

TENDER PART –I

TECHNICAL BID

FOR

ELECTRICAL & ALLIED WORKS OF

CENTRAL BANK OF INDIA & DENA BANK's

**SIR SORABJI POCHKHANAWALA BANKERS TRAINING
(SPBT) COLLEGE, AT VILE PARLE (W) MUMBAI**

Tender Reference Number :- CO/GAD/ARCH/ELECT/SPBT/2016-17

SIGNATURE OF CONTRACTOR / AUTHORISED PERSON WITH RUBBER
STAMP

INTRODUCTION TO TENDER

- | | | |
|----|--|--|
| 1 | NAME OF THE CLIENT | - SPBT COLLEGE, MUMBAI |
| 2 | CONSULTANTS | - M/s S. M. Engineers
C-107, 1 st Floor,
Nerul Railway Station Complex,
Nerul(E), Navi Mumbai.
Email :-admin.smengineers@gmail.com |
| 3 | SITE ADDRESS | - SPBT College, Near Cooper Hospital,
JVPD Scheme, Vile Parle (W), Mumbai-
400 056. |
| 4 | SCOPE OF WORK | - ELECTRICAL & ALLIED WORKS FOR
SPBT COLLEGE PREMISES |
| 5 | COMPLETION PERIOD | - 90 Days from the date of Commencement
of work |
| 6 | TENDER FEES | - <u>Rs.5,000/-</u> (In works – Rupees Five
Thousand Only) (In the form of Demand
Draft in favour of “Principal, SPBT
College, Mumbai”) |
| 7 | EARNEST MONEY DEPOSIT(EMD) | - <u>Rs.1,70,000/-</u> (In words – Rupees One
Lakh, Seventy Thousand Only) (In the form
of Demand Draft in favour of “Principal,
SPBT College, Mumbai”) |
| 8 | DEFECT LIABILITY PERIOD | - 12 MONTHS FROM DATE OF
DELIVERY |
| 9 | RETENTION MONEY | - 8% / AS PER CLIENT'S WORK ORDER
PAYMENT CLAUSE |
| 10 | SECURITY DEPOSIT | - 2% OF THE CONTRACT VALUE
(Successful L-1 Bidder has to submit EMD
of balance amount which equals to 2% of
the contract value in the form of DD within
6 days from the date issue of LOI) |
| 11 | DATE OF PRE BID MEETING | - On 20-01-2017 AT 3.00pm |
| 12 | LAST DATE OF SUBMISSION | - On or before 30-01-2017 till 3.00pm |
| 13 | DATE OF TENDER OPENING OF
TECHNICAL BID | - On 30-01-2017 at 3.30pm |

Note :- Technial Bid received without Tender Fees & EMD will be summarily rejected.

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NOTICE INVITING TENDER

Date: 31st Dec'2016

Dear Sirs,

Subject: Tender for ELECTRICAL & ALLIED WORK for CENTRAL BANK OF INDIA's – SIR SORABJI POCHKHANAWALA BANKERS TRAINING (SPBT) COLLEGE PROJECT AT VILEPARLE (WEST) MUMBAI – 400056.

CENTRAL BANK OF INDIA invites tender for the aforesaid work.

Tender document can be downloaded from Tender section of Bank's official website www.centralbankofindia.co.in / www.denabank.co.in

Your sealed tender in the prescribed tender form in two separate envelope as follows should be addressed to **The Principal**, SPBT College, Vileparle (West) Mumbai – 400056.

And subscribed Tender for **ELECTRICAL & ALLIED WORK** for **CENTRAL BANK OF INDIA's –SPBT COLLEGE PROJECT AT VILEPARLE (WEST) MUMBAI - 400056.**

Envelope No.1 To contain covering letter/clarification, Technical & Commercial aspect and Earnest Money Deposit and set of drawings.

Envelope No.2 To contain only the priced tender complete in all aspects (No conditions shall be mentioned in Envelope No.2 which will not be taken into consideration for evaluation of the tender) and submitted as above not later than 3.00 p.m. on 30/01/2017.

Notes: (i) Envelope No.1 will be opened on the same date i.e. on 30/01/2017 at 3.30 p.m. & Envelope No.2 will be opened thereafter as per standard practice /norms of the Bank.

The Tenderer shall furnish in the covering letter, the following details: -

A Demand Draft from a Nationalized Bank payable at Mumbai in favour of “**The Principal, SPBT College, Mumbai**” amounting of **Rs. 1,70,000/- (Rupees One Lakh & Seventy Thousand Only)** as **Earnest Money Deposit**, towards **Electrical & Allied Works**.

The Tenderer will have to quote for all the sections included in the tender documents.

The Client reserves the right to accept or reject any tender either in whole, or in part without assigning any reasons for doing so and do not bind themselves to accept the lowest or any tender.

The Client also reserves the right to negotiate or partly accept any or all the tenders received without assigning any reason thereof. Tenders, which do not fulfill all or any of the above condition and conditions mentioned in the tender documents or are incomplete in any respect, are liable to be rejected. Any discrepancies, omissions, ambiguities in the tender documents for any doubts as to their meaning should be reported in writing to the office of the Principal's Office at SPBT College, who will review the questions and where information sought is not clearly indicated or specified, the Consultant will issue a clarifications to all the tenderers, which will become part of the contract documents.

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

Client also reserves the right to addition / deletion / divide and distribute the work floor / section wise and item wise. This may please be noted by the Tenderer. In such cases the decision will be solely at the discretion of Client in Consultation with Electrical Consultant M/s, S. M. Engineers, including that of assignment of works. You are advised to ensure strict observance of commercial aspect of this tender and also of the following points: -

Date of Commencement: IMMEDIATELY on awarding the work

- a. Time of Completion: - **90 Days (12 Weeks)** from the date of issue of Work Order.
- b. Submission of a detailed Bar Chart indicating your scheduled program for all major activities. This Bar Chart will be referred for during the progress of the work to establish periodical landmarks of achievement of work revised Bar Chart, based on revised scope of work to be submitted by Contractor.
- c. The onus of co-ordination with other contractors for any disciplines in services or civil works will lie on the tenderer.
- d. It may please be noted that all documents that comprise the tender documents should be signed and sealed by the tenderer.
- e. No part of the bill of quantities or drawings should be deleted.
- f. The electrical power required for site preparation work would be arranged by **Client** at a particular point and the Contractors have to make their own arrangements for tapping the supply at various points.

Contractors will have to make their own arrangement for water from the point of supply provided by the Client. Water may be available on site after meeting the requirements of Client.

- g. **Validity period of offer**: The Tender shall remain open for acceptance for **90 days** from the date of opening of price bids.
- h. **Liquidated damages 1%** of the contract value per week or part there of subject to maximum of **10%** or the tendered amount.
- i. **Defects Liability Period: 12 months** from the date of “**Virtual Completion**” certified by Bank / Client.

The successful tenderer shall enter into an agreement with the client as per the standard format within 7 DAYS on receipt of Letter of Intent (LOI) issued by Client & shall have to submit the Demand Draft of balance Amount which equals to 2% of the Contract Values.

Thank You.

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SECTION – I

LETTER OF SUBMISSION FROM BIDDERS / CONTRACTORS

To,

The Principal,

Pochkhanawala Bankers Training (SPBT) College,

Vile Parle (W)

Mumbai- 400 056

Dear Sir,

Sub: Tender for **ELECTRICAL & ALLIED WORKS** for **CENTRAL BANK OF INDIA – SPBT COLLEGE PROJECT AT VILEPARLE (WEST) MUMBAI - 400056.**

01. Having examined the site of work and Drawings, Specifications, General and Special Conditions of Contract, Schedule of Quantities relating to the tender for proposed **ELECTRICAL & ALLIED WORKS**, having obtained the tender invited by you.
02. We, the undersigned hereby offer to execute, complete and maintain the proposed work in strict accordance with the contract documents for the items described in the tender at the item rates quoted by us in the tender.
03. We undertake to complete and deliver the total work within **12 WEEKS** (including mobilization period) from the date of issue of work order.
04. We enclose herewith interest free Earnest Money amounting to **Rs. 1,70,000/- (Rupees One Lakh Seventy Thousand Only)** by D/D and this sum shall be forfeited in the event of our failing to execute the contract when called upon to do so by accepting our tender.
05. In the event of this tender being accepted, the above-mentioned Earnest Money will be converted into part of the Initial Security Deposit. The amount of the Initial Security Deposit shall be **2%** of the contract value including the Earnest Money Deposit shall be deposited by the “Demand Draft” in the name of “The Principal, SPBT College” within 14 days from the date of award letter.
06. The **8%** of the gross value of the work done will be deducted as Retention Money from each Interim Bill till the Initial Security Deposit together with Retention Money aggregate of **5%** of contract value. This amount will be called Total Security Deposit. On completion of work (to be certified by Consultants) 50% of the Total Security Deposit shall be released and the balance 50% retained till the expiry of Defects Liability Period. The said retained S.D. amount can be released against the Bank Guarantee of equal amount.
07. We agree to pay Government Vat, Sales-Tax (State & Central), Excise Duty, Octroi, Work Contract Tax and all taxes as prevailing from time to time, on such items for with the same are leviable and the rates quoted by us are inclusive of the same.
08. The successful tenderer shall obtain the permission/approval as required by local authority/Government department etc. Client / Consultant shall prepare only drawings, however the responsibility of the submission of drawings/liasioning/follow-up and obtaining approval/permission shall be the responsibility of the contractor.

The contractor shall absolve the employer and Client’s from any loss, damage, action etc. Rate quoted by the tenderer shall be inclusive of all such expenses.

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Name of the person having Power of
Attorney to sign the Contract

Yours faithfully,

Seal and Address of the Contractor

Date:

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SECTION – II

ARTICLES OF AGREEMENT

ARTICLES OF AGREEMENT MADE THE _____ DAY OF _____ 2016 BETWEEN The CENTRAL BANK OF INDIA a body corporate constituted under CENRAL BANK OF INDIA Act 1955 and having its CENTRAL BANK OF INDIA - _____

_____, (hereinafter called “the Employer” which expression shall unless repugnant to the context mean & include its successors & assigns of the one part & Herein-after called “the Contractor” which expression shall unless repugnant to the context mean & include a body Corporate Constituted under Central Bank of India on the other part.

WHEREAS the Employer is desirous of carrying out **CENTRAL BANK OF INDIA –SPBT COLLEGE PROJECT AT VILEPARLE (WEST) MUMBAI - 400056.**

and has caused Drawings, Specifications and Schedule of Quantities describing the works to be executed by Consultants M/s. S. M. Engineers – C – 107, First Floor, Nerul Railway Station Complex, Nerul (E), Navi Mumbai – 400 706,

AND WHEREAS the Contractor has agreed to execute the said works subject to the provisions hereinafter contained and subject also to the general instructions (vide Annexure I hereto), GCC (Annexure II hereto), special conditions (Annexure III), safety code (Annexure IV hereto), Preamble & BOQ (Vide Annexure V) and drawings (Annexure VI) collectivity referred to as “the said conditions”). The works shown upon the said drawings & described in the said BOQ will be payable to the Contractor in terms of bills of Quantities at the accepted rates and the estimated amount payable is (Rupees)

hereinafter referred to as the said contract amount.

NOW IT IS HEREBY AGREED AS FOLLOWS:

- 01) In consideration of the said contract sum to be paid by the Employer in the manner set for in the said conditions execute and complete the work shown in the said drawings as described in the said specifications and schedule of quantities.
- 02) The Employer shall pay the Contractor the said sum or such other sums as shall become payable hereunder at the times and in the manner specified in the said conditions.
- 03) The term “Consultants” in the said conditions shall mean the said **M/s, S. M. Engineers** in the event of its being ordered to wound up or ceasing to be Consultant for the purpose of this Contract, such other persons as shall be appointed for that purpose by the Employer. The Consultants so appointed subsequently shall be entitled to disregard or overrule any previous decision or approval or-direction given or expressed by the Consultants for the time being.
- 04) Tender documents containing Notice to the Contractors, Conditions of Contract Appendix thereto, Special conditions of Contract, Specifications, Drawings and Schedule of Quantities with the rates entered therein, shall be read and studied as forming part of this agreement and the parties hereto shall respectively abide by and submit themselves to conditions and stipulations and perform the agreements on their part respectively contained in said conditions.
- 05) This contract is neither a Fixed Lump sum Contract nor a Piece Work Contract, but is a Contract to carry out work in respect of the entire work to be paid for according to actual measured quantities at the rates contained in the schedule of rates and probable quantities or as provided in the said conditions.
- 06) The Employer on his own through the Consultant, reserves to himself the right of altering the drawings and nature of work or adding to or omitting any items of work or having portions of the same carried out without prejudice to this contract.
- 07a) The Contractors represent that they have experienced and competent staff, which will enable them to ensure proper quality check on the materials, whether brought by the Contractors or supplied by the Employer to the Contractors, further the Contractors will carry out proper test as required by the specifications and will supervise the day-to-day working and execution of the contract works.
- 07b) If the Contractors have any doubt about the quality of any materials or any difficulty in supervision of the day-to-day work, it shall be the duty of the Contractors to report the matter in writing forthwith to the Consultants and, for the time being, to suspend that portion of the work about which difficulty is experienced. The Contractors will abide by the direction of the Consultants.
- 07c) The Contractors are aware though the Consultants will supervise the work day-to-day this will not absolve the Contractors to perform their obligations under Sub-Clause (07a) & (07b) above.
- 07d) The Contractors covenant and warrant that completed items of work as well as the entire work on completion will be in conformity with the specifications and the terms and conditions of this contract and will be of quality and description as contained in contract.
- 08) Time shall be considered as the essence of this Agreement and the Contractors hereby agree to commence this work soon after the site is handed over to him as provided for in the said

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conditions and to complete the entire work within **12 Weeks (3 Months)** subject, nevertheless, to the provisions of extension of time as contained in the said conditions.

- 09) This agreement and Contract shall be deemed to have been made in Pune and any questions or dispute arising out or in any way connected with this Agreement and Contract shall be deemed to have arisen, in Pune and only the Court in Pune shall have jurisdiction to determine the same.

The selected tenderer shall comply with all Rules regulations of **LOCAL MUNICIPAL CORPORATION** and its Fire Department while carrying out the work of the internal additions/alterations in the Bank's Premises, as per the plan prepared by Client. In case any rules are deviated then such work shall be dismantled and reinstate the same at your cost to the satisfaction of the Client /Bank.

Contractors have to make all the arrangements for getting required permission/ passes for the Labour connected with the project, prior to commencement of the work from the Bank's Authority.

All the debris lying at site shall be properly stocked and disposed off from time to time.

Tarpaulin with scaffolding shall be erected while carrying out work to avoid nuisance to working staff, spoiling of Bank's Property and any other tenderers materials etc., wherever so required.

Signed/Sealed and delivered by the **Central Bank of India** by the hand of

Shri.....
(Name & Designation).....

.....
(EMPLOYER)

In the presence of

Witness No.1

Witness No.2

Signed Sealed and delivered by

.....
.....

.....
(CONTRACTOR)

OR

The COMMON SEAL OF at hereto fixed pursuant to resolution passed by its Board of Directors at the meeting held on In the presence of

1)

2)

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

1)

2)

SIGNED AND DELIVERED by the Contractor by the hand of Shri.....
its duly constituted attorney.

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SECTION – III

INSTRUCTIONS FOR TENDERERS

01. All quoted rates shall be inclusive of all taxes, Govt, Sales (State & Central), VAT, Octroi, Excise Duty, Levies & Wages as per minimum wages Act or as imposed from time to time etc.
02. Under any circumstances, no escalation will be allowed on the rates.
03. **RATES TO BE FILLED IN BILL OF QUANTITIES**
 - a. The tenderer is requested to fill up rates both in figures and words. In case of any discrepancy found between the figures and words, the rate quoted in words will be treated as valid.
 - b. If for the same item appearing in different sections, quoted rates vary, then the lowest quoted rate in such case will be treated as valid and will be applicable.
04. All drawings and documents issued to the bidders are confidential and shall be returned back with the tender.
05. A Time is essence of contract, hence contract has to mobilise proper man power and material in a short mobilisation period to site. No extension will be given for completion period to site. No extension will be given for completion period, without proper and genuine reasons.
06. All bidders shall visit the site prior to giving quotes to get themselves acquainted with site conditions. No demand shall be later entertained due to site conditions.
07. Duly completed tenders shall be submitted into two separate sealed envelopes, one containing “Technical Bid” with ‘EMD Demand Draft’ and the other with “Price Bid” to following address :-

 To,
The Principal
 SPBT College,
 Vile Parle (W),
 Mumbai – 400 056,
08. The last date of submission of the sealed tenders is on or before 3.00 p.m. on 30th Jan’ 2016 on above mentioned address. Late tenders shall be rejected, including postal delays.
09. Technical Bid shall be opened on the same day 30th Jan’ 2016 at 3.30 p.m. in the office of the above mentioned address.
10. The tender document shall consist of :-
 - a. Part – I: - Technical Bid: Conditions of contract, Instructions, Terms & conditions, Specifications, Tender Fees, EMD, etc.
 - b. Part – II: - Price Bid: Schedule of quantities.

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11. The tenders shall be submitted in the following manner :-
 - a. Envelope – I: - Forwarding letter accepting conditions of contracts, Part-I (Technical Bid) of the tender with Demand Draft of earnest money deposit and Tender Fees.
 - b. Envelope – II: - Shall contain schedule of quantities (Price Bid) only.
12. Envelope-I shall be super scribed as “TECHNICAL BID” and envelope-II shall be super scribed as “PRICE BID”. Both the envelops containing the bids shall be also super scribed with the subject and due date and time of opening.
13. Opening of Tender :-
Envelope-I shall be first opened on the due date and time. Conditions, if any will be read and discussed. In case of any condition not acceptable to CBI/SPBT and unless withdrawn, their price bid shall not be opened and returned to the Bidder.
14. Envelope-I & Envelope-II shall be submitted together on or before the due date and time.
15. Late tender including postal delays or incomplete tenders shall be rejected.
16. Central Bank of India reserves their right to accept any tender, in part or in full, or reject all tenders without assigning any reasons thereof.

SECTION IV
PREQUALIFICATION CRITERIA

1. The Bidder / Electrical Contractor should have minimum five years of experience in the field of Electrical Contracting at the time of publication of advertisement.
2. The Bidder should have successfully completed similar Electrical Contracting works during last 7 years of following value
 - a) One Work of value Rs. 1.4 Cr and above or
 - b) Two works of value Rs. 88 lacs and above or
 - c) Three works of value Rs. 70 lacs and above
3. The Bidder should have valid Electrical Contractor & Supervisor License issued by PWD / Electricity Licensing Authority.
4. The Bidder's / firm's average financial turn over for last three financial years shall be more than Rs. 55 Lacs.

Note :- Documentary proof is required for above criteria's.

SECTION V
INFORMATION TO BE FURNISHED BY THE BIDDER

1	Name, Registered address & Telephone No.	
2	Constitution (Whether Proprietorship/ Partnership / Company) Documentary proof required.	
3	Organisational set up of the firm including names, qualifications and experience of partners / Associates and staff	Details to be furnished in the prescribed proforma (Statement I).
4	Experience as Electrical Contractor (give number of years)	Years
5	Important large projects executed during last 5 years by the firm together with approximate cost of the individual project. The full postal address of the clients for whom the works have been executed shall also be given.	Details to be furnished in the prescribed proforma (Statement II) Documentary proof required.
6	Important large projects on which the firm is engaged at present and their estimated cost (stages of work). The full address of the clients shall be indicated against each project.	Details to be furnished in the prescribed proforma (Statement III) Documentary proof required.
7	Important large projects, if any, completed by the partners prior to joining the firm (these projects shall not be included under 5 above, but shall be shown separately).	Attach a separate sheet. Documentary proof required.

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8	Name and address of the Banker/s of the firm	
9	Turnover of the firm during last 3 years (Year-wise) Documentary proof required.	2013-14 : - Rs. _____ Lakhs
		2014-15 : - Rs. _____ Lakhs
		2015-16: - Rs. _____ Lakhs

Note : Please enclose copies of relevant supporting documents.

Signature & Seal of the Bidder

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GENERAL CONDITIONS OF CONTRACT

01. INTERPRETATIONS

GCC 01

In construing the conditions and the specifications, Schedule of Quantities and Contract Agreement, the, following words, shall have the meanings herein assigned to them except where the subject or context otherwise requires:

- 01a “Owner” / “Employer” / “Client” shall mean **CENTRAL BANK OF INDIA** /SPBT and shall include his / their heirs, legal representatives, assignees and successors.
- 01b “Contractors” shall mean the person, or persons, firm or Agency or company whose tender has been accepted by the Owner and shall include his/their heirs, and legal representatives, and the permitted assigns.
- 01c The “Client” shall mean **Central Bank of India / SPBT College**.

