

Maharashtra State Agricultural Marketing Board, Pune
(ISO 9001 – 2008 Certified)

REF NO : MSAMB/IT/DC/NON-IT/e-Bid-02/2014

e-TENDER DOCUMENT

For;

THE SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF;
Precision AC, Comfort AC, CCTV system, Access Control system, Water Leak
Detection System, Fire Detection & Suppression system, VESDA system, Fire
Proof Enclosure for Media Storage, Pest Control system, Rodent repellent system,
Building Management System, Online UPS, Racks, Switches

AND

SERVICES RELATED TO;

Layout Design of Data Center, Dismantle partitions of existing Data Center, Site
preparation (Civil & interior work), Electrical Works, Precision Air conditioning,
LAN structured cabling, for Establishment of Data Center (Tier-3)

at

Head Office, MSAMB, Pune



Maharashtra State Agricultural Marketing Board, Pune
(ISO 9001 – 2008 Certified)

Address:

Plot No. R-7, Market Yard, Gultekdi, Pune-4110037


Tel: 020-24261190, 24268297,

Email: msamb@vsnl.com

Website: www.msamb.com

e-Tender Notice

(Published in Economics Times [Mumbai, Pune edition] & Times of India [Nagpur edition])
on 9.05.2014

	Maharashtra State Agricultural Marketing Board, Pune [MSAMB]
ISO 9001 – 2008 Certified	
R-7, Market Yard, Gultekdi, Pune -411 037, Ph: 020-24261190 /24268297 E-mail: msamb@vsnl.com, Web : www.msamb.com	
e-TENDER NOTICE	
e-Tenders are invited for the supply, installation, testing & commissioning of Non-IT equipment and Services for establishment of Data Center (Tier-3) at Head Office, MSAMB, Pune. Details are available on http://mahatenders.gov.in & MSAMB website www.msamb.com on 9.05.2014, from 11 am onward.	
Managing Director	

Detailed Tender Notice


	<h3 style="margin: 0;">Maharashtra State Agricultural Marketing Board, Pune</h3>
ISO 9001 – 2008 Certified	
R-7, Market Yard, Gultekdi, Pune -411 037, Ph: 020-24261190 /24268297 Web : www.msamb.com , e-mail: msamb@vsnl.com	
e-TENDER NOTICE	
<p>e-Tenders are invited by Maharashtra State Agricultural Marketing Board (MSAMB), Pune, from reputed Companies involved in establishment of Datacenter (Tier-3), for THE SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF Precision Ac, Comfort AC, CCTV system, Access Control system, Water Leak Detection System, Fire Detection & Suppression system, VESDA system, Fire Proof Enclosure for Media Storage, Pest Control system, Rodent repellent system, Building Management System, Online UPS, Racks, Switches, AND Services related to Site preparation, Civil & interior works, LAN structured cabling, Electrical Works for Establishment of Data Center (Tier-3), at, Head Office, MSAMB, Pune. The Company should have at least 5 years of experience for the same.</p>	
<p>REF NO: MSAMB/IT/DC/NON-IT/eBid-02/2014</p>	
e-TENDER FEES (Non Refundable)	Rs.10,000/-
e-TENDER NOTICE PUBLISHING DATE	09/05/2014 at 11.00 Hrs.
DOCUMENT SALE START DATE	09/05/2014 at 11.00 Hrs.
PRE TENDER MEETING	16/05/2014 at 11.00 Hrs.
DOCCUMENT SALE END DATE	26/05/2014 up to 17.00 Hrs.
e-TENDER SUBMISSION START DATE	22/05/2014 up to 10.00 Hrs.
e-TENDER SUBMISSION END DATE	26/05/2014 up to 17.00 Hrs.
HARD COPY SUBMISSION DATE	26/05/2014 up to 17.30 Hrs.
TECHNICAL BID OPENING DATE	29/05/2014 at 11.00 Hrs.
<ol style="list-style-type: none"> 1. Technical Bids will be opened first. On the basis of technical evaluation, successful bidders will be called for Financial Bid opening. The date for Financial bid opening will be conveyed separately. 2. Right is reserved to revise or amend the e-Tender documents fully or part thereof prior to the date notified or amended for the receipt of tender. Such amendments if any will be published on www.msamb.com and http://mahatenders.gov.in. 3. e-Tenders which do not fulfill all or any conditions or are incomplete in any respect are liable for rejection 4. The right to accept or reject any or all e-Tenders without assigning any reasons thereof are reserved by MSAMB. 5. Place for Pre Bid Meeting & Opening of Tender - Plot No. R-7, Market Yard, Gultekdi, Pune -411 037, Ph: 020-24261190 /24268297 	
<p>Managing Director</p>	

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	<p style="text-align: center;">MAHARASHTRA STATE AGRICULTURAL MARKETING BOARD</p> <p style="text-align: center;">[MSAMB]</p> <p style="text-align: center;">R-7, Market Yard, Gultekdi, Pune-4110037, Tel: 020-24261190, 24268297, Email: msamb@vsnl.com, Website: www.msamb.com</p>
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Ref. No. MSAMB/IT/DC/NON-IT/eBid-02/2014

Date: 9 May, 2014

SECTION-1:- LETTER OF INVITATION

To,

Dear Sir / Madam,

1. The Managing Director, MSAMB, invites e-Tenders from reputed & experienced Companies having experience of establishment of Datacenter (Tier-3) and THE SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF Precision Ac, Comfort AC, CCTV system, Access Control system, Water Leak Detection System, Fire Detection & Suppression system (VESDA system), Fire Proof Enclosure for Media Storage, Pest Control system, Rodent repellent system, Building Management System, Online UPS, Racks, Switches, AND Services related to Site preparation, Civil & interior works, LAN structured cabling, Electrical Works for Establishment of Data Center (Tier-3), at, Head Office, MSAMB, Pune. More details about the services to be provided are given in the Terms of Reference (ToR).
2. The e-Tender Document is available for the download on <https://mahatenders.gov.in> and MSAMB website www.msabm.com. A complete Tender document shall accompany a crossed Demand Draft of Rs.10,000/- as tender fee drawn only from Nationalized Bank in favour of the Maharashtra State Agricultural Marketing Board, Pune, payable at Pune at par, without which tender will be treated as incomplete and shall not be considered.
3. It is compulsory to submit the Tender through eTender Portal of the State govt. (i.e. <https://mahatenders.gov.in>). **Tenders not submitted through eTender process will not be considered and rejected.**
4. Detailed terms and conditions as well as the technical specifications of all items as indicated in the e-Tender document.
5. MSAMB will not take the responsibility for any delay in receipt of the bidding document if it is sent by post/ Courier/ by-hand.
6. The bids will be opened in the presence of those Tenderers or their authorized representative who choose to attend at the office of the MSAMB, Pune on the specified date and time.
7. For any clarification please contact office of MSAMB.
8. The MSAMB at its sole discretion and without assigning any reasons there of reserves the right to accept and /or reject any or all e-Tenders. MSAMB also does not bind to accept the lowest bid.
9. It is not permissible to transfer this invitation to any other firm.

10. A firm will be selected under Quality and Cost Based Selection (QCBS) Method and procedures described in this Tender Document.
11. The RFP includes the following documents:
 - Section 1 - Letter of Invitation
 - Section 2 - Instructions to Tenderers
 - Section 3 - Technical Bid - Standard Forms
 - Section 4 - Financial Bid - Standard Forms
 - Section 5 - Terms of Reference
 - Section 6 - Standard Forms of Contract

YOURS SINCERELY,

**Managing Director,
Maharashtra State Agricultural Marketing Board (MSAMB)**

SECTION-2

INSTRUCTUONS TO TENDERERS (ITT)

INSTRUCTIONS TO TENDERERS (ITT)

- | | | |
|---|-----------------------|--|
| 1 | Introduction | <p>1.1 Title of the Project: THE SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF Precision Ac, Comfort AC, CCTV system, Access Control system, Water Leak Detection System, Fire Detection & Suppression system (VESDA system), Fire Proof Enclosure for Media Storage, Pest Control system, Rodent repellent system, Building Management System, Online UPS, Racks, Switches, AND Services related to Site preparation, Civil & interior works, LAN structured cabling, Electrical Works for Establishment of Data Center (Tier-3), at, Head Office, MSAMB, Pune.</p> <p>1.2 Name of Owner: Maharashtra State Agricultural Marketing Board, Plot No. R-7, Market Yard, Pune - 411 037.</p> <p>1.3 The site of the work is at Head Office, Maharashtra State Agricultural Marketing Board, Plot No. R-7, Market Yard, Pune - 411 037.</p> <p>1.4 Tenderers shall familiarise themselves with local conditions and take them into account while preparing their e-Tender. The interested Bidders are advised to visit and survey/inspect the site (existing Data Center for nature of work, etc.) prior to tendering and no claim will be allowed on the grounds of ignorance of the conditions under which works will be executed. After site survey the Tenderer has to decide whether any Govt. approval is required for the same.</p> <p>1.5 The Tenderer shall bear all costs associated with the preparation and submission of their Tender. MSAMB is not bound to accept any bid, and reserves the right to annul the selection process at any time prior to award of Contract, without thereby incurring any liability to the Tenderer.</p> <p>1.6 The Tenderer shall check the existing earthing of the building and shall make necessary earthing for the Data center.</p> |
| 2 | Scope of Work: | <p>2.1 Site survey/inspection of existing Data Center of MSAMB at Head office, Market, Gultekd, Pune and study the requirements for establishment of new Data Center (Tier-3). Understand the capacity and other related parameters of the existing transformer, DG set which is available and completely functional at MSAMB head office and assess the requirement of the new Data Centre. Tier-3 design shall be applicable from the LT panel onwards.</p> <p>2.2 Dismantle partitions of existing Data Center and make the arrangement for shifting of dismantled material.</p> <p>2.3 Preparation of layout, design & implementation plan in consideration with civil (if required), interior & other necessary work for establishment of new Data Center (Tier-3).</p> <p>2.4 Presentation of layout, design & implementation plan and approval by MSAMB authority.</p> <p>2.5 Preparation of the site with all aspects (Civil, Interior & Electric work, Structure cabling, etc.) for establishment of new Data Center (Tier-3) considering Bill of Material and specifications of items mentioned in BoM.</p> |

- 2.6 Provide Services related to Layout Design of Data Center, Dismantle partitions of existing Data Center & disposal of the same, Site preparation (Civil & interior work with fire proof electrical equipment), Electrical Works, Precision Air conditioning, LAN structured cabling, for Establishment of Data Center (Tier-3), at Head Office, MSAMB, Pune.
- 2.7 Supply, Installation, Testing & Commissioning of -Precision AC, Comfort AC, CCTV system, Access Control system, Water Leak Detection System, Fire Detection & Suppression system, VESDA system, Fire Proof Enclosure for Media Storage, Pest Control system, Rodent repellent system, Building Management System, Online UPS. Certification for successful commissioning from MSAMB Authority for the same.
- 2.8 Certification from MSAMB Authority for successful completion of the same.
3. **Conflict of Interest** MSAMB policy requires that Tenderer provide professional, objective, and impartial advice and at all times hold the Client's interests paramount, strictly avoid conflicts with other assignments or their own corporate interests and act without any consideration for future work. A Tenderer shall not have a conflict of interest. Tenderer found to have conflict of interest shall be disqualified.
4. **Fraud & Corruption** The Tenderers shall observe the highest standard of ethics during the tendering process till award of contract and execution of the contracts.
5. **Eligibility Criteria:** The Tenderer must be a Company/Firm incorporated in India and fulfill at least the following criteria and must also submit documentary evidences in support of fulfilling these criteria.
- 5.1 The Tenderer must be a Company/Firm, registered and shall be in existence for minimum 5 years. Consortium will not be allowed.
- 5.2 The Tenderer must be in operation for establishment of Datacenter (Tier-3) at least for last 3 years.
- 5.3 The Tenderer shall fulfill all the eligibility criteria and shall be wholly and severely liable for the project and shall be single point of contact for this project.
- 5.4 The Tenderer must have minimum total turnover of Rs.50 Crores during the last three financial years, related to similar kind of turnkey projects consisting of design and establish Datacenter, supply, installation, testing & commissioning of Data Center equipment. The copies of the audited annual accounts for the last three years shall be attached along with the bid.
- 5.5 Duration of the work is **113 Days**.
- 5.6 The Tenderer shall have the experience in similar kind of projects consisting of design and establish Datacenter, supply, installation, testing & commissioning of Data Center equipment. The Tenderer shall show documentary evidence about at least two projects executed of same nature.
- 5.7 The Tenderer shall have necessary infrastructure and Experts for establishment of Non-IT infrastructure for a Datacenter.
- 5.8 During the technical evaluation, the Tenderer will be evaluated based on the compliance sheet, proposed solution and details of technical resources and need to comply with minimum 70% of the marks to be considered for commercial evaluation.
- 5.9 Weightage 80% will be for Technical Marks and 20% weight age will

- be for Financial Marks. **Refer Clause No. 21.**
- 5.10 The Tenderer shall not be under a declaration of ineligibility due to corrupt and fraudulent practices nor should they have been blacklisted by any State Government of India or any of its agencies, including the public enterprises and/or any of its agencies. If a bidder has been barred or blacklisted in any contract with the government, the bid of such bidder will be rejected and the bidder will be disqualified from bidding in the MSAMB for next 3 years.
- 5.11 The interested Bidders are requested to visit site of existing Datacenter of MSAMB at Market Yard, Gultekdi, Pune for survey/ inspection of existing datacenter for establishment of new Datacenter (Tier-3).
- 5.12 The following points may also be noted by interested parties:
- 5.12.1 MSAMB reserves the rights to verify the information/document submitted.
- 5.12.2 MSAMB reserves the rights to modify any of the conditions while evaluating the tender and to accept or reject any of the tender without assigning any reasons whatsoever.
- 5.12.3 MSAMB reserves the right to inspect the office premises of the interested Companies and/or conduct reference verification to check the eligibility of the Companies to execute the works.
6. **Only one Tender** Tenderers shall submit only one Tender. If a Tenderer submits or participates in more than one Tender, such Tenders shall be disqualified.
7. **Tender Validity** Tender must remain valid for **120 days** after the submission date. During this period, Consultants shall maintain the Rates of Items to be supplied and Services to be provided. The MSAMB will make its best effort to complete Tender procedure and award of contract. Should the need arise, however, MSAMB may request Tenderers to extend the validity period of their Tenders.
8. **Pre-tender Meeting**
- 8.1 Pre-Tender Meeting will be held on 16/05/2014 at 11.00 hours at, Maharashtra State Agricultural Marketing Board, Plot No. R-7, Market Yard, Gultekdi, Pune-4110037.
- 8.2 The prospective Tenderers can ask for any additional information or clarification on or before the pre-bid conference (16.05.2014), in writing. Reply to the same will be given in pre-tender meeting and clarifications to queries received till pre-tender meeting will be published on <http://mahatenders.gov.in> and www.msamb.com.
- 8.3 The Tender submitted by Tenderer shall be based on the e-Tender document published by MSAMB, clarification of pre-bid queries and amendments if any. The Tender shall be un-conditional, conditional Tenders will be summarily rejected.
- 8.4 The amendment(s) if any, will be made available in the form of Corrigendum on <http://mahatenders.gov.in> and MSAMB website www.masmb.com. Amendment (s) will be binding on all bidders.
9. **Preparati** 9.1 The Tender as well as all related correspondence exchanged by the

on of Tender	<p>Tenderers shall be written in English language.</p> <p>9.2 The Tenderer is expected to examine all sections and follow all instructions, forms, layout, terms, conditions and specifications in the Tender Document. Failure to furnish all information or documentation required by the Tender Documents may result in the rejection of the Tender.</p> <p>9.3 It is compulsory to submit the eTender online through https://mahatenders.gov.in. Tender not submitted through online eTender process will be rejected.</p> <p>9.4 The Tenderer must have necessary facilities for submission of e-Tender (e.g. Computer/ Laptop, Internet, dongle for Digital Signature Certificate (DSC) Class 2, etc.). Information about e-Tendering and toll free number for support is available on https://mahatenders.gov.in.</p>
10. Earnest Money	<p>10.1 Earnest money of Rs.4,00,000/- (In words Rupees Four Lakh only) along with the tender shall be submitted in the form of Bank Guarantee/Demand Draft (DD) payable at Pune & drawn in favour of Maharashtra State Agricultural Marketing Board, (MSAMB) Pune, on any Nationalized/Commercial/Schedule Bank. The EMD shall be valid for a period of at least 120 days from the last date of submission of the bid.</p> <p>10.2 Earnest Money Deposit exemption certificate will not be accepted.</p> <p>10.3 Tender of those bidders, who do not deposit earnest money in one of the above acceptable forms, shall be summarily rejected. Earnest money in any other form of cash or cheque will not be accepted.</p> <p>10.4 The EMD of the unsuccessful bidders will be returned on their application after the award of the contract within 30 days of time. Bidders, under any circumstances, will not be entitled to claim or receive interest/penalty/damages from the Managing Director, MSAMB on account of the Tender Fee, EMD, Bank Guarantee/ Demand Draft (DD) required to be submitted under this tender and the contract. No claim/dispute in this regard will be received or accepted. The above EMD amount will be held by the Managing Director, MSAMB till it is returned and will not earn any interest thereof.</p> <p>10.5 The EMD will be refunded to the successful tenderer on deciding about the acceptance or otherwise of the tender or on expiry of the validity period whichever is earlier. In case of the successful tenderer it will be refunded on his paying the initial security deposit or will be transferred towards a part of security deposit to be paid after awarding of the work.</p> <p>10.6 The EMD will be liable for forfeiture, If a bidder withdraws his bid during the period of bid validity, or, in the case of a successful bidder, if the bidder fails to sign the contract in time, and/or to furnish performance security in time.</p>
11. Technical Bid Format	<p>ENVELOPE NO.1- TECHNICAL BID (TB)</p> <p>11.1 The Technical Bid shall be prepared using the Standard Forms (TECH-1 to TECH-10) of SECTION-3 of the Tender Document. Submission of the wrong type of Technical Bid will result in the Bid being deemed non-responsive.</p> <p>11.2 For Technical Bid, the comments and suggestions on the Terms of</p>

- Reference, if any, should be incorporated into the description of the approach and methodology (TECH-3).
- 11.3 The Technical Bid shall not include any financial information. A Technical Bid containing financial information may be declared non responsive.
12. **Technical Bid Content**
- The first envelope clearly marked as **“ENVELOPE NO.-1 TECHNICAL BID”** shall contain at least the following documents.
- 12.1 Covering letter stating the attached documents.
- 12.2 Copies of audited Company Account for the immediately preceding three financial years.
- 12.3 Attested copy of acknowledged Income tax Return filed for the immediate preceding financial year.
- 12.4 Unabridged Annual Reports for the last three years.
- 12.5 Details of major assignments/ assignment of a similar nature undertaken during the past 3 years. Value of completed assignments during the last 3 years. Also give details of similar assignments on hand i.e. not yet completed as on date of submission of application.
- 12.6 Attested copy of PAN/TAN, VAT, and Service Tax registration.
- 12.7 Self-declaration about ineligibility due to corrupt, fraudulent practices and blacklisting by Government as mentioned in eligibility criteria.
- 12.8 Attested copy of Company registration certificate.
- 12.9 Detailed Bill of Material is as per the TECH-8 of SECTION-3. This should be same as that given in the financial bid, but without prices.
- 12.10 Item Specification Compliance Statement – The bidder must provide compliance and remarks, if any, to all the items in the format provided in TECH-9 of SECTION-3.
- 12.11 Manufacturers Authorization Form (MAF) from the (OEMs) of all the items to be supplied as per the Tender along with support & warranty details. One copy of original Catalogues & manuals from OEM’s includes all the specifications & photos of every Items listed in Bill of Materials (BoM).
- 12.12 All other supporting documents / proofs / annexure / enclosures etc. should be attached to this Technical Bid. The Technical bid shall be sealed and super scribed as Technical Bid-Envelope; Ref. No. MSAMB/IT/DC/Non-IT/e-Bid-02/2014. Name of the vendor, contact address, telephone no., and fax and email shall be written on the cover.
- 12.13 A valid Solvency Certificate in original of Rs.4.00 Crore in the name of Maharashtra State Agricultural Marketing Board, Pune from the Nationalized/ Commercial/ Schedule Bank i.e. issued not earlier than 12 months on the date of opening.
- 12.14 Please note that omission to attach any document will invalidate the tender.
- 12.15 The Tenderer shall sign the original copy of the tender papers, design, layout, plan, drawing, etc. according to which the work is to be carried out.
- 12.16 He shall give a declaration to the effect that he has fully studied the plans, specifications, local conditions, availability of labour

- and materials and that he has quoted the rates with the consideration to all these factors.
- 12.17 Technical bid shall contain all relevant documents as mentioned above & other important document submitted online. Tender shall be submitted online. Hard copies of the same shall be submitted at the time of technical bid opening. It is the responsibility of Tenderers to submit hard copy of Tender in two envelopes along with separate third envelop for Demand Drafts for Tender fee and covering letter for the same, at least one hour before the opening of the Tenders. Tenderers will not be allowed to attend Tender opening meeting, if above three envelopes (hard copies) are not submitted at least one hour before the Tender opening meeting, though they have submitted the Tender online.
- 12.18 Financial Bid (Envelope No. 2) of Technically qualified Tenderers will be opened.
13. **Financial Bid Format** **ENVELOP NO.2 - FINANCIAL BID (FB).**
The Financial Bid shall be prepared using the Standard Forms (FIN-1 to FIN-3) of Section-4 of the Tender Document. It shall list all costs associated with the assignment.
14. **Financial Bid Content**
14.1 Financial Bid (FB) as prescribed shall be valid for 120 days and sealed in a separate envelop.
14.2 The FB should be super scribed as FINANCIAL BID- Envelope; Ref. No.MSAMB/IT/DC/Non-IT/e-Bid-02/2014, Name of the vendor, contact address, telephone no., fax no. and email shall be written on the cover.
14.3 The Tenderer shall not quote Financial offer anywhere directly or indirectly in envelope No.1 (Technical Bid).
14.4 The Bid shall be unconditional and in the format given in the Section-4 of Tender document. The conditional Tender will be rejected.
14.5 Even though tenderers meet the above requirement they are subject to be disqualified if they have made misleading or false representations in the forms statements and attachments submitted in proof of the qualification requirements, **AND/ OR**, record of proof performance such as abandoning the works, not properly completing the contract, inordinate delay in completion or work litigation history or financial failures etc.
15. **Taxes** Applicable taxes shall be mentioned separately in the Financial Bid. If applicable, TDS will be deducted by MSAMB and certificate will be issued for the same.
16. **Deviation/ Non-Compliance** All Tenderers are cautioned that the Tenders containing any deviation from the terms and conditions, specifications or other requirements of Tender Document, will be rejected.

