



TECHNICAL BID

TENDER FOR PROPOSED INTERIOR, ELECTRICAL AND AIRCONDITIONING ACCESSORIES WORKS FOR OUR MAYILADUTHURAI BRANCH

Name of the Employer:

**THE REGIONAL HEAD
M/s. BANK OF BARODA
PUDUCHERRY REGION,
Jai Krishna Plaza, No.7, 2nd floor,
Iyyanar Koil Street, Ellaipillaichavady Main Road,
Pondicherry - 605 005
Phone: 0413-2345058**

Name of the Consultant:

**M/s. SHRISHTI,
H3 Ras Subhiska Mascot Behind Deepam Hospital Trichy Road Ramanathapuram
Coimbatore 641 045.
Phone: 0422 231 3958 Mob: 8056866038**

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PREAMBLE

BANK OF BARODA, PUDUCHERRY REGION, Intends to carry out Interior, Electrical and Air-conditioning Accessories works in Our Mayiladuthurai Branch.

BANK OF BARODA appointed M/s SHRISHTI, H3 Ras Subhiska Mascot behind Deepam Hospital Trichy Road Ramanathapuram Coimbatore 641 045 as Architect and Project Management Consultant (PMC) for the project.

Now bank is seeking the interest from reputed contractors to complete all required interior, electrical and air- conditioning works.

As per the terms of appointment of **M/s SHRISHTI** now invites tenders from eligible contractors to take part in the contractor selection process for **proposed interior, electrical and Air-conditioning Accessories works in our Mayiladuthurai Branch.**

The process for selecting a Contractor is divided into two parts (collectively referred to as the Tender Process) namely invitation of Tenderers by issue of the Tenders and short listing of qualified Tenderers by vetting of their tenders (**Qualification Process**) and opening of financial bids from short listed Tenderers and awarding the bid in accordance with the terms thereof (**Bid Process**). The Qualification Process shall qualify Tenderers on the basis of information provided by them and evaluation done by the Consultant and the Client. This Tender document is being provided to enable Tenderers to submit details mentioned in schedules "A" to "F" of this Tender. At the end of the Tender Process, the Bidder submitting the **lowest bid** shall be awarded the Works envisaged under this technical bid. In case the Consultant and the Client feel that any one of the tenders or bids or all the tenders or bids are unresponsive, they are free to reject any one or all the tenders or bids and/or cancel the entire Tender Process and recall for fresh tenders or bids, with same or altered conditions of contract, without assigning any reason for the same.

For the purpose of the Tender Documents, persons submitting tenders in response to the technical bid shall herein after be referred to as the "Tenderers" and the persons from amongst the shortlisted Tenderers shall here in after be referred to as the "Bidders".

NOTICE INVITING TENDER

TENDER FOR PROPOSED INTERIOR, ELECTRICAL AIRCONDITIONING ACCESSORIES WORKS IN MAYILADUTHURAI BRANCH

1. Tenders in **Two bid** system are hereby invited in sealed tenders, on behalf of **BANK OF BARODA, PUDUCHERRY REGION** in prescribed form, for the following work from reliable, bonafide and resourceful Contractors experienced in the similar type of works Central Government or State governments or PSU's or PSU Bank's/Financial Institutions/Govt Corporations or Reputed Private organizations.

Name of work	Completion Period	Last date of submission of Tender document
TENDER FOR PROPOSED INTERIOR, ELECTRICAL AND AIRCONDITIONING ACCESSORIES WORKS IN MAYILADUTHURAI BRANCH	40 DAYS	18.07.2024

2. The estimated cost of the work is about **₹18,30,000/- (Rupees Eighteen Lakh Thirty Thousand Only)** Excluding GST.

3. Eligibility criteria:

- A. The Tenderers must have completed (excluding GST) –
3 (Three) similar works each of **₹7,32,000/-**
OR
2 (two) similar works each of **₹9,15,000/-**
OR
1 (one) similar work of **₹14,64,000/-**

In the last 7 years. The Tenderer should furnish required project specific information (Work order/Completion certificates) and evidence in support of its eligibility criteria, as per format.

It is clarified that similar works means Interior, Electrical, and Air-conditioning works.

Tenderer may be a single entity / company. There shall be no change in control of the Tenderer during the entire Tender Process or during the Contract Period (if the Tenderer is awarded the Works in accordance with the terms hereof) without the prior consent of The Client.

The term “control” shall mean (i) the ability to appoint major it of the members on its board of directors, or (ii) the ability to cast more than 50% (fifty per cent) of the voting rights attaching to voting securities

B. **Minimum average annual turnover** for the last **three consecutive financial** years immediately preceding 31st March 2023 should not be less than **₹5,49,000/- (Rupees Five Lakh Forty Nine Thousand Only)**. An Auditor's certificate, balance sheet, P&L statement and tax return acknowledgment shall be submitted in support of the Tenderer's annual turnover for last -3- Financial Years.

POINTS TO BE NOTED:

1. Works envisaged under this contract are required to be completed in all respects within the completion time set out in paragraph 1 above, and the work to be conducted in working environment, should not affect overseas branch timings.
2. The Tenderer shall ensure inclusion of all details required under the technical bid.
3. The Tender Documents consists of TECHNICAL BID and PRICE BID documents.
4. The Tender Documents will be available from bank web site www.bankofbaroda.com the filled Tender documents shall be submitted as follows The tender cover-1 (**TECHNICAL BID**) should be duly sealed and clearly super scribed as **TECHNICAL BID FOR "TENDER FOR PROPOSED INTERIOR, ELECTRICAL AND AIRCONDITIONING ACCESSORIES WORKS FOR MAYILADUTHURAI BRANCH"** With **EMD in the form of Demand Draft for ₹18,300/- (Rupees Eighteen Thousand Three hundred Only) in favour of "BANK OF BARODA" payable at Puducherry.** Tender cost/EMD exemption will be as per government rules applicable to MSME & NISC. Please submit relevant certificates in respective heads.
5. The tender cover-2 (**PRICE BID**) should be duly sealed and clearly super scribed as **FINANCIAL BID FOR "TENDER FOR PROPOSED INTERIOR, ELECTRICAL AND AIRCONDITIONING ACCESSORIES WORKS FOR MAYILADUTHURAI BRANCH"** Completed the both covers (1&2), signed and sealed tenders should be submitted to **M/s. BANK OF BARODA, Jai Krishna Plaza, No.7, 2nd floor, Iyyanar Koil Street, Ellaipillaichavady Main Road, Pondicherry - 605 005.**, on or before the last date of the submission of tender **18.07.2024 up to 4.00 PM.** Tenders received late on any account including postal / courier delay shall be considered for opening / evaluation purposes only at the discretion of the Client.
6. It is to be noted that the TECHNICAL BID shall be opened first & the contractors will be shortlisted. The selected contractors PRICE BID, opening date shall be informed to them.
7. Each page of the tender should be duly stamped with the company seal of the Tenderer and signed by a person authorized to do so by the Tenderer.
8. **Should have enclosed latest (Mar 2024) GSTR returns.**
9. **Should have enclosed a solvency certificate from a schedule bank for an amount of Rupees Eighteen lakh only. Not older than one year at the time the date of Technical bid opening.**
10. The Bank will not be bound to accept the lowest tender and reserves the right to accept or reject any or all the tender without assigning any reason whatsoever.
11. The Earnest Money will be retained in the case of the successful Tenderer as part of the security for the due fulfillment of the contract and will be refunded without any interest thereon to the unsuccessful Tenderers as soon as the Employer takes a decision on the Tenders or after the expiry of the validity period of the tenders whichever is later.
12. Canvassing in connection with Tenders is strictly prohibited and Tenders submitted Contractors who resort to canvassing are liable to be rejected.
13. Corrigendum / Addendum / Any Change in Tender terms (Additions/Deletions) shall be published in Banks Website only.
14. Successful Vendor/Service Provider/Supplier/ Consultant/Contractor, who will be selected according to the service/work/project for which the proposal or quotation is invited shall comply with the Bank's Code of Ethics which is available on the Bank's website>Shareholder's Corner> Policies/Codes> **Our Code of Ethics** and a clause to this effect shall be included in the agreement/contract.
15. Period of availability of the bidding documents – **27.06.2024 - 18.07.2024**
16. Last date, time & place for receipt of bids – **18.07.2024, 4.00 pm at M/s. BANK OF BARODA, Jai Krishna Plaza, No.7, 2nd floor, Iyyanar Koil Street, Ellaipillaichavady Main Road, Pondicherry - 605 005.**
17. Date & time for opening of technical bids – **18.07.2024 up to 4:30 P.M** at submission office.

FORM OF TENDER SUBMISSION

This letter should be submitted on the Tenderer's letterhead

To,

THE REGIONAL HEAD

Bank of Baroda,

Jai Krishna Plaza,

No.7, 2nd floor, Iyyanar Koil Street, Ellaipillaichavady Main Road,

Pondicherry - 605 005

Sir,

I / we have read and examined the following documents forming part of the (**TECHNICAL BID**) Issued on **27.06.2024**.

- (i) Notice inviting tender
- (ii) Form of tender submission
- (iii) Format for agreement
- (iv) All appendices and schedules
- (v) Memorandum
- (vi) Special Instruction to Tenderers
- (vii) General condition of Contract
- (viii) Safety code & Model Rules
- (ix) List of Approved make & materials
- (x) Material checklist
- (xi) Drawings
- (xii) Price Bid

In the event of this tender being accepted, I/we agree to enter into and execute the necessary contract required by you. I/we further agree to execute and complete the work within the time frame stipulated in the tender documents.

Yours faithfully,

Tenderer's authorized person _____

Office Address with company seal:

Format of Agreement

Articles of Agreement made the ____ of day _____ 2024 between BANK OF BARODA. In the district of Puducherry (hereinafter called "the employer") of the ONEPART and in the district of (hereinafter called "the contractor") **WHEREAS** the employer is desirous of **interior, electrical and Air-conditioning Accessories works for Mayiladuthurai Branch** as per schedule I to this agreement and has caused drawings, bills of quantities, and a specification describing the work to be done as prepared **M/s. SHRISHTI, H3 Ras Subhiska Mascot Behind Deepam Hospital Trichy Road Ramanathapuram Coimbatore 641 045** (Hereinafter called the "The Architects")

AND WHEREAS the said drawings as per schedule II to this agreement inclusive, the bill of quantities and the specifications as per Architect's specification /M.D.S.S /local PWD specifications as The Indian standard specifications have been signed by or on behalf of the parties here to:-

AND WHEREAS the contractor has agreed to execute upon and subject to the conditions set forth in schedule III here to (here in after referred to as "the said conditions") the work shown upon the said drawing and described in the said specification and included in the said bill of quantities for the sum of ₹. _____ (Rupees _____ only.)

NOW IT IS HEREBY AGREED AS FOLLOWS;

1. Inconsideration of the sum of ₹. _____ (Rupees _____ only) to be paid at the times and in the manner set forth in the said condition, the contractor will upon and subject to the said conditions execute and complete the works shown up to the said drawings and described in the said specification and bill of quantities.
2. The employer will pay to the contractor the said sum of ₹. _____ (Rupees _____ only) or such other sum as shall become payable hereunder at the times and in the manner specified in the said conditions.
3. The term "the Architects" in the said conditions shall mean **M/s. SHRISHTI, H3 Ras Subhiska Mascot Behind Deepam Hospital Trichy Road Ramanathapuram Coimbatore 641 045.**, or in the event of their ceasing to be architects for the purpose of this contract, such other person as shall be nominated for that purpose by the employer, not being a person to whom the contractor shall object for reasons considered to be sufficient by the arbitrator mentioned in the said conditions. Provided always that no person subsequently appointed to be architects under the contract shall be entitled to disregard or overrule any decision or approval or direction given or expressed by the architects for the time being.
4. The said conditions, specifications and priced bill of quantities shall be read and constructed as forming part of this agreement and the parties hereto will respectively abide by and submit themselves to the conditions and stipulations and perform the agreement on their part respectively in such conditions, specifications and priced bill of quantities contained.
5. M/s _____, (Vendor/Service Provider/Supplier/ Consultant/Contractor) agrees to comply with the Bank's Code of Ethics, available on the Bank's website >Shareholder's Corner> Policies/Codes> Our Code of Ethics, during the validity period of this agreement/ contract.
6. Any dispute arising under the agreement between the parties hereto shall be referred for adjudication to a sole arbitrator in the manner and in terms of the provisions as laid down in the General Conditions of Contract. The award of the arbitrator shall be final and binding on both the parties.
7. Notwithstanding what is stated in the general conditions and instructions to the tenderer and hereinbefore stated, the Owner/Employer through the Architect /Consultants reserves to himself the right to alter the nature of the work and of adding to or omitting any items of works from the contract or of having portions of the same carried out departmentally or otherwise and such alternations or variations shall be carried out without prejudice to this contract.
8. All disputes arising out of or in any way connected with this agreement shall be deemed at Courts in Chennai shall have jurisdiction to determine the same.

That the several parts of this contract have been read by the contractor and fully understood by the contractor.

SCHEDULE-I

Interior Layout, and False Ceiling

SCHEDULE-II

Contains drawing number

SCHEDULE-III

Correspondence between contractor and client
As witness our hand the day and year first above written.

Signed by the said employer In the presence of witnesses

Name: _____
Occupation: _____
Address: _____

Name: _____

Occupation: _____

Address: _____

Signed by said contractor(s): In the presence of Witnesses:

Name: _____
Occupation: _____
Address: _____

Name: _____

Occupation: _____

Address: _____

SCHEDULE - A

IDENTIFICATION AND FINANCIAL DATA SHEET

1. _____
(Firms Name)
2. Year of incorporation.
3. _____ Type of incorporation.
4. _____
(Head Office Address)
5. _____
(Local Office Address)
6. Principal Officers who will manage the work from head office.
- a.) _____
(Name) (Title/Position) (Dt. Of Appoint.)
- b.) _____
(Name) (Title/Position) (Dt. Of Appoint.)
- c.) _____
(Name) (Title/Position) (Dt. Of Appoint.)
7. Principal Officers in local / site offices.
- a.)
8. (Name) (Title/Position) (Dt. Of Appoint.)
- (Local Associate Firm or Agents)
- _____
9. Total liabilities (`) _____
10. Total assets (`) _____
11. Current liabilities (`) _____
12. Bank Overdrafts(`) _____

13. Net Worth () _____

- 14. Liquid Assets () _____
- 15. Stock of () _____
outstanding _____
- 16. Current Assets () _____
- 17. Bank Reference: (a) _____
(b) _____
- 18. Current credit Resources() _____
- 19. Solvency Amount in () _____
- 20. Annual Turnover. () _____
(Give Separately for () _____

Each year - last 3 years () _____

21. No. of Consortium if any _____
Date of consortium established _____

Name: _____
Signature: _____
Designation: _____

Date: _____

**Seal of the
company:**

SCHEDULE - B

PROJECT WISE EXPERIENCE

1. Name of the project location:
2. Name and address of the client:
3. Brief description:
4. Starting date and completion date:
5. Contract value (as constructed value in ` lakhs)
6. Data of key personals who executed the project on behalf of applicant:
 - (a) Name (b)Qualification
 - (c) Category (d) Exp. before Project.
7. Tools and equipment used by the applicant in execution of the project.
 - (a) Equipment
 - (b) Number
 - (c) Capacity
8. Seal of the Company:
9. Signature of the tenderer with date:

Note: Separate sheets shall be submitted to cover details in above format for the individual members of the consortium. **Completion certificate from client/architect is required to shortlist the contractor.**

SCHEDULE-C

PERSONNEL

TENDERER'S NAME & ADDRESS:

1. Number of Graduate in employment at present: AND available for deployed for this works.

- (i) With more than 10 years 'Experience
- (ii) Between 5 to 10 years 'Experience
- (iii) Between 2 to 5 years 'Experience
- (iv) Up to 2 years of Experience

2. Number of supervisory personal available for deployment on proposed job with their qualification and years of experience.

I / We here by confirm that number of personnel, I / We will engage for proposed job will not be less than those listed in item 1 & 2 and agree more personnel, if so wanted in the opinion of the consultants / corporation at no extra cost.

Seal of the Company

Signature of the tenderer

Date: / /

SCHEDULE – D

BIO DATA OF TECHNICAL PERSONNEL IN EMPLOYMENT WITH THE TENDERER WHO WILL BE AVAILABLE FOR THE EXECUTION OF THE CONTRACT.

(Separate sheet to be used for each staff members)

Name: _____

Date of Birth: _____

Positions held since Graduation : _____

(If not a graduate, mention this fact)

Experience in Particular projects: (Additional sheets may be attached, if necessary)

During employment with the present employer and also in previous employment, if any. Give details chronologically going back from the present project.

Project name	Year	Employer	Experience on project

Seal of the Company

Signature of tenderer

Date: / / ...

SCHEDULE – E

DETAILS OF WORK IN HAND AND WORKS TENDERED FOR AS ON THE DATE OF SUBMISSION OF TENDER.

FIRM'S NAME: _____
WORKS INHAND

S. N.	NAME OF WORK	TENDERED COST(IN LAKHS)	COST OF WORK REMAINING TO BE EXECUTED	ANTICIPATED Dt. OF COMPLETION

WORKS TENDERED FOR

S. N.	NAME OF WORK	PLACE	ESTIMATED COST	DATE WHEN DECISION EXPECTED	STIPULATED DATE AND PERIOD OF COMPLETION

Seal of Company.

Signature of the tenderer

Date: / /

NOTE – Tenderer shall to submit the details of litigation history, if any, on separate sheet of paper. If there is no history that should be specifically mentioned.

SCHEDULE – F
MACHINERY ANDEQUIPMENTS

LIST OF MACHINERY AND EQUIPMENTS AVAILABLE WITH TENDERER

Sr. No.	Name	No. of Units	Type & Make	Capacity	Owned / Leased	Health Certificate / attached Yes /No.
1.	Tile cutting machine					
2.	Glass cutting machine					
3.	Aluminum fabrication tools and equipment.					
4.	Electrical works tools and tackles					
5.	Plumbing tools and tackles					
6.	Any others specify					

Add to this list if required.

Note: - If owned attached Registration Book. If Rented attached agreement with the Party.

Signature and seal of the tenderer Date:

Note: Separate sheets shall be attached to cover the details in **above format only**, if required.

MEMORANDUM

Name of work	TENDER FOR PROPOSED INTERIOR, ELECTRICAL AIRCONDITIONING ACCESSORIES WORKS FOR MAYILADUTHURAI BRANCH.
Earnest Money Deposit (EMD)	₹18,300/-
Cost of the tender documents	NIL
Initial Security Deposit (ISD)	2% of the Accepted tender value less EMD
Percentage to be deducted from each bills(Retention Money-RM)	8% in each running bill.
Time Allowed for the work	40 (FORTY) Days
Liquidated Damages for Delay (LD)	0.50% of the tender amount shown in the tender per week
Defect Liability period	One year from final bill certification.

SPECIAL INSTRUCTIONS TO TENDERERS

1. Time of completion, Extension of Time & Progress Chart

Time of completion:

The entire work is to be completed in all respects within the stipulated period. The work shall be deemed to be commenced within seven days from the date of acceptance letter or date of handing over of site, whichever is later. Time is the essence of the contract and shall be strictly observed by the contractor.

The work shall not be considered as complete until the Architects have certified in writing that this has been completed and the Defects Liability Period shall commence from the date of such certificate.

Extension of Time:

If the opinion of the Employer / Architects / PMC the works be delayed (a) by reason of any exceptionally inclement weather, or (b) by reason of instructions from the Employer in consequence of proceedings taken or threatened by or disputes, with adjoining or neighboring owners or (c) by the works, or delay, of other contractors or tradesmen engaged or nominated by the Employer and not referred to in the specification or (d) by reason of authorized extra and additions or (e) by reason of any combination of workmen strikes or lock-out affecting any of the building trades of (1) from other causes which the Employer may consider being beyond the control of the contractor, the Employer at the completion of the time allowed for the contract shall make fair and reasonable extension of time for completion in respect thereof. In the event of the Employer failing to give possession of the site upon the day specified above the time of completion shall be extended suitably.