“Consultant / Engineer” shall mean any **M/s, S. M. Engineers** appointed by **Bank** as their Representative to give instructions/clarification to the contractors at site.
- 01d The Employer reserves the right to appoint a suitable person to act as his representative at site at his sole discretion.
- 01e “Works” shall mean the works to be executed & recorded in accordance with the contract and shall include all extra & or additional altered or substituted works as required & required for the Performance of the contract and “Site” shall mean the land and other places as shown on the site plan, on which the works are to be executed or carried out and other lands or places provided by the Employer for the purposes of the Contract.
- 01f “Contract Document” shall include the notice inviting Tenders, the Articles of Agreement, the General Conditions of Contract, and the Special Conditions of Contract. The Appendices, the Schedule of Quantities, Specifications for Materials, Work Sheet and mode of measurement and drawings pertaining to the work. All sections of the Contract document are to be read together.
- 01g “Drawings” shall mean the drawings referred to in specifications description of items etc., and any modifications of such drawings approved in writing by the Client t and such other drawings as may from time to time be finished or approved in writing by the Client and the Consultants.
- 01h “Notice in writing” or written notice shall mean a notice in writing, typed or printed characters, sent (unless delivered personally or otherwise) proved to have been received by registered post to the last known private or business address or registered office of the addressee and shall be deemed to have been received when in the ordinary course of post it would have been delivered.
- 01i “Act of Insolvency” shall mean any Act of Insolvency as defined by the Presidency Towns – Insolvency Act, or the Provincial Insolvency Act or any Act.
- 01j “Virtual Completion” shall mean that the works are in the opinion of the Consultants complete or fit for occupation.
- 01k Words importing persons include firms and Corporations, words importing the singular only also include the plural & vice versa where the context required.

02. SCOPE OF CONTRACT

GCC 02

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The contractor shall carry out and completed the works in every respect in accordance with this Contract and with the directions of and to the satisfaction of the Consultants / Employer. The Consultants may in his discretion with the consent of the employer and from time to time issue further drawings and / or written instruction's details, direction and explanations which are hereafter collectively referred to as "Consultants Instructions" as regard to.

- 02a The variations or modification of the design, quality or quantity of works or the addition, or omission or substitution of any work
- 02b Any discrepancy in or divergence between the Drawings or between the Schedule of Quantities and / or Drawings and or Specifications.
- 02c The removal from the site of any material brought thereon by the Contractor and the substitutions of any other material thereof.
- 02d The removal and / or re-execution of any works executed by the Contractor.
- 02e The postponement of any work to be executed under the provisions of this Contract.
- 02f The dismissal from the works of any person employed there upon.
- 02g The opening up for inspection of any work covered up.
- 02h The amending and making good of any defects.
- 02i Co-ordination of work with other agencies.

The contractor shall forthwith comply with and duly execute any work comprised in such Consultant's Instruction provided always that verbal instructions, directions and explanations given to the Contractor or his representatives upon the works by the Consultants shall, if involving a variation, be confirmed in writing to the Contractors within seven days, and if not dissented from in writing within a further seven days by the Consultant such shall be deemed to be Consultant's Instructions within the scope of the contract.

If compliance with the Consultant's instructions involves, variation, such variation shall be dealt with under Clause No.21.

Where extra work cannot properly be measured and valued, the Contractor shall be allowed day work prices, provided that a written authority for day work is obtained by the Contractor before the execution of the extra work and provided that in any case vouchers specifying the time daily spent time upon the work countersigned by the Employer's Representative and the materials employed, shall be delivered for verification to the Consultant not later than the end of the week, following that in which the work has been executed.

03. DRAWINGS AND SPECIFICATIONS

GCC 03

The works shall be carried out to the entire satisfaction of the Employer (and the Consultants) in accordance with the, signed drawings and specifications and such further drawings and details as may be instruction, direction and explanations as may from time to time & be given by the Consultant whose decision is to the sufficient and quality of the work and materials shall be final and binding upon all parties. If the work shown on any such further drawings or work that may be necessary to comply with such instructions, direction or explanations, be in the opinion of the Contractor extra to that comprised in or reasonably to be inferred from the Contract, he shall before proceeding with such work, give notice in writing to this effect to the Consultant and in the event of

the Consultant agreeing to the same in writing the Contractor shall be entitled to an allowance in respect of such extra work as an authorized extra. If the Consultant and the Contractor fail to agree as to whether or not there is in extra than if the Consultant decides that the Contractor shall carry out the said works, the Contractor shall do so, and the question whether or not there is extras and if so the amount thereof, shall failing agreement, be settled by reference to arbitration / Chief Engineer of the Employer whose decision shall be final and binding but such reference shall in no way delay the fulfillment of this contract.

No drawing shall be taken as in itself an order for variation unless in addition to the Consultant's signature, it bears express words stating that it is intended to be such an order or bears remark "VALID FOR EXECUTION". No claim for payment for extra work shall be allowed unless the said work shall have been executed under the provision of Clause 8 (Authorities, Notices, Patent Rights and Royalties), or by the authorities, directions in writing of the Consultant as herein mentioned.

One complete set of the signed Drawings Specification and Schedule of Quantities shall be furnished by the Consultants to the Contractors. The Consultant shall furnish, within 7 days of receipt of request by the Contractor. One copy of additional drawings for the execution of any work. Such copies shall be kept on the works site and the Consultant or his representatives shall at all reasonable times have access to the same. All drawings and specifications shall be returned to the Consultant by the Contractor before the issue of the Final Certificate. These drawings in original shall remain with the Employer and the duplicate copy will be with the Consultant.

04. SCHEDULE OF QUANTITIES

GCC 04

The Schedule of Quantities unless otherwise stated shall be deemed to have been prepared in accordance with the standard procedure of the Client, and shall be considered to be **approximate** and no liability shall attach to the Client for any error that say be discovered therein.

05. SUFFICIENCY OF SCHEDULE OF QUANTITIES

GCC 05

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

06. ERRORS IN SCHEDULE OF QUANTITIES

GCC 06

Should any error appear in the Schedule of Quantities, other than in the Contractor's prices and calculations, it shall be rectified and such rectification shall not vitiate the Contract but shall constitute a variation of the Contract and shall be dealt with as an authorized extra or deviation.

07. CONTRACTOR TO PROVIDE EVERYTHING NECESSARY

GCC 07

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

The Contractor shall provide ground for himself and fresh water for carrying out of the works at his own cost. The Employer shall not charge the Contractor for its own unrented ground but shall on no account be responsible for the expenses incurred by the Contractor for hired ground. If water from any source other than Municipal main is to be used for execution of work, the same shall be tested at the Contractor's cost and a report submitted to the Consultant for their approval, before such water is used for the works.

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The Contractor shall provide and maintain all measuring instruments including steel tape, at all times for properly carrying out the work and for the use of the Consultant / Employer, including skilled attendants as required.

The Contractor shall supply, fix and maintain at his cost during the execution of any works, all the necessary centering, scaffolding, staging, timbering, strutting, shoring, pumping, fencing, hoarding, watch & ward and lighting by night as well as by day required not only for the proper execution and protection of the public and safety of any adjacent roads, streets, cellars, vaults pavements, walls, houses, buildings and all other erections, matter or things. The Contractor shall take down and remove any or all such centering, scaffolding, staging, planking, strutting, shoring etc. as occasion shall require or when ordered to do so, and shall fully reinstate and make good all matters and things described during the execution of the works, to the satisfaction of the Contractor.

08. **AUTHORITIES, NOTICES, PATENTS, RIGHTS & ROYALTIES** **GCC 08**

The Contractor shall conform to the provisions of the statutes relating to the works, and to the Regulations and bye-laws of any local Authority and of any Water, Lighting of another Companies or Authorities with whose systems the structure is proposed to be connected, and shall before making any variation from the drawings or specifications that may be necessitated by so conforming, give to the consultant written notice, specifying the variations proposed to be made and the reason for making it, and apply for instruction thereon. In case the Contractor shall not within ten days receive such instructions, he shall proceed with the work conforming to the provisions, Regulations or Byelaws in question.

The Contractor shall bring to the attention of the Consultant all notices required by the said Acts Regulations or Byelaws to be given to any Authority by the Employer or the consultant and pay to such Authority or to any public officer, all fees that may be properly chargeable in respect of the works, and lodge the receipts with the Consultant.

The Contractor shall indemnify the Employer against all claims in respect of patent rights, design, trade marks of name or other protected rights in respect of any constructional plant, machine work or material used for in connection with the works or temporary works and from against all claims, demands, proceedings, damages, costs, charges and expenses whatsoever in respect thereof or in relation thereof. The Contractor shall defend all actions arising from such claims unless he informed the Consultant, before any such infringement and received their permissions to proceed, and shall himself pay all royalties, license fees, damages, costs and charges of all and every sort that may be legally incurred in, respect thereof.

09. **MATERIALS AND WORKMANSHIP TO CONFORM TO DESCRIPTION** **GCC 09**

All materials and workmanship shall, so far as procurable, be of the respective kinds specified in the Schedule of quantities and for specifications and in accordance with the Client's instructions and the Contractor shall upon the request of the Consultant furnish to them all invoices, accounts, receipts and other vouchers to prove that the materials comply therewith. The Contractor shall at his own cost arrange for and/or carry out any test of any materials with the Client say require. The Contractor shall submit the samples of various materials through Client for, the approval of the employer. If the Contractor contends that any of the materials, goods or workmanship specified as aforesaid, is unobtainable, he shall submit to the clients, his grounds for his contention, and thereupon the Client shall decide whether the same is unobtainable in fact. If the Client shall decide that any of the materials, goods or workmanship is in fact unobtainable, they shall issue in order in writing as what is to be substituted thereof and such order shall be deemed to be an order for variation; such order shall however be got approved by the client before issue.

10. **SETTING OUT** **GCC 10**

The Contractor shall at his own expense, set out the works accurately in accordance with the plans and to the complete satisfaction of the Client. The Contractor shall be solely responsible for the true and perfect setting out of the works, and for the correctness of the position, levels, dimensions and

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alignment of all parts thereof. If at any time, any error shall appear during the progress or on completion of any part of the work, the Contractor shall at his own cost rectify such error if called upon, to the satisfaction of the Client. The work shall from time to time be inspected by the Client and/or his representatives but such inspections shall not exonerate the Contractor in any way from his obligations to remedy any defects, which may be found to exist at any stage of the work or subsequently after the same is completed.

11. OPENING OF WORKS

GCC11

Contractor shall be liable to reinstate all work that may subsequently be, at any time, damaged on account of any defect in or insufficiency in his work. The Contractor shall at request of the Consultant within such time as the Consultant shall name, open up for inspection any other work and should the Contractor refuse or neglect to comply with such requests, the Employer through the Consultant, may employ other workmen to open up the same. If the said work has been covered up in contravention of the Consultant's instructions, or if on being opened up, it is found not in accordance with the drawings and Specifications, or the instructions of the Consultants, the expenses of opening and covering it up again, whether done by Contractor or such other, workmen shall be borne by and recoverable from the Contractor or may be deducted from any money due or which may become due to the Contractor. If the work has not been covered up in Contravention of such instructions, and is found in accordance with the said drawings and specifications or instructions, then the expenses aforesaid shall be borne by the Employer and be added to the contractors sum provided always that in the case of concealed work, or another work so opened up and requiring immediate attention, the Consultants shall within seven days after receipt of writing notice from the Contractor that the work has been opened, made or cause the inspection thereof to be made and at the expiration of such times if such inspection thereof to be made, and at the expiration of such time, if such inspection shall not have been made, the Contractor may cover the same, shall not be required to open it up again, except at the expense of the Employer.

12. CONTRACTOR'S SUPERINTENDENCE & REPRESENTATIVE ON WORKS

GCC 12

The Contractor shall give all necessary personal superintendence during the execution of the works and as long thereafter as the Client and consider it necessary until the expiration of the "Defects Liability Period" stated in Clause 24. The contractor shall meet the Consultant or his representative whenever required if demanded by Client.

The Contractor shall maintain and be represented on site, at all times while the work is in progress, by a responsible and efficient Engineer in charge, approved by the Client and who must thoroughly understand all the trades entailed and be constantly in Attendance, while the same are at work. Any directions, explanations, instructions or notices given by the Client to such Engineer shall be deemed to be given to the Contractor and shall be binding as such on the Contractor. The Engineer shall be thoroughly conversant with the English Language and should be able to read, write and-speak English.

13. REMOVAL OF ALL OFFENSIVE MATTERS

GCC 13

All debris shall be disposed off as per the rules and regulations of Local Authorities concerned beyond the property limits and the site shall be kept free of safety / fire hazards.

14. DISMISSAL OF WORKMEN

GCC 14

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

15. ACCESS TO WORKS

GCC 15

The Client /Employer and any person authorized by them shall at all reasonable times have free access to the works, and to the Factories or other places where materials are being prepared or

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fabricated for the Contract and also to any place where the materials are lying or from which they are being obtained. The Contractor shall give every facility to the Client and the Employer and their representative for inspection and examination and test of the Client and workmanship. No person unless authorized Client or the Employer, except the Representative, authorized shall be allowed on the works at any time. If any works is to be done at place other than the site of the works Contractor shall obtain the written permission of the doing so.

16. ROLE OF THE CLIENT/CONSULTANT

GCC 16

Client /Consultant duties are to be watch and supervise the works and to test any materials to be used or workmanship employed in connection with the works, quality control, project scheduling and monitoring and co-ordination with all other agencies and Civil Contractor, recording of measurement clarifications of bills, preparing extra deviation items, excess/saving statement preparing minutes of meeting etc. They shall have no authority either to relieve the Contractor of any of his duties or obligations under the Contract, or, except those expressly provided hereunder, to order any work involving delay or any extra payment of the Employer or any variation of or in the works.

The Contractor shall afford the Client/Consultant every facility and assistance for examining the works and materials and checking and measuring time and materials. The Client/Consultant shall have no power to revoke alter, enlarge or relax any requirements of this Contract, or to sanction any day-work, additions, alterations, deviations or emissions unless such in authority may be specially conferred by a written order of the Employer.

The Client /Consultant shall act in consultation with the Structural Consultant in regard to the quality of all Structural aspects of the work and in consultation with the Client will finalize the selection of materials involved. The Consultant shall jointly record the measurements with Contractor's representative for all items of works and on completion hand over the records to the Employer.

The Client /Consultant shall have the power to give notice to the Contractor or his Engineer in charge about the non-approval of any of any work or materials and such works shall be suspended or the use of such materials should be discontinued until the decision of the Client /Employer is obtained, the work, will from time to time visited by the Client /Employer but such examination

shall not in any way exonerate the Contractor from the obligation to remedy any defects, which say 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 Client as the case may be.

The Client /Consultant shall have such other powers and discharge other functions as are specifically provided in this contract including such incidental or consequential powers or duties, subject always to such specific instructions or directions of the Employer, which shall be duly notified to the Contractor.

17. ASSIGNMENT OR SUB-LETTING

GCC 17

The work 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 thereof or interest therein, nor shall he take a new partner, without the written consent of the Consultant/Employer and not undertaking shall relieve Contractor from the full and entire responsibility of the Contract or from active superintendence of the works during their progress.

18. VARIATIONS NOT TO VITIATE CONTRACT

GCC 18

The Contractor shall when directed in writing by the Consultant omit from or vary any works shown upon the drawings or described in the specifications or included in the priced Schedule of Quantities, but the Contractor shall not make any alterations on the provisions of the Contract without such authorization or direction in writing from the consultant.

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

The rate of items not included in the bill of quantities shall be settled by the consultant in accordance with the provisions of Clause 21 hereof.

19. MEASUREMENT OF WORKS

GCC 19

The Consultant may from time to time intimate the Contractor that he requires the works to be measured and the Contractor shall forthwith attend or send a qualified Engineer to assist the Consultant's or their representative in taking such measurements and calculations and to furnish all particulars or give all assistance required by them.

Should the Contractor not attend or neglect or omit to send such agent, then the measurements taken by the Consultant or approved by him shall be taken to be the correct measurements. The works shall be measured according to the mode of measurements stated in the Annexed general specifications. The measurement shall wherever not mentioned in the tender be taken in accordance with the Handbook of Method of Measurement of building work (SP-27-1987) published by Bureau Indian Standards 1988 and its latest revision if any.

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

All authorized extra works, omissions and all variation made without the Consultant's knowledge, if subsequently sanctioned by him, in writing, shall be included in such measurements.

20. PRICES FOR EXTRA ETC. - ASCERTAINMENT OF

GCC 20

Should it be found after the completion of the works from measurements taken in accordance with the previous paragraph that any of the quantities or amounts of work thus ascertained are less or more than the specified for the works in the period schedule of quantities and/or that any variation is made, from the tendered schedule of item by operating additional item called "extra item" or "substitute item" in substitution of some tendered items, the rate and the valuation thereof, unless previously or otherwise agreed upon shall be made in accordance with the following rules:-

20a The net rates or prices in the original tender shall determine the valuation of the extra work where extra work is of a similar character and executed under similar conditions as the work priced therein.

20b The net rates or prices in the original tender shall determine the value of the item omitted, provided if omissions vary the conditions under which any remaining, items of works are carried out, the prices for the same shall be valued under (c) hereof.

20c Where the extra works are not of similar character and/or not executed under similar condition as aforesaid or where the omissions vary, the conditions under which any remaining items of works are carried out or if the amount of any omission or additions relative to the amount of the whole of the Contract works or to be any part thereof shall be such that in the opinion of the Consultant, the net rate or price contained in the priced Schedule of Quantities or tender or for any item of the works involves loss or expenses beyond that reasonably contemplated by the Contractor or is by reason of such omission or addition rendered unreasonable or inapplicable, the Consultant shall fix such other rate or prices as in the circumstances he shall think reasonable and proper, on the basis of actual cost of work involved plus fifteen percent (15%) towards contractor's overhead and profits, which shall be final and binding on the contractor. **No escalation shall be entertained on the extra or deviated items.**

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- 20d The measurement and valuation in respect of the Final Contract as executed shall be completed within the “period of final measurement” or within 3 (THREE) months of the completion of the Contracted works as defined under Clause No.24 (Certificate of Virtual Completion)
- 20e The contractor shall submit the claims for deviated items on pink sheets & extra items on Yellow sheets.
21. **UNFIXED MATERIALS** **GCC 21**
 When any materials intended for the works shall have been placed at the site by the Contractor, such materials shall not be removed there from (except for the purpose if being used an the works) without the written authority of the Consultant and when the Contractor shall have received payment in respect of any Certificate in which the Consultant shall have stated that he has taken into account the value of such unfixed materials on the works, such materials shall become the property of the Employer and the contractor shall be liable for any loss or damage to any such materials.
22. **REMOVAL OF IMPROPER WORK AND MATERIALS** **GCC 22**
 The Consultant shall during the progress of the works, have power to order in writing from time to time the removal from the works, within such reasonable time as may be specified in the order of any material which, in the opinion of the Consultant are not in accordance with the specification or the instruction of the Consultant and the substitution of proper materials and the removal and proper execution of any such work, which has been executed with materials or workmanship, not in accordance with the Drawings and Specifications or instructions and the Contractor shall forthwith carryout such order at his own cost. In case of default on the part of the Contractor to carryout such order the Employer shall have power to employ and pay other persons to carry out the same and all expenses consequent thereon or incidental thereto shall be borne by the Contractor and shall be recoverable from him on behalf of the Employer or may or may be deducted by the Consultant from any money due or say become due to the Contractor.
- In lieu of the correcting works, which are not done in & accordance with the contract, the Consultant/Employer may allow such work to remain and in that case may make allowance for the difference in value together with such further allowance in consultation with the employer.
23. **DEFECTS AFTER COMPLETION** **GCC 23**
 Any defects, or other faults which may appear within the “Defects Liability Period” of 12 months after the Virtual Completion of work responsibility for making good at their own cost of the defects becoming apparent during this period will rest entirely with the Contractor & the Contractor shall upon the direction and writing of the Consultant, and within such reasonable time as shall be specified therein, be rectified and made good by the Contractor, at his cost, unless, the Consultant shall decide that he ought to be paid for such rectification and making good and in case of default the Employer may employ and pay other persons to rectify and make good such defects, or other faults and all damages, loss and expenses consequent thereon or incidental thereto shall be made good and borne by the Contractor and such damage, loss and expenses shall be recoverable from him by the Employer or say be deducted by the Employer upon the Consultant’s Certificate in writing from any moneys due or that may become due to the Contractor or the Employer may in lieu of such rectification and making good by the Contractor deduct from any money due to the Contractor as sum, to be determined by the Consultant, equivalent to the cost of rectifying such works & in the event the amount retained under Clause 34 (Certificate and Payments – Page No.31) being insufficient, recover the balance from the Contractor.
24. **CERTIFICATE OF VIRTUAL COMPLETION OF WORKS** **GCC 24**
 The Contractor shall inform in writing to the Consultant in the prescribed proforma ‘D’ as and when the works are completed in all respects to enable the Consultant to inform the Employer to take possession of the completed works. The defects liability period shall commence from the date of

issue of such letter by the Contractor & accepted by the Consultant to be called Virtual Completion Certificate.