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- 17. Submission of Tenders**
- 17.1 The original Tender (Technical Bid and Financial Bid) shall contain no interlineations or overwriting, except as necessary to correct errors made by the Tenderer themselves. The person who signed the Tender must initial such corrections. Submission letters for both Technical and Financial Bids should respectively be in the format of TECH-1 of Section-3, and FIN-1 of Section-4.
- 17.2 Tender shall be submitted in two separate envelopes. Envelop No. one shall contain Technical Bid and Envelop No. two shall contain Financial Bid. **The Bank Guarantee of Rs.4,00,000/- for the Earnest Money Deposit (EMD) shall be submitted in Envelop No.1. The Demand Draft of Rs.10,000/- for the fee of Tender Document shall be submitted with covering letter in separate envelop.**
- 17.3 The sealed envelopes No.1 shall be marked on the left hand top corner **“Technical Bid for establishment of MSAMB Data Center with reference number, Name of the vendor, contact address, telephone no., fax and email.”** All supporting documents, proofs, annexure, enclosures, certificates, etc. shall be attached to this TB.
- 17.4 The sealed envelopes No.2 shall be marked on the left hand top corner **“Financial Bid for establishment of MSAMB Data Center with reference number, Name of the vendor, contact address, telephone no., fax and email.”**
- 17.5 The authorized representative delivering the sealed envelopes shall carry the authority letter for submission of Bids. If hard copy of Tender submitted by post/courier, the sealed envelope marked as above, shall be enclosed in another cover properly addressed and shall be sent by Registered Post/courier.
- 17.6 The date and time for receipt of envelope containing tender shall strictly apply in all cases. The tenderers should ensure that their tender reaches at address of MSAMB before the last date and time.
- 17.7 No delays on account of any cause will be entertained for the late receipt of tender. Tender offered or received after the date and time, will be either not be accepted or if inadvertently accepted, will not be opened and shall be returned to the tenderer unopened.
- 17.8 All covering letters, documents and Xerox copies submitted for the Technical and Financial Bid in connection with the Tender shall be signed by authorized representative with seal of the Company. Otherwise their tender will not be considered for further action and envelope No.2 will not be opened.
- 17.9 The authorization shall be in the form of a written power of attorney accompanying the Bid or in any other form demonstrating that the

- representative has been dully authorized to sign. The signed Technical and Financial Bids shall be marked “ORIGINAL”.
- 17.10 MSAMB shall not be responsible for misplacement, losing or premature opening if the outer envelope is not sealed and/or marked as stipulated. This circumstance may be case for Bid rejection.
- 17.11 If the Financial Bid is not submitted in a separate sealed envelope duly marked as indicated above, this will constitute grounds for declaring the Bid non-responsive.
- 17.12 **Address for Submission** - Plot No. R-7, Market Yard, Gultekdi, Pune.
18. **Opening of Tenders**
- 18.1 The Technical Bids will be opened by the committee formed by the Managing Director, MSAMB. The envelopes with the Financial Bid shall remain sealed and securely stored till completion of Technical Evaluation.
- 18.2 On the date specified in the tender notice following procedure will be adopted for Opening of the tender.
- 18.3 **Envelope No. 1:-** Envelope No.1 Technical Bid (TB) of the Tenderers will be opened to verify its contents as per requirements. Qualified Technical Bid will be evaluated as per the evaluation criteria given below.
- 18.4 If the various documents contained in this envelope do not meet the requirements, a note will be recorded accordingly by the tender opening authority and Envelope No.2 the said tenderer will not be considered for further action.
- 18.5 **Envelope No. 2:-** Envelope No.2 Financial Bid (TB) of those Tenderers, who have qualified in Technical Evaluation, will be opened.
19. **Bid Evaluation**
- 19.1 From the time the Bids are opened to the time the Contract is awarded, the Supplier should not contact the Client on any matter related to its Technical and/or Financial Bid. Any effort by Tenderers to influence MSAMB in the examination, evaluation, ranking of Bids, and recommendation for award of Contract may result in the rejection of the Tender.
- 19.2 Evaluators of Technical Bids shall have no access to the Financial Bids until the technical evaluation is concluded.
20. **Evaluation of Technical Bids**
- The evaluation committee shall evaluate the Technical Bids on the basis of their responsiveness to the Technical Bid, applying the following evaluation criteria. Each responsive Bid will be given a technical score (TS). A Bid shall be rejected at this stage if it does not respond to important aspects of the Technical Bid, and particularly the compliance for specifications of Items, Terms of Reference or if it fails to achieve the minimum technical score indicated in evaluation criteria. MSAMB shall not entertain the Tenderers whose Bids are non-responsive or Tenderers not qualified in technical evaluation.
21. **Evaluation**
- During the technical evaluation, the Tenderer will be evaluated as per following criteria and need to comply with minimum 70% of the marks to

Criteria be considered for commercial evaluation. Criteria for the evaluation of Technical Bids are: **Adequacy of the proposed methodology and work plan in response to the ToR.**

#	Criteria	Marks
a)	Technical approach, methodology, work plan, deliverables.	10
b)	Bidders experience in similar assignments of at least 2 projects in India. Supporting documents such as Work orders, Completion Certificates or Letter from client to be enclosed.	More than Project 2=20 1-2 Projects=10
c)	Compliance sheet which provides details of items, quantity and compliance for the technical specifications.	25
d)	Proposed work schedule - Clear list of activities with timelines.	25
e)	Details of technical resources that will be deployed on the project with detailed CVs highlighting qualifications and experience.	20
	Total Marks	100

Grand Total = 100 Mark

The minimum Technical Core (TS) required to pass is: **70** Marks.

Note: Tenderer who scores 70 marks or more shall be declared as technically qualified Tenderer.

The formula for determining the financial scores is the following:

$FS = 100 \times F_m / F$, in which FS is the financial score, F_m is the lowest price and F the price of the Bid under consideration.

The weights given to the Technical and Financial Bids are:

T = **80** and F = **20**

22. **Public Opening and Evaluation of Financial Bids**

21.1 MSAMB will notify in writing the Tenderers that have secured the minimum qualifying mark in Technical Evaluation, the date, time and location for opening the Financial Bid. Tenderers attendance at the opening of Financial Bid is optional.

21.2 Financial Bid of technically qualified Tenderers will be opened publicly in the presence of the Tenderers/representatives who choose to attend. The name of the Tenderers, and the technical scores of the Tenderers will be read aloud. The Financial Bid of the Tenderers who met the minimum qualifying mark will then be inspected to confirm that they have remained sealed and unopened. These Financial Bids will be then opened, and the total prices read aloud and recorded.

21.3 For evaluation of Financial Bids, the basic cost (i.e. cost without taxes) of Tender will be considered. The lowest evaluated Financial Bid (F_m) will be given the maximum financial score (FS) of 100 points. The financial scores (FS) of the other Financial Bids will be computed as indicated in evaluation criteria. Bids will be ranked according to their combined technical (TS) and financial (FS) scores using the weights (T = the weight given to the Technical Bid; P =

- the weight given to the Financial Bid $T + P = 1$) indicated as $S = TS \times T\% + FS \times P\%$. The Tenderer achieving the highest combined technical and financial score will be invited for negotiations.
23. **Negotiations** The data & time for negotiations will be informed to qualified Tenderer. The invited Tenderer will, as a pre-requisite for attendance at the negotiations, confirm availability of all Professional staff and delivery of material & services as per the schedule. Failure in satisfying such requirements may result in proceeding to negotiate with the next-ranked Tenderer. Representatives conducting negotiations on behalf of the Tenderer must have written authority to negotiate and conclude a Contract.
 24. **Technical negotiations** Negotiations will include a discussion of the Technical Bid, the proposed technical approach and methodology, work plan, and organization, staffing, schedule of delivery, installation, testing & commissioning of non-IT infrastructure and related services. MSAMB and the Tenderer will finalize the Terms of Reference, staffing schedule, delivery & work schedule, logistics, and reporting. These documents will then be incorporated in the Contract as "Description of Services".
 25. **Financial negotiations** If applicable, it is the responsibility of the Tenderer, before starting financial negotiations, to contact the local tax authorities to determine the local tax amount to be paid by the Tenderer under the Contract. The financial negotiations will include a clarification (if any) of the firm's tax liability, and the manner in which it will be reflected in the Contract; and will reflect the agreed technical modifications in the cost of the services.
 26. **Availability of Professional staff/experience** Having selected the Tenderer on the basis of, among other things, an evaluation of proposed Professional staff, MSAMB expects to negotiate a Contract on the basis of the Professional staff named in the Bid. Before contract negotiations, MSAMB will require assurances that the Professional staff will be actually available. MSAMB will not consider substitutions during contract negotiations unless both parties agree that undue delay in the selection process makes such substitution unavoidable or for reasons such as death or medical incapacity. If this is not the case and if it is established that Professional staff were offered in the Bid without confirming their availability, the Tenderer may be disqualified. Any proposed substitute shall have equivalent or better qualifications and experience than the original candidate and be submitted by the Tenderer within the period of time specified in the letter of invitation to negotiate.
 27. **Conclusion of the negotiations** Negotiations will conclude with a review of the draft Contract. To complete negotiations MSAMB and the Tenderer will initial the agreed Contract. If negotiations fail, MSAMB will invite the Tenderer whose Bid received the second highest score to negotiate a Contract.
 28. **Award of Contract** After completing negotiations MSAMB shall award the Contract to the selected Tenderer.
 29. **Confidentiality** Information relating to evaluation of Bids and recommendations concerning awards shall not be disclosed to the Tenderer who submitted the Bids or to other persons not officially concerned with the process,

-
- until the publication of the award of Contract. The undue use by any Tenderer of confidential information related to the process may result in the rejection of its Bid.
30. **Performance Security** The successful bidder shall submit a Performance Security equivalent to 2% of the total accepted Contract value for 6 months, before signing of agreement in the form of a Bank Guarantee valid for 6 months.
31. **Liability of the Tenderer** The Tenderer will be liable for successful completion establishment of Non-IT infrastructure of Data Center (Tier-3). The liability will be of the total cost of the Project. This clause will be the part of contract document.

SECTION-3

TECHNICAL BID - Standard Forms

[Comments in brackets [] provide guidance to Consultants for the preparation of their Technical Bids; it should not appear on the Technical Bids to be submitted.]

Technical Bid Standard Forms shall be used for the preparation of the Technical Bid.

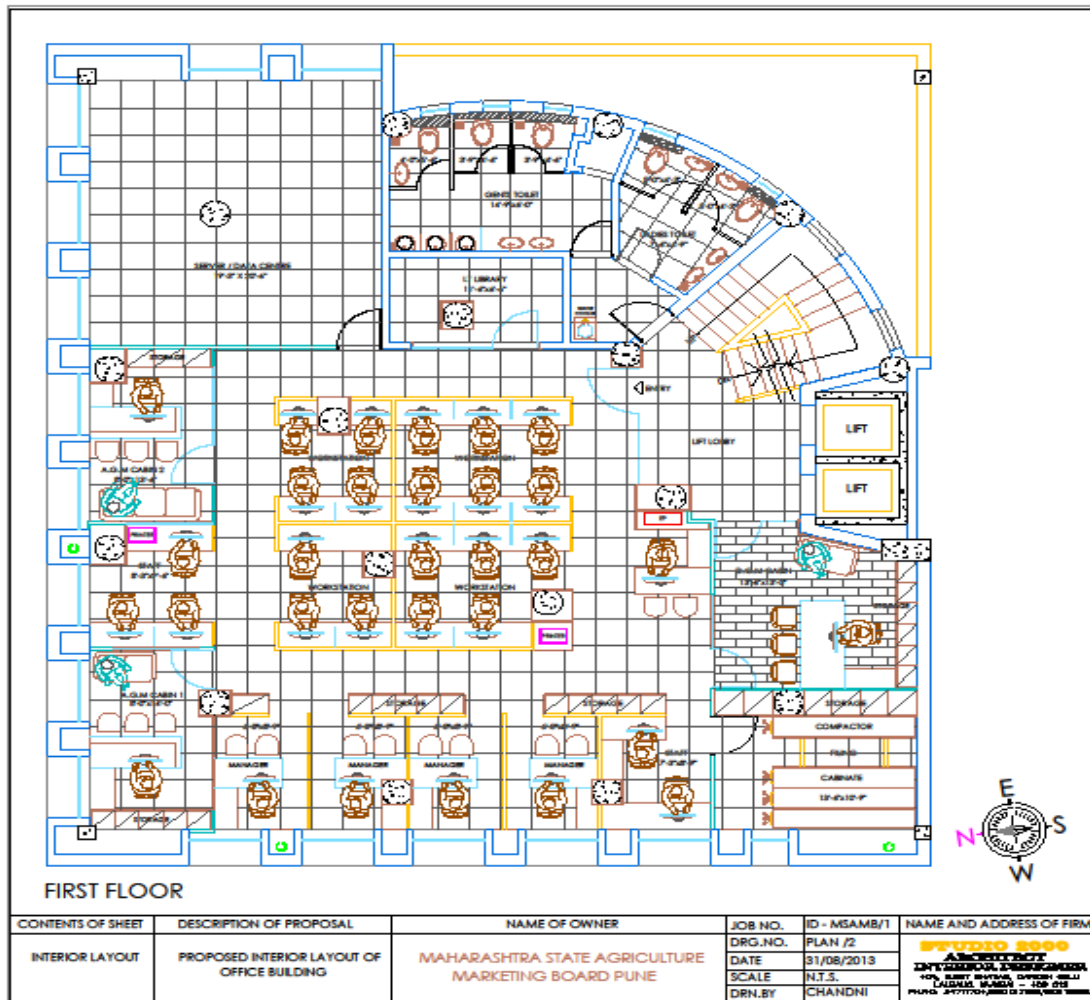
Interior Layout of IT Department at First Floor	20
High side electrical SLD for DG and transformer section	21
Form TECH-1: Technical Bid Submission Form	22
Form TECH-2: Tenderer Organization and Experience	24
A - Tenderer Organization	24
B - Experience of the Professionals of the Tenderer.....	25
Form TECH-3: Description of Approach, Methodology and Work Plan for Performing the Project.....	26
Form TECH-4: Team Composition and Task Assignments	27
Form TECH-5: Curriculum Vitae (CV) for Proposed Professional Staff	28
Form TECH-6: Staffing Schedule	30
Form TECH-7 Work Schedule	31
Form TECH-8 Bill of Materials.....	32
Form TECH-9 Item Specifications and Compliance.....	35
Form TECH-10 Technical Presentation Agenda	64

Interior Layout of IT Department at First Floor

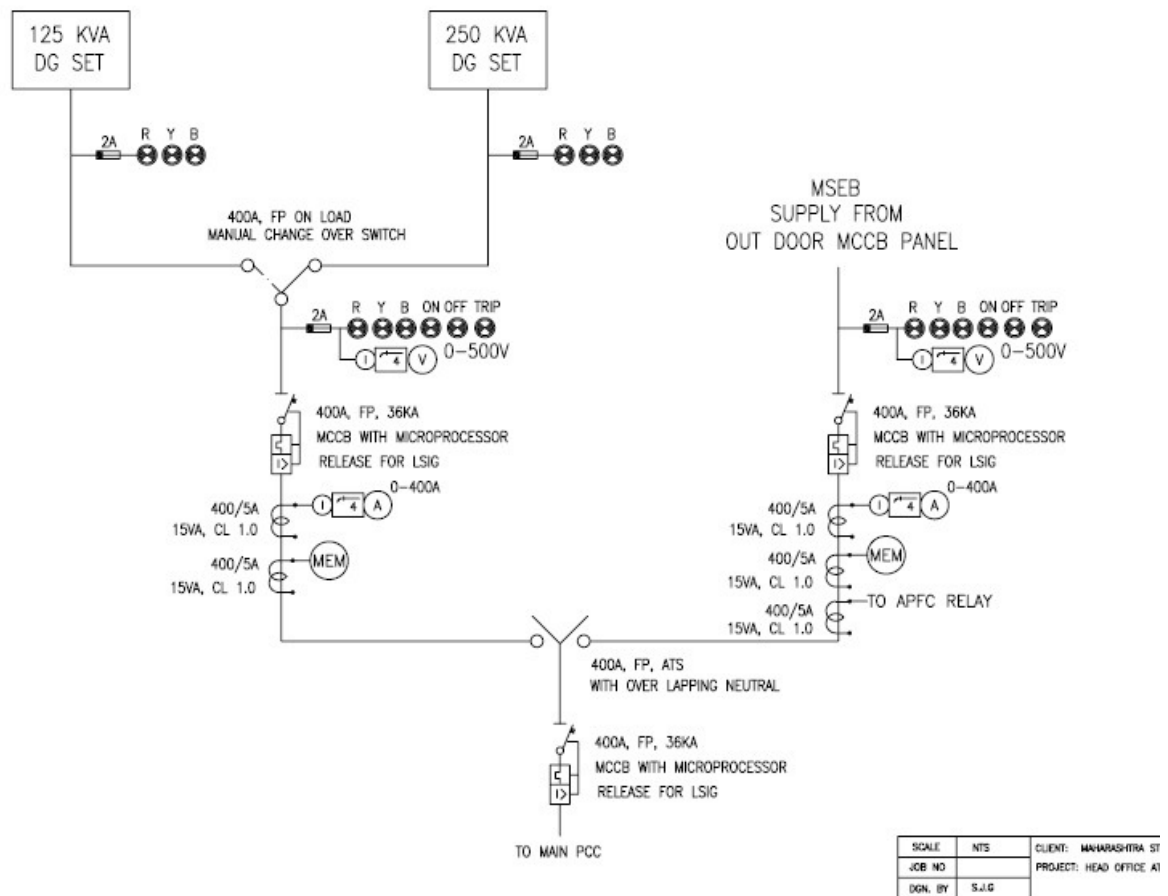
Square area at top left corner is for Data Center (397.58 Sq. Ft.)

(Total available room height is 9.10' and beam drop is 18")

The space earmarked for the Data Centre shall have 2 rooms; one room "Critical area" (250 Sq. Ft.) for Servers, storage etc. and one room "Normal area" (147.5 Sq. Ft.) where the MSAMB staff would be seated.



High side electrical SLD for DG and transformer section.



Form TECH-1: Technical Bid Submission Form

[The Bidder shall fill in this Form in accordance with the instructions indicated No alterations to its format shall be permitted and no substitutions shall be accepted.]

Date:
REF No.:

To,
The Managing Director

We, the undersigned, offer to supply, installation, testing & commissioning of Non-IT Items mentioned in Bill of Materials (BoM) and Specifications of Items as per the BoM, and Related Services in accordance with your e-Tender [Number] dated [Insert Date] published on <http://mahatenders.gov.in> and MSAMB web site www.msamb.com. We are hereby submitting our Tender, which includes this Technical Bid sealed under a separate envelope, declare that:

- (a) We have examined and have no reservations to the e-Tender Document *[insert the reference number and issuing date]*, including Addenda No.: *[insert the number and issuing date of each Addenda]*;
- (b) We offer to supply in conformity with the e-Tender Documents and in accordance with the Delivery Schedules the following Items and Related Services *[insert a brief description of the Goods and Related Services]*;
- (c) We confirm having submitted the information as required in the TENDER document. In case any further clarification/documentary proof in this regard before evaluation of our bid, we agree to furnish the same in time.
- (d) We hereby declare that, in case the Contract is awarded to us, we shall submit the contract Performance Bank Guarantee in the form prescribed. Our Bid is binding upon us and subject to the modifications resulting from contract negotiations, up to expiration of the validity period of the Bid.
- (e) We undertake, if our Bid is accepted, to commence work on the Project and to achieve Installation and Operational Acceptance within the respective timelines stated in the Tender and/or the Contract.
- (f) We have read the provisions mentioned in the Tender Documents and confirm that these are acceptable to us.
- (g) We have no conflict of interest in accordance with ITT Clause 3.
- (h) We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in bribery.
- (i) We undertake that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption in force in India namely, "Prevention of Corruption Act 1988."

We hereby declare that all the information and statements made in this Technical Bid are true and accept that any misinterpretation contained in it may lead to our disqualification.

We understand you are not bound to accept any Bid you receive.

We remain,

Yours sincerely,

Authorized Signature [*In full and initials*]: _____

Name and Title of Signatory: _____

Name of Firm: _____

Address: _____

Form TECH-2: Tenderer's Organization and Experience

A - Tenderer's Organization

[Provide here a brief description of the background and organization of your Company/firm.]

B – Details of major assignments/ assignment of a similar nature undertaken during the past 3 years.

[Using the format below, provide information on each assignment for which your firm, and each associate for this assignment, was legally contracted either individually as a corporate entity, for carrying out Project. Use separate sheet for each assignment.]

Assignment name:	Approx. value of the contract (in Rs.):
Location:	Duration of assignment (months):
Name of Client:	Total N ^o of staff-months of the assignment:
Address:	Approx. value of the services provided by your firm under the contract (in Rs.):
Start date (month/year): Completion date (month/year):	N ^o of professional staff-months provided by associated Consultants:
Name of associated Consultants, if any:	Name of senior professional staff of your firm involved and functions performed (indicate most significant profiles such as Project Director/Coordinator, Team Leader):
Narrative description of Project:	
Description of actual services provided by your staff within the assignment:	

Firm/Company Name: _____

Form TECH-3: Description of Approach, Methodology and Work Plan for Performing the Assignment

[Technical approach, methodology and work plan are key components of the Technical Bid. You are suggested to present your Technical Bid (inclusive of charts and diagrams) divided into the following three chapters:

- a) Technical Approach and Methodology,*
- b) Work Plan, and*
- c) Organization and Staffing,*

a) Technical Approach and Methodology. In this chapter you should explain your understanding of the objectives of the assignment, approach to the services, methodology for carrying out the activities and obtaining the expected output, and the degree of detail of such output. You should highlight the problems being addressed and their importance, and explain the technical approach you would adopt to address them. You should also explain the methodologies you propose to adopt and highlight the compatibility of those methodologies with the proposed approach.

b) Work Plan. In this chapter you should propose the main activities of the assignment, their content and duration, phasing and interrelations, milestones (including interim approvals by the Client), and delivery dates of the reports. The proposed work plan should be consistent with the technical approach and methodology, showing understanding of the TOR and ability to translate them into a feasible working plan. A list of the final documents, including reports, drawings, and tables to be delivered as final output, should be included here. The work plan should be consistent with the Work Schedule of Form TECH-7.

c) Organization and Staffing. In this chapter you should propose the structure and composition of your team. You should list the main disciplines of the assignment, the key expert responsible, and proposed technical and support staff.]

Form TECH-4: Team Composition and Task Assignments

Professional Staff				
Name of Staff	Qualifications	Area of Expertise	Position Assigned	Task Assigned

Form TECH-5: Curriculum Vitae (CV) for Proposed Professional Staff

1. Proposed Position [*only one candidate shall be nominated for each position*]: _____

2. Name of Firm [*Insert name of firm proposing the staff*]: _____

3. Name of Staff [*Insert full name*]: _____

4. Date of Birth: _____ **Nationality:** _____

5. Education [*Indicate college/university and other specialized education of staff member, giving names of institutions, degrees obtained, and dates of obtainment*]: _____

6. Membership of Professional Associations: _____

7. Other Training [*Indicate significant training since degrees under 5 - Education were obtained*]: _____

8. Countries of Work Experience: [*List countries where staff has worked in the last ten years*]: _____

9. Languages [*For each language indicate proficiency: good, fair, or poor in speaking, reading, and writing*]: _____

10. Employment Record [*Starting with present position, list in reverse order every employment held by staff member since graduation, giving for each employment (see format here below): dates of employment, name of employing organization, positions held.*]:

From [Year]: _____ To [Year]: _____

Employer: _____

Positions held: _____

<p>11. Detailed Tasks Assigned</p> <p><i>[List all tasks to be performed under this assignment]</i></p>	<p>12. Work Undertaken that Best Illustrates Capability to Handle the Tasks Assigned</p> <p><i>[Among the assignments in which the staff has been involved, indicate the following information for those assignments that best illustrate staff capability to handle the tasks listed under point 11.]</i></p> <p>Name of assignment or project: _____</p> <p>Year: _____</p> <p>Location: _____</p> <p>Client: _____</p> <p>Main project features: _____</p> <p>Positions held: _____</p> <p>Activities performed: _____</p>
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13. Total experience:..[*a. Experience in IT field in years, b. Experience in non-IT field in years.*]

14. Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience. I understand that any wilful misstatement described herein may lead to my disqualification or dismissal, if engaged.