In case of such strikes or lock-outs, as are referred to above, the contractor shall, immediately give the Employer, Written notice thereof. Nevertheless the contractor shall use his best endeavors all that to prevent delay, and shall do all that may be reasonably required to the satisfaction of the Employer to proceed with the works and on his doing so that it will be ground of consideration by the employer for an extension of time as above provided. The decision of the Employer as to the period to be allowed for an extension of time for completion hereunder (which decision shall be final and binding on the contractor) shall be promulgated at the conclusion of such strikes or lock-out and the Employer shall then, in the event of an extension being granted, determine and declare the final completion date. The provision in clause 15 respect to payment of liquidated damages shall in such case, be read and construed as if the extended dates fixed by the Employer were substituted for the damage shall be deducted accordingly.

Progress of work:

During the period of construction, the contractor shall maintain proportionate progress on the basis of a programmed Chart submitted by the contractor immediately before commencement of work and agreed to by Employer /Architects. Contractor should also include planning for procurement of scarce material well in advance and reflect the same in the programmed chart so that there is no delay in completion of the project.

2. Defects Liability Period (DLP)

- a) It must be realized that this period is for exposure of "latent defects" such as settlements, shrinkages or expansion cracks, undue weathering and wear due to faulty material and workmanship.
- b) The DLP commences from the certified date of Virtual completion issued by the Architects.
- c) In specialist contracts viz. for anti-termite and waterproofing treatment and the like, where the work is warranted to remain efficient and trouble-free for five to ten years

Through a specific guarantee on a stamp paper, appropriately worded amendments should be included in the contract documents to point out that the period of warranty supersedes the defects liability period stated in conditions of contract.

- d) Whenever the company is of the view that the defects in the workmanship and/or materials used likely to be apparent only over a long period, the Defect Liability Period may be extended as deemed fit.

3. Date of commencement

Normally, date of commencement shall be either 7 Days from the date of acceptance letter is issued to the contractor or the day on which contractor is instructed to take possession of the site, whichever is later. But in the instant case which being a **snap Bid**, We have indicated the revised commencement date elsewhere in the tender.

4. Date of completion

Date of completion shall be **40 days** for the execution of the work to the date of work order.

5. Liquidated Damages for Delay (LD)

The entry for the quantum of LD per week of delay, appropriate for the case in hand, should be selected from the following:

For Contract shaving	: 0.50%of the tender
Time for completion	amount shown in the
3 month sandless	tender per week

6. Period of final Measurement

The Entry for the period of final measurement after completion shall be made after taking into account the complexity of the work and staff available for carrying out measurements.

All hidden works shall have already been measured as the work progressed in presence of contractors, company, Architect and respective specialized consultants to check up the quality and method of installation. It should be noted that unless a longer period is stipulated, the condition of contract generally lays down three months (maximum) from the date of completion of the contract as the period of final measurement. Even though the maximum period of three months is mentioned, it shall be endeavored to complete the measurements as expeditiously as possible

7. Value of work for Interim certificate

No advance payment whatsoever will be made to the successful bidder for mobilization or for any other reason/s. Upon completion 40% and 70% of work entitling the contractor to claim interim bills

8. Period of Honoring Interim Certificate

The period shall be ten days, from the date of receipt of the Certificate from the Architect along with "M" Book only signed by the contractor consultants & Architect.

9. Period of Honoring Final Certificate

The period shall be one month from the date of receipt of the final certificate from the Architect along with "M" book duly signed by contractor, Consultant and Architects and statutory certificates wherever necessary.

10. Total security Deposit:

The Total security Deposit 10 % on the cost of work for the contract is calculated as under:

The Total Security Deposit shall comprise of

a) Earnest Money Deposit as Initial Security Deposit

b) Retention Money

a) Earnest Money Deposit(EMD)

Earnest Money Deposit shall be ₹18,300/- is calculated at the rate of 1.00% of the estimated value of work. EMD will not carry interest. The EMD shall be accepted in demand draft.

b) Retention Money

The retention percentage (i.e. deduction from interim bill) shall be 8% of the gross value of each interim bill. The total retention amount will be refunded to the contractor on the completion, subject to Issue of Virtual completion Certificate by the Architect.

GENERAL CONDITIONS OF CONTRACT

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

1. Interpretation

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

ii. Employer: The term employer shall denote Bank of Baroda, Regional office, Puducherry Region with their head office at and any of its employees representative authorized on their behalf Architects/Consultants.

iii. The term Architects shall mean SHRISHTI. The Architect with the approval of the Bank of Baroda, Regional Office, Puducherry Region may engage a local Architect/Consulting Engineer for supervision and co-ordination of the work at the site. He will be considered a representative of the Architect. The company may also engage a project Management consultant for the supervision of his work. He will be designated by the term PMC and work as Employer's agent at the site.

iv. Contractor: The term contractor shall mean L1 Bidder and his/ their heirs, legal representatives, assigns and successors.

v. Site: The site shall mean the site where the works are to be executed at **Mayiladuthurai Branch Located At No 178, Mahadana Street, Mayiladuthurai, Tamilnadu – 609001** any building and erections thereon allotted by the Employer for the Contractor's use.

vi. Site Engineer: The Site Engineer shall be appointed by the company. The company may also determine the number of Site Engineers and the supporting staff at site office to assist them and also whether the Site Engineer is shall be temporary or permanent. Where more than one Site Engineer is appointed, one of them shall be designed as Senior Site Engineer by the Premises Department and the other Site Engineer shall be reporting to the Senior Site Engineer. Wherever PMC is engaged, Site Engineer, if any, will work in close co- ordination with PMC

vii. Drawings: The work is to be carried out in accordance with drawings, specifications the schedule of quantities and any further drawings which may be supplied or any other instruction, which may be given by the Employer during the execution of the work.

All drawings relating to work given to the contractor together with copy of schedule of quantities are to be kept at site and employer! Architects/PMC shall be given access to such drawings or schedule of

quantities whenever necessary.

In case any detailed drawings are necessary contractor shall prepares such detailed drawings and or dimensional sketches there for and has it confirmed by the Employer/ Architects/PMC as case may prior to taking up such work.

The contractor shall ask in writing for all clarifications on and address of the contractor and his heirs, legal representatives, assigns and successors.

viii. "The Works" shall mean the work or work to be executed or done under this contract

ix. "Act of Insolvency" shall mean any act as such as defined by the presidency Towns Insolvency Act or in Provincial Insolvency Act or any amend in statutes.

x. "The Schedule of Quantities" shall mean the schedule of quantities as specified and for Ming part of this contract.

xi. "Priced Schedule of quantities" shall mean the schedule of quantities duly priced with the accepted quoted rates of the contractor.

2. Scope

The work consists of Construction of Employer's (details of work in accordance with the "drawings" and Schedule of Quantities". Air-conditioning work at site

Scope of this tender. It includes furnishing all materials, labour, tools and equipment and management necessary for and incidental to the construction and completion of the work. All work, during its progress and upon completion, shall conform to the lines, elevations and grades as shown on the drawings furnished by the Employer / Architects. Should any detail essential for efficient completion of the work be omitted from the drawings and specifications it shall be the responsibility of the contractor to inform the employer's/Architect' sand to furnish and install such detail with Employer's / Architect's concurrence, so that upon completion of the Air conditioning work the same will be acceptable and ready for use.

Employer or his agent (PMC) / Architects may in their absolute discretion issue further drawings and or written instruction, details, directions and explanations, which are, hereafter collectively referred to as "The Employer's / Architect's instructions" in regard to:

- a) The variation or modification of the design quality or quantity of work or the addition or omission or substitution of any work.
- b) Any discrepancy in the drawings or between the schedule of quantities and/or drawing and /or specifications.

- c) The removal from the site of any defective material brought thereon by the contractor and the substitution of any other material thereof.
- d) The demolition removal and/or re-executed of any work executed by the contractor/s. e) the dismissal from the work of any person employed thereupon.
- f) The opening up for inspection of any work covered up.
- g) The rectification and making good of any defects under clauses here in after mentioned and those arising during the maintenance period (retention period).

The contractor shall forthwith comply with and duly execute any work comprised in Such Employer's or his agent/Architect's instruction, provided always that very baling attractions, direction sand explanations given to the contractor's or his representative Upon the works by the Employer or his agent/Architects shall, if involving a variation, be confirmed in writing to the contractors within seven days. No work, for which rates are not specifically mentioned in the priced schedule of quantities, shall be taken up without written permission of the Employer or his agent/Architects. Rates of item not mentioned in the priced schedule of quantities shall be fixed by the Employer in consultation with the Architects as provided in clause "variation".

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

3. Tenderer shall Visit the Site

Intending tenderer shall visit the site and make him thoroughly acquainted with the local site condition, nature and requirements of the works, facilities of transport conditions, effective labour and materials, access and storage for materials and removal of rubbish. The tenderer shall provide in their tender for cost of carriage, 1 freight and other charges as also for any special difficulties and "including police restriction for transport etc., for proper execution of work as indicated in the drawings. The successful tenderer will not be entitled to any claim of compensation for difficulties faced or losses incurred on account of any site conditions which existed before the commencement of the work or which in the opinion of the Employer or his agent/Architects might be deemed to have reasonably been inferred to be so existing before commencement of work.

4. Tenders

The entire set of tender paper issued to the tenderer should be submitted fully priced and also signed on the every page. Signature will indicate the acceptance of the tender papers by the tenderer. The schedule of quantities shall be filled in as follows.

- a) The "Rate" column to be legibly filled in inking / both English figures and English word
- b) Amount column to be filled info reach item and the amount for each sub head as detailed in the "Schedule of Quantities".
- c) All corrections are to be initialed.
- d) The "Rate Column" for alternative items shall be filled up.
- e) The "Amount" column for alternative items of which the quantities are not mentioned shall not be filled

up.

f) In case of any errors/omissions in the quoted rates, the rates given in the tender marked "original" shall be taken as correct rates.

No modifications, writings or corrections can be made in the tender papers by the tenderer, but may at his option offer his comments or modifications in a separate sheet of paper attached to the original tender paper.

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

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

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

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

The Employer has power to add to, omit from any work as shown in drawings or described in specifications or included in schedule of quantities and intimate the same/in writing but no addition, omission or variation shall be made by the contractor without authorization from the Employer. No variation shall vitiate the contract. Please also refer to Para 9 hereinafter.

The tenderer shall not that his tender shall remain open for consideration for a period as specified in general rules and Instructions under item no 12. from the date of opening of the tender.

5. Agreement

The successful contractor may be required to sign agreement as may be drawn up to suit local conditions and shall pay for all stamps and legal expenses, incidental thereto.

6. Permits and Licenses

Permits and licenses for release of materials which are under government control will be arranged by the contractor. The Employer will render necessary assistance, sign any forms are applications that may be necessary.

Tenderer

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Seal & Signature of the

The Employer/Architect/PMC shall be indemnified against all government or legal actions for theft or misuse of cement M.S. rods and any controlled materials in the custody of the contractor.

7. Government and Local Rules

The contractor shall conform 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 with whose system the structure is proposed to be connected. The contractor shall give all notices required by said Act, Rules, Regulations and Bye-laws etc., and pay all fees payable to such authority for execution of the work involved. The cost, if any, shall be deemed to have been included in his quoted rates, taking into account all liabilities for licenses, fees for footpath encroachment and restorations etc., and shall indemnify the Employer against such liability and shall defend all actions arising from such claims or liabilities.

8. Taxes and Duties

The tenderer must exclude in their tender prices quoted for GSTN charges.

9. Quantity of Work to be executed

The quantities shown in the schedule of quantities are intended to cover the entire new structure indicated in the drawings but the Employer reserves the right to execute only part or the whole or any excess to be more than 25%.

10. Other Persons Engaged by the Employer

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

12. Contractor to provide everything necessary

The Contractor shall provide everything necessary for the proper execution of the work. According to the intent and meaning of the drawings, schedule of quantities and specifications taken together whether the same may or may not be particularly shown or described therein provided that the same can reasonably be inferred therefrom and if the contractor finds any discrepancies he shall immediately and in writing, refer the same to the employer/Architects/PMC whose decision shall be final and binding.

The Contractor shall provide himself for ground and fresh water for carrying out of works at his own cost. The Employer shall on no account be responsible for the expenses incurred by the contractor for hired ground or fresh water obtained from elsewhere.

The rates quoted against individual items will be inclusive of everything necessary to complete the said items of work within the contemplation of the contract, and beyond the unit price no extra payment will

be allowed for incidental or contingent work, labour and/or materials inclusive of all taxes and-duties whatsoever for specific items, if any stipulated in the tender documents.

The contractor shall supply, fix and maintain at his own cost, for the execution of any work all tools, tackles, machineries and equipment's and all the necessary centering, scaffolding, staging, planking, timbering , shorting, pumping, fencing, boarding, watching and lighting by night as well as by day required not only for the proper execution and protection of the said work but also for protection for the public and safety of any adjacent roads, streets, walls, houses, buildings, all other erections, matters and the contractor shall take down any remove any or all such centering, scaffolding, planking, timbering, strutting, shoring etc., as occasion shall be required or when ordered so to do and shall fully reinstate and make good all matters and things disturbed during the execution of the works to the satisfaction of the Employer/Architects.

The contractor shall also provide such temporary road on the site as may be necessary for the proper of the contract and for his own convenience but not otherwise. Upon completion, such roads shall be broken up and leveled where so required by the drawings unless the Employer shall otherwise direct. The contractor

shall at all the times give access to workers employed by the employer or any men employed on the building and to provide such parties with proper sufficient and if required, special scaffolding, hoists and ladders and provide such them with water and lighting and leave or make any holes, grooves etc., in any work, where directed by the employer as may require to enable such workmen to lay or fix pipes, electrical wiring, special fittings etc., The quoted rates of the tenderers shall accordingly include all these above mentioned contingent works.

13. Time of Completion, Extension / of Time & Progress Chart

1. Time of Completion: The entire work is to be completed in all respects within the stipulated period. Time is the essence of the contract and shall be strictly observed by the contractor. The work shall not be considered as complete until the Employer/Architects have certified in writing that this has been completed and the Defects Liability Period shall commence from the date of such certificate.

2. Extension of Time: If in the opinion of the Employer/Architects/PMC the works be delayed (a) by reason of any exceptionally inclement weather, or (b) by reason of instruction from the Employer in consequence of proceeding taken or threatened by or disputes, with adjoining or neighboring owners or (c) by the works, or delay, of other contractors or tradesmen engaged or nominated by the Employer and not referred to in the specification or (d) by reason of authorized extra and additions or (e) by reason of any combination of workmen or strikes or lock-out affecting any of the building trades or (f) from other causes which Employer may consider being beyond the control of the contractor, the Employer at the completion of the time allowed for the contract shall make fair and reasonable extension of time for completion in respect therefore. In the event of the Employer failing to give possession of the site upon

the day specified above the time of completion shall be extended suitably.

In case of strikes or lock-outs, as are referred to above, the contractor shall, immediately give the Employer, written notice thereof. Never the less, the contractor shall use his best endeavors all that to prevent delay, and shall to all that may be reasonably required, to the satisfaction of the Employer to proceed with the works and on his doing so that it will be grown of consideration by the Employer for on extension of time as above declare the final completion date. The provision in cost 15 with respect to payment of liquidated damages shall, in such case, be read and construed as if the extended date fixed by the Employer were substituted for and the damage shall be deducted accordingly.

3. Progress of work: During the period of construction the contractor shall maintained proportionate progress on the basis of a programme chart submitted by the contractors immediately before commencement of work and agreed to be the Employer/Architects. Contractor should also include planning for procurement of scarce materials well in advance and reflect the same programme chart so that there is no delay in completion of the project.

14. Liquidated Damages

Should the work be not completed to the satisfaction of the Employer/Architects within stipulated period, the contractor shall be bound to pay to the Employer a sum calculated as given below by way of liquidated damages and not as penalty during which the work remains uncompleted or unfinished after the completion – date.

a) For contractor shaving Time for completion 3 month sand less	0.50% of the estimated amount showing the tender per week subjected to a ceiling of 10% of the accepted contracted sum.
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15. Tools, Storage of material, protective works and site office Requirements

The contractor shall maintain a site office with site engineer to receive instruction notice or communication etc.

All drawings maintained done 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 ravages of termites, ants, and other insects. The contractor shall use the toilets identified by the Bank for use of their workmen and keep the same in a clean and sanitary condition to the satisfaction of the bank/ Public Health Authorities and shall cause such latrines and soil to be cleared away whenever necessary and shall make good all the works distributed 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., used for the storage of water must be suitably protected against breeding of mosquitoes.

The contractor shall indemnify the Employer against any breach of rules in respect of anti-material measures.

Protective Measures: The contractor from the time of being placed in possession of the site must make suitable arrangement 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 Employer against any possible damage to the building, roads, or members 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 distributed.

Storage of materials: The contractor shall provide and maintain proper sheds for the proper storage and adequate protection of the materials etc., and other work that may be executed on the site including the tools materials of sub-contractors and remove same on completion. Cement should be stored one feet above the ground level and have puca raised floor.

Tools: The theologicize 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 this contract as instructed by the site Engineer. All measuring tapes shall be of steel and scaffolding and ladders that may be required for safely taking measurement shall be supplied by the contractor.

The maistries and the supervisors on the works shall carry with them always a one meter or two meter steel tape, a measuring tape of 3 meters, 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 as he chooses for checking the works 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 work.

16. Notice and patents of Appropriate Authority and Owners

The contractor shall conform to the provisions of any Acts of the Legislature relating to the work, and to the Regulations and Bye-laws of any authorities, and/or any water, lighting and other companies, and/or authorities with whose systems the structure were proposed to have connection and shall before making any variations from the drawings or specification that may be associated to so conform, give the Employer/ Architects written notice specifying the variations proposed to be made and the reason for making them and apply for instruction thereon. The Employer /Architects on receipt of such intimation shall give a decision within a reasonable time.

The contractor shall arrange to give all notices requires for by the said Acts, Regulations or Bye-laws to be given any authority, and to pay to such authority or to any public officer all fees that may be properly

chargeable in respect of the work and lodge the receipts with the Employer.

The contractor shall indemnify the Employer against all claims in respects of patent rights, royalties and damages to buildings, roads or members of public in course of execution of work and shall defend all action arising from such claims and shall keep the Employer saved harmless and indemnified in all respects from such actions, costs and expenses.

17. Clearing Site and setting out Works

The site shown on the plan shall be cleared of all obstructions, loose stone, and materials rubbish of all kinds. All holes 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 his own cost. The contractor shall set out the works and shall be responsible for the true and perfect setting out of the work and for the correctness of the positions, levels, dimensions and alignment of all parts thereof. If at any time, any error shall appear during the progress of any part of the work, the contractor shall at his own expenses rectify such error, if called upon to the satisfaction of the Employer. The Contractor shall further set out the works to the alternative position at the site until one is finally approved and the rates quoted in his tender should include for this and no extra on this account will be entertained.

18. Datum

The average ground level will be considered as the crown of the nearest road, which should be taken as "Datum" which is however, subject to final confirmation by the Employer/Architects. All level shown in the drawings are to be strictly adhered to.

19. Benches

The contractor is to construct and maintain proper benches of all the main walls, in order that the lines and levels may be accurately checked at all times.

20. Contractor Immediately to Remove All Offensive Matters

All soil, filth or other matters of any 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 carted away by the contractor to place provided by him.

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 the Employer for the purpose, until the building is handed over to the Employer. The contractor shall arrange for the disposal of the water so accumulated to the satisfaction of the Employer and local authority and no claims will be entertained afterwards if he does not include in his rates for the purpose.

