# **AIR CONDITIONING WORKS**

TENDER NO: KSITM/ITES/2/2010-11/004

ITES Habitat Centre, Jawaharlal Nehru International Stadium , Kaloor, Ernakulam

# **TENDER DOCUMENTS**

# **KERALA STATE IT MISSION (KSITM)**

ICT Campus, Vellayambalam – Thiruvananthapuram-695033 Ph: 0471 2314307 / 2726881 Fax: 0471 2314284

AIR CONDITIONING works for ITES Habitat Centre

# **KERALA STATE IT MISSION (KSITM)**

ICT Campus, Vellayambalam – Thiruvananthapuram-695033 Ph: 0471 2314307 / 2726881 Fax: 0471 2314284

Tender Documents for

# AIR CONDITIONING WORKS

for

ITES Habitat Centre, Jawaharlal Nehru International Stadium , Kaloor, Ernakulam

TENDER NO: KSITM/ITES/2/2010-11/004

## **ISSUE OF TENDER OF DOCUMENT**

This tender doo	ument set is issued to:						
Bidder's name	:			_			
	s:			_			
				-			
l elephone no	:			-			
	: . 2201/- (Rupees			_Fee	for	this	tender
	ender document is against drawn on						dated
Official receipt	no	_ dt	·				

Issued by:

The Director, Kerala State IT Mission, Vellayambalam, Thiruvananthapuram- 33

Note: Each and every page of this document should be signed by the bidder and enclosed with technical bid

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5	FORM OF PRELIMINARY AGREEMENT
6	PRICE SCHEDULE( Price Bid)

Signature of the Bidder with seal

#### SPECIAL INSTRUCTION TO TENDERERS

- 1. The proposed work is an extension of existing set up of ITES HABITAT functioning at ground floor of E sector of Jawaharlal Nehru International Stadium, Kaloor, Ernakulam. The tenderer should positively inspect the proposed site for the work and study the existing arrangement and functioning of ITES HABITAT CENTRE before submitting the tender
- Tenders must be submitted in a sealed envelope super scribed as "AIR CONDITIONING works for ITES Habitat Centre, Jawaharlal Nehru International Stadium, Kaloor, Ernakulam," (Main Envelope) addressed to The Director, Kerala State IT Mission, Vellayambalam, Thiruvananthapuram- 33 and deposited in the tender box / submitted at his office on or before 05-08–2010, 4.00 PM. The main envelope should contain two envelopes containing TECHNICAL BID and PRICE BID in the prescribed forms super scribed as "AIR CONDITIONING works for ITES Habitat Centre, Jawaharlal Nehru International Stadium, Kaloor, Ernakulam," – Technical Bid" ( in Envelop-A ) and "AIR CONDITIONING works for ITES Habitat Centre, Jawaharlal Nehru International Stadium , Kaloor, Ernakulam ," – Price Bid" (in Envelop-B) respectively. Tender No, Name / address of tenderer should be superscribed in on all the 3 covers
- 3. Tenderers shall submit their offer in sealed envelops to be addressed and super scribed the Name of the work and address of the tenderer in the prescribed form and all required Documents duly filled in and signed on all pages along with E.M.D. and preliminary Agreement in the form prescribed ,on Rs. 100/- Kerala Stamp paper duly signed by the tenderer and two witnesses
- 4. The complete tender documents for the above work may be obtained from the office of the Director, Kerala State IT Mission, ICT Campus, Vellayambalam Junction, Thiruvananthapuram 695 033 on payment of Rs. 2,201/- (including taxes) non refundable per set to be remitted by cash or crossed demand draft from a Nationalized/scheduled bank in favor of The Director, Kerala State IT Mission, payable at Thiruvananthapuram
- 5. The bidder should ensure to enclose following documents & DD for EMD in the technical bid envelope
  - a) Form of tender (filled & signed)
  - b) Form of preliminary agreement signed
  - c) Power of Attorney of authorization
  - d) Technical Bid-FORM-A (filled)
  - e) Technical Bid-FORM-B (filled)
  - f) Dealership certificate from manufacturer
  - g) Details of similar work executed during last 5 years with W.O copy & completion Certificate of the relevant work with values from the Client including Concurrent Commitments. (Proof for statements in FORM-B)
  - h) Details of Concurrent Commitments.
  - i) Signed copy of Tender document. (all the pages including BOQ and drawings)

	BID SYNOPSIS					
1	Tender No.	:	KSITM/ITES/2/2010-11/004			
2	Name & Address of Client	:	Kerala State IT Mission, Vellayambalam, Thiruvananthapuram			
3	Name of the Project	:	AIR CONDITIONING works for ITES Habitat Centre, Jawaharlal Nehru International Stadium , Kaloor, Ernakulam			
4	4 Location ITES Habitat Centre, Jawaharlal Nehru International Stadium , Kaloor, Ernakular		ITES Habitat Centre, Jawaharlal Nehru International Stadium , Kaloor, Ernakulam			
5	Installation ,testing &		AIR CONDITIONING work including supply Installation ,testing & commissioning of ductable split air conditioners & Hi-wall split air conditioners			
6	Consultant		Habitat Technology Group, Ernakulam			
7	Probable amount of Contract	:	Rs.14.10 lakhs			
8	Type of Tender		Item Rate Tender			
9	Schedule of rates applicable	:	Kerala PWD SOR wherever applicable and market rates			
10	Completion Period	:	75 days			
11	Cost of Tender Documents	:	Rs. 2,201/- (including taxes) nonrefundable			
12	Date of Sale of Tender Documents	:	21.07.2010 to 05.08.2010			
13	Last Date of Receipt of Tender & place of Submission	:	4.00 PM on 05.08.2010 Kerala State IT Mission, Vellayambalam, Thiruvananthapuram			
14	Date & Time of Technical bid opening	:	05 -08 – 2010, 4.30 PM			
15	Tender Receiving Authority	:	Director, Kerala State IT Mission			

BID SYNOPSIS (Contd)				
16	Earnest Money Deposit	:	Rs. 35,250/- (Rupees Thirty Five thousand and two fifty Only) in the form of Demand Draft of a scheduled bank issued in favour of Director Director, Kerala State IT Mission", payable at Thiruvananthapuram. along with the Tender document at the time of submission	
a.	Security Deposit to be made within 10 days of date of issue of Letter of Intent.	:	5% of Quoted Amount as Demand Draft including EMD deposited at the time of tender subject to a maximum of Rs. 1,00,000/	
b.	Retention Percentage From Running / Final Bill	:	10% from each running account bill. shall amount to 5% of the contract price to a maximum limit of Rs.10,00,000/- including security deposit	
17	Validity Period of offer	:	90 days	
18	Defects Liability Period	:	12 months	
19	Compensation for delay in completion of work		1/2 % of contract amount per week subject to a maximum of 10% of contract value	
20	Minimum interim bills	:	5.00 Lakhs	
22	Taxes & duties	:	ALL INCLUSIVE RATES. The rates quoted should be inclusive of all taxes & duties inclusive of other liabilities approved by government . The rates quoted by the Contractor shall be firm throughout the contract period and there shall be no upward revision of the rates quoted by the contractor for any reason whatsoever. It should be clearly understood that any claims for extra Sales Tax, Excise duty, Construction tax or any additional tax etc. shall not be entertained in any case	

# INVITATION OF TENDER

Sealed and super scribed Percentage-rate tenders are invited in the prescribed form from registered electrical contractors having appropriate license, for the following work

Name of work	Estimated P.A.C	EMD (Rs)	Cost of tender form	Period of Completion
AIR CONDITIONING works for ITES Habitat Centre, KSITM, Jawaharlal Nehru International Stadium, Kaloor, Ernakulam	Rs. 14, 10,000/-	Rs. 35, 250/-	Rs. 2,201/- (including taxes) nonrefundable	75 days

## 1. ELIGIBILTY CRITERIA :

- a) The contractors will be eligible to participate in the above tenders only if they have Completed one or more similar works costing more than 40% of the Estimated PAC of the above works successfully during the last three years prior to the date of issue of tender form as prime contractor for IT Offices/commercial/office spaces for reputed public sector or private organization.
- b) The bidders should be approved manufacturers/ authorized dealers for AIR CONDITIONING SYSTEM manufacturers who are executing the similar works
- c) Copies of the work orders and satisfactory completion certificate obtained from the client to be furnished to support this along with the Technical bid. Average yearly turn over for the last three financial years should not be less than Rs. 15 Lakhs. Audited balance sheet/certificate from the chartered Accountant to be furnished to support this.
- d) The bidder should be a profit-making firm for the last two financial years.
- e) Any bidder who has been debarred or blacklisted by any Central/State Government organizations from participating in any project and the bar subsists as on date of proposal, would not be eligible to participate in the tender
- 2. The complete tender documents for the above work may be obtained from the office of the Director, Kerala State IT Mission, ICT Campus, Vellayambalam Junction, Thiruvananthapuram 695 033 on payment of Rs. 2,201/- (including taxes) nonrefundable per set to be remitted by cash or crossed demand draft from a Nationalized/scheduled bank in favor of The Director, Kerala State IT Mission, payable at Thiruvananthapuram. The tender documents will be issued from the office of the Director, KSITM, Vellayambalam, Thiruvananthapuram during working hours except Sundays and other holidays of the Government offices. Tender documents are non- transferable.

Signature of the Bidder with seal

- **3.** Each tenderer is requested to deposit the Earnest Money as mentioned above by a demand draft in the favour of "Director, Kerala State IT Mission", payable at Thiruvananthapuram.. The tender received without Earnest Money in full in the form prescribed shall summarily be rejected. The E.M.D. will be refunded to the unsuccessful tenders within a reasonable time without any interest. The Earnest Money Deposited by the successful tenderer will be retained towards the Security Deposits for the due fulfillment of the contract.
- 4. The successful tenderer shall, within 10 days from the date of intimation of acceptance of his tender, remit a security deposit equivalent to 5 % of the contract value (rounded to the nearest multiple of hundred rupees) less the earnest money deposited by him (which will be treated as part of the security deposit) subject to a maximum of Rs. 1,00,000/ in the form of a demand draft in favour of Director, Kerala State IT Mission", payable at Thiruvananthapuram. before he is allowed to execute the contract agreement and commence the work. This is treated as security deposit and carries no interest. Failure to deposit this additional amount within the stipulated time which will include any extensions granted by the Director, KSITM, at his discretion will make the Earnest Money deposited by the tenderer liable for forfeiture and the acceptance of his tender shall be considered withdrawn.

By way of additional deposit from every progressive account bill of the contractor, 10% of the value of work executed shall be deducted from each running account bill (limited to 5% of the contract value and subject to a maximum limit of Rs.10,00,000/-including security deposit) and kept as retention. After the completion of the work to the entire satisfaction of KSITM and obtaining the same in writing, KSITM will release an amount equal to the retention money deducted during the execution of the contract. The security deposit will be retained by KSITM as security during the Defects Liability period of the work. This amount may also be released entirely at the discretion of KSITM provided the contractor produces an irrecoverable bank guarantee for the same amount, valid for the Defects Liability period in the name of The Director, KSITM, Vellayambalam, Thiruvananthapuram.

- 5. The tenderer should quote their rate on item wise rate for each supply and work as per the specification of the contract schedule attached with the tender and they may also quote their rate in figure as well as in words. If the rate quoted in words disagrees with the figure, then the rate quoted in words will be considered as final unit rate.
- **6.** The acceptance of tender and award of contract even to more than one contractor if considered necessary will rest with The Director, Kerala State IT Mission, ICT Campus, Vellayambalam Junction, Thiruvananthapuram 695 033, who does not bind themselves to accept the lowest tender and will reserve to themselves the authority to reject any or all the tenders received without assigning any reason.
- 7. The rates quoted in the tender shall be valid till the completion time of work.

Signature of the Bidder with seal

8. Full information should also be given by the tenderer in respect of the following:-

		4)	
а	If an individual	1)	His full name, address and place of business with his Contact numbers.
			with his contact numbers.
b	In case of partnership	1)	The name of all partners and their addresses
	firms		with their Contact numbers.
		2)	Certified copies of Registration of
			Partnership deed.
		3)	Name & address of all directors with contact
			numbers.
		4)	The person who will sign bills and receipts
			on behalf of the company.
с	In case of	1)	Date and place of certificate of
	COMPANIES		incorporation including date of
			commencement of business.
		2)	Certified copies of memorandum of
			understanding and article of association as
			well as latest audited balance sheet and P&L
			are also to be furnished
		3)	Nature of business carried on by the
			company
		4)	Name & address of all directors with contact numbers
		5)	The person who will sign bills and receipts
		5)	on behalf of the company

- **9.** Each tender shall be signed by the tenderer with his usual signature. Tender by partnership may be signed in the firm's name by one of the Partners or Manager as the case may be or any other duly authorized representative followed by the name and designation of the person so signing. A copy of the instrument of partnership duly certified by a partner as a true copy should be submitted along with the tender. The original partnership deed may be produced at the time of opening of tender. Tender by a company shall be signed with the name of the company by a person authorized in this behalf and a Power of Attorney or other satisfactory proof showing that person signing the tender documents on behalf of the company is duly authorized to do so shall accompany the tender.
- **10.** The signature of the tenderer shall be witnessed by two responsible individuals in English/ Malayalam with full details. (In the form of preliminary agreement on Rs. 100/- stamp paper.)
- **11.** Unless otherwise specified all rates and prices in the tender shall cover sales Tax/VAT and other taxes and duties etc.
- **12.** Tenderers not giving the full particulars as mentioned above or as called for in the Special conditions are liable to be rejected

Signature of the Bidder with seal

**13.** With their quotation the tenderer shall sign all schedules with their seal, specifications, special conditions particular specifications etc. in token of acceptance thereof. Tenderers shall invariably furnish the preliminary agreement in the prescribed Performa typed on Kerala stamp paper worth Rs.100/- issued in his name and duly signed by him with their seal on all the pages. Tenders without the preliminary agreement are liable for rejection.

Director, Kerala State IT Mission, Vellayambalam, Thiruvananthapuram

Signature of the Bidder with seal

## NOTICE INVITING TENDERS FOR WORK (FORM NO-83)

#### Sealed tenders are invited for the

## AIR CONDITIONING works for ITES Habitat Centre, Jawaharlal Nehru International Stadium , Kaloor, Ernakulam

- 1. The items and sub-heads of work to be done are enumerated in the subjoined schedule. Unless otherwise specified, the tender must be for the whole of any individual work and Part tenders are liable to rejection. A contractor shall not tender for any part of work only, unless specifically so required.
- 2. All work shall be done in conformity with the specifications and conditions of contract in force unless specified otherwise. The rates quoted shall be inclusive ones, covering all the operations contemplated in the specifications and tender schedule and all incidental work necessary, such as material inspection, etc. The rates quoted shall be inclusive of sales tax/VAT and other taxes and duties wherever applicable.
- 3. The item wise rate will be quoted for the work by the Tenderers. A list of corrections which remain unattested by the tenderer will be made out and pasted to each tender. Each tender should be accompanied by a Demand draft for an Earnest Money deposit of Rs. 35, 250/-
- 4. Selected contractor will be required to produce Income Tax, sales tax and other statutory clearance certificates before the final payments is made for the work.
- 5. The tenderer shall examine closely the Indian standard Specifications, and also the other relevant specifications and other documents connected with the contract. <u>Unit rate</u> shall be given only for the finished work at site. He shall also carefully study the drawings and additional specifications and all the documents which form the part of the agreement to be entered into by the accepted tenderer. The special conditions of the contract must be strictly followed.
- 6. The tenderer's attention is directed to the requirements for materials under the clause "Materials and Workmanship" in the technical specification. Materials conforming to the Indian Standard Specification and other relevant rules shall be applicable to the work and the tenderer shall quote his rate accordingly for the specified make of materials.
- 7. Every tenderer is expected to inspect the site of the proposed work before quoting his rate. The best class of the materials obtained from the sources shall be used on the work. In every case the materials must comply with the relevant Standard Specification. Samples of materials as called for in the Standard Specification or in the tender notice or as required by the owner or his authorized engineer in any case shall be submitted for the owner or his authorized engineer's approval before the supply to the site of work is begun. All material test certificates should be submitted to the owner or his authorized

Signature of the Bidder with seal

engineer prior to starting the work. The Director, Kerala State IT Mission, ICT Campus, Vellayambalam Junction, Thiruvananthapuram does not make available any approach road or other means of approach to the proposed work site and the tenderer shall get acquainted with the available means of approach to the proposed site and quote for the items. The Director, Kerala State IT Mission, ICT Campus, Vellayambalam Junction, Thiruvananthapuram - 695 033 shall not be liable for any claim raised after on the plea for the non-availability or non-access to the site. The Director, Kerala State IT Mission, ICT Campus, Vellayambalam Junction, Thiruvananthapuram - 695 033 shall not be liable for any claim raised after on the plea for the non-availability or non-access to the site. The Director, Kerala State IT Mission, ICT Campus, Vellayambalam Junction, Thiruvananthapuram - 695 033 , will not however after acceptance of the contract rate pay any extra charges for lead or for any other reason, in case the contractor is found later on to have misjudged the materials available. Attention of the contractor is drawn to standard preliminary specification regarding the payment of seignior, age, tolls etc.