_____ Date: _____
[Signature of staff member or authorized representative of the staff] *Day/Month/Year*

Full name of authorized representative: _____

Form TECH-6: Staffing Schedule¹

N°	Name of Staff	Staff input (in the form of a bar chart) ²												Total staff-month input			
		1	2	3	4	5	6	7	8	9	10	11	12	n	Home	Field ³	Total
1		[Home]															
		[Field]															
2																	
3																	
n																	
												Total					

- 1 For Professional Staff the input should be indicated individually; for Support Staff it should be indicated by category (e.g.: clerical staff, etc.).
- 2 Months are counted from the start of the Project. For each staff indicate separately staff input for home and field work.
- 3 Field work means work carried out at a place other than the Company home office.

 Full time input
 Part time input

Form TECH-7 Work Schedule

N°	Activity ¹	Months ²												
		1	2	3	4	5	6	7	8	9	10	11	12	n
1														
2														
3														
4														
5														
N														

- 1 Indicate all main activities of the Project, including delivery of reports (e.g.: inception, interim, and final reports), and other benchmarks such as Client approvals. For phased assignments indicate activities, delivery of reports, and benchmarks separately for each phase.
- 2 Duration of activities shall be indicated in the form of a bar chart.

Form TECH-8 Bill of Materials

Bill of Material (BoM)

No	Description	Qty.	Remarks
Supply of Items with 3 years Warranty			
1.	Online UPS for Critical Area (Zone-A)	4	Dual redundant UPS systems. Online UPS – 20 KVA capacity
2.	Online UPS for Normal Area (Zone-B)	2	Online UPS - 10 KVA capacity
3.	Transient Voltage Surge Suppressor for 20KVA & 10KVA UPS	6	TVSS for 10 & 20 KVA Online UPS
4.	CCTV System (3 Cameras required) with Audio Visual System	1	<ul style="list-style-type: none"> • 2 Cameras inside the Zone-A area and 1 Camera at the entrance of the MSAMB Data Centre. • These cameras should be equipped with motion sensors so that cameras can start recording only when they detect movement in the corresponding area. • All the data should be recorded in digital format onto hard disk / tapes for future investigation. • This data should be preserved for at least 5 years before it is over written. • There should be facility to monitor movement in the Data Centre by security staff.
5.	Access Control system	1	Proximity card reader and proximity access control to be installed with its necessary software for monitoring the access of individual persons in the DC.
6.	Water Leak Detection System	1	Sensing cable to be installed along the room perimeter and under AC units to sense liquid leakage.
7.	VESDA	1	Very Early Smoke Detection & Alarm System
8.	Fire Detection and Control Mechanism	1	<ul style="list-style-type: none"> • Industry standard ionization and photoelectric detectors should be installed all over the DC area. • A separate Fire Alarm panel should be deployed. • The whole system should have fire

No	Description	Qty.	Remarks
			detection and alarm panel. VESDA should be installed for the server room area only (i.e. Zone-A).
9.	Fire Suppression Systems	1	<ul style="list-style-type: none"> NFPA standard 2001 compliant fire suppression system to be deployed in Zone-A. For other areas, handheld firefighting devices (CO2 gas based fire extinguishers) should be installed.
10.	Fire Proof Enclosure for Media Storage in Normal zone	1	Appropriate fire proof enclosures for backup media storage to be provided. The backup media has to be kept outside Zone-A.
11.	Pest Control system	1	Pest Control system to be provided for entire DC.
12.	Rodent repellent system	1	Electronic Rodent repellent system for Zone A.
13.	Precision AC	2	For Zone A (In the Row Unit)
14.	Comfort AC	2	For Zone B (Capacity- 2 Ton Minimum)
15.	Building Management System	1	
16.	Server Rack 42U	2	For Data Center
17.	Network Rack	2	For Data Center
18.	Network Smart Rack	1	For Local Area Network
19.	Managed Layer 2 Network Switch - 48 Port	4	For Local Area Network
20.	Patch Panel - 48 Ports	4	For Local Area Network
21.	Firewall	1	
22.	High Speed Scanners with ADF	2	
23.	Scanners with ADF	10	
24.	Windows Server Operating System Software	5	
25.	Linux Server Operating System Software with Postgre SQL	5	
	Services		
1.	Dismantling the partitions of existing Data Center & disposal of the same.		To be decided during site survey.
2.	Electrical Work		To be decided during site survey.
3.	Civil Work		To be decided during site survey.
4.	Interior Work		To be decided during site survey.
5.	Structured cabling		To be decided during site survey.

No	Description	Qty.	Remarks
	requirements for the Data Center including mounting cords, casing, capping, laying, of cables and I/Os.		
6.	Installation, testing and commissioning of all non-IT items of Data Center.		
7.	Call Basis Maintenance Charges (Per Call)		
8.	Miscellaneous, if any (Give details)		

Note - The details of existing 2 DG Sets are as follows -

Make - **Kirloskar** 125 KVA & 250 KVA- 415 Volt, 50 Hz,.0.8 Power Factor, 3 Phase 4 Wire System.

Form TECH-9: Minimum Technical Specifications and Compliance

Table No.1: UPS 20 KVA for Critical Area (Zone-A) – 4 Nos.

No.	Specification	Compliance
	Make	
	Model	
1	Capacity	20KVA/18kW (0-30deg C) / 16.2kW (30-35 deg C) / 14.4kW (35-40 deg C)
2	Power Factor	0.9 at 30Deg C
3	Configuration	3- ph, 3-wire,N +PE / 1 phase, L-N + PE
4	Nominal Voltage	380/400/415V
5	Voltage Regulation	(+/- 1%)
6	Voltage THD	<=2% - Linear load <=5% - Non linear load
7	Frequency	50/ 60Hz
8	Frequency Regulation - Free run frequency (Unsynchronised with bypass)	(+/- 0.25 %)
9	Frequency Regulation (synchronized with bypass)	(+/- 2 Hz)
10	Slew Rate	0.2Hz/s
11	Creast Factor	3:1 max.
12	Transient response at 100% step load	+/-5% for 100% load
13	Recovery time	60 millisecond
14	Over load capacity	< 105% - continuous; 105-125% - < 5 min; 125-150% -< 1 min >150% - < 200ms (after overload shifted to bypass)
15	AC-AC Efficiency	94%
16	Transfer time - Mains to battery	0 millisecond
17	Transfer time - Inverter to bypass - Synchronization mode	0 millisecond
18	Parallel Redundancy	3+1
INPUT PARAMETERS		
19	Configuration	3- ph, 3-wire,N +PE
20	Nominal Voltage	380/400/415V
21	Voltage range	+15% -20% of 415vac
22	Frequency	50/60 Hz
23	Frequency range- Hz	40 to 70 HZ
24	Power Factor	>0.99
25	Current Distortion (I- THD)	>5%
BYPASS		

26	Voltage	380/400/415V	
27	Voltage Range	+15% -20%	
28	Frequency	50/ 60Hz	
29	Frequency Range	+/-20%	
BATTERY CHARGER			
30	Nominal Voltage - Float	405 - 486V selectable	
31	Regulation	NA	
32	Ripple	Voltage ripple<1.414% ; current ripple <5%	
BATTERY PARAMETERS			
33	Type	SMF	
34	No. of battery blocks	selectable 30 blocks	
35	Battery Voltage	360 Vdc	
36	Backup Time	60 Min	
37	VAH Required	36000 VAH	
ENVIRONMENTAL PARAMETERS			
38	Operating temperature	0 to 40 deg. centigrade	
39	Storage temperature	-40 to 70 deg. centigrade	
40	Relative Humidity	95% RH	
41	Altitude	2000 meters	
42	Temperature de rating	30-40deg de rating	
43	Altitude de rating	NA	
44	Noise level	<55db	
MECHANICAL PARAMETERS			
45	Hight X width X Depth (MM)	130(3U) X 435 X 750	
46	Weight	30 Kg	
47	Ventilation	Forced - Air cooled	
48	Cable Entry	terminal block	
49	Colour / Panel finish	EG7021	
50	Protection	IP20	
51	Parallel	3+1, Built in Provision	
52	LBS	Built in	
53	MONITORING SOFTWARE	SNMP, Dry contact card, site monitoring / shutdown for multi servers	
54	STANDARDS	CE /TUV (EN62040-1-1)	
55	Warranty	3 Years onsite	

Table 2: UPS 10KVA for Zone B – 2 Nos.

No.	Specification	Compliance
	Make	
	Model	
1	Rectifier	IGBT Based
2	Input THDi	< 5 %
3	Input Power Factor	Unity
4	Input Voltage Range	415 , 3 Phase, 4 Wire
5	Input Voltage Variation	+25% -30%
6	Operation with Reverse	Possible

	Phase Sequence		
7	Input Frequency variation	+/- 10%	
8	Input Frequency Range	45 Hz - 55 Hz	
9	Output Voltage	220/230/240 VAC, 1 Phase	
10	Frequency	50 /60Hz	
11	Power rating at 0.8 P F	10 KVA	
12	Power rating at 1.0 P F	8KW	
13	Overload Rating	110 % for 60 minutes 125% for 10 minutes 150% for 1 minutes	
14	Max Non Linear load permissible	100% with crest factor of 3:1	
15	Output voltage Regulation	+/- 1%	
16	Transient response for 100% load change	+/- 10%	
17	Recovery Time	10 Millisecond	
18	Frequency stability unsynchronized Frequency stability synchronized	+/- 0.1% +/- 1Hz +/- 2 Hz +/- 3 Hz	
19	Max rate of change of freq	0.2\0.4 Hz/Sec	
20	Out Put Voltage Distortion	<3% of Non Linear Load <2% on Linear Load	
21	Battery Backup	60 mins	
22	Battery Management Systems	Facility should be Available	
23	No. of batteries	26	
24	Total VAH required	20280 VAH	
25	Battery Charger	Temperature Compensated Battery Charger	
26	DC Ripple	<2%	
27	DC Voltage regulation	+/- 1%	
28	Battery Supported	SMF Type	
29	Common Battery operation	Should be possible	
30	Isolation	Isolation transformer to be provided (preferably at O/P)	
31	Parallel Redundant Operation	Should be possible	
32	LCD Display for Fault Status and History function	Should be provided	
33	Generator Compatibility	Needed	
34	Warranty	3 Years onsite	

Table 3: Transient Voltage Surge Suppressor for 20KVA & 10KVA UPS – 6 Nos.

Specification		Compliance
Critical and expensive electronic equipment should be protected from transient over-voltages by TVSS. The selection of surge protective devices typically depends on the location of the device. TVSS device for ITE equipment shall be as per following specifications.		
	Make	
	Model	
(i)	Surge Current Capacity - 25KA	
(ii)	All Modes Protection - L-N, L-G, N-G	
(iii)	Connection Type - Parallel	
(iv)	Protection Level - < 1 kV	
(v)	MCOV - Min. 320 Volts	
(vi)	Response Time - . < 0.5 nanoseconds	
(vii)	EMI/RFI Attenuation- 40 dB typical	
(viii)	Status Indication - LED, Dry contacts	
(ix)	Monitoring - Monitoring of All Modes, including N-E	
(x)	Fusing - Individual Fusing of MOV's including N-E	
(x)	Warranty – 3 years onsite	

Table 4: CCTV System – 1 No.

A set of fixed cameras, integrated dome cameras (fixed), pan / tilt / zoom (PTZ) cameras with remote control operation of focus and zoom.

No.	Specification	Compliance
	Make	
	Model	
1.	A professional housing with internal and external cooling fans to protect both the camera and lens from the rigors of all environments and at the same time it should be designed and built for ease of installation and maintenance.	
2.	A complete CCTV control facility that performs all the functions with provision to increase the total number of inputs for each monitor site.	
3.	A complete system shall be connected through unshielded Twisted pair cable (UTP cable - Cat 6) as appropriate for the purpose establishing video and control of all cameras (fixed), pan / tilt / zoom (PTZ) cameras and integrated dome (PTZ)	
4.	CCTV Cabinets as required complete with all cable termination facilities, cable distribution system for video and power system along with any additional video amplifiers and other video equipment as may be required.	
5.	End point amplifiers as may be required to achieve satisfactory system operation.	

6.	Test equipment covering all tools, tackles and testing equipment / kits as required for preventive and first line maintenance including test monitors, camera adjustment and testing facilities.	
7.	Complete range of accessories as required.	
8.	All necessary relay boxes connectors, extension cables and adapter boxes as required at each of the ends of the CCTV System as required.	
9.	All systems and components shall have been thoroughly tested and proven in actual use.	
10.	All systems and components shall be provided with a one-day turnaround repair express and 24-hour parts replacement. The manufacturer on warranty and non-warranty items shall guarantee the repair and parts expresses.	
11.	Specifications included in this section are indicative and considered as a minimum; component and software that shall be acquired at the time of implementing the project shall be the latest versions available in the market.	
12.	The system also should provide clear & accurate indication of an intruder or abnormal movement within and around the Facility.	
13.	The system shall provide visual images from the cameras located throughout the facility. The cameras located shall be fed into the Digital Video Server (DVS) located in the security room.	
14.	The Digital Video Server shall consist of up to 16 channels Digital Multiplexer with built-in recording system into Hard Disk.	
15.	The Main Security Control Room which shall house the Monitors and the Digital Video Management Server.	
16.	The CCTV should be equipped with Digital recording facility for later scrutiny, with at least 30 days of recording facility.	
17.	The cameras shall be fixed, integrated dome (fixed) and the integrated Pan/Tilt/Zoom camera type that can be controlled from its monitor position, such that the cameras can be panned, tilted, zoomed and focused on to any part or entire area which they have been located to bring under observation from keyboard location.	
18.	The cameras shall be complete with the latest state of the art optical systems, filters, light sensitive pickup systems suitable for capturing images with very low light levels, and necessary interlaced scanners, encoders, decoders, associated amplifiers, synchronization facilities and any interfacing adapters as required, with all systems of that type suitable for a compact, durable, distortion free and clear image processing type camera.	
19.	The color cameras (Integrated Pan/Tilt/Zoom dome) shall have a minimum resolution of 470 lines and sensitivity of 0.08 lux (colour) and 0.013 lux (monochrome). The outdoor PTZ cameras shall be day/night camera with a minimum of 23 X optical zoom and 12 X digital zoom	
20.	The Outdoor PTZ camera shall have a minimum of 80 X wide dynamic range, to withstand complex light variations in the environment.	
21.	The preset accuracy for the camera shall be +/- 0.1degree maximum	
22.	The Outdoor PTZ camera shall have a preset speed of 360 deg /sec Pan and 200 deg /sec tilt.	
23.	The camera shall resume after alarm to the previously programmed state of alarm after alarm acknowledgement.	
24.	The outdoor PTZ camera shall have auto flip feature, whereby which the	

	dome shall rotate at 180 deg at the bottom of the tilt travel.	
25.	The cameras shall have automatic level control complete with auto iris, and gain control of the amplifier and shall be complete with spot filter as required.	
26.	The cameras shall have automatic shutter or 100% closing iris to prevent burning-in of image pickup device when the camera is not in use, both the shutter and iris shall fully close upon failure of power supply in order to prevent damage.	
27.	The cameras shall have standby circuitry for when the camera is not selected on any of the monitors. The beam current of the camera pickup device shall be switched off automatically.	
28.	The cameras shall have automatic circuitry which relates the black level in the signal to the darkest spot of the picture (black level control), limits the video signal in case of scene high-lights in order to prevent overloading of the monitor (White limiter), and prevents the automatic sensitivity control from reacting to strong highlights (Peak white eliminator).	
29.	The cameras shall have the features that shall prevent the occurrence of internal condensation or condensation on the window, necessary heaters/thermostats shall be provided as required.	
30.	The cameras shall be equipped with Pan & Tilt heads to allow for rotation over a minimum 360 degrees.	
31.	The cameras shall be provided with a local power distribution junction box, with local isolation switches and fuses to isolate each of the power circuits of the camera related to main camera power, and other circuits related to Pan & Tilt head, cooling fan, blower etc.	
32.	The camera housing shall have a rain/sun shield and a weather protection feature with a minimum IP protection of IP66 for outdoor mounted cameras. For indoor cameras, the protection class shall be IP45.	
33.	The aperture ratio (f-number) of the lenses shall be selected such that, a good picture is obtained at night.	
34.	Power supply units, as required for the cameras, shall be provided.	
35.	The camera and its supporting structures presence least obstruction of view and least obstruction for satisfactory movement and operation of the camera due to remote and local controls.	
36.	The cameras shall not be mounted on vibrating structures, where this is not possible than special structures or other facilities/measures for reducing vibrations shall be provided.	
37.	All the camera movements along with Pan and Tilt, and associated forces on structures are taken in to account during the design and installation of the cameras.	
38.	The installation presence the least risk of accidental damage.	
39.	The equipment and its components are accessible for maintenance.	
40.	The vibration of any object shall be less than that specified for the camera.	
41.	The monitor shall be suitable for use as desktop units.	
42.	The monitors shall be high-resolution video monitors. The monitor shall have a bandwidth of at least 10 MHz (-3dB) and a horizontal resolution in the center of the picture minimum 420 lines in the case of color monitor.	
43.	The monitors shall have the facilities to loop the video signal through the	

	other monitor.	
44.	Each monitor shall have local control knobs and remote control equipment and panel for monitor controls associated with power on/off switch standby on/off switch and for adjustment brightness, contrast, horizontal hold, vertical hold etc.	
45.	Monitor shall be suitable for use as desktop units or can be rack mounted with suitable racks as appropriate	
46.	The DVR Digital video recorder shall have 400 images/sec viewing speed as well as 40 images / sec recording speed	
47.	The recorder shall have a minimum of 16 video inputs. It shall also have looping inputs for all 16 inputs	
48.	The recorder shall run on Windows 2000 Professional.	
49.	The recorder shall provide PAL , the following recording resolutions shall be possible 320 x 288 / 640 x 288 / 640 x 576 / 352 x 288 / 704 x 288 / 704 x 576	
50.	The DVR shall have 6 high speed USB ports	
51.	The DVR shall be in a position to display 36 video images simultaneously on the DVR or the remote client from Multiple DVRS on the LAN.	
52.	The recorder shall support instant playback and shall have programmable favorite channel selection.	
53.	The recorder shall allow a minimum of 6 X digital zoom on playback	
54.	The recorder shall support simultaneous playback and record full duplex operation.	
55.	The recorder shall have the feature of an internal hardware watchdog. The reorder shall have an internal hard disc capacity of 3 TB and shall be possible to connect a RAID 0,1 back up.	
56.	The DVR shall be of the same make as that of the cameras to ensure 100% system compatibility. All the components in the DVR including hard disc etc shall be provided for the manufactures factory not locally assembled DVRS shall be provided. 100 % finished goods shall be supplied from the manufacturer	
57.	The DVR shall have each channel individually programmable.	
58.	Remote workstation shall be in a position to administer / view live images / search and view playback images	
59.	The recorder shall have 32 hard-wired alarm inputs, which shall be capable of configuring globally as normally open or normally closed. Each of these inputs shall be assigned to any or all of the cameras to trigger recording at custom record rates. Up to 5 seconds of pre-alarm shall also be available on each camera.	
60.	The recorder shall provide 24 dry contact outputs, each of which shall be associated with any or all of the camera inputs and/or alarm inputs.	
61.	The recorder shall provide an extremely flexible scheduling on a week-by-week basis. Each 24-hour period shall be divided into 15-minute blocks enabling different configurations of recording triggers to be available during each 15-minute period.	
62.	The recorder shall provide onscreen controls for operation of PTZ cameras. All fully functional cameras shall be controlled via a PC comport which shall use an additional converter to communicate via RS485/422	

63.	The recorder shall provide an Ethernet port as standard. If required in addition free client software shall supplied which enables remote control and connectivity via TCP/IP. The DVR shall support Gigabit port 10/100/1000 base T	
64.	The recorder shall be tested to comply with UL regulations/certifications.	
65.	The recorder shall provide a screen resolution of 1280 x1024 (X VGA output)	
66.	The recorder shall have a built in watchdog that will automatically restart after a power failure and begins to record as per its configured settings.	
67.	The recorder shall provide the ability to manually 'back up' recorded data to hard disk or DVD / RAID while the unit continues to record.	
68.	The recorder shall be programmed using a keyboard and mouse via on screen menus.	
69.	The recording of the recorders are watermarked and encrypted requiring backup software to open and view them. In addition, images backed up in bitmap or JPEG format can be verified for authenticity	
70.	The recorder shall be suitable for mounting on a standard 19" rack.	
71.	There shall be a network management Digital Video Recorder (DVR) if more than DVR is required to allow viewing of cameras from multiple DVR's in any combination.	
72.	The DVR shall support pre-alarm and post alarm recording.	
73.	The DVR shall support CIF / 2CIF and 4 CIF resolutions while recording.	
74.	The recording should be based on motion detection	
75.	Warranty - 3 Years onsite	

Table 5: Access Control System – 1 No.

No.	Specification	Compliance
	Make	
	Model	
1.	Proximity card reader and proximity access control system should be installed with its software for monitoring the access of individual persons inside the MSAMB DC.	
2.	Warranty - 3 Years onsite	

Table 6: Water Leak Detection System – 1 No.

No.	Specification	Compliance
	Make	
	Model	
1.	Sensing cable to be installed along room perimeter especially along the glass windows, and wall area, toilet adjacency area and under AC units in order to sense liquid leakage.	
2.	Warranty - 3 Years onsite	

Table 7: VESDA – 1 No.

No	Specification	Compliance
	Make	
	Model	

1.	Absolute smoke detection (coverage of upto atleast 400 sq. ft)	
2.	Wide sensitivity range	
3.	Single pipe inlet	
4.	Min. of five status LEDs	
5.	Should have clean air barrier optics protection	
6.	Min. three alarm levels and programmable relays	
7.	Air flow monitoring	
8.	Optional remote display and relay capability	
9.	Simple mounting design	
10.	Warranty - 3 Years onsite	

Table 8: Fire Detection and Control Mechanism – 1 No.

