



**BANK OF MAHARASHTRA**

HEAD OFFICE, CORPORATE SERVICES DEPARTMENT,  
LOKMANGAL, 1501, SHIVAJI NAGAR, PUNE – 411005.

**TENDER FOR THE CONSTRUCTION OF ZONAL OFFICE AND BRANCH AT BANK OF MAHARASHTRA's OWNED PLOT, SITUATED AT PLOT NO.1A/1A/3, GUT.NO. 534, MOUJE, SADAR BAZAR, SATARA 415001.**

**(TENDER NO.- AX1/CSD/Tender/37/23-24)**

**TENDER ISSUED TO: -**

NAME OF THE CONTRACTOR: - \_\_\_\_\_

ADDRESS: - \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

DATE OF ISSUE OF TENDER : FROM **09<sup>th</sup> JANUARY 2024**

DATE OF PRE-BID MEETING : ON **22<sup>th</sup> JANUARY 2024** AT **3:00 P.M.**, 1<sup>st</sup> FLOOR, CORPORATE SERVICE DEPT., BANK OF MAHARASHTRA, HEAD OFFICE, LOKMANGAL BUILDING, 1501, SHIVAJI NAGAR, PUNE.

DATE OF SUBMISSION OF: ON OR BEFORE **30<sup>th</sup> JANUARY 2024** UPTO **3:00 P.M**  
TENDER

DATE OF OPENING OF: ON **30<sup>th</sup> JANUARY 2024** AT **4:00 P.M.**  
TENDER (TECHNICAL BID):

**TECHNICAL BID**

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## NOTICE INVITING TENDER

### CONSTRUCTION OF ZONAL OFFICE AND BRANCH AT BANK OF MAHARASHTRA'S OWNED PLOT, SITUATED AT PLOT NO.1A/1A/3, GUT.NO. 534, MOUJE, SADAR BAZAR, SATARA 415001.

BANK OF MAHARASHTRA, is a corporate body, constituted by and under the Banking Companies (Acquisition and Transfer of Undertakings) Act 1970 and having its Registered and Head Office at "Lokmangal" 1501, Shivajinagar, Pune-411 005. Bank of Maharashtra is a nationalized bank with a standing of more than 88 years. It has a three-tier organizational set up consisting of branches, Zonal Offices and Head Office. The Bank has 2380 + branch offices and ATM's across the length and breadth of the country.

Bank of Maharashtra invites tender offer from reputed Contractors / Companies / Firms for the Civil works, Plumbing & Sanitary works, Interior Works, Water Supply, Internal & External Electrical works, L.V Services, Firefighting System, Fire Alarm System, HT & LT installations, Compound Works and associated allied works pertaining to the Construction of its building at Satara.

The reputed contractors /companies/ firms registered in unlimited class with Central/ State Govt. bodies/ Public sector Undertakings/ Public Sector Banks / PWD, Railway, MES etc & who have successfully executed similar type of works and meeting all Pre-qualification criteria need only apply.

Sr. No.	Project Description	EMD	Time Period
1.	Civil works, Plumbing & Sanitary works, Interior Works, Water Supply, Internal & External Electrical works, L.V Services, Firefighting System, Fire Alarm System, HT & LT installations, Compound Works and associated allied works pertaining to the Construction of its building at Satara ESTIMATED COST OF THE WORKS IS <b>Rs 6.58 Crores</b>	<b>Rs. 6,00,000/- (Rupees Six Lakh Only)</b>	6 Months for Construction of RCC works + 6 Months for Finishing Works

(2) Cost of the Tender Documents

Tender copies shall be downloaded from the Bank's website [www.Bankofmaharashtra.in](http://www.Bankofmaharashtra.in)  
No hard copy will be issued in any case. Cost of tender Form: **Rs. 10,000/- [Rs. Ten Thousand only]** (non-refundable) to be paid in the form of Demand Draft /PO favoring 'Bank of Maharashtra' payable at Pune.

(3) Date of Pre-bid meeting and address

- Of Pre-bid meeting
- On **22th JANUARY 2024** at **3.00 P.M.** at the Office of the Assistant General Manager, Corporate Services Department, Bank of Maharashtra, Head Office, Lokmangal Building, 1501, Shivaji Nagar, Pune - 411005.
- (4) Date & Place of Address for Submission of the filled-in Tenders
- On or Before **30th JANUARY 2024** Upto **3:00 P.M** at the Office of the Assistant General Manager, Corporate Services Department, Bank of Maharashtra, Head Office, Lokmangal Building, 1501, Shivaji Nagar, Pune - 411005.
- (5) Date & Place of Address for Opening of the Technical Bid Tenders
- On **30th JANUARY 2024** At **4:00 P.M** at the Office of the Assistant General Manager, Corporate Services Department, Bank of Maharashtra, Head Office, Lokmangal Building, 1501, Shivaji Nagar, Pune - 411005.
- (6) Earnest money Deposit:
- Rs. 6,00,000 /- (Rupees Six Lakh Only)** by means of a Demand Draft / Pay Order / Bankers Cheque (Valid for 90 Days from the last date of submission of tender) from any scheduled Nationalized Bank(only) drawn in favour of Bank of Maharashtra, Payable at Pune.
- (7) All the applications will be scrutinized as per the pre-qualification criteria given in this document, terms, and conditions of technical bid. Price bid of only those applicants/bidders will be opened who fulfill the Prequalification criteria and the technical bid criteria, whose works are found satisfactory on inspection and against whom there is no adverse comments/reports from previous clients, and after due diligence. The time and date of opening of the price bid will be intimated subsequently. Our endeavors will be to open the Price Bids of valid tenders at the earliest.
- (8) The Contractor shall be responsible to pay to the appropriate authorities all taxes, levies, royalties, Custom duty, Cess, etc., as applicable from time to time for the purpose of construction. The complete item rate would be inclusive of the above all mentioned taxes, duties etc. **GST SHALL BE PAID EXTRA as per Rules. No claims in respect of other Taxes, Duty or Levy whether existing or future shall be entertained by the Bank.** If the contractor fails to pay the taxes to the authorities concerned, the Bank reserves the rights to recover the said amount from the amount payable to the contractor and pay the same to the Authorities Concerned.
- Bidder shall quote percentage rates excluding GST. If rates are quoted in any other format as mentioned above, their bid will not be considered and will be summarily rejected.**
- (9) Bidder/ tenderer must submit the tender as per original format. If any bidder changes any format of technical bid, price bid, drawings, specifications or any part of tender at any stage of tendering/ bidding, his bid will not be considered and his tender/ bid will be ought rightly to reject. If bidder makes any remarks or any condition, his bid will not be considered and his tender/ bid will be rejected. Tenderer must not revise, add, omit or

assume anything other than detailed in tender. No justification whatever may be considered in this regard.

- (10) All MSMEs firms having registration as per provisions of the Government of India Policy i.e. registration with District Industries Centre (DIC) or Khadi and Village Industries Commission (KVIC) or Khadi and Industries Board (KVIB) or Coir Board or National Small Industries Commission (NSIC) or directorate of Handicrafts and Handlooms or Udyog Aadhar Memorandum or any other body specified by Ministry of MSME will be exempted from submission of EMD and Tender fee. The firm must have a valid registration under relevant category failing which their bid will be rejected. The firm must enclose all relevant documents while submitting the bid.
- (11) Bidders to ensure that the bids are dropped in tender box kept in the Reception of Bank of Maharashtra, Head office, Shivaji nagar, Pune before 03:00 PM of **30<sup>th</sup> JANUARY**. Bids received through any means (including courier) after 03:00 PM of **30<sup>th</sup> JANUARY** will be rejected.
- (12) **This tender is Percentage Rate tender, the tenderer/bidder shall quote percentage below/above/at par based on estimated cost at which he will be willing to execute the work. Addition/omission/additional discount in price bid will be summarily rejected.**
- (13) The validity of this tender is for a period of 90 days from the date of opening of the tender and it shall remain binding upon bidder and may be accepted by the **Bank** at any time before the expiration of that period without any additional cost. Bank may increase validity period, if required. Validity of the price bid shall be for 120 days from opening of price bid.
- (14) Time period for completion of project: 12 months from commencement of work ( 06 months for RCC and 06 months for finishing work).

The sealed tender in the prescribed tender form in two separate envelope as follows should be addressed to The Assistant General Manager, Corporate Services Department, Bank of Maharashtra, Head Office, Lokmangal Building, 1501, Shivaji Nagar, Pune - 411005, Maharashtra and subscribed "**TENDER FOR CONSTRUCTION OF ZONAL OFFICE AND BRANCH AT BANK OF MAHARASHTRA'S OWNED PLOT, SITUATED AT PLOT NO.1A/1A/3, GUT.NO. 534, MOUJE, SADAR BAZAR, SATARA 415001**".

Envelope No.1 To contain Covering Letter / Clarification, Technical & Commercial aspect and Earnest Money Deposit and Set of Drawings and all related documents as mentioned.

Envelope No.2 To contain only the Priced tender complete in all aspects (No conditions shall be mentioned in Envelope No.2 which will not be taken into consideration for evaluation of the tender) and submitted as above not later than 3.00 p.m. on **30<sup>th</sup> JANUARY 2024**.

Notes: (i) Envelope Nos. 1 & 2 will be opened on the different dates. Separate intimation of date for opening of price bid will be made to only pre- qualified bidders. The sealed price bids of disqualified bidders will be returned by post or can be collected by-hand.

- (15) The percentage quoted by Tenderer shall be binding for all the sections included in the tender documents. The Bank of Maharashtra reserves the right to accept or reject any tender either in whole, or in part without assigning any reasons for doing so and do not bind themselves to accept the lowest or any tender.

The Bank of Maharashtra also reserves the right to negotiate or partly accept any or all the tenders received without assigning any reason thereof. Tenders, which do not fulfill all or any of the above condition and conditions mentioned in the tender documents or are incomplete in any respect, are liable to be rejected. Any discrepancies, omissions, alterations, ambiguities in the tender documents for any doubts as to their meaning should be reported in writing to the office of the Assistant General Manager, Corporate Services Department, Bank of Maharashtra, Head Office, Lokmangal Building, 1501, Shivaji Nagar, Pune 411005 and if any such aforesaid discrepancies, omissions, ambiguities, alteration in the tender documents is accepted than necessary corrigendum will be issue accordingly.

Tenderers are requested to visit the site and make themselves familiar with the work before submitting the tenders.

All other terms & conditions are detailed in the tender documents.

Thanking you,

Yours faithfully,

Sd/-

Assistant General Manager (Civil),  
Corporate Services Department  
Head Office



## SECTION-I

### INSTRUCTIONS TO BIDDER

#### 1. GENERAL

1.1 Tender shall be available on line at <https://www.bankofmaharashtra.in>

1.2 The documents consist of the following and which are uploaded in parts or altogether:

#### 2. Volume – I

- Notice Inviting Tender
- Section I : Instructions to Bidders (ITB)
- Section II : General Conditions of Contract (GCC)
- Section III : Special Conditions of Contract (SCC)
- Section IV : Technical Specifications
  - a.Civil, b.Electrical, c.Fire, d.Interior
- Section V : Tender Bid/Forms of Bid
- Section VI : Standard Formats for Bank Guarantee for Performance Security, Advance Payment Security
- Section VII: Form of Agreement
- Section VIII :Integrity Pact
- Section IX :Schedules for Supplementary Information
- Section X: Eligibility criteria with Sample Forms for updating pre-qualification information
- Section XI :Clarifications
- Section XII : Safety Code – Additional / Special Safety Measures
- Section XIII Schedule of Contractor's Site Management Staff
- Section XIV :Documents to be furnished by the bidder
- Section XV: List of makes
- List of Drawings
  - a)Architectural Drawing, b)Structural Drawing, c)Services

#### 2.01 Volume –II

1. Price Bid
2. Annexure – BOQ of all schedule of works

#### 3.Addenda / Corrigenda / Clarifications as and when if issued

- 3.1 Modifications/ correlations / additions in any of the above documents will be made by addenda/corrigenda, copies of which will be available online at <https://www.Bankofmaharashtra.in>
- 3.4 The tender documents shall be available online in English. All accompanying literature and correspondence shall be in English.
- 3.5 No claim for costs, charges, expenses incurred by the tenderer in connection with tender submission and for subsequent clarifications of their tender shall be accepted.

#### 4.SCOPE OF WORK

Civil works, Plumbing & Sanitary works, Interior Works, Water Supply, Internal & External Electrical works, L.V Services, Firefighting System, Fire Alarm System, HT & LT installations, Compound wall Works and associated allied works pertaining to the Construction of its building at Satara all as per Price Bid (Bill of Quantities) of the tender.

**The Brief Scope of work includes the following:**

1. Civil Works
  2. External Plumbing Works
  3. Internal Plumbing Works
  4. External Electrical works
  5. Internal Electrical Works
  6. Fire Fighting & Fire Alarm Works
  7. Interior works
  8. Other items
  9. CCTV Works
- All as per Price Bids

A very high standard of workmanship and speed of construction is expected for this project.

**5.TENDERER TO STUDY DOCUMENTS AND VISIT SITE**

- 5.1 Submission of the tender by the tenderer implies that he has read tender documents and has made himself aware of the scope, specifications of the work, conditions of contract, drawings and other reports if any and also the site environment.
- 5.2 Tenderers are requested to inspect and examine the site and its surroundings before submitting tender so as to satisfy themselves about -
  - a) Nature of ground and soil conditions (so far as practicable).
  - b) Means of access to the site.
  - c) Accommodation they may require for staff / labour at and around site.
  - d) Water and Electricity requirements for construction and for staff/ labour etc.
  - e) Risk, contingencies, safety regulations to be followed and any other circumstances.
  - f) Local conditions and other factors affecting the works.
  - g) Acquaint himself with local hydrological and climatic conditions.
  - h) Acquaint him-self with Rules and Regulations of Local authorities including traffic, airport authorities or any other if any.
  - i) **Fencing/Barricading with corrugated GI sheet required around existing building during demolition / proposed building of basement + Stilt + 8 building during construction as specified elsewhere in this tender. Rate towards fencing including miscellaneous pre-requisite works such as netting with nylon ropes, barricading work in G.I sheets etc upto the height as specified by the consultants shall be supplied and fixed without any cost implications over and above the tender quote.**
  - j) Space for material under construction, workmen, and for excavated soil.
  - j) Investigate the built structure for getting conversant with the extent of balance work to be executed.
  - k) Bidder shall visit the site with Prior appointment from the Zonal office Satara. The Name and contact of officer is Shri Sagar Jagtap: 9223360482.
- 5.3 The Tenderer shall be deemed to have full knowledge of documents and site and no extra charges consequent on any mis-understanding or other-wise shall be allowed.
- 5.4 Questions regarding the meaning of any of the tender documents and discrepancies shall be directed to the Bank in writing or by e-mail ( [aneesh.lata@mahabank.co.in](mailto:aneesh.lata@mahabank.co.in) : [nilesh.gharge@mahabank.co.in](mailto:nilesh.gharge@mahabank.co.in)). All clarifications, interpretations, meanings and

specific directions if any shall be uploaded in the above portal in the form of Addenda /Corrigenda.

## **6. SUFFICIENCY OF TENDER:**

6.1 The Tenderer shall be deemed to have satisfied him-self before tendering as to the correctness and sufficiency of his tender for the works and about the rates and prices quoted by him, and except in so far as it is otherwise provided in the contract, cover all his obligations under the contract and all matters and things necessary for proper execution and maintenance of the works.

6.2 Tenderer shall take note of following for tender:

The technical bid shall be hardbound and all pages serially numbered and same to signed and stamped. Hardbound implies such binding between two covers through stitching or otherwise whereby it may not be possible to replace any paper without disturbing the documents. Further, all attachments/enclosures have to be self-attested by the bidder.

### **Part-I Technical Bid:**

- i) Bid security for an amount and in form as specified in Instruction to Bidder
- ii) Power of attorney/authorization on non-judicial stamp paper for signing the bid document;
- iii) Qualification information and supporting documents (if prequalification has been done, original qualification will be updated);
- iv) Evidence of access to a revolving line of credit;
- v) Undertaking for making available the required key equipment as specified;
- vi) Annual audited turnover/ CA certificate;
- vii) Current contract commitments/ works in progress;
- viii) Financial data;
- ix) Additional information regarding litigation, debarment, arbitration, and so on;
- x) Joint Venture (JV) agreement (or a letter of intent to create a JV in case of award of Contract) in case the bidder is a JV;
- xi) Proposed methodology and programme for execution of work duly supported by equipment planning and QA procedures proposed to be adopted by the bidder; and
- xii) Undertaking concerning Submission of Bid and abiding by Bid Conditions.

### **Part II Financial Bid**

- i) Priced BOQ : Bidder shall download PDF & formatted excel face sheet of Price bid from the Bank's website. The PDF copy of BOQ shall be signed and stamp on all pages while face sheet shall be filled duly in only those places which cells are unlocked. Bidder shall mandatorily send both hardcopy of face sheet & BOQ of price Bid which shall be enclosed in separate Envelope, which shall be superscribed as Price Bid. Bidder shall note that Price Bid envelope without either

of the aforesaid will be summarily rejected.

## **7. EARNEST MONEY DEPOSIT (EMD)**

- 7.1 Tender must be accompanied by earnest money deposit (Demand Draft / Pay Order / Bankers Cheque (Valid for 90 Days from the last date of submission of tender) as per annexure-1 hereinbefore) and shall be interest free.
- 7.2 The EMD deposited by the successful tenderer shall be held back towards the security deposit till as per provision of contract conditions.
- 7.3 Tenders without Earnest Money Deposit shall be summarily rejected.

## **8. Method Of-Tendering**

The tender is percent rate tender and as mentioned in the S.N. 6 above.

## **9. Authority of Signing**

- 9.1 If the tender is submitted by an individual, it shall be signed by him.
- 9.2 If the tender is submitted by a proprietary firm, it shall be signed by the proprietor.
- 9.3 If the tender is submitted by a partnership firm, it shall be signed by all the partners of the firm or by a partner holding the power of attorney for the firm for signing the tender, in which case, a certified copy of power of attorney shall accompany the tender.
- 9.4 If the tender is submitted by a limited company or a corporation, it shall be signed by a duly authorized person or the person holding the power of attorney for signing the tender, in which case a certified copy of the power of attorney shall accompany the tender.

## **10. Witnesses and Sureties**

All witnesses and sureties shall be persons of respectable status and probity and their full name, occupations and addresses shall be stated below their signatures.

## **11. Packing and Submission**

- 11.1 The Tenderer shall be in Hard Copy. Any tender received after the date and time specified in the tender shall not be accepted. Tenders shall be submitted in two covers;
  - a) Cover 'A'
  - b) Cover 'B'

With documents listed below.

### **11.2 Cover A shall contain TECHNICAL BID PART-I**

All sections as mentioned in Appendix from Sr. No. 1 to 19 along with any addenda / corrigenda / clarification / amendments / corrections issued before due date of tender. Also, related information as mentioned in cl. 6.2 above and all relevant self-certified documents as a proof for financial status, work experience, etc of the firm/company.

**11.3 Cover B shall contain PART-II:**

Bills of Quantities, duly completed with proper quoted percent in number and words and mentioning grand total and duly signed shall be enclosed in the envelope and same to be sealed.

**12.TENDER TO BE VALID FOR:**

Percentage Rate quoted by the tenderer and the earnest money deposit submitted shall be valid for 120 days from opening of price bid or till an extended date mutually as agreed on expiry of the said period.

The Tenderer shall not withdraw or revise or alter any conditions, rate(s) quoted within a stated period, unless he is called upon to do so in mutual agreement / negotiations. The Banks reserves the right to forfeit the earnest money deposit if the tenderer revokes or withdraws the tender within a stated period.

**13.OPENING OF TENDER**

To be opened in confidence.

**14.AGREEMENT**

14.1 The successful tenderer shall be bound to implement the contract on receipt of intimation of acceptance from the Banks and he shall sign an agreement in accordance with as per enclosed draft agreement within 15 days. However, till formal agreement is not signed, acceptance by the Banks together with tender form by the tenderer shall constitute a binding contract between them. Upon the finalization of rates & Conditions of contract, Letter of Intent, Work Order and agreements of Contract will be made between Finalized Tenderer and BANK OF MAHARASHTRA.

14.2 The successful tenderer shall bear stamp duty and other expenses pertaining to preparation and execution of contract document/agreement.

**15.PROCEDURE FOR REJECTION**

15.1 The Banks reserves the right to accept or reject any tender or reject all tenders without giving any reasons for their decision.

15.2 Tenders are liable to be rejected in which any of the particulars/ prescribed information is either missing or incomplete in any respect and or if the prescribed conditions are not fulfilled.

15.3 Canvassing in connection with tender is strictly prohibited and tender submitted by tenderers who resort to canvassing will be liable to rejection.

15.4 Tenders containing uncalled for remarks or any additional conditions are liable to be rejected. Tenderer shall not revise, add, omit or assume anything other than detailed in tender.

15.5, Conditional tenders will be summarily rejected. If bidders make addition/omission in technical or price bids than such bid will be rejected and no further submission will be entertained by Bank.

## SECTION: II

### GENERAL CONDITIONS OF CONTRACT(GCC)

#### 1. MEANING TO BE ASCRIBED TO THE DEFINITION: -

- 1.1 In the contract the following expression shall, unless the context otherwise requires have the meaning hereby respectively assigned to them shall mean any Act of Insolvency as defined by the Presidency Towns Insolvency Act, or the Provisional Insolvency Act or any amending statute.
- (a) "Banks " means the Bank of Maharashtra, Corporate Services Department, Head Office, Lokmangal, 1501, Shivaji Nagar, Pune-411 005, who will employ the Contractor and the legal success or sin title to the Bank or its assigner.
- (b) "Contractor"/ "Contracting agency" means the person(s), firm or company whose tender has been accepted by the Banks. Further it shall also mean as follows,
- i) In case of Partnership firm, "Contractor"/"Contracting agency" shall mean \_\_\_\_\_ and \_\_\_\_\_ trading as partners in the name and style of \_\_\_\_\_ and having a place of business at \_\_\_\_\_ and shall include the partners for the time being of the said firm and the heirs, legal successors and legal representatives of each partner.
- ii) In case of Individual, "Contractor"/"Contracting agency" shall mean Shri \_\_\_\_\_ trading in the name and style of \_\_\_\_\_ and shall include his heirs, successors and legal representatives.
- iii) In case of Company, "Contractor"/"Contracting agency" shall mean \_\_\_\_\_ a company legally incorporated under and having its registered office at \_\_\_\_\_ and shall include its successors and assigns.
- 1.2 Arbitration Act shall mean the Arbitration and Conciliation Act 1996 as amended by Arbitration and Conciliation (Amendment) Act, 2015 and rules framed there under as may be amended or re-enacted from time to time.
- 1.3 Architects shall mean **Arch. D.O. Nikam, Architect and Project management Consultant** having their office at **"Flat No: 201, Shelke building, Pulachiwadi, Deccan gymkhana, Pune -411004** and includes its representative, successors and assigns.
- 1.4 Articles of Agreement shall mean the articles of agreement dated entered into between the Bank and the Contractor set out in Section VI of the Contract Documents.
- 1.5 ASI shall mean Architect's Supplemental Instructions, issued by the Architect to further clarify drawings, specifications, instructions already issued as part of the contract and shall be binding on the contractor without any changes to the contract value or contract time.
- 1.6 Bank/ARCHITECT's instructions shall mean any drawings and/or instructions oral (confirmed in writing within 4 days) and/or in writing, details, direction and explanations issued by the Bank / ARCHITECT from time to time during the Contract Period.
- 1.7 Bidder/Tenderers shall mean the pre-qualified construction agency / agencies approved by the Bank who tender / bid for the Project.
- 1.8 Bill of Quantities shall mean the final rates for the schedule of quantities agreed to between the Bank and the Contractor in relation to the Work to be undertaken as per the terms and conditions contained in the Contract Documents.
- 1.9 CCD shall mean Changed Construction Directives, issued by the Architect. This shall be issued by way of drawings and/ or specifications indicating any changes to the drawings/specifications already issued.



- 1.10 Contract means the documents forming the tender and acceptance thereof and the Formal agreement executed between Bank of Maharashtra (BOM) and the Contractor, together with the documents referred therein including these conditions, the specifications, design, drawings and instruction issued from time to time by the Bank / Architect and all these documents taken together shall be deemed to form one contract.
- 1.11 Contract Value/Sum shall mean the value of the entire work as stipulated in the letter of acceptance or tender subject to such additions thereto or deductions there from as may be made under the provision herein after contained.
- 1.12 Contractor shall mean the successful bidder
- 1.13 Drawings / Good for Construction Drawings shall mean the drawings prepared by the Architect, approved by the Engineer in charge and referred to in the Specifications and any modifications of such drawing as may be issued by the Engineer from time to time, based on which the contractor shall proceed with Construction of Works.
- 1.14 Project coordinator / Engineer shall mean the authorized representative appointed by the Architect.
- 1.15 Final Snag List shall mean final list of items not found consistent with the desired quality norms desired by the Bank/ Architect. Such list of items shall be prepared by the Bank/ Architect at the time of issuance of Virtual Completion Certificate and handed over to the contractor for rectification and all such discrepancies shall be rectified at no extra cost to the Bank.

## 2.Type of Contract

The Contract shall be a Percent-rate Contract and the **Contractor** shall be paid for the actual quantity of work done, as measured at site, at the rates quoted/ accepted by him in the Contract Bills of quantities and quantities jointly measured on site and certified by the Architect & Bank.

## 3.Total Security Deposit

Total security deposit comprises: Earnest Money Deposit & Security Deposit/ Retention Money

### 3.1 Earnest Money Deposit:

The tenderer shall furnish EMD of **Rs. 6,00,000/- (Rupees Six lakh Only)**, as mentioned above. No tender shall be considered unless the EMD is so deposited in the required form. NO interest shall be paid on this EMD. The EMD of the unsuccessful Tenderer shall be refunded soon after the decision to award the contract is taken without interest. The EMD shall stand absolutely forfeited if the Tenderer revokes its tender at any time the period when it is required to keep its tender open acceptance by BOM or after it is accepted by the Bank, the contractor fails to enter into formal agreement or fails to pay the Initial security deposit as stipulated or fails to commence the work within the stipulated time.

### 3.2 Security Deposit/ Retention Money:

In addition to Performance Security (five percent), this Contract for works shall have percentage of 05%(five percent) of each running bill (periodic/ interim payment) to be withheld as Security Deposit/ retention money until final acceptance. The earnest money instead of being released may form part of the security deposit. The contractor may, at his option, replace the retention amount with an unconditional BG acceptable to the Bank at the following stages:

- i) After the amount reaches half the value of the limit of retention money; and
- ii) After the amount reaches the maximum limit of retention money. One-half of the retention money (or BG, which replaced retention money) shall be released on the issue

of the taking-over certificate; if the Taking Over Certificates (TOCs) are issued in parts, then in such proportions as the Bank's Engineer/Architect cum Consultant may determine, having regard to the value of such part or section. The other half of the retention money (or BG, which replaced the retention money) shall be released upon expiration of 365 days after the DLP of the works or final payment, whichever is earlier, on certification by the Architect cum Consultant and accepted by Bank's Engineer.

**Retention Money:**

Deductible in running bills: 5% of the value of each interim bill shall be retained as Retention Amount upto the end of the defect liability period of 12 months. Till the total security deposit shall be 10% of the contract value or total executed value, whichever is higher including the EMD & PSD.

Total security deposit shall be 10% of the contract value or total executed value, whichever is higher. Upon issuance of Virtual Completion Certificate (VCC) by the architect and its approval by Bank, half of the Security Deposit amount (i.e. 5% of the total contract value or total executed value, whichever is higher) shall be released. Upon completion of Defect Liability period (of 12 months) in case of CVC/CTE audit process, post its completion, the remaining retention amount (i.e. 5% of the contract value or total executed value, whichever is higher) shall be released. However, if CVC/CTE audit process is not over, then only 2.5% of the contract value or total executed value, whichever is higher shall be released & remaining 2.5% of contract value or total executed value, whichever is higher, upon completion of CVC/CTE audit process will be released.

**4. Performance Guarantee:**

To ensure due performance of the contract, performance security [or Performance Bank Guarantee (PBG)] shall be submitted by the successful bidder after award of the contract. Performance security may be furnished in the form of account payee demand draft, fixed deposit receipt from a commercial bank, bank guarantee issued/ confirmed from any of the commercial bank in India or online payment in an acceptable form, safeguarding the Procuring Entity's interest in all respects. In case of a JV, the BG towards performance security shall be provided by all partners in proportion to their participation in the project. Performance Security is to be furnished within 21 (twenty-one) days after notification of the award of work and it should remain valid for a period of 60 (sixty) days beyond the date of completion of all contractual obligations of the contractor, including Defect Liability Period (DLP). It will be refunded to the contractor without interest, after he duly performs and completes all obligations under the contract but not later than 365 days of completion of the Defect Liability Period (DLP).

The contractor shall submit separate irrevocable performance guarantee of 5% (Five percent) of contract amount for his proper performance of the contract agreement, Payable to Bank of Maharashtra in form of B.G. within 21 days from the date of issue of work order. This performance guarantee will be over and above the Total Security Deposit.

- i) On completion of the Defects Liability Period of 12 months and final completion certificate, this amount shall be refunded 14 working days, provided the Contractor has satisfactorily carried out all the works and attended to all defects in accordance with condition of contracts and has cleared and vacated the site. If the Contractor does not carry out the rectification work during the Defects Liability Period, the clients shall have the right to get such defective work rectified after giving due notice in writing to the Contractor and recover the cost of repairs from the money so retained.



- ii) The Consultant / Bank shall not make a claim under the performance guarantee except for amounts to which the Bank is entitled under the contract (not withstanding and /or without prejudice to any other provisions in the contract agreement) in the event of
- a) Failure by the contractor to extend the validity of the performance guarantee as described herein above, in which event the Consultant / BOM may claim the full-amount of the performance Guarantee.
  - b) Failure by the contractor to pay Bank any amount due, either as agreed by the contractor or determined under any of the clauses/conditions of the agreement, within 30 days of the service of notice to this effect by Consultant / Bank of Maharashtra.
  - c) Failure by the contractor to complete the project within schedule time, quality of work and workmanship, comply to instruction given by consultants / Bank of Maharashtra, over all handling of project including maintaining discipline, following green building norms etc.

In the event of the contract being determined or rescinded under provision of any of the conditions of the agreement, the performance guarantee shall stand forfeited in full and shall be absolutely at the disposal of the Bank of Maharashtra.

## **5.Language**

The Language in which the contract documents shall be drawn shall be in English.

## **6.Errors, Omissions & Discrepancies**

Under no circumstances shall the drawings be scaled or measured; only written dimensions shall be followed. In case of errors or omissions in drawings, the contractor shall notify the architect by issuing a RFI (Request for information) clearing stating the error or omissions.

In case of discrepancy between the written or shown description or dimensions in the drawings and the corresponding one in the specification the former shall be taken as correct.

In case of discrepancy between written description of an item in Bill of Quantities and corresponding technical specification, the former shall be adopted. In case of difference between rates written in figures and words, the rate in words prevail. Between the duplicate/subsequent copies of the tender, the original tender shall taken as correct.

## **7.Scope of Work**

The contractor shall carry out, complete and maintain the said work in every respect strictly in accordance with this contract and with the directions of and to the satisfaction the Bank to be communicated through the Architect. The Architect at the directions of Bank from time to time issue further drawings and / or written instructions, detailed directions and explanations which are hereafter collectively referred to as Bank / Architect's Instructions in regard to the variation or modification of design, quality or quantity of work or the addition or omission or substitution of work, any discrepancy in the drawings or between the BOQ and / or Drawings and /or Specifications, removal from the site of any material brought thereon by the contractor and any substitution of any other materials therefore the removal and /or re execution of any work executed by it and the dismissal from the work of any person employed engaged thereupon.

## **8.LOA & Agreement**

**8.1**Letter of Acceptance: within the validity period of the tender the Bank shall issue a letter of acceptance either direct or through the Architect by registered post or otherwise depositing at the address of the contractor as given in the tender to enter into a Contract for the execution of the work as per the terms of the tender. The letter of Acceptance shall constitute a binding contract between the Bank and the Contractor.

**8.2 Contract Agreement:** On receipt of intimation of the acceptance of tender from the Bank / Architect the successful Tenderer shall be bound to implement the contract and within 15 days thereof shall sign an agreement in a non-judicial stamp paper of appropriate value.

**8.3** Two copies of agreement duly signed by both the parties with the drawings shall be handed over to the contractors.

### **9.0 Ownership of drawings**

All drawings, specifications and copies thereof furnished by the Bank through its architect are the properties of the Bank. They are not to be used on other work.

### **10. Detailed drawings and instructions**

The Bank through its Architects shall furnish with reasonable promptness additional Instructions by means of drawings or otherwise necessary for the proper execution of work. All such drawings and instructions shall be consistent with contract document, true development thereof and reasonably inferable there from. The work shall be executed in conformity therewith and the contractor prepare a detailed programme schedule indicating the date of Start and Completion of various activities on receipt of the work order and submit the same to the Bank through the Architect.

### **11.0 Copies of Agreement**

Three copies of agreement duly signed by both the parties (Bank & the Contractor) including the drawings shall be handed over respectively to the Bank, Architect & the Contractor.

### **12.0 Liquidated Damage**

If the contractor fails to maintain the required progress or to complete the work and clear the site including vacating their office on or before the contracted or extended date or completion without justification in support of the cause of delay, it may be called upon without prejudice to any other right of remedy available under the law to the Bank on account of such breach to pay a liquidated damages at the rate of 0.5% of the balance contract value per week of delay subject to a maximum of 5% of the contract value.

### **13. Materials, Appliances and Employees**

Unless or otherwise specified the contractor shall provide and pay for all materials, labour, water, power, tools, equipment, transportation, loading, unloading and any other facilities that are required for the satisfactory execution and completion of the work. Unless or otherwise specified all materials shall be new and both workmanship and materials shall be best quality. The contractor shall at all times enforce strict discipline and good order among its employees and shall not employ on the work any unfit person or anyone not skilled in the work assigned to it. Workman whose work or behavior is found to be unsatisfactory by the Bank/Architect shall be removed from the site immediately.

The Contractor shall note that no child labour (less than 18 years of age) on the work shall be employed.

### **14. Permits, Laws and Regulations**

Permits and licenses required for the execution of the work shall be obtained by the contractor at its own expenses. The contractor shall give notices and comply with the regulations, laws, and ordinances rules, applicable to the contract. If the contractor observes any discrepancy between the drawings and specifications, he shall promptly notify the Bank in writing under intimation of the Architect. If the contractor performs any act which is against the law, rules and regulations it shall meet all the costs arising there from and shall indemnify the Bank against any against legal actions arising there from.

### **15.Setting out works**

The contractor shall set out the work and shall be responsible for the true and perfect setting out of the same and for the correctness of the positions, levels, dimensions, and alignment of all parts thereof and get it approved by the Architect & Bank's Engineer before proceeding with the work. If at any time any error in this respect shall appear during the progress of the works, irrespective of the fact that the layout had been approved the Architect, the contractor shall be responsible for the same and shall bear the cost to rectify such error, if so, required to satisfaction of the Bank.

### **16.Protection of works and property**

The contractor shall continuously maintain adequate protection of all his work from damage and shall protect the Bank's properties from injury or loss arising in connection with contract. The contractor shall make good any such damage, injury, loss, except due to causes beyond his control and due to its fault or negligence.

The contractor shall take adequate case and steps for protection of the adjacent properties. The Contractor shall take all precautions for safety and protections of his employees on works and shall comply with all applicable provisions of Govt and local bodies, safety laws and building codes to prevent accident, or injuries to persons or property on about or adjacent to his place of work. The Contractor shall take insurance covers as per compliance of the contract at its own cost. The policy to be taken in joint names of the contractor and the Bank and the original policy may be lodged with the Bank.

### **17.Inspection of Work**

The Bank/Architect or their representatives shall at all reasonable time have free access to the work site and / or to the workshop, factories or other places where materials are lying or from where they are obtained and the contractor shall give every facility to the Bank/ Architect and their representatives for necessary inspection and examination and test of the materials and workmanship. No person unless authorized by the Bank/Architect except the representative of public authorities shall be allowed on the work at any time.

The cost of carrying out and arranging for all tests and submission of test certificates reports called for in the specification shall be borne by the Contractor. The Bank / Architect shall have the right to reject defective material and workmanship or require its correction. Rejected workmanship shall be satisfactorily replaced with proper material without additional charge therefore and the Contractor shall promptly segregate and remove the rejected material from the Works. If the Contractor fails to proceed at once with the replacement of rejected materials and / or the correction of defective workmanship, the Bank/Architect may by contract or otherwise replace such materials and/or correct such workmanship and charge the cost thereof to the Contractor, or may terminate after giving reasonable notice to the Contractor and the opportunity to remedy and/or replace such defective workmanship and/ or materials. The contractor shall note that the claim for Extension of Time or Additional Cost shall not be entertained by the Bank / Architect to remedy such defective works. The instructions and/or decisions of the Bank/Architect shall be final and binding upon the Contractor in this regard.

### **18.Assignment and subletting**

In normal circumstances, subletting or assigning part or entire work shall not be permitted. However, for specialized works, if unavoidable, only with the prior approval of the Bank's Engineer & Architect, subletting or assigning part of the work shall be permitted. However, in case of assignment or subletting the work to another agency, it shall not relieve the main contractor from the responsibility of his overall responsibilities and liabilities of the work.

### **19.Quality of materials, workmanship & Test**

All material and workmanship shall be best of the respective kinds described in the contract

and in accordance with Architect's instructions and shall be subject from time to time to such tests as the Architect may direct all the place of manufacture or fabrication or on the site or an approved testing laboratory. The Contractor shall provide such assistance, instruments, machinery, labour, and materials as are normally required for examining, measuring, sampling and testing any material or part of work before incorporation in the work for testing as may be selected and required by the Architect. All samples of adequate numbers, size, shades & pattern as per specifications shall be supplied by the contractor without any extra charges. If certain items proposed to be used are of such nature that samples cannot be presented or prepared at the site detailed literature/ test certificates of the same shall be provided to the satisfaction of the Architect. Before submitting the sample/literature the contractor shall satisfy itself that the material / equipment for which it is submitting the sample/literature meet with the requirement of tender specification. Only when the samples are approved in writing by the Architect the contractor shall proceed with the procurement and installation of the particular material/equipment. The approved samples shall be signed by the Architect for identification and shall be kept on record at site office until the completion of the work for inspection/ comparison at any time. The Architect shall take reasonable time to approve the sample, any delay that might occur in approving the samples for reasons of its not meeting the specifications or other discrepancies inadequacy in furnishing samples of best qualities from various manufacturers and such other aspects causing delay on the approval of the material/equipment etc shall be to account of the contractor. To ensure use of Quality materials and to exercise proper quality control on the works, the Contractor shall submit the Material Test Certificates, test plans for the materials intended for the works for prior approval of the Architect. The contractor shall carry out such tests regularly during the progress of the work as per provision of the Technical Specifications & Approved Test plan submitted by the Contractor. The tests shall be conducted as per the relevant BIS specifications. **The frequency of test for cement, steel and concrete shall be as per IS-456-2000 the cost for all the test shall be borne by contractor.** Reports on these tests duly signed by the contractors shall be forwarded to the Architect / Bank who shall duly certify the results thereof are in order and the materials may be used in the work. If the results do not conform to the relevant BIS, the Architects / Bank's Engineer shall take immediate appropriate action as per terms of the contract.

The cost of making any test shall be borne by the contractor as mentioned above and is intended by or provided for in the specification or in Bill of Quantities in order to verify the quality.

**Costs of tests not provided for:**

If so intended by or provided for or (in the cases above mentioned) is not so particularized, or though so intended or provided for but ordered by the Architect / Bank's Engineer to be carried out by an independent person at any place other than the site or the place of manufacture or fabrication of the materials tested or any Government/ approved laboratory, then the cost of such test shall be borne by the contractor. The test for cement / concrete / steel shall be done only at Government Engineering College or any Engineering College approved by Bank. In any case, if the test reports reveals about failing of the required parameters, contractor shall immediately replace / remove / rectify the defect at his own cost. However, in any case, if possibility of aforesaid is not there, then Bank will levy penalty to the contractor as deemed fit.

**20.Obtaining information related to the execution of work**

No claim by the contractor for additional payment shall be entertained which is consequent upon failure on its part to obtain correct information as to any matter affecting the execution of the work nor any misunderstanding or the obtaining incorrect information or the failure to obtain correct information relieve the contractor from any risk or from the entire responsibility for the fulfillment of the contract.

## **21.Quantities**

The bill of quantities, unless stated otherwise, shall be deemed to have been prepared in accordance with the Indian Standard Method of Measurements of Quantities. The rate quoted shall remain valid for variation of quantity against individual item to any extent subject to maximum variation of the Total Project Contract Value by +/- 25%. If the quantities vary more than +/- 25%, we will deduct suitable amount from the unit rate of such quantities after mutual discussion and approval by the Bank/ Architect.

## **22.Works to be measured**

In line with the IS codes mode of measurements, the Architect may from time to time intimate to the contractor that he required the work to be measured and the contractor shall forthwith attend or send a qualified representative to assist the Architect in taking such measurements and calculations and furnish all particulars or to give all assistance required by any of them. Such measurements shall be taken in accordance with the mode of measurement detailed in the specifications. The representative of the Architect shall take measurements with the contractor's representative and the measurements shall be entered in the measurement book. The contractor or its authorized representative sign all the pages of the measurement book in which the measurements have been recorded in token of its acceptance. All the corrections shall be duly attested by representatives. No over writing shall be made in the Measurement Book. Should the contractor not attend or neglect or omit to depute its representative to take measurements then the measurements recorded by the representative of the Architect shall be final. All authorized extra work, omissions and all variations made shall be included in such measurement.

## **23.Variations**

No alteration, omission or variation ordered in writing by the Architect shall vitiate the contract. In case the Bank/ Architect thinks proper at any time during the progress of the works to make any alteration in the kind or quality of the materials to be used therein, the Architect / Bank's Engineer shall give notice thereof in writing to the contractor. The Contractor shall confirm in writing within 7(seven) days of giving such oral instructions the contractor shall alter to , add to or omit from as the case may be in accordance with such note but the contractor shall not do any work extra to or make any alterations or additions to or omissions from the works or any deviation from any of the provisions of the contract, stipulations, specifications or contract drawings without previous consent in writing of the Architect and the value of such extra, alterations, additions or omissions shall in all cases be determined by Architect and the same shall be added or deducted from the contract value, as the case may be.

## **24.Valuation of Variation**

No claim for any extra item shall be allowed unless it shall have been executed under the authority of the Architect with the concurrence of the Bank as herein mentioned. Any such extra item is herein referred to as authorized extra item and shall be made in accordance with the following provisions:

**24.1** The net rates or prices in the contract shall determine the valuation of the extra work where such extra work is of similar character and executed under similar conditions as the work priced herein.

**24.2** Rates for all items, wherever possible should be derived out of the rates given in the priced BOQ & **submission of Rate analysis prior to execution of the said extra item**

- b)** The net prices of the original tender shall determine the value of the items omitted, provided if omissions do not vary the conditions under which any remaining items of works are carried out, otherwise the prices for the same shall be valued under sub clause hereunder.
- c)** Where the extra works are not of similar character and/or executed under similar



conditions as aforesaid or where the omissions vary the conditions under which any remaining items or works are carried out, then the contractor shall within 7 days of the receipt of the letter of acceptance inform the Architect of the rate which he intends to charge for such items of work, duly supported by analysis of the rate or rates claimed and the Architect shall fix such rate or prices as in the circumstances in his opinion are reasonable and proper, based on the market rate.

- d) It is further clarified that for all such authorized extra items where rates cannot be derived from the tender, the Contractor shall submit rates duly supported by the rate analysis worked on the market rate basis for material, labour evaluated at maximum 30% of cost of all materials inclusive of wastage, cost of power and water, each evaluated at 2.5% of cumulative cost of material and labour plus 15% towards establishment charges, contractor's overheads and profit. Such items shall not be eligible for escalation. Acceptance / Approval of above said extra work shall be based on the Architect's recommendation and contractor's submission.

## **25.Final Measurement**

The final measurement and valuation in respect of the contract shall be completed within 15 (fifteen) days of completion of Items and approval thereof on the Architects Final Snag list.

## **26.Virtual Completion Certificate (VCC)**

On successful completion of entire works covered by the contract to the full satisfaction of the Bank, the contractor shall ensure that the following works have been completed to the satisfaction of the Bank:

- a. Clear the site of all scaffolding, wiring, pipes, surplus materials, contractor's equipment and machinery.
- b. Demolish, dismantle and remove the contractor's site office, temporary works including labour sheds/ camps and construction and other items and things whatsoever brought upon or erected at the site or any land allotted to the contractor by the Bank not incorporated in the permanent works.
- c. Remove all rubbish, debris etc from the site, the premises / land allotted to the contractor by the Bank and shall clear, level, and dress, compact the site as required by the Bank.
- d. Shall put the Bank in undisputed custody and possession of the site.
- e. Shall hand over the work in a peaceful manner to the Bank
- f. All defects/ imperfections have been attended and rectified as pointed out by the Bank/ Architect to the full satisfaction of Bank/ Architect.

Upon the satisfactory fulfillment by the Contractor as stated above, the contractor shall be entitled to apply to the Architect that he is satisfied with the completed work. Relative to whom the completion certificate has been sought, the Architect shall within 14(fourteen) days of the receipt of the application for the Virtual Completion Certificate, subject to satisfactory compliance of all conditions leading to VCC issuance, issue a VCC in respect of the work for which the VCC has been applied.

This issuance of a VCC shall be without prejudice to the Bank's right and contractor's liabilities under the contract including the contractor's liability for defects liability period nor shall the issuance of VCC in respect of the works or work at any site be construed as a waiver of any right or claim of the Bank against the contractor in respect of work or work at site and in respect of which the VCC has been issued.

## **27. Works by other Agencies**

The Bank / Architect reserves the rights to use premises and any portion of the site for execution of any work not included in the scope of this contract which they may desire to get executed by other agencies simultaneously and the appointed contractor shall not object or

obstruct but extend reasonable facilities & co-operation for the execution of such work by such agencies. The contractor however is not expected to provide any plant or material for the execution of such work except with special approval & instructions accorded by the Bank. Such work shall be carried out in such manner as not to hamper the progress of the works included in the contract.

## **28. Insurance of works:**

**28.1** Without limiting its obligation and responsibility under the contract, the contractor shall insure in the joint names of the Bank and the contractor against all loss of damages from whatever cause arising other than the excepted risks for which it is responsible under the terms of contract and in such manner that the Bank and contractor are covered for the period stipulated in GCC and are also covered during the period of maintenance for loss or damage arising from a cause occurring prior to the commencement of the period of maintenance and for any loss or damage occasioned by the contractor in the course of any operations carried out by it for the purpose of complying with its obligation under this clause.

**28.2** The works for the time being executed to the estimated current contract value thereof, or such additional sum as may be specified together with the materials for incorporation in the works at their replacement value.

**28.3** The construction plant & other things brought to the site by the contractor to the replacement value of such constructional plant and other things.

**28.4** Such insurances shall be effected with an insurer and in terms approved by the Bank which approval shall not be unreasonably withheld and the contractor shall whenever required produce to the Architect the policy if insurance and the receipts for payment of the premium.

## **28.5 CONTRACTORS LIABILITY AND INSURANCE SUMMARY**

<b>Sr. No.</b>	<b>Nature and scope of Insurance risk policy of</b>	<b>Value of insurance</b>	<b>Validity Period</b>	<b>Name of the insurer</b>
1	Loss of damage to works or any part thereof materials at site from any cause whatsoever and all	100 % of the Contract Value	The Policy should be valid till the expiry of defects liability period.	The policy should be in the joint name of Bank of Maharashtra & the Contractor
2	Damages , loss, or injury to any property of the Bank, architect, or consultant to any person including for his agents and servants	100 % of the Contract Value	The policy shall be valid till expiry of defect liability period.	The policy shall be in Joint name of Bank of Maharashtra and the Contractor
3	Claims under the workmen's compensation act 1923 / ESI / EPF / Labour charges	As per Gov. rules	The policy shall be valid till expiry of Defect liability period	The Policy shall be in the name of Bank of Maharashtra and the Contractor.

### **Note 1**

The insured amount for policy under sr.no1 above may be obtained through Nationalized

insurance company as follows:

- A) At the time of commencement of the work 100% of contracted value valid for 4months or the project completion period whichever is higher
- B) This will be further extended to cover the Defects liability period and submitted to the Bank prior to the Virtual Completion.

**Note 2**

The insurance policies for Sr.2 & 3 should be obtained in joints name of the Bank and the contractors at the time of commencement of the work and the same should be valid throughout the tenure of the contract including 12 months' defect liability period.

**Note 3**

The Contractor shall take car policy to cover all risk whatsoever. The tenderer, apart from being a competent contractor, must associate himself with the agencies of appropriate class who are eligible to tender for (i). Electrical (ii) Air conditioning (iii) Horticulture (iv) Fire Safety works (v) Interior Works. (vi) Furniture supplier (vii) Civil Works etc.

**28.6** The Contractor shall, at his own expense, effect and maintain till the issue of the Virtual Completion Certificate under this contract, with an insurance company approved by the Bank/Architect .Contractors All risk (CAR) Policy Insurance including earthquake ,cyclone risk in the joint names the Bank and the Contractor (Bank of Maharashtra being the Beneficiary ) against all risk as per the standard comprehensive ALL Risk Policy for the amount of Contract and deposit such policy or policies with the Bank/Architect before commencing the works .Apart from the same ,all labour related insurance such as Workmen's Compensation ESI & PF shall be strictly obtained by the contractor and no extra claim whatsoever would be entertained.

**28.7 Damage to persons and property** The contractor shall, except if and so far as the contract provides otherwise indemnify the Bank against all losses and claims in respect of injuries or damages to any person or material or physical damage to any property whatsoever which may arise out of or in consequence of the execution and maintenance of the works and against all claims proceedings, damages, costs , charges and expenses whatsoever in respect of or in relation thereto except any compensation of damages for or with respect to

- a. Permanent use or occupation of land by or any part thereof
- b. The right of Bank to execute the works or any part thereof on, over, under, in or through any lands.
- c. Injuries or damages to persons or properties which are unavoidable result of execution of maintenance of the works in accordance with the contract
- d. Injuries or damage to persons or property resulting from any act or neglect of the contractors agent, employees or other contractors not being employed by the contractor for or in respect of any claims, proceedings, damages, cost, charges and expenses respect thereof or in relation thereto or where the injury or damage was contributed by the contractor, its servants or agent or other contractors for the damage or injury.

**28.8. Third Party Insurance:**

Before commencing the execution of the work the contractor but without limiting its obligations and responsibilities under relevant clause of this conditions shall insure against its liability for any material or physical damage, loss, or injury which may occur to any property including that of Bank, or to any person , including any employee of the Bank by or arising out of the execution of the works r in the carrying out of the contract, otherwise that due to the matters referred to in the proviso to relevant clause thereof.

**28.9. Minimum amount of Third-Party Insurance:**

Such insurance shall be effect with an insurer and in terms approved by the Bank which



approval shall not be reasonably withheld and for at least the amount stated below. The Contractor shall, whenever required, produce to the Architect/Bank the policy or policies of insurance cover and receipts for payment of the current premium.

The minimum insurance cover for physical property, injury and death is INR 50.0 lakhs per occurrence with **no limit on the number of such accidents or occurrences**. After such occurrence the Contractor shall pay additional premium necessary to make insurance valid for four occurrences always.

**28.10. Insurance against accidents to workmen:**

The contractor shall insure against such liability with an insurer approved by the Bank during the whole of the time that any persons are employed by him on the works and shall, when required, produce to the Architect such policy of insurance and receipt for payment of the current premium. Provided always that, in respect of any persons employed by any sub-contractor the contractor's obligation to insure as aforesaid under this sub clause shall be satisfied if the sub-contractor shall have insured against the liability in respect of such require such sub-contractor to produce to the Architect when such policy of insurance and the receipt for the payment of the current premium.

**28.11. Remedy on contractor's failure to insure:**

If the contractor fails to effect and keep in force the insurance referred to above or any other insurance which it may be required to effect under the terms of contract, then and in any such case the Bank may effect and keep in force any such insurance and pay such premium or premiums as may be necessary for that purpose and from time to time deduct the amount so paid by the Bank as aforesaid from any amount due or which may become due to the contractor, or recover the same as debt from the contractor.

Without prejudice to the other rights of the Bank against contractor, in respect of such default, the Banks shall be entitled to deduct from any sums payable to the contractor the amount of any damage costs, charges and other expenses paid by the Bank and which are payable by the contractors under provision of this clause. The contractor shall upon settlement by the insurer of any claim made against the insurer pursuant to policy taken under this clause, proceed with due diligence to rebuild or repair the works destroyed or damaged. In this event all the monies received from the insurer in respect of such damage shall be paid to the contractor and the contractor shall not be entitled to any further payment in respect of the expenditure incurred for rebuilding or repairing of the materials or goods destroyed or damaged.

