



**Premises Department
Technical Division**

SCHEDULE OF TENDER (SOT)

Tender for Design, Supply, Installation, Testing and Commissioning of Intelligent Analogue Addressable Fire Alarm System for the Bank's Office Building floors at Maker Tower, Mumbai.

Tender No. RBI/Central Office/Premises Department/5/20-21/ET/227

| Sr. No. | Item | Description |
|----------------|--|---------------------------|
| 1 | Date of NIT available to parties to download | 17:00 hours of 14.10.2020 |
| 2 | Last date of receiving communication in writing in mail for off line pre-bid queries/clarifications regarding tender terms and conditions/specifications | 23.10.2020 |
| 3 | Bid open date:- Date of starting of e-tender for submission of online Techno-Commercial bid and price bid at www.mstcecommerce.com/eprochome/rbi | 16:00 hours on 26.10.2020 |
| 4 | Bid close date:- Date of closing of online e-tender for submission of Techno-Commercial bid and Price bid | 12:00 hours on 06.11.2020 |
| 5 | Tender open date :- Date and time of opening of Part-I (i.e. Techno commercial bid) | 15:00 hours on 06.11.2020 |

**RESERVE BANK OF INDIA
PREMISES DEPARTMENT
MUMBAI**

Section A

NOTICE INVITING e-TENDERRBI

Name of the work: Design, Supply, Installation, Testing and Commissioning of Intelligent Analogue Addressable Fire Alarm System for the Bank's Office Building floors at Maker Tower, Mumbai.

A. Eligibility criteria:

E-tenders are invited for "Design, Supply, Installation, Testing and Commissioning of Intelligent Analogue Addressable Fire Alarm System for the Bank's Office Building floors at Maker Tower, Mumbai." through E-portal of MSTC limited. The work is estimated to cost Rs 16.00 lakhs and is to be completed within 8 weeks.

Only those contractors who fulfill the following criteria will be considered eligible to participate

- (i) Valid License issued by Fire Authority of Maharashtra or Local Fire Authority as applicable for undertaking works pertaining to installation and Maintenance of Addressable Fire Alarm System.

And

- (ii) Only OEM or Indian authorized dealer/system integrator with valid dealership/system integrator certificate are eligible for participation in the bidding process.

And

- (iii) Minimum 5 years of experience in the field of undertaking similar works viz SITC of Intelligent Analog Addressable Fire Alarm System for large office buildings / commercial premises / industrial houses

And

- (iv) Have executed successfully similar works on or after August 31, 2015 individually costing as under:

- a) Three works each costing not less than 40 % of the estimated cost
OR
b) Two works each costing not less than 50 % of the estimated cost
OR
c) One work costing not less than 80 % of the estimated cost,

And

- (v) Have a minimum yearly turnover of 100 % of the estimated cost during the last 3 years

And

- (vi) Have a service set up in Mumbai for rendering after sales service

The contractor should invariably furnish the below mentioned information in writing and upload copies of the relevant documents along with the Part I of the tender. Further, the contractor should submit the original of the documents to the Bank when demanded to qualify for further tendering process..

| | | |
|-----|--|--|
| (a) | Composition of the firm | Full particulars (whether contractor is an individual, or a partnership firm, or a company etc.,) of the composition of the firm of contractors in details should be uploaded along with name(s) and address (es), of the partner's copy of the Articles of Association/ Power of Attorney/other relevant document. |
| (b) | Work experience & Completion of similar works of specified value during the specified period | Copies of the detailed work orders for the qualifying works indicating date of award, value of awarded work, time given for completing the work, etc. and the corresponding completion certificates indicating actual date of completion and actual value of executed similar works should be uploaded in proof of the work experience. The details along with documentary evidence of previous experience, if any, of carrying out works for the Reserve Bank of India at any centre, should also be given. |
| (c) | Credit worthiness of the contractor and their turnover during the specified period | Copies of the Income Tax Clearance Certificates/Income Tax Assessment Orders along with the latest final accounts of the business of the contractor duly certified by a Chartered Accountant should be enclosed in proof of creditworthiness and turnover for last three years should be uploaded. |
| (d) | Name(s) and address(es) of the Bankers and their present contact executives | Written Information about the names and addresses of bankers along with full details such as names, postal addresses, e-mail IDs, telephone (landline and mobile) nos., fax nos., etc. of the contact executives (i.e. the persons who can be contacted at the office of the bankers of the firm, in case it is so needed) should be uploaded. |

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| (e) | Details of bank accounts | Full particulars of bank accounts, such as account no. type, when opened etc., should be uploaded. |
| (f) | Name(s) and address(es) of the Clients and their present contact executives | Written information about the names and addresses of clients of the firm along with full details, like names, postal addresses, e-mail IDs, telephone (landline and mobile) nos., fax nos. etc., of the contact executives (i.e. the persons who can be contacted at the office of clients by the Bank in case it is so needed) should be uploaded. |
| (g) | Details of completed works | The client-wise names of work(s), year(s) of execution of work (s), awarded and actual cost (s) of executed work (s), completion time stipulated in the contract (s) and actual time taken to complete the work (s), Name(s) and full contact-details of the officers/authorities/departments under whom the work(s) was/were executed should be uploaded. |

In the event of intending tenderer's failure to satisfy the Bank; the Bank reserves the right to reject the tender of the firm.

4. Tender forms will be available for downloading from MSTC portal w.e.f **date 14.10.2020 from 17 hours**. Due to current COVID19, pre-bid meeting will not be conducted at our office in presence of bidders. All communication regarding points requiring clarifications shall be given in writing in following mails addressed to Chief General Manager in Charge, Reserve Bank of India, Premises Department, 5th floor, fort, Mumbai by the eligible tenderers on before **23.10.2020**.

nkkhadia@rbi.org.in

mayankpurohit@rbi.org.in

pjgurjar@rbi.org.in

5. Tenders form can be downloaded for viewing from RBI website www.rbi.org.in or www.mstcecommerece.com/eprochome/rbi. The pre-Qualification papers and scanned copy of proof of EMD payment should be uploaded with Techno Commercial Bid (Part-I) on the MSTC portal. The Demand Draft or Bank Guarantee for EMD should reach in original in a sealed envelope to Central Office, Premises Department, Reserve Bank of India, Fort, Mumbai by **06.11.2020, 12 hours**. If paid through NEFT, the NEFT receipt should be uploaded along with pre-qualification documents. After scrutiny, if any of the contractors are not found to possess the required eligibility, their tenders will

not be accepted by the Bank for further processing. Further, the contractor should submit the original of the documents to the Bank when demanded to qualify for further tendering process. The duly filled and stamped part-I of tender document should be uploaded by the contractors on MSTC portal along with all the pre-qualification documents. The tender process shall be executed on the MSTC portal through e-Tendering

6. Interested contractors can participate in e-Tender after getting registered with www.Mstcecommerce.com/eprocurement/rbi). Online Part I-Techno-Commercial Bid and Part II -Price Bid shall be opened through www.mstcecommerce.com/e-procurement/rbi and applicable transaction charges have to be paid by the firm.
7. Tender in prescribed format shall be submitted in two parts. Part-I of tender will contain the Bank's standard technical and commercial conditions for the proposed work, Contractors' covering letter, the EMD of Rs.32,000/- should be submitted through NEFT transfer to A/c. No – 41869163273 IFSC Code – RBIS0COD001 A/c. Name – Reserve Bank of India or by a demand draft issued by a Scheduled Bank in favour of 'Reserve Bank of India, Mumbai' Or in the form of an irrevocable bank guarantee issued by a scheduled bank in the Bank's standard proforma which is available in the tender-form along with pre-Qualification documents. The documents pertaining to EMD should be scanned and uploaded with the pre-Qualification documents. Part-II of the tender will contain no conditions but Contractor's Price Bid, Bank's Schedule of quantities, tender drawings if any, only.
8. Part-I of the tenders will be opened by RBI on **06.11.2020 at 15:00 hrs** in the presence of the authorized representative of the tenderers who choose to be present at Central Office, Premises Department,, Reserve Bank of India, Mumbai for the same. Part II of eligible tenderers will be opened on a subsequent date which will be intimated to the tenderers in advance.
9. The applicants/tenderers have to submit in a sealed envelope / cover before the last date of submission of part-I
 - a. Client's certificate as per format at [Annex - IV](#) from their clients for whom they have carried out "eligible works" in terms of the eligibility (Pre-qualification) criteria explained in this notice.
 - b. Banker's certificate as per format at [annex - V](#) from their banker/bankers.

The certificates should be addressed to Chief General Manager in Charge, Premises Department, Reserve Bank of India, Mumbai and shall be submitted in a sealed envelope/cover.

10. The client's certificate shall be accepted only when the same is signed by an official of the rank of Executive engineer/Superintendent Engineer or equivalent in respect of a Government/Semi Government organization or a PSU and only when they are supported by adequate proof of payment received by the contractor for the work done by him. The client's certificate issued by the private organizations shall also accompany Tax Deducted at Source (TDS) certificates. The Bank shall have the right to independently verify these certificates.
11. The Bank shall evaluate the said reports before evaluation of price bid of the tenders. If any tenderer is not found to possess the required eligibility for participating in the tendering process at any point of time and/or his performance reports received from his clients and/or his bankers are found unsatisfactory, the Bank reserves the right to reject his offer even after opening of Part-I of the tender. The Bank is not bound to assign any reason for doing so.
12. The Bank is not bound to accept the lowest tender and reserves the right to accept either in full or in part any tender. The Bank also reserves the right to reject all the tenders without assigning any reason there for.
13. Bank reserves the right to accept or reject any or all Bids without assigning any reasons and also reserves the right to relax any of the terms and conditions. No Contractor shall have any cause of action or claim against the RBI for rejection of his Bid.

Chief General Manager In Charge
Reserve Bank of India
Premises Department
Central Office Building
5th Floor
Fort, Mumbai

E-Tendering procedure
Important instructions for E-procurement
Bidders are requested to read the terms & conditions of this tender before submitting your online tender.

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| 1 | <p><u>Process of E-tender :</u></p> <p>A) Registration: The process involves vendor's registration with MSTC e-procurement portal which is free of cost. Only after registration, the vendor(s) can submit his/their bids electronically. Electronic Bidding for submission of Technical Bid as well as Commercial Bid will be done over the internet. The Vendor should possess Class III signing type digital certificate. Vendors are to make their own arrangement for bidding from a P.C. connected with Internet. MSTC is not responsible for making such arrangement. (Bids will not be recorded without Digital Signature).</p> <p>SPECIAL NOTE: THE TECHNICAL BID AND THE COMMERCIAL BID HAS TO BE SUBMITTED ON-LINE AT www.mstcecommerce.com/eprochome/rbi</p> <p>1). Vendors are required to register themselves online with www.mstcecommerce.com → e-Procurement → PSU/Govt. depts. → Select RBI Logo- > Register as Vendor -- Filling up details and creating own user id and password → Submit.</p> <p>2). Vendors will receive a system generated mail confirming their registration in their email which has been provided during filling the registration form.</p> <p>In case of any clarification, please contact RBI/MSTC, (before the scheduled time of the e- tender).</p> <p>Contact person (RBI):-</p> <ol style="list-style-type: none">1. N.K.Khadia (Asst.General.Manager):9167097294 (nkkhadia@rbi.org.in)2. Mayank Anand Purohit (Manager):(9910062627) mayankpurohit@rbi.org.in3. Parth Jagdishkumar Gurjar(Asst. Manager): 9574954295 pjgurjar@rbi.org.in <p>Contact person (MSTC Ltd):</p> <ol style="list-style-type: none">1. Mr. Sushil Nale, Asst. Manager – sushil@mstcindia.co.in Mobile-099877584602. Ms Archana, Asst. Manager- archana@mstcindia.co.in Mobile- 099906736983. Ms. Rupali Pandey, Executive- rpandey@mstcindia.co.in Ph- 022 228862684. Mr. Tejas V, Executive tejasv@mstcindia.co.in Ph-022 22822789 Google hangout ID- (for text chat)- mstceproc@gmail.com B) System Requirement: <p>i) Windows 7 or above Operating System ii) IE-7 and above Internet browser.</p> <p>iii) Signing type digital signature iv) Latest updated JRE 8 (x86 Offline) software to be downloaded and installed in the system.</p> <p>To disable "Protected Mode" for DSC to appear in The signer box following settings may</p> |
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| | <p>be applied.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Tools => Internet Options => Security => Disable protected Mode If enabled- i.e, Remove the tick from the tick box mentioning "Enable Protected Mode". <input type="checkbox"/> Other Settings: Tools => Internet Options => General => Click On Settings under "browsing history/ Delete Browsing History" => Temporary Internet Files => Activate "Every time I Visit the Webpage". <p>To enable ALL active X controls and disable 'use pop up blocker' under Tools Internet Options → custom level (Please run IE settings from the page www.mstcecommerce.com once)</p> |
| 2 | <p>The Techno-commercial Bid and the Price Bid shall have to be submitted online at www.mstcecommerce.com/eprochome/rbj. Tenders will be opened electronically on specified date and time as given in the Tender.</p> |

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| 3 | <p>All entries in the tender should be entered in online Technical & Commercial Formats without any ambiguity.</p> |
| 4 | <p>Special Note towards Transaction fee: The vendors shall pay the transaction fee using "Transaction Fee Payment" Link under "My Menu" in the vendor login. The vendors have to select the particular tender from the event dropdown box. The vendor shall have the facility of making the payment either through NEFT or Online Payment. On selecting NEFT, the vendor shall generate a challan by filling up a form. The vendor shall remit the transaction fee amount as per the details printed on the challan without making change in the same. On selecting Online Payment, the vendor shall have the provision of making payment using its Credit/ Debit Card/ Net Banking. Once the payment gets credited to MSTC's designated bank account, the transaction fee shall be auto authorized and the vendor shall be receiving a system. Generated mail. Transaction fee is non-refundable. A vendor will not have the access to online e-tender without making the payment towards transaction fee. NOTE Bidders are advised to remit the transaction fee well in advance before the closing time of the event so as to give themselves sufficient time to submit the bid.</p> |
| 4 | <p>Information about tenders /corrigendum uploaded shall be sent by email only during the process till finalization of tender. Hence the vendors are required to ensure that their corporate email I.D. provided is valid and updated at the time of registration of vendor with MSTC. Vendors are also requested to ensure validity of their DSC (DigitalSignature Certificate).</p> |
| 5 | <p>E-tender cannot be accessed after the due date and time mentioned in NIT.</p> |

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| 6 | <p>Bidding in e-tender :</p> <p>a) Vendor(s) need to submit necessary EMD, Tender fees and Transaction fees (If ANY) to be eligible to bid online in the e-tender. Tender fees and Transaction fees are non refundable. No interest will be paid on EMD. EMD of the unsuccessful vendor(s) will be refunded by the tender inviting authority.</p> <p>b) The process involves Electronic Bidding for submission of Technical and Commercial Bid.</p> <p>c) The vendor(s) who have submitted transaction fee can only submit their Technical Bid and Commercial Bid through internet in MSTC website www.mstcecommerce.com → e-procurement →PSU/Govt depts→ Login under RBI→ My menu→ Auction Floor Manager→ live event →Selection of the live event.</p> <p>d) The vendor should allow running JAVA application. This exercise has to be done immediately after opening of Bid floor. Then they have to fill up Common terms/Commercial specification and save the same. After that click on the Technical bid. If this application is not run then the vendor will not be able to save/submit his Technical bid.</p> <p>e) After filling the Technical Bid, vendor should click 'save' for recording their Technical bid. Once the same is done, the Commercial Bid link becomes active and the same has to filled up and then vendor should click on "save" to record their Commercial bid. Then once both the Technical bid & Commercial bid has been saved, the vendor can click on the "Final submission" button to register their bid</p> <p>f) Vendors are instructed to use <i>Attach Doc button</i> to upload documents. Multiple documents can be uploaded.</p> <p>g) In all cases, vendor should use their own ID and Password along with Digital Signature at the time of submission of their bid.</p> <p>h) During the entire e-tender process, the vendors will remain completely anonymous to one another and also to everybody else.</p> <p>i) The e-tender floor shall remain open from the pre-announced date & time and for as much duration as mentioned above.</p> <p>j) All electronic bids submitted during the e-tender process shall be legally binding on the vendor. Any bid will be considered as the valid bid offered by that vendor and acceptance of the same by the Buyer will form a binding contract between Buyer and the Vendor for execution of supply.</p> <p>k) It is mandatory that all the bids are submitted with digital signature certificate otherwise the same will not be accepted by the system.</p> |
| | <p>l) Buyer reserves the right to cancel or reject or accept or withdraw or extend the tender in full or part as the case may be without assigning any reason thereof.</p> <p>m) No deviation of the terms and conditions of the tender document is acceptable. Submission of bid in the e-tender floor by any vendor confirms his acceptance of terms & conditions for the tender.</p> |
| 7 | Any order resulting from this tender shall be governed by the terms and conditions Mentioned therein. |
| 8 | No deviation to the technical and commercial terms & conditions are allowed. |
| 9 | The tender inviting authority has the right to cancel this e-tender or extend the due date of receipt of bid(s) without assigning any reason thereof. |
| 10 | Vendors are requested to read the vendor guide and see the video in the page www.mstcecommerce.com/eprochome to familiarize them with the system before bidding. |

**Design, Supply, Installation, Testing and Commissioning of
Intelligent Analogue Addressable Fire Alarm System for the
Bank's Office Building floors at Maker Tower, Mumbai.**

Part I

Section (I)

Form of Tender

Place _____

Date _____

The Chief General Manager In Charge
Premises Department
Central Office Building
5th Floor
Fort, Mumbai

Dear Sir,

We have carefully examined the specifications, designs and schedule of quantities relating to the works specified in the memorandum hereinafter set out and having visited and examined the installation site of the works specified in the said memorandum and having acquired the requisite information relating thereto as affecting the tender. We hereby offer to execute the works specified in the said memorandum within the time specified in the said memorandum at the rates mentioned in the attached Schedule of Quantities and in accordance in all respects with specifications, designs and instructions in writing referred to in articles of agreement, general instructions to the tenderers and special conditions, conditions hereinbefore referred to, specifications, data sheet and schedule of quantities and with such materials as are provided for, by and in all other respects, in accordance with such conditions so far as they may be applicable.

