

UCO BANK

**ZONAL OFFICE - KOLKATA
15/1A, GARIAHAT ROAD, 1ST FLOOR
KOLKATA – 700 019**

TENDER FOR

**FIRE FIGHTING WORKS
OF
UCO BANK FLAGSHIP CORPORATE
INDIA EXCHANGE PLACE BARNCH
AT
2, INDIA EXCHANGE PLACE, KOLKATA – 700 001**

ISSUED TO

**ARCHITECT
DHAR & ASSOCIATES PVT.LTD.
KOLKATA
2248 0464 / 2210 0534**

Oct' 2017

SECTION - I

UCO BANK

SHORT TENDER NOTICE

Sealed tenders are invited in duplicate on behalf of The Dy. General Manager & Zonal Head, Zonal Office – Kolkata, from eligible Contractors for following works :

- 1) Name of work Supply, erection, testing & commissioning of fire fighting and fire detection alarm system at UCO Bank Flagship Corporate India Exchange Place Branch.
- 2) Location of work 2, India Exchange Place, Kolkata – 700 001
- 3) Estimated cost Rs. 8.60 Lac (Rupees Eight Lac Sixty Thousand only)
- 4) Time of completion of the work 1 (One) Calendar Month from the date of acceptance of tender
- 5) Earnest Money Rs. 8,600/- (Rupees Eight Thousand Six Hundred Fifty Only) in the shape of Bank Draft / Pay Order / Bank Guarantee / Banker's Cheque drawn in favour of UCO Bank and payable at Kolkata. Tender without Earnest Money in proper form will be rejected.
- 6) Cost of tender document Rs. 500/- (Rupees Five Hundred only) in the form of Bank Draft in the name of UCO Bank, Zonal Office-Kolkata (Non-refundable) per set of tender document (original & duplicate) payable at Kolkata. Both original & duplicate documents are to be submitted.
- 7) Availability of tender documents Tender documents will be available from UCO Bank's website www.ucobank.co.in
- 8) Time & Date of submission of tender Up to 14.00 Hrs on 06/11/2017
- 10) Place of submission At the Office of The Dy. General Manager & Zonal Head, UCO Bank, Zonal Office – Kolkata, at 15/1A, Gariahat Road, 1st Floor, Kolkata – 700 019

- 11) Procedure for submission of tender Tenders in duplicate will have to be submitted in two parts viz. Part-I & Part-II separately sealed and super scribed with the name of the work as described in detail under para 6 of Section – II (General Rules & Instructions for the Guidance of Tenderers).
- 12) Tender to be addressed to The Dy. General Manager & Zonal Head, UCO Bank, Zonal Office – Kolkata, at 15/1A, Gariahat Road, 1st Floor, Kolkata – 700 001.
- 13) Time & Date of Opening of Tender **I. Part-I on 06/11/2017 at 15.00 Hrs.**
II. Part-II – Time and date will be notified after opening of Part-II.
- 14) Place for Opening of Tender At the Office of The Dy. General Manager & Zonal Head, UCO Bank, Zonal Office – Kolkata, 15/1A, Gariahat Road, 1st Floor, Kolkata – 700 019.
- 15) Inspection of drawings other than enclosed ones and clarifications, if any At the Office of The Dy. General Manager & Zonal Head, UCO Bank, Zonal Office – Kolkata, 15/1A, Gariahat Road, 1st Floor, Kolkata – 700 019. during working hours on all working days up to 05/11/2017.
- 16) Validity of tenders For (4) Calendar Months from the stipulated last date of submission of tender.
- 17) Delay in submission Delay in submission arising out of postal or any other irregularities will not be considered. The Bank in any case will not be responsible for any damage in transit in case of postal delivery.
- 18) **TAXES** : GST on service contract charges will be paid extra against monthly bill at the rate prevailing at the time of payment of the bill.

Additional Terms & Conditions on Taxes is are as follows :

- Supplier / Service provider to confirm that the GST amount charged in invoice is declared in its returns and payment of taxes is also made.
- The Supplier / Service provider agrees to comply with all applicable GST laws, including GST Acts, rules, regulations, procedures, circulars & instructions there under applicable in India from to time and to ensure that such compliance is done within the time prescribed under such laws, Supplier / Service Provider should ensure accurate transaction details, as required by GST laws, are timely uploaded in GSTN. In case there is any mismatch between the details so uploaded in GSTN by Supplier / Service Provider and details available with UCO

Bank, then payments to Supplier / Service Provider to the extent of GST relating to the invoices under mismatch may be retained from due payments till such time the accurate Tax amount is finally effected in the GSTN to UCO Bank's Account and is finally available to UCO Bank in terms of GST laws and that the credit of GST so taken by UCO Bank is not required to be reversed at a later date along with applicable interest.

- Supplementary invoices / debit note / credit note for price revisions to enable UCO Bank to claim tax benefit on the same shall be issued by you for a particular year before September of the succeeding financial year.

The purchase order / work order shall be void, if at any point of time you are found to be black listed as per GSTN rating system and further no payment shall be entertained.

- 19) The Bank does not bind itself to accept the lowest tender and reserves to itself the right to reject any or all others tenders received without assigning any reason/s thereof. The notification of award of contract will be made to the successful tenderer in writing by the Bank.

Yours faithfully,

For UCO Bank, Zonal Office - Kolkata

SECTION – II

General Instruction for Guidance of Tenderers in respect to Part-I of Tender Document

1. Applications should be submitted in Bank's prescribed format only (as per Annexure-I). Application in any other form will not be considered.
2. Applicants should have at least seven year's experiences in execution of similar works i.e., Supply, erection, testing & commissioning of fire fighting and fire detection alarm system at Office / Residential Buildings, Training College with Hostel, Hotels, Shopping Malls etc in Banks / Govt./Public Sector / reputed private sector organizations.

Project cost below Rs. 5.00 Crore

Tenderers should have successfully executed at least two similar works of at least up to 75% of the estimated cost during last seven years ending last day of the month previous to the one in which applications are invited in execution of similar works.

3. Average financial turnover during the last three years, ending 31st March of the previous financial year, should be at least 30% of the estimated cost.
4. The Tenderers should have their Office / Establishment in Greater Kolkata.
5. The Bank reserves the right to visit the establishment / workshop of Tenderers before finalization of tender.
6. The Bank reserves the right to accept or reject any application without assigning any reason and **WITHOUT COST OR COMPENSATION THEREFOR.**
7. Additional sheet of papers may be used for submitting the applications, wherever space in the format is found inadequate.
8. Bank reserves the right to call for report from the existing clients of the applicant if required.
9. Following documents / papers are to be submitted :
 - The list of similar work executed in last three years in Bank's / Govt. Departments / Public Sector Organizations / Reputed private Sector Organizations along with Completion Certificates & Work Order mentioning therein the details of work value & date of completion. (**as per Annexure – II & III**).
 - Copies of PAN card, GST Registration Certificate, Trade Licence and any other registration certificates/licences, as may be necessary, as per Rules of local Statutory Authorities.

- Audited Account and Balance Sheet for last three years.
- Name and Address of Bankers with solvency certificate.
- Key personnel permanently employed (**as per Annexure – IV**).
- Work force & workshop facilities (**as per Annexure – V & VI**).

10. Rejection Criterion

Tender will be summarily rejected on account of followings:-

1. Tenderers not submitting the cost of tender document along with Part – 1 tender as stipulated in NIT,
2. Tenderers not submitting the Earnest Money along with Part-1 tender as stipulated in NIT,
3. Tenderers not submitting the Part – 1 & Part – 2 tender in separate sealed cover duly super scribed as mentioned in NIT,
4. Non-fulfilment of any criterion as specified under this Section – II.

Signature of Bank Official with seal

SECTION – III

GENERAL RULES AND INSTRUCTION FOR THE GUIDANCE OF TENDERER

1. Tenders are hereby invited on behalf of UCO Bank, Zonal Office Kolkata for Supply, erection, testing & commissioning of fire fighting and fire detection alarm system of Bank's Flagship Corporate India Exchange Place Branch at 2, India Exchange Place, Kolkata – 70 001. Estimated cost of the work is Rs. 8.60 Lac.
 2. Tender documents consisting of the following may be downloaded from UCO Bank's website www.ucobank.co.in
 - i. Notice Inviting Tender,
 - ii. General Instructions for Guidance of Tenderers in respect to Part – I of Tender Document,
 - iii. General Rules and Instructions for the guidance of Tenderer,
 - iv. Form of Tender,
 - v. Articles of Agreement,
 - vi. General Conditions of Contract with Appendices,
 - vii. Special Conditions,
 - viii. Safety Code,
 - ix. Model Rules for the protection of health and sanitary arrangements of Workers,
 - x. Technical Specifications and mode of Measurements,
 - xi. Schedule of Quantities,
 - xii. Drawings, Construction Schedule.
 3. The site of work is available.
 4. Tenders only in downloaded printed form should be placed in a sealed cover and address to the Dy. General Manager & Zonal Head, UCO Bank, Zonal Office – Kolkata, 15/1A, Gariahat Road, 1st Floor, Kolkata – 700 019. The name of the project shall be super scribed on the envelop and the same shall be submit at the Office of the Dy. General Manager & Zonal Head, UCO Bank, Zonal Office - Kolkata, 15/1A, Gariahat Road, 1st Floor, Kolkata – 700 019 up to 14.00 hrs on 06/11/2017.
 5. The sealed cover, as mentioned in para 5 above, shall contain two separate sealed covers marked Part – I and Part – II containing the documents as under :-

Part – I : Covering Letter, Earnest Money of Rs. 8,600/- (Rupees Ten Thousand Two Hundred Fifty Only), Cost of Tender Booklet of Rs. 500/- (Rupees Five Hundred Only) and others as per Annexure I to Annexure – VI.

Part – II : Bill of Quantities, duly priced and Drawings. No conditions shall be stipulated in the Part – II. Conditional Rebate, if any, given in Part – II shall be treated as unconditional.
 6. Part – I will be opened on 06/11/2017 at 15.00 hrs. The tenderers may depute their authorized representative to be present at the time of opening. The date and time of opening of Part – II will be intimated to the tenderers after opening of Part – I. In order to expedite the process, the representatives deputed by the tenderers at the time of tender opening should be authorized to take the decision on behalf of the tenderers.
- Part – II of tenders will not be opened and will be treated as cancelled in case submissions in Part – I are found to be not in order.

7. The time allowed for carrying out the work will be 01 (One) Calendar Month either from the fourteenth day after the date of written orders to commence work or day on which the contractor is instructed to take possession of site, whichever is later.
8. The tenderers should quote in figures as well as in words the rates and amount tendered by them. The language for filling tender documents shall be in English. The amount of each item should be worked out and requisite total given.

All corrections shall be attested by the initials of the tenderes with the seal of the firm. In case any discrepancy / difference is found on checking between rates quoted by the Contractor in words and figures or in the amount worked out by him, the following procedure shall be followed :-

- a) When there is difference between the rates in figure and in words, the rate which corresponds to the amount worked out by the Contractor, shall be taken as correct.
 - b) When the amount of any item is not worked out by the Contractor or it does not correspond with the rate written either in figures or in words, then the rate quoted by the Contractor in words shall be taken as correct.
 - c) When the rate quoted by the Contractor in figures and in words tally but the amount is not worked out correctly, rate quoted by the Contractor shall be taken as correct and not the amount.
 - d) Amendments as mentioned above shall be based on tender marked "original" only.
9. Tenderer has to ensure that the rates of terms of similar nature or analogous in specifications are consistent throughout the tender.

In case inconsistent rates are observed for terms of same description in the different sections of the schedule of quantities, the lowest of such rates shall be considered as the rate applicable for all such items.

10. All rates shall be quoted on the proper form of the tender alone.

Special care should be taken to write the rates in figures as well as in words and the amount in figures only, in such a way that interpolation is not possible. The total amount should be written both in figures and in words. In case of figures, the words Rs. Should be written before the figures of rupees and words "P" after the decimal figures e. G. Rs. 2.15P and in case of words, the words "Rupees" should precede and the word Paise should be written at the end. Unless the rate is in whole rupees and followed by the words "only" it should be invariably up to two decimal places. While quoting the rate in schedule of quantities, the word "only" should be written clearly following the amount and it should not be written in the next line.

11. The Vendor, whose tender is accepted, will be required to furnish by way of security deposit for the due fulfilment of his contract, such sum as detailed in clause No. 17 of the General Conditions of Contract. The Earnest Money Deposit of the Contractor whose tender is accepted is liable to be forfeited in full at the discretion of the Employer in case he does not remit the Initial Security Deposit (ISD) within the stipulated period and / or does not start the work by the stipulated date mentioned in the tender of award / work order.

12. The acceptance of a tender will rest with the UCO Bank, Zonal Office – Kolkata, who does not bind itself to accept the lowest or any tender and reserves to itself the authority to reject any or all the tenders received without assigning any reason whatsoever. All tenders in which any of the prescribed conditions are not fulfilled are incomplete in any

respect are liable to be rejected. The Employer reserves the right to accept the tender in full or in part and the tenderer shall have no claim for revision of rates or other conditions if his tender is accepted in parts.

13. Canvassing in connection with tenders is strictly prohibited and tenders submitted by the Contractors who resort to canvassing will be liable to rejection.
14. An item rate tender containing percentage below / above will be summarily rejected.
15. On acceptance of the tender, the name of the accredited representatives of the Contractor who would be responsible taking instructions from the Employer / Consultant shall be communicated to the Employer / Consultant.
16. GST will be payable by Bank as per applicable rate.
17. The Vendor shall give a list of his relatives working with the Employer along with their designations and address.
18. No Employee of the Employer is allowed to work as a contractor for a period of two years of his retirement from Employer's service, without the previous permission of the Employer. The contract is liable to be cancelled if either the Contractor or any of his employees is found at any time to be such a person who had not obtained the permission of the Employer as aforesaid before submission of the tender or engagement in the Contractor's service.
19. The tender for the work shall remain open for acceptance for a period of 4 (Four) calendar months from the stipulated last date for submission of tenders. If any tenderer withdraws his tender before the said period, or make any modification in the terms and conditions of the tender which are not acceptable to the Employer, then the Employer without prejudice to any other right or remedy shall be at liberty to forfeit the Earnest Money paid along with the tender.
20. The tender for the work shall not be witnessed by a Vendor or Vendors who himself / themselves has / have tendered or who may and had / have tendered for the same work. Failure to observe this condition would render tenders of the Contractors tendering as well as witnessing the tender liable to summarily rejection.
21. It will be obligatory on the part of the tenderer to tender and sign the tender documents for all the component parts and **THE WORK ORDER WILL BE ISSUED / AWARDED TO THE SELECTED BIDDER ONLY AFTER RECEIPT OF SIGNED TENDER DOCUMENTS AND ACCEPTANCE OF OUR LETTER OF INTENT BY THE SELECTED BIDDER FOR EXECUTING THE ARTICLES OF AGREEMENT AVAILABLE WITH THE BANK THEREAFTER.**

Signature of Bank Official with Seal

SECTION – IV

FORM OF TENDER

**The Dy. General Manager & Zonal Head
UCO Bank,
Zonal Office , Kolkata**

Date

Dear Sir(s),

Re : Supply, erection, testing & commissioning of fire fighting and fire detection alarm system of Bank's Flagship Corporate India Exchange Place Branch, at 2, India Exchange Place, Kolkata – 700 001.

1. I / we refer to the tender notice issued by UCO Bank, Zonal Office - Kolkata in connection with the captioned work that the work for which tender is submitted falls within the scope and ambit of our business.
2. I / we do hereby offer to perform, provide, execute, complete and maintain the work in conformity with drawings, conditions of contract, specifications, schedule of quantities etc. at the respective rates quoted in the schedule of quantities.
3. I / We have satisfied myself / ourselves as to the site conditions, examined the drawings and all aspects of the tender conditions. Subject to above, I / We do hereby agree, should this tender be accepted in whole or in part, to :
 - a: Abide by and fulfil all the terms and provisions of the said conditions annexed hereto :
 - b: Complete the work within 01 (One) calendar Month, as stipulated by working in two or three shifts, if considered necessary by the Consultants, at no extra cost the Employer.
4. I/ We have deposited Earnest Money of Rs. 8,600/- (Rupees Eight Thousand Six Hundred Only) in the form of Demand Draft / Pay Order / Banker's Cheque which, I / We note, will not bear any interest and is subject to forfeiture solely at Bank's discretion if :
 - a. Not abide by and fulfil all the terms and provisions of the said conditions annexed hereto.
 - b. Not completed the work within 01 (One) calendar Month, as stipulated by working in two or three shifts, if considered necessary by the Consultants, at no extra cost to the Employer.
5. I / We have deposited Earnest Money of Rs. 8,600/- (Rupees Eight Thousand Six Hundred Only) in the form of Demand Draft / Pay Order / Banker's Cheque which, I / We note, will not bear any interest and is subject to forfeiture solely at Bank's discretion if :

- i) The work is not commenced by me / us either within 4 (Four) days from the date of issue of formal work order or the day on which I / We will be instructed to take possession of the site, whichever is later Or,
 - ii) The offer is withdrawn within the validity period of acceptance Or,
 - iii) The Initial Security Deposit (ISD) is not deposited within 14 (fourteen) days from the date of acceptance of tender Or,
 - iv) The agreement of the contract is not executed within 10 days from award of contract.
6. I / We understand that you are not bound to accept the lowest or any tender you receive **and for that the accepting authority is not bound to assign any reason for the same.**
7. The acceptance of this tender shall constitute a binding contract and any failure as mentioned in item 4. above shall constitute a breach of contract by us and the tender accepting authority shall be entitled to have the work executed at our risk and cost and to claim extra cost / expenditure incurred by them from us.
8. Our Bankers are :
- 1.
 - 2.
 - 3.
9. Name of partners / directors of our firm :
- a)
 - b)
 - c)
 - d)

Yours faithfully,

For

Signature

Designation

.....

