air conditioned directly through duct collar & grille or, through duct system specified in the tender. 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 casing shall be Galvanized Steel Plate. Unit must be insulated with sound absorbing thermal insulation material, Glass Fiber. The noise level of unit at the highest operating level shall not exceed 68 dB(A), at a vertical distance of 1.5 m below the units with duct connected to the unit.

The unit must have provision to set external static pressure in three stages from max 10 mm to min 2 mm, depending on the air supply system. The unit must include as standard equipment, maintenance free long-life filter, resin net with mold resistant. The unit must include as standard equipment, a drain pump kit suitable to lift drain water up to 250 mm from the drain pipe opening. Unit must have Thermal Fuse for fan motor protection, in case of motor heating. The unit will be connected in series to a suitable outdoor unit & it must be possible to operate the unit independently, through corded/ cordless remote as per specification.

The unit shall be supplied with following from the factory –

Operation Manual

Installation Manual

Paper pattern for installation Drain hose/ Clamp metal/ Insulation for fitting/ Sealing pads/ Clamps/ Screws .

The unit must be available in following capacities –

- (1) 2.0TR-695CFM WithRefnets& Remote Controller
- (2) 2.8 TR-945CFM WithRefnets& Remote Controller
- (3) 3.2TR-1095CFM WithRefnets& Remote Controller

SPECIFICATION FOR CONTROLS SYSTEM FOR VRV/VRF AIR CONDITIONING SYSTEM

WIRELESS REMOTE CONTROLLER

Wireless remote controller shall be supplied by contractor .

The same operation modes & settings as with wired remote controllers must be possible.

NOTE - ALL OUT-DOOR UNITS SHALL BE MOUNTED ON MS ANGLE FRAME STRUCTURE. THE MS ANGLE FRAME STRUCTURE SHALL BE PAINTED WITH EPOXY PAINT. THE SHADE OF THE PAINT SHALL BE APPROVED BY THE AIIMS RAIPUR.

CONTROLS AND INTERLOCKING

All electrical control devices should be enclosed in the indoor and outdoor units. The compressor should be protected against breakdown by a quick response over current relay, a high-pressure switch, a wrap around type oil

heater and a discharge gas thermistor. In addition to the compressor protection devices, the indoor / outdoor fan motor should be protected by an internal thermostat. The indoor fan motor shall be directly supplied with the power source from the control circuit. The functions of these control devices shall compose an electrical sequence of manual starting and stopping, automatic continuous operation whenever the room thermostat requires, and the protection devices allow the operation. The remote control switch should be designed to provide simple operation such as On/Off, temperature and fan speed only without trouble shooting functions.

REFRIGERANT PIPING

The indoor and outdoor units shall be connected with Hard Copper refrigerant piping which is mention in SOQ. All piping connections for the units should be performed inside the unit. The refrigerant piping should be insulated with 9 mm nitrile rubber to copper pipe complete as required after applying two coats of cold setting adhesive (CPRX compound). Lastly, cover up the pipes sections with the with tie rods & supports clamp .Supporting should be at distance of 1.2Mtr not less than that and with necessary tie rods & brackets, supports, saddles, clamps, hangers, vibration-isolators and fittings such as bends, tees etc.as required .

DRAIN PIPING

Condensate from the evaporator unit shall be drained through properly installed drain piping designed to prevent any accumulation of condensate in the drain pan. Drain piping shall be made of 32mm dia. and 25 mm dia rigid CPVC pipe with 6 mm nitrile rubber insulation to protect any condensation . pressure rating with water tight threaded connections, leading from the room unit to a suitable drain point. Complete drain piping shall be made leak proof and water tight by means of precise installation and the use of leak proof sealant/adhesives.

All grilles (SA & RA), diffusers (SA & RA) will be made from heavy gauge extruded Aluminum sections / M.S. duly powder coated to match the interior requirements of Architect / Client. All the supply air grilles/diffusers will be provided with opposed blade dampers fabricated from Al. The damper should be suitable for operation from front face of grille/diffuser.

INSTALLATION

All pipe shall be rigid and shall be adequately supported and braced where required with standing seams, tees or angles of ample size to keep the pipe true to shape and to prevent buckling, vibration or breathing. All the joints shall be made tight and all interior surfaces shall be smooth. Bends shall be made with radius not less than one half the width of the duct or with properly designed interior curved vanes where metal ducts or sleeves terminate in woodwork, brick or masonry openings, tight-flanged collars. Pipes over false ceiling shall be supported from the slab above or from beams.