#### <u>The Tenderers particular attention is drawn to the sections and clauses to the standard</u> <u>Preliminary</u> <u>Specification dealing with</u> -

- 1. Test inspection and rejection of defective materials and work
- 2. Carriage
- 3. Cleaning of office area during progress of work and for delivery
- 4. Accidents
- 5. Delays
- 6. Particulars of payment.
- 8. The contractor should closely peruse all the specification clauses, which govern the rates which he is tendering.
- 9. In consideration of the tenderer being allowed to quote for the work he should keep the tender form for a period of two months from the date of opening the tender during which period or till the tenders are decided whichever is earlier. He will not be free to withdraw the tender. Any such withdrawal will entail forfeiture of the earnest money deposit for the work.
- 10. The successful tenderer shall, within 10 days from the date of intimation of acceptance of his tender, remit a security deposit equivalent to 5 % of the contract value (rounded to the nearest multiple of hundred rupees) less the earnest money deposited by him (which will be treated as part of the security deposit) subject to a maximum of Rs. 1,00,000/ in the form of a demand draft in favour of Director, Kerala State IT Mission", payable at Thiruvananthapuram. before he is allowed to execute the contract agreement and commence the work. This is treated as security deposit and carries no interest. Failure to deposit this additional amount within the stipulated time which will include any extensions granted by the Director, KSITM, at his discretion will make the Earnest Money deposited by the tenderer liable for forfeiture and the acceptance of his tender shall be considered withdrawn . If he fails to do this or does not maintain a specified rate of progress specified in each case the earnest money and security deposit shall be forfeited to The Director, Kerala State IT Mission, ICT Campus, Vellayambalam Junction, Thiruvananthapuram, and fresh tender shall be called for or the matter otherwise disposed off. As a result of such measures due to the default of the tenderer

Signature of the Bidder with seal

to pay the requisite deposit, sign contracts, or take possession of the work on time any loss to The Director, Kerala State IT Mission, ICT Campus, Vellayambalam Junction, Thiruvananthapuram, results, the same will be recovered from him as arrears of land revenue but should it be saving to The Director, I.T.Mission, Vellayambalam, Thiruvananthapuram, the original contractor shall not claim what ever is the difference. Recoveries on this or any other account will be made from the sum that may be due to the contractor on this job or under R.R. Act.The acceptance of the tender rests with The Director, Kerala State IT Mission, ICT Campus, Vellayambalam Junction, Thiruvananthapuram , which does not bind itself to accept the lowest tender and the authority reserves the right to reject any or all the tenders without assigning any reason.

- 11. The right to carry out the work either in conformity with or in a manner entirely different from the terms of the tender, which may be considered most suitable before or subsequent to the receipt of the tenders due to exigencies of work, is reserved with The Director, Kerala State IT Mission, ICT Campus, Vellayambalam Junction, Thiruvananthapuram
- 12. Drawings, schedule of quantities, specifications of work to be done and conditions of contract to be entered into and clarifications thereon can be seen and cleared of doubts at the office of M/s Habitat Technology Group, ERNAKULAM on any working day during office hours. It shall be definitely understood that The Director, Kerala State IT Mission, ICT Campus, Vellayambalam Junction, Thiruvananthapuram does not accept any responsibility to the correctness or completeness of the schedule and that the schedule is liable for alteration, omissions, deductions or additions at the discretion of the Consultant/ The Director, Kerala State IT Mission, Vellayambalam, Thiruvananthapuram.
- 13. Arbitration shall not be means for settling of disputes. All disputes will be referred to the civil courts with Jurisdiction at Thiruvananthapuram.
- 14. The earnest money deposit of the unsuccessful Tenderers will be refunded immediately after tabulating the tenders, keeping only the earnest money of the three lowest tenders.
- 15. The earnest money deposit of the remaining unsuccessful Tenderers will also be refunded with in two weeks from the date of acceptance of tender and execution of the contract agreement by the successful tenderer.
- 16. If two or more tenders received for the work are identical in all respect including the rate quoted, negotiation will be made with them and the tender settled to the advantage of the Department. If none of them respond to the negotiation, so as to decide the issue, the tender may be settled by lots in the presence of the tenders after giving due notice to them.
- 17. The Tenderers must also state in their tenders if they are prepared to carry out at their tender rates such portion or portions of the work as may finally be allotted to them by the officer deciding tenders.

Signature of the Bidder with seal

- 18. Quantities given in the tender schedule are only tentative and the contractor will have to execute any additional quantity at his agreed quoted rate.
- 19. Any further information necessary can be obtained from the office of our consultant M/s. Habitat Technology Group,Opp.Chinmaya Vidyalaya,Warriyam Road,Ernakulam on all working days during working hours.
- 20. The work should be completed in all respect in 75 DAYS from the date of executing agreement/ handing over the site.
- 21. Payment will be on measurement at unit prices depending on the type of work being executed. Minimum value of interim bill is indicated in elsewhere of this tender document
- 22. It shall be accepted as a condition of the contract that, the payment of the final bill to the contractor less the with held amount and his acceptance thereof shall constitute in full and absolute release of The Director, Kerala State IT Mission, ICT Campus, Vellayambalam Junction, Thiruvananthapuram from the further claims by the contractor under the contract.
- 23. Items of work not expressly or implicitly described in the schedules, plans or specifications will be treated as extras. They will include only those items of work which are for the proper execution of the work and for its completion.
- 24. Execution of extra items of work and payment there for will be based on the following conditions:
  - i) There shall be an order in writing to execute the extra item of work duly signed by the Consultant/owner authorized engineer before its commencement.
  - ii) If the contractor finds after examining the specification and plans that extras are involved, he should give notice to the Consultant/owner authorized engineer to this effect and shall proceed with the execution of the extra items only after receiving from the site Consultant/owner authorized engineer .
- 25. Extra items may be classified as additional, substituted or altered items depending on their relation or otherwise to the original item or items of work .
- 26. The rates for extra items shall be worked out as below:

i) In the case of extra items whether altered or substituted, if accepted rates for identical items are provided for in the contract, such rates shall be applicable.

ii) In the case of extra items whether altered or substituted, if accepted rates for similar items exists in the contract the rates shall be derived form the original item by appropriate adjustment of cost of affected components.

Signature of the Bidder with seal

- iii) In the case of extra item whether altered or substituted and for which similar items do not exist in the contract the rates shall be based on PWD data as per original schedule of rates on which tenders were invited and applying 10 percentage towards contractor's profit + taxes if any and should get approval from the Consultant/owner authorized engineer / The Director, KSITM, Vellayambalam, Thiruvananthapuram.
- iv) In the case on extra items not contemplated in PWD data book, the rate of such items will be arrived at by observing the execution of that items at site and preparing an observed data duly certified as based on actual observation at site by the Consultant/owner authorized engineer and approved by The Director, Kerala State IT Mission, ICT Campus, Vellayambalam Junction, Thiruvananthapuram
- 27. The contractor shall not without the previous sanction in writing of the authority accepting the tender execute any power of attorney in respect of any matter touching this contract and any such power of attorney executed without such sanction shall not be recognized or be binding upon The Director, Kerala State IT Mission, ICT Campus, Vellayambalam Junction, Thiruvananthapuram. It shall be entirely within the discretion of the authority accepting the tender either to grant such sanction or to refuse it or revoke a sanction once given.
- 28. No part of the contract shall be sublet without written permission of The Director, Kerala State IT Mission, ICT Campus, Vellayambalam Junction, Thiruvananthapuram nor shall transfer be made by power of attorney authorizing others to receive payment on the contractor's behalf.
- 29. The Director, Kerala State IT Mission, ICT Campus, Vellayambalam Junction, Thiruvananthapuram reserves the right to reject any tender or all the tenders with out assigning any reasons there for.
- 30. In making payment the total amount of the bill will be rounded off to the nearest rupee.
- 31. The Tenderers should declare that they are not related to any officials of The Director, Kerala State IT Mission, ICT Campus, Vellayambalam Junction, Thiruvananthapuram who are in charge of or having control of the work. Relationship in this will be restricted to those given under section 61 (A) & (B) of the companies act 1956. If the above condition is found to have been contravened when they tender the earnest money/ security deposit of the tenderer will be forfeited and the contract entered into will stand cancelled.
- 32. Contractor will provide his own tools and plant, store shed to store his own material as well as those supplied by The Director, Kerala State IT Mission, ICT Campus, Vellayambalam Junction, Thiruvananthapuram if any, and will be entirely responsible for the proper use and safe custody of the latter and for any loss, damage, theft, mishandling, weathering or any cause what so ever.
- 33. If different rates are quote for the same specification of work under identical working conditions at the same site in different appendices of the schedule the lowest quoted rate will be accepted by the items in all the appendices.

- 34. Contractor shall be responsible for the safety of the labour employed by him and he shall be liable to pay necessary compensation in case of accidents as per the workmen's compensation act. The contractor will also be liable to abide by the fair wage clause condition.
- 35. The contractor is totally responsible in all matters concerning labour disputes and/ or labour settlements.
- 36. It shall be accepted as a condition of contract that the landed property or the bank deposit based on which the solvency certificate was issued by the revenue department and produced during the time of registration will not be alienated during the period of contract without the permission of The Director, Kerala State IT Mission, ICT Campus, Vellayambalam Junction, Thiruvananthapuram
- 37. Contractor shall employ Engineering personnel as details below for the period of the contract.
- a) Minimum qualification and experience of Principal Technical Representative for Interior works with estimated cost put to tender.
  - i) Above Rs. 5 lakhs but less than Recognized Diploma Holder in Engineering Rs. 10 lakhs.
  - Rs. 10 lakhs and above but up to Graduate Engineer
    Rs. 60 lakhs.
- b) Recovery to be affected from the contractor in the event of not fulfilling the provisions of clause 36(i).
  Rs. 4000 per month for Graduate Engineer.
  Rs. 2000 per month for Diploma Holder.
- 38. Tenderers who are not in conformity with his tender notice are liable for rejection.
- 39. This tender notice with the conditions stated herein will form part of the contract documents.
- 40. When the rates quoted for a particular item in figures and words disagree, the rates quoted in words will be taken for the purpose of settlement of contract. The contractor is bound to accept these if the contract is awarded to him.
- 41. The entries in the tender schedule issued by The Director, Kerala State IT Mission, ICT Campus, Vellayambalam Junction, Thiruvananthapuram should in no way to be corrected by the Tenderers. If any correction is made by the tenderer in the tender schedule the tender will be rejected.

- 42. The quantities provided for in the schedule may vary widely and contractor should be prepared to do any excess or short quantity over the schedule quantity at his quoted rates for the work.
- 43. The acceptance of the tender rests with The Director, Kerala State IT Mission, ICT Campus, Vellayambalam Junction, Thiruvananthapuram, which does not bind itself to accept the lowest tender and the authority reserves the right to reject any or all the tenders without assigning any reason

#### KERALA STATE IT MISSION (KSITM)

ICT Campus, Vellayambalam – Thiruvanathapuran-695033 Ph: 0471 2314307 / 2726881 Fax: 0471 231428

#### **INSTRUCTIONS TO TENDERERS**

- Tender must be submitted in sealed envelope super scribed as "AIR CONDITIONING works for ITES Habitat Centre, Jawaharlal Nehru International Stadium, Kaloor, Ernakulam" and addressed to Director, Kerala State IT Mission, Vellayambalam, Thiruvananthapuram- 33 and deposited in the tender box/submitted at his office on or before the prescribed time and date. Tenders may be sent by registered Post or other by methods, provided it reaches the concerned office on or before the concerned date and time. The IT Mission office, Vellayambalam, Thiruvananthapuram does not take any responsibility nor will any extension be granted due to postal delay.
- 2. A tender which is received after the time and date specified above will be rejected summarily.
- 3. Any tender delivered or sent otherwise will be at the risk of the Tenderers.
- 4. The tender should be accompanied by Earnest Money Deposit prescribed and this E.M.D. should be in the form of a demand draft in the name of The Director, KSITM, Vellayambalam, Thiruvananthapuram- 33 payable at Thiruvananthapuram from any Nationalized/scheduled bank. Tenders without the Earnest Money deposit for the prescribed amount or for a lesser amount or in any other form other than the form mentioned herein will be summarily rejected. No interest will be paid for the period for which the E.M.D remains with the Director, KSITM, Vellayambalam, Thiruvananthapuram- Tenderers are warned that cash or encashable cheques, or insurance guarantee or fixed deposit receipt in lieu of the afore mentioned form E.M.D will not be accepted

The corrections wherever necessary should be made by crossing out initialing dating and rewriting. The rates and amount should be expressed both in figures and words in English/Malayalam. If the words figures differ, the amount mentioned in words will stand good.

- **5.** Tender quoting rates on units different from those prescribed in the tender schedules will be liable for rejection.
- **6.** Procedure for submission and opening of tenders: Tenderers shall submit their offer in sealed envelops to be addressed and super scribed the Name of the work and address of the tenderer in the prescribed form and all required Documents duly filled in and signed on all pages along with E.M.D. and preliminary Agreement in the form prescribed in the general conditions of contract, on Rs. 100/- Kerala Stamp paper duly signed by the tenderer and two witnesses. Each and every page of the tender documents including terms & conditions, drawings, specifications, schedules should be signed on every page by the bidder and enclosed with technical bid as an unconditional acceptance of the terms and conditions mentioned therein. Envelopes duly sealed and indicating the name and address of the tenderer and to be submitted to The Director, KSITM , Vellayambalam, Thiruvananthapuram- 33.
- 7. The tenders will be opened on the same date or at a date to be fixed and intimated by Director, Kerala State IT Mission, Vellayambalam, Thiruvananthapuram- 33

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- **8.** This tenderer should enclose the preliminary agreement in the form prescribed for this purpose in Rs. 100/- Kerala Stamp paper duly signed by them along with their tenders. Tenders without the said preliminary agreement duly executed as prescribed will be summarily rejected.
- **9.** Conditional tenders in any form will be summarily rejected. Any request from the tenderer in respect of additions, modification corrections etc. of either terms and conditions or rates of his tender after opening the tenders, will lead to rejection of his tender. Any tender containing clerical or arithmetical mistakes may be rejected.
- **10.** By submitting a tender the tenderer will be deemed to have satisfied himself by actual inspection of the site and locality of work that the rates quoted by him in the tender will be adequate to complete such work according to the specifications and conditions attached there to and he had taken into account all conditions and difficulties that may be encountered during its progress and to have quoted labour and material rates, consumables which shall include cost of material with taxes, and other duties, lead and lift, loading and unloading, freight for materials and all other charges necessary for the completion of the work to the entire satisfaction of the Director, KSITM, Vellayambalam, Thiruvananthapuram.
- **11.** The successful tenderer shall make his arrangements for the supply of all materials as specified in the special conditions. All the material supplied is liable to inspection by The Director, KSITM, Vellayambalam, Thiruvananthapuram, on each consignment.
- **12.** Tenderer must prove his position as an independent contractor or the properly authorized agent of a responsible firm by producing the registered power of attorney and the express authority from the same firm to act as its agent to undertake and carryout the work satisfactorily.
- **13.** Acceptance of the tender will be intimated to the successful tenderer through a letter of intent. This contractor shall then be required to execute an agreement within the time specified in the letter of intent. In the event of failure on the part of the tenderer to sign the agreement within the specified time, the EMD amount shall be forfeited and the acceptance of his tender shall be treated as withdrawn.
- **14.** No contract work however petty may be carried out except under and in accordance with a duly executed agreement or on a special order from The Director, KSITM, Vellayambalam, Thiruvananthapuram.
- **15.** No agreement is valid unless it has been signed by the contractor or his duly authorized agent and by The Director, KSITM, Vellayambalam, Thiruvananthapuram. Canvassing in any form is strictly prohibited and the tender submitted by Tenderers who resort to canvassing will be liable to be rejected.
- **16.** The form of preliminary agreement, tender schedule, invitation to tender, form of tender, instructions to tenderer, Notice inviting tenders (Form 83), special conditions of contract, specifications, technical specifications, drawings time schedule and the rates and amount

#### TENDER NO: KSITM/ITES/2/2010-11/004

quoted against the items of tender schedule together with letter of intent awarding the work shall form the contract. If there is any conflict between any of the provisions in the special condition or in any of the other documents referred, the provisions in the special conditions shall prevail. Similarly if there is any difference between the description in the specification and drawings and the works items in the tender schedule, works items in the tender schedule shall prevail for determining the rate.

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## **GUARANTEE AND INSURANCE**

The contractor should give a minimum guarantee of <u>**12 MONTHS**</u> from the certified date of completion of the work for the stability of the work against failure due to any defective workmanship or usage of defective material or equipments for the work. This will be defects liability period in respect of this contract.

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# **DEFINITIONS AND TERMS**

Ir	In the contract (as hereinafter defined) the following words and expression shall have the meaning hereby assigned to them except wherein the context otherwise required.				
1	Owner/ Client/ Employer	:	Director, Kerala State IT mission (KSITM), Vellayambalam, Thiruvananthapuram		
2	Consultant shall mean	:	Habitat Technology Group, Ernakulam		
3	Tenderer shall mean	:	The firm/ party/ Individual who quote against enquiry		
4	Contractor shall mean accepted	:	The successful tenderer whose tender has been accepted by The Director, KSITM, Vellayambalam, Thiruvananthapuram and to whom a letter or work order has been placed and shall include his heirs, legal representative and assigns		
5	Contract price shall mean	:	Prices/rate referred in the agreement		
6	This contract shall mean invited	:	Invitation to tender, Preliminary Agreement, Notice Inviting Tender, (Form No.83), Form of Tender, Instruction to tenderers, Special Conditions, General Conditions of Contract, Technical Specifications, Schedule of Quantities with rates and amounts against each item with specifications, Drawings of the work and correspondences or negotiations if any.		
7	P.A.C. Shall mean	:	Probable Amount of Contract as per the contract		
8	Site shall mean	:	The place of the proposed project where the work is to be executed under this contract.		
9	Month shall mean	:	Thirty days		
10	Earnest money shall mean	:	The sum paid along with the tender as a token to bind the contract		
11	Award shall mean	:	The written acceptance given to the successful tenderer by the Director, KSITM, Vellayambalam, Thiruvananthapuram.		
12	Security deposit shall mean	:	The amount deposited with The Director, KSITM, Vellayambalam, Thiruvananthapuram for faithful and satisfactory Performance of Contract		
13	Retention amount shall mean	:	The amount deducted from the running bills.		