No	Specification	Compliance
	Make	
	Model	
2.	The Fire alarm system shall be an automatic 1 to n (e.g. 24) zone single loop addressable fire detection and alarm system, utilizing conventional detection and alarm sounders	
3.	Detection shall be by means of automatic heat and smoke detectors located throughout the Data Center (ceiling, false floor and other appropriate areas where fire can take place) with break glass units on escape routes and exits	
4.	All controls of the system shall be via the control panel only.	
5.	All site-specific data shall be field programmable and stored in an integral EEPROM. The use of EPROM's requiring factory 'burning' and re-programming is not acceptable.	
6.	All internal components of the control panel shall be fully monitored.	
7.	The control panel shall be capable of supporting a multi device, multi zone 2-wire detection loop. Removal of 1 or more detection devices on the loop shall not render the remaining devices on the loop inoperable.	
8.	The system status shall be made available via panel mounted LEDs and a backlit alphanumeric liquid crystal display.	
9.	All user primary controls shall be password protected over 4 access levels in accordance with EN54 Part 2. Essential controls, such as Start / Stop sounders and Cancel fault buzzer, etc. will be clearly marked.	
10.	Cancel fault and display test functions shall be configurable to be accessed from level 1 or level 2.	
11.	All system controls and programming will be accessed via an alphanumeric keypad. The control panel will incorporate form fill menu driven fields for data entry and retrieval.	
12.	The control panel shall log a minimum of 700 events comprising of 100 event fire log and 200 event fault, disablement and historic logs, giving time, date, device reference and status of indication.	
13.	Fire, fault and disablement events shall be logged as they occur. Visual and audible conformation shall be given on an array of LEDs, the Liquid Crystal Display and the internal supervisory buzzer.	

14.	The control panel shall have an integral automatic power supply and maintenance free sealed battery, providing a standby capacity of a minimum 72 hours and further 30 minutes under full alarm load conditions. The system shall be capable of full re-charge within 24 hours following full system discharge. The performance of the power supply and batteries shall be monitored and alarm rose, should a fault be detected. The system shall protect the batteries from deep discharge.	
15.	All terminations within the control panel with the exception of the 230V mains connection will be via removable terminal screw fixing points.	
16.	The control panel will have a programmable maintenance reminder to inform the user that maintenance of the system is required. This function shall provide the user with the option of a monthly, quarterly, annually or bi-annually reminder prompts. The maintenance reminder will be indicated on the control panel. This message shall be resettable by the user and will not require the intervention of specialist support. The control panel will provide programmable free text field as part of the maintenance reminder facility.	
17.	The system will include a detection verification feature. The user shall have the option to action a time response to a fire condition. This time shall be programmable up to 10 minutes to allow for investigation of the fire condition before activating alarm outputs. The operation of a manual call point shall override any verify command.	
18.	Heat detectors shall be of the fixed temperature (58° C) or rate of temperature rise type with a fixed temperature operating point.	
19.	Devices shall be compatible with the CIE conforming to the requirements of EN54 Part 5 and be LPCB approved.	
20.	The detectors shall have a single LED to indicate the device has operated and shall fit a common addressable base.	
21.	All bases shall be compatible with the type of detector heads fitted and the control system component used. Each base shall comprise all necessary electronics including a short circuit isolator.	
22.	The device shall be automatically addressed by the CIE on power up of the loop without the need of the insertion of a pre-programmed EPROM or setting of DIL switches.	
23.	Detector bases shall fit onto an industry standard conduit box.	
24.	The fire detection and alarm system will be programmable and configurable via an alpha numeric keypad on the control panel.	
25.	The labeling of Device and Zone labels should be part of the system.	
26.	Necessary Software to the control panel	
27.	Warranty - 3 Years onsite	

Table 9: Fire Suppression Systems – 1 No.

No	Specification	Compliance
	Make	
	Model	
1.	The Clean Agent system considered for Total flooding application shall be in compliance with the provisions of Kyoto Protocol.	

2.	Care should be taken that none of the Greenhouse Gases identified in the Kyoto Protocol is used for fire suppression application.	
3.	The minimum criterion for the selection of the Clean Agent will be on the following parameters	
a)	Zero Ozone Depleting Potential.	
b)	Global Warming Potential not exceeding one.	
c)	Atmospheric Lifetime not exceeding one week.	
4.	The clean agent fire suppression system with FK-5-1-12 and Inert Gas based systems are accepted as a replacement of HCFC and HFC as per Kyoto Protocol.	
5.	The Clean Agent considered for the suppression system must be suitable for manable occupied areas with NOAEL Level (No observable adverse effect level) of 10% as compared to the design concentration to ensure high safety margin for the human who might be present in the hazard area.	
6.	The minimum design standards shall be as per NFPA 2001, 2004 edition or latest revisions.	
7.	DCO would be responsible for refilling the gas, in case the fire suppression system has to be activated for suppressing fire and the defined time period required to refill the gas is 2-3 weeks. DCO would be responsible for any accidental damage caused during refilling whereas DCO would be responsible for any accidental damage caused during testing of the equipment	
8.	Care shall be given to ensure proper early warning detection system with minimum sensitivity of 0.03% per foot obscuration as per NFPA 318 & NFPA 72 to ensure that one gets a very early warning to investigate the incipient fire much before the other detectors activate the fire suppression system automatically.	
9.	All system components furnished and installed shall be warranted against defects in design, materials and workmanship for the full warranty period which is standard with the manufacturer, but in no case less than five (5) years from the date of system acceptance	
10.	Additionally, Portable Extinguishers (CO ₂ or Halon based Extinguishers are not acceptable) shall be placed at strategic stations throughout the Data Centre. OR Fire suppression system shall deploy FM-200 (ETG-5)/ NOVEC 1230based gas suppression systems with cross-zoned detector systems for all locations. These detectors should be arranged in a manner that they activate the suppression system zone wise to cater to only the affected area.	
11.	Illuminated Signs indicating the location of the extinguisher shall be placed high enough to be seen over tall cabinets & racks across the room. Linear heat detection cable should be placed along all wire pathways in the ceiling. This should not directly trigger the suppression system—rather; it should prompt the control system to sound an alarm	
12.	The OEM (/ Bidder) shall give a Certificate stating that their FM-200 / NOVEC 1230 system is approved by UL / FM / VdS / LPC/CNPP for use with Seamless Steel Cylinders (Component as well as System Approval).	
13.	The OEM (/ Bidder) shall also provide a Letter that the OEM has FM-200 / NOVEC 1230 Flow Calculation software suitable for Seamless Steel	

	cylinder bided for as per the Bill of materials and that such Software shall be type approved by FM / UL / VdS / LPC.	
14.	The Storage Container offered shall be of Seamless type, meant for exclusive use in FM- 200 /NOVEC 1230 systems, with VdS/FM/UL/LPC/CNPP component approval. Welded cylinders are not permitted.	
15.	The Seamless storage cylinder shall be approved by Chief Controller of Explosives, Nagpur and shall have NOC from CCoE, Nagpur for import of the same. Documentary evidence to be provided for earlier imports done by the bidder.	
16.	The FM-200/Novec 1230 valve should be Differential Pressure Design and shall not require an Explosive / Detonation type Consumable Device to operate it.	
17.	The FM-200 / NOVEC 1230 Valve operating actuators shall be of Electric (Solenoid) type, and it should be capable of resetting manually. The Valve should be capable of being functionally tested for periodic servicing requirements and without any need to replace consumable parts.	
18.	The individual FM-200/ NOVEC 1230 Bank shall also be fitted with a manual mechanism operating facility that should provide actuation in case of electric failure.	
19.	The system flow calculation be carried out on certified software, suitable for the Seamless Steel Cylinder being offered for this project. Such system flow calculations shall be also approved by VdS / LPC/ UL / FM.	
20.	The system shall utilize 25 Bar / High pressure (362 psi) technology that allows for a higher capacity to overcome frictional losses and allow for higher distances of the agent flow; and also allow for better agent penetration in enclosed electronic equipment such as Server Racks/ Electrical Panels etc.	
21.	The designer shall consider and address possible Fire hazards within the protected volume at the design stage. The delivery of the FM-200 system/ NOVEC 1230 shall provide for the highest degree of protection and minimum extinguishing time. The design shall be strictly as per NFPA standard NFPA 2001.	
22.	The suppression system shall provide for high-speed release of FM-200/NOVEC 1230 based on the concept of total Flooding protection for enclosed areas. A Uniform extinguishing concentration shall be 7% (v/v) of FM-200 / NOVEC 1230for 21 degree Celsius or higher as recommended by the manufacturer.	
23.	The system discharge time shall be 10 seconds or less, in accordance with NFPA standard 2001.	
24.	Sub floor and the ceiling void to be included in the protected volume.	
25.	The FM-200/ NOVEC 1230 systems to be supplied by the bidder must satisfy the various and all requirements of the Authority having Jurisdiction over the location of the protected area and must be in accordance with the OEM's product design criteria.	
26.	The detection and control system that shall be used to trigger the FM-200 suppression shall employ cross zoning of photoelectric and ionization smoke detectors. A single detector in one zone activated, shall cause in alarm signal	

	to be generated. Another detector in the second zone activated, shall generate a pre-discharge signal and start the pre-discharge condition.	
27.	The discharge nozzles shall be located in the protected volume in compliance to the limitation with regard to the spacing, floor and ceiling covering etc. The nozzle locations shall be such that the uniform design concentration will be established in all parts of the protected volumes. The final number of the discharge nozzles shall be according to the OEM's certified software, which shall also be approved by third party inspection and certified such as UL / FM / VdS / LPC.	
28.	The Cylinder shall be equipped with differential pressure valves and no replacement parts shall be necessary to recharge the FM-200 containers.	
29.	FM-200 / NOVEC 1230 shall be discharged through the operation of an Electric (solenoid) operated device or pneumatically operated device, which releases the agent through a differential pressure valve.	
30.	The bidder shall provide all documentation such as Cylinder Manufacturing Certificates. Test and Inspection Certificates and Fill Density Certificates.	
31.	The FM-200 / NOVEC 1230 discharge shall be activated by an output directly from the `FM-200'/ NOVEC 1230 Gas Release control panel, which will activate the solenoid valve. FM-200/NOVEC 1230 agent is stored in the container as a liquid. To aid release and more effective distribution, the container shall be super pressurized to 600 psi (g) at 21°C with dry Nitrogen.	
32.	The releasing device shall be easily removable from the cylinder without emptying the cylinder. While removing from cylinder, the releasing device shall be capable of being operated, with no replacement of parts required after this operation.	
33.	Upon discharge of the system, no parts shall require replacement other than gasket, lubricants, and the FM-200/NOVEC 1230 agent. Systems requiring replacement of disks, squibs, or any other parts that add to the recharge cost will not be acceptable.	
34.	The manual release device fitted on the FM-200/NOVEC 1230 Cylinder(s) shall be of a manual lever type and a faceplate with clear instruction of how to mechanically activate the system. In all cases, FM-200/NOVEC 1230 cylinders shall be fitted with a manual mechanical operating facility that requires two-action actuation to prevent accidental actuation.	
35.	FM-200/NOVEC 1230 storage cylinder valve shall be provided with a safety rupture disc. An increase in internal pressure due to high temperature shall rupture the safety disc and allow the content to vent before the rupture pressure of the container is reached. The # contents shall not be vented through the discharge piping and nozzles.	
36.	FM-200/NOVEC 1230 containers shall be equipped with a pressure gauge to display internal pressure.	
37.	Brass Discharge nozzles shall be used to disperse the Fire Suppression gas. The nozzles shall be brass with female threads and available in sizes as advised by the OEM system manufacturer. Each size shall come in two styles: 180° and 360° dispersion patterns.	
38.	All the Major components of the FM-200 system /NOVEC 1230 such as the Cylinder, Valves and releasing devices, nozzles and all accessories shall be	

	supplied by one single manufacturer under the same brand name.	
39.	Manual Gas Discharge stations and Manual Abort Stations, in conformance to the requirements put forth in NFPA 2001 shall be provided.	
40.	Release of FM-200 / NOVEC 1230 agent shall be accomplished by an electrical output from the FM- 200/ NOVEC 1230 Gas Release Panel to the solenoid valve and shall be in accordance with the requirements set forth in the current edition of the National Fire Protection Association Standard 2001.	
41.	The complete Fire Suppression system should be an integrated solution, in a separate rack & coupled with the network and server racks. The complete solution should be in closed containment.	
42.	Warranty - 3 Years onsite	

Table 10: Fire Proof Enclosure for Media Storage in Normal Zone – 1 No.

No.	Specification	Compliance
	Make	
	Model	
1.	The fireproof media cabinet has to be engineered to meet the strictest industry requirements for fire protection.	
2.	Fireproof media cabinets should be able to store DLT, LTO or VXA tapes - even external hard drives, USB devices or portable flash and thumb drives.	
3.	Should have facility to change Internal accessories easily as per storage requirements evolve.	
4.	Should have at the minimum standard key lock and optionally dial or digital combination lock to ensure high security.	
5.	Shall be either Caster base and/or floor mounts.	
6.	Warranty - 3 Years onsite	

Table 11: Pest Control System – 1No.

No	Specification	Compliance
1.	Pest Control system has to be provided for the entire MSAMB DC. The proposed Pest Control system & Rodent Repellent system pests shall be controlled using nonchemical, non-toxic devices. Ultrasonic pest repellents shall be provided in the false flooring and ceiling to repel the pests without killing them. However periodic pest control using Chemical spray can be done once in 3 months as a contingency measure to effectively fight the pest menace.	

Table 12: Rodent Repellant System – 1 No.

No	Specification	Compliance
	Make	
	Model	
1.	Electronic Rodent repellent system to be provided to the Zone A & B areas.	
2.	Warranty - 3 Years onsite	

Table 13: Precision AC (Capacity 35 KW) - 2 Nos.

No	Specification	Compliance
	Make	
	Model	

1.	The system shall be designed to maintain temperature and relative humidity conditions within the row(s) of racks with return air temp. of 37 Deg. C & 24% RH.	
2.	<p>One refrigeration circuit, incorporating a high efficiency, fully hermetic variable capacity compressor with crankcase heater, safety valve, filter drier, moisture indicating sight glass, liquid line solenoid valve and an externally equalised expansion valve.</p> <p>The compressor solenoid valve shall unload the compressor & allow the variable capacity operation, i.e. the compressor shall modulate its capacity from 10% to 100% without frequency variation. The compressor shall be suction cooled motor, vibration isolator, internal thermal load overloads, manual reset high pressure switch, rota lock service valves, low pressure & high pressure transducers.</p>	
3.	Units has to be offered with two plug EC Direct Drive Fan, High efficiency, external rotor electronically commutated (EC) motor with integrated electronics, True soft start characteristics (inrush current lower than operating current), Backward curve, corrosion resistant aluminum fan wheel, Maintenance free design and construction. The fan section shall be designed for higher air flow. The fan shall be protected over temperature of motor, electronics, locked rotor protection, short circuit of motor output. Fans are IP54, Protection class F.	
4.	For close control of the SDC environment conditions (Temp. and RH) the controller shall have (PID) proportional integration and differential.	
5.	The precision unit shall be air cooled refrigerant based system to avoid chilled water in critical space.	
6.	The internal rack layout design shall follow cold aisle and hot aisle concept as recommended. The complete set-up should be containment based solution.	
7.	The refrigerant used shall be environment friendly HFC, R-410A equivalent in view of long term usage of the data center equipment, availability of spares and refrigerant.	
8.	Fully Deployed Dynamic Smart Cooling with Auto sequencing Provision and Auto Power Management Features	
9.	The unit shall be fitted with an canister type steam humidifier suitable for use with water of varying degrees of hardness, provided that the water is not treated or demineralised (Conductivity range 125-500 μ S/cm). The humidifier is complete with a water inlet valve, water outlet valve and a maximum water level sensor, disposable cylinder, steam distributor and electronic controls. Humidifier control is of the ON-OFF type, can be also disabled by remote contact.	
10.	<p>Microprocessor Controls: Air conditioning models should be controlled by microprocessor based controller. It can be programmed to control the function of every device within the unit via I/O.</p> <p>The controller allows setting and monitoring of the room parameters. Unit utilises multiple temperature sensors placed at the rack inlet, to ensure management and control of temperature by rack. Each unit should be connected up to 10 Sensors.</p> <p>The controller should allow setting and monitoring of the following space</p>	

	<p>parameters:</p> <ul style="list-style-type: none"> • Air inlet Temperature • Air supply Temperature (remote sensors at rack inlet) • Return Temperature set-point • Supply Temperature set-point • Return Temperature band • Supply Temperature band • Humidity (inlet) • Humidity set-point • Humidity band • Rack Min, Max and Average temperature 	
11.	The unit shall be fitted with an canister type steam humidifier suitable for use with water of varying degrees of hardness, provided that the water is not treated or demineralised (Conductivity range 125-500 μ S/cm). The humidifier is complete with a water inlet valve, water outlet valve and a maximum water level sensor, disposable cylinder, steam distributor and electronic controls. Humidifier control is of the ON-OFF type, can be also disabled by remote contact.	
12.	<i>Micro processor & controls:-</i>	
a)	Room temperature and humidity.	
b)	The filter cells are made of two deep pleated 4" filters rated MERV8 following ASHRAE 52.2 (45% by ASHRAE 52.1) or G4 following EN779, located within the cabinet, and accessible from the rear of the unit. Frame of the filter shall be made of galvanized steel. Optional filters are available: MERV11 following ASHRAE 52.2-1999 (45% by ASHRAE 52.1-1992) or F5 following EN779. Clogged filter alarm is available for standard and for optional filter. It sends a visual alarm to display.	
c)	Compressor working status	
d)	Electric heaters working status	
e)	Humidifier working status	
f)	Manual / Auto unit status	
g)	Temperature set point	
h)	Humidity set point	
i)	Working hours of main component i.e. compressors, fans, heater, humidifier etc.	
j)	Unit working hours	
k)	Current date and time	
l)	Type of alarm (with automatic reset or block)	
m)	The last 10 intervened alarms	
13.	<i>The microprocessor should be able to perform following functions:</i>	
a)	Testing of the working of display system	
b)	Password for unit calibration values modification	
c)	Automatic re-start of program	
d)	Cooling capacity control	
e)	Compressor starting timer	
f)	Humidifier capacity limitation	

g)	Date and time of last 10 intervened alarm	
h)	Start / Stop status storage	
i)	Random starting of the unit.	
j)	Outlet for the connection to remote system	
k)	Temperature and humidity set point calibration	
l)	Delay of General Alarm activation	
m)	Alarm calibration	
14.	<i>Following alarms shall be displayed on screen of microprocessor unit:</i>	
a)	Air flow loss	
b)	Clogged Filters	
c)	Compressor low pressure	
d)	Compressor high pressure	
e)	Smoke – fire	
f)	Humidifier Low water level	
g)	High / Low room temperature	
h)	High/Low room humidity	
i)	Spare External Alarms	
j)	Water Under floor	
15.	<i>The control system shall include the following settable features:</i>	
a)	Unit identification number	
b)	Startup Delay, Cold start Delay and Fan Run on timers	
c)	Sensor Calibration	
d)	Remote shutdown & general Alarm management	
e)	Compressor Sequencing	
f)	Return temperature control	
g)	Choice of Modulating output types	
16.	<i>The unit shall incorporate the following protections:</i>	
a)	Single phasing preventers	
b)	Reverse phasing	
c)	Phase imbalancing	
d)	Phase failure	
e)	Overload tripping (MPCB) of all components	
17.	Warranty - 3 Years onsite	

Table 14: Comfort AC – 2 Nos.

No	Specification	Compliance
	Make	
	Model	
1.	Capacity – 2 Tonnage Minimum	
2.	Cooling Capacity – minimum 24000 BTU / Hr	
3.	Compressor – Hermetically Sealed Scroll Type	
4.	Refrigerant – R 22 Type	
5.	Power Supply – Three Phase, 380-415 V, 50 Hz	
6.	Air Flow Rate – minimum 19 cu m / min	
7.	Noise Level - < 50 dB	

8.	Operation – Remote Control	
9.	Warranty - 3 Years onsite	

Table 15: Building Management System (BMS) – 1 No.

No.	Specification	Compliance
	Make	
	Model	
1.	Precision AC Units	
2.	Temperature monitoring and controls at all specified positions/locations	
3.	LT Panel Energy Monitoring	
4.	UPS Monitoring	
5.	Fire Alarm System Integration	
6.	VESDA (Very Early Smoke Detection Alarm) System Integration	
7.	Access Control & Surveillance System Integration	
8.	Gas System Integration	
9.	DG Set on MODBUS Protocol with RS 485 Communication Port	
10.	Energy Meter on MODBUS Protocol with RS 485 Communication Port	
11.	Service provider should provide NOC facility to monitor non IT parameters 24X7	
12.	Warranty - 3 Years onsite	

Table 16: Server Racks 42U – 2 Nos.

No	Specification	Compliance
	Make	
	Model	
1.	19" 42U racks shall be used in the Data Centre for hosting the department applications. Dimension 600 x 1200 (W x D) mm	
2.	Floor Standing Server Rack - 42U with Heavy Duty steel Frame for rigidity. Top & Bottom cover with cable entry gland plates. Heavy Duty Top and Bottom frame of MS. Two pairs of 19" mounting angles .Depth support channels . with a overall weight carrying Capacity of 500Kgs.	
3.	All racks should have mounting hardware 2 Packs, Blanking Panel	
4.	Keyboard Tray with BB Slides (Rotary Type) (1 no. per Rack)	
5.	Stationery Shelf 627mm Network (2 sets per Rack)	
6.	All racks must be lockable on front & rear doors.	
7.	Racks should have Rear Cable Management channels, Roof and base cable access	
8.	Wire managers Two vertical and four horizontal	
9.	Power distribution Unit Power Distribution Unit - Vertically Mounted, 32AMPs with 25 Power Outputs. (20 Power outs of IEC 320 C13 Sockets & 5 Power outs of 5/13Amp Sockets), Electronically controlled circuits for Surge & Spike protection, LED readout for the total current being drawn from the channel, 32AMPS MCB, 5 KVAC isolated input to Ground & Output to Ground (1 No per Rack)	
10.	2 sets of power outputs from 2 different sources	

11.	The unit shall be powder painted steel panels with ½” (or 10mm) insulation. A hinged control access panel opens to a second front panel which is a protection enclosure for high voltage components. The frame is painted with a powder coat finish to protect against corrosion. The unit is totally front and rear accessible including any component removal. Unit shall be provided with casters and levelling feet for an easy unit placement into the row of racks.	
12.	Monitoring There should be SNMP and HTTP/Web-management capability for enhanced communications and control of HPM systems. The cards make use of an Ethernet network (10/100Mbit) to monitor and control a wide range of operating parameters, alarms and notifications thanks to a standard web browser (Internet Explorer). The card utilizes standard Ethernet cables (different cable lengths are available for your convenience on the Connectivity price list). The unit shall also include input for remote on-off and volt-free contacts for simple remote monitoring of low and high priority alarms: high/low temperature, high/low refrigerant pressure, fan/control failure, compressor/control failure and others are available	
13.	Warranty - 3 Years onsite	

Table 17: Network Racks – 2 Nos.

