INDIAN INSTITUTE OF MANAGEMENT TIRUCHIRAPPALLI

Date: 27.04.2024

CORRIGENDUM - I

for

Tender Notification No.: 24SP022T dated: 18.04.2024

Notice Inviting Tender for the Supply, Installation, Testing and Commissioning of HVAC works (in Fifth and Sixth floor) at Chennai Campus of IIM Tiruchirappalli.

Corrigendum/Amendments in the tender document

1. Please refer to the above-mentioned tender document for the Supply, Installation, Testing and Commissioning of HVAC works (in Fifth and Sixth floor) at Chennai Campus of IIM Tiruchirappalli.

2. The following changes have been made in the Tender Document through this corrigendum – I

S. No	Reference to the Tender	Amendments
1	Page No. 24 -26 of the main tender Document i.e. Annexure –II.	Page Number 24-26 stands cancelled, and Revised Annexure – II (Price Bid – BoQ) is incorporated from Page 4 of this Corrigendum. Hence, the bidder should quote their rate only in the Revised Price Bid as available in this Corrigendum – I and the same has to be placed in Price Bid Cover(i.e. Cover 2).
2	Indoor AC Layout is attached for the reference of the bidders under this corrigendum.	

S. No	Reference to the main Tender Document	Queries raised by the Bidders	Clarification from IIMT
1	Point. 5 of the Annexure – II (Price Bid)	Whether the drain pipe to be insulated?	The vendor should insulate the drain pipe.
2	Point No. 7 of the Annexure –II (Price Bid)	Is there any approved makes for the Duct?	The successful bidder should use only the CPWD-approved factory fabricated Duct.
3	Point No. 7, 8, 9 & 12 of the Annexure –II (Price Bid)	The Quantities mentioned in the Price Bid for the rectangular duct, Inline fan, Round fan is insufficient for the covered area and dampers also required for the Inline fresh air duct.	Kindly refer to the Revised Annexure –II (Revised Price Bid (BoQ)) in this corrigendum –I .

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4	Point No. 8 of the Annexure –II (Price Bid)	Whether the Inline fan single-phase or 3-phase?	It is a Single Phase.
5	Point No. 14 of the of the Annexure –II (Price Bid)	MS Fabrication is not suitable for the Outdoor basement.	MS Fabrication is replaced by the RCC Beds. Kindly refer to the Revised Annexure –II (Revised Price Bid (BoQ)) in this corrigendum –I .
6	-	Do the Outdoor units throw air from the top or the side?	Outdoor units are to be of Top throw discharge.
7	-	Whether the false ceiling available?	Both sides of the cassette AC are vertically closed by the false ceiling, and the same will be done by the Civil Contractor.
8	-	Does lifting the Outdoor unit come under the scope of the Vendor or the Institute?	Lifting of Outdoor unit to the terrace and balcony of the 6th floor is under the vendor's scope.
9	-	Does laying the Cable tray and routing the same come under the scope of the Vendor or the Institute?	The electrical vendor will provide and fix the cable tray. Routing of the same has to be provided by the HVAC vendor.
10	-	In addition to the hard-drawn pipes, soft-drawn pipes are also required to complete the HVAC work.	The necessary changes have been made in the BoQ. Kindly refer to the Revised Annexure –II (Revised Price Bid (BoQ)) in this corrigendum –I .
11	-	The shop drawing is not attached to the tender document.	Shop drawing should be submitted by the vendor to the Engineer-in-charge of the institute within 4 working days from the date of issue of the Work Order for approval, and the same will be approved by the institute within 3 working days.
12	-	Kindly clarify the Work Completion Schedule, as the given schedule is not feasible to supply the machines within 30 days per floor.	The vendor should complete the work at 5th & 6th floor and handover within 60 days from the date of approval of the shop drawing.

13	Point ii. of Page No. 10 under the validity of bids and Rates clause	Is it possible to Amend the Price Validity clause as follows? "Price validity will be 90 days from the last date of submission of tender"	No Changes will be made.
14	Point i. of Page No. 16 under the Payment Terms clause of General terms and conditions	No advance payment will be made in any case. However, part payment will be released to the extent of 90% of the work done as per the mutually agreed stages.	No advance payment will be made in any case. However, a Payment of 50% will be released after the supply of machines. After successful completion of the Erection, Testing, Commissioning and handing over of the machines to the fullest satisfaction of the Institute, the remaining 40% will be released. The remaining 10% payment will be released along with the Performance Security, after completion of the 12-month Defect liability period (DLP).
15		Request for the inclusion of of additional brands.	No. Brands mentioned in the tender are final and binding.
16		Whether the drain pump is required?	For High Wall split AC, drain pipeline pump has to be provided based on the site conditions.
17		Please confirm whether the Indoor and Outdoor unit power cable, MCCB, Switch and Sockets come under Institute or vendor scope	It will be provided by the electrical vendor. However, Supply and fixing of the communication cable will be under the scope of HVAC Vendor.
18	A measurement book should be maintained to record site measurements at the site and the same should be countersigned by the Engineer i/c for passing the bill.		
19	For any clarifications arise during execution, decision of Engineer i/c will be final and binding.		