MEMORANDUM

| | | |
|-----|----------------------|---|
| (a) | Description of works | Design, Supply, Installation, Testing and Commissioning of Intelligent Analogue Addressable Fire Alarm System for the Bank's Office Building floors at Maker Tower, Mumbai. |
| (b) | Estimated cost | Rs 16.00 lakh |

| | | |
|-----|--|--------------------|
| (c) | Mode of payment | As per tender |
| (d) | Earnest Money | Rs 32,000/- |
| (e) | Time allowed for completion of work from tenth day after the date of letter advising acceptance of tender. | 8 weeks |

2. We also agree that our tender will remain valid for acceptance by the Bank for 90 days from the date of opening of Part I of the tender and this period of validity can be extended for such period as may be mutually agreed between the Bank and us in writing. We also agree to keep the Bank Guarantee towards earnest money valid during the entire period of validity of tender, as per enclosed proforma ([Annexure II](#)).
3. Should this Tender be accepted, I/we hereby agree to abide by and fulfil all the Terms and Conditions of the Tender and in default thereof, to forfeit and pay to you or your successors, or assignees or nominees such sums of money as are stipulated in the conditions contained in the tender together with the written acceptance of the Contract.
4. I/We understand that you reserve the right to accept or reject any or all the tender either in full or in part without assigning any reason therefore.
5. The Tender is submitted in two parts. Part I contains all commercial terms and conditions and technical particulars and Part II contains only the price bid in the Bank's proforma.

Dated: this _____ day of _____ 2020.

For and on behalf of M/s _____

(Signature with seal)

Name _____

Designation _____

Place _____ Date _____

(Certified true copy of the Power of Attorney of the above signatory should be enclosed).

Witnesses

(1) Signature with _____
name, address and date _____

(2) Signature with _____
name, address and date _____

Section (II)

General Instructions to Contractors and Special Conditions

E-tenders are invited for “Design, Supply, Installation, Testing and Commissioning of Intelligent Analogue Addressable Fire Alarm System for the Bank's Office Building floors at Maker Tower, Mumbai..” through E-portal of MSTC limited. The work is estimated to cost **Rs 16.00 lakhs** and is to be completed within 8 weeks.

Eligibility Criteria

Only those contractors who fulfill the following criteria will be considered eligible to participate.

- (i) Valid License issued by Fire Authority of Maharashtra or Local Fire Authority as applicable for undertaking works pertaining to installation and Maintenance of Addressable Fire Alarm System.

And

- (ii) Only OEM or Indian authorized dealer/system integrator with valid dealership/system integrator certificate are eligible for participation in the bidding process.

And

- (iii) **Minimum 5 years of experience** in the field of undertaking similar works viz SITC of Intelligent Analogue Addressable Fire Alarm System for large office buildings / commercial premises / industrial houses

And

- (iv) **Have executed successfully similar works** on or after August 31, 2015 individually costing as under:

- a) Three works each costing not less than **40 % of the estimated cost**

OR

- b) Two works each costing not less than **50 % of the estimated cost**

OR

- c) One work costing not less than **80 % of the estimated cost,**

And

- (v) Have a **minimum yearly turnover** of **100 % of the estimated cost** during the last 3 years

And

- (vi) Have a **service set up in Mumbai** for rendering after sales service

Only Tenderers who qualify as above will be eligible to tender for the work. A Tender submitted by a firm who is found to be not satisfying any of the above criteria will be liable for rejection.

2. The tenders shall be valid for acceptance by the Bank for **90 days** from the opening of tender **Part-I** and shall be extended by such period as may be mutually agreed to.

3 Pre-Bid Meeting

- i. All communication regarding points requiring clarifications shall be given in writing in following mails addressed to Chief General Manager in Charge, Reserve Bank of India, Premises Department, 5th floor, fort, Mumbai by the eligible tenderers on before **23.10.2020**.
 - a) nkkhadia@rbi.org.in
 - b) mayankpurohit@rbi.org.in
 - c) pjgurjar@rbi.org.in
- ii. No request for change in date of pre-bid meeting will be entertained.
- iii. After pre-bid meeting inclusion/submission of any deviations in the tender conditions in Part-I of the tender is liable for rejection.

EMD & Bank Guarantees To Be Submitted By the Tenderers

4. Tender (Part I & Part II) shall be submitted through e-tender portal of MSTC. Part-I of the tender will contain the Bank's standard technical and commercial conditions for the proposed work, tenderers' covering letter, tenderer's additional conditions, if any and the EMD of **Rs 32,000/-** in the form Demand Draft in favour of Reserve Bank of India payable at Mumbai or an irrevocable Bank Guarantee issued by a scheduled Bank in the Bank's standard proforma valid for six months which is available in the Part I of the tender form submitted to the Premises Department, 5th floor, Central Office Building, Reserve Bank of India, Fort, Mumbai on or before **06.11.2020 up to 12.00Hrs.**

Tender not accompanied by EMD, shall be treated as non-responsive, and will be summarily rejected by the RBI.

5. On award of the work, the successful tenderer shall furnish an amount equal to 10% (ten percent) of the contract value for the work in the form of a Bank Guarantee (BG) from any scheduled Bank in the form prescribed by the Bank as per Bank's format towards security deposit for the due fulfilment of the contract. The Bank guarantee towards Earnest Money Deposit furnished at the time of submission of tender will be returned thereafter. This Bank Guarantee towards security deposit shall be valid for the contract completion period and in case of delay, shall be extended upto the date of virtual completion.

After completion of the work as security against due fulfilment of the terms and obligations the Guarantee period and Annual Maintenance service contract for the entire life cycle of the equipment, the successful tenderer shall renew the Bank Guarantee of **10% of the contract value initially valid for a period of 3 years**. After three years, the amount of Bank guarantee will be reduced by FIVE percent (5%) of initial value year for a further period of 5 years.

(b) On submission of the above Bank Guarantee for 10% of the contract value, the EMD submitted by the firm will be refunded.

6. The Tenderers shall furnish full details of all such similar works carried out by them during the last 5 years, as per the proforma included in this tender. The Bank will inspect one or all the works and satisfy itself about the performance of the installed equipment's including the quality and reliability of the service rendered before opening Part II of the tenders. Thereafter, the Bank at its discretion will consider or reject any or all the tenders without assigning any reason therefore.

7. Insurance

The contractor shall take all insurances at his cost to cover all kinds of risks from the date of scheduled commencement of works till handing over the Fire alarm system to the Bank, in the joint names of the Bank and the contractor before commencement of work and it shall cover the following risks:

- Contractors all risk (CAR) Insurance inclusive of fire insurance, Storage, erection testing and commissioning policy for the full contract value.
- Workmen compensation policy for the employees of the contractor at site.
- Third party liability policy for a total of Rs.10 lakh and with a limit of Rs.2 lakh per accident.

9. The rates quoted shall be firm till completion of work and shall not be subjected to variations in exchange rate, rate of taxes, duties, levies or variation in labour rates. The rates shall be quoted for complete work, i.e. design, supply, installation, testing and commissioning of the equipment and shall include charges for all taxes, duties, levies, consumable, labour, transport, insurance etc., at the specified site till the work is finally handed over to the Bank.

No concessional form for any taxes, duties and levies will be issued by the Bank. Similarly no import license will be issued by the Bank. Equipment, if required to be imported shall be arranged to be imported against the contractors own import license. All payments will be made at Mumbai and will be in Indian rupees only.

10. Tenderers are advised to quote strictly as per BOQ. The schedule of quantities is based on probable quantities. The quantities for individual items may increase or decrease without any restriction depending upon the site conditions and requirements solely at the discretion of the Bank. No increase in rates will be considered. This is not a fixed lump sum contract but a contract based on item rates. Bank will not pay for any surplus/unused material.

As regards make of equipment acceptable to the Bank the tenderers are advised to refer to "Section V – Approved Makes" and to the list of approved make of materials/equipments.

All the pages of Part II of the tenders shall be signed by the contractor and dated.

11. Tenders will be evaluated on the basis of Total Cost of Ownership considering the Capital cost, and the Net Present Value of the annual comprehensive maintenance service contracts charges for a period of 7 years after initial Guarantee period of one year. The following percentages will be applied for the purpose of evaluation only.

| | | |
|-----|--|---|
| (a) | Life of equipment | 8 years including defects liability period of one years |
| (b) | Discount factor for calculating NPV | 8% |
| (c) | AMC escalation after first year of the AMC | 5% |
| (c) | AMC Payment flow | Half yearly after service |

(NPV Factor of AMC =5.6321)

Total Cost of Ownership = Capital Cost + 5.6321xAMC Rate

Minimum Base Rate for Comprehensive AMC

Minimum Base Rate for Comprehensive AMC is 5% (Five) of total capital cost. In case, the tenderer quotes the rates for comprehensive AMC lower than 3% (Three) of the quoted capital cost, then the 5% (Five) of the quoted capital cost will be considered as AMC for calculation of Total Cost of Ownership.

Note: Notwithstanding the above, the Bank shall pay only the quoted rate of the AMC during the currency of the committed contract period subject to renewal formulae indicated in the tender.

12. Scope of work during Guarantee and Annual maintenance contract period:

The equipment supplied shall be guaranteed against all types of defects for a period of one year from the date of handing over of the Fire Alarm System to the Bank. Upon successful completion of defect liability period, the system will be put under Comprehensive Annual Maintenance Contract for 7 years.

The scope during the DLP and AMC will be as follows:

- (a) Any defect(s) in the system/sub-assemblies, found within the guarantee period and the annual maintenance contract period shall be rectified / replaced by the tenderer without any additional cost including replacement of detectors, all spare parts and loop wiring and labour involved etc. the rates quoted should include all such factors.
- (b) During this period, full servicing and cleaning of devices **once in a quarter** shall be done including attending to ANY NUMBER of breakdown calls.

The tenderers shall also quote their charges separately for Annual maintenance service contract after expiry guarantee period. The payment shall be made on half yearly basis on rendering satisfactory service. The service contract rate shall also take into account all the cost, including travel cost from the nearest service station, cost of spares etc.

During Guarantee and AMC period the system will be inspected and checked by deputing a competent, trained service engineer on quarterly basis by creating a fire /smoke simulation in the loops:

Critical area detectors viz server rooms/UPS rooms/IPCCTV room etc should be invariably included and checked during the regular visits.

Suitable log register indicating faults, rectification done with date & time of breakdown should be maintained and got signed from the security/Fire officer. Bank will not provide any assistance in the form of men/material during the currency of the guarantee and service contract.

The tenderers will have to make their own arrangements for deputing a helper to skilled personnel including all necessary spares for rectification of the defects reported/observed.

This being an emergency system, any fault in the system shall be rectified as per the rectification time given below failing which penalty shall be applied as under:

| | | Rectification time | Penalty |
|--|--|---------------------------|---|
| (a) | Any defects resulting in total failure of the system | 12 hours | Rs.2000/- per day |
| (b) | Any defects in independent devices, components, cables which may not result in total failure of the system | 24 hours | Rs.500/- per day subject to maximum of 25% of the prevailing CAMC charges on (a) &(b) |
| The Total penalty is subject to maximum of 25% of the prevailing CAMC charges. | | | |

The AMC rate shall be revised after 2nd year of AMC and the contract shall be renewed based on the revised AMC amount calculated as per the following formula:

| | |
|--|--|
| $A_C = A_P [(15+60x(EPI_C/EPI_P)+25x(CPI_C/CPI_P))] / 100$ | |
| A_C | The contract amount for the current year. |
| A_P | The contract amount for the previous year. |

| | |
|------------------|--|
| EPI _C | Wholesale Price Index for Electrical Products 6 months prior to the commencement date of contract for the current year. |
| EPI _P | Wholesale Price Index for Electrical Products 6 months prior to the commencement date of contract for the previous year. |
| CPI _C | Consumer Price Index for Industrial Workers (All India Average) 6 months prior to the commencement date of contract for the current year. |
| CPI _P | Consumer Price Index for Industrial Workers (All India Average) 6 months prior to the commencement date of contract for the previous year. |

13. The tenderers shall indicate details such as the service centre from which the proposed system at Mumbai will be serviced, the staff strength at that centre and the availability of spares for the system at that centre.

The tenderer should impart training to the Bank's staff for a period not less than one week on the system before handing over of the system without any additional charge to the Bank.

14. The tender shall be accompanied by leaflets / literatures giving complete technical & constructional details, makes of components of the equipment offered.
- a) Tenderers are advised to visit the site of installations and acquaint themselves of the site conditions before tendering..
- b) Tenderers should be specific and offer comments only if their system differs from the Bank's detailed specifications/ features in any manner.
- c) A write up of working of the system as a whole and the individual components shall also be enclosed in Part I.
15. The successful tenderer, on completion of the work, shall furnish three sets of schematic and coloured laminated layout drawings in minimum A-3 size and maintenance manuals.
16. The following terms of payment shall be applicable to this contract subject to statutory deductions:
- **60% of the quoted rates pro-rata against delivery of materials after checking at site and submission of 10% Bank Guarantee as per above mentioned clause.**
 - **20% of the quoted rates on completion of Installation/erection**
 - **20% after testing, commissioning and handing over the system**
17. Time is the essence of the contract with respect to the tenderer's scope of works to be carried out under this contract. The entire work shall be completed within **8 weeks from the 10th day of letter of award by the Bank** failing which liquidated damages at a rate of 1/4% of the contact amount per week of delay beyond the stipulated period with an upper ceiling of 10% of the contract amount, may be levied.

- The successful tenderer shall submit a Bar Chart program for completion of Design, Supply, Installation, Testing & commissioning of the various components & sub-assemblies. As the work is to be executed in a working building, the program for carrying out the work should be framed to cause minimal disturbance to the office functioning.
 - The work may also be planned on all Saturdays, Sundays and holidays including extended working hours during week days.
 - All debris generated during execution should be removed on the same day including taking adequate precautions to prevent dust / debris falling on computers / telephones / etc. Broken false ceiling should be repaired after completion of the work
18. The successful tenderer shall execute an agreement with the Bank on stamped paper within fourteen days of receipt of letter of acceptance. However, the issue of letter of acceptance by the Bank shall be construed as a binding contract, as though such an agreement has been executed and all the terms and conditions shall apply on this contract.
- 19.
- a) The tenderer shall furnish the **name and address of the Bankers** with whom they normally Bank.
 - b) They shall also furnish the **name and addresses of their recent clients** for whom they have carried out similar works/supplies in the recent past, along with full details like the cost and capacity of the system/machine supplied, the date of the supply etc.
20. Settlement of dispute by Arbitration - All disputes and differences of any kind whatever arising out of or in connection with this Contract or the carrying out of the works (whether during the progress of the works or after their completion and whether before or after the determination, abandonment or breach of the contract) shall be referred to Chief General Manager in charge, Premises Department, Central Office Building, 5th Floor, Fort, Mumbai and settled by him who shall state his decision in writing.