25. OTHER PERSONS ENGAGED BY THE EMPLOYER GCC 25

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

26. CONTRACTOR'S LIABILITY AND INSURANCE GCC 26

26a From commencement to completion of works, the Contractor shall take full responsibility for the care of the work and for taking precautions to prevent loss or damage to the works and to minimize the loss or damage to the maximum extent possible shall be liable for any damage or loss that may arise to the works or any part thereof from any cause whatsoever, inherent defects and failures due etc poor workmanship and causes such as lighting, explosion, earthquake, storm, hurricane, floods, inundation, riots (excluding civil war rebellion, revolution and insurrection) but further including the failure to the design and shall at his own cost repair and make good the same so that at all times the work shall be in good order and condition and in conformity in every respect with the requirements of the Contract. The Contractor shall take the Comprehensive contractor's all Risk Insurance policy for the full value provided under this contract increased by 25% of the contract value.

Explanation:

For the purpose of this condition, the expression "from the commencement to completion of work" shall mean the time commencing **from the date of commencement and ending with the expiry of defects liability period provided in the Agreement.**

26b Without limiting the obligations and responsibilities under this condition, the Contractor shall insure to keep insured the works from commencement to completion, as aforesaid, for their full value provided under this contract increased by 25% of the Contract value against the risk of loss or damage from any cause whatsoever including the causes enumerated in the Clause(a) above. In the event of there being in variation in the nature and extent of the work, the Contractor shall from time to time increase or decreases the value of the insurance correspondingly. All the premium shall be borne and paid by the Contractor. The said insurance shall also provide for the removal of debris of the lost or damaged works.

The said insurance shall be in **the Joint name of the Employer and the Contractor**, the Employers name being mentioned first in policy and the Contractor should deposit with the Employer the said policy or Policies before commencing the work at site. All money payable by the insurers under such policy or Policies shall be recovered by the Employer and shall be paid to the Contractor in installments for the purpose of rebuilding or replacement or repair the work and/or goods destroyed or damaged as the case may be.

26c If the Contractor has a blanket insurance policy for all the works and the policy covers all the items to be insured under the condition, the said policy shall be assigned by the Contractor in favor of the Employer, provided however that if any amount is payable under the policy by the insurers in respect of works other than the work under the Contract, the same may be recovered by the Contractors directly from the insurers.

20d The Contractor shall indemnify and keep indemnified the Employer against all losses and claims, damages or compensation under the provision of the Payments of Wages Act 1938, Minimum Wages Act 1949, Employer's Liability Act 1938, Workman's Compensation Act 1923, the Maternity

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Benefit Act 1961, the Bombay Shops and Establishment Act 1947, Industrial Dispute Act 1947 and Contractor Labour (Regulation and Abolition) Act 1970 and Employees State Insurance Act or any modification thereof or any other law relating thereto and rules made there under from time to time or as consequences of any accident or injury to any workman or other person in or about the work whether in the employment of the employer or contractor or not, and also against cost, charges and expenses of any unit, action or proceedings whatsoever of such accident or injury or combination of any such claim.

26e Before commencing the work, the Contractor shall without limiting his obligations and responsibilities under this condition, insure against any loss of life or injury to any personnel in the employment of Contractor/sub-Contractor / nominated subcontractor. For this purpose, an insurance shall be taken by the Contractor/Sub- Contractor, such insurance shall be taken to include both employees/workmen covered by the Workman's Compensation Act 1923, as well those employers/workmen not covered by the Act. Separate insurance policies may be taken for employees/workmen covered by Workman's Compensation Act. 1923, and employees workmen not covered by the said Act. The entire premium shall be paid by the Contractor

Policy/Policies taken under this clause for the 'personnel in employment with the Contractor/Sub-Contractor/nominated Sub-Contractors the Employee and Contractor shall recover directly from the Insurance Company and ensure that payment of the same is made to the affected parties. The policy in original shall be deposited with the Employer.

26f The Contractor shall at all times indemnify and keep indemnified the Employer against all losses and claims for injuries or damage to any person or any property whatsoever which may arise out of or in consequence of the construction and during the defects liability period and against all claims, demands, proceedings, damages, costs, charges and expenses whatsoever in respect of the relation thereto. Before commencing the execution of the works, the Contractor shall without in any way

limiting his obligations and liabilities under this condition, insure at his cost and expense against any damage or loss, or injury which may be caused to any person or property including the Employee or servants of the Employer and the Consultants and their property by or in the Course of the execution of the works. Such insurance to be known as the Third Party Insurance shall be in a sum equivalent to two percent of the estimated value of the work, subject to the minimum sum of Rupees Five Lakhs. The Insurance Policy to be so obtained by the Contractor shall be deposited by the Contractor with the Employer within seven days of its issue by the insurers.

26g The Contractor shall provide the Employer with documentary evidence from time to time that he has taken all the insurance policies mentioned foregoing paragraphs and that he has paid the necessary premium for keeping the policies valid till the expiry of the defects liability period.

26h The Contractor shall ensure that similar insurance policies are taken out by his sub- Contractors or nominated Contractors, if any, and shall be responsible for any claim or loss resulting from their failure to obtain adequate Insurance protection in connection thereof. While taking the insurance policies, Contractor should indicate clearly to the insurance companies that policies issued shall cover their sub-contractors and nominated subcontractors also.

26i If the Contractor and/or his sub- Contractor or nominated Contractor, if any, shall fail to effect and keep in force the Insurance referred to above or any other insurance which he/they say be required to effect under the terms of the Contract, then in any such case the Employer may without being bound to effect and keep in force any such insurance policy and pay such premium or premium as may be necessary for that purpose from time to time and deduct the amount so paid by the Employer from any moneys due or which may become due to the Contractor recover the same as a debt due from the Contractor.

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- 26j All insurance to be affected by the Contractor and/or his sub-contractors or nominated sub-Contractors if any, shall be taken only with the insurance company to be approved by the Employer.
- 26k Without prejudice to any of his obligations and responsibilities under this condition, the Contractor shall within 30 days from the date of work order and thereafter at the end of each quarter submit a report to the Employer in proforma 'C' annexed hereto indicating the detailed information on the insurance policies as prescribed in the said proforma together with relevant document.
- 26l No work shall be commenced by the Contractor unless and until he has obtained the insurance or Insurances required to be obtained by his under or by the foregoing clauses and no work shall be carried out or continued by the Contractor unless and until – each insurance is current and valid at that time. All the receipts in original along with two photo copies thereof, for the payment of premium shall be furnished by the Contractor to the Consultant / Employer. The original receipts will be returned to the Contractor after verification. The Employer reserves the right for payment on works done subject to fulfillment of this conditions.
- 26m In the event of any claim for insurance becoming due on account of any eventuality covered by the respective insurance policy/policies, the Contractor shall reinstate the installation, replace the materials or equipment's or pay compensation to be affected personnel/employee under this Contract or any other Contract.
- 26n If the Contractor shall not perform and observe any of the duties and obligations devolving upon him hereunder and such omission or breach by the Contractor shall involve the Employer in any liability tortuous or otherwise and/or loss or damage, the Employer shall be entitled to recover the amount of restitution from any moneys due to the Contractor from the Employer under this Contract or any other Contract.
- 26o The consultant will ensure the validity of the Insurance policies (taken by the Contractors) on behalf of the Employer.
27. TO DEFINE TERMS AND EXPLAIN PLANS **GCC 27**
The various parts of the Contract are intended to be complementary to one another, but should any discrepancy appear, or any misunderstanding arise as to the import of anything contained therein the explanations of the Consultant shall be final and binding. The correction of any errors or omissions of the Drawings and Specifications may be made good by the Client / Consultants, when such correction is necessary to bring out clearly the intention which is indicated by a reasonable interpretation of the drawings and specification as whole.
28. DATE OF COMPLETION **GCC 28**
On receiving the Work Order, the Contractor shall thereupon and forthwith begin the works **IMMEDIATELY** and shall proceed regularly with and complete the same in accordance with the programme of execution, to the entire satisfaction of the Client / Employer within **12 Weeks / 3 Months** from the date of issue of work order subject nevertheless, to the provisions for extension of time hereinafter contained. The Contractor shall not have any lieu or charges on the site, building and/or any other plant, equipment, machinery etc. lying on the site in respect of any of his claim arising under the contract or otherwise.
29. DELAY AND EXTENSION OF TIME **GCC 29**
If in the opinion of the consultant the works be delayed (a) by force majeure or (b) by reason of any exceptionally inclement weather or (c) by reason of proceeding taken or threatened by the dispute with adjoining or neighboring owners or public authorities arising otherwise than through the Contractor's own default or (d) by the works or delays of other.

Contractors or tradesmen engaged or nominated by the Employer or the consultant and not referred to in the Schedule of Quantities and/or Specifications or (e) by reason of the Consultant's instruction as per clause (9) below, or (f) by reason of civil commotion local commotion of workmen or strike or lock-out affecting any of the building trades or (9) in consequences of the Contractor not having in due time necessary instructions from the Consultant for which he shall have specifically applied in writing, ahead of time giving the Consultant reasonable time to prepare such instructions, the Employer/Consultant shall make a fair and reasonable extension of time for completion of the Contracted works. In case of such strike or lock-out, the Contractor shall, as soon as may be, give written notice thereof to the Consultant, but the Contractor shall nevertheless constantly use his endeavors to prevent delay and shall do all that may reasonably be required to the satisfaction of the Consultant to proceed with the work.

The Contractor shall take all practicable steps to avoid or reduce any delay in the execution and completion of the works arising out of

- (a) Force Majeure
- (b) Exceptionally inclement weather
- (c) Loss or damage by fire and earthquake
- (d) Civil commotion lock out, strike etc.
- (e) Consultants/Employer's instructions, as the case may be

30. DAMAGES FOR NON-COMPLETION GCC 30

If the Contractor fails to complete the works by the date named in Clause 28 (Date of Completion) or within any extended time under Clause 29 (Delay & Extension of Time – Page Nos.28 & 29) and if the Consultant shall certify in writing on or before the date of issue of the Certificate for the last payment which the Contractor may become entitled hereunder that the works could reasonably have been completed by the date or within the said extended time, then the Contractor shall pay or allow the Employer the sum to be worked out at ½% of the contract value per week or part of the week thereof subject to maximum 10% of contract value to be recovered as liquidated damages and not by way of penalty for the delays beyond the said date of extended that as the case say be, drying which the works shall remain unfinished and such damages may be deducted from any moneys dues or which say become due to the Contractor. The deduction of such sum shall not however absolve the Contractor of his responsibility and obligations to complete the work in its entirety.

31. FAILURE BY CONTRACTOR TO COMPLY WITH CONSULTANTS INSTRUCTIONS GCC 31

If the Contractor after receipt of written notice from the Consultant requiring compliance, with such further drawings and/or instructions to remove, fails within seven days to comply with the same, **the Consultant may employ other persons to execute any such work whatsoever as may be necessary to give effect thereto and all costs incurred in connection therewith shall be recoverable from the Contractor by the Employer on a certificate by the Consultant as a debt, to be deducted by him from any moneys due to and/or to become due to the Contractor**

32. CONSULTANTS DELAY IN PROGRESS GCC 32

The Consultant may delay the progress of the works in case of rains or otherwise, without vitiating the Contract and grant such extension of time with the approval of the Employer for the completion of the Contract as he may think proper and sufficient in consequences of such delay and the Contractor shall not make any claim for compensation or damage in relation thereto.

33. SUSPENSION OF WORKS GCC 33

If the Contractor except on account of any legal restraint upon the Employer preventing the continuance of the works, on account of any of the causes mentioned in Clause 29 (Delay &

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Extension of Time – Page Nos.28 & 29) in the case of a certificate being withheld or not paid when due, shall suspend the works, or in the opinion of the Consultant shall neglect or fail to proceed with due diligence in the performance of his part of the Contract or if he shall more than once make default in the respects mentioned in CLAUSE 22 (Removal of improper work and materials – Page Nos.23 & 24) the Employer through the Consultant shall have power to give notice in writing to the Contractor requiring that the work be proceeded with a reasonable manner and with reasonable dispatch. Such notice shall not be unreasonably given and must signify that it purports to be a notice under the provisions of this clause and must specify the act or defaults on the part of the Contractor upon which it is based. After such notice shall have been given, the Contractor shall not be at liberty to remove from the site of works, or from any ground contiguous thereto, any plant or materials belonging to him which shall have been placed thereon for the purpose of works and the Employer shall retain and hold a lien upon such plant and materials until the works shall have been completed. If the Contractor fails for 7 (seven) days after such notice has been given to proceed with the works as therein prescribed, the Employer may enter upon and take possession of the works and of all such plant and materials thereon intended to be used or the work, and the Employer shall retain and hold a lien upon all such plant and materials until the works shall have been completed under powers hereinafter conferred upon him. If the Employer shall exercise the above power, he may engage any other person to complete the works and exclude the Contractor, his agents and servants, from entry upon or access to the same, except that the Contractor or any person appointed in writing may have access at all reasonable times during the progress of the works to inspect, survey and measure the works.

Such written appointment or a copy thereof shall be delivered to the consultant before the person so appointed comes on to the works and the Employer shall take such steps as in the opinion of the Consultant, may be reasonably necessary for completion the works, without undue delay or expenses, using for that purpose the plant and materials above mentioned in so far as they are

suitable and adaptable to such use. Upon the completion of the work, the Consultant shall certify the amount of the expenses properly incurred, consequent on and incidental to the default of the Contractor as aforesaid and in completing the works by other persons. Should the amount so certified as the expenses properly incurred be less than the amount which would have been due to the Contractor upon the completion of the works by him, the difference shall be paid to the Contractor by the Employer should the amount of the former exceed the latter, the difference shall be paid by the Contractor of the Employer.

The Employer shall not be liable to make any further payment or compensations to the Contractor for or on account of the proper use of the plant for the completion of the works under the provision herein before mentioned other than such payment as included in the contract. After the works shall have been so completed by persons other than the Contractor under provision herein before contained, the Consultant shall give notice to the Contractor; to remove his plant and all surplus materials as may not have been used in the completion of the works from the site. If such plant and materials are not removed within a period of 14 days, after the notice shall have been given, the Employer may cause to remove and sell the same, holding the proceeds, less the cost of the removal and sale to the credit of the Contractor. The Employer shall not be responsible for any loss sustained by the Contractor the event of from the sale of the plant in the Contractor not removing if after notice.

34. CERTIFICATE & PAYMENTS

GCC 34

The Contractor shall be entitled under the certificate to be issued by the Consultant to the Contractor, RUNNING PAYMENT – UP TO 75% within 15 working days from the date of each certificate, to the payment from the Employer from time to time by installments against two / three(Maximum) Running Bills during progress of work at site. The retention at the rate of 8% (Eight percent) of the value of the work so executed shall be deducted from running bills. The

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maximum amount of Retention Money shall be balance of the total Security deposit of **5%** of contract value. This amount will not carry any interest. This balance payment will be made after due scrutiny within 15 working days from the date of certificate of the Client.

Provided always that the issue of any certificate by the Consultant during the progress of the works or at or after their completion shall not have effect as a certificate of satisfaction or relieve the Contractor from his liability under Clause 23 and within the extent and period provided by the Statute of Limitations, provided always that the interim certificate and the final certificate issued by the Consultant shall be accompanied by the Client's Certificate to the effect that the work has been carried out as per the drawings and specifications approved by them. The Consultant shall have power to withhold any certificate, if the works or any parts thereof are not carried out to this satisfaction.

The Consultant may by any certificate make any correction required in previous certificates/s which shall have been issued by him.

The Contractor shall submit interim bills only after taking actual measurement jointly recorded with Consultant in Measurements Book and showing the register to Employer's Representatives. This is not only to regulate the correctness of the quantity but also to facilitate expeditious clearing of the bills. The bills shall be submitted in the following proforma. The employer shall carry out test checking of measurements as when required.

The final bill shall be submitted by the Contractor within one month of Virtual Completion Certificate received from the Contractor duly endorsed by the Consultant, and such bill shall be settled and certified for payment by the Consultant within three months of the submission of the bill.

Payments upon the Consultant's Certificate shall be made within a period of seven working days named in the appendix as 'Period of Honoring of Interim Certificates' after such Certificates have been delivered to the Employer. Payment upon the Consultant's Final Certificate shall be made within a period of three months from the date of its receipt by the Employer.

The Contractor shall submit the proforma 'A' and 'B' serially numbered with dates for all extra/deviated items of works. The approved rates & quantities in the bills shall be in 'Pink Sheets' for deviated item & 'Yellow' sheets for extra items.

Contractor shall, without fail submit along with his R.A. Bills/Final Bills the test certificates to the Consultant for the wood, plywood, laminates, veneers, glass, hinges, door closure etc. all in conformity with latest relevant I.S. Codes. Such test certificates and result shall be presented to and certified for acceptance by the Consultants before submission along with R.A.Bills/Final Bills.

R.A.Bills/Final Bills received without the test certificate/results approved by Consultant shall be returned to the Contractor.

35. NOTICES

GCC 35

Notices of the Employer, to the Consultant or the Contractor may be served personally or by being left at or sent by registered post to last known place of the business of the party to whom the same is given or in the case of the Contractor by being left on the works. In the case of Company or Corporation, notices shall be served at or sent by registered post to the registered office of the Company or Corporation. Any notice sent by registered post shall be deemed to be served at the time when, in the ordinary course of post, it would be delivered.

36. TERMINATION OF CONTRACT BY THE EMPLOYER

GCC 36

If the Contractor being an individual or a firm, commit any Act of Insolvency of shall be adjudged an insolvent or being in an incorporated company shall have an order for compulsory winding up or

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applies for voluntary winding up or subject to the supervision of the Court and of the Official Assignee or the Liquidator in such acts of insolvency or winding up shall be unable within seven days notice to his requiring him to do so, to show to the reasonable satisfaction of the Consultant that he is able to carry out and fulfill the contract and to give security, therefore if so required by the Consultant.

OR if the Contractor (whether an individual, firm or incorporated company) shall suffer execution to be issued or shall suffer any payment under this contract to be attached by or on behalf of any of the creditors of the Contractor.

OR shall assign or sub-let the contract without the consent in writing of the Consultant first obtained,

OR shall charge or encumber this contract or any payments due or which might become due to the Contractor there under,

OR if the Consultant shall certify in writing to the Employer that the Contractor:

- i. has abandoned the contract, or
- ii. has failed to commence the works, or has without any lawful excuse under these conditions suspended the progress of the works for seven days after receiving from the Consultant, written notice to proceed or
- iii. has failed to proceed with the works with such due diligence and failed to make such due progress as would enable the works to be completed within the time agreed upon, or
- iv. has failed to remove materials from the site or to pull down and replace work for seven days after receiving from the Consultant written notice that the said materials of work were condemned and rejected by the Consultant under these conditions, or
- v. has neglected or failed persistently to observe and perform all or any of this acts, matters or things by this contract to be observed and performed by the Contractor for seven days, after written notice shall have been given to the Contractor requiring the Contractor to observe or perform the same, or
- vi. has to be detriment of good workmanship or in defiance of the Consultant's instructions to the contrary sub-let any part of the contract.

Then and in any of the said cases the Employer may, notwithstanding any previous waiver, after giving seven days notice in writing to the Contractor, determine the contract but without thereby affecting the powers of the Consultant or the obligations and liabilities of the Contractor, the whole of which shall continue in force as fully as if the contract has not been so determined and as if the works subsequently executed has been executed by or on behalf of the Contractor. And further the Employer may enter upon and take possession of the work and plant, tools, scaffolding, sheds, machinery, steam and other power utensils and materials lying upon the premises or the adjoining lands or roads and use the same as his own property or may employ the same by means of his own servants and workmen in carrying on and completing the works or by employing any other Contractors or other persons to complete the works, and the Contractor shall not in any way interrupt or do any Act, matter or thing to prevent or hinder such other Contractor or other person or persons employed for completing and finishing or using the materials and plant for the works. When the works shall be completed or as soon thereafter as convenient, the Consultant shall give a notice in writing to the Contractor to remove his surplus materials and plant, and should the Contractor fail to do so within a period of 14 days after receipt thereof by him, the Employer shall sell the same by public auction and give credit to the Contractor for the amount realized on deducting there from, the

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costs of removal and sales. The Consultant shall (if anything) shall be due or payable to or by the Employer for the values of the said plant and material so taken possession of by the Employer and the expense or loss which the Employer shall have been put to in procuring the works to be completed and the amount if any, owing to the Contractor and the amount which shall be so certified shall thereupon be paid by the Employer, to the Contractor or by the Contractor to the Employer, as the case may be and the certificate of the Consultant shall be final and conclusive between the parties. On termination of the contract, the Contractor shall forthwith remove himself and his workmen from the works site.

37. PHOTOGRAPHS OF WORKS CARRIED OUT GCC 37

The Contractor shall every month supply at his own cost a reasonable number of Post Card size colored photographs of the works carried out from time to time as per the instructions of the Consultant. In the event of any dispute or termination of contract either by the Employer or the Contractor as provided for in the aforesaid clause 37 and 30, the Contractor shall arrange to obtain photographs of the works completed upto the date of such termination of contract.