No	Specification	Compliance
	Make	
	Model	
1.	Should be available in 2-Post Configurations	
2.	Option of 84” or 96” height	
3.	Should be available with an option of Rail Widths: 3”, 6”, 12” (2-Post)	
4.	EIA-310-E Compliant	
5.	UL Listed, Certification - Information Technology and Communications equipment	
6.	Load Capacity: 1000 lb (2 and 4-Post A1)	
7.	EIA Standard Hole Pattern: 12-24 Threads @ 5/8" (127mm), 1/2" (25.4mm) centers	
8.	Material: Al: 6061-T6 Aluminum Extrusion (3” Rail), Al: 6061-T6 0.125” Thick, (6” and 12” Rail), Steel: 14 Gauge (0.075 Thick), CRS	
9.	Finish: Durable black epoxy powder-coat	
10.	Easily assembled, hardware included	
a)	Ergonomically designed and aesthetically pleasing, Lightweight, but sturdy	
b)	Should have dual hinge latching door & can be opened right or left.	
c)	Cable fingers spaced at 1RMU increments for exact alignment with EIA standard	
d)	Rack spacing	
e)	Cable fingers support up to 48 cables per RMU	
f)	Should be available in 6”, 8”, 10” & 12” vertical trough widths both single sided or double sided.	
g)	In case of Horizontal cable management the cover should hinges up or down	

	and locks into position with cylindrical finger ends for easy snap on installation	
h)	Horizontal cable management troughs should be available in 1, 2 & 3 RMU	
i)	Open back on 2U and 3U horizontal troughs for easy pass through of cables	
j)	Easy one point removal and installation process for door	
k)	Handle should be recessed to eliminate snag potential for clothes and arms	
l)	Should have C Channel bracket allowing for easy access to the cable trough	
m)	Provision for Tool-less installation of Cable Spool	
11.	Warranty - 3 Years onsite	

Table 18: Network Smart Rack – 1 Nos.

No	Specification	Compliance
	Make	
	Model	
	Automatic Regulatory Apparatus for IT Systems - Smart Cabinet Rack	
1	42 U Rack 2000(H) x 800(W) x 1000(D); Front Glass Door & Rear Plain Door.	1
	Cooling unit	
2	Cooling Unit, 3.5 kW, for Rack with ODU	1
	Rack Accessories	
4	Keyboard Tray with Brackets for 500mm Depth for 1000D panel (RAL 7021), PNR HD rack	1
5	Cable Route, 100W x 1700H, for Network Rack, HD Series	2
6	1U 19" Horizontal cable Manager, PNR HD rack	6
7	Cu Earth rail 15x3x500 with 10 Points with screws and insulators	1
8	Vertical Socket strip with 12 nos of IEC C13 Sockets & 4 nos of IEC C19 Socket with 2.5 mtr power chord with 32A MCB. RAL 9005	2
9	SO Plinth 800Wx1000Dx100H. mm. RAL 7022	1
10	Metal Shunting Rings-90mm x 60mm pack of 10	2
11	Ergoform handle RAL 9005	2
12	Lock Insert Key Lock Accessory	2
13	Captive hardware(pack of 20)	3
14	Blanking Panel 2 U RAL 7021 (Pack of 2)	4
15	Blanking Panel 1 U (RAL 7021), PNR HD rack	2
16	Kit, Sheetmetal for Rack	1
	Monitoring Solution for Rack-RDU-A	
17	Functional Unit IRMU061D--RDU-A	1
18	Functional modules-IRME04COM-four serial card (IRM-E04COM) - RDU-A-4COM	1
19	Serial Temp & Hum Sensor IRMS02TH- --RDU-A-S02TH	2
21	Water sensor-12V~24VDC/NORMAO LOW--10~60°C -RDU-A-S01W(5m length)	1
22	Beacon & Buzzer-Sound and Flash Led Alarm-24VDC/70mA/RJ45--10~60°C	1
23	Smoke Detector / RJ 45 / Bottom Outlet 24 V / 8mA-10-50 degree celcius	1

24	Door status sensor-normal close-RJ45-500mA/40~70mm--10~50°C	1
25	Fire Supression System with Novec1230 gas, fire panel & alarm	1
25	Power distribution panel 3kVA / 6kVA	1
26	Warranty - 3 Years onsite	

Table 19: Managed Layer 2 Network Switch - 48 Port – 4 Nos.

No	Specifications	Compliance
	Make	
	Model	
1	Architecture	
1.1	Shall be 1RU, 19" Rack Mountable in standard 42U rack	
1.2	48 RJ-45 autosensing 10/100/1000 ports with 4 dual-personality ports, auto-sensing 10/100/1000Base-T or SFP	
1.3	1 RJ-45 serial console port	
1.4	128 MB SDRAM and 16 MB flash	
1.5	Shall have switching capacity of 96 Gbps	
1.6	Shall have up to 71.4 million pps switching throughput	
1.7	Shall provide Gigabit (1000 Mb) Latency of < 3.2 μs	
2	Resiliency	
2.1	Shall support redundant power supply	
2.2	IEEE 802.1D Spanning Tree Protocol, IEEE 802.1w Rapid Spanning Tree Protocol and IEEE 802.1s Multiple Spanning Tree Protocol	
2.3	IEEE 802.3ad Link Aggregation Control Protocol (LACP)	
2.4	Ring protocol support to provide sub-100 ms recovery for ring Ethernet-based topology	
3	Layer 2 Features	
3.1	Shall support up to 4,000 IEEE 802.1Q-based VLANs	
3.2	Shall support GARP VLAN Registration Protocol or equivalent feature to allow automatic learning and dynamic assignment of VLANs	
3.3	Shall have the capability to monitor link connectivity and shut down ports at both ends if uni-directional traffic is detected, preventing loops	
3.4	Shall support IEEE 802.1ad QinQ and Selective QinQ to increase the scalability of an Ethernet network by providing a hierarchical structure	
3.5	Shall support Jumbo frames on GbE ports	
3.6	Internet Group Management Protocol (IGMP)	
3.7	Multicast Listener Discovery (MLD) snooping	
3.8	IEEE 802.1AB Link Layer Discovery Protocol (LLDP)	
3.9	Shall support Voice VLAN feature to automatically assigns VLAN and priority to devices like IP phones	
5	Layer 3 Features (any additional licenses required shall be included)	
5.1	Static Routing for IPv4	
5.2	Static Routing for IPv6	
5.3	User Datagram Protocol (UDP) helper function to allow UDP broadcasts to be directed across router interfaces	
5.4	Dynamic Host Configuration Protocol (DHCP) client and Relay	
5.5	Proxy ARP to allow normal ARP operation between subnets	
6	QoS and Security Features	
6.1	Access Control Lists for Layer 2 to Layer 4 traffic filtering	
6.2	Shall support global ACL, VLAN ACL, port ACL, and IPv6 ACL	

6.3	Traffic classification using multiple match criteria based on Layer 2, 3, and 4 information	
6.4	Powerful QoS feature supporting strict priority (SP) queuing, weighted round robin (WRR) and and SP+WRR	
6.5	Shall support applying QoS policies on a port, VLAN, or whole switch, to set priority level or rate limit selected traffic	
6.6	IEEE 802.1x to provide port-based user authentication with multiple 802.1x authentication sessions per port	
6.7	Media access control (MAC) authentication to provide simple authentication based on a user's MAC address	
6.8	Dynamic Host Configuration Protocol (DHCP) snooping to prevent unauthorized DHCP servers	
6.9	Port security and port isolation	
6.10	STP BPDU port protection to prevent forged BPDU attacks	
6.11	STP Root Guard to protect the root bridge from malicious attacks or configuration mistakes	
6.12	IP Source guard to prevent IP spoofing attacks	
6.13	Dynamic ARP protection blocking ARP broadcasts from unauthorized hosts	
7	<u>Management Features</u>	
7.1	Configuration through the CLI, console, Telnet, SSH and Web Management	
7.2	SNMPv1, v2, and v3 and Remote monitoring (RMON) support	
7.3	sFlow (RFC 3176) or equivalent for traffic analysis	
7.4	Management security through multiple privilege levels	
7.5	FTP, TFTP, and Secure FTP support	
7.6	Port mirroring to mirror ingress/egress ACL-selected traffic from a switch port or VLAN to a local or remote switch port	
7.7	RADIUS/TACACS+ for switch security access administration	
7.8	Network Time Protocol (NTP) or equivalent support	
7.9	Shall have Ethernet OAM (IEEE 802.3ah) management capability	
8	<u>Environmental Features</u>	
8.1	Shall provide support for RoHS and WEEE regulations	
8.2	Shall have features to improve energy efficiency like variable-speed fans, shutoff unused ports etc	
8.3	Operating temperature of 0°C to 45°C	
8.4	Safety and Emission standards including UL 60950-1; IEC 60950-1; VCCI Class A; EN 55022 Class A	
9	<u>Warranty and Support</u>	
9.1	The below Warranty shall be offered directly from the switch OEM.	
9.2	Lifetime warranty with advance replacement and next-business-day delivery	

Table 20: Patch Panel - 48 Ports - 4 Nos.

Patch Panel shall be implemented in the Data Center and shall be connected to LAN Switches

No	Specification	Compliance
	Make	
	Model	
1	Rack Mountable: Mountable in standard 42U rack	
2	48 ports, 10/ 100/1000 Gigabit Ethernet Base	

Table 21: Firewall – 1 No.

No.	Specification	Compliance
	Make	
	Model	
A.	General Requirements:	
1	The Firewall must be appliance based and should facilitate multi-application environment.	
2	The proposed system shall support unlimited IP/User license for Firewall / VPN (IPSec& SSL)/ IPS/WCF/AV	
3	The Firewall should be ICSA Labs certified for Firewall, AntiVirus, AntiSPAM, VPN & IPS feature.	
4	All features and hardware should be from single OEM, Not third-party	
B.	Networking & System Performance Requirements:	
1	The Firewall should support a minimum of 16 X 10/100/1000 and 1 X USB interfaces for 3G & 4G Datacard and all should be interface should be configurable.	
2	The Firewall should support a minimum of 2 WAN interface and upgradable to 6 WAN interface.	
3	Should support automatic ISP failover as well as ISP load sharing for outbound traffic	
4	The Firewall should support Dynamic Routing Protocol for RIP1 & 2, OSPF, OSPFv3, BGP4, ISIS, RIPng	
5	The Firewall should support throughputs of 3.5 Gbps or better for both small & large packets	
6	The firewall should support throughput of atleast 1Gbps Mbps of AES - IPSEC VPN	
7	Should support concurrent session atleast 2 Mil.	
8	Should support new session per second atleast 4,000	
9	Should support and IPS throughput of 275 Mbps or better	
10	Should support and GAV throughput of upto 65 Mbps	
11	Should support Site to Site VPN Tunnels up to 200	
12	Should support Client to Site VPN Tunnels up to 1000	
13	Should support SSL VPN Tunnels up to 200 without any extra license cost	
14	Should support End Point Protatation Client up to 200	
15	Should support Access Point Centralize Management up to 32 AP	
16	Should support Two Factor Authentication Token up to 100	
C.	Firewall Requirements:	
1	Allow multiple OS firmware image for booting options	
2	Be easily backup or restored via GUI and CLI to/from local PC, remote centralized management or USB disk	
3	The administrator authentication shall be facilitated by local database, PKI & remote services such as Radius, LDAP and TACAS+	
4	The Firewall must be capable of clustering multiple firewalls together into a redundant and highly available stateful configuration (Minimum 10 cluster shoulde support) without any extra license cost for creating HA.	
5	The Firewall should support deployment modes as; "Stealth Mode" or "Route Mode" or "Transparent Mode" or "Proxy Mode".	
6	The proposed system should have integrated Traffic Shaping / QoS functionality	
7	Should support DHCP server & DHCP Agent functionality	
8	The Firewall should support Inbound Port Forwarding with optional inbound Load Balancing	

9	Should support IPv6 ACL to implement security Policy for IPv6 traffic	
10	All internet based applications should be supported for filtering like Telnet, FTP,SMTP, HTTP, DNS, ICMP, DHCP, RPC,SNMP, BGP, IMAP, NFS etc	
11	The Anti Virus Engine should be able to scan following Protocols: HTTP and HTTPS, SMTP and SMTPS, POP3 and POP3S, IMAP, Instant Messenger (AIM, YAHOO!, MSN, ICQ, SIMPLE) and NNTP	
12	The proposed system shall provide ability to allow, block and intercept (allow but quarantine) attachments or downloads according to file extensions and/or file types	
13	The proposed system should have integrated Web Content Filtering solution without external solution, devices or hardware modules.	
15	Should have application control feature with the intelligence to identify & control of popular IM & P2P applications like KaZaa,BitTorrent etc.	
16	Should have the ability to prevent data loss through SMTP, FTP, HTTP, HTTPS & IM	
17	should be able to create policies based on device type like Windows, Android, MAC, Blackberry & Etc. devices connecting to networks, wireless or wired.	
18	Should have “Zero-day” protection against DoS/DDoS and worm attacks based on traffic behavior.	
19	The firewall must support Active-Active as well as Active-Passive redundancy.	
20	The Firewall must support stateful clustering of multiple active firewalls, and the firewalls must load balance the traffic between them to share the load.	
21	The firewall should support minimum 10 Unit HA clustering without any HA Licenses.	
22	Warranty - 3 Years onsite	

Table 22: High Speed Scanner with ADF - 2 Nos.

No	Specification	Compliance
	Make	
	Model	
1	Scan type - Flatbed, ADF	
2	Scan technology - Charge Coupled Device (CCD)	
3	Light source (scanning) - Cold Cathode Fluorescent Lamp (CCFL)	
4	Scan resolution Optical - Up to 600 dpi; Hardware - Up to 600 x 600 dpi	
5	Output resolution dpi settings - 75, 100, 150, 200, 240, 300, 400, 500, 600	
6	Bit depth/Grayscale levels - 48-bit internal/24-bit external/256 grayscale levels	
7	Color scanning - Yes	
8	Scan input modes - Quick start buttons to Smart Document Scan Software and Document Copy; Software scan using Smart Document Scan Software; User application via TWAIN, ISIS, WIA or Kofax VRS Professional drivers	
9	Duplex ADF scanning - Yes	
10	Standard connectivity - 1 USB (2.0)	
11	Control panel - 2 quick start buttons (Scan, Copy), Cancel, Tools, Powersave	
12	Remote front panel software supported	

13	Digital sending standard features - Yes, LED reader, Scan to folder, scan to email, scan to copy, scan to application	
14	Multifeed detection - Yes, ultrasonic	
15	Duty cycle (daily) - Up to 5000 pages per day	
16	Media types - Paper (plain, inkjet, photo), envelopes, cards (index, greeting), 3-D objects	
17	Scan file formats - PDF (formatted Text and Graphics, normal with images, searchable image over text, MRC, PDF/A), TIFF (single page, multi-page, compressed), JPG, BMP, PNG, DOC, RTF, TXT, WPD, XLS, HTM, OPF, UNICODE, XML, XPS	
18	Preview mode - Up to 4 sec	
19	Scan speed ADF (letter) - Up to 50 ppm/100 ipm (letter, color, black and white, grayscale, 200 dpi), up to 40 ppm/80 ipm (black and white, grayscale, 300 dpi), up to 40 ppm/66 ipm (color, 300 dpi)	
20	Scan size (ADF)	
21	Minimum - 2.75 x 5.8 in (70 x 148 mm),	
22	Maximum - 11.7 x 34 in (300 x 864 mm)	
23	Paper sizes supported (ADF) - Letter, legal, executive, A3, A4, A5, A6,	
24	Automatic document feeder capacity - Standard, 200 sheets (20 lb; 75 g/m2)	
25	Media weight imperial (ADF) - 13 to 32 lb (49 to 120 g/m2)	
26	Compatible Operating Systems - Microsoft Windows 7 ready. Windows Vista x64, Windows Vista, Windows XP Professional, Windows XP x64,	
	Power	
27	Power supply type - Built-in universal power supply	
28	Power supply required - 100 to 240 VAC (+/- 10%), 50/60 Hz (+/- 3%)	
29	Power features description - 100 to 240 VAC, 50/60 Hz autoranging internal power supply	
30	Power consumption - 112 watts maximum	
31	Operating environment	
32	Recommended operating temperature - 50 to 95° F (10 to 35° C)	
33	Maximum operating temperature - 50 to 95° F (10 to 35° C)	
34	Temperature storage range - -40 to 158° F (-40 to 70° C)	
35	Humidity recommended operating range - 15 to 80% RH	
36	Operating humidity - 15 to 80% RH	
37	Storage humidity - 15 to 80% RH	
38	Warranty - 3 Years onsite	

Table 23: Scanner with ADF - 10 Nos.

No	Specification		Compliance
	Make		
	Model		
1	Scan Type	Flatbed, ADF	
2	Scan Technology	Charge coupled device (CCD), Light source: Xenon fluorescent lamp	
3	Control Panel	5-button front panel: Scan document, Scan photo, File documents, E-mail, Copy center	

4	Scan Input Modes	Front-panel: Scan document, Scan photo, File documents, E-mail, Copy center; HP Photosmart software; user application via TWAIN; automatic document feeder; transparent materials adapter (scanning 35 mm negatives and slides)	
5	Automatic Document Feeder Capacity:	50 sheets, Paper sizes: Legal, letter, A4, custom	
6	Duty Cycle US Letter or A4	Up to 500 pages	
7	Transparent Materials Adapter	Included, Satellite; three slides or four 35 mm negative frames	
8	Scan Resolution Hardware:	2400 x 2400 dpi, Optical: Up to 2400 dpi Enhanced: Up to 999999 dpi	
9	Color bit depth/Grayscale levels	48-bit/256	
10	Preview Mode	Up to 7 sec	
11	Task Speed	Less than 24 sec: 4 x 6-in color photo into Microsoft Word; less than 36 sec: OCR a full page of text into Microsoft Word; less than 18 sec: e-mail photo	
12	Enlargement Range	10 to 2000% in 1% increments	
13	Scan Size	Maximum: 8.5 x 11 in, Maximum (ADF): 8.5 x 14 in (one-sided); 8.5 x 12 in (two-sided) Minimum (ADF): 3.5 x 5 in (one-sided); 5 x 9 in (two-sided)	
14	Media Types	Paper (banner, inkjet, photo, plain), envelopes, labels, cards (greeting, index), 3-D objects, 35 mm slides and negatives (using transparent materials adapter), iron-on transfers	
15	Photographic Format Types	35 mm film strips, mounted slides, photos up to 8 x 11 in	
16	Scan File Formats	Windows: BMP, JPEG, GIF, TIFF, TIFF compressed, PNG, PCX, Flashpix (FPX), PDF, PDF searchable, RTF, HTM, TXT; Macintosh: TIFF, PICT, JPEG, GIF, FlashPix, Plain Text, PDF, HTML, Rich Text	
17	Control Panel	5 front-panel buttons (Copy, E-mail, File document, Scan document, Scan photo)	
18	Standard Connectivity	Hi-Speed USB - compatible with USB 2.0 specifications	
19	Compatible Operating System	Microsoft® Windows® 7 ready, Windows Vista®, Windows® XP, Windows® XP x64, Windows® 2000, Mac OS X v10.3.9, 10.4.11, 10.5, 10.6	
20	Minimum System	Windows Vista®: 1.3 GHz processor, 1 GB RAM (2 GB for 64-bit); Windows® XP: 1.3 GHz	

	Requirements	processor, 512 MB RAM (1 GB for 64-bit); Windows® 2000: 800 MHz processor, 256 MB RAM, for all systems: 450 MB available hard disk space (additional 500 MB and Hi-Speed USB 2.0 port recommended for extensive ADF use), CD-ROM drive, 800 x 600 SVGA monitor, 16-bit color Mac: Mac OS X v10.2, 10.3, 10.4: PowerPC G3, G4, G5, or Intel Core processor, 128 MB RAM, 240 MB available hard disk space; Mac OS X v10.5: PowerPC G4, G5, or Intel Core processor, 512 MB RAM, 7 GB available hard disk space; Mac OS X v10.6 (available on HP.com): Intel Core processor, 1 GB RAM, 25 MB available hard disk space.	
21	Temperature	Maximum Operating: 41 to 104° F (5 to 40° C); Recommended Operating: 50 to 95° F (10 to 35° C); Storage Range: -40 to 158° F (-40 to 70° C)	
22	Safety	EU (IEC 60950 Third Edition Compliant, Third-Party Safety Certification), North America (Nationally-Recognized Testing Laboratories), Poland (PCBC), Russia (GOST)	
23	Power Supply Type	External power adapter, Power Features Description 100 to 240 VAC, 50/60 Hz, 24 VDC, 1500 mA	
24	Power Consumption	36 watts maximum	
25	Power Supply Required	100 to 240 VAC (+/- 10%), 50/60 Hz (+/- 3%)	
26	Warranty	Warranty - 3 Years onsite	

Table 24: Windows Server Operating System - 5 Nos.

No	Specification	Compliance
1	Microsoft Windows Server 2012 R2 Standard Version or Latest	

Table 25: Linux Server Operating System - 5 Nos.

No	Specification	Compliance
1	Red Hat Enterprise Linux Server Version 6.x or Latest with Postgre SQL 9.2 database	

Table 26: UTP Cable (Structure Cabling as per the site survey of the existing Data Center)

No	Specification	Compliance
1.	UTP, Cat 6, ANSI/TIA/EIA 568-B.2-1	
2.	The cable jacket shall comply with Article 800 NEC for use as a non-plenum cable. The 4 pair UTP cable shall be UL® and c (UL®) Listed Type CM.	
3.	4 pair 23 / 24 AWG Copper with pair separator for uniform characteristic impedance	
4.	Polyethylene/Polyolefin	
5.	Thickness 0.22 ± 0.03mm	
6.	20 to +60 Deg. C	

7.	Flame Retardant PVC	
8.	UL Listed	
9.	100 MHz >= 250 MHz	
10.	25ns-45ns / 100m Max	
11.	100 Ω \pm 6 Ω	
12.	Attenuation, Pair-to-pair and Powersum NEXT, ELFEXT and PS ELFEXT, Return Loss and Delay skew tested for 100m channel as well as 90m Permanent Link	

Table 26.1: Cable Laying (As per the site survey of the existing Data Center)

No	Specification	Compliance
1.	Structured Cabling as per industry Standards	
2.	UL * R certified for complete channel for both Fiber and UTP (CAT 5e/ CAT6) cables.	
3.	Minimum 20 years standard performance warranty should be given on passive components	
4.	UTP or OFC Cable route, with detailed diagram and plan for laying of UTP and OFC for approval.	
5.	Termination of cabling component, UTP cable and OFC with labels & marking as per approved labeling plan & documentation.	
6.	Documentation for all POPs (Hard and Soft Copy) to be maintained for entire 5 years of Projects.	
7.	Should be 1" diameter, with ISI mark.	
8.	At least 4 cable can laid in one casing	
9.	Using clamp or gulli channel should be fix on wall and distance between two gulli or clamp not more then 6 inches.	
10.	Should be 2" inch diameter class B standard	
11.	At least 2 cable can laid in one pipe only	
12.	Should follow approved plan	
13.	OFC laying on wall or underground in GI pipe, vendor should follow as approved plan	
14.	Should be a 24 port modular / discrete patch panel.	
15.	Ports should be individually replaceable and consistent port-to-port performance	
16.	Should confirm or exceed TIA/EIA-568-B.2-1 and IEC 60603-7-4 standards requirements for CAT 6	
17.	Metallic high strength and 1U height	
18.	Should be UL Listed	
19.	Should confirm or exceed TIA/EIA-568-B.2-1 and IEC 60603-7-4 standards requirements for CAT 6	
20.	Durability: 750 mating cycles on modular jack and 200 termination cycles on 110 block	
21.	Multimode OM3 Fiber Patch Chords	
22.	Patch Cords 550 metres channel @ 10 Gb/s	
23.	The fiber-optic patch cord shall be configurable with standard LC, SC, terminations, and shall be available in either 1.6 mm or 3.0 mm duplex zipcord.	
24.	The 1.6 mm cordage shall exceed the requirements for larger diameter	

	cordage and allows at least twice as many fibers to be installed in a cabinet.	
25.	The duplex cordage shall be 1.6 mm by 3.5 mm and have two single fiber cords joined together with a web.	
26.	The connector shall have a pull-proof design that helps prevent accidental disconnects and helps to assure optimal performance of equipment.	