Such decision may be in the form of a final certificate or otherwise. If either the Employer or the Contractor be dissatisfied with the decision of Chief General Manager in Charge on a matter, question or dispute of any kind or as to the withholding by the Bank or any Certificate to which the Contractor may claim to be entitled, then and in any such case either party (the Employer or the Contractor) may within 28 days after receiving notice of such decision give a written notice to the other party requiring that matters in dispute be arbitrated upon.

Such written notice shall specify the matters which are in dispute or difference of which such written notice has been given and no other shall be and is hereby referred to the arbitration and final decision of an arbitrator to be agreed upon as appointed by both the parties or, in case of disagreement as to the appointment of a single arbitrator, to the appointment of two arbitrators, one to be appointed by each party, which arbitrators shall, before taking upon themselves the burden of reference, appoint an Umpire. The entire arbitration process will be governed by the Indian Arbitration and Conciliation Act, 1996.

21. Right of Technical Scrutiny of Final Bill - The employer shall have a right to cause a technical examination of the works and the final bill of the Contractor including all supporting vouchers, abstracts, etc., to be made at the time of payment of the final bill. If as a result of this examination or otherwise, any sum is found to have been overpaid or over-certified, it shall be lawful for the Employer to recover the sum.
22. The Bank reserves the right to accept or reject any or all the tenders either in full or in part without assigning any reasons thereof.

I/We have understood all the above-mentioned conditions and they are acceptable to me/us.

Place:

Seal & Signature of Tenderer

Date:

Name
Designation

1. First aid appliances including adequate supply of sterilized dressings and cotton wool shall be provided in a readily accessible place.
2. An injured person shall be taken to a public hospital without loss of time, in cases where the injury necessitates hospitalization.
3. Suitable and strong scaffolds should be provided for workmen for all work that cannot safely be done from ground.
4. No portable single ladder shall be over 8 meters in length. The width between the side rails shall not be less than 30 cm (clear) and the distance between two adjacent rungs shall not be more than 30 cm. When a ladder is used an extra mazdoor shall be engaged for holding the ladder.
5. The excavated material shall not be placed within 1.5 meters of the edge of the trench or half of the depth of trench, whichever is more. All trenches and excavations shall be provided with necessary fencing and lighting.
6. Every opening in the floor of a building or in a working platform shall be provided with suitable means to prevent the fall of persons or materials by providing suitable fencing or railing; minimum height shall be one metre.
7. No floor, roof or other part of the structure shall be so overloaded with debris of materials as to render it unsafe.
8. Workers employed on mixing and handling material such as asphalt, cement mortar or concrete and lime mortar shall be provided with protective footwear and rubber handgloves.
9. Those engaged in welding works shall be provided with welder's protective eye-shields and gloves.
10. i) No paint containing lead or lead products shall be used except in the forms of paste or readymade paint. ii) Suitable face masks shall be supplied for use by the workers when the paint is applied in the form of spray or surface having lead paint dry rubbed and scrapped.
11. Overalls shall be supplied by the Contractor to the painters and adequate facilities shall be provided to enable the working painters to wash during the period of cessation of work.
12. Hoisting machines and tackle used in the works, including their attachments, anchorage and support shall be in perfect condition.
13. The ropes sued in hoisting or lowering material or a means of suspension shall be of durable quality and adequate strength and free from defects.
14. The contractor shall provide all the safety gadgets to the workers for carrying out the work as per statutory norms.
15. During the work execution necessary fire safety measures shall also be taken.

Section (III)

The Conditions Hereinbefore Referred To

1. In constructing these conditions, the specification, schedule of quantities and Contract Agreement, the following words shall have the meaning herein assigned to them except where subject or context otherwise requires.

| | |
|---------------------------|---|
| a) "Employer" | Shall mean the Reserve Bank of India and shall include its assignees and successors. |
| b) In the case of company | "Contractor shall mean _____ a company incorporated under _____ and having its registered office at _____ and shall include its successors and assigns. |
| c) "Site" | Shall mean the site of the contract works including any building and erection thereon and any other land (inclusively) as aforesaid allotted by the Employer for the Contractor's use. |
| d) "This Contract" | Shall mean the Article of Agreement, the special conditions, the conditions, the Appendix, the schedule of quantities and specifications attached hereto and duly signed. |
| e) "Notice in writing" | Shall mean a notice in written, typed or printed or written notice" characters sent (unless delivered personally otherwise proved to have been received) by registered post to the last known private or business address or registered office of the addressee and shall be deemed to have been received when in the ordinary course of post it would have been delivered. |
| f) "Act of Insolvency" | Shall mean any Act of insolvency as defined by the Presidency Town Insolvency Act, or the provincial insolvency Act or any Act amending such original Act. |

| | |
|-----------------|--|
| g) "Net Prices" | If in arriving at the contract amount the Contractor shall have added to or deducted from the total of items in the Tender any sum, either as a percentage or otherwise, then net price of any item in their tender shall be the sum arrived at by adding to or deducting from the actual figures appearing in the Tender as the price of that the item a similar percentage or proportionate sum |
| | provided always that in determining the percentage or proportion of the sum so added or deducted by the Contractor the total amount of the any Prime Cost items and provisional sums of money shall be deducted from the total amount of the tender. The expression "net rates" or "net prices" when used with reference to the contract or account shall be held to mean rates or prices so arrived at. |
| h) "The works" | Shall mean Design, Supply, Installation, Testing and Commissioning of Intelligent Analogue Addressable Fire Alarm System for the Bank's Office Building floors at Maker Tower, Mumbai. |

2. **Scope of Contract:** The contractor shall carry out and complete the said work in every respect in accordance with this contract and with the directions of and to the satisfaction of the Bank's Engineer. The Bank's Engineer may in his absolute discretion and from time to time issue further drawings and/or written instructions, details, direction and explanations which are hereafter collectively referred to as "Bank's Engineer's instruction in regard to":

- a) The variations or modifications of the design, quality or works or the addition or omission or substitutions of any work.
- b) Any discrepancy in the Drawing or between the Schedule of Quantities and/or Drawing and/or specifications.
- c) The removal from the site of any materials brought thereon by the contractor and the substitution of any other material therefor.
- d) The removal and/or re-execution of any works executed by the contractor.
- e) The dismissal from the works of any persons employed thereupon.
- f) The opening up for inspections of any work covered up.
- g) The amending and making good of any defects under clause 20 hereof.

The contractor shall forthwith comply with and duly execute any work comprised in such Bank's Engineer's instructions provided always that verbal instructions, directions and explanations given to the Contractor or his representative upon the works by the Bank's Engineer shall, if involving a variation, be confirmed in writing by the Contractor within seven days, such shall be deemed to be Employer's instructions within the scope of the Contract.

The contractor shall submit a statement of variations giving quantity and rates duly supported by analysis of rates, vouchers etc. The rates on scrutiny and final acceptance by the Employer shall form a supplementary tender. The Employer shall not be liable for payment of such variations until these statements are sanctioned by him.

3. The Contract shall be executed in triplicate and the Bank's Engineer, the Employer and the Contractor shall be entitled to one executed copy each for his use. The contractor shall prepare the line diagram, UPS configuration drawing and Lay out plan of the site for carrying out the work. Before the issue of the final certificate to the Contractor he shall submit to the Bank's Engineer all Drawings and Specifications.
4. The Contractor shall provide at his cost everything necessary for the proper execution of the works according to the intent and meaning of the Drawings, Schedule of Quantities and specifications taken together, whether the same may or may not be particularly shown or described therein provided that the same can reasonably be inferred therefrom, and if the Contractor finds any discrepancy in the Drawings or between the Drawings, Schedule of quantities and Specifications, he shall immediately and in writing refer the same to the Bank's Engineer, who shall decide which is to be followed.
5. **Authorities, notices and patents:** The Contractor shall conform to the provisions of any Act of the Legislature relating to the works, and to the regulations and bye-laws of any authority, and of any water, electricity supply and other companies and/or authorities with whose system the structure is proposed to be connected, and shall, before making any variations from the Drawings or Specifications that may be necessitated by so conforming, give to the architect written notice, specifying the variation proposed to be made and the reason for making it and apply for instructions thereon. In case the Contractor shall not within ten days receive such instructions he shall proceed with the work conforming to the provisions, regulations, or bye-laws in question, and any variation so necessitated shall be dealt with under clause 17 hereof.

The contractor shall bring to the attention of the Employer all notices required by the said Acts, regulations or bye-laws to be given to any authority and pay to such authority or to any public office all fees that may be properly chargeable-in respect of the works and lodge the receipts with the Employer.

The Contractor shall indemnify the Employer against all claims in respect of patent rights, and shall defend all actions arising from such claims and shall himself pay all royalties, licence fees, damages cost and charges of all and every sort that may be legally incurred in respect thereof.

6. **Setting out of work**: The contractor shall set out the works and shall be responsible for the true and perfect setting out of the same and for the correctness of the positions levels, dimensions and alignment of all parts thereof. If at any time any error in this respect shall appear during the progress of the works or within a period of one year from the completion of the works, the Contractor shall, if so required, at his own expense rectify such error to the satisfaction of the Bank's Engineer.
7. **Materials and Workmanship to conform to description**: All materials and workmanship shall so far as procurable be of the respective kinds described in the Schedule of Quantities and/or specifications and in accordance with the contract and the Contractor shall furnish to the Employer with all invoices, accounts, receipts and other vouchers to prove that the materials comply therewith. The Contractor shall at his own cost arrange for and/or carry out any test of any materials.
8. **Contractor's superintendence and representative on the works**: The Contractor shall give all necessary personal superintendence during the execution of the works and so long thereafter as the Employer may consider necessary until the expiration of the "Defects Liability Period" stated in the Appendix hereto. The contractor shall, also during the whole time the works are in progress employ a competent representative who shall be constantly in attendance at the works while the men are to work. Any directions, explanations, instructions or notice given by the Bank's Engineer to such representative shall be held to be given to the Contractor.
9. **Dismissal of workmen**: The Contractor shall on the request of the Bank's Engineer immediately dismiss from the works any person employed thereon by him who may, in the opinion of the Bank's Engineer, be incompetent or misconduct himself and such

persons shall not be again employed on the works without the permission of the Bank's Engineer.

10. **Access to works**: The Employer, shall at all reasonable times, have free access to the works and/or to the workshops, factories or other places where materials are lying or from which they are being obtained and the Contractor shall give every facility to the Employer necessary for Inspections and examination and test of the materials and workmanship. No person not authorized by the Employer except the representatives of public authorities shall be allowed on the works at any time.
11. **Bank's Engineer**: The term Bank's Engineer shall mean the person appointed and paid by the Employer to inspect the works. The Contractor shall afford the Bank's Engineer every facility and assistance for inspecting the works and materials and for checking and measuring time and materials.

The Bank's Engineer, or the Employer shall have power to give notice to the Contractor or to his representative of non-approval or any work or materials and such work shall be suspended or the use of such materials shall be discontinued. The work will from time to time be examined by the Assistant Manager (Tech.) but such examination shall not in any way exonerate the Contractor from the obligation to remedy any defects which may be found to exist at a stage of the works or after the same is completed. Subject to the limitations of this clause the Contractor shall take instructions only from the Bank's Engineer.

12. **Assignment and Subletting**: The whole of the works included in the Contract shall be executed by the Contractor and the contractor shall not directly or indirectly transfer, assign or under-let the Contract or any part share thereof or any interest therein without the prior written consent of the Employer and not undertaking shall relieve the Contractor from the full and entire responsibility of the Contract or from active superintendence of the works during their progress.
13. No alteration, omission or variation shall vitiate this contract but in case the Bank's Engineer thinks proper at any time during the progress of the works to make any alterations in, or addition to, or omissions from the works or any alteration in the kind of quality of the materials to be used therein and shall give notice thereof in writing under

his hand to the Contractor, the Contractor shall alter, add to, or omit from, as the case may be, in accordance with such notice, but the contractor shall not do any work extra to or make any alterations or additions to or omissions from the works or any deviation from any of the provisions of the Contract. Stipulations, specifications or Contract Drawings without the previous consent in writing of the Employer and the value of such extras alterations, additions or omission shall, in all cases, be determined by the Employer in accordance with the provisions of Clause 17 hereof, and the same shall be added to, or deducted from the Contract Amount, as the case may be accordingly.

14. **Schedule of Quantities**: The Schedule of quantities, unless otherwise stated shall be deemed to have been prepared in accordance with the Standard Method of Measurement.

Any error in description or in quantity or in omission of items from the schedule of quantities shall not vitiate this contract but shall be rectified and the value thereof, as ascertained under Clause 17 hereof, shall be added to, or deducted from the Contract Amount (as the case may be) provided that no rectification of errors, if any, shall be allowed in the Contractor's schedule of rates.

15. **Sufficiency of Schedule of Quantities**: The Contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the prices stated in the Schedule of Quantities and/or the schedule of rates and prices which rates and prices shall cover all his obligations under the contract, and all matters and things necessary for the proper completion of the works.

16. **Measurement of works**: The Bank's Engineer may, from time to time, intimate to the contractor that he requires the works to be measured, and the Contractor shall forthwith attend or send a qualified agent to assist Assistant Engineer in taking such measurements and calculations and to furnish all particulars or to give all assistance required by any of them.

Should the Contractor not attend or neglect or omit to send such agent then the measurement taken by the Bank's Engineer or a person approved by him shall be taken to be correct measurement of the works. Such measurements shall be taken in accordance with the Mode of Measurements detailed in the Specifications.

The Contractor or his Agent may at the time of measurement take such notes and measurement as he may requires.

All authorized extra works, omissions and all variations made with the prior approval in writing of Employer shall be included in such measurements.

17. **Prices for extra** : The Contractor may, when authorised and shall, when directed, in writing by the Employer, add to, omit from or vary the works shown upon the drawings, or described in the specification, or included in the schedule of Quantities, but the contractor shall make no addition, omission or variation without such authorisation or direction. A verbal authority or direction by the Bank's Engineer shall, if confirmed by them in writing within seven days, be deemed to have been given in writing.

No claim for an extra shall be allowed unless it shall have been executed under provisions of clause above hereof with the concurrence of the Employer herein mentioned. Any such extra in herein referred to as authorised and shall be made in accordance with the following provisions.

- (a) (i) The net rates or prices in the original tender shall determine the valuation of the extra work where such extra work in similar character and executed under conditions as the work priced therein.
- (ii) Rates for all items, wherever possible should be derived out of the rates given in the priced Schedule of Quantities.
- (b) The net prices of the original tender shall determine the value of items omitted provided if omissions vary the conditions under which any remaining items of works are carried out, the prices for the same shall be valued under subclause(c) hereof.
- (c) Where the extra works are not of similar character and/or quoted under similar conditions as aforesaid or where the omissions vary the conditions under which any remaining items of works are carried out or if the amount of any omissions or additions relative the amount of the whole of the Contract works or to any part thereof shall be such that in the opinion of the Bank's engineer, the net rate or price contained in the priced Schedule of Quantities or tender or for any item of the works involves loss or expenses beyond that reasonably contemplated by the contractor or is by reason of such omission or addition rendered unreasonable or inapplicable, the Bank's Engineer shall fix such other rate or price as in the

circumstances he shall think reasonable and proper, with the prior approval in writing of the Employer.

- (d) Where extra work cannot be properly measured or valued, the Contractor shall be allowed day work prices as the net rates stated in the tender or the Priced Schedule or Quantities or, if not so stated, then in accordance with the local day work rates and wages for the district provided that in either case vouchers specifying the daily time (the workmen's names) and materials employed be delivered for verification to the Bank's Engineer at or before the end of the week following that in which the work has been executed.

The measurement and valuation in respect of the Contract shall be completed within the "period of final measurements" stated in the Appendix or if not stated then within six months of the completion of the Contract works as defined in Clause 21 hereof.