38. MATTER TO BE FINALLY DETERMINED BY THE CONSULTANTS GCC 38

The Consultants decision, opinion, direction, certificates (except for payments) with respect to all or any of the matter under CLAUSES 2, 7, 9, 17, 23, 30(a), 30(b), 30(f) and the schedule of rates as contained in Annexure hereof and as to the exercise by him under clause It of the right to have any works opened up, (which matters are here in referred to as the excepted matters) shall be final and conclusive and binding on the parties hereto and shall be without appeals litigation in court or Arbitration etc.

39. FORECLOSURE OF CONTRACT IN FULL OR IN PART GCC 39

If at any time after acceptance of the tender the Employer/Consultant shall decide to abandon or reduce the scope of works for ay reason whatsoever and hence not require whole of any part of the works to be carried out they shall inform the Contractor in writing to that effect and the Contractor shall have no claim to any payment or compensation or otherwise whatsoever on account of any profit or advantage which he might have derived from the execution of the works in full, but which he did not derive in consequence of such foreclosure of the whole or part of the works.

The Contractor shall be paid at the contract rates, full amount for works executed at site, and in addition, reasonable amount as certified by the Consultant for the value, of such material which material shall thereupon become the property of the Employer.

40. INSPECTION OF SITE AND SUFFICIENCY OF TENDERS GCC 40

40a The Contractor shall inspect and examine the site and its surroundings and shall satisfy himself before submitting his tender as to the nature of the premises, the form and nature of the site, the quantities and nature of work and materials necessary for the completion of the works and the means of access of site, the accommodation he may require outside the project site and in general shall himself obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect his tender.

40b The Contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the rates and prices quoted in the Schedule of work/items/quantities or in Bills of Quantities, which rates and prices shall, except as otherwise provided, cover all his obligations under the contract and all matters and things necessary for proper completion and maintenance of the works.

40c No extra charges consequent on any misunderstanding or otherwise shall be allowed.

INSPECTION OF WORKS

The proposed work can be inspected by the CTE's Organization – a wing of Chief Vigilance Commission. The Contractor shall assist and co-ordinate to provide everything necessary for the purpose.

41. NOTICES TO LOCAL BODIESGCC 41

The Contractor shall comply with and give all notices required under any law, rule, regulations, or byelaws of parliament, State Legislature or local authority relating to works. The Contractor shall before commencing the execution of work issue a certificate to the Employer or Consultant that he has obtained all the permission and given all the notices as are required to be obtained or given under law.

42. TOTAL SECURITY DEPOSITGCC 42

Total Security Deposit shall comprise:

42a Earnest Money Deposit,

42b Initial Security Deposit

42c Retention Money

42a EARNEST MONEY DEPOSIT

The tenderer shall furnish Earnest Money Deposit amounting of **Rs.1,70,000/- (Rupees One Lakh Seventy Thousand Only)** of the tender amount in the form of Bank Draft down in favor of Employer and attach draft at the time of submission of tender as the Earnest Money. No tenders shall be considered unless the Earnest Money is so deposited. No interest shall be paid out this Earnest Money Deposit. The Earnest Money of an unsuccessful tenderer will be refunded, without any interest, soon after the decision to award the work is taken. The Earnest Money Deposit shall stand absolutely forfeited if the tenderer revokes his tender at any time during the period when he is required to keep his tender open for acceptance by the Employer, or if, after the tender is accepted, the Contractor fails to enter into a formal agreement / or if fails to pay the security deposit as stipulated/or if he fails to commence the work within stipulated time limit.

42b INITIAL SECURITY DEPOSIT

The amount of Initial Security Deposit shall be **2%** of the accepted value of the tender including the Earnest Money Deposit.

42c RETENTION MONEY

Apart from the initial earnest money deposit to be made to the Contractor as aforesaid, the retention money shall be deducted from progressive running account bills @ **8%** of the gross value of work done and claimed in each running account bill. Provided that the total security deposit to the earnest money deposit amount plus the retention amount shall both together not exceed **5%** of the Contract price as determined after considering all variations as approved.

43. TECHNICAL AUDIT CLAUSEGCC 43

The work is liable to be technically audited by the Chief Technical Examiner of the Central Vigilance Commission Government of India from time to time. Any defects, improvements or testing etc pointed out by the Chief Technical Examiner should be carried out by the Contractor as his own cost and any deduction suggested by the CTE will be effected.

The Employer shall have a right to cause a technical examination and audit of works and the final bills of the Contractor including all supporting vouchers, abstract, etc to be made at the time of payment of the final bill. If as a result of this examination or otherwise any sum is found to have been overpaid in respect of any work done by the Contractor under the contract the Contractor shall be liable to return the amount of over payment and it will be lawful for the Employer to recover the

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same from any sum or due to him and in any other manner legally permissible and if it is found, that the Contractor was paid less than what was due to him under the contract in respect of any work, executed by him under the contract the amount of such under payment shall be duly paid by the Employer.

Any sum of money due and payable to the Contractor (including Security deposit returnable to him) under this contract may be appropriated by the Employer and set off against any claim of the Employer for the payment of a sum of money arising out of or under any other contract made by the Contractor with the Employer.

44. PROCEDURE FOR BILLING

GCC 44

44a Contractor shall submit THREE COPIES of his bill on white paper for tender items.

42b As regards Contractor's claims for extra/deviated items. The onus of getting Consultant's/Owner's approval for the admissibility of such items lies on the Contractor.

42c After the admissibility is confirmed by client in writing, the Contractor will submit his rate analysis and details of claims on Consultant pink or yellow papers to be made available by the Consultant.

42d The Contractor will include extra/deviated items in his interim bills only after Employer's approval of rates on the basis of Consultant recommendations.

45. DELETION OF ITEMS FROM BILLS OF QUANTITIES

GCC 45

The Employer reserves the right to delete any item from the bill of quantities drawn up. The Contractor will not have any claim on his account whatsoever.

46. REINSTATEMENT ITEMS

GCC 46

In case of items like making good new work plaster of paris false ceiling after the alteration and matching the finish with the existing one, the work will have to be done perfectly. In this case Consultants' decision will be final regarding the acceptability of finish. If the reinstatement is not accepted by the Consultant, the same will have to be done again to Consultant's and Bank's satisfaction at no extra cost.

47. NON-AVAILABILITY OF ANY MATERIAL

GCC 47

If for some reasons, the materials mentioned in the Approved Brand of Manufacturer's or the Bill of Quantities are not available, the same shall be brought to the notice of the Employer/Consultant in writing by the Contractor. No alternative material shall be used without Employer's and Consultant written approval.

48. APPENDIX TO CONDITIONS OF CONTRACT GCC 48
 Clause Nos.

- | | | |
|-----|---|--|
| 01. | Earnest Money Deposit | Rs.1,70,000/-(Rupees One Lakh Seventy Thousand Only) |
| 02. | Defects Liability Period | 12 Months |
| 03. | Date of Commencement | IMMEDIATELY |
| 04. | Date of Completion | 12 Weeks from the date of Issue of Letter of Intent./workorder |
| 05. | Extension of Time Limit | |
| | No.1 Ref Extended Date | of completion upto |
| | No.2 Ref Extended Date | _____”upto |
| | No.3 Ref Extended Date | _____”upto |
| 06. | Agreed Liquidated Damages | ½% as specified in clause 31
Max upto 10% of the Contract Value |
| 07. | Period of Final Measurement | 90 working days |
| 08. | Value of work for the issue of Interim Certificates | upto 75% against 2 / 3 Running bills |
| 09. | Retention Percentage | 8% (Maximum 5% of the contract value – Initial Security Deposit) including EMD |
| 10. | Period of honoring Interim Certificate | 10 working days |
| 11. | Period of honoring balance payment | 15 working days |
| 12. | Period of honoring Final Certificate | 30 working days. |

Witness _____

Signature of Contractor

49. CONTRACTOR'S LIABILITY & INSURANCE: - SUMMARY GCC 49

No.	Nature & Scope Of Work	Value Of Insurance	Validity Period Of Insurance	Name Insurer	Insurance Policy No.
01.	Loose or Damage to works or any part thereof & all materials at site from any cause whatsoever.				
02.	Damage, loss or injury to any property of the Employer or Consultant to any person Including the Employer or Consultant or his Agents and Servants.				
03.	Claims under the Workman's Compensation Act, 19IL3, the Minimum Wages Act 1949 & the Contract Labour. (Regulation & Abolition) Act 1970.				

Signature of Contractor

Address

Witness: - _____

50.

PROFORMA "A"**GCC 50**

As Per Current Bill		As Per Previous Bill		For Current Bill		Remarks
No.	Amount	No.	Amount	No.	Amount	

1. Deviated Items

2. Extra Items

3. Deleted Items _____

Net Excess / Savings _____

Actual Total (As Executed) _____

Tender Amount _____

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51.

C E R T I F I C A T EGCC 51

The measurements on the basis of which the above entries for the Running Bill No. _____

Were made have been taken jointly on _____ and are recorded at pages _____ to _____ of measurement book No. _____.

Signature & Date
Of Contractor

Signature & Date
of Client's
Representative (Seal)

Signature & Date of
Site Engineer

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

Client

Site Engineer / Bank's Engineer

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PROFORMA OF CERTIFICATE OF PAYMENT BY CLIENT

Certificate No. Interim /	Dated	
Client: -	Project No.	Building Work/Interior Work
Particulars: -		
Contractor	Contract/Letter No.	Dated
	Contractor's Bill No.	Dated

This is to certify that the amount given below (*) is due to your Contractors for the work done by them and/or against materials delivered at site and/or advance towards contract on the above referred project.

Advance against contract	Rs.
LESS – Advance adjusted to-date	Rs.
Balance Advance	Rs.
Advance against material delivered at site	Rs.
Amount of work done to-date	Rs.
Total	Rs.
LESS – Retention on work done	Rs.
LESS – Previously certified upto	Rs.
PRESENT CERTIFICATE (*)	Rs.

Rupees _____

The cost of cement or any other material supplied by you or payments made by you directly, if any and not covered herein above, should be adjusted before making the payment of the certified amount (*)

Necessary Deduction U/S 194C of the Income Tax 1961 & sales tax may be made before paying the above certified amount.

By a copy of this letter, we are intimating the Contractors to call on you for the necessary payment.

Remarks, if any
(P.T.O.) The details of Insurance Policy are given in the next page.

Signature of Client

Enclosure: - Bill

Client's Copy

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DETAILS OF INSURANCE POLICIES

Types of Policies	Name of Insurance	Amount (Rupees)	Policy No.	Validity
-------------------	-------------------	-----------------	------------	----------

CAR Policy
Including 3rd Party
Liability

Workmen's
Compensation

Remarks: -

01. This is only an 'on-account' payment and is not to be interpreted either as approval of work, materials brought or affixed at site or for that matter approval of any sort.
02. The quantum of work done and materials delivered at site have been certified by _____.
03. Should you wish to audit such work, kindly contact the undersigned & oblige.

Client

54.

GCC 54**IV. MEMORANDUM FOR PAYMENT**

R. BILL NO. _____

01. Total amount due since previous bill (D) (A + B) Rs. _____
02. P.V.A. on account of escalation in price of steel, cement & other materials and labour as detailed in separate statements enclosed Rs. _____
03. **DEDUCTION**: -
- a) Secured advance paid in the previous Bill Rs. _____
- b) Retention money on value of works as per accepted tenders : upto date amount Rs. _____
- LESS** – Already recovered (-) Rs. _____
- BALANCE TO BE RECOVERED Rs. _____ Rs. _____
- c) Mobilization advance, if any
- c1) Outstanding amount
(Principal + Interest) as on date Rs. _____
- c2) To be recovered in this Bill Rs. _____
- d) Any other departmental material cost to be recovered as per contract, if any Rs. _____
- e) Any other departmental service charges to be recovered if any, as per contract (water, power etc.)
Enclose Statement Rs. _____
- Total deduction as per contractor Rs. _____ (-) Rs. _____
- Net amount payable as per contract (E – F) Rs. _____ (G)

IN WORDS (Rupees _____)

The bill amounting to _____ (both figures and words) has been scrutinized by me after due test check of the measurement of works as required and is recommended for payment.

Dated Signature of Bank's Engineer

In Charge of the Project

Signature of Contractor / Authorized Person With Rubber Stamp

STATUTORY DEDUCTIONS: -

01. Total amount due (E) Rs. _____

02. LESS – Income Tax Payable Rs. _____

NET PAYABLE Rs. _____

The figure given in the Memorandum for Payment has been and the bill passed for payment _____
(words and figures).

Date: - _____

Signature Of Premises Officer

For A & B refer Annexure 29.

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55. **PROFORMA 'B'**

Name of Work: -

Interim Bill No.: -

	Tender Provision Rs.	Actual Amount Rs.	Excess (+) Saving (-) Rs.	Remark
01.	Deviated Items (Pink Sheets)		+	
02.	Extra Items (yellow sheets)		+	
03.	Deleted Items		-	
		Net Excess Savings	+	
04.	Tender Items (As executed)			
		Actual cost: - (As executed)		
		LESS Tender Cost	-	
		Net Excess Saving		

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56.

PROFORMA 'C'

GCC 56**CONTRACTORS LAIBILITY AND INSURANCE SUMMARY**

Name & Number of Insurance Policy with Description	Value of Insurance	Validity Period	Loss or damage in work (covered under policy) or any part thereof and all materials at site from any Cause whatsoever
01.	02.	03.	04.
a.			
b.			
c.			
Damage, loss or injury to Any property of the Employer Or Consultant or his agents & Servants		Claims under the workman compensation Act. 19L`3, the Minimum Wages Act 1949 & Contract Labour (Regulation Abolitoin) Act 1970	Remark
05.		06.	07.

NB: - Details of further policies if any taken and the loss or damage if any under that policy may please be indicated separately 4t appropriate places.

Signature of Contractor

Address: -

Witness: -

Signature of Contractor / Authorized Person With Rubber Stamp

PROFORMA 'D': CERTIFICATE

Draft for letter to be written by the Contractor to the Consultant in connection with the Virtual completion certificate as per Clause No.24 on Page No.25 of the Contract.

Having executed the work in terms of the Contract, we hereby certify and affirm that we have virtually completed the contracted works.

We hereby certify that the works has been executed wholly to our satisfaction and with the materials and workmanship in accordance with the contract between us. We do certify further that we have executed the work in accordance with the applicable laws and without any transgression of such laws.

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CERTIFICATE FOR INSURANCE POLICIES

This is to certify that the work for which this bill is presented was executed only after obtaining the necessary insurance policies in according with obligation under this contract and during the execution of such work, the insurance policy was current and valid as detailed below: -

Workmen's Insurance				
Particulars	Contractors Plant, Machinery & Material Insurance	Third Party Insurance	Covered by Workmen is Compensation Act	Not Covered by workmens Compensation Act
01.	02.	03.	04.	05.

Name of
Insurance
Company

Policy No.

Value in
Rs.

Date of
Issue

Date of
Expiry

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INDEX TO SPECIAL CONDITIONS OF CONTRACT

No.	Item	Ref. Code
01.	Inspection of Drawings	SPCC-01
02.	Execution of work	SPCC-02
03.	Schedule of Quantities	SPCC-03
04.	Access for Inspection	SPCC-04
05.	Dimensions	SPCC-05
06.	Program of work	SPCC-06
07.	Work on Holiday	SPCC-07
08.	Action where there is no Specification	SPCC-08
09.	Reporting of Accidents to Labor	SPCC-09
10.	Clearing the Site work	SPCC-10
11.	Occupation of Partially Completed Building by the Employer	SPCC-11
12.	Preparation of building for occupation & use on Completion	SPCC-12
13.	Wages of Labor Employed by the Contractor	SPCC-13
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15.	Insurance Policies	SPCC-15
16.	Indebtedness and Liens	SPCC-16
17.	Independent Contractor	SPCC-17
18.	Work performed at Contractor's Risk	SPCC-18
19.	Construction Drawings	SPCC-19
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SECTION V

SPECIAL CONDITION OF CONTRACT

01. INSPECTION OF DRAWINGS

SPCC-01

Before filing in the tender, the tenderer will have to check up all Drawings and Schedules of quantities and will have to get an immediate clarification from the Consultant on any point that he feels is vague or uncertain. No claim for damages or compensation will be entertained on this account.

02. EXECUTION OF WORK

SPCC-02

The whole of the work as described in the Contract (including the schedule of quantities the specifications and all drawing pertaining hereto) and as advised by the Consultant from time to time is to be carried out and completed in all its parts to the entire satisfaction of the Employer/Consultant. Any minor details of work which are obviously and fairly attended, or which may not have been definitely referred to in this contract, but which are usual in sound construction practice and essential to the work, are to be included in that contract. Rates quoted in the Schedules shall be inclusive of all freights, taxes, duties such as Octroi, Sales Tax, Work Contract Tax, Excise Duty, Royalties etc., as well as transportation to as to execute the contract as per the rules and regulations of Local Bodies. State Government and the Government of India and to the full intent of tender document.

Following shall be deemed to be provided for in the quoted rates.

- 02a Labour, maintenance, flying, carrying, cleaning, making good, hauling, wastage etc.
- 02b Plant, double scaffolding frame work, English ladders, ropes, nails, spikes, tools, material and workmanlike-protection from weather, shuttering, temporary supports, plant for and the maintenance of the same.
- 02c Covering for the walling and other works during inclement weather or strikes or whenever directed as necessary.
- 02d All temporary canvas, lights, tarpaulin, barricades, water sheets etc.
- 02e All stairs and steps thresholds and any other requisite protection of the works.
- 02f All such temporary weather-proof sheds at such places and in a manner approved by the Consultant for the storage and protection of materials against the effects of Sun or Rain.
- 02g All such temporary fences guards approaches and roads say be necessary for execution of the contract works and for safeguarding the public.
- 02h The necessary scaffolding, labour and removal of the same after the completion of the work. The Consultant will be sole judge in deciding as to the suitability of the tools and plant that say be brought at the works by the Contractors for the proper execution of the work.

The rates quoted by the tenderer in the schedule of probable quantities will be deemed to be for the finished work inclusive of the list of providing the above items

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03. SCHEDULE OF QUANTITIES – NO CLAIM BECAUSE ACTUAL QUANTITIES DIFFER FROM PRELIMINARY STATEMENT SPCC-03

A schedule of probable quantities in respect of work and specifications accompany these conditions. The schedule of probable quantities is liable to alterations by omission, deductions or additions at the discretion of the Consultant / Employer.

The quantities of the various kind of work to be done and materials to be furnished under this Contract which have been estimated and are set forth in the proposal of the Agreement or the list or Contract prices, are the best available but may not be accurate in any of all particulars and are only, for the purpose of comparing on a uniform basis the bids offered for the work under this Contract. The Contractor agrees that neither the Employer nor the Consultant nor any of the employees or agents hereof shall be held responsible if any of the said estimated quantities shall be found to be not even approximately correct in the execution of the work and that he will not at any time dispute or complain of such statement nor assert that there was any misunderstanding in regard to the characters, size and type of work to be done or the kind or amount of the materials to be furnished or work to be done. Further, the Contractor shall make no claim for anticipated profits, for loss of profits or for damages because no work is ordered under certain items or because of a differences between the quantities of the various kinds of work to be done or materials actually delivered and the estimated quantities set forth by the Employer or the Consultant.

04. ACCESS FOR INSPECTION SPCC-04

The Contractor is to provide at all times during the progress of the works and the maintenance period proper means of access, ladders, gang ways etc., and the necessary attendants to move and adapt the same as directed for the inspection or measurement of the works by the Consultant/Employer or their representatives.

05. DIMENSION SPCC-05

Figured dimensions are in all cases to be followed and no case should they be scaled? Large scale details take precedence over small scale drawings. In case of discrepancy the Contractor is to ask for an explanation before proceeding with the work.

06. PROGRAMME OF WORK SPCC-06

The Bidder shall, along with his bid, submit completion of work, either in the form of CPM Net Work or in the form of a bar chart, showing how he proposes to complete the works. This programme shall be prepared in sufficient detail and shall – indicate, among other things, the following details on month-to-month basis (for each month) or week to week.

06a Quantum of work under each major item of work that should be carried out.

06b Amount of resources that would be deployed e.g. skilled/unskilled labour carpenters equipment etc.

06c Schedule of delivery of materials to site.

06d Approximate value of work contemplated to be completed each month/week.

06d Schedule and manner in which detail is or material (to be issued by the – Employer) are required from the Consultant/Employer.

06e Time period allowed for other agencies work.

06f Various milestones to be achieved.

This program, suitably amended after discussions with the Consultant/Employer, shall become binding on the, Contractor. However during the execution of project, should it become necessary in the opinion of the Consultant / Employer to reschedule some of the activities the Contractor shall do so at no extra cost and/or without any other claim.

Acceptance of bidder's tender does not necessarily, imply acceptance of the schedule submitted and the Consultant/Employer reserves to himself the right to modify/amend this schedule to suit the overall project schedule and the Contractor shall adhere to these revisions/modifications at no extra cost to the Employer.

Open space for storage could be provided by the Employer. The Contractor has to make arrangements for enclosing open space for providing safety Arrangements.

07. WORK ON HOLIDAY/WEEK DAYS

SPCC-07

Major work is required to be carried out after office hours and holidays without disturbing the departments/occupants in the building / floor and during office hours on working days may be permitted provided care is taken by the Contractor for not causing any disturbance to the working staff.