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## **GENERAL CONDITIONS OF CONTRACT**

#### 1. SCOPE OF CONTRACT

The contractor shall carry out and complete the said work in every respect in accordance with this contract and with the directions of and to the satisfaction of Director, KSITM, Vellayambalam, Thiruvananthapuram / engineer authorized by him may in their absolute discretion and from time to time issue further drawings and / or written instructions, details, directions and explanations which are hereafter collectively referred to as KSITM, Vellayambalam, Thiruvananthapuram, instructions in regard to.

- a) The variation or modification of design, quality or quantity of works or the addition, omission or substitution of any work.
- b) Any discrepancy in the drawings or between the schedule of quantities and / or drawings and / or specifications.
- c) The removal from the site of any materials brought thereon by the contractor and the substitution of any other material thereof.
- d) The removal and / or re-execution of any works executed by the contractor.
- e) The dismissal from the works of any person employed there upon.
- f) The opening up for inspection of any works covered up.
- g) The amending and making good of any defects.

The contractor shall forthwith comply with and duly execute any work comprised in such instructions of The Director, KSITM, Vellayambalam, Thiruvananthapuram,

## 2. CONTRACTOR TO VISIT SITE

The contractor is required to visit the site in advance and satisfy himself as to the condition of the soil, facility for transport and storage of materials, availability of various materials, labour, water, electricity etc. and no extra claims under the headings shall be entertained after the contract has been executed.

#### 3. INTERIM PAYMENT

The contractor shall raise bills periodically to the Director for all the works executed in the previous period in accordance with the terms of the specifications and the Director, will check the claim and tax deduction at source will be made from each bill as per the income tax and other tax rules of the central and state governments in force during that time when bill is passed for payment. Minimum value of interim bill is indicated in elsewhere of this tender document

#### 4. DEFECTS LIABILITY PERIOD & RELEASE OF SECURITY DEPOSIT

The contractor shall be responsible for the maintenance of the work executed by him for a period of 12 months as specified elsewhere in this contract from the date of completion of works as certified by The Director, KSITM, Vellayambalam, Thiruvananthapuram, and any defects notified in the work/construction during this period will have to be rectified by the contractor at his own cost. The

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security deposit shall be released to the contractor only after satisfactory rectification of such defects noticed if any. If the contractor fails to rectify any such defects within seven days, when notified, it will be attended by the department and the cost thereof will be made good from the contractor.

#### 5. SUB – CONTRACTING

The contractor shall not with out the previous sanction in writing from The Director, KSITM, Vellayambalam, Thiruvananthapuram, sublet or execute any Power of Attorney in respect of any matter touching this contract and any such power of attorney executed without the above concurrence shall not be recognized or be binding up on KSITM, Vellayambalam, Thiruvananthapuram, It shall be entirely within the discretion of the, The Director, KSITM, Vellayambalam, Thiruvananthapuram, either to grant or to refuse or to revoke a sanction once given in this regard.

## 6. SUB - LETTING

Not with standing any sub letting with such approval as aforesaid and not withstanding that KSITM, Vellayambalam, Thiruvananthapuram, shall have received notices of any sub contracts, the contractor shall be remain solely responsible for the quality and for condition of contract in all respect as if such subletting or subcontracting had not taken place and as if such work has been done directly by the contractor.

If any sub contractor engaged up on the works at site, executes any works which in the opinion of Director KSITM, Vellayambalam, Thiruvananthapuram, is not in accordance with the contract documents, the Director, KSITM, Vellayambalam, Thiruvananthapuram, may issue written notice to the contractor and up-on the receipt of such contractor and later shall forthwith leave the works, failing which the Director, KSITM, Vellayambalam, Thiruvananthapuram, shall have the right to remove such sub-contractors from the site. No action taken by the Director, KSITM, Vellayambalam, Thiruvananthapuram, under this clause shall relieve the contractor form any of his liabilities under the contract or give to any right to compensation, extension of time or otherwise.

#### 7. DELAY AND EXTENSION OF TIME

Time shall be the essence of the contract. The contractor's Endeavor shall be to prevent any delay and complete the work within the time agreed. However, on unavoidable circumstances, for reasons supported by documentary proof, Director, KSITM, Vellayambalam, Thiruvananthapuram may allow extension of time at their discretion as may be necessary to complete the work at the request of the contractor. In case of any extension of time, the contractor will be required to execute a supplementary agreement to that effect at his cost with genuine reasons for the request so as to justify the request. Please refer relevant clauses in special conditions of contract regarding penalty amount.

#### 8. TERMINATION OF CONTRACT BY THE EMPLOYER

If the contractor being an Individual or a Firm commits any 'Act of insolvency' or shall be adjudged as insolvent or being an Incorporated Company shall have an order for compulsory winding up made against it or pass an effective resolution for winding up voluntarily or subject to the supervision of the court and the official Assignee or the Liquidator in such act of insolvency winding up, as the case may be, requiring him to do so to show to the reasonable satisfaction of The Director, KSITM, Vellayambalam, Thiruvananthapuram, that he is able to carry our and fulfill the contract and to give security therefore so required by the Director, KSITM, Vellayambalam, Thiruvananthapuram.

Or if the contractor (Whether an individual, firm or incorporated company) shall suffer execution to be issued or shall suffer any payment under this contract to be attached by court or on behalf of any of the creditors of the contractor.

Or shall assign or sublet this contract without the consent in writing The Director, KSITM, Vellayambalam, Thiruvananthapuram, obtained.

Or shall charge or encumber this contract or any payments due or which may become due to the contractor hereunder to the contractor.

- a) At any time makes default in proceeding with the works with due diligence and continues to do so after a notice in writing of seven days from The Director, KSITM, Vellayambalam, Thiruvananthapuram.
- b) Commits defaults in complying with any of the terms and conditions of the contract and does not remedy it within 7 days after a notice in writing is given to him in that behalf by The Director, KSITM, Vellayambalam, Thiruvananthapuram.
- c) Fails to complete the works or items of work with individual date of completion and does not complete them within the period specified in a notice given in writing in that behalf by The Director, KSITM, Vellayambalam, Thiruvananthapuram.
- d) Offers or gives or agrees to give any person of KSITM, Vellayambalam, Thiruvananthapuram, service any gift or consideration of any kind as an inducement or reward or doing or forbearing to do or having done or forborne to do any action in relation to the obtaining or execution of this or any other contract for KSITM, Vellayambalam, Thiruvananthapuram.
- e) Fails to carry out and execute the works to the satisfaction of The Director, KSITM, Vellayambalam, Thiruvananthapuram.
- f) Fails to supply sufficient or suitable constructional plant, temporary works, labour, materials of things.
- g) The Director, KSITM, Vellayambalam, Thiruvananthapuram, may without prejudice to any other right to remedy which shall have accrued or shall accrue thereafter to The Director, KSITM, Vellayambalam, Thiruvananthapuram, after written notice, cancel the contract as a whole or only such items of work in default from the contract as assessed by The Director, KSITM, Vellayambalam, Thiruvananthapuram. In case, the contract as whole cancelled due to reason specified above, The Director, KSITM, Vellayambalam, Thiruvananthapuram, reserves the right to get the whole of the contract or such items of work as are cancelled due to reasons specified above executed at the risk, cost and expense of the contractor and that the Director, KSITM,

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Vellayambalam, Thiruvananthapuram will be at liberty to recover the entire loss from the contractor not with standing the amount fixed as liquidated damages under clause 4 above.

#### 9. TERMINATION OF CONTRACT FOR DEATH

If the contractor is an individual or a proprietary concern and the individual or the proprietor dies and if the contractor is a partnership concern and one of the partners dies then unless The Director, KSITM, Vellayambalam, Thiruvananthapuram is satisfied that the legal representative of the individual contractor or of the proprietary concern and in the case of partnership, the surviving partners are capable of carrying out and completing the contract, The Director, KSITM, Vellayambalam, Thiruvananthapuram, shall be entitled to cancel the contract as to it's incomplete part without The Director, KSITM, Vellayambalam, Thiruvananthapuram, in any way liable to pay any compensation to the estate the deceased contractor and / or to the surviving partners of the contractor's firm on account of the cancellation of the contract. The decision of the Director, KSITM, Vellayambalam, Thiruvananthapuram that the legal representative of the deceased contractor or the surviving partners of the contractor's firm cannot carry out and complete the contract shall be final and binding on the parties. In the event of such cancellation, the Director, I T. Mission, Vellayambalam, Thiruvananthapuram, shall not hold the estate of the deceased contractor and / or to the partners of the contractor's firm liable in damage for not completing the contract.

## **10. TERMINATION OF CONTRACT DUE TO BANKRUPTCY**

The authorized representative of The Director, KSITM, Vellayambalam, Thiruvananthapuram, shall, as soon as may be practicable after any such entry and termination by The Director, KSITM, Vellayambalam, Thiruvananthapuram, fix and determine expert, or by or after reference to the parties or after such investigation or enquiries as they may think fit to make or institute and shall certify.

- a) What amount (if any), had at the time of such entry and termination, been reasonable earned by or would reasonable accrue to the contractor in respect of work then actually done by him under the contract, and
- b) The value of any of the said unused or partially used materials any contractor's equipment and any temporary works and such certified amount shall be recovered to the extent of loss on account of such termination.

#### 11. ALTERATION

The Director, KSITM, Vellayambalam, Thiruvananthapuram, may at any time during the progress of the work by order in writing make any alteration in the original specification and drawings by way of addition there to, or omission or other deviation there from whereupon the contractor shall execute such additional work or omit, or deviate from such specification and drawings as may be ordered by The Director, KSITM, Vellayambalam, Thiruvananthapuram, in the same manner as if the same has been so provided in the original specification or drawings for the works. All alterations to the accepted tender given in writing by The Director, KSITM, Vellayambalam, Thiruvananthapuram are proceeded with by the contractor.

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#### 12 REMOVAL OF WORKMEN

The contractor shall employ in and about the execution of works only such persons as are skilled and experienced in their several trades and The Director, KSITM, Vellayambalam, Thiruvananthapuram, shall be at liberty to object to and require the contractor to remove from the works any person employed by the contractor in or about the execution of the works who in the opinion of The Director, KSITM, Vellayambalam, Thiruvananthapuram, misconducts himself or is incompetent or negligent in the proper performance of his duties and such persons shall not be again employed upon the works with out the written permission of The Director, KSITM, Vellayambalam, Thiruvananthapuram, Thiruvananthapuram, Thiruvananthapuram, KSITM, Vellayambalam, Thiruvananthapuram, The Director, KSITM, Vellayambalam, Thiruvananthapuram, Thiruvananthapuram, Thiruvananthapuram,

## **13. REMOVAL OF WORKS NOT ACCEPTED**

The contractor shall invariably execute all works in the most substantial and workman like manner and the materials used shall be of the best description. The contractor shall also conform minutely to the drawings and specification which from the basis of the accepted tender and other written instructions and drawings, if any relating to the work which may from time to time be issued by The Director, KSITM, Vellayambalam, Thiruvananthapuram. If it shall appear to The Director, KSITM, Vellayambalam, Thiruvananthapuram, that any work has been executed with unsound, imperfect or unskillful workmanship or with material of an inferior description by the contractor, The Director, KSITM, Vellayambalam, Thiruvananthapuram, shall demand in writing forthwith to rectify, remove or reconstruct the same in whole or in part, as the case may require at his own proper charge and cost and in the event of refusing to do so with in a period to be specified by The Director, KSITM, Vellayambalam, Thiruvananthapuram, or if he shall fails to remove, from the site of work with in a specified period, any material or articles which are considered by The Director, KSITM, Vellayambalam, Thiruvananthapuram, as unsound or bad quality, or not agreeable to the terms of the contract and to provide immediately suitable materials or articles in lieu of these condemned, then the contractor shall be liable to pay liquidated damages at the rate of one percent of the amount of contract for every day not exceeding 10 days that he fails to comply with the written demand of The Director, KSITM, Vellayambalam, Thiruvananthapuram. Incase of default on the part of the contractor to carry out such order, The Director, KSITM, Vellayambalam, Thiruvananthapuram, shall have the power to employ and pay other persons to carry out the same and expenses consequent there on or incidental there to, as certified by The Director, KSITM, Vellayambalam, Thiruvananthapuram, shall be recovered by KSITM, Vellayambalam, Thiruvananthapuram, from any money due, or that may become due, to the contractor in addition to the penalty mentioned above.

#### 14. SAFETY MEASURES AND ACCIDENTS

The contractor shall provide at his own cost of all necessary safety measures required to protect the public (including their rights and property) as well as his own workman from accidents arising out of and in consequence of the work under this contract. The contractor shall be responsible for the safety of employees and workman, employed or engaged by him in connection with work and in addition to the staff of The Director, KSITM, Vellayambalam, Thiruvananthapuram, employed at site of and the contractor shall forthwith report to The Director, KSITM , Vellayambalam,

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Thiruvananthapuram, about any accident any injuries sustained and shall make adequate arrangements for rendering all possible first aid or hospitalization as the case may be in respect of the victims of any accidents.

#### 15. INDEMNIFYING KSITM, THIRUVANANTHAPURAM, BY THE CONTRACTOR

The contractor shall be liable for any claim or compensation, damages or expenses payable as a result of any accidents or injury or loss sustained any workman engaged or employed by him or any member of the general public on account of the execution the contract and the amount he is liable to pay in accordance with the workman compensation act or any such legislation or rule or common law. For the above, the contractor shall, before commencement of work buy and produce a current insurance policy covering the entire period of the contract from a registered insurance company indemnifying The Director, KSITM, Vellayambalam, Thiruvananthapuram, for any such claim, compensation, damages etc. Incase such an insurance policy is acceptable to The Director, KSITM, Vellayambalam, Thiruvananthapuram, is not produced, the contractor will be deemed to have agreed to The Director, KSITM, Vellayambalam, Thiruvananthapuram, to deduct 1% from the running bills and the amount so deducted will be credited to insurance fund maintained by KSITM, Vellayambalam, Thiruvananthapuram, and The Director, KSITM, Vellayambalam, Thiruvananthapuram, will then undertake the responsibility to meet such claims and that under no circumstances the said 1% shall be returned whether or not there is any accident or claim from any one.

#### 16. PAYMENT OF WAGES, INSURANCE ETC.

It shall also be the responsibility of the contractor to observe the provision of any other law like the ESI act, EPF Act, payment of wages Act, the contract labour Abolition and regulation Act etc. to the extent they are applicable to him in respect of the workman engaged or employed by him in or for the execution of the work as per this contract. The contractor shall indemnify The Director, KSITM, Vellayambalam, Thiruvananthapuram, against any claim that may be made on The Director, KSITM, Vellayambalam, Thiruvananthapuram, for any obligation under the said acts or any amount which may be required to be paid by The Director, KSITM, Vellayambalam, Thiruvananthapuram, for any obligation from the amounts due to him or otherwise. The contractor shall keep a muster roll of the labourers, engaged by at site noting their daily attendance and wages. Payments must be made to them at least in a week by the contractor and the signature or thumb impression of the workers should be obtained. Such roll shall be opened for inspection and verification by the officials of the Director, KSITM, Vellayambalam, Thiruvananthapuram, whenever found necessary.

#### 17. QUANTITIES

The quantities indicate in the schedule are only approximate and the total quantity of work may vary to any extent and may even be omitted thus altering the aggregate value of the contract.

#### **18.** SCOPE OF WORK

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The rates quoted by the contractor are for work at the site to be completed for all materials, labour and tools of every description necessary for executing and completing the works. Any materials brought on to the site by the contractor and not approved by The Director, KSITM, Vellayambalam, Thiruvananthapuram, will be removed and replaced by materials acceptable to The Director, KSITM, Vellayambalam, Thiruvananthapuram, at the contractor's own cost immediately. A sample of all materials to be used shall have to be got approved by The Director, KSITM, Vellayambalam, Thiruvananthapuram or his nominated representative, and the same shall be kept at the site for verification. The rate quoted shall be for finished works inside and shall be inclusive of contingent expenses such as testing tools and plant.

## **19.** CERTIFICATE OF ACTUAL COMPLETION

The works shall not be considered as completed until The Director, KSITM, Vellayambalam, Thiruvananthapuram, has certified in writing that they have been actually completed. The defects liability period shall commence from the date of such certificate.

#### 20. EXECUTION OF AGREEMENT

The successful tenderer will be required to enter into a contract with The Director, KSITM, Vellayambalam, Thiruvananthapuram - 695033 for the execution and completion of the above work on a Rs. 100/- Kerala Non Judicial stamp paper. The Director, KSITM, Vellayambalam, Thiruvananthapuram, will communicate to the successful tenderer about the acceptance of his tender, on receipt of which he should remit the security deposit by demand draft and arrange to execute an agreement in the prescribed form with The Director, KSITM, Vellayambalam, Thiruvananthapuram, with in 7 days from the date work order.