Name of Partner / Director of the Firm authorized to sign or name of person having power of attorney to sign the contract. (Certified true copy of power of attorney should be attached)

Signature and address of witnesses:

a. Signature
Name:

.....
Address

b. Signature
Name:

.....
Address

SECTION - V

GENERAL CONDITIONS OF CONTRACT

Except where provided for in the description of the individual items in the schedule of quantities and in the specifications and conditions laid down hereinafter and in the Drawings, the work shall be carried out as per standard specifications and under the direction of the Employer/Consultant.

1: INTERPRETATION

In construing these conditions the specifications, the schedule of quantities, tender and Agreement, the following words shall have the meaning herein assigned to them except where the subject context otherwise requires:

- i: **Employer** : The term Employer shall denote "**UCO Bank**, a body corporate, constituted under the Banking Companies (Acquisition & Transfer of Undertakings) Act, 1970 as amended from time to time having its Head Office at No.10, BTM Sarani, Kolkata-700001 and a Zonal Office - Kolkata amongst other places at 15/1A, Gariahat Road, Kolkata – 700 019 or any of its employees / representative authorized on their behalf
- ii: **Consultant** : The term Consultant shall mean **M/s. DHAR & ASSOCIATES PVT. LTD., 7, Red Cross Place, 4th Floor, Kolkata – 700 001** or in the event of their ceasing to be the Consultant for the purpose of this contract such other persons as the Employer shall nominate for the purpose.
- iii: **Vendor**: The term Vendor shall mean the individual or firm or company whether incorporated or not, undertaking the work and shall include legal representative(s) of such individual or persons composing such firm or company or successors of such firm or company as the case may be and *permitted* assigns of such individual or firm or company.
- iv: **Site**: The site shall mean the site where the work are to be executed as shown within the boundary in red borders on the site plan including any building and erections thereon allotted by the Employer for the Contractor's use.
- v: **Site Engineer/Project Management Consultant (PMC)** : The Site Engineer shall be appointed by the Employer. The Employer may also appoint Project Management Consultant (PMC).
- vi: **Drawing** : The work is to be carried out in accordance with drawings, specifications, the schedule of quantities and any further drawings which may be supplied or any *other* instruction, which may be given *by* the Employer/Consultant during the execution of the work.

All drawings relating to work given to the Contractor together with a copy of schedule of quantities are to be kept at site and the Employer/Consultant shall be given access to such drawings or schedule of quantities whenever necessary.

In case any detailed drawings are necessary the contractor shall prepare such detailed drawings and/or dimensional sketches therefore and have it confirmed by the Employer/ Consultant prior to taking up such work.

The contractor shall ask in writing for all clarifications on matters occurring anywhere in drawings, specifications and schedule of quantities or to additional instructions at least 20 days ahead from the time when it is required for implementation so that the Employer / Consultant may be able to give decision thereon.

- vii: **"The Work"** shall mean the work to be executed or done under this contract.
- viii: **"Act of Insolvency"** shall mean any act as such as defined by the Presidency Towns Insolvency Act or in Provincial Insolvency Act or any amending statutes.
- ix: **"The Schedule of Quantities"** shall mean the schedule of quantities as specified and forming part of this contract.
- x: **"Priced Schedule of Quantities"** shall mean the schedule of quantities duly priced with the accepted quoted rates of the Contractor.

2: SCOPE

The work consists of Supply, erection, testing & commissioning of fire fighting and fire detection alarm system of Bank's Flagship Corporate India Exchange Place Branch at 2, India Exchange Place, Kolkata – 700 001 UCO Bank in accordance with the drawings and "Schedule of items and quantities". It includes furnishing all materials, labour, tools and equipment and management necessary for and incidental to the construction and completion of the work. All work, during its progress and soon completion, shall conform to the lines, elevations and grades as shown on the drawings furnished by the Employer/ Consultant. Should any detail, essential for efficient completion of the work be omitted from the drawings and specifications it shall be the responsibility of the Contractor to inform the Employer/Consultant and to furnish and install such detail with Employers / Consultant's concurrence, so that upon completion of the proposed work the same will be acceptable and ready for use.

Employer/Consultant may in their absolute discretion issue further drawings and/or written instructions, details, directions and explanations, which are, here after collectively referred to as 'The Employer's / Consultant's instructions in regard to :

- a. The variation or modification of the design, quality or quantity of work or the addition or omission or substitution of any work.
- b. Any discrepancy in the drawings or between the schedule of quantities and/or drawings and/or specification.
- c. The removal from the site of any defective material brought thereon by the Vendor and the substitution of any other material thereof.
- d) The demolition removal and or execution for any work executed by the Vendors.
- e) The dismissal from the work of any persons employed thereupon.
- f) The opening up for inspection of any work covered up.
- g) The rectification and making good of any defects under clauses hereinafter mentioned and those arising during the Defect Liability Period.

The Vendor shall forthwith *comply with* and duly execute any work comprised in such Employers / Consultant's instructions, provided always that verbal instructions, directions and explanations given to the Contractor or his representative upon the work by the Employer / Consultant shall if involving a variation be confirmed in writing to the Contractor within seven days. No work, for which rates are not specifically mentioned in the priced schedule of

quantities, shall be taken up without written permission of the Employer / Consultant. Rates of items not mentioned in the priced schedule of quantities shall be fixed by the Employer in consultation with the Consultant as provided in Clause "variation".

The Vendor shall set up at his own cost a field laboratory with necessary equipments for day to day testing of materials like grading of coarse and fine aggregates, silt content and bulkage of sand etc.

Regarding all factory made products for which ISI marked products are available, products bearing ISI marking shall be used in the work.

3 DETAILED DRAWINGS AND INSTRUCTIONS

The Employer through its Consultant shall furnish with reasonable promptness additional instructions by means of drawings or otherwise necessary for the proper execution of *the* work. All such drawings and *instructions* shall be consistent with the Contract Documents, true developments thereof, and reasonably inferable therefore.

The work shall be executed in conformity therewith and the Contractor shall not work without proper drawings and instructions.

4. COPIES FURNISHED

The Vendor on signing of the agreement shall be furnished by the Employer through its Consultant free of charge with a copy of the priced schedule of quantities rates, two copies of each of the said drawings and one copy of specifications and two copies of all further drawings issued

during the progress of the work. Any further copies of such drawings required by the Vendor shall be supplied on payment of the charges thereof by *the* contractor.

5. OWNERSHIP OF DRAWING

All drawings, specifications and copies thereof furnished by the Consultant are the property of the Employer. They are not to be used on other work and with the exception or the signed contract set, are to be returned to the Employer on request at the completion of the work

6. FAILURE BY VENDORS TO COMPLY WITH EMPLOYER'S / CONSULTANTS INSTRUCTION

If the vendor after receipt of written notice from the Employer or the Consultant requiring compliance of any instruction within ten days fails to comply with such further drawings, Employer's/Consultant's instructions, the Employer through the Consultant or other person, may *employ* other person to execute any such work whatsoever that may be necessary to give effect here and pay all cost incurred in connection therewith and same shall be recoverable from the vendor by the Employer on the certificate of the Consultant as a debt or shall have right to deduct same from all moneys due or to become due to the vendor.

7. TENDERER SHALL VISIT THE SITE

Intending tenderer shall visit the site and make himself thoroughly acquainted with the local site condition, nature and requirements of the work, facilities of transport condition, effective labour and materials, access and storage for materials and removal of rubbish. The tenderer

shall provide in their tender for cost of carriage, freight and other charges including all taxes etc. as also for any special difficulties and including police restriction for transport etc for proper execution of work as indicated in the drawings. The successful tenderer will not be entitled to any claim of compensation for difficulties faced or losses incurred on account of any site condition which existed before *the* commencement of the work or which in *the* opinion of the *Employer* / Consultant might be deemed to have reasonably been inferred to be so existing before commencement of work.

8. TENDERS

The entire set of tender paper Issued to the tenderer should be submitted fully priced and also signed on the last page together with initials on every page. Initial/signature will *indicate* the acceptance of the tender papers by the tenderer :

The schedule of quantities shall be filled in as follows :

- i: The "Rate" column to be legibly filled in ink in both English figures and English words.
- ii: Amount column to be filled in for each item and the amount for each subhead as detailed in the "Schedule of Quantities".
- iii: All corrections / overwriting are to be initialed with the seal of the Firm.
- iv: The "Rate Column" for alternative items if any shall be filled up.
- v: The "Amount" for alternative items if any of which the quantities are not mentioned shall not be filled up.
- vi: In case of way errors / omissions in the quoted rates, the rates given in the tender marked original shall be taken as correct rates.

No modifications, writings or corrections can be made in the tender papers by the tenderer.

The Employer reserves the right to reject the lowest or any tender and also to discharge *any* or all of the tenders for each *section* or to split up and distribute *any item* of work to any specialist firm or firms, without assigning any reason.

The tenderers should note that the tender is strictly on the item rate basis and their attention is drawn to the fact that the rates for each and every item should be correct, workable and self-supporting. If called upon by the Employer / Consultant detailed analysis of any or all the rates shall be submitted. The Employer / Consultant shall not be bound to recognize the Contractor's analysis.

The work will be paid for as "measured work" on the basis of actual work done and not as "lump sum" contract.

All items of work described in the schedule of quantities are to be deemed and paid as complete work in all respects and details including preparatory and finishing work involved, directly, related to and reasonably detectable from the drawings, specifications and schedule of quantities and no further extra charges will be allowed in this connection. In the case of lump sum charges In the tender in respect of any item of work, the payment of such item of work will be made for the actual work done on the basis of lump sum charges as will be assessed to be payable by the Employer / Consultant.

The Employer has power to add to, omit from any work as shown in drawings or described in specifications or included in schedule of quantities and intimate the same in writing but no addition, omission or variation shall be made by the Contractor without authorization from the Employer. Such variation done by the Employer shall not vitiate the contract.

9. QUANTITY OF WORK TO BE EXECUTED

The Quantities shown in the Schedule of Quantities are intended to cover the entire new structure indicated *in* the drawings but *the* Employer reserves *the* right to execute only a part or the whole or any excess thereof without assigning any reason therefore. If at any time after the commencement of the work, the Employer / Consultant shall for any reason whatsoever not require the whole work thereof as specified *in the* tender to be carried out, the Consultant / Employer shall give notice in writing of the fact to the vendor who shall have no claim to any payment or compensation whatsoever on account of any profit or advantage which he might have derived from the execution of the work in full, but which he did not derive in consequence of the full amount of the work not having been carried out; neither shall he have any claim for compensation by reason of any alterations having been made in the original specification, drawing, designs and instructions which shall involve any curtailment of the work as originally contemplated.

10. OTHER AGENCY OR PERSONS ENGAGED BY THE EMPLOYER

The Employer reserves the right to execute any part of the work included in this contract or any work which is not included in this contract by other Agency or persons and the Vendor shall allow all reasonable facilities and use of his scaffolding for the execution of such work.

11. EARNEST MONEY, SECURITY DEPOSIT & RETENTION MONEY

The tenderer will have to deposit an amount of Rs. 8,600/- (Rupees Eight Thousand Six Hundred Only) in the form of Demand Bank Draft/Pay Order/Banker's Cheque drawn in favour of UCO Bank and payable at Kolkata at the time of submission of tender as Earnest Money. The Employer is not liable to pay any interest on the Earnest Money. The Earnest Money of the unsuccessful tenderers will be refunded without any interest soon after the decision to award the work is taken or after the expiry of the validity period of the tender.

The successful tenderer to whom the *contract* is awarded *will* have to deposit as "Initial Security Deposit" (ISD) a further sum to make up 2% (Two Percent) of the value of the accepted tender including the Earnest Money. ISD may be submitted in the form of Bank Draft/Pay Order/Banker's Cheque or Bank Guarantee (as per Annexure-XII herein below). The Bank Guarantee shall be from any nationalized Bank other than UCO Bank. The initial Security Deposit will have to be made within 14 days from the date of acceptance of tender, failing which the Employer at his discretion may revoke the Letter of Acceptance and forfeit the Earnest Money deposit furnished along with the tender.

Apart from the initial security deposit made as above, Retention Money shall be deducted from progressive running bills @ 8% of the gross value of each running bill until security deposit, i.e. the Initial Security Deposit plus the Retention Money equal to:

- (a) 10% on the first Rupees one Lac of the cost of work;
- (b) 7.5% on *the* next Rupees one Lac of *the* cost of work;
- (c) 5% on the next amount up to Rs. 2 Crores of the cost of work.
- (d) 2% for the amount in excess of 2 Crores of the cost of work subject to ceiling on the total security of Rs. 25,00,000/-.

However, the retention money will not be deducted from progressive running bills till the amount of Initial Security Deposit including the earnest money is covered.

Also, the Retention Money will not be deducted from the vendor's running bills if Bank Guarantee from a Nationalized Bank other than UCO Bank covering the retention money *calculated* as above, is submitted by the vendor.

After realization of *the* total Retention Money by deduction from the bills of the vendor as specified above, 50% of the total Retention Amount will be refunded to the vendor on completion of work subject to the following :-

- 1) Issue of the Virtual Competition Certificate by the Consultants / Bank.
- 2) Vendor removal of his material, equipment, labour force, temporary, sheds/stores etc. from the site excepting for small presence required if any, for the defect liability period and approved by the Bank.

The balance 50% will be released to the Vendor within a reasonable period after the end of "Defect Liability Period" provided he has satisfactorily carried out all the work, submitted all documents including all as built drawings etc. contractually called for and attended to all defects in accordance with the conditions of the contract. No interest is allowed on Retention Money and Earnest Money Deposit.

Further, if some dues to the Employer from the Vendor(s) have still to be recovered, the Employer reserves the right to withhold payment of so much of the Retention Money as in his opinion, represents the cost of the same.

12. PERFORMANCE SECURITY:

Within 30 days of receipt of the letter of award the successful tenderer shall furnish to the UCO Bank Performance Security (as per Annexure-XIII herein below) for an amount of 5% (*five* percent) of the contract price in the shape of Demand Draft or Pay Order or Bank Guarantee from a Nationalized (other than UCO Bank) or Foreign Bank acceptable to the employer.

After due performance or completion of the work in all respects the Performance Security will be returned to the Vendor without any interest. Failure of the successful tenderer to furnish the Performance Security shall constitute sufficient grounds for the annulment of the award and forfeiture of Initial Security Deposit. In this event the employer *may* make the award to other tenderer according to the position prevailing at the appropriate time.

No interest is allowed on retention money for defect liability period of one year.

13. LIQUIDATED DAMAGES (LD)

Should the work be not completed to the satisfaction of the Employer / Consultant within the stipulated period, the vendor shall be bound to pay to the employer a sum calculated as under by way of liquidated damage and not as penalty during which the work remains un-commenced or unfinished after the expiry of the completion date :-

a)	For contracts having time for completion 6 months and less	1.00% of the estimated amount shown in the tender per week subject to a ceiling of 10% of the accepted contracted sum.
b)	For contracts having time for completion exceeding 6 months but not exceeding 2 years (24 months)	0.50% of the estimated amount shown in the tender per week subject to a ceiling of 7.5% of the accepted contracted sum but not exceeding the total S. D. of the contract.
c)	For contracts having time for completion in excess of 2 years	0.25% of the estimated amount shown in the tender per week subject to a ceiling of 5% of the accepted contracted sum but not exceeding the total S. D. of the contract.

14. ACTION WHEN WHOLE OF SECURITY DEPOSIT IS FORFEITED

In any case in which under any clause or clauses of this contract, the vendor shall have rendered himself liable to pay liquidated damages amounting to the whole of his Security Deposit (whether paid in one sum or deducted by Installments) the Employer / Consultant shall have power to adopt any of the following courses as they may deem) best suited to the interest of the Employer:

- a) To rescind the contract (of which rescission notice in writing to the vendor under hand of the Employer shall be conclusive evidence), and in which case the Security Deposit of the vendor shall stand forfeited and be absolutely at the disposal of the Employer.
- b) To employ labour by the Employer and to supply materials to carry out the work, or any part of the work, debiting the vendor with the cost of the labour and price of material (of the amount of *which* cost and price of a certificate of the Consultant shall be final and conclusive against the vendor) and crediting him with the value of the work done, in all respects in the same manner and at the same rates as if it had been carried out by the contractor under the terms of this contract and the certificate of the Employer as to the value of the work done, shall be final and conclusive against the vendor.
- c) To measure up the work of the vendor, and to take such part thereof as shall be unexecuted, out of his hands, and to *give* it to another vendor to complete in which case any expenses which may be incurred in excess of the sum which would have been paid to the original vendor, if the whole work had been executed by him (of the amount of which excess the certificates *in* writing of *the* Consultant shall be final and conclusive) shall be borne and paid by the original vendor and may be deducted from any money due to him by the Employer under the contract or otherwise, or from his security Deposit or the proceeds of sale thereof, or a sufficient part thereof.

In the *event* of any of the *above* courses being adopted by the Employer / Consultant the vendor shall have no claim to compensation for any loss sustained by him by reasons of his having purchased or procured any materials or entered into any engagements or make any advances on account *of*, or with a view to the execution of the work or the performance of the contract. And in case the contract shall be rescinded under the provision aforesaid, the vendor shall not be entitled to recover or be paid any sum for any work thereto for *actually* performed under this contract unless and until the Employer / Consultant will have certified in writing the performance of such work and the value payable in respect thereof, and he shall only be entitled to be paid the value so certified.

15. PAYMENTS

a) All bills shall be prepared by the Vendor in the form prescribed by the Employer / Consultant as per **format marked Annexure – VIII**. Normally one interim bill shall be prepared each month subject to minimum value for interim certificate as stated in **APPENDIX**. The bills in proper forms must be duly accompanied by detailed measurements recorded in the approved measurement book available from the consultants office, on payment, duly endorsed by the *Site Engineer/PMC/Consultant* representative in support of quantities of *work done and must show* deductions for all previous payments, retention money, etc. Advance / adhoc payment for work actually executed will not be normally made. However adhoc payment may be made at *the* discretion of Consultant/Employer in case of exigency.