21. Access

Any authorized representative of the Employer shall at all reasonable times have free access to the works and/or to the, workshops, factory or other places where the materials are laying or from where they are being obtained, and the contractor shall give every facility to the Bank or their representative necessary for inspection and examination and test of the materials and workmanship. Except the representatives of the Employer no person shall be allowed at any time without the written permission of the Employer.

22. Materials, Workmanship, Samples, Testing of Materials

All the works specified and provided for in the specifications or which may be required to be done in order to perform and complete any part thereof shall be executed in the best and most workmanlike manner with materials of the best and approved quality of the respective kinds in accordance with the particulars contained in and implied by the specifications and as represented by the drawings or according to such other additional particulars, and instructions as may from time to time be given by the Employer / Architects during the execution of the work, and to his entire satisfaction.

If required by the Employer/Architects the contractor shall have to carry out tests on materials and workmanship in approved materials testing laboratories or as prescribed by the Employer/Architects at his

own cost to prove that the materials etc. Under test conform to the relevant I.S Standards or as specified in the specifications. The necessary charges for preparation of mound (in case of concrete cube) transporting, testing etc., shall have to be borne by the contractor. No extra payment on this account should in any case be entertained.

All works to be carried out generally as per BIS Specifications.

Branded items, i.e., BIS complaint items specified in the tender shall not be tested separately. However the other items if approved by Bank are subjected to testing as per tender specifications. All the materials (except where otherwise described) stores and equipment required for the full performance of the work under the contract must be provided through normal channels and must include charges for import duties, sales tax, octroil and other charges and must be the test of their kind available and the contractor must be entirely responsible for the proper and efficient carrying out of the work. The work must be done in the best workmanlike manner. Samples of all other materials to be used must be submitted to the Employer/Architects when so directed by the Engineer/Architects and written approval from Employer/Architects must be obtained prior to placement of order.

During the inclement weather the contractor shall suspend concreting and plastering for such time as the Employer/Architects may direct and shall product from injury all work when in course of execution. Any damage (during constructions) to any part of the work for any reasons due to rain, storm, or neglect of contractor shall be rectified.by the contractor in an approved manner at no extra cost.

Should the work be suspended by reason of rain, strike, lock-outs or any other cause, the contractor shall take all precautions necessary for the production of work and at his own expenses shall make good any damage arising from any of these causes.

The contractor shall cover up and protect from damage, from any cause, all new work and supply all temporary doors, production to windows, and any other requisite for the execution of the work whether by himself or special tradesmen or sub-contractor and any damage caused must be made good by the contractor at his own expenses.

23. Removal of Improper Work

The employer shall during the progress of the work have power to order in writing from time to time the removal from the work within such reasonable time or times as may be specified in the order of any materials which in the opinion of the Employer/Architects or not in accordance with specification or instructions, the substitution or proper re-execution of any work executed with materials or workmanship not in accordance with the drawings and specifications or instructions. In case the contractor refuses to comply with the order the Employer shall have the power to Employ and pay other agencies to carry out the work and all expenses consequent thereon or incidental thereto as certified by the Employer/Architects shall be borne by the contractor or may be deducted from any money due to or that may become due to the contractor. No certificate which may be given by the Architects shall relieve the contractor from his liability in respect of unsound work or bad materials.

24. Site Engineer/Project Management Consultant

The term "Site engineer/PMC" shall mean the person/agencies appointed and paid by the Employer or superintend the work. The contractor shall afford the Site Engineer/PMC every facility and assistance for examining the works and materials and for checking and measuring work and materials. The site Engineer/PMC shall have no power to revoke, alter, enlarge or relax any requirements of the contractor or to sanction any day work, additions, alterations, deviations or omission or any extra work whatever, except in so far as such authority may be specially conferred by a written order of the Employer.

The Site Engineer/PMC shall have power to give notice to the contractor or to his foreman, of non-approval of any work or materials and such work shall be suspended or the use of such materials shall be discontinued until the decision of the Employer is obtained. The work will from Time to time be examine by the Architects, Engineer from the premises Department of the Employer and the Site Engineer if any, But such examine shall not in any way exonerate the contractor from the obligation to remedy any defects which may be found to exist at any stage of the work or after the same is completed. Subject to the limitations of this clause the contractor shall take instructions only from the Architects/Employers or his representative.

25. Contractor's Employees

The contractor shall employ technically qualified and competent supervisors for the work who shall be available (by turn) throughout the working hours to receive and comply with instructions of the Employer /Architects. The contractor shall engage at least one experienced Engineer as site-in-charge for execution of the work. The contractor shall employ in connection with the work persons having the appropriate skills or ability to perform their job efficiently. The contractor shall employ local labours on the work as far as possible. No labourer below the age of sixteen years and who is not an Indian National shall be employed on the work.

Any laborer supplied by the contractor to be engaged on the work on day-work basis either wholly or partly under the direct order or control of the Employer or his representative shall be deemed be a person employed by the contractor. The contractor shall comply with the provisions of all labour legislation including the requirements of

- a) The Payment of Wages Act
- b) Employer's Liability Act
- c) Workmen's Compensation Act Contract Labour (Regulation & Abolition) Act, 1970 and Central Rules 1971
- e) Apprentices Act 1961
- f) Minimum Wages Act
- g) Any other Act or enactment relating thereto and rules framed there Under from time to time

The contractor shall keep the Employer saved harmless and indemnified against claims if any of the workmen and all costs and expenses as may be incurred by the Employer in connection with any claim that may be made by any workmen.

The contractor shall comply at his own cost with the order of requirement of any Health Officer of the State or any local authority or of the Employer regarding the maintenance of proper environmental of the area where the contractor's laborers are house do accommodated, for the prevention of smallpox, cholera, plague, typhoid, malaria and other contagious diseases. The contractor shall provide, maintain and keep in good sanitary condition adequate sanitary accommodation and provide facilities for pure drinking water at all times for the use of men engaged on the works and shall remove and clear away the same on completion of the works. Adequate precautions shall be taken by the contractor to prevent nuisance of any kind on the works or the lands adjoining the same

The contractor shall arrange to provide first-aid treatment to the laborers engaged on the works. He shall within 24 hours of the occurrence of the any accident at or about the site or in connection. With execution of the works, report such accident to the Employer and also to the Competent Authority where such report is required by law.

26. Dismissal of workmen

The contractor shall request of the Employer immediately dismiss from works any person employed thereon by him, who may in the opinion of the Employer be unsuitable or incompetent or who may

misconduct himself. Such discharges shall not be the basis of any claim for compensation or damages against the Employer or any of their officer or employee.

27. Assignment

The whole of the works included in the contract shall be executed by the contractor and the contractor shall not directly or indirectly transfer, assign or underlet the contract or any part share or interest therein nor, shall take a new partner, without written consent of the Employer and no subletting shall relieve the contractor from the full and entire responsibility of the contract or from active superintendence of the work during their progress.

28. Damage to person and property Insurance Etc.,

The contractor shall be responsible for all injury to the work or workmen to persons, animals or things and for all damages to the structural and/or decorative part of property which may arise from the operations or neglect of himself or of any sub-contractor or of any of his or a sub-contractor's employees, whether such injury or damage arise from carelessness, accident or any other cause whatsoever in any way connected with the carrying out of this contract. The clause shall be held to include inter-alia, any damage to buildings whether immediately adjacent or otherwise, and any damage to roads, streets, foot paths or ways as well as damages caused to the buildings and the works forming the subject of this contract by rain, wind or other inclemency of the weather.

The contractor shall indemnify the Employer and hold harmless in respect of all any expenses arising from any such injury or damages to persons or property as aforesaid and also in respect of any claim made in respect of injury or damage under any acts of compensations or damage consequent upon such claim.

The contractor shall reinstate all damages of every sort mentioned in this clause, so as to deliver the whole of the contract works complete and perfect in every respect and so as to make good or otherwise satisfy all claim for damages to the property or third parties-

The contractor shall effect the insurance necessary and indemnify the Employer entirely from all responsibility in this respect. The insurance must be placed with a company approved by the Employer and must be effect jointly in the name of the contractor and the Employer and the policy lodged with the latter. The scope of insurance is to include damage or loss to the contract itself till this is made over in a complete state. Insurance is compulsory and must be affected from the very initial stage. The contractor shall also be responsible for anything which may be executed from damage to any property arising out of incidents, negligence or defective carrying out of this contract.

The Employer shall be at liberty and is hereby empowered to deduct the amount of any damages, compensations, costs, charges and expenses arising or accruing from or in respect of any such claim for damages from any sums due or to become due to the contractor.

29. Insurance

The contractor shall arrange to take "Contractors all risk insurance policy including third party liability," covering the entire period of contract (including extended period if any) for the entire scope of works for a risk cover not less than the contract value.

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 fire and / or earthquake, flood. The insurance must be placed with a company approved by the Employer, in the joint name of the Employer and the contractor for such amount and for any further sum if called to do so by the Employer, the premium of such further sum being allowed to the contractor as an authorized extra.

The contractor shall as soon as the claim under the policy is settled or the work reinstated by the Insurance company should they elect to do so, proceed with due diligence with the completion of the work in the same manner as though the fire has not occurred and in all respect under the conditions of the contract. The contractor in case of rebinding or reinstatement after fire shall be entitled to extension of time for completion as the Employer may deem fit.

30. Accounts, Receipts & Vouchers

The contractor shall, upon the request of the Employer 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 what he is required under the 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 Employer 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.

31. Before taking any measurement of any work the site Engineer or a subordinate deputed by him shall give reasonable notice to the contractor. If the contractor fails to attend at the measurements after such notice or fails to countersign or to record the difference within a week from the date of measurement in the manner required by the site Engineer then any such event the measurements taken by the site Engineer or by the subordinate deputed by him as the case may be is final and binding on the contractor and the contractor shall have no right to dispute the same.

32. Payments

All bills shall be prepared by the contractor in the form prescribed by the Employer/Architects. Normally one interim bill shall be prepared each month subject to minimum value for interim certificate as stated in these documents. The bills in proper forms 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 Employer/Architect shall issue a certificate after due scrutiny of the contractor's bill stating the amount due to the contractor from the Employer and the contractor shall be entitled to the payment thereof, within the period of honoring certificate named in these documents. In case of delay due to some reason in the

processing of such bills for payment, an advance of 75% of the billed amount may be paid on the request of the contractor for the smooth progress of the work. The amount stated in an interim certificate shall be the total value of work properly executed and 75% of invoiced value of material brought to site for permanent incorporation into the work up to the date of the bill less the amount to be retained by the Employer as retention money vide clause 11 of the general conditions of contract, less TDS, less works contract tax of 2% of cost of civil works and 4% of cost of electrical works and less installments previously paid under these Conditions, provided that such certificate shall only include the value of said material and goods as and from such time as they are reasonably, properly and not prematurely brought to or placed adjacent to the work and then only if adequately protected against weather or other casualties.

The Employer will deduct retention money as per tender conditions. The refund of retention money will be made as specified in the said clause.

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

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

Final Payment

The final bill shall be accompanied by a certificate of completion from the Consultants & Architects. Payment of final bill shall be made after deduction of Retention Money as specified in clause 11 of the general conditions of contract bills, which sum shall be refunded after the completion of the Defects Liability Period after receiving the Employer's/Architects' certificate that the contractor has rectified all defects to the satisfaction of the Employer/Architects. The acceptance of payment of the final bill by the contractor would indicate that he will have no further claim in respects of the work executed.

33. Variation/Deviation

The price of all such additional items/non-tendered items will be worked out on the basis of rates quoted for similar items in the contract wherever existing or on engineering rate analysis based on prevalent fair price of labour, material and other components as required. The tender rates shall hold good for any increased or decreased in the tendered quantities up to variation of 25%. For variation beyond 25%, the

rate for the respective item may be reviewed on mutually agreed terms.

34. Substitution

Should the contractor desire to substitute any materials and workmanship, he / they must obtain the approval of the Employer / Architects in writing for any such substitution well in advance. Materials designed in this specification indefinitely by such term as "Equal" or "other approved" etc., Specific approval of the Employer/Architects has to be obtained in writing.

35. Preparation of Building Works for Occupation and Use on Completion

The whole of the work will be thoroughly inspected by the contractor and deficiencies and defects put right. On completion of such inspection the contractor shall inform the Employer that he has completed the work and it is ready for inspection.

On completion the contractor shall clean all windows and doors including the cleaning and oiling if necessary, of all hardware, inside and outside, all floors, staircase, and every part of the building. He will leave the entire building neat and clean and ready for immediate occupation and to the satisfaction of the Bank.

36. Clearing Site on Completion

On completion of the work the contractor shall clear away and remove from the site all constructional plant, surplus materials, rubbish and temporary works of every kind and leave the whole of the site and the works clean and in a workman like condition to the satisfaction of the Employer/Architects.

37. Defects after Completion

The contractor shall make good at his own cost and to the satisfaction of the Employer all defects, shrinkage, settlements or other faults which may appear within 12 month after completion of the work. In default the Employer may Employ and pay other persons to amend and make good such damages, losses and expenses consequent thereon or incidental thereto shall be recoverable from him by the Employer or may be deducted by the Employer, in lieu of such amending and making good by the contractor, deduct from any money due to the contractor a sum equivalent to the cost of amending such work and in the event of amount retained being insufficient, recover that balance from the contractor from the amount retained under clause No.12 together with any expenses the Employer may have incurred in connection therewith.

38. Concealed Work

The contractor shall give due notice to the Employer/Architects whenever any work is to be buried in floor / earth, concrete, ceiling or in the bodies of walls or 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 opinion of the Employer/Architects be either reopened up for measurement at the contractor's expense or no payment may be made for such materials. Should any dispute or differences 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 Employer/Architects shall be accepted as correct and binding on the contractor.

39. Escalation

The rate quoted shall be firm throughout the tenure of the contract (including extension of time, if any, granted) and will not be subjected to any fluctuation due to increase in cost of materials, and labour, etc.

unless specifically provided in these documents. The price variation clause being adopted by the IBA may be followed if such a situation arises on a case-to-case basis.

Further in case of variation in the wages of labour due to statutory enactments like the revision of the Minimum Wages Act by more than 10%, the increase in actual labour cost due to the implementation of the statutory provisions based on the number and category of labour actually borne on the Muster during the period under consideration may be also considered, if provided in the tender.

40. 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 circumstance.

41. Suspension

If the contractor except on account of any legal restraint upon the Employer preventing the continuance of the work or in the opinion of the Employer 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, the Employer shall have the power to give notice in writing to the contractor requiring the work to be proceeded with in a reasonable manner and with reasonable dispatch, such notice purport to be a notice under this clause. After such notice shall have been given the contractor shall not be at liberty to remove from the site of the works or from any ground contiguous thereto any plant or materials to subject from the date of such notice being given until the notice shall have been complied with. If the contractor fails to start the work within seven days after such notice has been given to proceed with the works as therein prescribed, the Employer may proceed as provided in clause 42 (Termination of contract by Employer)

42. Termination of Contract by Employer

If the contractor being a company go into liquidation whether voluntary or compulsory or being a firm shall be dissolved or being an individual shall be adjudicated insolvent or shall make an assignment or a composition for the benefit of the greater Part, in number amount of his creditors or shall enter into a Deed or arrangement with his creditors, or if the Official Assignee in insolvency, or the Receiver of the contractor in insolvency , Shall repudiate the contract, or if a Receiver of the contractor's firm appointed by the court shall be unable, within fourteen day sort notice to him requiring him to do so, to show to the reasonable satisfaction of the employer that he is able to carry out and fulfill the contract, and if so required by employer to give reasonable security therefore . or if the contractor shall suffer execution to be issued, or shall suffer any payment under this contract to be attached by or on behalf of and the creditors of the contractor, or shall assign, charge or encumber this contract or any payments due or which may become due to the contractor, there under, or shall neglect or fail to observe and perform all or any of the acts matters of things by this contract, to be observed and performed by the contractor within three clear days after the notice shall have been given to the contractor in manner hereinafter mentioned requiring the contractor to observe or perform the same or shall use improper materials or workmanship in carrying on the works, or shall in the opinion of the employer not exercise such due diligence and make such due progress as would enable the work to be completed within due time agreed

upon, and shall fail to proceed to the satisfaction of the employer after three clear days' notice requiring the contractor so to do shall have been given to the contractor as hereinafter mentioned, or shall abandon the contract, then and in any of the said cases, the Bank may notwithstanding previous waiver determine the contractor by a notice in writing to the effect as hereinafter mentioned, but without thereby effecting the powers of the employer of the obligations and liabilities of the contractor the whole on which shall continue in force as fully if the Contract, had not been so determined and as if the works subsequently executed had been executed by or on behalf of the contractor (without thereby creating any trust in favour of the contractor) further the employer or his agent, or servants, may enter upon and take possession of the work and all plants, tools, scaffolding, sheds, machinery, steam and other power, utensils and materials lying upon premises or the adjoining lands or roads and sell 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 persons or person to complete the works, and the contractor shall not in any way interrupt or do any act, matter of thing to prevent or hinder such other contractors or other persons or person employed from completing and finishing or using the materials and plants for the works when the works shall be completed, or as soon. Thereafter as conveniently may be, the employer shall give notice in writing to the contractor to remove his surplus materials and plants and should the contractor fail. To do so within a period of 14 days after receipt by him the employer may sell the same by public Auction and shall give credit to the contractor for the amount so realized. Any expenses or losses incurred by the employer in gather works carried out by other contractors shall be adjusted against the amount payable to the contractor by way of selling his tools and plants or due on account of work carried out by the contractor prior to engaging other contractors or against the Security Deposit.

43. Arbitration

If any dispute, differences or question shall at any times arise between the parties as to the construction of this Agreement or concerning anything herein contained or arising out of the Agreement or as to the rights, liabilities and duties of the parties hereunder except in respect of matters for which it is provided hereunder that the decision of the Employer is final and binding, the same shall be referred to arbitration and final decision after giving at least 30 days notice in writing to the other (hereinafter referred to as the "Notice for Arbitration" clearly setting out the items of dispute) to a sole arbitrator who shall be appointed as hereinafter provided. For this purpose of appointing the sole arbitrator referred to above, the Employer shall send to the Architects within thirty days of the "Notice of Arbitration" a panel of three names of persons who shall be presently unconnected with the organization of the Employer or the Architects.

The Architects shall, on receipt of the names as aforesaid, select any one of the persons so named to be appointed as the Sole Arbitrator and communicate his name to the Employer within 15 days of receipt of the names. The Employer shall thereupon without any delay appoint the said person as the Sole Arbitrator. If the Architects fail to communicate such selection as provided above within the period specified, the Employer shall make the selection and appoint the sole arbitrator from the panel notified to the Architects.

If the Employer fails to send to the Architect the panel of three names as aforesaid within the period specified, the Architects shall send to the Employer a panel of three names of persons who shall be

unconnected with either party. The Employers shall on receipt of the names as aforesaid, select any of the persons and appoint him as the Sole Arbitrator. If the Employer fails to select the person and appoint him as the Arbitrator within 30 days of the receipt of the panel and inform the Architect accordingly, the Architects shall be entitled to appoint one of the persons from the panel as Sole Arbitrator and communicate his name to the Employer.

If the Arbitrator so appointed is unable or unwilling to act or refuses his appointment or vacates his office due to any reason whatsoever another Sole Arbitrator shall be appointed. The arbitration shall be governed by the Arbitration & Conciliation Ordinance 1996 as in force from time to time. The award of the Arbitrator shall be binding and final on the parties. It is hereby agreed that in all disputes referred to the Arbitration, the Arbitrators shall give a separate award in respect of each dispute or difference in accordance with the terms of reference and the award shall be reasoned award.