**29. Contractor to Indemnify BANK:**

- a. The Contractor shall indemnify the Bank against all claims, proceedings, damages, costs, charges and expenses in respect of the matters referred to in the provision of the relevant clause of the RFP. The Contractor shall indemnify the Bank on matters pertaining to and related to the adjacent neighboring building of the proposed works.
- b. Contractor's superintendence:  
The contractor shall fully indemnify and keep indemnified the Bank against any action, claim, or proceeding relating to infringement or use of any patent or design or any other intellectual property rights or any alleged patent or design rights and shall pay any royalties which may be payable in respect of any article or part thereof included in the contract. In the event of any claim made under or action brought against the Bank in respect of such matters as aforesaid the contractor shall be immediately notified thereof and the contractor shall be at liberty at his own expenses to settle any dispute or to conduct any litigation that may arise there from.

c. Accident of injury to workmen:

The Bank shall not be liable for or in respect of any damages or compensation payable at law in respect or in consequence of any accident or injury to any workmen or other person in the employment of the contractor or any sub-contractor, save and except an accident or injury resulting solely from any act or default of the Bank or its agent, or employees. The contractor shall indemnify and keep indemnified the Bank against all such damages, and compensation, save and except said as aforesaid and against all claims, proceedings, costs, charges and expenses whatsoever in respect thereof or in relation thereto.

**30. Commencement of Work:**

The date of commencement of the work shall be reckoned as the date of handing over the site or fifteen days from the date of issue of letter of acceptance of tender by the Bank whichever is later including mobilization period.

**31. Time for Completion:**

Time is essence of the contract and shall be strictly observed by the Contractor. The Entire work shall be completed within a period of **12 months (06 Months RCC works & 06 Months finishing works)** from the date of issue of work order. If required in the contract or as directed by the Architect, the contractor shall complete certain portions of the works before completion date of the entire work. However, the completion date shall be reckoned as the date by which the whole work is completed as per the terms of the contract.

**32. Extension of Time:**

If, in the opinion of the Architect, the work be delayed for reasons beyond the control of the contractor, the Architect may submit a recommendation to the Bank to grant a fair and reasonable extension of time for completion of the works as per the terms of the contract. If the contractor needs the extension of time for the completion of the works or the completion for the works is likely to be delayed for any reasons beyond the due date of completion as stipulated in the contract, the contractor shall apply to the Bank through the Architect in writing at least 30 days before the expiry the schedule time and while applying for the extension of time it shall furnish the reason in detail and its justification if any for the delays. The Architect shall submit their recommendations to the Bank in the prescribed format for granting extension of time. While granting extension of time the contractor shall be informed the period extended time which will qualify for levy of liquidated damages. For the balance period in excess of original stipulated period and duly sanctioned extension of time by the Bank, the provision of the liquidated damage as stated herein this conditions shall become applicable. Further the contract shall remain in force even for the period beyond the due date completion irrespective whether the extension is granted or not.

**33. Rate of Progress:**

Whole of the material, plant and labour to be provided by the contractor and the mode, manner and speed of execution and maintenance of the works are to be of kind and conducted in a manner to the satisfaction of the Architect. Should the rate of progress of the work or part thereof be at any time be in the opinion of the Architect seems too slow to ensure the completion of the whole of the work by the prescribe time or extended time for completion the Architect shall thereupon take such steps as considered necessary by the Architect to expedite progress so as to complete the works by the prescribed time or extended time. Such communications from the Architect neither shall relieve the contractor from fulfilling obligations under the contract nor it shall be entitled to raise any claims arising out of such directions.

**34. Working hours / Work during nights and holidays:**

Working hours of execution for the subject Works shall be 9:00 a.m. to 6:00 p.m. (Including 1 hour of Lunch Break). If the Contractor's work extends beyond the mentioned working

time, the Contractor well in advance, shall take permission of the Bank /Architect for the same in writing and execute the works strictly in compliance with the applicable acts and rules / regulations of the local statutory authorities (Relevant sections).

Subject to any provision to the contrary contained in the contract no permanent work shall save as herein provided be carried out on during the night or on holidays without the permission in writing of the Architect/Bank's Engineer. When the work is unavoidable or absolutely necessary for the saving of life or property or the safety of the work in which case the contractor shall immediately advise in the case of any work which becomes essential to carry by rotary or double shifts in order to achieve the progress and quality of the part of the works being technically required/ continued with the prior approval of the Architect/Bank's Engineer at no extra cost to the Bank. All work at night after obtaining approval from competent authorities shall be carried out without unreasonable noise and disturbance and at the quoted rates only. No additional cost shall be claimed by the Contractor. Contractor shall ensure that night work shall not create any disturbance which will be objectionable to the neighbors.

### **35. No Compensation or restriction of work**

If at any time after acceptance of the tender, the Bank shall decide to abandon or reduce the scope of the works for any reason whatsoever and hence not required the whole or any part of the works to be carried out. The Architect shall give notice in writing to the effect to the contractor and the contractor shall act accordingly in the matter the contractor shall have no claim to any payment of compensation or otherwise whatsoever, on account of any profit or advantage which it might have derived from the execution of the works fully but which it didn't derive in consequence of the foreclosure of the whole or part of the work.

Provided that the contractor shall be paid the charges on the cartage only of materials actually and bonafide brought to the site of the work by the contractor and rendered surplus as a result of the abandonment, curtailment of the work or any portion thereof and then taken back by the contractor, provided however that the Architect shall have in such cases the option of taking over all or any such material at their purchase price or a local current rate whichever is less.

In case of such materials having been issued from the Bank's stores (If any) and returned by the contractor, credit shall be given to him at the rates not exceeding those at which the materials were originally issued to the contractor, however only after taking into consideration the deduction for claims on account of any deterioration or damage while in the custody of the contractor and in this respect the decision of the Architect shall be final.

### **36. Suspension of work**

The contractor shall, on receipt of the order in writing from the Bank based on recommendation of the Architect which shall be final & binding on the contractor to suspend the progress of the works or part thereof for such time and in such manner as the Bank may consider necessary so as not to cause any damage or injury to the works already done or endanger the safety thereof for any of the following reasons:

- a. On account of any default on the part of the contractor or
- b. for proper execution of the works or part there if for reasons other than the default of the contractor, or
- c. For safety of the works or part thereof.

The contractor shall during such suspension, properly protect and secure the works, the extent necessary and carry out the instructions given in that behalf by the Architect. If the suspension is ordered for reasons (b) and (c) as mentioned above: The contractor shall be entitled to an extension of time equal to the period of every such suspension. No compensation whatsoever shall be paid on this account.

### **37. Action when the whole security deposit is forfeited**

In any case in which under any clause or clauses of this contract, the contractor shall have rendered itself liable for to pay compensation amounting to the whole of its security deposit, the Architect shall have the power to adopt any or all of the following course as may deem best suited to the interest of the Bank subject to prior approval of the Bank in such matter:

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

In the event of any of above course being adopted by the Bank, the contractor shall have no claim to compensation for any loss sustained by reasons of its having purchased or procured any material or entered in to any agreements 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 rescind under the provision aforesaid. The contractor shall not be entitled to receive to be paid any sum or any work thereto for actually performed under this contract, unless, and until the Architect will have certified in writing the performance of such work and the value payable in respect thereof, and the contractor shall only be entitled to be paid the value so certified.

### **38. Bank' right to terminate the contract:**

If the contractor being an individual or a firm commits any "Act of insolvency" or shall be adjudged an insolvent or being an incorporated company shall have an order of compulsory winding up voluntarily or subject to the supervision of Govt. and or the official assignee of the liquidator in such acts of insolvency or winding up, within a period of seven days, after notice to the contractor to do so, shall show to the Bank with reasonable satisfaction that Contractor is able to carry out and fulfill the contract and to give security thereof if so required by the Bank.

Or if the contractor shall suffer any payment under this contract to be attached by or on behalf of any of the creditors of the contractor or shall assign or sublet this contract without the consent in writing of the Bank through Architect or shall charge or encumber this contract or any payment due to which may become due to the contractor hereunder

- a. Has abandoned the contract
- b. Has failed to commence the works, or has without any lawful excuse under these conditions suspended the progress of the works for 14 days after receiving from the Bank through the Architect written notice to proceed, or
- c. Has failed to proceed with the works with such diligence and failed to make such due progress as would enable the works to be completed within the time agreed upon , or

has failed to remove the materials from the site or to pull down and replace works within 7 days after written notice from the Bank / Architect with the consultation of the Bank that the said materials were condemned and rejected by the Architect under these conditions; or has neglected or failed persistently to observe and perform all or any of the acts, matters or things by this contract to be observed and performed by the contractor for 7days after written notice shall have been given to the contractor to observe or perform the same or has to the detriment of good workmanship or in defiance of the Bank's / Architect's instructions to the contrary subject any part of the contract. Then and in any of said cases the Bank may notwithstanding any previous waiver, after giving 7days notice in writing to the contractor, determine the contract, but without thereby affecting the powers of the Bank or the Architect or the obligation and liabilities of the contractor whole of which shall continue in force as fully as if the contract had not been determined and as if the works subsequently had been executed by or on behalf of the Contractor. And, further the Bank, their agents employees may enter upon and take possession of the works and all plants , tools, scaffolding, materials, sheds, machineries lying upon the premises or on the adjoining lands or roads use the same by means of their own employees or workmen in carrying on and completing the work or by engaging any other contractors or persons to complete the work and the contractor shall not in any ways interrupt to do any act, matter to think to prevent or hinder such other contractor or other persons employed for completing and finishing or using the materials and plant for the works.

When the works shall be completed by the contractor, the Bank shall give a notice in writing to the contractor to remove its surplus materials and plants and should the contractor fail to do so within 14 days after receipt thereof, the Bank sell the same through public auction after due publication, and shall adjust the amount realized by such auction against the amount payable if any. The contractor shall have no right to question any of the acts of the Banks incidental to the sale of the materials etc.

### **39. Certificate of Payment**

The contractor shall submit interim bills at intervals as mentioned below:

- a) 1st Running Account Bill - at end of 1st Month from the commencement date. Subsequent Running Account Bill at every 1 Months interval till the completion of project and approved time extension thereto.
- b) The Architect shall scrutinize and certify the Interim Bill invoice within 7days of submission of the Bill by the Contractor in proper format as approved by the Bank/Architect. The Bank shall make the payments to the Contractor within 15 working days from the date of certificate to the payment from the Architect to the Bank. The Bank shall further recover the statutory recoveries other dues including the retention amount from the certificate or payment.
- c) It is clarified to the Contractor that, the joint measurement of any Item /Works by the Architect shall not be considered as means of approval for the subject Item / works for the payment. The Item / Works shall be entertained for Payment only after 100% of the subject Item / Works approved and to complete satisfaction of Architect. Provided always that the issue of any certificate by the Architect during the progress of works or completion shall not have effect as certificate of satisfaction or relieve the contractor from its liability under this clause.
- d) The Architect may by any certificate make any corrections required in previous certificate. The Bank shall modify the certificate of payment as issued by the Architect from time to time while making the payment.
- e) After the Bank makes payment of the interim bill invoice to the Contractor, The Contractor shall immediately make the payments to its sub agencies and submit the



receipt of payment done on the letter head of respective sub agencies before the subsequent Running Account Bill is raised.

- f) The final bill may be submitted by the contractor within a period of 15 (Fifteen) days from the date of completion of Items of the Architects final signed list and Architect shall issue the certificate of payment within a period of further 1(One) month. The Bank shall pay the amount within a period of 3 (Three) months from the date of issue of certificate by the Architect.
- g) The final bill shall be accompanied by a certificate of completion from the Bank. Payments of final bill shall be made after deduction of Retention Money etc. as specified in the relevant Clause above, which sum shall be refunded after the completion of the Defect Liability Period after receiving the Bank's certificate that the Contractor has rectified all defects to the satisfaction of the Bank, the acceptance of payments of the final bill by the Contractor would indicate that he will have no further claim in respect of the work executed.

#### **40. Arbitration**

- a) If an amicable settlement is not forthcoming, recourse may be taken to the settlement of disputes through arbitration as per the Arbitration and Conciliation Act 1996 as amended by Arbitration and Conciliation (Amendment) Act, 2015. All disputes or difference of any kind whatsoever. which shall at any time arise between the parties hereto touching or concerning the works or the execution or maintenance thereof of this contract or the rights touching or concerning the works or the execution of maintenance thereof of this contract or the construction remaining operation or effect thereof or to the right or liabilities of the parties or arising out of or in relation thereto whether during or after determination foreclosure or breach of the contract (other than those in respect of which the decision of any person is by the contract expressed to be final and binding) shall after written notice of 60 days by either party to the contract to the other of them and to the Banks hereinafter mentioned be referred for adjudication to a Sole Arbitrator to be appointed as per the provisions of law. By the Banks who shall be the fellow of institution of India (or former judge of Bombay high court or supreme court of India).
- b) If the Arbitrator so appointed is unable or unwilling to act or resigns his appointment or vacates his office due to any reason whatsoever another Sole Arbitrator shall be appointed as per the law.
- c) The work under the Contract shall, however, have to continue during the Arbitration proceeding and no payment otherwise due to the Contractor shall be withheld on account of such proceedings.
- d) The Arbitrator shall be deemed to have entered on the reference on the date he issued to both the parties fixing the date of the first hearing.
- e) The Arbitrator may from time to time, with the consent of the parties, enlarge the time for making and publishing the award.
- f) 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 and give a reasoned award. The venue of arbitration shall be such place as may be fixed by the Arbitrator in his Sole discretion.
- g) 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 and amount of cost to be paid.

- h) The award of the Arbitrator shall be a reasoned Award.
- i) Subject to aforesaid, the provisions of the Arbitration and Conciliation Act 1996 as amended by Arbitration and Conciliation (Amendment) Act, 2015 or any statutory modification or re-enhancement thereof and the rules made there under and for the time being in force, shall apply to the Arbitration proceeding under this clause.
- j) The Banks and the Contractor hereby also agree that arbitration under clause shall be a condition precedent to any right to action under the contract with regard to the matters hereby expressly agreed to be so referred to arbitration.

#### **41.Extra Items**

Prior approval and sanction for rate from consultant shall be obtained for executing items, which are not covered in Bill of quantities and specifications read together. The rates for such extra items, if any, shall be derived on the basis of similar items in schedule of quantities. If any particular item is not similar in nature the rate shall be derived by actual labour, material cost and 20% thereof to cover overhead and profits. Transportation of material is deemed to be included in overhead and profits and will not be allowed to charge separately.

#### **42.Sub Contracting**

Contractor shall not sub-let any work without the consent / permission of the Bank/Architect. The Main Contractor may if required, at the discretion of the Banks & Architect and with prior approval from the same, sublet the Electrical Work only to the Electrical Contractor Empanelled with Bank of Maharashtra and who are capable of undertaking such a magnitude of work and reputed in their discipline.

However, we shall not be responsible in any way if our work is tampered with or if the body of the structure is damaged due to sinking, cracking and/or by any other act of God beyond our control and also to any consequential damage that might take place to persons or property because of leakage/seepage that might take place from the areas treated.

In regard to the causes of the leakage the decision of the consultants shall be final and binding.

#### **43.Water Supply:**

The contractor shall make its own arrangement of water required for the works at site and nothing extra shall be paid for the same. This shall be subject to the following conditions

- i. That the water used by the contractor shall be fit for construction purposes to the satisfaction of the Architect
- ii. The contractor shall make alternative arrangements for the supply of water if the arrangement made by the contractor for procurement of water in the opinion of the Architect is unsatisfactory.
- iii. If water is provided by the Bank at site, then charges shall be deducted from the contractor's bills @ 0.5% of actual project value.
- iv. The contractor shall include in his rates all charges for water whether provided by Bank or provided by the contractor.

#### **44.Power supply:**

The Bank shall supply the Power & emergency power back up at one point for the works at site on chargeable basis @ 0.5% of actual project value which shall be deducted from the contractor's bills or contractor may take temporary connection from MSEDCL for the work and necessary payment is to be made by the contractor based on the electricity bill issued by MSEDCL.

**45. Treasure troves etc:**

Any treasure trove, coin, or object antique which may be found on the site shall be the property of the Bank and shall be handed over to the Bank immediately.

**46. Method of Measurement:**

Unless otherwise mentioned in the schedule of quantities or in mode of measurement, the measurement will be on the net quantities or work produced in accordance with up to date. Rules laid down by the IS and in conformity of the terms and conditions of this contract and subject to the approval of the Architect. In the event any dispute/ disagreement the decision of the Bank's Engineer shall be final and binding on the contractor.

**47. Maintenance of Registers:**

The Contractor shall maintain the following registers as per the proforma provided by the Bank/Architect at site of work and should produce the same for inspection of BOM. Architects whichever desired by them. The Contractor shall also maintain the record / registers as required by the local authority/Government. From time to time.

- a) Register for secured advance.
- b) Register for Testing materials & equipments.
- c) Register for hindrance to work
- d) Register for Labour
- e) Measurement Books/Sheets
- f) Register for Drawings issued for the work
- g) Site Order Book in Triplicate
- h) Certified True copies of the Contract.
- i) All connected Measurement Book, Level Books, field Books and Lead Charts.
- j) All running Account Bills with all connected statements/ vouchers.
- k) Statements showing details of check of measurements by superior officers-copies of order laying down such requirements.
- l) Materials at site accounts / cement, steel bitumen, paints, water proofing compound, anti-termite chemical etc.
- m) Site order Books / Test Records / Log Books.
- n) Details of extra / substituted items and of deviated quantities being executed/considered for execution in the work along with Analysis of rates.
- o) Hindrance Register.
- p) Office, correspondence files and inspection notes, if any, issued by inspecting office.
- q) Complaint records, if any.
- r) Any other documents relevant to the works.
- s) Details of payments.
- t) Cement consumption statement.
- u) Steel consumption statement.
- v) Statement of test material.
- w) Work Diary

**48. Price Variation / Escalation:**

The contract rates shall be firm and shall not be subject to fluctuation in the cost of materials, labour, transport, rate of exchange and whatsoever till completion of work including the extension of time thereto.

**49. Force majeure:**

Neither contractor nor the Bank shall be considered in default in performance of the obligations if such performance is prevented or delayed by events such as but not limited



to War, hostilities revolution, riots, civil commotion, lockout, conflagrations, epidemics, fire, storms, floods, droughts, earthquakes or ordinances or any act of God or for any other cause beyond the reasonable control of the party affected or prevented or delayed. However, a notice is required to be given within 30 days from the happening of the event with complete details, to the other party to the contract, if it is not possible to serve a notice, within the shortest possible period without delay.

**50.** As soon as the cause of force majeure has been removed the party whose ability to perform its obligations has been affected, shall notify the other of such cessation and the actual delay incurred in such affected activity adducing necessary evidence in support thereof.

**51.** From the date of occurrence of a case of force majeure obligations of the party affected shall be suspended during the continuance of any inability so caused. With the cause itself and inability resulting therefrom having been removed, the agreed time completion of the respective obligations under this agreement shall stand extended a period equal to the period of delay occasioned by such events.

**52.** Should one or both parties be prevented from fulfilling the contractual obligations by state of force majeure lasting to a period of 2 months or more, the two parties shall each other to decide regarding the future execution of this agreement.

### **53. Local laws, Acts, Regulations**

The contractor shall strictly adhere to all preventing labour laws inclusive of contract labour (regulation and abolition) act of 1970 and other safety regulations, premium payments and shall abide with all the terms & conditions of the said Acts in toto. The contractor shall comply with the provision of all labour legislation including the latest requirements of all the Acts, laws, any other regulations that are applicable to the execution of the project.

- a) Minimum wages Act 1948 (amended)
- b) The Constitution of India
- c) Indian Contracts Act, 1872
- d) Arbitration and Conciliation Act, 1996 read with The Arbitration and Conciliation (Amendment) Act, 2015
- e) Competition Act, 2002 as amended with Competition (Amendment) Act, 2007;
- f) Right to Information (RTI) Act 2005
- g) Central Vigilance Commission Act, 2003
- h) Prevention of Corruption Act, 1988;
- i) Code of Criminal Procedure, 1973 (Sections 195(1) and 197(1));
- j) Various labour laws applicable at the works' site;
- k) Various building and safety acts, codes, standards applicable in the context of the scope of work;
- l) Various environmental and mining laws, codes, standards applicable in the context of the scope of work
- m) Payment of wages Act 1936 (amended)
- n) Workmen's compensation Act 1923 (amended)
- o) Contract labour regulation and abolition act 1970 and central rules 1971 (amended)
- p) Apprentice Act 1961 (amended)
- q) Industrial employment (standing order) Act 1946 (amendment)
- r) Personal injuries (compensation insurance) act 1963 and any other modifications

- s) Employee's State Insurance Act & Employees Provident Fund Act and misc provision act 1952 and amendment thereof
- t) Bombay Shop and establishment act 1948.
- u) Any other act or enactment relating thereto and rules framed there under from time to time.
- v) Factories Act 1948
- w) Child labour (Prohibition and Regulation) Act 1986
- x) The Building and Other Construction workers (Regulation of Employment and Conditions of Service) Act 1996 and the Cess Act of 1996 and such other as may be made applicable.

The contractor hereby indemnifies the Bank against any penalty / loss suffered by the Bank due to non – compliance of any of the labour law regulations including but not limited to regulations mentioned above.

#### **54.Accidents**

The contractor shall immediately on occurrence of any accident at or about the site or in connection with the execution of the work report such accident to the Architect & Bank. The contractor shall also report such accident immediately to the competent authority and take appropriate actions thereof.

#### **55.Deduction for uncorrected work**

If the **Bank/Architect** deems it inexpedient to correct work damaged or not done in accordance with the Contract, an equitable deduction from the Contract price shall be made there for.

#### **56.Payments withheld**

The **BANK / ARCHITECT** may withhold or on account of a subsequently discovered evidence nullify the whole or a part of any certificate to such extent as may be necessary in his reasonable opinion to protect the **Bank / ARCHITECT** from loss on account of :

- a) Defective work not remedied.
- b) Failure of the **Contractor** to make payments properly due for materials or labour and/or to other Sub-Contractors
- c) Damage incurred on the Works of other contractors on account of breach of contract, default, negligence, errors and/or omissions of the Contractor in the performance of its Works.
- d) Non adherence of Safety, Health & Environment norms as specified
- e) When the above grounds are removed or rectified within the time limit as instructed by the Bank / ARCHITECT, payment shall be made for amounts withheld because of them.

#### **57.Liens**

The **Contractor** represents that the work called for under this contract shall be performed, finished and delivered to the Bank free from all claims, liens and charges of any kind within the spirit of this contract.

#### **58.Corrupt Practices**

No representative of the Bank / Architect or any one directly or indirectly involved in this Works shall be offered by the **Contractor** or any of his Sub Contractor, directly or indirectly, any benefit, fee, commission, dividend, gift or consideration of any kind in connection with the services and will not at any time offer gratuities or merchandise cash services or other inducement. The Contractor is aware of and familiar with the existence, provisions and purposes of the Anti-Bribery laws described below:

The prevention of corruption Act of 1998 (Indian Law) of the Indian penal code and the

foreign contribution (Regulation) Act of India (1976).

## 59.Environmental laws

The Contractor shall be solely liable for any breach of the applicable Laws including the Environmental Laws in relation to the Work to be undertaken under the Contract Document.

## 60.Miscellaneous

### 60.1Further Assurance

From time to time, as and when requested by either Party hereto, the other Party shall execute and deliver, or cause to be executed and delivered, all such documents and instruments and shall take, or cause to be taken, all such further or other actions, as such other Party may reasonably deem necessary or desirable to consummate the transactions contemplated under the Contract Documents and take such other actions as may be reasonably requested from time to time in order to carry out, evidence and confirm their rights and the intended purpose of the Contract Documents.

### 60.2 Amendments

The Contract Documents may be amended or modified, and any of the terms hereof may be waived, only by a written instrument duly executed by the Bank. No waiver by the Bank of any term or condition contained of the Contract Documents, in any one or more instances, shall be deemed to be or construed as a waiver of the same or any other term or condition of the Contract Documents on any future occasion.

### 60.3 Notices

All notices, demands or requests or other communication required or permitted under the Contract Documents shall be written in English, and shall be made by hand delivery, registered post, facsimile transmission, certified mail, Federal Express or a similarly internationally recognized overnight courier service or facsimile, to the other Parties at the address provided as follows:

If to the Bank:

**Address:** Assistant General Manager, Corporate Services  
Department,  
Bank of Maharashtra, Head Office,  
Lokmangal Building, 1501, Shivaji Nagar, Pune.

If to the Architect /

**Address:** Arch. D.O. Nikam  
**Address:** Flat No: 201, Shelke Building  
Pulachiwadi, Deccan Gymkhana, Pune - 411004.  
**Email:** donikam2016@gmail.com

If to the Contractor:

**Address:**  
**Telephone:**  
**Email:**

### 60.4 Governing Law and Jurisdiction

The Contract Documents shall be construed and interpreted in accordance with and governed by the laws of India and the Courts at Pune, India shall have jurisdiction over all matters arising out of or relating to the Contract Documents.

### **60.5 Guarantee / Warrantee**

Besides guarantees required elsewhere, the Contractor shall guarantee the work in general for one years as noted under these Conditions. All required guarantees /warrantee certificates of manufacturer/ vendor for all the materials, Equipment used in execution of the Works shall be submitted in Original copy to the Bank / Architect by the Contractor after the completion of the subject Item of works and/or before certification of Running Account Bill for payment by the Bank/Architect.

### **61.Relationship between Contractor and the Bank.**

There shall be to principal agent relationship between the Bank and the contractor. At no point contractor shall represent itself as the agent of the Bank. The contractor shall work as an "independent contractor".

- 62.** It may be noted that in case of any difference / variations between the Tender Technical Specifications & the BOQ specifications, if any, the Clients & the Architects reserves the right to select &/or consider any of the specifications out of the two as final &/or the consider for execution, the stringent amongst the two specifications &/or combination of both the specifications including the mix of the requirements spelled out in both the said specifications as may be incorporated in the tender and the contractor shall have absolutely no say whatsoever in the said matter and the decision of the Clients & Architects shall be final and binding upon the contractors.

### **63. Unresponsive Tenders:**

Tenders that do not meet the basic requirements specified in the bid documents shall be treated as unresponsive both during Technical Bid evaluation and Financial Evaluation. All tenders received shall be first scrutinized by the Tender Committee to see whether the tenders meet the basic requirements as incorporated in the Bid document and to identify unresponsive tenders, if any. Unresponsive offers may not subsequently be made responsive by correction or withdrawal of the non- conforming stipulation. Some important points on the basis of which a tender may be declared as unresponsive and be ignored during the initial scrutiny are as mentioned below:

- a) The tender is not in the prescribed format or is unsigned or not signed as per the stipulations in the bid document.
- b) The required EMD has not been provided or exemption from EMD is claimed without acceptable proof of exemption.
- c) The bidder is not eligible to participate in the bid as per laid down eligibility criteria.
- d) The bid departs from the essential requirements specified in the bidding document (for example, the tenderer has not agreed to give the required performance security); or
- e) Against a schedule in the list of requirements in the tender enquiry, the tenderer has not quoted for the entire requirement as specified in that schedule (example: in a schedule, it has been stipulated that the tenderer will supply the equipment, install and commission it and also train the Procuring Entity's operators for operating the equipment. The tenderer has, however, quoted only for supply of the equipment).

**Note: Examples mentioned is to understand the meaning of above clause. It shall not be considered to be specific to the tender.**

## **64. Breach of Contract and Termination:**

### **a) Breach of Contract**

In case the contractor is unable to honour important stipulations of the contract, or gives notice of his intention of not honouring or his inability to honour such a stipulation, a breach of contract is said to have occurred. Mostly, such breaches shall be in relation to the performance of the contract in terms of inability to complete the Work within stipulated time. It could also be due to breach of ethical standards or any other stipulation that affects Bank seriously. As soon as a breach of contract is noticed, a show cause notice will be issued to the contractor, giving two weeks' notice, reserving the right to implement contractual remedies. If there is an unsatisfactory resolution, remedial action may be taken immediately.

If termination takes place because of a fundamental breach/ insolvency on the part of the contractor, the Bank's Engineer shall issue a certificate for the value of work done, deducting from the amounts in respect of: (i) advance payments; (ii) any recoveries; (iii) taxes as due; and (iv) percentage to apply to the work not completed as indicated in the contract data. If the total amount due to the Bank exceeds that due to the contractor, the difference will be a debt payable to the Bank. The Competent Authority may terminate a contract in the following cases. The Bank is then free to take over the site and complete the works himself or with another contractor and use the contractor's materials, equipment, temporary works as he/ they think proper.

### **b) Cancellation of Contract for Default**

Without prejudice to any other remedy for breach of contract, such as removal of the contractor, by written notice of default sent to the Contractor, the contract may be terminated in whole or in part, if the contractor has:

- i) has seriously or repeatedly breached the contract, including
  - a) failure to complete the work within the time period(s) specified in the contract, or any extension thereof granted;
  - b) failure to obey instructions in relation to his progress or defective work, material or plant;
  - c) breach of the prohibition against sub-contracting
  - d) Failure to supply sufficient and suitable constructional plant, temporary works, labour and material as proposed in the work programme;
  - e) Substantial suspension of work for more than the specified days without authority from the Bank's Engineer and failure to proceed with the work within the specified days of receipt of notice from the Engineer
  - f) Failure to comply with the requirements regarding JVs
- ii) committed fraud
- iii) If the contractor fails to perform any other obligation under the contract within the period specified in the contract or any extension thereof granted
- iv) If the contract is terminated in whole or in part, recourse may be taken to any one or more of the following actions:
  - a) Forfeiture of the performance security;
  - b) Upon such terms and in such manner as it deems appropriate, taking over the site and to complete the works himself or with another contractor (risk & cost) and use the contractor's materials, equipment, temporary works as he/ they think proper;

and

- c) However, the contractor shall continue to fulfil the contract to the extent not terminated.

**c) Termination of Contract for Insolvency:**

If the contractor becomes bankrupt or becomes otherwise insolvent or undergoes liquidation or loses substantially the technical or financial capability (based on which he was selected for award of contract), at any time, the contract may be terminated, by giving a written notice to the contractor, without compensation to the contractor, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to Bank

**d) Termination of Contract for Procuring Entity's Failure or Convenience:**

After placement of the contract, there may be an unforeseen situation compelling Bank to cancel the contract. In such a case, a suitable notice shall be sent to the contractor for cancellation of the contract, in whole or in part, for its (Bank's) convenience, inter alia, indicating the date with effect from which the termination will become effective. Depending on the merits of the case, the contractor may have to be suitably compensated on mutually agreed terms for terminating the contract. If termination occurs because of Bank's convenience or a fundamental breach on his part, the Bank's Engineer shall certify the value of works executed, value of any materials lying at site, reasonable cost of removal of equipment, repatriation of project staff, cost of protecting and securing the works and deducting from it: (i) pending advances; (ii) other recoveries; and (iii) taxes as due.

**65. DRAWINGS AND SPECIFICATIONS:**

- a) The works shall be carried out to the entire satisfaction of the Bank and the Architect, in accordance with the signed drawings and specifications and such further drawings and details as may be provided by the Architect, and in accordance with such written instructions, directions and explanations as may from time to time be given by the Architect, whose decision as to the sufficiency and quality of the work and materials shall be final and binding upon all parties. If the work shown on any such further drawings or work that may be necessary to comply with any such instructions, directions or explanations, be in the opinion of the contractor that it comprised in or reasonably to be inferred from the contract he shall before proceeding with such work, give notice in writing to this effect to Architect, and in the event of the Architect agreeing to the same in writing the contractor shall be entitled to an allowance in respect of such extra work as on authorized extra. If the Architect and the contractor fail to agree as to whether or not there is an extra, then, if the Architect decided that the contractor is to carry out the said work, the contractor shall do so, and the question whether or not there is any extra, and if so the amount thereof, shall, failing agreement, be settled by Arbitration as hereinafter provided, but such references shall in no way delay the fulfillment of this contract.
- b) No drawings shall be taken as in itself an order for variation unless, in addition to the Architect's signature, it bears express words stating that it is intended to be such an order or bears a remark 'VALID FOR EXECUTION'. No claim for payment for extra work shall be allowed unless the said work shall have been executed under the provisions of clause 41, Page 31 of 201 (Authorities notices, patent right and royalties) or by the Authorities of directions in drawing of the Architect as herein mentioned.



- c) One complete set of the signed drawings and specification and scheduled of quantities shall be furnished by the Architect to the Contractor. The Architect shall furnish within such time, as he may consider reasonable, one copy of any additional drawing, which is his opinion, may be necessary for the execution of any part of work. Such copies shall be kept at the works, and the architect or his representatives shall, at all reasonable time have access to the same and shall be return to the Architect by the contractor before the issue of the Final certificate. The contract shall remain in the custody of the Architect, and shall be produced by him at his office as and when required by the Bank or by the contractor.

#### **66. Debarment of Contractor:**

Orders for Debarment of firms shall be passed keeping in view of the followings:

- A bidder or any of its successors may be debarred from participating in any procurement process for a period not exceeding two years and should not be less than six months.
- Firms will be debarred if it is determined that the bidder has breached the code of integrity as per Rule 175 of GFR's 2017.
- A bidder can also be debarred for any actions or omissions by the bidder other than violation of code of integrity, which in the opinion of the Bank warrants debarment, for the reasons like supply of substandard material, non-supply of material, abandonment of works, substandard quality of works etc.
- An order for debarment passed shall be deemed to have been automatically revoked on the expiry of that specified period and it will not be necessary to issue a specific formal order of revocation.
- Competent Authority that issued the order of debarment can also issue an order for revocation of debarment before the period of debarment is over, if there is adequate justification for the same.
- In case, any debar firms has submitted the bid, the same will be ignored. In case such firm is lowest (L-1), next lowest firm shall be considered as L1. Bid security/EMD submitted by such debarred firms shall be returned to them.
- The debarment shall be automatically extended to all its allied firms. In case of joint venture/consortium is debarred all partners will also stand debarred for the period specified in the Debarment Order. The names of partners should be clearly specified in the "Debarment Order".
- Contracts concluded before the issue of debarment order shall, not be affected by the debarment orders.
- The period of debarment shall start from the date of issue of debarment order.
- The necessary information about debarment is to be provided in Sr No. 15 ,Form-I Information of the Company.

#### **67. Blacklisting of Contractor/Bidder (For 02 Years):**

i. During Bidding Process:

Bidder has to provide genuine and correct information while filling tender document. Any document which are attached with this tender shall be genuine and shall be self-attested. If during scrutiny of Bids or during due diligence any incorrect/ wrong/ fake /forged / spurious document or information is found, then Bank will put the respective Bidder in Blacklist. The information of the same will be submitted to IBA and other agencies. The Bidder will be barred from any participation of tender process in the Bank.

ii. After Award of Work:

If any information/document submitted by the successful bidder is found incorrect/ wrong/ fake /forged / spurious/ fails to supply assigned any 02 orders during contract period, then Bank shall terminate the contract and Blacklist the Bidder. The information of the same will be submitted to IBA and other agencies. The Bidder will be barred from any participation of tender process in the Bank. Further Bank will forfeit the Performance Security Deposit. All the action in the aforesaid matter will be at the discretion of Bank.



### **SECTION: III**

#### **SPECIAL CONDITIONS OF CONTRACT**

##### **1.Scope of works:**

Civil works, Plumbing & Sanitary works, Interior Works, Water Supply, Internal & External Electrical works, L.V Services, Firefighting System, Fire Alarm System, HT & LT installations, Compound Works and associated allied works pertaining to the Construction of its building at Satara.

The Scope of work includes the following:

- a) Civil Works
- b) Interior works
- c) External Plumbing Works
- d) Internal Plumbing Works
- e) Internal Electrical Works
- f) External Electrical works
- g) Fire Fighting & Fire Alarm Works
- h) CCTV Works.

All as per Price Bids

A very high standard of workmanship and speed of construction is expected for this project.

The scope of work is to carry out "Civil works, Plumbing & Sanitary works, Interior Works, Water Supply, Internal & External Electrical works, L.V Services, Firefighting System, Fire Alarm System, HT & LT installations, Compound Works and associated allied works pertaining to the Construction of its building at Satara.

##### **2.Address of Site:**

The proposed work is to be carried out at "PLOT NO.1A/1A/3, GUT.NO. 534, MOUJE, SADAR BAZAR, SATARA 415001".

##### **3.Dimensions & levels:**

All dimensions and levels shown on the drawings shall be verified by the contractor on the site and shall be held responsible for the accuracy and maintenance of all the dimensions and the levels. Figured dimensions are in all cases to be accepted and no dimension shall be scaled. Large scale details shall take precedence over small scale drawings. In case of discrepancy the contractor shall ask for clarification from the Architect before proceeding with the work.

##### **4.Notice of operation:**

The contractor shall not carry out any important operation without the consent in writing from the Architect.

##### **5.Construction records:**

The contractor shall keep and provide to the Architect full and accurate records of the dimensions and positions of all new work and any other information necessary to prepare complete drawings recording details of the work as constructed.

##### **6.Safety of adjacent structure:**

The contractor shall provide and erect to the approval of the Architect such supports as may be required to protect effectively all structures which may be endangered by the execution of the works or otherwise take such permanent measures as may be required by the Architect

to protect structure.

**7. Temporary works:**

Not Applicable

**8. Temporary sheds:**

Contractor shall take necessary permission for making temporary sheds. The contractor shall provide temporary sheds, site office & godowns for his own use at no extra cost and as directed at the designated location by the Bank. The contractor shall also responsible for proper maintenance of these temporary sheds. The laying and maintaining the temporary sheds within the site area shall be the contractor's responsibility and the contractor shall take such measures that are necessary and as directed by the Bank. Contractor shall provide undertaking about vacation of temporary sheds from the site and making site clean after completion of work.

**9. Water, Power and Other facilities:**

- a) The rate quoted by the contractor shall include all expenses that are required for providing all the water required for the works and the contractor shall make its own arrangements for the supply of the good quality water suitable for the construction and good quality drinking water for the workers. If necessary, the contractor has to bring water by means of tankers at its own cost for the purpose. The Bank will not be liable to pay any charges in connection with the above.
- b) The Bank shall supply the Power & emergency power back up at one point for the works at site on chargeable basis. The rate quoted in the tender shall include the expenses for the power supply & distribution system; charges for power shall be deducted from contractor's bills @ 0.5% of contract value or else as per clause number 44, Page 31 of 201
- c) The contractors for other trades directly appointed by the Bank shall be entitled to take power and water connections from the temporary water & power supply obtained by the contractor, however the concerned contractor shall make their own arrangement to draw the supply and pay directly the actual consumption charges at mutually agreed rates between them.
- d) The Bank as well as the Architect shall give all possible assistance to the contractors to obtain the requisite permissions from the various authorities, but the responsibility for obtaining the same in time shall be of contractor.
- e) If water is provided by the Bank at site, then charges shall be deducted from the contractor's bills @ 0.5% of actual project value.

**10. Contractors Site Management:**

**a) Site Management:**

The **Contractor** shall constantly keep on his work, during its progress, qualified and competent minimum 1 No of Project Engineers under the overall in charge of the Project Manager who will be responsible for the carrying out of the works to the true meaning of the Drawings, Specifications and Schedule of the Quantities, the **Bank / Architect's** instructions and directions to the satisfaction of the **BANK / ARCHITECT**. Any directions or instructions given to him by the **BANK / ARCHITECT** shall be deemed to have been issued to the **Contractor**. Attention is called to the importance of requesting instructions from the **BANK / ARCHITECT** before undertaking any work where **Bank / Architect's** directions or instructions are required. Any such work done in advance of such instructions will be liable to be removed.

The deployment of the staff / person shall be subject to interview and written approval by **Bank/ Architect**. The same shall be arranged within 7days of issue of the work order / Confirmation letter to the **CONTRACTOR**.

If it is found by the Bank / Architect that any staff deployed by the contractor for the subject works is deficient, the Contractor shall replace and substitute the same with prompt response without causing any delays in the Works.

**b) Equipment:**

The **Contractor** shall provide sufficient number of constructional machinery of approved capacity for the construction of the works.

**c)** The contractor shall provide and maintain all necessary offices, workshops, stores, sanitary facilities and other temporary structures in connection with the work at the site at its own cost after getting the approvals from the Architect.

**d)** A site office assistance / effort for the use of the Bank/ Architect shall be provided by the contractor at its own cost.

**e)** All temporary buildings and facilities as mentioned above shall be removed on completion of the work or at any other earlier date as directed by the Architect.

**f)** All expenses for obtaining statutory approval and maintenance of the above facilities as well as running expenses shall be borne by the contractor at no extra cost. It is the responsibility of the contractor to obtain the statutory approvals for providing the above facilities.

**g) Watchmen:**

The **Contractor** shall make his own security arrangements to guard the Site and premises at all times, at his own expense. The security arrangements shall be adequate to maintain strict control on the movement of equipment, material and labour. The **Contractor** shall extend the security arrangements to guard the material stored and/or fixed on the premises by the Sub-Contractors.

**h) Sanitary Conveniences:**

The **Contractor** shall provide and make necessary sanitary convenience for the Site staff and the workmen maintain the same in a clean orderly and hygienic condition. All the required shall be maintained as per latest labour laws

**i) House Keeping:**

The **Contractor** shall be required to maintain the site, works and surroundings in a neat and orderly manner, free of accumulating debris, haphazard stacking of materials, unhygienic and unsafe environment, cleaning of the site at all levels inside and outside, removal of unwanted materials, packing cases etc., shall be undertaken at least once on daily basis. The **Contractor** shall nominate the Safety Officer to be responsible for housekeeping. Unwanted material and debris shall be carted away from site.

The **Contractor** must allow for providing sufficient quantity of rubbish chutes for the discharge of construction debris from the upper floors of the structure. The design construction and location of the rubbish chutes must be approved by the **BANK/ARCHITECT** and the **Contractor** shall adapt, modify the reposition of the rubbish chutes as and when necessary to the entire satisfaction of the **BANK/ARCHITECT**.

The **Contractor** is also required to undertake all necessary precautionary measures to ensure that the discharge of rubbish and superfluous materials from rubbish chutes do not cause any nuisance to the neighboring premises.

The Contractor must ensure, prior to handover, that the entire premises has been cleaned

to the best hygienic standards and fit for habitation to the satisfaction of the Architect/ Bank. The Contractor shall not stack or store the material in the Fire Escape Route / Exit staircases. If it is found by the Architect / Bank that the Contractor's material stacked / stored at such places, The Bank/ Architect shall levy penalty charges for such non-conformance. If the Contractor denies or does not pay such penalties, the same shall be recovered by the Bank / Architect from the monies due to the Contractor.

**j) Site Building Premises and Adjoining structures:**

The Contractor's attention is drawn to the existing adjacent structure to site within Premises. Care must be taken to ensure that no vibrations or other disturbances shall affect the structures during course of work. The Contractor shall ensure that the security of structures located nearby is not lessened due to work activities and take measures to prevent trespass from adjoining properties.

Should there be any danger of possible damage to adjacent premises or structures during the execution of the works, the Contractor must inform the architects or BOM and agree with them on the measures he would adopt to strengthen, support and make such constant checks on the structural soundness of neighboring properties and to take necessary protective measures.

Any damage or other disturbances caused to the adjacent premises, common spaces, adjoining buildings and structures during the course of the Works and not covered by insurance policies shall be the sole responsibility of the Contractor who will have to make good all such damages to the satisfaction of the Architects / Bank and pay for any compensation claimed, at his own cost.

Noise, vibration, dust or any other interference to the adjacent premises must be reduced to the minimum. The Contractor shall as and when required by the BANK/ARCHITECT install all necessary measures without additional cost for mitigation of noise, vibration dust, etc.

As the building / complex is very sensitive the work to be conducted should be in such a manner that the live cables which are buried and otherwise will not be damaged under any circumstances.

**k) Sub- Agencies / Sub Contractor:**

The Contractor shall submit the details of all such sub agencies or sub-contractor that are required for the proposed execution of the project works.

Contractor shall in writing & in advance submit the request for sub-agencies /sub-contractors to the Architect. Upon receipt of such requests, the Architect shall submit his recommendations to the Bank for necessary approval / rejection. Upon receipt of concurrence by the Bank/Architect, the contractor needs to proceed accordingly in the matter.

**l) Site Progress Report:**

The Contractor shall submit the Weekly, Monthly Progress report in format duly approved by the Architect / Bank.

The Contractor shall put up zone wise plan and reflected ceiling plan drawings mounted on the plywood at scale of 1:100 as directed by the Architect for easy reference. The Contractor shall also keep the complete drawings set of full-size prints at Site and produce the same for discussion as and when required and instructed by the Bank / Architect.

**11.Facilities for contractor 's employees:** The contractor shall make its own arrangement

for on-site drinking water facilities.

#### **12.Lighting of works:**

The contractor shall at all times provide adequate and approved lighting as required for the proper execution and supervision of work.

#### **13.Fire Fighting arrangement:**

- a) The contractor shall provide suitable arrangement for the fire-fighting at its own cost. For this purpose, the contractor shall provide requisite number of fire extinguishers and adequate number of buckets, some of which are to be always kept filled with sand and some with water. These equipments shall be provided at suitable prominent and easily accessible places and shall be properly maintained.
- b) Any deficiency in the fire safety or unsafe conditions shall be corrected by the contractor at its own cost. The contractor shall make the following arrangement at its own cost but not limited to the following:
  - c) Proper handling, storage and disposal of combustible materials and waste.
  - d) Work operation which can create fire hazards
  - e) Access for firefighting equipment
  - f) Type, size, number and location of fire extinguisher or other firefighting equipment
  - g) General house keeping

#### **14.Site Instructions book:**

A work diary shall be maintained at site and it shall be filled on daily basis by site Engineer appointed by Architect. Assistance shall be provided by site Supervisor appointed by contractor at his own cost. The work diary shall be put up to the Architect on fortnightly basis. The said site instructions book shall be maintained by the Contractor at site for the purpose of quick communication between the Bank / Architect. Any communication relating to the works may be conveyed through records in the site order book. Such communication from one party to the other shall be deemed to have been adequately served in terms of contract. Each site instructions book shall have machine numbered and shall be carefully maintained and preserved by the contractor and shall be made available to the Architect / Bank Engineer as and when demanded. Any instruction which the Architect / Bank's Engineer may like to issue to the contractor, the same to be written in the said book.

#### **15.Site meetings:**

Site meetings will be held to review the progress and quality evaluation. The contractor shall depute an authorized senior representative such as Proprietor / Partners / Directors of the firm to attend the site meetings along with the site representative and other staff of approved sub-contractors and suppliers as required to the site meetings and ensure all follow up actions. Any additional review meeting shall be held if required by the Architect. The site meetings shall be held every week on the pre-decided day and time, post award of the work.

#### **16.Disposal of refuse:**

The contractor shall cart away all debris, refuse etc arising from the work at site and deposit the same at dumping grounds approved by statutory authorities. It is the responsibility of contractor to ensure proper debris dumping procedures at all times.

#### **17.Contractor to verify site measurement:**

The contractor shall check and verify all site measurement with respect to the Contract Drawings issued by the Architect. Based on this verification, the contractor shall inform the to the Architect and same to be updated in the drawings. It shall be referred as amended drawing.



**18.Displaying the name of works:**

The contractor shall put up a name board of suitable size as directed by the Architect indicating there in the name of the project and other details as given by the Architect at its own cost and remove the same on completion of the project works.

**19.As-built drawings:**

For the drawings issued to the contractor by the Architect, the Architect will issue 2 sets of drawings to the contractor for the items for which some changes have been made. From the approved drawings as instructed by the Bank/ Architect. The Architect shall make the changes made on these copies. In case any revision is required or the corrections are not properly marked the Architect will point out the discrepancies to the contractor. The Architect will incorporate these corrections and / or attend to the discrepancies on the copies. The Architect will submit final copies with all the amendment incorporated.

**20.Approved make & Mock Up's:**

The contractor shall provide all materials from the list of approved makes at its own cost and also appoint the specialized agency for the waterproofing, anti termite, Aluminium doors and windows and any other item as specified in the tender. The Architect may approve any make/agency within the approved list as given in the tender after inspection of the sample / mockup.

The Contractor shall make 2 Mock up rooms in plywood or as directed by Bank / Architect, during the progress of the work at no extra cost to the Bank.

The Bank / Architect shall not entertain any extension of time or additional cost claim from the Contractor for any samples / Mock up. The Contractor shall include in its rate all such charges for the Mockup.

**21.Procurement of materials:**

The contractor shall make its own arrangement to procure all the required materials for the works. All wastages and losses in weight shall be the contractor's account. The Contractor shall submit the original copies of Bill Receipts, Challan, Bill invoices of all the Materials procured for the subject project works / Item along with Running Account Bill as requested / directed by the Architect/Bank. The Contractor shall submit such Bill receipts / Challan for minimum 4 major Items of the particular works as demanded by the Architect. The Architect shall certify the running account bill on production of satisfactory supporting document as mentioned. In case of the supporting document submitted by the Contractor, in the opinion of the Architect are found not satisfactory, then the Architect shall hold the subject payment for the certification till the Contractor submits the proper supporting documents.

**22.Excise Duty, Taxes, Levies etc**

The contractor shall pay and be responsible of all taxes, duties, levies, royalties, fees, cess or charges in respect of the works including but not limited to sales tax, tax on works contract, excise duty and octroi, payable in respect of materials, equipment, plant and other things required for the contract. All of the aforesaid taxes, duties, levies, fees and charges shall be to the contractor's account and the Bank shall not be required to pay any additional or extra amount on this account. Variation of taxes, duties, fees levies etc if any, till completion of the works shall be deemed to be included in the quoted rates and no extra claim on this account will in any case be entertained. If a new tax or duty or cess or royalty or octroi is imposed under statute or law during the currency of the contract the same shall be borne by the contractor. Any penalty if imposed on the Bank for non - payment of such taxes or duties shall be paid by the contractor.



### **23.RATES TO INCLUDE:**

While quoting their rates the tenderer should include the following if otherwise not stated herein before.

- a) Necessary cost of taking samples of materials supplied by them for construction including cement and steel, wood/tiles etc., testing of the same at Govt.'s / approved laboratory including transportation, cost of the samples, as and when required and as instructed.
- b) Submission of test reports of other materials as may be specified by Architects or Bank's Engineer.
- c) Taxes such as VAT, Sales Tax, Excise, Insurance duties & premiums, ESI, PF, labour charges, Approval charges etc. GST as applicable will be payable extra.

### **24.LABOUR HUTMENTS:**

Shelter or stay for the laborers has to be arranged by the contractor at his own expense and responsibility. Under no circumstances, the contractor's workforce or labourers will be allowed to stay at the site at any point of the contract. It would be the responsibility of the contractor to provide for temporary toilet & hygiene facilities to the workforce / labourers till the time of completion of the project and no extra claim whatsoever will be entertained.

### **25.OTHER MISCELLANEOUS CONDITIONS:**

Making any cut-out / opening for electrical wiring / fittings wherever instructed shall be the responsibility of the contractor and shall not be paid extra.

Method of measurement will be as per technical specifications. In case the specifications are silent, then relevant IS codes shall be followed Consultant's decision will be final and binding on the contractor regarding method/mode of measurement.

Except for the PVA clause of materials defined in the tender, the Bank will not agree to escalation in the rates quoted under and circumstances and no claims on this account for whatsoever reason will be entertained at any stage.

The quantities given in the schedule of quantities are approximate. The contractor shall bear in mind the nature of job and note carefully that quantities can vary to any extent. Also some items may be deleted. No claims will be entertained on increased/decrease/deletion of quantities to any extent.

Contractor shall not sub-let any work without the consent / permission of the Bank/Consultant.

Prior approval and sanction for rate from consultant shall be obtained for executing items, which are not covered in Bill of quantities and specifications read together. The rates for such extra items, if any, shall be derived on the basis of similar items in schedule of quantities. If any particular item is not similar in nature the rate shall be derived by actual labour, material cost and 15% thereof to cover overhead and profits. Transportation of material is deemed to be included in overhead and profits and will not be allowed to charge separately.

The Quoted rates shall be all inclusive and cover the cost of materials freight, all types of taxes, duties, levies, royalties, erection, construction, testing of materials, samples brought for approval, tools and tackles, plant and equipment, labour, scaffolding, supervision, overhead and profits and any other expenditure incurred for completion of work as per drawings/specifications and to the full satisfaction of Bank/Consultant. The taxes such as VAT, Professional Tax, WCT, ESI, PF, Insurance charges & premiums etc and all the other taxes, levies, duties, Insurance cover etc should be inclusive in the quote and nothing extra would be paid over and above the quoted prices and rates. The quoted rates shall also include cost of lighting, security of contractor material and equipment's. Only GST shall be at actuals in accordance with the tender BOQ.