The Consultant / Employer shall issue a certificate after due scrutiny of the Vendor's bill stating the amount due to the Vendor from the Employer and the Vendor shall be entitled to payment thereof, by the Employer within the period of honoring certificates mentioned in the **APPENDIX**.

The amount stated in an interim certificate shall be the total value of work properly executed and secured advances not exceeding 75% of invoiced assessed value of material brought to site for permanent incorporation into the work up to the date of the bill provided that secured advance is payable against them as per *tender* condition less the amount to be retained by the Employer as retention money and less installments previously paid under these conditions. The materials against which secured advance will be considered are cement, steel & stone chips/gravels; manufactured items of steel / cement, bricks, door frames & shutters, window frames & shutters, flooring materials, paints, G.I. & C.I. pipes & fittings, sanitary fixtures & fittings etc.

The materials to be considered for secured advance shall only include the value of the said material and goods as and from such time as they are reasonably, properly and not prematurely brought to or placed adjacent to the work and then only if *adequately* protected against weather or *other* casualties, provided also materials are considered acceptable by the Site Engineer/PMC/Consultant. An indemnity bond on stamp paper is to be submitted by the contractor in the **annexed format** (as per Annexure-XIV herein below) whenever Secured Advance against materials are prayed for.

If the Employer has supplied any materials or goods to the Contractor, the cost of any such materials or goods will be progressively deducted from the amount due to the Contractor in accordance with the quantities consumed in the work.

All the interim payments shall be regarded as payments by way of advance against the final payment only and not as payments for work actually done and completed, and shall not preclude the requiring of bad, unsound, and imperfect or unskilled work to be removed and taken away and reconstructed, or re-erected or be considered as an admission of the due performance of the contract, or any part thereof in any respect or the accruing of any claim, nor shall, it conclude determine or affect in anyway the powers of the Employer under these conditions or any of them as to the final settlement and adjustment of the accounts or otherwise or in any other way vary or affect the contract. The final bill shall be submitted by the Contractor to the Consultant within three months of the date fixed for completion of the work or of the date of certificate of completion furnished by the Consultant and payment shall be made by the Employer within three months from the date of receipt of the final bill duly verified & certified by the Consultant.

The Employer / Consultant reserves the right to withhold in part or full payment of bills in case of non-compliance/violation of *any* terms and conditions stipulated in *the* agreement. The contractor shall neither suspend the work nor claim for extension of time for non-payment / withholding of payment on this account and no interest is also payable on the payment withheld/due.

b) FINAL PAYMENT

The final bill shall be accompanied by a certificate of completion from the Consultants. Payments of final bill shall be made after deduction of Retention Money which sum shall be refunded in *the* manner. The acceptance of payment of the final bill by the Contractor would indicate that *he* will have no further claim in respect of the work executed.

16. VARIATION / DEVIATION

The Vendor may when authorized and shall, when directed in writing by the Consultant / Employer add and / or omit, or vary the work shown in the drawings or described in the *specifications* or included in the priced schedule of quantities. The Vendor on his own accord shall make no addition, omission or variation without such authorization or direction. A verbal authorization or direction by the Consultant / *Employer shall* when confirmed by the vendor in writing within 3 days shall be deemed to have been given in writing.

The price of all such additional/non-tendered items will be worked out on the basis of rates quoted for similar items in the contract wherever existing or on engineering rate analysis based on prevalent fair price of labour, materials at site of work including wastage and other components as required plus 15% towards contractor's profit, supervision, overhead etc. The tendered rates *shall* hold good for any increase or decrease in tender quantities.

No claim for an extra shall be allowed unless it shall have been executed by the authorization of Employer / Consultant. No variation i. e. additions, omissions or substitutions shall vitiate the contract.

17. SUBSTITUTION

Should the Contractor desire to substitute any materials and workmanship, he/they must obtain the approval of the Employer / Consultant In writing for any such substitution well *in* advance. For materials designated in this specification indefinitely by such term as "Equal" or "Other approved" etc. specific approval of the Employer / Consultant has to be obtained in writing prior to execution.

18. TERMINATION OF CONTRACT BY EMPLOYER

The Employer shall have the right to terminate the contract at any time at its own convenience by serving a prior written notice of 30 days to the vendor without assigning any reason and without cost or compensation therefore.

However, the Employer may also terminate the contract in any of the following cases upon prior notice of 30 days to the vendor:

- (a) If the Vendor being a company go into liquidation whether voluntary or compulsory or being a firm shall be dissolved or being an individual shall be adjudicated insolvent or
- (b) shall make an assignment or a composition for the benefit of the greater part, in number of amount of his creditors or
- (c) shall enter into a Deed or arrangement with his creditors, or
- (d) if the Official Assignee in insolvency, or the *Receiver* of the Contractor *in* insolvency, shall repudiate the contract, or
- (e) if a *Receiver* of the Vendor's firm appointed by the Court shall be unable, within fourteen days after notice to him requiring him to do so to show to the reasonable satisfaction of the Employer that he is able to carry out and fulfill the contract and if so required by the Employer to give reasonable security therefore, or
- (f) if the Vendor shall suffer execution to be issued, or shall suffer any payment under this contract to be attached by or on behalf of the creditors of Vendors, or

- (g) shall assign, charge or encumber this contract or any payments due or which may become due to the Vendor, there under, or
- (h) shall neglect or fail to observe and perform all or any of the acts matters of things by this contract, to be observed and performed by the Vendor within three clear days after the notice shall have been given to the Vendor in manner hereinafter mentioned requiring the Vendor to observe or perform the same or
- (i) shall use improper materials or workmanship In carrying on the work, or
- (j) shall in the opinion of the Employer not exercise such due diligence and make such due progress as would enable the work to be completed within due time agreed upon, and shall fail to proceed to the satisfaction of the Employer after three clear days notice requiring the Vendor so to do shall have been given to the Vendor as hereinafter mentioned, or
- (k) Shall abandon the contract, then and in any of the said cases.

19. EFFECTS OF TERMINATION:

Further, on termination of the agreement as aforesaid, the Employer or his agent, or servants, may enter upon and take possession of the work and also materials lying upon premises or the adjoining lands or roads if any advance payment has been made by the Bank against those materials—and completing the work by employing any other contractors or other persons or person to complete the work, and the Contractor shall not in any way interrupt or do any act, matter or thing to prevent or hinder such other contractors Employer may give notice in writing to the Contractor to remove his surplus materials, plants, machinery, tools, scaffolding etc and should the Contractor fail to do so *within a period of 14 days* after receipt by him the Employer *may* sell the same by Public Auction and shall give credit to the Contractor for the amount so realized after adjusting dues from the contractor if any.

Any expenses or losses incurred by the Employer in getting the work carried out by other contractors shall be adjusted against the amount payable to the Contractor by way of selling his tools and plants or due on account of work carried out by the Contractor prior to engaging other contract or against the Security Deposit.

The Employer at its sole discretion shall invoke the Performance Guarantee, Security Deposit and the Indemnity furnished for performance of contract in the event of breach of terms and conditions of the contract by the Contractor, without prejudice to its rights and conditions available under the Law for the time being in force.

20. ARBITRATION

The Vendor and the Employer shall endeavor their best to amicably settle all disputes arising out of or in connection with the Contract in the following manner:

- a. The Party raising a dispute shall address to the other Party a notice requesting an amicable settlement of the dispute within seven (7) days of receipt of the notice.
- b. The matter will be referred for negotiation between Employer and the Vendor. The matter shall then be resolved between them and the agreed course of action documented within a further period of 15 days.
- c. In case any dispute between the Parties, does not settle by negotiation in the manner as mentioned above, all disputes or differences of any kind whatsoever which shall at any time arise between the parties hereto touching or concerning the work or the execution or maintenance thereof of this contract shall be referred to and the same may be resolved exclusively by arbitration by a Sole Arbitrator to be selected by the employer and approved by the contractor and such dispute may be submitted by either party for arbitration within 20 days of the failure of negotiations. Arbitration shall be held at **THE ZONAL OFFICE- KOLKATA OF THE UCO BANK AT 15/1A, Gariahat Road, 1st Floor, Kolkata – 700 019** and conducted in accordance with the provisions of Arbitration and Conciliation Act, 1996 or any statutory modification or re-enactment thereof.

d. The "Arbitration Notice" should accurately set out the disputes between the parties, the intention of the aggrieved party to refer such disputes to arbitration as provided herein and the Arbitrator is to be appointed within 45 days from receipt of the notice. All notices by one party to the other in connection with the arbitration shall be in writing.

e. The arbitrator shall hold the sittings at the **ZONAL OFFICE - KOLKATA OF THE UCO BANK AT 15/1A, Gariahat Road, Kolkata – 700 019**. The arbitration proceedings shall be conducted in English language. The arbitration award shall be final, conclusive and binding upon the Parties and judgment may be entered thereon, upon the application of either party to a court of competent jurisdiction. Each Party shall bear the cost of preparing and presenting its case, and the cost of arbitration, including fees and expenses of the arbitrators, shall be shared equally by the Parties unless the award otherwise provides.

f. The vendor shall not be entitled to suspend the work or the completion of the work, pending resolution of any dispute between the Parties and shall continue with the work in accordance with the provisions of the Contract/Agreement notwithstanding the existence of any dispute between the Parties or the subsistence of any arbitration or other proceedings.

g. It is also a term of the contract that if Contractor(s) do/does not make any demand for arbitration in respect of any claim (s) within 90 days of receiving intimation from Employer/Consultant that the bill after due verification is passed for payment of a lesser amount, or he has accepted the payment as per clause 45 whichever is earlier or otherwise, the Contractor's right under this agreement to refer to arbitration shall be deemed to have been forfeited and Employer/Consultant shall be relieved and discharged of their liability under this agreement in respect of such claims. Further, it is agreed that for the purpose of this clause, such notice is deemed to have been received by the Contractor(s) within 2 days of posting of the letter by Employer / Consultant or when delivered by hand immediately after receipt thereof by the Contractor/(s), whichever is earlier. Further, a letter signed by the officials of Employer / Consultant that the letter so posted to the *Contractor(s)* shall be conclusive.

h. For the purpose of appointing the sole Arbitrator referred to above the **ZONAL HEAD UCO BANK ZONAL OFFICE - KOLKATA AS** Appointing Authority will send within thirty days of receipt by him of the written notice as aforesaid to the Contractor, a panel of three names of persons who shall be presently unconnected with *the* organization for which *the* work is executed from the following categories of Arbitrators.

i) Retired High Court / Supreme Court Judges, who have experience in handling Arbitration cases.

ii) Members of the Council of Arbitration.

iii) Fellow of the Institution of Indian Institute of Architects.

iv) Eminent retired Chief Engineers from State/Central PWD/Public Sector Undertakings of good reputations and integrity.

(i) The vendor shall on receipt by him names as aforesaid select any one of the persons named to be appointed as a sole Arbitrator and communicate his name to the Appointing Authority within thirty days of receipt by him of the names. *The* Appointing Authority shall thereupon without any delay appoint the said person as the sole Arbitrator. If the Vendor fails to communicate such selection as provided above within the period specified, *the Appointing Authority* shall make the selection and appoint the selected person as the Sole Arbitrator.

(j) If the Appointing Authority fails to send to the Vendor, the panel of three names as aforesaid within the period specified, the Contractor shall send to the Appointing Authority a *Panel* of three names of persons out of the above mentioned four categories of Arbitrators who shall all be unconnected with either party. The appointing Authority shall on receipt by him of the names as aforesaid select anyone of the person named and appoint him as the sole Arbitrator. *If* the Appointing

Authority fails to select the person and appoint him as the sole Arbitrator within 30 days of receipt by him of the panel and inform the Contractor accordingly, the Contractor shall be entitled to appoint one of the persons from the panel as the sole Arbitrator and communicate his name to the Appointing Authority.

- (k) If the Arbitrator so appointed is unable or unwilling to act or resign his appointment or vacates his office due to any reason whatsoever another sole Arbitrator shall be appointed as aforesaid.
- (l) The work under the Contract shall, however, continue during the arbitrations proceedings and no payment due or payable to the Contractor shall be withheld on account of such proceedings.
- (m) The Arbitrator shall be deemed to have entered on the reference on the date he issues notice to both the parties fixing the date of the first hearing.
- (n) The Arbitrator may from time to time, with the consent of the parties, extend the time for making and publishing the award.
- (o) The Arbitrator shall give a separate award in respect of each dispute or difference referred to him. The Arbitrator shall decide each dispute in accordance with the terms of the contract. The venue of arbitration shall be such place as may be fixed by the Arbitrator in his sole discretion.
- (p) In all cases, where the amount of claim in dispute is Rs. 50,000/- (Rupees Fifty thousand) and above, the Arbitrator shall give reasons for the award.
- (q) The fees, if any, of the Arbitrator shall, if required to be paid before the award is made and published, be paid half and half by each of the parties. The cost of the reference and of the award including the fees if any, of the Arbitrator who may direct to and by whom and In what manner, such costs or any part thereof shall be paid and may fix or settle the amount of costs to be so paid.
- (r) The award of the Arbitrator shall be final and binding on both the parties AND THE PARTIES AGREE TO BE BOUND THEREBY AND TO ACT ACCORDINGLY.
- (s) Subject to aforesaid the provisions of the Arbitration and Conciliation Act, 1996 or any statutory modification or re-enactment thereof and the rules made there under, and for the time being in force, shall apply to the Arbitration proceeding under this clause.

21. WORKING HOURS

Site office working hours shall normally be fixed as may be prevailing in the locality.

Normally no construction work of important structural nature shall be carried out on Sundays, Holidays and during nights. In exceptional circumstances, however, the work may be carried out with prior approval of the Site Engineer who shall depute supervising staff to be present on the occasion.

APPENDIX

1	Name of Work	Supply, erection, testing & commissioning of fire fighting and fire detection alarm system for UCO Bank Flagship Corporate India Exchange Place Branch at 2, India Exchange Place, Kolkata – 700 001.
2	Location	2, India Exchange Place, Kolkata – 700 001.
3	Scope of work	As in Clause 2 of Section : V and as further detailed in Tender Notice, Instruction to Tenderer.
4	Defect Liability Period (Cl. 50)	12 (Twelve) Months.
5	Date of Commencement (Cl. 20)	4 th day from the date of issue of work order or the date on which the contractor is instructed to take possession of site, whichever is later.
6	Date / Time of Completion (Cl. 20)	01 (One) Calendar Month.
7	Liquidated Damages (Cl. 21)	As per Clause 21, Page ---, under the Head "General Conditions of Contract" (Section – V)
8a	Earnest Money (Cl. 17)	Rs. 8,600/- (Rupees Eight Thousand Six Hundred Only)
8b	Initial Security Deposit (Cl. 17)	1% of the accepted contract sum including EMD.
8c	Retention Percentage (Cl. 17)	As mentioned in Clause No. 17.
9	Installment after completion certificate (Cl. 17)	50% of the total retention amount.
10	Period of Honoring Certificate (Cl. 45)	3 weeks from the date of receipt of Certificate from the Consultant.
11	Minimum value of work for interim certificate (Cl. 44)	Rs. 5.00 Lac (Rupees Ten Lac).

NOTE : Clauses (CL) refer to General Conditions of Contract.

SECTION - VI

SAFETY CODE

1. The Vendor should maintain all first aid appliances including adequate supply of sterilized dressing and cotton wool in a readily accessible place.
2. In case of any injured person if it is needed hospitalization even after proper first aid treatment then the injured person should be admitted to the nearest hospital without loss of time.

SCAFFOLDS

- i. Suitable scaffolds shall be provided for workmen for all work that cannot safely be done from the ground, or from solid construction except in the case of short duration work which can be done safely from ladders. When a ladder is used, it shall be of rigid construction made either of good quality wood or steel. The steps shall have a minimum width of 450 mm and a maximum rise of 300 mm. Suitable hand holds or good quality wood or steel shall be provided and the ladder shall be given an inclination not steeper than 1/4 to 1 (1/4 horizontal and 1 vertical).
- II. Scaffolding or staging more than 4 meter above the ground floor swung or suspended from an overhead support or erected with stationery support shall have a guard rail properly bolted, braced or otherwise secured, at least 1 meter above the floor or platform of such scaffolding or staging and extending along the entire length of the outside and ends thereof with only such openings as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying from the building or structure.
- III. Working platforms, gangways and stairway shall be so constructed that they do not sag unduly or unequally and if the height of the platform, gangway or stairway is more than 4 meter above ground level or floor level, they shall be closely boarded and shall have adequate width and be suitably fenced as described in (ii) above.
- IV. 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 whose minimum height shall be 1 Mt.
Wherever there are open excavations in ground, they shall be fenced off by suitable railing and danger signals installed at night so as to prevent persons slipping into the excavations.
- V. Safe means of access shall be provided to all working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9 m in length *while* the *width* between side rails in rung ladder shall in no case be less than 290mm for ladder up to and including 3m *in* length. For longer Ladders this width shall be increased at least 20mm for each additional meter of length.
- VI. A sketch of the ladders and scaffolds proposed to be used shall be prepared and approval of the Engineer obtained prior to construction.

OTHER SAFETY MEASURES

- VII: All personal of the Vendor working within this plant site shall be provided with safety helmets. All welders shall wear welding goggles while doing welding work and all in metal workers shall be provided with safety gloves. Persons employed on metal cutting and grinding shall wear safety glasses.
- VIII: Adequate precautions shall be taken to prevent danger from electrical equipment. No materials on any of the sites of work shall be so stacked or placed as to cause danger or inconvenience to any person or the public All safety rules shall be observed while working on live electrical system or/installation as stipulated in I.E. rules.