#### 21. PROCEDURE FOR MEASUREMENTS

All the works shall be done according to the drawings and instructions of The Director, KSITM, Vellayambalam, Thiruvananthapuram, Figured dimensions shall be followed. Measurements shall be of the actual work done.

All measurements shall be in metric system as per the drawing. All works will be measured and recorded by the engineer/consultant authorized by Director, KSITM by with assistance of the contractor. This will be check measured by The Director, KSITM, Vellayambalam, Thiruvananthapuram.

## 22. TAXES

Advance income tax together with surcharge and sale tax / purchase tax and only other taxes, duties, fees cess or levies for the work will be deducted from the bill as per rules prevailing at the time of passing the bills.

1% of the Construction cost will be deducted from the contractor's running bills as contribution to be remitted to "Nirmana Thozhilaly Kshema Board" (KCWFF). The contractor should register himself / itself with Construction Labour Welfare Board and produce receipt to The Director, KSITM, Vellayambalam, Thiruvananthapuram.

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#### 23. MODE OF MEASUREMENTS.

Mode of measurements will be as per I.S.1200 or as per its latest revision.

#### 24. WATER AND ELECTRICITY

Water and electricity required for the construction purpose of this work will have to be arranged by the Contractor at his own cost and for its consumption (if any) will have to be paid by the Contractor.

#### 25. LABOUR LAWS AND SAFETY REGULATIONS.

- 1. Contractor shall be responsible for making good at his own cost to the satisfaction of The Director, KSITM, Vellayambalam, Thiruvananthapuram, any loss and damage to any structures and properties belonging to the owner or other agencies or persons if such loss or damages are caused on account of the execution of work.
- 2. The Contractor shall keep The Director, KSITM, Vellayambalam, Thiruvananthapuram, indemnified for all claims for damages to the property for arising under or by reason of this agreement, if such claims result from the fault and / or negligence or willful acts or omission of the contractor, his employee, representatives or sub-contractors as certified by The Director, KSITM, Vellayambalam, Thiruvananthapuram.
- 3. Should The Director, KSITM, Vellayambalam, Thiruvananthapuram, have to pay any money in respect of such claims or demands as aforesaid, the amount so paid and the costs incurred by The Director, KSITM, Vellayambalam, Thiruvananthapuram, shall be recovered from the dues to the contractor shall not be at liberty to dispute or to question the right of The Director, KSITM, Vellayambalam, Thiruvananthapuram, to make such payments not withstanding the same have been made with out his consent or authority.
- 4. The contractor shall indemnify The Director, KSITM, Vellayambalam, Thiruvananthapuram, against all actions, proceedings, claim demands, cost and expenses which may be made for and in respect of or arising out of any failure by the contractor in the performance of his obligations under the contract.
- 5. No child labourer as per rules shall be employed on the work.
- 6. The contractor shall not pay less than what is provided under law to labourers engaged by him on to the work.
- 7. The contractor shall at his expense comply with all labour laws and keep The Director, KSITM, Vellayambalam, Thiruvananthapuram, indemnified in respect there of.

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#### 26. MATERIAL AND WORKMANSHIP

It shall confirm to their respective description and to The Director, KSITM, Vellayambalam, Thiruvananthapuram, for approval. All works shall be carried as prescribed in the specifications and in accordance with The Director, KSITM, Vellayambalam, Thiruvananthapuram, instructions., and the contractor shall upon the request of The Director, KSITM, Vellayambalam, Thiruvananthapuram, furnish all invoice, accounts receipts and other vouchers to prove that the materials comply therewith. The contractor shall at his own cost arrange for and / or carry out the test of any materials which The Director, KSITM, Vellayambalam, Thiruvananthapuram, may require.

#### 27. SHED FOR MATERIALS

The contractor shall provide at his own cost necessary temporary sheds of adequate dimension as per the instruction of The Director, KSITM, Vellayambalam, Thiruvananthapuram, for the usage of the contractors and for storage and protection of materials, including tools and equipments, which are likely to deteriorate by the action of sun, wind, rain or other natural causes due to exposure in the open. All such sheds shall be cleared away and the whole area left in good order on completion of the contract to the satisfaction of The Director, KSITM, Vellayambalam, Thiruvananthapuram. All materials which are stored shall be stacked in such a manner as to facilitate rapid and easy checking of quantities of such materials. Manufacturer's instructions and Indian standard specifications regarding storage and handling of materials concerned shall be strictly observed by the contractor.

#### 28. INSURANCE

The contractor shall be responsible for all injury to persons, animals or things, for all structural damage to property which may arise from the operation neglect of himself or any employee of either whether such injury damage arises from carelessness, accident or any other whatever in any way connected with the carrying out of this contract. This clause shall be held to include inter-alia any damage of buildings, whatever immediately adjacent or otherwise, and any damages to the buildings and works forming the subject of this contract by frost, rain, wind or other inclemency of weather. The contractor shall reinstate all damage of every sort mentioned in this clause, so as to deliver up the whole the contract works complete and perfect in every respect and so as to make or otherwise satisfy all claims or damage to the property of third parties. The Director, KSITM, Vellayambalam, Thiruvananthapuram, shall be entitled to deduct the amount any damage, compensation cost, charges and expenses arising or accruing from or in respect of, any such claims or damage from any or all sums due to or become due to contractor without prejudice to The Director, KSITM, Vellayambalam, Thiruvananthapuram other rights in respect thereof.

Tax on works contract as per Kerala Finance act or any other statute, rules or regulation will be the liability of the contractor.

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#### 29. SETTLEMENT OF DISPUTES

Arbitration shall not in any way be a means for settlement of disputes. All disputes and differences of any kind whatever arising out of or in connection with the contract or the carrying out of the works (whether during the progress of the works or after their completion and whether before or after the determination, abandonment or breach of the contract) shall be settled by The Director, KSITM, Vellayambalam, Thiruvananthapuram, who shall state his decision in writing. Such decision may be in the form of a final certificate or otherwise. The decision of The Director, KSITM, Vellayambalam, Thiruvananthapuram, shall be final and binding on the contractor.

## **30.** PARTIAL OCCUPATION

The Director, KSITM, Vellayambalam, Thiruvananthapuram, will be at liberty at any time during the contract to take over any completed portion of the work or to hand over such completed portions to any agency for use or occupation which shall not absolve the liability of the contractor during the defects liability period as set out at clause 4 above.

## 31. ESCALATION

Rates quoted by the tenderer shall include any escalation in prices of materials / wages etc also. On no account an enhancement in rates will be considered.

## 32. JURISDICTION

The courts at Thiruvananthapuram alone shall be the jurisdiction in respect of any matter arising out or in connection with this contract.

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## SAFETY CODE TO BE OBSERVED BY THE CONTRACTOR AT SITE

- 1. First aid appliances including adequate supply of sterilized dressings and cotton wool shall be maintained in a readily accessible place.
- 2. An injured person shall be taken to a registered hospital without loss of time, in case were the injury necessitates hospitalization.
- 3. Suitable and strong scaffolds should be provided for the workmen for all works that cannot safety be done from the ground.
- 4. No portable single ladder shall be over 4mts in length. The width between side rails shall not be more than 25cms. When a ladder is used an extra Mazdoor shall be engaged for holding the ladder.
- 5. The dismantled material shall not be placed within the office premises and will be kept away from the work site as directed by the Director.
- 6. No space or part of the office shall be overloaded with debris or materials as to render it unsafe.
- 7. Workers employed shall be provided with protective foot wear.
- 8. Those engaged in welding works if any shall be provided with welder's protective eye-shields and gloves.
- 9. In situations where materials used for the work and debris is likely to fall, workmen and personnel in such areas shall be provided with hard hats or helmets to prevent head injury.

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TENDER NO: KSITM/ITES/2/2010-11/004

# **SPECIAL CONDITIONS**

The contractor shall abide by the conditions prescribed in the rules for instruction to the tenders, general and special conditions of contract. The contractors are requested to study and understand the terms and conditions before quoting their rates.

- 1. Time shall be considered as the essence of the contract. If the completion of the contract is delayed The Director, KSITM, Vellayambalam, Thiruvananthapuram, reserves the right for imposing a penalty for the delayed work, delay being worked out with reference to the time schedule. If the contractor fails to complete the work and fails to clear the site on or before the contract or extended date of completion, he shall, without prejudice to any other right or remedy available under the law to the KERALA STATE IT MISSION on account of such breach, pay as agreed compensation the amount calculated at the rates stipulated below. "1/2 % of contract amount per week subject to a maximum of 10% of contract value" Provided always that the total amount of compensation for delay to be paid under this condition shall not exceed 10 % of the tendered value of work on or of the Tendered Value of the item or group of items of work for which a separate period of completion is originally given. The amount of compensation may be adjusted or set-off against any sum payable to the Contractor under this or any other contract with the KERALA STATE IT MISSION.
- 2. The various materials to be used on the work must comply with the relevant standard specifications of Bureau of Indian standards, or any other special specification given and must be approved by the owner authorized engineer /consultant before use in the work. The workmanship should be of high quality as per IS. Material test certificates must be provided to owner authorized engineer/consultant in charge prior to starting the work. All the materials used for this work should be approved by the employer should suit to the work in question.
- 3. For materials supplied by the contractor from various suppliers, the same are subject to third party inspection at the cost of the contractor arranged by The Director, KSITM, Vellayambalam, Thiruvananthapuram, if required, the contractor and his suppliers shall undertake to provide all assistance required to the third party inspectors in the execution of their duties. The contractor shall be responsible for payment of all import duties, taxes, duties, fees etc. Which ever they are payable in respect of all materials and articles supplied or procured by him. The responsibilities for safe custody of materials supplied by the contractor rests with him till they used for work and the necessary measurements are recorded by owner authorized engineer /consultant and the contractors sign the measurements book in token of acceptance of measurement.
- 4. The contractor has to study the site the availability of working area and area for storage of material and other site conditions etc.
- 5. The materials which are found to be inferior quality and not conforming will be rejected by the Director / owner authorized engineer and such materials should be removed from site

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within 24 hours by the notice of such removal and on no account be used for the work. The Director / owner authorized engineer will be the authority of passing of the materials prior to usage on works. Rejections can be made by the Director / owner authorized engineer before or during use on work.

- 6. Any faulty construction noticed and pointed out by the Director / owner authorized engineer shall be rectified by the contractor at his cost.
- 7. The direction and advice of the Director / owner authorized engineer and their subordinate in all matters including technical matters shall be final and binding and the contractor shall meticulously follow them.
- 8. The contractor shall be prepared to work in three shifts if called for.
- 9. The contractor shall begin to work immediately after the site is handed over and shall regularly and continuously can carry out the work to achieve the rate of progress as indicated in the schedule.
- 10. The Director, KSITM, Vellayambalam, Thiruvananthapuram, reserves the right to terminate the contract at any time if he finds that the contractor is not able to carry out the work satisfactorily after issuing due notices.
- 11. All tools and plants, machineries etc. required for the work and specified in the schedule shall be provided by the contractor at his cost.
- 12. The rates quoted for the work shall be firm till the completion of the works to the satisfaction of The Director, KSITM, Vellayambalam, Thiruvananthapuram, and nothing extra shall be payable on any account.
- 13. The rates for the various items in the tender schedule shall be inclusive of all leads and lifts.
- 14. No residential accommodation shall be provided to the contractor by The Director, KSITM, Vellayambalam, Thiruvananthapuram,
- 15. The contractor shall arrange for a site shed for storing the materials and safe custody with necessary watchmen etc.
- 16. The contractor shall comply with the regulation of the payments of the wages act in respect of the workers employed by him and it shall be his obligation to pay compensation to any of his workers as per the Workman's compensation Act.
- 17. The contractor should be in possession of the valid license under the contract labour (regulation and abolition) Act 1970 if he is attracted by the provision of the act consequent on the number of workers employed by him and it be produced for verification on demand.

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- 18. The contractor should ensure compliance of the statutory provisions under employees PF and miscellaneous provisions and should maintain all required registers.
- 19. Payment to the contractor shall be as per the actual measurements recorded and check measured and entered in the measurement books and in stages completed. . Minimum interim bill value is as indicated elsewhere in this tender document
- 20. Income tax at the current prescribed rate will be deducted against each bill in this contract unless a certificate from the income tax officer concerned to the effect that no tax may be deducted before payment.
- 21. All works shall be done in conformity with the specification and condition in the contract in force. The rates quoted shall be inclusive to cover all the operation contemplated in the specification and the tender schedule and inclusive of all incidental works necessary for such operation such as shoring, bailing, form work, scaffolding etc. The rate quoted shall be inclusive of sales tax and other taxes and duties.
- 22. The rate quoted by the contractor for the various items shall be inclusive of all tools and plants required for the proper execution of the works and all the other incidental charges and separate claim for these will not be entertained under any circumstances.
- 23. The contractor will have to make his own arrangements to convey the materials and for stacking of materials and site shed etc. Which are found necessary for the proper execution of the work. He will also be responsible for the safe custody of the materials till they are used on the works.
- 24. The contractor alone is responsible for the salary of his labourers and damages if any payable under workmen compensation act will be borne by him.
- 25. It shall be contractor's responsibility to protect the public, personnel & properties of KSITM, Vellayambalam, Thiruvananthapuram, and his employees against accident from any cause during execution of the work.
- 26. The work shall be completed in all respects and also at the rate of progress with in the time limit and the stipulations in the Form No. 83, Notice inviting tender failing which the contractor is liable to be fined as stipulated in special condition No 36 below.
- 27. Defects if any noticed within the guarantee period will be rectified by the contractor in default of which be attended by The Director, KSITM, Vellayambalam, Thiruvananthapuram, and the cost made good from the contractor.
- 28. The guarantee period for the work will be twelve months from the date of handing over the system to The Director, KSITM, Vellayambalam, Thiruvananthapuram,

- 29. Contractor should produce latest sales tax and income tax clearance certificate for receiving final payment. The rate of tax will be applicable as per government order of notification in the matter from time to time.
- 30. Contractor shall be responsible for the payment of the sales tax/VAT and other taxed & duties as per the rules in force from time to time and the rates quoted for the various items remain unaffected by any change that may be made from time to time in the rate at which such taxes or duties are levied. Sales tax due to government will be recovered from the contractor's bill of the work as per the advice of the authority concerned.
- 31. The contractor for this work should bound to remit an amount equal to the employer's contribution to the Kerala Construction workers welfare fund Act 1989. This amount shall be recovered proportionately from the running bill and the final bill for the work and contractor shall abide such recoveries.
- 32. All sums due to the government under or by virtue of this contract shall be recoverable first from the security furnished by the contractor and if the same is found in sufficient such deficit amount shall be recoverable under the provisions of the Revenue Recovery Act for the time being in force as though the same were arrears of land revenue or in any other manner as The Director, KSITM, Vellayambalam, Thiruvananthapuram, may deem fit.
- 33. The contractor may agree that before final payment shall be made on the contract he will sign and deliver to the Director / owner authorized engineer either in the measurement book or otherwise as demanded a valid release and discharge from any / all claims and demands what-so-ever for all matters arising or contract with the contractor, provided that nothing in the clause shall release the contractor from his liabilities under the contract. It is further expressly agreed that the owner authorized engineer supplying the final measurement certificate need not be bound by the preceding measurements and payments. The final measurements if any of the decision of The Director shall be final which is conclusive and binding on the contractor.
- 34. The date fixed by The Director, KSITM, Vellayambalam, Thiruvananthapuram, for the commencement and completion of the works as per the agreement shall be strictly observed by the contractor. For any delay the contractor shall pay damages as fixed by the Director, KSITM, Vellayambalam, Thiruvananthapuram.
- 35. The method of measurements will be as per Indian standard.
- 36. (a) The Director, KSITM, Vellayambalam, Thiruvananthapuram, shall have the right to deduct from the money due to the contractor and any sum required or estimated to be required for making good the loss suffered by the worker or the workers by reasons of non fulfillment of the condition of the contract for the benefit of the workers this non-payment of wages or deductions made from his or their wages which are not justified by their terms of the contractor nonobservance of the regulations.