The fees, if any of the Arbitrator shall, if required to be paid before the award is made and published, be paid in equal proportion by each of the parties. The cost of the arbitration including the fees if any, of the Arbitrator shall be borne and paid by such party or parties to the dispute in such manner or proportion as may be directed by the Arbitrator in the award. The Employer and the Architects also hereby agree that the arbitration under this clause shall be a condition precedent to any right of action under the contract with regard to the matters hereby expressly agreed to be so referred to arbitration.

The Arbitrator or Arbitrators or Umpire, as the case may be, will be Fellows of the Indian Institute of Architects or Fellow of Institute of Engineers (India). The award of the Arbitrator(s) or Umpires, as the case may be, shall be final and binding upon the parties to the Arbitration.

44 Force majeure

Neither Contractor nor BOB shall be considered in default in performance of their obligations if such performance is prevented or delayed by events such as but not to war, hostilities revolution, riots, civil commotion, strikes, lockout, conflagrations, epidemics, accidents, 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 40 days from the happening of the even 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.

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.

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 there from having been removed, the agreed time of completion of the respective obligations under this agreement shall stand extended by a period equal to the period of delay occasioned by such events. should one or both parties be prevented from fulfilling the Contractual obligations by a state of force majeure lasting to a period of 6 months or more the two parties shall each other to decide regarding the future execution of this agreements.

ELECTRICAL INSTALLATION WORK

MEDIUM VOLTAGE CABLES

SCOPE

Supply, installation, storing, laying, fixing, jointing, terminating, testing and commissioning of Medium Voltage PVC insulated PVC sheathed Armored Aluminum/Copper Conductor Cables of reputed make, **conforming to relevant IS specification amended up-to-date and specifications**, laid in built up trenches, directly buried underground, on cable trays, in pipes, clamped directly to wall or structures etc.

GENERAL

All cables shall be of 1100 V PVC sheathed with or without steel armoring as specified and within outer PVC protective sheath. Cables shall have high conductivity stranded Aluminum or Copper conductors and cores shall be color coded to the Indian Standards

Medium voltage cables shall be aluminum/copper conductor, PVC insulated, PVC sheathed and steel wire flat armored or. Steel tape armored construction. The cable shall have stranded, sector shaped aluminum conductors for cables of 4 Sq.mm size and above.

Core Identifications shall be provided with the following colour scheme of PVC

Single Core: Red/Black/Yellow/Blue

Two Core: Red and Black

Three Core: Red, Yellow and Blue

3 1/2 or 4 Core: Red, Yellow, Blue and Black

All cables shall be new without any kinks of visible damage. The manufacturer's name, insulating material, conductor size and voltage class shall be marked on the surface of the cable.

Standards

The following standards and rules shall be applicable

- | | | |
|----|----------|--|
| a. | IS: 1554 | PVC insulated electric cables (heavy duty) |
| b. | IS: 1753 | Aluminum conductor for insulated cables |
| c. | IS: 3691 | Recommended current ratings for cables |

All codes and standards mean the latest. Where not specified otherwise the installation shall generally follow the Indian Standard Codes of Practice or the British Standard Codes of Practice where Indian Standards are not available

Inspection

All cables shall be inspected upon receipt at site and checked for any damage during transit and shall be supplied with complete manufacturer's test certificates. At any cost the cables shall not be accepted without test certificate.

Storing

All the cables shall be supplied in drums, with manufacturer's seal. On receipt of cables at site, the cables shall be inspected and stored in drums with flanges of the cable drum in vertical position.

Joints in Cables

The Contractor shall take care to see that all the cables received at site are apportioned to various locations in such a manner as to ensure maximum utilization and avoidance of cable jointing. This apportioning shall be got approved by the Consultant before the cables are cut in lengths. Where joints are unavoidable, the Bank/Architect/Consultant approval in writing shall be obtained about the location of such joints and marking shall be done with suitable tags.

Jointing Boxes for Cables

Cable joint boxes shall be of appropriate size, suitable for PVC insulated armored cables of particular voltage rating.

Joining Cables

All cable joints shall be made in suitable, approved cable joint boxes, and the filling in of compound shall be done in accordance with manufacturers' instructions and in an approved manner. All straight through joints shall be done in epoxy mould boxes with epoxy resin.

All cables shall be jointed colour to colour (should not be different colour); tested for continuity and insulation resistance before jointing. The seals of cables must not be removed until preparations for jointing are completed. Joints shall be commenced and finished on the same day. During the time of joining the cables, sufficient protection from the weather should be ensured. Joints shall be made by means of suitable solder/crimping of conductors, the conductors being firmly butted into the thimbles or ferrules and the whole conductors soldered/crimped with proper solder and soldering flux. The conductors shall be efficiently insulated with high voltage insulating tape and by using of spreaders of approved size and pattern. The joints shall be completely topped up with epoxy compound so as to ensure that the box is properly fined.

Bonding of Cables

Where a cable enters any piece of apparatus, it shall be connected to the casing by means of an approved type of armored clamp and gland. The clamps must grip the armoring firmly to the gland or casing, so that no undue stress is passed on to the cable due to vibrations. The glands shall be fixed to the lead sheath by means of either a 'Plumbing joint' or a cone of approved material, capable of being compressed in to lead sheath. The gland or cone shall be capable of affecting a good electrical bond between both the armoring of the cable, and the casing

Installation

Cables shall be laid in the routes marked in the drawing. Where the route is not marked in the drawing, the contractor shall make it out on the drawing and also on the site and obtain the approval of the Bank/Architect/Consultant before laying the cable. Procurement of cable shall be on the basis of actual site measurement and the quantities shown in the Bill of Quantities shall be regarded as a guide.

Indoor

Cables rising indoor shall be laid on walls, ceiling, inside shaft or prepared trenches. The Cables run inside concrete trenches shall be supported on cable trays and shall be neatly arranged and clamped.

The Cable entries through pipes from outside to inside the building shall run in GI pipes and shall be sealed water tight with approved type of sealant to avoid water entering the building. Single cable laid shall be fixed directly to wall or ceiling with base clamp. All supports shall be fixed directly to walls or ceiling and the supports shall be at intervals of 500 mm. The cables on wall surface from panel board up to angle iron shall run in galvanized steel pipes of adequate size.

Where numbers of cables are run, necessary perforated cable trays shall be provided. The cable trays should be routed above false ceilings wherever provided. Cables laid in built-up trenches shall be on steel supports. Identification tags with reverse engraving plates shall be provided at intervals of 20 mts.

Cables shall be bent to a radius not less than 12 times the overall diameter of the cable, or in accordance with the manufacturer's recommendation whichever is higher

Outdoor

Cables shall be laid in outdoor trenches wherever called for. In case of direct buried cables, the cable route shall be parallel or perpendicular to roadways, walls etc. Cables shall be laid in excavated trench to a depth of 1000 mm, below the final ground level. The width of the trenches shall not be less than 450 mm. Where more than one cable is buried in one trench it should be laid in tier formation or with a coaxial distance of not less than 150 mm between the cables. Non corroding identification tags shall be provided on each cable at 10 meters center to center. In addition suitable galvanized / CI cable route markers should be provided over ground at all bends intervals on straight runs at intervals of 20 meters center to center. The trenches shall be with uniform depth. Suitable shoring and propping may be done to avoid caving-in of trench walls. The floor of the trench shall be rammed to level. The cables shall be laid in trenches over rollers placed inside the trench.

The cable drums shall be laid unrolled in the direction of the arrow marked on the drum for unrolling. After the cable is laid and straightened, it shall be covered with 80 mm thick layer of sand. The cable shall then be lifted and placed over the sand cushion. Over this, 75 mm thick layer of sand shall be covered and a course of cable protection tiles or burnt brick (both on sides and top) shall be provided to cover the cables by 50 mm on either side. The cable trench shall be backfilled with excavated earth and consolidated as original. Excess earth shall be removed the site free of cost. Cables shall be laid in Hume pipes/stoneware pipes at all road crossings and in GI pipe at the wall entries. Cable route markers to be provided as per standards.

All apparatus, connections and cable work shall be designed and arranged to minimize the risk of fire and any damage, which might be caused in the event of fire. Wherever cables pass through floor or wall openings or their partitions suitable bushes of an approved type shall be supplied and put in to position by the contractor. If required by the Engineer, the Contractor shall seal the cables into the bushes using fire-resisting materials to prevent the spreading of fire through each partition.

Inspection on receipt, unloading, storage and handling of cables shall be in accordance with IS: 1255 and other Indian Standard Codes of Practice.

Standard cable grips and reels shall be utilized for cable puffing. If unduly difficult pulling occurs, the Contractor shall check the pull required and suspend pulling until further procedure has been approved by the Engineer. The maximum pull tension shall not exceed the recommended value for the cable measured by the tension dynamometer. In general, any lubricant that does not injure the overall covering & does not set up undesirable conditions of electrostatic stress or electrostatic charge may be used to assist in the pulling of insulated cables in conduits and ducts.

After pulling the cable, the Contractor shall record cable identification and date pulled neatly with waterproof ink on linen tags and shall securely attach such identification tags. Identification tags shall be attached to each end of each cable with non-corrosive wire. The said wire must be non-ferrous material on single conductor power cable. Tags may further be required at Intervals on long runs of cables on cable trays and in pull boxes. Cable and joint markers and RCC warning covers shall be provided wherever required.

Sharp bending and kinking of cables shall be avoided. The bending radii for various types of cables shall not be less than those specified below:

1.1 KV XLPE Multicore armoured cables: 15 times the overall dia of the cable.

II.650/II00V PVC Insulated cable: 10 times the overall dia of the cables.

If shorter radius appears necessary, no bend shall be made until clearance and instructions have been received from the Engineer's Representative.

Power and control cables shall be laid in separate cable racks/trays.

Where groups of HV, LV and control cables are to be laid along the same route, suitable barriers to segregate them physically shall be employed.

When power cables are laid in the proximity of communication cables, minimum horizontal and vertical separation between power and communication cables shall be normally 600 mm, but in any case not less than 460mm for single core cables and 300mm for Multicore cables. Power and communication cables shall as far as possible, cross at right angles to each other.

Where cable cross roads and water, oil, gas or sewage pipes, the cables shall be laid in reinforced spun concrete or steel pipes. For road crossings the pipe for the cable shall be buried at not less than one-meter depth.

Cable laid in ground shall be laid on a 50mm riddled earth bed. The cables shall then be covered on top and at their sides with riddled earth to a depth of about 150mm. This is then gently rammed up to a depth of about 100 mm above the top of uppermost cable covers which are placed centrally over the cables. The protective cable covers for LV cables may be of earthenware and for HV cables of reinforced concrete. The specification of protective covers shall be generally as per Appendix 'C' of IS: 1255. The RCC covers shall have one hole at each end, to tie them to each other with GI wires to prevent displacement. The trench is then back filled with the-excavated soil and well rammed in successive layers of not more than 300. Mm in depth, with the trenches being watered to improve consolidation where necessary. To allow for subsidence, it is advisable to allow a crown of earth not less than 50 mm in the center and tapering towards the sides of the trench.

Each cable shall be pulled into the particular conduit and shall be taken from the particular reel designated for the run. All cables shall be neatly trained without interlacing. In hand holes, pull boxes or junction boxes having any dimension over 1000mm, all conductors shall be cabled and/or racked in an approved manner care shall be taken to avoid sharp bending or stressing cable beyond manufacturer's recommendations in pulling. Cable shall be protected at all times from mechanical injury and from absorption of moisture at unprotected ends.

In each cable run some extra length shall be kept at a suitable point to enable one or two straight through joints to be made, should the cable develop a fault at later date.

Cables on cable racks, on cable trays and in conduits shall be formed to avoid tearing against edges or trays, racks, conduits or their supports upon entering or leaving trays, racks or conduits. Cables shall be locked or laid directly into cantilevered cable trays where practicable, but in some cases it may be necessary that cables are pulled or threaded into trays. To facilitate visual tracing, cables in trays shall be laid only in single layers and unnecessary crossing of cables shall be avoided. Cables on trays shall finally be clamped in an approved manner.

Cable splices will not be permitted except where permitted by the Engineer. Splices shall be made by the Contractor for each type of wire or cable in accordance with the instructions Issued by cable manufacturers and the Engineer. Before splicing, insulated cables shall have conductor insulation stepped and bound or penciled for recommended distance back from splices to provide a long leakage path. After splicing, insulation equal to that on the spliced conductors shall be applied at each splice.

At cable terminal points where the conductor and cable insulation will be terminated, terminations shall be made in a neat, workmanlike and approved manner by men specialized in this class of work. The Contractor shall make terminations for each type of wire or cable in accordance with instructions issued by cable manufacturers and the Engineer.

Control cable terminations shall be made in accordance with wiring diagrams, using color codes, numbering ferrules approved by the Engineer for the various control circuits, by code marked wiring diagrams.

When control cables are to be fanned out and cabled together with cord, the Contractor shall make Connections to terminal blocks, and test the equipment for proper operation before cables are corded together. If there is any question as to the proper connection, the Contractor shall make a temporary connection with sufficient length of cable so that the cable can be switched to another terminal without splicing. After correct connections are established through operating the equipment, cables shall be cut to their correct lengths, connected to terminals in the specified manner, and corded together where necessary to hold them in place in a workmanlike manner.

Jointing of cables shall be in accordance with relevant Indian Standard Codes of Practice and manufacturer's special Instruction. The Contractor shall supply materials and tools required for cable jointing work, including cold setting bituminous compound. Cables shall be firmly clamped on either side of a straight through joint at a distance of not more than 300mm away, from the joints. Indication tags shall be provided at each joint and at all cable terminations.

Cable seals shall be examined to ascertain if they are intact and that cable ends are not damaged. If the seals are found to be broken the cable ends shall not be joined until after due examination and testing by the Engineer. Before joining commences, insulation resistance of both sections of cable to be joined shall be checked by mega

After installation and alignment of motors, the Contractor shall complete the conduit Installation, including a section of flexible conduit between the motor terminal box and cable trench / tray. The Contractor shall install and connect the power, Control and heater supply cables as per equipment manufacture's drawings if any. The Contractor shall be responsible for correct phase sequence of the motor power connections and shall interchange connections at the motor terminal box if necessary, after each motor is test run.

Connections to recording instrument float switches, level electrodes, limit switches, pressure switches, thermo-couples, thermostats and other miscellaneous equipment shall be done as per manufacturer's drawings and instructions.

Metal sheath and armour of the cable shall be bonded to the earthing system of the station. The size of conductor for boning shall be appropriate with the system fault current.

POWER AND CONTROL CABLE TERMINATIONS

All cables shall be full runs from panel without any joints. Cables shall be identified at end terminations indicating the feeder number and the Panel/Distribution Board from where it is being laid. All cable terminations for conductors up to 4 sq.mm may be insertion type and all higher sizes shall have tinned copper/aluminum compression lugs as specified. Cable termination shall have necessary single/double brass compression gland as specified and the end terminations shall be insulated with a PVC tape

Cable boxes shall be of approved design with adequate clearances between phases and between phases and earth, in accordance with relevant standards.

Cable boxes shall be complete with combined armour and earthing clamps.

Suitable compression type cable glands shall be provided for power and control cables.

Provision shall be made for earthing the body of each cable box.

Equipment terminal blocks for power connections shall be complete with adequate phase segregating insulating barriers and suitable crimping type of lugs for connecting the insulated cable tails.

Testing of Cables

TESTS

The cables shall be tested in accordance with the IS: 684/1554/7098. The tests shall include

PVC insulated cables (for voltage up to 1100V: IS 684

PVC insulated cables (heavy duty): IS 1554.

Cross-linked polyethylene insulated PVC sheathed cables: IS 7098.

Cable Insulation Tests shall be conducted between phases and between phase and earth for each length of cable, before and after jointing. As such all phase cables may be checked before being laid for above tests. On completion of cable laying work, the following tests shall be conducted in the presence of the Bank/Consultant.

Construction tests

Test for conductor

Test for thickness of Insulation

Test for laying up

Test for thickness of laying up

Test for thickness of inner sheath

Test for armouring

Test for thickness of outer sheath

Insulation Resistance Test (sectional and overall)

Continuity resistance test.

Sheathing continuity test.

Earth test.

All tests shall be carried out in accordance with relevant Indian Standard Code of Practice and Local Electricity Rules. The Contractor shall provide necessary Instruments, equipment and labour for conducting the above tests and shall bear all expenses In connection with such tests. All tests shall be carried out In the presence of the Consultant/Employer.

The contractor shall install, test and commission the cables in accordance with technical specification and drawings approved by the Engineer. Cables shall be laid directly buried in earth, or cable racks, in build up trenches, on cable trays and supports, in conduits and ducts or bare on walls, ceiling etc. as per approved drawing. Contractor's scope of work includes unloading, laying, fixing, joining, bending, and terminating of the cables. The Contractor shall also supply the necessary materials and equipment required for joining and terminating the cables.

All new cables shall be meggar tested before joining is completed. LV cables shall be mugger tested. 1100/650 volt grade cables shall be tested by 1000 Volt meggar.

Cable cores shall be tested for

Continuity

Absence of cross phasing

Insulation resistance to earth

Insulation resistance between conductors.

Contractor shall furnish all testing kit and instruments required for field-testing.

CONDUITS, PIPES AND DUCTS

The Contractor shall supply and install conduits, pipes and accessories as per requirement. All accessories required for making the installation complete, including but not limited to, ordinary and inspection tees elbows check nuts, male and female reducers and enlargers, wooden plugs, caps, square headed male plugs, nipples, gland sealing fittings, junction boxes, pull boxes, conduits, outlet boxes, splice boxes, terminal

boxes, glands, gaskets and box covers, saddles and all steel supporting work shall be supplied by the Contractor. Conduit accessories shall be of the same material as the conduits.

Flexible metallic conduits shall be used for termination of connections to equipment such as motors or other apparatus to be disconnected at periodic intervals. Flexible metallic conduits shall also be used for termination of connections to level switches, level electrodes, limit switch, pressure, pressure switches etc. All flexible metallic conduits shall be provided with end glands.

Conduits or pipes shall run along walls, floors, and ceilings, on steel supports, embedded in soil, floor, wall or foundation, in accordance with approved layout drawings.

Exposed conduit shall be adequately supported by racks and clamps or straps or by other approved means. Conduit supports shall be erected square, and true to line and grade with an average spacing of one support for every 750 mm of conduit length.

Each conduit run shall be marked with its designation.

All installed conduits shall have their ends temporarily closed by caps, wooden plugs, or other approved means until cable is pulled. Closures shall be made in such a way that they do not get dislodged easily.

When one or more cables are strained through a conduit, conduit size shall be such that the total cross sectional area of the cable does not exceed 60% of the internal cross sectional area of the conduit.

The Contractor shall be responsible for bonding of metal pipes or conduits in which cables have been installed to the main earthing system. Joints, metal sheath and armour of cables shall be bonded to the earth system in an approved manner. The entire system of conduit after installation shall be tested for mechanical and electrical continuity throughout and permanently connected to earth by means of a special approved type-ear thing clamp efficiently fastened to the conduit. Gas or water pipes shall not be used as an earth medium.

DISTRIBUTION BOARDS

SCOPE

Supply, erection, testing and commissioning of standard make distribution boards conforming to relevant Indian standards (IS 8623) and specifications given below.

GENERAL

Distribution Boards Shall Consist of Following.

MCBs/ELCBs/ELMCBs of reputed make and designed capacity, which shall conform to IS 8878 latest.

Neutral strip/earth strip for connecting all distribution point neutral/earth wires of serial room.

Two numbers brass bolts and nuts on DB base for its earthing.

Cable conduit entry boxes on top and bottom as per design drawing.

However the specifications herein after described shall take precedence over the above wherever this specifications call for a higher standard of material or workmanship. The distribution boxes shall be of standard factory make and flexibility shall be given to mount MCBs/ELCBs/ELMCBs of any make.