All other points mentioned in the Tender document other than the above Corrigendum will remain the same.

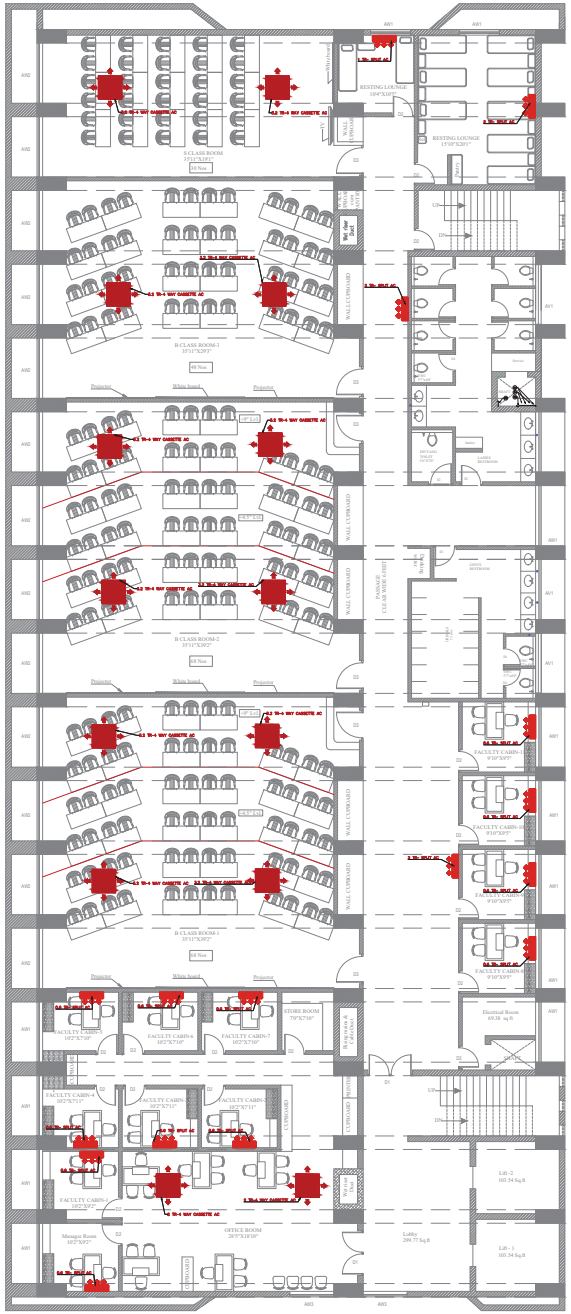
Date: 27.04.2024

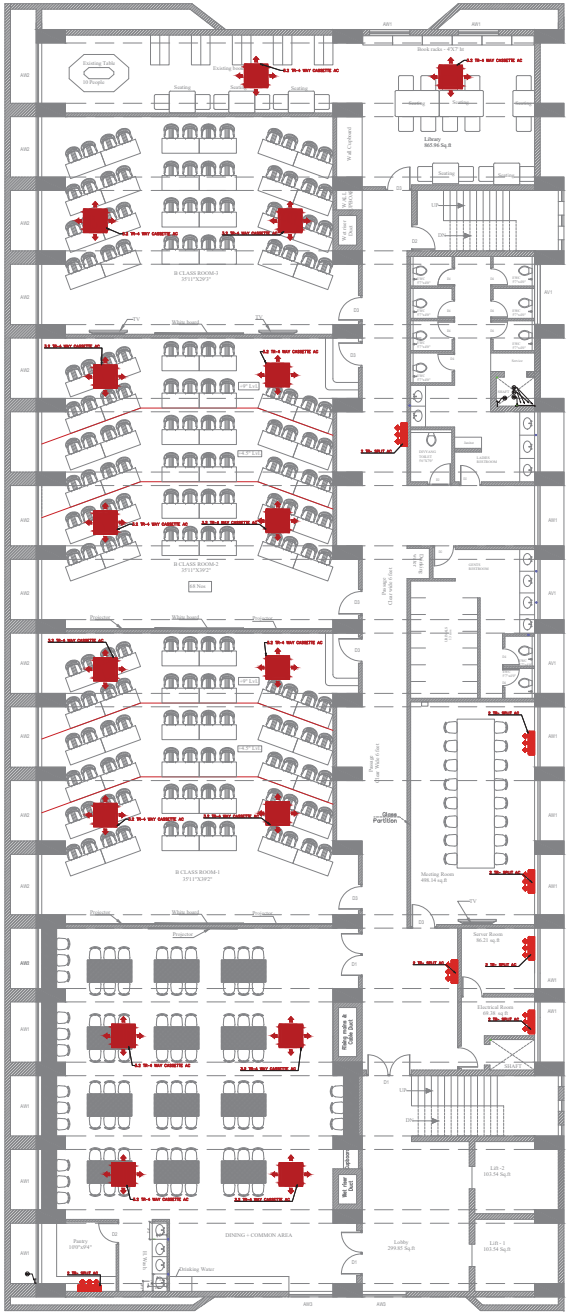
Revised Price Bid – ANNEXURE –II – BOQ

S.No	DESCRIPTION	Unit	Qty	Rate per Unit	Total Amount (Excluding GST)
VRF/VRV AIR CONDITIONING					
1	Supply Installation, Testing & Commissioning of modular type Variable Refrigerant Flow/Variable Refrigerant Volume air cooled Outdoor units suitable for cooling and heating, having all hermetically sealed inverter type Scroll Compressor(s), minimum two compressors for above 14 HP modules, microprocessor based Controller, top discharge type condensing unit(s), with R 410 A Refrigerant, vibration isolators, with suitable foundation etc. complete as required. The unit shall deliver the rated capacity at AHRI Conditions and work even at 50°C ambient temperature without tripping. The unit shall be suitable to work on 400V +/- 10%, 3 Phase, 50Hz AC power supply. The unit shall be filled with first charge of the refrigerant and ready for use as required. The COP at AHRI conditions shall not be less than 3.1 and IEER not less than 6.5. The noise level shall not be more than 68 dB when measured horizontally 1m away and 1.5m above ground level. Including lifting & shifting of ODU (Outdoor unis) (According to site requirements, each floor should have three outdoor units. and it is essential to group the same).	HP	130		
2	Supply, installation, testing and commissioning of following minimum capacity 4-way flow VRV/VRF Cassette Type Indoor ceiling mounted unit equipped with synthetic washable media pre-filter, fan section with low noise fan/dynamically balanced blower, multispeed motor, coil section with DX Copper coil, electronic expansion valve, outer cabinet, drain pump, grill, necessary supports, vibration isolation, cord less remote control etc., suitable for operation on single phase 230 V ± 10%, 50Hz AC supply, complete, as required. The unit shall have automatic force shut down provision in case of fire on receiving signal from BMS System. The cooling capacity of indoor unit will be at air inlet conditions of 27 Degree C DB and 19 Degree C WB temperature. (Noise level in conditioned spaces due to all refrigeration and air conditioning equipment shall not exceed 48 dB when measured at any point in occupied spaces less than 150 cm above floor level and not closer than 150 cm from any supply air register)				
a	2 TR	Each	2		
b	3.2 TR	Each	28		