18. Unfixed materials when taken into account to be the property of the Employer

Where in any certificates (of which the Contractor has received payment) the Bank's Engineer has included the value of any unfixed materials included for and/or placed on or adjacent to the works such materials shall become the property of the Employer and they shall not be removed except for use upon the works, without the written authority of the Employer. The Contractor shall be liable for any loss of, or damage to, such materials.

19. **Removal of improper work** : The Employer shall, during the progress of the works, have power to order in writing from time to time the removal from the works within such reasonable time or times as may be specified in the order of any materials which in the opinion of the Bank's Engineer are not in accordance with the Specifications, the substitutions of proper materials, and the removal and proper re-execution of any work executed with materials or workmanship not in accordance with the drawings & specifications or instructions and the contractor shall forthwith carry out such order at his own cost. In case of default on the part of Contractor to carry out such order, the Employer shall have the power to employ any pay other persons to carry out the same; and all expenses consequent thereon, or incidental thereto, shall be borne by the Contractor, or may be deducted by the Employer from any moneys due, or that may become due, to the Contractor.

20. **Defects after virtual completion** : Any defect, shrinkage, settlement or other fault which may appear within the "Defects Liability Period" stated in the Appendix hereto, or, if none stated them within twelve months after the virtual completion of the works, arising in the opinion of the Employer from materials of workmanship not in accordance with the contract, shall upon the direction in writing of the Employer, and within such reasonable time as shall be specified therein, be amended and made good by the Contractor, at his own cost and in case of default the Employer may employ and pay other persons to amend and make good such defects, shrinkage settlements or other faults, and all damages loss and expenses consequent thereon are incidental thereto shall be made good and borne by the Employer or may be deducted by the Employer, upon the Bank's Engineer's Certificate in writing, from any money due or that may become due to the Contractor, or the Employer may in lieu of such amending and making good by the Contractor deduct from any money due to the Contractor a sum, to be determined by the Employer equivalent to the cost of amending such work and in the event of the amount retained under clause 32 hereof being insufficient, recover the balance from the Contractor, together with any expenses the Employer may have incurred in connection therewith. Should any defective work have been done or materials supplied by any subcontractor employed on the works who has been nominated as provided under clause 12 and 22 hereof, the contractor shall be liable to make good in the same manner as if such work or material had been done or supplied by the Contractor and been subject to the provision of this clause 2 hereof. The contractor shall remain liable under the provisions of this clause the signing of any certificate or the passing of any accounts by the Employer.
21. **Certificate of virtual completion and defects liability period** : The works shall not be considered as completed until the Bank's Engineer has certified in writing that they have been virtually completed. The defects liability period shall commence from the date of such certificates.
22. **Nominated Sub-Contractor** : All Specialists, Merchants, Tradesmen and others executing any work of supplying and fixing any goods for which the prime cost prices or provisional sums are included in the Schedule of Quantities and/or Specifications who may be nominated or selected by the Employer or hereby declared to be sub-contractors employed by the contractor and are herein referred to as nominated sub-contractors.

No nominated sub-contractors shall be employed on or in connection with the works against the Contractor shall make reasonable objection are (save where the Architect and the Contractor shall otherwise agree) who will not enter into contract providing.

- (a) That the nominated sub-contractor shall indemnify the contractor against the same obligation in respect of the sub-contract as the contractor is under in respect of this contract.
- (b) That the nominated sub-contractor shall indemnify the contractor against claims in respect of any negligence by the sub-contractors his servants or agents or any misuse by him or them or any scaffolding or other plant, the property of the Contractor or under any Workmen's Compensation Act in force.
- (c) Payment shall be made to the nominated sub-contractor within fourteen days of his receipt of the Employer's Certificate provided that before any Certificate is issued the Contractor shall upon request furnish to the Bank proof that all nominated sub-contractors accounts included in previous certificates have been duly discharged; in default whereof the Employer may pay the same upon a Certificate of the Bank and deduct the amount thereof from any sums due to the Contractor. The exercise of this power shall not create private of contract as between Employer and Sub-Contractor.

23. **Other persons employed by Employer:** The Employer reserves the right to use premises and any portion of the site for the execution of any work not included in this Contract which it may desire to have carried out by other persons, and the Contractor shall allow all reasonable facilities for the execution of such work but shall not be required to provide any plant or material for the execution of such work except by special arrangement with the Employer. Such work shall be carried out in such manner as not to impede the progress of the works included in the Contract and the Contractor shall not be responsible for any damage or delay which may happen to or occasioned by such work.

24. **Insurance in respect of damage to person and property:** The Contractor shall be responsible for all injury to persons, animals or things, and for all structural and decorative damage to property which may arise from the operation or neglect of himself or of any nominated sub-contractor or any employee of either, whether such injury or damage arises from carelessness accident or any other clause whatever in any connected with the carrying out of this Contract. This clause shall be held to include inter

alia, any damage to buildings, whether immediately adjacent or otherwise, and any damage to road, streets, foot-paths, bridges or ways as well as damage caused to the buildings and works forming the subject of this contract by frost, rain, wind or other inclemency of weather. The Contractor shall indemnify the Employer and hold it harmless in respect of all and any expenses arising from any such injury or damage to persons or property as aforesaid and also in respect of any claim made in respect of injury or damage under any acts of any legislature or otherwise and also in respect of any award or compensation or damages consequent upon such claim.

The Contractor shall reinstate all damage of every sort mentioned in this clause, so as to deliver up the whole of the Contract works complete to and perfect in every respect and so as to make good or otherwise satisfy all claims for damage to the property of third parties.

An insurance policy covering third party liability shall be taken by the contractor to cover the loss/disablement of human life (persons not belonging to the contractor). This shall also cover the risk of damages to other's materials/equipment/properties including those, if any of the banks during construction/erection/commissioning of the said contract work at site. The value of third party liability for compensation for loss of human life or full /partial disablement shall be of required statutory value for full and partial disablement and shall nevertheless cover such compensation as may be awarded by a court of law. Cover for damage to other's equipment/property shall be as approved by the bank. The sub-contractors of the contractor shall not be holders or beneficiaries in the policy nor shall they be named in the policy. The bank shall be the principal holder of the policy along with the contractor. The bank reserves the exclusive right to assign the policy.

The Contractor shall indemnify the Employer against all claims which may be made against the Employer by any member of the public or other third party in respect of anything which may arise in respect of the works or in consequences thereof and shall at his own expenses arrange to effect and maintain, until the virtual completion of the contract, with an approved office a policy of insurance in the joint names of the Employer and the Contractor against such risks and deposit such policy or policies with the Architect from time to time during the currency of this contract. The Contractor shall also similarly indemnify the Employer, against all claims which may be made upon the Employer whether under the Workmen's Compensation Act or any other status in force during the currency of this contract or at common law in respect of any employee of the

Contractor or any Sub-Contractor and shall at his own expenses effect and maintain, in the joint names of the Employer and the Contractor against such risks and deposit such policy or policies with the Architect from time to time during currency of the Contract.

The Contractor shall be responsible for any liability which may be executed from the Insurance Policies above referred to and also for all other damage to any person, animal or property arising out of the incidental to the negligent or defective carrying out of this Contract transit, storage, erection, testing & commissioning policy. He shall also indemnify the Employer in respect of any costs, charges or expenses arising out of any claim or proceedings and also in respect of any award of compensation or damages arising therefrom.

The Employer shall be entitled to deduct the amount of any damage, compensation, costs, charges and expense arising of accruing from or in respect of any such claims or damage from any or all sums due or to become due to the Contractor without prejudice to the Employer's other rights in respect thereof. The Contractor shall at his own expense, arrange to effect and maintain (until the virtual completion of the contract) with an approved office the following insurance policies in the joint name of employer and himself with the employer being first (Principal) and deposit such policy or policies with the employer from time during the currency of this contract.

1. Transit, storage, erection, testing and commissioning policy (C.A.R. policy) for the total amount of contract including fire.
2. Workmen compensation policy.

Third party liability policy with the limit as under: Rs.10,00,000/- per annum
Rs.2,00,000/- per occurrence

25. **Insurance**: The contractor shall, within 14 days from the date of commencement of the works, insure the works at his cost and keep them insure until the virtual completion of works, against loss or damage by fire with an office **in the joint names of the employer and the contractor (the name of the former being placed first in the policy) for the full amount of the contract.** Such policy shall cover the property of the "Employer" only. **The contractor shall deposit the policy and receipts for the premium with the employer within twenty one days from the commencement of the works.** In default of the contractor, insuring as provided above, the employer may so insure the works and may deduct the premium paid from any moneys due or which may become due to the

Contractor without prejudice to the other rights of the Employer in respect of such default. In case it becomes necessary to suspend the works, the Contractor shall as soon as the claim under the policy is settled, or the work reinstated by the Insurance Office, should they elect to do so, proceed with all due diligence with the completion of the works in same manner as though the fire had not occurred and in all respects under the same conditions of Contract. The Contractor in case of rebuilding or reinstatement after fire shall be entitled to such extension of time for completion as deems fit.

26. **Date of commencement and completion**: The Contractor shall be allowed admittance to the site on "Date of Commencement" stated in the Appendix hereto, or each later date as may be specified by the Employer and he shall thereupon and forthwith begin the works and shall regularly proceed with and complete the same (except such painting or other decorative work as the bank may desire to delay) or before the "Date of Completion" stated in the Appendix subject nevertheless to provisions for extension of time hereinafter contained.
27. **Damages for non-completion**: If the Contractor fails to complete the works by the date stated in the Appendix or within any extended time under Clause 26 and 20 here the Contractor shall pay the Employer the sum named in the Appendix as "Liquidated Damages" for the period during which the said works shall so remain incomplete and the Employer may deduct such damages from any money due to the Contractor.
28. **Delay and extension of time**: If in the opinion of the Employer the works be delayed (a) by force major or (b) by reason of any exceptionally inclement weather or c) by reason of proceedings taken or threatened by or dispute with adjoining or neighbouring owners or public authorities arising otherwise than through contractor's own default or (d) by the works or delays of other contractor or Tradesmen engaged or nominated by the Employer and not referred to in the schedule of quantities and/or specifications or (e) by reasons of Bank's Engineer instruction as per clause 17 hereof (f) by reason of civil commotion, local combination of workmen or strike or lockout affecting any of the building trades or (g) in consequence of the Contractor not having received in due time necessary instructions from the Bank for which he shall have specifically applied in writing or (h) from other causes which the Bank may certify as beyond the control of contractor or (i) in the event, the value of the work exceed the value of the Priced Schedule of Quantities owing to variation, the Bank may make a fair and reasonable extension of time for completion shall as soon as may be given written notice thereof to

the bank but the Contractor shall nevertheless constantly use his endeavours to prevent delay and shall do all that may reasonably has required to the satisfaction of Bank to proceed with work.

29. **Contractor's failure to comply with Employers instruction:** If the Contractor after receipt of written notice from the Employer requiring compliance within 10 days fails to comply with such further drawings and/or Bank's instructions the Employer may employ and pay other persons to execute any such work whatsoever that may be necessary to give effect thereto, and all costs incurred in connection therewith shall be recoverable from the Contractor by the Employer as a debt or may be deducted by him from any moneys due to the Contractor.

30. **Termination of Contract by the Employer:** If the Contractor being an individual or a firm commits any "act of insolvency" or shall be adjudged an insolvent or being an incorporated company shall have an order for compulsory winding up made against it or pass an effective resolution for winding up voluntarily or subject to the supervisions of the court and the Official Assignee or the Liquidator in such acts of insolvency or winding up, as the case may be, shall be unable within seven days after notice to him requiring him to do so to show the reasonable satisfaction of the Architect that he is able to carry out and fulfill the Contract and to given security therefore, if so required by the Architect.

Or if the Contractor (whether an individual, first or incorporated company shall suffer execution or other process of court attaching property to be issued against the Contractor.

Or shall suffer any payment under this contract to be attached by or on behalf of any of the creditors of the Contractors.

Or shall assign to sublet this Contract without the consent in writing of the Employer first had and obtained.

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

- (i) Has abandoned the Contract, or
- (ii) Has failed to commence the works, or has without any lawful excuse under these conditions suspended the progresses of the works for fourteen days after receiving from the Bank notice to proceed or
- (iii) Has failed to proceed with the work with such due diligence and failed to make such due progress as would enable the works to be completed within the time agreed upon, or
- (iv) Has failed to remove materials from the site or to pull down and replace work for seven days receiving from the Bank written notice that the said materials or work were condemned and rejected by the Bank's Engineer under these conditions' or
- (v) Has neglected or failed persistently to observe and perform all of any of the acts, matter or things by the Contract to be observed and performed by the Contractor for seven days after written notice shall have been given to the Contractor requiring the Contractor to observe or perform the same.

Then and in any of the said cases the Employer may, notwithstanding any previous waiver, after giving seven days notice in writing to the Contractor, determine the Contract, the whole of which shall continue in force as fully as if the Contract has not been so determined, and so if the works subsequently execute had been executed by or on behalf of the Contractor. And further, the Employer by his agents or servants may enter upon and taken possession of the works and all plant, tools scaffoldings, sheds, machinery, steam and other power utensils and materials lying upon the premises or the adjoining lands or roads, and use the same as his own property or may employ the same by means of his own servants and workmen in carrying on and completing the work or by employing any other Contractor or other person or persons to complete the works, and the Contractor shall not in any way interrupt or do any act matter or thing to prevent or hinder such other contractor or other person or persons employed for completing and finishing or using the materials and plant for the works. When the works shall be completed or as soon thereafter as convenient the Bank shall give a notice in writing to the Contractor to remove his surplus materials and plant, and should the Contractor fail to do so within a period of fourteen days after receipt thereof by him, the Employer may sell the same by public auction, and give credit to the Contractor for the net amount realised. The employer shall thereafter ascertain and certify in writing under his hand what of the said plant and materials so taken possessions or by the Employer and the expenses or loss which the Employer shall have been put to in procuring the works to be completed and the amount. If any, owing the Contractor and the amount which shall be

so certified shall thereupon be paid by the Employer to the Contractor or by the Contractor to the Employer, as the case may be, and the Certificate of the Bank shall be final and conclusive between the parties.

31. **Termination of Contract by Contractor:** If this payment of the amount payable by the Employer under Certificate of the Bank's Engineer shall be in arrears and unpaid for thirty days after notice in writing requiring payment of the amount as aforesaid shall have been given by the Contractor to the Employer, or if the Employer interferes with or obstructs the issue of any such Certificate, or if the Employer shall repudiate the Contract, or if the works be stopped under the order of the Architect or the Employer or by any injunction or other order of any court of Law, then and in any of the said cases the Contractor shall be in liberty to determine the Contract by notice in writing to the Employer, and he shall be entitled to recover from the Employer, payment for all works executed and for any loss he may sustain upon any plant or materials supplied or purchased or prepared for the purpose of the Contract.

In arriving at the amount of such payment the net rates contained in the Contractor's original Tender shall be followed or where the same may not apply valuation shall be made in accordance with Clause 17 hereof.

32. **Certificates and Payments:** The Contractor shall be paid by the Employer from time to time by installments under interim Certificate to be issued by the Bank's Engineer on account of the works executed work to the approximate value named in the Appendix as 'Value of work for Interim Certificate' has been executed in accordance with this Contract, subject, however, to a retention of the percentage of such value named in the Appendix as "Total Retention Money" after which time the installments shall be up to the full value of the work subsequently so executed and fixed in the building. And when the works have been virtually completed, the Contractor shall be paid by the Employer in accordance with the Certificate to be issued by the Bank's Engineers the sum of money named in the Appendix as "installment after Virtual Completion" being a part of the said Total Retention Money. And the Contractor shall be entitled to the payment of the Final Balance in accordance with the final Certificate at the expiration of the period referred to as 'the Defects liability Period' in the Appendix hereto from the date of virtual completion or as soon as after expiration of such period as the works shall have been finally completed and all defects made good according to the true intent and meaning hereof

whichever shall last happen provided always or at or after their completion shall not relieve the Contractor from his liability under clause 21 and 36 nor relieve the Contractor of his inability in cases of fraud, dishonesty, or fraudulent concealment relating to the works or materials or to any matter dealt with in the Certificate and in case of the all defects and insufficiencies in the works or materials which a reasonable examination would not have disclosed.

The Employer shall have power to withhold any Certificate if the works or any parts thereof are not being carried out to his satisfaction.