## **26.SAFETY RULES & PRECAUTIONS WHILE WORKING:**

Contractor shall bear in mind that he will have to carry out certain part of the works inside occupied areas. He shall take utmost care to see that:-

1. Working areas to be kept clean & free from any encumbrances.
2. Interior decoration/furniture or any other property of Bank/ Occupier is not damaged.
3. No inconvenience/nuisance is caused.
4. Plastic sheets are spread on floor to save them from staining.
5. Hessian Cloth curtain are hanged over scaffolding.
6. All types of windows, doors & openings shall be covered with plywood (4mm thick) temporarily during the course of works & later removed including cleaning the areas damaged.
7. Temporary partitions made out of Approved quality of Plastic sheet shall be provided to stop the dust transfer due to repairs work, as per the instructions of consultant.
8. All the staff working at site shall wear safety helmets, goggles, gloves, shoes etc.
9. No temporary electrical connections with loose wire will be permitted. For all electrical connections, proper sockets and plugs will be used and wiring / cabling clamped. At no point of time, electrical wires, cables or any gadgets shall be observed loose & free. All electrical wires, cables & gadgets shall be properly clamped, secured & all dangerous connections removed & replaced with new proper IS marked wires & cables during the course of work or at the time of providing temporary connections for any area of the work.
10. Fire-fighting portable extinguishers shall be used and located at appropriate locations.
11. All staff working at heights will use safety belts and standard platforms.
12. Inflammable materials like petrol, kerosene, wax etc will not be allowed to be stored at site stores.
13. Welding mechanics and electricians will wear suitable type of gloves, canvas shoes & suitable type of protection.
14. Personal protecting equipment like ear Muffler, Goggles, Gloves, Safety Belt, Safety helmet, Rubber shoes etc should be used by the workforce and be made available to the workforce by the contractor.
15. All scaffolding shall be double pole steel scaffold.
16. Contractor to ensure that all the equipments, tools brought on site will be in safe condition, have recently been checked and all the personnel using the equipment and tools have been trained in their safe use.
17. No floor, roof or other part of the structure shall be so overloaded with debris or materials as to render it unsafe.
18. Proper net to be provided in all around the under construction building and in duct area to safeguard the workers. The net of frame work shall be suitable to protect the worker during mis-happenings.

(Quoted rates shall include the cost as above-mentioned above and no extra cost shall be paid for the same. It may be noted that the medical treatment for the injured contractor's personnel in case of an accident if any on site during the progress of the work shall be entirely the responsibility of the contractor.)

## **27. DAMAGES & LIABILITIES OF THE CONTRACTOR:**

Cost of replacement / repair of any damage that might occur to any property during the progress of the work on site due to negligence or fault or willful acts on part of contractor or his workers shall be recovered from any moneys due to contractor.

Contractor shall replace all the broken glasses, damage to properties, life, vehicles, all structures, which break or gets damaged during the progress of work due to falling debris etc. Quoted rates shall be inclusive of such replacement cost and no separate payment shall be made for the same.

Contractor shall be responsible for making good to the satisfaction of the Bank any loss of

article, any damage to the structures, vehicles, life and properties etc belonging to the Bank or being executed or procured or being procured by the Bank or of any agencies within the premises of all works of the Bank during the progress of the work if such loss or damage is due to fault and / or the negligence or willful acts of omission of the contractor, his employees, representatives or sub-contractor if any.

#### **28.DISPOSAL OF DEBRIS:**

The contractor shall be responsible for disposing the debris outside Bank's premises on day-to-day basis & for any lead & lift & at the designated Municipal dumping area. He shall not dump the same on roads/garbage dumps in the area. He shall attend to disputes arises from improper disposing. The contractor shall also ensure that after finishing every days work, the place shall be kept clean, free of debris especially inside areas, or in the corridors, open yards, stair cases such that occupants are not inconvenienced. Fumigation shall be carried out periodically to ensure mosquito free zones & especially near water storage & debris areas.

#### **29.WORKING AT HEIGHTS:**

The rates quoted shall be valid for working at any heights and depths. No extra payments shall be made for metal scaffolding, safety gadgets, staging, ladders etc for transportations of labour and material to higher or lower level.

#### **30. MEASUREMENT:**

Before taking any measurement of any work the contractor shall give reasonable notice to the consultant or the representatives of the Banks or the site engineer if any, and measurements particularly concealable in nature shall be jointly taken and recorded and such statement of measurement shall be enclosed along with the bill or running bills. In the event of such measurement taken directly by the contractor the details shall be recorded and routes be marked for inspection of the consultant or Engineer-in-charge.

Any deviation or discrepancies observed by the engineer-in-charge or the consultant shall be brought to the notice of the contractor or their representatives and during such inspection and measurement if the contractor fails to be present the certification of the Engineer- in-charge or the consultant shall be final and binding on the contractor and the contractor shall have no right to dispute the same.

#### **31.Scaffolding:**

No holes shall be made in the walls or slab to support access scaffolding. Contractor shall erect only double steel scaffolding, which would be permitted. He will be allowed to take lateral support by fixing expansion anchor bolts in the structure. Scaffolding of any other material will not be allowed under any circumstances. During the course of works on site, necessary temporary supporting arrangements such as Props, ties, bracings etc shall be provided wherever directed & necessary at the instructions of the Architects. Jute Kintan shall be provided from the external side of the scaffold to avoid dust nuisance & flying particles. Warning signs to be provided at the important designated areas & spaces. Scaffolding shall be independent without damaging the brick work or structure in general.

#### **32.Indemnification:**

The Contractor shall indemnify Bank against any liability, directly or third party, in case of an accident during the execution of work.

#### **33.Guarantee:**

Contractor shall guarantee works wherever so specified in the format given below on 100 rupees stamp paper (Non Judicial)

### Format for Guarantee

We hereby guarantee that the above work carried out by us as per our Bill No. \_\_\_\_\_ shall remain entirely watertight for location of toilets, terrace, basement external surface of building etc.. Should, however, due to any unforeseen defect left out in our work at the times of execution there be any leakage during the period of \_\_\_\_\_ Years from the date of its completion i.e., from \_\_\_\_\_, it shall be rectified by us without any extra cost to the Banks.

However, we shall not be responsible in any way if our work is tampered with or if the body of the structure is damaged by any other act of God beyond our control and also to any consequential damage that might take place to persons or property.

No excuses on account of petty damages caused in view of fixing of antennas, solar panels, etc. shall be entertained by the Bank. In regard to the causes of the leakage, the contractor shall at all means carry out repairs and take all steps to rectify the seepage/leakages and decision of the Bank's Engineer shall be final and binding.

No excuses in the matter shall be entertained. Guarantee of a minimum of 10 years are deemed to be a part of the contract.

Signature of Contractor :

Date:

### 34.LIASIONING WITH LOCAL AUTHORITIES, AS PER APPLICABILITY:

i) The Contractor shall be responsible for liasoning with all the applicable local authorities such as Police, Ward Office of Municipal Council, labour officer, local Fire authorities & stations, Electricity Authorities such as MSEDCL, Adani, Reliance, Tata etc or any other Statutory local authority during the execution of works which are required to be comply for the construction work purpose.

ii) The successful contractor shall comply with all drawings, construction practices etc. and the Bank for any problems arising out of such works during the course of execution of works on site and no extra claim whatsoever shall be entertained. Any damage arising out of strict action of any of these departments due to non-compliance of the expected procedural works shall be the sole liability of the contractor. Contractor shall strictly adhere to the no-mosquito breeding pockets on site and shall be wholly responsible for any violation of same will led to penalty/fine impose on Bank.

iii) Further the Contractor to liaison and obtain required permissions such royalties debris/waste Building material disposal from local statutory authorities for carrying out the entire work. Contractor shall provide all assistance to Architect in means of documentation in order to get necessary approval from local bodies. Any statutory fees that may arise in lieu of obtaining permission from the concerned office of Satara Municipal Council (SMC) will be paid by Bank against demand notice issued.

The contractor has to submit Bank guarantee of adequate amount towards solid waste management plan for the project as per the SMC guidelines as applicable.

iv) The work shall be considered "Virtually Complete" only after the Contractor submits to Client the following documents obtained by him: -

- Drainage Certificate, Pest Control & Management initiative by the Local Municipal Council.
- Approval for obtaining dry fittings & wet fitting permission and permanent water supply connection. Necessary Certificate under prevailing section of Municipal Act from the concerned Municipal Authority for adequate water supply to the building.

v) For Completion certificate/Occupation Certificate, contractor shall provide all the inputs for preparation of final completion drawings to the architect. However, liaisoning with the local authorities/ Municipal council and getting Occupation certificate/Completion certificate shall be in scope of architect.

**35.** The bidding contractor shall note that the works pertaining to Fire-fighting systems, Electrical works, Mechanical & LV works shall be got executed through licensed electrical and licensed fire-fighting agencies. In case if these works are to be sub-contracted, which may be possible only with the prior approval of the Bank, the Bank reserves the right to finalize / approve the agencies for such electrical works, fire-fighting, mechanical & LV works on the basis of the credentials furnished by the contractor. In case, if the contractor is having in-house departments / workforce for the execution of such works, the associated staff, Engineer for the project needs to have valid Electrical, Fire-fighting and other licenses as applicable and necessary documents for approval needs to be furnished to the Bank & APC. (Preferably to be submitted along with the technical bid documents. However, mandatorily required before the commencement of works on site).

## **36. ADDITIONAL IMPORTANT TERMS & CONDITIONS OF THE TENDER:**

### **36.1 CONTRACTOR TO VISIT SITE:**

Each tenderer must before submitting his tender, visit the site of works so as to ascertain the physical site conditions and prices, availability and quality of materials according to specifications before submitting the quotations. No extra regarding non-availability of materials or charges in the price will be entertained or extra allowed on that account.

### **36.2 AUTHORITIES, NOTICES, PATENT RIGHTS AND ROYALTIES:**

The Contractor shall confirm to the provisions of the statutes relating to the works, and so to the regulation and bylaws of any local authority, and of any water, lighting and other companies or authorities with whose systems the structures are proposed to be connected and shall before making any variation from the drawings or specifications, that may be necessitated by so conforming given to the Architect's written notice, specifying the variations proposed to be made and the reason for making it apply for instruction thereon. In case, the Contractor shall not within the 10 days receive such instruction, he shall proceed with the work conforming with the provisions, regulations or bylaws in questions.

The Contractor shall bring to the attention of the Architect all notices required by the said acts, regulations or bylaws to be given to any Authority, and pay to such authority or to any Public Officer all fees that may be properly chargeable in respect of the works, and lodge the receipts with the Architect / Bank.



The Contractor shall identify the Bank against all claims in respect of patent rights, designs, trademarks or name or the protected rights in respect of any constructional plant, machine, work or material used for or in connection with the works or temporary works and from and against all claims, demands, proceedings, damages, costs, charges, and expenses whatsoever in respect thereof or in relation thereto. The Contractor shall defend all actions arising from such claims, unless he has informed the Architects, before any such infringement and received their permission to proceed and shall himself pay all royalties, license fees, damages, cost and charges of all and every sort that may be legally incurred in respect thereof.

### **36.3 QUANTITY OF WORK TO BE EXECUTED:**

The quantities shown in the schedule of the quantities are intended to cover the entire remaining work for completion of the structure indicated in the drawings but the Bank reserves the right to execute any excess thereof without assigning any reason therefore.

Variation in the quantity is however not expected to be more than +25%. The quoted rate shall be applicable for variations of quantity up to +25%. If the quantity of work to be executed varies beyond +25%, the rate for the quantity beyond +25% variation will be settled as per clause no 34 of general conditions. Nothing extra will be paid neither for omission/deletion of any items nor for execution of only part of the quantities stated in the schedule of quantities.

### **36.4 NOTICES AND STATUTORY REGULATIONS:**

The contractor shall give all notices and pay all fees and shall comply with all acts and regulations for the successful completion of the contract works. The whole of the work including sanitation and electrical is to be complied with as per the requirements and bylaws of the relevant statutory authorities including contract labor (regulation and abolition) act 1970.

### **36.5 SCHEDULE OF QUANTITIES & SUFFICIENCY OF SCHEDULE OF QUANTITIES:**

The Schedule of Quantities unless otherwise stated shall be deemed to have been prepared in accordance with the Standard Procedure of the Architects shall be considered to be approximate and no liability shall attach to the Architect for any error may be discovered therein. The Bank reserves the right to execute only a part or the whole or any excess thereof without assigning any reason therefore.

The Contractor shall be deemed to have satisfied himself before tendering to the correctness and sufficiency of his tender for the works and of the prices stated in the Schedule of Quantities and /or the Schedule of Rates and Prices, which rates and prices shall cover all things necessary for the completion of the works.

### **36.6 OTHER PERSONS ENGAGED BY THE BANKS:**

The Bank reserves the right to use the premises and any portions of the site for the execution of any work not included in the contract which he may desire to have carried out by other persons, and the contractor is to allow all reasonable facilities for the execution of such work, but is not required to provide any plant or materials for the execution of such work, except by special arrangement with the Bank. (Such work shall be carried out in such a manner as not to impede the progress of the works included in the contract, and the Contractor shall not be responsible for any damage or delay which may happen to or be occasioned by such work)



### **36.7 CONTRACTOR TO PROVIDES EVERYTHING NECESSARY:**

The Contractor shall provide everything necessary for the proper execution of works according to the true intent and meaning of the drawings, specifications and Schedule of Quantities taken together whether the same may or may not be particularly shown or described there in provided that the same can be referred there from and if the Contractor finds any discrepancy in the drawings or between the drawings, specifications and Schedule of Quantities, he shall immediately refer the same in writing to the architect, who shall decide which shall be followed and his decisions shall be final and binding on all parties.

The Contractor shall supply, fix and maintain at his cost, during the execution of any works, all the necessary centering, scaffolding, staging, timbering, strutting, shoring, pumping, fencing, hoarding, watching and lighting by night as well as day required not only for the proper execution and protection for the said works, but also for the streets, collars, vaults, pavements, walls hoses, buildings and all their erections matters or things. The Contractor shall take down and remove any or all such centering, scaffolding, staging, planking, strutting, shoring etc as fully reinstate at his own cost and make good all the matters and thins disturbed during the execution of the works to the satisfaction of the Architects.

### **36.8 TIME OF COMPLETION, EXTENSION OF TIME AND PROGRESS CHART:**

The Contractor shall be allowed admittance to the site on the 'Date of Commencement' stated in the Appendix, and he shall thereupon and forthwith begin the works and shall regularly proceed with the complete the same (except such painting or other decorative work as the Architect may desire to delay). On or before the 'Day of Completion' stated in the Appendix subject nevertheless the provision for extension of time hereinafter contained.

If in the opinion of the Architect the works be delayed:

- a. By force major or
- b. By reason of any exceptionally inclement weather or
- c. By reason of proceedings taken or threatened by or dispute with adjoining or neighboring Banks of public authorities arising, then through the Contractor's won default or
- d. By the works or delays of the contractors' tradesmen engaged or nominated by the Bank / Architect and not referred in the Schedule of Quantities and / or specifications or
- e. By reason of civil, commotion, local combination of workmen or strike or lock-out effecting any of the buildings traders or
- f. By reason of the Architect's instructions, or
- g. In consequence of the Contractor not having in due time, necessary instructions from the architect for which he shall have specifically applied in writing ahead of time, giving the Architect reasonable time to prepare such instructions, the Architects shall make a fair and reasonable extension of time for completion of the Contract works

In case of such strike or lock-out, the Contractor shall as soon as possible, give written notice thereof the Architect, but the Contractor shall nevertheless constantly use his

endeavors to prevent delay and shall do all they may reasonably be required, to the satisfaction of the Architect to proceed with the work.

The Contractor on starting the works shall furnish to the Bank / Architect a PERT / CPM for carrying out the work stage in the stipulated time for the approval of Architect / Bank and follow strictly the approved time schedule incorporating charges if any, to ensure the completion of construction work in stipulated time. A graph or chart on individual work shall be maintained showing the proportionate progress of work week by week by Architect a weekly progress report stating the number of skilled and un skilled laborers employed on the work, working hours done, quality of cement used, place, type, and quantity of work done during the period.

The Contractor must inform the Architect within 10 days in advance of all drawings and details required by him from time to time. The Contractor shall adhere to the approved program and arrange for the materials and labour etc accordingly.

Despite repeated instructions, of the Contractor fails to show proportionate progress of the work, the Architect / Bank may take suitable action and deemed fit without prejudice to any terms and conditions of the contract.

### **36.9 TOOLS STORAGE OF MATREIALS PROTECTIVE WORKS AND SITE OFFICE REQUIREMENTS:**

The Contractor shall provide, fix up and maintain in an approved position proper office accommodation for the contractor's representative and staff which offices shall be open at all reasonable hours to receive instructions notices or communications and clear away on completion of the works and make good all work disturbed.

All drawings maintain on the site are to be carefully mounted on boards of appropriate size and covered with a coat of approved varnish. They are to be protected from ravage of termites, ants and other insects.

The Contractor shall provide a suitable temporary but for the watchman and clear away the same when no longer required and to provide all necessary attention, lights etc required.

The Contractor shall arrange for temporary latrines for the use of workers and filed staff and keep the same in a clean and sanitary condition to the satisfaction of the public health authorities and shall cause such latrines and soil to be cleared away whenever necessary and shall make good all the works disturbed by these conveniences.

Every precaution shall be taken by the Contractor to prevent the breeding of mosquitoes on the works during the construction, and all receptacles, cisterns, water tanks etc. use for storage of water must be suitably protected against breeding of mosquitoes. The Contractor shall indemnify the Bank against any breach of rules in respect of anti-malaria measures.

### **36.10 PROTECTIVE MEASURES:**

The Contractor from the time of being placed in possession of the site must make suitable arrangements for watching, lighting and protecting the work, the site and surrounding property by day, by night, on Sundays and other holidays.

Contractor shall indemnify the Bank against any possible damage to the building, roads, or member of the public in course of execution of the work.

The Contractor shall provide necessary temporary enclosures, gates, entrances etc for the protection of the work and materials and for altering and adopting the same as may be required and removing on completion of the works and making good all works disturbed.

#### **36.11 STORAGE OF MATERIALS:**

The Contractor shall provide and maintain proper sheds for the proper storage and adequate protection of materials and other work that may be executed on the site including the tools and materials of sub-contractors and remove same on completion. Sheds for storage are to have pucca floor raised above the ground.

#### **36.12 TOOLS:**

Theodolite levels, prismatic compass, chain, steel and metallic tapes and all other surveying instruments found necessary on the works shall be provided by the Contractor for the due performance of the contract as instructed by the site engineer.

All measuring tapes shall be of steel and suitable scaffolding and ladders that may be required for safety taking measurements and shall be supplied by the Contractor.

The masons and the supervisors on the works shall carry with them always 1.0m or 2.0m Steel tape, a measuring tape of 30.0m, a spirit level, a plumb bob and a square and shall check the work to see that the work is being done according to the drawing and specifications. The Site Engineer will use any or all-measuring instruments or tools belonging to the Contractors he chooses for checking the works executed or being executed on the contract.

The Contractor should cover in his rates for making provisions for all reasonable facilities for the use of his scaffolding, tools and plant etc by sub-contractors for their works.

#### **36.13 NOTICE AND PATENTS OF APPROPRIATE AUTHORITIES AND BANKS:**

The Contractor shall confirm to the provisions of any acts of the legislature relating to the work, and to the regulations and by laws of any authorities, and / or any water, lighting and other companies, and / or authorities with whose systems the structures were proposed to have connection and shall before making any variations from the drawings or specification they may be associated to so confirm, give the Architect / Bank written notices specifying the variations proposed to be made and the reasons for making them and apply for instructions thereon. The Architect / Bank on receipt of such intimations shall give a decision within a reasonable time.

The Contractor/s shall arrange to give all notices required for by the said acts, regulations or bye-laws to be given to any authority and to pay such authority or to any public officer all fees that may be properly chargeable in respect of the work and lodge the receipt with the Bank.

The Contractor shall indemnify the Bank against all claims in respect of patent rights, royalties, and damages to building, roads or member of public in course of execution of work and shall defend all actions arising from such claims and shall keep the Bank saved harmless and indemnified in all respects from such actions, costs and expenses.

#### **36.14 CLEARING SITE AND SETTING OUT WORK:**

The site shown on the plan shall be cleared of all constructions, loose stone, and materials rubbish of all kinds. all hold or hollows whether originally existing or produced by removal or loose stone or materials shall be carefully filled-up with earth well rammed and leveled off as directed at the contractor's own cost.

The Contractor shall at his own expense, set out the works accurately in accordance with the plans and to the complete satisfaction of the architect. The contractor shall be solely responsible for the true and perfect setting out of the same and for the correctness of the positions, levels dimensions and alignment of all parts thereof. If at any time error shall appear during the progress or on completion of any part of the work, the Contractor shall at his cost rectify such error if called upon to the satisfaction of the Architects and Bank. The work shall from time to time inspected by the Architect and / or his representatives, but such inspection shall not exonerate the Contractor in any way from his obligations to remedy defects at his own cost which may be found to exist at any stage of the work or after the same is completed.

The Contractor shall clear the site of works as per the Architect. The site of works shall be cleared of all men, materials, sheds, huts etc belonging to the contractor. The site shall be delivered in a clean neat condition as required by Architect within a period of one week after job is completed. In case of failure by the contractor, Bank, under advice of the Architect have the right to get the site cleared to his satisfaction at the risk and cost of the Contractor.

#### **36.15 DATUM:**

The average ground level will be considered as the crown of the nearest the road, which should be taken as 'DATUM' which is however, subject to final confirmation by the Architect / Bank. All levels shown in the drawings are to be strictly adhered to.

#### **36.16 BENCHES:**

The Contractor shall construct and maintain proper benches at different places at site as required and directed by the Architect to that lines and levels can be checked accurately at all times during the progress of work. In case benches are disturbed for any reason 'whatsoever' necessary rectification will be carried out by the Contractor at his cost as directed by the Architect / Bank.

#### **36.17 CONTRACTOR IMMEDIATELY TO REMOVE ALL OFFENSIVE MATTERS:**

All soil, filth or other matter of an offensive nature taken out of any trench, sewer, drain cesspool or other place shall not be deposited on the surface, but shall be at once carried out away by the Contractor to some pits or place provided by him and shall be disposed off as per the rules and regulations of the Local Authorities concerned.

The Contractor shall keep the foundations and works free from water and shall provide and maintain at his own expenses electrically or other power driven pumps and other plant to the satisfaction of Architect / Bank for the purpose, until the building is handover to the Bank. The accumulated to the satisfaction of the Bank and the local authority and no claims will be entertained afterwards if he does not include in his rates for the purpose.

### **36.18 ACCESS TO WORKS:**

The Architect, the BANK and any person authorized by them shall at all reasonable times have free access to the works and to the workshops factories or other places where materials are being prepared or constructed for the Contract and also to any place where the materials are lying or from which they are being obtained. The contractor shall give every facility to the Architect and the BANK and their representatives if inspection and examination and test of the materials and workmanship. No person unless authorized by the Architect or the Bank, except the representatives of Public Authorities shall be allowed on the works at any time. If any work is to be done at a place other than the site of works, the Contractor shall obtain the written permission of the Architect / BANK for doing so.

### **36.19 MATERIALS, WORKMANSHIP, SAMPLES TESTING OF MATERIALS:**

All materials and workmanship shall, so far as procurable be of the respective kinds specified in the schedule of quantities and / or specifications and in accordance with the Architect's instructions and the Contractor shall be on the request if the Architect's furnish to them all invoices, accounts receipts and other vouchers to prove that the materials comply therewith. The Contractor shall at his own cost arrange for and / or carry any test of any materials which the Architect and Bank may require.

### **36.20 TESTINGS:**

The Contractor shall as and when directed by the Architect / BANK arrange to test materials and / or proportions of the work at site or in any approved laboratory at his own cost in order to prove their soundness and efficiency. The Contractor shall transport all the materials from site to the approved laboratory at own cost. The Contractor shall carryout all the mandatory tests as per list attached, at the frequency stated therein. In case these tests are not carried out as per the frequency stated, then proportionate cost will be deducted from the Contractor which will be worked out by the Architect / Client and shall be final and binding on him. Even after such test, any materials brought on site or incorporated in the works are found to be defective or unsound or not as per approved samples, the Contractor shall remove the same and re-erect at his own cost.

### **36.21 REMOVAL OF IMPROPER WORK AND MATERIALS:**

The Architect / BANK shall, during the progress of the works, have power to order in writing from time to time the removal from the works, within such reasonable time as may be specified in order to, of any materials which in the opinion of the Architect / Bank are not in accordance with the specification or the instructions of Architect / Bank , and the substitution of proper materials and the removal and proper re-execution of any work, which has been executed with materials or workmanship, not in accordance with the drawings and specifications or instructions, and the Contractor shall forthwith carry out such orders at his own cost. In case, of default on the part on the Contractor to carry our such orders, the Bank shall have to employ and pay other persons to carry out the same and all expenses consequent thereon or incidental thereto shall be borne by the Contractor, and shall recoverable from on behalf of the Bank or may deducted by the Architect from any money due or may become due to the Contractor

In view of correcting work not done in accordance with the contract, the Architect / Bank may allow such work to remain and in that case may make allowance for the difference in value together with such further allowance for damage to the Bank, as in his opinion may be reasonable.



No certificate, which may be given by Architects, shall relieve the Contractor from his liability in respect of unsound work or bad material.

**36.22 ARCHITECT REPRESENTATIVE (SITE ENGINEER):**

The Architect would appoint a Site Engineer or clerk of works who shall be representative of the Architect and the Bank. The duties of the representative are to watch and supervise the works and to test any materials to be used of workmanship employed in connection with the works. He shall have no authority either to relieve the Contractor of any of his duties or obligations under the Contract, or except those expressly provided hereunder, to order any work involving delay or any extra payment or any variation of or in the works.

The contractor shall afford the representative every facility and assistance for examining the works and materials and checking the measuring time and materials. Neither the representative nor any assistant to the Architect shall have power to revoke, alter enlarge or relax the requirements of this Contract, or to Sanction any day-work, additions, alterations, deviations or omissions unless such an authority may be specially conferred by a written order of the Bank.

The Representative shall have to give notice to the Contractor or his foreman about the non-approval of any work or materials and such works shall be suspended or the use of such material should be discontinued until the decision of the Architect is obtained., the work will from time to time be examined by the Architect or his representative but such examinations shall not in any way exonerate the Contractor from the obligation to remedy defects which may be found to exist at any stage of the work of after the same is completed. Subject to the limitations of this cause, the Contractor shall take instruction from the Architect / Bank. If any dispute arises between architect & contractor, the decision of Bank's engineer will be final and binding on both Architect & Contractor.

**36.23 DISMISSAL OF WORKMEN:**

The Contractor shall on the request by the Architect / Bank immediately dismiss from the works any person employed there who may, in the opinion of the Architect / Bank, be unsuitable or incompetent or who may misconduct himself and such person shall not again be employed or allowed on the works without the permission of the Architect / Bank.

**36.24 DAMAGE TO PERSONS AND PROPERTY INSURANCE ETC:**

- a) The Contractor shall be responsible for all injury to persons, animals or things and for all structural and decorative damage to property which may arise from operation or neglect of himself or any sub-contractor or of any of his or a sub-contractor's employees, whether such injury or damage any arise from carelessness, accident or any other cause whatever in any way connected with the carrying out of this Contract. This clause shall be held to include, inter alia, any damage to buildings, whether immediately adjacent or otherwise, any damage to roads, streets, footpaths, bridges, or ways otherwise any damage caused to the buildings and works forming the subject of this Contract, by frost or other inclement weather. The Contractor shall indemnify the BANK and hold him harmless in respect of all and any expenses arising from any such injury or damage to persons or property as aforesaid and also in respect of any claim made in respect of injury or damage under the acts of Governments or otherwise, and also in respect of any award of compensation or damages consequent upon such claim.



- b) The Contractor shall reinstate all damages of every sort mentioned in this clause, so as to deliver up the whole of the Contract works complete and perfect in every respect and so as to make good or otherwise satisfy all claims for damage to the property of third parties.
- c) The Contractor shall indemnify the BANK against all claims which may be made against the BANK, by any member of the public or other party, in respect of anything which may arise in respect of the works or in consequence thereof and shall at his own cost, effect and maintain until the end of defects liability period of the Contract with an approved office, a policy of Insurance in the joint names of the BANK and the Contractor against such risks and deposit such policy or policies with the BANK on the signing of the Contract. The Contractor shall also indemnify the Bank against all claims which may be made upon the Bank whether under the Workmen's compensation Act or any other statute if force during the currency of this contract or at Common Law in respect of any employee of the Contractor or of any sub-contract and shall at his own expense effect and maintain until the end of defects liability period of the Contract, with an approved office a policy of Insurance in the joint names of the Bank and the Contractor against such risks and deposit such policy or policies with the Bank from time to time, during the currency of the Contract. In default of the Contractor insuring as provided above, the Architect on behalf of the Bank may so insure and may deduct the premium paid from money due or which may become due to the Contractor.
- d) The Contractor shall be responsible for anything which may be excluded from the Insurance Policies above referred to and also for all other damages to any property arising out of and incidental to the negligent or defective carrying out of this contract however, such damage shall be caused.
- e) The Contractor shall also indemnify the Bank in respect of any costs, charges or expenses arising out of any claim or proceedings and also in respect of any Award of or compensation of damages arising there from.
- f) The Bank with the concurrence of the Architect shall be at liberty and is hereby empowered to deduct the amount of any damages, compensations, costs charges and expenses arising or occurring from or in respect of such claims of damages from any sums due or to become due to the Contractor.

**36.25 CONTRACTOR'S ALL RISK POLICY (INSURANCE):**

The Contractor shall within 14 days from the date of commencement of the work insure the works at his cost and keep them insured until one month after the works are taken over by the Bank or three months after the date of completion whichever is earlier, against loss or damage by fire and usual risks other than fire against which insures generally provide cover in a Contractor's All Risk Policy, with an insurer to be approved by the Architects, in the joint names of the Bank and Contractor (the name of the former being placed first in the policy), progressively for the full amount of the Contract, in three stages, beginning with 1/3 of the Contract value, and for any further sum as called upon to do so by the Architect, with the prior written consent of the Bank, the premium of such further sum being allowed to the Contractor as an authorized extra such policy shall cover the property of the Bank only and Architects and Supervisors fees for assessing the claim and in connection with his services generally in re-instatement and shall not cover any property of the Contractor or of any sub-contractor or employee. The Contractor shall deposit the policy and receipts for the premiums paid with the Architects within twenty-one days of the date of commencement of the work unless otherwise

instructed by the Architects. In default of the Contractor insuring as provided above, the Bank or the Architect on his behalf may insure and may deduct the premium paid from any money that may be due or that may become due to the Contractor. The Contractor shall as soon as the claim under the policy is settled, or the work reinstated by the insurers should they elect to do so, proceed with all diligence with the completion of the works in the same manner as though the fire or other such risk had not occurred and in all respects under the same conditions of Contract.

The Contractor in case of rebuilding or reinstatement after fire or other such usual risk shall be entitled to such extensions of time for completion as recommended by the Architect.

#### **36.26 ACCOUNTS RECEIPTS AND VOUCHERS:**

The Contractor shall upon from the request of the Architect / BANK furnish them with all the invoices, accounts receipts and other vouchers that they may require in connection with the works under this Contract. If the Contractor shall use materials less than that he is required under this Contract, the value of the difference in the quantity of the materials he was required to use and that he actually used shall be deducted from his dues. The decision of the Architect / BANK shall be final and binding on the Contractor as to the amount of materials the contractor is required to use for any work under this Contract.

#### **36.27 MEASUREMENTS:**

- a) The Architect may from time to time intimate the Contractor that he requires the works measured and the Contractor shall forthwith attend or send a qualified agent to assist Architect or the Architect's representative in taking such measurements and calculations and to furnish all particulars or give all assistance required by either of them.
- b) Should the Contractor not attend or neglect or omit to send such an agent, then the measurements taken by the Architect is approved by him shall be taken to be correct measurements. The measurements shall whenever not mentioned in the under, be taken in accordance with the Indian Standard Method of Measurements of Building works (I.S.1200-1958) and its revisions, if any.
- c) The Contractor or his agent may at the time of measurement take such notes and measurements as he may require.
- d) All authorized extra costs, omissions and all variations made without the Architect's knowledge, if subsequently sanctioned by him in writing shall be included in such measurements.
- e) The Contractor shall take joint measurements with the Architect / Bank's representative before covering up or otherwise placing beyond the reach of measurement any item of work. Should the Contractor neglect to do so, the same shall be uncovered at the Contractor's expense or in default thereof. No payment or allowance shall be made for such work or the materials with which the same was executed.

#### **36.28 PAYMENT:**

All bills shall be prepared by the Contractor in the form prescribed by Architect / Bank's. Normally one interim bill shall be prepared each month subject to minimum value for interim certificates as stated in these documents. The bills in proper

formats must be duly accompanied by detailed measurements in support of the quantities of work done and must show deductions for all previous payments, retention money etc.

The Architect / Bank shall issue a certificate after due scrutiny of the Contractor's bill stating the amount due to the Contractor from the Bank and the Contractor shall be entitled to payment thereon within the period of honoring certificates named in these documents.

#### **36.29 MATERIAL ADVANCE**

No Material advance would be paid for any of the items.

#### **36.30 VARIATIONS / DEVIATIONS:**

The Contractor shall when directed in writing by the Architect, omit from or vary works shown upon the drawings or described in the specifications or included in the priced Schedule of Quantities, but the Contractor shall not make any alterations or additions to or omissions from the works or any deviations from the provisions of the Contract without such authorizations or directions in writing from the Architect / Bank.

No claim for extra shall be allowed unless it shall have been executed by the Authority of the Architect / Bank as herein mentioned. Any such extra is hereinafter referred to as on authorized extra. No variations i.e. additions, omissions or substitutions shall vitiate the Contract.

The prices of all such additional 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, material and other components as required.

#### **36.31 SUBSTITUTIONS:**

Should the Contractor desired to workmanship, he / they must obtain the approval of the Architect / Bank in writing for any such substitutions well in advance. Materials designated in this specification indefinitely by such term as 'Equal' or 'Other Approved' etc specific approval of the architect / Bank's has been obtained in writing.

#### **36.32 PREPARATION OF BUILDING WORK FOR OCCUPATION AND USE ON COMPLETION**

The contractor shall handover possession to the Bank of the completed works in stages as and when required and directed by the Architect / Bank.

The Bank will take over the possession of completed works in stages as directed by the Architect and defect liability period will commence only from the date of final handing over of all the works accordingly.

#### **36.33 CONCEALED WORK:**

The Contractor shall give notice to the Architect / bank whenever any work is to be buried in the earth, concrete or in the bodies of walls otherwise becoming inaccessible later on, in order that the work may be inspected and correct dimensions taken before such burial, in default whereof the same shall, at the option of the Architect / bank be either opened up from measurements at the Contractor's expenses or no payment may be made for such materials. Should any dispute or difference arise after the execution of any work as to measurements etc., or other matters which cannot be conveniently tested or checked, the notes of the

Architect / bank shall be accepted as correct and binding on the contractor.

**36.34 ESCALATION:**

No Escalation in any of the individual item rates / total contract value is permitted against delay of any sort. the Asst. General Manager, Bank of Maharashtra – Head Office shall be the final authority for deciding the merits on the case of delays for the award of the escalations claim if to be considered in case if justified as no fault of the contractor.

**36.35 TREASURE TROVE:**

Should any treasure, fossils, minerals or works or act of antiquation interest be found during excavation or while carrying out the works, the same shall be the property of the Bank. The Contractor shall give immediate notice to the Architect / Bank of any such treasure and handover the same to the Bank demand.

**36.36 IDLE LABOUR:**

Whatever the reasons may be, no claim for idle labour, additional establishment cost of hire and labour charges of tools and plants would be entertained under any circumstances.

**36.37 SUSPENSION OF WORKS:**

- a) If the Contractor, except on account of any legal restraint upon the Bank preventing the continuance of the works, or on account of any of the causes mentioned in the clause 'Extension of Time' or in the case or certificate being withheld of not paid when due, shall suspend works or in the opinion of the Architects, shall neglect or fail to proceed with due diligence in the performance of his part of the contract or if he shall more than once make default in the respects mentioned in clause 26 ( removal of improper work and materials), the bank through the architect shall have the power to give notice in writing to the Contractor requiring that the works be provided within a reasonable manner, and with reasonable dispatch, such notice shall not be unreasonably given and must signify that it purports to be a notice under the provisions of this clause and must specify the acts or defaults on the part of the Contractor upon which it is based. After such notice shall have given, the Contractor shall not be liberty to remove from the site of works, or from any ground contiguous thereto, any plant or materials belonging to the him which shall have been placed thereon for the purpose of work, and the bank shall have lien upon such plants and materials to subsists from date of such notice being given until the notice shall not under complied with. Provided always that such lie shall not under any circumstance subsist after the expiration of 30 (thirty) days from the date of such notice given, unless the bank shall have entered upon and taken possession of the works and site as hereinafter provided.
- b) If the Contractor shall fail for seven days after such notice has given, to proceed with the works as therein prescribed, the Bank may enter upon and take possession of the works and site, and of all such plants and materials thereon intended to be used for the works, and the BANK shall retain and held a lien upon all such plants and materials until the work shall have been completed under powers hereinafter conferred upon him.
- c) If the Bank shall exercise the above power, he may engage any other person to complete the works and exclude the Contractor, his agents and servants from entry upon or access to the same, except that the Contractor or any person appointed in writing may have access at all times during the progress of the works to inspect, survey and measure the works. Such written appointments or

a copy thereof shall be delivered to the Architects before the person appointed comes on to the works and the Bank shall take such steps as in the opinion of the architect may reasonably necessary for completing the works, without undue delay or expenses using for that purpose the plant and materials above mention in so far as they are suitable and adopted to such use.

- d) Upon the completion of the works, the architects shall certify the amount of the expenses properly incurred consequent on and incidental to the default of the Contractor as aforesaid and in completing the works by other persons.
- e) Should the amount to certified as the expenses properly incurred be less than amount which should have been due to the Contractor upon the completion of the works by him, the difference shall be paid to the Contractor by the Bank, should the amount of the former exceed the latter, the difference shall be paid by the Contractor to the Bank. The Bank shall not be liable to make any further payments or compensations to the contractor for or on account of the proper use of the plant for the completion of the works under the provision herein before mentioned other than such payments as is included in the contract.
- f) After the works shall have been completed by persons other than the Contractor under provisions hereinbefore contained, the Architect shall give notice to the Contractor to remove his plant and all surplus materials as may not have been used in the completion of the works from the site, if such plant and materials are not removed within a period of 14 days after the notice shall have been given the Bank may remove and sell the same, holding the proceeds less the cost of the removal and sale, to the credit of the Contractor. The Bank shall not be responsible for any loss sustained by the Contractor from the sale of the plant in the event of the contractor not removing it after notice.

#### **36.38 INDEBTEDNESS AND LIENS:**

The Contractor agrees to furnish the Bank from time to time during the progress of the work as requested, verified statement showing the Contractor's total outstanding indebtedness in connection with the work covered by the Contract. Before final payment is make, the bank with satisfactory proof that there are no outstanding debts or liens in connections of the Contract. If during the progress of the work, the Contractor shall allow any indebtedness to accrue to sub-contractor or other and shall fail to pay discharge same with five (5) days after demand, then the bank may withhold any money due to the Contractor until such indebtedness is paid, or apply the same towards the discharge thereof.

#### **36.39 TERMINATION OF CONTRACT BY THE BANK:**

If the Contractor being an individual or a firm, commit any act of insolvency, or shall be adjudged an insolvent or being on incorporated company shall have an order for compulsory winding up made against it or pass on effective resolution for winding up voluntary or subject to the supervision of the court and if the Official. Assignee of the Liquidator in such acts of insolvency or winding up shall be unable within seven days after notice to him requiring him to do so, to show to the reasonable satisfaction of the architect that he is able to carry out and fulfill the contract, and to give security thereof, if so required by the Architect.

Or if the Contractor (whether an individual, firm or incorporated Co.) shall suffer execution to be issued.

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



Or shall assign or subject this contract without the consent in writing of the Architects / Bank first obtained.

Or shall charge or encumber this Contract or any payments due or which may be due to the Contract there under.

Or the Architect shall certify in writing to the bank that the Contractor

- a. Has abandoned the Contract, or
- b. Has failed to commence the works, or has without any lawful excuse under these conditions suspended the progress of the works for 14 days after receiving from the Architect written notice to protect, or
- c. has failed to proceed with the works with such due diligence and failed to make such due progress as would enable the works to be completed within the time agreed upon, or
- d. has failed to remove materials from the site or to pull down and replace work for 7 days after written notice shall have been given to the contractor requiring the Contractor to observe or perform the same, or
- e. has neglected persistently to observed and perform all or any of the acts, matters or things by this contract to be observed and performed by the Contractor for 7 days after written notice shall have been requiring him to observe and perform the same, or
- f. has to the determinant of good workman ship or in defiance of the Architect's instructions to the contrary sublet any part of the Contract.

Then and in any of the said cases the bank with the written consent of the Architect may not withstanding any previous waiver, after giving 7 days' notice in written to the Contractor, determine the Contract, but without hereby affecting the powers of the Architect to continue in force as full as if the contract had been so determined and as if the works subsequently executed have been executed by or on behalf of the Contractor

And further, the bank under instructions of the Architect, by his Agents, or servants may enter upon take possession of the works and all plants, tools, scaffoldings, sheds, machinery, steam and other power utensils and materials laying up on the premises or the adjoining lands or roads, and use the same as his own property or may employ the same by means of his own servants and workmen in carrying on and completing the works or by employing any other contractors or other person to complete the works and the Contractors or the persons to complete the works and the contractor shall not in any way interrupt or do not act, matter or thin to prevent or hinder such other contractor or other persons or person employed for completing and finishing or using the materials and plant for the works. When the works shall be completed of as soon thereafter as convenient, the Architect shall give a notice in writing to the Contractor to remove his surplus materials and plant, and should the Contractor fail to do so, within a period of 14 days after receipt thereof by him, the bank shall sell the same by publication and shall give credit to the Contractor for the amount realized. The Architect shall thereafter ascertain and certify in writing under his hand when (if thing) when shall be due of payable to or by the bank for the value of the said plant and materials so taken a possession of by the expense or loss which the Bank shall been owing to the Contractor and the amount which shall be so certified shall thereupon the paid by the bank to the Contractor or by the Bank as the case may be.



### **36.40 DRAWINGS AND SPECIFICATIONS:**

- a) The works shall be carried out to the entire satisfaction of the Bank and the Architect, in accordance with the signed drawings and specifications and such further drawings and details as may be provided by the Architect, and in accordance with such written instructions, directions and explanations as may from time to time be given by the Architect, whose decision as to the sufficiency and quality of the work and materials shall be final and binding upon all parties. If the work shown on any such further drawings or work that may be necessary to comply with any such instructions directions or explanations, be in the opinion of the contractor extraction that comprised in or reasonably to be inferred from the contract he shall before proceedings with such work, give notice in writing to this effect to Architect, and in the event of the Architects agree to the same in writing the contractor shall be entitled to an allowance in respect of such extra work as on authorized extra. If the Architect and the contractor fail to agree as to whether or to there is an extra, then, if the Architect decided that the contractor is to carry out the said work, the contractor shall do so, and the question whether or not there is any extra, and it so the amount thereof, shall failing agreement, be settled by Arbitration as hereinafter provided, but such references shall in no way delay the fulfillment of this contract.
- b) No drawings shall be taken as in itself on order for variation unless, in addition to the Architect's signature, it bears express words stating that is intended to be such an order or bears a remark 'VALID FOR EXECUTION'. No claim for payment for extra work shall be allowed unless the said work shall have been executed under the provisions of clause 6 (Authorities notices, patent right and royalties) or by the Authorities of directions in drawing of the Architect as herein mentioned.
- c) One complete set of the signed drawings and specification and scheduled of quantities shall be furnished by the Architect to the Contractor. The Architect shall furnish within such time, as he may consider reasonable, one copy of any additional drawing, which is his opinion, may be necessary for the execution of any part of work. Such copies shall be kept at the works, and the architect or his representatives shall, at all reasonable time have access to the same and shall be return to the Architect by the contractor before the issue of the Final certificate. The contract shall remain in the custody of the Architect, and shall be produced by him at his office as and when required by the Bank or by the contractor.

### **36.41 EXECUTION OF WORK (PRICES TO INCLUDE):**

The whole of the work is described in the contract a (including the schedule of Quantities, the specifications and all drawing pertaining there to) and as advised by Bank / Architect from time to time is to be carried out and completed in all its parts to the entire satisfaction of the Bank /Architect. Any minor details of the work which may not have been definitely referred to in this contract, but which are usual in practice and essential to the work, are deemed to be include in this contract. Rates quoted in the Schedule shall be inclusive of all freights, taxes, such as octroi, sales tax, Royalties, duties, excise, turnover tax, sales tax on works contract, etc., as well as transportation, so as to Execute The contractor as per the rules and regulations of Local Bodies, State Government and Government of India.

The rates quoted in the tender should include all charges for:

- a. Labour, maintenance fixing, carrying, cleaning, making good, hauling, watering etc

- b. Plant, machinery, scaffolding, framework, English ladders, ropes, nails, spikes, tools, materials and workmanship protection from weather, shuttering, temporary supports, platform and maintenance of the same.
- c. Covering for the walling with nets and other works during inclement weather or striking or whenever directed as necessary.
- d. Water for civil works, curing with quality of water, which has been certified as "Fit for Construction" from an approved test laboratory.
- e. Electricity for pumping water, cutting, lighting etc including employing a generator set if required.

#### **36.42 PROCUREMENT OF MATERIALS:**

- a) Contractor shall procure all the materials for the work from the open market. Time is the essence of the contract. Acceptance of the completion date by the contractor shall mean that he has taken into consideration the availability of all material of approved make and quality in sufficient quantities at site to enable him to complete the entire work in the stipulated period.
- b) Contractor will get sample of all materials approved by the Bank / Architect before placing order / purchase / procurement. They shall conform to I.S. codes and or tender specification as applicable.
- c) For all materials the contractor shall quote for the best quality of the materials of best make / source or supply and it will be got approved by bank / Architect before procurement.
- d) In case sufficient quantities of approved quality materials from approved source are not available in time, contractor may have to procure the same for neighboring area with longer leads as required and directed at no extra cost. The material will be, however as per relevant I.S code as and wherever applicable.

#### **36.43 EXTRA ITEMS RATES:**

The work or extra items shall be started only after the approval of extra items rates by client / Architect. Rates for additional or extra items of construction work, which can be derived from the contract item rates and are not covered in the contract, shall be calculated on the basis of actual cost plus 15 % for profit.

#### **36.44 FAILURE BY CONTRACTOR COMPLY WITH ARCHITECT BANK'S INSTRUCTIONS:**

If the contractor after receipt of written notice from the architect requiring compliance with such further drawings and / or Architects instruction, fails within seven days to comply with the same, the Bank / Architect may employ and pay other persons to execute any such work whatsoever as may be necessary to give effect thereto and all cost incurred in connection there with shall be recoverable from the contractors by the Bank on a Certificate by the Architect as a debit or may be deducted by him from any money due or which become due to the Contractors.

#### **36.45 DELAYED PAYMENTS:**

Any amounts payable by the Bank to the contractor in pursuance of any Certificate given by the Architect hereunder shall, if not paid within the 'Period of honoring of Certificate' no interest paid by the Bank.

#### **36.46 FORCE MAJEURE:**

Neither party shall be held responsible by the other for breach of any condition of this agreement attributable to any 'Act of God' Act of state, lockout of control or any

other reason, beyond the control of the parties and any breach of clauses arising from much force majeure conditions as aforesaid shall not be regarded as a breach of the provision of this Agreement.

**36.47 INCOME-TAX AND WORKS CONTRACT TAX:**

Income Tax and Works Contract Tax shall be deducted at source by the client from the contractor's interim and final bill payments as per Statutory Regulations.

**36.48 WORKING HOURS:**

Since the site is with all Working Departments, the Contractor has to execute the work judiciously without disturbance to the neighboring building/offices during the day and after working hours, nights & on holidays. No extra payments will be made for the work being done during odd hours.

**36.49 ACTION WHERE THERE IS NO SPECIFICATION:**

In case of any class of work for which there is no specification mentioned, the same will be carried out in accordance with the Indian Standards Specifications subject to the approval of the Bank / Architect.

**36.50 TYPOGRAPHICAL CLERICAL ERRORS:**

The Bank / Architect clarification regarding partially omitted particulars of typographical or Clerical errors shall be final and binding on the contractors.

**36.51 GENERAL PRICE VARIATION ADJUSTMENT CLAUSE (PVA CLAUSES FOR ALL MATERIALS:**

There shall be no price variations of any sort during the course of execution of the works on site. The rates quoted by the contractor shall remain firm right throughout the duration of the contract.

**36.52 INCOME TAX:**

Income tax shall be deducted from the Contractor's bills as per the rules and regulations in force in accordance with Income Tax Act prevailing from time to time. Quoted rates shall be deemed to include this.

**36.53 EXCISE DUTY ON WORKS CONTRACT, SALES TAX ON WORKS CONTRACT, GST & VALUE ADDED TAX:**

- a) ED on Works Contract:  
Excise duty on Works Contract, if applicable, shall be included by the Contractor in their quoted rates and no variation on this account will be entertained by the Bank.
- b) Value Added Tax: (VAT)  
Price implication if any due to implementation of VAT by the statute after the actual date of opening the priced bid up to the contractual completion period will be to Bank's account subject to the condition that the contractor in such an event will furnish the documentary evidence with regard to the same.
- c) Goods Services Tax:  
The quoted rates shall be inclusive of GST.
- d) Other Taxes:  
The quoted rates shall be deemed to be inclusive of all applicable taxes, octroi, levies, sales tax on works contract etc at the present rate of taxation. Any statutory variation within the contractual completion period in such taxes shall be reimbursed by BOM at actuals upon submission of documentary evidence and verification by EIC.
- e) Registration Under State Government Value Added Tax Act.
- f) Attested copy of certificate of registration under State Government Value Added

Tax Act in the proforma prescribed by the State Govt. should accompany the Bid. The registration under Value Added Tax Act should be in the name of the FIRM/INDIVIDUAL quoting for the work. In the absence of the above registration, tenderer may not be awarded the work tendered for, in the light of State Govt. directive/instruction.

#### **36.54 FIRM PRICE:**

The prices shall be kept FIRM till the completion of work and no escalation including statutory variation will be admissible.

#### **36.55 DRAWINGS & DOCUMENTS:**

- a) The drawings accompanying the tender document are of indicative nature and issued for tendering purpose only. Purpose of these drawings is to enable the tenderer to make an offer in line with requirements of the Bank. However, no extra claim whatsoever shall be entertained for any variation in the "Approved for Construction" and "Tender Drawings" regarding any changes/units. Construction shall be as per drawings/specifications issued/approved by the Engineer-in-Charge during the course of execution of work. Detailed construction drawings on the basis of which actual execution of work is to proceed will be furnished to the Contractor progressively based on the detailed construction programme evolved after the award of work and also based on construction progress achieved.
- b) Detailed working drawings on the basis of which actual execution of the works is to proceed, will be furnished from time to time during the progress of the work. The contractor shall be deemed to have gone through the drawings and bring to the notice of the Engineer-in-Charge discrepancies if any, therein before actually carrying out the work.
- c) Copies of all detailed working drawings relating to the works shall be kept at the Contractor's office on the site and shall be made available to the Engineer-in-Charge at any time during execution of the contract. The drawings and other documents issued by the Bank shall be returned to the Bank on completion of the works.

#### **36.56 CONSTRUCTION EQUIPMENT:**

The contractor shall without prejudice to his overall responsibility to execute and complete the work as per specifications and Time schedule, progressively deploy adequate Equipment's and tools and tackles and augment the same as decided by the Engineer-in-Charge depending on the exigencies of the work so as to suit the construction schedule. The tenderer shall submit a list of construction Equipment's he proposes to deploy for the subject work along with deployment schedule. **No construction equipment shall be supplied by the Bank. Tenderer to ensure deployment of suitable cranes and take all safety precautions during execution of work.**

#### **36.57 SITE ORGANISATION:**

The tenderer shall submit the details of Organization proposed by him at site of work for the implementation of the works under the contract, together with bio-data of the key personnel. The contractor shall however without prejudice to his overall responsibility to execute and complete the works as per specifications and time schedule progressively deploy adequate qualified and experienced personnel together with skilled/unskilled manpower and augment the same as decided by Engineer-in-Charge depending on the exigencies of work to suit the construction schedule without any additional cost to Bank.

**36.58 EXISTING SERVICES/STRUCTURES:**

Structures, drains, pipes, cables, overhead wires and similar services encountered in the course of the works shall be guarded from injury by the CONTRACTOR at his own cost, so that they may continue in full and uninterrupted use to the satisfaction of the Bank.

Should any damage be done by the CONTRACTOR to any structures, mains, pipes, cables or lines (whether above or below ground etc), whether or not shown on the drawings, the CONTRACTOR must make good or bear the cost of making good the same without delay to the satisfaction of the Engineer-in-Charge.

**36.59 CONTRACTOR'S FIELD OFFICE, GODOWN, WORKSHOP AND CAMP FACILITIES:**

Contractor shall, if required by him, for the entire duration of the execution of the work arrange construction of Contractor's office, warehouse and workshops required for the execution of the Contract. The Contractor shall at his own cost construct all temporary buildings/facilities and provide suitable water supply and sanitary arrangement as required. Such facilities as constructed by Contractor shall be maintained by Contractor at his own cost.

**36.60 STATUTORY REQUIREMENT:**

The approval from any authority required as per statutory rules and regulations of Central/State Government shall be the contractor's responsibility unless otherwise specified in the tender document.

The application on behalf of the Bank for submission to relevant authorities along with copies of required certificates complete in all respects shall be prepared and submitted by the contractor well ahead of time so that the actual construction/commissioning of the work is not delayed for want of the approval/inspection by concerned authorities. The inspection of the works by the authorities shall be arranged by the Contractor and necessary coordination and liaison work in this respect shall be the responsibility of the Contractor. **However, statutory fees paid, for Building Assessment, EB Connections, Metro water connection, Drainage Connections for all inspections and approvals for permanent establishment by such authorities shall be reimbursed at actuals by the Bank to the Contractor on production of documentary evidence.** The statutory fees paid in the case of approvals for the Contractors equipments, materials, liasoning and workmanship shall not be reimbursed. Any change/addition required to be made to meet the requirements of the statutory authorities shall be carried out by the Contractor free of charge. The inspection and acceptance of the work by statutory authorities shall, however, not absolve the contractor from any of his responsibilities under this contract.