All holes in concrete, masonry etc. made by contractor for fixing supports etc. shall be made good and restored to original finish by him .

TESTING-

After completion all such system shall be tested for leakage.

The entire air distribution system shall be balanced to supply the air quantities as required in various zones and rooms to maintain the specified room conditions. The final shall be recorded and submitted to the Consultant for approval before acceptance and taking over of the entire system by the Employer.

Minimum Temperure required -24+-2 degree Celsius and Humidity -55 % - 60% .

PAINTING

Angle iron flanges, stiffeners, hangers and supports shall be painted with 2 coats of anti-rust primer and those remaining uncovered shall be further painted with 2 coats of synthetic enamel paints as required colour.

INSULATIONFOR PIPING

THERMAL INSUALTION

The insulation material for ducts shall be of closed cell elastomeric nitrile foam / EPDM. The thickness of the insulation shall be as specified. Non-flammable adhesive used for setting the insulation shall be non absorbing , non-chipping, odourless & low penetrative type (polygrip / equivalent). The pipe shall be insulated with closed type

elastomeric nitrile foam of density 40 to 60 Kg. / Cu. M. The insulation shall be fixed after cleaning the pipe surface and applying thin coat of good quality adhesive / rubber solution on pipe as well as on insulation material.

ELECTRICAL WORK

The electrical work will be carried out as per IE rules. The distribution including power cabling, control cabling and earthing of copper shall be carried out by the contractor. The electrical panel required for all the split units will also be provided by the contractor. The power cabling and control cabling will be of copper. The electrical work will be carried out by the contractor as per the approved drawings.

1. The work shall be carried out strictly in accordance with CPWD specifications for Electrical Works 2013 (internal) and 1995 (External) as amended upto date and in accordance with Indian Electricity Rules, 1956, Indian Electricity Act, 1910 as amended upto date and as per instructions of the Engineer-in-Charge including as below and nothing will be paid extra.
2. PVC insulated Cu. conductor wire used shall be multi-standard FRLS grade for which nothing extra shall be paid.
3. The size of conduit and wiring shall be got approved from the Engineer-in-Charge before taking up the execution.
4. The contractor shall make his own arrangement at his own cost for electrical / general tools and plants required for the work. Main Board and Main Distribution Board: The work shall be carried out according to the drawings / details are as approved by the Engineer- in-Charge. The contractor shall have to get the samples approved before the whole lot is brought to site and it shall include all inter connections etc. All termination of electrical cables in panel / feeder pillars DB's, cable-looping box etc. shall have to be done with proper thimbles / lugs using crimping process. Copper thimbles / reducer shall be used for copper cable and Aluminium cable nothing extra will be paid for the same.
5. Location of Light fixtures, cable routes etc. should be got approved from the Engineer-in-Charge before execution.
6. All interconnection in the panel, DB, cable-looping boxes shall be carried out with suitable cable commensurate with the current carrying capacity of incoming and outgoing cables complete with thimbles etc. as required for which nothing extra shall be paid.
7. All panels, DB's, cable-looping boxes will be numbered and marked with paint / name plate and nothing extra will be payable on this amount.
8. All MCB, MCCB, MCB, DB's, RCBO's, RCCB with DB's shall be of same make / manufacturer.
9. Modular Switch / Socket's / Plates / Computer outlet / Telephone outlet and all accessories shall be of the single make only be provided. The contractor shall have to make the edges around the boxes wherever required shall have to be made by the contractor for which nothing extra shall be paid. The galvanized metal box shall be of the standard thickness as the GI boxes besides other requirement.
10. The connection, inter connection, earthing and inter earthing shall be done by the contractor wherever required and noting extra shall be paid on this account All repairs & patch work shall be neatly carried out to match with the original finish & all damages caused to the building installation during the execution of work shall have to be made good by the contractor immediately at his own cost to the entire satisfaction of Engineer-in-charge. In case contractor fails to comply with the instructions of the Engineer-in-charge, Engineer-in-charge shall be at liberty to get the work done by any other agency and recover such amount as paid to the other agency from the bill(s) of the contractor. Contractor shall have no claim, whatsoever, on the extent of such amount.
11. The contractor shall have to provide the fish wire after removing the choking of the conduits. Even if subsequently the conduits are found choked, the choking will be get removed and / or the new conduits shall be provided at the risk and cost of the contractor.
12. Wherever ceiling roses are not required to be provided in the light/fan/exhaust fan points, due to site conditions, the contractor shall use suitable three pin connectors for which nothing extra shall be paid. Wiring shall be carried out with FRLS wires.
13. Contractor shall provide polythene/PVC plastic cover for all MDB's/SDB's/DB's, panels, feeder pillars etc to protect them from rust/damages, during execution of work till the work is actually completed and handed over to the department.
14. Copper lugs shall be provided for terminating copper/aluminium/GI earth wire to all switchboards for which nothing extra shall be paid. All multi-stranded/ stranded wires shall be terminated through copper lugs.