08. ACTION WHERE THERE IS NO SPECIFICATION

SPCC-08

In the case of any class of work over which there is no specification mentioned, the same shall be carried out in accordance with the Indian Standard Specifications subject to the approval of the Consultant and clients.

09. REPORTING OF ACCIDENT TO LABOUR

SPCC-09

Contractor shall be responsible for the safety of persons employed by him on the works and shall report accidents to any of them, however and wherever occurring on the works, to the Consultant/Employer. The Contractor shall make every arrangement to render all possible service to such workman. This shall be without prejudice to the responsibility of the Contractor to under the Insurance Clause of the General Condition.

10. CLEARING THE SITE OF WORKS

SPCC-10

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

11. OCCUPATION OF PARTIALLY COMPLETED BUILDING BY THE EMPLOYER

SPCC-11

The Employer shall be entitled to and at liberty to occupy even the partially completed premises or any portion thereof by themselves or through their agents and servants if they so desire in which even. Necessary extension of time & on this account for completing the work shall however, be granted to the Contractor, but he shall have no claim for any compensation whatsoever due to the delay involved in completing the work.

12. PREPARATION OF BUILDING FOR OCCUPATION AND USE ON COMPLETION SPCC-12

On completion of the work, the Contractor shall inform the Consultant in writing that he has finished the work and it is ready for the Consultants inspection. The Contractor/Employer 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 occupation and to the satisfaction of the Consultant.

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13. **WAGES OF LABOUR EMPLOYED BY THE CONTRACTOR** **SPCC-13**
 The Contractor shall pay all labour employed by him at rates fixed by his at the commencement of the Contract as per the Labour Laws. Wages as applicable for the construction work as per norms stipulated by the Bombay Metro Corporation shall be followed by the Contractor. No variation of such statutory laws & rules shall be permissible. This will also include the minimum & maximum allowable wages for various categories of labour to be employed by the Contractor
- All wages shall be paid in full and without any deductions whatsoever at the approved rates and for the full time actually worked during the wage period. The Engineer or such other office of the Employer maybe authorized in that behalf and shall have power to exercise supervision over the labour employed by the Contractor and or such purpose any of these officers may inspect the wage books, muster books and other labour records of the Contractor. In the event of the report of the inspecting officer showing that the proper rates of wages are not being paid, or that in any manner whatsoever the dealings between the Contractor and his labour are not satisfied, the Engineer shall pass such order upon the report as he considers desirable, and those orders shall be final and binding upon the contractor. The Contractor shall indemnify & keep indemnified the Consultant against any claim arising from failure of the Contractor to comply with such labour laws.
14. **EXTRA ITEMS / DEVIATIONS** **SPCC-14**
 The Contractor shall not commence work in respect of any extra items/deviations without obtaining the approval of the Consultant/Employer in writing. The Contractor shall immediately submit the rate analysis for such items, with necessary details to support the rate quoted. The rate shall then be settled by the Consultant and necessary certificate based on this shall be given to the Employer while incorporating the item in the Interim Bills.
- Claim for extra / deviated items shall be submitted in the yellow/pink proforma respectively (as per specimen copies of proforma included in the tender document), which indicate authority / order for such items.
15. **INSURANCE POLICIES** **SPCC-15**
 The Contractor shall not commence any work at site, until all the Insurance Policies, as required in terms of the General Conditions of Contract, have been submitted to the Employer. Renewal of the same if required due to extension of time of the completion or similar reasons is also the responsibility of the Contractor.
- Notwithstanding anything to the contrary mentioned in the contract, Contractors have to submit all Insurance policies in original to the Client directly to sake the Client satisfy themselves regarding adequacy of the value of Insurance, validity etc as per contractual clauses and furnish a copy to the Consultant. The Contractor shall arrange for renewals on their own. Any omission to do so or delay in non receipt of such information will be no excuse for failure to renew them or keep thee in force without a break.
16. **INDEBTEDNESS AND LIENS** **SPCC-16**
 The Contractor agrees to furnish the Employer from time to time during the progress of the work as requested, verified statements showing the Contractors total outstanding indebtedness in connection with the work covered by the contract. Before final payment is made the Employer may require the Contractor to furnish the Employer with satisfactory proof that there are no outstanding debts or liens in connection with the contract. If during the progress of the work, the Contractor shall allow any indebtedness to accrue to sub-contractors or others and shall fail to pay or discharge same within five (5) days after demand then the Employer may withhold any money due to the Contractor until such debt is paid, or apply the same towards the discharge thereof.

17. INDEPENDENT CONTRACTORSPCC-17

The Contractor agrees to perform this contract as an independent Contractor and not as a sub-contractor, agent or employee of the Employer.

18. WORK PERFORMED AT CONTRACTORS RISKSPCC-18

The Contractor shall take all precautions necessary and shall be responsible for the safety of the work and shall maintain all lights, guards, signs, temporary passages or other protection necessary for the purpose. All work shall be done at the contractors risk and if any loss or damage shall result from fire or from other cause, the Contractor shall promptly repair or replace such loss or damage free from all expenses to the Employer. The Contractor shall be responsible for any loss or damage to materials, tools or other articles used or held for use in connection with the work. The work shall be carried on and completed without damage to any work or property of the Employer or of others and without interference with the operation of existing machinery or equipments, if any.

During the contract period, the Contractor shall appoint at the site a Senior Engineer to the satisfaction of the Consultant and shall continue in such appointment for three months after the grant of the "Virtual Completion Certificate" to him. The Consultant shall be entitled to approve or disapprove without assigning reasons the appointment of such Engineer proposed by the Contractor. This condition shall be reckoned as being the essence of the contract and its breach shall make the contract revocable at the option of the Employer.

The Engineer so appointed shall coordinate the execution of work by Contractors of other trades in general and shall perform the following function in particular:

- 18.1 The Senior Engineer, in-charge of co-ordination shall be responsible for providing all the necessary support, required to be given by the **ELECTRICAL** Contractor by virtue of the contract, to the various services Contractors for the purpose of commissioning the testing of their respective services.
- 18.2 The Senior Engineer shall have adequate knowledge about the various services involved in the job to appreciate the importance of various interface activities to be performed by the main **ELECTRICAL** Contractor in the desired sequence so as to hold up the work of the services Contractors as regards commissioning and testing of their respective services.
- 18.3 The Senior Engineer should have preferably past experience of shouldering similar responsibilities to appreciate the importance of this final critical phase of the project where utmost co-ordination is required for cutting down the delays in successful commissioning of the entire facility.

19. CONSTRUCTION DRAWINGSSPCC-19

The successful tenderer shall state on receiving the letter of intent, what drawings are yet to be issued by the Consultant for execution purposes and what further details are required by him from the Consultants. Silence on the part of the successful tenderer in this regard will be construed to mean that he has all the information that he needs for ordering out materials and for contractual purposes. Unless specifically asked for in writing, delays later claimed by the successful tenderer on account of drawings will not be construed as reasons for delay the execution of work.

Apart from clarifications sought during the periodic visits to site by the Consultants representatives, the successful tenderer shall obtain all clarifications and the Consultants drawings from their, offices in Mumbai.

Extra / variation not registered within 3 weeks on receipt of drawings will not be entertained.

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20. COMPLETION DRAWINGS / ACCEPTANCE OF INSTALLATION **SPCC-20**
 The Contractor shall furnish 3 sets of drawings 'as erected' and approved by different statutory authorities in accepting the work in its entirety and completion.
- The Contractor shall submit the written acceptance of the installation by the different statutory authorities in respect of the different components of the installation and commission the system in the presence of the Consultant and Employer's representative before asking for the Virtual Completion Certificate.
21. KEEPING THE AREAS AND ACCESS ROAD CLEAN **SPCC-21**
 The Contractor shall be required to maintain the site all the building areas in a neat and clean condition at all times to the satisfaction of the Consultant.
- The Contractor shall also be required to maintain all access roads to the sit and within the site and keep, them free from all obstructions, material dropping etc. to the satisfaction of Consultant and local authorities.
22. TYPOGRAPHICAL OR CLERICAL ERRORS **SPCC-22**
 The Consultant's clarifications regarding partially omitted particulars or typographical or clerical errors shall be final and binding on the Contractor.
23. INFORMATION TO BE SUPPLIED BY THE CONTRACTORS **SPCC-23**
 The Contractor shall furnish the Employer the following:
- 23a Detailed Industrial statistics regarding the labour, employed by his etc.
- 23b The Power of Attorney, name and signature of his authorized representative who will be in charge for the execution of the work.
- 23c A list of technically qualified persons employed by his for the execution of the work.
- 23d The total quantity and quality of materials used the work.
24. TESTING OF WORKS, MATERIALS & PREPARATION OF SAMPLES **SPCC-24**
 The Contractor shall arrange to test materials and / or portions of the works as instructed by the Consultant / Employer wherever possible to ISI standards at his own cost in order to prove their soundness and efficiency. If after any such test, the work or portions of the works are found to be detective or unsound the Contractor shall pull down and re-erect the same at his own cost.
- Samples of various materials shall be submitted by the Contractor for approval prior to ordering out the same, wherever necessary the Contractor shall at his own cost, prepare samples to indicate the workmanship.
25. COVERING UP OF WORKS **SPCC-25**
 The Contractor shall cover up and protect the works from the weather and from wear and tear as directed by Consultant /Employer and shall suspend all wet operations during weather which in the opinion of Consultant, will be detrimental to the works.
26. NOTICES **SPCC-26**
 The Contractor shall give all notices and pay all fees charges royalties, which may be levied/leviable to any authority and shall comply with all Acts and Regulations for the successful completion of the Contract Works.

27. MUNICIPAL REGULATION **SPCC-27**
The whole of the work including sanitation is to comply with the requirements and byelaws of the concerned Municipal Corporation, local bodies & Chief Fire Officer.
28. MEASUREMENT TO BE RECORDED BEFORE WORK IS COVERED UP **SPCC-28**
The Contractor shall take joint measurement with the Consultant's representative before covering up or otherwise placing beyond the reach of measurement any item of work. Should the Contractor neglect to do so, the same shall be uncovered at the Contractors expenses or in default thereof, no payment or allowance shall be made for such work or the materials with which the same was executed.
29. WORK AT NIGHT **SPCC-29**
If the Contractor is required to work at night in order to complete the work within the 'Time Schedule', the Contractor shall provide and maintain at his own cost sufficient lights to enable the work to proceed satisfactorily without danger. Approaches to the site also shall be sufficiently lighted by the Contractor. No extra payment will be made for night. Prior intimation of approval should also be taken from the Consultant.
30. ISSUE OF EXTRA CONSTRUCTION/ELECTRICAL DRAWING **SPCC-30**
Client will supply one set of drawings to the Contractor for construction. Extra prints of drawings for construction will be issued on chargeable basis by Bank / Consultant as detailed hereunder:
- | | | | |
|---------|---|---------|---------------|
| A0-Size | Rs.150/- each to Rs.200/- each depending on size of drawing | | |
| A1-Size | Rs.125/- each | A2-Size | Rs.100/- each |
| A3-Size | Rs.75/- each | A4-Size | Rs.50/- each |
- The Contractor shall ensure that all the bills furnished from the Client's Office in this regard are hachured, failing which the certificate for payment of Contractor's next Interim Bill will be withhold. The drawings are to be used for the project concerned.
31. DISPLAY OF NOTICES **SPCC-31**
Except where otherwise provided in the contract all questions and disputes relating to the meaning of the specifications, design, drawings and instructions herein before mentioned and as to the quality of workmanship or materials used on the work or as to any other question, claim, right, matter or thing whatsoever in any way arising out of or relating to the contract, design, drawings, specifications, estimates, instructions orders or these conditions or otherwise concerning the work or the execution or failure to execute the same whether arising during the progress of the work or after the cancellation, termination, completion or abandonment thereof shall be dealt with as mentioned hereinafter.
- 31a If the Contractor considers that he is entitled to any extra payment or compensation in respect of the works over and above the amounts admitted as payable by the Client or in case the Contractor wants to dispute the validity of any deductions or recoveries made or proposed to be made from the contract or raise any dispute, the Contractor shall forthwith give notice in writing of his claim or dispute to the Assistant General Manager (Premises & Estate) in writing in the manner and within the time aforesaid.
- 31b Bank shall give their decision in writing on the claims notified by the Contractor. The Contractor may within 30 days of the receipt of the decision of the Bank submit his claims to the conciliating authority along with all details and copies of correspondence exchanged between him and the Bank.

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If the conciliation proceeding are terminated without settlement of the disputes, the Contractor shall, within a period of 30 days of termination thereof shall give a notice to the Deputy General Manager & Circle Development Officer of the Bank for appointment of an arbitrator to adjudicate the notified claims failing, which the claims of the Contractor shall be deemed to have been considered absolutely barred and waived.

Except where the decision has become final, binding and conclusive in terms of the contract, all disputes or differences arising out of the notified claims of the Contractor as aforesaid and all claims of the Bank shall be referred for adjudication through arbitration by the sole arbitrator appointed by the Deputy General Manager & Circle Development Officer. It will also be no objection to any such appointment that the Arbitrator so appointed is a Bank Officer and that he had to deal with the matters to which the contract relates in the course of his duties as Bank Officer. If the Arbitrator so appointed is unable or unwilling to act or resigns his appointment or vacates his office due to any reason whatsoever another sole Arbitrator shall be appointed in the manner aforesaid by the said Deputy General Manager & C.D.O. Such person shall be entitled to proceed with the reference from the stage at which it was left by his predecessor.

It is a term of this contract that the party invoking arbitration shall give list of disputes with amounts claimed in respect of each dispute along with the notice for appointment of arbitrator.

It is also a term of this contract that no person other than a person appointed by such Deputy General Manager & Circle Development Officer as aforesaid should act as arbitrator.

The conciliation and arbitration shall be conducted in accordance with the provisions of the Arbitration & Conciliation Act.1996 or any statutory modification or reenactment thereof and the rules made thereunder.

It is also a term of the contract that if any fees are payable to the arbitrator these shall be paid equally by both the parties. However, no fees will be payable to the arbitrator if he is a Bank Officer.

It is also a term of the contract that the arbitrator shall be deemed to have entered on the reference on the date he issues the notice to both the parties calling them to submit their statement of claims.

32. WORK TO BE CONTINUED DURING THE PENDENCY OF THE ARBITRATION **SPCC-32**
The Contractor shall continue with the construction work with due diligence and speed so as to complete the same within the period agreed upon, notwithstanding any dispute or different or question as referred to arbitration. The works shall not be delayed on account of any such reference made to the Arbitrators.
33. LIEN ON SUMS PAYABLE TO THE CONTRACTORS **SPCC-33**
Any sum of money due and payable to the Contractor including any deposits returnable to them under this contract may be with held or retained by the Employer, against any claims of the Employer.
34. APPROVAL OF MOCK-UPS AND SAMPLES **SPCC-34**
It will be the Contractors responsibility to obtain written approval of mock-ups and samples from the Consultant and Employer. If this is not done, such items where these materials are used will be rejected by the Consultant / Employer.
35. APPROVAL OF FINAL FINISH IN CASE OF POLISHING AND PAINTING **SPCC-35**
In case of items for painting and polishing, normally primer and three coats should suffice. However, to achieve the final finish, to Employer's/Consultants satisfaction, it may become necessary to have more than three coats. This will have to be done by the Contractor at no extra cost.

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36. NON-AVAILABILITY OF SPECIFIED MATERIALS / ITEMSSPCC-36

In case of materials/items, which are not available, the Contractor shall have to submit a letter from manufacturer to that effect. After proper verification, alternative material may be selected by the Employer / Consultant. In the case there will not be any increase of the quoted rates. However, if accepted alternative is cheaper the cost benefit is to be passed on to the Employer.

37. COST VARIATION IN MOCK-UPSSPCC-37

Any cost variation upto 3% of quoted rates for all items of mock-ups shall be absorbed by the Contractor & he will not claim such amount in case of alternation in design.

38. ADDRESS FOR SERVICESPCC-38

All letters and notices under or pursuant to these presents shall be hand delivered against acknowledgement or sent by Registered Post with acknowledgement due at the respective addresses mentioned below. Any change in the addresses shall be duly intimated by the concerned party to all others.

01. Address for Employer

**The Principal,
SPBT College,
Vile Parle (W),
Mumbai – 400 056**

02. Address for Consultant

M/s. S. M. Engineers,
C-107, 1st Floor, Nerul Rly Stn Complex,
Nerul, Navi Mumbai - 400 706.

03. Address for the Contractors

SIGNATURE OF THE TENDERER

SECTION VI**PREAMBLE TO SPECIAL CONDITIONS OF CONTRACT****GENERAL:**

The tenderer must obtain for himself on his responsibility in at his own expense all the information which may be necessary for than purpose of filling this tender and for entering into are contract for the execution of the same and must examine himself / themselves with all local condition and all the bye-laws and rules and regulation various authorities and matter pertaining thereto.

This is intended to be a performance based contract whereto the Contractor will be liable to execute the work on the basis of the plans and design offered by him or the plans and design hereby given and accepted by him. The Contractor will have to guarantee for the due and proper performance of the work agreed to be so erected and installed by him. The Contractor shall be paid his bills from time to time “on account” basis and the payments so made shall be adjusted against the money becoming due and payable to him at the agreed rates at the conclusion of the contract if the work erected and installed under the contract is found to be giving the due and proper performance.

TO SPECIAL CONDITION OF CONTRACT

1. The prices shall be firm for the duration of contract plus all authorized extensions of time plus three months period after completion of work. All rates will be including turnover tax, sales tax, works contract tax, VAT etc.
2. The Contractor is to furnish the basic of various materials likely to be used in the **ELECTRICAL & ALLIED** work so as to serve as guidelines for working out the rate analysis for extra/taxes, duties etc.
3. The Contractor is to quote for all sections of the Bills of Quantities. However, the Contractor will have to quote for all items including those where only rate is asked fro a particular section. If all such items of & section are not quoted, the tender shall be treated as incomplete and is likely to be rejected.
4. Clients / Consultant reserve the right to ask the Contractor to prepare ‘Mock-up’ of any item for their approval before proceeding with the work.

PREAMBLE TO BILL OF QUANTITIES

01. Quantities mentioned are approximate and payment shall be made on actual measurement.
02. All the items shall include required scaffolding, ladders, temporary supporting, machinery & equipment.
03. If Contractor quotes different rates for execution in different areas for the same item, the lowest of the quoted rates shall be considered for comparison of bid and payment of work done.
04. In case of non-availability of any specified manufacturers materials, the Contractor shall submit samples of materials later to that effect for Consultants and Owners approval allowed, necessary price adjustment as per Consultant's scrutiny shall be applicable.

SAFETY CODE

01. First aid appliances including adequate supply of sterilized dressing and cotton wool shall be kept in a readily accessible place.
02. An injured person shall be taken to a public hospital without loss of time, in case where the injury necessitates hospitalization.
03. Suitable and strong scaffolds should be provided for workmen for all works that cannot safely be done from the ground.
04. No portable single ladder shall be over 8 meter in length. The width between the side rails shall not be less than 30 cm (clear) and the distance between two adjacent rungs shall not be more than 30 cm. When a ladder is used an extra mazdoor shall be engaged for holding ladder.
05. The excavated material shall not be placed within 1.5 meters of the edge of the trench or half of the depth of trench whichever is more. All trenches and excavations shall be provided with necessary fencing and lighting.
06. 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 on meter.
07. No floor, roof or other part of the structure shall be so overloaded with debris or materials as to render it unsafe.
08. Workers employed on mixing and handling material such as asphalt, cement mortar or concrete and lime mortar shall be provided with protective footwear and rubber hand gloves.
09. Those engaged in welding works shall be provided with welder's protective eye-shields and gloves.
- 10.1 No paint containing lead or lead products shall be used except in the form of paste or readymade paint.
- 10.2 Suitable face masks should be supplied for use by the workers when the paint is applied in the form of spray or surface having lead paint dry rubbed and scrapped.

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SECTION VII

TECHNICAL SPECIFICATION

A - GENERAL SPECIFICATION FOR ELECTRICAL INSTALLATION

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

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

RULES AND REGULATION

ISI SPECIFICATIONS

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

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

1 **Earthing :**

- 1.1 16 SWG bare copper conductor or 1.5 sq.mm. pvc insulated (1.1KV) grade Cu. wire shall be provided as earthing for all light fittings from local control box to individual fittings through the conduits and junction boxes.
- 1.2 14 SWG bare copper conductor or 1.5 sq.mm. pvc insulated (1.1KV) grade Cu. wire shall be provided as earthing for socket outlets of 5/15A/20A.
- 1.3 The flexible metallic tubing is not a reliable earth continuity conductor and hence will not be used for earthing.

2. **POINT WIRING :**

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

Signature of Contractor / Authorized Person With Rubber Stamp

2.5 Where 4 wire 3 phase wiring is done the neutral shall be in one color and the other three wires in another colour.(R,Y,B)

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

The number of points shall generally be measured as under:

3.1 From individual control switch to first light/fan fitting shall be one point subsequent fitting in the same circuit shall be considered as given above & Bill Of Quantity.