**36.61 ACTION AND COMPENSATION PAYABLE IN CASE OF BAD WORK:**

The work during its progress (or) during the defect liability period can also be inspected by the Chief Technical Examiner (or) his authorized representatives of the Central Vigilance Commission and any defects pointed out by him shall be attended by the Contractor immediately and if any penalties/compensation arises based on the defects noted by CTE/TE then contractor has to rectify or shall pay to Bank or the same will be deducted from any payment payable to the contractor. Bank's decision will be binding on the contractor.



### 36.62 PENALTIES FOR VIOLATION/NON-ADHERENCE OF SAFETY PROCEDURES AND PRACTICES:

Event	Penalty
Absence of Resident Engineer of Contractor	Rs.20,000 / - per Meeting
For non-use of Personal Protective Equipment (Helmet, goggles, gloves, Safety belts, etc.,)	Rs.250/- per day/ item/ person
Working at height / depth without permit and/or failure to arrange fall-protection arrangement (while works continue at heights / depth, i.e., 1.5 mtrs)	Rs.1000/- case/day
Failure to have regular site safety Inspection (by contractors themselves) every week	Rs.1000/- Week
Working without clearance	Rs.15000/- per occasion
Hot work without proper Clearance / permit	Rs.10000/-per occasion
Non-Display of name board Permit etc.	Rs.1500/- per occasion
Non fencing of excavated area	Rs.1000/- per occasion
Inadequate First Aid Box	Rs.1500/- per occasion
For not providing shoring / strutting / proper slope and not keeping the excavated earth at least 1.5M away from the excavated area	Rs.5000 per occasion

The rate of above penalty shall be double in case of violation of aforesaid acts more than three times during the pendency of the contract. In case of accidents depending on the seriousness of injury etc. in addition to the hospitalization / Treatment charges and Group insurance amount, compensation shall be paid by the Contractor to the affected person / his family members in presence of Engineer-in-charge as per Workmen Compensation Act.

Special Conditions of Contract on Safety Regulations are given as **ANNEXURE-IV** to SCC.

### 36.63 RELEVANT IS - CODES FOR PERSONAL PROTECTION

- IS: 2925 - 1984 Industrial Safety Helmets
- IS: 4770 - 1968 Rubber gloves for electrical purposes
- IS : 6994 1973 (Part-I) Industrial Safety Gloves (Leather & Cotton Gloves)
- IS : 1989-1986 (Part-I & III) Leather safety boots and shoes
- IS : 3738-1975 Rubber knee boots
- IS : 5557-1969 Industrial and safety rubber knee boots
- IS : 6519-1971 Code of practice for selections, care and repair of Safety footwear
- IS : 11226-1985 Leather Safety footwear having direct molding Sole
- IS : 5983 - 1978 Eye protectors
- IS : 9167 - 1979 Ear protectors



IS : 3521 - 1983 Industrial Safety belts and harness

**36.64 FIRST AID:**

The Bidder shall provide necessary first aid facilities to their personnel. Depending on the availability at that time of need, BOM may provide these facilities entirely at its discretion. The cost of such assistance as worked out by BOM shall be recovered from the Bidder's running bill.

**36.65 HOUSEKEEPING:**

It shall be the Bidder's responsibility to keep the work area clean and tidy always and shall be done on a day-to-day basis. Scrap, debris, oil spills, etc; generated during the course of work shall be disposed at the designated location as directed by the Bank and the transportation for this purpose shall be arranged by the Bidder at his cost.

**36.66 ABNORMAL RATES:**

The Contractor is expected to quote rate for each items after careful analysis of costs involved for the performance of the complete item consisting all specifications and conditions of the contract. If it is noticed that the rates quoted by the tenderer for any items are unusually high (or) unusually low, it will be sufficient cause for rejection of the tender unless the Bank is convinced about the reasonableness of the rate on scrutiny of the analysis for such rate to be furnished by the tenderer on demand. Notwithstanding anything there in stand, the rate once accepted by the Bank shall be final and shall not be subject to any claim either on account of un-workability of rates or on any other ground whatsoever.

**36.67 INDEMNITY BY THE CONTRACTOR:**

- a) The contractor shall be responsible at all times during the currency of the contract for and shall defend, hold harmless and indemnify the Bank and or the Bank indemnified parties from and against any and all claims, liabilities, costs, damages and expenses (including court cost and legal fees) arising whether by way of indemnity or otherwise, in relation to any and all losses of every kind and nature resulting from damage to or loss or, loss of use or recovery, or destruction of property, or sickness, injury or death suffered by any personnel or consultant of the contractor, its affiliates, agents or sub-contractors and damage to or loss or, loss of use or recovery or destruction of any property or equipment belonging or contracted to or otherwise in the custody of the contractor its affiliates, agents or sub-contractors or its or their personnel or consultants (other than Bank equipment) in connection with the performance of this contract regardless of any cause howsoever arising specifically including but not limited to the default and /or willful misconduct and / or negligence of the Bank.
- b) Contractor's Personnel And Property: -  
The contractor shall be liable for and shall indemnify the Bank, the participants and Bank's personnel from and against all claims in respect of any death or injury or contractor's personnel and any damage to contractor's property in each case caused by or arising out of the performance of this contract and whether or not arising in respect of a serious event. The assumption of liability and the indemnity contained in this clause extends to any claims made against the Bank pursuant to any provision of any agreement, whenever effective, under which Bank assumes liability in respect of and or indemnifies and or otherwise compensates any other person or body in respect of the death or injury of contractor's personnel and any damage to contractor's property arising in respect of a serious event.

- c) All contractor's personnel which may include permanent, temporary or casual, servants, agents and / or representatives, contractual or otherwise, either contractor's and /or their sub-contractors, affiliates/subsidiaries/co-ventures shall be covered under contractor's workers compensation and employers liability insurance of statutory benefits and any damages or compensation payable in respect of accidents of injury as set forth and required by applicable law in the area of operations or such other jurisdiction under which contractor may become obligated to pay benefits. Employers' liability insurance, including appropriate coverage covering all contractors' personnel shall be provided to meet the requirement of this clause or as required by applicable statute, which ever is greater. Workmen's compensation and / or employers' liability insurance covers or coverage of comparable nature, to the full extent required by all statute/laws applicable in any jurisdiction of operations hereunder in the course of contract shall be affected by the contractor for the appropriate limits and for the entire period of the contract.
- d) Personnel Injury And Property Damages: -  
Contractor shall indemnify and hold harmless the indemnified all claims resulting from personal injury to any personnel, employees, sub-contractors or agents of contractor or damage to any property of contractor or any employees or agent or sub-contractor arising out of the performance of the services, whether or not the personnel injury or damage to property is caused by or contributed to by the negligence or other legal fault of the indemnified.
- e) Contractor shall further indemnify and hold harmless the indemnified against all claims resulting from personal injury to any person (s) (other than employee or agent of contractor or employee or agent of Bank) or damage to any property to the extent that the personal injury or damage is contributed to by negligence or other legal fault of the contractor.
- f) Third party and third-party property: -  
Third party liability insurance shall be provided for liability arising from all operations of contractor including accidental / similar liabilities. The policy shall include coverage for premises and operations including operations off shore. It is expressly the term third party shall mean and include any person other than that employed by contractor himself and shall not extend to any person in employment of Bank or sub-contractor / associates / affiliates / subsidiaries/ co-ventures and or other similar agencies.
- g) Contractor shall be liable for and shall indemnify Bank and Bank's personnel from and against all claims in respect of any death or injury of a third party and any damage to third party property upto a sum of Rs. five Lakh in respect of each and any single incident caused by or arising out of the performance of this contract by contractor or its sub-contractors. If any such claim or claims exceeds Rs. five Lakh liability for the excess shall, as between the Bank and the contractor, be borne in proportion to what the respective liabilities (if any) in the law of negligence are or would be in respect of the incident in question.
- h) Due Diligence: -  
Apart from complying with the various expressed conditions it is necessary for the contractor to take reasonable precautions:
- For safety of the property insured.
  - In selection of labour

- To prevent injury, loss or damage
- i) It is also requires that the insured
  - To allow the insurer's access to examine the insured's premises plant and equipment
  - To minimize loss in the event of an accident
- j) No Limitation of Liability: -  
The required coverage referred to and set forth in the relevant Clause shall in no way affect or limit Contractor's liability with respect to performance of the work or any obligation under the Contract.
- k) Indemnity by the Bank: -  
The Bank shall be responsible at all times for and shall defend, hold harmless and identify the Contractor, its affiliates, agents and subcontractors from and against any and all claims, liabilities, costs, damages and expenses (including court costs and legal fees) arising, whether by way of indemnity or otherwise, in relation to any and all losses of every kind and nature resulting from sickness, injury or death of personnel of, or damage to or loss or destruction of any equipment or other property suffered by, the Company, its Co-ventures, Affiliates or agents and / or its or their personnel or belonging or contracted to or otherwise in the custody of the Bank (other than Contractor's Equipment) in connection with the performance of this contract regardless of any cause howsoever arising specifically including but not limited to the default and / or willful misconduct and / or negligence of the Contractor.  
Bank shall indemnify and hold harmless the Contractor against all claims resulting from personal injury to such person or damage to such property arising out of the performance of the services to the extent that the personal injury or damage is contributed to by the negligence of other legal fault of Bank.

### **36.68 REVIEW MEETINGS AFTER AWARD OF WORK:**

The contractor shall present the programme and status at various review meetings as required.

Contractor shall also follow the bar chart/schedule of activity submitted by Architect and any further update as per site execution.

#### **Weekly Review Meeting:**

Level of Participation: Contractor's Site In charge and Job Engineers.

Agenda:

- Weekly programme v/s actual achieved in the past week and programme for next week.
- Remedial Actions and hold up analysis.
- Client query/approval
- Safety compliance

#### **Monthly Review Meeting:**

Level of Participation: Senior Officers of BOM and contractors.

Agenda:

- Progress Status / Statistics
- Completion Outlook.
- Major hold ups / slippages

- Assistance required
- Critical issues
- Client query / approval
- Safety compliance

### **36.69 PROGRESS REPORTS TO BE FURNISHED AFTER AWARD OF WORK:**

#### **Monthly Progress Report:**

This report shall be submitted on a monthly basis within Ten Calendar days from cut-off date as agreed upon, covering overall scenario of the work. The report shall include but not be limited, to the following:

- a) Brief introduction of the work.
- b) Activities executed/achievements during the month
- c) Schedule v/s actual percentage progress & material stocks, resource allocation and overall work.
- d) Areas of concern/problem/hold ups, impact and action plan.
- e) Resources deployment status.
- f) Safety compliance report
- g) Distribution: BOM: Three copies

#### **Weekly Report:**

This report (3 copies) will be prepared and submitted by the Contractor on weekly basis and will cover following items:

- a) Activities programmed and completed during the week.
- b) Resource deployed men and machine.
- c) Qty. achieved against target in construction.
- d) Record of Man-days lost.
- e) Percentage progress, schedule and actual.
- f) Safety compliance report

### **36.70 TEST CERTIFICATES:**

The contractor shall submit the certificates for every batch of materials from recognized laboratories / agencies for approval of the Bank's Engineer.

### **36.71 SPECIFICATIONS/ CODES AND STANDARDS:**

All works under this Contract will be executed according to the Specification for works. Whenever the details are not specifically covered in the specifications, relevant provisions in the latest revision and/ or replacements of the Indian Standard Specifications (IS) or any other Inter-national Code of Practice/CPWD specifications will be followed. The Contractor shall have to procure copies of such codes/ standards for ready reference of his own personnel as well as the Engineers at site at his own cost and without any additional reimbursement.

### **36.72 MATERIALS AND TRANSPORT:**

All materials except mentioned otherwise in the items of the attached bill of quantities, for successful completion of work shall have to be procured and supplied by the successful tenderer at his own cost. The materials supplied by the contractor shall be of approved quality and approval also shall have to be taken from the Bank's Engineer before using the materials to the work. Rejected materials, if any, shall have to be removed by the contractor with his own labour and transport at his own cost immediately on receipt of the instruction.

### **36.73 CLEANING DURING EXECUTION AND AFTER COMPLETION:**

On completion of the works the contractor shall reinstate and make good at his own expense any property or land which might have been disturbed and/or damaged by his works. He should also clean the site as required during execution and fully clear

the site after completion of all the works. The contractor shall forward any usable materials found during the course of construction at the work site dispose off the debris all at his own expenses by his own transport and labour and clean out all part of the work and leave everything clean and tidy to the entire satisfaction of the Engineer.

### **37. Measurement and Payment:**

- i) Measurements of all items having financial value shall be recorded in Measurement books (MB) and/ or level field books so that a complete record is obtained of all works performed under the contract. Measurements and levels shall be taken jointly by the official designated (Architect's Engineer /Bank's Engineer) for the purpose and the contractor. All final measurements shall be in typed form with soft & hard copy and it shall be signed jointly by Architect, Bank's Engineer and Contractor.

Interim Payments: At a prearranged date each month, the contractor will submit a statement in such a form as the Bank's Engineer from time to time prescribes showing the amounts to which the contractor considers himself entitled up to the end of the month. The Architect /Bank's Engineer's would issue an Interim Payment Certificate (IPC) after following checks

- a) Reconciliation with Field measurements of quantities of work completed or claimed;
- b) Quantity of work actually completed as of an agreed 'cut-off' date;
- c) Inventory of equipment and materials delivered to the site but not yet used in the work (materials on site);
- d) Review of claims for extra work;
- e) Checking of retention amount and other recoveries;
- f) Review of variations - whether these have been approved by Bank. If not, provisional rates are to be used until final valuation sanctioned by Bank; and
- g) Price adjustments;
- h) Following the bills filed by the contractor, Interim monthly payments (net of: (i) retentions and recovery of advances; and (ii) statutory deductions (works tax, income tax, others) would be made based on IPC. The Architect/ Bank's Engineer will not be bound to certify any payment if the net amount thereof, after all retentions and deductions, is less than the minimum amount of IPC.

### **38. Secured Advance against Material brought to Site:**

Secured advance on the security of materials (which are not combustible, fragile or perishable in nature) brought to the site but not yet incorporated in the works will be made up to 75 (seventy-five) per cent of invoice value, or the 75 (seventy-five) per cent of the corresponding value of the materials determined on the basis of BOQ rates, whichever is less, subject to the condition that their quantities are not excessive and shall be used within a period of 30 (thirty) days and subject to other stipulations in the contract. The contractor will be required to sign an indenture bond, hypothecating the goods to the procuring entity, and also be responsible

for their safe custody. Before the advance is released, the procuring entity may inspect the site to ensure that the Contractor has safeguarded the materials against pilferage and deterioration. It may be ensured that the contractor has not taken any loan/ limit from banks against hypothecation of the materials against which the secured advance is claimed. An undertaking in this regard may also be taken from the contractor.

Generally, as per the provisions of the contracts, the contractors are required to submit proof of cost of materials and the delivery of material at site while claiming such advances. The stock register should be maintained from the commencement of the contract and, unless otherwise prescribed in the contracts, the stock, so considered for advance, should generally be only paid stock (and not brought on credit). Where the materials are supplied from a captive source of the contractor, the reasonableness of the valuation of such materials may be ensured.

The advance will be repaid from each succeeding running bill (periodic/ interim payment) to the extent materials for which advance has been previously paid have been incorporated into the works. In all cases, the repayment of the advance will be affected after expiry of a period of 60 days since payment of advance, whether the material is consumed in the work or not. However, secured advance on the security of materials will be sole discretion of the Bank.

**39. WHERE THERE IS SHORTCOME OF SPECIFICATION FOR ITEM OF BOQ OR IN TENDER:**

In case of any class of work over which there is no specification mentioned or short come of the specification, same shall be carried out in accordance with the latest Indian standard specification and as per standard practice and as a necessary requirement to complete the item/job, subject to the approval of the Bank's Engineer. No additional payment will be made for the same. Bidder shall quote the rate for every item, considering aforesaid requirement.



**SECTION IV**  
**TENDER FORM**

Date:

To,  
The Assistant General Manager(Civil),  
Corporate Services Department,  
**Bank of Maharashtra,**  
Head office, lokmangal, 1501,  
Shivaji nagar, Pune – 411005.

**SUB: CONSTRUCTION OF ZONAL OFFICE AND BRANCH AT BANK OF MAHARASHTRA's OWNED PLOT, SITUATED AT PLOT NO.1A/1A/3, GUT.NO. 534, MOUJE, SADAR BAZAR, SATARA 415001**

Dear Sir,

1. I/We have examined the Instructions to Tenderers, Conditions of Contract, Specifications, Bills of Quantities, and Drawings; familiarized ourselves with land surface, sub surface, metrological, climatological, environmental condition.
2. I/ We, having examined the drawings, specifications, designs and bill of quantities relating to the works specified in the memorandum hereinafter set out and having visited and examined the site of the works specified in the said memorandum / tender / BOQ and having acquired the requisite information relating thereto as affecting or related to the tender.
3. I/we hereby offer to execute the works specified in the said memorandum / tender / BOQ within the time specified and at the rates mentioned in the attached bill of quantities and in accordance in all respects complying to the specifications, designs, drawings and instructions in writing referred to in conditions of tender, the articles of Agreement, Condition of Contract, Bill of Quantities and with such materials as are provided for, by, or prescribed and in all other respects in accordance with such conditions so far they may be applicable
4. I/We, the undersigned offer to execute completely and maintain the whole of the works in conformity with the documents listed tender. In complying execution, we do hereby confirm to carryout surveys, procurement, construction, installation, testing, pre-commissioning, startup and commissioning as per the contract document. The work covered under the contract documents shall be completed to the entire satisfaction of Bank at the quoted prices and BOQ of rates accompanying this tender.
5. I/We further agree for the followings:
  - i) Description of Works Civil works, Plumbing & Sanitary works, Interior Works, Water Supply, Internal & External Electrical works, L.V Services, Firefighting System, Fire Alarm System, HT & LT installations, Compound wall works and associated allied works pertaining to the Construction of its building at Satara
  - ii) Cost of the Tender Documents Tender copies shall be downloaded from the Bank's website [www.Bankofmaharashtra.in](http://www.Bankofmaharashtra.in)  
No hard copy will be issued in any case. Cost of tender Form: Rs. 10,000/- [Rs. Ten Thousand only (non-refundable)] to be paid in the form of Demand Draft /PO favoring 'Bank of Maharashtra" payable at Pune

- |       |   |  |
|-------|---|--|
| iii)  | Date of Pre-bid meeting and Bank of Address of Pre-bid meeting  | On <b>22th JANUARY 2024</b> at <b>3.00 P.M.</b> on Maharashtra, Head Office, Building, 1501, Shivaji Nagar, Pune   |
| iv)   | Date & Place of Address for Submission of the filled-in Tenders | On or Before <b>30<sup>th</sup> JANUARY 2024</b> Upto <b>3:00 P.M</b> at the Office of the Assistant General Manager Bank of Maharashtra, Head Office, Lokmangal Building, 1501, Shivaji Nagar, Pune   |
| v)    | Date & Place of Address for Opening of the Tenders              | On <b>30<sup>th</sup> JANUARY 2024</b> At <b>4:00 P.M</b> at the Office of the Assistant General Manager, Corporate Services Department, Bank of Maharashtra, Head Office, Lokmangal Building, 1501, Shivaji Nagar, Pune.  |
| vi)   | Earnest money Deposit   | <b>Rs. 6,00,000/- (Rupees Six Lakhs Only)</b> by means of a Demand Draft / Pay Order / Bankers Cheque (Valid for 90 Days from the last date of submission of tender) from any scheduled Nationalized Bank drawn in favour of Bank of Maharashtra, Payable at Pune  |
| vii)  | Performance Security deposit (PSD)                              | For the successful bidder, who is awarded the project, 5% of the contract value is in the form of performance security deposit which includes the EMD amount paid along with the tender. Performance Security Deposit is payable within 14 days from the date of award of the work in the form of Letter of Intent / Detailed Word Order / Tender acceptance Letter, whichever is earlier. This Performance security deposit amount will be adjusted in the Final Bill amount  |
| viii) | Quantum of Retention Amount                                     | Deductible in running bills: The 10% of the gross value of the work done will be deducted as Retention Money from each Running Account Bill aggregating to 5%. of the actual project cost including EMD, Initial security deposit and retention money recovered in each RA bill  |
| ix)   | Refund of security deposit                                      | Total security deposit shall be 5% of the contract value or total executed value, whichever is higher. Upon issuance of Virtual Completion Certificate (VCC) by the architect and its approval by Bank, half of the Security Deposit amount (i.e. 2.5% of the total contract value or total executed value, whichever is higher) shall be released. Upon completion of <b>Defect Liability period (Of 12 months)</b> in case of CVC audit process, post its completion, the remaining retention amount (i.e. 2.5% of the contract value or total executed value, whichever is higher) shall be released. However if CVC audit process is not over, then only 1.25% of the contract value or total executed value, whichever is higher shall be released & remaining 1.25% of contract value or total executed value, whichever is higher, upon completion of CVC audit process |

- x) Time allowed for completion for **12 months** from the date of commencement of work or date of the Letter of Intent / Detailed Word Order / Tender acceptance Letter, whichever is earlier
- xi) Date of Commencement Within 7<sup>th</sup> day from the date of issue of Letter of Intent / Detailed Word Order / Tender acceptance Letter, whichever is earlier
- xii) Terms of payment of Bills Interim bills or periodical running bills Running Bill/ interim payment shall be based on minimum value of work for Rs. 80.00 Lakhs. No advance on account bills: materials / plant / machinery or mobilization advance shall be paid in any circumstances.
- xiii) Liquidated damages (Delay Penalty) 0.5% (Zero Point Five) of the Contract Value per Week or part there of subject to maximum of 5% of the actual project cost

6. I/We agree that If our tender is accepted we will, obtain and arrange;
  - a. Security Deposit and Performance Security as defined.
  - b. Insurances.
  - c. Labour Licenses.
  - d. All statutory obligation, if any, as a contractor prior to commencement of work as stated in above.
7. I/We agree that, Separate intimation of date for opening of price bid will be made to only pre-qualified bidders. The sealed price bids of disqualified bidders will be returned by post or can be collected by-hand. In case of any of the condition put-forth by any of the bidding agency, the bidder shall be asked to withdraw the condition or otherwise the particular tenderer shall be disqualified and price bids of remaining tenderers shall be opened on the same day.
8. I/We agree to execute all the works therein referred to you entire satisfaction and as detailed in the contract sum analysis herewith attached.
9. I/We agree to abide by and fulfill the terms and provisions of the said conditions of contract annexed hereto so far as they may be applicable or in default thereof to forfeit and pay to the **Bank of Maharashtra** the amount mentioned in the said contract.
10. I/We have submitted a Demand Draft for a sum of **Rs. 6,00,000/- (Rupees Six Lakhs Only)** as Earnest money with the **Bank of Maharashtra**, payable at Pune, which amount is not to bear any interest. Should I/we fail to execute the contract when called upon to do so, I/we do hereby agree that this sum shall be forfeited by to the **Bank of Maharashtra**.
11. I/We agree that if this tender is accepted we agree to provide an Performance Security Deposit (for a sum equivalent to 5% (Five Percent) of the contract vale including EMD for the due performance of the contract under the terms of the conditions of Contract within 14 days of acceptance of tender. The same shall be returned to the contractor (without interest) after issue of Virtual Completion Certificate by the Architect and accepted by bank.

12. I/We agree that the validity of this tender is for a period of 90 days from the date of opening of the tender and it shall remain binding upon us and may be accepted by the **Bank** at any time before the expiration of that period without any additional cost. Further the percent rate quoted for Price bid shall remain valid upto 120 days from opening of Price Bid for acceptance of bank and I/We agree to complete the project on same rate until the completion of the work in all respect. Bank may increase validity period if required.
13. I/We agree to execute a formal agreement when it is prepared and this Tender together with Bank's written acceptance thereof, shall constitute a binding contract between us. The agreement has to be entered in non-judicial stamp paper of value as per as per latest Maharashtra Stamp Act and we agree to bear the entire cost of agreement charges.
14. I/We agree to pay Government VAT, Sales-Tax (State & Central), Service Tax, Central Excise Duty, Octroi, Work Contract Tax and all taxes as prevailing from time to time, on such items for with the same are leviable and the rates quoted by us are inclusive of the same.
15. I/We agree to return you all reports and technical data provided for our use in preparing this tender and in the subsequent conduct of the works. We undertake that we will not use the same for any other work /purpose.
16. I/We submit this bid with the full understanding that our offer fully complies with the bidding documents requirements of the Bank and that no deviation / exception to the bidding documents have been taken by us. I/We also agree that in case we have taken any alteration/exceptions / deviations/omission to the bidding documents, the Banks will be free to reject our offer on account of such alteration/exceptions / deviations/omission.
17. I/We agree that any dispute arise after post award of work, it shall be based on dispute resolution procedure as mentioned in Clause - 40 of Section I, General Conditions of Contract and as per Arbitration and Conciliation Act 1996 as amended by Arbitration and Conciliation (Amendment) Act, 2015.
18. I /we agree that Indian law shall be govern the terms and conditions under this tender & contract.
19. NOTE: ALL PAGES OF THE TENDER DOCUMENTS SHALL BE SIGNED & STAMPED.

Our bankers are:

- i)
- ii)

Yours faithfully,  
Signature of Tenderer  
(By the authorized signatory of the  
Lead firm with Board resolution  
Reference and common seal of company)

WITNESS

- i)      Signature:  
            Occupation:  
            Address:
  
- ii)     Signature :  
            Occupation:  
            Address:

**SECTION:V**

**ARTICLES OF AGREEMENT (FORMAT)**

**(on non-judicial stamp paper of value as per latest Maharashtra Stamp Act)**

This AGREEMENT is made at \_\_\_\_\_ on \_\_\_\_\_ day \_\_\_\_\_ and \_\_\_\_\_ month of 2024

BY and BETWEEN

BANK OF MAHARASHTRA a Bank constituted by the Banking Companies (Acquisition and Transfer of Undertakings) Act 1970 and having its Head Office at Lokmangal 1501 Shivajinagar Pune 411005 hereinafter called the "Bank" (which expression shall include its successors and assigns) of the One Part.

AND

\_\_\_\_\_ CONTRACTOR, a registered firm/company having its office at \_\_\_\_\_, hereinafter referred to as "The Contractor" carrying on business as \_\_\_\_\_ in the firm name and style of M/s \_\_\_\_\_ (address- \_\_\_\_\_) (hereinafter called the Contractor (which expression shall include wherever the context so admits, its heirs, executors, administrators, successors and assigns) of the OTHER PART (Hereinafter Bank and the consultants are hereinafter jointly referred to as "Parties" and individually as "Party", as the context may require)

Whereas the Bank of Maharashtra has floated RFP vide **AX1/CSD/TENDER/37/23-24** Dated \_\_\_\_\_, hereinafter called as "said tender document" with following details as:

Date of Issue: \_\_\_\_\_

Last date of submission: \_\_\_\_\_

Date of Opening of Technical Bid: \_\_\_\_\_

for the work of "Construction Of Zonal Office And Branch At Bank Of Maharashtra's Owned Plot, Situated At Plot No.1a/1a/3, Gut.No. 534, Mouje, Sadar Bazar, Satara 415001", hereinafter called as "said work" on the Bank's owned plot (hereinafter referred to as the said plot of land).

**WHEREAS**

The Bank has for the above purpose have appointed M/s. Arch D.O. Nikam its Architects cum Consultant having office at Flat No: 201, Shelke Building, Pulachiwadi, Deccan Gymkhana, Pune - 411004. (Hereinafter referred to as the Architect cum Consultant) for prepared of the building plans, drawings and specifications and also for monitoring and supervision of day – to day works and progress thereof on behalf of Bank. The expression "**Structural Consultant**" shall mean and refer to Structural Consultants viz. M/s. Precision Precast Solutions Pvt Ltd Engaged by the Architect cum Consultant to carry out on his behalf structural consultancy with the approval of the Bank for the said work. The Architect cum Consultant to provide the authority letter of Structural Consultant to Bank for Approval or in the event of their ceasing to be the Structural Consultants for this project, such other person or persons as may be appointed by the Architect cum Consultant with the approval of the Bank.

1. AND WHEREAS the said drawings – Layout inclusive of the Specifications and the Bill of Quantities with rates have been signed by or on behalf of the parties hereto.



2. AND WHEREAS the Contractor has agreed to execute upon and subject to the conditions set forth herein in the Technical Bid document of the tender and attached drawings for the work which are approved by the Satara Municipal Council (All of which are collectively hereinafter referred to as the "the contract conditions") the works shown upon the said drawings and/or described in the said specifications and included in the Bills of Quantities at the respective quoted \_\_\_\_\_percentage rates therein set forth amounting to the sum as therein arrived at or such other sums as shall become payable \_\_\_\_\_hereunder(Rupees \_\_\_\_\_without GST) (hereinafter referred to as "the said Contract Sum") as mentioned and quoted in the tender by the Contractor.

3. NOW IT IS HEREBY AGREED AS FOLLOWS:

- i. In consideration of the said contract value to be paid by the Bank to the Contractor at the time and in the manner set forth in the said contract documents and in accordance with the Schedule of payments to execute and complete the work shown upon the said Drawings and the approved building plans strictly in accordance with the specifications and priced schedule of quantities and other contract documents.
- ii. The said contract documents shall be read and construed as forming part of this contract and the parties hereto shall respectfully abide by, submit themselves to the said conditions and perform the agreements on their part respectively contained in the said conditions.
- iii. In Consideration of the said Contract, Sum to be paid at the times and in the manner set forth in said conditions, the Contractor shall upon the subject to the said conditions execute the work as per technical specifications and the priced Bills of Quantities.
- iv. The Bank shall pay the Contractor the said Contract Sum, or such other sum as shall become payable as per this agreement, at the times and in the manner specified in the said Conditions and all such payments shall be made at Head Office, Pune.
- v. Copy of the tender documents, inclusive of bill of quantities and technical specifications are annexed here as Annexure I and II respectively and the conditions of contract (collectively referred to in this clause as 'said documents') shall be read and construed as forming part of this agreement and the parties hereto shall respectfully abide by, submit themselves to the said documents and perform the Agreements on their part respectfully contained in the said documents.
- vi. The plans, agreements and document mentioned herein shall form the basis of this Contract.
- vii. This Contract is percent rate contract as mentioned above and is a re-measurable Item wise to carry out the work in respect of the entire works to be paid for according to the rates contained or as provided in the said conditions.
- viii. The Contractor shall afford every reasonable facility for the carrying out of all the works in manner laid down in the said conditions and shall make good any damages done to walls, floors, ceilings etc. after the completion of the works.
- ix. The Bank reserves to itself the right of altering the drawings and the nature of the works by adding to or omitting any items of the works or having portions of the same carried out without prejudice to this contract. There shall be no limit on the scope and

extent of changes that can be ordered by the BANK subject to the condition stipulated in succeeding paragraph and the Contractor shall not be entitled to any compensation or claim due to such change (s) / Order (s) by the BANK. The Contractor will only be paid for the actual quantity of works executed payable at the accepted unit rates. The rate quoted shall remain valid for variation of quantity against individual item to any extent. Such variations shall not warrant any claims for modifications to already quoted and accepted rates.

- x. Time is Essence of the Contract. The Works should be completed in all respect in accordance with the terms of contract within a period of 12 months from the commencement date.
- xi. All payments by the BANK under this contract will be made only at Head Office, Pune, in Indian Rupees (INR). The Contractor will have to submit at running account bills and final bill in two copies.
- xii. Liquidated damages:  
In the opinion of Bank, if any delay in execution is attributable to the fault or any act of commission/omission of the contractor, Bank shall be entitled to recover liquidated damages at the rate of 0.5% of the total fees per week (7 days) of delay. Total recoveries on account of delays and / or any other loss or damage caused to the Bank due to defective work on part of contractor shall be limited to maximum of 5% of total contract amount. The decision of Bank in this matter shall be final and binding on the contractor. The Bank shall, however give to the contractor an opportunity of being heard.  
The liquidated damages for non-compliance of the works within 30 Days period shall be 0.5% per week of Delay subject to a maximum of 5% of Contract Sum.
- xiii. The rates quoted by the Tenderer, shall be firm till completion of the entire WORKS and the rates quoted in the tender document shall be inclusive of all Duties, Levies, Insurance, Premium, Cess, ESI, PF, Surcharge, Labour laws, duties, labour charges, labour insurance premiums, all type of Taxes such as Octroi, Works Contract Tax, CST, BST, LBT, Insurance premiums of all types and any other levies / duty / tax but exclusive of GST imposed by state, central government and any of the local authorities.
- xiv. All disputes arising out of or any way connected with this agreement shall be deemed to have arisen at Pune and only courts in Pune shall have the jurisdiction to determine the same.
- xv. That all parts of this contract and its annexed documents and tender documents have been read by the Contractor and fully understood by the contractor.
- xvi. The selected tenderer shall comply with all Rules regulations of Extant Labour Regulation Act, Satara Municipal Council and its Fire Department while carrying out the said work. In case any rules are deviated then such work shall be dismantled and reinstate the same at contractors cost to the satisfaction of the Architect/ Bank.
- xvii. Contractors shall have to make all the arrangements for getting required permission/ passes for the Labour connected with the project, prior to commencement of the work from the Bank's Authority.
- xviii. All the debris lying at site shall be properly stocked and disposed-off from time to time.

- xix. Contractor shall take all safety measures and precautions during the ongoing works. All the safety procedure & equipment's shall be adhered while carrying out the subject scope of work. Any untoward happens due to negligence from the contractor or his labour, in such case, contractor shall have sole responsibility for all the cost effect, penalties and other litigation issues.

4. Dispute resolution:

The Bank and the Contractor shall make every effort to resolve amicably, by direct informal negotiation between the respective parties, any disagreement or disputes arising between themselves under or in connection of the terms of the contract. The provision of arbitration as per the Arbitration and Conciliation Act 1996 as amended by Arbitration and Conciliation (Amendment) Act, 2015 shall be applied all as mentioned in cl No. 40 of Arbitration of GCC

Arbitration proceedings shall be conducted in Pune. Language of the arbitration shall be in English. The Award of the Arbitrator shall be Final and binding on the parties.

5. Indemnity:

- i. The contractor hereby agrees and undertakes to indemnify and keep indemnified, saved, defended, harmless, the bank, its successors and assign at all times against all losses, costs, claims, expenses, charges, damages etc. whatsoever which the bank may suffer or incur:
- ii. By reason of any act or omission of the contractor and/or his/their employee/s and/or representative which is contrary to or inconsistent with or in breach of the terms and conditions of this agreement or any instructions/guidelines that may be given by the bank from time to time.
- iii. Arising out of the act of commission or omission by the consultant, agencies, his employee/s, representatives etc.
- iv. For any other reason whatsoever including wrong assessment or assessment which is not as per the prescribed procedure and norms.
- v. The bank shall not be liable or responsible for any act or omission on the part of the consultant or his employee/s, representative/s, etc. done while performing the contractual obligations which may result into criminal, civil or tortuous liability. The consultant shall be exclusively responsible and liable for all such acts and omissions.
- vi. The Bank shall be at liberty to proceed legally against the contractor in case of breach of any condition enumerated in the agreement and contractor shall at his own cost defend such legal action and shall indemnify and keep the Bank indemnified against the loss and cost/expenses including legal expenses that are incurred or might be incurred while proceeding with such legal action or pendency of such legal action/s.

6. NON Disclosure:

It is hereby agreed that all the parties in this agreement hereby agree as follows.

- i. Bidder shall hold all information about this tender and / or information gathered about the Bank through this process in strict confidence with the same degree of care with which Bidder protects its own confidential and proprietary information. Bidder shall restrict disclosure of the information solely to its employees, agents and Sub-contractors on a need to know basis advise those persons of their obligations hereunder with respect to such Information.
- ii. To use the information only as needed for the purpose solely related to this project.
- iii. Except for the purpose of execution of this Project, not disclose or otherwise provide such information or knowingly allow anyone else to disclose or otherwise provide such information.
- iv. Bidder shall disclose any information to parties not involved in supply of the products and services forming part of this order and discloser of information to parties not involved in supply of the products and services forming part of this order will be

treated as breach of trust and invite legal action. This will also mean termination of the contract and disqualification of the Contractor in any future tendering process of the Bank.

- v. Any information considered sensitive must be protected by the Bidder from unauthorized disclosure or access.
- vi. Any information, Photographs, Floor plan relating to the Interior/details of the Branch/Zonal office premises must be protected by the Bidder from unauthorized disclosure or access.

7. Insurance: THE CONTRACTOR shall strictly adhere to the clause for Insurance of work & Insurance against accident/ death etc. to workmen as mentioned in the tender document.

8. Applicable Laws & Jurisdiction: "This Agreement shall be construed and interpreted in accordance with and governed by the laws of India, and the courts at Pune shall have exclusive jurisdiction over matters arising out of or relating to this Agreement".

9. Severability: If any of the provisions of this Agreement may be constructed in more than one way, one of which would render the provision illegal or otherwise voidable or enforceable, such provision shall have the meaning that renders it valid and enforceable. In the event any court or other government authority shall determine any provisions in this Agreement is no amended so that it is enforceable to the fullest extent permissible under the laws and public policies of the jurisdiction in which enforcement is sought and affords the parties the same basic rights and obligations and has the same economic effect as prior to amendment. In the event that any of the provisions of this Agreement shall be found to be void, but would be valid if some part thereof was deleted or the scope, period or area of application were reduced, then such provision shall apply with the deletion of such words or such reduction of scope, period or area of application as may be required to make such provisions valid and effective, provided however, that on the revocation, removal or diminution of the law or provisions, as the case may be, by virtue of which such provisions contained in this Agreement were limited as provided hereinabove, the original provisions would stand renewed and be effective to their original extent, as if they had not been limited by the law or provisions revoked. Notwithstanding the limitation of this provision by any law for the time being in force, the Parties undertake to, at all times observe and be bound by the spirit of this Agreement.

10. Termination of Contract:

The termination of the contract shall be as per cl no. 64 of GCC and 36.41 of Special Conditions of Contract (SCC).

11. IN WITNESS WHEREOF THE BANK and the contractor have set their respective hands to these presents and duplicates hereof the day and year first hereinabove written

#### SIGNATURE CLAUSE

Signed and delivered by the \_\_\_\_\_ by the hand of  
Shri \_\_\_\_\_  
(Name & Designation) (**BANK**)

In presence of:

(1) \_\_\_\_\_

Address:

(2) \_\_\_\_\_

Address:

(Witnesses)

Signed and delivered by the \_\_\_\_\_ by the hand of  
Shri \_\_\_\_\_

(Name & Designation) (**CONTRACTOR**)

In presence of:

(1) \_\_\_\_\_

Address:

(2) \_\_\_\_\_

Address:

(Witnesses)

## SECTION: VI

### **PRE- CONTRACT INTEGRITY PACT**

General: This pre-bid pre-contract Agreement (hereinafter called the Integrity Pact) is made on \_\_\_\_\_ day of month of \_\_\_\_\_ 2024, between on one hand, Bank of Maharashtra through authorized official Shri. \_\_\_\_\_, Assistant General Manager, Corporate Services Department, Bank of Maharashtra 1501, Shivajinagar, Pune (hereinafter called the "BANK", which expression shall mean and include unless the context otherwise required, his successors in office and assigns) of the First Part and M/s \_\_\_\_\_ represented by Shri. \_\_\_\_\_ Proprietor (herein called the "BIDDER" which expression shall mean and include unless the context otherwise requires his successors and permitted assigns) of the Second Part.

WHEREAS the BANK proposes to carry out "Construction Of Zonal Office And Branch At Bank Of Maharashtra's Owned Plot, Situated At Plot No.1a/1a/3, Gut.No. 534, Mouje, Sadar Bazar, Satara 415001" (said work) and the BIDDER is willing to offer/has offered for the aforesaid work and

WHEREAS the BIDDER is a private company/public company/Government undertaking/partnership/registered export agency/LLP, constituted in accordance with the relevant law in the matter and the BUYER is Corporate Services Department of Bank of Maharashtra

NOW, THEREFORE,

To avoid all forms of corruption by following a system that is fair transparent and free from any influence/ prejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to: -

Enabling the BANK to obtain the desired said Equipment/product/services at a competitive price in conformity with the defined specifications by avoiding the high cost and the distortionary impact of corruption on public procurement, and

Enabling BIDDER to abstain from bribing or indulging in any corrupt practice in order to secure the contract by providing assurance to them that their competitors will also abstain from bribing and other corrupt practices and the BANK will commit to prevent corruption, in any form by its officials by following transparent procedures.

The parties hereto hereby agree to enter into this Integrity Pact and agree as follows:

Commitments of the BANK:

1.1. The BANK undertakes that no officials of the BANK, connected directly or indirectly with contract will demand, take a promise for or accept directly or through intermediaries any bribe, consideration gift reward favor or any material or immaterial benefit or any other advantage from the Bidders either for themselves or for any person, organization or third party related to the contract in exchange for an advantage in the bidding process, bid evaluation contracting or implementation process related to the contract.

1.2. The BANK will, during the pre-contract stage, treat all BIDDERS alike, and will provide to all BIDDERS the same information and will not provide any such information to any particular BIDDER which could afford an advantage that particular BIDDER in comparison to other BIDDERS.



1.3. All the officials of the BANK will report to the appropriate Government office any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach.

2. In case any such preceding misconduct on the part of such official(s) is reported by the BIDDER to the BANK with full and verifiable facts and the same is prima facie found to be correct by the BUYER, necessary disciplinary proceedings or any other action as deemed fit, including criminal proceedings may be initiated by the BUYER and such a person shall be debarred from further dealings related to the contract process. In such a case while an enquiry is being conducted by the BANK the proceedings under the contract would not be stalled.

#### COMMITMENTS of BIDDERS

3. The BIDDER commits itself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of its bid or during any pre-contract or post contract stage in order to secure the contract or in furtherance to secure it and in particular commit itself to the following: -

3.1. The BIDDER will not offer, directly or through intermediaries, any bribe gift consideration reward favor, any material or immaterial benefit or other advantage, commission fees, brokerage or inducement to any official of the BANK, connected directly or indirectly with bidding process, or to any person organization or third party related to the contract in exchange for any advantages in the bidding, evaluation contracting and implementation of the contract.

3.2. The BIDDER further undertakes that it has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favor, any material benefit or other advantage commission fees brokerage or inducement to any officials of the BUYER or otherwise in procuring the Contract or forbearing to do or having done any act in relation to the obtaining or execution of the contract or any other contract with the Government for showing or forbearing to show favor or disfavor to any person in relation to the contract or any other contract with Government.

3.3. BIDDERS shall disclose the name and address of agents and representatives and Indian BIDDERS shall disclose their foreign principals or associates.

3.4. BIDDERS shall disclose the payments to be made by them to agents/brokers or any other intermediary, In connection with bid/contract.

3.5. The BIDDER further confirms and declares to the BANK that the BIDDER is the original manufacturer/integrator and not engaged any individual or firm or company whether Indian or foreign to intercede, facilitate or in any way to recommend to the BUYER or any of its functionaries whether officially or unofficially to the award of the contract to the BIDDER, nor has any amount been paid, promised or intended to be paid to any such individual firm or company in respect of any such intercession facilitation or recommendation.

3.6. The BIDDER, either while presenting the bid or during pre-contract negotiations or before signing the contract shall disclose any payments he has made is committed to or intends to make to officials of the BANK or their family members, agents, brokers or any other intermediaries in connection with the contract and the details of services agreed upon for such payments.

3.7. The BIDDER will not collude with other parties interested in the contract impair the transparency fairness and progress of the bidding process, bid evaluation contracting and implementation of the contract.

3.8. The BIDDER will not accept any advantage in exchange for any corrupt practice unfair means and illegal activities.

3.9. The BIDDER shall not use improperly, for purposes of competition or personal gain, or pass on to others any information provided by the Bank as part of business relationship, regarding plans, technical proposals and business details including information contained in any electronic data carrier. The BIDDER also undertakes to exercise due and adequate care lest any such information is divulged.

3.10. The BIDDER commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.

3.11. The BIDDER shall not instigate or cause to instigate any third person to commit any of the actions mentioned above.

3.12. If the BIDDER or any employee of the BIDDER or any person acting on behalf of the BIDDER either directly or indirectly, is a relative of any of the officers of the BANK, or alternatively, if any relative of an officer of the BANK has financial interest/stake in the BIDDER's firm, the same shall be disclosed by the BIDDER at the time of filing of tender. The term 'relative; for this purpose, would be as defined in Section 6 of the Companies Act 1956

3.13. The BIDDER shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee of the BANK.

#### 4. Previous Transgression

4.1. The BIDDER declares that no previous transgression occurred in the last three years immediately before signing of this Integrity Pact, with any other company in any country in respect of any corrupt practices envisaged hereunder or with any Public Sector Enterprise in India or any Government Department in India that could justify BIDDER's exclusion from the tender process.

4.2. The BIDDER agrees that if it makes incorrect statement on this subject, BIDDER can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

#### 5. Earnest Money (Security Deposit)

5.1. While submitting commercial bid, the BIDDER shall deposit an amount Rs 6,00,000 (to be specified in RFP) as Earnest Money Deposit/ Security Deposit, and Tender fee of Rs 10,000/- with the BANK through any of the following instruments:

5.1.1. Bank Draft or Pay Order in Favor of **Bank of Maharashtra**

5.1.2. A Confirmed guarantee by an Indian Nationalized Bank, promising payment of the guaranteed sum to the BANK on demand within three working days without any demure whatsoever and without seeking any reason whatsoever. The demand for payment by the BUYER shall be treated as conclusive proof of payment.

5.2. The Earnest Money/Security Deposit shall be valid up to a period of as mentioned in the tender clause or the complete conclusion of the contractual obligations to the complete

satisfaction of both the BIDDER and the BANK, including warranty period, whichever is later. Tender fee will be non-returnable once paid to the Bank.

5.3. In case of the successful BIDDER a clause would also be incorporated in the Article pertaining to Performance Bond/performance security deposit for the said work that the provisions of Sanctions for Violation shall be applicable for forfeiture of performance Bond/performance security deposit in case of decision by the Bank to forfeit the same without assigning any reason for imposing sanction for violation of this Pact.

5.4. No interest shall be payable by the Bank to the BIDDER in Earnest Money/Security Deposit for the period of its currency.

## **6. Sanctions for Violations:**

6.1. Any breach of the aforesaid provisions by the BIDDER or any one employed by its or action on its behalf (Whether with or without the knowledge of the BIDDER) shall entitled the Bank to take all or any one of the following actions, wherever required: -

6.1.1. To immediately call of the pre contract negotiations without assigning any reason or giving any compensation to the BIDDER. However, the proceedings with the other BIDDER(s) would continue.

6.1.2. The Earnest Money Deposit (in pre-contract stage) and /or Security Deposit / Performance Bond /performance security deposit (after the contract is signed) shall stand forfeited either fully or partially, as decided by the Bank and the Bank shall not be required to assigning any reason therefore.

6.1.3. To immediately cancel the contract, if already signed, without giving any compensation to the BIDDER.

6.1.4. To recover all sums already paid by the BANK, and in case of an Indian BIDDER with interest thereon at 2% higher than the prevailing Prime Lending Rate of State Bank of India, while in case of a BIDDER from country other than India with interest thereon at 2% higher than the LIBOR. If any outstanding payment is due to the BIDDER from the Buyer in connection with any other contract for any other project such outstanding payment could also be utilized to recover the aforesaid sum and interest.

6.1.5. To encash the advance Bank guarantee and performance bond/warranty bond, if furnished by the BIDDER, in order to recover the payments, already made by the Bank, along with interest.

6.1.6. To cancel all or any other Contracts with the Bidder. The Bidder shall be liable to pay compensation for any loss or damage to the Bank resulting from such cancellation/rescission and the BANK shall be entitled to deduct the amount so payable from the money(s) due to the Bidder.

6.1.7. To debar the BIDDER from participating in future bidding processes of the Bank for a minimum period of five years, which may be further extended at the discretion of the BANK.

6.1.8. To recover all sums paid in violation of this Pact by Bidder(s) to any middleman or agent or broker with a view to securing the contract.

6.1.9. In cases where irrevocable letter of credit has been received in respect of any contract signed by the BANK with the BIDDER, the same shall not be opened

6.1.10. Forfeiture of Performance Bond in case of a decision by the BANK to forfeit the same without assigning any reason for imposing sanctions for violation of this Pact.

## **7. Independent Monitors:**

1.1. The BANK has appointed Independent Monitors

Name: Arun Jha

Designation: Secretary to GOI (National Commission for Scheduled Castes)

Email id : arunjha01@gmail.com

Name: Umesh Vasant Dhattrak

Designation: Officer of Public Sector Unit (Rashtriya Chemicals & Fertilizers Unit)

E-Mail id : uvdhattrak@gmail.com

(Hereinafter referred to as Monitors) for this Pact in consultation with the Central Vigilance Commission.

1.2. The task of the Monitors shall be to review independently and objectively whether and to what extent the parties comply with the obligations under this Pact.

1.3. The Monitors shall not be subject to instructions by the representatives of the parties and performs their functions neutrally and independently.

1.4. Both the parties accept that the Monitors have the right to access all the documents relating to the project/procurement, including minutes of meetings.

1.5. As soon as the Monitor notices, or has reason to believe, a violation of this Pact, he will so inform the Authority designated by the BANK.

1.6. The BIDDER(s) accepts that the Monitors has the right to access without restriction to all Project documentation of the BANK including that provided by the BIDDER. The BIDDER will also grant the Monitor upon his request and demonstration of a valid interest, unrestricted and unconditional access to his pocket documentation. The same is applicable to subcontractors. The Monitor shall be under contractual obligation to treat the information and documents of the BIDDER/subcontract(s) with confidentiality.

1.7. The BANK will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the parties. The parties will offer to the Monitor the option to participate in such meetings.

1.8. The Monitor will submit a written report to the designated Authority of BANK in the Department/within 8 to 10 weeks from the date of reference or intimation to him by the BANK/BIDDER and, should the occasion arise, submit proposals for correction problematic situations.

## **9. Facilitation of Investigation**

In case of any allegation of violation of a provisions of this Pact or payment of commission the BANK or its agencies shall be entitled to examine all the documents including the Books

of Accounts of the BIDDER and the BIDDER shall provide necessary information and documents in English and shall extend all possible help for the purpose of such examination.

## **10. Law and Place of Jurisdiction**

All disputes whatsoever arising between the parties out of or in relation to the construction, meaning and operation of effect of these Tender Documents or breach thereof shall be settled amicably. If, however, the parties are not able to solve them amicably within 30 days, the same shall be settled as per the procedure mentioned at ARBITRATION clause at page no. 30-31 of this RFP in accordance with the applicable Indian laws and the award made in pursuance thereof shall be binding on the parties. The Arbitrator/Arbitrators shall give a reasoned award. Any appeal will be subject to the exclusive jurisdiction of courts at PUNE.

## **11. Other Legal Actions:**

The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the extant law in force relating to any civil or criminal proceedings.

## **12. NON Disclosure:**

It is hereby agreed that all the parties in this agreement hereby agree as follows: Contractor shall hold all information about this tender and /or information gathered about the Bank through this process in strict confidence with the same degrees of care with which contractor protects its own confidential and proprietary information. Contractor shall restrict disclosure of the information solely to its employees, agents and sub-contractors on a need to know basis and advise those persons of their obligations hereunder with respect to such information. To use the information only as needed for the purpose solely related to this project: Except for the purpose of execution of this project, not disclose or otherwise provide such information or knowingly allow anyone else to disclose or otherwise provide such information. Contractor shall not disclose any information to parties not involved in supply of the products and services forming part of this order and disclose any information to parties not involved in supply of the products and services forming part of this order will be treated as breach of trust and invite legal action. This will also mean termination of the contract and disqualification of the contractor in any future tendering process of the Bank. Any information considered sensitive must be protected by the contractor from unauthorized disclosure or access.

## **13. Validity:**

13.1. The validity of this Integrity Pact shall be from date of its signing and extend up to 2 years or the complete execution of the contract to the satisfaction of both the BANK and the BIDDER/Seller, including warranty period whichever is later, in case BIDDER is unsuccessful, this Integrity Pact shall expire after six months from the date of the signing of the contract.

13.2. Should one or several provisions of this pact turn out to be invalid; the remainder of this Pact shall remain valid. In this case, the parties will strive to come to an agreement to their original intentions.