15. All concealed work and earthing shall be done in the presence of the Engineer-in-charge or his authorized representative.
16. All floor-mounted panels shall be mounted on M.S. channel of suitable size on all the sides. It shall have a continuous earth bus of the same size and material as the main phase running continuously along the length of the panel extending on either side for earth connection.
17. The doors of all cubicle panels shall be hinged type including those of bus bar chambers and cable alleys. The locking shall be with chrome plated metal key locks. All doors shall be earthed with copper conductor wire as approved by the Engineer-in-charge.
18. The MCB should be of the same make as that of MCB DB's and having a minimum breaking capacity of 10 KA. Contractor shall obtain approval of the Engineer-in-charge before procurement of MCB DB's.
19. All model of modular accessories required for the work shall be got approved from the Engineer-in-charge from among the approved makes. The base plate shall be preferably in sheet steel or otherwise in unbreakable polycarbonate. The cover plates shall be screw less type in shade approved by the Engineer-in-charge.
20. MCCBs shall be used with terminal spreaders and all terminals shall be shrouded to avoid direct contact.
21. All measuring and indicating instruments shall be protected through MCB's and isolating switches.
22. General arrangement drawing of the switchboard shall be got approved from the Engineer-in-Charge before commencement of manufacturing.
23. For the items like LT panels, feeder pillars and accessories, etc, the firm shall arrange for inspection in the factory and provide for all facilities for testing. The cost of the visit of Engineer-in-Charge or his representative shall be borne by department. However, firm will be responsible for arranging the inspections as required.
24. Conduit layout as per switching arrangement shall be prepared by contractor and got approved from the Engineer-in-Charge before slab casting.
25. Conduit and termination to SDB and main board adapter box i/c connection wires to MCB,s inter connection between SDB and main board etc shall be included in the tendered rates and nothing extra shall be paid for the same.
26. The contractor shall provide junction boxes / looping boxes of required sizes and such boxes shall be measured as part of conduit / batten wiring without any extra payment.
27. M.S. dash fastener shall be used for installation of fittings and fixtures in ceiling and for providing suspenders for the angle support, conduiting, cable tray etc. for which nothing extra shall be paid
28. All CI/metal boxes & junction boxes should be cleaned properly and painted from inside before wiring & fixing the accessories.
29. Cables:-
 - (a) Cables shall be bought from manufacturer only as per approved NIT.
 - (b) The length of the cables required shall be measured w.r.t. site condition and these shall be delivered in section of approved length only, to avoid jointing as far as possible.
 - (c) Cable delivery shall be scheduled in consultation with department only.
 - (d) All cable's shall be offered for inspection by department prior to dispatch, department reserve the right to wave of inspection so required in lien of proper test certificates.
30. Conduit layout drawing shall be got approval by Engineer -in-Charge before laying of conduit.
31. **Earthing connections:-**
 - (a) All fans & fittings are to be properly earthed for which no extra will be paid.
 - (b) Proper sleeving is to be provided to bare earth conductor in the switch boxes and also to bore conductors used for inter switch looping inside the switch boxes for which no extra will be paid.
 - (c) Termination of wiring inside DB's & main boards should be by crimped connections.
 - (d) Clamp type termination of earth strip (wherever provided) to pipe electrode will be made.