3.2 If a socket outlet is tapped from the same lighting circuit it shall be treated as half point.

3.3 If a separate circuit is used for a socket outlet it will be considered as one point.

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

4.1 Supply and installation of 20/25 mm PVC with accessories such as bends, inspection tees, elbows, two ways, 3 ways, 4 ways, junction box etc.

4.2 Supply and pulling of wires from the local board to single various points.

4.3 Supply and fixing of control switch boards, switches, socket outlets, lamp holders etc. for individual points.

4.4 Supply and Installation of multiway enclosed PVC junction boxes and 3 way/10 Amps. terminal blocks for light and fan fitting.

4.5 Supply and fitting/fixing of hardware such as clamps, saddles, screws, bolts, nuts, frame work as required.

4.6 Supply, laying and termination of earthing conductors for socket outlets, fittings and installations etc.

5. **WIRES & CABLES :-**

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

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

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6. All the conductors of the wires/cables shall be of copper unless/otherwise mentioned.
- 6.1 Single core armoured cable shall not be used any where.
- 6.2 1.5 sq. mm. (3/0.8 mm) P.V.C. insulated wires 1.1 KV grade shall be used upto maximum load current of 3A Amps.
- 6.3 2.5 sqmm (3/1.04 mm) P.V.C. insulated wires 1.1 KV grade shall be used upto maximum load current of 10 Amps.
- 6.4 4 sq.mm. (7/0.85 mm) P.V.C. insulated wires 1.1 KV grade shall be used upto maximum load current of 20 Amps
- 6.5 Wires and cables of the sizes including and above 4 mm**2 for aluminium and 7/.036 SWG for copper will be terminated; copper solder less crimped sockets and copper soldered sockets respectively.
- 6.6 Looping of conductors and tee-joints in power wiring shall not be employed. Power and heating sub-circuits shall be kept separate and distinct from fan and lighting sub-circuits.
7. **CONDUIT INSTALLATION :-**
- 7.1 PVC conduit system shall be mechanically and electrically continuous across joints.
- 7.2 Conduit installation shall be of surface type in case of False ceiling or false walls and shall be of concealed type in absence of false wall or false ceiling.
- 7.3 In case of false wall/ceiling where sufficient space or false covering is not available the conduits are to be concealed.
- 7.4 All conduit pipes shall be confirming to I.S: 1653
- 7.5 The routing of conduits shall be marked on ceiling, walls or structures in accordance with the drawings; as per layout approved by the Consultant. The installation shall be undertaken after approval of the same by Consultant. Any changes suggested by the Consultant shall be followed by the Contractor.
- 7.6 All bare threaded portions shall be treated with anticorrosive preservative or covered with approved plastic compound.
- 7.7 The conduit shall be of 16 gauge or MMS upto 25 mm dia and 14 gauge or HMS above 32 mm dia, reputed and approved make conforming to IS specification.
- 7.8 Conduits shall be supported on walls, ceiling or structure by means of distance saddles at a spacing not exceeding 600mm horizontally and 900mm vertically for conduits of 20 / 25 / 32 mm size.

- 7.9 All conduits shall however be supported within a distance of 225 mm at either end of junction boxes, lighting fittings, switches or equipment enclosures. In case of right angle bends and offsets, conduits shall be supported within 150 mm at either end. The distance saddle shall maintain a minimum clearance of 3 mm. between the conduits and the surface on which conduit is being installed.
- 7.10 Inspection boxes, elbows or tees shall be used as specified or specifically approved by the Consultant. Solid bends shall be provided as far as possible.
- 7.11 All conduits installation shall be carried out accurately and neatly. All conduit runs shall be truly horizontally or vertically, threading of conduits shall be done to close tolerance.
- 7.12 When conduits are to be concealed the conduit pipes shall be firmly tied to the steel reinforcement with steel wires at intervals not greater than 1 meter and on both sides of accessories like junction boxes, beds, coupling etc.
- 7.13 For concealed conduits uses of Tees, elbows and sharp bends shall be avoided as far as possible. And no length of conduit shall have more than two bends from outlet to outlet. (Use 2-way/3- way Junction Box if possible)
- 7.14 All conduit runs shall be thoroughly cleaned of dust, moisture etc. by blowing compressed air or by any other suitable means.

8. CONDUIT WIRING :-

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

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

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

9. CONCEALED CONDUIT WIRING:-

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

10. INSTALLATION OF CABLES :-

- 10.1 All the cables shall be conforming to IS 1554, with PVC insulation, PVC sheathed, 1100V grade steel armoured with stranded copper/Aluminum conductors.
- 10.2 Cable supplied shall be of reputed make having ISI mark.
- 10.3 No cable joints are allowed, unless it is absolutely essential and will be carried out only after.
- 10.4 The cable shall be tied with Nylon ties at regular intervals of 1 meter for horizontal length. In case of vertical run cable shall be tied at every 500 mm width with metallic cable ties. At the cable bend ties shall be provided at 150 mm interval from the centre of bending radius to avoid any sharp bends.
- 10.5 Cable entry and exit of distribution boards shall be done by appropriate glands and lock-nuts.
- 10.6 All cables shall be terminated with crimped soldered copper lugs of proper sizes.
- 10.7 Armouring of cables shall be terminated at earthing stud provided on each distribution boards.
- 10.8 The cable to be laid in the ground shall be laid at 750 mm depth from ground level and sandbed of 75 mm shall be provided. Width of trench will be approved by Corporation/Consultant depending upon no. of cables to be laid. Bricks are to be laid on the cables and then the back filling with screened soil.
- 10.9 Trench excavation, supply of sand bricks back filling and all associated necessary work and supply of material for same shall form Contractor's scope of work.
- 10.10 For cables laid in the ground, cable markers are to be provided on the cable route at every bend at every 15 metres for straight run.

- 10.11 The cables crossing through floors, walls etc. should be through G.I. pipe and sealed with fire barrier material and bushes.
- 10.12 Where groups of H.V., L.V. control and telephone cables are to be laid along the same route suitable barriers to segregate them physically shall be employed.
- 10.13 The communication cable shall be at least 300 mm away from power cable.

11 **CABLE TERMINATION :-**

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

12 **SOCKET OUTLETS & PLUGS:-**

- i) The socket shall be so wired that the phase or the line is connected to one of the pins through the switch controlling the socket and not directly.
- ii) Three pin socket outlets of 5A shall be earthed with 16 SWG bare copper conductor or 1.5 sq.mm. pvc insulated wire (1.1 KV grade).
- iii) Three pin socket outlets of 15/20A shall be earthed with 14 SWG bare copper conductor or 2.5 sq.mm. pvc insulated wire (1.1 KV grade).
- iv) 20 A socket outlet shall be industrial type (MDS-make) with provision of circuit breaker.
- v) The isolated socket outlets shall be installed at distance mentioned in layout or as specified by the Consultant. However, the socket outlet shall be installed at a distance not less than 23 cms. from the floor level and shall be away from danger of mechanical injury.

- vi) A socket outlet shall not embody fuse terminals as an integral part of it but the fuse may be embodied in plug.
- vii) Every plug containing a fuse shall be non-reversible and shall be pulled through separate conduit system (not to be mixed with light, fan point etc.)

13 SWITCHES

- i) Quick make and break switches shall be used.
- ii) All single pole switches shall be fitted in phase or line conductor.
- iii) Termination of wires at switches or plug points shall be carried out by looping the conductor at end instead of straight strand connection.
- iv) The Switches for various appliances etc. on the boards shall be marked as according to the numbers mentioned in the single line wiring diagram.

B - LIGHTING FIXTURE SCHEDULE

1 LUMINARIES

- 1.1 All light fittings are to be provided with lamps/tubes.
- 1.2 Luminaries are to be as per the makes and catalogues indicated.
- 1.3 Installation of light fitting shall include making of connections and proper suspension, support and mounting.
- 1.4 For suspended fluorescent light fittings suitable length of conduits, ball and socket on junction box are to be provided.
- 1.5 The majority of the fittings are to be installed in the false ceiling and electrical Contractor has to co-ordinate with false ceiling work for installation.
- 1.6 The necessary opening in the false ceiling for fixing of lighting fittings will be provided by false ceiling Contractor. The cut-out details are to be given by electrical Contractor.
- 1.7 The suspension of light fittings for recess mounting in the false ceiling will be to suite site condition.
- 1.8 The design, manufacture and performance of Luminaries shall comply to all applicable statutes, regulation and safety codes.
- 1.9 The Luminaries shall be designed for minimum glare and continuous operation without reduction in lamp life or without deterioration of material and internal wiring.

- 1.10 The fittings shall be designed for low temperature rise and it should be complete with copper choke, starter, reflector etc.
- 1.11 The power factor improvement capacitor shall be incorporated.
- 1.12 Outdoor fixture shall be provided with totally weather proof.
- 1.13 Each Luminaries shall have terminal for loop in loopout and tee off connection. All internal wiring shall be flexible copper suitable to withstand high temperatures.
- 1.14 The Luminaries shall be provided with earthing terminal, conduit knockout etc.
- 1.15 Aluminum used for mirror optic light fitting shall be of high purity and non edging type.
- 1.16 The reflectors/louvers/diffusers of fittings should be easily approachable and easy to clean without removal, of light fitting.
- 1.17 The ballast shall be designed to have low power loss and shall be mounted using anti vibration fixing. The ballast should be totally enclosed. The ballast should be all copper wound.
- 1.18 The ballast which produce humming noise shall be replaced free of cost by the supplier.
- 1.19 The starter shall be of safety type and shall be replaceable without disturbing reflector or the lamps and without use of any tool.
- 1.20 The starter shall have brass contact.
- 1.21 The Luminaries with diffuser shall be of acrylic, non yellowing, non edging type.
- 1.22 Fluorescent tubes shall be of day light colour type and shall be suitable for use in any position.
- 1.24 The light fitting shall be fitted as according to the distance measurements as mentioned in the layout drawing.
- 1.25 Supply of conduits, junction boxes and other hardware shall form part of Contractors scope of work.
- 1.26 The Contractor shall test, check each fitting before installation.

2. **EXHAUST FANS :**

- 2.1 Exhaust fans of sizes 6" & 12" shall be installed as per the distances mentioned in the layout or specified by the Consultant.

2.2 For fixing of an exhaust fan, a circular hole shall be provided in the wall to suit the size of the frame which shall be fixed by means of rag-bolts embedded in the wall. The hole shall be neatly plastered with cement and brought to the original finish of the wall. The exhaust fan shall be connected to exhaust fan point which shall be wired as near to the hole as possible by means for flexible cord, care being taken that the blades rotate in the proper direction.

2.3 Digging, replastering of wall for installation of exhaust fan and provision of hardware & other material shall be under Contractor's scope of work.

C COMMUNICATION SYSTEM

1.0 TELEPHONE CABLES

Telephone pair cables and switch board cables and wires shall be on annealed tinned electrolytic copper conductors, insulated and sheathed with good quality PVC compound as per BS:6746, twisted pairs bunched together in connecting layers so as to minimise cross-talk and wrapped with Melinex or PVC tape.

Cables shall be manufactured to standard specifications ITD-S/WS-113B, approved make.

Conductor resistance at 20°C, 0.5mm=Max. 98 ohms/Km; 0.6mm=Max. 64 ohms/Km; and 0.71mm=Max. 46 ohms/Km.

2.0 CONDUITS FOR TELEPHONE NETWORK

The rates for conduit work include:

- a) All necessary spacers and fittings.
- b) Inspection, junction and outlet boxes as required.
- c) 3 mm thick perapex sheet covers for inspection and junction boxes.
- d) All fixing accessories such as clips, nails, screws etc.
- e) 2 mm dia G.I. pull wires in conduit work.
- f) Providing and fixing approved saddle, hooks and grouting the same as required in the case of all exposed conduit work.
- g) Embedding conduits and accessories in walls, floors etc., during construction and/or cutting chases and making good as necessary in the case of concealed conduit work.
- h) Painting all inspection, junction and outlet boxes.
- i) Providing and fixing approved fixing devices for support of expo conduits and grouting the same as required.

- j) Painting of perspex sheet cover from inside to suit the colour of the surrounding wall.

3.0 **TELEPHONE WIRING**

3.1 **SYSTEM OF WIRING :-**

The system of wiring shall consist of PVC insulated copper, conductor wires in metallic or non-metallic conduits as called for. All conduits shall be concealed unless otherwise called for.

3.2 **GENERAL :-**

Prior to laying of conduits, the Contractor shall submit the shop drawings for conduit layout indicating the route of conduit, number and size of conduits, location of junction/inspection/pull boxes, point outlet boxes and other details. The shop drawings shall be got approved by the Consultant and then only conduit laying can be started. Any modifications and suggestions shall be approved by the Consultant before the laying of conduits is commenced.

3.3 **MATERIALS :-**

- A) **Conduits :** Conduits for exposed/ underground/ below floors, R.C.C. slab and concealed in walls shall be HMS conduits.

B) **P.V.C. Conduits (ISI only) :**

PVC conduits shall be rigid unplasticised, heavy gauge having 1.8 mm wall thickness upto 25 mm diameter and 2.0 mm wall thickness for all sizes above 25 mm diameter only HMS & MMS conduits shall be used .

C) **PVC Conduit Connections (ISI only) :-**

PVC conduits shall be joined by means of screwed or plain couplers depending on whether the conduits are screwed or plain. Where there are long runs of straight runs of straight conduit inspection boxes shall be provided at intervals as approved by the Consultant. The threads pipes and sockets shall be free from grease and oil and shall be thoroughly cleaned before making the screwed/plain joints. Proper jointing materials as recommended by manufacturer shall be used for jointing PVC pipes. Use PVC couplers and connectors for PVC pipe connections and terminating in boxes. All the joints shall be fully watertight. Junction boxes and running joints shall be provided at suitable places to allow for subsequent extensions if without undue dismantling of conduit system. As far as possible , diagonal run of conduit and adaptable boxes , back outlet boxes, switch boxes and the like must be provided with entry spouts and smooth PVC bushes.

3.4 **BENDS IN CONDUIT :-**

Where necessary, bends or diversions may be achieved by means of bends and/or circular inspection boxes with adequate and suitable inlet and outlet screwed joints. In case of recessed system each junction box shall be provided with a cover properly secured and flush with the finished wall surface, so that the conductors inside the conduits are easily accessible. No bends shall have radius less than 2.5 times the outside diameter of the conduit. Heat may be used to soften the PVC conduit for bending.

3.5 **FIXING CONDUITS :-**

Conduits and junction boxes shall be kept in position while the walls, slabs and floors are under construction and proper hold-fasts shall be so arranged as to facilitate easy drawing of wires through them. Adequate junction boxes of approved shape and size shall be provided. Where conduits cross expansion joints in the building, adequate expansion fittings or other approved devices shall be used to take care of any relative movement. All conduits shall be installed so as to avoid water pipes. Conduits shall not come in contact with any wooden members unless otherwise stated. Conduits stubs in floor slabs shall be kept as short as possible above the finished floor level in order to avoid any damage to them. After the conduits, junction boxes and outlet boxes are installed in a position; their outlets shall be properly plugged or covered so that water, mortar, insects or any other foreign matter does not enter into the conduit system. Exposed conduits shall be fixed by means of spacer bar saddles at intervals not more than 1000mm in normal run & 500 mm from both sides of fittings or accessories. The saddles shall be of galvanised mild steel, flat, properly treated, and painted. Conduits shall be laid in a neat and organized manner as directed and approved by the Consultant. Conduit run shall be planned so as not to conflict with any other service pipe lines/ ducts. Where exposed conduits are suspended from the structure they shall be clamped firmly and rigidly to hanger of designed to be approved by the Consultant. Where hangers are to be anchored to reinforced concrete, appropriate inserts and necessary devices for their fixing shall be left in position at the time of concreting. Making holes or openings in the concrete generally be not allowed. In case it is unavoidable prior permission of the Consultant shall be obtained.

D LOCAL AREA NETWORK

SCOPE OF WORK :

1. Supply & installation of PVC conduit with all accessories.
2. Supply & installation of Brass outlets.
3. Supply & installation of heavy gauge M. S . box with openable cover.
4. Cutting of chases/opening in floors walls & recementing the same after conduit laying.
5. Preparation of layouts, Charts, Schematics & "as built" drawings.

SUPPLY

PVC conduit :

Conduits & all accessories are as per ISI specification. inside with min. wall thickness of 2 mm. The conduits shall be delivered to the site of construction in original bundles and each length of the conduit shall be with the label of manufacturer.

FLOOR OUTLETS

Floor outlet should be fabricated from 2mm thick M.S. sheet steel with top openable cover, gasketed and painted.

INSTALLATION

CONDUCTING

Conducting will be carried out by chiseling the floor and laying and clamping the conduit in the floor & recementing to original level & finish.

DOCUMENTATION

Three sets of "as built" cable layout (one retraceable print), single line diagram wiring charts, cable termination details and telephone faults location charts will be submitted.

Unarmoured co- axial cable:

The cable shall be of plain copper conductor of 0.81 mm dia. over dielectric 2.95 mm, impedance 53.5 ohm, attenuation (db/100 mt. 200 MHz) should be max. 23, capacitance 93.5 pf/mt. and max. R.F operating voltage should be 1.9 RMS KV. The cable shall be polythene dielectric, braided with fine copper wires and overall polythene jacketed confirming to B.S. 2316 (UR series) American Military standard MIL-C- 17 (RG series) The cable manufacturers approval certificate shall be submitted. The inspection will be carried out at manufacturers place if required. The cable test report shall be submitted along cable delivery.

PVC SCREENED UNARMoured CABLE :

The cable shall be of annealed copper conductor of 0.5 mm dia. polythene insulated, cores colour coded, twisted into pairs, laid up, pvc taped, screened unarmoured and overall polythene jacked confirming to ITD specs NO. S/WS - 113C.

The offered cable shall be multipair & DOT approved make. The cable manufacturer's DOT approval certificate shall be submitted. The inspection will be carried out at manufacturers place if required. The cable test report shall be submitted along cable delivery.

TENDER PART – II

PRICE BID

FOR

ELECTRICAL & ALLIED WORKS OF

CENTRAL BANK OF INDIA & DENA BANK's

**SIR SORABJI POCHKHANAWALA BANKERS TRAINING
(SPBT) COLLEGE, AT VILE PARLE (W) MUMBAI**

Tender Reference Number :- CO/GAD/ARCH/ELECT/SPBT/2016-17

SIGNATURE OF CONTRACTOR / AUTHORISED PERSON WITH RUBBER
STAMP

**PROPOSED ELECTRICAL & ALLIED WORKS FOR SIR SORABJI
POCHKNANWALA BANKERS TRAINING (SPBT) COLLEGE PROJECT AT
JVPD SCHEME, VILEPARLE (WEST), MUMBAI.**

ELECTRICAL & ALLIED WORKS ESTIMATE

BILL OF QUANTITIES FOR ELECTRICAL & ALLIED WORKS

DATE : 31-12-2016

SUMMARY OF ESTIMATED COST OF ELECTRICAL & ALLIED WORKS

REV-02

SEC.	DESCRIPTION OF ITEM		AMOUNT(Rs.)
			TOTAL
A	MAIN LT PANELS /DBS	Rs.	
B	CABLES / MAINS	Rs.	
C	EARTHING (GENERAL / DEDICATED)	Rs.	
D	INTERNAL LIGHTING & POWER WIRING	Rs.	
E	TRENCHING / FLOOR -RACEWAYS	Rs.	
F	LIGHTING FIXTURES	Rs.	
	TOTAL - (A to F)	Rs.	
G	VOICE NETWORKING	Rs.	
H	DATA NETWORKING	Rs.	
I	MISCELLANEOUS WORKS	Rs.	
J	MUSIC CUM PUBLIC ADDRESS SYSTEM	Rs.	
K	SMOKE DETECTION & FIRE ALARM SYSTEM (CONVENTIONAL)	Rs.	
	TOTAL - (A to K) (INCLUDING TAXES)	Rs.	
M	LESS BUY - BACK OF REMOVED UN-USABELE ELECTRICAL MATERIAL	Rs.	
	TOTAL - (A to K) - (M) (INCLUDING TAXES)	Rs.	
	LESS DISCOUNT (IF ANY)	Rs.	
	GRAND TOTAL (INCLUDING TAXES)	Rs.	

GRAND TOTAL AMOUNT IN WORDS :-

NOTE :-

1. Above quantities may vary as per the final approved interior layout plans.
2. Lengths of cables from Section-B may vary as per the approved locations of Panel & DB's on site.
3. All the Light fittings samples shall be approved from Client / Consultant before delivery at site.
4. Work shall be done upto to the satisfaction of Client / Consultant.
- 5. Main Electrical LT Panel's Fabrication drawings shall be approved from the Consultant / Client before starting fabrication of the same at factory & all the required Panel Test reports shall be submitted with the Delivery of Panel at site. Failing to these conditions Client / Consultant reserves the right to reject the Panel without assigning any reason thereof.**
6. Submission of Handover documents is necessary for Certification of Final Bill. In case of failure to submit the same Client / Consultant reserves right not to certify the final bill without submission of Handover Documents alongwith the Final Bill.
7. Bidder / Contractor shall quote all items. Omission of any item is not allowed. This may lead to rejection of such tender.
8. ELECTRICAL LOAD LIASIONING & STATUTORY APPROVAL (IF ANY) :- It will be under the scope of the contractor. Hence, contractor shall quote rates accordingly.