EXCAVATION AND TRENCHING

- IX: All trenches, 1.2M or more In depth, shall at all times be supplied with at least one ladder for each 30M in length or fraction thereof. The ladder shall be extended free bottoms of the trench to at least 1 m above the surface of the ground. Sides of trenches which are 1.5M or more in depth shall be stepped back to give suitable slope or securely held by timber bracing, so as to avoid the danger of sides collapsing. The excavated material shall not be placed within 1.5m of the edges of the trench or half of the depth of the trench whichever is more. Cutting shall be done from top to bottom. Under no circumstances undermining or undercutting shall be done.
- X: The Vendor shall take all measures on the site of the work to protect the public from accidents and shall be bound to bear the expenses of defense of every unit, action or other proceedings at law that may be brought by any persons for injury sustained owing to *neglect of the* above precautions and to pay any such persons or which may with the consent of the Contractor, be paid to compromise any claim by any such person.

DEMOLITION

- XI: Before any demolition work is commenced and also during the process of the work :-
- a: All roads and open areas adjacent to the work site shall either be closed or suitably protected;
- b: No electric cable or apparatus which is liable to be a source of danger over a cable or apparatus used by the operator shall remain electrically charged;
- c: All practical steps shall be taken to prevent danger to persons employed from the risk of fire or explosion or flooding. No floor, roof or other part of the building shall be so overloaded with debris or materials as to render it unsafe.

PERSONAL SAFETY EQUIPMENTS

- XII: All necessary safety equipment as considered adequate by the Engineer should be kept available for the use of the person employed on the site and maintained in a condition suitable for immediate use, and the Contractor should take adequate steps to ensure proper use of equipment by those concerned :
- a: Workers employed on mixing asphaltic materials, cement and *lime* mortars shall be provided with protective footwear and protective goggles.
- b Those engaged in white washing and mixing or stacking of cement bags or any material which is injurious to the eyes shall be provided with protective goggles.

- c: Those in welding work shall be provided with welder's protective eyesight lids.
- d. Stone breakers shall be proved with protective goggles and protective clothing and sealed at sufficiently safe intervals.
- e. When workers are *employed* in sewers and manholes, which are in use, suitable railing and provided with warning signals or boards to prevent accident to the public;
- f: The Contractor shall not employ men below the age of 18 years and women on the work of painting with products *containing* lead in any form. Wherever men above the age of 18 are employed on the work of lead painting the following precautions should be taken :
 - i: No paint containing lead or lead products shat be used except in the form of paste or readymade paint.
 - ii: Suitable face masks should be supplied for use by the workers when paint is applied in the form of spray or a surface having lead paint dry rubbed and scrapped.
 - iii: Overalls shall be supplied by the Contractor to the workman and adequate facilities shall be provided to enable the working painters to wash during cessation of work.
- XIII: When the work is done near any public place where there is risk of drowning all necessary equipments should be provided and kept ready for use and all necessary steps taken for prompt rescue of any person in danger and adequate provision should be made for prompt first aid treatment of all injuries likely to be sustained during the course of the work.

XIV: **HOISTING MACHINES**

- 1) Use of hoisting machines and tackle including their attachments anchorage and supports shall conform to the following standards or conditions.
 - a: These shall be of good mechanical constructions sound material and adequate strength and *tree from* patent defect and shall be kept in repair and in good working order.
 - b. Every rope used in hoisting or lowering materials or as means of suspension shall be of durable quality and adequate strength and free from paten defects.
- 2) Every crane driver or hoisting appliance operator shall be properly qualified. No person under the age of 21 years shall be in charge of any hoisting machine including any scaffolding winch or give signals to operator.
- 3) In case of every hoisting machine all of every chain ring hook, shackle shovel and pulley block used in hoisting or as means of suspension the safe working load shall be ascertained by adequate means. Every hoisting machine and all gear referred to above shall be plainly marked with the safe working load. In case of hoisting machine having a variable safe working load, each safe working load and the conditions under which it is *applicable* shall be *clearly* indicated. No park of any machine or any gear referred to above in this paragraph shall be loaded beyond the safe working load except for the purpose of testing.

- 4) In case of departmental machines, the safe working load shall be notified by the Engineer. As regards Contractor's machines, the Contractor shall notify the safe working load of the machine to the Engineer whenever he brings any machinery to site of work and get it verified by the Engineer concerned.
- XV) Motors, gearing, transmission, electric wiring and other dangerous parts of hoisting appliances should be provided with sufficient safeguards, hoisting appliances should be provided with such means as will reduce to the minimum the risk of *any* part of a suspended load becoming accidentally displaced. When workers are employed on electrical installations which are already energized, insulating mats, wearing apparel, such as gloves, sleeves and boots as *may* be necessary, should be provided. The workers should not wear any rings, watches and carry keys or other materials which are good conductors of electricity.
- XVI: All scaffolds, ladders and other safety devices mentioned or described herein shall be *maintained in safe condition* and no scaffold, ladder or equipment shall be *altered* or removed while it is in use.
Adequate washing facilities should be provided at or near places of work
- XVII: These safety provisions should be brought to the notice of all concerned by display on a notice board at a prominent place at work spot. The person responsible for compliance of the safety code shall be named therein by the Contractor.
- XVIII: To ensure effective enforcement (the rules and regulations relating to safety) precautions the arrangements made by the Contractor shall be open to inspection by the Labour Office, Engineers of the Department or their representatives.
- XIX: Notwithstanding the above clause from (I) to (VXIII), there is nothing in those to exempt the Contractor from the operations of any other Act or Rule in force in the Republic of India.

SECTION - VII

MODEL RULES FOR THE PROTECTION OF HEALTH AND SANITARY ARRANGEMENTS FOR WORKERS

1. APPLICATION

These rules shall apply to all buildings and construction work relating to Construction of Bank Building at 2, India Exchange Place, Kolkata – 700 001 of UCO Bank and the Contractor shall bear all cost for making the necessary provisions.

2. DEFINITION

- (a) 'Work Place' means a place at which, at an average, 50 workers are employed in connection with construction work.
- (b) 'Large work place' means a place at which average 500 or more workers are employed in connection with construction work

3. FIRST AID

- (a) At every work place, there shall be maintained in readily accessible place first aid appliance including an adequate supply of sterilized dressings and sterilized cotton wool. The appliance shall be kept in good order and in large work place, they shall be placed under the charge of a responsible person who will be readily available during working hours.
- (c) Where large work places are remote from regular hospitals, an indoor ward shall be provided with one bed for every 250 employees
- (d) Where. large work places are situated in cities, towns in their suburbs and no beds are considered necessary owing to *the* proximity of city or town hospitals, suitable transport shall be provided to facilitate removal of urgent cases to the hospitals. At other work places, some conveyance facilities, such as a car, shall be kept readily available to take injured person or persons suddenly taken ill to the nearest hospital.

4. DRINKING WATER

- a) In every work place there shall be provided and maintained at suitable places easily accessible to labour sufficient supply of cold water fit for drinking.
"
- b) Where drinking water is obtained from an intermittent public wale supply, each work place shall be provided with storage where such drinking water shall be stored.
- (c) Every water supply or storage shall be at a distance of not less than 15m from any latrine, drain or other source of pollution. Where water has to be drawn from an existing well which is within the proximity of latrine, drain or any other source of pollution, the well shall be properly chlorinated before water is drawn from it for drinking. All such wells shall be entirely closed in and be provided with a trap door which shall be dust and water proof.
- (d) A reliable pump shall be fitted to each covered well, the trap door shall be kept locked and opened only for cleaning or inspection which shall be done at least once a month.

5. WASHING AND BATHING PLACES

- (a) Adequate washing and bathing places shall be provided, separately for men and women.
- (b) Such places shall be kept in clean and drained condition.

6. SCALE OF ACCOMMODATION IN LATRINES AND URINALS

There shall be provided with the precincts of every work place, latrines and urinals in an accessible place and the accommodation, separately for each of them shall not be less than the following scale.

No. of seats

- a) Where the number of persons does not exceed 50 - 2
- b) Where the number of persons exceeds 50, but does not exceed 100 -3
- c) For every additional 1 00 3 per 100

In particular cases the Engineer shall have the powers to vary the scale where necessary.

7. LATRINES AND URINALS FOR WOMEN

If women and employed, separate latrines and urinals screened from those for men and marked *in* the vernacular *in* conspicuous letters 'For Women Only' shall be provided on the scale laid in Rule 6. Those for men shall be similar¹y marked 'For Men Only'. A poster showing the figure of a man or a woman shall also be exhibited at the entrance of latrines for the respective sex. There shall be adequate supply of water close to the urinals and latrines.

8. LATRINES AND URINALS

All latrines shall be provided with septic tanks or leach pits in case of small units. All the latrines shall be kept in good sanitary condition.

9. CONSTRUCTION OF LATRINES

The Inside walls shall be constructed of masonry *or* some suitable heat resisting non-absorbent materials and shall be cement washable inside and outside at least once a year. The dates of cement washing shall be noted in a register maintained for this purpose and kept available for inspection. Latrines will not be of a standard lower than bore hole system and should have thatched roofs.

10. DISPOSAL OF EXCRETA

Unless otherwise arranged for by the local sanitary authority, arrangements tor proper disposal of excreta shall be made by septic tank or leach pit duly approved by the Engineer and in conformity with the requirements of local public health authorities.

11. PROVISIONS OF SHELTER DURING REST

At every work place there shall be provided free of cost, two suitable sheds, one for meals and the other for rest separately for men and women for the use of labour. The height of the shelter shall not be less than 3.5 M from the floor level to the lowest part of the roof. The sheds should be roofed with at *least* thatch and mud flooring and will be provided with a dwarf wall around not less than 750 mm. Sheds should be kept clean and the space should be on the basis of at least 0.50 square meter per head.

12. CRECHES

- a) At every work place, at which 50 or more women workers are ordinarily employed, there shall be provided two huts for the use of children under the age of 6 years, belonging to such women, one hut shall be used for infants' games and play and the other as their bed room. The huts shall not be constructed on a lower standard than the following :-

i: thatched roofs

ii: mud floors and walls

iii: planks spread over the mud floor and covered with matting.

The huts shall be provided with suitable and sufficient openings for light and ventilation. There shall be adequate provisions of sweepers to keep the place clean. There shall be two dais in attendance. Sanitary utensils shall be provided to the satisfaction of the Health Officer of the area concerned. The use of the hut shall be restricted to children, their attendants and mothers of the children.

- b) Where the number of women workers is more than 25 but less than 50, the Contractor shall provide at least one hut and one dai to look after the children or women working.
- c) The size of crèches or crèches shall vary according to the number of workers
- d) The crèche or crèches shall be properly maintained and necessary equipment like toys, etc. shall be provided

13 CANTEEN

A cooked food canteen on a moderate scale shall be provided for the benefit of workers wherever *it is considered expedient*.

TECHNICAL SPECIFICATION FOR FIRE ALARM AND DETECTION SYSTEM

- 1.0 The system covered under this specification shall be designed, manufactured and tested for proven, reliable and trouble – free performance. It shall be capable to identify the fire within the Building and cause audio- visual indication in Master control panel (MCP) to be located in the Fire control in the ground floor. The fire detection and alarm system should be so designed as to clearly identify the hazardous zone for taking quick, safe and faster remedial measure by the Security/ Fire Fighting personnel.

It shall include two numbers hooters on each floor to provide clear audible warning to the persons on the floor. Each floor of the Building shall be provided with two numbers manual call points to be fixed near each staircase in every floor and one no. each in the basement entry and exist points. In case the fire is detected by any person visually he will be able to actuate the alarm system by operating the manual call point provided in the particular area for drawings attention of the working/ Security personnel and taking faster remedial measures for extinction of fire.

The Master control panel shall be located in control Room at ground floor. A separate public Address (P.A.) system shall be provided for enabling the security personnel to advice for taking remedial measures for fighting the fire as well as to guide the people for safe escaping during fire.

The scope of this specification shall include all the items/ components, which are essential and necessary for proper performance of the individual items, irrespective of whether the item is specifically mentioned herein or not, and for completion of the installation in all respects. Cost of individual items shall include all the accessories/ items essential for satisfactory performance of the particular items.

The equipment's used and the system design should be TAC approved or acceptable to TAC.

Surface/ Concealed conduit wiring shall have to be provided in floors/ walls / ceiling as detailed in the schedule of items. To make the installation complete, necessary chipping, making openings etc are to be done by the successful tenderer without any extra cost. Also final finishing are to be made matching with the existing finishing of the floor/ ceiling / walls etc. after completion of the work without any extra cost.

2.0 DETECTORS

All the Detectors shall be connected to the control and indication equipment provided in the local control panels, which are to be installed in respective floors. The detectors shall be so designed as to have high accuracy, sensitivity, reliability and long life. At the same time the Detectors shall be so designed and constructed that it should restrict in giving all possible false alarms. The Detectors shall also be so designed as to give protection from vibrations, pollution's, heat, corrosion etc. A visual IED alarm indication shall be provided on the corner of the detector and it indication shall be provided on the corner of the detector and it will glow in case the particular detector detects the fire. The will glow in case the particular detector detects the fire. The detectors shall be of surface mounting type of flush mounting type according to the application taking into consideration the aesthetic sense and the approved colour finish.

2.2 SMOKE DETECTOR.

These are to be dual chamber ionization type approved by TAC/ Under writer Laboratory, USA or any other recognized international standard and shall be low voltage type working on 24 V or less.

2.2 HEAT DETECTOR

It uses principle of expansion resulting from heat. The detector senses excess of a preset temperature (fixed temperature) as well as any abnormal rate of increase of temperature above a preset value. Operating fixed temperature shall be 69 degree for transformer rooms, other areas and 79 degree in kitchen areas for the rate of rise of 2 degree C/ minute and air velocity 1 metre/ second. Operating time for rate of rise action shall be 70- 100 second for a rate of rise 22 degree C/ minute and air velocity 1 metre/ second and within safe time at different air velocities. These shall be TAC approved type.

2.3 The operations of one or more detectors shall result in simultaneous alarm as following.

- i) Hooter will sound at respective floor.
- ii) Audio- Visual indications on Local control panel.
- iii) Audio- Visual indications in the Master control panel.
- iv) Damper will be closed and electric supply to AHU motor will cut of at respective floor.
- v) Control rooms should have overriding facility to sound all the hooters of all floors simultaneously in case of fire/ drill / test operation.

2.4 Where the detectors are installed in the path of air current (as in the case of A/C Return Air Duct) appropriate arrangement to reduce the velocity of air current to prevent false alarm shall be provided.

2.5 FLAME DETECTOR

Flame Detector shall work on ultra violet principle approved by statutory Authority for application causing no radiation hazard for personnel. These shall be TAC approved type

2.6 The operation of one or more detectors shall result in simultaneous alarm given by –

- i) Hooter will sound at respective floor.
- ii) Audio/ Visual indication on local Panel.
- iii) Audio/ Visual indication on Master Panel indicating the floor where detector has operated.

3.0 MANUAL CALL POINTS

On each floor manual call points as indicated in the drawing should be installed. The call points should form integral part of the fire detection system.

Manual calls points should be wall mounting type. The housing should be mild steel and should be dust proof. The housing should be minimum 100 x 100 mm and glass

thickness should not exceed 1 mm. Once the glass is broken the alarm should sound on the floor as well as on the main control panel and visible indication should glow to indicate the operation and the related floor. The alarm should be maintained by the control equipment, even if some one presses button subsequently.

3.3 REMOTE INDICATOR

These are connected to the detectors which are concealed or located in enclosed unattended areas. On actuation of the detector, its location will be indicated and pin pointed by this indicator. These Remote Indicators are generally to be mounted in easily visible points near the from housing the detector unit. The Remote Indicators are to be provided with single luminous diode display with clusters of fire IFD indications. These shall be approved by the architect.

4.0 EXTERNAL HOOTER

This is connected mainly to the LCP/ Master control Panel and operated by LCP of relevant floor. This shall be suitable for giving double tone audible indications and shall produce high pitch sound to indicate fire. Minimum audible range shall be to 20 metres. It shall be of reliable and proved electronic design.

4.1 Two or three numbers external Hooters shall be provided in general on each floor.

4.2 The circuit feeding power from control panel shall have the design provision to give fault signal on control panel in the event of short circuit, disconnection of power circuit to manual call points and hooter provided in floors.

4.3 The hooter should be available to give clear, audible and intangible sound. The sound level should be 75 db (A) above and loud noise likely to persist for more than 30 seconds.

4.4 The hooters can be silenced only on acceptance from either LCP or MCP

5.0 LOCAL CONTROL PANEL

5.1 The panel shall be constructed with cold rolled sheet metal of minimum thickness 2 mm and shall be IP 54 degree of protection and TAC approved.

5.2 It shall be spray painted with approved paints. Colour shall be Grey Shade No. 631 as per IS 5. Two coats of primer shall be used after proper cleaning, and removal of Harris, followed by two coats of final painting. If required painting shall be redone after installation.

5.3 It shall be wall mounted type with provision of cable entry at the top, bottom & back sides as required for site condition.

5.4 The power supply shall be from a centralized emergency power panel (common for all panels) which is fed from normal and emergency system with auto-change over as detailed afterwards.

- 5.5 Each floor is divided into zones. There shall be one indicator for 'Fire" and one for " Fault" on the LCP for each zone. All the detectors in one zone shall be associated with one indicator on the panel. The 'Fire" & " Fault" indicators shall consist of two separate LED/ bulbs in parallel. Red & yellow indication shall be used for 'Fire Signal" & " Fault Signal" respectively. These will flash at abnormal condition along with audio alarm.
- 5.6 The panel wiring shall conform to IS 2189 – 1976 and its latest revision.
- 5.7 Separate annunciates for fire and faults shall be provided on the panels. Continuous audible alarm shall indicate " Fault" whereas pulsating alarm shall indicate " Fire" The Fire tone shall always override the fault tone.
- 5.8 The panel shall consist of all solid state electronic circuitry or plug in printed circuit boards. The tenderer shall submit the following documents for the panels in requisite numbers (six sets) .
- a) Annunciation PCB card details.
 - b) Pin details of each card.
 - c) INPUT/OUTPUT details of annunciation.
 - d) Basic trouble shooting chart.
 - e) Ordering instructions of PCB's
 - f) Pin connection details between card to card.
 - g) Block diagram of annunciation scheme.
- 5.9 Fault detector circuit shall indicate –
- a) Open circuit fault.
 - b) Short circuit fault.
- 5.10 Repeat alarm actuation for connection to Master control panel shall be provided such that these are not affected during operation from local panel.
- 5.11 The panel shall have provision for operating all the hooters in the floor simultaneously in case of fire- sensing by detector's Provision of silencing the hooters and thus accepting fire- intimation shall also be kept in the panel. All necessary equipment's for flawless operation of the above shall be provided.
- 5.12 A facility shall be provided for deliberate isolation of each inside the panel and is not easily accessible for unauthorized persons. This facility is needed to keep the system operating in other parts of the floor while any repair / testing work is being done in any zone with visual indication on panel.
- 5.13 One set of potential free contacts for fire damper (to be used with central A/C system) shall be provided in Local control Panel (LCP)
- 6.0 MAIN CONTROL PANEL (MCP)
- 6.1 The Master Control Panel shall be mounted in the Fire control Room in the ground floor and shall be TAC approved.