14. The parties hereby sign this Integrity Pact at \_\_\_\_\_ on \_\_\_\_\_

BANK

Name of the Officer:

Designation:

Corporate Services Department

Bank of Maharashtra

(Office Seal)

BIDDER

Proprietor

(Office Seal)

Place \_\_\_\_\_

Date \_\_\_\_\_

Witness:

1 \_\_\_\_\_

(Name & Address) : \_\_\_\_\_

2 \_\_\_\_\_

(Name & Address) : \_\_\_\_\_

Witness

: 1 \_\_\_\_\_

(Name & Address) : \_\_\_\_\_

2 \_\_\_\_\_

(Name & Address) : \_\_\_\_\_



## SECTION VII

### SCHEDULES FOR SUPPLEMENTARY INFORMATION

S.N	Particulars	Remarks
1	Validity of Tender	90 days from date of Tender Opening (Technical Bid).120 days from date of Financial bid. The validity of price bid shall remain for 120 days from opening of price bid. Bank may increase the validity of tender above aforesaid days,if required.
2	Tender Issuing Authority	Corporate Services Department, Bank of Maharashtra, Head Office, Lokmangal, 1501, Shivaji Nagar, Pune-411 005.
3	Address for Submission of Tender	Assistant General Manager, Corporate Services Department, Bank of Maharashtra, Head Office, Lokmangal, 1501, Shivaji Nagar, Pune-411 005.
4	Opening of Tender	Assistant General Manager, Corporate Services Department, Bank of Maharashtra, Head Office, Lokmangal, 1501, Shivaji Nagar, Pune-411 005.
5	Period of Commencement of works from Employer's work order	Within 15 days of issue of work order including Mobilization period
6	Time / Period of Completion	12 (Twelve) months - 06 Months for RCC works & 06 Months for Finishing works
7	Liquidated Damages (L.D.)	i. 0.5% of Contract value per week of delay ii. Limited to maximum 5% of Contract Value.
8	Tender Fee	Rs 10,000/-
9	E M D	Rupees Six Lakhs Only
10	Amount of Security Deposit/Retention Money	i. Performance Security Deposit (5% of contract value) to be submitted within 7 days from the date of award of works including EMD. ii. Retention Money 5% of Contract Price shall be deducted at pro-rata percentage starting from RA Bill till final bill. Said amount will be retained upto defect liability period.
11	Material Advance	75% of nonperishable Material brought at site against indemnity bond of tendered Rate amount and after submission of valid challan, receipt etc of the material brought at site. Necessary Test Certificate is to be submitted with Advance bill. This advance shall be treated against the material brought at site. Also material which shall be immediately incorporated in the work as per schedule will only be taken under consideration for material advance. The period of utilization shall be not more than 30 days.
12	Mobilization Period	Please refer Sr. 5 hereinabove
13	Submission of Interim Bill /R.A. Bills	Once per month or R.A. Bill and Minimum Value of Interim Bill shall not less than Rs. 80.00 Lakhs.
14	Time within which payment to be made after submission of	Ad-hoc amount i.e. 75% of the running bill amount as certified by the APC and accepted by Bank's Engineer will be released in 15 (Fifteen) working days from the date of

S.N	Particulars	Remarks
	correct bill	receipt of the APC's certificate/ Recommendation with all the supporting documents. The final payment of the running bill amount will be released in 30 (Thirty) working days from the date of receipt of the APC's certificate/ Recommendation with all the supporting documents. No interest shall be payable for any delay whatsoever in releasing the interim payment.
15	Submission of Final Bill of taking over certificate from the APC	Within 45 days of receipt
16	Time for Certification of Final Bill	Within 60 days of Submission
17	Time for payment of Final Bill within 90 days after certification	Admissible payments
18	Program Submission /Work Methodology	Within 7 days of issue of work order
19	Insurance shall be obtained	Following minimum cost
20	CAR Policy	Project cost. All insurance policies to remain in force till completion of contract period for 110% of contract amount.
21	Workmen's compensation	Insurance as per Workmen's Compensation Act of India
	a) Third Party	<b>Yes</b>
	b) Personal	50 Lakhs
	c) Accident	50 Lakhs
22	Type of Contract	Percentage Rate contract
23	Price Escalation	No Price Escalation
24	Basic Rates	As specified in the tender/ Bill of Quantities (if mentioned in the tender)
25	Water supply	Contractor to make his own arrangement at his own cost
26	Electricity supply	Contractor to make his own arrangement at his own cost
27	Use of water / electricity by other contractors	As per direction of Architect cum Consultant (APC)/ Bank.
28	Fencing	Barricading and safety measures to be carried out as required by APC/ Bank
29	Space for Accommodation for Labour and Staff of Contractor	To be as per direction of APC / Bank. No space available at site for labour and staff of contractor accommodation
30	Space for site office and yard	To be as per of APC / Bank.
31	Defect Liability Period / months Maintenance Period	12months w.e.f a)Final Completion b)Final Billing Certificate
32	Jurisdiction	Pune

## SECTION VIII

### **ELIGIBILITY CRITERIA FOR PRE-QUALIFICATION AND SAMPLE FORMS FOR UPDATING PRE-QUALIFICATION INFORMATION**

#### **INSTRUCTIONS TO APPLICANTS:**

1. While deciding upon the pre-qualification of contractor emphasis will be given on the ability and competence of applicants to do good quality work within the specified time schedule.
2. Applications containing false and /or inadequate information will be summarily rejected.
3. Clarifications if any required, may be obtained from Bank of Maharashtra, Assistant General Manager, Corporate Services Department, Head Office, Lokmangal Building, 1501, Shivaji Nagar, Pune
  - **Name:** .....  
Corporate Services Department  
Head Office  
**Tel.** .....  
**Email:** .....
4. Mere fulfillment of minimum eligibility criteria will not entitle Pre-qualification as pre-qualification will be done after taking into account various parameters including receipt of satisfactory reports from clients.
5. Decision of the Bank in regard to pre-qualification of contractor shall be final. The Bank reserves the right to reject any or all applications without assigning any reason there to.

#### **BASIC INFORMATION**

##### **NOTES:**

- a) Information has to be filled up specifically in this form only. Do not write remark "As indicated in Brochure or as enclosed" unless asked for by Bank of Maharashtra.
- b) Information shall be limited to the Applicant. If any relevant data concerning the Group of Companies to which the Applicant belongs is desired to be given, the same shall be given separately in a supplementary sheet.
- d) Documentary evidence etc. have to be closed.

#### **The Companies / Firms that fulfill the criteria as given below shall be eligible:**

- 1.The Company should be either a Partnership or a Public Limited Company or a Private Limited Company or Proprietorship firm registered under the Indian Companies Act 1956.
- 2.The Company / Firm should have registration with Central/ State govt. bodies/ Public sector undertakings/ Public sector Banks and Railway.
- 3.The Company / Firm should have average financial turnover of Rs.7.0 Crores on similar works during the last three years ending 31st March 2022. The Profit & Loss Account & Balance sheet certified by CA with UDIN to be produced.

4. Reports on financial standing of the Company / Firm, annual turnover of the company / Firm, profit and loss statement and auditors report for last three years.

(Audited Balance sheets and copy of IT returns to be acknowledged)

5. The company / firm should have their Head Office/ Registered Office in Satara/Pune. The Telephone bill/ Electricity/ registered rental lease agreement will only be considered as an address proof of Satara/Pune location. Site office of other ongoing project shall not be treated as branch office.

6. The Contracting Company/ Firm during the last 7 years (ending 31<sup>st</sup> March 2022) should have satisfactorily completed the following works/ Projects:

1) At least **3 similar type** of works of individual contract value not less than **Rs.2.70 crores** within Maharashtra.

OR

2) At least **2 similar type** of works of individual contract value not less than **Rs 3.30 crores** within Maharashtra.

OR

3) At least **1 similar type** of works of individual contract value not less than **Rs. 5.30 crores** within Maharashtra.

**The definition of similar work shall mean Original Construction Works of whole building comprising of Civil works, Plumbing & Sanitary works, Water Supply, Internal & External Electrical works, Fire-fighting System, Fire Alarm System, HT & LT installation, L.V services works, Compound / Site Work and associated allied works etc. executed for Residential / Commercial buildings of multistoried for Public Sector Banks, PSU's, Government & Semi Government Organizations, Private Sector organizations, Financial Institutions, private entity. In case, if the works are executed within a single tender package comprising of Civil works, the work order and the completion certificate shall clearly indicate the amount of works completed pertaining to the above-mentioned services and as such the break-up thereof, which has to satisfy the minimum works qualifying criteria. No civil work related to repair/maintenance will be considered as similar work.**

**Note** =The contractors should provide proper documentary proof in support of satisfactory completion of similar works in terms of Certified copy of full occupation certificate from the concerned authority, Letter of award, photographic evidence, Completion certificate from the clients indicating the date of commencement, date of completion & estimated & actual cost of execution of the work failing which it may be treated that they have not completed such works. Certificate and testimonials of the project should clearly identify completion of the above activities satisfactorily for the projects referred to meet pre-qualification criteria. **No completion from PMC/Architect will be accepted by the Bank on proof of completion of works.** Completion Certificate shall be issued mentioning the above requirement with satisfactory completion of project. No Certificate of partial Completion or payment details will be considered as proof of experience.

7. Bank Solvency Certificate of **Rs. 2.70 Crores** and authority to seek references from Company's / Firm's Bankers and evidence of adequacy of working capital for this contract.

8. Should possess major construction equipment like H-frame, scaffolding and exterior cradles and detailed list of machinery and equipment to be submitted.
9. Should possess and furnish technical personnel with sufficient skill set in all the above work types and details of personnel with qualification and experience to be submitted.
10. Should possess in name of company or nominated sub-contractor valid license for executing water supply, sanitary, drainage works, Firefighting, fire detection and electrification, LV & site / compound works.
11. Confidential reports from previous employers will be sought by client.
12. A committee comprising Bank's representatives & ARCHITECTs representatives would inspect the work executed by the firms. The visit is to ascertain quality, workmanship & ability of the contracting firm.
13. The firm / company should have registration with GST, PF, ESIC and Prof. Tax and submit the proof of the same.
14. The firm should produce acknowledgement and copy returns of IT for the last three years.
15. Bidders shall have valid registration of establishments for employing building workers.
16. Bidders have to fulfil all the criteria of Pre-qualification failing which their bids will be summarily rejected and no correspondence in this regard will be entertained by the Bank.

**Form- 1 : Information Of The Company**

1.	Name of the Applicant and address of the Registered office. Phone No. : E-mail address : Name of Authorized representative: Mobile No. : Website, if any :	
2. (a)	Year of establishment (Enclose documentary evidence)	
(b)	No. of years of experience in the relevant field (Minimum experience required is 7 years as on 31.03.2022 in relevant field)	
3	Type of the organization (Whether sole proprietorship, Partnership, Private Ltd. or Co-operative body etc.)	
4.	Name of the Proprietor/Partners/Directors of Applicant with address and phone Numbers.	
	(a)	
	(b)	
	(c)	
	(d)	
5	Details of registration – Whether Partnership firm, Company, etc. Name of Registering Authority, Date and Registration number.	
6.	Whether the firm has worked for the Central/ State govt. bodies/ Public Sector/ Banks and Railways.	
7.	No. of years of experience in the relevant field. (Enclose C.A's certificate)	
8.	Address of office through which the proposed work of the Bank will be handled and the name & designation of the officer in charge.	



9.	Adequate and satisfactory evidence to indicate financial capacity of the Applicant to undertake the said works with names of Bankers and their full addresses. (Solvency certificate from a Bank & Income tax clearance certificate has to be attached).	
10.	Yearly turnover of the Organization during last Three Financial years. (year wise) – As certified by the Chartered Accountant (C.A's certificate has to be enclosed).	Rs..... For 31 <sup>st</sup> March 2020-2021
		Rs..... For 31 <sup>st</sup> March 2021-2022
		Rs..... For 31 <sup>st</sup> March 2022-2023
11.	Number of supplementary sheets attached.	
12.	Ability to provide Bank Guarantee or other equivalent form of security from a Nationalized Bank / scheduled Price Bank (Specify the amount maximum).	
13.	Enclose Performance Certificates from previous clients during last 7 years for the work carried out and matching each of the similar work criteria indicated.	
14.	Whether any Civil Suit/litigation /Arbitration arisen with Govt./Semi Govt./PSU/Banks etc. during the last 7 Years/being executed now. If yes, please furnish the details in the performa given below.	
15.	Whether Bidder has been debar by any Central or State Govt. Organization /PSB/PSU etc and for what period. If same is revoked than necessary, document to attached.	

**Form 2-Details of Litigation History**

Sr. No.	Name of the project and employer	Nature of work	Work Order No. & date	Present stage of work	Value of contract (Rs.)	Brief details of the Dispute

**Form 3: Work capability and previous experience.**

- a) List of important Projects executed by the organization as per the criteria of similar works specified previously, during last 7 years costing Rs.....Crore and above.

S.n	Particulars	Cost of project	Remarks

*(Supporting documentary proofs such as copies of work order, satisfactory completion certificate of the work from clients etc. with proper indexing to be enclosed failing which the application will be liable for rejection. Satisfactory Completion Certificate is mandatory to be enclosed.)*

**Form 4: LIST OF IMPORTANT PROJECTS EXECUTED**

S. N	Name of the Project mentioning all features, scope of services and location	Name & full postal address of the Bank & Consultant. Also indicate whether Govt. or Private body with full postal address & phone no.	Total final value of work (Rs.)	Completion period with dates		Whether work was left incomplete or contract was terminated from either side. Give full details.	Any other relevant information
				Stipulated	Actual		
1.	2.	3.	4.	5.	6.	7.	8.

**NOTES:**

1. Information has to be filled up specifically in this format. Please do not write remark "As indicated in Brochure / as enclosed" unless unavoidable.
2. Information shall be limited to the Applicant. If any relevant data concerning the Group of Companies to which the Applicant belong is desired to be given, the same shall be given separately in a supplementary sheet.

**Form 5: Important works in hand**

a) List of Important works IN HAND costing **Rs. .... Crore and above:**

(Supporting documentary proofs such as copies of work order etc. to be enclosed failing which the application will be liable for rejection)

Sr. No.	Name of the Project and location	Name & full postal address of the Bank & Consultant. Also indicate whether Govt. or Private body with full postal address.	Contract Amount (Rs.) & date of award of work	Progress of work along with Completion Period in months		Any other relevant information
				Stipulated	Expected date of completion	
1.	2.	3.	4.	5.	6.	8.

**NOTES:**

1. Information has to be filled up specifically in this format. Please do not write remark "As indicated in Brochure / as enclosed" unless unavoidable.

2. Information shall be limited to the Applicant. If any relevant data concerning the Group of Companies to which the Applicant belongs is desired to be given, the same shall be given separately in a supplementary sheet.

**Form 6: Technical personnel data**

**a) List of your technical personnel, giving details about their technical qualifications & experience including that in your establishment.**

S.N	Name	Age	Qualifications	Experience	Nature of Works handled	Name of the projects Handled costing Rs ..... Crore & above	Date from which employed in your organization	Indicate special experience such as Advance Management Techniques, ISO Certificate etc.
1.	2.	3.	4.	5.	6.	7.	8.	9.

**NOTES:**

- Information has to be filled up specifically in this format. Please do not write remark "As indicated in Brochure / as enclosed" unless unavoidable.
- Information shall be limited to the Applicant. If any relevant data concerning the Group of Companies to which the Applicant belongs-to is desired to be given, the same shall be given separately in a supplementary sheet.



## Form 7: Details of Machinery

[illegible]

### **Form 8: Performance Certificate**

#### **FORMAT OF PERFORMANCE CERTIFICATE TO BE GIVEN BY THE PREVIOUS CLIENTS OF THE APPLICANT CONTRACTOR**

- i. Name of work executed with scope of work in brief:
- ii. Client's name and address:
- iii. ARCHITECTs for the project:
- iv. PMC of the Project, if any:
- v.
  - a. Tendered cost;
  - b. Value of work executed:
- vi.
  - a. Time allowed for completion
  - b. Actual time taken for completion
  - c. If delayed, reasons for the same and whether extension granted
  - d. Whether liquidated damages levied on the contractor
- vii. General attitude and approach of the contractor in the work
- viii. Assessment of work:

Particulars	Excellent	Good	Satisfactory	Poor
Workmanship				
Competence				
Integrity and reliability				
Attitude and approach				
Quality of work				
Financial soundness				

- ix. Any Litigation involving Arbitration/ Court of Law with details:
- ix. Any other information about the overall performance of the contractor, the authority would like to mention

Signature:

Place:

Date:

Name and Designation:

Address:

## **SECTION: IX**

### **CLARIFICATIONS**

#### **1. QUANTITIES**

The quantities set out in the Schedule of Quantities are the estimated quantities of the work and they are not to be taken as the actual and correct quantities of the Work to be executed by the Vendor in fulfillment of his obligations under the Contract. The quantities in Schedule of Quantities can vary up to any extend of the contract provision and in event of any excess or shortfall therefore the rates are same for such excess or shortfall.

#### **2. INDEMNIFICATION AND INSURANCE:-**

The Bank at all times stands indemnified by the contractor for any loss what so ever to the Bank to its property by accident theft, fire and / or earthquake, injury / death of the workers, Bank's Employees and third party and the contractor shall obtain C.A.R. policy in joint name first being that of the Bank.

Unless otherwise instructed the Contractor shall insure the works and keep them insured until the virtual completion of the contract against loss or damage by accident theft, fire and / or earthquake, flood etc. The insurance must be taken from a company approved by the Bank, in the joint names of the Bank and the Contractor for contract value and for any further sum if called to do so by the Bank.

#### **3. WRITTEN GUARANTEE FOR THE SPECIALISED WORKS:-**

Wherever provision for submission of a written guarantee has been advised, the same shall be submitted from the specialized agency along with a counter guarantee by the main Contractor engaged for the work **before receiving any payment from the Banks , against such items of work** and be furnished on a non-judicial stamp paper of appropriate value. The guarantee shall however come to the force from the date of the completion of the entire contracted work.

#### **4. TECHNICAL EXAMINATIONS:-**

The proposed work covered under this tender during its progress or after completion is subject to inspection/examination by the Chief Technical Examiner / Technical Examiner, Central Vigilance Commission, Govt. of India or by an Auditor, Officer of the vigilance Cell of the Authority, on behalf of the Engineer-in-charge. The Contractor will be required to extend all co-operation, assistance and facilities for such inspection and thereafter complying their observation. All the observation of such authorities will be final and binding on the Contractor. If as a result of this examination or otherwise any sum is found to have been overpaid or over certified it shall be lawful for the Bank to recover the same. The Bank shall have also right to cause a technical scrutiny of the works and the bills of the contractor including all supporting vouchers, challans, abstracts etc. If as a result of this scrutiny any sum is found to have been overpaid or over certified it shall be lawful for the Bank to recover the same.

#### **5. GOVERNMENT AND LOCAL RULES:-**

The Contractor shall confirm to the provisions of all local Bye-laws and Acts relating to the work and to the Regulations etc. of the Government and Local Authorities and of any company UNDER WHOSE JURISDICTION the work is to be carried out. The Contractor shall give all notices required by said Act, Rules, Regulations and Bye-laws etc. and pay all fees payable to such Authority/authorities for execution of the work involved. The cost, if any, shall deemed to have been included in his quoted rates, taking into account all liabilities for licenses, fees for footpath encroachment and restoration etc. and **shall indemnify the Bank against such liabilities and shall defend all actions arising from such claims or liabilities.**

## **6.THE RIGHT TO SITE OF CLIENT:**

- a) The Client reserves the right to use the premises and any portion of site for execution of any work not included in this contract which the Client may desire to get executed by other agencies. The Contractor shall allow all reasonable facilities for the execution of such work but shall not be required to provide any plant or materials for which work except by special arrangement with the Client in such a manner as not to impede the progress of the works included in this contract and the Contractor shall not be responsible for any damage or delay which may happen or be occasioned by such work.
- b) The Contractor shall not be permitted to enter on (other than for inspection purpose) or take possession of site until instructed to do so by PMC/Client in writing. The portions of the site to be occupied by the Contractor shall be defined and / or marked on the site plan failing which these shall be indicated by the PMC/ARCHITECT/Client at site and the operations beyond the areas, in respect of any land permitted by the Client for the use of the Contractor for the purpose of or in connection with the contract, the same shall be subject to the following and such other terms and condition as may be imposed by Client. The use or occupations of such shall not confer any right of tenancy of the land to the Contractor.
- c) The Contractor shall have no right to put up any construction of his own of any nature or type on Client's land except temporary constructions for storage of equipment for the work under the contract or as a resting place for the laborers employed by him for the work provided that he obtain the requisite previous permission they would be entitled to refuse in their absolute discretion. Such construction will be erected at the contractor's own cost. If any electricity is used in any such construction the Contractor shall pay for the same. The Contractor shall at his own cost demolish all such constructions and remove the debris thereof. As also all his materials and equipment and clean and level the site thereof before handing over the completed work to the PMC/ARCHITECT/Client. The Client shall be entitled to and will be at liberty to occupy even the partially completed portion of the work by themselves or through their agents and servants if they so desire. Necessary extension of time for completing the work shall, however, be granted to the Contractor but he shall have no claim for any compensation whatsoever due to the delay, if any involved in completing the work on account of partial occupation.

## **7.MOCK – UP**

The Contractor shall prepare a mock – up of each item, if required, strictly in accordance with the specifications free of cost, for approval and fulfillment of Client/ PMC/ARCHITECT. The work on these items shall proceed further only after the approval of the mock – up.

## **8.LIASIONING WITH LOCAL AUTHORITIES, AS PER APPLICABILITY**

- a) The Contractor shall be responsible for liasoning with all the applicable local authorities especially during the stage of execution of works on site especially Ward Office of Satara Municipal Corporation, local Fire authorities & stations, Electricity Authorities such as MSEDCL, Adani, Reliance, Tata etc, Approvals / Licenses from the PWD towards S.I.T.C of Lifts (Inspector for lifts) or any other Statutory local authority as applicable.
- b) The successful contractor will indemnify the Bank/Architect for any problems arising out of such liasoning works during the course of execution of works on site and no extra claim whatsoever shall be entertained. All the necessary follow up / Liasoning with such local shall be the responsibility of the contractor. Any damage arising out of

strict action of any of these departments due to non-compliance of the expected procedural works shall be the sole liability of the contractor.

- c) Further the Contractor to liaison and obtain required permissions such royalties debris/waste Building material disposal from local statutory authorities for carrying out the entire work. All required documentation that will be necessary for obtaining the requisite permissions from the concerned office shall be prepared and submitted by the Contractor. Any statutory fees that may arise in lieu of obtaining permission from the concerned office will be paid by Bank against demand notice issued. The contractor has to submit Bank guarantee of adequate amount towards solid waste management plan for the project as per the statutory authority guidelines. The contractor also needs to furnish NOC from necessary statutory authorities before start-of & during the execution activities on site such as: -
- d) The work shall be considered "Virtually Complete" only after the Contractor submits to Client the following documents obtained by him: -Drainage Certificate, Pest Control & Management initiative by the Local Municipal Corporation.
- e) Approval for obtaining dry fittings & wet fitting permission and permanent water supply connection. Necessary Certificate under prevailing section of Municipal Act from the concerned Municipal Authority for adequate water supply to the building.
- f) NOC from PWD (lift & Parking in services) for installation and operation of lifts.
- g) Necessary Liaisoning with statutory authorities for obtaining Commencement certificate, approval of building plans and Completion certificate will be carried out by Bank through Architect.

## **SECTION:X**

### **TECHNICAL SPECIFICATION**

#### **CIVIL WORKS:**

All civil work shall be as per Maharashtra State PWD latest specifications

#### **(ELECTRICAL LT & ALLIED SERVICES)**

#### **ELECTRICAL LT WORKS:**

#### **A - GENERAL SPECIFICATION FOR ELECTRICAL INSTALLATION**

Complete Installation will be done complying with the requirements of the followings:

- Indian Electricity Act, 1910.
- Indian Electricity Rules (1956) amended upto date.
- Code of practice for Electrical wiring installations (system voltage not exceeding 650v) IS 732-1963 Revised
- Code of practice for Electrical wiring installations (system voltage exceeding 650v) IS 2274-1963.
- Rules and Regulations, Regional Council of Fire Insurance Association of India for Electrical wiring.

### **RULES AND REGULATION**

#### **ISI SPECIFICATIONS**

<b>I.S. NO</b>	<b>I.S. TITLE</b>	<b>MATERIAL EQUIPMENTS</b>
694	PVC Insulated Cables	PVC Cables
1293/3854	Switch socket outlet	5A/15A/Switch sockets.
3043	Code of practice for earthing.	Earthing.
3646	Interior illumination	Luminaries/Fittings.
5216	Guide for safety of installation	Procedure & practices.
1248	Electrical Indicating	Instrument.
1534	Ballast for fluorescent Luminaries.	Tubes.
1653/266	P.V.C. conduit	
2667/3837	Code of practice for electrical wiring installation	Wiring
371	Ceiling Roses	Luminaries
1567	Metal clad switches.	
2268	Electric call bells/Buzzers	Call bells.
37A	Fans & Regulators	Fans



I.S. NO	I.S. TITLE	MATERIAL EQUIPMENTS
1169	Fans & Regulators	Pedestal type
2312	Exhaust Fans	Exhaust fans
1947	Illumination	Flood lights
418	Electric lamp	GLS Lamps.
2412	Tubular Fluorescent lamps	Tube lights
3854	Switch for domestic & Similar purpose.	Switch.
1293	3 pin plug socket outlet	Socket.
3106	For selection, installation and maint. elect. fuses.	
5908	For methods of measurements of electrical installations.	

### 1 **Earthing** :

- 16 SWG bare copper conductor or 1.5 sq.mm. pvc insulated (1.1KV) grade Cu. wire shall be provided as earthing for all light fittings from local control box to individual fittings through the conduits and junction boxes.
- 14 SWG bare copper conductor or 1.5 sq.mm. pvc insulated (1.1KV) grade Cu. wire shall be provided as earthing for socket outlets of 5/15A/20A.
- The flexible metallic tubing is not a reliable earth continuity conductor and hence will not be used for earthing.

### 2. **POINT WIRING** :

- Point wiring shall be in PVC conduits (heavy gauge) as mentioned in Bill of Quantity. It shall be on surface in case of false ceiling and false wall, and concealed in absence of false walls, false ceilings.
- The wiring throughout the installations shall be such that there is no break in the neutral wire, in the form of a Switch or Fuse Unit.
- All runs of wiring and the exact positions of all points shall be according to the layout or the specifications given by the Consultant and in the absence of same, the Contractor shall mark the same on the plan and approve it from the Consultant/ Site Engineer before actual commencement of work.
- In any system of wiring no bare or twist joints shall be made at intermediate points in the run of cables unless the length of Final sub-circuit, sub-main or main is more than the length of standard coil as given by the manufacturer of the cable. If any jointing becomes unavoidable such joint shall be made through proper cut-outs or through proper junction boxes open to easy inspections.
- Where 4 wire 3 phase wiring is done the neutral shall be in one color and the other three wires in another colour.(R,Y,B)

- DEFINITION** :- Wiring from local switch board through control switches shall be considered as one point. Wiring from the first fitting to the next fitting in the same circuit shall be considered as half point, or as group of two /three / four / five/ six etc.

The number of points shall generally be measured as under:

- From individual control switch to first light/fan fitting shall be one point subsequent fitting in the same circuit shall be considered as given above & Bill Of Quantity.
- If a socket outlet is tapped from the same lighting circuit it shall be treated as half point.
- If a separate circuit is used for a socket outlet it will be considered as one point.

**4. Each point wiring shall comprise the following :**

- Supply and installation of 20/25 mm PVC with accessories such as bends, inspection tees, elbows, two ways, 3 ways, 4 ways, junction box etc.
- Supply and pulling of wires from the local board to single various points.
- Supply and fixing of control switch boards, switches, socket outlets, lamp holders etc. for individual points.
- Supply and Installation of multiway enclosed PVC junction boxes and 3 way/10 Amps. terminal blocks for light and fan fitting.
- Supply and fitting/fixing of hardware such as clamps, saddles, screws, bolts, nuts, frame work as required.  
Supply, laying and termination of earthing conductors for socket outlets, fittings and installations etc.

**5. WIRES & CABLES :-**

Colour Identification of Cores of Non-flexible cables and Bare Conductors for Fixed Wiring.

Function	Colour Identification of core of rubber or p.v.c. insulated non-flexible cable, or of sleeve or disc to be applied to conductor or cable core.
Earthing	Green-and-Yellow or Green
Live of a.c. single or three-phase Circuit	
Phase R of 3-phase a.c. Circuit	Red
Phase Y of 3-phase a.c. Circuit.	Yellow.
Phase B of 3-phase a.c. Circuit.	Blue
Positive of d.c.2-wire Circuit	Red
Negative of d.c. 2-wire Circuit	Black

**6. CONDUIT INSTALLATION :-**

- MS / PVC conduit system shall be mechanically and electrically continuous across joints.
- Conduit installation shall be of surface type in case of False ceiling or false walls and shall be of concealed type in absence of false wall or false ceiling.
- In case of false wall/ceiling where sufficient space or false covering is not available the conduits are to be concealed.
- All conduit pipes shall be confirming to I.S: 1653

- e) The routing of conduits shall be marked on ceiling, walls or structures in accordance with the drawings; as per layout approved by the Consultant. The installation shall be undertaken after approval of the same by Consultant. Any changes suggested by the Consultant shall be followed by the Contractor.
- f) All bare threaded portions shall be treated with anticorrosive preservative or covered with approved plastic compound.
- g) The conduit shall be of 16 gauge or MMS upto 25 mm dia and 14 gauge or HMS above 32 mm dia, reputed and approved make conforming to IS specification.
- h) Conduits shall be supported on walls, ceiling or structure by means of distance saddles at a spacing not exceeding 1.75 M horizontally and 2.0 metre vertically for conduits of 20 mm size.
- i) All conduits shall however be supported within a distance of 225 mm at either end of junction boxes, lighting fittings, switches or equipment enclosures. In case of right angle bends and offsets, conduits shall be supported within 150 mm at either end. The distance saddle shall maintain a minimum clearance of 3 mm. between the conduits and the surface on which conduit is being installed.
- j) Inspection boxes, elbows or tees shall be used as specified or specifically approved by the Consultant. Solid bends shall be provided as far as possible.
- k) All conduits installation shall be carried out accurately and neatly. All conduit runs shall be truly horizontally or vertically, threading of conduits shall be done to close tolerance.
- l) When conduits are to be concealed the conduit pipes shall be firmly tied to the steel reinforcement with steel wires at intervals not greater than 1 meter and on both sides of accessories like junction boxes, beds, coupling etc.
- m) For concealed conduits uses of Tees, elbows and sharp bends shall be avoided as far as possible. And no length of conduit shall have more than two bends from outlet to outlet. (Use 2-way/3- way Junction Box if possible)
- n) All conduit runs shall be thoroughly cleaned of dust, moisture etc. by blowing compressed air or by any other suitable means.

#### **7.CONDUIT WIRING :-**

The No. of wires to be drawn through conduit shall be as given in the below table.

CONDUCTOR OF CABLE Nominal cross Number and sectorial area dia in mm area mm**2 of wires	SIZE OF CONDUIT (mm)		
	20	25	30
1.0 1/1.12	5	10	14
1.25 3/0.75	5	10	14
1.5 1/1.40	5	10	14
2.0 3/0.925	4	8	12
2.5 1/1.80	5	8	12
3.0 7/.75	4	6	10
4.0 1/2.24	3	6	10

## **8. Wiring:**

- a) Conduit wiring shall generally be carried out with single core P.V.C. insulated wire.
- b) The conduit installation with Tie wire shall be complete in all respects before the cables are drawn in conduits.
- c) An approved lubricating compound (such as soap, stone powder, flakes or talc) shall be applied to the insulated wires before they are drawn in conduits. The wire shall be neatly bunched together to prevent twisting or kinks.
- d) The number of wires run in one conduit shall be such that it permits easy drawing in of wires.
- e) The wires passing through the conduits shall be of opposite polarity or conductors of opposite polarity should be bunched together.

## **9. CONCEALED CONDUIT WIRING:-**

- a) Concealed point wiring shall be provided through 20/25 mm dia. Conduits concealed 1" to 1.5" deep inside the walls, beams, columns, slabs etc.
- b) The control boxes and distribution boxes shall be flush type concealed deep in the wall with only operating switch levers emerging out on the wall.
- c) All the control boards shall be at an height of 1500 mm. from floor level ( or refer HT. mentioned in drawings.).
- d) Chipping and digging walls, beams, columns, slabs etc. for concealing conduits and replastering with necessary material to form even surface will be under Contractors scope of work.

## **10. INSTALLATION OF CABLES :-**

- a) All the cables shall be conforming to IS 1554, with PVC insulation, PVC sheathed, 1100V grade steel armoured with stranded copper/Aluminum conductors.
- b) Cable supplied shall be of reputed make having ISI mark.
- c) No cable joints are allowed, unless it is absolutely essential and will be carried out only after.
- d) The cable shall be tied with Nylon ties at regular intervals of 1 meter for horizontal length. In case of vertical run cable shall be tied at every 500 mm width with metallic cable ties. At the cable bend ties shall be provided at 150 mm interval from the centre of bending radius to avoid any sharp bends.
- e) Cable entry and exit of distribution boards shall be done by appropriate glands and lock-nuts.
- f) All cables shall be terminated with crimped soldered copper lugs of proper sizes.

- g) Armouring of cables shall be terminated at earthing stud provided on each distribution boards.
- h) The cable to be laid in the ground shall be laid at 750 mm depth from ground level and sandbed of 75 mm shall be provided. Width of trench will be approved by Corporation/Consultant depending upon no. of cables to be laid. Bricks are to be laid on the cables and then the back filling with screened soil.
- i) Trench excavation, supply of sand bricks back filling and all associated necessary work and supply of material for same shall form Contractor's scope of work.
- j) For cables laid in the ground, cable markers are to be provided on the cable route at every bend at every 15 metres for straight run.
- k) The cables crossing through floors, walls etc. should be through G.I. pipe and sealed with fire barrier material and bushes.
- l) Where groups of H.V., L.V. control and telephone cables are to be laid along the same route suitable barriers to segregate them physically shall be employed.

The communication cable shall be at least 300 mm away from power cable.

#### **11 CABLE TERMINATION :-**

- a) P.V.C. insulated steel armoured 1100 V Grade cables are to be terminated with help of Siemens glands for larger size cables and flange type glands (brass) for 2.5 mm\*\*2 cables. Crimping type copper lugs are to be used for end terminations. All standard practices to be followed and anti corrosive inhibiting flux is to be used. Brass nuts bolts with plain and spring washers are to be used.
- b) Any accessories other than above such as cable and box, jumpers etc. for cable terminations shall be included in the scope of termination of cables.
- c) Spliced ends of cable shall be immediately crimped with lugs. Base conductor shall not be left open to atmosphere.
- d) All the strands of a conductor must be fitted in the lugs and no cutting of strands will be allowed under any circumstances.
- e) He appropriate size of holes shall be drilled on the cable gland plate so that the gland after lightening is firmly secured with the gland plate. Any additional holes in the gland plate shall be plugged to make it vermin proof.

#### **12 SOCKET OUTLETS & PLUGS:-**

- a) The socket shall be so wired that the phase or the line is connected to one of the pins through the switch controlling the socket and not directly.

- b) Three pin socket outlets of 5A shall be earthed with 16 SWG bare copper conductor or 1.5 sq.mm. pvc insulated wire (1.1 KV grade ).
- c) Three pin socket outlets of 15/20A shall be earthed with 14 SWG bare copper conduct or 2.5 sq.mm. pvc insulated wire( 1.1 KV grade).
- d) 20 A socket outlet shall be industrial type (MDS-make) with provision of circuit breaker.
- e) The isolated socket outlets shall be installed at distance mentioned in layout or as specified by the Consultant. However, the socket outlet shall be installed at a distance not less than 23 cms. from the floor level and shall be away from danger of mechanical injury.
- f) A socket outlet shall not embody fuse terminals as an integral part of it but the fuse may be embodied in plug.
- g) Every plug containing a fuse shall be non-reversible and shall be pulled through separate conduit system (not to be mixed with light, fan point etc.)

### **13 SWITCHES:**

- a) Quick make and break switches shall be used.
- b) All single pole switches shall be fitted in phase or line conductor.
- c) Termination of wires at switches or plug points shall be carried out by looping the conductor at end instead of straight strand connection.
- d) The Switches for various appliances etc. on the boards shall be marked as according to the numbers mentioned in the single line wiring diagram.

## **B LIGHTING FIXTURE SCHEDULE:**

### **1 LUMINARIES**

- a) All light fittings are to be provided with lamps/tubes.
- b) Luminaries are to be as per the makes and catalogues indicated.
- c) Installation of light fitting shall include making of connections and proper suspension, support and mounting.
- d) For suspended fluorescent light fittings suitable length of conduits, ball and socket on junction box are to be provided.
- e) The majority of the fittings are to be installed in the false ceiling and electrical Contractor has to co-ordinate with false ceiling work for installation.
- f) The necessary opening in the false ceiling for fixing of lighting fittings will be provided by false ceiling Contractor. The cut-out details are to be given by electrical Contractor.



- g) The suspension of light fittings for recess mounting in the false ceiling will be to suite site condition.
- h) The design, manufacture and performance of Luminaries shall comply to all applicable statutes, regulation and safety codes.
- i) The Luminaries shall be designed for minimum glare and continuous operation without reduction in lamp life or without deterioration of material and internal wiring.
- j) The fittings shall be designed for low temperature rise and it should be complete with copper choke, starter, reflector etc.
- k) The power factor improvement capacitor shall be incorporated.
- l) Outdoor fixture shall be provided with totally weather proof.
- m) Each Luminaries shall have terminal for loop in loopout and tee off connection. All internal wiring shall be flexible copper suitable to withstand high temperatures.
- n) The Luminaries shall be provided with earthing terminal, conduit knockout etc.
- o) Aluminum used for mirror optic light fitting shall be of high purity and non edging type.
- p) The reflectors/louvers/diffusers of fittings should be easily approachable and easy to clean without removal, of light fitting.
- q) The ballast shall be designed to have low power loss and shall be mounted using anti vibration fixing. The ballast should be totally enclosed. The ballast should be all copper wound.
- r) The ballast which produce humming noise shall be replaced free of cost by the supplier.
- s) The starter shall be of safety type and shall be replaceable without disturbing reflector or the lamps and without use of any tool.
- t) The starter shall have brass contact.
- u) The Luminaries with diffuser shall be of acrylic, non- yellowing, non- edging type.
- w) Fluorescent tubes shall be of day light colour type and shall be suitable for use in any position.
- x) The light fitting shall be fitted as according to the distance measurements as mentioned in the layout drawing.

- y) Supply of conduits, junction boxes and other hardware shall form part of Contractors scope of work.
- z) The Contractor shall test, check each fitting before installation.

## **2. EXHAUST FANS :**

- a) Exhaust fans of sizes 6" & 12" shall be installed as per the distances mentioned in the layout or specified by the Consultant.
- b) For fixing of an exhaust fan, a circular hole shall be provided in the wall to suit the size of the frame which shall be fixed by means of rag-bolts embedded in the wall. The hole shall be neatly plastered with cement and brought to the original finish of the wall. The exhaust fan shall be connected to exhaust fan point which shall be wired as near to the hole as possible by means for flexible cord, care being taken that the blades rotate in the proper direction.
- c) Digging, replastering of wall for installation of exhaust fan and provision of hardware & other material shall be under Contractor's scope of work.

## **C COMMUNICATION SYSTEM**

### **1.0 TELEPHONE CABLES**

- a) Telephone pair cables and switch board cables and wires shall be on annealed tinned electrolytic copper conductors, insulated and sheathed with good quality PVC compound as per BS:6746, twisted pairs bunched together in connecting layers so as to minimise cross-talk and wrapped with Melinex or PVC tape.
- b) Cables shall be manufactured to standard specifications ITD-S/WS-113B, approved make.
- c) Conductor resistance at 20°C, 0.5mm=Max. 98 ohms/Km; 0.6mm=Max. 64 ohms/Km; and 0.71mm=Max. 46 ohms/Km.

### **2.0 CONDUITS FOR TELEPHONE NETWORK**

The rates for conduit work include:

- a) All necessary spacers and fittings.
- b) Inspection, junction and outlet boxes as required.
- c) 3 mm thick perapex sheet covers for inspection and junction boxes.
- d) All fixing accessories such as clips, nails, screws etc.
- e) 2 mm dia G.I. pull wires in conduit work.

- f) Providing and fixing approved saddle, hooks and grouting the same as required in the case of all exposed conduit work.
- g) Embedding conduits and accessories in walls, floors etc., during construction and/or cutting chases and making good as necessary in the case of concealed conduit work.
- h) Painting all inspection, junction and outlet boxes.
- i) Providing and fixing approved fixing devices for support of expo conduits and grouting the same as required.
- j) Painting of perspex sheet cover from inside to suit the colour of the surrounding wall.

### **3.0 TELEPHONE WIRING**

#### **3.1 SYSTEM OF WIRING :-**

The system of wiring shall consist of PVC insulated copper, conductor wires in metallic or non-metallic conduits as called for. All conduits shall be concealed unless otherwise called for.

#### **3.2 GENERAL :-**

Prior to laying of conduits, the Contractor shall submit the shop drawings for conduit layout indicating the route of conduit, number and size of conduits, location of junction/inspection/pull boxes, point outlet boxes and other details. The shop drawings shall be got approved by the Consultant and then only conduit laying can be started. Any modifications and suggestions shall be approved by the Consultant before the laying of conduits is commenced.

#### **3.3 MATERIALS :-**

- a) **Conduits** : Conduits for exposed/ underground/ below floors, R.C.C. slab and concealed in walls shall be HMS conduits.
- b) **P.V.C. Conduits (ISI only) :**  
PVC conduits shall be rigid unplasticised, heavy gauge having 1.8 mm wall thickness upto 25 mm diameter and 2.0 mm wall thickness for all sizes above 25 mm diameter only HMS & MMS conduits shall be used .

c) **PVC Conduit Connections ( ISI only ) :-**

PVC conduits shall be joined by means of screwed or plain couplers depending on whether the conduits are screwed or plain. Where there are long runs of straight runs of straight conduit inspection boxes shall be provided at intervals as approved by the Consultant. The threads pipes and sockets shall be free from grease and oil and shall be thoroughly cleaned before making the screwed/plain joints. Proper jointing materials as recommended by manufacturer shall be used for jointing PVC pipes. Use PVC couplers and connectors for PVC pipe connections and terminating in boxes. All the joints shall be fully watertight. Junction boxes and running joints shall be provided at suitable places to allow for subsequent extensions if without undue dismantling of conduit system. As far as possible, diagonal run of conduit and adaptable boxes, back outlet boxes, switch boxes and the like must be provided with entry spouts and smooth PVC bushes.

**3.4 BENDS IN CONDUIT :-**

Where necessary, bends or diversions may be achieved by means of bends and/or circular inspection boxes with adequate and suitable inlet and outlet screwed joints. In case of recessed system each junction box shall be provided with a cover properly secured and flush with the finished wall surface, so that the conductors inside the conduits are easily accessible. No bends shall have radius less than 2.5 times the outside diameter of the conduit. Heat may be used to soften the PVC conduit for bending.

**3.5 FIXING CONDUITS :-**

Conduits and junction boxes shall be kept in position while the walls, slabs and floors are under construction and proper hold-fasts shall be so arranged as to facilitate easy drawing of wires through them. Adequate junction boxes of approved shape and size shall be provided. Where conduits cross expansion joints in the building, adequate expansion fittings or other approved devices shall be used to take care of any relative movement. All conduits shall be installed so as to avoid water pipes. Conduits shall not come in contact with any wooden members unless otherwise stated. Conduits stubs in floor slabs shall be kept as short as possible above the finished floor level in order to avoid any damage to them. After the conduits, junction boxes and outlet boxes are installed in a position; their outlets shall be properly plugged or covered so that water, mortar, insects or any other foreign matter does not enter in to the conduit system. Exposed conduits shall be fixed by means of spacer bar saddles at intervals not more than 1000mm in normal run & 500 mm from both sides of fittings or accessories. The saddles shall be of galvanised mild steel, flat, properly treated, and painted. Conduits shall be laid in a neat and organized manner as directed and approved by the Consultant. Conduit run shall be planned so as not to be conflict with any other service pipe lines/ ducts. Where exposed conduits are suspended from the structure they shall be clamped firmly and rigidly to hanger of designed to be approved by the Consultant. Where hangers are to be anchored to reinforced concrete, appropriate inserts and necessary devices for their fixing shall be left in position at the time of concreting. Making holes or openings in the concrete generally be not allowed. In case it is unavoidable prior permission of the Consultant shall be obtained.

**D LOCAL AREA NETWORK**

**1.SCOPE OF WORK :**

- a). Supply & installation of MS conduit with all accessories.

- b). Supply & installation of Brass outlets.
- c). Supply & installation of heavy gauge M. S . box with open able cover.
- d). Cutting of chases/opening in floors walls & recementing the same after conduit laying.
- e). Preparation of layouts, Charts, Schematics & "as built" drawings.

## **2.SUPPLY**

### **a) MS conduit :**

Conduits & all accessories are as per ISI specification. inside with min. wall thickness of 2 mm. The conduits shall be delivered to the site of construction in original bundles and each length of the conduit shall be with the label of manufacturer.

### **b) Floor Outlets**

Floor outlet should be fabricated from 2mm thick M.S.sheet steel with top open able cover, gasketed and painted.

### **c) Conducting**

Conducting will be carried out by chiseling the floor and laying and clamping the conduit in the floor & recementing to original level & finish.

### **d) Documentation**

Three sets of "as built" cable layout (one retraceable print), single line diagram wiring charts, cable termination details and telephone faults location charts will be submitted.

## **3 PVC SCREENED UNARMoured CABLE:**

The cable shall be of annealed copper conductor of 0.5 mm dia. polythene insulated, cores colour coded, twisted into pairs, laid up, pvc taped, screened unarmoured and overall polythene jacked confirming to ITD specs NO. S/WS - 113C.

The offered cable shall be multipair & DOT approved make. The cable manufacturer's DOT approval certificate shall be submitted. The inspection will be carried out at manufacturers place if required. The cable test report shall be submitted along cable delivery.

## **E. FOR 415 VOLTS, MAIN LOW TENSION PANEL AND POWER CONTROL CENTRES AND DISTRIBUTION BOARDS**

### **1.0 Scope :-**

This Specification covers the design, manufacture, testing and supplying at site all LT Distribution Panels of Schneider make Block Set in Design in all respect and to complete the installation in working condition

## 2.0 Applicable Standards :-

All relevant Indian Standards shall be made applicable with latest amendments. Also any other specific application is required, then the same shall be complied to.

## 3.0 440 Volts grade Warning Boards :-

All the warning Boards shall be 440 Volts Red in color and made up of Aluminum sheet and having size of 150 mm x 150 mm x 3 mm thick painted with self illuminated fluorescent "RED" Color paint shall be fixed at prominent places. These shall have minimum 2 languages inscribed on it, mainly Local Language, and English. The Warning Boards shall also have the usual Electrical Shock inscriptions as well as the small mark of Danger on it. These shall be fixed on The Main L.T Panel and All the Distribution Panels as per directions of Consultant.

## 4.0 General Specification of Equipment :-

The scope of work comprises of Designing, Obtaining Approval of the Consultants and Fabricating as per approved Drawings, Testing at Works, Packing and Forwarding, Supplying, at Site, Checking at site, Touching Up all Damaged portions, and assessing the Electrical Contractor while commissioning of the Panels at site. Further Touching up of damaged powder coated painting shall be carried at site after the installation of all panels is completed by the contractor.

5.0 The Main L.T. Panel, Power Control Centres, distribution boards shall be metal clad, totally enclosed, rigid, floor mounting, air-insulated, cubicle type for use on 415 volts, 3 phase 50 cycles system.

6.0 The equipment shall be designed for operation in high ambient temperature and high humidity tropical atmospheric conditions. Means shall be provided to facilitate ease of inspection, cleaning and repairs in the installations where continuity of operation is of prime importance.

## 7.0 Standards :-

The equipment shall be designed to conform to the following requirements and to the latest amendments in the codes or relevant IEC applicable standards.

- a) IS 8623 - Part II of 1993 Factory Built Assemblies of switchgear and control gear.
- b) IS 13947 - Part I General requirements for switchgears and control gear for voltages not exceeding 1000 Volts.
- c) IS 13947 Part I - Degrees of protection provided by enclosures for low voltage switchgear and control-gear.
- d) IS 11353 - Marking and arrangement of bus-bars.
- e) IEC 660947-1 – General specification for Low voltage Switchgears
- g) IEC 60947-2 – For ACB and MCCB
- g) IEC 60947-3 – For Switches (Isolators and SDF)
- h) IEC 60947-4 For Contactors and BMR



i) IEC 60898 – For MCB

8.0 Individual equipments housed in the power control centre shall conform to the following IS specifications :

- a) Air Circuit Breakers - IEC 647-2 and IS 13947-2
- b) Molded Case Circuit Breakers - IEC 60947-2 and IS 13947-2.
- c) HRC Fuse-links - IS.9224 Part II
- d) Current Transformers- IS.2705 Part I, II & III of 1992.
- e) Voltage Transformers - IS.3156 Part I,II,III &IV of 1992.
- f) Relays - IS.3231 Part I, II, & III of 1987
- g) Indicating Instruments - IS. 1248 Part I of 1993
- h) Control Switches & Push Buttons - IS 13947 Part V Sec -1
- i) AC Contractors - IS.13947 Part IV Sec - 4

## 9.0 Construction :-

9.1 The Main LT Panel, Power Control Centres, Distribution boards shall be:-

- a) of the metal enclosed, indoor, floor mounted, free standing type.
- b) be made up of the minimum 14 Gauge White CRCA Sheets vertical sections, which, when coupled together shall form continuous front operated dead back type switchboards except for Main L.T Panel which shall have back access.
- c) Provide dust and vermin proof design. All the Panels should be designed in such a manner that the in Panel Temperature should not rise more than 30 degree Centigrade over an ambient of 45 degree Centigrade. The Vendors has to provide the temp sensors. If the temp of the cubicle increase more than 15 degree over an ambient the Exhaust Fan should be started and even after that the temp of the Bus Bars reaches to 85 degree the Alarm should be started and should the command to the Main Breaker to Trip . All this provision has be done by the bidder without any extra cost. The Small Exhaust fans with the louvers should be provided for the Main Bus Bar chambers and all the cable alleys. All the fans should have the provision to start and stop by way of MCB. All the fans should be suitable for continuous duty. All panels cable alleys should have dust proof ventilators with the provision to mount impedance compensated fans.
- d) be readily extensible on both sides by the addition of vertical sections after removal of the end covers or as otherwise as called for in the schedule of quantities.

9.2 The Main L.T Panel, Power Control Centers and Distribution Boards shall be constructed only of materials capable of withstanding the mechanical, electrical and thermal stresses, as well as the effects of humidity, which are likely to be encountered in normal service.

9.3 Each vertical section shall comprise: -

- a) A front framed structure of rolled/folded sheet steel channel section, of minimum 14 Gauge thickness, rigidly bolted together. This structure shall house the components contributing to the major weight of the equipment, such as Air circuit breaker, Molded Case Circuit Breakers, main horizontal bus-bars, vertical risers and other front mounted accessories.
- b) The structure shall be mounted on a rigid base frame fabricated using Galvanized Iron channel of minimum 100 mm height. The design shall ensure that weight of

the components is adequately supported without deformation or loss of alignment during transit or during operation. The thickness of the Galvanising should be minimum 65 microns and it should be hot dipped.

- c) A rear or front cable chamber housing shall be designed in such a manner that enough space is available for clamping of the cable cores terminating the same on the terminals. The design shall ensure generous availability of space for case of installation and maintenance of cabling, and adequately safety for working in one vertical section without coming into accidental contact with live parts in an adjacent section.
  - d) Galvanised Powder Coated Sheets of 18 gauge shall be provided inside all the horizontal and vertical Bus bar chamber and cable alleys. After the removal of the Bus Cover these painted sheets should be visible this is to be provided for ventilation purpose and to avoid direct access to Bus Bars or live parts after the removal of the Bus-bar covers. The size of the holes shall be less than 12.5 mm in diameter. These sheets should also go under seven tank painting process and should be power coated Egg Shell white in color. These sheets shall be fixed using magnetic locks and the ball catch fixed to the Main body.
  - e) All the doors should be fitted with neoprene gaskets with fasteners designed to ensure proper compression of gaskets. When covers are provided in place of doors, generous overlap shall be assured between sheet steel surfaces with closely spaced fasteners to preclude the entry of dust.
  - f) No Black sheets shall be allowed. All sheets shall be white CRCA. If it is found at any stage that Black sheets have been used, The panel shall be summarily rejected.
- 9.4 The height of the panel should not be more than 2100 mm. The total depth of the panel should be adequate to cater for proper cabling space and should not be less than 1000 mm for ACB sections and 450 mm for MCCB sections. The Minimum size of the Compartments for the various sizes of MCCBs/ACBs shall be as shown in the General Arrangement drawings. The Contractor may modify to suit the site conditions.
- 9.5 Doors and compartment partitions shall be fabricated using 14 Gauge thick sheet steel. Sheet steel shrouds and partitions shall be of minimum 14 Gauge thickness. All sheet steel work forming the exterior of switch boards shall be smoothly finished, leveled and free from flaws. The corners should be rounded. All the Sheet steel forming the exterior of the switch board should be fabricated using 14 gauge White CRCA Sheets. The entire Panel shall be fabricated using 14 Gauge white CRCA Sheets only.
- 9.6 The apparatus and circuits in the Power Control Centers shall be so arranged as to facilitate their operation and maintenance and at the same time to ensure the necessary degree of safety.
- 9.7 Apparatus forming part of the Power Control Centers shall have the following recommended minimum clearances for un insulated or should be as per relevant IS Codes.
- a) Between Phases - 25 mm.