Additional Terms and Conditions

1. All materials to be used on this work shall be ISI marked & shall be got approved from the Technical sanctioning authority/Engineer-in-Charge before installation at site unless otherwise not covered under ISI.
2. The work shall be carried out according to approved drawings/details which shall be subsequently issued to the successful tenderer for execution of work and as per instructions of Engineer-in-Charge who will have the right to change the layout as per requirement at site and the contractor shall not have any claim due to change in layout. The work shall be executed by skilled person Licensed by the approved authorities.
3. All damages done to the building during execution of electrical work shall be the responsibility of the contractor and the same will be made good immediately at his own cost to the satisfaction of the Engineer-in-Charge. Any expenditure incurred by the department in this condition shall be recovered from the contractor and decision of the Engineer-in-Charge about recovery shall be final.
4. The bad workmanship will not be accepted and defects shall be rectified at contractor's cost to the satisfaction of the Engineer-in-Charge. The programme of electrical works is to be co-ordinate in accordance with the building work and no claim for idle labour shall be entertained.
5. All the debris during and after works should be removed and the site should be cleared by the contractor immediately after the accruing of debris. Similarly any rejected material should be immediately cleared off from the site by the contractor.
6. The contractor or his representative is bound to sign the site order book as and when required by the Engineer-in-Charge and to comply with the remarks therein.
7. All materials shall be supplied and used in items of works by the contractor should be of standard and approved quality. They should be got approved from the Engineer-in-Charge or his authorized representative before installation otherwise no payment will be made for an unapproved or rejected material used on the works and the same shall be removed at his cost from site or work.
8. The contractor shall have to prove bonafides of the make of materials by producing necessary documentary evidence. They are advised to obtain prior approval of Engineer-in-Charge for proposed make of material, before bringing material to site work.
9. All the material should be ISI Marked unless otherwise clarification is not available.
10. All concealed works shall have to be done in the presence of Engineer-in-Charge or his authorized representative.
11. The contractor shall make his own arrangement for carriage of material from store to the site.
12. The entire installation shall be at the risk and responsibility of the contractor until these are tested and handed over to the department.
13. Notwithstanding the schedule of quantities, all items of interrelated works considered necessary to make the installation complete and operative are deemed to be included shall be provided by the contractor at no extra cost.
14. The makes of material have been indicated in the list of acceptable makes. No other make will be acceptable. The material to be used in the work shall be got approved from the Engineer-in-Charge before use at site. The Engineer-in-Charge shall reserve the right to instruct the contractor to remove the material which, in his opinion, is not as per specifications.
15. No material shall be brought to site without the approval of Engineer-in Charge. All fixtures and fittings shall be procured just before the installation.
16. Makes of all items that are not covered in the schedule of work/additional specifications shall be got approved from the Engineer-in-charge and shall conform to relevant Indian Standard as applicable.
17. The contractor shall ensure that the staff employed by him for execution of the electrical work, possess the valid electrical license issued by competent authority. Consequences arising due to the default of the contractor in not complying with the above condition shall be the responsibility of the contractor.
18. The schematic diagram/dimensional drawings of the various electrical cubical panels shall be got approved from the Engineer-in-charge before fabrication and shall comply with CPWD specifications and Indian Electricity Rules. The panels shall conform to IS: 8623/1993. All panels shall be powder coated inside out, in shade approved by the Engineer-in-charge.
19. The work shall be carried out according to drawing approved by the Engineer-in-charge. The layout once approved can only be changed by the Engineer-in-charge as per requirement at site. It shall be the responsibility of the contractor to plan the layout and get the approval from the Engineer-in-charge before laying the conduits etc.

20. Contractor shall have to check the Site Order Book for any instructions of the Engineer-in-charge or his authorized representative and sign the site order book. He shall be bound to ensure compliance with the instructions recorded therein.
21. Watch and ward:- Watch & ward for the installations, materials, including materials supplied by the department shall be responsibility of the contractor till the installations / left over materials are finally taken over by the department. Nothing shall be payable on this account separately as this is deemed to be included within scope of work.
22. Completeness of tender:- Statutory deduction of "Contract Tax" at source shall be made while releasing payment through running / final bills. A certificate specifying the rate and amount of deduction shall however be issued.
23. Conformity to specifications:-
- (a) The work shall be carried out strictly in accordance with C.P.W.D. Specifications as amended up to date and also in accordance with the Indian Electricity Rules, 1956 and Indian Electricity Act, 1910 as amended up to date and as per the instructions of the Engineer-in-Charge.
 - (b) Contractor shall have to prove bonafides of the make of materials by producing necessary documentary evidence. Firms are advised accordingly to obtain prior approval of Engineer- in-Charge for proposed make of materials before bringing materials to site of work.