CABINET DESIGN

Distribution boards shall be of totally enclosed type with dust and vermin proof construction. The enclosure shall be made of steel sheet of 16G. The steel sheet shall be treated with a rigorous rust inhibition process before fabrication. The distribution boards shall consist of Earth leakage / Miniature Circuit Breaker as in-comer and required number of Miniature Circuit Breakers as outgoing. The distribution boards shall be with

top and bottom cable/conduit entry. The incoming and outgoing shall be rated as specified on the drawings and schedule; and both shall be totally isolated from one another. The cabinet shall be spray enameled to required colour shade finish. The electrical components of the DB shall be mounted on Din Rails, mounted on the studs provided inside the cabinet. A cover made of hylam sheet, or sprays enameled 16G steel sheet, shall be provided over the cabinet with slots for operating knobs or breakers.

The cabinet shall be equipped with 16G inside hinged front door having a spring latch and lock over flanged door. Cabinets shall have detachable gland plates at both top and bottom made out of 16G. The hinged type door shall be with 'U' shape edge to provide Square type compressed rubber gasket.

The construction of the hinges shall be as to enable the door to swing open by not less than 150degree. In addition to this, the hinged design shall permit doors being completely removed whenever necessary.

MINIATURE CIRCUIT BREAKERS (MCB)

Miniature circuit Breakers shall be quick Make and Break type, and shall conform to relevant Indian Standards. The housing shall be heat resistant and shall have high impact strength. MCBs shall be flush mounted and shall be provided with trip free manual operating lever and 'ON' and 'OFF' indications. The contacts shall be provided with magnetic and thermal releases for short circuit and over current. The device shall have a common trip bar in the case of DP and TPN Miniature Circuit Breakers.

MCB for ratings up to 125 Amps shall be available in 1, 2, 3 or 4 pole versions. MCB casing shall be made of self-extinguishing material tropicalized treatment 2 (relative humidity) 95% at 55°C).

MCB shall comply with IS 8828-1996/IEC 898 -1995.

It shall be suitable for use in frequency range 40Hz to 60Hz and shall accommodate AC/DC supply according to requirements.

Arc chutes should be provided for effective quenching of arc during operations and fault conditions.

It shall have trip free mechanism and toggle shall given positive contact indication.

It shall be suitable for mounting on 35mm DIN rail/surface mounting.

Line supply may be connected to either top or bottom terminals i.e. there shall be no line load restriction.

Degree of protection, when the MCB is flush mounted, shall be IP40.MCB & shall. Be supplied with clamping terminals fully open.

Contact closing shall be independent of the speed of the operator.

MCB's operating temperature range shall be -20 deg C to + 60 deg C.

The characteristics should be in accordance with IS 8828 -1996. The breaking capacity of the MCB shall be 10kA and energy limiting class3.

The rated impulse voltage of the MCB shall be greater than 4kV.

The MCB shall be capable of being used as Incomer circuit breaker and shall be suitable for use as an isolator.

Contact closing shall be independent of the speed of the operator.

Electrical endurance of the MCB shall be greater than 4kV.

Power loss per pole shall be in accordance with IS 8828-1996 and the manufacturer shall furnish the same

In case of multipole MCBs in a single location (DB) it shall be possible to remove MCB without having to disturb other MCB's in the vicinity.

'B' curve type MCB should be used for lighting loads, 'C' curve type for motor loads and 'D' curve type for UPS circuits.

RESIDUAL CURRENT CIRCUIT BREAKER (RCCB)

RCCB shall comply With IS 12640-1988 IEC1008. It shall be available in 2 pole and 4 pole versions and threshold sensitivities (non-user adjustable) of 30m A, 100m A & 300mA with inbuilt time delay of 200mS for discrimination with downstream ELCB, if specified in schedule of quantities. Tropicalisation: treatment 2 (relative humidity 95% at 55°C).

The current rating shall be from 25A to 125A. Ratings and sensitivities shall be as specified in schedule of quantities.

It shall be operationally independent of line voltage.

There shall be clear Identification of earth fault or overload/short circuit fault on the RCCB.

The RCCB shall not give nuisance tripping due to transient over voltages (lightening line disturbances or other equipment).

The RCCB should preferably be 'Si' class type (should be suitable for SMPS loads i.e. unaffected by the D.C pulsated components present if any in the circuit), and should not give nuisance ripping. Details to be furnished confirming suitability.

The short circuit withstands capacity of the RCCB without the associated short circuit/overload protection should preferably be 6kA.

A test device should be incorporated to check the integrity of the system and tripping mechanism.

Terminals should ensure easy termination of cables and should provide covers to shield Incoming and outgoing terminals with IP20 degree of protection.

The RCCB should be suitable for DIN rail mounting.

INDICATING LAMPS

Type Panel mounting "Protected LED" types.
(I.e. protection is provided against
Electromagnetic interference & Over
Voltage)

Standard applicable : IEC 947-5-1

Electric shock protection : class 2(IEC 536)

Degree of protection : IP 659(IEC 529)

Diameter : 22mm

Voltage : 230V AC

TERMINALS

Distribution Boards shall be provided with a terminal block. For neutral and earth terminations of adequate size. The terminal block shall be so located as to prevent crowding of wires in the proximity of live parts.

DIRECTORY

Distribution Boards shall be provided with a directory indicating the areas of loads served by each Orchid Breaker, the rating of breakers, size of conductors, etc. The directory shall be mounted in metal holder with a clear plastic sheet on inside surface of the front door. A suitable size "Danger" plate indicating voltage grade shall also be fixed inside the DB front cover.

INSTALLATION

Distribution Boards shall be wall / surface mounted or recess mounted as required and at the locations shown on the drawings. The Boards shall be fixed on 30 x 40 x 6mm angle iron framework and bolts for surface Installation. All the cables/conduits shall be properly terminated using glands/grips/check nuts, etc. Wiring shall be terminated properly, using crimping lugs / sockets and PVC identification ferrules. No bare

conductor shall be provided inside the board.

Distribution boards shall be bonded to the earthing system at least at two points using brass bolts and lugs.

WIRING SYSTEM

SYSTEM OF WIRING

The system of wiring shall consist of PVC insulated copper conductor wires in MS conduits as per IS 9537 part II for concealed installation.

GENERAL

Prior to laying and fixing of conduits, the Contractor shall carefully examine the drawings indicating the layout justify himself about the sufficiency of number and size of conduits, location of Junction boxes, size and location of switch boxes and other relevant details. Any discrepancy found in the drawings shall be brought to the notice of the Consultant / Employer. Any modifications suggested by the Contractor shall be got approved by the consultants before the actual laying of conduits is commenced.

CONDUITING MATERIALS

All concealed and surface electrical wiring Installation shall be in MS conduits.

PVC CONDUITS

Conduits and accessories shall conform to IS 9537-Latest and the specifications given below. PVC conduits shall be of black, round, heavy gauge Polyvinyl Chloride (PVC). The Internal surface of the conduit shall be smooth. All flexible conduits shall be of steel. Only approved quality as recommended by the consultant and factory made bends / accessories shall be used.

METAL CONDUITS

Conduits and Accessories shall conform to IS 9537 (Latest) and tender specifications. The steel conduits shall be solid drawn, mild steel, 16 gauge, heavy duty electrical welded, thread type, having perfect circular tubing with tight fitting joints and shall be capable of being cleaned easily. The conduit shall be protected from rust by one coat of paint applied inside and outside in its manufactured form.

Minimum Conduit Dia (OD) for electrical Wiring shall be 20 mm.

Minimum Conduit Dia (OD) For Telephones and Audio Video shall be 20 mm

Joints between conduits and accessories shall be securely made, to ensure earth continuity. Where called for, buried wiring passing underground, shall be in galvanized steel conduit.

The conduits shall be delivered to the site of construction in original bundles and each length of conduit shall bear the label of the manufacturer. This shall be approved by respective Engineer-In-charge and same shall be submitted along with bills for payment.

The numbers of 650/1100 volts grade PVC insulated copper conductor wires that may be drawn in the conduits of various sizes are given below. The space occupied by the wires shall not exceed 60% of the conduit Internal Area and 40% of conduit space should be left free.

Maximum permissible number of 650 / 1100 volt grade PVC insulated wires that may be drawn into rigid non-metallic or MS conduits are given below:

Size of wire in Sq.mm	Maximum Number of Wires within conduit size (mm)				
	19	25	32	38	51
1.5	3	6	10	14	-
2.5	2	5	10	14	-
4.0	-	3	5	8	14
6.0	--	2	4	5	8
10.0	-	-	3	4	6

16.0	-	2	2	3	4
25.0	-	-	-	1	3
35.0	-	-	-	1	2

BENDS IN CONDUIT

Conduit bends shall be of SWG. Where necessary, bends or diversions may be achieved by means of bends and/or circular inspection boxes with adequate and suitable inlet and outlet terminations. In case of recessed system each junction work shall be provided with a cover properly secured and flush with the finished wall surface. No bends shall have radius less than 22 times the outside diameter of the conduit. Ready-made bends shall be used where required.

Run of conduit pipes through expansion joints in RCC member should be avoided as far as possible, and if unavoidable, flexible conduit pipe shall be used with ceiling outlet box on both sides of expansion joints, after getting approved from the Consultant. Outlet boxes for lights/fans shall be protected at the time of laying by fitting with jute/earth/cotton etc.,

Locating junction boxes on outer surface of exterior walls of building should be avoided to prevent exposure to weather as also to preserve aesthetics. Junction boxes should never be closed permanently by plaster. The contour of the boxes should match the colour of the wall.

Junction boxes inside the guest room/areas shall be avoided. In case these are unavoidable they can be located in corridor / service areas / staircase, etc. One bolt shall be welded to receive earth wire inside all switch points. The switch points shall be fixed at a level accessible from floor level. Conduits in wall crossing area shall be sealed with M-Seal/epoxy compound after pulling the wires.

SWITCH OUTLET AND JUNCTION BOXES

All concealed outlet boxes for switches, sockets and other purpose shall be rust proof and shall be of thick Galvanized steel (GI) boxes having smooth external and internal surfaces.

All outlet boxes for receiving plug sockets and switches shall be of standard factory make and of approved size, and shape. All boxes shall have- adequate number of knock out holes of required diameter and earthing terminal screws. Outlet boxes shall have a minimum depth of 65 mm.

INSPECTION BOXES

Rust proof inspection boxes of 2 mm thick mild steel having smooth external and internal finish shall be provided to facilitate removal and replacement of wires, where required.

WALL SOCKET OUTLETS

Following types of socket outlet shall generally be used for electrical

6A 2/3 pin socket outlets

6/16A socket outlets

20A metal clad socket 230V/440V

25A Heavy duty socket outlets

All sockets shall be of shutter type.

All electrical points shall be installed as per approved layout. The insulated earth. Wires shall be run in each conduit originating from the distribution board up to the light, socket and switch boxes. If the Electrical Contractor fails to install any conduit / boxes etc., before the plastering / painting work is done by other agencies, he may be permitted to install the same with prior permission of Consultant and the expenses towards redoing the wall, floor, ceiling etc., shall be borne by the Electrical Contractor.

OPEN/SURFACE CONDUIT SYSTEM

Conduits on surface of walls/Ceiling shall be fixed on the route as approved by Bank/Architect/Consultant. Heavy gauge GI saddles shall be used for fixing the conduit. Distance between two consecutive saddles shall not exceed 750 mm. No wooden plug for fixing saddles / clamps shall be used. Use of Rawl plug / steel fastener with hard setting / scaling compound is recommended. Bends or similar fittings are used, saddles shall be provided at either side at a distance of 300 mm from the center of such fittings. Conduits shall be joined by means of screwed couplers and screwed accessories only. In long distance straight runs of conduit, inspection type couplers / junction boxes shall be provided.

Threading shall be long enough to accommodate pipe to the full threaded portion of the couplers and accessories. Cut ends of conduits shall have no sharp edges or any burrs left, to avoid damage to Insulation of wires.

Bends in conduit runs shall be done by using pipe-bending machine. Sharp bends shall be accomplished by Intruding solid bends, Inspection bends or cast Iron/ MS Inspection boxes. Radius of solid bends shall not be less than 75mm. Not more than 90-degree bend shall be used in a conduit run from outlet to outlet.

All conduits opening shall be property plugged with PVC stoppers / bushes. Conduits shall be adequately protected against rust by applying two coats of approved synthetic enamel paint over a coat of primer after the installation is completed and should be certified by the Architect/Consultant.

Wherever conduits terminate into control boxes, outlet boxes, distribution boards etc., it shall be rigidly connected to the box with check nuts on either side of the entry.

Conduit run in the floor/wall should be embedded using cutting machine and manual cutting should be totally avoided. Chicken mesh should be provided when the number conduits exceeds two in a row. The scope also include for rough plastering after embedding the conduit in the floor/wall.

The entire conduit system shall be bonded to the earth.

WIRING

All wires shall have been manufactured in accordance with the latest IS Specification (IS 694 - Part II).

All wires shall be PVC insulated, copper conductors of 650-volt grade. Cross section of the conductor shall be as per the specification mentioned in schedule of quantities.

Minimum cross section of conductor for electrical wiring shall be 1.5 mm square.

For single-phase wiring, the colour of the insulation of phase conductors shall be Red / Yellow / Blue and black for neutral. The colour coding adopted should be uniform for the entire Project.

Earthing is to be done by Green PVC insulated copper conductor. For three phase wiring, the Insulation of phase conductors shall be Red/Yellow/Blue, as per relevant phase and Black for neutral.

Earth wire shall always be of copper conductor PVC insulated and colour of insulation shall be Green

Whenever wires are being terminated in a Distribution Board / Switch Box / socket outlet point etc., a minimum of 300 mm long extra wire should be provided in the form of a loop for further maintenance use.

For each lot of wires, the Contractor shall submit all relevant test certificates issued by the Manufacturer stating its origin, all wires and cables shall bear the manufacturers label and shall be brought to site in original packing.

Only Authorized/certified wiremen and cable jointers shall be employed to do the cable jointing work

Wires shall not be jointed inside the conduit or pull boxes. Where unavoidable, joints shall be made through approved mechanical connectors with prior permission of Employer/Consultant. Control switches shall be connected in the phase conductors only; and shall be 'ON' when knob is down. Switches shall be fixed in

galvanized steel boxes. Chromium plated screws shall be used. Power wiring shall be distinctly separate from lighting wiring.

Each circuit phase wire from the distribution boards should be followed with a separate neutral wire of the same size as that of the circuit wire.

Wires originating from two different phases shall not run in the same conduit.

DRAWING CONDUCTORS

The drawing and jointing of PVC insulated copper / aluminum conductor wires and cables shall be executed with due regard to the following precautions. While drawing wires through conduits, care shall be taken to avoid scratches, etc., Care shall also be taken to ensure that the insulation is not peeled off either in portions or as a whole; and the conductor is not broken anywhere. There shall be no sharp bends that may lead to the breakage of the conductor.

PVC Insulated copper conductor wire ends shall be soldered (at least 20 mm length) before inserting into the switch for termination. Conductors having nominal cross sectional areas exceeding 6 Sq.mm shall always be provided with cable sockets / lug of same material as that of conductor.

Strands of wires shall not be cut for connecting terminals. The terminals shafts have sufficient cross sectional area to take all strands and shall be soldered. Connecting brass screws shall have flat ends. All looped joints shall be soldered and Connected through block/connectors. The pressure applied to tighten terminal screws shall be just adequate, neither too much nor too less.

At all bolted terminals, brass flat washer of large area and approved size spring shall be used. Brass nuts and bolts shall be used for all connections.

For all internal wiring, PVC insulated wires of 650 / 1100 volts grade shall be used.

The sub-circuit wiring for point shall be carried out in loop in/loop out system and no joints shall be allowed in the length of the conductors. If the uses of joint connections are unavoidable due to any specific reason, prior permission, in writing, shall be obtained from the Employer / Consultant. No wire shall. Be drawn into any conduit, until all work of any nature, that may cause injury to wire, is completed. Care shall be taken in pulling the wires so that no damage occurs to the insulation of wire. Before the wires are drawn into the conduits, the conduits shall be thoroughly cleaned of moisture, dust, dirt or any other construction debris, by forcing compressed air through the conduits. All sub-circumstances for light points shall be with 2.5 Sq.mm PVC insulated copper conductor.

JOINTS

All joints shall be made at main switches, distribution boards, socket outlets, lighting outlets and switch boxes only. No joints shall be made in conduits and in junction boxes. Conductors shall be continuous from outlet to outlet.

MAINS AND SUB-MAINS

Mains and sub-mains cable or wires where called for shall be of the rated capacity and approved make.

Every main and sub-main wire shall be drawn into an independent adequate size conduit. An independent earth wire of the proper rating shall be provided for each sub main, one earth wire of proper rating shall be provided for every single-phase sub main. For every 3-phase sub main, two. Earth wires of proper rating shall be provided along with the sub main. The earth wires shall be fixed to conduits by means of clips at not less than 1000mm distance. For mains and sub-mains extra lengths of cable shall be provided to facilitate easy connections and maintenance

LOAD BALANCING.

Balancing of circuits in three-phase installation shall be planned before the commencement of wiring and shall be strictly adhered to.

COLOUR CODE OF CONDUCTORS

Colour code shall be maintained for the entire wiring installation as red, yellow, blue for three phases, black for neutral.

MEASUREMENTS

POINT WIRING

All outlets connected on a lighting point shall be measured under point wiring. It shall include wiring from first switch point of the circuit up to light, fan, socket outlet via switches, regulators, controls etc., as called for. Generally, the following accessories shall be induced.

Light outlet box with ceiling rose

Lamp holder

Switches

6/16 A socket outlets with plug tops

M.S. /G.I outlet box

Fan hook

Fan regulator.

Small wiring from outlet to Fan Light

Conduit and accessories

PVC copper conductor wires

CIRCUIT MAIN FOR LIGHT CIRCUIT

Circuit main is measured in length from the Distribution Board up to the first switch point on that circuit only; from this point onwards, all looping will be measured under point wiring.

GENERAL

Point wiring and circuit wiring should be done in independent conduits and should not be taken through the same conduit.

Fan regulator box, fans, light fittings, calling bells are to be properly earthed. In respect of 6 Amps conventional plug point, the third pin should be earthed with 2.5 Sq.mm green PVC Insulated copper wires.

All flush type switches and accessories will be used with 3-mm thick hylam sheet in MS box.

For the purpose of determining the load per circuit the following electric rating of points shall be assumed. This Group lighting Board would always be from DB of size as specified in schedule of quantities." Group lights" points would commence from DB inducing circuits, surface / concealed conduit system, necessary wiring, MS switch box H.C.B, hylam sheet cover and outlet box up to last light of the group.

SLNO	DESCRIPTION	WATTAGE
1	LIGHT POINTS	60

2	CONVENTIONAL PLUG POINT Dependent/Independent)	100
3	FAN POINT	60
4	EXHAUST FAN POINTS	60

Light, fans and 6 A point shall be wired on a common circuit. Each circuit shall not have more than a total of ten points of lights, fans and 6 A socket outlets or a load of 800 watts whichever is less. The ceiling fan point shall be complete with special outlet box including fixing and connection of regulator. Supply and fixing of 6A switch for each ceiling fan is included in scope of Contractor.

For 16A POWER PLUG POINTS

In one circuit, there shall not be more than two 16A power plug points and circuit shall be connected by 2 x 4 Sq.mm copper conductor wires.

One flush type plug socket outlet and switch shall be fixed for each power point on 3 mm thick hylam sheet cover. Plug socket can be standard type or 16 / 6 A universal type as shown in the. Diagram. The circuit main would commence from DB and end up to the switch box. Looping of circuit would be done to second 16A power point from first 16A power point and shall be counted as power point wiring.

Each circuit would have its own 2.5 Sq.mm green PVC insulated copper wire from DB to switch box and would be connected to third pin of socket outlet.

Electrical load for each 16A power point would be considered as 1000 watts.