- b) Between Phases and Neutral - 25 mm.
- c) Between Phases and Earth - 25 mm.
- d) Between Neutral and Earth - 25 mm.

When, for any reason, the above clearances are not available, suitable insulation shall be provided. Clearances shall be maintained during normal service conditions. Creepage distances shall comply to those specified in relevant standards.

- 9.8 All insulating material used in the construction of the equipment shall be of non-hygroscopic material, duly treated to withstand the effects of high humidity, high temperature tropical ambient service conditions.
- 9.9 Functional units such as circuit breakers and fuse switches shall be arranged in multi-tier formation. All the Air Circuit Breakers shall housed in a single tier formations Only. Nothing shall be housed above and below the Bus- Coupler. The above and below compartments of the Bus-Coupler/Or shall be kept empty.
- 9.10 Metallic/insulated barriers shall be provided within vertical sections and between adjacent sections to ensure prevention of accidental contact with :
- 9.11 Main bus-bars and vertical risers during operation, inspection or maintenance of functional units and front mounted accessories.
- 9.12 All doors/covers providing access to live power equipments circuits shall be provided with tool operated fasteners to prevent unauthorized access.
- 9.13 Provision shall be made for permanently earthing the frames and other metal parts of the switchgear by two independent connections.

## **10 METAL TREATMENT AND FINISH :-**

- a) All steel work used in the construction of the switch board should have undergone a rigorous metal treatment process as follows.
- b) Effective Cleaning by hot alkaline degreasing solution followed by cold water rinsing to remove traces of alkaline solution.
- c) Pickling in dilute sulfuric acid to remove oxide seals and rust formation, if any, followed by cold water rinsing to remove traces of acidic solution.
- d) A recognized phosphating process to facilitate durable coating of the paint on the metal surface and also to prevent the speared of rustling in the event of the paint film being mechanically damaged. This again, shall be followed by hot water rinsing to remove traces of phosphate solution.
- e) Passivating in de-oxalite solution to retain and augment the effects of phosphating.
- f) Drying with compressed air in a dust free atmosphere.

- g) Two coats of granule finished Powder Coating of Siemens gray having shade No. RAL 7032 is to be done from inside and outside of the panel on the phosphate panels on all exterior and interior side, by wet on wet process, with an interval of 2-3 minutes between coats. One coat involves 2 phases horizontally/ vertically over the entire surface on all exterior and interior side. In any case the thickness of the Paint should not be less than 65 Microns. All the panels shall be Granule finished powder coated painted with Siemens Gray having shade No RAL 7032 from Outside and Inside and dried up in oven.

## 11 BUS-BARS :-

- a) The material of the Bus-Bars shall be electrolytic grade Copper and should have purity more than 99.95% and Conductivity more than 97 IACS. All the Bus Bars should be Tinned Copper throughout the length. The Oxygen contents in Copper should not be more than 10 parts in million. The Copper should be cold drawn and annealed up to 30%. All the Bus Bars should be tested as per relevant IS and latest IEC standard. The Bus Bar manufacture should submit the certificate from original supplier of Bus Bar for purity and oxygen contents in Copper. These shall confirm to I.S 613 of 2000 (Rev III) or the latest amendments. The size of the Bus bars used should be indicated by the Bidder in his Bid and shall be subject to the Consultants approval. For all the Molded Case Circuit Breakers (MCCBs) more than 63 Amps the connections should be done using Tinned Copper Bus bars . The connections to MCCBs having rating 63 Amps and below can be done using FR Copper flexible of Lapp makes given in the document. To arrive at the bus bar size, the calculations will be based on 1000 Amps. Per sq. inch. The size of the bus bar thus arrived at shall be chosen to the nearest mm. The sizes of the shall be chosen in such a manner that the sizes of the terminals and the sizes of the are matches with each other.
- b) The shall be suitably braced with non-hygroscopic SMC supports. The Neutral as well as the earth bar should also be cable of withstanding the stresses of electrical fault. Ridges shall be provided on the SMC supports to prevent tracking between adjacent .
- c) Large clearances and creepage distances shall be provided on the system to minimized the possibility of a fault.
- d) High tensile bolts and spring washers shall be provided at all joints.
- e) The cross section of the bus-bars and risers for various ratings shall have been decided on the basis of temperature rise tests results carried out on some other Panels for the stated sections.
- f) Connections from the main bus-bars to functional circuits shall be arranged and supported so as to withstand without any damage or deformation the thermal and dynamic stresses due to short circuit currents.
- g) Bus-bars shall be color coded for easy identification of individual phases and neutral.
- h) All the shall be provided with color coded heat sink sleeves through the full length. Intermittent color bands are not acceptable . The Earth Bus bar shall be provided with green color heat shrink sleeve. The size of the Earth shall be same as the size of the neutral bus bar but in any case it should not be less than

50 x 6 mm Tinned Cooper strip with Heat Shrinkable PVC Sleeve for Main L.T Panel and 25 x 6 mm Tinned Copper Strips for Small Panels.

#### **FOR LT SWITCHGEARS:**

##### **12. MOULDED CASE CIRCUIT BREAKER:-**

All the MCCBS Shall be suitable for fault braking Capacity as mentioned in the Single line Diagrams but in any case should not be less than 16 KA. All the MCCBs shall be provided with variable Over Current, Short Circuit releases . The variable Earth fault release is optional. The same shall be provided if called for in the schedule of quantity. The MCCBS having rating 250 Amps and the above the releases shall be Microprocessor based only and the MCCBS of lower ratings the releases shall be Thermo magnetic type. All the MCCBS shall have ICs=100% of ICu. All the MCCBS shall conform to disconnection function as per IEC947-2 Section 7.1.2. All four pole MCCBS above 250 Amps shall have capability of setting Neutral to N or N/2. All accessories of MCCBS shall be snap fitted type . All MCCBS should have flexibility of Line Load reversibility. Manufacture should submit let through energy curves and discrimination charts and cascading table for the approval of the consultant prior to ordering the MCCBS. All the MCCBS should be designed in such a way that no live parts is accessible. All the MCCBS should comply to IEC 60947-2 and IS 13947-2. All the MCCBS should have three clear positions ON/OFF and TRIP. The Manufacturer to Provide direct or extended Rotary handle with door interlock facility for all the rating of the MCCBS. All the MCCBS should be suitable for total discrimination. The MCCBs having rating more than 250 Amps shall have communication option which should able to display the status of each breaker and its setting, Control the circuit breakers and display the faults. All MCCB's shall be double break the current limiting type enabling full use of current limitation. Operating mechanism shall be of the quick make quick break type, with the speed of operation independent of the operator, and mechanically trip free from the operating handle so as to revert the contacts from being held closed against short-circuit and overload conditions. The operating mechanism shall be constructed to operate all poles in a multi-pole breaker simultaneously during opening, closing and tripped conditions.

##### **13. Protection Function:**

- a. All Molded Case Circuit Breakers should have Microprocessor based releases capable of sensing true RMS values of Current based on digital Technology & should have Centralized variable short circuit & overload setting
- b) Electronic trip units shall comply with appendix F of IEC60947-2 standard (measurement of rms current values, electromagnetic compatibility, etc.).
- c) All electronic components shall withstand temperatures up to 125°C. ‘
- d) Earth fault protection if required should be an integral part of the release & should be
  - a. adjustable
- e) The control unit shall have thermal memory to store temp rise data in case of repetitive
- f) Overloads or earth fault for protecting the cables & loads.
- g) The accessories like shunt trip, closing trip coils should be continuously rated to avoid the Burning due to sustained command.

**h) The MCCBs should be with Class-2 front facia in order to avoid any live part exposure in case the front cover is opened for the accessory mounting.**

- i) All the Molded Case Circuit Breakers should have load Monitor LED and Adjustable Magnetic Threshold above 200 Amps. All the MCCB,s Should have Trip Unit Interchangeability at site.
- j) The MCCB shall be 3 pole / 4 pole as the need be. In case of 4 pole MCCB, the 4<sup>th</sup> pole shall be 100% rated.
- k) The MCCB shall be available in fixed / draw-out version as the need be.
- l) It shall be possible to fit accessories on the MCCB such as aux contact, trip indication contact, rotary handle, undervolt coil or shunt trip coil, etc. In case of rotary handle, the same shall have built-in door interlock, defeat & padlocking facility. The rotary handle shall be same as that for SDF or MPCB for better aesthetics.
- m) The MCCB shall be manually operated or motor operated as the need be. It shall be possible to convert the MCCB from manually operated to motorized MCCB and vice-versa.

**14. Electrical**

- a) All the MCCB shall be suitable for 690 V ac system voltage.
- b) The MCCB shall be suitable for impulse withstand of 8 kV.
- c) The MCCB shall have short circuit breaking capacity Icu of 18 or 40 or 70 kA rms. The MCCB breaking capacity shall have Icu = 100% of Ics for the entire range.
- d) The MCCB shall have no de rating up to 50°C service temperature. In case the MCCB needs de rating, manufacturer shall declare the de rated current carrying capacity at 50°C service temperature.
- e) The MCCB shall be current limiting and shall have line-load interchangeability without any loss of capacity.
- f) The MCCBs above 100 A, shall have adjustable and properly calibrated overload and short circuit settings.

**15. Trip Unit**

- a) The MCCBs up to 630 A shall be with thermo-magnetic trip unit. 800 A & above, the trip unit shall be microprocessor based. Static trip unit shall not be acceptable.
- b) The trip unit shall be capable to accept any change in the setting on-line, without need to switch off the MCCB.
- c) The trip unit shall have overload and short circuit protection. It shall be possible to change the trip unit from thermo-magnetic to microprocessor based and vice-versa.

**16. MINIATURE CIRCUIT BREAKERS (MCB)**



- a) All the Miniature Case Circuit Breakers shall comply fully with IEC 8828-1996 and should have uniform breaking capacity of 10 KA.
- a. All the MCB shall comply with Isolation function.
- b) "C" Curve MCBS shall be used for Lighting and other small loads and "D" Curve MCBS should be used for Capacitors and UPS Loads.
- c) All the accessories of the MCB should be Snap fit type in design.
- a. The Power loss per pole of the MCB shall be less than as specified in relevant codes of IEC standards and Manufactures shall submit the test certificate for the same.

**17. Switch-Disconnecter Fuse –**

- a) The SDF shall conform to the latest IS specification IS – 13947 (3)
- b) The SDF shall be suitable for 550 V ac system voltage.
- c) The SDF shall be 3 pole with neutral. In case required, facility shall be available to have switched neutral.
- d) It shall be possible to fit accessories on the SDF such as aux contact, castle-key interlock, etc. The rotary handle shall have built-in door interlock, defeat & padlocking facility. The rotary handle shall be same as that for MCCB or MPCB for better aesthetics.
- e) The SDF shall have quad break mechanism and roller contact system for longer life.

**18. HRC Fuse –**

- a) The HRC fuse shall conform to the latest standard IS – 13703.
- b) The HRC fuse shall be suitable for 500 V ac system voltage.
- c) The HRC fuse shall have non-deteriorating type characteristics.
- d) The HRC fuse shall be of operating class gG.
- e) The HRC fuse shall be of link type construction as per DIN standard.
- f) The HRC fuse shall have breaking capacity of minimum 120 kA.
- g) The HRC fuse shall have trip indication flag / pop.
- h) The fuse characteristics shall be such that it allows close selectivity between downstream or upstream fuses with a ratio of 1 : 1.25. Manufacturer to specify this ratio for the fuses offered.

**19 Contactors –**

- a) The contactors shall conform to the latest IS specification IS – 13947 (4)
- b) The contactors shall be suitable for 690 V ac with impulse withstand capacity of 8 kV.

- c) The contactors shall have no de rating up to 55°C service temperature. In case the contactors need de rating, manufacturer shall declare the de rated current carrying capacity at 55°C service temperature.
- d) The contactors shall be suitable for various duties viz AC1, AC2, AC3 & AC4.
- e) For applications such as capacitor switching or crane duty etc, special definite purpose contactors shall be used.
- f) Contactors above 45 A shall have arc chamber interlock to prevent ON operation if arc chamber is not in place.
- g) Vendor to specify 10 seconds rating for the contactors offered.
- h) Contactors above 16 A, shall have replaceable contacts. The spare kits shall be available.
- i) The contactor – overload relay combination shall be type tested for type-2 co-ordination at 50 kA.

## **20. Overload relays –**

- a) The overload relays shall conform to the latest IS specification IS – 13947 (4)
- b) The overload relays shall be suitable for 690 V ac.
- c) The overload relays shall have no de rating up to 55°C service temperature. In case the overload relays need de rating, manufacturer shall declare the de rated current carrying capacity at 55°C service temperature.
- d) The overload relay shall be bi-metallic type with built-in single-phase preventor and 1NO+1NC aux contacts.
- e) The overload relay shall have trip test and auto / manual reset facility.
- f) For critical motors, wherever specified, microprocessor based overload relay shall be used. Static relays shall not be allowed.
- g) For motors above 75 kW, a microprocessor based motor protection relay shall be used. Static relays shall not be allowed. The relays shall offer at least following protections

3 ph balanced overload	- Locked rotor
Phase imbalance	- Earth fault
Single phasing	- Thermistor
Trip cause indication by LED &	- Trip class setting

## **21 Motor Protection Circuit Breakers :**

- a) The MPCB shall conform to the latest IS specification IS – 13947 (4)
- b) The MPCB shall offer overload, single phasing and short circuit protection.

- c) It shall be possible to fit accessories on the MPCB such as aux contact, trip indication contact, rotary handle, under volt coil or shunt trip coil, etc. In case of rotary handle, the same shall have built-in door interlock, defeat & padlocking facility. The rotary handle shall be same as that for SDF or MCCB for better aesthetics.
- d) The MPCB shall have rotary handle mechanism with ON, OFF & TRIP positions.
- e) The MPCB shall have no de rating up to 55°C service temperature. In case the MPCB needs de rating, manufacturer shall declare the de rated current carrying capacity at 55°C service temperature.
- f) The contactor – MPCB combination shall be type tested for type-2 co-ordination at 50 kA.
- g) The MPCB shall sense the overload faults, however the tripping shall be by the contactor only. MPCB shall trip only on short circuit faults.

## **22. Current Transformers :-**

Current transformers shall comply with the requirements of IS.2705. They shall have ratios, outputs and accuracy's as specified/required.

## **23. Indicating/Integrating Meters :-**

- a) All indicating instruments shall be of flush mounting industrial pattern, conforming to the requirements of I. S.
- b) The instruments shall have non-reflecting bezels, clearly divided and indelibly marked scales, and shall be provided with zero adjusting devices in the front.
- c) Integrating instruments shall be of flush mounting switchboard pattern, complying with the requirements of I. S.

## **24 Relays :-**

- a) Circuit breakers shall be provided with integrally mounted Microprocessor based Releases. The Releases shall have a set of 3 phase characteristics which shall be adjustable over wide range to provided discrimination between a multiplicity of devices.
- b) Microprocessor based relays shall be used for all applications including auto changeover. These relays shall be draw out type with built-in test facilities. All the Microprocessor Relays shall conform to IEC 60255-5. LED indication shall be provided in these relays capable of being reset without opening the relay case.

## **25. Control Switches :-**

- a. Control switches shall be of the heavy duty rotary type with escutcheon plates clearly marked to show the operating position. They shall be semi-flush mounting with only the front plate and operating handle projecting.
- b. Circuit breaker control switches shall be of the spring return to neutral type, while instrument selector switches shall be of the stay-put type.

- c. All the Indicating lamps shall be of the LED type. All the Lamps shall be color LED lamps. Lamps and lenses shall be easily replaceable from the front. All the Lamps should be Tested and certified as per IS 13947 (Part II) 1993. All the lamps shall be provided with leakage voltage glow protection. All the lamps shall be Immune to vibrations. The Power Consumption of the lamps should not be more than 0.5 Watts at 230 Volts A.C. The Lamps should be suitable for -30% to + 20% of operating Voltage. The Lamps Housing material shall be Flame Retardant ABSTRYNOL with ribbed Poly Carbonate Lens. The Enclosure shall be IP 65 as per IS 13947- (1) of 1993. The Rated Insulation Voltage shall be 500 Volts and Insulation shall be above 500 Mega Ohms. The Termination shall be Totally enclosed/finger Touched proof glass filled nylon and suitable for 2.5 sq. mm FRLS wires with M 3 brass screws. All the Lamps shall be provided with color LEDs.

## **26. Push Buttons :-**

Push buttons shall be of the momentary contact, push to actuate type, fitted with self reset contacts and provided with integral escutcheon plates marked with its functions.

## **27. Cable Terminations :-**

- a) Cable entries and terminals shall be provided in the switchboard to suit the number, type and size of aluminum conductor power cables and copper conductor control cable specified in the detailed specifications.
- b) Provision shall be made for top or bottom entry of cables as required. Generous size of cabling chambers shall be provided, with the position of cable gland and terminals such that cables can be easily and safely terminated. The minimum depth of the panel shall be restricted to suit for this purpose.
- c) Barriers or shrouds shall be provided to permit safe working at the terminals of one circuit without accidentally touching that of another live circuit.
- d) Cable risers shall be adequately supported to withstand the effects of rated short circuit currents without damage and without causing secondary faults.
- e) Cable sockets shall be of copper and of the crimping type as specified.

## **28. Control Wiring :-**

- a. All control wiring shall be carried out with color coded 1100 Volts grade single core FR wires of approved make conforming to IS 694 of 1990. All the wires should be Uniley in construction with more than 99.99% purity Copper. All the wires stranding should be of fine wires CLASS-5 Construction in accordance with VDE 0295 or IEC 60228. The Oxygen contents in Copper should not be more than 10 parts in million. The Copper should be cold drawn and on line annealed. All the wires should be tested as per relevant IS and latest IEC standard. The Wire manufacture should submit the certificate from original supplier for purity and oxygen contents in Copper. The outer PVC insulation should be Flame Retardant

as per IEC 332.1 The color coded wires should be used. For Potential Circuits "Red", "Yellow" and "Blue" Color wires to be used. For Neutral Black Color is to be used. For Earth Yellow/Green Wires is to be used. For Control's Wiring Gray Color wires are to be used. For CT and PT 2.5 sq. mm wires are to be used.

- b) Wiring shall be neatly bunched, adequately supported and properly routed to allow for easy access and maintenance.
- c) Wires shall be identified by numbered ferrules at each end. The ferrules shall be of the ring type and of non-deteriorating material. They shall be firmly located on each wire so as to prevent free movement.
- d) All control circuits fuses shall be mounted in front of the panel and shall be easily accessible.

## **29 Terminal Blocks :-**

Terminal blocks shall be of 500 volts grade of the suitable type. Insulating barriers shall be provided between adjacent terminals. All the Terminal Block shall be approved make.

Terminal blocks shall have a minimum current rating of 10 Amps. Provisions shall be made for label inscriptions.

## **30 Labels :-**

Labels shall be of anodized aluminum, with white engraving on black background. They shall be properly secured with fasteners.

## **31 Tests :-**

The Following tests shall be conducted on all the Panels and Distribution Boards before the same are dispatched to the site from the vendors place. All the Tests shall be carried out in accordance with relevant IS codes and in presence of the Representative of Bank/ Consultant .

Visual inspection of Panels and checking the bill of materials as per the approved drawings and Mechanical ON/OFF operation of the components.

Checking of Protective Measures and electrical continuity of the protective circuits.

High Voltage Test by applying 2.5 kV, 1 minute for checking insulation of equipment and the Material used and recording the leakage current .

Megger tests before and after High Voltage Test at Vendors Factory.

Heat Run Test On Main L.T Panel .

Primary Injection Test for Checking of all Meters and Relays.

Testing of all the Microprocessor Releases at vendors factory and at site before commissioning of the ACBs and MCCBs. The Release should be tested by OEM only and necessary settings of releases to be done at site in consultation with Consultants.

Millie Volt Drop Test across the Bus-Bars Joints/ACB/MCCB/SFU/MCB and any other Equipment.

Testing of Barkers through Remote operation for ON/OFF and connectivity and operation of Barkers Through the Software and RS 485 Port.

Physical verification of all components. Any other tests as desired by Bank / Consultant.

## **EARTHING:**

### **1.0 Scope :**

- a) Earthing system to be provided shall comprise of earth electrode of copper plate or hot dipped Galvanised plates in earth pits, earth bus/grid of copper flats or GI Flats or Aluminium flats as called for and bare copper earth wires or Galvanised earth wires or aluminium earth wires as called for, for acting as earth continuity conductor.
- b) Lightning Protection system shall comprise of earth electrode of Cu or GI plate in earth pits, earth bus of down conductors of Cu or GI flats.
- c) Earthing of Compound, Flood Lighting and Road Lighting poles shall be done by using Cu or GI plates in earth pits near pole and 7/16 size galvanised strained wire for connecting to the pole or as specified in the Schedule or in drawings.
- d) Entire earth system shall conform to the Code of Practice as per IS. 3043 of 1987.

### **2.0 General Requirement :**

- a) Enclosures and frame work of all current carrying equipment and accessories, structural steel/columns shall be adequately earthed to a single earthing system, unless separate earthing systems are specifically stipulated. All electrical equipment shall be earthed at two distinct points.
- b) Earth loads and risers shall follow as direct and short a path as possible. Suitable risers shall be provided as directed if equipment is not available when earthing is installed.

### **3.0 Earth Electrodes in Earth Pits :**

Plate electrodes of Copper shall be 600 x 600 x 6 mm thick and 600 x 600 x 12 mm thick for GI unless otherwise specified.

### **4.0 Earth Bus and Earth Continuity Conductor :**

Earth bus is a copper strip or flat of specified size interconnecting all earth electrodes.

- a) Switchgears and Power Distribution Boards shall be earthed by a copper flat strip.
- b) Panels, fused DBs and motors up to 30 KW rating shall be earthed by a continuity conductor, as specified. Minimum size of continuity conductor shall be 25 x 3 mm bare copper strip, soft drawn.
- c) Road Lighting Poles shall be earthed with Cu stranded wire conductor while for lighting and power wiring bare copper conductor shall be provided unless otherwise specified to use insulated conductor.

### **5.0 Earth Bus Station :**



Earth Bus Station shall be provided to facilitate tapping of earth continuity conductor from earth bus/grid very conveniently. It will comprise of a 400 mm long 50 x 6 mm bare copper strips/flat fixed with rawl plugs/bolts securely on wall/column above floor level. Spacers of 20 mm to 25 mm shall be provided to keep the flat away from wall and facilitate connections of earth conductor for which 6 mm dia holes 8 to 10 numbers are provided with proper size brass nuts, bolts, and washers. Earth bus shall be connected to it.

#### 7.0 **Artificial Treatment of Soil :**

If the earth resistance is too high and the multiple electrode earthing does not give adequate low resistance to earth, then the soil resistivity immediately surrounding the earth electrodes shall be reduced by adding sodium chloride, calcium chloride, sodium carbonate, copper sulphate, salt and soft coke or charcoal in suitable proportions.

#### 8.0 **Resistance to Earth :**

The Contractor shall measure the resistance of the individual earthing pit and report to the Architect/Consultants. The Contractor will make after due consultation with Architect/Consultants, No. of Earth pits, such that, the overall resistance in the earth mat does not exceed 1.0 ohm.

#### 9.0 **Plate Electrode Earthing :**

Earthing electrode shall consist of a tinned copper plate not less than 600 x 600 x 6 mm thick, or, 600 x 600 x 6 mm G.I. as called for in the drawings. The plate electrode shall be buried as far as practicable below permanent moisture level but in any case not less than 3 mts. below ground level. Wherever possible earth electrode shall be located as near the water tap, water drain or a down take pipe as possible. Earth electrodes shall not be installed in proximity to a metal fence.

It shall be kept clear of the buildings foundations and in no case shall it be nearer than 1 meter from the outdoor face of the wall. The earth plate shall be set vertically and surrounded with 150 mm thick layer of charcoal dust and salt mixture. 20 mm G.I. pipe shall run from the top edge of the plate to the ground level. The top of the pipe shall be provided with a funnel and a mesh for watering the earth through the earth. The main earth conductors shall be connected to the electrode just below the funnel, with proper terminal lugs and checks nuts. The funnel over the G.I. pipe and earth connections houses 300 mm wide and 300 mm deep. The masonry chamber shall be provided with a cast iron cover resting cover a C.I. frame embedded in masonry.

### **G.FOR CABLE TRAYS:**

- a) Perforated Cable Trays of ladder type and associated accessories tees, bends, elbows and reducers shall be fabricated from 12 gauge (2.5 mm) mild steel. Prefabricated Cable trays of perforated type and associated accessories tees, elbows and reducers shall be fabricated from 14 gauge (2 mm) White CRCA Sheets. Cable trays shall be made of corrosion resistant material or if made of material shall be adequately protected against the corrosion.
- b) Cable trays accessories shall be painted with One Shop coat of Red oxide zinc chromate primer and two side coats of Aluminium alkylid paint.
- c) Cable trays shall not have sharp edges, burrs or projections that may damage the insulation jackets of the wiring.

- d) Cable trays shall not have side rails or equivalent structural members cable trays shall include fittings or other suitable means for change in direction and elevation of runs.

**e) Cable Tray Mounting**

Unless otherwise specifically noted on the relevant layout drawing, all cable tray mounting works to be carried out the following :

- i. Cable tray mounting arrangement type to be as marked on layout drawing.
- ii. Assembly of tray mounting structures shall be supplied fabricated, erected & painted by the electrical contractor.
- iii. Tray Mounting structures shall be welded to plate inserts or to structural beams as approved by the Project Manager.
- iv. Wherever embedded plates & structural beams are not available for welding the tray mounting structure electrical contractor to supply the MS plate & fix them to floor slab by four anchor fasteners of minimum 16 mm dia having minimum holding power of 5000 Kg, at no extra cost.
- v. Maximum loading on a horizontal support arm to be 120 Kg/metre of cable run.
- vi. Width of the horizontal arms of the tray supporting structures to be same as the tray widths specified in tray layout drawings, plus length required, for welding to the vertical supports.
- vii. The length of vertical supporting members for horizontal tray runs will be to suit the number of tray tiers shown in tray layout drawings.
- viii. Spacing between horizontal support arms of vertical tray runs to be 300 mm.
- ix. Cable trays will be welded to their mounting supports.
- x. Minimum clearance between the top most tray tier and structural member to be 300 mm.
- xi. Cable in vertical race ways to be clamped by saddle type clamps to the horizontal slotted angles. Clamps to be fabricated from 3 mm. thick aluminium strip at site by the electrical contractor to suit cable groups.
- xii. The structural steel (standard quality) shall be according to latest revision of IS : 2062 & IS 808 Rev III of 1989 . Welding shall be as per latest revision of IS : 816 Rev I of 1969. All structural steel to be painted with one shop coat of red oxide and oil primer followed by a finishing coat of aluminium alkyd paint where any cuts or holes are made on finished steelwork these shall be sealed against oxidation by red oxide followed by the same finishing paint. Steel sheet covers wherever indicated to be similarly painted.

#### **H.SPECIFICATION FOR PUBLIC ADDRESS SYSTEM:**

- a) The PA system shall include the following functionality: system supervision, spare amplifier switching, loudspeaker line surveillance, digital message management along with BGM and EMG.
- b) The six channel system shall provide zone wise emergency calls. It shall also have the ability to switch ON/OFF, BGM for the zones. In case of emergency it shall be possible to activate all zones with the help of an EMG microphone. EMG microphone will have highest priority. The system should also have provision of message generator. It shall be possible to select the zones through the zone switcher microphone. The system shall have provision for recording messages at the site.
- c) 24Vdc output shall be available to supply power to external relays, so no external power supply shall be required for that purpose. A LED VU-meter shall allow for monitoring of the master output.
- d) Microphone Interconnections shall be made using standard RJ45 connectors and CAT5 cable.
- e) It shall be possible to connect external booster amplifier using standard analog audio 100 V line switching for full compatibility with public address equipment.
- f) The frequency response shall be 60 Hz – 18 kHz (+1/-3 dB, @ -10 dB ref. rated output. The distortion shall not exceed 1% at the rated output, 1 kHz. The master unit shall have tone controls to allow for adjustment of the BGM sound. It shall have separate bass and treble controls. The master unit shall have BGM source inputs and a mic/input. It shall have two connectors to connect the call stations.
- g) The output section shall have six transformer-isolated 100 V constant voltage outputs for driving 100 V-loudspeakers in six separate zones. All zones shall be individually selectable from the front panel and the BGM output level in each zone shall be individually settable.
- h) The output of the booster shall be also available as a separate output on 100V and 70 V. A separate 100 V Call Only output shall be provided for addressing an area where BGM is not required but where priority announcements are.
- i) The call station shall be a stylish high quality call station with a stable metal base, a flexible microphone stem and a unidirectional condenser microphone. It shall be intended for making calls to selected zones. It shall be possible to FLUSH MOUNT the microphone on the desktop. The call station shall have selectable gain, speech filter and limiter for improved intelligibility.
- j) It shall have LED indications for zone selection, fault and emergency state. The call station extension shall provide seven additional zone and zone group keys
- k) Loud speakers shall be recessed type with an output of 6 watts, complete with mounting clamps working on 100volts.
- l) Remote volume controls of 6 watts should be mountable on MK electrical switch panels. Volume controls shall be autotransformer based, and should have ON/OFF facility.

- m) BGM source shall be housed in the rack of suitable size, and shall be able to play CD in all formats. It shall also be possible to connect a PC as a BGM source to the Master Unit. The System shall operate on 230Vac.

## **I. FIRE DETECTION FIRE ALARM SYSTEM (FDS):**

### **1. SCOPE OF WORK:**

- a) These specifications together with Consultant's drawings will cover the Design, Supply, Erection, Testing, and Commissioning of State-of-Art Fire Detection and Early Warning Systems
- b) The scope of work as indicated in these specifications, drawings and schedule of quantities is the minimum and is not limited to the same in case of requirements demanded for safe and efficient operations of the installations
- c) The work shall include submittals, data entry, programming, startup test and validation, training of Employers representatives, maintenance and operation, submission of construction and installation drawings and wiring diagrams, as built documents and system warranty.
- d) The Central Fire Panel shall be integrated with the FAS Software so that the Detector positions and their status is displayed on the separately provided workstation.
- e) The Contractors' scope of work will include all items of work as per these specifications, drawings, terms and conditions of contract etc. and briefly described in schedule of quantities.
- f) This shall include, but not be restricted to the following:-  
i. Intelligent Analog Addressable Photo-Electric Smoke Detectors  
ii. Intelligent Analog Addressable Photo-Electric cum Thermal Detectors  
iii. Intelligent Analog Addressable Thermal Detectors  
iv. Addressable Control Modules and Monitor Modules  
v. Addressable Break Glass Type Manual Call Points  
vi. Microprocessor Based Analog Addressable Control Fire Panel for connecting and monitoring the Fire Detectors.  
vii. Sirens and Hooters activated from the Panel  
viii. Voice Evacuation Messaging System  
ix. Electrical works, including Cabling, Conduiting, Earthing etc. for the Detectors
- g) Minor Masonry, Carpentry and Civil works such as cutting opening in Masonry Walls, Internal Partitions, chasing on Walls, etc. and making good the same to match existing works shall be provided by the Contractor, wherever asked for by the BANK/ Consultant.
- h) All other works associated with above items as per specifications, drawings and conditions of contract and the Satara Fire Brigade requirements except those specifically excluded as shown in Schedule of Quantities.
- i) Unless otherwise indicated in Schedule of Quantities and drawings, the Contractor's scope of work will exclude only the following items of work and services which will be arranged by the BANK through other contractors, if required.

- j) Provisions of adequate AC, single/ three phase, 230/415 V, 50 HZ supply with earthing for Fire Control Panels, Hooters, etc. as per drawings
- k) Fire Dampers to be activated by Control Modules (supplied by Fire Detection Contractor).
- l) Making Major Openings in Shear Walls, Beams, Columns, Slabs etc. for Ducts and Pipes and Cables.
- m) Other items specifically mentioned as excluded in the Schedule of Quantities.

## **2.CODES AND STANDARDS:**

- a) The equipment and installation shall comply with any one of the current applicable provisions of the NFPA-72 or equivalent as per the standard applicable in the country of the Principal manufacturer and Indian Standards IS-2189-1999 and local Statutory Regulations.
- b) In this specification, the reference of American Code is mentioned. However, the contractor may supply the equivalent product complying with other codes as listed above. The system and all components shall have the approval of Satara statutory bodies.
- c) In general, the system and all components shall be listed by Underwriters laboratory for use in fire alarm system under the following standards as applicable.  
UL 864 - Control Units  
UL 268 - Smoke Detectors  
UL 521 - Heat Detectors  
UL/ EN-54 - Fire Alarm Control Panel  
FM Listed / LPCB Approved /VDS approved.

## **3.MAIN FIRE ALARM CONTROL PANEL :**

- a) The FACP shall contain a microprocessor based Central Processing Unit (CPU). The CPU shall communicate with and control the following types of equipment used to make up the system: analog addressable smoke and thermal (heat) detectors, addressable modules, printer, annunciator, and other system controlled devices.
- b) The system shall include TEN (10) Signaling Line Circuits (SLCs). Each SLC interface shall provide power to and communicate with up to 125 intelligent detectors ( Photo-Electric or thermal) and 125 intelligent modules (Monitor or Control or Manual Call Points) for a system capacity as described in the BOQ. The system shall be capable of expansion by 250 analog/addressable devices to a maximum system capacity of 2500 points.
- c) The microprocessor shall be a state-of-the-art, high speed, at least 16 bit device and it shall communicate with, monitor and control all external interfaces. It shall include an EPROM for system program storage, non-volatile memory for building-specific program storage, and a "watch dog" timer circuit to detect and report microprocessor failure. The panel should have short circuit protection.
- d) 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.

- e) 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.
- f) The FACP display shall provide all the controls and indicators used by the system operator and may also be used to program all system operational parameters. Control panel should have on board key facility.
- g) The display shall include an 80-character back-lit alphanumeric Liquid Crystal Display (LCD). It shall also provide Light-Emitting-Diodes (LEDs) that indicate the status of the following system parameters:
  - i. AC POWER,
  - ii. FIRE ALARM,
  - iii. PREALARM WARNING,
  - iv. SECURITY ALARM,
  - v. LOW BATTERY,
  - vi. SUPERVISORY SIGNAL,
  - vii. SYSTEM TROUBLE,
  - viii. DISABLED POINTS,
  - ix. ALARM SILENCED.
- h) The fire alarm control panel shall include a full featured operator interface control and annunciation panel that shall include as part of the standard system a backlit Liquid Crystal Display (LCD), individual color coded system status LEDs, and an alphanumeric keypad for entry of any alphabetic or numeric information, for field programming and control of the fire alarm system. Minimum two different password levels shall be provided to prevent unauthorized system control or programming.
- i) All programming or editing of the existing program in the system shall be achieved without special equipment and without interrupting the alarm monitoring functions of the fire alarm control panel. The system shall be fully programmable, configurable, and expandable in the field without the need for special tools, PROM programmers or PC based programmers. All programs should be PC based in addition to Control panel operation and should have networking capability with other panels and PC.
- j) The main power supply shall continuously monitor all field wires for earth ground conditions, and shall have the following LED indicators:
  - Ground Fault LED
  - Battery Fail LED
  - AC Power Fail LED
- k) The main power supply shall operate on 240 VAC, 50 Hz, and shall provide all necessary power for the FACP. It shall provide SMF Battery for 24 hours along with charger for stand-by supply with a provision to indicate battery voltage and charging current. It shall provide very low frequency sweep earth fault detect current capable of detecting earth fault on sensitive addressable module. It shall be power limiting using positive temperature coefficient (PTC) resistor.
- l) The Fire alarm control panel should have facility of single switch for evacuation and this switch should be guarded type



- m) The FACP shall receive analog information from all addressable detectors to be processed to determine whether normal, alarm, pre-alarm, 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. To eliminate nuisance alarms each smoke detector shall be provided with alarm verification with field-adjustable time from 0 to 55 seconds. Only a verified alarm shall initiate the alarm sequence for the zone.
- n) The main fire alarm control panel should be provided one man walk test with system for addressing the sensitivity of detector. System should have remote facility or from the system keypad for adjusting sensitivity. Day/Night Automatic Adjustment of detector sensitivity shall be possible.
- o) Maintenance alert shall be provided with two levels, to warn of excessive smoke detector dirt or dust accumulation.
- p) Any addressable device or conventional circuit in the system may be enabled or disabled through the system keypad.
- q) Upon command from an operator of the system, a status report will be generated and printed, listing all system status.
- r) The fire alarm control panel shall contain a history buffer that will be capable of storing up to 1000 events. Each of this activation 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.
- s) The system shall include one serial EIA-232/ Centronics Parallel interfaces. Each interface shall be a means of connecting multiple printers, CRT monitors and other similar peripherals.
- t) Loop communications and processing scheme shall assure that in a fully loaded loop, alarms will be detected in less than 7 seconds. The Response Time for each loop shall not exceed 750 milliseconds.
- u) The control relay module shall provide minimum auxiliary relay circuits rated at 5 amperes, 28 VDC. An expansion circuit board shall allow expansion to eight relays per module.
- v) The control panel shall be housed in a UL-listed cabinet suitable for surface or semi-flush mounting. The cabinet and front shall be corrosion protected, given a rust-resistant prime coat, and as per manufacturer's standard finish.
- w) The door shall provide a key lock and shall include a glass or other transparent opening for viewing of all indicators. The control panel shall be modular in structure for ease of installation, maintenance & future expansion
- x) When a fire alarm condition is detected and reported by one of the system initiating devices, the following functions shall immediately occur:
- y) The system alarm LED on the FACP shall flash.

- z) A local piezo electric signal in the control panel shall sound.
- aa) A backlit 80-character LCD display on the FACP shall indicate all information associated with the fire alarm condition, including the type of alarm point and its location within the protected premises.
- bb) Printing on the FACP and history storage equipment shall log the information associate each new fire alarm control panel condition, along with time and date of occurrence.
- cc) All system output programs assigned via control-by-event interlock programming to be activated by the particular point in alarm shall be executed, and the associated system outputs (alarm notification appliances and/or relays) shall be activated.
- dd) AHU on each floor shall be switched off and staircase pressurization fans will be switched on
- ee) Pre-recorded messages shall be played on the speaker circuit.
- ff) The following Operator Control shall be provided:
- gg) Acknowledge Switch: Activation of the control panel acknowledge switch in response to a single new alarm and/or trouble condition shall silence the local panel piezo electric signal and change the system alarm or trouble LED from flashing mode to steady-ON mode. If additional alarm or trouble conditions exist or are detected and reported in the system, depression of this switch shall acknowledge and/or advance the 80-character LCD display to the next alarm or trouble condition.
- hh) Alarm Silence Switch: Activation of the alarm silence switch shall cause all notification appliances and relays which are programmed to do so to return to the normal condition after an alarm condition. The selection of notification circuits and relays that are silence able by this switch shall be fully programmable within the confines of all applicable standards.
- ii) Alarm Activate (Drill) Switch: Activation of system drill switch shall initiate an automatic test of all analog/addressable detectors in the system. The system test shall activate the electronics in each analog/addressable sensor, simulating an alarm condition and causing the transmission of the alarm condition from that sensor to the fire alarm panel. The FACP shall interpret the data from each sensor installed in the system. A report summarizing the results of this test shall be displayed automatically on the control panels LCD display, CRT and printer. This report shall display the number of detectors tested per SLC/Loop, the total number tested in the system, any detector that failed, or an all "Tested OK" message. Time/Date stamp of when the test was performed shall also be included in the report.
- jj) System Reset Switch: Activation of the system reset switch shall cause all electronically-latched initiating devices, appliances or software zone, as well as all associated output devices and circuits, to return to their normal condition. If the alarm conditions still exist, or if they reoccur in the system after system reset switch activation, the system shall then respond the alarm condition.
- kk) Lamp Test: Activation of the lamp test switch shall sequentially turn on all LED indicators, LCD display and local piezo electric signal, and then automatically return the fire alarm panel to the previous condition.

- ll) An alarm from a water flow detection device shall activate the appropriate alarm message on the 80 character display; turn on all programmed notification appliance circuits and shall not be affected by the signal silence switch.
- mm) The Fire Panel shall be capable of mapping diagnostics with the diagnostic codes so that the alpha-numeric description of the same shall be displayed on the Fire Display Panel.

#### 4.Data Sheet :

Sr No	Description	Provided by Vendor
1	Model Number	
2	Manufacturer	
3	No of Loops provided	
4	No of Detectors that can be connected per Loop	
5	Voltage Range	
6	Standby Current	
7	Response time	
8	LCD Display with Backlighting (specify number of characters)	
9	Printer Interface	Parallel Preferred
10	Programmable Keypad	
11	Password Protection	
12	Real Time Clock and Calendar	
13	Tamper Resistant	
14	Battery Charger	
15	Standard Relays for Alarm and Exception Reporting	

#### 5.ADDRESSABLE DEVICES:

- a) Addressable Detectors Shall be of the Photo-Electric type, Photo-Electric cum Thermal Type and Thermal type to be installed as indicated in the accompanying drawings.
- b) The Detectors shall be Analog Addressable and shall connect with two wires to the Fire Alarm Control Panel (FACP) Signaling Line Circuit (SLC) loops.
- c) 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.
- d) The Detectors shall be ceiling-mounted and mount to a single 4" square electrical box by using a plaster ring and shall have included a twist-lock removable base and insect-resistant screen for field cleaning.
- e) All addressable Detectors should be compatible with common base and should be listed in UL and approved by F.M.

- f) The Detectors shall be Compact of a Stylish Design and shall have built-in tamper-resistant feature.
- g) The detectors shall provide address-setting means on the detector head using rotary decimal switches and shall also store an internal identifying code that the control switch has set-up.
- h) Detectors shall also store an internal identifying type code that the control panel shall use to identify the type of device (PHOTO, THERMAL, PHOTO cum THERMAL ).
- i) The smoke detection should be of two LED type. Single LED should be capable of giving three different conditions i.e. TROUBLE- yellow, OK-green, FIRE-red.
- j) All sensors must have Automatic self test feature meeting standard NFPA –72 sensitivity test requirements which test the sensor every minute thus reducing maintenance cost.
- k) All smoke sensors should have the facility for selection of two sensitivities for dual stage operation.
- l) All sensors should have a facility of Automatic environment compensation. Once set the sensitivity should remain fixed irrespective of variation of environment factors, like temperature Humidity, Dust, Dirt etc. No drift in the sensitivity should be allowed.
- m) The detectors shall provide an LED. The LED will flash under normal conditions, indicating that the detector is operational and in regular communication with the control panel. The LED shall be placed into steady illumination by the control panel, indicating that an alarm condition has been detected. It shall also be possible to connect an external remote alarm LED if required.
- n) Detectors shall have a plug-in wiring connector for ease of installation and serviceability. Easy wiring using terminal block shall be provided to enable removing the detector without loss of power to the remaining loop.
- o) The detectors will provide a means to test 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 may be activated remotely on command from the Control Panel.
- p) The detectors shall have fully coated circuit boards, RF/transient protection circuits and shall withstand air velocities exceeding 1,500 feet-per-minute without triggering false alarm.

## **6.ANALOG ADDRESSABLE PHOTO-ELECTRIC SMOKE DETECTORS:**

The analog addressable Photo-Electric smoke detectors shall use the Photo-Electric (light-scattering) principal to measure smoke density and shall, on command from the control panel, send data to the panel representing the analog level of smoke density. The sensors shall be monitored continuously to measure any change in their sensitivity because of the environment (dirt, smoke, temperature, humidity, etc.). The sensor shall provide advanced indication of the analogue value of the level of smoke density to the panel that maintenance is required thus reducing the maintenance required to inspect routinely all sensors, in order to ensure normal operation.

Data Sheet :

Sr No	Description	Provided by Vendor
1	Model Number	
2	Manufacturer	
3	Voltage Range	
4	Standby Current	
5	LED Current	
6	Sensitivity range	
7	Air Velocity	
8	Diameter	
9	Height	
10	Temperature	
11	Relative Humidity	
12	Tamper Resistant	

#### 7.ADDRESSABLE THERMAL DETECTORS:

The addressable Thermal sensor shall have low profile and operate on the combination of "rate of rise" and "fixed" temperature principles with fixed temperature set point at 135 °F (58 °C) & have a rate-of-rise element rated at 15°F(9.4 °C) per minute. It shall connect via 2 wires to the fire alarm control panel signaling line circuit.

Data Sheet :

Sr No	Description	Provided by Vendor
1	Model Number	
2	Manufacturer	
3	Voltage Range	
4	Standby Current	
5	LED Current	
6	Fixed temp set point	
7	Rate of Rise in °C	
8	Diameter	
9	Height	
10	Temperature	
11	Relative Humidity	
12	Tamper Resistant	

#### 8.ANALOG ADDRESSABLE PHOTO-ELECTRIC CUM THERMAL DETECTORS:

The analog addressable photo-electric cum Thermal detector shall use both photo-electric (light scattering) principle as well as on thermal sensing by combination of rate of rise and fixed temperature.

Data Sheet:

Sr No	Description	Provided by Vendor
1	Model Number	
2	Manufacturer	
3	Voltage Range	
4	Standby Current	
5	LED Current	
6	Sensitivity Range	
7	Air Velocity	
8	Fixed temp set point	
9	Rate of Rise in °C	
10	Diameter	
11	Height	
12	Temperature	
13	Relative Humidity	
14	Tamper Resistant	

#### 9.ADDRESSABLE MONITOR MODULE:

The addressable monitor module shall allow the connection of simple contacts onto an addressable detection line of the control unit. No separate power supply shall be required.

The addressable monitor module shall represent one address on the control unit.

#### 10.ADDRESSABLE CONTROL MODULE:

- Addressable control Modules shall be provided to allow a compatible control panel to switch discrete contacts by code command. The control Module shall mount in a standard 4-inch square, 2-1/8" deep electrical box or to a surface mounted back-box. The control Module shall provide two isolated sets of Form-C contacts for fan shutdown and other auxiliary control functions.
- The control Module contact ratings shall support up to 1 Amp/30 VDC of Inductive load or 2 Amps/30VDC (coded) of Resistive load (up to 3 Amps in non-coded applications).
- The relay coil shall be magnetically latched to reduce wiring connection requirements and to insure that 100% of all auxiliary relays or may be energized at the same time on the same pair of wires.
- The Control Module shall provide address-setting means using decimal switches and shall also store an internal identifying code that the Control Panel shall use to identify the type of device. Modules that use binary jumpers or dip-switches are subject to installation errors and are not acceptable. An LED shall be provided that shall flash under normal conditions, indicating that the Control Module is operational and is in regular communication with the control panel.
- A magnetic test switch shall be provided to test the module without opening or shorting its NAC circuit wiring.

#### 11.ADDRESSABLE MANUAL CALL POINTS:

- The manual call points shall be addressable type and suitable to connect with two wires to the Fire Alarm Control Panel (FACP) Signaling Line Circuit (SLC) loops.



- b) The MCP point unit should be addressable type with should be UL listed and FM approved.
- c) Manual Stations shall connect with two wires to one of the control panel SLC loops. The Manual Station shall, on command from the control panel, send data to the panel representing the state of the manual switch. Manual stations shall provide two-digit address-setting by use of rotary decimal switches with in-built fault isolator module

The word FIRE shall appear on the front of the stations in 1.75 inches or larger.

Data Sheet :

Sr No	Description	Provided by Vendor
1	Model Number	
2	Manufacturer	
3	Diameter	
4	Height	
5	Temperature	
6	Relative Humidity	
7	Normal Operating Voltage	
8	Maximum SLC Loop Voltage	
9	Maximum SLC Loop Current	

## 12.RESPONSE INDICATOR:

- a) The response indicator shall provide a remote indication for any analogue addressable detector installed above the false ceiling.
- b) The response indicator shall be driven directly from its associated local detector.
- c) The connection to the response indicator shall be monitored for open and short circuits.

## 13.LCD REPEATER PANEL:

- a) The LCD repeater panel shall annunciate all the system events and duplicate status at the main Fire alarm Control Panel. The LCD repeater panel be a backlit 80 characters alphanumeric display and operate via the system RS-485 or RS-232 serial output terminal from the main FACP. The LCD display shall automatically illuminate upon receipt of an alarm or trouble condition. The unit shall operate on 24V DC power which shall be fed from the Main FACP.
- b) In addition to the LCD display, the annunciator shall also include a Power LED, Alarm LED, Trouble LED and Supervisory LED. A local piezo sounder shall also be included on the annunciator.
- c) Switches for Acknowledge/Lamp Test, Silence, Drill and Reset shall be included on the annunciator protected from unauthorized usage by a key switch (keyed alike to the host FACP).
- d) BATTERIES:

- e) The battery shall have sufficient capacity to power the fire alarm system for not less than four hours upon a normal AC power failure.
- f) The batteries are to be completely maintenance free. No liquids are required. Fluid level checks for refilling, spills, and leakage shall not be required.

#### 14.LOOP SOUNDERS:

- a) The loop sander provided shall be such that it gives discontinuous/ intermittent audible alarm automatically whenever automatic/manual detector operates and is distinct from the background noise in every part of the premises.
- b) The loop sander should preferably be of two type tones, ie. alert tone and evacuation tone
- c) The mode of the alarm sounders shall be quite distinct from any other sander to be heard. All loop sounders shall produce a similar sound and shall maintain the same during their operation. The loop sander shall be complete with electronic oscillations, magnetic coil (sound coil) and accessories, ready for mounting (fixing) and confirming to IS : 2189 - 1999

PARAMETER	DESCRIPTION
Tone Type	Single Tone
Casing	Rugged ABS Plastic

#### 15.0 CABLE:

##### A) CABLE SPECIFICATIONS:

The specification covers the supply, installation and delivery to site of 1100V grade cables. The design, manufacture of performance of the cable should confirm to the latest applicable standards of Bureau of Indian Standards (BIS).

All cables shall be PVC FRLS and shall comply with the following requirements:

- a) Annealed Copper Conductor, Class 5 as per IS:8130
- b) Insulation for cables shall confirm to the properties covered under IS:5831,
- c) Colour coding shall be provided,
- d) Inner sheath shall be extruded type and shall be compatible with the insulation for the cables.
- e) The inner sheath shall be with PVC compound type 'A',
- f) Armouring for all the cables shall comprise G.I. strips/ wires,
- g) The outer sheath shall be of an extruded layer of Type ST-1 compatible with the specified ambient and operating temperature of the cables. The sheath shall be resistant to water, ultra violet radiation, fungus, termite and rodent attacks.
- h) The outer sheath shall be of black color.
- i) The outer sheath shall be FRLS type (Type FR-LSH, Category C2 as per IS:1554)
- j) Cables shall be subjected to routine and acceptance tests in accordance with IS: 1554 and other relevant standards.
- k) Test method shall confirm to IS:10810

##### B) CABLE INSTALLATION ON WALL / COLUMNS/ CEILING:

Cables shall be fixed on walls etc. by using M.S. galvanized spacers and G.I. saddles using screws etc. Drilling on walls should be neatly done with electric drills and the cable fixed on walls should be done in one straight line avoiding any bends, sagging and kinks. All cables fixed on walls shall necessary be done following fire insurance and other Electricity Regulations. Any procedures as stated in the technical specification shall be complied with. The maximum allowable distance between two cable supports shall be as under:

Cable Size	Horizontal	Vertical
1.5sqmm	350 mm	450 mm

## **COMMISSIONING & GUARANTEE**

### **1. SCOPE OF WORK:**

- Work under this section shall be executed without any additional cost. The rates quoted in this tender shall be inclusive of the works given in this section.
- Contractor shall provide all tools, equipment, metering and testing devices required for the purpose.
- On award of work, Contractor shall submit a detailed proposal giving methods of testing and gauging the performance of the equipment to be supplied and installed under this contract.
- All tests shall be made in the presence of the Architect or his representative or any inspecting authority. At least five working days' notice in writing shall be given to the inspecting parties before performing any test.
- Water flow rates of all equipment and in pipe lines through valves shall be adjusted to design conditions. Complete results of adjustments shall be recorded and submitted.
- Contractor shall ensure proper balancing of the hydraulic system and for the pipes / valves installed in his scope of work by regulating the flow rates in the pipe line by valve operation. The contractor shall also provide permanent Tee connection (with plug) in water supply lines for ease of installing pressure gauge, temperature gauge & rota meters. Contractor shall also supply all required pressure gauge, temperature gauge & rotameter for system commissioning and balancing. The balancing shall be to the satisfaction of Consultant / Project Manager.
- Three copies of all test results shall be submitted to the Engineer in A4 size sheet paper within two weeks after completion of the tests.

### **2. PRECOMMISSIONING:**

On completion of the installation of all pumps, piping, valves, pipe connections, insulation etc. the Contractor shall proceed as follows:

- Prior to start-up and hydraulic testing, the Contractor shall clean the entire installation including all fittings and pipe work and the like after installation and keep them in a new condition. All pumping systems shall be flushed and drained at least once through to get rid of contaminating materials. All pipes shall be rodded to ensure clearance of debris, cleaning and flushing shall be carried out in sections as the installation becomes completed.
- All strainers shall be inspected and cleaned out or replaced.
- When the entire systems are reasonably clean, a pre-treatment chemical shall be introduced and circulated for at least 8 hours. Warning signs shall be provided at all outlets during pre-treatment. The pre-treatment chemical shall:

- Remove oil, grease and foreign residue from the pipe work and fittings;
- Pre-condition the metal surfaces to resist reaction with water or air.
- d) Establish an initial protective film;
  - After pre-treatment, the system shall be drained and refilled with fresh water and left until the system is put into operation.
  - Details and procedures of the pre-treatment shall be submitted to the Architect for approval.
- e) Check all clamps, supports and hangers provided for the pipes.
- f) Check all the equipment, piping and valves coming under hot water system and operate each and every valve on the system to see if the valves are functioning properly. Thereafter conduct & hydro test of the system as for (b) above.
- g) Fill up pipes with water and apply hydrostatic pressure to the system as given in the relevant section of the specification. If any leakage is found, rectify the same and retest the pipes.