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- b) Vis-à-vis the Central governments the contractors shall be primarily liable for all payments to be made under for the observance of the regulations aforesaid without prejudice to his right to claim form his cub-contractors.
- (c) The regulations aforesaid shall be deemed to be a part of this contract and breach thereof shall be a breach of this contract.
- 37. (a) On the occurrence of an accident which result in the death of any workmen employed by the contractor or which is so serious as to be like to result in the death of any such workmen the contractor shall within 24 Hours of happening of such accidents indicate in writing to The Director, KSITM, Vellayambalam, Thiruvananthapuram, the fact of such accidents. The contractor shall indemnify The Director, KSITM, Vellayambalam, Thiruvananthapuram, against all loss or damage sustained by The Director, KSITM, Vellayambalam, Thiruvananthapuram, resulting directly or indirectly from his failure to give indication in the manner aforesaid including the penalties or fines if any payable by The Director, KSITM, Vellayambalam, Thiruvananthapuram, as consequence of The Director, KSITM, Vellayambalam, Thiruvananthapuram, failure to be notified under the workmen's compensation act or otherwise confirm to the said Act in regard to such accidents.
- (b) In the event of an accident in respect of which compensation may become payable under the workmen's compensation act of 1923 whether by the contractor or by KSITM, Vellayambalam, Thiruvananthapuram, as principal it shall be lawful for the Director / Architect to retain out of moneys due and payable to the contractor such sum or sums of money as may the opinion of the Director / Architect sufficient to meet such liability. The opinion of the Director shall be final in this regard on all matters arising under this clause.
- 37. The person whose tender may be accepted shall, before the date fixed for commencing the work, execute an agreement with The Director, KSITM, Vellayambalam, Thiruvananthapuram, 695 033 and shall pay for all stamps and legal expenses incident thereto after depositing security for the due performance of his contract.
- 38. In every case in which under any clause or clauses of this contract, the contractor shall have rendered himself to damages amounting to the whole of his security deposit, The Director, KSITM, Vellayambalam, Thiruvananthapuram, shall have power to rescind the contract altogether or to have the work completed without further notice at the contractor's risk or expense as The Director, KSITM, Vellayambalam, Thiruvananthapuram, may deem best suited to the interest of The Director, KSITM, Vellayambalam, Thiruvananthapuram, and the contractor shall have no claim to compensate for any loss that may accrue from any materials he may have collected or engagements he may have entered into, on account of his work and in the latter case The Director, KSITM, Vellayambalam, Thiruvananthapuram, shall have power to deduct whatever amount may be extended on the completion of the work, from any sums that may be due or become due from The Director, KSITM, Vellayambalam, Thiruvananthapuram, to the contractor on account of this or any other work or recover such sums from him and his assets, movable and immovable. And in case the contract shall be rescinded under the provisions aforesaid the contractor shall not be entitled to recover or be paid any sum for any work thereto for actually performed under

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this contract unless and until The Director, KSITM, Vellayambalam, Thiruvananthapuram, shall have certified the performance of such work and the value thereof, and he shall only be entitled to be paid the value so certified after deduction of any amounts due to The Director, KSITM, Vellayambalam, Thiruvananthapuram.

- 39. If the contractor shall be hindered in the execution of his work or as to necessitate an extension of time allowed for its completion, he shall apply in writing to The Director, KSITM, Vellayambalam, Thiruvananthapuram, who may, if reasonable grounds be shown authorized such extension of time, if any, as may, in their opinion, be necessary and without such written authority of The Director, KSITM, Vellayambalam, Thiruvananthapuram. The contractor shall also execute supplemental agreement with The Director, KSITM, Vellayambalam, Thiruvananthapuram, when such extension of the time is authorized.
- 40. No work will be paid for unless thoroughly good and fully in accordance with the specification and should through in advertence bad work be passed and paid for, it will nevertheless be perfectly competent for The Director, KSITM, Vellayambalam, Thiruvananthapuram, to strike the same out of the account at any future time recover the value and the contractor will be liable for the same.
- 41. If it shall appear to The Director, KSITM, Vellayambalam, Thiruvananthapuram, or their representative in charge of the work, that any work has been executed with unsound, imperfect or unskillful workmanship, or with materials of an inferior description, the contractor shall on demand in writing, forthwith rectify, remove, or reconstruct the same in whole or in part, as the case my require, at his own proper charge and cost in the event of his shall fail to remove, from the site of the work within a specified period, any materials or articles which are considered by the same officers unsound, or bad quality, or not agreeable to the terms of the contract and to provide immediately suitable materials or articles in lieu of those condemned, The Director, KSITM, Vellayambalam, Thiruvananthapuram, shall have the power to employ and pay other persons to carry out the same, and all expenses consequent thereon or incidental thereto, as certified by The Director, KSITM, Vellayambalam, Thiruvananthapuram, and penalties thereon shall be borne by the contractor or may be deducted from any moneys due or that may become due to the contractor, and the contractor shall not have claim on this.
- 42. All works under execution by the contractor shall at all times be open to the inspection and supervision of The Director, KSITM, Vellayambalam, Thiruvananthapuram, and the contractor shall always, when he is not himself present, have a responsible agent present at the work site during the usual working hours, and at all other times, when reasonable notice of the intention of The Director, KSITM, Vellayambalam, Thiruvananthapuram, to visit the works shall have been given, to receive their orders and instructions. Orders given to the contractor's agent shall be considered to have the same force as if they have been given to the contractor himself. The appointment of an agent and any change of agent shall be forthwith notified by the contractor to The Director, KSITM, Vellayambalam, Thiruvananthapuram, who may accord their approval in writing without which the appointment shall not stand.

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- 43. The contractor shall give due notice in writing to The Director, KSITM, Vellayambalam, Thiruvananthapuram, to measure any work which is going to be covered up to otherwise placed beyond the reach of measurements, in order that the correct dimensions may be taken before being so covered and must have the authority in writing of The Director, KSITM, Vellayambalam, Thiruvananthapuram, to cover it up, in default whereof at the opinion of The Director, KSITM, Vellayambalam, Thiruvananthapuram, Thiruvananthapuram, the same shall be uncovered at the contractor's expense or no allowance shall be made for such work or materials.
- 44. If the contractor or his work people break, deface, injure any part of a building they may be working in or any building, road, fence, enclosure or grass-land or cultivated ground, or if any damage, shall happen to the work while in progress or any imperfection become apparent in it, he shall make the same good at his own expense from any sums that may be there or at any time thereafter due to the contractor.
- 45. The contractor shall supply at his own all plant, tools, implements, ladders, cordage, tackles and scaffolding required for the proper execution of his work together with the carriage for the same to and from the work. He shall also supply without charge the requisite agency with him necessary means to arrange works, and to count weight, and assist in the measurement of his work or materials.
- 46. No work is done on Sundays and National Holidays without the written permission of The Director, KSITM, Vellayambalam, Thiruvananthapuram Prior intimation shall be given to The Director, KSITM, Vellayambalam, Thiruvananthapuram, for all stoppage of works except for stoppages on Sundays and National Holidays.
- 47. The Contractor shall pay and be responsible for payment of all taxes, duties, levies, royalties, fees, cess or charges in respect of the works including but not limited to sales tax, tax on works Contract excise duty, Service Tax and octroi, payable in respect of materials, equipment plant and other things required for the contact. All of the aforesaid taxes, duties, levies, fees and charges shall be to the Contractor's account and the KSITM shall not be required to pay any additional or extra amount on this account. Variation of taxes, duties, fees, levies etc., if any till completion of work shall be deemed to be included in the quoted rates and no extra amount on this account will in any case be entertained. If a new tax or duty or levy or cess or royalty or octroi is imposed under as statue or law during the currency of Contract the same shall be borne by the Contractor.
- 48. The rates once agreed will not be revised on any account.
- 49. No advance payment will be made .
- 50. The cost of actual quantity of materials measured will alone be paid at agreed rates in the final settlement of claims for the works done, excess quantity of materials, if any, brought to site and not utilized for the works will have to be taken by the contractor at his cost.

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- 51. In the case of partners tendering, no change in the individual of the firms shall affect the liability of the persons who may sign such tender. Any such change shall be forthwith notified by the contractors to The Director, KSITM, Vellayambalam, Thiruvananthapuram, for their information.
- 52. All materials shall be supplied by the contractor. The contractor has to make his own arrangements for the procurement of materials on time. In case when materials have to be measured and paid for, the contractor shall be responsible for such materials until they are formally taken over by The Director, KSITM, Vellayambalam, Thiruvananthapuram or used in works.
- 53. The material brought to site shall not be removed from the site without the prior approval of The Director, KSITM, Vellayambalam, Thiruvananthapuram,
- 54. The terms of the contract cannot be added to, varied or reduced by any oral agreements previous or subsequent to its signature. Any such oral agreements will be repudiated by The Director, KSITM, Vellayambalam, Thiruvananthapuram,
- 55. The Director, KSITM, Vellayambalam, Thiruvananthapuram, does not undertake to relieve the contractor from any difficulties or penalties arising from interference with private property in carrying out his contact.
- 56. The contractor shall pay to the labour engaged by him wages not less than fair wages as defined in the minimum wages act or any other relevant statute. It shall be the responsibility of the contractor to pay wages, compensation or any other dues if payable and it shall also be his sole responsibility to comply with the relevant statutory provisions and rules applicable to the work. The contractor is liable to pay the compensation to The Director, KSITM, Vellayambalam, Thiruvananthapuram, for any loss caused to The Director, KSITM, Vellayambalam, Thiruvananthapuram, due to the non-compliance of any statutory provisions.
- 57. Drawings furnished along with the tender documents are intended to give the tenderer an idea of the type of work involved. The drawings are only indicative and for tender purpose only. Work shall proceed only on the basis of drawing issued as 'Released for construction' which shall be issued to the contractor progressively after the award of contract as per the progress achieved at site. No claim shall be entertained from the contractor if the Released for construction drawings are at variance with those shown for tender purposes
- 58. The quantities furnished in the schedule of quantities are only approximate based on preliminary design and are meant primarily to form a common basis for tender analysis. The quantities in the schedule of quantities approximately indicate the total extent of work, but may vary to any extent and may even be omitted thus altering the aggregate value of the contract. The rate shall remain firm through out the contract period. It is stressed that no claims for loss, compensation or escalation on the grounds of increase/ decrease in the quantities indicated in the tender schedule or quantities, will be entertained under any

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circumstances, nor will the Contractor be entitled to prefer any claims whatsoever on these grounds

- 59. Any error/variation in description, quantity or rate in the Bill of Quantities, or any omission there from shall not vitiate the contract, or release the Contractor from execution of the whole or any part of the works comprised therein according to the drawings and specifications, or from any of his obligations under the Contract
- 60. The work requires significant coordination and information exchange between various contractors. The contractor for this package shall plan and execute work in coordination and in co-operation with other contractors working for interior fit out work and ELECTRIFICATION work for the same project at ITES HABITAT. The contractor should extend necessary support for completing the work of other contractors and the work schedule should be finalized taking the required inputs from other contractors working for interior fit out work and ELECTRIFICATION .
- 61. The proposed work is an extension of existing set up of ITES HABITAT functioning at ground floor of D&E sectors of Jawaharlal Nehru International Stadium, Kaloor, Ernakulam. The contractor should positively inspect the proposed site for the work and study the existing arrangement and functioning of ITES HABITAT before tendering. The visit should be conducted in coordination with our consultant Habitat Technology group ,Ernakulam
- 62. The contractor has to prepare all the necessary drawings and submit to the Kerala State Electricity Board / Kerala State Electricity Inspectorate /GCDA for clearance within 14 days of award of the work. Necessary follow up shall be taken by the contractor to obtain the clearance from the Electrical Inspectorate and the Kerala State Electricity Board.
- 63. The contractor has to prepare a time schedule for the complete work in detail and submit to The Director, KSITM, Vellayambalam, Thiruvananthapuram, in triplicate within 10 days from the date of the letter of Intent. The schedule should be in line with time schedule approved for INTERIOR FIT OUT WORKS and ELECTRIFICATION work at the same site and should be approved by The Director, KSITM, Vellayambalam, Thiruvananthapuram
- 64. On completing the installation, the completion certificate shall be issued to the Kerala State Electrical Inspectorate for approval. The observation / comments issued by the Electrical Inspector shall be rectified at no extra cost.
- 65. KSITM shall pay the statutory fee for the above work. All other costs shall be included in the offer.
- 66. When any of the details are not given in either in the schedule or in the technical specification, the same may be obtained from the manuals, statutory rules or approvals issued. Any further data or details required may be obtained in consultation with the engineer in charges.

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- 67. The tenderer should note that the specifications furnished in the tender is of general nature only and it is the responsibility of the tenderer to supply, install and commission the equipment and services required for the satisfactory performance of the installation. All the items of equipment required for the safe and satisfactory operation of the installation shall be supplied and installed by the contractor.
- 68. The drawings and specifications will form a part of the tender and are to be considered as explanatory documents. The contractor shall himself verify and satisfy that these documents are in conformity with general instructions issued by any authority competent to approve the same finally. Deviations from the approved drawing/specifications can be done only with concurrence of authorized authority.
- 69. When the works are completed in full shape, the contractor shall arrange to draw neatly "As built drawing" of the total arrangements in the premises and supply THREE copies of the drawings to KSITM including soft copy of all documents and certificates .
- 70. Any doubts on any of the instructions, conditions, specifications or drawings in the tender shall be got clarified from the appropriate authority well before submission of the tenders.
- 71. All the routine tests to be carried out in the presence of the consultant/owner approved engineer and test certificate produced along with the catalogue and maintenance manual
- 72. The following measurement code shall apply to this contract: -

Sheet Metal Work

## a. Ducting:

- i. All sheet metal ducting work will be measured in terms of final sheet area installed in SQ. METERS.
- ii. No measurement of vanes, splitters, duct dampers, deflectors, access doors, etc. which are required to be installed in the ductwork shall form part of the ductwork.
- iii. Duct fittings such as bends, elbows, tap-offs, collars, transformation pieces etc. shall be treated as ordinary duct pieces with their length measured along their centerline.
- iv. No duct supports, stiffening, members, etc. shall be measured separately. All such supports/hangers shall form part of ductwork.
- v. Equipment connections such as canvas/asbestos/Rexene shall be deemed to be part of the ductwork and no separate measurement will be allowed.

## b) Grilles:

All grilles will be measured in terms of effective area (e.g. 600mm x 150mm grille will be measured as 0.09 Sq. Meter

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## c) Diffusers:

Diffusers will be measured in terms of diameter of each diffuser in centimeters.

## d) Dampers

- i) All duct dampers shall form part of ductwork; no separate measurement will be made for duct dampers.
- ii) Fire dampers will be measured in terms of effective area in Sq. metre.

## Insulation

## a) Ducting Insulation

i) Ducting insulation will be measured on the basis of centerline of insulation and not the outer line of insulation.

Example: Measurement 25 mm thick insulation on 600 mm x 300 mm duct 1 metre length.

[(600 + 25) + (300 + 25] 2 x 1 metre

- ii) No special measurement shall be made for insulation of bends, transformation pieces, tap offs, elbows etc. All such insulation shall be treated as standard duct insulation.
- iii) Insulation item shall include all accessories and finishes as specified. No separate measurement will be made for such items.

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## **WORK DETAILS & GENERAL SPECIFICATIONS**

### Scope:

The scope of work under the specifications hereinafter enumerated shall cover supply, erection, testing and commissioning of the entire air-conditioning system as required and shown on the relevant drawings.

### **Design Conditions & Data:**

The basic data for the system design has been derived from the climatological data available

## **BASIS OF DESIGN**

Outside design condition - 35° C. DB, 27° C WB Inside design condition - 22 °C +/- 1.1 °C, (RH not exceeding 60%)

SL NO	ROOM DISCRIPTION	AREA (SQFT)	OCCUPA NY	LIGHT LOAD (KW/ SQFT)	EQPME NT LOAD (KW)	AIR FLOW (CFM)	AC LOA D (TR)	FILTRATI ON (MICRON S)
1.	FIRST FLOOR ROOM 1	189	4	2	1	600	1.5	20
2.	FIRST FLOOR ROOM 2	225	6	2	1	800	2	20
3.	FIRST FLOOR ROOM 3	186	4	2	1	600	1.5	20
4.	FIRST FLOOR ROOM 4	219	6	2	1	800	2	20
5.	FIRST FLOOR ROOM 5	149	4	2	1	600	1.5	20
6.	FIRST FLOOR ROOM 6	142	4	2	1	600	1.5	20
7.	FIRST FLOOR ROOM 7	376	10	2	1	1200	3	20
8.	FIRST FLOOR ROOM 8	161	4	2	1	600	1.5	20
9.	FIRST FLOOR ROOM 9	161	4	2	1	600	1.5	20
10.	FIRST FLOOR ROOM 10	184	4	2	1	600	1.5	20
11.	FIRST FLOOR ROOM 11	135	3	2	1	400	1	20
12.	FIRST FLOOR ROOM 12	133	3	2	1	400	1	20
13.	FIRST FLOOR ROOM 13	382	10	2	1	1200	3	20
14.	FIRST FLOOR ROOM 14	188	4	2	1	600	1.5	20
15.	FIRST FLOOR ROOM 15	219	4	2	1	600	1.5	20
16.	FIRST FLOOR ROOM 16	182	4	2	1	600	1.5	20
17.	FIRST FLOOR ROOM 17	216	4	2	1	600	1.5	20
18.	SECOND FLOOR DINNING AREA	507	20	2	1	1200	3	20
19.	SECOND FLOOR CABIN 1, 2, & 3	709	20	2	2	2200	5.5	20
20.	SECOND FLOOR CABIN 4, 5, & 6	677	20	2	2	2200	5.5	20

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## SPLIT UNIT/ PACKAGE UNIT

**GENERAL** (Suggested tentatively)

## 

Capacity <in tr=""> Type of Compressor Capacity control</in>	As per specifications Sealed automatic
EVAPORATOR	As per supplier's specifications
CONDENSER	As per supplier's specifications
ELECTRICAL	
Motor output rating Motor input rating Starting method (soft starting) Starting current System parameters	As per supplier's specifications -Do- -Do- -Do- -Do-

### MISCELLANEOUS

Control Panel	Microprocessor control panel
Safety devices	-Do-
Meters/Instruments	Microprocessor Control Panel
First charge refg./oil	-YES-
Refrigerant piping & Valves	-YES-
Mounting frame/base frame/ skid base	-YES-
Anti-vibration device	-YES-
Pressure gauges	-YES-
Flow switches	-YES-
Thermometers	-YES-

Note: The technical details given above are representative only. The contractors are required to submit details of equipment being offered

#### MISCELLANEOUS

\_\_\_\_\_

GSS DUCTING: QUALITY FABRICATION HANGERS SUPPORT & ANGLE FASTENERS

As per I.S.S. As per IS 655 GI full threaded rod two coat with zinc coat primer and finished with enamel paint Aluminum Powder Coated

**GRILLES & DIFFUSERS** 

INSULATION

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TENDER NO: KSITM/ITES/2/2010-11/004	Page 46	AIR CONDITIONING works for ITES Habitat Centre
PIPING (Fire retardant quality)	Expanded p	olystyrene/
ТҮРЕ	Pipe section	15
DENSITY	Minimum 2	4kg/cubic meter.
THICKNESS	50 mm for p	polystyrene
TREATMENT		
INDOOR	•	oolythene sheet, fire resistant Hessian, chicken w en, 12mm plaster.
OUTDOOR	of vapor ba	ove but with one layer of 6mm plaster, laye rrier mastic with rp tissue & a final two laye bitumen coating.
DRAIN PIPING	25 MM poly piping	ystyrene with same specification as for indo
INSULATION		
DUCTING:		
MATERIAL	Resin bonde	ed fiberglass
ТҮРЕ	Slabs	
DENSITY	Not less tha	an 24 kg/cubic metre
THICKNESS	As per B.O.	Q.
TREATMENT	30 SWG Alu	iminium sheet finish as per specs.