33. **Delayed Payment:** Any amounts payable by the Employer to the Contractor shall, if not paid within the 'period of honouring Certificates' names in the Appendix carry interest at the rate named in the Appendix as the "Rate of interest for delayed payment" from the date upon which sum ought to have been paid by the Employer until the payment.
34. The decision, opinion, direction Certificate (except for payment) with respect to all or any of the matters under Clauses 2(a,b), 4,5, 14, 20 (a,b,c,d and f) hereof (which matters are herein referred to as the excepted matters) shall be final and conclusive and binding on the parties hereto and shall be without appeal. Any other decision, opinion, direction, shall be subject to the right of Arbitration and review under the Clause 35 hereof in the same way in all respects (including the provisions as to opening the reference).
35. **Settlement of disputes by Arbitration:** All disputes and differences of any kind whatever arising out of or in connection with the contract or the carrying out of the works (whether during the progress of the works or after there completion and whether before or after the determination abandonment or breach of the contract) shall be referred to and settled by the Bank who shall state its decision in writing. Such decision may be in the form of a final certificate or otherwise. The decision of the Bank with respect to any of the excepted matters shall be final and without appeal as stated in Clause 33 hereof. But if either the Contractor be dissatisfied on any matter on which a decision is taken by the Bank as above, except any of the expected matter the Contractor may within 28 days after receiving notice of such decision give a written notice to the other party requiring that the matters in dispute be arbitrated upon. Such written notice shall specify the matters, which are in dispute or difference of which such written notice has been given. If both the parties agree, a single arbitrator would be appointed for the purpose. In case no agreement could be reached on the appointment of single arbitrator, both the parties will

nominate one person each as an arbitrator on their behalf. The two arbitrators nominated by the parties shall nominate one more person to act as third arbitrator or umpire.

The arbitrator or Arbitrators, as the case may be, shall have power to open up, review and revise any certificate, opinion, decision, requisition or notice, save in regard to the excepted matters, referred to in the preceding clause, and to determine all matters to dispute which shall be submitted to arbitration and of which notice shall have been given as aforesaid.

The arbitrator or Arbitrators, as the case may be, shall make his or their award within one year (or such further extended time as may be decided by him or them as the case may be with the consent of the parties) from the date of entering on the reference. In case during the arbitration proceedings the parties mutually settle or compromise their dispute or difference, on the parties filing their joint memorandum of the settlement or compromise, the Arbitrator or the Arbitrators as the case may be, shall make an award in terms of such settlement or compromise.

Upon any such reference, the decision on the cost incidental to the reference and Award respectively shall be in the discretion of the arbitrator or Arbitrators as the case may be, who may determine the amount thereof or direct the same to be taxed as between the party and party, and shall direct by whom and to whom and in what manner the same shall be borne and paid.

This submission shall be deemed to be a submission to arbitration within the meaning of the Indian Arbitration and Conciliation Act, 1996 or any statutory modification thereof.

The award of the arbitrator or Arbitrators, as the case may be, shall be final and binding on the parties. It is agreed that the Contractor shall not delay the carrying out of the works by reason of any such matter, question or dispute being referred to arbitration, but shall proceed with the works with all due diligence and shall until the decision of the Arbitrator or Arbitrators, as the case may be, is given, abide by the decision of the Bank. No award of the Arbitrator or Arbitrators, as the case may be, shall relieve the Contractor of his obligations to adhere strictly to the Bank's instructions with regard to the actual carrying out of the works. The Employer and the Contractor hereby also agree that arbitration under this Clause shall be a condition precedent to any right of action under the Contract.

Right of technical scrutiny of final bill

36. The Employer shall have a right to cause a technical examination of the works and the final bill of the contractor including all supporting vouchers, abstracts, etc. to be made at the time of payment of the final bill. If as a result of this examination of otherwise any sum is found to have been overpaid or over certified it shall be lawful for the employer to recover the sum.

Employer entitled to cover compensation paid to workman

37. If, for any reason, the Employer is obliged, by virtue of the provisions of the Workmen's Compensation Act, 1923, or any statutory modification or re-enactment thereof to pay compensation to a workman employed by the Contractor in execution of the works, the Employer shall be entitled to recover from the Contractor the amount of compensation so paid, and without prejudice to the rights of the Employer under the said Act. The Employer shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due by the Employer shall not be bound to contest any claim made against it under the said Act, except on the written request of the Contractor and upon his giving to the Employer full security to the satisfaction of the Employer for all costs for which the Employer might become liable in consequence of contesting such claim.

Abandonment of works

38. If at any time after the acceptance of the tender, the Employer shall for any reasons whatsoever not requires the whole or any part of the works to be carried out, the Bank shall give notice in writing to the Contractor who shall have no claim to any payment of compensation or other-wise whatsoever on account of any profit or advantage which he might have derived from the execution of the whole works.

Return of surplus materials

39. Notwithstanding anything to the contrary contained in any or all the clauses of this Contract, where any material for the execution of the Contract is procured with the assistance of the Employer by purchase made under orders or permits or licenses issued by Government, the Contractor shall hold the said materials economically and solely for the purpose of the Contract and not dispose of them without the prior written permission of the Employer and return it to the Employer, if required by the Employer, at the price to be determined by the Bank having due regard to the conditions of the

materials, the price to be determined not be exceed the purchase price thereof inclusive of sales tax, octroi and other such levies paid by the Contractor in respect thereof, in the even of breach of the aforesaid condition, the Contractor shall in addition to being liable to action for contravention of the terms of licenses or permit and/or criminal breach of trust, be liable to Employer for all moneys, advantages or profits resulting or which in the usual course would have resulted to his by reason of such breach.

Right of employer to terminate contract in the event of death of Contractor or individual

40. Without prejudice to any of the rights or remedies under this Contract, if the Contractor, being an individual, dies, the Employer shall have the option of terminating the contract without incurring any liability for such termination.

APPENDIX HEREIN REFERRED

| | | |
|----|--|--|
| 1. | Defects liability Period | 12 months from the date of issue of virtual completion certificate. |
| 2. | Period of final measurement | 1 month from the date of final commissioning. |
| 3. | Date of commencement | 10 th day from the date of award letter. |
| 4. | Period of completion | 8 weeks from the 10th day of work order |
| 5. | Liquidated Damages | Rs.0.25% of the contract value per week of delay subject to a maximum of 10% of the contract amount. |
| 6. | Value of work for Interim Certificate for running bill | Rs.6.00 lakh |
| 7. | Period of honoring interim certificate | 1 month |
| 8. | Interest for delayed payment | 3 percent per annum |

Signature of Contractor

Part I
Section(IV)

Technical Specifications Description

This section of the specification includes the Design, Supply, installation, testing, commissioning and handing over of an intelligent analogue addressable fire alarm system required to form a complete, operative, coordinated system for Bank's Office Building at Maker Tower, Mumbai. It shall include, but not be limited to, alarm initiating devices, alarm notification appliances, control panels, auxiliary control devices, annunciators, power supplies etc. as specified herein.

The fire alarm system shall comply with requirements of NFPA Standard No. 72 for protected Estate signalling systems except as modified and supplemented by this specification. The system shall be supervised either electrically or by software-directed polling of field devices.

Scope of work

The scope of work includes Design, Supply, installation, testing, commissioning and handing over of an intelligent **analogue** addressable fire alarm system for the Bank's leased Premises at Maker Tower Mumbai..

A new intelligent reporting, fire detection and alarm annunciation system shall be supplied and installed in accordance with the specifications and BOQ after.

(A) Basic Performance

- (i) All signals from various type of devices shall be digitally encoded onto a looped multiplex communication system of appropriate class (Digitized electronic signals shall employ check digits or multiple polling).
- (ii) The devices shall be of low current, solid-state integrated circuits, and shall be powered from the central primary power and standby battery power source.
- (iii) A single ground or open on any system signalling line circuit, initiating device circuit, or notification appliance circuit shall not cause system malfunction, loss of operating power or the ability to report an alarm on other circuits
- (iv) Alarm signals arriving at the main FACP shall not be lost following a power failure (or outage) until the alarm signal is processed and recorded.

(B) Basic System Functional Operation

When a fire alarm/trouble condition is detected and reported by one of the system initiating devices or appliances, the following functions shall immediately occur:

- (i) The System Alarm LED shall flash or the system trouble LED shall flash. (ii) A local piezo-electric signal in the control panel shall sound.
- (iii) The LCD display shall generate a Pop-Up to indicate all information associated with the fire alarm / trouble condition, including the type of alarm point and its location within the protected Estate.
- (iv) Printing and history storage equipment shall log the information associated with the fire alarm control panel condition, along with the time and date of occurrence.
- (v) All system output programs including sounding of hooters assigned via control-by-event equations to be activated by the particular point in alarm/trouble condition shall be executed, and the associated system outputs (alarm notification appliances and/or relays) shall be activated.

(C) FIRE DETECTION & ALARM PANEL

General

1. The Panel shall be UL864 / EN 54, listed and shall comply with latest standards of NFPA 72.
2. The panel shall be a Microprocessor based, Analogue addressable networkable and Intelligent.
3. **The Panel shall have all necessary provisions for interfacing with BMS on MODBUS/Back net protocols**
4. **The Fire Alarm Control Panel / system shall be supplied with all required Hardware, Software, Technical support, Software Development Key (SDK), Application Program Interface (API) to integrate the Fire Alarm System to the proposed Command and Control Centre through open communication protocol such as BACNET / Modbus / OPC etc. It should be compatible to integrate with IP CCTV system. Further, during alarm condition, the system should be compatible to give OFF (through NO/NC contact) signal to switch off the AHU of affected area.**
5. In the event of CPU failure, all signalling loop circuit (SLC), modules shall fall back to **degrade mode**. Such degrade mode shall treat the corresponding SLC Loop Control Module and associated detection devices as conventional two wire operation. Any activation of a detector in this mode shall automatically activate associated notification appliance circuits. ***In case the degrade mode in SLC is not available, a redundant CPU configuration in the main panel must be supplied.***

6. The system shall support a detector response time to meet word annunciation requirements of less than 3 seconds.
7. The system shall be designed so that spare capacity of at least 20% in each loop is available for future expansion.

Main Fire Alarm Control Panel (MFACP)

The control panel shall be microprocessor based networkable system designed specifically for fire detection and alarm applications. The control panel shall include all required hardware, software and site specific system programming to provide a complete and operational system. The control panel shall be designed such that interactions between any applications can be configured, and modified. The control panel operational priority shall assure that life safety takes precedence among the activities coordinated by the control panel.

The Panel should be controlled by a Central Processing Unit (CPU). The CPU shall interface with all the loop cards which shall have its individual microprocessors for executing the functions of the fire alarm system.

The Loop shall contain its own microprocessor and shall be capable of operating in a degraded **mode** (any addressable device input shall be capable of activating any or all addressable device outputs) in the unlikely event of a failure of the main CPU/standby CPU. In such eventuality, the hooter/alert device present in the Main FACP should always be activated.

Fire Alarm panel shall be a single or multi-loop (exact number of loops as per schedule of quantity) panel and all the loop card should be of same size with a minimum capacity of 159 detectors/devices. It shall have a backlit minimum 640-character liquid crystal/LED display or touch screen, individual, colour coded system status LEDs, and alphanumeric keypad and control of the fire alarm system, and the provision of internal / external printer.

The panel shall maintain a history file of the last 4000 events, each with a time and date stamp. History events shall include all alarms, troubles, operator actions, and programming entries. The control panels shall also maintain a 1000 event Alarm History buffer, which consists of the 1000 most recent alarm events from the 4000 event history life.

The loop interface board shall be able to drive an NFPA Style 6 twisted shielded circuit up to 5280 feet in length. The loop Interface shall also be capable of driving an NFPA Style 6, no twist, no shield circuit up to 5280 feet in length. In addition, loop wiring shall meet the listing requirements for it to exit the building or structure. "T"-tapping shall be allowed in either case.

The FAS shall have pre-signal and Positive Alarm Sequence that is the system shall provide means to cause alarm signals to only sound in specific areas with a delay of the alarm from 60 to up to 180 seconds after start of alarm processing. The system shall support a detector response time to meet word annunciation requirements of less than 3 seconds.

To obtain early warning of incipient or potential fire conditions, the system shall support a programmable option to determine system response to real-time detector sensing values above the programmed setting. Two levels of Pre-alarm indication shall be available at the control panel: alert and action.

The system shall provide means to allow panel programming either through an off-line software utility program away from the panel or while connected and on-line. The system shall also support upload and download of programmed database and panel executive system program to a Personal Computer/laptop.

The system shall support two password levels, master and user. Up to 9 user passwords shall be available, each of which may be assigned access to the programming change menus, the alter status menus, or both. Only the master password shall allow access to password change screens.

The system shall provide means to obtain a variety of reports listing all event, alarm, trouble, supervisory, or security history.

The system shall provide means to link one detector to up to two detectors at other addresses on the same loop in cooperative multi-detector sensing. There shall be no requirement for sequential addresses on the detectors and the alarm event shall be a result or product of all cooperating detectors chamber readings.

The Addressable Main Power Supply shall operate on 240 VAC, 50Hz, and shall provide all necessary power for the FACP.

The FAS shall be networkable in a peer to peer style and shall be able to communicate with other network nodes at a minimum speed of 3Mbps on copper. It shall be able to build a network on copper or fibre optics.

FIRE ALARM SYSTEM DEVICES

General

1. Each device shall be UL / EN 54 Listed.
2. Addressable devices shall use simple to install and maintain decade, decimal address switches. Devices shall be capable of being set to an address in a range of 001 to 159. Devices shall receive power and communication from the same pair of conductors of the SLC.
3. The contractors shall not install the detectors until after the construction clean-up of all trades is complete and final.
4. Initiating devices shall be installed in all areas, compartments, or locations where required by other NFPA codes and standards or as required by the authority having jurisdiction.
5. In the event of duplicate addressing of a device, the fire panel shall indicate this as a fault condition. However, the SLC should continue to function normally with the trouble condition display at the Fire panel.
6. Each addressable detector & device shall respond to Fire Alarm Panel scan for information with an analogue representation of measured fire related phenomena (smoke density, particles of combustion, temperature).
7. The standard base of the Detector shall be interchangeable with other Smoke/Heat/Multi criteria Detectors.
8. Using software in the FACP, detectors shall automatically compensate for dust accumulation and other slow environmental changes that may affect their performance.
The detectors shall be listed by UL /EN54as meeting the calibrated sensitivity test requirements of NFPA Standard 72.
- 9 . Addressable devices shall use simple to install and maintain type address switches.
- 10. In case Isolation feature is not available within the detector, the cost for Isolation module should be included in the system cost. No separate payment will be made for this item.**

INITIATION DEVICES

Intelligent Multi Criteria Detector with floating sensitivity

The intelligent multi criteria detector shall be an addressable device that is designed to monitor a minimum of photoelectric and thermal technologies in a single sensing device. The design shall include the ability to adapt to its environment by utilizing a built-in microprocessor to determine it's environment and choose the appropriate sensing settings automatically i.e. have floating sensitivity. The detector design shall allow a wide sensitivity window as per UL864/EN 54 standards. This detector shall utilize advanced electronics that react to slow smoldering fires and thermal properties all within a single sensing device. It shall be capable of operation in heat-only alarm mode, enabled by a special command from the panel.

The microprocessor design shall be capable of selecting the appropriate sensitivity levels based on the environment type it is in (office, manufacturing, kitchen etc.) and then have the ability to automatically change the setting as the environment changes (as walls are moved or as the occupancy changes).

The intelligent multi criteria detection device shall include the ability to combine the signal of the thermal sensor with the signal of the photoelectric signal in an effort to react hastily in the

event of a fire situation. It shall also include the inherent ability to distinguish between a fire condition and a false alarm condition by examining the characteristics of the thermal and smoke sensing chambers and comparing them to a database of actual fire

Analog Addressable Photo Electric Smoke Detector

It shall have an optical sensing chamber that operates on the light scattering principle. When smoke enters the sensing chamber it scatters light which is received by a photo cell. The signal is amplified and digitized for reception by the panel. Detector shall be completely solid state with LED indication at the detector.

The minimum coverage per Photoelectric Smoke Detector shall be 50 M. Sq. This coverage area will reduce depending upon structural configurations or partitions etc as per NFPA 72, Chapter 5. It shall be possible to connect Smoke Detector with Heat Detector or Manual Push Buttons in the same SLC.