### **3.Fire Protection System**

- a. Check all hydrant valves by opening and closing: any valve found to be open shall be closed.
- b. Check all the piping under hydro test.
- c. Check that all suction and delivery connections are properly made for all pump sets.
- d. Check rotation of each motor after decoupling and correct the same if required.
- e. Tests run each pump set.
- f. All pump sets shall be run continuously for 8 hours (if required with temporary piping back to the tank).

### **Commissioning and Testing**

- a. Pressurize the fire hydrant system by running the jockey pump and after it attains the shutoff pressure of the pump, then
- b. Open bypass valve and allow the pressure to drop in the system. Check that the jockey pump cuts-in and cuts-out at the preset pressure. If necessary, adjust the pressure switch for the jockey pump. Close by-pass valve.
- c. Open hydrant valve and allow the water to flow into the fire water tank in order to avoid wastage of water. The main fire pump shall cut-in at the preset pressure and shall not cutout automatically on reaching the normal line pressure. The main fire pump shall stop only by manual push button. However, the jockey pump shall cut-out as soon as the main pump starts,
- d. Switch off the main fire pump and test check the diesel engine driven pump in the same manner as the electrically driven pump,

- e. When the fire pumps have been checked for satisfactory working on automatic controls, open fire hydrant valves simultaneously and allow the hose pipes to discharge water into the fire tank to avoid wastage.
- f. Check each landing valve, male and female couplings and branch pipes, for compatibility with each other. Any fitting which is found to be incompatible and do not fit into the other properly shall be replaced by the Contractor. Each landing valve shall also be checked by opening and closing under pressure.
- g. Check all annunciations by simulating the alarm conditions at site.

### **Sprinkler System**

- a. Start the sprinkler pump and develop the required pressure in the sprinkler pipes.
- b. Open the test valve to test the automatic starting of the pump. If necessary, make necessary adjustments in the setting of pressure switch. The sprinkler water gong alarm shall also operate when the test valve is open. This operation is to be done for each and every section of the sprinkler system and the alarm for each section (via flow switch) shall be checked for operation.
- c. After satisfactory operation of the pump the Contractor shall set up mock fire and test the system.
- d. Check all annunciations by simulating the alarm conditions at site.

### **4. STATUTORY AUTHORITIES' TESTS AND INSPECTIONS**

- a) As and when notified in writing or instructed by the Architect, the Contractor shall submit shop drawing and attend all tests and inspections carried out by Local Fire Authorities, Water Authority and other Statutory Authorities, and shall forthwith execute free of charge any rectification work ordered by the Architect as a result of such tests and inspections where these indicate non-compliance with Statutory Regulations. Some of these tests may take place after the issue of Practical Completion of the Main Contract and the Contractor shall make all allowances in this respect.
- b) The Contractor shall be responsible for the submission of all necessary forms and shop drawings to the Statutory Authorities which shall conform in layout to the latest architectural plans submitted to and kept by these Authorities.
- c) The submission shall comply with the requirements set forth in the current Codes of Practice and circular letters of the Statutory Authorities. The shop drawings to be submitted shall be forwarded to the Architect for checking before submission.
- d) The Contractor shall allow for at least two submissions of complete sets of shop drawings to the Authorities, one to be made within six months after the award of the Contract but not less than six weeks before the inspection. The Architect may at his discretion instruct the Contractor for additional submissions to the Local Authorities whenever necessary.
- e) The Contractor shall notify the Architect at least seven days in advance of his application for local Authority tests and inspections. On receipt of a confirmed date for test and inspection the Contractor shall inform the Architect without delay.

## 5. **FINAL ACCEPTANCE TESTS**

- Following commissioning and inspection of the entire installation, and prior to issue of the Completion Certificate, the Contractor shall carry out final acceptance tests in accordance with a programme to be agreed with the Architect.
- Should the results of the acceptance tests show that plant, systems and/or equipment fail to perform to the efficiencies or other performance figures as given in this Specification, the Contractor shall adjust, modify and if necessary replace the equipment without further payment in order that the required performance is obtained.
- Where acceptance tests are required by the relevant Authorities having jurisdiction, these tests shall be carried out by the Contractor prior to the issue of Completion Certificate to the acceptance of the Authorities.

## 6. **REJECTION OF INSTALLATION / PLANT**

- Any item of plant or system or component which fails to comply with the requirements of this Specification in any respect whatsoever at any stage of manufacture, test, erection or on completion at site may be rejected by the Architect either in whole or in part as he considers necessary/appropriate. Adjustment and/or modification work as required by the Architect so as to comply with the Authority's requirements and the intent of the Specification shall be carried out by the Contractor at his own expense and to the satisfaction of the Authority/Architect.
- After works have been accepted, the Contractor may be required to carry out assist in carrying out additional performance tests as reasonably required by the Architect/BANK.

## 7. **WARRANTY AND HANDOVER**

The Contractor shall warrant that all plant, materials and equipment supplied and all workmanship performed by him to be free from defects of whatsoever nature before handover to the Bank.

## 8. **HANDING OVER OF DOCUMENTS**

All testing and commissioning shall be done by the Contractor to the entire satisfaction of the Bank's site representative and all testing and commissioning documents shall be handed over to the Bank's site representative.

The Contractor shall also hand over all maintenance and operation manuals, all certificates and all other documentation as per the terms of the contract to the Bank's site representative.

## 9. **PIPE COLOUR CODE:**

S.No.	Pipe Lines	Ground / Base Colour	First Colour Band	Second Colour Band
1	Cooling Water	Sea Green	French Blue	
2	BOMler feed	Sea Green	Gulf Red	
3	Condensate	Sea Green	Light Brown	
4	Drinking Water (All cold	Sea Green	French Blue	Single Red



S.No.	Pipe Lines	Ground / Base Colour	First Colour Band	Second Colour Band
	water lines after filter)			
5	Treated Water (Soft Water)	Sea Green	Light Orange	
6	Domestic Hot Water	Sea Green	Light Grey	
7	Compressed air upto 15/Kg/Sqcm	Sky Blue		
8	Steam	Silver Grey		
9	Drainage (Storm Water)	Black		
10	Drainage (Sewage Water)	Brown		
11	Gas	Canary Yellow		
12	Fire System	Post Office Red		

## **TECHNICAL SPECIFICATIONS FOR FIRE FIGHTING SYSTEMS**

### **1. SCOPE OF WORK:-**

#### **1.1 GENERAL:**

The scope of work covers Fire Hydrant, Sprinkler System for Proposed Construction of the buildings.

#### **1.2 CONTRACTOR TO INSPECT SITE:**

The Contractor should visit and examine the site of work and satisfy himself as to the nature of existing roads and other means of communication and other details pertaining to the work and local conditions and facilities for obtaining his own information on all matters affecting the execution of the work. No extra charge made in consequence if any misunderstanding or incorrect information on any of these points or on grounds of insufficient description will be allowed.

#### **1.3 SETTING OUT:**

The contractor shall set out the drainage, soil, waste and water pipe lines and other fittings and fixtures in accordance with the plans and instructions of the Engineer-in-charge. The contractor shall be responsible for the correctness of the above and any inaccuracies are to be rectified at his own expense as stated in the conditions of Contract. He will be responsible for taking level of site before setting out and putting them on record without extra charge.

#### **1.4 WORK PROGRAMME:**

The Contractor should note that the work should be executed and completed ahead

of the completion of the general building work and the Contractor shall take care to see that no damage or breakage is done to work once it is constructed and finished. The sanitary and water supply work shall be programmed in such a way that it does not hold up the general construction or works of other trades.

#### **1.5 ACCESS FOR INSPECTIONS:**

The Contractor shall provide at all times during the progress of the works and the maintenance period, proper facilities and necessary attendance for inspection or measurement of the work by the Engineer-in-charge or their representatives.

#### **1.6 SHOP DRAWINGS & AS BUILT DRAWINGS:**

Contractor shall prepare all the necessary Shop drawings indicating the layout, Specification of pipe fittings, levels, and all other information required for execution of work. The Shop drawings shall be got approved before carrying out any section of work. The Shop Drawings shall be submitted 7 days in advance for Approval of the Client / Consultant. On Approval of the same the contractor shall submit the desired nos. of hard copies for further distribution to the respectable disciplines and for record.

On completion of work, Contractor shall submit 5 hard copies of As Built Drawings along with soft files copied on the CD indicating all works with complete information as regards to sizes, operational valves, chambers etc. including levels and other such information as may be required for reference, duly certified by the Consultants, to the Client. Contractor shall also submit all operations and maintenance manual along with list of spare parts to the Client.

- 1.7** Contractor shall ensure that all the sleeves required at the time of casting of water tank, over head tank and any other sleeves required for Fire Fighting purpose shall be provided as per the drawings.
- 1.8** Chasing of walls for concealing of Fire Fighting pipes shall be done by cutter only.
- 1.9** Scaffolding if required for Fire Fighting work shall be provided by contractor at no extra cost.
- 1.10** Contractor has to submit his activity schedule in accordance with the civil activity bar chart (especially water proofing, tiling etc.) and ensure proper coordination with the civil agency.
- 1.11** All temporary water lines required for the civil activity shall be done by contractor at no extra labour cost.
- 1.12** Contractor shall insert all the necessary sleeves as indicated in the drawings fabricated out of G.I. 'B' class pipe or as instructed in all the beams at the time of casting of the slab and the beams of the toilet areas at no extra cost. Also all the sleeves required for the under ground and Over Head Tanks shall be provided by the Contractor at no extra cost.
- 1.13** Core cutting in RCC members if any shall be the Contractors responsibility and shall be made good at no extra cost.

## **2. WORKS TO COMPLY LOCAL REGULATIONS & RATES TO INCLUDE:**

- 2.1.** All Fire Fighting works shall confirm to the prevailing local Municipal Bye-laws and/or rules and regulations of Local Bodies and the works shall be got inspected and approved by the various authorities having jurisdiction.
- 2.2.** The work shall be carried out through a licensed Fire Fighting Contractor.
- 2.3.** The rates quoted shall be for complete items as fixed in position and cover all costs of materials, labour, tools supervision cutting of holes, chases overheads/profits etc., and also for providing fixing arrangements viz. clamps, brackets, wooden blocks etc. The rates shall also include restoration the original condition of all damage to walls, floors, etc. during the process of fixing Fire Fighting installations. All debris of excavation etc. shall be removed without any extra charge. The Fire Fighting work or the other building work affected by the contractors work shall be left thoroughly cleaned to the satisfaction of the Engineer-in-charge in approved manner.
- 2.4.** All brackets for G.I. pipes and fixtures M.S. Fixtures, shall be painted. All painting works shall be carried out to the entire satisfaction of the Engineer-in-charge. If directed, additional coats of paint shall be applied to get uniform and matching finish without any extra cost.
- 2.5.** In the interior of the building, all pipes whether of cast iron, or G.I. shall be embedded in an approved manner in chase made in walls or floors if required by the Engineer-in-charge.

The Contractor shall make all necessary holes in the walls of masonry and concrete etc. and restore them to the original condition.

- i) No tampering of waterproofing
  - ii) Prior permission for making holes in concrete.
- 2.6.** All cuttings, chasing and fixing work concealing work, shall be completed before commencement of any plastering tiling or finishing work.

The contractor shall be responsible for the adequacy and efficiency of the entire system and if, in his opinion he finds any serious objection to the system shown on the drawings, he shall set forth his objections or his suggestions with reasonable Arguments / justification to ensure adequacy and efficiency of the said system and notify the Engineer-in-charge before proceedings with the work.

- 2.8.** The work in every respect during its progress and till its final acceptance by the BANK, including raw material delivered to be incorporated for use in construction of the work by the Bank shall be under charge and in the care of and under the responsibility of the contractor and at his risk. Any loss or damage to such materials or work prior to final acceptance of the work by the BANK shall immediately be replaced by the Contractor at his expenses.

## **2.9 TESTING AND TEST RECORDS:**

The Contractor shall test the respective system as described to establish whether the installation has been carried out to facilitate efficient operation. Each component of the work shall be tested independently at various intervals and at completion. Where the situation calls for sectional testing (e.g. before embedding any

piping within the building structure or before covering up pipes laid in trenches), the contractor shall promptly arrange such testing. All testing shall be done in the presence of Engineer-in-charge's representative and at intervals as desired by him. The contractor shall record all testing done by him in a 'Log Book' of approved form. The test results shall be countersigned by the representatives of both the Contractor and Engineer-in-charge. The contractor shall arrange for all facilities, labour, materials, kit and instruments required for testing. All expenses, thereof shall be borne by the contractor.

- 2.10** Contractor will have to obtain necessary approvals for the Fire Fighting works including all approvals and compliances from various statutory departments as required and no extra would be paid for the same

### **3. FIRE HYDRANT AND SPRINKLER GENERAL REQUIREMENTS**

#### **3.1 APPLICABLE STANDARDS:**

- 3.1.1** Unless specifically mentioned otherwise all the applicable codes and standards updated and in force published by the Bureau of Indian Standards (BIS) and its subsequent revision and all other standards which may be published by them before construction work starts, shall govern in respect of design, workmanship, quality and properties of materials and method of testing. Some of this available standards are listed below:

(All materials shall conform and bear stamps of the required Indian Standard specifications).

IS: 1239/I.S. 3589 :	Specifications for black heavy. Pipes/ G.I. pipes ( Pipe lines up to 150mm shall be as per IS:1239 While pipe line above 150mm dia. shall be as per IS:3589)
IS: 1239:	Specifications for M.S. Pipes
IS: 778 :	Specifications for Gun Metal Globe valves.
I.S. 800	Specifications for Structural steel.
I.S. 3589 Gr 330	Specifications for ERW pipes for water service.
I.S. 814	Specifications for covered electrodes for metal arc welding of structural steel.
API: 600	Specifications for Gate Valves.
API: 609	Specifications for Butterfly valves.
API: 594	Specifications for Check valve
I.S. 4927	Specifications for Canvas Hose pipes.
B.S. 1641	Specifications for C.I. Screwed fittings.
I.S. 903	Specifications for Branch pipes

I.S. 3844	Code of practice for installation of internal fire hydrant in Multi-toried building.
I.S. 5290	Specifications for landing valves (Courtyard Hydrant)
I.S. 903	Specifications for coupling double male double female instantaneous pattern for fire fighting
I.S. 2217	Recommendation for providing first aid fire fighting arrangement in Public buildings.
I.S. 1879	Malleable Iron fittings Parts I to X.
I.S. 1200	Method of measuring of building & civil engineering works (Water Supply, Plumbing Drain and sanitary fittings)
I.S. 4853	Recommended practice for radiographic inspection of fusion welded butt joints in steel pipes.
I.S. 636	Synthetic, jacketed hose pipes
I.S. 1520	Electrically operated multistage/ multi outlet pump
I.S. 2198	Control Panels
I.S. 3524	Pressure Gauge.

### 3.2 MATERIALS:

All materials shall be C.F.O. approved and conform and bear stamps of the required standard specifications.

Samples of all materials shall be approved before placing order and the approved samples shall be deposited with Engineer-in-charge.

If so directed, materials shall be tested in an approved testing laboratory and the Contractor shall produce the test certificate in original to the Engineer-in-charge and the entire charges for original as well as repeated tests shall be borne by the Contractor. If required by the Engineer-in-charge, the Contractor shall arrange to test portion of the work at his own cost in order to prove their soundness and efficiency. If after any such test, the work or portions of work is found in the opinion of the Engineer-in-charge, to be defective or unsound, the contractor shall pull down and redo the same at his own cost. Defective Material shall be removed from site.

It shall be obligatory for the Contractor if so required by the Engineer-in-charge to furnish certificates from manufacturers or materials suppliers, that the work has been carried out using their materials and installed/fixed as per their recommendations/factory manuals.

### 3.3 STEEL PIPES: (Refer Material Specification Attached)

The M.S.pipes of 200 NB – 300 NB shall conform to IS : 3589-1981 Class I Grade 330 with 6 mm wall thickness and 350 NB shall conform IS:3589 Gr 330 with 8 mm thickness. And 150mm dia & less shall confirm IS:1239.

No G.I pipes for fire hydrants . G.I pipes shall be used within building for sprinkler system only.

IS: 1239 black heavy-galvanized shall be used for sprinkler system.

IS: 1239 black heavy- from 1/2" – 6" shall be used for Hydrant system.

### 3.4 GALVANISING:

Galvanizing shall conform to I.S. 2529 (Hot Dip galvanizing of iron and steel). On delivery to site, the pipes and fittings shall be inspected for the galvanized coating and shall have identification for the class of pipes. Pipes with damaged coatings shall be segregated & removed from the site and not be used in the installation.

### 3.5 WELDING OF PIPES:

The welding of M.S or galvanised pipes and fittings shall be in accordance with "Recommendation for metal Arc welding of carbon and carbon manganese steel". IS: 9595 - 1980. The electrodes used for welding shall comply with I.S 814 (part -1) 1974 and IS : 814 (part-2) 1974.

Preparing pipe faces for welding: Before aligning, assembling and welding the pipe faces shall be cleared by scraping by wire brushes or any other method specified by the construction Manager.

The welding shall show evenness in ripples or waves and well formed beds with good fusion along the edge of weld. There shall be no unfilled cavities, small pockets of slag's or burned metal air or gas pockets.

### 3.6 TESTING OF WELDED JOINTS:

The welded joints shall be tested in accordance with the procedure laid down in I.S.3600,(Part I) 1973 suitable means as desired by Engineer-in-charge.

### 3.7 WELDING OF CLOSURE GAPS:

Final welding of closure gaps shall be carried out with in a temperature range of average air temperature +8 Degree C.

### 3.8 JOINTING OF PIPES:

All pipes M.S./G.I. shall be joined by means of arc welding after laying in correct position and shall have flanged joints at every 20 M straight length and at change in direction/change in size/branch connections. M.S. flanges shall conform to I.S 1538 part IV to part VI table E which shall be cut and drilled out of M.S. plates. M.S. cut flanges shall be galvanised before welding to G.I. pipes. All gaskets for flanged joints wherever required shall be of Neoprene 3 mm thick with G.I. nuts and bolts. Welded joints shall be covered with a coat of epoxy paint, applied after preparation of surface and appropriate primer.

### A. FIRE FIGHTING SYSTEM:

Pipes of all diameters shall have welded joints with flanged joints at every 20 m straight length.

### B. SPRINKLER SYSTEM

Pipes of 2" (50mm) NB and above shall have welded joints with flanged joints at every 20 m straight length. Pipes of 1/2" – 1 1/2" (15mm NB – 40mm NB) shall have screwed joints.

### 3.9 INSPECTION BEFORE INSTALLATION:

The M.S. and G.I.pipes, fittings and specials shall be inspected before delivering at the site for the brand, quality, etc. The pipe and fittings shall be inspected at the site again before laying and defects noticed, if any, such as protrusion, grooves, dents, etc. shall be rectified. Care shall be taken that the resulting wall thickness does not



become less than the minimum. Any damaged portion shall be cutout as a cylinder and replaced by an undamaged piece of pipe.

### **3.10 HANDLING OF PIPES AND SPECIALS:**

It is very essential to avoid damage to the pipes, fittings specials etc., at all stages during handling. The pipes & specials shall not be distorted of their circular shape and galvanizing shall not be damaged. Pipes shall not be thrown down while unloading.

### **3.11 LAYING OF PIPES:**

The pipes cut to required lengths shall be laid to required gradients and joined by welding or by flanged joints as called for. The laying of welded pipes shall comply to IS:5822-1986, "Code of practice for laying of welded pipes for water supply".

### **3.12 TESTING OF PIPE LINE:**

#### **i. Field Test Pressure :**

The field test pressure to be imposed shall not be less than 15 kg/cm<sup>2</sup>.

#### **ii. Procedure of Test :**

All air shall be expelled from the pipe line through hydrants and air valves. Each valve section of pipes shall then be slowly and carefully filled with water and allowed to stand full of water for a few hours if time permits. The specified test pressure based on the elevation of lowest point of the line or section under test and corrected to the elevation of the test gauge shall be applied by means of a pump connected to the pipe in a manner satisfactory to the Engineer-in-charge. Due precaution shall be taken to ensure that the required test pressure is not exceeded. Pressure gauges shall be accurate and shall preferably have been re-calibrated before the test. The test pump having been stopped, the test pressure shall maintain itself without measurable loss for at least Two hours or as directed by Engineer-in-charge. The pipes shall be tested in sections as the work of laying Proceeds, and joints inspected during testing. The open end of the pipe line may be temporarily closed for testing under moderate pressure by fitting a water tight expanding plug. The end of the pipe and the plug shall be secured by struts or other wise to resist the end thrust of the water pressure in the pipes.

### **3.13 PIPE SUPPORTS:**

- a. M.S. Brackets/Hangers shall be thoroughly cleaned by wire brush to make the Surface clear from any rust before application of paint. The brackets/Hangers shall be fixed to the ceiling by Anchor fasteners, as directed by the Engineer-in-charge. In case the brackets cannot be fixed by above method due to site condition, they shall be grouted in to the slab with the permission and as directed by the Engineer-in-charge.
- b. Sturdy Hanger, Brackets and saddles of approved design shall be installed to support all pipe lengths, which are not embedded over their entire run. The hangers and brackets shall be of adjustable heights and primer coated with zinc chromate primer. Clamps, collars and saddles to hold pipes shall be provided with nuts, bolts and suitable gaskets. The brackets and hangers shall be designed to carry the weight of pipes safely and without any deflections. All pipes and fittings shall be supported at a maximum of 3 M run of pipe and at change of direction or wherever required as per site conditions. Where called for, pipe hangers shall also be supplied with proper sound and vibration dampening devices, to minimize noise and vibration transmission.

- c. Details of piping supports both for Horizontal and vertical pipes are shown in the relevant drawings and shall be strictly followed by the Contractor.
- d. Pipes of 50mm dia & less shall be fixed to the ceiling with Anchor-fastener, or M.S/'U' clamps as directed. Pipe hangers for larger dia meter i.e 65mm and above shall be as per the supporting details shown in the relevant Drawing. The support consists of channel of suitable size as indicated in the drawing., fixed vertically and supported from the ceiling and two 'U' clamps made from 25 x 6mm flat with bolts & nuts.
- e. Fire water main pipes or headers shall be supported on M.S. Cradles , fabricated out of M.S. angles of suitable size and verticals made out of M.S.flat of suitable size hooked to reinforcement in slab above and pocket grouted properly.
- f. Pipe hangers shall be provided at the following maximum spacings:

Pipe Dia (mm)	Hanger Rod Dia (mm)	Spacing between Supports (m)
Up to 25	6	2
32 to 50	6	2.5
65 to 80	8	2.5
80 to 100	10	2.5
125 to 150	10	3.0
200 to 300	12	3.5

### 3.14 PAINTING:

#### a. Scope :

This specification covers the surface preparation method of application and material to be used for all coating of equipments & piping.

#### b. Applicable Standards, Project Specifications, Code & Regulations.

Work shall be performed in accordance with the following codes & standards. Equivalent Indian Standards may be used subject to RIL's Approval. Works shall be in accordance with the coating manufacturer's recommendations.

#### c. Coating Preparation and Application :

- 1.1 Coating and primers shall be delivered to the job site in the original containers bearing the manufactures name, product designation, batch number, shelf life and date of manufacture.
- 1.2 Field application shall be by brush, roller or spray gun. Local regulations regarding spray and roller coating shall be observed.
- 1.3 Two component (base and hardner) coatings like Air drying epoxy, Polyurethane coatings etc. shall be mixed in the ratio recommended by manufacturer to ensure proper and complete curing of the coatings.
- 1.4 Painting should not be undertaken during fog or mist or when rains is imminent

conditions, when the surface to be painted is wet.

1.5 Prime coats shall be inspected and cleaned when required by RIL's Inspector before applying finish coats.

**d.Coating and Color Schedule :**

CODE LETTER	DESCRIPTION	COLOUR	BRITISH STD. 4800 ***
F	Tankages:		
	Heated (Except Acid, Caustic, Water)	Black	00 – E - 53
	Refrigerated, Tanks inside battery limits	White	
	All Tanks in Tank Farm area	Sand	
G	Rotating Equipment:		
	Pumps-Compressors-Turbines-Fans-Motors	Light Grey	10 – A - 03
	Uncovered moving parts that could cause injury	Orange	06 – E - 51
L	Piping, Valves, Fittings etc.:		
	For Air services, unless galvanized	Light Blue	20 – E - 51
	Underground (Buried)	Black	00 – E - 53
	Above Ground – Fire Water, Foam etc.	Fire Red	04 – E - 53
	All other services except the above.	Light Grey	10 – A - 03
	Transition Flanges (Above ground & Below ground)	Yellow	08 – E - 51
P	Fire Protection Material and Equipment:	Fire Red	04 – E - 53
	Foanatic Hydrants, Water Hydrants, Extinguishers, Sprinkler Systems, Alaram Boxes		
	Fire doors, Connections and Cabinet fir Fire		
	Blankets and Hoses.		
	Safety Equipment: Safety Showers, Eyewash Fountains, First Aid Equipment etc.	Green	14 – C - 39

**3.15 WRAPPING AND COATING OF U/G PIPING**

- This specification covers the materials, applications & procedure for coating and wrapping the external surface of u/g piping.
- The Codes and Standard listed below.

American Water Works Association Standards.

AWWA C203 : Coal Tar Enamel Protective Coating for steel water pipes (1986)

British Standards:

BS 4164 : Coal tar based Hot Applied Coating Materials for Protecting Iron & Steel (1987).

**American Society For Testing Materials:**

ASTMC-162: Glass & Glass Products – Definition of Terms – (1987)

ASTM D36 : Test Method of Softening Point of Bituminous Material – (1987)

ASTM D5 : Test for Penetration of Bituminous materials – (1987)

ASTM-F-22: Standard Method for Hydrophobic Surface Films by Water Break Test.

**International Organisation for Standardisation:**

ISO 8501-1 (1988): Preparation of steel substrate before application of paint and related products – visual assessment of surface cleanliness Part 1

ISO 8503-1 (1988): Preparation of steel substrate before application of paint and related products – surface roughness characteristics of blast cleaned steel substrate part 1.

APIRP 5L1: Railroad Transportation of Line Pipe.

DIN 30671 : Thermo set Plastic Coatings for Buried Steel Pipes.

**RIL Quality Control:**

Quality Control & Inspection of Painting internal & external coating, insulation, fire proofing and refractory lining as per RIL's (ceiling) standard requirements.

**c. Application General**

- i) All coating and wrapping materials consigned to the coating shall be properly stored to prevent damage and deterioration. Wrapping and reinforcing materials shall be stored in a dry warehouse and in accordance with the manufacturer's recommendations.
- ii) Pipe identification shall be preserved by the contractor by marking a field number (pipe diameter, length, pipe mill number, date of coating) on the inside surface of the pipe using wax chalk or white paint before the last cleaning of the external pipe surface.

**3.16 VALVES AND CONTROLS:**

All valves shall be C.I butterfly slim seal type of approved make as per B.S. 5155).

**3.17 C.I. NON RETURN VALVES:**

The non-return valve shall be double flanged cast iron of approved make. Re coil check valve with cast iron body with all internals made of Gun Metal or Wafer Type Check Valve.

**3.18 ORIFICE PLATES:**

These shall be specially designed orifice plates wherever required on hydrant outlets of suitable size for adjustment of delivery pressure, where running pressure exceeds 7 kg/cm<sup>2</sup>.

**3.19 HYDRANT VALVES:**

Hydrant valves shall be as per I.S. 5290 Type-A. The outlet nozzles size shall be 63mm dia. The hydrant valves shall be Gun Metal Morris pattern approved by Fire Brigade with necessary nuts, bolts, & gaskets etc. The valve shall be right angled, turn down and other types having instantaneous female plunger type 63mm outlets with chained

blank cap. flanged inlets gunmetal or light alloy with C.I. or brass hand wheels tested to 21 kg/cm<sup>2</sup> pressure. The valves shall be either single outlet or Double outlet as required and as shown in the drawing.

### **3.20 HOSE REEL BOX (ON LANDINGS):**

Mild Steel Hose cabinet of size shall be to suit site conditions (For External & Internal hydrant). It shall be capable of accommodating twin outlet hydrant valves Fire hose, and first Aid hose reel with locking arrangement and lever for opening the door after breaking glass. Each hose box to be fitted with glass door in front, painted 'fire' in red paint. Cabinet shall be painted with two coats of enamel paint over two coats of Zinc Chromate primer. These boxes shall be provided at locations shown in the drawing. 900mmx600x400 deep or nearest

### **3.21 FIRST AID HOSE REEL:**

Hose Reels shall be Swinging wall mounting type complete with 20mm dia x 30 Mt. long armored rubber hose with nozzle and cutoff valve attachment. Hose reel shall be of surging type wall mounted drum.

### **3.22 FIRE BRIGADE CONNECTION:**

Fire Brigade (Siamese) inlet connection with 4 (four) connecting points of 63mm size male inlet connections, fabricated out of G.I. Pipes and incorporating a C.I. non return valve for fire and sprinkler system. The fire brigade connection shall be connected to the 1) Fire storage tank 2) Fire wet riser system 3) Sprinkler system at locations shown in the drawings.

### **3.23 SPRINKLERS:**

Sprinklers shall be 'GRINNEL/AUTOMATIC' Type F UNDER WRITERS LABORATORY/Factory mutual listed or approved equivalent and approved by CFO. The bulb shall be quartzoid bulb with a temperature rating of 68 deg.C. The sprinklers shall be pendant type / Side Wall / Recessed type as called for.

The Orifice size shall be 15 mm with Gun Metal Body, Bronze finish and quartzoid bulb as heat sensitive element and universal deflector all as approved by CFO & UL/FML listed. The discharge pattern for pendant sprinklers shall be spheroidal covering an area of 9 sq.meters. Sprinklers shall be mounted up right/ suspended in pendant position, shown in the drawings.

### **3.24 INSTALLATION CONTROL VALVE:**

Installation Control valves shall be approved by CFO and shall be wet type, flanged of suitable size as shown in the drawing with cast iron body, Bronze seating Alarm valve clack, Drain and test valve, pressure gauge on upstream and down stream and water motor gong to be automatically operated on loss of pressure in the system. The water motor gong shall be pelton wheel type or electric alarm.

### **3.25 COURT YARD HYDRANT:**

The Court Yard Hydrant (external hydrant) landing valve shall be as per I.S. 5290. The valve shall be a single outlet oblique type hydrant valve with instantaneous coupling Gun Metal Body and hand wheel to be fixed on a stand pipe of 80mm dia.

### **3.26 HOSE PIPE FOR COURT YARD HYDRANT:**

Fire hose shall be synthetic, jacketed type with unified lining and cover of special polymer compound designed to resist impact, abrasion, damage, weathering by ozone, burning oils and chemicals. It shall conform to IS : 636 type B of 63 mm dia, 15 m long with instantaneous couplings (Male & Female) screwed, with 16 gauge G.I. wire

on either ends.

### 3.27 BRANCH PIPES:

Branch pipe shall be as per IS-903 long type with copper body with Male inlet and screwed bronze type 20mm nozzle.

### 3.28 PRESSURE GAUGE:

The pressure gauges shall be of 'BOURDEN TYPE' with +/- 1% accuracy. The size or diameter of the dial shall be 150mm with a pressure range from 0 to 16 kg./sq.cm with 15mm connection. The measuring element type shall be 'BOURDEN' and material shall be SS-316. The end connection for the pressure gauge shall be NPT (male).

### 3.29 AUTOMATIC SPRINKLER INSTALLATION (WET SYSTEM):

Sprinkler heads shall be located in positions shown on the drawings. While slight relocation may result from building construction features or interference from other services, the maximum spacing between sprinkler heads and coverage area shall not exceed those stipulated in the TAC regulations and the NFPA 13-1994 Rules.

Allowance shall be made for such relocations within a radius of 1500 mm of the indicated positions without additional cost. The Fire Protection Services Trade shall co-ordinate with the ceiling Trade to set out the sprinkler locations to suit the site location of the unit grid. In general, all sprinklers shall be located at the centre of the ceiling unit and a provision of about 10% more sprinklers and pipe work than required in TAC and NFPA Rules shall be included in this sub-contract. Chrome plated wire mesh guards shall be used to protect the sprinkler heads which are liable to accidental or mechanical **(at no extra cost)** damage.

#### A. STOP VALVES :

The valve shall be of wedge type and be provided with an indicator showing the valve in open or closed position. It shall be secured in the open position by a padlock and strap. This valve controls the water supply to installation and must always remain open.

#### B. ALARM EQUIPMENT :

The Alarm equipment to be provided shall give a loud alarm in case of fire. This equipment shall come into operation when water flows through the installation valves to sprinkler when opened due to fire. The equipment shall consist of simple and positive action main parts namely i) Alarm valve, ii) Alarm Stop Valve

##### B.1 ALARM VALVE :

Alarm valve shall have a cast iron body & be fitted with a Bronze seating and valve guide clack resting on the bronze seating. The flat circular Bronze plate of the clack shall be faced with a special composition disc, and shall rest on the seating and prevent access of water to the groove. When water flows into the installation, clack shall lift and water shall flow through groove and open alarm stop valve to the alarm motor.

##### B.2 ALARM STOP VALVE :

Alarm stop valve shall have an indicator to show whether it is open or closed. Alarm stop valve shall control the flow of water from Alarm valve through annular groove to the alarm motor. It should have a strap to keep the valve in open position to give alarm when the fire takes place.



### **B.3 ALARM MOTOR AND GONG :**

The Alarm Motor shall be of pelton wheel type. The whole unit shall be simple and robust construction and shall give a reliable service. Suitable Drain pipe shall be provided to discharge water through drip plug with an orifice to restrict the rate of discharge. This shall not impair the operation of Alarm motor and gong.

### **C. Drain and Test Valve:**

The drain pipe size shall be 50mm dia. The test valve shall have to be in closed position secured by a strap. 15mm dia size test valve shall be provided to test the Alarm when the test valve is opened, water shall flow through Alarm valve, lift alarm valve clack from its seat and allow water to flow to the Alarm Motor. Valve shall be in closed position when not in operation and shall be secured with the strap.

### **D. SPRINKLERS FOR TESTING :**

The Contractor shall provide free of cost to the Bank Sprinkler heads for testing purposes. The test shall be carried out on the sprinklers separately for each zone.

## **3.30 EXAMINATION UNDER PRESSURE**

Under the test pressure no leak or sweating shall be visible at all section of pipes, fittings, valves, Hydrants & welded joints. Any defective workmanship and defective pipes, fittings, valves or Hydrants discovered in consequence of this pressure test shall be removed and replaced with acceptable material & the test shall be repeated until found satisfactory by the Engineer-in-charge.

## **3.31 HAND HELD FIRE EXTINGUISHERS**

### **A. HAND APPLIANCES**

Work under this section shall consist of furnishing all labour, materials, appliances and equipment necessary and required to install fire extinguishing hand appliances as per relevant specification of various authorities.

Without restricting to the generality of the foregoing, the work shall consists of the following:

Installation of fully charged and tested fire extinguishing hand appliances of A B C powder type as required and specified in the drawings and schedule of rates. Hand appliances shall be installed in easily accessible locations with the brackets fixed to the wall by suitable anchor fasteners.

Each appliance shall be provided with an inspection card indicating the date of inspection, testing, change of charge and other relevant data. All appliances shall be fixed in a true workmanlike manner truly vertical and at correct locations. Distribution / Installation of fire extinguisher to be in accordance to IS:2190.

### **B. MEASUREMENT**

Fire extinguishers shall be counted in numbers and include installation of all necessary items required as given in the specifications.

### **C. ABC TYPE DRY POWDER EXTINGUISHER**

The Extinguisher shall be filled with ABC grade 40, Mono Ammonium Phosphate 40% from any approved manufacturer.

The capacity of the extinguisher when filled with Dry Chemical Powder (First filling) as per IS 4308, Part II, shall be 5 Kg +/-2% or 10 Kg +/- 3%.

The distribution of fire extinguishers to be as per IS 2190 - 1992

It shall be operated upright, with a squeeze grip valve to control discharge. The plunger neck shall have a safety clip, fitted with a pin, to prevent accidental discharge. It shall be pressurized with Dry Nitrogen, as expellant. The Nitrogen to be charged at a pressure of 15 Kg/cm<sup>2</sup>

**D. WATER TYPE EXTINGUISHER (Gas Pressure Type)**

The Extinguishing medium shall be primarily water stored under normal pressure, the discharge being affected by release of Carbon Dioxide Gas from a 120 gms cylinder. The capacity of Extinguisher, when filled upto the indicated level, shall be 9 ltr +/- 5%

The extinguisher shall be treated for anti-corrosion internally and externally, and externally painted with Fire Red paint. The paint shall be stove enameled/powder coated. The cartridge shall be as per IS, and have 60 gm net carbon dioxide gas for expelling.

The extinguisher, body and cap shall be treated to an internal hydraulic pressure of 25 Kg/cm<sup>2</sup>. It shall have external marking with letter A, of 2.5 cm height, in block letters within a triangle of 5 cm each side. The extinguisher shall be upright in operation, with the body placed on ground and discharge tube with nozzle held in one hand to give a throw of not less than 6 mtr, and continue so for at least 60 secs. The extinguisher body shall be clearly marked with ISI stamp (IS 940).

**3.32 CARBON DIOXIDE EXTINGUISHER**

The Carbon Dioxide Extinguisher shall be as per IS: 2878

The body shall be constructed of seamless tube conforming to IS:7285 and having a convex dome and flat base. Its dia shall be maximum 140 mm, and the overall height shall not exceed 720 mm.

**The extinguisher shall fulfill the following test pressures:**

Cylinder: 236 Kg/cm<sup>2</sup>

Control Valve: 125 Kg/cm<sup>2</sup>

Burst Pressure of Hose: 140 Kg/cm<sup>2</sup> minimum

It shall be an Upright type. The cylinder, including the control valve and high pressure Discharge Hose must comply with relevant Statutory Regulations, and be approved by Chief Controller of Explosives, Nagpur and also bear IS marking.

The Extinguisher including components shall be IS marked.

**4.0 MISCELLANEOUS :**

**4.1. TOOLS, MATERIALS & STORAGE:**

- A. The contractor at his own cost and charge shall provide all materials, tools, testing, materials, scaffolding labour and electric power, necessary for the perfect completion of the whole work.
- B. The contractor shall pay the fees for testing the materials if directed by the PMC/Clients and local Authorities or other statutory authorities.
- C. The contractor shall obtain from time to time various permissions and the completion certificates as per rules of all local and statutory authorities.

- D. The contractor shall arrange for the materials and storage facility with the Engineer-in-charge.
- E. Any materials, brought at site shall not be removed without the written authority of the architects and when the contractor shall have received payment in respect of any certificate in which it is stated that the value of any unified materials, on the work has been taken into account, such materials shall become the property of the BANK and the contractor shall be liable for any loss or damage hereto.
- F. The contractor shall insure the work against damages for such sum as the Architect may, from time to time direct. All insurance policies are to be taken out in the joint name of the BANK and the contractor in an office selected by the PMC/Clients and all policies and receipts shall be deposited with the Architects/Clients.
- G. All the brackets and hangers for pipes shall be fixed to the wall or R.C.C. slab using Anchor fasteners, wherever necessary.
- H. Surplus material from the site shall be carried away by the contractor without any cost to the BANK and the storage space provided to the contractor shall be handed over to the BANK clear and ready occupation.

#### **4.2 TESTING:**

The contractor shall be required at his own expense to test the installation with water. The minimum test pressure shall be 50% higher than the system pressure. Pressure shall be 50% higher than the system pressure. When the installation is completely carried out, proper stoppers, screws, plugs, hose, etc. must be provided for this purpose. If required, these shall be taken out and re-laid at the contractor's expense. The required quantity of water for testing will be provided by the Bank. The installation shall be guaranteed against faulty material, workmanship and design. The defect liability period is for 12 months and design and the period commences from the date of commissioning of the whole installation along with the approved certificate from the authorities. During this period the contractor shall be responsible for any repairs or replacement of any defective part and shall rectify the installation free of cost to the Bank.

The contractor shall train the Bank's personnel for the proper maintenance of the installation.

The contractor shall supply free of cost 2 sets of final installation drawings and operating manual to the Bank.

### **TECHNICAL SPECIFICATIONS FOR INTERIOR WORKS:**

#### **1. GENERAL**

This specification is for work to be done, item to be supplied and materials to be used in the works as shown and defined on the drawings and described herein, all under the supervision and to the satisfaction of the Competent Authority.

Competent authority means Architects / Engineer in charge.

- 1.1 The workmanship is to be the best and of high standard, use must be made of special trades men in all respects of the work and allowances must be made in the rates for doing

SO.

- 1.2 The materials and items to be provided by the contractor shall be approved by the Competent Authority in accordance with any samples which will be submitted for approval by Contractor and generally in accordance with the Specifications Also if products are specified in the catalogue reference, the contractor will be required to obtain the approval of the Competent Authority before using a material. The Contractor shall produce all invoices, vouchers or receipts for any material if called upon to do so by the Competent Authority.
- 1.3 Samples of all materials are to be submitted to the Competent Authority for approval before the Contractor orders or delivers the materials at site. Samples together with their packing are to be provided free of charge by the Contractor and should any materials be rejected; they will be removed from the site at the Contractor's expense. All samples will be retained by the Competent Authority for comparison with materials, which will be delivered at the site. Also, the Contractor will be required to submit specimen finishes of colours, fabrics etc. for the approval of the Competent Authority before proceeding with the work.
- 1.4 The contractor shall be responsible for providing and maintaining and boxing or other temporary coverage required for the protection of dresses or finished work if left unprotected. He is also to clean out all shelving's, out ends and other waste from all parts of the works before coverings or in-fillings are constructed.
- 1.5 Templates, boxes and moulds shall be accurately set out and rigidly constructed so as to remain accurate during they are in use.
- 1.6 All unexposed surface of timber e. g. false ceiling, backing fillets, backs of door frames, cupboard framing, grounds, etc. are to be treated with two coats of approved timber preservative before fixing or converging.
- 1.7 Only first class workmanship will be accepted. Contractor shall maintain uniform quality and consistency in workmanship throughout.

## **2. JOINERY:**

- 2.1 Joinery is to be prepared immediately after the placing of the contract, framed up, bonded and waged up. Any portions that are wrapped or found with other defects are to be replaced before wedging up. The whole of the work is to be framed and finished in a workmen-like manner in accordance with the detailed drawings wrought and wherever required, fitted with all necessary metal ties, straps, belts, screws, glue etc. Running beaded joints are to be cross-tongued with teak wherever 1(1/2) thick double cross tongued. Joiners work generally to be finished with fine sand/glass paper.
- 2.2 Joints: All joints shall be standard mortise and tennon, dowel, dovetail, and cross-halved. Nailed or glued butt joints will not be permitted, screws, nails etc. will be standard iron or wire of oxidized nettle fold tennon should fit the mortises exactly.
- 2.3 Nailed or glued butt joints will not be permitted except in exceptional cases with approval of Competent Authority.
- 2.4 Where screws shown on a finished surface, those will be sunk and the whole plugged with a wood plug of the same wood and grain of the finished surfaces will be neatly punched and the hole filled with wood filler to match the colour.
- 2.5 Should joints in joiner's work open, or other defects arise within the period stated for defect liability in the contract and the clause thereof, be deemed by the Competent Authority to be due such defective joinery shall be taken down, and refilled, redecorated and/or replaced if necessary and any work disturbed shall be made good at the Contractor's expense.
- 2.6 Nails spikes and bolts shall be of lengths and weights approved by the Competent Authority. Nails shall comply with is 1959-1960 or equivalent approved quality sample. Brass-headed nails are to comply with B. S. 1210. Wire staples shall comply with B. S. 1494 or equivalent.
- 2.7 The contact surface of dowels, tennons wedges etc., shall be glued with an approved adhesive. Where glued, joinery and carpentry work is likely to come into contact with moisture, the glue shall be waterproof.

### **3.0 HARDWARE AND METALS:**

The hardware throughout shall be of approved manufacture or supplier well-made and equal to in every respect to the samples to be deposited with the Competent Authority. The contractor may be required to produce and provide samples from many different sources before the Competent Authority takes decision and he should allow his rates for doing so.

- 3.1 Fittings generally shall be brass oxidized, unless otherwise specified and shall be suitable for their intended purpose. In any case, it will have to be approved by Competent Authority before the Contractor procures it at site of work.
- 3.2 Screws are to match the finish of the article to be fixed, and to be round or flat headed or counter sunk as required.
- 3.3 The contractor should cover up and protect the brass and bronze surfaces with a thick grease or other suitable productive material, renew as necessary and subsequently clean off away on connection.
- 3.4 Aluminium and stainless steel shall be of approved manufacture and suitable for its particular application. Generally, the surface of aluminium shall have an anodized finish and both shall comply with the samples approved by the Competent Authority. All stainless steel sheets shall be 304 S. S. Japan or equivalent with gauge as specified but not thinner than 16G.
- 3.5 All steel, brass, bronze, aluminium and stainless steel articles shall be subjected to a reasonable test at the Contractor's expense.
- 3.6 All brazing and welds are to be executed in a clean and smooth manner rubbed down and left in the flattest and tidiest way, particularly where exposed.
- 3.7 Chromium plating shall be in accordance with I. S. Standard or as per approved specification for normal outdoor conditions and shall be on a base material of copper or brass.

### **4.0 GLAZIER:**

- 4.1 All glass to be of approved manufacturer complying with IS 3548-1966 as per approved quality and sample to be of the selective qualities specified and free from bubbles, smoke, air holes and other defects.
- 4.2 Polished plate glass shall be "glazing glass" (G. G.) quality and that for mirrors shall be "silvering quality" (S.G.) conforming to IS 3438-1965 or as per approved sample and quality.
- 4.3 The compound for glazing to metal is to be a special non-hardening compound manufactured for the purpose and of a brand and quality approved by the Competent Authority.
- 4.4 While cutting glass, proper allowance be made for expansion. Each square of glazing to be in one whole sheet. On completion of work clean all glass inside and cut, replace all cracked scratched and broken panes and leave in good condition.

### **5.0 PAINT AND POLISHES:**

- 5.1 All material required for the works shall be of specified and approved manufacturer, delivered to the site in the manufacturer's container's name or trade mark with a description of the contents and colour. All materials are to be stored on the site.
- 5.2 Spray painting with approved machines will be permitted only if written approval has been obtained from the Competent Authority prior to painting. No spraying will be permitted in the case of priming coats nor where the soiling of adjacent surfaces is likely to occur. The pressure and speed to be so operated as to give an even coating throughout to the satisfaction of the Competent Authority. The paint used for spraying is to comply generally with the specification concerned and is to be specially prepared by the manufacturer for spraying. Thinning of paint made for brushing will not be allowed.
- 5.3 Wood preservative shall be Solignum or other equal and approved impregnating wood preservative and all concealed woodwork shall be treated with wood preservative.
- 5.4 All brushes, tools, pots kettles etc. used in carrying out the work shall be clean and free from foreign matter and are to be thoroughly cleaned out before being used with a different type of class of materials.
- 5.5 All iron or steel surfaces shall be thoroughly scraped and rubbed with wire brushes and shall



be entirely free from rust, mill scale etc. before applying the priming coat.

- 5.6** Surfaces of new wood work which to be painted are to be rubbed down, cleaned, down to the approval of the Competent Authority.
- 5.7** Surfaces of previously painted woodwork which are to be painted are to be cleaned down with soap and water, detergent solution or approved solvent to remove dirt, grease etc. Whilst wet the surfaces shall be flatted down with a suitable abrasive and then rinsed down and allowed to dry. Minor areas of defective paint shall be removed by scraping back to a firm edge and the exposed surface touched in with primer as described and soaked with putty. Where woodwork has been previously painted or polished and it is to be newly polished, with scrapping, burning off or rubbing down and making surface properly.
- 5.8** Surfaces of previously painted metal which shall be painted are to be cleaned down and flattened down as described in surfaces of any rust and loose scale shall be removed completely by chipping, scrapping and wire brushing back to the bare metal and touched in with primer as described.

## **6 UPHOLSTERY:**

- 6.1** This will be of first class standard workmanship with webbing, no-sag springs, coiled springs, padding and filling as specified on drawing. Covering fabrics will be seen, tufted, and corded as shown on the drawing and as approved by the Competent Authority.
- 6.2** Cushion Vents: Brass "cushion Vents" should be installed at the back or under side or seat cushions (especially those covered in leather vinyl plastic or very tightly woven fabric) to allow air to escape easily and to prevent torn seams.
- 6.3** Materials: Finished timber shall be of the type specified. Furnishing fabrics, colour, pattern, substance to be as specified, no variations of this will be permitted unless with prior approval of the Competent Authority.

## **7 POLISH:**

- 7.1** French polish: The basic material shall be shellac dissolved in mentholated spirit.

### **Preparation:**

The timber must be well sanded and cleaned and the grain filled with grain filler. Any staining must be done before applying the polish.

### **Equipment:**

The polishing rubber the most important implement in French polish shall consist of a pad of cotton wool, which acts as a reservoir for the polish, and a cover of soft white linen or cotton fabric, similar to a well-worn handkerchief which acts as a fitter. The rubber must never be dipped into the polish; it should be charged by pouring the polish on to the pad with the cover removed.

### **Application:**

Work evenly over the surface with a slow figure-of-eight motion until the timber is coated with a thin layer of polish. The object is to apply a series of thin coats, allowing only a few minutes for drying between the coats. When a level and even-bodied surface is obtained the work is ready for the second stage i.e. spiriting off.

Allow the work to stand for at least eight hours, then take a fresh rubber with a double thickness of cover material and charge it with mentholated spirit. The object of spiriting off into and remove the rubber marks and to give the brilliance of finish.

Finally, work in the direction of the grain and continue until the surface is free from smears and rubber marks then leave to harden off.



## 7.2 Wax polish:

Wax polish shall contain silicones and driers. A good silicon wax is to be used not a creamy or spray. The timber shall be sealed first with another finish such as Ron seal, before applying wax.

### Application:

Apply coat of the sealer by brush or cloth direct to the unfilled timber, working it well in and finishing evenly with the grain. Allow to dry thoroughly then sand lightly with fine abrasive paper. Apply a heavy coat of wax by cloth on flat surfaces, with a stiff brush. Work it well into the timber and finish off by stroking with the grain before leaving to harden. Leave for four hours before rubbing up with a soft brush. Finally, buff the grain with a soft cloth.

## 7.3 Transparent Coloured Polyurethane (Melamine)

This shall be applied where natural grain of the wood is required to show. Polyurethane gives tough surface which resist chipping, scratching and boiling water.

### Application:

Clean off all grease and wax with an abrasive and white spirit, this should not be applied in humid conditions. Apply the first coat, preferably of clear hard glaze with a cloth pad. Leave this to dry for at least six hours, then apply further coats with a paintbrush. If you wait for longer than 24 hours between coats, rub down the previous coat with fine glass paper or a medium grade of steel wool. Obtain a matt finish, if required, by giving a final coat of clear Reseal Matt coat.

## 8 TIMBER:

8.1 Only seasoned Teakwood to be used.

8.2 Use of Rose wood wherever specified.

8.3 All the wood shall be properly seasoned, natural growth and shall be free from worm holes, loose or dead knots or other defects, saw die square and shall not suffer warping, splitting or other defects.

8.4 The moisture content shall not exceed 12%.

8.5 All internal frame work shall be treated with approved wood preservative.

8.6 All wood brought to site should be clean shall not have any preservative or other coating/covering.

8.7 All rejected decayed, bad quality wood shall be immediately removed from site.

8.8 All wood brought to site must be stacked-stored properly as per instructions.

## 9.0 PLYWOOD:

9.1 Plywood/medium density fiber board/teak practical board/ Veneer shall be as specified in the approved list of manufacturers shall be used.

9.2 Commercial ply shall conform I. S. I. 303 of approved make.

9.3 Marine plywood shall generally conform to generally I. S. 303 BWR or unless specified I.S.710-1980(BWP)

9.4 Particle board shall be phenol formaldehyde bonded and generally conform to I. S. 3087-1965.

9.5 Only 3mm to 4mm thick straight-grained groups matching approved veneers shall be used. No extra claim will be entertained for veneer if found of extra thickness.

## 1.0 LAMINATED WOODEN WORK

Providing laminated wooden Flooring with the following Specifications:

Type: -Original-Vintage

Thickness: -8 to 9mm thk  
Weight: -8.2 kg/sq mts.  
Core Material: -HDF regular  
Backing: -Sound Bloc CS

Material Properties: - The material shall have a wear resistance, impact resistance, indentation resistance, resistance to rolling castors, resistance to furniture legs, stain resistance, resistance to burning cigarettes, slip resistance and resistance to color fading.

Apart from the above properties, the material shall have following additional properties: -

Dimensional Stability:	Less than 0.9 mm
Surface Soundness: -	More than 1.0 N per sq mm
Impact Sound Resistance: -	17 to 19 dB
Thermal Insulation: -	0.07 sq mts
Electrostatic charge: -	4 KV and
Thickness Swelling: -	Less than 12%.