3	Supply, installation, testing and commissioning of following minimum capacity VRV/VRF High wall type Indoor unit equipped with washable synthetic media pre-filter, fan section with low noise fan/dynamically balanced blower, multispeed motor, coil section with DX copper coil, electronic expansion valve, outer cabinet, cord less remote control, drain pan, necessary accessories etc., suitable for operation on 230 V ± 10%, 50 Hz, single phase AC supply, complete as required. The unit shall have automatic force shut down provision in case of fire on receiving signal from BMS System. The cooling capacity of indoor unit will be at air inlet conditions of 27 Degree C DB and 19 Degree C WB temperature.(Noise level in conditioned spaces due to all refrigeration and air conditioning equipment shall not exceed 48 dB when measured at any point in occupied spaces less than 150 cm above floor level and not closer than 150 cm from any supply air)				
a	0.6 TR capacity	Each	12		
b	1 TR capacity	Each	1		
c	2 TR capacity	Each	9		
4	Supply, Installation, testing and commissioning including vaccumiazation and Nitrogen testing of following nominal sizes of soft/hard drawn copper refrigerant piping for VRV/VRF system, complete with fittings, with suitable adjustable ring type hanger supports, jointing/brazing including accessories, insulated with XPLE Class-O tubular insulation/with Class-O closed cell elastomeric nitrile rubber tubular sleeves sections of specified thickness as given below for Suction and Liquid lines and all accessories as per specifications etc. as mentioned in the scope of works and shop drawing, which will be provided by the successful bidder.				
a	19 mm dia (OD) (Hard drawn) with tube thickness 1.2 mm with 19 mm thick insulation	Mtr	800		
b	12.7 mm dia (OD) (Hard drawn) with tube thickness 1.2 mm with 19 mm thick insulation	Mtr	150		
c	15.86 mm dia (OD) (Hard drawn) with tube thickness 1.2 mm with 19 mm thick insulation	Mtr	150		
d	31.8 mm dia (OD) (Hard drawn) with tube thickness 1.62 mm with 19 mm thick insulation	Mtr	700		
e	6.4 mm dia (OD) (Hard drawn) with tube thickness 1.2 mm with 19 mm thick insulation	Mtr	1		
f	9.5 mm dia (OD) (Hard drawn) with tube thickness 1.2 mm with 19 mm thick insulation	Mtr	1		
g	22.2 mm dia (OD) (Hard drawn) with tube thickness 1.2 mm with 19 mm thick insulation	Mtr	1		
h	28.6 mm dia (OD) (Hard drawn) with tube thickness 1.2 mm with 19 mm thick insulation	Mtr	1		
i	34.9 mm dia (OD) (Hard drawn) with tube thickness 1.2 mm with 19 mm thick insulation	Mtr	1		
j	41.3 mm dia (OD) (Hard drawn) with tube thickness 1.2 mm with 19 mm thick insulation	Mtr	1		
k	6.4 mm dia (OD) (Soft drawn) with tube thickness 1.2 mm with 19 mm thick insulation	Mtr	1		
l	9.5 mm dia (OD) (Soft drawn) with tube thickness 1.2 mm with 19 mm thick insulation	Mtr	1		