The sensitivity of Detector shall be adjusted and set by the contractor to suit the site requirement. The location of smoke detectors shall be based on an evaluation of potential ambient sources of smoke, moisture, dust, or fumes, and electrical or mechanical influences to minimize nuisance alarms. The selection and placement of smoke detectors shall take into account both the performance characteristics of the detector and the areas into which the detectors are to be installed to prevent nuisance alarms or improper operation after installation.

As per NFPA 72, Chapter 5, smoke detectors shall not be installed if the ambient conditions are any of the four - Temperature below 0°C (32°F), Temperature above 38°C (100°F), Relative humidity above 93 percent, Air velocity greater than 1.5 m/sec (300 ft/min). Photoelectric smoke sensor shall have a nominal sensitivity of 2.0% foot obscuration or better.

Addressable Heat Detectors

The Heat Detector shall be a Addressable Detector with its own manually set digital code and shall be able to give a single digitized output to the Fire Alarm Panel regarding its condition. Heat detectors shall be rated at 135 degrees Fahrenheit (58 degrees Celsius) and have a rate-of-rise element rated at 15 degrees F (9.4 degrees C) per minute. It shall connect via two wires to the fire alarm control panel signaling line circuit.

It shall be able to withstand temperature variations from 0o C to 38o C. Further, relative Humidity (non Condensing type) up to 93% shall not hamper its performance. The Voltage rating shall be from 17 V DC to 28 V DC, though the voltage may be changed depending upon the working voltages of a proprietary Fire Alarm Panel. The Detector shall meet the requirements of NFPA 72. The approved coverage per Detector for unhampered areas shall not be less than 30 sq. M. The detector shall be capable of being reset automatically after any alarm condition.

Addressable Beam Detectors

The Beam Detector shall be intelligent, addressable projected beam type smoke detectors for protecting open areas with high and sloping ceilings, and wide-open areas, and the ideal applications are atriums, cathedral ceilings, aircraft hangers, warehouses, sporting arenas, concert halls, and enclosed parking facilities.

The detector shall have a transmitter/receiver unit and a reflector. When smoke enters the area between the unit and the reflector it shall causes a reduction in the signal strength. When the smoke level (signal strength) reaches the predetermined threshold, an alarm shall be activated. The Transmitter/receiver shall be built into same unit. The detector shall have six user - selectable sensitivity levels with a protection range of 16' to 230'.

The detectors shall have a Digital display with no special tools required. It shall also be equipped with a Built-in automatic gain control that compensates for signal deterioration

from dust buildup. The adjustment angle shall be $\pm 10^\circ$ horizontal and vertical. The detector shall offer 6 levels of sensitivity. It shall give indications for alarm, trouble and normal operation..

Intelligent Addressable Spot Type Laser Very early warning fire detector

The intelligent laser photo smoke detector shall be a spot type detector that incorporates an extremely bright laser diode and an integral lens that focuses the light beam to a very small volume near a receiving photo sensor. The scattering of smoke particles shall activate the photo sensor.

The laser detector shall have conductive plastic so that dust accumulation is reduced significantly. The intelligent very early warning fire detector shall have nine sensitivity levels and be sensitive to a minimum obscuration of 0.03 percent per foot. The laser detector shall not require expensive conduit, special fittings or PVC pipe. It shall comply with NFPA76/318. The intelligent very early warning fire photo detector shall support standard, relay, isolator and sounder detector bases.

The very early warning fire photo detector shall not require other cleaning requirements than those listed in NFPA 72. Replacement, refurbishment or specialized cleaning of the detector head shall not be required. The very early warning fire photo detector shall include two bicolor LEDs that flash green in normal operation and turn on steady red in alarm.

Intelligent Addressable Hostile Area Smoke Detector

The detector shall be designed to provide early warning smoke detection in hostile environments. The detector shall have a filter system to remove particles down to at least 25 microns. This filter system shall remove unwanted airborne particles and water mist. This shall allow the detector to operate in environments where traditional smoke detectors would have nuisance alarms.

The filter system shall consist of 2 filters one of which is field replaceable. The filter system shall have an intake fan to draw air and smoke through the filters into the sensing chamber. The filter system shall be supervised so that if the filter is clogged or the fan fails the control panel reports trouble. The detector shall be UL Listed. The filter system shall be powered from 24 VDC separate from the SLC communications. The detector shall utilize a photoelectric sensing chamber.

LPG Sensor/Detector

The LPG gas detector shall be designed to sense the leak of LPG flammable gas. It shall be connected to the fire alarm panel by use monitor modules and shall be UL Listed.

The scale, range, calibration, relay operation and alarm set points of the detector shall all be adjusted via the transmitters' backlit LCD. The detector shall be mountable on a wall or round support pole using universal brackets.

Digital Heat Sensing Cable

The sensor cable shall be comprised of two steel conductors individually insulated with a heat sensitive polymer. The insulated conductors shall be twisted together to impose a spring pressure between them, then wrapped with a protective tape and finished with an outer jacket suitable for the environment in which the detector will be installed.

It shall be is a fixed temperature digital sensor with alarm temperature of 155°F (68°C) and shall therefore be capable of initiating an alarm once its rated activation temperature is reached.

It shall not be required that a specific length be heated in order to initiate an alarm, nor shall system calibration be necessary to compensate for changes in the installed ambient temperature. It shall provide the advantages of line coverage with point sensitivity.

It shall be a normally open contact device and shall be interfaced to the intelligent fire alarm panels via monitor modules.

Avoiding false alarms: The system should be provided with intelligent signal processing which compares the measured smoke level with known disturbance variables in order to decide an alarm or deception condition

Diagnostic features: the system should have in built self-diagnostic mechanism to indicate the health of system.

Remote monitoring: The system should be provided with a remote monitoring/repeater panel with all necessary cabling and connectivity.

The panel shall preferably mimic all the functions provided in the local onsite control panel including providing audible and visual annunciations.

Addressable Manual Call Point

Manual Call Point shall be of the dual action design. Addressable manual fire alarm boxes shall, on command from the control panel, send data to the panel representing the state of the manual switch and the addressable communication module status. They shall use a key operated test-reset lock, and shall be designed so that after actual emergency operation, they cannot be restored to normal use except by the use of a key.

All operated stations shall have a positive, visual indication of operation and utilize a key type reset.

Manual fire alarm boxes shall be constructed of Lexan with clearly visible operating instructions provided on the cover. The word FIRE shall appear on the front of the stations in raised letters.

NOTIFICATION DEVICES

Strobe cum Alarm Hooters

Strobe cum Alarm hooters shall be suitable for indoor applications. All hooters shall be 24 V DC operated. The minimum sound level shall be 80 dB at 10 feet. Listed to UL 1971 and UL 864/EN 54. Strobe cum Alarm hooters shall be wired as a primary signalling notification appliance.

The strobe shall flash at 1 Hz over the strobe's entire operating voltage range. The strobe light shall consist of a xenon flash tube and associated lens/reflector system. The hooter shall have two tone options, two audibility options (at 24 volts) and the option to switch between a temporal 3 pattern and a non-temporal continuous pattern. Strobes shall be powered independently of the sounder. The horn on horn/strobe shall operate on a noncoded power supply.

The strobe cum alarm hooter shall be loop powered or else shall draw independent power from the FACP. Making arrangement for the power cable and power supply units for this purpose shall within the scope of SITC of strobe cum alarm hooters and shall not be paid separately. In case of separately powered Hooters **the status of the power supply each**

strobe cum hooter level should be monitored continuously and in case of any power interruption it should initiate alarm / alert at FACP and repeater panels.

MODULES

Control Module (for output from fire alarm panel)

The addressable control module shall be provided to control the operations of the system etc. The control module shall receive necessary communication from FACP and shall initiate required trigger to control the operation of the controlled system. The device module shall also contain an LED which blinks upon being scanned by the Fire Alarm panel to indicate its health or fault conditions.

Fault Isolator Device

A wire-to-wire short circuit fault on any circuit or device, before or after the circuit or device has been activated, shall initiate a trouble signal and shall isolate that circuit or device from the rest of the system. The Fault Isolator Device shall detect and isolate a short-circuited segment or device of a fault-tolerant loop. The fault isolator device shall automatically determine a return to normal condition of the loop and restore the isolated segment. The Fault isolators shall be provided in the loop as per manufacturers /UL/EN standard requirement for each detector/device or after a set of not more than ten detectors/devices.

Repeater Panel

The Repeater Panel shall be with minimum suitable display or touch screen to indicate the status of system and location of incident which shall mimic the main fire alarm panel. It shall be supervised, remotely located and shall have a back-lit LCD display. It shall have an onboard input, output, and status indicators to support diagnostics. It shall display all alarm and trouble conditions in the system. The Repeater panel shall be UL/EN 54 Listed. The Repeater Panel shall be capable of a wiring distance of up to 3300feet from the main control panel using recommended cables. It shall have functional keys like Acknowledge, Signal Silence, System Reset, Lamp Test etc.

Networked Graphic Control Station (NCS)

The NCS shall utilize a Microsoft TM operating system. Each Network Control Station shall be capable of graphically annunciating and controlling all network activity. Network display devices that are only capable of displaying a subset of network points shall not be suitable substitutes.

The NCS shall be a desktop computer with Intel® Core 2 Duo - 2.0 GHz, 1GB RAM, 320 GB hard disk, DVD-ROM/CDRW, sound card, mouse, speakers, keyboard, Ethernet card, PCI slot, RS-232 serial COM port, Windows OS , Laser jet Printer and 32" Flat Screen full HD LED Monitor.

The NCS workstation shall be capable of storing over 100,000 network events in a history file. Events shall be stored on hard disk and shall be capable of back-up storage to a tape drive. The history buffer shall allow the operator to view events in a chronological order. A filter shall be available for displaying chronological events by operator, date, time, fire alarms, troubles (including security, supervisory and system/device), disabled points/zones, system programming, operator response and operator log in/log out. The ability to print NCS history files shall also be available.

The NCS software shall be a high-performance colour graphic system capable of displaying all network events and points. The workstation shall use Microsoft® Windows®, providing an easy-to-use graphical user interface. The operator shall be presented with a consistent look and operation for all monitored equipment. The NCS software shall have the ability to monitor up to four Fire Alarm Control Panels.

It shall have but not be limited to the following features:

All off-normal events displayed simultaneously with text and corresponding graphic screens.

- Automatic screen navigation (selectable for each device) that locates and zooms to the device related to an alarm or event, based on the priority of the event.
- Dynamically generated floor plan overview.
- Floor plans can be zoomed in and out and devices can be placed at different zoom levels. - Full linked multimedia (text, audio, video, and bitmaps) to any device and event status, all definable by the administrator.
- Intuitive navigational tree and icons for easy access to building

Floor plans

- Control of fire panels (extent of control determined by panel model).
- Operator log with response tracking.
- Backup capability for all system data – screen, member, and history databases.
- System Administrator-definable security, monitoring, and control profiles for allowing extremely flexible definition of operator accounts.
- A Pop up at the time of alarm.
- Device disabling feature for faulty devices
- When PC is switched ON, the NCS software must automatically loaded without any manual intervention. **Batteries**

a. Battery shall have sufficient capacity to power the fire alarm system for not less than 30 Minutes in alarm condition and at least 60 hours in normal condition. b. The batteries are to be completely maintenance free.

Approvals

a. All the equipment shall have proper listing and/or approvals and shall comply to the requirements of the following recognized agencies.

UL – Underwriters Laboratories Inc.
EN 54 - European Standards
IS 2189 – Indian Standard 4th Revision

Cables/conduits

All cables/conduits to be laid on wall, ceiling , below soil by excavation up to minimum three feet and refilling by the same excavated material and on the hangers wherever necessary and as directed by Bank's engineer with required hardware. The cables shall be FRLS, armoured PVC twisted 1.5 sq. mm multi stranded insulated, copper conductor cables, conforming to IS: 1554 and shall be of specified make. All the cables shall be properly supported by GI saddle spacers and hardware and terminated and labelled. All the drops on the wall must be concealed in PVC pipe and repairing of

wall thereafter. The work includes termination of all the cables using brass saddles, copper thimbles and proper nomenclature tags for loop identification.

Section (IV) Execution

Installation

- (i) As the work is to be carried out in existing occupied building, the actual functioning of the existing fire alarm system cannot be put under shut down. Therefore, the execution of this work has to be meticulously planned and executed in consultation with site engineer and Fire officer in such a manner that fire safety of the building is not hampered.
- (ii) The work shall be taken for execution only after the entire material has been supplied at site.
- (iii) Before commencement of execution of work, the tenderer shall design the system and prepare the drawings for the proposed new Fire alarm system and get the same approved from Bank.
- (iv) Installation shall be in accordance with the NEC, NFPA 72, local and state codes, as shown on the drawings, and as recommended by the major equipment manufacturer.
- (v) All conduit, junction boxes, conduit supports and hangers shall be concealed in finished areas and may be exposed in unfinished areas as per Bank's direction.
- (vi) **Removing and re-fixing of the light fixtures / false ceiling tiles in order to access the area above the false ceiling for laying of cable and fixing of detectors etc., will be in the scope of this contract. No additional payment shall be made on this account. Any damage to the Bank's property shall be made good without any additional claim.**
- (vii) Smoke detectors shall not be installed prior to the system programming and test period. If construction is ongoing during this period, measures shall be taken to protect smoke detectors from contamination and physical damage.
- (viii) All fire detection and alarm system devices, control panels and remote annunciators shall be flush mounted when located in finished areas and may be **surface mounted** when located in unfinished areas.
- (ix) Addressable intelligent break-glass units (Manual Stations) shall be suitable for surface mounting or semi-flush mounting as existing, and shall be installed not less than 42 inches, nor more than 48 inches above the finished floor

Testing of the System

The contractor shall arrange and provide at no extra cost, the service of a competent, factory-trained engineer or technician authorized by the manufacturer of the fire alarm equipment to technically supervise and participate during all of the adjustments and tests for the system.

- (i) Before energizing the cables and wires, check for correct connections and test for short circuits, ground faults, continuity, and insulation.
- (ii) Open initiating device circuits and verify that the trouble signal actuates.

- (iii) Open signalling line circuits and verify that the trouble signal actuates.
- (iv) Open and short notification appliance circuits and verify that trouble signal actuates.
- (v) Ground initiating device circuits and verify response of trouble signals.
- (vi) Ground signalling line circuits and verify response of trouble signals.
- (vii) Ground notification appliance circuits and verify response of trouble signals.
- (viii) Check alert tone and pre-recorded voice message if any to all alarm notification devices.
- (ix) Check installation, supervision, and operation of all intelligent smoke detectors using walk test.
- (x) Each of the alarm conditions that the system is required to detect should be introduced on the system. Verify the proper receipt and the proper processing of the signal at the FACP and the correct activation of the control points.
- (xi) When the system is equipped with optional features, the manufacturer's manual should be consulted to determine the proper testing procedures. This is intended to address such items as verifying controls performed by individually addressed or grouped devices, sensitivity monitoring, verification functionality and similar.

Final Inspection

At the final inspection a factory trained representative of the manufacturer of the major equipment shall demonstrate that the systems function properly in every respect.

Instruction

- (i) Provide instruction as required for operating the system. "Hands-on" demonstrations of the operation of all system components and the entire system including program changes and functions shall be provided.
- (ii) The contractor and/or the systems manufacturer's representatives shall provide a typewritten "Sequence of Operation."

Documentation

- (i) Sufficient information, clearly presented, shall be included to determine compliance with drawings and specifications.
- (ii) It should include manufacturer's name(s), model numbers, ratings, power requirements, **equipment layout**, device arrangement, complete point to point wiring diagrams, annunciators layouts and main control layout, configurations and terminations
- (iii) Complete operating and maintenance manuals including technical data sheets
- (iv) Provide a clear and concise description of operation which gives, in detail, the information required to properly operate the equipment and system
- (v) Four copies of the above documents in book form well bound should be submitted

Standards to be followed

| | |
|--|---|
| | The above system should follow the following Standards |
| | NFPA 318 (Standards on Critical Area and Clean room applications) |
| | NFPA 76 (Protection of Electronic Computer/Data Processing) |
| | NFPA 72 (Standards on Fire detection) |
| | NFPA 2001 (Standards on Gas Suppression) |
| | NFPA 101 (Standards on Life Saving) |

Section (V)Approved Makes

1. FRLS Cables

- 1) FINOLEX
- 2) CCI
- 3) Polycab

Fire Equipment: Control Nodes (Fire Panel, repeater panel, software etc.), Initiation devices (detectors, Manual Call Points); Notification devices (hooter cum strobes etc.); Modules

- 1) NOTIFIER
- 2) SIEMENS
- 3) BOSCH
- 4) EDWARDS GE
- 5) TYCO

PC & LED MONITOR

PC- HP, Dell, IBM, Lenovo

Monitors - HP, Dell, IBM, Lenovo, Samsung, VU

LASER Printer –HP, Brother, EPSON

Note: OEM selected must have their service set up with full infrastructure, in India. A copy of the service tax registration number must be submitted along with tender Part-I.