- 6.2 The panel shall be constructed with cold rolled sheet metal of minimum thickness 2 mm and shall be IP 54 degree of protection.
- 6.3 It shall be spray painted with approved paints. Colour shall be Grey shade no. 631 as per IS 5. Two coats of primer shall be used after properly cleaned, and removing bars, followed by two coats of final painting. If required painting shall be re- done after installation.
- 6.4 It shall be wall / floor mounted console type design with provision of cable entry at the top, bottom and back sides as required for site condition.

The console shall have an inclined flat desk surface with all controls and the microphones easily accessible to the operating personnel sitting in front of the same

- 6.5 The power supply unit backed by Dry Maintenance Free rechargeable battery and battery charger shall be provided in the Main control Panel.
- 6.6 There shall be separate audio- visual indication for 'normal power supply failure' and ' battery voltage low/ standby supply failure.
- 6.7 There shall be indication of the ' System ON', " Standby ON' etc.
- 6.8 There shall be one indicator for ' Fire ' and for ' Fault' on the M. P . for each floor. The ' Fire" and " Fault" indicators shall consists of two separate LED/ Bulbs in parallel. Red & yellow indication shall be used for " Fire Signal" and " Fault Signal" respectively These will flash at abnormal condition along with audio alarm.

The panel wiring shall conform to IS 2189 – 1976 and its latest revision.

- 6.9 Separate annunciation for "Fire" and "Fault" shall be provided on the panel. Continuous audible alarm shall indicate " Fault" whereas pulsating alarm shall indicate " Fire" The "Fire" tone shall always override the "Fault" tones.
- 6.10 A fault warning shall be given in the event of failure/ disconnection of any of the followings :
- i) Normal supply
 - ii) Standby supply
 - iii) Battery charging equipment
 - iv) L.C.P. – (open Circuit/ short Circuit Fault)
 - v) Fuse/ Protective Device
 - vi) Any other item
- 6.11. ' Fault' detector circuit shall indicate :
- a) open circuit fault
 - b) Short circuit fault.

- 6.12. The panel shall consist of all solid state electronic circuitry or plug in printed circuit boards. The tenderer shall submit the following documents for the panels. :
- a) Annunciation PCB card details and circuitry with component details.
 - b) Pin details of each card.
 - c) INPUT /OUTPUT details of annunciation.
 - d) Basic trouble shooting chart.
 - e) Ordering instructions of PCB's
 - f) Pin connection details between card to card
 - g) Block diagram of annunciation schemes.
- 6.13. A facility, which is not easily accessible for unauthorized persons, shall be provided for deliberate isolation of each zone inside the panel. This facility is needed to keep the system operating in other parts of the floor while any repair/ testing work is being done in any zone with visual indication to panel.
- 6.14. Besides ' System on' ' Standby on' ' system on test' indicators should be provided.
- 6.15. Toggle switch to actuate alarm from the MCP to one floor or all the floors as necessary.
- 6.16. The operation of any fire alarm sounder or the transmission of signal to main control panel in the control room does not depend upon the operation of the indicator and is not stopped by any defect/ failure in the indicator.
- 6.17. Failure of any indicator circuit should not prevent the fire alarm from sounding for acknowledgement / silencing of alarm from one floor should prevent another alarm coming from other floor.
- 6.18. The provision of voltmeter and ammeter in the front panel shall be provided in MCP for both A. C. and D.C supplies.

1.0 GENERAL TO CONTROL PANELS

7.1 Alarm System & Indications

- a) The sequence of operation of the alarm system shall be ---

<u>Sequence</u>	<u>Hooter Indication</u>		<u>Remarks</u>
Normal	OFF	OFF	-----
Abnormal	ON	Flashing	Preliminary Alert Alarm which will be 2 second ON & 1 second OFF
Reset	OFF	OFF	If the system comes back to normal.
Abnormal	ON	Flashing	If Fault / Alarm per-

sists, flashing will be faster after 1 minute from occurrence of fault.

Reset	OFF	Flashing	During abnormal stage.
Reset	OFF	OFF	If systems comes to normal.

The reset push button shall be lockable type, to avoid unauthorized reset of audio – visual indication.

B) INDICATION

The circuit & mechanical design of the apparatus shall be such that operation of one indicator does not prevent proper & separate operation of other indicators. Each fire/fault indicator shall be clearly labeled with the floor address from which the call originates.

- 7.2 All the components of fire alarm system i.e. manual call point, solid state circuitry, shall have same 'nominal operating voltage'
- 7.3 There shall be a system and lamp test button. The hooter and all indicators will be 'ON' when this button is pressed.
- 7.4 Pulse timer should be provided calibrated to sound the alarm if not acknowledged within 60 seconds and thereafter if not acknowledged from the floor of alarm within 3/4/5/ minutes.
- 7.5 The audible alarm shall continue until silenced by a manually operated switch / button provided on the panel. The alarm shall not be silenced automatically. The silencing of audible alarm for the zone shall not prevent alarm coming from other zones. The visible indicator showing the zone of actuation shall continue to glow till the whole system is reset.
- 7.6 The manual operation of silence switch/button shall automatically result in giving a visual signal on the panel until the system is reset.
- 7.7 Test facilities should be provided to test alarm circuit, sounder, indicator etc.
- 7.8 The following should be provided – acknowledge button, fire alarm cancel button, fire alarm cancel indicator, fire alarm cancel audible buzzer, reset button, pulse timer, related fuses/ protective devices etc.
- 7.9 Local control panel shall be provided with voltage appropriate to the rating of the interconnected manual call point and shall incorporated overload cutout device to protect external circuit against excess current. The voltage drop in the cable risers should be taken into account. The voltage drop in the cable risers should be taken into account. To solve this problem consideration may be given to operate main console at a slightly higher voltage, with solid state voltage adjuster and stabilizer circuits in the main & local control panels.

2.0 POWER SUPPLY

- 8.1 The Master Control Panel shall be provided with a complete unit of charger, rectifier & distribution system. The charger shall be provided with auto change over system from normal to emergency supply in case of failure of normal power supply. The emergency power shall be derived from a maintenance free battery which shall be included in the offer.
- 8.2 Only 230 V, 1 Ph, 50HZ AC power supply shall be made available to the Master Control Panel from the nearest available power source. The cabling from the permanent supply source to the Master Control Panel and the cabling from Master Control Panel to the respective floors and to the individual sensing items external speaker- cum- hooter are to be included in the offer.
- 8.3 The Master Control Panels for any other panels requiring power supply for its operation shall be approved with "Power Supply Healthy ON" "Indication Fuse Blown" "Charge ON", " Supply in EM Power " etc. indications.
- 8.4 The battery bank shall be such that all the equipment will work at its " Final Voltage"
- 8.5 The battery charging equipment shall incorporate automatic control features which should match the output with the limits, specified by the batter manufacturer taking into consideration the quiescent load of the system.
- 8.6 Low battery voltage condition shall be monitored and indicated on MCP by visible and audible alarm.
- 8.7 Each battery of the secondary cells when charged by its normal charging arrangements for a period of 24 hours from the fully discharged condition shall then have sufficient power to supply quiescent load together with fault signal resulting from disconnection for a period of 24 hours. Thereafter it shall have enough supply to cope with additional load resulting in an alarm originating in all zones for 30 minutes. If utilized to sound emergency evacuation alarm it shall supply additional power for at least 10 minutes.
- 8.8 There shall be provision of protection against earth leakage current. All panels/Equipment's shall be effectively earthed whenever required to satisfy statutory & system requirements.
- 8.9 A suitable anti – corrosive insulating rack shall be provided for the battery bank.

3.0 GENERAL REQUIREMENTS

- 9.1 All equipments and panels shall be rugged in design. It shall be reliable in design and should have long service life.
- 9.2 Equipment shall be designed to operate continuously on a maximum ambient temperature of 45 degree C and the temperature rise shall be within the allowable limit. It shall also be so designed that it should work in local vibration and impacts, if arises at any time in the locality during use.

- 9.3 The internal circuits shall be so designed that due to failure of any part/ component or malfunction it should not give any false fire alarm signals at any time. It should instead may give rise to fault alarm signals only.
- 9.4 There shall be no easily accessible normal controls, e.g. switches off – main / standby power supply etc. to the unauthorised person.
- 9.5 All manual controls, indicators, switches etc. shall be clearly labelled to indicate their proper function/ services. All manual controls shall be robust in construction positive in action and so located that no accidental operation can take place.
- 9.6 All equipments and components shall be designed, manufactured and selected to work satisfactorily against deterioration due to temperature, humidity, corrosion etc. resulting from the atmospheric condition existing in the vicinity. The equipments and components shall be of first class good quality materials for its reliability. The cubicle type Master control Panels shall be dust and vermin proof and to prevent ingress of moisture. Protective painting shall be provided after installation of the panels and equipments wherever required.
- 9.7 The selection of the power supply unit and the cables shall be such that on appreciable voltage drop takes place. There shall be provision of protection against over load.
- 9.8 All the electrical/ electronic components covered under this specification, shall conform to the following. :
- i) Components shall conform to the ISI specification or to B.S. specification where no IS specification exist.
 - ii) Alarm indication lamps may have signals or double filaments to suit the requirement and it should be having larger life. The intensity of the indications shall be clearly visible from distance at 10 metres in normal condition. IED may be used wherever it suits to have low power consumption.
 - iii) Double lamps should be used to avoid confusion/ inattention in case of one lamp blows off.
 - iv) All frictional contact surfaces should be plated/ flashed with double metals or equipments.
 - v) List of recommended spares for its normal and trouble free operation for at least 5 years shall be furnished separately with quoted price as on optional item.

9.9 CIRCUIT DESIGN.

Latest design and technology shall be offered as accepted by the ISI or similar institution. All components shall be interchangeable in design. As an optional case separate price may be quoted for provision of " Self diagnosis feature" of each circuit of the equipment offered, In case the design of any circuit is such that any failure or malfunction in it does not activate automatic fault warning then the tests of its function shall be included in routing procedure.

9.10 CONDUIT WIRING SYSTEM

- i) Surface conduit wiring shall be adopted in wall/ ceilings or similar other coverages. Conduits are to be laid in an approved manner and the surfaces are to be made good after laying of the conduit. Wherever requirement of the fire protection system and made good in an approved manner. NO extra cost will be paid on this account.
- ii) All conduits shall be of 25 mm dia M.S. conduits of wall thickness conforming to the relevant IS. The conduits shall be free from burrs and integral roughness. No. conduit shall be less than 25 mm dia unless specified otherwise.
- iii) Metal conduits wherever running shall be mechanically and electrically continuous and an earth continuity conductor shall be run along and an earth continuity conductor shall be run along its length according to the I.E. Rules and the relevant IS for its proper and rigid earthing . It shall be bounded electrically at a regular interval to provide effective and rigid earthing of the conduit installation. In long distance straight runs of the conduit, inspection type screwed coupler shall be provided at a suitable interval on running threads with couplers and jam nuts.
- iv) To protect against rust the outer surface of the conduit & accessories shall be thoroughly cleaned and painted with anti-corrosive preservative paints, similar to the walls/floors/ceiling finish wherever required.
- v) Necessary bends in the system including diversions shall be done by bending the pipes or by inserting suitable inspection type bends/ elbows or similar fittings.
- vi) Generally 100 V grade 1.5mm PVC insulated and sheathed copper cable shall be used conforming to IS 694 (Part II) with adequate number of cores required for wiring. However, the voltage drop in the system should be selected wherever such necessity arises. Total number of cables shall be so taken in a conduit as to facilitate easy drawing of the cables.
- vii) For loop earthing G. I. wires shall be used.
- viii) Panels and bigger items should be having cable glanding facility using double compression dust and moisture proof Electro plated brass cable brass cable glands of approved make.

9.11 CABLE TERMINATION.

- i) All heavy duty cables to be used for the purpose of connecting the fire protection system shall be PVC insulated and PVC sheeted copper conductor cables of armored type conforming to IS 1554 (Part I) 1964 of 650/1100 V grade wherever used for indoor purpose. Cables concerned only with fire protection system are generally to be taken along the fire protection system are generally to be taken along the fire protection duct provided in the building. All cables after bringing to site must be got approved by the Engineer- In – Charge before use. All relevant test certificates shall be submitted in support of the sound manufacturing of the cables for approval to the Engineer- In Charge. The cables are to be dispatched to site in wooden drums with the ends sealed. The

requirement of the exact length of cables shall be determined by the successful tenderer after measurements at site.

- ii) Cables shall be laid in walls/ ceilings/ structures wherever concealed wiring is to be done but mainly the wiring run along the duct provided for the fire protection system shall be surface wiring. The cables shall be suitably supported @ 0.45 M for vertical run and @ 0.30 M for horizontal run in general , by means of M.S. brackets and clamps or aluminium cleats fixed on M.S. brackets. Bolts of suitable sizes are to be grouted on wall for fixing of the brackets. Cables to be laid underground shall be of armored type conforming to IS 1554 (Part I) 1964.
- iii) Loops should be kept at terminal ends. Appropriate glands should be provided where the cable enters junction box.
- iv) All the cables and wires should be bagged for proper identification. Wires should be identified by ferrules, and cables by colour bands at every 3M distance.
- v) Minimum bending radius permissible is 12 D in case of armoured cables and 8/10 D in case of unarmoured cables.

10.0 TESTS

10.1 The contractor shall obtain from the manufacturer of major equipment, components and control panels and produce the necessary test certificates from the National Test House or any other approved Testing laboratory of each item to satisfy the good workmanship of the equipment fitness offered, and submit to clients.

10.2 After satisfactory completion of all the procedural tests/ performance test, inspection etc the contractor shall be responsible to obtain the final ' No Objection Certificate" from the Local Fire Brigade, TAC and other Statutory Bodies as applicable without any additional/ extra charges.

11.0 INSTRUCTION MANUAL & DRAWING.

11.1 The manufacturer shall submit all the relevant drawings and instruction manual furnishing detail information's on the circuit diagrams, component specifications, operational and maintenance instructions. Routine and periodical test methods and frequencies within one month from the date of completion and handing over. During detail engineering stage, a complete wiring diagram/ cable schedule interconnections shall be furnished by the contractor along with G.A drawings of each floor and the Main Control Panel and for the major equipment for comments / approval.

11.2 The tenderer shall submit a list of users of their materials and installation along with the satisfactory performance certificates of the users.

12.0 EARTHING

12.1 The Master control Panel, battery charger, metallic non- current carrying parts etc of the installation shall be rigidly earthed with adequately rated G.I. wires not less than 14 SWG. The Master control Panel shall be earthed to the nearest earthing grid/ mat with adequately rated earth wires. The earthing of the Fire Alarm system shall be separately done from Master Control Panel to the various floors, manual call points, external hooter etc.

13.0 SUPPLY DESCRIPTION

13.1 The complete Fire Protection and Fire Alarm System for the UCO Bank Flagship Corporate India Exchange Place Branch, will be generally in line with the recommendations of W.B.F.S.

- a. Electrically operated Auto-Manual Fire Alarm System by Break Glass type Manual Call Point and Smoke / Heat Detector.

13.2 Fire Alarm System:

- a. The Fire Alarm for the complex will be auto-manual nature. The system will operate through a 10-zone Fire Alarm Panel complete.
- b. The system will comprise network of cabling for connecting numbers of Break Glass type Call Point, Smoke / Head Detector, Response Indicator and Hooter. The Smoke / Heat Detectors are considered for the office space at the 1st floor.
- c. In case the fire is detected by any person, the near by call point will be actuated by breaking the glass or by the automatic actuation of detector (Smoke / Heat), the impulse will be transmitted to the Fire Alarm Panel. On receipt of impulse from the respective zone, the complete Fire Alarm System will automatically come into operation and necessary audio-visual annunciation will appear on the panel.
- d. After each operation / testing the complete system is to be resettled manually (if required by replacing the glass cover of call point) and the system should be kept ready for operation.

CODES & STANDARDS

All the systems and equipments within the scope of this tender shall be of reputed proven makes, designed and manufactured in accordance with the stipulations of latest versions of Indian Codes or recommendations of W.B.F.S. / T.A.C. / F.O.C./ N.F.P.A.

When an equipment is offered conforming to standards other than those listed below, it shall be clearly brought in Schedule of Deviations.

01. IS : 1646 : Code of Practice for fire safety of building (general), Electrical Installation.
02. IS : 1648 : Code of Practice for fire safety of buildings (general), Fire Fighting Equipment and its Maintenance.
03. IS : 3034 : Code of Practice for Fire of Industrial Buildings, Electrical Generating and Distributing Stations.
04. IS : 884 : Fire Aid Hose Reel for Fire Fighting (for fixed installations).
05. IS : 2171 : Portable Fire Extinguisher, Dry Powder type.
06. IS : 2175 : Heat Sensitive Fire Detector.
07. IS : 2878 : Portable Fire Extinguisher, CO2 type.
08. IS : 1239 : Part - I : Mild Steel Tubes.
Part - II : Mild Steel tubulars and other wrought steel pipe fittings.
09. IS : 778 : Gunmetal gate, globe and check valves for general purposes.
10. IS : 14946 : Sluice Valves for water works purposes (50 to 300 mm size).
11. IS : 5312 : Swing Check type Reflux (Non-Return) Valves.
12. IS : 940 : Portable Fire Extinguisher, Water CO2 type.
13. IS : 10204 : Portable Fire Extinguisher, Foam type.
14. IS : 2190 : Code of Practice for selection, installation and maintenance of portable Fire Aid Fire Appliances.
15. IS : 1520 : Horizontal Centrifugal Pumps for clear, cold and fresh water.
16. IS : 5290 : Landing Valves (internal hydrant)
17. IS : 8423 : Controlled Percolation Hose for fire fighting.
18. IS : 903 : Fire Hose Delivery Couplings, Branch Pipe, Nozzles & Nozzle spanner.