Table 26.2: Mounting Cords

No	Specification	Compliance
1.	Length 10, 20, 30 and 40 feet	
2.	Conductor 23 / 24 AWG 7 / 32, stranded copper	
3.	Cable Type UTP CAT 6 ANSI/TIA/EIA 568-B.2-1	
4.	Plug Protection Anti-s snag feature	
5.	Warranty - Minimum 20-year component warranty	
6.	Cable Type - Cat 6	
7.	Preferably molded	
8.	Terminals - Phosphor Bronze with gold plating	
9.	Jacket - PVC	
10.	Jacket - The cable jacket shall comply with Article 800 NEC for use as a non-plenum cable. The 4 pair UTP cable shall be UL® and c (UL®) Listed Type CM (non-plenum).	
11.	End point connector - Factory fitted RJ-45 plugs at both ends	
12.	Insulation - Flame Retardant	

Form TECH-10 Technical Presentation Agenda

The date and time for Technical Presentation will be informed to those Tenderers who will submit the Tender.

Attributes

A. Presentation/ Walkthrough

- A1. Detailing of Proposed Architectures
- A2. Detailing of Delivery Schedules
- A3. Project Plan
- A4. Effort Estimation
- A5. Satisfactory Replies to queries raised

SECTION- 4

FINANCIAL BID - Standard Forms

[Comments in brackets [] provide guidance to Consultants for the preparation of their Financial Bids; it should not appear on the Financial Bids to be submitted.]

Financial Bid Standard Forms shall be used for the preparation of the Financial Bid.

Form FIN-1: Financial Bid Submission Form	66
Form FIN-2: Summary of Costs	67
Form FIN-3: Item Wise Costing	68

Form FIN-1: Financial Bid Submission Form

[Location, Date]

To: [Name and address of Client]

Dear Sirs:

We, the undersigned, offer to Supply, installation, testing, commissioning of Non-IT infrastructure as per the Bill of Material (BoM) and necessary Service for establishment of Data Center (tier-3) in accordance with your Tender dated [Reference & Insert Date] and our Technical Bid. The Cost of our enclosed Financial Bid is as follows;

- a) Sum of Amounts without taxes [Insert amount(s) in words and figures¹]
- b) Sum of Amount for taxes [Insert amount(s) in words and figures¹]
- c) Total Cost [a + b] [Insert amount(s) in words and figures¹]

Our Financial Bid shall be binding upon us subject to the modifications resulting from Contract negotiations, up to expiration of the validity period of the Bid.

- i. Our bid shall be valid for the period of time specified in ITT Clause 7, from the date fixed for the bid submission deadline, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- ii. We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.
- iii. If our bid is accepted, we commit to obtain a performance security in accordance with ITT Clause for the due performance of the Contract;

We understand you are not bound to accept any Bid you receive.

We remain,

Yours sincerely,

Authorized Signature [In full and initials]: _____

Name and Title of Signatory: _____

Name of Firm: _____

Address: _____

¹ Amounts must coincide with the ones indicated under Total Cost of Financial Bid in Form FIN-2.

Form FIN-2: Summary of Costs

Description		Cost in Rs.
Supply, installation, testing, commissioning of Non-IT Infrastructure as per BoM.		
Services for Establishment of Data Center (Tier-3) as per scope of work & BoM.		
Total Costs of Financial Bid without Taxes		
Taxes and Duties	Tax	
	Tax.....	
GRAND TOTAL COSTS (Including all Taxes and Duties)		

Form FIN-3: Item wise Costing

No.	Description	Qty.	Rate	Amount
	Supply of Items with 3 years Warranty			
1.	Online UPS of 20 KVA for Critical Area (Zone-A)	4		
2.	Online UPS of 10 KVA for Normal Area (Zone-B)	2		
3.	Transient Voltage Surge Suppressor for 20KVA & 10KVA UPS	6		
4.	CCTV System (3 Cameras required) with Audio Visual System	1		
5.	Access Control system	1		
6.	Water Leak Detection System	1		
7.	VESDA	1		
8.	Fire Detection and Control Mechanism	1		
9.	Fire Suppression Systems	1		
10.	Fire Proof Enclosure for Media Storage in Normal Zone	1		
11.	Pest Control system	1		
12.	Rodent repellent system	1		
13.	Precision AC	2		
14.	Comfort AC	2		
15.	Building Management System	1		
16.	Server Rack 42U	2		
17.	Network Rack	2		
18.	Network Smart Rack	1		
19.	Managed Layer 2 Network Switch - 48 Port	4		
20.	Patch Panel - 48 Ports	4		
21.	Firewall	1		
22.	High Speed Scanners with ADF	2		
23.	Scanners with ADF	10		
24.	Windows Server Operating System Software	5		
25.	Linux Server Operating System Software with Postgre SQL	5		
	Taxes			
	Total (A)			
	Services			
1.	Dismantling the partitions of existing Data Center & disposal of the same.			
2.	Electrical Work			

3.	Civil Work			
4.	Interior Work			
5.	Structured cabling requirements for the Data Center including mounting cords, casing, capping, laying, of cables and I/Os.			
6.	Installation, testing and commissioning of all non-IT items of Data Center.			
7.	Call Basis Maintenance Charges (Per Call)			
8.	Miscellaneous, if any (Give details)			
	Taxes			
	Total (B)			
	Grand Total (A)+(B)			

SECTION-5

Terms of Reference (ToR)

ToR for the Supply, Installation, Testing & Commissioning of Non-IT Items and providing Services for Establishment of Data Center (Tier-3), at Head Office, MSAMB, Pune.

I) Background:

1) Maharashtra State Agricultural Marketing Board [MSAMB]:

Maharashtra State Agricultural Marketing Board (MSAMB) is an ISO 9001-2008 certified organization established under section 39 A of Maharashtra Agricultural Produce Marketing (Regulation) Act, 1963. MSAMB is committed to provide quality and timely services in the field of Agriculture marketing by executing various functions like Domestic Marketing, Infrastructure development, Export Promotion, Consultancy, Training and Market Intelligence for the benefit of farmers and market functionaries. MSAMB being an apex body has important role in developing, coordinating and promoting the activities of the agricultural marketing in the State and shouldering the responsibility of planning for their growth and development. MSAMB has completed 29 years of its service in the field of Agricultural Marketing, in the State.

2) Agriculture Produce Market Committee [APMC]:

Agriculture Produce Market Committee (APMC) is established to provide platform for buying and selling of agriculture produce in the State. APMC is a place where farmer brings his agriculture produce for selling through the commission agent. Major objectives of APMCs are to help the farmer to get the remunerative price for his produce and to provide necessary infrastructure facilities to farmers, commission agents, traders and market functionaries, to carry out the day to day transactions. Total 912 (303 main & 609 sub) regulated markets (APMCs) are in existence and more than 250 commodities are notified in the State.

3) MSAMB-IT department (Since 1990):

MSAMB is pioneer in the country for implementation of Information and Communication Technology (ICT) in the field of Agricultural Marketing, in the State. MSAMB has independent IT Department with a data center. Datacenter comprise of eight servers (servers - web, mail, application, database, backup), router, firewall, leased line. Datacenter is managed by IT experts of MSAMB. Present manpower in IT department is Manager (IT), In-charge Managers, Programers, Jr. Programer, Data Entry Operator. Local Area Network (LAN) of 80 computers with Broad Band Internet connection of 16 mbps has been established in the head office. Similarly, Laptops, Computers & Broad Band Internet facilities are provided to 8 division and 30 district offices of MSAMB.

4) MARKNET Project (APMC Computerization):

MARKNET- Market Network Project was initiated in the year 1991-92. MARKNET is a network of computerized APMCs in the State. Under this project MSAMB has computerized APMCs and connected through internet. Objective of the project is to compile and disseminate market arrivals & prices for the benefit of farmers. Computers and internet facilities have been provided free of cost to 294 main markets and 66 sub yards. APMCs are using these computers for daily data upload on MSAMB web site (www.msamb.com) and office work. This website provides latest information about various project, schemes and activities carried out by MSAMB. The web site has average 30000 hits per day. Major feature of this website is online current and future prices of agriculture commodities.

Free email facility has been provided to all APMCs through MSAMB mail server. Daily correspondence and Information exchange between MSAMB and APMCs is being carried out through this email facility. This has saved the time and cost of information exchange between MSAMB and APMCs.

IT Department has provided basic computer training to 1300 staff (Secretaries, Computer Operators, etc.) of APMCs, in the state. IT team is coordinating with all APMCs for daily data upload to MSAMB web site. Similarly, guidance/ support have been provided for problem related to computer hardware and software.

II) Overview:

- 1) MSAMB has initiated next phase of computerization in the field of Agricultural Marketing, the State and decided for complete automation of various activities of MSAMB, NIPHT & APMCs.

MSAMB datacenter was established in 2006. MSAMB web site, mail facility and various online applications are hosted in the datacenter. Team of IT department has designed, developed and implemented 26 online web based applications for various activities of MSAMB and APMCs. User interface & reports of these applications are available in regional (Marathi) language.

All online web based applications are developed using Dot Net technology with SQL database and hosted at MSAMB datacenter. These applications are maintained by IT experts and regular support has been provided to all users/stakeholders. A dedicated 2 mbps Internet Leased Line is available at Datacenter for online access to above applications. Similarly, Firewall is installed in the Datacenter. All APMCs, Exporters, Direct Purchase license holders are compulsory using online applications for various activities. These applications have brought effectiveness & transparency in Bid submission and sanction process. It has become easy to monitor/ track the online

proposals at every stage till final sanction. These applications are regularly used by APMCs, Exporters & Direct Purchase license holders and the results are encouraging. All users have appreciated the efforts.

A web site, MIS and other web based applications of MACP (World Bank fund project of MASMB), have been hosted in the Data Center. The web sites of AIDIP and CAIM (Both internationally funded projects of MSAMB), have been hosted in the Data Center.

MSAMB has planning to provide new online services such as Auction at APMCs, Virtual markets, etc. This demands for a robust state-of-art IT infrastructure and Non-IT infrastructure at the MSAMB Data Centre. In view of above, the existing Data Centre of MSAMB needs immediate “Technology Upgradation”.

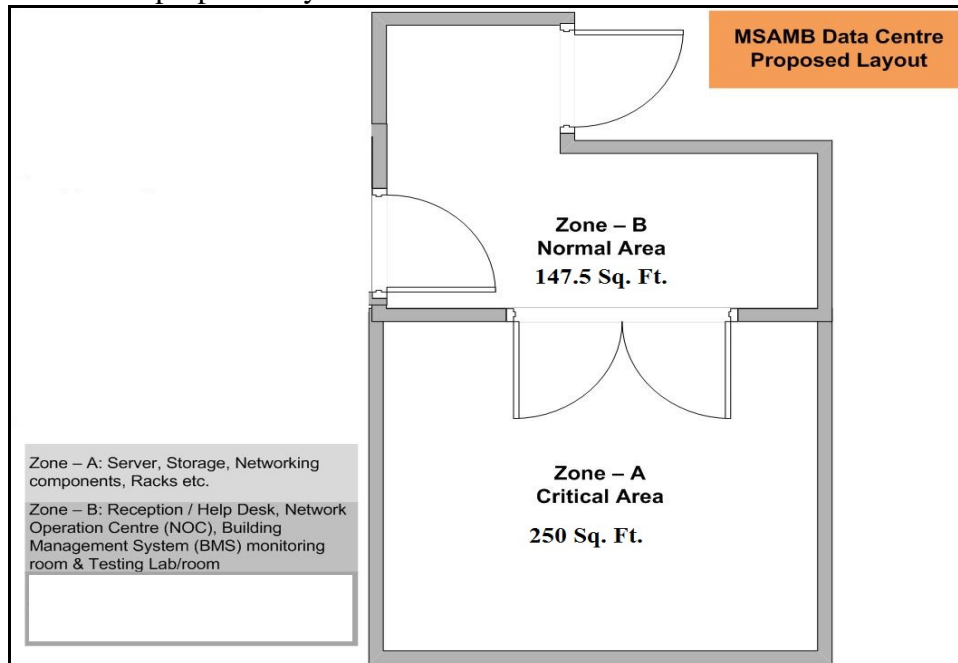
2) Proposed Solution

MSAMB has planned to rollout more services to its stakeholders and have foreseen that there would be a drastic increase in the use of ICT in their functionalities. In order to meet the this objective, the technology upgradation of existing MSAMB data centre is mandatory and shall enable the farming community to have improved access to markets, as well as to provide services seamlessly to all stakeholders without any interruption. MSAMB envisages implementation of various IT applications, including web based IT applications, which will involve capturing and analyzing a large volume of data pertaining to agri-business promotion, as well as, various activities. It is also mandatory to ensure that all the software applications and the relevant data are hosted in a centralized manner at the MSAMB data center in Pune. In order to capture and analyze large volumes of data, there is a need to upgrade the existing data center of the MSAMB to Tier-3 Data Centre with following minimum facilities;

- Multiple independent distribution paths serving the IT equipment.
- All IT equipment would be dual-powered and fully compatible with the topology of a site’s architecture.
- Concurrently maintainable site infrastructure with expected availability of 99.982%.
- Minimal (Ideally less than 2 hours) downtime in a year
- Upto 72 hour power outage protection
- **High Availability**-This assures un-interrupted delivery of services of the department.
- **High Scalability**- This caters to the future growth in services.
- **Enhanced Performance**- This ensures better performance in the delivery of services.
- **Business continuity**- This ensures continuity of services even in case of failure of any IT component due to the redundancy built for key components.

As per the good practices being followed in setting up and managing data centers, it is mandatory to have the following components for the proposed MSAMB data center. This

shall ensure smooth managing of the data center as well as provide sufficient scope for future enhancements. The proposed layout for the MSAMB data center is as shown below;



The flooring should be capable of handling full load of the equipment hosted at the Data Centre. The proposed MSAMB DC should ideally have 3 zones as stated below;

- **Zone-A (Critical area):** Should be of approx. 250 sq. ft. for Server, Storage, Networking components, Racks etc. Critical area (Zone-A) should have Precision air conditioning with 24/7 temperature monitoring and control.
- **Zone-B (Normal Area):** Should be of approx. 147.5 sq. ft. for Reception / Help Desk, Network Operation Centre (NOC), Building Management System (BMS) monitoring room & Testing Lab/room. Normal area (Zone-B & C) should have split-type comfort air-cooled system. UPS Panel can be placed in Normal area. **The Tenderer shall make setting arrangement in normal zone (1 Staff).**
- **Zone-C (Normal Area):** Should be of approx. 100 sq. ft. for Electrical room, UPS/Battery room, Air Handling Unit (AHU) room, Telecom room & Fire Suppression system.
- The distribution system should have enough provision to scale up if required in later stage. It should have provision for Dual bus configuration in order to have dual power supplies to each rack.
- Redundancy – Power supply for each rack should be from different power sources All switchboards should be designed as per IEEE1100-1999 specifications. Panel boards should be divided into two; one from UPS and one from DG set.
- Lighting – Adequate illumination has to be provided for the Data Center. 10% of the power for lighting in other areas should be from emergency panel and the rest from direct electricity board.

- Grounding – Should be a single ground system with separated ground window for power and data conforming to international standards.
- Surge protection system to be installed that conforms to IEEE62.41 and UL 1283 standards.
- Auto Main Failure (AMF) panel is necessary for the DC for connecting the DG, UPS such that automatic switchover takes place during power failure.

III) Objective:

To supply, installation, testing, commissioning of Non-IT infrastructure and provide necessary services for establishment of state-of-art Data Centre (Tier-3), at Head Office of MSAMB.

IV) Scope of Work:

The specific tasks to be performed by the Supplier (Tenderer) are mentioned below.

- Site survey/inspection of existing Data Center of MSAMB at Head office, Market, Gultekd, Pune and study the requirements for establishment of new Data Center (Tier-3). Submission of site survey/ inspection report.
- Dismantle partitions of existing Data Center and make the arrangement for shifting of dismantled material. Submission of dismantle and disposal report.
- Preparation of layout, design & implementation plan in consideration with civil (if required), interior & other necessary work for establishment of new Data Center (Tier-3).
- Presentation of layout, design & implementation plan and approval by MSAMB authority.
- Preparation of the site with all aspects (Civil, Interior & Electric work, Structure cabling, etc.) for establishment of new Data Center (Tier-3) considering Bill of Material and specifications of items of BoM. Submission of site preparation report.
- Provide Services related to Layout Design of Data Center, Dismantle partitions of existing Data Center & disposal of the same, Site preparation (Civil & interior work), Electrical Works, Precision Air conditioning, LAN structured cabling, for Establishment of Data Center (Tier-3), at Head Office, MSAMB, Pune.
- Supply, Installation, Testing & Commissioning of -Precision AC, Comfort AC, CCTV system, Access Control system, Water Leak Detection System, Fire Detection & Suppression system, VESDA system, Fire Proof Enclosure for Media Storage, Pest Control system, Rodent repellent system, Building Management System, Online UPS.
- Certification from MSAMB Authority for successful commissioning the Data Center.

V) Schedule for completion of task by the Tenderer (Working Days)

No.	Task	Duration	Cumulative
	Services -		
1.	Site Survey/ inspection of Existing Datacenter	3 days	3 days
2.	Preparation & submission of new DC Floor Lay-out by Tenderer	7 days	10 days
3.	Approval of DC Floor Lay-out by MSAMB	5 days	15 days

	authority		
4.	Dismantle of partitions of existing Datacenter	7 Days	22 Days
5.	Civil Work if required	21 Days	43 Days
6.	Availability of 3-Phase raw power / transformer set-up & Electric work	14 Days	57 Days
7.	Structure Cabling	7 Days	64 Days
8.	Interior Work	28 Days	92 Days
9.	Installation, testing and commissioning of Non-It Infrastructure of Data Center	21 Days	113 Days
	Supply -		
1.	Delivery of Non-IT Infrastructure of the Data Center	75 Days	Parallel to points 1-8
	Total		113 Days

VI) Duration:

The duration of the Project will be for the period of 113 Days.

VII) Deliverables:

No.	Task	Deliverables
1	Site survey/inspection of existing Data Center of MSAMB.	<ul style="list-style-type: none"> Visit the site of existing Data Center at Head office, Market, Gultekd, MSAMB, Pune. Survey/inspection of existing Data Center. Study the requirements for establishment of new Data Center (Tier-3). Submission of site survey/ inspection report.
2	Dismantle partitions of existing Data Center.	<ul style="list-style-type: none"> Dismantle partitions of existing Data Center. Disposal of dismantled material. Submission of dismantle and disposal report.
3	Preparation of layout, design & implementation plan.	<ul style="list-style-type: none"> Preparation of layout, design & implementation plan considering expected civil (if required), interior & other necessary work for establishment of new Data Center (Tier-3). Submission of the same.
4	Presentation of layout & implementation plan and approval.	<ul style="list-style-type: none"> Presentation of layout, design & implementation plan to MSAMB authority. IF required, make necessary changes/ modifications. Take approval to layout & implementation plan by MSAMB authority.
5.	Preparation of the site for establishment of new Data Center (Tier-3).	<ul style="list-style-type: none"> Considering all aspects of establishment of Tier-3 Data Center, preparation of the site as per layout & implementation plan and specifications of Bill of Material. Submission of site preparation report.
6.	Provide Services related for	<ul style="list-style-type: none"> Provide Services related to Layout Design of Data Center, Dismantle partitions of existing Data Center

No.	Task	Deliverables
	Establishment of Data Center (Tier-3).	& disposal of the same, Site preparation (Civil & interior work), Electrical Works, Precision Air conditioning, LAN structured cabling, for Establishment of Data Center (Tier-3), at Head Office, MSAMB, Pune. <ul style="list-style-type: none"> • Certification from MSAMB authority for successful completion of the Services.
7.	Supply, Installation, Testing & Commissioning of Non-IT infrastructure.	<ul style="list-style-type: none"> • Delivery, successful Installation, Testing & Commissioning of Precision AC, Comfort AC, CCTV system, Access Control system, Water Leak Detection System, Fire Detection & Suppression system, VESDA system, Fire Proof Enclosure for Media Storage, Pest Control system, Rodent repellent system, Building Management System, Online UPS, as per the schedule. • Certification from MSAMB authority for successful commissioning of above items.

VIII) Reporting arrangement:

- The Tenderer shall submit layout, implementation plan in soft and hard copies.
- A weekly progress report shall be submitted in soft & hard copies.

IX) Payment:

Payment of the Company will be made as follows;

No	Work completed	Payment on the total Cost
1	Site survey/inspection of existing Data Center of MSAMB. Preparation of layout, design & implementation plan and approval from MSAMB authority.	5%
2	Completion of site preparation for establishment of new Data Center (Tier-3). (Dismantle of existing partitions & disposal, Civil, Electrical, Interior, Precision ACs, etc. work)	30%
3	Delivery of Non-IT infrastructure as per specifications of BoM.	35%
4	Installation, Testing & Commissioning of Non-IT infrastructure & completion of establishment of Data Center (Tier-3).	20%
5	Certification from MSAMB for successful establishment & commissioning of Data Center (Tier-3)	10%

X) Key Professional Staff:

The Tenderer should have a team of following minimum key professional staff, having minimum qualification & experience given bellow, to plan & execute large scale state level Projects of similar nature.

No.	Designation	Qualification	Duties
1	Project Manager (PM)	M.Tech/ B.Tech/ MCA/ MBA / MCS/ B.E with minimum 10 years of experience in IT Project Management, preferably in establishment of Data Center.	PM shall have effective coordination between MSAMB team & project team. PM will be responsible for; <ul style="list-style-type: none"> • Site Survey/ Inspection and submission of report. • Dismantle partitions of existing Data Center and make the arrangement for shifting of dismantled material. Submission of dismantle and disposal report. • Preparation of layout, design & implementation plan in consideration with civil (if required), interior & other necessary work for establishment of new Data Center (Tier-3). • Presentation of layout, design & implementation plan and approval by MSAMB authority. • Delivery, installing, testing, commissioning of Data Center infrastructure (non-IT) as per the time schedule. • Preparation of the site with all aspects (Civil, Interior & Electric work, Structure cabling, etc.) for establishment of new Data Center (Tier-3).
2	Team Leader	M.Tech/B.Tech./MCA/ MBA/MCS/MCM/B.E. with minimum 10 years of experience in implementation of various IT Projects, preferably in establishment of Data Center.	Coordination with PM, project team, and the team of MSAMB. Responsible for; <ul style="list-style-type: none"> • Preparation, submission, presentation & approval of site layout of proposed Data Center. • Assistance in dismantle of existing Data Center and disposal of dismantle material. Report submission. • Assistance in preparation of layout,

			<p>design & implementation plan in consideration with civil (if required), interior & other necessary work for establishment of new Data Center (Tier-3).</p> <ul style="list-style-type: none"> • Assistance in presentation of layout, design & implementation plan and approval by MSAMB authority. • Assistance in delivery, installing, testing, commissioning of Data Center infrastructure (non-IT) as per the time schedule. • Assistance in preparation of the site with all aspects (Civil, Interior & Electric work, Structure cabling, etc.) for establishment of new Data Center (Tier-3).
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XI) Support to be provided by the MSAMB:

The support provided will be as under:

- i) Coordination between the Tenderer and authorities/staff of MSAMB.
- ii) Inputs for preparation of layout and implementation plan.
- iii) Approval of layout and implementation plan.
- iv) Coordination for site preparation & commission of equipment for establishment of Data Center (Tier-3).