## Codes:

The latest edition of the following codes, standards and regulations shall be applicable for this work.

(a) Piping: IS 1239 part I and II, IS 3589

(b) Welding: Relevant Indian Standard

(c) Refrigeration and Air-conditioning: Air-conditioning and refrigeration institute standards, American society of Heating Refrigeration and Air-conditioning Engineering Inc. & IS specifications.

(d) Duct work: ISS 655 (Latest Edition)

(e) CPWD specification for Air-conditioning/Electrical works

### Drawings:

The drawings furnished along with these specifications are essentially diagrammatic and depict general arrangement and approximate locations of the equipment. The intent of these drawings is to aid the Contractor to acquaint himself of the general nature and extend of the work involved and these drawings are not intended to be used for construction. The Contractor, upon the award of work shall prepare detailed piping, ducting. Equipment layouts along with working drawings/shop drawing giving details of fixing arrangements, foundations, etc. as required for the above work shall submit the same along with detailed selection charts and catalogs of equipment's for the approval of the employer within one month from the date of award of work. The contractor shall commence the work only after the working drawings are approved by the consultant.

### **Co-ordination of Space:**

The Contractor, before, preparing the working drawings shall examine all the architectural, structural, electrical and plumbing and shall prepare his drawings based on co-ordination of space shown on them. **Equipment:** 

All the equipment offered shall be brand new from the works. The Contractor shall submit for approval a list of equipment he intends to use along with the detailed selection charts, catalogs, etc. before ordering of equipment. Any equipment or machine ordered or installed without the approval of owner shall be at Contractor's risk and shall be removed and replaced as directed, without additional expense to the owner. **Precautions:** 

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All the equipment shall be so designed as to prevent rusting, corrosion and deterioration, the design of equipment shall be such that moisture, dust, vermin, etc. shall not find access to interior parts and components. All moving parts shall be provided with guard to prevent accidental contact.

## Factory Tests and Inspections:

The Contractor shall at his expenses, arrange for all factory tests and inspection of equipment required under the specification in the presence of owner's representative, if so desired by the owner.

#### **Operation and Maintenance:**

Four complete sets of operating & maintenance instructions for every equipment and component shall be furnished properly bound. The Contractor shall depute, for a period of ten working days, a competent engineer or manufacture's representative to instruct employer Engineers/Representatives in the operation and maintenance of air conditioning system.

### PACKAGE / SPLIT UNITS

#### 1.Cabinet:

The split units shall have metal cabinet of heavy gauge. The body should be machine pressed and adequately stiffened. The body should be chemically treated for corrosion resistance and then paint-

ed over with at least two coats of paint on primer. The body shall be insulated both thermally and acoustically on the inside. All the components indicated below should be mounted within the cabinet. Removable type access and drain connections shall be provided to the unit.

#### 2.Compressor:

Each unit shall have one or more reciprocating compressors complete with motor. Compressor shall be semi sealed or hermetic or open type and shall be suitable for Freon refrigerant. Compressors shall be mounted on vibration isolation springs/mountings and shall be easily accessible for service. The whole casing shall be suitably sealed against dirt and moisture. The lubrication system shall be force-feed type and shall comprise relief valves, pressure controls. Electrically operated oil heaters shall be with built in thermostat suitable for specified power supply. Heaters shall be automatically actuated when the compressor is stopped by means of auxiliary contacts and indicating light shall be provided with compressor.

#### 3.Condenser (Air cooled)

The coils shall be made of copper hydraulically bonded with aluminum fins. The condenser shall be fitted with safety relief valve and air purge cock.

#### 4.Refrigeration piping and accessories.

Only hard drawn copper shall be used in piping with brass fittings wherever required. Brazing shall be with silver copper phosphorous alloy. Horizontal lines shall have a grading of at least 1:250 away from the compressor and towards condenser to prevent gravity draining of oil to compressor. Liquid lines shall be sized to ensure that flashing of liquid refrigerant does not occur. The circuit should include a thermostatic expansion valve, distributors, liquid strainer, de-hydrator and liquid lines shut off valve. Refrigerant shall be factory charged with latest standards in charging procedure. If any leaks during transit shall be tested by the procedure as given below:

Leaks shall be tested with soap solution. After all leaks have been repaired, system shall be tested with a test pressure maintained for a period of not less than 8 hours. No measurable drop in pressure should be detected after the pressure readings are adjusted for temperature changes. After satisfactory completion of the pressure test, the system shall be evacuated to reduce the pressure to 0.1 Kg/Sq.cm. for a period of 6 hours and vacuum broken. A vacuum pump connected to the refrigeration system shall be used to create the vacuum and the installed compressor shall not be used to create the purpose. The system shall again be evacuated and a vacuum of 0.01 Kg/Sq.cm. absolute maintain for 24 hours before charging with correct quantity of refrigerant and oil. The system shall be operated for 12 hours and then again tested for leaks with halide torch.

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#### 5. Fan

Fan section including wheel and housing shall be of heavy gauge steel. Fans shall be centrifugal, forward curved multi blade type. Fan housing shall have inlets and guide vanes for smooth air flow. Fans

shall be complete with drive motor and belt drive. The fans should be statically and dynamically balanced. They should be of the double inlet, forward curve blade centrifugal type. The fan bearing should be "Life lubricated type" ball bearing. The fan motor should be resilient mounted. The fan should be suitable for the final filters specified. The fan outlet should be closable with a damper.

## 6.Coil

Coils shall be of direct expansion type made of heavy gauge copper with aluminium fins firmly banded. The cooling coil of both condenser and evaporator should be of copper tube with aluminium fins. The fins should be bonded to the coil under hydraulic pressure. The refrigerant circuit should be heavy gauge copper factory piped and transported complete with initial charge of gas and oil. Toping up if required, should be carried out in keeping with current practices. The circuit should include a thermostatic expansion valve, distributor, liquid strainer and liquid line shut off valve.

#### 7. Testing

Split/Packaged units after installation shall be tested for its conformity to specifications. Units shall also be tested for a capacity and power consumption. The contractor shall compensate shortfall in capacity and excess power consumption from the rated figure.

#### Refrigerant, refrigerant piping & oil:

The refrigerant shall be R-134A/R-22.

Piping shall be of factory installed refrigerant piping with filler-drier, controls, etc. Required as per standard of manufacturer shall be installed. The first charge of refrigerant and oil shall be carried out.

### Miscellaneous

#### a) Purge system

Continuous purge system with automatic purging of non-condensable gases/refrigerant.

#### b) Refrigerant flow control:

This shall be provided.

c) Instruments (Generally as per the standard of the supplier)

- a) Auxiliary relays.
- b) Temperature controller.
- c) Thermal relay and contactor for oil pump.
- d) Alarm buzzer or indication lamps.
- e) Fuses for voltmeter etc.

d) Vibration isolator (Generally as per the standard of the supplier)

a) Corrugated ribbed rubber pads to provide sufficient deflection to minimize vibration.b) Base plates.

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## e) Insulation

Refrigerant suction line insulation as per standards of manufacturer.

## f) Tools

Standard & special tools for operation & maintenance. A list of such tools shall be furnished along with the technical bids.

## INSULATION

### Scope:

Supply and fix thermal insulation for piping, ducting and equipment as per the specification described in the section.

## Materials of Insulation :

The following insulating materials shall be used : a) For Ducting

25 mm Nitrile Rubber or Flexalen insulation

## **Duct Insulation:**

Sheet metal/aluminium ducts shall be insulated as described below:

a) Thickness of insulation:	Material: 50 mm crown 150 fibre glass covered with	aluminium foil
and sealed with PVC tapes.		

## **Duct Lining:**

All the ducting emanating from air handling units shall be provided with lining on inside surface of the duct for at least 6 metres distance from the outlet of air handling units to attenuate fan noise transmission to the conditioned space. The duct liner or the sound absorbing material shall not import odor to the air, delaminate or lessened by the air stream under normal operating conditions. The liner shall be fiber glass or approved equivalent, unless otherwise indicated, acoustical duct liner shall have a minimum average density of 48 kg/cubic meter covered with RP tissue and 24 gauge aluminium perforated sheet.

## SHEET METAL WORK

## Scope

Supply and erect all sheet metal work as per the specifications described below:

## Material for Ducting :

All duct work shall be constructed out of best quality cold annealed, flat galvanized sheet steel (galvanized to specifications of IS : 277 (latest edition)).

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The joints shall be finished straight and neat. The duct work shall be supported/secured from roof slab or any other building member using angles, rods as may be required.

Maximum	Maximum size of				
Rectangular Duct (in MM)	Round Duct dia.(mm)	Sheet in MM			
Up to 750	Up to 600	0.63(24G)			
751 to 1500	601 to 750	0.80(22G)			
1501 to 2250	750 to 900	1.00(20G)			
2251 & above	901 & above	1.25(18G)			

Thickness of sheets shall be as shown in the tables given below :

The fabrication of duct shall be done as per IS : 655 (latest edition). Transverse joints, connections, bracing, seam etc. shall be generally as per IS : 655. All the ducts over 300mm in either dimension shall be cross broken except those on which rigid board insulation is applied. Stiffening angles shall be black structural steel and riveted to the cut work. The longitudinal seam on all ducts may be Pittsburgh seam hooked and hammered. Ducts of size 600 mm and above shall be reinforced between the joints. Where drive-slips are used, angles shall be riveted to the ducts 50mm from slips.

#### **Duct Construction :**

The intent of the above specification, is to obtain duct pieces that are robust and rigid enough to preclude flutter & to achieve minimum amount of air leakage. The contractor may fabricate ducts conforming to any other approved standard to achieve the desired result. However, detailed specifications shall be submitted for approval before adopting the same. Suitable rubber gaskets shall be provided between the duct flanges. Ducting shall be supported from independent hangers fixed to the building structure. In any case the duct shall not be supported from false ceiling, ceiling hangers, light fixtures, support for light fixtures or piping work etc. In case the structure is under construction, inserts and anchors required for duct support shall be set in the building structure at the time of pouring concrete. The Contractor shall prepare, detailed drawings of hangers and supports and submit for the approval of consultants.

Dimensions of duct sections shown are inside dimension of bare ducts. Where ducts are required to be lined or insulated on inner surface, their dimensions have to be enlarged so that the cross section area is not reduced as compared to those shown on the drawings.

#### Elbows, Vanes Etc.

Simple elbows, transformation sections, shall be formed with Pittsburgh corner seams. Complicated fittings shall be constructed with double corners. Elbows, bends and offset pieces shall have a center line radius of not less than 1.5 times the radial of width of the duct. Turning vanes should be provided at required spacing such that the aspect ratio of each individual elbow formed by the vanes shall not be more.

#### Transformation

Duct transformation shall be made with a side slope of 10mm to 70mm. However, if the duct cross section area need to be reduced, a maximum reduction of 20% of the original area shall be allowable.

#### Obstructions

Where ducting has to avoid building structural members, piping, electrical pipes and cables, ducts shall be transformed, divided or curved to one side. The reduction in area shall not exceed 20% of the original area.

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## Take offs

The branch take-offs and collars shall be provided with turning vanes. Straightening vanes shall be provided in the collars wherever practicable.

## **Dampers & Splitters**

Dampers shall be provided in the duct work for proper control and balancing of air distribution. Dampers shall have easily accessible operating mechanism. The operating mechanism shall consist of links, levers and quadrants as required for proper control and setting in a desired position. The position of the handle of Damper operating mechanism shall be clearly visible and it shall indicate the position of the damper in duct. Dampers, splitters and their operating mechanism shall be fabricated of GS sheets of two gauges heavier than duct piece having theses fittings and shall be easily accessible through suitable access doors in the ducts. Dampers shall be installed in duct at all required locations such as chutes, branches etc.

## Apparatus and Equipment connections

Equipment's such as air handling units shall be connected to the duct by means of double canvas sleeve of 15 ounce, woven asbestos cloth connection of at least 150mm long.

Duct sleeves made of 20 gauge thick galvanized sheet steel shall be used for ducts passing through load bearing walls or partitions. sleeves shall provide 25mm clearance all around as per duct or insulated duct. The space between sleeve and duct shall be packed with twisted asbestos.

All the sheet metal plenums required to confine the flow of air through filters and fans, shall be fabricated out of 18 gauge galvanized sheet steel, suitably braced as required. Suitable access doors shall provided for plenums.

## Access Doors

Hinged or bolted access doors shall be provided in ducting for fire dampers, coils, plenums and any apparatus requiring frequent servicing for inspection. Access doors shall be rigid and shall be provided with air tight rubber gaskets. Insulated ducts shall be provided with insulated doors

## Diffusers, Registers & Grilles

All side wall supply grilles shall be double deflection type with both horizontal and vertical vanes being adjustable. Grilles shall be provided with multi-louver damper for volume control with adjustable handle from the from of the grille. Side wall grille shall be similar to Tuttle & Bailey. All return air and exhaust grilles shall have only horizontal louvers and similar to Tuttle and Bailey Aerovane T-70 D or equivalent. Ceiling diffuser shall be provided with volume control dampers, which can be operated from below. Ceiling diffusers shall be similar to Tuttle & Bailey type 5-aerofuse.

All the diffusers and grilles shall be of mild steel/powder coated aluminium. Diffusers and grilles shall be provided with sponge rubber gasket between flanges and wall or ceiling. Samples of grilles/diffusers shall be approved by consultant before installation.

## Installation

The installation of ducting shall conform to standard practice of the trade. The contractor shall provide and neatly erect all the sheet metal work as shown on the approved drawings.

The Contractor shall upon the award of work prepare detailed shop drawings of ducting for approval by Engineer-in-charge. The drawings shall indicate the exact route of ducting, ducting dimensions, details of splitters, vanes, dampers, fire dampers, heaters, filters etc. as specified and required. The drawings shall

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also incorporate cross section indicating beams, obstruction, piping, cables etc. The ducting shall be suitably designed to avoid all obstructions and at the same time utilizing a minimum number of bends/transformations/divisions etc. Every duct layout drawing shall clearly indicate the location & spacing of supports & hangers.

Ducting over the false ceiling area shall be supported from the ceiling slab or from beams. In no event, the ducting shall be supported from false ceiling hangers, cable trays/racks, pipe supports or be permitted to rest on the false ceiling. All the ducts shall be rigid and shall be adequately supported and braced wherever required with tees, angles or adequate size to prevent buckling, Vibration or breathing. The contractor should mention the total quantity of various sizes ducting sheet along with each floor drawing of duct layout.

#### Insulation:

Duct work shall be insulated as per specification given under insulation.

#### Testing:

After completion of ducting, the entire system shall be tested for air leakages. The max. allowable air leakage shall be 10% on commissioning of the plant, the entire air distribution system shall be balanced to supply the required air quantities to various regions and rooms to maintain the specified inside conditions. The readings of air quantities, after final balancing of the system. through each register, diffuser or grille shall be recorded and submitted to the Engineer-in-Charge.

## ELECTRICAL INSTALLATION:

## Scope

The scope of this section comprises of the supply, erection, testing and commissioning of electrical switch gear and wiring installation.

## General

Work shall be carried out in accordance with the specifications, local rules I.E. Act 1910 as amended up to date and rules issued thereunder, regulations of the Local Fire Insurance Association and Indian Standards code of practice No. IS : 732-1963 and CPWD General specifications for Electrical Work(Internal) -1977 and Kerala State Electrical Inspectorate standards.

## Wiring System

Wiring shall be carried out with PVC insulated, PVC sheathed and armored cables. Wiring shall be suitable for a 3 phase, 50 cycles, 4 wire supply with 415 volts between phases and 230 volts between phase and neutral. The voltage and frequency of supply shall be subject to variations permissible under the Indian Electrical Act and Rules.

### Material

All materials shall be of the best quality complying with the appropriate IS specification. Material used shall be subject to the approval and samples of the same shall furnished where required. Acceptable makes of materials are given in the equipment schedule.

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## Cables Laying

Cables shall be laid generally in accordance with Indian Standard Code of Practice/CPWD specification/ISS/ Inspectorate cables shall be laid in trenches or buried or carried on walls as stated in the schedule, indicated on the drawings, or approved by Where more than one cable is running proper spacing shall be provided to minimize the loss incurrent carrying capacity.