19. IS : 2062 : Structural Steel (Fution / Welding quality).
20. IS : 325 : Three Phase Induction Motor.
21. NBC : National Building Code, Chapter - IV.
22. IS : 2871 : Branch Pipe, Universal, for Fire Fighting purposes.
23. IS : 732 : Code of Practice for electrical wiring installations.
24. IS : 2217 : Recommendations for providing first aid fire fighting arrangements in public buildings.
25. IS : 3844 : Code of Practice for installation of internal fire hydrant in multistoried buildings.
26. IS : 2189 : Code of Practice for selection, installation and maintenance of Automatic Fire Detections and Alarm System.
27. N.F.P.A. : Code of Practice for selection, installation and maintenance of Automatic Fire Detections and Alarm System.

INTELLIGENT REPORTING FIRE DETECTION SYSTEM

PART 1.0 - GENERAL

1.1. DESCRIPTION:

A. This section of the specification includes the furnishing, installation, connection and testing of the microprocessor controlled, intelligent reporting fire alarm equipment required to form a complete, operative, coordinated system. It shall include, but not be limited to, alarm initiating devices, alarm notification appliances, Fire Alarm Control Panel (FACP), auxiliary control devices, annunciators, and wiring as shown on the drawings and specified herein.

B. The fire alarm system shall comply with requirements of NFPA Standard 72 for Protected Premises Signaling Systems except as modified and supplemented by this specification. The system shall be electrically supervised and monitor the integrity of all conductors.

C. The FACP and peripheral devices shall be manufactured 100% by a single U.S. manufacturer (or division thereof).

D. The system and its components shall be Underwriters Laboratories, Inc. listed under the appropriate UL testing standard as listed herein for fire alarm applications and the installation shall be in compliance with the UL listing.

1.2. SCOPE:

A. A new intelligent reporting, microprocessor controlled fire detection system shall be installed in accordance to the project specifications and drawings.

B. Basic Performance:

1. Alarm, trouble and supervisory signals from all intelligent reporting devices shall be encoded on NFPA Style 4 (Class B) Signaling Line Circuits (SLC).

2. Initiation Device Circuits (IDC) shall be wired Class B (NFPA Style B) as part of an addressable device connected by the SLC Circuit.

3. Notification Appliance Circuits (NAC) shall be wired Class B (NFPA Style Y) as part of an addressable device connected by the SLC Circuit.

4. On Style 6 or 7 (Class A) configurations a single ground fault or open circuit on the system Signaling Line Circuit shall not cause system malfunction, loss of operating power or the ability to report an alarm.

5. Alarm signals arriving at the FACP shall not be lost following a primary power failure (or outage) until the alarm signal is processed and recorded.

6. NAC speaker circuits shall be arranged such that there is a minimum of one speaker circuit per floor of the building or smoke zone which ever is greater.

7. Audio amplifiers and tone generating equipment shall be electrically supervised for normal and abnormal conditions.

8. NAC speaker circuits and control equipment shall be arranged such that loss of any one (1) speaker circuit will not cause the loss of any other speaker circuit in the system.

C. BASIC SYSTEM FUNCTIONAL OPERATION

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

1. The system alarm LED on the system display shall flash.

2. A local piezo electric signal in the control panel shall sound.

3. A backlit LCD display shall indicate all information associated with the fire alarm condition, including the type of alarm point and its location within the protected premises.

4. Printing and history storage equipment shall log the information associated each new fire alarm control panel condition, along with time and date of occurrence.

1.3. SUBMITTALS

A. General:

1. Two copies of all submittals shall be submitted to the Architect/Engineer for review.
2. All references to manufacturer's model numbers and other pertinent information herein is intended to establish minimum standards of performance, function and quality. Equivalent compatible UL-listed equipment from other manufacturers may be substituted for the specified equipment as long as the minimum standards are met.
3. For equipment other than that specified, the contractor shall supply proof that such substitute equipment equals or exceeds the features, functions, performance, and quality of the specified equipment.

B. Certifications:

Submit a certification from the major equipment manufacturer indicating that the proposed supervisor of the installation and the proposed performer of contract maintenance is an authorized representative of the major equipment manufacturer. Include names and addresses in the certification.

1.4. GUARANTY:

All work performed and all material and equipment furnished under this contract shall be free from defects and shall remain so for a period of at least one (1) year from the date of acceptance. The full cost of maintenance, labor and materials required to correct any defect during this one year period shall be included in the submittal bid.

1.5. POST CONTRACT MAINTENANCE:

A. Complete maintenance and repair service for the fire alarm system shall be available from a factory trained authorized representative of the manufacturer of the major equipment for a period of five (5) years after expiration of the guaranty

B. As part of the bid/proposal, include a quote for a maintenance contract to provide all maintenance, tests, and repairs described below. Include also a quote for unscheduled maintenance/repairs, including hourly rates for technicians trained on this equipment, and response travel costs for each year of the maintenance period. Submittals that do not identify all post contract maintenance costs will not be accepted. Rates and costs shall be valid for the period of five (5) years after expiration of the guaranty.

1.6. POST CONTRACT EXPANSIONS:

A. The contractor shall have the ability to provide parts and labor to expand the system specified, if so requested, for a period of five (5) years from the date of acceptance.

B. As part of the submittal, include a quotation for all parts and material, and all installation and test labor as needed to increase the number of intelligent or addressable devices by ten percent (10%). This quotation shall include intelligent smoke detectors, intelligent heat detectors, addressable manual stations, addressable monitor modules and addressable modules equal in number to one tenth of the number required to meet this specification (list actual quantity of each type).

C. The quotation shall include installation, test labor, and labor to reprogram the system for this 10% expansion. If additional FACP hardware is required, include the material and labor necessary to install this hardware.

1.7. APPLICABLE STANDARDS AND SPECIFICATIONS:

The specifications and standards listed below form a part of this specification. The system shall fully comply with the latest issue of these standards, if applicable.

A. National Fire Protection Association (NFPA) - USA:

No. 72 National Fire Alarm Code

B. Underwriters Laboratories Inc. (UL) - USA:

1.8. APPROVALS:

- A. The system shall have proper listing and/or approval from the following nationally recognized agencies:
- UL Underwriters Laboratories Inc

PART 2.0 PRODUCTS

2.1. EQUIPMENT AND MATERIAL, GENERAL:

- A. All equipment and components shall be new, and the manufacturer's current model. The materials, appliances, equipment and devices shall be tested and listed by a nationally recognized approvals agency for use as part of a protective signaling system, meeting the National Fire Alarm Code.
- B. All equipment and components shall be installed in strict compliance with manufacturers' recommendations. Consult the manufacturer's installation manuals for all wiring diagrams, schematics, physical equipment sizes, etc., before beginning system installation.
- C. All equipment shall be attached to walls and ceiling/floor assemblies and shall be held firmly in place (e.g., detectors shall not be supported solely by suspended ceilings). Fasteners and supports shall be adequate to support the required load.

2.2. CONDUIT AND WIRE:

- A. Conduit:
1. Conduit shall be in accordance with The National Electrical Code (NEC), local and state requirements.
 2. Where required, all wiring shall be installed in conduit or raceway. Conduit fill shall not exceed 40 percent of interior cross sectional area where three or more cables are contained within a single conduit.
 3. Cable must be separated from any open conductors of power, or Class 1 circuits, and shall not be placed in any conduit, junction box or raceway containing these conductors, per NEC Article 760-29.
 4. Wiring for 24 volt DC control, alarm notification, emergency communication and similar power-limited auxiliary functions may be run in the same conduit as initiating and signaling line circuits. All circuits shall be provided with transient suppression devices and the system shall be designed to permit simultaneous operation of all circuits without interference or loss of signals.
- B. Wire:
1. All fire alarm system wiring shall be new.
 2. Wiring shall be in accordance with local, state and national codes (e.g., NEC Article 760) and as recommended by the manufacturer of the fire alarm system. Number and size of conductors shall be as recommended by the fire alarm system manufacturer, but not less than 18 AWG (1.02 mm) for Initiating Device Circuits and Signaling Line Circuits, and 14 AWG (1.63 mm) for Notification Appliance Circuits.
 3. All wire and cable shall be listed and/or approved by a recognized testing agency for use with a protective signaling system.
 4. Wiring used for the multiplex communication circuit (SLC) shall be twisted and unshielded and support a minimum wiring distance of 12,500 feet. The design of the system shall permit use of IDC and NAC wiring in the same conduit with the SLC communication circuit.
 5. All field wiring shall be electrically supervised for open circuit and ground fault.
- D. Initiating circuits shall be arranged to serve like categories (manual, smoke). Mixed category circuitry shall not be permitted except on signaling line circuits connected to intelligent reporting devices.

- E. The fire alarm control panel shall be connected to a separate dedicated branch circuit, maximum 20 amperes. This circuit shall be labeled at the main power distribution panel as FIRE

ALARM. Fire alarm control panel primary power wiring shall be 12 AWG. The control panel cabinet shall be grounded securely to either a cold water pipe or grounding rod.

2.3. MAIN FIRE ALARM CONTROL PANEL OR NETWORK NODE:

A. Main FACP or network node shall be a US MANUFACTURER Model 2 LOOP PANEL and shall contain a microprocessor based Central Processing Unit (CPU) and power supply in an economical space saving single board design. The CPU shall communicate with and control the following types of equipment used to make up the system: intelligent addressable smoke and thermal (heat) detectors, addressable modules, printer, annunciators, and other system controlled devices.

D. Central Microprocessor

1. The microprocessor shall be a state-of-the-art, high speed, 16-bit RISC device and it shall communicate with, monitor and control all external interfaces. It shall include an EPROM for system program storage, Flash memory for building-specific program storage, and a "watch dog" timer circuit to detect and report microprocessor failure.

2. The microprocessor shall contain and execute all control-by-event programs for specific action to be taken if an alarm condition is detected by the system. Control-by-event equations shall be held in non-volatile programmable memory, and shall not be lost even if system primary and secondary power failure occurs.

3. The microprocessor shall also provide a real-time clock for time annotation of system displays, printer, and history file. The time-of-day and date shall not be lost if system primary and secondary power supplies fail. The real time clock may also be used to control non-fire functions at programmed time-of-day, day-of-week, and day-of-year.

4. A special program check function shall be provided to detect common operator errors.

5. An auto-program (self-learn) function shall be provided to quickly install initial functions and make the system operational.

6. For flexibility and to ensure program validity, an optional Windows(TM) based program utility shall be available. This program shall be used to off-line program the system with batch upload/download, and have the ability to upgrade the manufacturers (FLASH) system code changes. This program shall also have a verification utility, which scans the program files, identifying possible errors. It shall also have the ability to compare old program files to new ones, identifying differences in the two files to allow complete testing of any system operating changes. This shall be in compliance with the NFPA 72 requirements for testing after system modification.

E. System Display

1. The system shall support the following display mode options:

a. 80 character display option. The display shall include an 80-character backlit alphanumeric Liquid Crystal Display (LCD) and a full PC style QWERTY keypad.

2. The display shall provide all the controls and indicators used by the system operator:

a. The 80-character display shall include the following operator control switches: ACKNOWLEDGE, ALARM SILENCE, ALARM ACTIVATE (drill), SYSTEM RESET, and LAMP TEST.

3. The display shall annunciate status information and custom alphanumeric labels for all intelligent detectors, addressable modules, internal panel circuits, and software zones.

4. The display shall also provide Light-Emitting Diodes.

a. The 80-character display shall provide 8 Light-Emitting-Diodes (LEDs), that indicate the status of the following system parameters: AC POWER, FIRE ALARM, PREALARM WARNING, SECURITY ALARM, SUPERVISORY SIGNAL, SYSTEM TROUBLE, DISABLED POINTS, and ALARM SILENCED.

F. Signaling Line Circuits (SLC)

1. Each FACP or FACP network node shall support up to two SLCs. Each SLC interface shall provide power to and communicate with up to 159 intelligent detectors (ionization, photoelectric or thermal) and 159 intelligent modules (monitor or control) for a loop capacity of 318

devices. The addition of the optional second loop shall double the device capacity, supporting a total of 636 devices. Each SLC shall be capable of NFPA 72 Style 4, Style 6, or Style 7 (Class A or B) wiring.

2. CPU shall receive analog information from all intelligent detectors to be processed to determine whether normal, alarm, prealarm, or trouble conditions exist for each detector. The software shall automatically maintain the detector's desired sensitivity level by adjusting for the effects of environmental factors, including the accumulation of dust in each detector. The analog information shall also be used for automatic detector testing and for the automatic determination of detector maintenance requirements.

G. Power Supply:

1. A high tech off-line switching power supply shall be available for the fire alarm control panel or network node and provide 6.0 amps of available power for the control panel and peripheral devices.

2. Provisions will be made to allow the audio-visual power to be increased as required by adding modular expansion audio-visual power supplies.

3. Positive-Temperature-Coefficient (PTC) thermistors, circuit breakers, or other over-current protection shall be provided on all power outputs. The power supply shall provide an integral battery charger for use with batteries up to 60 AH or may be used with an external battery and charger system. Battery arrangement may be configured in the field.

4. The power supply shall continuously monitor all field wires for earth ground conditions, and shall have the following LED indicators:

Ground Fault LED
AC Power Fail LED
NAC on LED (4)

5. The main power supply shall operate on 120 VAC, 60 Hz, and shall provide all necessary power for the FACP.

6. The main power supply shall provide a battery charger using dual-rate charging techniques for fast battery recharge and be capable of charging batteries up to 60 AH.

7. All circuits shall be power-limited, per UL864 requirements.

N. Audio Amplifiers:

1. The audio amplifiers will provide audio power (@ 25 Volts RMS) for distribution to the speaker circuits.

2. Multiple audio amplifiers may be mounted in the fire alarm control panel using additional cabinets if necessary.

3. The audio amplifiers shall include an integral power supply, and shall provide the following controls and indicators:

Normal Audio Level LED
Incorrect Audio Level LED
Brownout LED
Battery Trouble LED
Amplifier Trouble LED
Audio Amplifier Gain Adjust

4. Adjustment of the correct audio level for the amplifier shall not require any special tools or test equipment.

5. All terminal blocks for the connection of field wiring shall have a removable plug-in and be hardwired to allow for ease of field wire installation in a cabinet or at a remote location.

6. The amplifier shall include audio input and amplified output supervision, back up input, and automatic switchover to back up (if primary amplifier should fail).

P. Specific System Operations

1. Smoke Detector Sensitivity Adjust: A means shall be provided for adjusting the sensitivity of any or all addressable intelligent detectors in the system from the system keypad. Sensitivity range shall be within the allowed UL window and have a minimum of 9 levels.

2. Alarm Verification: Each of the intelligent addressable smoke detectors in the system may be independently selected and enabled to be an alarm verified detector. The alarm verification delay shall be programmable from 5 to 30 seconds and each detector shall be able to be selected for verification. The FACP shall keep a count of the number of times that each detector has entered the verification cycle. These counters may be displayed and reset by the proper operator commands.

3. Point Disable: Any addressable device or conventional circuit in the system may be enabled or disabled through the system keypad.

4. Point Read: The system shall be able to display or print the following point status diagnostic functions:

- a. Device status
- b. Device type
- c. Custom device label
- d. View analog detector values
- e. Device zone assignments
- f. All program parameters

5. System Status Reports: Upon command from an operator of the system, a status report will be generated and printed, listing all system status.

6. System History Recording and Reporting: The fire alarm control panel shall contain a history buffer that will be capable of storing up to 800 events. Up to 200 events shall be dedicated to alarm and the remaining events are general purpose. Systems that do not have dedicated alarm storage, where events are overridden by non-alarm type events, are not suitable substitutes. Each of these activations will be stored and time and date stamped with the actual time of the activation. The contents of the history buffer may be manually reviewed, one event at a time, or printed in its entirety. The history buffer shall use non-volatile memory. Systems that use volatile memory for history storage are not acceptable substitutes.

7. Automatic Detector Maintenance Alert: The fire alarm control panel shall automatically interrogate each intelligent detector and shall analyze the detector responses over a period of time. If any intelligent detector in the system responds with a reading that is above or below normal limits, then the system will enter the trouble mode, and the particular detector will be annunciated on the system display, and printed on the optional printer. This feature shall in no way inhibit the receipt of alarm conditions in the system, nor shall it require any special hardware, special tools or computer expertise to perform.

8. Pre-Alarm Function: The system shall provide two levels of pre-alarm warning to give advance notice of a possible fire situation. Both pre-alarm levels shall be fully field adjustable. The first level shall give an audible indication at the panel. The second level shall give an audible indication and may also activate control relays. The system shall also have the ability to activate local detector sounder bases at the pre-alarm level, to assist in avoiding nuisance alarms.

9. Software Zones: The FACP shall provide 100 software zones, 10 additional special function zones, 10 releasing zones, and 20 logic zones.

10. The fire alarm control panel shall include a walk test feature. It shall include the ability to test initiating device circuits and notification appliance circuits from the field without returning to the panel to reset the system. Operation shall be as follows:

- a. Alarming an initiating device shall activate programmed outputs, which are selected to participate in walk test, for 3 seconds.
- b. Introducing a trouble into the initiating device shall activate the programmed outputs for 8 seconds.
- c. All devices tested in walk test shall be recorded in the history buffer.