GENERAL REQUIREMENTS

The installation shall be carried out by an electrical contractor holding a valid license as required by the respective State Government. The contractor shall provide particulars of the license held by him or his subcontractor to the purchaser.

In accordance with the specific installation instructions or as directed by the purchaser, the contractor shall unload, erect, assemble, install, wire, test and commission all electrical equipment's Included In this contract. Equipment's shall be installed in a neat workman like manner with highest regard for safety.

Erection materials, tools, testing instruments or any other machinery of any nature shall not be supplied by the purchaser. Contractor shall arrange for the same in a timely manner and he shall not be allowed to claim for any delay or extra cost of any nature.

Consumable materials of any nature required for the erection job shall also have to be arranged by the contractor

Clearing the site after completion of erection as well as regular clearance of unwanted, materials from site, returning all packing material and excess material and excess material shall also be covered under the scope of work.

All equipment's and instruments of indoor and outdoor, shall be inscribed with number, nomenclature, danger boards and other instructions.

The contractor shall touch up the surface for all equipment's, which are scratched and / or damaged during transportation and erection. The paint used. Shall match exactly the surface being touched up.

The contractor shall employ skilled and semi-skilled laborers for erection, installation & testing as required. All electricians, cable jointers, wire men, welders and others employed shall be suitably qualified possessing valid certificates / licenses recognized by the competent authorities

The contractor shall also furnish a list of Engineers/Supervisors and staff Employed by him for erection and installation jobs, giving in brief, qualification and experience of such staff and indicating whether they hold such competency certificates I licenses to supervise the electrical installation jobs as required under Indian Electricity Rules & State Electrical Inspectorate Rules.

The contractor shall set up his own workshop and other facilities at site to undertake fabrication jobs, pipe bending, threading etc.

The contractor shall be responsible for recording of all readings and observations during erection, testing and commissioning, in registers or on prescribed Persona. These shall be carried in the presence of purchasers representative. All such test data and records shall be duly signed by the contractor's Engineer / Purchaser's representative and shall be submitted to Purchaser in triplicate. The contractor shall carry out all tests at site for outdoor and indoor electrical equipment and commission the installation in the presence of Purchaser's representative. The contractor shall be responsible for final adjustment of relays, instruments, meters breakers etc., and also for submission of relay settings and calculations.

LIGHTING SYSTEMS

Three pin, 240V, 20A metal clad receipted with switch shall be provide in the switchyard at locations to ensure accessibility with a 15M length of cable to any point in switchyard. The receipted shall be mounted at 1.2 M above finished floor level.

All miscellaneous items not specifically mentioned but necessary for installation and completion of the lighting system are included in the scope of this contract.

TECHNICAL SPECIFICATION FOR TESTING AND COMMISSIONING

GENERAL

The testing and commissioning for all electrical equipment at sire shall be according to the procedure laid down below.

All electrical equipment shall be installed tested and commissioned in accordance with the latest relevant standards and codes of practices published by Indian Standards, institution wherever applicable and stipulations made in relevant general specifications.

The testing of all electrical equipment as well as the system as a whole shall be carried out to ensure that the equipment and is components are in satisfactory condition and will successfully perform is functional operation. The inspection of the equipment shall be carried out to ensure that all materials, workmanship and installation conform to the accepted design, engineering and construction standards, as well as accepted codes of practice and stipulations made in the relevant general specifications.

The contractor using his own instruments, testing equipment as well as qualified testing personnel shall carry out all tests.

The results of the tests shall be conforming to the specification requirements as well as any specific performance data guaranteed during finalization of the contract.

GENERAL:

At the completion of the work, the entire installation shall be subject to the following tests in presence of Employer/Consultant.

1. Wiring Continuity Test
2. Insulation Resistance Test
3. Earth Continuity Test
4. Earth Resistivity Test

PREPARATION OF THE ELECTRICAL SYSTEM FOR COMMISSIONING

After completion of the installation at site and for the preparation of Electrical system commissioning, the contractor shall carry out check and testing of an equipment and installation in accordance with the agreed standards Codes of practice of Indian standards Institution and specific instructions furnished by the particular equipment suppliers

Checking required to be made on all equipment and installations at site shall comprise, but not be limited, to the following:

The following checks shall be made on all equipment and installation at site:

Physical inspection for removal of any foreign bodies, external defects, such as damaged insulators, loose connecting bolts, loose foundation bolts etc.

Check for grease, insulating / lubricating oil leakage and its proper quantity.

Check for the free movement of mechanism for the circuit breakers, rotating part of the rotating machines and devices.

Check for tightness of all - cable, bus bars at termination / joints ends as well as earth connections in the main earthing network

Check for Clearance of live bus bars and connectors from the metal enclosure.

Check the proper alignment of all draw out device like draw out type circuit breakers.

Continuity checks in case of power cables

Checking of all mechanical and electrical interlocks including tripping of breakers using manual operation of relay.

Checking of alarm and annunciation circuits by manual actuation of relevant relays.

Check and calibrate devices requiring field adjustment! Calibration like adjustment of relay settings etc., Check proper connection to earth network of all non-current carrying parts of the equipment and installation.

Test reports for all meters are to be furnished.

These tests shall be carried out on the equipment shall include but not be limited to the above

H.T. BREAKER PANEL

The following tests shall be carried out In accordance with IS 13118.

1. Mechanical operation tests.

2. Power frequency HV test. Insulation resistance test.
3. Functional tests on control circuits.
4. Relay operation tests by primary, secondary Injection method.

Checking of settings of all relays/releases as per single line diagram/specification

POWER TRANSFORMER

The following tests shall be carried out In accordance with IS: 2026

Measurement of winding resistance at all taps.

Measurement of voltage ratio on all taps.

Vector group check

Measurement of impedance voltage / Short circuit impedance

At normal tap position and load loss.

Measurement of no load loss and current.

Measurement of insulation resistance.

Power frequencies withstand test.

Operational tests to know the correct functional of all devices associated with the transformer.

Low Voltage Switch gear (up to 1000V AC or 1200v DC)

Insulation resistance test with 1000V mega for main circuits shall be minimum

Value of insulation resistance shall be in mega ohm.

Insulation resistance test with 1000V mega for control, metering and relay

Circuits. The minimum value of insulation resistance shall be 1 (One) mega ohm.

Relay operation test by primary & secondary injection method

Functional tests of control circuit.

Checking of settings of all relay/releases as per single line diagram / specification.

ON/OFF operation of breakers both manually and electrically in "Test" as well as "service" positions.

CABLES

1. Insulation resistance test with 2,500V mega for high voltage power cables rated above 1.1KV grade and 1000V mega for cables meted up to 1.1KV grade

2. All cables of 1.1KV and all H.V. cables shall be subjected to high voltage test after joining and terminating but before commissioning as per relevant standards.

3. In each test, the metallic sheath / screen / armour should be connected to earth.

4. Continuity of all the cores, correctness of all connections as per wiring diagram, correctness of polarity and phase of power cibles and proper earth connection of cable glands, cable boxes, armour and metallic sheath, shall be checked.

EARTHING SYSTEM

Tests to ensure continuity of all earth connections.

Tests to obtain earth resistance of the complete network by using earth tester. The test values obtained shall be within the limits.

All documents / records regarding test data, oscillography and other measured values of important ammeters finalized after site adjustment shall be handed over to the Owner in the form of test reports for their future use and reference

SCHEDULE OF RATES

1. The schedule of rate should be read in connection with all the other sections of the tender.
2. The quantities shown against the items of work are only approximate and may vary to any extending. No extra whatsoever shall be entertained.

The rates inserted in the bills of quantities are to be for the full inclusive of value of the work described under the several items, including all costs and expenses which may be required in and for the construction and full protection of the work described, together with all risks, liabilities and obligations set forth or implied in the documents on which the tender is based. The quoted rates shall be for all heights, lifts and leads unless otherwise mentioned specifically in the description of item.

General direction and description of work and materials given elsewhere in the contractor documents are not necessarily repeated in the Bill(s) of quantities. Reference to be made to the other documents for the full information/details.

The contractor shall be deemed to have visited the site before quoting for the tender and to have examined for himself the conditions under which the work will be carried out including local conditions under which the work will be carried out including local conditions affecting labour and to have studied the items of the bills of quantities, the drawings and specification, relating to them and to have satisfied himself that the rates quoted by him provide for all minor accessories and contingent works or services as necessary for the works described even though there are not specifically defined.

Tenderer is advised to read items of works carefully and quote the rates accordingly. However, if he quotes different rates for the same items) of work under different schedules of items, the lowest rates quoted shall be made applicable to all the Bills of quantities and the contract sum corrected accordingly.

Where an item of work not mentioned in a particular bill of quantities, is required to be executed and where the rate for such an item of work is quoted under a different bill of quantities forming a part of this contract, then the contractor being called upon shall execute the work and shall be paid at the rate so quoted. Nothing extra over shall be payable on this account.

The drawing(s) attached with this tender document are for the purpose of tender only, giving the tenderer a general idea of the nature and the extent of works to be executed.

The rates quoted by the tenderer shall be deemed to be for the execution of the works in accordance with the "Construction Drawings" (to be supplied to the contractor at the "Design Aspect" of these drawings).

The rates quoted by the tenderer shall include all labour, tools and plants, materials inclusive of all, transport, loading, unloading charges, all levies, all taxes, excise duties, etc. at the time of quoting their rates. The quoted rates shall remain firm throughout the contract period. No escalation on prices of labour and materials shall be entertained.

SAFETY CODE AND MODEL RULES FOR PROTECTION OF HEALTH AND SANITARY ARRANGEMENTS FOR WORKERS

Safety Measures:

Adequate precautions shall be taken to prevent danger from electrical equipment. No materials on any of the sites of work shall be so stacked or placed as to cause danger or inconvenience to any person or the public. Personal Safety Equipment's.

Suitable and strong scaffolds should be provided for workmen of all works that cannot safely be done from the ground.

No portable single ladder shall be over 8 meters in length. The width between the side rails shall not be less than 30 cm (clear) and the distance between two adjacent rungs shall not be more than 30cm. When a ladder is used an extra mazdoor shall be engaged for holding ladder.

The excavated materials shall not be placed within 1.5 meters if the edge if the trench or half of the depth of trench whichever is more. All trenches and excavations shall be provided with necessary fencing and lighting.

Every opening in the floor of a building or in a working platform be provided with suitable means to prevent the fall of persons or materials by providing suitable fencing or railing whose minimum height shall be one meter.

No floor, roof or other part of the structure shall be so overloaded with debris or materials as to render it unsafe.

Personnel Safety Equipment's:

All necessary personal safety equipment as considered adequate by the Engineer should be kept available for the use of the person employed on the site and maintained in a condition suitable for immediate use, and the contractor should take adequate steps to ensure proper use of equipment by those concerned.

a) Workers employed on mixing asphalt materials, cement and lime mortars shall be provided with protective footwear and protective goggles.

b) Those engaged in white washing and mixing or stacking of cement bags or any material that is injurious to the eyes shall be provided with protective goggles.

c) Those engaged in welding work shall be provided with welder's protective eyesight lids.

d) The contractor shall not employ men below the age of 18 years and women on the work of painting with products containing lead or any toxic material in any form. wherever men above the age of 18 are employed on the work of following precautions should be taken:

i. No paint containing lead or lead products shall be used except in the form of pastier or ready-made paint. Paints like vinyl and epoxies having toxic fumes should be applied after following all precautions laid down by manufacture.

ii. Suitable face masks should be supplied for use by the workers when paint is applied in the form of spray or a surface having lead paint dry rubbed and scrapped.

iii. Overalls shall be supplied by the contractor to the workers and adequate facilities shall be provided to enable the working painters to wash during the cessation of work.

e) When the work is done near any public place where there is risk of drowning all necessary equipment's should be provided and kept ready for use and all necessary steps take for prompt rescue of any person in danger and adequate provision should be made for prompt first aid treatment of all injuries likely to be sustained during the course of the work.

All personnel of the contractor working within the plant site shall be provided with safety helmets. All welders

shall wear welding goggles while doing welding work and all metal workers shall be provided with safety gloves. Persons employed on metal cutting and grinding shall wear safety glasses.

Workers employed on mixing and handling materials such as asphalt, cement mortar or concrete and lime mortar shall be provided with protective footwear and rubber hand gloves.

Those engaged in welding works shall be provided with welder's protective eye- shields and gloves.

No paint containing lead or lead products shall be used except in the form of paste or readymade paint. Suitable facemasks 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.

Overalls shall be supplied by the contractor to the painters and adequate facilities shall be provided to enable the working painters to wash during the periods of cessation of work.

Hoisting machines and tackle used in the works, including their attachments, anchorage and supports shall be in perfect condition.

The ropes used in hoisting or lowering materials or as a means of suspension shall be of durable quality and adequate strength and free from defects.

First Aid:

At every work place, there shall be maintained in readily accessible place first aid appliance including an adequate supply of sterilized dressings and sterilized cotton wool. The appliance shall be kept in good order and in large work place, they shall be kept in good order and in large work place, they shall be placed under the charge of a responsible person who shall be readily available during working hour.

An injured person shall be taken to a public hospital without loss of time, in cases where the injury necessitates hospitalization.

Drinking Water:

In every work place, there shall be provided and maintained at suitable places easily accessible to labour sufficient supply of cold water fit for drinking. Where drinking water is obtained from an intermittent public water supply, each work place shall be provided with storage where such drinking water shall be stored.

LIST OF NOMINATED SUPPLIERS MAKE LIST	
INTERIOR WORK	
Commercial Ply (IS: 303)	Century / GREENPLY Sharon
Laminate century	Formica/ Greenlam/MERINO
Veneer	Green / Duro / Century / Timex / Anchor or
Acrylic sheet	ICI, GE or equivalent ISI make
Adhesive	Fevicol / Araldite/Anchor or equivalent
Solid Surfaces (Corion)	DUPOINT/HI-MAC/ STARON OR equivalent
Marine grade Block Board	Century, Greenply, Sharon
Flush Door	Century, Greenply, Sharon
Polish	Asian / Dulex or equivalent
Latex	MM Foam or equivalent ISI make
High density foam	U Foam or equivalent ISI make
Locks	Godrej / Haffle / Hettich / Ebco or equivalent
Storage Hardware	Godrej / Haffle / Hettich / Ebco or equivalent
Screws / Nails & other accessories	GKW / Nettleford or equivalent
False Flooring	Kebao , Armstrong , AMF or equivalent
Vinyl Flooring	Armstrong ,gerflor, Eurotex ,
Carpet	Unitex, Armstrong,
Wooden laminated flooring	Pergo / Armstrong / Euro / Squarefeet or equivalent
Plain/Toughened glass	Saint- Gobain, Indo Asahi , Modi or equivalent
Hardware for general staff areas	Dorma / Euro/ Ozone / Enox / Ebco /Hamco or
Hardware for main Glass doors (patch fittings)	Dorma / Euro/ Ozone / Enox / Ebco /Hamco or equivalent
Door Closers (general use)	Dorma / Euro/ Ozone / Enox / Ebco /Hamco or
Floor springs (general use)	Dorma / Euro/ Ozone / Enox / Ebco /Hamco or
Floor springs for main glass doors	Dorma / Euro/ Ozone / Enox / Ebco /Hamco or
Aluminium Sections for Partitions	Jindal / Tata steel or equivalent
False Ceilings: Gypsum	India Gypsum / Saint Gobin / Asia
False Ceilings: Grid (As Approved)	Armstrong / AMF or equivalent
False Ceilings: Grid (Metal Ceiling)	Unimech / AMF / Armstrong /
GI Sections	India Gypsum / Saint Gobin / Jindal or equi
Acoustical False Ceilings: Mineral fiber board	Armstrong, Hunter Douglas / Peritex or equivalent
POP Punning	Gyprock / India Gypsum / Birla
Paint	Asian / Nerolac / Dulex / Berger or equivalent
Exterior Paint	Asian / Nerolac / Dulex / Berger or equivalent
ACP (Exterior / Interior)	Alstone / Eurobond /Alucobond
Cylicon	G E / Dow corning / Wacer
Rolling / Vertical Blind	Vista / Peritex / Winfab / MAC or equivalent
Frosted Film	Garware or equivalent
Aluminum Skirting - 50mm	Jindal or equivalent
Water Proofing	Pidilite or equivalent
HardWood	Salwood / Teakwood/kapoor
Automated Rolling Shutter	Gandhi Automation/Toshi Automatic Systems/Akash Rolling

Glass	Saint Gobin / equivalent
Electrical Light Fittings	Philips / Wipro / Osram / Havells / Crompton G.
MCCB, MCB , RCCB, DB, ICTPN TP, HRC Fuse, cahnge over switch, switch fuse Unit	L&T, ABB, Legrand, Siemens, Schneider
FRLS insulated Elec. Wire/ cable armoured, unarmoured, Sheathed,unSheathed, flexible LT cable, Multi core, single core cable, flat cable	Finolex/Ploycab/Havells/RR kabel/KEI
PVC conduit(HEAVY DUTY ONLY)	CAP/Finolex/Polycab
PVC insulated copper conductor Wires	Finolex/ Polycab/RR Cable
Distribution Box	Legrand/ Schneider/ ABB/Siemens
MCB & MCCB	Legrand/ Schneider/ ABB/Siemens/L&T
Light Fixture & Lamps	Philips/ Wipro Osram / Havells / Crompton G./
HT cable	Polycab/Havells
Modular Switches	ABB/ Legrand/ MK/ANCHOR/ELLEYS/ROMA
DLP Trunking	Legrand/Schneider or equivalent
Power cable	CCI/ Skytone/ Universal/ LAPP/ Torrent
End Termination	Raychem/ Mahindra/ELMEX
PANEL	Crompton/L&T/C&S
Fan	Crompton/Havells/Bajaj/Usha
Raceway & Alu. Trunking	Tata/Jindal/Zenith
Casing Caping	Finolex/Cap or equivalent
Weather proof socket outlet with MCB	ABB/MDS/LEXIC/Neptune/Elcon- Clipsil, Siemens, Schneider (Merlin Gerin)
Miniature Circuit Breaker	ABB/MDS/LEXIC/ Clipsil/Siemens/HPL
Earth Leakage Circuit Breaker	MDS/LEXIS/Siemens/HPL
MCB Distribution Boards in sheet steel housing (double door)	ABB/MDS/LEXIC/Siemens/HPL
Distribution MV Contractor/Timer/Relays/Starters	Legrand/ Schneider(MG)/ ABB/Siemens/L&T
Moulded case circuit breakers	Legrand/ Schneider(MG)/ ABB/Siemens/L&T
SFU/Fuses	HPL/ L&T. Siemens, GE Power, Schneider (MG)
ACB	Schneider(MG)/ ABB/Siemens/L&T

APPROVED MAKE OF MATERIAL LIST FOR AIR CONDITIONING WORKS

Inverter split ac	Daikin/Blue Star/ Carrier
Copper pipe	Totaline / Mandev Tubes / Rajco Metals
Drain pipe	Supreme / Finolex
4/5 KVA Stabilizer	Everest / Microtek
Timer machine	Legrand / L&T
Power cable for split AC	Polycab / Anchor / Finolex / Orbit
Outdoor stand	1st quality

NOTES:

- Equivalent means equivalent in the opinion of architect/bank engineer, and every materials to be get approval from architect/bank engineer

- Advance/final bills are in same format of bill of quantities with measurements sheet.
- Single line format bills for advance/ final payment shall be not be acceptable.
- Any changes in the drawing or required for the site with conformation of architect / bank engineer.
- If additional works required apart from the tender. Those items to be prepared with rate analyses.