Cable racks and trays shall be provided wherever specified in bill of quantities. Cables shall be suitably supported with MS angle iron clamps mounted on M.S. supports when run on walls. This distance between supports shall not be more than 0.5 meter.

Special care shall be taken to ensure that the cables are not damaged at bends. The radius of bends of the cables when installed shall be sufficiently large to ensure that no undue stress is caused on the insulation/conductor. Where cables pass through pipes, wooden bushes shall be provided at the ends.

When these pass through floors or walls the cable holes shall be sealed in a manner approved by consultant. With each cable, 2 Nos. of earth conductors of sizes specified under sub-head "Earthing" shall be provided.

#### Equipment Wiring

Final connections to the Equipment shall be through flexible wiring particularly for equipment mounted on guide rails and which are liable to be moved.

#### Earthing

Earthing shall be as per IS : 3042 - 1963 in all respects. The earth station shall consist of GI pipe and accessories as per IS : 3043.

The connection between earth plate and main earth bar shall be by means of 3 Nos. 3/8" brass bolts and nuts. These bolts shall be fixed at least 4" apart. The earthing station shall be preferably located in a grassy lawn/near flower beds/near water traps. These shall be kept at least 2 meter away from the foundation of the building or outer face of the building. The distance between earth stations, shall be at least 5 meters. No earth electrode shall have greater ohmic resistance than 0.5 ohms. as measured with approved earth testing equipment. In case of rocky soil, it may be relaxed to 1.0 ohms.

All switches/isolators shall be connected to the earth and size of earth conductor shall be as follows depending upon the size of the cable connected with the switch/isolators.

Cross sectional area of the current	Size of earth conductor			
Carrying conductor				
1. 4/6/10	10 SWG Cu			
2. 16/25/35	6 SWG Cu			
3. 50/70/95	4 SWG Cu			
4. 120/150/185/225/240	25mm x 3mm strip Cu			
5. 300/400	40mm x 5mm strip Cu			

## Control/Indication/Interlocking Wiring:

The control/indication/interlocking wiring shall be done with 2.5 sq.mm PVC insulated and PVC sheathed armored copper conductor cables of multi cores as per requirement. All the machines as detailed in the drawings shall be remote controlled at the main panel board through push buttons (ON/OFF buttons). All the machines shall have red/green lamp indicators to show the working/off position of individual machines.

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An electrical interlocking shall be provided for safe running of refrigeration machines i.e. the refrigeration machine shall only start after C.T. fans, condenser water pumps, chiller water pumps have started working. Control wiring for individual fan coil units shall be done with 2.5 sq.mm copper conductor single core cables drawn in recessed conduit.

#### **Completion Drawings**

Four sets of completion drawings giving single line diagram run of cables location along with of detail panels, indication/interlocking circuits cable with sizes within the building/underground cables showing the location of straight through joint boxes, location of main earthing stations shall be furnished within one month from the date of completion of the work.

#### Testing

Before the commissioning of the plant, the entire installation shall be tested in accordance with Code of Practice IS No: 732 - 1963 and the test report furnished by the qualified and authorized person. The electrical installation shall be got passed from local electrical inspector. The first inspection fee shall be paid by the Owner. Subsequent fee, if any, shall be paid by the Contractor.

## TESTING OF AIR-CONDITIONING SYSTEM:

Routine and type tests for the various items of equipment shall be performed at the Contractor's works and test certificates furnished if required. Functional tests shall be conducted at site.

The performance tests to determine whether or not the full intent of the specification is met shall be conducted by the contractor. After notification to the employers that the installation has been completed and the plant has run continuously for a period of at least one weeks, the Contractor shall conduct under the direction and in the presence of the employer's representative such tests as specified to establish the capacity of various equipment supplied and installed by the Contractor.

The Contractor shall operate, test and adjust the air conditioning system units, fan, motors, all air handling appliances including adjustment of regulators, dampers etc. All test equipment, labor, operating personnel, oil and refrigerant required for these tests shall be furnished by the Contractor to enable the plant to be put in a continuous running test. The Contractor will be provided with electric power and water.

#### Procedure :

#### **Design Conditions:**

The inside and outside dry bulb and wet bulb temperatures shall be recorded by means of a sling psychrometer with mercury thermometers. The relative humidity shall be computed from the psychometric chart. The inside dry bulb temperature and relative humidity shall fall within the specified limits.

### Air balancing:

After the desired inside conditions are achieved the quantity of air through every outlet shall be measured. Air Qty (CFM) = Air velocity at the outlet in FPM x Effective area of the outlet in Sft.

### Testing at various loading conditions:

The performance tests shall be conducted for various loads such as 100%, 75%, 50% of the capacity of the plant.

**Supply Air Grilles** 

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TENDER NO: KSITM/ITES/2/2010-11/004	Page 55	AIR CONDITIONING works for ITES Habitat Centre		
1. Area of Grill	- M2 (Sft)			
2. Velocity	- M/Hr (FPM)			
3. Air flow rate	- M3 (FPM)			
4. Temperature DB	- 0C (0F)			
5. Temperature WB	- 0C (0F)			
Filters				
1. Total area	- M2 (Sft)			
2. Effective area	- M2 (Sft)			
3. Velocity of air	- M/Hr (FPM)			
4. Quantity of air	- M3/Hr (CFM)			
Controls, Interlocks, etc.	,			

The observations of the test shall be recorded for each item separately.

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## **TECHNICAL DATA**

The following data shall be furnished along with the offer:

#### Compressor

- 1. Manufacturer
- 2. Model
- 3. Overall dimensions
- 4. Size of foundation
- 5. Size of foundation
- 6. Refrigerant
- 7. Test pressure (Max) (Kgs. / sq.M.)
- 8. Maximum revolutions per minute
- 9. Minimum revolutions per minute for proper lubrication
- 10. Type of capacity control
- 11. No. of steps of capacity control
- 12. Capacity and bhp of the m/c at suction & condensing temperatures (Specify the temperatures)
- 13. Crank case heaters.
  - i) Whether provided ii) Power rating (W)
- 14. Type of drive arrangement
- 15. No. Of belts in case of V- belt drive
- 16. Whether oil pump is provided
- 17. Type of oil pump.

18. IKW and BHP per ton @ 100%, 75%, 50% as per ARI 2000 –550-598 conditions as specified. And IPLV (Tender without this details will be rejected.)

#### Split units

- a. Manufacturer
- b. Length (mm)
- c. Width (mm)
- d. Height (mm)
- e. Weight (kg)
- f. Nominal capacity
- g. Actual capacity at selected discharge and suction temp.
- h. No. of Refrigeration circuits.

#### **Cooling coil**

- a. Manufacturer
- b. Type
- c. Material of Tubes
- d. Material of fins
- e. Tube diameter
- f. Tube thickness
- g. Fin thickness
- h. Method of boding of fins
- i. No. of fins/cm.
- j. No. of raw deep
- k. Total tube surface outside (Sq.M)
- I. Test pressure

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- m. Coil face area
- n. Flow/Rate of water/Refrigerant (kgs/min or L.P.M.)
- o. Volume of water/Refrigerant through tube (M.P.S.)
- p. No. of circuits
- q. Pressure drop in coil (Kgs/sq.cm or mm of water)

## Air filters

- a. Manufacturer
- b. Type of filters
- c. Filter medium
- d. Material of frame work and its thickness (mm)
- e. Face area (Sq.M)
- f. Face velocity across filters
- g. Pressure drop across filters (mm of water )

## Ducting.

- a. Material
- b. Manufacturer
- c. Whether ducting is as per I.S. 655

## Insulation (for each applications)

- a. Manufacturer.
- b. Material and density
- c. `K' Value at 10 (C°) mean temperature
- d. Thickness.

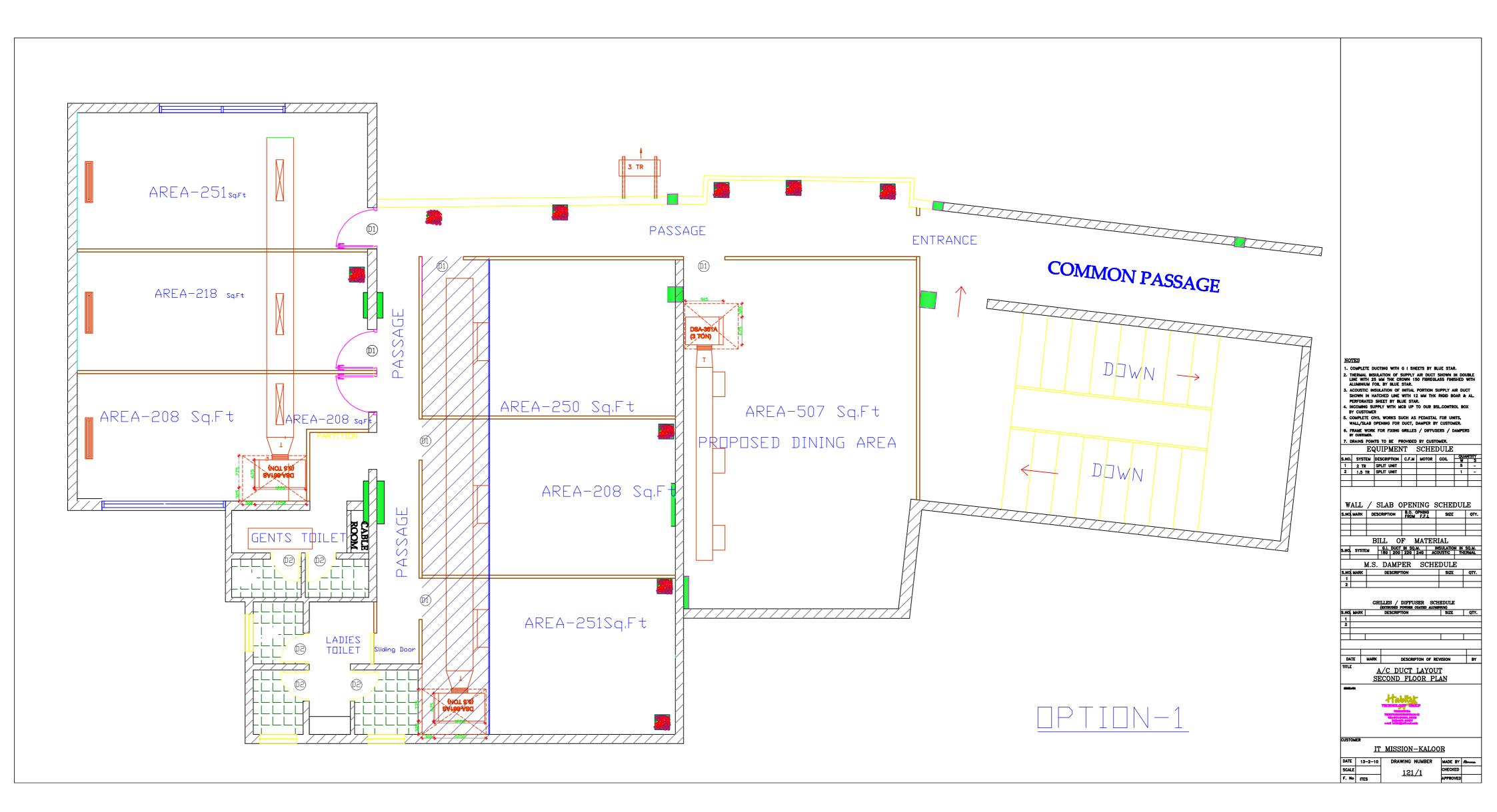
Signature of the Bidder with seal

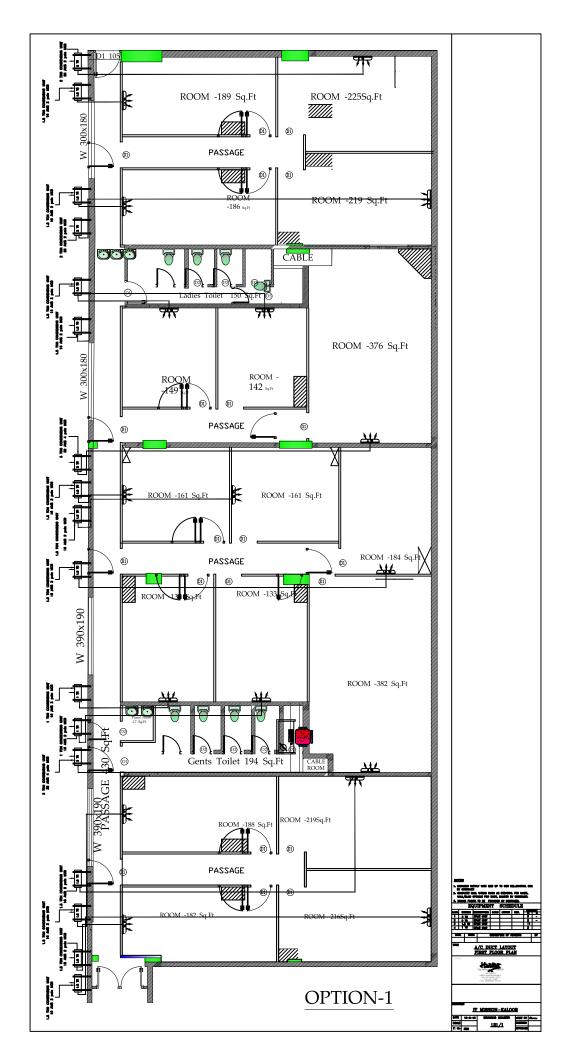
## LIST OF APPROVED BRANDS

The following are the suggested brands for each item listed below. Any selection of brands or materials from the suggested list or other must have prior approval owner authorized engineer/consultant

S.NO	ITEM	MANUFACTURER
1	DX Split units	Voltas/Blue Star/Carrier
2	GSS Sheets	Sail/Jindal/Tata
3	Duct and Pipe Supports/ Vibration Isolators	Hi Tech
4	Fibre Glass Insulation	UP Twiga/Owens Corning/KIMMCO
5	Gri/s / Diffusers / Dampers	Caryaire/Ravistar/Airmaster
6	Volume Control Damper	Caryaire/Ravistar/Airmaster
7	Duct Accessories	Ductmate/Duroyne/Watts
8	Electrical Cables	Nicco/Gloster/
9	Electrical Wires (FRLS)	Finolex/ Polycab
10	Controls / BMS	Honeywe/Siemens/Johnson Controls

Signature of the Bidder with seal





# **AIR CONDITIONING WORKS**

TENDER NO: KSITM/ITES/2/2010-11/004

ITES Habitat Centre, Jawaharlal Nehru International Stadium , Kaloor, Ernakulam

# **TENDER FORMS & PRICE SCHEDULE**

# **KERALA STATE IT MISSION (KSITM)**

ICT Campus, Vellayambalam – Thiruvananthapuram-695033 Ph: 0471 2314307 / 2726881 Fax: 0471 2314284

# **KERALA STATE IT MISSION (KSITM)**

ICT Campus, Vellayambalam – Thiruvananthapuram-695033 Ph: 0471 2314307 / 2726881 Fax: 0471 2314284

# **Tender FORMS**

# AIR CONDITIONING WORKS

for

ITES Habitat Centre, Jawaharlal Nehru International Stadium , Kaloor, Ernakulam

**TENDER NO: KSITM/ITES/2/2010-11/004** 

Issued by:

The Director, Kerala State IT Mission, Vellayambalam, Thiruvananthapuram- 33

Note:

- 1. Filled form signed by the bidder with relevant attachments should be enclosed with technical bid
- 2. Tender documents incorporating terms & conditions, drawings etc in separate booklet

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CHEC	K LIST FOR DOCUMENTS TO BE ATTACHED ALONG WITH THE TE	NDER DOCUMENT
SI. No	Document list	Furnished / not furnished
<u>TECH</u>	NICAL BID	
1	Earnest Money Deposit -DD valid for 180 days drawn on any scheduled Bank in favor of "Director, ", payable at Thiruvananthapuram for Rs. 35,250/-	
2	Form of tender (filled signed)	
3	Form of preliminary agreement signed	
4	Power of Attorney of authorization	
5	Technical Bid-FORM-A (filled)	
6	Technical Bid-FORM-B (filled)	
	Audited balance sheets for	
7	2006-2007	
8	2007-2008	
9	2008-2009	
10	Details of similar work executed during last 5 years with W.O copy & completion certificate of the relevant work with values from the Client including Concurrent Commitments. (proof for statements in FORM-B)	
11	Copy of Authorized Dealership certificate from manufacturer	
12	Details of Concurrent Commitments.	
13	Signed copy of Tender document (all the pages including BOQ and drawings)	
PRIC	E BID	
1	Price schedule	

	TECHNICAL BID-FORM-A						
1	Name of the Tenderer's firm	:					
2	Type of Firm : Private Ltd./Public Ltd./ Cooperative/ NGO/PSU/others	:					
3	Year of establishment						
4	Office Address ( Regd office) with Tel/fax No & E-mail address	:					
5	Local Office Address at Ernakulam (If any) with Tel/fax No & E-mail address	:					
6	Name of authorized representative(s) with Mobile No	:					
7	No of years experience till 30/6/2010	:					
8	PAN No.(Please enclose photocopy)	:					
9	Registration details if any PWD/CPWD/MES/Railways etc						
10	TIN No. :(Please enclose photocopy)	:					
11	Service Tax Regn. No. :(Please enclose photocopy)	:					
12	Dealership registration details with proof	:					
13	sheet/profit & loss account for the last thr	o be furnished duly supported by figures in balance ree years duly certified by the Chartered Accountant, ne Tax Department (Copies to be attached))					
	Year	Gross Annual Turnover in Rupees ( in words and figures)					
	2006-07						
	2007-08						
2008-09							

#### AIR CONDITIONING works for ITES Habitat Centre

	TECHNICAL BID-FORM-B									
	Details of Projects executed till 30/6/2010 or under Execution									
SI No	Name of work/project	Work order No and date	Status of work(Completed /Under Execution /Others)	Owner or sponsoring organization	Cost of work in Lacs (Copy of work order to be attached)	Date of commencement as per contract	Stipulated date of completion.	Actual date of completion	Name and address/ phone number of officer (of the owner) to whom reference may be made	Whether pre qualification is being sought based on this work(YES/NO)
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										

Note:

a) Please mention all works executed equal to or above the qualifying amount

b)For stipulated date of completion, submit copy of work order

c)For actual date of completion, submit copy of completion certificate from employer

d) Please clearly indicate the works (in the above form) on the basis of which prequalification is being sought.