11. Supervisory Operation

An alarm from a supervisory device shall cause the appropriate indication on the system display, light a common supervisory LED, but will not cause the system to enter the trouble mode.

12. Signal Silence Operation

The FACP shall have the ability to program each output circuit (notification, relay, speaker etc) to deactivate upon depression of the signal silence switch.

13. Non-Alarm Input Operation

Any addressable initiating device in the system may be used as a non-alarm input to monitor normally open contact type devices. Non-alarm functions are a lower priority than fire alarm initiating devices.

2.5. SYSTEM COMPONENTS - ADDRESSABLE DEVICES

A. Addressable Devices - General

1. 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.
2. Addressable devices, which use a binary-coded address setting method, such as a DIP-switch, are not an allowable substitute.
3. Detectors shall be intelligent (analog) and addressable, and shall connect with two wires to the fire alarm control panel Signaling Line Circuits.
4. The fire alarm control panel shall permit detector sensitivity adjustment through field programming of the system. The panel on a time-of-day basis shall automatically adjust sensitivity.
5. 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 as meeting the calibrated sensitivity test requirements of NFPA Standard 72, Chapter 7.
6. The detectors shall be ceiling-mount and shall include a separate twist-lock base with tamper proof feature. Bases shall include a sounder base with a built-in (local) sounder rated at 85 DBA minimum, a relay base and an isolator base designed for Style 7 applications.
7. The detectors shall provide a test means whereby they will simulate an alarm condition and report that condition to the control panel. Such a test may be initiated at the detector itself (by activating a magnetic switch) or initiated remotely on command from the control panel.
8. Detectors shall also store an internal identifying type code that the control panel shall use to identify the type of device (ION, PHOTO, THERMAL).
9. Detectors will operate in an analog fashion, where the detector simply measures its designed environment variable and transmits an analog value to the FACP based on real-time measured values. The FACP software, not the detector, shall make the alarm/normal decision, thereby allowing the sensitivity of each detector to be set in the FACP program and allowing the system operator to view the current analog value of each detector.
10. Addressable devices shall store an internal identifying code that the control panel shall use to identify the type of device.

B. Addressable Manual Fire Alarm Box (manual station)

1. 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.
2. All operated stations shall have a positive, visual indication of operation and utilize a key type reset.
3. 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, 1.75 inches (44 mm) or larger.

D. Intelligent Laser Photo Smoke Detector

1. 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.
2. The laser detector shall have conductive plastic so that dust accumulation is reduced significantly.
3. The intelligent laser photo detector shall have nine sensitivity levels and be sensitive to a minimum obscuration of 0.03 percent per foot.
4. The laser detector shall not require expensive conduit, special fittings or PVC pipe.

5. The intelligent laser photo detector shall support standard, relay, isolator and sounder detector bases.

6. The laser 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.

7. The laser photo detector shall include two bicolor LEDs that flash green in normal operation and turn on steady red in alarm.

E. Intelligent Multi Criteria Acclimating Detector

1. The intelligent multi criteria Acclimate 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 its environment and choose the appropriate sensing settings. The detector design shall allow a wide sensitivity window, no less than 1 to 4% per foot obscuration. This detector shall utilize advanced electronics that react to slow smoldering fires and thermal properties all within a single sensing device.

2. 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).

3. 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 and deceptive phenomena.

M. Isolator Module

1. Isolator modules shall be provided to automatically isolate wire-to-wire short circuits on an SLC Class A or Class B branch. The isolator module shall limit the number of modules or detectors that may be rendered inoperative by a short circuit fault on the SLC loop segment or branch. At least one isolator module shall be provided for each floor or protected zone of the building.

2. If a wire-to-wire short occurs, the isolator module shall automatically open-circuit (disconnect) the SLC. When the short circuit condition is corrected, the isolator module shall automatically reconnect the isolated section.

3. The isolator module shall not require address-setting, and its operations shall be totally automatic. It shall not be necessary to replace or reset an isolator module after its normal operation.

4. The isolator module shall provide a single LED that shall flash to indicate that the isolator is operational and shall illuminate steadily to indicate that a short circuit condition has been detected and isolated.

2.6. BATTERIES:

A. The battery shall have sufficient capacity to power the fire alarm system for not less than twenty-four hours plus 5 minutes of alarm upon a normal AC power failure.

B. The batteries are to be completely maintenance free. No liquids are required. Fluid level checks for refilling, spills, and leakage shall not be required.

C. If necessary to meet standby requirements, external battery and charger systems may be used.

PART 3.0 - EXECUTION

3.1. INSTALLATION:

A. 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.

B. All conduit, junction boxes, conduit supports and hangers shall be concealed in finished areas and may be exposed in unfinished areas. 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.

C. 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.

D. Manual fire alarm boxes shall be suitable for surface mounting or semi-flush mounting as shown on the plans, and shall be installed not less than 42 inches (1067 mm), nor more than 48 inches (122 mm) above the finished floor.

3.2. TEST:

The service of a competent, factory-trained engineer or technician authorized by the manufacturer of the fire alarm equipment shall be provided to technically supervise and participate during all of the adjustments and tests for the system. All testing shall be in accordance with NFPA 72, Chapter 7.

3.3. FINAL INSPECTION:

A. At the final inspection, a factory-trained representative of the manufacturer of the major equipment shall demonstrate that the system functions properly in every respect.

3.4. INSTRUCTION:

A. Instruction shall be provided 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.

B. The contractor and/or the systems manufacturer's representatives shall provide a typewritten "Sequence of Operation."

Annexure - I

PARTICULARS TO BE FURNISHED FOR SUPPLY, ERECTION, TESTING & COMMISSIONING OF FIRE FIGHTING AND FIRE DETECTION ALARM SYSTEM WORKS FOR FLAGSHIP CORPORATE INDIA EXCHANGE PLACE BRANCH AT 2, INDIA EXCHANGE PLACE, KOLKATA – 700 001.

1. Name of Company / Firm:

2. Registered Address of the Company with Telephone No., FAX & E-mail ID:

3. Address of the company in New Delhi / Faridabad with Telephone No., FAX & E-mail ID:

4. Year of Establishment:

5. Status of the Company (whether Proprietary / private Ltd. / Public Limited/ Co-operative Society / Public Sector / Autonomous body / Govt. Department):

6. Name of the Proprietor / Directors / Partners / Controlling body:
 - i)
 - ii)
 - iii)

7. Whether registered with the Registrar of Companies / Registrar of Firms / Registrar of Co-operative societies. If so, please mention the number of such registration and date:

8. a) Name and Address of Bankers:
 - i)
 - ii)
 - iii)
 - a) Enclose Solvency certificate from at least one Banker in a sealed envelope marked confidential.

9. Whether registered for GST.
If so, please mention the GST registration number and furnish a copy of such registration certificate:

10. Whether an assessee of Income Tax.
If so, please mention the Permanent Account Number:

11. Furnish copies of audited Balance Sheet 2014-15 2015 -16 2016-17 with Profit & Loss account for last three Years :

12. Whether empanelled with other PSU Banks / Govt. Deptts. / PSUs / Autonomous bodies. If so, please furnish the following particulars:

<u>Name of the Organisation / Financial Institution</u>	<u>Trade/Services</u>	<u>Date of Empanelment</u>	<u>Validity</u>
---	-----------------------	----------------------------	-----------------

13. Furnish the names of three responsible persons who will be in a position to certify about the quality as well as past performance of your organization

- i)
- ii)
- iii)

The particulars furnished in the application are true to the best of my/our knowledge & belief. I/we understand that if any of the particulars is found incorrect, even at a later stage, my/our empanelment will be cancelled.

Date:

(Signature of Applicant with Seal)

Annexure – II

Detailed Particulars for the works done in past seven years:

work completed	Name of organization	Name of work	Value	Compliance of stipulated completion time

(Furnish photocopies of credentials)

Annexure -III
Particulars in respect of work executed

Sr. No.	Name of work/Project with address	Short description of work executed	Name & address of owner	Value of work executed	Stipulated time of completion	Actual time of completion	Name of Architect / Consultant

Annexure –IV

Key personnel permanently employed

Sr. No.	Name	Designation	Qualification	Experience	Years with the firm	Any other

ANNEXURE - V

ARTICLES OF AGREEMENT

ARTICLES OF AGREEMENT made this ----- day of two thousand -----
- between "**UCO Bank**, a body corporate, constituted under the Banking Companies (Acquisition & Transfer of Undertakings) Act, 1970 as amended from time to time having its Head Office at No.10, BTM Sarani, Kolkata-700001 and a Zonal Office amongst other places at 15/1A, Gariahat Road, Kolkata – 700 019 hereinafter referred to as "**the Employer**" (which expression shall unless excluded by or repugnant to the subject or context be deemed to mean and include its assigns, administrators and successors) of the "**ONE PART**".

and

M/s.....having its office
at..... represented by its
....., son of (hereinafter called the
"**CONTRACTOR** (which expression should include its successors and assignee/s.) of the **OTHER PART**,

WHEREAS the Employer is desirous of executing the Supply, erection, testing & commissioning of fire fighting and fire detection alarm system Work for Bank's Flagship Corporate India Exchange Place Branch at 2, India Exchange Place, Kolkata – 700 001 of UCO Bank and has caused drawings and specifications describing the work to be prepared by **M/s Dhar & Associates Pvt. Ltd, 7, Red Cross Place, 4th Floor, Kolkata – 700 001 (hereinafter called the "CONSULTANT")**.

AND WHEREAS the said **DRAWINGS** numbered as mentioned in the tender document and to be issued from time to time, the Specifications and the Schedule of Items and quantities have been signed by and on behalf of the parties hereto.

AND WHEREAS the **Contractor** has agreed to execute upon and subject to the conditions set forth herein and Schedule of Items and quantities, *General* Conditions of Contract, Special Conditions of Contract including all other conditions as mentioned in the tender document, specifications and all correspondence exchanged by or between the parties from the submission of tender till *the award of work, both letters* inclusive, (all of which are collectively hereinafter referred to as "**the said conditions**") the work shown upon the said drawings described in the said specification and included in the schedule of items and quantities at the respective rates therein set forth amounting to sum of Rs. (Rupee..... only) as therein arrived at or such other sum as shall become payable thereunder (**Hereinafter referred to as "the said Contract amount"**).

NOW IT IS HEREBY AGREED AS FOLLOWS:

1. 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 shown upon the said drawings and described in the said specifications and *the schedule* of items and quantities.
2. 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

8. The Consultant in the said conditions shall mean the **M/s**(Name & Address).....
 or, in the event of their ceasing to be the Consultant for the purpose of this
 Contract for whatever reason, such other person or persons as shall be nominated for
 that purpose by the Employer, provided always that no person subsequently appointed
 to be Consultant under this contract shall be entitled to disregard or overrule any
 previous decision or approval or direction given or expressed in writing by the Consultant
 for the time being.
9. The said conditions and Appendices thereto shall be read and considered as
 forming part of this Agreement, and the *parties* hereto shall respectively abide
 by, submit themselves to the said conditions and perform the agreement on their
 part respectively in the said conditions contained.
10. The plans, agreements and documents mentioned herein shall form the basis of
 this contract.
11. 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 *General* building, Sanitary, Plumbing
 and Area development work relating to construction of Bank Building at
 as per the scope described and to be paid for according to actual
 measured quantities at the rates contained in the Schedule of rates and probable
 quantities or as provided in the said conditions.
12. The Employer reserves to itself the right of altering the drawings and nature of
 the work by adding to or omitting any items of work or having portions of the
 same carried out without prejudice to this contract.
13. Time shall be considered as the essence of this contract. and the contractor
 hereby agrees to commence *the* work on the day of handing over of *the* site or
 within fourteenth days from the date of issue of formal work order whichever is
 later as provided for in the said conditions and to complete the entire work within
 ---(-----) calendar months subject nevertheless to the provisions for extension of
 time **AS WOULD BE GRANTED BY THE EMPLOYER IN WRITING.**
9. All payments *by the Employer* under *this* contract *will* be made at New Delhi.
10. THE TERMINATION OF CONTRACT AND ITS EFFECT WOULD BE IN ACCORDANCE WITH
 THE STIPULATIONS LAID DOWN IN GENERAL CONDITIONS OF CONTRACT.
11. Any dispute *arising* under this Agreement shall be referred to arbitration in accordance
 with the stipulations laid down in the general conditions of contract.
12. That the several parts of this contract have been read by the contractor and fully
 understood by the contractor.

In witness whereof the Employer and the Contractor have set their respective hands to these
 presents through their authorized official and the said two duplicates hereof to be executed on
 its behalf of the day and year first herein above written.

Signed on behalf of the UCO Bank by its

Signed on behalf of the Contractor

Duly authorized official

In the presence of :

In the presence of :

(1) Signature: ----- (1) Signature : -----

Name with address: ----- Name with address: -----

(2) Signature: ----- (2) Signature : -----

Name with address: ----- Name with address: -----

ANNEXURE – VI

RUNNING ACCOUNT BILL / FINAL BILL

- I) : Name of Contractor / Agency :
- ii) : Name of work
- iii) : SL No. of this bill
- iv) : No. and date of previous bill
- v) : Reference to Agreement No
- vi) : Date of commencement
- vii) : Date of completion as per Agreement
- viii) : Contract amount
- vix) : Validity of Insurance
- a) : Workmen Compensation:
- b) : Contractor's All Risk Insurance
- x) : Validity of Labour License:
- xi) : Total retention money including Earnest Money to be deducted as per contract.

- xii) : Earnest Money deposited :
- xiii) : Total retention money including Earnest Money and ISD deducted up to this bill
- xiv) : Period of execution of work for which this bill has been submitted

sl no	Item description	unit	Rate	<u>As per tender</u>
			(R.S) Quantity	Amount (R.S)
(1)	(2)	(3)	(4)	(5)

<u>Up to previous R A. bill</u>		<u>Upto date (Gross)</u>		<u>Present Bill</u>	
Quantity	Amount	quantity	Amount	quantity	Amount
(6)	(7)	(8)	(8)		

Net value since previous Bill (9) Remarks (10)

NOTE : i) If part is allowed for any item, it should be indicated with reason for allowing such rate. ii) If ad hoc payment is made, it should be mentioned specifically.

MEASUREMENT CERTIFICATE

The measurements on the basis of which the above entries for the running bill No. were made have been taken jointly on ----- and are recorded at pages..... To..... of Measurement Book

Signature and Date of Contractor Signature and date of Consultant's representative Signature and date of site Engineer/PMC

The work recorded In the above mentioned measurements have been done at the site satisfactorily as per tender drawings, conditions and specifications

Consultant

Bank's Engineer

Site Engineer / PMC /

**ACCOUNT OF SECURED ADVANCE, IF ADMISSIBLE
ON MATERIALS HELD AT SITE BY THE CONTRACTOR**

No.	Item	quantity	Unit	Amount	Remark
1.	2.	3.	4.	5.	6.

Total value of materials at site

Secured Advance @ ----- %of above value (B)

Certified (i) that the materials mentioned above have actually been brought by the Contractor to the *site* of the **work** and no advance on any quantity of any of this item *is* outstanding on their security, (ii) that the secured advance against all the materials are payable as per contract and all are required by the Contractor for use in the work in connection with the items for which rates of *finished* work have *been* agreed upon.

Date

Signature of Site Engineer
/PMC preparing tile bill

Date:

Signature of Contractor

Date:

Signature of Consultant's Site
Engineer

Date:

Signature of Consultant at

MEMORANDUM OF PAYMENT

Date.

1. Name of work:
2. Name of owner:
3. Name of Contractor
4. Contact Amount
5. Date of Commencement
6. Stipulated date of Completion
- 7: Actual date of completion
- 8: Insurance Valid up to
 - a. Workmen Compensation Act
 - b. All Risk Insurance Policies
9. Gross value of work done
Up tobill
- Less : Rebate @ as
 Per tender
- 10, Retention money
11. Add: Secured Advance against materials:
12. Less: Payment made up toBill: (-) Rs.
13. Less: Adhoc payment certified

.....

Rs

(-)

Rs

.....

Say: Rs

The bill amounting to Rs. ----- (Rupees -----) has been scrutinized by me after due test checking of the measurements of work as required and is recommended for payment.

.....
Signature of Employer's Engineer with date.

Statutory Deductions :

(1) Total amount due : Rs.....

(2) Less: I.T. Payable (-) : Rs..... , .

3) Less: Sales Tax on Works Contr . (-): Rs.....

Net payable : Rs.....

The figures given in the Memorandum of Payment has been verified and the *bill* passed for payment of Rs. ----- (Rupees-----)

.....
Signature of Authorized Official of UCO Bank

Date:

CERTIFICATE OF PAYMENT

(TO BE GIVEN ON BILLS AS WELL AS ON MEASUREMENT BOOKS)

Certified that the various items of work claimed in this -----bill by the Contractor
----- have been completed to the
extent claimed and at appropriate rates and that the items are In accordance with and fully
conforming to the standard/prescribed specifications and drawings. We further certify that we
have checked the measurements to the extent of 100%. Hence the bill is recommended for
payment of Rs:

.....
Signature of Consultant

ANNEXURE – VII

FORM OF BANK GUARANTEE FOR INITIAL SECURITY DEPOSIT

Form No.

Dated :

M/s UCO Bank,
Zonal Office, Kolkata

Dear Sirs,

GUARANTEE NO. :

AMOUNT OF GUARANTEE:

GUARANTEE COVER FORM:

LAST DATE OF LODGEMENT OF CLAIM:

This Deed of guarantee executed ON THIS DAY OF..... BETWEEN UCO BANK, A BANK CONSTITUTED UNDER THE BANKING COMPANIES (ACQUISITION & TRANSFER OF UNDERTAKINGS) ACT, 1970 AS AMENDED FROM TIME TO TIME HAVING ITS HEAD OFFICE AT 10,B.T.M SARANI, KOLKATA -700001 AND HAVING INTER ALIA A ZONAL OFFICE AT 15/1A, GARIAHAT ROAD, 1ST FLOOR, KOLKATA – 700 019 (HEREINAFTER REFERRED TO AS THE “EMPLOYER/UCO BANK”)WHICH EXPRESSION SHALL INCLUDE ITS SUCCESSOR/ASSIGNEES.