CONTRACTOR'S STAMP & SIGNATURE

Authorised Signatory

BILL OF QUANTITIES FOR ELECTRICAL AND ALLIED WORKS

S.N.	PARTICULARS	QTY	UNIT	RATE PER UNIT	AMOUNT (Rs.)
A	MAIN LT PANEL / DB'S				
1	Supply, installation, testing & commissioning of 630A IC TPN SFU with 630A HRC fuses 415 V 3 phase & neutral 50 c/s AC23 duty with Enclosure with cable end boxes, earthing, name plate danger board fixing accessories etc.	1	Set		
Rate in words :-					
2	Supply, installation, testing & commissioning of 400A IC TPN SFU with 400A HRC fuses 415 V 3 phase & neutral 50 c/s AC23 duty with Enclosure with cable end boxes, earthing, name plate danger board fixing accessories etc.	1	Set		
Rate in words :-					
3	Supply, installation, testing & commissioning of 250A IC TPN SFU with 250A HRC fuses 415 V 3 phase & neutral 50 c/s AC23 duty with Enclosure with cable end boxes, earthing, name plate danger board fixing accessories etc.	1	Set		
Rate in words :-					
4	Supply, installation, of following varnish plywood board 25 mm thick mount required no. of meters, switches, MCB, cutouts etc., (in meter room)	1	LS		
Rate in words :-					
5	Supply & installation at Energy meter position PVC insulated copper conductor wires of appropriate ratings neatly clipped on meter boards from Bus-bar to cutout, cutout to KWH meter & from KWH meter to MCB as required complete with interconnections etc. as required.				
	(a) Single Phase = 13 Nos.	13	Nos		
Rate in words :-					
6	Supply and Installation of main LT Bus-Bar panel, wall mounted, front operated, dead back, totally enclosed vermin proof, indoor, non-drawout, cubicle type power dist. panel fabricated out of 2mm thick CRCA sheet having gasketed hinged door on each cubicle, fully powder coated / enamel painted after seven tank treatment, incorporating horizontal and vertical sleeved aluminium busbars 'complete with all internal wiring, danger board, two earthing lugs, cable chamber etc. as required housing 1 Set of 300A TPN tinned Aluminium busbar suitable for 1 no. 3-Phase Incoming & 13 Nos of Single Phase Output with PVC sleeving & accessories including Digital Voltmeter, Digital Ammeter with CT & , RYB indicating lamps with resistors & fuses, etc. complete with all necessary hardware & accessories.	1	Nos		
Rate in words :-					
7	Supply & Installation of 40/32A, DP, MCB box as required. (In Meter Room for Flats Meter.)	13	Nos		
Rate in words :-					
8	MAIN ELECTRICAL LT PANEL - 1 - Supply, Installation, Testing and Commissioning including transport to site with propoer required (PVC sheets / wooden frame) packing, store at site, erect in proper position of Sub-Main Electrical LT panel, floor mounted, front operated, dead back, totally enclosed, IP42, vermin proof, indoor, non-drawout, cubicle type power distribution panel fabricated out of 2mm thick CRCA sheet having gasketed hinged door on each cubicle, fully powder coated / enamel painted after seven tank treatment, incorporating horizontal and vertical sleeved copper / aluminium busbars complete with all internal wiring with suitable size approved make FRLS grade colour coded wires, rotary handle, spreaders, 3mm thick gland plate, hinged type door with neoprene gasket, danger board, two earthing lugs, cable chamber, etc. as required housing below mentioned switchgears, metering instruments and accessories :-				

S.N.	PARTICULARS	QTY	UNIT	RATE PER UNIT	AMOUNT (Rs.)
	Note :- GA & Control Drawing of the panel shall be approved by the consultant before fabrication. (Panel shall be manufactured from CPRI approved & ISO 9001:2008 certified manufacturer only.) All test certificates for Panel shall be submitted alongwith the delivery of Panel at site. (Client / Consultant reserves the right to reject the Panel supplied without prior design approval / submission of required test certificates alongwith the delivery of Panel at site.)				
	(MAIN ELECTRICAL LT PANEL)				
	<u>INCOMER</u>				
	1 No. 400A, FP, 36kA / 50kA, MCCB with Thermal Magnetic release, of approved make with over load (O/L), short circuit (S/C) & Earth Fault (E/F) protection. The Breaker shall be suitable for 415 Volts 50 Hz., AC supply. The breaker shall have breaking capacity of 36kA / 50kA for 1 Sec. as required. (Schneider / Hager / Legrand / Siemens / L&T make)				
	<u>METERING</u>				
	1 No., 3 phase CT Operated (with class-1 CT) multifunction meter / Load Manager (LM) with RS 485 communication port of approved make. The Load manger should read Ammeter, Voltmeter, KWH meter and Power Factor meter.				
	<u>INDICATORS</u>				
	The following indicating lamps shall be provided for Incomer Section :-				
	1 Set of R,Y,B Phase Indicating lamps, LED type of approved make.				
	1 No. Red & 1 no. Green colour LED type indicating lamps for indicating MCCB is in 'ON' or 'OFF' position.				
	<u>BUSBARS</u>				
	1 Set of 600 Amps uniformly rated, continuous duty, 415V AC, 3-Phase & Neutral electrolytic grade 99.95% Purity Tinned Copper bus-bars with colour coded heat sink sleeves supported on SMC type grip supports. The Horizontal / Vertical sections of the busbars should all be uniformly rated for 600 Amps.				
	1 Set of 32 x 6 mm copper busbars of high conductivity electrolytic quality shall be provided throught out the panel for its earthing.				
	<u>OUTGOINGS</u>				
	1 No. 160A, TPN, Switch Fuse Unit (SFU) The Breaker shall be suitable for 415 Volts 50 Hz., AC supply. (For APFC Panel Incomer - 1 no.) (Schneider / Hager / Legrand / Siemens / L&T make)				
	1 No. 250A, FP, 25kA / 36kA, MCCB with Thermal Magnetic release, of approved make with built in over load (O/L), short circuit (S/C) protection. The Breaker shall be suitable for 415 Volts 50 Hz., AC supply. The breaker shall have breaking capacity of 25 / 36 kA for 1 Sec. (Schneider / Hager / Legrand / Siemens / L&T make) (For Raw / AC POWER PANEL)				
	3 Nos. 125A, FP, 25kA / 36kA, MCCB with Thermal Magnetic release, of approved make with built in over load (O/L), short circuit (S/C) protection. The Breaker shall be suitable for 415 Volts 50 Hz., AC supply. The breaker shall have breaking capacity of 25 / 36 kA for 1 Sec. (Schneider / Hager / Legrand / Siemens / L&T make) (For Lighting panel - 1 no, Auditorium Main DB - 1 no, Auditorium HVAC Room - 1 no.)				
	2 Nos. 100A, FP, 25kA / 36kA, MCCB with Thermal Magnetic release, of approved make with built in over load (O/L), short circuit (S/C) protection. The Breaker shall be suitable for 415 Volts 50 Hz., AC supply. The breaker shall have breaking capacity of 25 / 36 kA for 1 Sec. (Schneider / Hager / Legrand / Siemens / L&T make) (For First floor 25KVA UPS, Spare - 1 no.)				
	4 Nos., of 40/63 Amps., TPN Miniture Circuit Breaker. The MCB shall be suitable for 415Volts 50Hz., AC supply and having fault level of 10KA. The MCB Shall have "C" curve type. (Schneider / Hager / Legrand / Siemens / L&T make) (Lift room - 1 no, Spare - 3 Nos.)				
	2 nos, 40/32/25A, DP, MCB, "C" curve type as outgoings.				
	Full Set as above	1	NOS		
Rate in words :-					

S.N.	PARTICULARS	QTY	UNIT	RATE PER UNIT	AMOUNT (Rs.)
9	Supply and Installation of Automatic Power Factor Control (APFC) Panel - 1 , floor mounted, front operated, dead back, totally enclosed vermin proof, indoor, non-drawout, cubicle type power dist. panel fabricated out of 2mm thick CRCA sheet having gasketed hinged door on each cubicle, fully powder coated / enamel painted after seven tank treatment, incorporating horizontal and vertical sleeved copper / aluminium busbars as required 'complete with all internal wiring, danger board, two earthing lugs, cable chamber etc. as required 'housing below mentioned switchgears. Panel to be installed at min. 6" / max. as required at actual above floor on MS stand or frame with required anchor fasteners, nuts, bolts etc.				
	APFC Panel shall consists of solid state automatic power factor correction arrangement having microprocessor based control circuit and thyristor switching power circuit having a required capacity of 120KVAR in the stages as approved by the Client / Consultant alongwith required size MCCB, MCB, Contactors, Voltmeter, Ammeter, Load Manager, etc. including all necessary internal wiring & control wiring alongwith necessary hardware & accessories, etc. complete as required & approved by the Client / Consultant.				
	Note :- GA & Control Drawing of the panel shall be approved by the consultant before fabrication. (Panel shall be manufactured from CPRI approved & ISO 9001:2008 certified manufacturer only.) All test certificates for Panel shall be submitted alongwith the delivery of Panel at site. (Client / Consultant reserves the right to reject the Panel supplied without prior design approval / submission of required test certificates alongwith the delivery of Panel at site.)				
	Full Set as above	1	Nos		
Rate in words :-					
10	LIGHTING PANEL - Supply, Installation, Testing and Commissioning including transport to site with propoer required (PVC sheets / wooden frame) packing, store at site, erect in proper position of Sub-Main Electrical LT panel, floor mounted, front operated, dead back, totally enclosed, IP42, vermin proof, indoor, non-drawout, cubicle type power distribution panel fabricated out of 2mm thick CRCA sheet having gasketed hinged door on each cubicle, fully powder coated / enamel painted after seven tank treatment, incorporating horizontal and vertical sleeved copper / aluminium busbars complete with all internal wiring with suitable size approved make FRLS grade colour coded wires, rotary handle, spreaders, 3mm thick gland plate, hinged type door with neoprene gasket, danger board, two earthing lugs, cable chamber, etc. as required housing below mentioned switchgears, metering instruments and accessories :-				
	Note :- GA & Control Drawing of the panel shall be approved by the consultant before fabrication. (Panel shall be manufactured from CPRI approved & ISO 9001:2008 certified manufacturer only.) All test certificates for Panel shall be submitted alongwith the delivery of Panel at site. (Client / Consultant reserves the right to reject the Panel supplied without prior design approval / submission of required test certificates alongwith the delivery of Panel at site.)				
	INCOMER				
	1 No. 125A, FP, 36kA / 50kA, MCCB with Thermal Magnetic release, of approved make with over load (O/L), short circuit (S/C) & Earth Fault (E/F) protection. The Breaker shall be suitable for 415 Volts 50 Hz., AC supply. The breaker shall have breaking capacity of 36kA / 50kA for 1 Sec. as required. (Schneider / Hager / Legrand / Siemens / L&T make)				
	METERING				
	1 No., 3 phase CT Operated (with class-1 CT) multifunction meter / Load Manager (LM) with RS 485 communication port of approved make. The Load manger should read Ammeter, Voltmeter, KWH meter and Power Factor meter.				
	INDICATORS				

S.N.	PARTICULARS	QTY	UNIT	RATE PER UNIT	AMOUNT (Rs.)
	The following indicating lamps shall be provided for Incomer Section :-				
	1 Set of R,Y,B Phase Indicating lamps, LED type of approved make.				
	1 No. Red & 1 no. Green colour LED type indicating lamps for indicating MCCB is in 'ON' or 'OFF' position.				
	BUSBARS				
	1 Set of 160 Amps uniformly rated, continuous duty, 415V AC, 3-Phase & Neutral electrolytic grade 99.95% Purity Tinned Copper bus-bars with colour coded heat sink sleeves supported on SMC type grip supports. The Horizontal / Vertical sections of the busbars should all be uniformly rated for 160 Amps.				
	1 Set of 32 x 5 mm copper busbars of high conductivity electrolytic quality shall be provided through out the panel for its earthing.				
	OUTGOINGS				
	10 Nos., of 63 Amps., TPN Miniture Circuit Breaker. The MCB shall be suitable for 415Volts 50Hz., AC supply and having fault level of 10KA. The MCB Shall have "C" curve type. (Schneider / Hager / Legrand / Siemens / L&T make) (For Gr. Flr.-2 nos, 1'st flr - 2 nos, 2'nd flr - 2 nos, 3'rd flr - 1 no., Spare - 3 nos)				
	3 nos, 40/32/25A, DP, MCB, "C" curve type as outgoing. (Outdoor LDB 1 No, Spare - 2 nos)				
	Full Set as above	1	NOS		
Rate in words :-					
11	HVAC POWER PANEL - Supply, Installation, Testing and Commissioning including transport to site with propoer required (PVC sheets / wooden frame) packing, store at site, erect in proper position of Sub-Main Electrical LT panel, floor mounted, front operated, dead back, totally enclosed, IP42, vermin proof, indoor, non-drawout, cubicle type power distribution panel fabricated out of 2mm thick CRCA sheet having gasketed hinged door on each cubicle, fully powder coated / enamel painted after seven tank treatment, incorporating horizontal and vertical sleeved copper / aluminium busbars complete with all internal wiring with suitable size approved make FRLS grade colour coded wires, rotary handle, spreaders, 3mm thick gland plate, hinged type door with neoprene gasket, danger board, two earthing lugs, cable chamber, etc. as required housing below mentioned switchgears, metering instruments and accessories :-				
	Note :- GA & Control Drawing of the panel shall be approved by the consultant before fabrication. (Panel shall be manufactured from CPRI approved & ISO 9001:2008 certified manufacturer only.) All test certificates for Panel shall be submitted alongwith the delivery of Panel at site. (Client / Consultant reserves the right to reject the Panel supplied without prior design approval / submission of required test certificates alongwith the delivery of Panel at site.)				
	INCOMER				
	1 No. 250A, FP, 36kA / 50kA, MCCB with Thermal Magnetic release, of approved make with over load (O/L), short circuit (S/C) & Earth Fault (E/F) protection. The Breaker shall be suitable for 415 Volts 50 Hz., AC supply. The breaker shall have breaking capacity of 36kA / 50kA for 1 Sec. as required. (Schneider / Hager / Legrand / Siemens / L&T make)				
	METERING				
	1 No., 3 phase CT Operated (with class-1 CT) multifunction meter / Load Manager (LM) with RS 485 communication port of approved make. The Load manger should read Ammeter, Voltmeter, KWH meter and Power Factor meter.				
	INDICATORS				
	The following indicating lamps shall be provided for Incomer Section :-				
	1 Set of R,Y,B Phase Indicating lamps, LED type of approved make.				
	1 No. Red & 1 no. Green colour LED type indicating lamps for indicating MCCB is in 'ON' or 'OFF' position.				
	BUSBARS				

S.N.	PARTICULARS	QTY	UNIT	RATE PER UNIT	AMOUNT (Rs.)
	1 Set of 350 Amps uniformly rated, continuous duty, 415V AC, 3-Phase & Neutral electrolytic grade 99.95% Purity Tinned Copper bus-bars with colour coded heat sink sleeves supported on SMC type grip supports. The Horizontal / Vertical sections of the busbars should all be uniformly rated for 350 Amps.				
	1 Set of 32 x 5 mm copper busbars of high conductivity electrolytic quality shall be provided throughout the panel for its earthing.				
	OUTGOINGS				
	1 No. 160A, FP, 25kA / 36kA, MCCB with Thermal Magnetic release, of approved make with built in over load (O/L), short circuit (S/C) protection. The Breaker shall be suitable for 415 Volts 50 Hz., AC supply. The breaker shall have breaking capacity of 25 / 36 kA for 1 Sec. (Schneider / Hager / Legrand / Siemens / L&T make) (For 2'ND Floor Main Power Panel)				
	1 Nos. 125A, FP, 25kA / 36kA, MCCB with Thermal Magnetic release, of approved make with built in over load (O/L), short circuit (S/C) protection. The Breaker shall be suitable for 415 Volts 50 Hz., AC supply. The breaker shall have breaking capacity of 25 / 36 kA for 1 Sec. (Schneider / Hager / Legrand / Siemens / L&T make) (For Spare - 1 no.)				
	8 Nos., of 63 Amps., TPN Miniature Circuit Breaker. The MCB shall be suitable for 415Volts 50Hz., AC supply and having fault level of 10KA. The MCB Shall have "C" curve type. (Schneider / Hager / Legrand / Siemens / L&T make) (For Gr. Flr.-2 nos, 1'st flr - 1 nos, 3'rd flr - 1 no., Spare - 4 nos)				
	5 nos, 40/32/25A, DP, MCB, "C" curve type as outgoing. (For 1'st Flr Lab 1 & 2 AC DB - 2 nos, Spare - 3 nos)				
	Full Set as above	1	NOS		
Rate in words :-					
12	UPS PANEL - Supply, Installation, Testing and Commissioning including transport to site with proper required (PVC sheets / wooden frame) packing, store at site, erect in proper position of Sub-Main Electrical LT panel, floor mounted, front operated, dead back, totally enclosed, IP42, vermin proof, indoor, non-drawout, cubicle type power distribution panel fabricated out of 2mm thick CRCA sheet having gasketed hinged door on each cubicle, fully powder coated / enamel painted after seven tank treatment, incorporating horizontal and vertical sleeved copper / aluminium busbars complete with all internal wiring with suitable size approved make FRLS grade colour coded wires, rotary handle, spreaders, 3mm thick gland plate, hinged type door with neoprene gasket, danger board, two earthing lugs, cable chamber, etc. as required housing below mentioned switchgears, metering instruments and accessories :-				
	Note :- GA & Control Drawing of the panel shall be approved by the consultant before fabrication. (Panel shall be manufactured from CPRI approved & ISO 9001:2008 certified manufacturer only.) All test certificates for Panel shall be submitted alongwith the delivery of Panel at site. (Client / Consultant reserves the right to reject the Panel supplied without prior design approval / submission of required test certificates alongwith the delivery of Panel at site.)				
	INCOMER				
	1 No. 100A, FP, 36kA / 50kA, MCCB with Thermal Magnetic release, of approved make with over load (O/L), short circuit (S/C) & Earth Fault (E/F) protection. The Breaker shall be suitable for 415 Volts 50 Hz., AC supply. The breaker shall have breaking capacity of 36kA / 50kA for 1 Sec. as required. (Schneider / Hager / Legrand / Siemens / L&T make)				
	METERING				
	1 No., 3 phase CT Operated (with class-1 CT) multifunction meter / Load Manager (LM) with RS 485 communication port of approved make. The Load manager should read Ammeter, Voltmeter, KWH meter and Power Factor meter.				
	INDICATORS				
	The following indicating lamps shall be provided for Incomer Section :-				

S.N.	PARTICULARS	QTY	UNIT	RATE PER UNIT	AMOUNT (Rs.)
	1 Set of R,Y,B Phase Indicating lamps, LED type of approved make.				
	1 No. Red & 1 no. Green colour LED type indicating lamps for indicating MCCB is in 'ON' or 'OFF' position.				
	BUSBARS				
	1 Set of 150 Amps uniformly rated, continuous duty, 415V AC, 3-Phase & Neutral electrolytic grade 99.95% Purity Tinned Copper bus-bars with colour coded heat sink sleeves supported on SMC type grip supports. The Horizontal / Vertical sections of the busbars should all be uniformly rated for 150 Amps.				
	1 Set of 25 x 5 mm copper busbars of high conductivity electrolytic quality shall be provided throughout the panel for its earthing.				
	OUTGOINGS				
	12 nos, 63/40/32, DP, MCB, "C" curve type as outgoing. (Gr flr - 2 nos, 1 st floor - 3 nos., 2 nd flr. - 4 nos. spare - 3 nos)				
	Full Set as above	1	NOS		
Rate in words :-					
13	POWER PANEL (2ND FLOOR MAIN AC/RAW POWER PANEL)- Supply, Installation, Testing and Commissioning including transport to site with proper required (PVC sheets / wooden frame) packing, store at site, erect in proper position of Sub-Main Electrical LT panel, floor mounted, front operated, dead back, totally enclosed, IP42, vermin proof, indoor, non-drawout, cubicle type power distribution panel fabricated out of 2mm thick CRCA sheet having gasketed hinged door on each cubicle, fully powder coated / enamel painted after seven tank treatment, incorporating horizontal and vertical sleeved copper / aluminium busbars complete with all internal wiring with suitable size approved make FRLS grade colour coded wires, rotary handle, spreaders, 3mm thick gland plate, hinged type door with neoprene gasket, danger board, two earthing lugs, cable chamber, etc. as required housing below mentioned switchgears, metering instruments and accessories :-				
	Note :- GA & Control Drawing of the panel shall be approved by the consultant before fabrication. (Panel shall be manufactured from CPRI approved & ISO 9001:2008 certified manufacturer only.) All test certificates for Panel shall be submitted alongwith the delivery of Panel at site. (Client / Consultant reserves the right to reject the Panel supplied without prior design approval / submission of required test certificates alongwith the delivery of Panel at site.)				
	INCOMER				
	1 No. 160A, FP, 36kA / 50kA, MCCB with Thermal Magnetic release, of approved make with over load (O/L), short circuit (S/C) & Earth Fault (E/F) protection. The Breaker shall be suitable for 415 Volts 50 Hz., AC supply. The breaker shall have breaking capacity of 36kA / 50kA for 1 Sec. as required. (Schneider / Hager / Legrand / Siemens / L&T make)				
	METERING				
	1 No., 3 phase CT Operated (with class-1 CT) multifunction meter / Load Manager (LM) with RS 485 communication port of approved make. The Load manger should read Ammeter, Voltmeter, KWH meter and Power Factor meter.				
	INDICATORS				
	The following indicating lamps shall be provided for Incomer Section :-				
	1 Set of R,Y,B Phase Indicating lamps, LED type of approved make.				
	1 No. Red & 1 no. Green colour LED type indicating lamps for indicating MCCB is in 'ON' or 'OFF' position.				
	BUSBARS				
	1 Set of 200 Amps uniformly rated, continuous duty, 415V AC, 3-Phase & Neutral electrolytic grade 99.95% Purity Tinned Copper bus-bars with colour coded heat sink sleeves supported on SMC type grip supports. The Horizontal / Vertical sections of the busbars should all be uniformly rated for 200 Amps.				
	1 Set of 25 x 5 mm copper busbars of high conductivity electrolytic quality shall be provided throughout the panel for its earthing.				
	OUTGOINGS				