Offered Makes & Models by tenderers

| Sl. No | Item | Offered Make | Offered Model |
|---------------|---|---------------------|----------------------|
| 1 | Fire Alarm Control Panel | | |
| 2 | Networked Graphic Control Station | | |
| 3 | Repeater Panel | | |
| 4 | Intelligent Multi Criteria Detector with floating sensitivity | | |
| 5 | Photo Electric Smoke detectors | | |
| 6 | Rate of rise cum fixed temperature heat detectors | | |
| 7 | Intelligent Addressable Very early warning fire detector | | |
| 8 | Dual action call point | | |
| 9 | Hooter cum strobe lights | | |
| 10 | Response Indicator | | |
| 11 | FRLS cable | | |
| 12 | PC | | |
| 13 | Software | | |

The tenderers have to supply the technical literature of all the above offered makes and models in part I of the tender.

The firm must have installed and commissioned at least one Fire Alarm Control Panel of the above offered make & model. The details of such installation need to be furnished

Technical data to be furnished by tenderer:

| Tenders for Design, Supply, Installation, Testing and Commissioning of Intelligent Analogue Addressable Fire Alarm System for the Bank's Office Building floors at Maker Tower, Mumbai | | | | |
|--|---|----------------------------|----------------------|--|
| Bill of Quantities | | | | |
| S.No. | Description | Tender | Offered BY Yes or NO | Remarks |
| 1 | Fire Alarm Control Panel (Minimum one Loop) as under. | 1 loop | | Separate panel for 13th and 20th floor |
| a | Total Loops in panel | 1 loop | | |
| b | Redundant CPU to take over the functions of main CPU in the event of failure of main CPU | Required | | |
| c | Minimum Addressable Detectors & devices per Loop | 159 | | |
| d | Complete System Scanning time | 3 sec | | |
| e | Field Programming via Built in Key pad | Yes | | |
| f | Display | 640 Chanel LCD/Touch Panel | | |
| g | Alarm Verification | Yes | | |
| h | Occupancy Scheduling feature | Yes | | |
| i | Adjustable Alarm Sensitivity Level | Yes | | |
| j | Windows based Upload & Download programming Utility | Yes | | |
| k | Event History | 4000 events | | |
| l | Trouble alarm History | 1000 events | | |
| m | Loop Length (1.5 sq. mm twisted wire) | 1600 mtr | | |
| n | UL 9th Edition Listed /EN 54(Latest UL/En 54 Standards to be implemented) | Yes | | |
| 2 | Fire Graphic Command Station | | | |
| a | PC with Intel® Core 2 Duo - 2.0 GHz, 1GB RAM, 320 GB hard disk, DVD-ROM/CDRW, sound card, mouse, speakers, keyboard, Ethernet card, PCI slot, RS-232 serial COM port, Windows OS , Colour Laserjet Printer and 32" full HD LED Screen | Yes | | |
| b | High-performance colour graphic software capable of displaying all network events and points | Yes | | |
| c | Automatic screen navigation (selectable for each device) that locates and zooms to the device related to an alarm or event, based on | Yes | | |

| | | | | |
|----------|---|------------|--|--|
| | the priority of the event. | | | |
| d | Real-time event printing of system-wide events | Yes | | |
| e | Automatic loading of the software after power ON. | Yes | | |
| f | Pop up at the time of Fire | Yes | | |
| g | Backup capability for all system data – screen, member, and history databases. | Yes | | |
| h | System Administrator-definable security, monitoring, and control profiles for allowing extremely flexible definition of operator accounts | Yes | | |
| 3 | Repeater Panel | | | |
| a | UL Listed/EN 54 | Yes | | |
| b | Display | Yes | | |
| c | Mimic all events and Notification from the Panel | Yes | | |
| d | It shall have functional keys like Acknowledge, Signal Silence, System Reset, Lamp Test etc. | Yes | | |

Signature of tenderer _____

Seal:

Annexure I

Proforma for Details of Bankers

| Sr. No. | Particulars | Banker | Banker 1 | Banker 2 |
|----------------|--------------------|---------------|-----------------|-----------------|
| 1 | Address | | | |
| 2 | Contact Person | | | |
| 3 | E-mail | | | |
| 4 | Telephone Number | | | |
| 5 | Fax Number | | | |

Signature of Tenderer:

Date

Annexure II

Proforma for bank guarantee in lieu of earnest money deposit

(To be submitted on non judicial stamp paper of appropriate value purchased in the name of the issuing Bank)

This deed of guarantee made this _____ day of _____ two thousand _____ between _____ (Name of Banker) having its registered office at _____ (place) and one of its local offices at _____ (hereinafter referred to as the Surety), and Reserve Bank of India, a Corporation constituted by the Reserve Bank of India Act, 1934, having its Central Office at Central Office Building, Shahid Bhagat Singh Road, Mumbai-400 001 INDIA (hereinafter referred to as the Bank).

WHEREAS _____ (Tenderer's name hereinafter referred to as 'Tenderer'), a Company registered under _____ and having its registered office at _____ is bound to deposit with the Bank by way of earnest money INR _____ (INR _____ only) in connection with its **Design, Supply, Installation, Testing and Commissioning of Intelligent Analogue Addressable Fire Alarm System for the Bank's Office Building floors at Maker Tower, Mumbai** and the specifications and terms and conditions enclosed therein.

WHEREAS the tenderer as per clause No. _____ Section II of Instructions to tenderers and special conditions has agreed to furnish a Bank Guarantee valid up to _____ instead of deposit of earnest money in cash.

NOW THIS GUARANTEE WITNESSETH:

1. That the Surety in consideration of the above Tender made by the Tenderer to the Bank hereby undertakes to guarantee payment on demand without demur to the Bank the said amount of INR _____ (INR _____ only) within one week from the date of receipt of the demand from the Bank on presentation of this deed of guarantee, which the Tenderer is bound to deposit with the Bank by way of earnest money in connection with his Tender.
2. This guarantee shall not be affected by any infirmity or irregularity on the part of the Tenderer or by the dissolution or any change in the constitution of the Bank, Tenderer or the Surety.
3. The Bank shall be eligible to make any claim under this guarantee if the Tenderer after submitting his Tender, rescinds from his offer or modifies the terms and conditions thereof in a manner not acceptable to the Bank or expresses his unwillingness to accept the order after the Bank has decided to place order with the Tenderer for **Design, Supply, Installation, Testing and Commissioning of Intelligent Analogue Addressable Fire Alarm System for the Bank's Office Building floors at Maker Tower, Mumbai..** The Banks' decision in this regard shall be final and binding.
4. The Surety shall not and cannot revoke this guarantee during its currency except with previous consent of the Bank in writing.

5. Notwithstanding anything contained in the foregoing, the Surety's liability under the guarantee is restricted to INR _____ (INR _____ only).
6. This guarantee shall remain in force and effective up to _____ and shall expire and become ineffective thereafter.
7. The Surety will make the payment pursuant to the demand notice issued by the Bank, notwithstanding any dispute that may exist or arise between the Tenderer and the Bank or any other person.
8. Any forbearance, act or omission on the part of the Bank in enforcing any of the conditions of the said tender or showing of any indulgence by the Bank to the tenderer shall not discharge the Surety in any way and the obligations of the Surety under this guarantee shall be discharged only on the intimation thereof being given to the Surety by the Bank.
9. Notwithstanding anything contained hereinabove, unless a demand or claim under this guarantee is made on the Surety in writing on or before _____ before 2:00 PM (Indian Standard Time), the Surety shall be discharged from all liabilities under guarantee thereafter and the guarantee ceases to be in effect in all respects whether or not the original Bank Guarantee is returned to the surety. The guarantee is to be returned to the surety within 15 days from the date it ceases to be in force. If the guarantee is not received by the surety within that date, it shall be deemed to be automatically cancelled.
10. The Surety has the power to issue this guarantee under its Memorandum and Articles of Association and the person who is hereby executing this deed has the necessary powers to do so under the Power of Attorney granted to him by the Surety.

SIGNED AND DELIVERED
For and on behalf of above named Bank.

For and on behalf of
(Banker's Name and Seal)

Branch Manager
(Banker's seal)

Annexure III
Proforma of Bank Guarantee For Security Deposit

(To be submitted on Non-judicial stamp paper of appropriate value purchased in the name of the issuing bank)

No. _____ Date _____

To:

To,
The Chief General Manager In Charge
Reserve Bank of India,
Premises Department
Mumbai
Dear Sir

In consideration of your agreeing to accept the security deposit of INR ____ (INR ____ only) furnishable to you by Messrs _____ (hereinafter referred to as "the Contractor") in terms of their contract with you for **Design, Supply, Installation, Testing and Commissioning of Intelligent Analogue Addressable Fire Alarm System for the Bank's Office Building floors at Maker Tower, Mumbai** as per their Tender No. ____ dated ____ and your Special Conditions of Contract and other tender documents relating thereto subject to the conditions and alterations mutually agreed upon the set forth or referred to in your Contract No. ____ dated ____ in the form of guarantee from us in the manner hereinafter contained, we _____ (Name of the Bank) do hereby covenant and agree with you as follows :

1. We undertake to indemnify you and keep you indemnified from time to time to the extent of INR ____ (INR____ only) against any loss or damage caused to or suffered by or that may be caused to or suffered by you by reason of any breach or breaches on the part of the Contractor of any of the terms and conditions contained in the said Contract and in the event of the Contractor making any default or default in carrying out any of the work under the said Contract or otherwise in the observance and performance of any of the terms and conditions relating thereto in accordance with the true intent and meaning thereof, we shall forthwith on demand pay to you such sum or sums not exceeding in total the said sum of INR _____ (INR_____ only) as may be claimed by you as your losses and/or damages, costs, charges or expenses by reason of such default on the part of the Contractor.
2. Notwithstanding anything to the contrary, your decision as to whether the Contractor has made any such default or defaults and the amount or amounts to which you are entitled by reasons thereof will be binding on us and we shall not be entitled to ask you to establish your claim or claims under this Guarantee but will pay the same forthwith on your demand without any protest or demur.
3. This guarantee shall continue and hold good until it is released by you on the application by the Contractor after expiry of the relative guarantee period of the said Contract and after the contractor had discharged all his obligations under the said Contract and produced a certificate of due completion of the work under the said contract and submitted a "No Demand Certificate", provided always that this guarantee shall in no event remain in force after the day of _____ without prejudice to your claim or claims arisen and demanded from or otherwise notified to us in writing

before the expiry of six months from the said date which will be enforceable against us notwithstanding that the same is or are enforced after the said date.

4. Should it be necessary to extend this guarantee on account of any reason whatsoever, we undertake to extend the period of this Guarantee on the request of M/s _____ till such time as may be mutually decided by you and M/s_____.
5. You will have the fullest liberty without effecting this guarantee from time to time to vary any of the terms and conditions of the said contract or extend the time of performance of the Contractor or to postpone for any time or from time to time any of your rights or powers against the Contractor and either to enforce or forbear to enforce any of the terms and conditions of the said Contract and we shall not be released from our liability under this guarantee by the exercise of your liberty with reference to matters aforesaid or by reason of any time being given to the Contractor or any other forbearance, act or omission on your part or any indulgence by you to the Contractor or by any variation or modification of the said contract or any other act, matter or things whatsoever, which under the law relating to sureties would but for the provisions hereof have the effect of so releasing us from our liability hereunder provided always that nothing herein contained will enlarge our liability hereunder beyond the limit of INR _____ (INR _____ only) as aforesaid.
6. This guarantee shall not in any way be affected by your taking or varying or giving up any securities from the Contractor or any other person, firm or company on its behalf or by the winding up, dissolution, insolvency or death as the case may be, of the Contractor.
7. In order to give full effect to the guarantee herein contained you shall be entitled to act as if we were your principal debtors in respect of all your claims against the Contractor hereby guaranteed by us as aforesaid and we hereby expressly waive all our rights of surety-ship and other rights, if any, which are in any way inconsistent with any of the provisions of this guarantee.
8. Subject to the maximum limit of our liability as aforesaid, this guarantee will cover all your claim or claims against the contractor from time to time arising out of or in relation to the said contract and in respect of which your claim in writing is lodged on us before expiry of six months from the date of expiry of this guarantee.
9. Any notice by way of demand or otherwise hereunder may be sent by special courier, telex, fax or registered post to our local address as aforesaid and if sent by post, it shall be deemed to have been given when the same has been posted.
10. This guarantee and the powers and provisions herein contained are in addition to and not by way of limitation of or substitution for any other guarantee or guarantees heretofore given to you by us (whether jointly with others or alone) and now existing un-cancelled and that this guarantee is not intended to and shall not revoke or limit such guarantee or guarantees.
11. This guarantee shall not be affected by any change in the constitution of the contractor or us nor shall it be affected by any change in your constitution or by any amalgamation or absorption thereof or therewith but will enure to the benefit of and be available to and enforceable by the absorbing or amalgamated company or concern.
12. Any forbearance, act or omission on the part of the Bank in enforcing any of the conditions of the said tender or showing of any indulgence by the Bank to the Tenderer shall not discharge the Surety in any way and the obligations of the Surety under this guarantee shall be discharged only on the intimation thereof being given to the Surety by the Bank.
13. This guarantee is irrevocable during the period of its currency and shall not be revoked without your previous consent in writing.

14. We further agree and undertake to pay you without demur the amount demanded by you in writing notwithstanding any difference or dispute or controversy that may exist or arise between you and contractor or any other person.
15. Notwithstanding anything contained herein above our liability under this guarantee is restricted to INR _____ (INR _____ only). Unless a written claim is lodged on us for payment under this guarantee within six months from the date of expiry, including extensions if any, of this guarantee all your rights under the guarantee shall be forfeited and we shall be deemed to have been released and discharged from all liabilities thereunder, irrespective of whether or not the original guarantee is returned to us.
16. We have power to issue this guarantee in your favour under the Memorandum and Articles of Association of our Bank and the undersigned has full power to execute this Guarantee under the Power of Attorney granted to him by the Bank.

SIGNED AND DELIVERED

(For & on behalf of the above named Bank)

For & on behalf of
(Banker's Name & Seal)

BRANCH MANAGER
(Banker's Seal)

Address _____

Annexure - IV

The Chief General Manager In Charge
Premises Department
Central Office Building
5th Floor
Fort, Mumbai

CLIENT'S CERTIFICATE REG. PERFORMANCE OF CONTRACTOR

Name & address of the Client

Details of Works executed by Smt. /M/s

- 1 (a) Name of work with brief particulars

(b) Type , no. and capacity of Chiller unit(s)
- 2 Agreement No. and date
- 3 Agreement amount
- 4 Date of commencement of work
- 5 Stipulated date of completion
- 6 Actual date of completion
- 7 Details of compensation levied for delay (indicate amount) if any
- 8 Gross amount of the work completed and paid
- 9 Name and address of the authority under whom works executed
- 10 Whether the contractor employed qualified Engineer/Overseer during execution of work?
- 11 i) Quality of work (indicate grading) Outstanding/Very Good/
Good/Satisfactory/poor
ii) Amt. of work paid on reduced rates, if any.
- 12 i) Did the contractor go for arbitration?
ii) If yes, total amount of claim
iii) Total amount awarded
- 13 Comments on the capabilities of the contractor.
 - a) Technical proficiency Outstanding/Very Good/
Good/Satisfactory/poor
 - b) Financial soundness Outstanding/Very Good/
Good/Satisfactory/poor
 - c) Mobilization of adequate T&P Outstanding/Very Good/
Good/Satisfactory/poor

d) Mobilization of manpower

Outstanding/Very Good/
Good/Satisfactory/poor

e) General behavior

Outstanding/Very Good/
Good/Satisfactory/poor

Note : All columns should be filled in properly

* countersigned”

Reporting Officer* with Office seal

*Officer of the rank of executive engineer/Superintending Engineer or equivalent

Annexure - V

FORM OF BANKERS' CERTIFICATE FROM A SCHEDULED BANK

1. Composition of the firm (whether Partnership/ Private Limited/ Proprietorship/ Public Limited.)
2. Name of the Proprietor/ Partners/ Directors of the firm.
3. Credit facility/ Overdraft facility enjoyed by the firm.
4. Dealings
5. The period from which the firm has been banking with your bank.
6. Any other remarks.