AND

..... BANK, A BANK CONSTITUTED UNDER THE BANKING COMPANIES (ACQUISITION & TRANSFER OF UNDERTAKINGS) ACT, 1970 HAVING ITS HEAD OFFICE AT AND INTER ALIA A BRANCH OFFICE AT(HEREINAFTER REFERRED TO AS “THE GUARANTOR”))WHICH EXPRESSION SHALL INCLUDE ITS SUCCESSOR/ASSIGNEES.

AND

....., A COMPANY REGISTERED UNDER THE COMPANIES ACT, 1956, HAVING ITS HEAD OFFICE AT(HEREINAFTER REFERRED TO AS “THE CONTRACTOR”) WHICH EXPRESSION SHALL INCLUDE ITS SUCCESSOR/ASSIGNEES.

WHEREAS THE CONTRACTOR M/S HAS BEEN AWARDED A CONTRACT FOR CONSTRUCTION OF BANK BUILDING AT -----FOR RS (Hereinafter referred to as the ‘said contract’) AND ACCORDING TO THE SAID CONTRACT, THE SAID CONTRACTOR IS REQUIRED TO DEPOSIT INITIAL SECURITY DEPOSIT OF RS

AND WHEREAS IN CONSIDERATION OF THE EMPLOYER/UCO BANK HAVING AGREED TO EXEMT THE CONTRACTOR FROM DEPOSITING THE SECURITY DEPOSIT OF RS UNDER THE TERMS AND CONDITIONS OF THE SAID CONTRACT ENTERED INTO BY AND BETWEEN THE EMPLOYER/UCO BANK AND THE CONTRACTOR ON THE CONTRACTOR FURNISHING A BANK GUARANTEE FOR SECURITY DEPOSIT AMOUNT IN FAVOUR OF THE EMPLOYER/UCO BANK FOR THE DUE FULFILLMENT OF THE CONTRACT BY THE CONTRACTOR.

AND WHEREAS THE CONTRACTOR HAS APPROACHED THE GUARANTOR BANK FOR ISSUE OF SUCH A GUARANTEE IN FAVOUR OF THE EMPLOYER/UCO BANK ON BEHALF OF THE CONTRACTOR FOR THE PERFORMANCE AND DISCHARGE OF THE OBLIGATIONS OF THE CONTRACTOR UNDER THE SAID CONTRACT ENTERED INTO BY AND BETWEEN THE EMPLOYER/UCO BANK AND THE CONTRACTOR.

AND WHEREAS THE EMPLOYER/UCO BANK HAS FORWARDED A DRAFT BANK GUARANTEE WHICH THE CONTRACTOR HAS SCRUTINISED AND APPROVED AND THEREAFTER REQUESTED THE GUARANTOR BANK TO ISSUE A BANK GUARANTEE IN FAVOUR OF THE EMPLOYER/UCO BANK IN ACCORDANCE WITH THE TERMS CONTAINED IN THE DRAFT BANK GUARANTEE PROVIDED BY THE EMPLOYER UCO BANK.

NOW, THEREFORE, THESE PRESENTS WITNESSETH AND THE PARTIES HEREBY AGREE AS FOLLOWS:

1. THE GUARANTOR BANK HEREBY UNDERTAKES TO PAY TO THE EMPLOYER/UCO BANK UPTO RS AS MAY BE DUE AND PAYABLE UNDER THIS GUARANTEE ON THE FIRST DEMAND BEING MADE WITHOUT ANY DEMUR IRRESPECTIVE OF ANY DISPUTE BETWEEN THE CONTRACTOR AND THE EMPLOYER/UCO BANK IN RESPECT OF ANY AMOUNT OF CLAIM AGAINST THE CONTRACTOR AS BEING DUE BY WAY OF LOSS OR DAMAGE CAUSED TO AND SUFFERED BY THE EMPLOYER/UCO BANK WITHOUT ANY QUESTION AS TO THE FACTUM OR QUANTUM THEREOF PROVIDED THAT THE LIABILITY OF THE GUARANTOR BANK UNDER THIS GUARANTEE SHALL BE RESTRICTED TO AN AMOUNT NOT EXCEEDING RS
2. THE BANK GUARANTEE CONTAINED HEREIN SHALL REMAIN IN FULL FORCE AND EFFECT FOR A PERIOD OFYEARS FROM THE EXECUTION HEREOF AND THAT IT SHALL CONTINUE TO BE ENFORCEABLE B Y THE EMPLOYER BANK TILL ALL THE DUES THEREUNDER OR BY VIRTUE OF ANY AGREEMENT HAVE BEEN DULY PAID AND THE CLAIM WILL BE SATISFIED OR DISCHARGE OR THAT THE SAID AGREEMNT/CONTRACT IS FULLY CARRIED PUT BY THE SAID CONTRACTOR .
3. THE GUARANTOR BANK AGREES AND DECLARES THAT THE EMPLOYER/UCO BANK HAVE FULLEST LIBERTY WITHOUT THE WRITTEN CONSENT OR PRIOR APPROVAL AND WITHOUT AFFECTING ANYTHING IN ANY MANNER ANY OBLIGATION HEREUNDER TO VARY ANY OF THE TERMS AND CONDITIONS OF THE SAID AGREEMENT/CONTRACT OR TO EXTEND THE TIME OF PERFORMANCE BY THE CONTRACTOR FROM TIME TO TIME OR TO POSTPONED AT ANY TIME OR FROM TIME TO TIME ANY OF THE POWERS EXCECISABLE BY THE EMPLOYER UCO BANK AGAINST THE CONTRACTOR AND TO FORBEAR TO ENFORCE ANY OF THE TERMS AND CONDITIONS RELATING TO THE SAID AGREEMENT/CONTRACT AND IT IS DECLARED THAT NOT WITHSTANDING ANY SUCH VARIATION OR EXTENSION OR FORBEARANCE, ACT, OMMISSION OR INDULGENCE ON THE PART OF THE EMPLOYER/UCO BANK IN FAVOUR OF THE CONTRACTOR, THE GUARANTOR BANK SHALL NOT BE RELEASED OF ITS LIABILITY BY REASON OF ANY SUCH VARIATION, EXTENSION, ACTS OR FORBEARANCE.
4. THE GUARANTOR BANK HEREBY UNDERTAKES NOT TO REVOKE THE GUARANTEE DURING ITS CURRENCY EXCEPT WITH THE PREVIOUS CONSENT OF THE EMPLOYER/UCO BANK AND THIS GUARANTEE WILL NOT BE DISCHARGED DUE TO THE CHANGE IN THE CONSTITUTION OF THE EMPLOYER BANK OR THE GUARANTOR BANK OR THE CONTRACTOR.
5. ANY CLAIM FOR THE BREACH OF CONTRACT BY THE CONTRACTOR OR FOR ANY LOSS OR DAMAGES SUFFERED BY THE EMPLOYER/UCO BANK SHOULD BE MADE BY INVOCATION OF

THESE BANK GUARANTEE WITHIN ITS VALIDITY PERIOD. NO CLAIM UNDER THIS GUARANTEE SHALL BE ENTERTAINED BY THE GUARANTOR BANK AFTER 3 MONTHS FROM THE DATE OF EXPIRY OF THE BANK GUARANTEE PERIOD.

6. THAT ON INVOCATION OF THE BANK GUARANTEE THE BANK WOULD PAY TO THE EMPLOYER UCO BANK WITHOUT ANY QUESTION AS TO ANY BREACH OF THE AGREEMENT OR LOSS SUSTAINED OR OTHERWISE AND THE INVOCATION IN TERMS OF THE GUARANTEE WILL BE TAKEN AS FINAL AND CONCLUSIVE.

NOTWITHSTANDING ANYTHING CONTAINED HEREIN :

- (1) OUR LIABILITY UNDER THIS BANK GUARANTEE SHALL NOT EXCEED RS(RUPEES.....) ONLY
- (2) THIS BANK GUARANTEE SHALL BE VALID UPTOAND
- (3) WE ARE LIABLE TO PAY THE GUARANTEED AMOUNT OF ANY PART THEREOF UNDER THIS BANK GUARANTEE ONLY AND ONLY IF YOU SERVE UPON A WRITTEN CLAIM OR DEMAND ON OR BEFORE(DATE OF EXPIRY OF GUARANTEE).

IN WITNESS WHEREOF THE PARTIES HEREIN EXECUTED THESE PRESENTS ON THEDAY OF OF AT
.....

Signed, sealed and delivered by

..... Bank by its
Authorized agent Mr
Being the Manager ofBank
OfBranch.

In the presence of:

- 1.
- 2.

Signature

ANNEXURE - VIII

FORM OF PERFORMANCE SECURITY

(BANK GAURANTEE)

IN CONSIDERATION OF THE UCO Bank (hereinafter called the Employer) having agreed to place order on M/S ----- (hereinafter called the Contractor) for execution of contract against the tender being tender no. Datedfor Supply, erection, testing & commissioning of fire fighting and fire detection alarm system of Bank Building at ----- as per agreement dated and the Contractor having agreed to execute the contract against the said tender and the contractor having agreed to furnish a Bank Guarantee of Rs. ----- (Rupees ----- Only) litigations for fulfillment of said contract in terms and conditions of the said tender we (Name of the Bank) do hereby undertake to pay to the Employer an amount not exceeding Rs: against any loss or damage caused to or suffered by the Employer by reasons of any breach of the said contract of any of the terms and conditions contained in to said tender.

We (Name of Bank) do hereby undertake to pay the amounts due and payable under this guarantee without any demur merely on demand from the Employer stating that the amount claimed is due by way of the contractor's failure to perform the Agreement to be executed between Employer and contractor. Any such demand made on the Bank shall be conclusive as regards the amount due payable by Bank under this guarantee. However, our liability under this guarantee, shall be restricted to an amount not exceeding Rs. ----- (Rupees -----Only) **AND FOR THE PERIOD OFYEARS/MONTHS FROM THE DATE HEREOF.**

We undertake to pay the Employer any money so demanded notwithstanding any dispute or disputes by the Contractor in any suit or proceeding pending before any court of Tribunal relating there to, or liability under this present being absolute and prequivalocal.

The payment so made by us under this **GUARANTEE** shall be a valid discharge of our liability or payment there under and the contractor shall have no claim against us for making much payment.

We (Name of Bank) further agrees that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance or the Agreement to be executed between Employer and contractor and that, it shall continue to be enforceable till all dues of the Employer under or by virtue the said Agreement have been full paid and its claims satisfied or discharged or till appropriate Authority certifies that terms and conditions of the said Agreement have been fully and properly carried out by the said contractor and accordingly discharges this guarantee. Unless a demand or claim under this guarantee is made on us in writing on or before the (Date) -----we shall be discharged from all liability under this guarantee.

We (Name of Bank) further agree/s with the Employer that the Employer shall have the fullest liberty, without our consent and without affecting in any manner our obligations of the said Agreement to extend time of performance by the said contractor from time to time or to postpone for any time or from time to any of the powers exercisable by the Employer against the said Contractor, and to *forebear* or enforce any if the terms and conditions relating to the said Agreement, and we shall not be relieved to the said Agreement and we shall not be

relieved from our liability by reasons of any such variation or for any such variation or for any forbearance ay or omission on the part of the Employer any indulgence by the Employer to the said contractor .

By any such matter or thing whatsoever, which under the law relating to sureties would but for this provision have effect of so relieving us.

This guarantee will not be discharged due to the change in the constitution of the bank or of the Contractor.

We (Name of Bank) **FURTHER AGREE THAT WE SHALL NOT REVOKE** this guarantee during the currency **OF THIS GUARANTEE EXECPT** with the previous consent of the employer/**UCO BANK** in writing.

Notwithstanding anything contained herein :

- (1) Our liability under this Bank guarantee shall not exceed Rs(Rupees.....) only
- (2) This Bank Guarantee shall be valid uptoand
- (3) We are liable to pay the guaranteed amount of any part thereof under this Bank Guarantee only and only if you serve upon a written claim or demand on or before(date of expiry of Guarantee).

Signature and seal of the guarantor.

Name of Bank -----

Address -----

Date -----

ANNEXURE - IX

FORM OF INDEMNITY BOND

On Rs.----/-- Stamp Paper

KNOW all men by these presents that I/We -----(name of the contractor) having its registered office at-----, being the indemnifier do hereby execute indemnity bond in favour of UCO Bank having their Head Office at 10, B.T.M Sarani, Kolkata-700 001 and a Zonal Office amongst other places at ----- Pin-----, on this-- day of -----, 2017.

WHEREAS the UCO Bank has appointed us as contractor for their Supply, erection, testing & commissioning of fire fighting and fire detection alarm system of Flagship Corporate India Exchange Place Branch at 2, India Exchange Place, Kolkata – 700 001 and M/s DHAR & ASSOCIATES PVT. LTD.as their Architects/Engineers.

In consideration of the Bank having agreed to award the aforesaid contract to us more particularly described and stated in the aforesaid Articles of Agreement dated ----- and the related tender documents, we do hereby agree and undertake that we, being the indemnifier shall, at the time hereinafter save and keep the bank harmless and indemnified including its respective Directors, officers and employees and keep them indemnified from and against

1. Any third party claims, civil or criminal complaints/ liabilities, site mishaps and other accidents or disputes and/or damages occurring or arising out of any mishaps at the site due to faulty work, negligence, faulty construction and/or for violating any law, rules and regulations in force, for the time being while executing civil work by me/us.
2. Any damages, loss or expenses due to/resulting from any negligence or breach of duty on the part of me/us or any sub-contractor/s if any, servants or agents.
3. Any claim by an employee of mine/ours or of sub-contractors if any, under the Workmen Compensation Act and Employer Liability Act or any other law, rules and regulations in force for the time being and any acts replacing and/or amendments thereof as may be in force at the time and under any law in respect of injuries to persons or property arising out of and in the course of execution of the contract work and/or arising out of and in course of employment of any workmen/employee.
4. Any act or omission of mine/ours or sub-contractors if any, ours/theirs servants or agents which may involve any loss, damage, liability, civil or criminal action.
5. We further agree and undertake that we shall during the contract period, ensure that all permissions, authorizations, consents are obtained from the local and or municipal and//or governmental authorities, as may be required under the applicable laws, regulations, guidelines, notifications, orders framed or issued by any appropriate authorities.
6. If any, additional approval, consent or permission is required by us to execute and perform the contract during the currency of the contract, we shall procure the same and/or comply with the conditions stipulated by the concerned authorities without any delay.
7. Our obligations herein are irrevocable, absolute and unconditional in each case irrespective of the value, genuineness, validity, regularity or enforceability of the aforesaid agreement or the insolvency, bankruptcy, reorganization, dissolution, liquidation or change in ownership of the bank or indemnifier.

8. Our obligation under this bond shall not be affected by any act, omission, matter or thing which would reduce, release us from any of the indemnified obligation under this indemnity or diminish the indemnified obligations in whole or in part, including in law, equity or contract (whether or not known to it, or to the bank).
9. This indemnity shall be governed by and construed in accordance with the laws of India. We irrevocably agree that any legal action suit or proceedings arising out of or relating to this indemnity may be brought in the Courts, Tribunals at ----- . Final judgment against us in any such action, suit or proceedings shall be conclusive and may be enforced in any other jurisdiction by way of suit on the judgment/decreed, a certified copy of which shall be conclusive evidence of the judgment/decreed, or in any other manner provided by law. By the execution of this indemnity, we irrevocably submit to the exclusive jurisdiction of such Court/Tribunal in any such action suit or proceeding.

IN WITNESS WHEREOF ----- has set his/their hands on this -----day of -----, 2015
SIGNED AND DELIVERED BY THE AFORESAID-----

IN THE PRESENCE OF WITNESS

- 1)
- 2)

B.O.Q. For Supply, Erection, Testing & Commissioning of Fire Fighting and Fire Detection Alarm System at UCO Bank Flagship Corporate India Exchange Place Branch.

Sl. No.	Item Description	Model	Qty.	Unit	Rate	Amount P.	Rs.
A - ANALOG ADDRESSABLE FIRE ALARM SYSTEM							
1	Manual Call Point	Manual Call Point Manual Call point(retrofit) front facing addressing, front reset key/with isolator [Model M-MCP-ID]	3	No.			
2	Above False Ceiling Photo Electric Sensor	Multicriteria detector [Model D-MC]	25	Nos.			
3	Below False Ceiling Photo Electric Sensor	Photo electric smoke Detector [Model D-PE]	51	Nos.			
4	Laser Sensor & Base	Multicriteria detector [Model D-MC]	1	No.			
5	Thermal Detector	Heat detector 55 deg [D-H-55]	29	Nos.			
6	Fire Alarm Panel	Godrej Fi-Warn Addressable Single Loop alarm panel [GFW201]	1	No.			
7	Internal Hooter	Intelligent Open area sounder cum visual, with IP65, isolator, 92/100dB, loop powered [Model - A-SV-OD]	1	No.			
8	External Sounder	Intelligent Open area sounder, with IP65, Self-test fault monitoring Two volume settings 92dB(A) and 100dB(A) 85319000 28% 8,870.00 isolator, 92/100dB, loop powered	1	No.			
9	Burglar Alarm Panel	3 Zone Eagle Burglar Alarm Panel	1	No.			
10	Panic Switch Hand Operated	Panic Switch Hand Operated	8	Nos.			
11	Panic Switch Foot Operated	Panic Switch Foot Operated	10	Nos.			
12	Internal Hooter	Internal Hooter	1	No.			
13	External Sounder	External Sounder	1	No.			

B - SUPPLY & LAYING OF CABLE :						
1	Cables for Fire Panel and Sensors	2 Core 1.5 Sq MM Cable + 25 MM Conduit	320	Mtr.		
2	Laying Charges		320	Mtr.		
		SUB -TOTAL				
		ADD GST				
		TOTAL				

Total in Words:

Place :

Date

:

Signature of the Vendor with Seal