XII) Terms and Conditions:

- i. The successful Tenderer (Service Provider) shall provide detailed schedule for establishment of MSAMB Data Center (Tier-3) and get approved from the authority of MSAMB.
- ii. The successful Tenderer shall provide layout/ design of the proposed Data Center (Tier-3) and the Tenderer has to establish the Data Center in consultation with the officials of MSAMB.
- iii. The successful tenderer has to dismantle existing partitions and make an arrangement for shifting of dismantled material. Ground rent will be levied if material is not removed within 8 days of dismantling.
- iv. The successful tenderer has to do the necessary civil work, if required.
- v. The successful Tenderer shall depute the personnel with adequate experience and competence for the design, development, and establishment of Data Center (Tier-3).
- vi. The successful Tenderer shall provide training about operation and handling of Non-IT infrastructure to IT Experts of MSAMB.
- vii. The successful Tenderer shall be able to provide presentation of technical capacity and resources to carry out the Project.

-
- viii. The successful Tenderer shall submit product broacher and detailed operational manuals of the Items of Bill of Material. These operational manuals shall be submitted at the time of supply and installation.
 - ix. The successful Tenderer shall take care of technical, legal issues related to establishment of Non-It Infrastructure of MSAMB Data Center.
 - x. All items/ equipment/ systems supplied by the successful Tenderer shall have three years onsite warranty.
 - xi. In case of electrical, civil, interior, cabling, etc. work for establishment of Data Center (Tier-3), the successful Tenderer shall follow the rules of Minimum Wages Act, 1948 for the payment to the labours.
 - xii. Penalty of Rs.5000/- per day will be applicable to the successful Tenderer for the delay in delivery, installation and commissioning of items/ equipment mentioned in BoM, according to the time schedule. These penalty charges will be deducted from the payment to the successful Tenderer as per the payment schedule.
 - xiii. The successful bidder shall submit a Performance Security equivalent to 2% of the total accepted Contract value for 6 months, before signing of agreement in the form of a Bank Guarantee valid for 6 months.
 - xiv. The proposed Data Center shall have all minimum features of Tier-3 data center, not restricted to points specified in II) Overview – 2) Proposed Solution given in Terms of Reference (ToR) of this Tender Document.

SECTION-6

STANDARD FORM OF CONTRACT

[DRAFT]

(THIS IS DRAFT CONTRACT DOCUMENT AND SUBJECT TO CHANGE AT THE TIME OF CONTRACT NEGOTIATION AND FINAL CONTRACT AGREEMENT)

Supply & Services

CONTRACT FOR SUPPLY & SERVICES

between

[name of the Client]

and

[name of the Consultant]

Dated: _____

I. Form of Contract

(All notes should be deleted in final text)

This CONTRACT (hereinafter called the "Contract") is made the *[day]* day of the month of *[month]*, *[year]*, between, on the one hand, *[name of client]* (hereinafter called the "Client") and, on the other hand, *[name of Consultant]* (hereinafter called the "Consultant").

WHEREAS

- (a) the Client has requested the Consultant to provide certain consulting services as defined in this Contract (hereinafter called the "Services");
- (b) the Consultant, having represented to the Client that it has the required professional skills, and personnel and technical resources, has agreed to provide the Services on the terms and conditions set forth in this Contract;

NOW THEREFORE the parties hereto hereby agree as follows:

1. The following documents attached hereto shall be deemed to form an integral part of this Contract:
 - (a) The General Conditions of Contract;
 - (b) The Special Conditions of Contract;
 - (c) The following Appendices:
 - Appendix A: Description of Services
 - Appendix B: Reporting Requirements
 - Appendix C: Key Personnel
 - Appendix D: Breakdown of Contract Price in Local Currency
2. The mutual rights and obligations of the Client and the Consultant shall be as set forth in the Contract, in particular:
 - (a) the Consultants shall carry out the Services in accordance with the provisions of the Contract; and
 - (b) the Client shall make payments to the Consultants in accordance with the provisions of the Contract.

IN WITNESS WHEREOF, the Parties hereto have caused this Contract to be signed in their respective names as of the day and year first above written.

For and on behalf of *[name of Client]*

[Authorized Representative]

For and on behalf of *[name of Consultant]*

[Authorized Representative]

II. General Conditions of Contract

General Conditions of Contract

1. Definitions

1.1 The following words and expressions shall have the meanings hereby assigned to them:

- (a) “Contract” means the Contract Agreement entered into between the Purchaser and the Supplier, together with the Contract Documents referred to therein, including all attachments, appendices, and all documents incorporated by reference therein.
- (b) “Contract Documents” means the documents listed in the Contract Agreement, including any amendments thereto.
- (c) “Contract Price” means the price payable to the Supplier as specified in the Contract Agreement, subject to such additions and adjustments thereto or deductions therefrom, as may be made pursuant to the Contract.
- (d) “Day” means calendar day.
- (e) “Completion” means the fulfillment of the Related Services by the Supplier in accordance with the terms and conditions set forth in the Contract.
- (f) “GCC” means the General Conditions of Contract.
- (g) “Goods” means all of the commodities, raw material, machinery and equipment, and/or other materials that the Supplier is required to supply to the Purchaser under the Contract.
- (h) “Purchaser” means the entity purchasing the Goods and Related Services, as specified in the SCC.
- (i) “Related Services” means the services incidental to the supply of the goods, such as installation, testing, commissioning, training and services incidental to establishment of new Data Center, such as dismantle of existing Data Center, preparation of layout, civil, electrical & interior work, initial maintenance and other such obligations of the Supplier under the Contract.
- (j) “SCC” means the Special Conditions of Contract.
- (k) “Supplier” means the natural entity, whose bid to perform the

Contract has been accepted by the Purchaser and is named as such in the Contract Agreement.

- (1) “The Project Site,” where applicable, means the place named in the SCC.

2. Contract Documents

2.1 Subject to the order of precedence set forth in the Contract Agreement, all documents forming the Contract (and all parts thereof) are intended to be correlative, complementary, and mutually explanatory. The Contract Agreement shall be read as a whole.

3. Fraud and Corruption

3.1 If the Purchaser determines that the Supplier has engaged in corrupt, fraudulent, collusive, coercive or obstructive practices, in competing for or in executing the Contract, then the Purchaser may, after giving 14 days of notice to the Supplier, terminate the Supplier's employment under the Contract and cancel the contract, and the provisions of Clause 35 shall apply as if such termination had been made under Sub-Clause 35.1.

(a) For the purposes of this Sub-Clause:

- (i) “corrupt practice”¹ is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
- (ii) “fraudulent practice”² is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;
- (iii) “collusive practice”³ is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
- (iv) “coercive practice”⁴ is impairing or harming, or threatening to impair or harm, directly or

¹ “another party” refers to a public official acting in relation to the procurement process or contract execution. In this context, “public official” includes MSAMB staff and employees of other organizations taking or reviewing procurement decisions.

² a “party” refers to a public official; the terms “benefit” and “obligation” relate to the procurement process or contract execution; and the “act or omission” is intended to influence the procurement process or contract execution.

³ “parties” refers to participants in the procurement process (including public officials) attempting to establish bid prices at artificial, non-competitive levels.

⁴ a “party” refers to a participant in the procurement process or contract execution.

indirectly, any party or the property of the party to influence improperly the actions of a party;

(v) “obstructive practice” is

(aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Purchaser investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or

(bb) acts intended to materially impede the exercise of the Purchaser’s inspection and audit rights.

3.2 Should any employee of the Supplier be determined to have engaged in corrupt, fraudulent, collusive, coercive, or obstructive practice during the purchase of the Goods, then that employee shall be removed.

4. Interpretation

4.1 If the context so requires it, singular means plural and vice versa.

4.2 Incoterms

(a) Unless inconsistent with any provision of the Contract, the meaning of any trade term and the rights and obligations of parties thereunder shall be as prescribed by Incoterms.

(b) :

4.2 Entire Agreement

The Contract constitutes the entire agreement between the Purchaser and the Supplier and supersedes all communications, negotiations and agreements (whether written or oral) of the parties with respect thereto made prior to the date of Contract.

4.3 Amendment

No amendment or other variation of the Contract shall be valid unless it is in writing, is dated, expressly refers to the Contract, and is signed by a duly authorized representative of each party thereto.

4.4 Nonwaiver

- (a) Subject to GCC Sub-Clause 4.5(b) below, no relaxation, forbearance, delay, or indulgence by either party in enforcing any of the terms and conditions of the Contract or the granting of time by either party to the other shall prejudice, affect, or restrict the rights of that party under the Contract, neither shall any waiver by either party of any breach of Contract operate as waiver of any subsequent or continuing breach of Contract.
- (b) Any waiver of a party's rights, powers, or remedies under the Contract must be in writing, dated, and signed by an authorized representative of the party granting such waiver, and must specify the right and the extent to which it is being waived.

4.5 Severability

If any provision or condition of the Contract is prohibited or rendered invalid or unenforceable, such prohibition, invalidity or unenforceability shall not affect the validity or enforceability of any other provisions and conditions of the Contract.

5. Language

- 5.1 The Contract as well as all correspondence and documents relating to the Contract exchanged by the Supplier and the Purchaser, shall be English. Supporting documents and printed literature that are part of the Contract may be in another language provided they are accompanied by an accurate translation of the relevant passages in English language, in which case, for purposes of interpretation of the Contract, this translation shall govern.
- 5.2 The Supplier shall bear all costs of translation to the governing language and all risks of the accuracy of such translation, for documents provided by the Supplier.

6. Deleted (Not Applicable)

7. Eligibility

- 7.1 The Supplier and its Subcontractors shall have the nationality of an eligible country.
- 7.2 All Goods and Related Services to be supplied under the Contract shall have their origin in Eligible Countries. For the purpose of this Clause, origin means the country where the goods have been grown, mined, cultivated, produced, manufactured, or processed; or through manufacture, processing, or assembly, another commercially recognized article results that differs substantially in its basic characteristics from its components.

8. Notices

- 8.1 Any notice given by one party to the other pursuant to the Contract shall be in writing to the address specified in the

SCC. The term “in writing” means communicated in written form with proof of receipt.

8.2 A notice shall be effective when delivered or on the notice’s effective date, whichever is later.

9. Governing Law

9.1 The Contract shall be governed by and interpreted in accordance with the laws of the Union of India.

9.2 All disputes will be subject to Pune Jurisdiction only.

10. Settlement of Disputes

10.1 The Purchaser and the Supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.

10.2 If, after twenty-eight (15) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the Purchaser or the Supplier may give notice to the other party of its intention to commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given. Any dispute or difference in respect of which a notice of intention to commence arbitration has been given in accordance with this Clause shall be finally settled by arbitration. Arbitration may be commenced prior to or after delivery of the Goods under the Contract. Arbitration proceedings shall be conducted in accordance with the rules of procedure **specified in the SCC.**

10.3 Notwithstanding any reference to arbitration herein,

(a) the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and

(b) the Purchaser shall pay the Supplier any monies due the Supplier.

11. Inspections and Audit by the Purchaser

11.1 The Supplier shall permit the Purchase and/or persons appointed by the Purchaser to inspect the Supplier’s offices and/or the accounts and records of the Supplier relating to the performance of the Contract, and to have such accounts and records audited, if required. The Supplier’s attention is drawn to Clause 3, which provides, inter alia, that acts intended to materially impede the exercise of the Purchaser’s inspection and audit rights provided for under Sub-Clause 11.1 constitute a prohibited practice subject to contract termination.

12. Scope of Work

12.1 The Goods and Related Services to be supplied shall be as specified in the Special Condition of Contract.

13. Delivery and Documents	13.1 Subject to GCC Sub-Clause 33.1, the Delivery of the Goods and Completion of the Related Services shall be in accordance with the Delivery and Completion Schedule specified in the ToR. The details of shipping and other documents to be furnished by the Supplier are specified in the SCC .
14. Supplier's Responsibilities	14.1 The Supplier shall supply all the Goods and Related Services included in the Scope of Supply in accordance with GCC Clause 12, and the Delivery and Completion Schedule, as per GCC Clause 13.
15. Contract Price	15.1 Prices charged by the Supplier for the Goods supplied and the Related Services performed under the Contract shall not vary from the prices quoted by the Supplier in its bid, with the exception of any price adjustments authorized in the SCC .
16. Terms of Payment	<p>16.1 The Contract Price, including any Advance Payments, if applicable, shall be paid as specified in the SCC.</p> <p>16.2 The Supplier's request for payment shall be made to the Purchaser in writing, accompanied by invoices describing, as appropriate, the Goods delivered and Related Services performed, and by the documents submitted pursuant to GCC Clause 13 and upon fulfillment of all other obligations stipulated in the Contract.</p> <p>16.3 Payments shall be made promptly by the Purchaser, but in no case later than sixty (60) days after submission of an invoice or request for payment by the Supplier, and after the Purchaser has accepted it.</p> <p>16.4 The payments shall be made in Indian Rupees to the Supplier under this Contract.</p> <p>16.5 In the event that the Purchaser fails to pay the Supplier any payment by its due date or within the period set forth in the SCC, the Purchaser shall pay to the Supplier interest on the amount of such delayed payment at the rate shown in the SCC, for the period of delay until payment has been made in full, whether before or after judgment or arbitrage award.</p>
17. Taxes and Duties	The Supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted Goods to the Purchaser.
18. Performance Security	<p>18.1 If required as specified in the SCC, the Supplier shall, within twenty-eight (28) days of the notification of contract award, provide a performance security for the performance of the Contract in the amount specified in the SCC.</p> <p>18.2 The proceeds of the Performance Security shall be payable to the Purchaser as compensation for any loss resulting from the</p>

Supplier's failure to complete its obligations under the Contract.

18.3 As specified in the SCC, the Performance Security shall be denominated in the Indian Rupees, and shall be in one of the format stipulated by the Purchaser in the SCC, or in another format acceptable to the Purchaser.

18.4 The Performance Security shall be discharged by the Purchaser and returned to the Supplier not later than twenty-eight (28) days following the date of Completion of the Supplier's performance obligations under the Contract, including any warranty obligations, unless specified otherwise in the SCC.

19. Copyright

19.1 The copyright in all drawings, documents, and other materials containing data and information furnished to the Purchaser by the Supplier herein shall remain vested in the Supplier, or, if they are furnished to the Purchaser directly or through the Supplier by any third party, including suppliers of materials, the copyright in such materials shall remain vested in such third party

20. Confidential Information

20.1 The Purchaser and the Supplier shall keep confidential and shall not, without the written consent of the other party hereto, divulge to any third party any documents, data, or other information furnished directly or indirectly by the other party hereto in connection with the Contract, whether such information has been furnished prior to, during or following completion or termination of the Contract. Notwithstanding the above, the Supplier may furnish to its Subcontractor such documents, data, and other information it receives from the Purchaser to the extent required for the Subcontractor to perform its work under the Contract, in which event the Supplier shall obtain from such Subcontractor an undertaking of confidentiality similar to that imposed on the Supplier under GCC Clause 20.

20.2 The Purchaser shall not use such documents, data, and other information received from the Supplier for any purposes unrelated to the contract. Similarly, the Supplier shall not use such documents, data, and other information received from the Purchaser for any purpose other than the performance of the Contract.

20.3 The obligation of a party under GCC Sub-Clauses 20.1 and 20.2 above, however, shall not apply to information that:

(a) the Purchaser or Supplier need to share with the Bank or other institutions participating in the financing of the Contract;

(b) now or hereafter enters the public domain through no fault of

that party;

- (c) can be proven to have been possessed by that party at the time of disclosure and which was not previously obtained, directly or indirectly, from the other party; or
- (d) otherwise lawfully becomes available to that party from a third party that has no obligation of confidentiality.

20.4 The above provisions of GCC Clause 20 shall not in any way modify any undertaking of confidentiality given by either of the parties hereto prior to the date of the Contract in respect of the Supply or any part thereof.

20.5 The provisions of GCC Clause 20 shall survive completion or termination, for whatever reason, of the Contract.

21. Subcontracting

21.1 The Supplier shall notify the Purchaser in writing of all subcontracts awarded under the Contract if not already specified in the bid. Such notification, in the original bid or later shall not relieve the Supplier from any of its obligations, duties, responsibilities, or liability under the Contract.

21.2 Subcontracts shall comply with the provisions of GCC Clauses 3 and 7.

22. Specifications and Standards

22.1 Technical Specifications and Drawings

(a) The Goods and Related Services supplied under this Contract shall conform to the technical specifications and standards mentioned in Section VI, Schedule of Requirements and, when no applicable standard is mentioned, the standard shall be equivalent or superior to the official standards whose application is appropriate to the Goods' country of origin.

(b) The Supplier shall be entitled to disclaim responsibility for any design, data, drawing, specification or other document, or any modification thereof provided or designed by or on behalf of the Purchaser, by giving a notice of such disclaimer to the Purchaser.

(c) Wherever references are made in the Contract to codes and standards in accordance with which it shall be executed, the edition or the revised version of such codes and standards shall be those specified in the Schedule of Requirements. During Contract execution, any changes in any such codes and standards shall be applied only after approval by the Purchaser and shall be treated in accordance with GCC Clause 33.

23. Packing and

23.1 The Supplier shall provide such packing of the Goods as is

Documents	<p>required to prevent their damage or deterioration during transit to their final destination, as indicated in the Contract. During transit, the packing shall be sufficient to withstand, without limitation, rough handling and exposure to extreme temperatures, salt and precipitation, and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the goods' final destination and the absence of heavy handling facilities at all points in transit.</p> <p>23.2 The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract, including additional requirements, if any, specified in the SCC, and in any other instructions ordered by the Purchaser.</p>
24. Insurance	<p>24.1 Unless otherwise specified in the SCC, the Goods supplied under the Contract shall be fully insured—against loss or damage incidental to manufacture or acquisition, transportation, storage, and delivery, in accordance with the applicable Incoterms or in the manner specified in the SCC.</p>
25. Transportation	<p>25.1 Unless otherwise specified in the SCC, responsibility for arranging transportation of the Goods shall be in accordance with the specified Incoterms.</p>
26. Inspections and Tests	<p>26.1 The Supplier shall at its own expense and at no cost to the Purchaser carry out all such tests and/or inspections of the Goods and Related Services as are specified in the SCC.</p> <p>26.2 The inspections and tests may be conducted on the premises of the Supplier or its Subcontractor, at point of delivery, and/or at the Goods' final destination, or in another place in the Purchaser's Country as specified in the SCC. Subject to GCC Sub-Clause 26.3, if conducted on the premises of the Supplier or its Subcontractor, all reasonable facilities and assistance, including access to drawings and production data, shall be furnished to the inspectors at no charge to the Purchaser.</p> <p>26.3 The Purchaser or its designated representative shall be entitled to attend the tests and/or inspections referred to in GCC Sub-Clause 26.2, provided that the Purchaser bear all of its own costs and expenses incurred in connection with such attendance including, but not limited to, all traveling and board and lodging expenses.</p> <p>26.4 Whenever the Supplier is ready to carry out any such test and inspection, it shall give a reasonable advance notice, including the place and time, to the Purchaser. The Supplier shall obtain from any relevant third party or manufacturer any necessary permission or consent to enable the Purchaser or its designated representative to attend the test and/or inspection.</p>

- 26.5 The Purchaser may require the Supplier to carry out any test and/or inspection not required by the Contract but deemed necessary to verify that the characteristics and performance of the Goods comply with the technical specifications codes and standards under the Contract, provided that the Supplier's reasonable costs and expenses incurred in the carrying out of such test and/or inspection shall be added to the Contract Price. Further, if such test and/or inspection impedes the progress of manufacturing and/or the Supplier's performance of its other obligations under the Contract, due allowance will be made in respect of the Delivery Dates and Completion Dates and the other obligations so affected.
- 26.6 The Supplier shall provide the Purchaser with a report of the results of any such test and/or inspection.
- 26.7 The Purchaser may reject any Goods or any part thereof that fail to pass any test and/or inspection or do not conform to the specifications. The Supplier shall either rectify or replace such rejected Goods or parts thereof or make alterations necessary to meet the specifications at no cost to the Purchaser, and shall repeat the test and/or inspection, at no cost to the Purchaser, upon giving a notice pursuant to GCC Sub-Clause 26.4.
- 26.8 The Supplier agrees that neither the execution of a test and/or inspection of the Goods or any part thereof, nor the attendance by the Purchaser or its representative, nor the issue of any report pursuant to GCC Sub-Clause 26.6, shall release the Supplier from any warranties or other obligations under the Contract.
- 27. Liquidated Damages**
- 27.1 Except as provided under GCC Clause 32, if the Supplier fails to deliver any or all of the Goods by the Date(s) of delivery or perform the Related Services within the period specified in the Contract, the Purchaser may without prejudice to all its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage specified in the **SCC** of the delivered price of the delayed Goods or unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the percentage specified in those **SCC**. Once the maximum is reached, the Purchaser may terminate the Contract pursuant to GCC Clause 35.
- 28. Warranty**
- 28.1 The Supplier warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the Contract.
- 28.2 Subject to GCC Sub-Clause 22.1(b), the Supplier further warrants that the Goods shall be free from defects arising from

any act or omission of the Supplier or arising from design, materials, and workmanship, under normal use in the conditions prevailing in the country of final destination.

- 28.3 Unless otherwise specified in the **SCC**, the warranty shall remain valid for twelve (12) months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the **SCC**, or for eighteen (18) months after the date of shipment from the port or place of loading in the country of origin, whichever period concludes earlier.
- 28.4 The Purchaser shall give notice to the Supplier stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof. The Purchaser shall afford all reasonable opportunity for the Supplier to inspect such defects.
- 28.5 Upon receipt of such notice, the Supplier shall, within the period specified in the **SCC**, expeditiously repair or replace the defective Goods or parts thereof, at no cost to the Purchaser.
- 28.6 If having been notified, the Supplier fails to remedy the defect within the period specified in the **SCC**, the Purchaser may proceed to take within a reasonable period such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.

**29. Patent
Indemnity**

- 29.1 The Supplier shall, subject to the Purchaser's compliance with GCC Sub-Clause 29.2, indemnify and hold harmless the Purchaser and its employees and officers from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Purchaser may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract by reason of:
- (a) the installation of the Goods by the Supplier or the use of the Goods in the country where the Site is located; and
 - (b) the sale in any country of the products produced by the Goods.

Such indemnity shall not cover any use of the Goods or any part thereof other than for the purpose indicated by or to be reasonably inferred from the Contract, neither any infringement resulting from the use of the Goods or any part thereof, or any products produced

thereby in association or combination with any other equipment, plant, or materials not supplied by the Supplier, pursuant to the Contract.

29.2 If any proceedings are brought or any claim is made against the Purchaser arising out of the matters referred to in GCC Sub-Clause 29.1, the Purchaser shall promptly give the Supplier a notice thereof, and the Supplier may at its own expense and in the Purchaser's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claim.

29.3 If the Supplier fails to notify the Purchaser within twenty-eight (28) days after receipt of such notice that it intends to conduct any such proceedings or claim, then the Purchaser shall be free to conduct the same on its own behalf.