m	12.7 mm dia (OD) (Soft drawn) with tube thickness 1.2 mm with 19 mm thick insulation	Mtr	1		
n	15.9 mm dia (OD) (Soft drawn) with tube thickness 1.2 mm with 19 mm thick insulation	Mtr	1		
o	19.1 mm dia (OD) (Soft drawn) with tube thickness 1.2 mm with 19 mm thick insulation	Mtr	1		
5	**Supply, installation, and Insulation of the UPVC drain pipe**				
a	32mm dia	Rmt	300		
b	25mm dia	Rmt	200		
6	Supply and fixing of refnut joints/Branch Distributors, T,Y joint for indoor & Outdoor units	Nos	50		
7	Supply and installation of factory fabricated rectangular duct made up of 24 Gauge GI Sheet, with 120 GSM Galvanized coating. Ducts should be made as hollow profiles and then delivered to site. Duct shall be using fully threaded Rods and Anchor Fasteners, complete as per site condition.				
a	24 Gauge sheet	Sq mt	180		
8	Supply and Installation Of GSS made cabinet/circular Inline Fans complete with Blower, casing, terminal , Bird shield /guard Etc.				
a	200 CFM 20 mm static Inline Fan	Nos	14		
9	Supply and Installation of 26 GS GSS Round Duct for fresh air, complete as per site condition.				
a	100 mm Dia	Rmt	100		
10	Supply and Installation of uninsulated Aluminium Flexible duct for termination near indoor, complete as per site condition.				
a	100 mm Dia	Rmt	60		
11	Supply and Installation of GSS/GI Round Collar for fresh air connection to the indoor unit				
a	100 mm Dia	Nos	38		
12	Supply and Installation of Extruded Aluminium powder coated Fresh air Louver .	Sq mt	2		
13	Supplying and Charging of R410a Refrigerant	Kgs	140		
14	Supplying and fixing of Dampers Rectangle/Round as per site requirements.	Each	28		
15	Supply and providing plain concrete Bed with 300mm height to place the Outdoor Units, etc., complete as per site condition.	Cu.M	4		
Total Amount including Supply, Installation, Testing, Commissioning, lifting, Shifting, laying, Fixing, Labour and Packing, Loading, Unloading, Transportation and freight and Excluding GST					





HVAC LEGENDS:	
	SPLIT AC
	CASSETTE AC

GENERAL NOTES:

1. DRAWINGS SHALL NOT BE MEASURED, FOLLOW WRITTEN DIMENSIONS.
2. ALL DIMENSION ARE IN "FEET & INCHES" UNLESS MENTIONED.
3. ALL STRUCTURAL MEMBERS LIKE BEAMS, COLUMNS, ETC SHALL BE PROVIDED AS PER STRUCTURAL DRGS & DETAILS.
4. ANY DISCREPANCY IN THIS DRAWING OR ANY OTHER DRAWINGS RELATED TO THIS DRAWING SHALL BE BROUGHT TO NOTICE OF THE PROJECT ARCHITEC IMMEDIATELY.
5. PLEASE REFER ARCHITECTURAL DRAWINGS WITH STRUCTURAL DRAWINGS.

JOINERIES DETAILS:

D1 - 6'0"X8'0"	AW1 - 8'0"X5'0"
D2 - 3'0"X7'0"	AW2 - 8'0"X5'0"
D3 - 4'0"X8'0"	AV1 - 8'0"X2'0"
D4 - 2'6"X7'0"	AV2 - 2'0"X2'0"

AREA STATEMENT:

Fifth floor area : 13008.48 sq.ft
Sixth floor area : 13008.48 sq.ft

FIFTH & SIXTH AC FLOOR LAYOUT