You may also kindly forward your opinion whether the above firm is considered financially sound to be entrusted with the contract for works estimated to cost Rs.16Lakhs.

(Signature)
For the Bank

Note:

1. Bankers' certificates should be on letter head of the Bank, sealed in cover addressed to enlistment authority.
2. In case of partnership firm, certificate to include names of all partners as recorded with the Bank.

Annexure - VI

**FORMAT FOR POWER OF ATTORNEY FOR SIGNING OF PROPOSAL
(On Non-Judicial Stamp Paper of appropriate value)**

Know all men by these presents,
We.....(Name of the Bidder and address
of their registered office) do hereby constitute, appoint and authorise Mr. / Ms.
.....(Name and
residential address of Power of Attorney holder) who is presently employed with us and
holding the position of
as our attorney, to do in our name and on our behalf, all such acts, deeds and things
necessary in connection with or incidental to our bid for the Tender for Design, Supply,
Installation, Testing and Commissioning of Intelligent Analogue Addressable Fire Alarm
System for the Bank's Office Building floors at Maker Tower, Mumbaion Item Rate
Contract basis for Reserve Bank of India including signing and submission of all
documents and providing information / responses to RBI, representing us in all matters
before RBI, and generally dealing with RBI in all matters in connection with our proposal
for the said Project.

We hereby agree to ratify all acts, deeds and things lawfully done by our said attorney
pursuant to this Power of Attorney and that all acts, deeds and things done by our
aforesaid attorney shall and shall always be deemed to have been done by us.

Note:

Power of Attorney should be properly stamped and notarized
Power of Attorney furnished shall be irrevocable.

Signature/(s) of the Bidder

Name/(s)

Stamp/Seal of the Bidder

(NB: This guarantee will require stamp duty as applicable in the state, where it is executed and shall be
signed by the official whose signature and authority shall be verified).

Annexure-VII
Articles of Agreement

ARTICLES OF AGREEMENT made the _____ day of _____ between the Reserve Bank of India, Premises Department, Mumbai having its Office at Mumbai (hereinafter called "the Employer") of the one part and _____ (hereinafter called "the Contractor") of the another part.

WHEREAS the Employer is desirous of **Design, Supply, Installation, Testing and Commissioning of Intelligent Analogue Addressable Fire Alarm System for the Bank's Office Building floors at Maker Tower, Mumbai**. (Hereinafter called "the said work") and has caused specifications and schedule of quantities describing the work to be done.

AND WHEREAS the said Specifications and the Schedule of Quantities have been signed by on behalf of the parties hereto.

AND WHEREAS the Contractor has agreed to execute upon and subject to the conditions set forth herein and to the conditions set forth in the Special Conditions and in the Schedule of Quantities and Conditions of Contract (all of which are collectively hereinafter referred to as "the said Conditions") the works described in the said Specifications and included in the Schedule of Quantities at the respective rates therein set forth amounting to the sum as therein arrived at or such other sum as shall become payable there under (hereinafter referred to as "said Contract Amount").

NOW IT IS HEREBY AGREED AS FOLLOWS

In consideration of the said Contract Amount to be paid at the times and in the manner set forth in the Said Conditions, the Contractor shall upon and subject to the Said Conditions execute and complete the work described in the Said Specifications and the Schedule of Quantities.

The Employer shall pay the Contractor the said Contract Amount or such other sum as shall become payable at the times and in the manner specified in the said Conditions.

The Said Conditions and Appendix thereto and any correspondence exchanged between the Employer and the contractor in connection with the said work till the date of letter of acceptance of their tender shall be read and construed as forming part of this Agreement and the parties hereto shall respectively abide by, submit themselves to the said Conditions and perform the agreements on their part respectively in the said Conditions contained.

The plans, agreement and documents mentioned herein shall form the basis of this Contract.

This contract is neither a fixed lump sum contract nor a piece work contract but is a contract to carry out the work in respect of installation of fire alarm system, subject only to the Price Variation Clause as specified elsewhere, to be paid for at the rates/amounts contained in the Schedule of Rates and Probable Quantities or as provided in the Said Conditions.

The Contractor shall afford every reasonable facility for carrying out of all works relating to the said work in the manner laid down in the said Conditions and shall make good any damages done to walls, floors etc. after the completion of such works.

Time shall be considered as the essence of this contract and the Contractor hereby agrees to commence the work soon after the site is handed over to him or from tenth day of date of issue of formal work order as provided for in the said Conditions, whichever is later, and to complete the entire work within 26 weeks subject nevertheless to the provisions for extension of time.

All payments by the Employer under this Contract will be made only at Mumbai.

All disputes arising out of or in any way connected with this Agreement shall be deemed to have arisen at Mumbai and only Courts in Mumbai shall have jurisdiction to determine the same.

That the several parts of this Contract have been read and fully understood by the Contractor.

IN WITNESS THEREOF the Employer has set its hand to these presents through its duly authorised official and the Contractor has caused its common seal to be affixed hereunto and the said two duplicates / has caused these presents and the said two duplicates hereof to be executed on its behalf, the day and year first hereinabove written.

Signature clause

SIGNED AND DELIVERED by the
Reserve Bank of India by the hand of
Shri _____
(Name and designation)

in the presence of

(1) _____
Address _____

(2) _____
Address _____

(Witnesses)

The COMMON SEAL OF _____
Was hereunto affixed pursuant to the resolutions
passed by its Board of Directors at the meeting
held on _____ in the presence of
(1) _____
(2) _____

If the Contractor signs under common seal, the signature clause should tally with the sealing clause in the Articles of Association.

Directors, who have signed these presents in token thereof in the presence of

(1) _____

(2) _____

SIGNED AND DELIVERED BY the Contractor by the hand of Shri _____ and duly constituted attorney.

| |
|--|
| If the Contractor is signing by the hand of power of attorney, whether a company or an individual. |
|--|

Annexure -VIII
Proforma for 5 years of experience

Copy of work/purchase order of similar works and its completion certificate (of any amount) to be attached to prove the experience of five years in this field.

| S. No. | Name of work and location | Name, Address and Contact details of the principal employer | Work order ref. No. & date | Stipulated date of completion | Actual date of completion |
|--------|---------------------------|---|----------------------------|-------------------------------|---------------------------|
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Annexure –IX

Proforma for work executed in last 5 years of experience

List of similar Works executed by the applicant during last Five Years (completed on or after August 31, 2015), to be considered for meeting the eligibility criteria as per format given below:

| Sr. No. | Name of work and location | Name, Address and Contact details of the principal employer | Work order ref. No. & date | Value of work | Stipulated date of completion | Actual date of completion | Any other relevant information including reason, if any, for delay in completion of work. |
|---------|---------------------------|---|----------------------------|---------------|-------------------------------|---------------------------|---|
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Design, Supply, Installation, Testing and Commissioning of Intelligent Analogue Addressable Fire Alarm System for the Bank's Office Building floors at Maker Tower, Mumbai

Renovation of 13th & 20th Floor-SITC of Fire Alarm System at Maker Tower Cuffe Parade RBI Mumbai

| Floor No. | Item No. | | Quantity | Unit |
|-------------------|----------|---|----------|------|
| 13th Floor | 1 | Microprocessor based single loop Networkable analogue addressable Fire Alarm Control Panel (FACP): Supply Installation Testing and Commissioning of Microprocessor based single loop Networkable analogue addressable Fire Alarm Control Panel (FACP). The Panel shall have minimum 640 character LCD/LED display or touchscreen. Each loop shall have a capacity of minimum 159 analog addressable detectors/devices. It shall have multi access levels flash EPROM 240 volts AC power supply automatic battery charger 24 volts sealed lead acid batteries sufficient for 60 hours normal working and then can operate the system for 30 Minutes during an emergency conditions as required. Fire Alarm Control Panel shall also be supplied with all the required gateways like Modbus/BACnet etc and the required hardware software Application Program Interface (API) Software Development Key (SDK) etc. to communicate on open protocol such as Modbus/BACnet etc. for connectivity with the Command and Control Centre. The Panel shall be listed for UL864 9th Edition / EN54 and comply fully with the detailed specifications set out in Part I of the tender | 1 | set |
| | 2 | Repeater Panel: Supply Installation Testing and Commissioning of Repeater Panel complete with minimum suitable display or touchscreen to indicate the status of system and location of incident etc. back-box and control function. It shall be UL / EN 54 Listed | 1 | No |

| | | | |
|----|---|----|-----|
| 3 | Initiating Devices: Automatic Floating Sensitivity type Analog addressable Photo thermal smoke detector: Supply Installation Testing and Commissioning of Automatic Floating Sensitivity type Analog addressable Photo thermal smoke detector with mounting box mounting base LED Address Switch to programme the detectors complete as required BELOW FALSE CEILING. It shall be UL / EN 54 approved | 75 | No. |
| 4 | Initiating Devices: Automatic Floating Sensitivity type Analog addressable Photo thermal smoke detector: Supply Installation Testing and Commissioning of Automatic Floating Sensitivity type Analog addressable Photo thermal smoke detector with mounting box mounting base LED Address Switch to programme the detectors complete as required ABOVE FALSE CEILING. It shall be UL / EN 54 approved | 25 | No. |
| 5 | Analog addressable Rate of Rise Cum Fixed temperature detector: Supply Installation Testing and Commissioning of Analog addressable Rate of Rise Cum Fixed temperature detector with mounting base LED Address Switch to programme the detectors complete as required. It shall be UL / EN 54 approved. | 2 | No. |
| 6 | Addressable Dual Action Manual Call Station: Supply Installation Testing and Commissioning of Addressable Dual Action Manual Call Station | 3 | No. |
| 7 | NOTIFICATION DEVICES: Hooter cum Strobe Lights: Supply Installation Testing and Commissioning of Addressable Hooter cum Strobe Lights with 110 cd complete with modules. | 3 | NO. |
| 8 | MODULES: Addressable Monitor Modules: Supply Installation Testing and Commissioning of Addressable Control Modules for AHUs and Control Dampers etc. | 1 | No. |
| 9 | MODULES: Addressable Relay Modules: Supply Installation Testing and Commissioning of Addressable Control Modules for AHUs and Control Dampers etc. | 1 | No. |
| 10 | Addressable Isolation modules: Supply Installation Testing and Commissioning of Addressable Isolation modules | 3 | No. |
| 11 | Response Indicator: Supply Installation Testing and Commissioning of Response Indicator | 25 | NO. |

| | | | | |
|-------------------|----|---|-----|-----|
| | 12 | CABLE: Supply and laying of 2 x 1.5 sq.mm twisted armoured FRLS cable for Fire Loop etc partially on ceiling/walls with all accessories hardware and fixing materials i.e saddles screws MS supports proper terminations using brass glands/ copper thimbles on various devices boxes and partially in underground manner by excavation at minimum three feet below soil and refilling by the same excavated material after giving brick protection. The drops on walls will be in concealed manner using PVC Pipe and as directed by the Bank's engineer as per site requirements. | 300 | RM |
| | 13 | For Lot No 1 to 12: Comprehensive Annual Maintenance Charges(AMC): All inclusive Comprehensive Annual Maintenance Charges(AMC) for the entire system including Main Panel all devices and cabling after completion of the initial guarantee period of one year as per details mentioned in techno - commercial conditions in tender Part I. Basic price only excluding GST | | |
| 20th Floor | 14 | Microprocessor based single loop Networkable analogue addressable Fire Alarm Control Panel (FACP): Supply Installation Testing and Commissioning of Microprocessor based single loop Networkable analogue addressable Fire Alarm Control Panel (FACP). The Panel shall have minimum 640 character LCD/LED display or touchscreen. Each loop shall have a capacity of minimum 159 analog addressable detectors/devices. It shall have multi access levels flash EPROM 240 volts AC power supply automatic battery charger 24 volts sealed lead acid batteries sufficient for 60 hours normal working and then can operate the system for 30 Minutes during an emergency conditions as required. Fire Alarm Control Panel shall also be supplied with all the required gateways like Modbus/BACnet etc and the required hardware software Application Program Interface (API) Software Development Key (SDK) etc. to communicate on open protocol such as Modbus/BACnet etc. for connectivity with the Command and Control Centre. The Panel shall be listed for UL864 9th Edition / EN54 and comply fully with the detailed specifications set out in Part I of the tender | 1 | set |

| | | | |
|----|---|----|-----|
| 15 | Repeater Panel: Supply Installation Testing and Commissioning of Repeater Panel complete with minimum suitable display or touchscreen to indicate the status of system and location of incident etc. back-box and control function. It shall be UL / EN 54 Listed | 1 | No |
| 16 | Initiating Devices: Automatic Floating Sensitivity type Analog addressable Photo thermal smoke detector: Supply Installation Testing and Commissioning of Automatic Floating Sensitivity type Analog addressable Photo thermal smoke detector with mounting box mounting base LED Address Switch to programme the detectors complete as required BELOW FALSE CEILING. It shall be UL / EN 54 approved | 75 | No. |
| 17 | Initiating Devices: Automatic Floating Sensitivity type Analog addressable Photo thermal smoke detector: Supply Installation Testing and Commissioning of Automatic Floating Sensitivity type Analog addressable Photo thermal smoke detector with mounting box mounting base LED Address Switch to programme the detectors complete as required ABOVE FALSE CEILING. It shall be UL / EN 54 approved | 25 | No. |
| 18 | Analog addressable Rate of Rise Cum Fixed temperature detector: Supply Installation Testing and Commissioning of Analog addressable Rate of Rise Cum Fixed temperature detector with mounting base LED Address Switch to programme the detectors complete as required. It shall be UL / EN 54 approved. | 3 | No. |
| 19 | Addressable Dual Action Manual Call Station: Supply Installation Testing and Commissioning of Addressable Dual Action Manual Call Station | 4 | No. |
| 20 | NOTIFICATION DEVICES: Hooter cum Strobe Lights: Supply Installation Testing and Commissioning of Addressable Hooter cum Strobe Lights with 110 cd complete with modules. | 4 | NO. |
| 21 | MODULES: Addressable Monitor Modules: Supply Installation Testing and Commissioning of Addressable Control Modules for AHUs and Control Dampers etc. | 1 | No. |

| | | | | |
|--|----|---|-----|-----|
| | 22 | MODULES: Addressable Relay Modules: Supply Installation Testing and Commissioning of Addressable Control Modules for AHUs and Control Dampers etc. | 1 | No. |
| | 23 | Addressable Isolation modules: Supply Installation Testing and Commissioning of Addressable Isolation modules | 4 | No. |
| | 24 | Response Indicator: Supply Installation Testing and Commissioning of Response Indicator | 25 | NO. |
| | 25 | CABLE: Supply and laying of 2 x 1.5 sq.mm twisted armoured FRLS cable for Fire Loop etc partially on ceiling/walls with all accessories hardware and fixing materials i.e saddles screws MS supports proper terminations using brass glands/ copper thimbles on various devices boxes and partially in underground manner by excavation at minimum three feet below soil and refilling by the same excavated material after giving brick protection. The drops on walls will be in concealed manner using PVC Pipe and as directed by the Bank's engineer as per site requirements. | 400 | RM |
| | 26 | For Lot No 14 to 25: Comprehensive Annual Maintenance Charges(AMC): All inclusive Comprehensive Annual Maintenance Charges(AMC) for the entire system including Main Panel all devices and cabling after completion of the initial guarantee period of one year as per details mentioned in techno - commercial conditions in tender Part I. Basic price only excluding GST | | |

The rates for the AMC charges shall be quoted only basic price i.e. exclusive of GST. The system will calculate the amount automatically inclusive of GST.

However, the all other items under-price bid shall be quoted inclusive of GST.

Date:

Place:

Seal & Signature of the Contractor