29.4 The Purchaser shall, at the Supplier's request, afford all available assistance to the Supplier in conducting such proceedings or claim, and shall be reimbursed by the Supplier for all reasonable expenses incurred in so doing.

29.5 The Purchaser shall indemnify and hold harmless the Supplier and its employees, officers, and Subcontractors from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Supplier may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract arising out of or in connection with any design, data, drawing, specification, or other documents or materials provided or designed by or on behalf of the Purchaser.

30. Limitation of Liability

- 30.1 Except in cases of criminal negligence or willful misconduct,
- (a) the Supplier shall not be liable to the Purchaser, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the Supplier to pay liquidated damages to the Purchaser and
 - (b) the aggregate liability of the Supplier to the Purchaser, whether under the Contract, in tort or otherwise, shall not exceed the total Contract Price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment, or to any obligation of the supplier to indemnify the purchaser with respect to patent

infringement

- 31. Change in Laws and Regulations**
- 31.1 Unless otherwise specified in the Contract, if after the date of 28 days prior to date of Bid submission, any law, regulation, ordinance, order or bylaw having the force of law is enacted, promulgated, abrogated, or changed in India, where the Site is located (which shall be deemed to include any change in interpretation or application by the competent authorities) that subsequently affects the Delivery Date and/or the Contract Price, then such Delivery Date and/or Contract Price shall be correspondingly increased or decreased, to the extent that the Supplier has thereby been affected in the performance of any of its obligations under the Contract. Notwithstanding the foregoing, such additional or reduced cost shall not be separately paid or credited if the same has already been accounted for in the price adjustment provisions where applicable, in accordance with GCC Clause 15.
- 32. Force Majeure**
- 32.1 The Supplier shall not be liable for forfeiture of its Performance Security, liquidated damages, or termination for default if and to the extent that its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.
- 32.2 For purposes of this Clause, “Force Majeure” means an event or situation beyond the control of the Supplier that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the Supplier. Such events may include, but not be limited to, acts of the Purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.
- 32.3 If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.
- 33. Change Orders and Contract Amendments**
- 33.1 The Purchaser may at any time order the Supplier through notice in accordance GCC Clause 8, to make changes within the general scope of the Contract in any one or more of the following:
- (a) drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Purchaser;
 - (b) the method of shipment or packing;

- (c) the place of delivery; and
- (d) the Related Services to be provided by the Supplier.

33.2 If any such change causes an increase or decrease in the cost of, or the time required for, the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or in the Delivery/Completion Schedule, or both, and the Contract shall accordingly be amended. Any claims by the Supplier for adjustment under this Clause must be asserted within twenty-eight (28) days from the date of the Supplier's receipt of the Purchaser's change order.

33.3 Prices to be charged by the Supplier for any Related Services that might be needed but which were not included in the Contract shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services.

33.4 Subject to the above, no variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.

34. Extensions of Time

34.1 If at any time during performance of the Contract, the Supplier or its subcontractors should encounter conditions impeding timely delivery of the Goods or completion of Related Services pursuant to GCC Clause 13, the Supplier shall promptly notify the Purchaser in writing of the delay, its likely duration, and its cause. As soon as practicable after receipt of the Supplier's notice, the Purchaser shall evaluate the situation and may at its discretion extend the Supplier's time for performance, in which case the extension shall be ratified by the parties by amendment of the Contract.

34.2 Except in case of Force Majeure, as provided under GCC Clause 32, a delay by the Supplier in the performance of its Delivery and Completion obligations shall render the Supplier liable to the imposition of liquidated damages pursuant to GCC Clause 26, unless an extension of time is agreed upon, pursuant to GCC Sub-Clause 34.1.

35. Termination

35.1 Termination for Default

- (a) The Purchaser, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Supplier, may terminate the Contract in whole or in part:
 - (i) if the Supplier fails to deliver any or all of the Goods/Services within the period specified in the Contract, or within any extension thereof granted

by the Purchaser pursuant to GCC Clause 34;

- (ii) if the Supplier fails to perform any other obligation under the Contract; or
- (iii) if the Supplier, in the judgment of the Purchaser has engaged in fraud and corruption, as defined in GCC Clause 3, in competing for or in executing the Contract.

- (b) In the event the Purchaser terminates the Contract in whole or in part, pursuant to GCC Clause 35.1(a), the Purchaser may procure, upon such terms and in such manner as it deems appropriate, Goods or Related Services similar to those undelivered or not performed, and the Supplier shall be liable to the Purchaser for any additional costs for such similar Goods or Related Services. However, the Supplier shall continue performance of the Contract to the extent not terminated.

35.2 Termination for Insolvency.

- (a) The Purchaser may at any time terminate the Contract by giving notice to the Supplier if the Supplier becomes bankrupt or otherwise insolvent. In such event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy that has accrued or will accrue thereafter to the Purchaser

35.3 Termination for Convenience.

- (a) The Purchaser, by notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Purchaser's convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.
- (b) The Goods that are complete and ready for shipment within twenty-eight (28) days after the Supplier's receipt of notice of termination shall be accepted by the Purchaser at the Contract terms and prices. For the remaining Goods, the Purchaser may elect:
 - (i) to have any portion completed and delivered at the Contract terms and prices; and/or
 - (ii) to cancel the remainder and pay to the Supplier

an agreed amount for partially completed Goods and Related Services and for materials and parts previously procured by the Supplier.

- 36. Assignment** 36.1 Neither the Purchaser nor the Supplier shall assign, in whole or in part, their obligations under this Contract, except with prior written consent of the other party.

Section VIII. Special Conditions of Contract

The following Special Conditions of Contract (SCC) shall supplement and / or amend the General Conditions of Contract (GCC). Whenever there is a conflict, the provisions herein shall prevail over those in the GCC.

IGCC 1.1(j)	The Purchaser is: The Managing Director, Maharashtra State Agricultural Marketing Board, Pune Plot No. R-7, Market Yard, Gultekdi, Pune.
GCC 1.1 (o)	The Project Site(s)/Final Destination(s) is/are: Managing Director Maharashtra State Agricultural Marketing Board R-7, Market Yard, Gultekadi, Pune 411 037. Maharashtra, India Tel: 020 2426 1190, 2426 8297, Fax: 020 2427 2095, E-Mail: msamb@vsnl.com.
GCC 4.2 (a)	The meaning of the trade terms shall be as prescribed by Incoterms.
GCC 4.2 (b)	The version edition of Incoterms shall be 2010
GCC 8.1	For notices , the Purchaser's address shall be: Managing Director Maharashtra State Agricultural Marketing Board R-7, Market Yard, Gultekadi, Pune 411 037. Maharashtra, India Tel: 020 2426 1190, 2426 8297, Fax: 020 2427 2095, E-Mail: msamb@vsnl.com.

GCC 10.2	<p>1. Settlement of Disputes</p> <p>The dispute settlement mechanism to be applied shall be as follows: Except where otherwise provided for in the contract, all questions and disputes or things whatsoever in any way arising out of or relating to the contract or these conditions or otherwise concerning the works or the execution or failure to execute the same whether arising during the progress of the work or after the cancellation, termination, completion or abandonment thereof shall be dealt with as mentioned hereinafter:</p> <ol style="list-style-type: none"><li data-bbox="519 514 1458 829">i. If the Supplier considers any work awarded is outside the requirements of the contract, or it disputes any record or decision given in writing by the Purchaser on any matter in connection with or arising out of the contract for carrying out the work, to be unacceptable then the Supplier within 10 days of such dispute request the Purchaser in writing for instruction or decision. Thereupon, the Purchaser shall give his written instructions or decision within a period of 10 days from the receipt of the Supplier's letter.<li data-bbox="519 829 1458 1102">ii. Except where the decision has become final, binding and conclusive in terms of sub para (i) above disputes of difference shall be referred to the sole arbitrator namely Managing Director, MSAMB. The provisions of Indian Arbitration Act, 1940 and the rules made there under or statutory modifications thereto for the time being enforced. The decision of the Managing Director, MSAMB shall be final and binding upon both parties.<li data-bbox="519 1102 1458 1306">iii. The Supplier shall not have any lien on the site on the work in process for the dues. In case of dispute of any nature the Supplier should handover the site/work in progress, if so directed to the Supplier irrespective of pending settlement of dues. So as to enable the Purchaser to get the work completed from some other Supplier of it's choice.
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GCC 12.1	<p>The scope of Work:</p> <ol style="list-style-type: none">a. Site survey/inspection of existing Data Center of MSAMB at Head office, Market, Gultekd, Pune and study the requirements for establishment of new Data Center (Tier-3). Understand the capacity and other related parameters of the existing transformer, DG set which is available and completely functional at MSAMB head office and assess the requirement of the new Data Centre. Tier-3 design shall be applicable from the LT panel onwards.b. Dismantle partitions of existing Data Center and make the arrangement for shifting of dismantled material.c. Preparation of layout, design & implementation plan in consideration with civil (if required), interior & other necessary work for establishment of new Data Center (Tier-3).d. Presentation of layout, design & implementation plan and approval by MSAMB authority.e. Preparation of the site with all aspects (Civil, Interior & Electric work, Structure cabling, etc.) for establishment of new Data Center (Tier-3) considering Bill of Material and specifications of items mentioned in BoM.f. Provide Services related to Layout Design of Data Center, Dismantle partitions of existing Data Center & disposal of the same, Site preparation (Civil & interior work with fire proof electrical equipment), Electrical Works, Precision Air conditioning, LAN structured cabling, for Establishment of Data Center (Tier-3), at Head Office, MSAMB, Pune.g. Supply, Installation, Testing & Commissioning of -Precision AC, Comfort AC, CCTV system, Access Control system, Water Leak Detection System, Fire Detection & Suppression system, VESDA system, Fire Proof Enclosure for Media Storage, Pest Control system, Rodent repellent system, Building Management System, Online UPS. Certification for successful commissioning from MSAMB Authority for the same.h. Certification from MSAMB Authority for successful completion of the same.
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GCC 13.1	<p>Details of Documents to be furnished by the Supplier are given below:</p> <p>GCC 13.1 Upon delivery of the goods to the consignee, the supplier shall notify the purchaser and mail the following documents to the Purchaser :</p> <ul style="list-style-type: none"> (i) 3 (Three) Copies of the Supplier invoice showing contract number, goods description, quantity, unit price, total amount (2 copies to the invoice to the Consignee and 1 copy to the Purchaser); (ii) Delivery note with acknowledgement of receipt of goods from the Consignee; (iii) 3 (Three) Copies of packing list identifying contents of each package (2 copies to the invoice to the Consignee and 1 copy to the Purchaser); (iv) Insurance certificate; (v) Manufacturer's/Supplier's warranty certificate; (vi) Supplier's factory inspection report; and (vii) Certificate of origin. <p>The above documents shall be received by the Purchaser after delivery of the Goods, and if not received, the supplier will be responsible for any consequent expenses.</p>
GCC 15.1	The prices charged for the Goods supplied and the related Services performed shall not be adjustable.
GCC 16.1	<p>Payment shall be made in the currency specified in the Contract in the following manner:</p> <p>(a) <i>Payment for Goods and Services supplied from India:</i></p>

	<p>(i) <i>Advance Payment</i>: Nil.</p> <p>(ii) <i>On Delivery</i>: Seventy (80)% of the contract price of the goods shall be paid on receipt of Goods and upon submission of the documents specified in Clause 13.1 of SCC; and</p> <p>(iii) <i>On Final Acceptance</i>: the remaining twenty (20)% of the Contract Price of the goods shall be paid within thirty (30) days after the date of the Acceptance Certificate issued by the Purchaser’s representative in the proforma given in Section VI - Form 6.</p> <p>(b) Reimbursement of local taxes such as sales tax, octroi etc. will be at actual based on the documentary evidence of payment within 30 days of submission of bill with documents.</p> <p>(c) (i) For all the payments to be made, against Bank guarantees, the bank guarantee shall be issued by a Scheduled Indian Bank in the format enclosed at Section VIII. The guarantees issued by other banks should be confirmed by a Scheduled Indian Bank.</p> <p>(ii) Bank guarantees for advance payment shall be released not later than 30 days after the date of completion of supply of the goods at their final destination.</p>
<p>GCC 16.5</p>	<p>The payment-delay period after which the Purchaser shall pay interest to the supplier shall be 60 days. The interest rate that shall be applied is 0.01 % of local currency per day</p>
<p>GCC 18.1</p>	<p>Performance Security to the Purchaser shall be for an amount of 5% of the contract value, valid upto 60 days after the date of completion of performance obligations including warranty obligations.</p> <p>In the event of any correction of defects or replacement of defective material during the warranty period, the warranty for the corrected/ replaced material shall be extended to a further period of 12 months and the Performance Bank guarantee for proportionate value shall be extended 60 days over and above the extended warranty period.</p>
<p>GCC 18.3</p>	<p>If required, the Performance Security shall be in the form of a “Bank demand draft or Bank Guarantee” drawn in favour of the Purchaser in the name <i>MSAMB payable at PUNE</i>. .</p>

<p>GCC 18.4</p>	<p>Substitute Clause 18.4 of the GCC by the following:</p> <p>The performance Security will be discharged by the Purchaser and returned to the Supplier not later than 60 days following the date of completion of the Supplier’s performance obligations, including the warranty obligation, under the contract and following receipt of a performance guarantee for 2.5% of the contract value.</p>
<p>GCC 18.5</p>	<p>Add as Clause 18.5 to the GCC the following:</p> <p>In the event of any contractual amendment, the Supplier shall, within 28 days of receipt of such amendment, furnish the amendment to the Performance Security, rendering the same valid for the duration of the Contract, as amended for 60 days after the completion of performance obligations including warranty obligations.</p>
<p>GCC 23.2</p>	<p><u>Packing Instructions:</u> The Supplier will be required to make separate packages for each Consignee. Each package will be marked on three sides with proper paint / indelible ink with the following:</p> <ul style="list-style-type: none"> (i) Project: <i>Maharashtra State Agricultural Marketing Board (MSAMB)</i> (ii) Contract No.: (iii) Country of Origin of Goods: (iv) Supplier’s Name: (v) Packing List Reference Number: <p>Suppliers should use recycled materials as much as possible for packing</p>
<p>GCC 24.1</p>	<p>Amend GCC Clause 24.1 as under and insert Clause GCC 24.2:</p> <p>The insurance shall be paid in an amount equal to 110 percent of the CIF or CIP (EXW for Goods supplied from within the country) value of the Goods from “Warehouse to warehouse (final destination)” on “All Risks” basis including War Risks and Strikes, valid for a period not less than 3 months after installation and commissioning and issue of acceptance certificate by the purchaser.</p>
<p>GCC 24.2</p>	<p>Should any loss or damage occur, the Supplier shall -</p> <ul style="list-style-type: none"> a) initiate and pursue claim till settlement, and b) Promptly make arrangements for repair and/or replacement of any damaged item/s and ensure supply/commissioning as per terms of the contract, irrespective of settlement of claim by the underwriters.

GCC 25.1	The Supplier is required under the Contract to transport the Goods duly insured to the specified final destination, and all related costs shall be included in the Contract Price.
GCC 26.1	<p>The inspections and tests shall be:</p> <p>The hardware Servers, Storage & Tape Library, Network & Security Components, System Software & Other Related Components for Upgradation Of MSAMB Data Centre as per the technical specifications shall be inspected at the site locations as per the list attached.</p> <p>The inspection will comprise of physical checking of the supplied hardware, by the supplier in the presence of consignee / the representative of the purchaser.</p>
GCC 26.2	<p>The Inspections and tests shall be conducted at:</p> <p>The hardware and software as per the technical specification shall be inspected at the site locations as per the list attached.</p>
GCC 27.1	The liquidated damage shall be: 0.5% of contract price per week or part thereof.
GCC 27.2	The maximum amount of liquidated damages shall be: 10% of the contract price.
GCC 28.3	<p>Amend GCC Clause 28.3 & insert GCC Clause 28.7 as under:</p> <p>In partial modification of the provisions, the warranty period shall be Twenty Four months from date of commissioning of the Goods, whichever occurs earlier. The Supplier shall, in addition, comply with the performance guarantees specified under the Contract. If, for reasons attributable to the supplier, these guarantees are not attained in whole or in part, the Supplier shall, make such changes, modifications, and/or additions to the Goods or any part thereof as may be necessary in order to attain the guarantees specified in the contract at its own cost and expense and to carry out further performance tests in accordance with GCC 26.2.</p>
GCC 28.5	The period for repair or replacement shall be: 2 days

GCC 28.7	Maintenance Service
GCC 28.7.1	Free maintenance services shall be provided by the supplier during the period of warranty.
GCC 28.7.2	<p>The maximum response time for a maintenance complaint from any of the destination specified in the schedule of requirements (i.e. time required for supplier's maintenance engineers to report to the installations after a request call / telegram / fax is made or letter is written) shall not exceed: on-site on-call basis, support for Servers, Storage & Tape Library, Network & Security Components, System Software & other Related Components for Upgradation of MSAMB Data Centre should be seventy-two (72) hours from reporting. Response time for problem resolution for the Servers, Storage & Tape Library, Network & Security Components, System Software & other Related Components, the support should be onsite next business day or on the same day of reporting.</p> <p>The Bidder should provide unconditional warranty for TWO (2) years.</p>
GCC 28.7.3	<p>It is expected that the average downtime of an item will be less than half the maximum downtime (i.e. defined as number of days for which an item of equipment is not usable because of inability of the supplier to repair it) as mentioned in the form of technical details. In case an item is not usable beyond the stipulated maximum downtime the supplier will be required to arrange for an immediate replacement of the same till it is repaired. Failure to arrange for the immediate repair / replacement will be liable for penalty of Rs. 5000/- per day. The amount of penalty will be recovered from performance security during warranty.</p>
GCC 31.1	This clause will apply only to variations in VAT/Sales tax/ Octroi etc payable in India on the final product which is being supplied and not for the individual components / raw materials which go into the product.

Section IX – Contract Forms

Table of Forms

1. Contract Agreement
2. Performance Security
3. Description of the Services
4. Reporting Requirements
5. Key Personnel
6. Breakdown of Contract Price in Local Currency
7. Terms and Conditions

1. Contract Agreement

[The successful Bidder shall fill in this form in accordance with the instructions indicated]

THIS CONTRACT AGREEMENT is made

the *[insert: **number**]* day of *[insert: **month**]*, *[insert: **year**]*.

BETWEEN

- (1) *[insert complete name of Purchaser], a [insert description of type of legal entity, for example, an agency of the Ministry of of the Government of { insert name of Country of Purchaser }, or corporation incorporated under the laws of { insert name of Country of Purchaser }] and having its principal place of business at [insert address of Purchaser] (hereinafter called “the Purchaser”), and*
- (2) *[insert name of Supplier], a corporation incorporated under the laws of [insert: country of Supplier] and having its principal place of business at [insert: address of Supplier] (hereinafter called “the Supplier”).*

WHEREAS the Purchaser invited bids for certain Goods and ancillary services, viz., *[insert brief description of Goods and Services]* and has accepted a Bid by the Supplier for the supply of those Goods and Services in the sum of *[insert Contract Price in words and figures, expressed in the Contract currency(ies)]* (hereinafter called “the Contract Price”).

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
2. The following documents shall constitute the Contract between the Purchaser and the Supplier, and each shall be read and construed as an integral part of the Contract:
 - (a) This Contract Agreement
 - (b) Special Conditions of Contract
 - (c) General Conditions of Contract
 - (d) Technical Requirements (including Schedule of Requirements and Technical Specifications)
 - (e) The Supplier’s Bid and original Price Schedules
 - (f) The Purchaser’s Notification of Award
 - (g) *[Add here any other document(s)]*

3. This Contract shall prevail over all other Contract documents. In the event of any discrepancy or inconsistency within the Contract documents, then the documents shall prevail in the order listed above.
4. In consideration of the payments to be made by the Purchaser to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Purchaser to provide the Goods and Services and to remedy defects therein in conformity in all respects with the provisions of the Contract.
5. The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the Goods and Services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of *[insert the name of the Contract governing law country]* on the day, month and year indicated above.

For and on behalf of the Purchaser

Signed: *[insert signature]*
in the capacity of *[insert title or other appropriate designation]*
in the presence of *[insert identification of official witness]*

For and on behalf of the Supplier

Signed: *[insert signature of authorized representative(s) of the Supplier]*
in the capacity of *[insert title or other appropriate designation]*
in the presence of *[insert identification of official witness]*

2. Performance Security

[The bank, as requested by the successful Bidder, shall fill in this form in accordance with the instructions indicated]

Date: *[insert date (as day, month, and year) of Bid Submission]*
ICB No. and title: *[insert no. and title of bidding process]*

Bank's Branch or Office: *[insert complete name of Guarantor]*

Beneficiary: *[insert complete name of Purchaser]*

PERFORMANCE GUARANTEE No.: *[insert Performance Guarantee number]*

We have been informed that *[insert complete name of Supplier]* (hereinafter called "the Supplier") has entered into Contract No. *[insert number]* dated *[insert day and month]*, *[insert year]* with you, for the supply of *[description of Goods and related Services]* (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a Performance Guarantee is required.

At the request of the Supplier, we hereby irrevocably undertake to pay you any sum(s) not exceeding *[insert amount(s)⁵ in figures and words]* upon receipt by us of your first demand in writing declaring the Supplier to be in default under the Contract, without cavil or argument, or your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This Guarantee shall expire no later than the *[insert number]* day of *[insert month]* *[insert year]*,⁶ and any demand for payment under it must be received by us at this office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 458, except that subparagraph (ii) of Sub-article 20(a) is hereby excluded.

[signatures of authorized representatives of the bank and the Supplier]

⁵ *The Bank shall insert the amount(s) specified in the SCC and denominated, as specified in the SCC, either in the currency(ies) of the Contract or a freely convertible currency acceptable to the Purchaser.*

⁶ *Dates established in accordance with Clause 17.4 of the General Conditions of Contract ("GCC"), taking into account any warranty obligations of the Supplier under Clause 15.2 of the GCC intended to be secured by a partial Performance Guarantee. The Purchaser should note that in the event of an extension of the time to perform the Contract, the Purchaser would need to request an extension of this Guarantee from the Bank. Such request must be in writing and must be made prior to the expiration date established in the Guarantee. In preparing this Guarantee, the Purchaser might consider adding the following text to the Form, at the end of the penultimate paragraph: " We agree to a one-time extension of this Guarantee for a period not to exceed [six months] [one year], in response to the Purchaser's written request for such extension, such request to be presented to us before the expiry of the Guarantee."*

3. Description of the Services

[Give detailed descriptions of the Services to be provided; dates for completion of various tasks, place of performance for different tasks; specific tasks to be approved by Client, etc.]

4. Reporting Requirements

[List format, frequency and contents of reports; persons to receive them; dates of submission, number of copies, etc. If no reports are to be submitted, state here "Not applicable".]

5. Key Personnel

(Refer Clause 4.1 of the Contract)

- List under:*
- C-1 Titles [and names, if already available], detailed job descriptions and minimum qualifications and experience of Personnel to be assigned to work in India, and staff-months for each.*

 - C-2 List of approved [if already available]; same information with respect to their Personnel as in C-1 .*

 - C-3 Same information as C-1 for Key local Personnel.*

6. Breakdown of Contract Price in Local Currency

List here the elements of cost used to arrive at the breakdown of the price — local currency:

- 1. Activity wise rates for Personnel (Key Personnel and other Personnel).*

7. Terms and Conditions