SUMMARY FOR BANK OF BARODA - MAYILADUTHURAI BRANCH

1	TOTAL FURNISHING WORK FOR BRANCH	
2	TOTAL ELECTRICAL WORK FOR BRANCH	
3	TOTAL AIRCONDITIONING WORK FOR BRANCH	
	GRAND TOTAL AMOUNT (exclusive of GST)	

(RUPEES

Signature of Tenderer :

Address with company seal :

Date :

Notice: TENDERERS MUST VISIT THE SITE AND INSPECT FOR THEMSELVES THE ACTUAL WORKS TO BE CARRIED OUT BEFORE SUBMITTING THE TENDER

BOQ OF THE INTERIOR FURNISHING WORK FOR BANK OF BARODA, MAYILADUTHURAI BRANCH					
Sl.No.	Description of work	Qty	Units	Rate	Amount
1	FULLY GLAZED PARTITION				
a	FRONT ENTRANCE & MANAGER FRONT : Providing and fixing Fully glazed partition Branch Entry & Manager Cabin in front (exterior side) , 12 mm thk toughened glass of approved make with patch fittings and glass with necessary etching designs as per the approved design with Bank logo & border design.All edges of the glass to be machine polished (Frame work to be supported from the rcc ceiling, but the final measurement for billing would be taken below the false ceiling level only)	90	Sft		
b	ENTRANCE DOOR : Providing and fixing Fully glazed door for branch entrance & Manager Cabin Front of 12 mm thk toughened glass of approved make with patch fittings and door glass with necessary etching designs as per the approved design with Bank logo & border design.All edges of the glass to be machine polished.Door to be provided with 16" SS handle of approved make with rubber beading ,Glass to glass lock round type (w/o cut out) and fixed with branded floor spring and floor to door lock of approved make. Branch Door size : 3'6"x7'0" - 1 no & Manager Door Size : 3'0"x7'0" - 1 no.	50	Sft		
2	Partly Glazed Partition:				
	Providing & fixing partly glazed partitions using aluminium rectangular sections size of 50.8mmx25.4mm Aluminium frame 2 mm thickness for all horizontals & verticals spaced at 2 ft centre to centre or part thereof both ways for supporting frame work. For the bottom 3 feet height panel and the top panel above 7'0" upto false ceiling level and on both sides to be covered with 6mm thick Plywood and over that 1mm thick laminate of approved colour and brand to be pasted, 4" skirting(BOB Orange) & 3" border(BOB Orange) @ 7' ht to be done , float glass of 8mm thickness to be fixed above 3'0" level for a height of 4'0" with necessary teak/ beech wood beadings which shall be neatly melamine polished. Necessary holes must be made in the partition's frame sections to run the wires, computer cables wherever necessary.Similarly necessary cuttings to be made in the Plywood surface to fix switch boxes of electrical, telephone sockets, computer Information outlets etc. Door to be done in same manner. Size: 3'0"x7'0" with locks, handle, door closure & stopper (Frame work to be supported from the rcc ceiling, but the final measurement for billing would be taken below the false ceiling level only).	100	Sft		
3	SEMI PARTITION				
	Semi partitions to be done at 4'0" ht ,to be done using Jindal aluminium rectangular sections of 50.8mmx25.4mm Aluminium frame 2 mm thk thickness fixed with 6 mm plywood and both side 1mm laminated sheet (approved colour) for upto 3'0" ht and then balance 1'0" ht with 12 mm glass.	50	sft		

4	Non Glazed Partition:				
a	Providing & fixing Full height Non glazed partition using Jindal aluminium rectangular sections size of 50.8mmx25.4mm Aluminium frame 2 mm thickness for all horizontals & verticals spaced at 2 ft centre to centre or part thereof both ways for supporting frame work. All the panels and on both sides of the partition to be covered with 6mm thick Plywood and over that 1mm thick laminate of approved colour and brand to be pasted, 4" skirting(BOB Orange) & 3" border(BOB Orange) @ 7' ht to be done. Necessary holes must be made in the frame sections to run the wires, computer cables wherever necessary. Similarly necessary cuttings to be made in the plywood surface to fix switch boxes of electrical, telephone sockets, computer Information outlets etc. (Frame work to be supported from the rcc ceiling, but the final measurement for billing would be taken below the false ceiling level only)	270	sft		
b	Same as above specification. Door to be done in same manner. Size: 3'0"x7'0" with locks, handle, door closure & stopper.	65	sft		
5	Composite Partition (one side plywood and one side Bison board)				
	Providing & fixing composite partitions at UPS/ Dining Wash using aluminium frame works, Jindal aluminium rectangular sections of 50.8mmx25.4mm Aluminium frame 2 mm thickness for all horizontals & verticals spaced at 2 ft centre to centre or part thereof both ways for supporting frame work. All the panels on One sides of the partition to be covered with 8mm thick bison board and over that 2 coat of emulsion paint approved colour to be painted and the other side with 6 mm thick Plywood.The partition should withstand its weight. The plywood surface shall be finished with 1mm thick laminate 3" skirting(CB Blue) & 3" border(CB Yellow) @ 7' ht to be done.Necessary holes must be made in the frame sections to run the wires, computer cables wherever necessary. Similarly necessary cuttings to be made in the bison board surface to fix switch boxes of electrical, telephone sockets, computer Information outlets etc. Door to be done in same manner. Size: 3'0"x7'0" - 1no with locks, handle, door closure & stopper.	195	sft		
6	Wicket Gate: Size 4'3" x2'6"				
	Providing and fixing of solid flush doors of wicket double door size 4'0" wide and 2'6" high and fixed with 1 mm laminate on both sides. The edges of the door shall be lipped with 6mm thick Teak / beach wood beedings. SS handles and tower bolt to be fixed. All the exposed wood shall be neatly finished with melamine polish.	1	no		
	FURNITURE & WOOD WORKS:-				
7	File Cabinet				
	Providing and fixing 1'6" wide storage for 7' ht unit made of 18 mm plywood, and finished with 1mm lamination and inside laminated with 0.8 mm white laminate. The shutters shall have godrej locks, D shaped SS 3" size handles, magnetic catch, auto close box hinges, 3" brass tower bolts as per the requirement.	395	sft		
8	Writing ledge: :Size : 4'0"x1'6"x3'6" ht				
	Writing desk to be done as per plan with 12mm glass topped with 18mm plywood structure with boxing as per design by Architect, finished with 1mm laminate (BOB ORANGE) outside and inside. Suggestion / complaint box and cheque drop box with view glass and locking provision in same manner to be provided along with the writing desk.	1	no		

9	Notice Board :Size : 4'0"x3'6" - (1 no)				
	Fabrication and fixing of notice board made of teak wood / beech wood frame work alround filled with soft board and covered with fur matching (BOB Orange).The outer frame of the notice board is to be finished with melamine polish.	1	no		
10	Sub Staff Table:				
	Providing working top for sub staff using 18mm plywood with lamination finished & fixed with Ebco bracket supported on partition. Size: 3'3"x2'0" @ ht 2'6"	1	no		
11	Dining Counter:				
	Size: 13'0"x1'9"x2'6"				
	Supplying and fixing of pantry table using 18mm plywood with proper support and finished with matching lamination sheet.	1	no		
12	Trophy Stand - Size : 3'0"x0'6" - (3nos):				
	Providing and fixing of trophy stand with 12mm thick glass is fixed using F bracket .	3	nos		
13	Rolling Shutter Box:				
	Supplying & fixing of rolling shutter box using 12mm thk, plywood with adequate support at the ends and finished with lamination of approved make and colour etc., complete.(If required)	40	Sft		
	OTHER WORKS :				
14	Vertical Blinds:				
	Providing and fixing of VISTA/ TRAC make vertical blinds of good quality fabric. The top rail shall be made of powder coated aluminium section with best quality sliding arrangement. The approved colour and pattern to be provided in consultation with the Architect.	90	Sft		
	FALSE CEILING :-				
15	MINERAL FIBRE BOARD GRID TYPE FALSE CEILING				
	Providing & Fixing of Mineral Fibre Acoustical Suspended Ceiling System with Bevelled Tegular Edge Tiles(600 x 600mm) of 16mm thick and 15mm face exposed grid. (Classic Lite RH99 Armstrong or eqlt..)	365	Sft		
	The tile shall be laid on profile grid system with 15mm white flanges incorporating a 6mm central reveal in white/black colour with mitred ends & "bird's mouth" notches to provide mitred cruciform junctions colour global white (Matching to tile color).Grid shall have double stroke rotary stitching on all T sections i.e. the Main Runner, 1200 mm & 600 mm Cross Tees with a web height of 38mm (all sections). The deflection loading of the system shall be 7.9 kg/m2 (as per standard installation layout mentioned below) and main beam tested as per ASTM C635 (Deflection limit less than L/360) with a deflection loading of 9.5 kg/m. The end details of the cross tee shall be made of pre hardened steel clip fixed to the ends of the cross tee to provide double locking between "cross tee to cross tee" and "cross tee to main beam". All main beam to main beam and cross tee to cross tee connection shall have a pull out strength of more than 100kg. The T Sections shall be made of 90 gsm as per IS 277 (2003) pre-painted steel with baked polyester paint of oT bending capability.				

16	<u>GYPBOARD FALSE CEILING</u>				
	Providing and fixing suspended false ceiling, which includes providing and fixing GI perimeter channels of size 0.55mm thick having one flange of 20mm and another flange of 30mm and a web of 27mm along with perimeter of ceiling, screw fixed to brick wall/partition with the help of nylon sleeves and screws at 610mm centers. The suspending GI intermediate channel of size 45mm, 0.9mm thick with two flanges of 15mm each from the soffit at 1220mm centers with ceiling angle of width 25mmx 10mmx 0.55mm thick fixed to soffit with GI cleat and steel expansion fastener. Ceiling section of 0.55mm thickness having knurled web of 51.5mm and two flanges of 26mm each with lips of 10.5mm are then fixed to the intermediate channel with the help of connecting clips and in direction perpendicular to the intermediate channel at 457mm centers. 12.5mm tapered edge Gypboard (Conforming to IS- 2095-1982) is then screwed fixed to ceiling section with 25mm dry wall screw at 230mm centers. Screw fixing is done mechanically.	920	Sft		
17	<u>Column & Wall Panelling:-</u>				
	Providing & fixing Wall Panelling @ 5'ht & Column panelling @ 8' ht using 8 mm thick plywood fixed over a 2 ft x 2 ft grid and of 2" x 2" wooden section made of hard wood frame work for the column surface and covering the same with 1.0 mm thick laminate of approved brand and shade. The exposed edges shall be finished with moulded corner matching (teak/beechn) wood beading with polish finish.	240	sft		
18	<u>VINYL FLOORING (Wooden Finish)</u>				
	Supply and laying of Vinyl Flooring (Architect's approval of Armstrong, Wonder floor, Tuskar/ branded company for the entire banking area using 2mm vinyl rolls using proper adhesives with surface preparation, levelling.	1210	sft		
19	<u>DISMANTLING & TEMPORARY ARRANGEMENTS</u>				
	Dismantling of existing counters, partitions (all), False Ceiling & file cabinets, etc., from branch and temporary arrangements for branch functioning Rate includes all labour, transportation ,debris carting away from the site etc, complete	1	LS		
TOTAL INTERIOR FURNISHING AMOUNT (exclusive of GST)					

(RUPEES

Signature of Tenderer :

Address with company seal :

Date :

NOTE Sofas, Chairs, Artificial plants, Art works, LED TV , Magazine rack etc. shall be procured directly by the Bank as per choice/design in consultation with the Architect. The rates for the same are not included in

BOQ FOR THE ELECTRICAL WORKS OF BANK OF BARODA, MAYILADUTHURAI BRANCH

Sl.No	Description Of Work	Qty	Unit	Rate	Amount
A	VERTICAL PANEL BOARD				
	Supply, erection, testing and commissioning of 8 way Vertical sub MCCB DB made out of 16 SWG CRCA Sheet , dust and vermin proof , wall mounting consisting of the following	1	set		
	Incomer : 100 A MCCB Breaking capacity 16KA				
	Out goings:				
	40 A 3 Pole MCB: 3 Nos for UPS				
	63 A 3 Pole MCB: 2 Nos for PDB & LDB				
	63/40 A 3P MCBs- Nil				
	6/10/16/20/32 A SP MCB: 7 Nos for others				
B	LIGHTING DB				
1	Supply, Installation & Commisioing of the following Three Phase, Phase segregated Distribution board with nuetral bar,earth bar,cables ties,top and bottom removable gland plate and with necessary adopter boxes if any. The DB should be IP 42 metallic double door with provisoin of MCB & ELCB etc as required including cuting of wall and plastering the same with neat finish.It comprising as follows:-	1	Set		
	(Make:MDS/Hager/CRABTREE)				
	Incomer : 63A 4P MCB with ELCB 100mA (DCMJCFPF063)				
	Outgoing:				
	DCMJCSPF - 10/6A SP MCBs- 10 Nos				
2	POWER DB				
	Three Phase, MCCB provision Distribution board with nuetral bar,earth bar,cables ties,top and bottom removable gland plate and with necessary adopter boxes if any.The DB should be IP 42 metallic double door with provisoin of MCCB etc as required including cuting of wall and plastering the same with neat finish.It comprising as follows:-	1	Set		
	(Make:MDS/Hager/CRABTREE)				
	Incomer : 63A TPN & Vertical MCCB (DCDKTHDDCW04)				
	DCMJCFPF040 - 40A 4P MCCB with ELCB 100mA - 1No				
	Outgoing:				
	DCMJCSPF - 32A/25/20A SP MCBs- 8 Nos				
3	AC DB				
	Three Phase, MCCB provision Distribution board with nuetral bar,earth bar,cables ties,top and bottom removable gland plate and with necessary adopter boxes if any.The DB should be IP 42 metallic	1	Set		
	(Make:MDS/Hager/CRABTREE)				
	Incomer : 63A TPN & Vertical MCB (DCDKTHDDCW04)				
	40A 4P MCB with ELCB 100mA - (DCMJCFPF040)				
	Outgoings:DCMJCSPF - 32/40 A SP MCB 4Nos				
4	C DB(12WAY SPN DB)				
	12 Way SPN Distribution board with nuetral bar,earth bar,cables ties,top and bottom removable gland plate and with necessary adopter boxes if any. The DB should be IP 42 metallic double door with provisoin of MCB&ELCB etc as required including cuting of wall and plastering the same with neat finish.It comprising as follows:-	2	Set		
	(Make:MDS/Hager/CRABTREE)				
	Incomer : 12Way SPN DB (DCDKTHDDCW12)				
	DCMJCFPF032 - 32 A DP with ELCB 100mA - 1 No				
	Outgoing:				
	DCMJCSPF - 10/16A SP MCBs- 8Nos				

5	Supply & Installation of 32A Metal Clad Socket with top in a specified company manufactured box with suitable rating MCB for connecting A/C Split point & Strong room socket	6	Set		
6	Supply and fixing of 63A Rotter Switch for UPS input	2	Set		
7	63A 4P Lever type Change Over Switch in Manual operation capable of making carrying and breaking currents under normal (HCL / Havells/GEM)	1	Set		
8	Supply & Installation of 32A Metal Clad Socket with top in a specified company manufactured box with suitable rating DP MCB breaker type for connecting UPS point & Strong room socket	2	Set		
C	LT CABLES				
	Supply & Laying of the following cables in built up trenches, on wall, or in the ground as per the case may be, with proper clamping with necessary fixing materials etc. Installing testing & commissioning of 1100V grade UG cable as per IS 7098/1554 (Finolex/ Universal)				
1	3.5Corex50Sqmm Aluminium Armored cable	35	Mtr		
2	4C x10Sqmm Copper Armoured Cable (UPS to Power DB)	10	Mtr		
3	4C x6Sqmm Copper Armoured Cable (VDB Panel to Power DB, Lighting DB & Computer DB)	50	Mtr		
4	4C x16Sqmm Copper Armoured Cable (Generator)	25	Mtr		
	End Termination of the above cables with proper Glands and Lugs				
1	3.5Corex50Sqmm Aluminium Armored cable	4	Set		
2	4C x10Sqmm Copper Armoured Cable	4	Set		
3	4C x6Sqmm Copper Armoured Cable	6	Set		
4	4C x16Sqmm Copper Armoured Cable	2	Set		
D	WIRING				
1	Light/Fan point wiring with 3 of 1.5 sqmm Finolex PVC insulated copper conductor to be laid in 2mm suitable PVC conduit with Bend, Couplings, etc.. And fixing with PVC clamps screws etc. All conduits to be laid above the conduit with Bend, Couplings, etc.. And fixing with false ceiling/partition/concealed in the wall 6A Modular type etc. plate and metal Box Wiring to be connected with supply & fixing of switch (MK/ROMA/CRABTREE) with suitable Modular switches				
	a) One light Controlled by One Switch	38	Pts		
	b) Two Lights Controlled by one Switch	3	Pts		
	c) 6A Switch box Sockets in the switch board itself (combined position only)	10	Pts		
	d) 6A Switch box Sockets for wall fan point	11	Pts		
	e) Exhaust Fan points	3	Pts		
	f) Ceiling fan point with regulator	7	Pts		
2	Supply & Wiring with Flame Retardant Insulated PVC copper wire as per grade IS 994 for Circuits, Computer point, Power points within 2mm thk PVC conduits with necessary accessories and with proper clamps and to be concealed below the false ceiling				
	It comprises as follows:-				
a	3Runs of 2.5Sqmm copper wire in PVC conduit for circuit mains (Circuit mains LDB to All switch boards)	240	Mtr		
b	3Runs of 2.5Sqmm copper wire in PVC conduit for Power points (Power wiring)	300	Mtr		
c	3Runs of 2.5Sqmm copper wire in PVC conduit for computer points (UPS wiring for alternate UPS 1 & 2)	320	Mtr		

d	4Runs of 6Sqmm copper wire+2.5Sqmm copper wire in PVC conduit for (Split AC wiring)	130	Mtr		
e	2Runs of 6Sqmm copper wire+2.5Sqmm copper wire in PVC conduit (UPS input/output)	25	Mtr		
f	3Runs of 2.5Sqmm copper wire in UPS wiring for lights in Manager Cabin & Banking hall	110	Mtr		
g	3Runs of 2.5Sqmm copper wire in PVC conduit for Light points (inverter wiring)	140	Mtr		
h	4Runs of 6Sqmm copper wire+2.5Sqmm copper wire in PVC conduit (DB's looping & Genset wiring)	40	Mtr		
E	POWER POINT OUTLETS				
1	Supply & Installation of 3 Nos of 6A Sockets controlled by 1No 5A Switches with front plate with enclosure and other accessories etc..(MK /ROMA/CRABTREE)	13	Set		
2	Supply & Installation of 1Nos of 6A Socket controlled by 1No 6A Switch with front plate with enclosure and other accessories etc..(MK /ROMA/CRABTREE)	12	Set		
3	Supply & Installation of 1Nos of 16A Socket controlled by 1No 16A Switch with front plate with enclosure and other accessories etc..(MK /ROMA/CRABTREE)	10	Set		
F	LIGHTING FIXTURES				
1	Supply, Fixing & Commisioning of Recess mounting type compact vertical Flat Panel 36W LED fitting in Down Rods with white finish and other fixing accessories.,	21	Set		
2	Supply, Fixing & Commisioning of Recess mounting type compact vertical Flat Panel 18W LED Square Light fitting in Down Rods with white finish and other fixing accessories.	7	Set		
3	Supply & fixing of 22Watts LED tube light fittings (Crompton / Havells)	14	Set		
4	Supply & Fixing of exhaust fan (Crompton / Havells)	3	Set		
5	Supply & Fixing of Wall mounting Fan (Crompton / Havells)	11	Set		
6	Supply & fixing of Orange/warm colour LED FLEXI Strip Light fittings in the stepped false ceiling area including the cost of wiring etc., complete. (Manger Cabin & Banking Hall Suspended Ceiling)	50	mts		
7	Supply & fixing 7W LED bulb fitting including lamps.	2	nos		
8	Supply, Fixing & Commisioning of 48" ceiling fan with necessary Down Rods andfan hook with all fixing accessories., (Crompton / Havells)	7	Set		
G	EARTHING				
1	Providing dedicated earthing with 600x600x3.15 mm copper plate along with 50mm dia.10feet long G.I pipe with other accessories in the earth filled with salt,charcoal,etc as per BIS specifications and IS 3043/1987. It should be covered with G.I Manhole cover with necessary civil works.etc..	2	Set		
2	Supplying of all materials and providing earth point, with pipe earthing waste pipe earthing strips funnel etc. excavation trenches, filling with alternate layers of charcoal, salt and sand, back filling as per BIS specifications and IS 3043/1987	2	Set		
3	Supply & Laying of 10 Sqmm PVC Insulated Multi strand copper conductor laid in 25mm dia PVC pipe for Dedicated earth leads from the earth electrodes to the UPS system	40	Mtr		