Material Storage & Pre-requisites: - The material shall be stored in unopened packages at normal room temperature at least 0.5m from the walls, for at-least 48 hours prior to the installation. The contractor shall ensure that the boards are undamaged and free from any faults before installation. The contractor shall use felt pads and castor cups on furniture legs and provide external doormats inside all the external doorways to protect the floor at the time of handover. A maintenance guide of the approved company shall be made available any time and handed over to the client at the time of handover.

Material Installation: -

The normal method of installation of laminated wooden flooring is in a random installation pattern taking into consideration the type of installation pattern desired for the purpose of aesthetics or any technical reasons. The desired temperature in the room at the time of installation shall be at least 18 deg C and RH in the range of 30 to 80%. The joinery is tongue & grooved in an interlocking pattern including beading at the end. A teak moulding of size 45 X 45 shall be provided and installed at the joinery junction of the wall and the floor as per the approved manufacturer's specifications. The quoted rate shall be inclusive of leveling the surface, polishing etc complete to the satisfaction. Underlay shall be provided as per manufacturer specification.

MEASUREMENTS: -

Length and breadth of superficial area of the finished work shall be measured correct to a cm. The area shall be calculated in square metre correct to two places of decimal. No deduction shall be made nor extra paid for voids not exceeding 0.20 square metre. Deductions for ends of dissimilar materials or other articles embedded shall not be made for areas not exceeding 0.10 square metres.

Rate: - The rate shall include the cost of the labour and materials involved in all the operations described above

## **2.0 VITRIFIED TILES /GRANITE STONE WORKS**

These items are modified DSR items, hence CPWD specification shall be followed for the work. However, the thickness of the mortar shall be as specified in the item of BOQ. Granite/Vitrified shall be hard, sound, dense and homogenous in texture with crystalline texture as far as possible. It shall generally be uniform in color and free from any stains, cracks, decay & weathering. The material shall be got approved from the Engineer-in-charge.

Approval: - Before starting the work the contractor shall get the samples of Granite/Vitrified tiles approved by the Consultant / Client. The approved samples shall be kept in the custody of the Engineer-in-charge and the materials supplied and used on the work shall confirm to the samples with regard to the soundness, color, veining and general texture.

Measurements: - Measurement shall be as per CPWD specifications.

### **3.0 MAIN FRAMELESS DOOR & FIXED GLAZING -**

Providing and Erecting in position Fully Glazed Double Leaf Frameless Door with 12mm thk clear toughened glass with Dorma patch fittings such as Bottom Patch PT 10 with SS covers-2 nos, Top Patch PT 10 with SS covers-2 nos, Patch with plate PT 30-1 no, Over Panel Patch PT 40 with SS covers-1 no, Corner Lock US 10 with SS covers-2 nos, Lock keeper plate -5.190-2 nos, Floor Spring BTS 75V with standard spindle screws and SS cover plates-2 nos, Pull Handle TGD130033S (40mm dia X Full Height of the door)-2 pairs, PFF GT1-Ceiling / Façade Bracket-14 nos, Aluminum U Channel-13 mts. Gap of 3.5mm to be maintained between every two glass panels.

Patch fittings of any approved make with similar feature may also be accepted. Gaps to be sealed with clear silicone sealant. Before sealing the gaps, masking tape to be stuck on the edge of the glass in such a way that only the gap is visible. Any spillage of the sealant while sealing the gaps is only on the masking tape which shall be peeled off after the silicone sealant in the gap between the glasses is dry. The contractors shall note that all damages to the floor work to be reinstated without any extra cost including making & filling of the necessary holes etc complete to the satisfaction.

Measurements: -The length and breadth of the finished work shall be measured in metre correct to cm. The area shall be calculated in Sq.M. nearest to two places of decimals.

Rate: -

The rates include the cost of materials and labour required for all operations including wastage, heights, cutting, finishing etc complete.

### **SIPOREX MASONARY WALL: -**

Providing and constructing 150 mm thk Siporex lightweight concrete block masonry in superstructure, blocks conforming to BIS : 2185 (Part III), BIS 6041 having minimum crushing strength 75 kg / sq cm in cement mortar 1:6 (1 cement : 6 coarse sand) mixed with approved non shrinking compound as per manufacturer's instructions including providing RCC patli beam of 150 X 100 mm size at every 1.0 mts centres with 2 nos, 8mm dia Tor bars and 6 mm dia links at 300 mm centres in cement concrete of mix M 20 including the required formwork complete with raking out of joints, curing, double legged scaffolding as per specifications at all the heights, depths & leads & lifts as per the directions & satisfaction of Engineer-in-charge

### **PLASTER OF PARIS FINISH**

Description:

Providing & Applying Plaster of Paris (POP) in a paste form up to average thickness of 6 mm thick and level the surface on the existing plastered surface to proper line & plumb, including making grooves etc complete. The surface of the under coat on which the POP is to be done shall be left rough. The POP paste shall be applied on dry plastered surface in two layers slightly more than 3 mm thick each between gauged pads, with which to ensure an even and uniformly thick surface of 6 mm by frequent checking with a wooden straight edge. It shall be finished to an even and smooth surface with trowels.

All corners, arises, angles and junctions shall be truly vertical and horizontal as the case may be

and shall be carefully and neatly finished. Rounding or chamfering corners, arises, junctions etc. where required, shall be done without any extra payment. Such rounding, chamfering or grooving shall be carried out with proper templates or battens to the sizes required. No portion of the surface shall be left out initially to be patched up later on.

Thickness:

The thickness of the finished surface shall not be less than 6mm thick.

Precaution:

Any crack which appears in surface and all portions which sound when tapped or are found to be soft or otherwise defective shall be cutout in rectangular shape & re-done as directed by Engineer-in-Charge.

Mode of Measurements:

The measurements for POP finish shall be taken over the finished work. The length and breadth shall be measured correct to a cm. The area shall be calculated in sq.m. correct to two places of decimal

Deductions in measurements for openings shall be regulated generally as per CPWD specification for measurement of cement plaster.

Rate:

The rate shall include the cost of all labour, materials scaffolding etc involved in all the operations described above.

#### **GENERAL NOTES FOR INTERIORS AND FURNISHINGS**

- 1 The plywood wherever mentioned and considered in this estimate shall be Marine Plywood for all the items of Interior & Furniture works. The particle board wherever mentioned shall be exterior grade Particle board. The rate shall be inclusive of anti-termite coating on all sides to plywood, teak wood & all the other wooden components of approved makes.
- 2 All internal frameworks shall be of Aluminium unless otherwise specified. All exposed edges of Plywood shall be fixed with Teak Lipping as directed by Engineer-in-charge. The skinning shall be in 12 mm thk Exterior Grade Particle Board unless otherwise specified. All exposed veneer surfaces shall be finished with melamine polish of approved shade unless otherwise as specified. The minimum thickness of the veneer shall be 4.0mm & laminate shall be 1.5mm thk unless otherwise noted. The approved veneer shall be finished with natural melamine polish of minimum 2 coats to have desired finish unless otherwise as specified in the individual items.
- 3 Rate for partition to include the cost of framework 150 mm above false ceiling as required to fix the same to the ceiling slab for which no extra payment shall be made and the rate quoted shall be inclusive of the same. Measurement of Partition & Paneling shall however be limited upto the false ceiling level only & no separate payment shall be made for the work above the false ceiling level and the quoted rates shall be deemed to be inclusive of the same. The partitions to be erected shall be measured including the door of any desired size, shape & elevation and with all its standard fittings, fixtures, hardware etc complete. The door frame shall be measured and paid separately under the relevant item. In case of the glazed partition necessary SS hardware fittings, fixtures, floor spring, door closers, hinges, handles, locks for the door & including glass & finishing for the same are included in the glazed partition.

- 4 The rate shall be also inclusive of pattas & bands wherever instructed including the necessary framing/ openings for electrical, telephone & AC outlets. All the type of wall paneling enumerated below except glazed portion shall be provided & fixed in between the aluminium frames with 50 mm thk Rockwool slabs of density 96 kgs / cu. m. of standard width as per the available clear distances between the existing frames as per manufacturers specifications including pins, adhesives, threads for fixing the slabs etc, sealing of joints, grooves, canvas treatment etc complete.
- 5 The measurements for all type of storages, wardrobes, credenzas & side units shall be measured in square meters i.e. length of the unit (Front Apron) X height of the unit. The measurements of false ceilings of all types shall be measured in terms of the total clear dimension of the false ceiling including the area of the vertical / inclined drops. No deduction for the cut-outs for lighting fixtures, smoke detectors etc shall be made upto a limit of 0.5 sq. m. of area. The table shall be measured in running meters' length of front apron for the relevant items unless otherwise specified.

Note: The above said specification shall be read with BOQ specifications and Special conditions of the contract. The rate for the items in the BOQ shall be quoted accordingly. The decision of Bank's Engineer will be final in any ambiguity noticed in the specification of the item.

## **SECTION-XI**

### **LIST OF APPROVED MAKE**

#### **CIVIL WORKS**

<b>S. No.</b>	<b>Material</b>	<b>Manufacturers</b>
1	Doors & Windows fixtures/ Fittings	Dorma, Godrej, Ozone
2	Floor spring	Ozone, Godrej, Dorma
3	Aluminium Sections.	Hindalco, Jindal, BALCO
4	Clear Glass/ Clear Float Glass/ Toughened Glass	Saint Gobain (SG), AIS, TATA (including their authorized processors)
5	Laminates	Formica, Century, Greenlam
6	Synthetic Enamel Paints	Berger, Dulux, Nerolac, Asian
7	Oil Bound Distemper	Berger, Dulux, Nerolac, Asian
8	Cement Paint	Berger, Dulux, Nerolac, Asian
9	Plastic Emulsion Paint	Berger, Dulux, Nerolac, Asian
10	Other Paints/ Primers	Berger, Dulux, Nerolac, Asian
11	OPC 43 Grade Cement (Conforming to IS 8112)*  OPC 53 Grade Cement	ACC, Ultratech, Birla Gold  ACC, Ultratech, Birla Super
12	Reinforcement Steel	SAIL, TATA Steel (TISCON), JSW
13	Glass Mosaic Tiles	Italias, Opio, Eon Ceramics
14	MS Pipe / Sections	Jindal Hissar, Tata, Sail
15	Polycarbonate Sheets	Lexan, Polygal, Vergola
16	Steel / Glazed Fire Check Doors	Navair, Shakti-Hormann, Ozone
17	Fire Rated Glazing	Saint Gobain–Vetrotech, Pilkington, Trosch
18	Sunken Portion Treatment	Roffe, Sika, CICO
19	Admixtures for concrete	Cico, Roffe, FOSROC, Sika ,
20	Ceramic Tiles	Kajaria, Nitco, RAK
21	Pre-Laminated Particle Board	Novopan, Greenlam, Merino
22	Flush Door Shutters	Century, Green Ply, Merino.
23	Glazed Tiles	Kajaria, Nitco, RAK
24	PVC Water Stops	Prince/ Supreme/ Finolex
25	White Cement	Birla White, J.K., Grasim



S. No.	Material	Manufacturers
26	Powder Coating Material Pure Polyester	Jotun, Berger, Goodlass Nerolac
27	Stainless Steel Screws for Fabrication and fixing of Windows.	Kundan , Puja , Atul
28	Dash Fasteners /Anchor bolts	Hilti, Fischer, Bosch
29	Stainless Steel Bolts, Washers and nuts	Kundan, Puja , Atul
30	Stainless Steel Pressure Plate screws	Kundan, Puja, Atul
31	Stainless Steel Friction Stay	Hafele, Ozone, Dorset
32	E.P.D.M. Gaskets	Anand Reddiplex, Enviro Seals, Hanu
33	Weather Silicon	GE/ Pidilite/ / Fosroc
34	Structural Silicon at butt joints	Dow Corning, GE, Sika
35	PVC continous fillet for periphery packing of Glazings /Structural glazings	Roop, Forex Plastic, Supreme
36	Water proofing / Injection Grouting/ PVC Waterproofing	Sika/ BASF/ Panetron
37	Reflective Glass, Coated glass, Hi-performance glass	Saint Gobain, AIS, TATA
38	Door Locks	Godrej, Dorma, Ozone
39	Door Seal – Woolpile Weather Strip/ Acoustic seal	Anand – Reddiplex, Enviroseal, Ozone
40	Aluminium Grill	Hindalco, Jindal
41	Vitrified Tiles	Kajaria, Nitco, RAK
42	Aluminium Cladding sheets	Alcobond, Alu-K-Bond, Durabuild, Alstrong, Eurobo
43	Stainless steel D-handles	Dorma, Dorset, Ozone
44	Stainless Steel Pipes/Flats	304 Grade (as approved by Architect) /JSL
45	Structural Steel	TATA, SAIL, JSW.
46	Ready Mix Concrete	ACC, Ultratech, Lafarge.
47	Epoxy Flooring/ Wall coating	Fosroc, Araldite, Sika
48	Acoustic Mineral Fibre tile ceiling	Armstrong, 21 <sup>st</sup> Century, Daikin, Daxune, Gyproc
49	Fire Panic bar	Briton, Dorma, D-Line
50	Ply board	Century, Greenply, Merino
51	PVC Flooring	Tarkett, Armstrong, Gerflor
52	SS Railing	Ozone, Jindal, Kich

S. No.	Material	Manufacturers
53	Interlocking Paver Tiles	Unistone, Amcon, Style Earth
54	Smoke Seals	Pemko, Scalz, Lorient, Navair
55	Fire rated door closer/ Mortice Lock/ Door Co-Ordinator	Dorma, Becker F.S. Australian or approved equivalent
56	Gypsum Board False Ceiling System	Gyproc (Saint Gobain), Boral
57	Adhesive for Door Work	FEVICOL SH., ARALDITE OF HINDUSTAN CIBA- GEIGY LTD.,
58	Epoxy Paint	Nerolac/ Fairmate/ Sika / Pidilite,
59	Polysulphide sealant	Pidilite/ Fosroc/ sika
60	Glass Doors (Motorised)	DORMA/ Hafele/ Ozone/
61	Calcium silicate boards	Hilux/ Aerolite, Armstrong
62	Calcium Silicate Tiles	Hilux/ Aerolite, Armstrong
63	PVC membrane – Basement Waterproofing	Sika / Fosroc / BASF
64	Grass Paver	Ultra/ Hindustan/NTC, Amcon
65	Terrazo tiles	Nitco/ Hindustan Tiles/ Bharat
66	Texture Paints	Dulux/Asian/Ardex Endura
67	Cement Putty	J.K. White/Birla/Gyproc wall putty
68	Frameless glass partition fixtures	Dorma/Hafele/Ozone
69	Spider fittings/ patch fittings	Ozone/Dorma/ Hafele
70	Stone cladding clamps	Hilti /Bosch Fischer/ Axel
71	U-PVC Windows	Fenesta, Fensterbau Lingel
72	Toilet Cubicles	Greenlam, Merino or approved equivalent
73	AAC Blocks	Ultratech., Bultech/Siporex, Modcrete, kamcrete
74	Metal False Ceiling	Durlum, Saint Gobain, Armstrong
75	Furniture and Fixtures	Godrej, Wipro, Durian
76	Expansion Joints	Construction Specialties, Inpro Corporation, Emseal
77	Expansion joint Filler Board	Supreme, Kumtek, Aerofoam, Kumpun
78	LRPC Strands for Post Tensioning	Tata Wiron, Usha Martin, Indore Wire
79	Storage Water Cooler	BlueStar, Voltas, Usha, Aquaguard
80	Baggage Scanner & Metal Detectors	Rapiscan, Aventura, Proline
81	STP Vendor	Thermax, Swaran Aquatech, Shubham Inc, Kwan Environmental Solutions
82	Luster Paint (Water Base)	Asian Royale Luster, Nerolac (Pearl Finish), Dulux, Berger Premium Quality Luster.
83	Exterior Paint	Asian Apex Ultima, Dulux Weather Shield, Nerolac Excell Total. (Premium Quality).

S. No.	Material	Manufacturers
84	Proflex Roofing	TATA, Jindal, Bhushan Proflex

**INTERIOR WORK:**

S. No.	Material	Manufacturers
1.	Door closers - ENCLOSED	RIKOTO. Ozone, Hyper.
2.	Soft Board	Century or equivalent
3.	Commercial Plywood/B.B.	Anchor, Mayur, Century, Green Ply
4.	Marine Plywood	Anchor, Mayur, Century, Green Ply
5.	Veneers (Natural) (4mm thk.)	Durian, Greenply, Century, Mayur, Anchor.
6.	Fabric protection coating for upholstery	Approved Brand & Design
7.	Laminates	Durian, Royal Touch, Sunmica, Greenlam
8.	Screws (oxidised)	GKW
9.	Hardware	SHALIMAR, CIEF, VISION, EFFICIENT GADGETS, HEFELE- (GERMANY), INNOFIT
10.	Adhesive	FEVICOL SH., ARLDITE OF HINDUSTAN CIBA- GEIGY LTD.,
11.	Locks	Dorma, Kich, Hettich, Hafele India, Godrej, Europa
12.	Wood preservatives	WOODGUARD /TERMISIL
13.	Furniture items	FEATHERLITE, WOODCARVER, GODREJ, WIPRO
14.	Teak Wood	Best quality teak, Well-seasoned, free from sap, Knots, cracks, Uniform in colour
15.	Glass & Structural / Glazing / Glazing	Saint Gobain, Pilkington, ASAHI Glaverbell
16.	Al. Door & window section	JINDAL, INDAL
17.	ACP (Aluminium Composite Panels)	Alcobond, Alu-K-Bond, Durabuild, Alstrong, Eurobo
18.	VERTICAL / roller Blinds	Hunter Douglas, Vista

S. No.	Material	Manufacturers
20	Auto closing Hinges, Ferrari Hinges	GRASS, GODREJ
21	Drawer Slides	Imported – Telescopic Full Extension
22	Door Locks	Dorset
23	Stain less Steel	304 grade
24	Glass/ Mirror	Modi Guard, Asahi, Saint Gobain
25	G. I. False Ceiling	India Gypsum Co. Original Frame Work Section
26	Modular	Silhouette
27	Handles	DUNEX
28	Sun Control Film	Garware or equivalent
29.	Carpets	Beaulieu United (Salisbury)
30.	Glass Tiles (100 x 100)	Mirrano Classics
31	Keyboard Drawer	Imported PVC – Rigid 'Ergonomic' with mouse Tray & Pencil Box. INNOFIT MAKE
32	Agro wood 19mm Thk.	Imported Malaysian Make.
33	Flush Door – Marine – 40mm thk.	West Coast
34.	White Board	Alkon Make
34	Prelaminated Board	Bakelite Hylam/ Decoboard.
35.	CABLE MANAGER, CPU HANGER,	INNOFIT.

#### **PLUMBING WORKS & SANITARY**

S.No	Material	Relevant IS Code	Manufacturers
1	Vitreous China Sanitary ware	2556	Totto, RAK, American Standard
2	White Glazed Fire Clay Sink	771	Sanfire, Cera, Neycer, Hindware.
3	Stainless Steel Sink	--	Jayna, Neelkanth, Commander, Nirali
4	Plastic seat cover of W.C	2548	Kohler, Hindware, Jaquar, RAK, American Standard
5	Geyser	--	Racold, Venus, Jaquar, Havells.

S.No	Material	Relevant IS Code	Manufacturers
6	C. P. Fittings Mixer/ Pillar taps Washers, C.P. brass accessories, CP Angle Valve, Bib cocks, CP waste	1795 / 4291/ 4827	Hindware, Kingston, Jaquar, Parryware.
7	Centrifugally /Sand cast iron pipes & fittings	3989/1729	Neco, Hepco, SKF
8	G.I. Pipes	1239 Part I	Jindal-Hissar, Tata, Prakash-Surya.
9	G.I. Fittings	1239 Part I	Unik, K.S., Zoloto, R
10	Gunmetal Valves	778	Zoloto, Leader, Castle, Sant.
11	Brass stop & Bib Cock/Pressure Release valve	781	Zoloto, Sant, Leader, Jaquar.
12	Ball valve with floats	1703	Zoloto, Leader, Sant
13	Stoneware pipes & Gully Traps	651	IS Marked pipes
14	R.C.C. pipes	458	IS Marked pipes
15	C.I. Manhole Covers	1726	SKF, NECO, HEPSCO, RIF
16	Water Tank	--	Sintex, Polycon, Uniplast
17	Mirror	--	Modi guard, Asahi, ,Saint Gobain
18	Hand drier	--	Kopal, Automat, Euronics
19	Insulation of Hot water pipes	--	Vidoflex insulation, Superlon, Thermaflex
20	PVC Rain Water Pipes.	--	Supreme, Finolex, Astral
21	D.I pipes	--	Jindal, Tata, Lanco, Electrosteel,
22	Sluice valve / NRV	--	Kirloskar, Kilburn, Zoloto
23	Water supply pumps	--	KIRLOSKAR, Crompton (CG), GRUNDFOS, KSB, Mather & Platt
24	DI Manhole Cover	--	SKF,NECO
25	Submersible pumps	--	GRUNDFOS, KSB, Mather & Platt, Kirloskar
26	PVC/UPVC/ CPVC pipes & fittings	--	Finolex, Prince, Supreme, Astral.
27	Chlorinator	--	Siemens, Thermax Ltd, Watcon, Ion exchange,
28	HDPE Solution tank	--	WATCON, ION EXCHANGE, Water Supply Specilist P (Ltd).
29	Infrared Sensor operated Faucets/ Urinals	--	Kohler, Hindware, Parryware, Jaquar.
30	Gratings, Strainers, Cleanouts etc	--	Neer Brand (Sage Metals), ACO.
31	Level controller	--	21st Century/ Advance Auto/ Minilec
32	Drainage Pumps	--	Grundfos, KSB, Mather & Platt.
33	Water / Effluent/ Sewage Treatment Plant	--	Thermax, Geo Miler & Co, Ion-Exchange , Hydrolog Architects
34	Decorative Bathroom Fittings	--	Jaquar (Florentine Range), Parryware, Kingston, Kohler
35	R.O System	--	Thermax, Ion-Exchange, Pentair
36	PE-AL-PE	--	Kitec, Jindal, Prince, Supreme.
37	HDPE pipes and fittings	--	Oriplast, Geberit, Dura-line
38	CPVC pipe & fittings and Solvent	--	Astral, Finolex, Ashirwad
39	Solar Panel	--	Tata BP, BHEL, Edwards (Australia)
40	Copper Pipe	--	Raj Co., Maxflow, Mehta Tubes
41	Copper Fittings	--	Viega, IBP, Yorkshire

### **FIRE FIGHTING WORKS**

S.No	Material	Relevant ISI Code	Manufacturers
1	G. I. / M. S. Heavy class pipe	1239/3589	Jindal-Hissar, Tata, Prakash -Surya,
2	Gate Air Valve		Leader, Zoloto, Castle
3	Butterfly valves	13095	Audco, KSB, Castle
4	Portable Fire Extinguisher	2171	Minimax, Safex, Ceasefire
5	First aid Fire hose reels	884	Minimax, Safex, Ceasefire
6	Fire hose pipes	636	Minimax, Safex, Ceasefire,
7	Fire Hydrant valves	5290	Minimax, Safex, Ceasefire
8	Sprinkler Heads		
a	Pendent type		Tyco, Viking, HD
b	Side wall type		Tyco, Viking, HD
c	Sprinkler Side wall extended through		Tyco, Viking, HD
9	Sluice and non return/ check valve foot valve strainer		Kirloskar, I.V.C., Kilburn
10	Thermoplastic fire hose pipe	1258	Minimax, Safex, Newage
11	Rubber hose 12/20mm dia		Dunlop, Good year, Jyoti Eversafe
12	Reinforced rubber lined/canvas		Newage, Jayshree, Eversafe, Indian Rayon
13	Standby battery lead acid		Exide, Standard, Amco
14	Horizontal centrifugal/Fire pumps		Kirloskar, Mather & Platt (WILO), GRUNDFOS,
15	Diesel engine		Kirloskar Cummins, Ashok Leyland
16	Electric motors		Kirloskar, GEC, Siemens
17	Electrical switch gear & starters		As per Electrical Works
18	Cables		As per Electrical Works
19	Flow meter		Scientific Equipment (P) Ltd. Hyderabad , System Sensor /CPWD
20	Suction strainer		Leader, ZOLOTO, Castle
21	Vibration eliminator connectors		Resistoflex, Kanwal, D.wren
22	Single phase preventor		L & T, GEC, SIEMENS



S.No	Material	Relevant ISI Code	Manufacturers
23	G.I. Fittings	1239 Part I	Unik, K.S., Zoloto,R
24	Yard Hydrant Stand Post, 4 way suction		Eversafe, Minimax, Newage
25	DI pipes		Jindal, TATA, Electrosteel
26	Pipe coat material (Pipe protection)		Pypkote Integrated water proofing Co. Madras / Coaltek Rustech products (P) Ltd. Syndcate Enclave
27	Fire Man's Axe		Safeguard/ Safex/ Newage
28	Pressure guage		IS:C3624 (cl-I) H.GURU/ Fiebig / BRC
29	Flow switch		Potter / Safex system sensor / Jhonson control
30	Pressure switch		Indfoss / switzer

### **ELECTRICAL WORKS**

S.No	Material	Manufacturers
1	Moulded Case Circuit Breakers	Legrand, Schneider, Siemens
2	Air Circuit Breaker	Legrand, Schneider, Siemens
3	Change Over Switch/ATS	SOCOMEK, L&T, Siemens
4	Contactors	Schneider Electric, L&T, SIEMENS
5	Voltmeter & Ammeter Digital Multifunction Meters	ABB, L&T, Schneider Electric
6	Current Transformer	BCH, C&S, Crompton Greaves
7	Indication Lamp/Push button	ABB, L&T, Schneider Electric
8	Connectors terminal Block	Elmex, Lupco, Phoenix,
9	Protection relays	L&T, GE, Schneider Electric
10	Cable thimbles and glands	Trinity Touch, Comet, Gripwell
11	Cable thimbles / lugs	Trinity Touch, Lotus, Comet
12	Capacitors with relay	Neptune, Epcos, L&T
13	Batteries	Voltstat, Amara Raja, Standard Furukawa
14	Sealed Maintenance free Battery	Standard, Amco, Exide
15	Distribution Boards	Schneider, Legrand, Siemens

S.No	Material	Manufacturers
16	MCB/ RCCB/ RCBO	Schneider, Legrand, Siemens
17	PVC insulated copper conductor Single Core Stranded Wires of 1100 Volt grade	Havells, Finolex, Polycab
18	XLPE insulated PVC sheathed armored cables of 1.1kv grade as per IS 7098 Part-I & II 1988/1985.	Havells, Finolex, Polycab
19	Modular type Switches, Socket etc. (ISI marked)	Legrand, Siemens, Havells, Roma
20	LT Panel, Air conditioning Panel	SPC Electrotech Pvt. Ltd, Mitsubishi, Siemens.
21	Fire Fighting Panels, Water supply Panels, Main & Sub Distribution Boards, Feeder Pillers And Meter Boards	Schneider, ABB, GE.
22	MS Conduit (ISI marked)	BEC, M-Kay, AKG
23	PVC Conduit (ISI marked)	BEC, PolyCab, AKG
24	Conduit accessories (ISI marked)	Trinity Touch, M-Kay, Rama
25	Flexible conduit	Trinity Touch
26	Industrial type sockets	ABB, Crompton, BCH
27	Exhaust Fan/ Ceiling fans	Crompton Greaves, USHA, Orient
28	Light Fixtures	Wipro, Phillips, Crompton
29	Lamps/Tube Rods	Wipro, Phillips, Crompton
30	Tel.tag Block	Krone, Pouvet, Action
31	Addressable fire Control Panel, Address Monitor modules, control relay modules etc. Addressable Detectors, Hooters, Response Indicators, Manual Call Bell point etc.	Beldon, Systemax, Legrand.
32	LAN cable and data outlets, Information outlets, Patch panels, Patch cords, Cabinets and Racks	Beldon, Panduit, Legrand
33	Telephone Wire	RR, Polycab, Havells
34	G. I. Raceway	LeGrand, MK, OBO
35	Cable Trays	Aaditya Steel, Slotco, OBO
36	Lightning arrestor	Alltec, Trinity Touch

S.No	Material	Manufacturers
37	Maintenance free earthing	Alltec, Trinity Touch
38	Nurses call bell system	GE, Honeywell, Ackermann
39	Access Control system	GE, SIEMENS, Honeywell
40	Video Management Server (VMS), Network Video Recorder (NVR) & Accessories	American Dynamics, Qognify
41	Power Supply	Protect, Semec, Equivalent ISI Mark
42	Cat-UTP Cable	AMP, Avaya-Systemax, Beldon
43	Single Cables/ Control/ Power Cables	Belden, RR, Finolax
44	Network Switch (L2/L3)	Cisco, HP, Fortinet
45	EPABX System	SIEMENS, PANASONIC, Cisco
46	Complete UPS with associates system	Delta, Numeric, Siemens
47	Projector	Vivitek/Panasonic/LG/Digital Projection.
48	Rising mains, Tip-offs, feed units and Bus ducts	Schneider, Siemens, Legrand
49	Microphone	Shure/Sennheiser/Audio Technica
50	Switching	Karmer
51	Digital Phones	Avaya, Cisco, Unify
52	Analog Phones (Non Display Phones)	Beetel, Protel, Panasonic
53	Main Distribution Frame(MDF)	Krone, Legrand, D Link
54	Rack	APW, Comrack, Rittal
55	Call Billing Software	Telesoft, Cube, Alliance
56	Protection Module	Krone, Legrand, D Link, Tyco
57	Access control system Approved Make List	Honeywell. Gallagher, Bosch
58	Transformer	VOLTAMP/KIRLOSKAR/RPG/UNIVERSAL
59	Sound /Speaker/PA System	Bose / Martin Audio / EAW.
71	LT Panels	L&T, Siemens, Schneider

- Note**
- If the makes given in the list are not available, other equivalent makes can be considered subject to approval by the Architect / Bank's Engineer based on credentials of the company and test certificates of the product.
  - Wherever makes have not been specified for certain items, the same shall be as per BIS and as per approval of Architect/ Bank's Engineer.

**ANNEXURE-I**

**COVERING LETTER FORMAT**  
**(ON LETTER HEAD OF BIDDER)**

To  
Assistant General Manager(Civil Engineer),  
Corporate Services Department,  
Bank of Maharashtra, Head Office,  
Lokmangal Building, 1501,  
Shivaji Nagar, Pune.

Dear Sir,

I / We have read and understood the press notice and the notification in Bank's web-site for Pre-qualification and instructions to the Applicants. I/We do hereby declare that the information furnished by me / us are correct to the best of my/our knowledge and belief.

Yours faithfully,

Authorized Signatory:

Name:

Designation:

Address:

Seal:

**ANNEXURE-II**

**DECLARATION**

1. I /We have inspected the site of works and have made me/us fully acquainted with the local conditions in and around the sites works.
2. I /we hereby declare that I/we have gone through the conditions laid down in the Notice Inviting tender, General Conditions of Contract, Technical Specifications, etc of the Tender document (Technical and Price Bid) and understood the same on the basis of the same, I / we quoted our Percentage rate in the schedule of quantities with the tender document.
3. I/We shall also uniformly maintain such progress with the work, as may be directed by the Bank to ensure completion of the same within the Target date as mentioned in the tender document.

Date:

Signature of Tenderer

Witness:

Address:\_\_\_\_\_

**ANNEXURE-III**

**SCHEDULE OF CONTRACTOR'S SITE MANAGEMENT STAFF**

Tenderers/Bidders must enter below the name, qualifications and experience for the following mandatory positions (full time site personnel) in the proposed format.

Mandatory requirements are at least:

1 Full time Project Manager / Engineer in charge during the course of execution of works on site.

2. At least 1 Site Engineer, working as sub-ordinate to the Project Manager in charge, working as assistant for the project. Only Site Engineers having minimum of 10 years' experience & expertise in Civil Construction works & Building Construction projects with thorough knowledge of latest methodologies & special technologies would be allowed for deputation on site by the Bank.

3. Site supervisors with adequate experience to carry out his/ her respective responsibilities to the satisfaction of Bank/ Architect.

4. The contractor shall note that he will be required to deploy the additional adequate numbers of Key Staff at site, for following activities to execute the Project works as per agreed schedule & to the satisfaction of the Bank/Architect. No extra payment shall be made to carrying out these activities.

B1) Site Safety, Health, Housekeeping Engineering

B2) Site Security Person

B3) Accountant cum Administrative staff



**ANNEXURE-IV**

**SAFETY MEASURES**

1. First aid appliances including adequate supply of sterilized dressing and cotton wool be kept in a readily accessible place.
2. An injured person shall be taken to a public hospital without loss of time, in cases the injury necessitates hospitalization.
3. Suitable and double strong metal scaffolds should be provided for workmen for all works that can safely be done from ground.
4. No portable single ladder shall be over 8metres in length. the width between the rails shall not be less than 30cm (clear) and the distance between two adjacent shall not be more than 30 cm . when the ladder is used an extra mazdoor shall be engaged for holding ladder.
5. No floor, roof or other part of the site premises shall so overloaded with debris or material as to render it unsafe.
6. Workers engaged in the welding works shall be provided with welders protective eye shield and gloves.
7. No paint containing lead or lead products shall be used suitable facemasks should be supplied or use by the workers when paint is applied in the form of spray.
8. Hoisting machines and tackles used in the works, including their attachments, anchorage and supports shall be in perfect condition.
9. The ropes used in hoisting or lower in martial or as a means of suspension shall be durable quality and adequate strength and free from defects.
10. No paint containing lead or lead products shall be used except in the form of paste or readymade paint.
11. Suitable face masks should be supplied for use by the workers when the paint is applied in the form of spray or surface having lead paint dry rubbed and scrapped.

## **ANNEXURE-V**

### **MEASUREMENT OF WORKS**

#### **1.GENERAL**

- a) Payment will be made on the basis of joint measurements taken by Contractor and certified by Engineer-in-Charge. Measurement shall be based on "Approved for Construction" drawings, to the extent that the work conforms to the drawings and details are adequate. Wherever work is executed based on instructions of Engineer-in-Charge or details are not adequate in the drawings, physical measurements shall be taken by Contractor in the presence of Engineer-in-Charge.
- b) Measurement of weights will be in metric tones corrected to nearest kilogram and will be made based on the execution drawings (where weights are not indicated on the working drawings, packing lists as received from the suppliers will be consulted for determining the weights). All other measurement will be as per actual work executed at site. The weld metal weight will not be taken into consideration.
- c) For the excavation, measurement of each foundation with 1 feet on all sides will be considered and no excess and full length measurement will be considered.
- d) Linear measurement will be in meters corrected to the nearest centimeter. If physical measurement is not practicable, dimensions as given in the execution drawings shall be adopted.
- e) Cabling shall be measured on the basis of length of cables actually laid from lug to lug including that of loops provided.

#### **2.STRUCTURAL STEEL WORK & MISCELLANEOUS STRUCTURES**

Payment for steel work shall be made on basis of admissible weight of the structure accepted, the weight being determined as described below:

- a) The weight for payment will be assessed from the approved fabrication drawings and the respective bill of materials prepared by the contractor and approved by the Engineer-in-charge. The weight of structural materials/plates shall be calculated wherever necessary on the basis of IS handbook. If sections are different from IS sections, then manufacturer hand book shall be referred to.
- b) Sections built out of plates/structural shall be paid on the actual weight incorporated except for gussets, which will be paid on the weight of the smallest rectangle enclosing the shape.
- c) Welds, bolts, nuts, washers, etc. shall not be measured. Rate for structural steel work shall be deemed to include the same.
- d) No other payment either for temporary works or for any other items such as welds, shims, packing plates, etc. shall be made. Such items shall be deemed to have been allowed for in the rate quoted for steel work.

#### **3.SPECIAL CONDITIONS OF CONTRACT ON SAFETY REGULATIONS**

The following is a list of Rules & Regulations, which must be observed by a contractor working in the Site.

#### **A)SAFETY**

- a)The contractor shall ensure that all labourers/supervisors engaged by him will carry identity Card/Photo Pass displayed on their person during working hours at the work place in/out side for their easy identification.
- b)The contractor shall ensure that their workmen / supervisors shall not move to other places other than their work premises without proper permission/authorization.
- c)The contractor shall ensure verification of antecedents of the labourer/supervisors from Police/Sarpanch/other officials before he engages them. The contractor shall employ no person having adverse antecedent. The contractor shall be held responsible for all the acts carried out by these workmen.
- d)A job will not be considered complete until all surplus materials, scrap. Rubbish is removed from the job site.

#### **B) WORK PERMIT**

A hot work permit issued by the concerned department or area-in-charge must cover any work carried out within site. In addition, a clearance must be obtained from the concerned department's officer or supervisor prior to commencement of any job.

#### **C)SAFETY PERMITS**

- a) The contractors must obtain the safety permit from the area in-charge of the concerned department, prior to the starting of the job as stated below:
- b) Entry of personnel into any process area of storage facilities that has been in service.

#### **D)ELECTRICAL APPARATUS**

Ensure that all portable appliances are provided with 3 pin plug and socket connections and that the metal body of the apparatus is effectively earthed. All loose wiring such as flexible cables for portable lamps, tools & trailing cables and other portable and transportable apparatus shall be tested regularly at frequent intervals to ensure safety. All temporary board shall have ELCB for personnel safety.

#### **E) TEMPORARY FIXTURES**

- a) Before erecting temporary shelters like sheds or tents anywhere within the site, written permission of the Engineer-in-charge be obtained.
- b) Temporary fixtures like sheds, tents, etc. shall be erected in conforming with normal safety standards. Thatched roof to such fixtures will not be permitted.
- c) Temporary piping, hose connections and electrical wiring must be laid in such manner that they do not cause tripping or hitting hazard.

#### **F) HOUSE KEEPING**

The contractor personnel must practice good housekeeping at all times while within the plant. During and after completion of the work, they are to ensure that their work area is kept clean and tidy. Materials and equipment should be stored in a safe and orderly manner so that they will not block exit to roads, building, arises, passage and approach to firefighting equipment such as fire hydrants, fire hose and fire extinguishers or area

where emergency safety showers, electrical switch panels and switch panels and switch rooms are located.

## **G) UNSAFE PRACTICES**

Any unsafe practices or disregard of normal safe working practices by contractor personnel when pointed out by company personnel shall be immediately corrected.

## **4. Maintenance of Registers**

The Contractor shall maintain the following registers as per the proforma provided by the Bank/Architect at site of work and should produce the same for inspection of BOM. Architects whichever desired by them. The Contractor shall also maintain the record / registers as required by the local authority/Government. From time to time.

- x) Register for secured advance.
- y) Register for Testing materials & equipments.
- z) Register for hindrance to work
  - aa) Register for Labour
  - bb) Measurement Books/Sheets
  - cc) Register for Drawings issued for the work
  - dd) Site Order Book in Triplicate
  - ee) Certified True copies of the Contract.
  - ff) All connected Measurement Book, Level Books, field Books and Lead Charts.
  - gg) All running Account Bills with all connected statements/ vouchers.
  - hh) Statements showing details of check of measurements by superior officers-copies of order laying down such requirements.
  - ii) Materials at site accounts / cement, steel bitumen, paints, water proofing compound, anti-termite chemical etc.
  - jj) Site order Books / Test Records / Log Books.
  - kk) Details of extra / substituted items and of deviated quantities being executed/considered for execution in the work along with Analysis of rates.
  - ll) Hindrance Register.
- mm) Office, correspondence files and inspection notes, if any, issued by inspecting office.
- nn) Complaint records, if any.
- oo) Any other documents relevant to the works.
- pp) Details of payments.
- qq) Cement consumption statement.
- rr) Steel consumption statement.
- ss) Statement of test material.
- tt) Work Diary

## **5.0 UNDERTAKING:**

I/We hereby give an undertaking that I/We abide by all precautions/Rules & Regulations/directives. Entry/Safety/Work permits etc. and any other instruction pertaining to Safety of the S and safe working at the job site and also hereby declare that I/We shall strictly enforce the same during the entire execution of this work including mobilization period, if any.

## **STAMP & SIGNATURE OF BIDDER**

**ANNEXURE-VI**

**Format for BG**

**BANK GUARANTEE- PAYMENT OF PERFORMANCE SECURITY DEPOSIT**

Bank Guarantee No.
Bank Guarantee Amount-
Date-
Claim Amount
Account

THIS GUARANTEE AGREEMENT executed at Pune on this ...day month of ....month of Two Thousand Twenty Three.

**BY**

..... **Bank**, a body corporate constituted under Banking Corporation (Acquisition and Transfer of Undertakings) Act, 1980, having its Registered Office/ Head Office at .....and a Branch Office at the .....(hereinafter referred to as "**the Guarantor**", which expression shall, unless it be repugnant to the subject or context thereof, be deemed to mean and include its successors and assigns)

**In favour of**

Bank of Maharashtra, a body corporate constituted under Banking Companies (Acquisition and transfer of Undertaking) Act, 1970 and having its Registered office at 1501, Lokmangal, Shivajinagar, Pune – 411005 (hereinafter referred to as "**BANK**" which expression shall unless it be repugnant to the subject, meaning or context thereof, be deemed to mean and include its successors and assigns),

**1.WHEREAS** Bank of Maharashtra, Shivajinagar, Head Office, Pune and ..... having their registered office at .....(hereinafter called "**the vendor**" which expression shall unless repugnant to the extent and meaning thereof includes its successor and assign) have entered into contract for work of and related tender Documents(**TENDER NO : AX1/CSD/TENDER/\_\_\_\_/2024-24** Dated \_\_\_\_\_, general terms and conditions of Contract, Letter of Intent (LOI) and Agreement (hereinafter collectively referred to as "**the said documents**", with .... and said **VENDOR** has accepted the work more particularly described in the bill of quantities to the said documents (hereinafter collectively referred to as "**said work**"), subject to payment of the purchase price as stated in the said documents and also subject to the terms, conditions, covenants, provisions and stipulations contained the said documents.

**2.AND WHEREAS** pursuant to the above arrangement, the **BANK**, has placed work order dated ..... for "**Construction Of Zonal Office And Branch At Bank Of Maharashtra's Owned Plot, Situated At Plot No.1a/1a/3, Gut.No. 534, Mouje, Sadar Bazar, Satara 415001**" (hereinafter referred to as "**The Work Order**"), with ....., subject to the terms and conditions contained in the said documents and the **VENDOR** has duly confirmed the same.

**3 AND WHEREAS** the said documents and the unconditional, unqualified and absolute

acceptance by the VENDOR are hereinafter collectively referred to as **“the Contract”**.

4. **AND WHEREAS** the VENDOR has returned the duplicate copy of the Work Order duly signed as token of its unconditional, unqualified and absolute acceptance, for the said work and has confirmed the performance/ execution of the said Contract and the said documents.
5. **AND WHEREAS** in accordance with the terms and conditions of the Contract, the VENDOR has agreed to procure an unconditional and irrevocable performance Bank guarantee, in favour of the BANK of Maharashtra, Head Office Pune from a Scheduled BANK(herein referred as **Guarantor**), for securing towards faithful observance and performance by the VENDOR of the terms, conditions, covenants, stipulations, provisions of the said Contract.
6. **AND WHEREAS** at the request of the VENDOR, the Guarantor has agreed to guarantee the BANK, payment of **Rs. ..../(Rupees ....)** towards faithful observance and performance by the VENDOR of the terms of the Contract.

**NOW THEREFORE THIS AGREEMENT WITNESSETH AS FOLLOWS:**

In consideration of the above, the Guarantor hereby unconditionally, absolutely and irrevocably guarantees to the BANK as follows:

1. The Guarantor hereby guarantees and undertakes to pay, on demand, to the BANK at its office at 1501, Lokmangal Shivajinagar, Pune forthwith, an amount of **Rs. ..../-** or any part thereof, as the case may be, as aforesaid due to the BANK from the VENDOR, towards any loss, costs, damages, etc. suffered by the BANK on account of default of the VENDOR in the observance and performance of the terms, conditions, covenants, stipulations, provisions of the contract, without any demur, reservation, contest, recourse or protest or without any reference to the VENDOR. Any such demand or claim made by the BANK, on the Guarantor shall be conclusive and binding notwithstanding any difference or any dispute between the BANK and the VENDOR or any dispute between the BANK and the VENDOR pending before any Court, Tribunal, Arbitrator, or any other authority.
2. The Guarantor undertakes not to revoke this Guarantee during the currency of these presents, without the previous written consent of the BANK and further agrees that the Guarantee herein contained shall continue to be enforceable until and unless it is discharged earlier by the BANK, in writing or until **.././20\_\_** whichever is earlier.
3. The BANK shall be the sole judge to decide whether the VENDOR has failed to perform the terms of the said Contract by the VENDOR to the BANK and on account of the said failure what amount has become payable by the VENDOR to the BANK under this Guarantee. The decision of the BANK in this behalf shall be conclusive and binding on the Guarantor and the Guarantor shall not be entitled to demand the BANK to establish its claim under this Guarantee but shall pay the sums demanded without any objection, whatsoever.



4. To give effect to this Guarantee, the Guarantor shall be liable under this guarantee as if it were the principal debtor.
5. The liability of the Guarantor, under this Guarantee shall not be affected by
  - i. any change in the constitution or winding up of the VENDOR or any absorption, merger or amalgamation of the VENDOR with any other Company, Corporation or concern; or
  - ii. any change in the management of the VENDOR or takeover of the management of the VENDOR by the Government or by any other authority; or
  - iii. acquisition or nationalization of the VENDOR and/or of any of its undertaking(s) pursuant to any law; or
  - iv. any change in the constitution of the BANK; or
  - v. any change in the setup of the Guarantor which may be by way of change in the constitution, winding up, voluntary or otherwise, absorption, merger or amalgamation or otherwise; or
  - vi. the absence or deficiency of powers on the part of the Guarantor to give Guarantees and/or Indemnities or any irregularity in the exercise of such powers.
6. Notwithstanding anything contained hereinabove, the liability of the Guarantor hereunder shall not exceed **Rs. ..../(Rupees .....).**
7. For all purposes connected with this Guarantee and in respect of all disputes and differences under or in respect of these presents or arising there from the courts of Pune city where the BANK has its Head Office shall alone have jurisdiction to the exclusion of all other courts.
8. Bank of Maharashtra shall be at liberty to vary, and alter or modify any of the terms and conditions of the Agreement/tender including without limitation to extend from time to time, the time for the performance of the Agreement/tender by the Vendor or to postpone from time to time any of the powers exercisable by BANK of Maharashtra against the Vendor, to forbear or to enforce any of the terms and conditions of the Agreement/tender, without in any manner affecting this Guarantee and without notice to or assent of the BANK provided that nothing contained hereinabove extends or enlarges the liability of the BANK under this guarantee.
9. The Guarantor waives any right requiring to BANK of Maharashtra proceed first against the Vendor or requiring BANK of Maharashtra to first enforce any other security or any other guarantee.
10. The Guarantor agrees and confirms that its obligation to make payment to BANK of Maharashtra on demand hereunder and discharge of such obligation shall not be delayed, exercised or avoided by reason of any act or omission on the part of BANK of Maharashtra the legal consequence of which may be the discharge of the BANK as guarantor.
11. The Guarantor declares and confirms that the BANK has taken all necessary corporate action to authorize the execution delivery and performance of this Guarantee in

accordance with the terms hereof and that the BANK has full power to enter into and performance & discharge its obligations undertaken hereunder and this Guarantee constitutes legal, valid and binding obligation of the BANK, enforceable in accordance with its terms.

12. This guarantees shall be governed by and construed in all respects according to the laws of the India and shall be subject to the jurisdiction of the court in Pune.
13. All notices, demands or communications required or permitted to be given hereunder shall be in writing and shall be valid and sufficient if dispatched and acknowledged as received as follows:

IF to the BANK: .....

The Branch Manager

The Name of BANK and Address : .....

IF to BANK of Maharashtra, Head office, Pune:

BANK of Maharashtra, Lokmanagal,

Head office, Shivajinagar, Pune - 411005.

Any party hereto may change its address by a notice given to the other party hereto in the manner set forth above, all notices, demands and other communications shall be made in writing thru letter/ fax or courier/registered post.

14. Any forbearance or indulgence on the part of BANK of Maharashtra, Head office, Pune in the enforcement of the covenants, agreements, conditions and provisions express or implied on the part of the Vendor to be performed, observed or complied with by the Vendor under the Agreement /terms & conditions of tender shall in no way relieve the Guarantor of its liability under the Guarantee provided that nothing contained hereinabove extends or enlarges the liability of the Guarantor under this guarantee.
15. Terms and expression defined in the Agreement / tender and used herein shall have the meanings assigned to them therein save and except where the context otherwise require.

*"Notwithstanding anything contained herein:*

- I. The Bank's liability under this Bank Guarantee shall not exceed Rs \_\_\_\_\_  
(Rupees \_\_\_\_\_)
- II. This bank Guarantee shall be valid up to \_\_\_\_\_ (Date of  
Validity of the Bank guarantee) and
- III. The Bank is liable to pay the Guaranteed amount or part thereof under this Bank Guarantee only and only if the beneficiary serves upon the Bank a written claim or demand on or before \_\_\_\_\_ (Date of Validity of the Bankguarantee) "
- IV. As per Exception 3 to Section 28 of Indian Contract Act, 1872, the statutory claimperiod will be up to one year of the Validity period of this Bank Guarantee. In other words, the Bank issuing such guarantee will not be liable under such guarantee to the beneficiary after the expiry of one year from the validity period, regardless of period of limitation under the Limitation Act, 1963. "

Dated the \_\_\_\_\_ day of \_\_\_\_\_ for  
\_\_\_\_\_(indicate the name of the Bank).

This guarantee is non-assignable and non-transferable.

**IN WITNESS WHEREOF THE BANK HAS SET ITS HAND AND SEAL THE DAY AND YEAR FIRST ABOVE WRITTEN**

SIGNED AND DELIVERED BY  
the within named Guarantor,

\_\_\_\_\_

by the hand of Shri. \_\_\_\_\_,  
its authorized official.

**Note :-** a) The Name and Designation of the Authorized officer(s) of the BANK should be compulsorily mentioned.  
b) A copy of the resolutions/power of attorneys authorizing the officer(s) for executing the aforesaid guarantee.

**ANNEXURE-VII**

**LIST OF DRAWINGS**

<b>S.N</b>	<b>Description of drawings</b>
<b>A)</b>	<b>ARCHITECTURAL DRAWING</b>
01	GROUND FLOOR PLAN
02	FIRST FLOOR PLAN
03	SECOND FLOOR PLAN
04	THIRD FLOOR PLAN
05	FORTH FLOOR PLAN
06	TERRACE FLOOR PLAN
07	LIFT MACHINE ROOM LEVEL PLAN
08	SECTION AA
09	SECTION BB
10	SECTION CC
11	SECTION DD,EE,FF
12	ELEVATION 1
13	ELEVATION 2
14	ELEVATION 3
15	ELEVATION 4
<b>B)</b>	<b>STRUCTURAL DRAWING</b>
S-1.1	FOUNDATION LAYOUT AND SCHEDULE
S-1.2	COLUMN REINFORCEMENT SCHEDULE AND DETAILS
S-1.3	WALL REINFORCEMENT DETAILS
S-2.1	FRAMING PLAN AT PARKING FLOOR LEVEL AND SCHEDULE
S-2.2	FRAMING PLAN AT FIRST FLOOR LEVEL
S-2.3	FIRST FLOOR LEVEL BEAM AND SLAB SCHEDULE
S-2.4	FRAMING PLAN AT SECOND FLOOR LEVEL
S-2.5	SECOND FLOOR LEVEL BEAM AND SLAB SCHEDULE
S-2.6	FRAMING PLAN AT THIRD FLOOR LEVEL
S-2.7	THIRD FLOOR LEVEL BEAM AND SLAB SCHEDULE
S-2.8	FRAMING PLAN AT FOURTH FLOOR LEVEL
S-2.9	FOURTH FLOOR LEVEL BEAM AND SLAB SCHEDULE
S-3.0	FRAMING PLAN AT ROOF FLOOR LEVEL
S-3.1	ROOF FLOOR LEVEL BEAM AND SLAB SCHEDULE
S-3.2	FRAMING PLAN OF OVER HEAD WATER TANK AND SCHUDULE
S-3.3	FRAMING PLAN OF LIFT MACHINE ROOM AND SCHEDULE
<b>C)</b>	<b>PLUMBING DRAWING</b>
01	PLUMBING LAYOUT 1ST FLOOR
02	PLUMBING LAYOUT 2ND FLOOR
03	PLUMBING LAYOUT 3RD FLOOR
04	PLUMBING LAYOUT 4TH FLOOR
05	PLUMBING LAYOUT TERRACE
<b>D)</b>	<b>ELECTRICAL DRAWING</b>
01	PROPOSED SINGLE LINE DIAGRAM
02	PRPOSED LAYOUT OF ELECRICAL SYSTEM FOR GROUND FLOOR
03	PRPOSED LAYOUT OF ELECRICAL SYSTEM FOR FIRST FLOOR
04	PRPOSED LAYOUT OF ELECRICAL SYSTEM FOR SECOND FLOOR

<b>S.N</b>	<b>Description of drawings</b>
05	PRPOSED LAYOUT OF ELECTRICAL SYSTEM FOR THIRD FLOOR
06	PRPOSED LAYOUT OF ELECTRICAL SYSTEM FOR FORTH FLOOR