Signature of Bidder

## FORM OF TENDER AIR CONDITIONING works for ITES Habitat Centre, Jawaharlal Nehru International Stadium , Kaloor, Ernakulam

То

DIRECTOR, Kerala State IT Mission ICT Campus, Vellayambalam Junction, Thiruvananthapuram - 695 033

Sir,

I/We do hereby tender to execute the works enumerated in the Schedule accompanying in accordance with the terms and conditions stipulated in your tender notification dated 20/7/2010 and specifications.

- 1. Copy of the specifications duly signed is also enclosed.
- 2. I/We further agree to complete the whole work in 75 days from the date of receipt of order to start work and maintain specified rate of progress as specified in the tender schedule.
- 3. I/We do agree to accept and carry out such portions of the work included in my/our tender as may be allotted to me/us.
- 4. In consideration of I / We being a qualified of the invited to tender. I / We agree to keep the tender open for acceptance of 2 monthS from the due date of submission thereof and not to make any modifications in its terms and conditions which are not acceptable to The Director, , ICT Campus, Vellayambalam Junction, Thiruvananthapuram
- 5. A sum of Rs. Rs. 35,250 /- is hereby forwarded as a demand draft in favor of The Director, Kerala State IT Mission , Vellayambalam, Thiruvananthapuram payable at Thiruvananthapuram as earnest money.
- 6. If I / We fail to keep the tender open as aforesaid or make any modifications in the terms and conditions of the tender which are not acceptable to The Director, Kerala State IT Mission , Vellayambalam, Thiruvananthapuram, or if after the tender is accepted, I/We fail to execute the agreement as provided in the tender notification or to commence the execution of work as provided in the conditions, I/We agree that the Kerala State IT Mission , Vellayambalam, Thiruvananthapuram shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely, and also to recover from me the entire loss that may be caused to Kerala State IT Mission , Thiruvananthapuram by re-tender or rearrangement of the work or otherwise under revenue recovery act or as other wise as decided by the Director, Kerala State IT Mission , Vellayambalam, Thiruvananthapuram.

Best regards,

Yours sincerely,

(Signature of the Bidder)

## FORM OF PRELIMINARY AGREEMENT

(This to be executed on stamp paper of value Rs. 100/- and submitted along with the tender)

Preliminary agreement entered into this							
Two thousand and Ten between The Director, Kerala State IT Miss	ion						
Vellayambalam, Thiruvananthapuram							
and							

(Name and address of the contractor) (Hereinafter called the Contractor) on the other part for the execution of the <u>AIR CONDITIONING works</u> for ITES Habitat Centre, Jawaharlal Nehru International Stadium, Kaloor, Ernakulam and whereas in the notice inviting tenders it is stated as follows.

The tenderer shall, within 10 days from the date of intimation of acceptance of his tender, remit a security deposit equivalent to 5 % of the contract value (rounded to the nearest multiple of hundred rupees) less the earnest money deposited by him (which will be treated as part of the security deposit) subject to a maximum of Rs. 1,00,000/ in the form of a demand draft in favour of "Director, Kerala State IT Mission", payable at Thiruvananthapuram", This amount together with the amount of earnest money deposited shall be treated as security for the proper fulfillment of the same and he shall execute an agreement for the work in the prescribed form of agreement. If he fails to do this or fails to maintain a specified rate of progress, the security deposit shall be forfeited to the Director, IT. Mission, Vellayambalam, Thiruvananthapuram, and fresh tenders shall be called for or the matter otherwise disposed. If as a result of such measures due to the default of the tenderer to pay the requisite deposit, sign contracts or take possession of the work any loss to the Director, Kerala State IT Mission , Vellayambalam, Thiruvananthapuram, results, the same will be recovered from him as arrears of revenue but should it be a saving to the Director, Kerala State IT Mission , Vellayambalam, Thiruvananthapuram, the original contractor shall have no claim whatever to the difference. Recoveries to this or any other account will be made from the sum that may be due to the contractor on this or any other contracts or under the Revenue recovery Act or other wise as the Director, Kerala State IT Mission , Vellayambalam, Thiruvananthapuram, may decide...

Now therefore these present witnessed and it is mutually agreed as follows:-

- The terms and conditions for the said contract having been stipulated in the said tender form to which the contractor has agreed, copy of which is append, and which forms part of this agreement, it is agreed that the terms and conditions stipulated therein shall bind the parties to this agreement, except to the extent to which they are abrogated or altered by express terms and conditions herein, agreed to and in which respect the express provisions herein shall supersede those of the said tender from.
- 2. The contractor hereby agrees and undertakes to perform and fulfill all the operations and obligations connected with the execution of the said contract work.
- 3. If the contractor does not come forward to execute the original agreement after the said work is awarded and selection notice issued in his favour or commits breach of any of the conditions of the contract as stipulated in clause 10 of the Notice inviting Tenders (Form 83) as quoted above within the

period stipulated, by the Director, Kerala State IT Mission , Vellayambalam, Thiruvananthapuram, may rearrange the works otherwise or get it done otherwise at the risk and cost of the contractor and the loss so sustained by Director, Kerala State IT Mission , Vellayambalam, Thiruvananthapuram, can be realized from the contractor under the Revenue Recovery Act as if arrears of land revenue as assessed, quantified and fixed by an adjudicating authority consisting of the Director, Kerala State IT Mission , Vellayambalam, Thiruvananthapuram, or any other officers authorized by the Director, Kerala State IT Mission , Vellayambalam, Thiruvananthapuram, or any other officers authorized by the Director, Kerala State IT Mission , Vellayambalam, Thiruvananthapuram, taking into consideration the prevailing rates and after giving due notice to the contractor. The decision taken by such authorized officer or officers shall be final and conclusive and shall be binding on the contractor.

4. The contractor further agrees that any amount found due to the Director, Kerala State IT Mission , Vellayambalam, Thiruvananthapuram, under or by virtue of this agreement shall be recoverable from the contractor from his E.M.D and his properties, movable and immovable as arrears of land revenue under the provisions of the Revenue Recovery Act for the time being in force or in any other manner as the Director, Kerala State IT Mission , Vellayambalam, Thiruvananthapuram, may deem fit in his regard.

In witness where of Sri .....

(The name of the Employer, Kerala State IT Mission Vellayambalam, Thiruvananthapuram. For and on behalf of the Director, Kerala State IT Mission, Vellayambalam, Thiruvananthapuram and

Sri.....

The contractor has set their hands on the day and year first above written

Signed by Sri..... Officer/Officers of

Kerala State IT Mission, Vellayambalam, Thiruvananthapuram, in the presence of witnesses

- 1.
- 2.

Signed and delivered by Sri....

(The contractor) in the presence of witness

- 1.
- 2.

# **KERALA STATE IT MISSION (KSITM)**

ICT Campus, Vellayambalam – Thiruvananthapuram-695033 Ph: 0471 2314307 / 2726881 Fax: 0471 2314284

# **PRICE SCHEDULE**

# AIR CONDITIONING WORKS

for

ITES Habitat Centre, Jawaharlal Nehru International Stadium , Kaloor, Ernakulam

TENDER NO: KSITM/ITES/2/2010-11/004

Bidder's name :\_\_\_\_\_\_

Bidder's address:\_\_\_\_\_

Issued by:

The Director, Kerala State IT Mission, Vellayambalam, Thiruvananthapuram- 33

Note: Each and every page of this document should be signed by the bidder and enclosed with PRICE BID

	PRICE SCHEDULE							
	AIR CONDITIONING works for ITES Habitat Centre, Jawaharlal Nehru International Stadium , Kaloor, Ernakulam							
	Jawaharlal I	Nehru I	nternatio	-	Kaloor, Ernakulam			
S.NO	DESCRIPTION	QTY	UNIT	RATE (In Figures)	RATE (In Words)	AMOUNT		
	SITC of factory assembled DX type Split Units operating on R 22 complete as specified and comprising as under All frames supports shall be of Galvanised steel All units shall comply to ECBC norms with regard to its energy efficiencyHermetically Sealed energy efficient Scroll /Reciprocating compressors as specified operating on R 22Air Cooled Condenser with low noise fans and corrosion resistant blue fins - Indoor units (of sleek low height design for ducted splits) wiith centrifugal DIDW blowers , high efficiency DX cooling coils, 20 micron washable flat pre-filters , insulated sandwiched drain pan and pendant control ( remote )Indoor and outdoor units casings shall be of GSS construction with powder coated finish Necessary mounting arrangements for indoor and out door units with suitable vibration isolatorsMicro processor based control centre with all necessary controls and protective devices ,thermal protection for compressor etc							
1	Supply of ceiling suspended ductable split air- conditioner of <b>5.5 TR</b> nominal capacity with micro controller processor.	2	Nos					
2	Supply of ceiling suspended ductable split air- conditioner of <b>3 TR</b> nominal capacity with micro controller processor.	1	Nos					

	PRICE SCHEDULE									
	AIR CONDITIONING works for ITES Habitat Centre, Jawaharlal Nehru International Stadium , Kaloor, Ernakulam									
S.NO	RATE (In									
3	Supply of <b>3 TR</b> nominal capacity Mega split air conditioners with cordless remote	2	Nos							
4	Supply of <b>2 TR</b> nominal capacity 3 Star rated split air conditioners with cordless remote	2	Nos							
5	Supply of <b>1.5 TR</b> nominal capacity 3 Star rated split air conditioners with cordless remote	11	Nos							
6	Supply of <b>1 TR</b> nominal capacity 3 Star rated split air conditioners with cordless remote	2	Nos							
7	Installation, testing, and commissioning of <b>5.5 TR</b> nominal capacity ductable split air conditioners with all standard fittings, vibration isolation pads etc.	2	Nos							
8	Insulated refrigerant piping out of hard drawn copper pipes duly insulated with 13mm nitrile rubber pipe sleeves -Supply & Work complete	30	RM							
9	Installation, testing, and commissioning of <b>3 TR</b> nominal capacity ductable split air conditioners with all standard fittings, vibration isolation pads etc.	1	Nos							

	PRICE SCHEDULE								
	AIR CONDITIONING works for ITES Habitat Centre, Jawaharlal Nehru International Stadium, Kaloor, Ernakulam								
S.NO	DESCRIPTION	QTY	UNIT	RATE (In Figures)	RATE (In Words)	AMOUNT			
10	Insulated refrigerant piping out of soft drawn copper pipes duly insulated with 13mm nitrile rubber pipe sleeves -Supply & Work complete	15	RM						
11	Installation, testing, and commissioning of <b>3 TR</b> nominal capacity maga split air conditioners with all standard fittings, Stabilizer, vibration isolation pads etc.	2	Nos						
12	Insulated refrigerant piping out of soft drawn copper pipes duly insulated with 13mm nitrile rubber pipe sleeves -Supply & Work complete	40	RM						
13	Installation, testing, and commissioning of <b>2 TR</b> nominal capacity Three Star rated Hi-wall split air conditioners with all standard fittings, Stabilizer, vibration isolation pads etc.	2	Nos						
14	Insulated refrigerant piping out of soft drawn copper pipes duly insulated with 13mm nitrile rubber pipe sleeves -Supply & Work complete	40	RM						
15	Installation, testing, and commissioning of <b>1.5 TR</b> nominal capacity Three Star rated Hi-wall split air conditioners with all standard fittings, Stabilizer, vibration isolation pads etc.	11	Nos						

	PRICE SCHEDULE									
	AIR CONDITIONING works for ITES Habitat Centre,									
S.NO	S.NO DESCRIPTION QTY UNIT RATE (In Figures) RATE (In Words) AMOUNT									
16	Insulated refrigerant piping out of soft drawn copper pipes duly insulated with 13mm nitrile rubber pipe sleeves -Supply & Work complete	220	RM							
17	Installation, testing, and commissioning of <b>1 TR</b> nominal capacity Three Star rated Hi-wall split air conditioners with all standard fittings, Stabilizer, vibration isolation pads etc.	3	Nos							
18	Insulated refrigerant piping out of soft drawn copper pipes duly insulated with 13mm nitrile rubber pipe sleeves -Supply & Work complete	45	RM							
19	Factory Fabricated Ducting Work complete with angle iron flanges , Hi Tech GI supports, GI rods , anchor bolts ,GI nuts and bolts, PVC/ rubber gaskets complete with all fittings , bends, transformations , vanes , splitter dampers ,inspection doors , plenums etc as required - thickness 24G	84	Sq.M							
20	Supply installing and testing of external thermal insulation of square ducts with 50 mm crown 150 fibre glass covered with aluminium foil .and sealed with PVC tapes.	84	Sq.M							

	PRICE SCHEDULE									
	AIR CONDITIONING works for ITES Habitat Centre, Jawaharlal Nehru International Stadium , Kaloor, Ernakulam									
S.NO	DESCRIPTION	QTY	UNIT	RATE (In Figures)	RATE (In Words)	AMOUNT				
21	Supply installing and testing of acoustic insulation of ducts with 12 mm crown 300 fibre glass covered with perforated aluminium sheet	14	Sq.M							
22	Powder coated extruded Aluminium Supply air slotted Grilles (3 slot) with horizontal fixed bars and end flanges complete with volume control damper-Supply & Work complete	1.4	Sqm							
23	Powder coated extruded Aluminium Return air slotted Grilles (3 slot) with horizontal fixed bars and end flanges -Supply & Work complete	1.4	Sqm							
24	Power and control cabling between indoor and out door units complete as required ( Incoming power supply shall be terminated in an isolator near to the HVAC contractor scope )Supply & Work complete									
24a	For 5.5 TR Ductable air conditioner	32	Rmt							

	PRICE SCHEDULE									
	AIR CONDITIONING works for ITES Habitat Centre,									
	Jawaharlal Nehru International Stadium , Kaloor, Ernakulam									
S.NO	DESCRIPTION	QTY	UNIT	RATE (In Figures)	RATE (In Words)	AMOUNT				
24b	For 3 TR Ductable air conditioner	16	Rmt							
24c	For 3 TR mega Split air conditioner	42	Rmt							
24d	For 2 TR hi-wall Split air conditioner	42	Rmt							
24e	For 1.5 TR Hi-wall Split air conditioner	231	Rmt							
24f	For 1 TR Hi-wall Split air conditioner	42	Rmt							
25	Insulated drain piping out of uPVC pipes 6kg/cm2 duly insulated with 9mm nitrile rubber pipe sleevesSupply & Work complete									
25a	For 5.5 TR Ductable air conditioner	22	Rmt							
25b	For 3 TR Ductable air conditioner	11	Rmt							
25c	For 3 TR mega Split air conditioner	38	Rmt							
25d	For 2 TR hi-wall Split air conditioner	36	Rmt							
25e	For 1.5 TR Hi-wall Split air conditioner	130	Rmt							

	PRICE SCHEDULE								
	AIR CONDITIONING works for ITES Habitat Centre, Jawaharlal Nehru International Stadium , Kaloor, Ernakulam								
S.NO	DESCRIPTION	QTY	UNIT	RATE (In Figures)	RATE (In Words)	AMOUNT			
25f	For 1 TR Hi-wall Split air conditioner	30	Rmt						
26	Rubber Pad -Supply & Work complete	42	Nos						
27	Canvas Connection-Supply & Work complete	3	Nos						
28	Supply, installation & testing of fresh air opening duct with bird and cowl screen with damper arrangement.	3	Nos						
29	Out Door Channel of galvanised steel -Supply & <u>Work complete</u>								
29a	For 5.5 TR Ductable air conditioner	2	Nos						
29b	For 3 TR Ductable air conditioner	1	Nos						
29c	For 3 TR mega Split air conditioner	2	Nos						
29d	For 2 TR hi-wall Split air conditioner	2	Nos						
29e	For 1.5 TR Hi-wall Split air conditioner	11	Nos						

	PRICE SCHEDULE								
	AIR CONDITIONING works for ITES Habitat Centre,								
	Jawaharlal	Nehru I	nternatio	onal Stadium , K	(aloor, Ernakulam				
S.NO	DESCRIPTION	QTY	UNIT	RATE (In Figures)	RATE (In Words)	AMOUNT			
29f	For 1 TR Hi-wall Split air conditioner	3	Nos						
30	Refrigerant gas R22 -Supply&Total work	14	kg						
	GRAND TOTAL								
Signature with date									
Name and address									