24. Date of acceptance of the installation:-

After the Engineer – in – Charge is satisfied that the installation complies with

- (a) Requirements of specifications in all respect.
- (b) The entire installation shall be at the risk and responsibility of the contractor until these are tested and handed over to the department. However, if there is any delay from the department side, the installation may be taken over in parts but the decision on the same shall be binding on the contractor.
- (c) Contractor or his authorized representative is bound to sign the site order book as and when required by the Engineer-in-Charge.
- (d) The contractor shall remain responsible for attending complaints free of cost for the minimum period of One Year for satisfactory performance of installations against the scheduled work done.
- (e) If any makes stated above does not comply with the technical specification given in the tender then such a make shall not be allowed.
- (f) If for any Material Makes not given, it should be got approved from the Engineer - in - Charge.

APPROVED MAKE

Note :

1. Unless otherwise specified, the brand/make of the material as specified in the item nomenclature or in the particular specifications or in the list of approved materials attached in the tender, shall be used in the work.
2. The Contractor shall obtain prior approval from the Engineer-in-charge before placing order for any specific material/ Brand/ Make.
3. Whenever the specified brand of material is not available than, the Engineer-in-charge may approve any material equivalent to that specified subject to proof being offered by the Contractor for its equivalence and its non-availability to his satisfaction.

S.no.	Item	Acceptable Makes/ Manufactures
1	VRV /VRF SYSTEM	DAIKIN / HITACHI /MITSUBISHI /VOLTAS /BLUE STAR /CARRIER
2	INSULATION:-	
a	FIBREGLASS	FGP / UP TWIGA / KHIMCO
b	EXPANDED POLYSTYRENE	BEARDSELL / COOLINE
c	EXPANDED POLYETHYLENE	NIKIFOAM / PROFEEL /Supreme/EQVT
d	NITRILE FOAM	AEROFLEX / Supreme/ ARMAFLEX/supreme/eqvt
3	GRILLES / DIFFUSERS	COSMOS / DYNACRAFT/ CARYAIRE
4	PRE-FILTERS	KIRLOSKAR / DYNA / KLENZAIDS /AIRTECH
5	Power and control CABLES	KEI/Finolex/RR Kabel/Havells/polycab
6	Drain Piping	SUPREME / PRINCE / EQUIVALENT
7	Ventilation/Exhaust fans	KRUGER / COMEFRI /NICOTRA /Usha/ Crompton/ Havells/ GE/ Bajaj
8	Copper piping	MANDEV/RAJCO/MEHTA
9	PVC insulated Copper wire (FRLS), Cables / Telephone wire	Havells / RR Kabel / Polycab / Finolex/ Anchor/ L&T (All with ISI Marked)
10	Circuit breakers/MCB / MCB DB's / RCCB	Legrand / L&T / Hager / Seimens / Schneider/ MDS/ GE/ Hager/ ABB
11	Industrial Socket	MDS/ HAVELLS/ Hager/ ABB
12	PVC Conduit	AKG/ MK/ Anchor/ Finolex/ Steel Craft/ Saraswati/ Swastik
13	Casing Capping	Saraswati/ Polycab/ AKG
14	LUGS, Thimble, Cable Glands	Dowels/ Commet/ Hex/ Jhonson / Gripwell/ Comex/Comed

PROFORMA OF SCHEDULES

(Operative Schedules)

SCHEDULE 'A'

Schedule of quantities (as per PWD-3)

: **Attached****SCHEDULE 'B'**

Schedule of materials to be issued to the contractor: -

SR. NO.	Description of item	Quantity	Rates in figures & words at which the material will be charged to the contractor	Place of Issue
1	2	3	4	5
			→ NIL ←	

SCHEDULE 'C'

Tools and plants to be hired to the contractor: -

Sr. No.	Description	Hire charges per day	Place of issue
1	2	3	4
		→ NIL ←	

SCHEDULE 'D'

Extra schedule for specific requirements / : NA
document for the work, if any

SCHEDULE 'E'

Reference to General Conditions of contract : CPWD General Conditions of Contract 2014 Corrected as per CON Circular up to last date of submission of bid.