4	Supply & Laying of 8 SWG copper wire	50	Mtr		
H	TELECOMMUNICATION CABLING				
1	Supply & Laying of 2 pair telephone cable in the 2mm Thk suitable PVC conduit for all telephone points(delton)	210	Mtr		
2	Supply & Fixing of RJ 11 Telephone Sockets	8	Set		
3	Supply & Installation of 10Pair KRONE Box with Enclosure	1	Set		
I	DATA CABLING				
1	Supplying & Fixing of D-Link CAT 6 10/100/1000 Mbps UTP Cable including the cost of laying the cable etc.complete	380	mts		
2	Supplying & Fixing of D-Link CAT 6 single information outlet including the cost of punching & fixing etc.,	14	nos		
3	Supplying & Fixing of D-Link 24 Port 10/100 Mbps Fast Ethernet Switch	Nil	no	Nil	
4	Supplying & Fixing of D-Link CAT 6 24 port patch panel including punching & fixing etc., complete	1	no		
5	Supplying & Fixing of D-Link CAT 6 3 Feet Patch cord	15	nos		
6	Supplying & Fixing of D-Link CAT 6 7 Feet Patch cord	14	nos		
7	Supplying & Fixing of 9 U RACK	1	no		
J	MISCELLANEOUS WORK				
1	Supply & providing Rubber mat for placing near panels - LT side Electric grade 6mm thick rubber mat of 2 Mtr x 1 Mtr	1	Ls		
2	Supply & providing caution boards	3	nos		
3	Supply & providing electrical shock treatment chart (small)	1	no		
4	Electrical safety rubber insulating gloves Confirming to IS: 4770	1	Pair		
5	Supply and installation of firstaid kit as per inspectorate standards	1	no		
K	DISMANTLING & TEMPORARY ARRANGEMENTS				
1	Dismantling of existing electrical fixtures, points, DBs from branch, cleaning and temporary arrangement of lights, fans and data for branch functioning.Rate includes all labour, transportation, debris carting away from the site etc, complete	1	Ls		
TOTAL ELECTRICAL AMOUNT FOR BRANCH (exclusive of GST)					

(RUPEES

Signature of Tenderer :

Address with company seal :

Date :

NOTE:

- 1 Burglar alarm & CCTV provision shall be procured directly by the bank from the respective contracting agencies and the rates for the same is not included in this estimate.

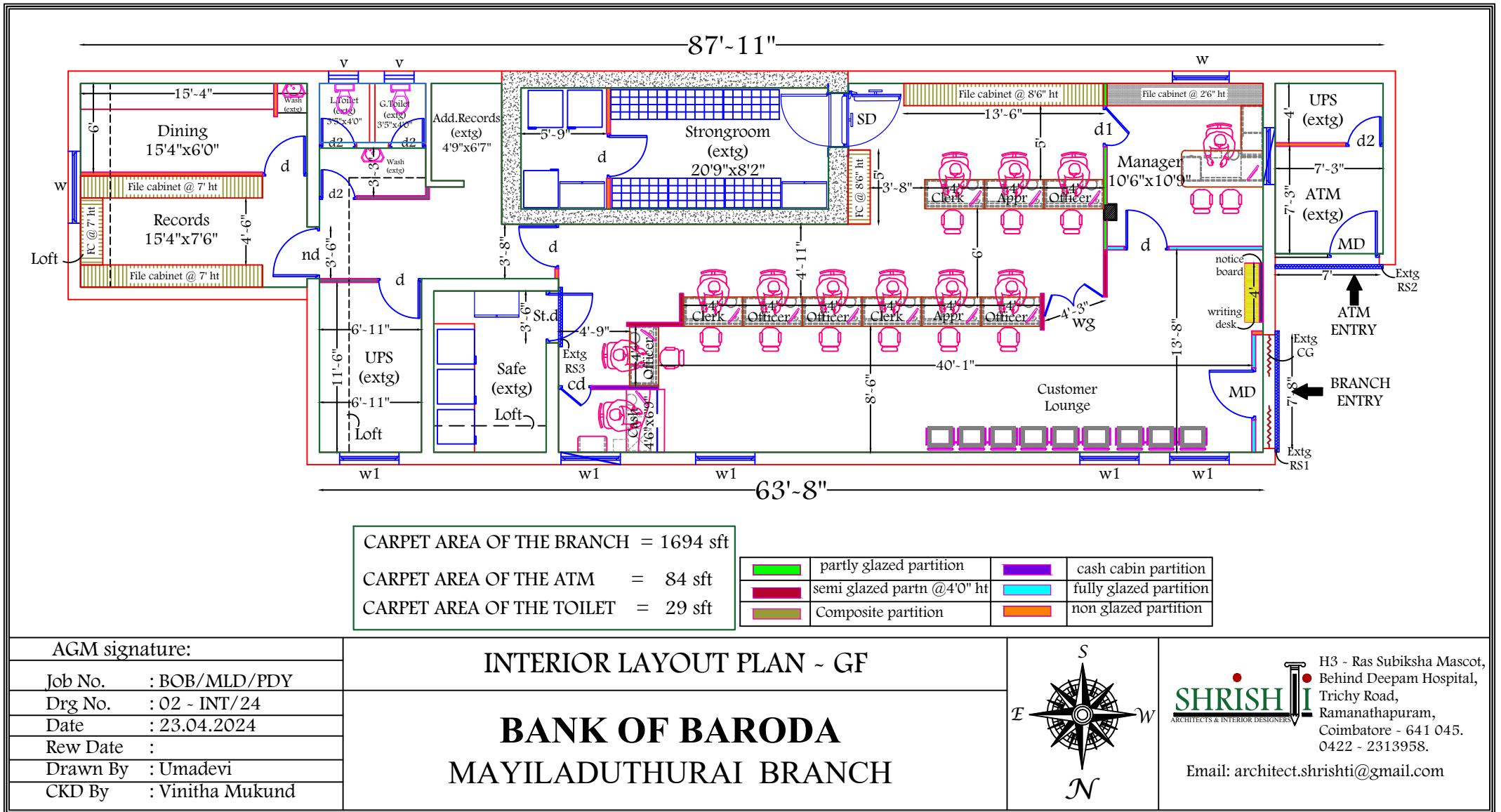
BOQ FOR THE AIRCONDITIONING WORK OF BANK OF BARODA MAYILADUTHURAI BRANCH					
Sl.No	Description Of Work	Qty	Unit	Rate	Amount
	SPLIT AIR CONDITIONER				
1	Supply & Installation of 1 TR Split Air Conditioner Inverter Model 5Star rated including copper tubing (for 3mts) from indoor to outdoor unit and water drain pipe complete. (Make: Blue Star / Carrier /Daikin)	1	no		
2	Supply & Installation of 2 TR Split Air Conditioner Inverter Model 5Star rated including copper tubing (for 3mts) from indoor to outdoor unit and water drain pipe complete (Make: Blue Star / Carrier /Daikin)	3	nos		
3	Installation Charges for Split Air Conditioner	4	nos		
4	V-Guard normal Make 5 K va Voltage Stabilizer	4	nos		
5	Out door unit stand (if required)	4	set		
6	Supply & Laying of PVC drain pipe (if required)	20	mts		
7	Copper Piping and inter connecting cable Charges for split Air Conditioners	15	mts		
8	Civil works like cutting AC hole, packing, drain pipe cutting and packing with mortar etc.	1	ls		
	TOTAL AIR-CONDITIONING AMOUNT (exclusive of GST)				

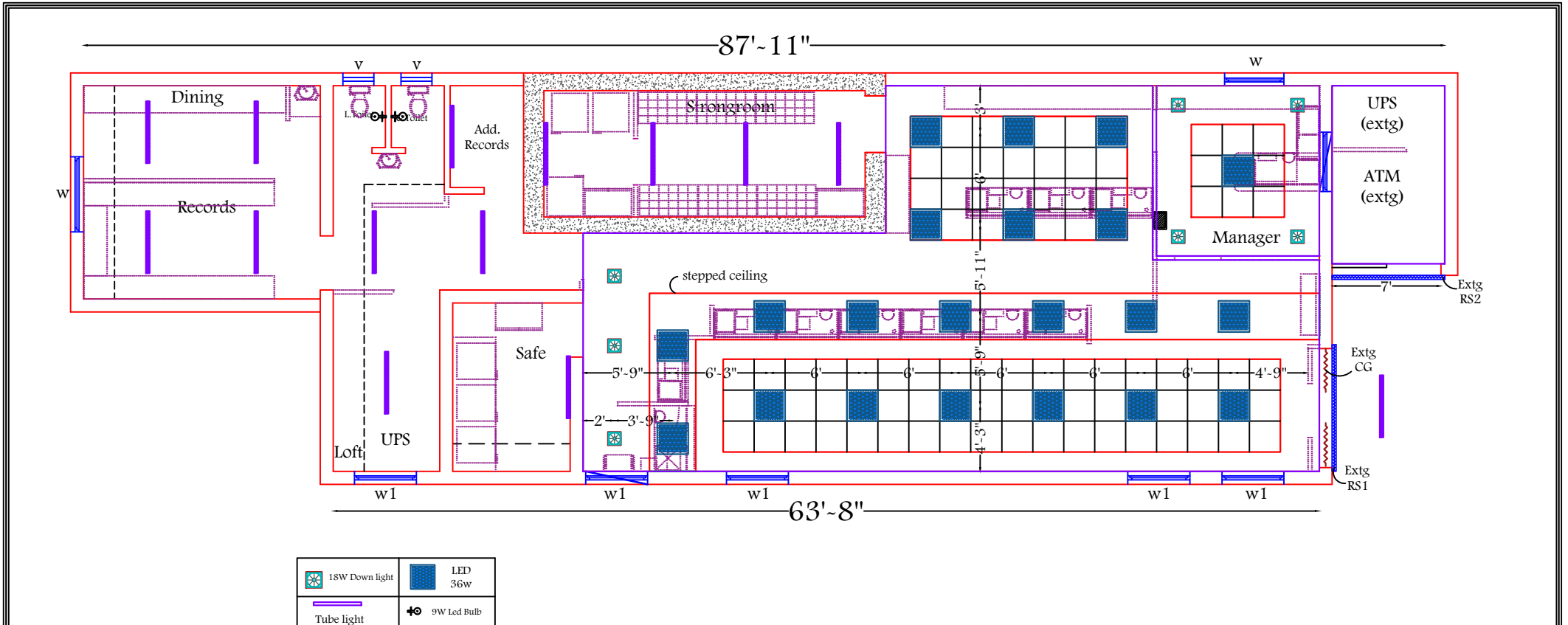
(RUPEES

Signature of Tenderer :

Address with company seal :

Date :



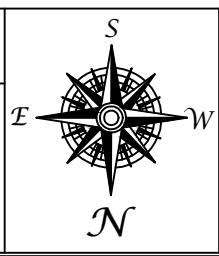


AGM signature:	
Job No.	: BOB/MLD/PDY
Drng No.	: 02 - ELE/24
Date	: 16.05.2024
Rew Date	:
Drawn By	: C.P.
CKD By	: Vinitha Mukund

ELECTRICAL LAYOUT PLAN ~ GF

BANK OF BARODA

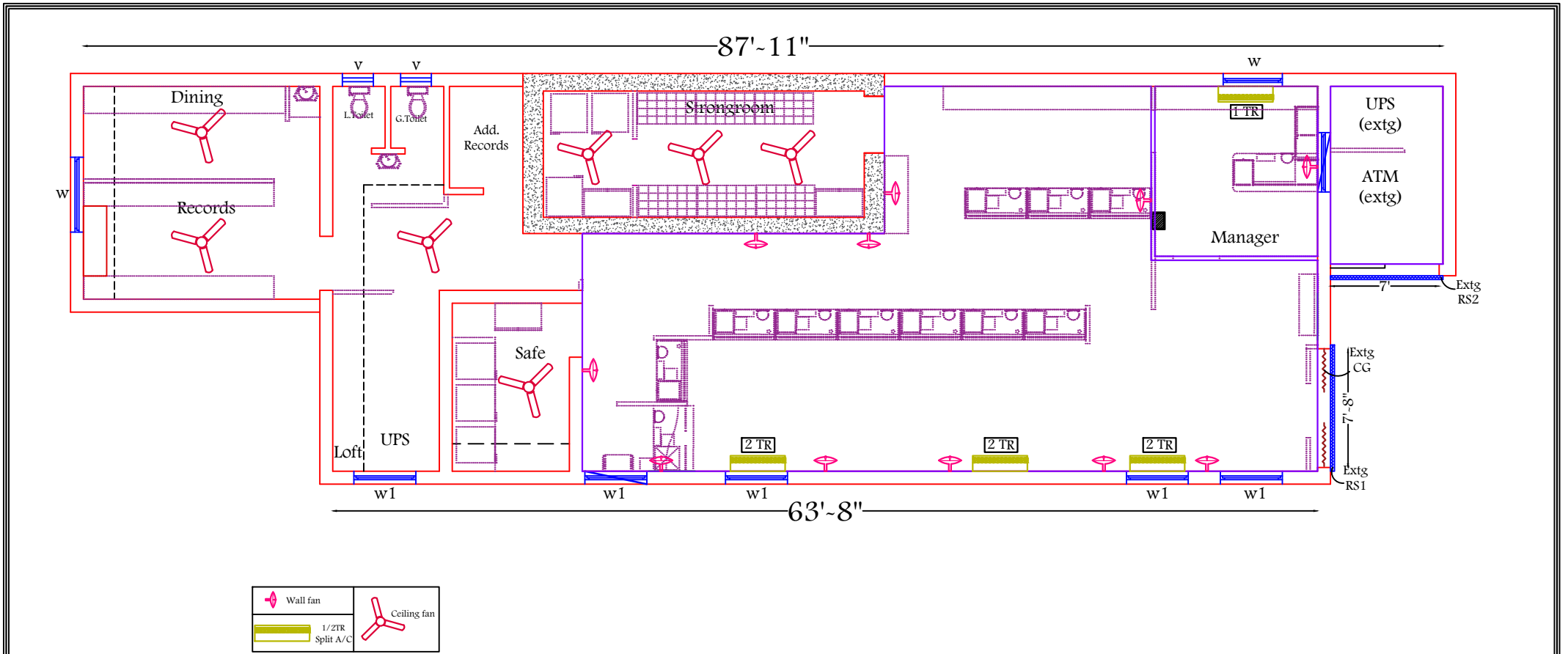
MAYILADUTHURAI BRANCH



SHRISH I
ARCHITECTS & INTERIOR DESIGNERS

H3 - Ras Subiksha Mascot,
Behind Deepam Hospital,
Trichy Road,
Ramanathapuram,
Coimbatore - 641 045.
0422 - 2313958.

Email: architect.shrishti@gmail.com

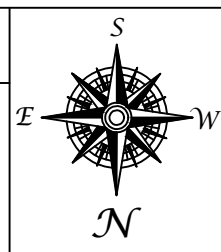


AGM signature:	
Job No. : BOB/MLD/PDY	
Drng No. : 02 - AC/24	
Date : 21.05.2024	
Rew Date :	
Drawn By : Balaji	
CKD By : Vinitha Mukund	

AC & FAN LAYOUT PLAN ~ GF

BANK OF BARODA

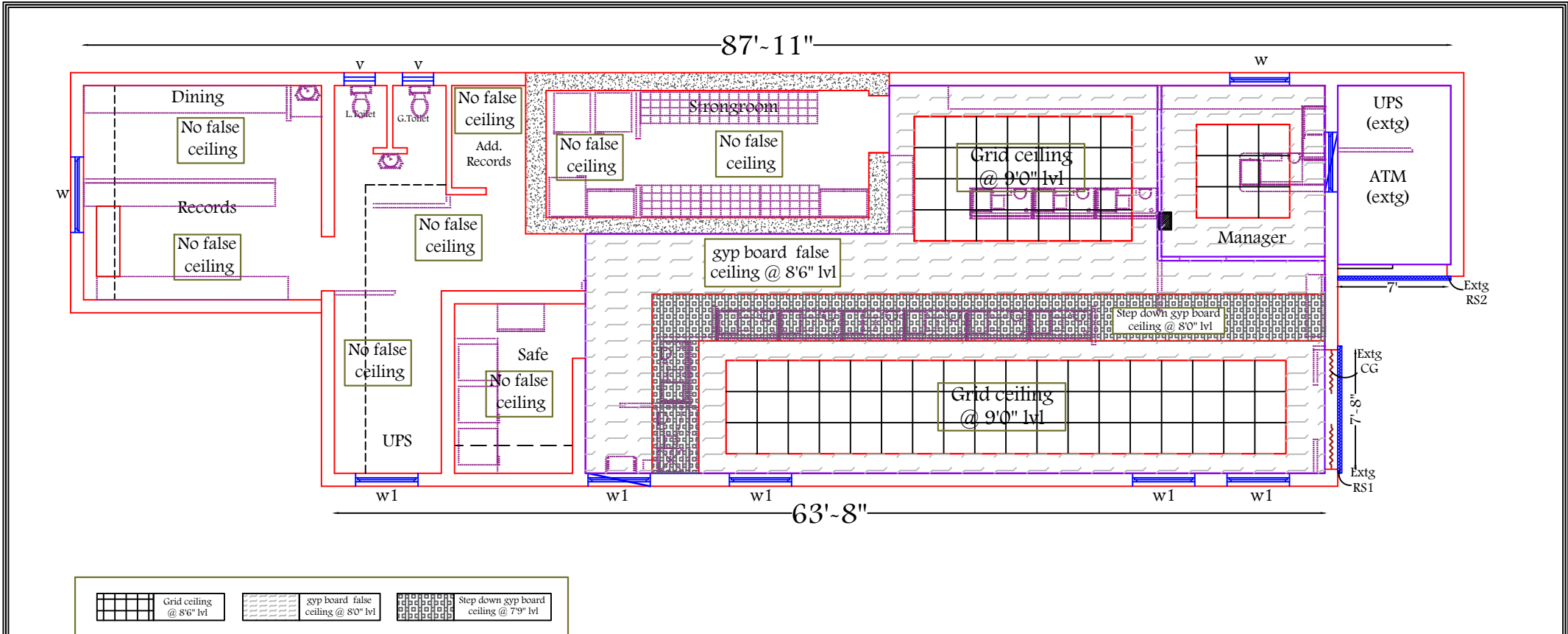
MAYILADUTHURAI BRANCH



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0422 - 2313958.

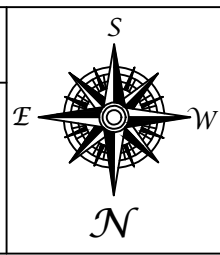
Email: architect.shrishti@gmail.com



AGM signature:	
Job No.	: BOB/MLD/PDY
Drg No.	: 02 - FC/24
Date	: 21.05.2024
Rew Date	:
Drawn By	: Balaji
CKD By	: Vinitha Mukund

FALSE CEILING PLAN - GF

BANK OF BARODA
MAYILADUTHURAI BRANCH



ARCHITECTS & INTERIOR DESIGNERS

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