NAME OF WORK: : **Supply, Installation, testing & commissioning of Inverter VRF /VRV Air Conditioning System at School of public Health, Medical College AIIMS Raipur.**

Estimated cost of work (Elect.) : **₹70,66,660.00/-**
 (i) Earnest Money : **₹1,41,333.00/-**
 (ii) Performance Guarantee : 5% of Tendered Value
 (iii) Security Deposit : 2.5% of Tendered Value

SCHEDULE 'F'**GENERAL RULES & DIRECTIONS**

Officer inviting tender : Executive Engineer (Civil) on behalf of Director AIIMS Raipur

Maximum percentage for quantity of items of work to be executed beyond which rates are to be determined in accordance with Clauses 12.2 & 12.3 : See below

DEFINITIONS: -

2(viii)	Accepting Authority	: Superintending Engineer/Executive Engineer, AIIMS Raipur (C.G.)
2(v)	Engineer -in- Charge (EIC)	: Superintending Engineer/Executive Engineer, AIIMS Raipur (C.G.)
2(x)	Percentage on cost of materials and Labour to cover all overheads and profits	: 15%
2(xi)	Standard Schedule of Rates	: Delhi Schedule of Rates 2018 (E&M) and 2014 (Civil) and Market Rate.
2(xii)	Department	: Project Cell, AIIMS Raipur
9(ii)	Standard CPWD Contract Form	: All uploaded documents

Clause 1

(1)	Time allowed for submission of Performance Guarantee from the date of issue of letter of acceptance	: 07 Days
(2)	Maximum allowable extension with late fee at 0.1% / day of PG amount beyond the period provided in (i) above.	: 07 Days

Clause 2

Authority for fixing compensation under Clause- 2	: Superintending Engineer/ Director, AIIMS Raipur
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Clause 2A

Whether Clause 2A shall be applicable	: No
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Clause 5

Number of days from the date of issue of letter of acceptance for reckoning date of start : **14 Days**

Mile stone(s) will be as per table given below: Not applicable

Mile Stone No	Description of Milestone (Physical)	Time allowed in days (from date of start)	Amount to be with- held in case of non - achievement of milestone.
--- Nil --			

Time allowed for execution of work – **60days**

Authority to decide:

(i)	Extension of time	: NA
(ii)	Rescheduling of mile-stones	: NA

Clause 6, 6A

Clause applicable - (6 or 6A)	: 6A
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Clause 7

Gross work to be done together with net payment /adjustment of advances for material collected, if any, since the last such payment for being eligible to interim payment. : **Rs. 25 Lakhs**

Clause 10A

List of testing equipment to be provided by the contractor at site laboratory. : Applicable

Clause 10B

Whether Clause 10 B (ii) shall be applicable : No

Clause 10C

Component of labour expressed as per-cent of value of work : 15%

Clause 10CA : Not applicable

Sr. No.	Material covered under this clause	Nearest Materials (other than cement, reinforcement bars and the structural steel) for which All India Wholesale Price Index to be followed	Base price and its corresponding period of all materials covered under clause 10 CA *
--- Nil --			

Clause 10CC

Clause 10 CC to be applicable in contracts with stipulated period of completion exceeding the period shown in next column : Not Applicable

Clause 11

Specifications to be followed for execution of work : CPWD Specifications with up to date correction slips and Technical Specifications as mentioned in tender documents.

Clause 12

Type of Work : Original Work

12.2 & 12.3:

Deviation Limit beyond which clauses 12.2 & 12.3 shall apply. : As per CPWD Works manual-2019

12.5:

(i) Deviation Limit beyond which Clause - 12.2 & 12.3 shall apply for Foundation Work (Except Earth Work). : As per CPWD Works manual-2019

- (ii) Deviation Limit for items in earth work subhead of DSR or related : As per CPWD Works manual-2019 items.

Clause 16

Competent Authority for deciding reduced rates. : Superintending Engineer/ Director, AIIMS Raipur

Clause 18

List of mandatory machinery, tools & plants to be : As required by Engineer -in- Charge deployed by the contractor at site

Clause 25

Constitution of Dispute Redressal Committee (DRC): AIIMS Raipur.

Clause 36 (i): **Applicable**

Requirement of Technical Representative(s) and recovery rate

S. No.	Minimum Qualification of Technical Representative	Discipline	Designation (Principal Technical/ Technical Representatives)	Minimum Experience (Yrs.)	Minimum (No.)	Rate at which recovery shall be made from the contractor in the event of non-fulfilling provision of provision of Clause 36(i) (Rs. Per Month)
(a)	Graduate Engineer OR Diploma Engineer	Electrical	Principal Technical Representative	02 years For Graduate Engineer/ 05 years For Diploma Engineer	1	Rs. 15,000/-

1. Assistant Engineers retired from Government services that are holding Diploma will be treated at par with Graduate Engineers
2. Diploma holder with 10 years relevant experience with a reputed construction company can be treated at par with graduate Engineer for the purpose of such deployment subject to the condition that such diploma holders should not exceed 50% of the requirement of Graduate Engineers.

Clause 42

: Not applicable