S.N.	PARTICULARS	QTY	UNIT	RATE PER UNIT	AMOUNT (Rs.)
	2 Nos., of 63 Amps., TPN Miniature Circuit Breaker. The MCB shall be suitable for 415Volts 50Hz., AC supply and having fault level of 10KA. The MCB Shall have "C" curve type. (Schneider / Hager / Legrand / Siemens / L&T make) (5KVA UPS - 1 No, Spare - 1 Nos.)				
	6 nos, 40/63, DP, MCB, "C" curve type as outgoing. (LH. 1,2,3,4 - 4 Nos, Spare - 2 Nos.)				
	8 nos, 32/25, DP, MCB, "C" curve type as outgoing. (LH.5,6 - 2 nos, Comp. Lab.3,4,5 - 3 Nos, Server room - 1 no, Spare - 2 Nos.)				
	Full Set as above	1	NOS		
Rate in words :-					
14	MAIN ELECTRICAL LT PANEL - 2 - Supply, Installation, Testing and Commissioning including transport to site with propoer required (PVC sheets / wooden frame) packing, store at site, erect in proper position of Sub-Main Electrical LT panel, floor mounted, front operated, dead back, totally enclosed, IP42, vermin proof, indoor, non-drawout, cubicle type power distribution panel fabricated out of 2mm thick CRCA sheet having gasketed hinged door on each cubicle, fully powder coated / enamel painted after seven tank treatment, incorporating horizontal and vertical sleeved copper / aluminium busbars complete with all internal wiring with suitable size approved make FRLS grade colour coded wires, rotary handle, spreaders, 3mm thick gland plate, hinged type door with neoprene gasket, danger board, two earthing lugs, cable chamber, etc. as required housing below mentioned switchgears, metering instruments and accessories :-				
	Note :- GA & Control Drawing of the panel shall be approved by the consultant before fabrication. (Panel shall be manufactured from CPRI approved & ISO 9001:2008 certified manufacturer only.) All test certificates for Panel shall be submitted alongwith the delivery of Panel at site. (Client / Consultant reserves the right to reject the Panel supplied without prior design approval / submission of required test certificates alongwith the delivery of Panel at site.)				
	(MAIN ELECTRICAL LT PANEL)				
	INCOMER				
	1 No. 630A, FP, 36kA / 50kA, MCCB with Thermal Magnetic release, of approved make with over load (O/L), short circuit (S/C) & Earth Fault (E/F) protection. The Breaker shall be suitable for 415 Volts 50 Hz., AC supply. The breaker shall have breaking capacity of 36kA / 50kA for 1 Sec. as required. (Schneider / Hager / Legrand / Siemens / L&T make)				
	METERING				
	1 No., 3 phase CT Operated (with class-1 CT) multifunction meter / Load Manager (LM) with RS 485 communication port of approved make. The Load manger should read Ammeter, Voltmeter, KWH meter and Power Factor meter.				
	INDICATORS				
	The following indicating lamps shall be provided for Incomer Section :-				
	1 Set of R,Y,B Phase Indicating lamps, LED type of approved make.				
	1 No. Red & 1 no. Green colour LED type indicating lamps for indicating MCCB is in 'ON' or 'OFF' position.				
	BUSBARS				
	1 Set of 800 Amps uniformly rated, continuous duty, 415V AC, 3-Phase & Neutral electrolytic grade 99.95% Purity Tinned Copper bus-bars with colour coded heat sink sleeves supported on SMC type grip supports. The Horizontal / Vertical sections of the busbars should all be uniformly rated for 800 Amps.				
	1 Set of 32 x 6 mm copper busbars of high conductivity electrolytic quality shall be provided throught out the panel for its earthing.				
	OUTGOINGS				
	1 No. 250A, TPN, Switch Fuse Unit (SFU) The Breaker shall be suitable for 415 Volts 50 Hz., AC supply. (For APFC Panel Incomer - 1 no.) (Schneider / Hager / Legrand / Siemens / L&T make)				

S.N.	PARTICULARS	QTY	UNIT	RATE PER UNIT	AMOUNT (Rs.)
	2 Nos. 250A, FP, 25kA / 36kA, MCCB with Thermal Magnetic release, of approved make with built in over load (O/L), short circuit (S/C) protection. The Breaker shall be suitable for 415 Volts 50 Hz., AC supply. The breaker shall have breaking capacity of 25 / 36 kA for 1 Sec. (Schneider / Hager / Legrand / Siemens / L&T make) (For 1'st & 2'nd Floor Main DB - 2 Nos)				
	3 Nos. 125A, FP, 25kA / 36kA, MCCB with Thermal Magnetic release, of approved make with built in over load (O/L), short circuit (S/C) protection. The Breaker shall be suitable for 415 Volts 50 Hz., AC supply. The breaker shall have breaking capacity of 25 / 36 kA for 1 Sec. (Schneider / Hager / Legrand / Siemens / L&T make) (For Gr.flr Hostel Main DB - 1 no, Canteen / Executive Dining HVAC DB - 1 no. Kitchen/Pantry Panel - 1 no.,)				
	1 Nos. 100A, FP, 25kA / 36kA, MCCB with Thermal Magnetic release, of approved make with built in over load (O/L), short circuit (S/C) protection. The Breaker shall be suitable for 415 Volts 50 Hz., AC supply. The breaker shall have breaking capacity of 25 / 36 kA for 1 Sec. (Schneider / Hager / Legrand / Siemens / L&T make) (For Spare - 1 no.)				
	7 Nos., of 40/63 Amps., TPN Miniture Circuit Breaker. The MCB shall be suitable for 415Volts 50Hz., AC supply and having fault level of 10KA. The MCB Shall have "C" curve type. (Schneider / Hager / Legrand / Siemens / L&T make) (For LDB Canteen - 1 No, Outdoor / Garden LDB - 1 No., 5HP Motors - 2 Nos, Spare - 3 Nos.)				
	3 nos, 40/32/25A, DP, MCB, "C" curve type as outgoings.				
	Full Set as above	1	NOS		
Rate in words :-					
15	Supply and Installation of Automatic Power Factor Control (APFC) Panel - 2 , floor mounted, front operated, dead back, totally enclosed vermin proof, indoor, non-drawout, cubicle type power dist. panel fabricated out of 2mm thick CRCA sheet having gasketed hinged door on each cubicle, fully powder coated / enamel painted after seven tank treatment, incorporating horizontal and vertical sleeved copper / aluminium busbars as required 'complete with all internal wiring, danger board, two earthing lugs, cable chamber etc. as required 'housing below mentioned switchgears. Panel to be installed at min. 6" / max. as required at actual above floor on MS stand or frame with required anchor fasteners, nuts, bolts etc.				
	APFC Panel shall consists of solid state automatic power factor correction arrangement having microprocessor based control circuit and thyristor switching power circuit having a required capacity of 200KVAR in the stages as approved by the Client / Consultant alongwith required size MCCB, MCB, Contactors, Voltmeter, Ammeter, Load Manager, etc. including all necessary internal wiring & control wiring alongwith necessary hardware & accessories, etc. complete as required & approved by the Client / Consultant.				
	Note :- GA & Control Drawing of the panel shall be approved by the consultant before fabrication. (Panel shall be manufactured from CPRI approved & ISO 9001:2008 certified manufacturer only.) All test certificates for Panel shall be submitted alongwith the delivery of Panel at site. (Client / Consultant reserves the right to reject the Panel supplied without prior design approval / submission of required test certificates alongwith the delivery of Panel at site.)				
	Full Set as above	1	Nos		

S.N.	PARTICULARS	QTY	UNIT	RATE PER UNIT	AMOUNT (Rs.)
16	<u>KITCHEN / PANTRY POWER PANEL</u> - Supply, Installation, Testing and Commissioning including transport to site with propoer required (PVC sheets / wooden frame) packing, store at site, erect in proper position of Sub-Main Electrical LT panel, floor mounted, front operated, dead back, totally enclosed, IP42, vermin proof, indoor, non-drawout, cubicle type power distribution panel fabricated out of 2mm thick CRCA sheet having gasketed hinged door on each cubicle, fully powder coated / enamel painted after seven tank treatment, incorporating horizontal and vertical sleeved copper / aluminium busbars complete with all internal wiring with suitable size approved make FRLS grade colour coded wires, rotary handle, spreaders, 3mm thick gland plate, hinged type door with neoprene gasket, danger board, two earthing lugs, cable chamber, etc. as required housing below mentioned switchgears, metering instruments and accessories :-				
	Note :- GA & Control Drawing of the panel shall be approved by the consultant before fabrication. (Panel shall be manufactured from CPRI approved & ISO 9001:2008 certified manufacturer only.) All test certificates for Panel shall be submitted alongwith the delivery of Panel at site. (Client / Consultant reserves the right to reject the Panel supplied without prior design approval / submission of required test certificates alongwith the delivery of Panel at site.)				
	<u>INCOMER</u>				
	1 No. 125A, FP, 36kA / 50kA, MCCB with Thermal Magnetic release, of approved make with over load (O/L), short circuit (S/C) & Earth Fault (E/F) protection. The Breaker shall be suitable for 415 Volts 50 Hz., AC supply. The breaker shall have breaking capacity of 36kA / 50kA for 1 Sec. as required. (Schneider / Hager / Legrand / Siemens / L&T make)				
	<u>METERING</u>				
	1 No., 3 phase CT Operated (with class-1 CT) multifunction meter / Load Manager (LM) with RS 485 communication port of approved make. The Load manger should read Ammeter, Voltmeter, KWH meter and Power Factor meter.				
	<u>INDICATORS</u>				
	The following indicating lamps shall be provided for Incomer Section :-				
	1 Set of R,Y,B Phase Indicating lamps, LED type of approved make.				
	1 No. Red & 1 no. Green colour LED type indicating lamps for indicating MCCB is in 'ON' or 'OFF' position.				
	<u>BUSBARS</u>				
	1 Set of 200 Amps uniformly rated, continuous duty, 415V AC, 3-Phase & Neutral electrolytic grade 99.95% Purity Tinned Copper bus-bars with colour coded heat sink sleeves supported on SMC type grip supports. The Horizontal / Vertical sections of the busbars should all be uniformly rated for 200 Amps.				
	1 Set of 25 x 5 mm copper busbars of high conductivity electrolytic quality shall be provided throught out the panel for its earthing.				
	<u>OUTGOINGS</u>				
	2 Nos., of 63 Amps., TPN Miniture Circuit Breaker. The MCB shall be suitable for 415Volts 50Hz., AC supply and having fault level of 10KA. The MCB Shall have "C" curve type. (Schneider / Hager / Legrand / Siemens / L&T make) (Pulvariser - 1 Nos, Spare - 1 Nos.)				
	5 Nos., of 20/25/32 Amps., TPN Miniture Circuit Breaker. The MCB shall be suitable for 415Volts 50Hz., AC supply and having fault level of 10KA. The MCB Shall have "C" curve type. (Schneider / Hager / Legrand / Siemens / L&T make) (Blower 5 HP - 2 Nos, Dough Kneeder - 2 Nos, Spare - 1 Nos.)				
	25 nos, 20/25, SP, MCB, "C" curve type as outgoing. (For Kitchen Equipments)				
	Full Set as above	1	NOS		
	Rate in words :-				

S.N.	PARTICULARS	QTY	UNIT	RATE PER UNIT	AMOUNT (Rs.)
17	Suply and installation of 8-way, VTPN, Acrylic transparent door, (MCCB DB) Main Power Distribution Board, flush mounted on wall, interconnected wiring complete with earthing lugs housing following switchgears : (Similar to Legrand / Hager / Siemens / Schnider make) (For Hostel Bldg first & second floor Main DB-2 nos)				
a	1 No. , 250A, 415V 50Hz TP MCCB complete with neutral & accessories as incomer				
b	3 Nos., 63/A, TP, MCB as outgoing.				
c	15 Nos., 16/20/32/A, SP, MCB as outgoing.				
	Full Set as above	2	Nos		
Rate in words :-					
18	Suply and installation of 8-way, VTPN, Acrylic transparent door, (MCCB DB) Main Power Distribution Board, flush mounted on wall, interconnected wiring complete with earthing lugs housing following switchgears : (Similar to Legrand / Hager / Siemens / Schnider make) (College bldg -Auditorium Main DB)				
a	1 No. , 125A, 415V 50Hz TP MCCB complete with neutral & accessories as incomer				
b	24 Nos., 10/16/20/32/A, SP, MCB as outgoing.				
	Full Set as above	1	Nos		
Rate in words :-					
19	Suply and installation of 8-way, VTPN, Acrylic transparent door, (MCCB DB) Main Power Distribution Board, flush mounted on wall, interconnected wiring complete with earthing lugs housing following switchgears : (Similar to Legrand / Hager / Siemens / Schnider make) (For Hostel Bldg Gr.floor Main DB- 1 no, & Canteen & Ex.Dining HVAC DB - 1no.)				
a	1 No. , 125A, 415V 50Hz TP MCCB complete with neutral & accessories as incomer				
b	3 Nos., 63/A, TP, MCB as outgoing.				
c	15 Nos., 16/20/32/A, SP, MCB as outgoing.				
	Full Set as above	2	Nos		
Rate in words :-					
20	Suply and installation of 6-way, VTPN, Acrylic transparent door, (MCCB DB) Main Power Distribution Board, flush mounted on wall, interconnected wiring complete with earthing lugs housing following switchgears : (Similar to Legrand / Hager / Siemens / Schnider make) (College bldg -Auditorium HVAC DB - 1 no.)				
a	1 No. , 125A, 415V 50Hz TP MCCB complete with neutral & accessories as incomer				
b	5 Nos., 63/40A, TP, MCB as outgoing.				
c	3 Nos., 16/20/32/A, SP, MCB as outgoing.				
	Full Set as above	1	Nos		
Rate in words :-					
21	Suply and installation of 6-way, VTPN, Acrylic transparent door, (MCB DB) Main Power Distribution Board, flush mounted on wall, interconnected wiring complete with earthing lugs housing following switchgears : (Similar to Legrand / Hager / Siemens / Schnider make)				
a	1 No. , 63A, 415V 50Hz FP MCB complete with neutral & accessories as incomer				
b	18 Nos. 25/32A SP, MCB as outgoing.				
	Full Set as above	2	Nos		
Rate in words :-					
22	Suply and installation of 4-way, VTPN, Acrylic transparent door, (MCB DB) Main Power Distribution Board, flush mounted on wall, interconnected wiring complete with earthing lugs housing following switchgears : (Similar to Legrand / Hager / Siemens / Schnider make)				
a	1 No. , 63A, 415V 50Hz FP MCB complete with neutral & accessories as incomer				

S.N.	PARTICULARS	QTY	UNIT	RATE PER UNIT	AMOUNT (Rs.)
b	12 Nos. 25/32A SP, MCB as outgoing.				
	Full Set as above	4	Nos		
Rate in words :-					
23	Supply and installation of 4-way, PPI TPN, Double Door, Metal type, with Acrylic Transperant Door (As approved by client / consultant / architect), Lighting Distribution Board (LDB), surface / flush mounted on wall , interconnected wiring complete with earthing lugs, including DB wiring dressing with ferruling, termination of circuits with ping type copper lugs, blank plates, etc. housing following switchgears : (Schneider / Hager / Siemens / Legrand make as approved by client / consultant)				
	(Note :- DB size & type selection shall be done with reference to the total number of modules / poles available in the DB which shall be suitable for housing of below mentioned switchgears & components forming a complete set.)				
a	1 no., 40 / 63A, FP MCB, "C" curve type as incomer				
b	3 no.s, 25A, DP RCCB / ELCB with sensitivity of 100mA, as sub-incomer.				
c	12 nos, 10A, SP, MCB, "C" curve type as outgoing + 3 no.s 1M-RYB indicators / lamps each.				
	Full Set as above	8	Nos		
Rate in words :-					
24	Supply and installation of 6-way, PPI TPN, Double Door, Metal type, with Acrylic Transperant Door (As approved by client / consultant / architect), Lighting Distribution Board (LDB), surface / flush mounted on wall , interconnected wiring complete with earthing lugs, including DB wiring dressing with ferruling, termination of circuits with ping type copper lugs, blank plates, etc. housing following switchgears : (Schneider / Hager / Siemens / Legrand make as approved by client / consultant)				
	(Note :- DB size & type selection shall be done with reference to the total number of modules / poles available in the DB which shall be suitable for housing of below mentioned switchgears & components forming a complete set.)				
a	1 no., 40 / 63A, FP MCB, "C" curve type as incomer				
b	3 no.s, 25A, DP RCCB / ELCB with sensitivity of 100mA, as sub-incomer.				
c	16 nos, 10A, SP, MCB, "C" curve type as outgoing + 3 no.s 1M-RYB indicators / lamps each.				
	Full Set as above	2	Nos		
Rate in words :-					
25	Supply and installation of 4-way TPN, Double Door, Metal type, with Acrylic Transperant Door (As approved by client / consultant / architect), Raw Power & AC Distribution Board (AC + RPDB), surface / flush mounted on wall , interconnected wiring complete with earthing lugs, including DB wiring dressing with ferruling, termination of circuits with ping type copper lugs, blank plates, etc. housing following switchgears : (Schneider / Hager / Siemens / Legrand make as approved by client / consultant)				
	(Note :- DB size & type selection shall be done with reference to the total number of modules / poles available in the DB which shall be suitable for housing of below mentioned switchgears & components forming a complete set.)				
a	1 no., 63A, FP MCB, "C" curve type as incomer				
b	12 nos, 16/20/25A, SP, MCB, "C" curve type as outgoing + 3 no.s 1M-RYB indicators / lamps each.				
	Full Set as above	4	Nos		
Rate in words :-					

S.N.	PARTICULARS	QTY	UNIT	RATE PER UNIT	AMOUNT (Rs.)
26	Suply and installation of 4-way, SPN, Acrylic transparent Door Distribution Board , flush mounted on wall, interconnected wiring complete with earthing lugs housing following switchgears : (Similar to MDS / equivalent approved make)				
a	1 no., 25A, DP MCB as incomer				
b	2 nos, 20A, SP, MCB outgoing				
	Full Set as above	2	Nos		
Rate in words :-					
27	Suply and installation of 8-way, SPN, Acrylic transparent Door Distribution Board , flush mounted on wall, interconnected wiring complete with earthing lugs housing following switchgears : (Similar to MDS / equivalent approved make)				
a	1 no., 32A, DP MCB as incomer				
b	4 nos, 10/16/20A, SP, MCB outgoing				
	Full Set as above	77	Nos		
Rate in words :-					
28	Suply and installation of 8-way, SPN, Acrylic transparent Door Distribution Board , flush mounted on wall, interconnected wiring complete with earthing lugs housing following switchgears : (Similar to MDS / equivalent approved make)				
a	1 no., 25/32A, DP MCB as incomer				
b	6 nos, 10/16/20A, SP, MCB outgoing				
	Full Set as above	9	Nos		
Rate in words :-					
29	Suply and installation of 12-way, SPN, Acrylic transparent Door Distribution Board , flush mounted on wall, interconnected wiring complete with earthing lugs housing following switchgears : (Similar to MDS / equivalent approved make)				
a	1 no., 63/40A, DP MCB as incomer				
b	10 nos, 10/16/20A, SP, MCB outgoing				
	Full Set as above	14	Nos		
Rate in words :-					
30	Suply and installation of 16-way, SPN, Acrylic transparent Door Distribution Board , flush mounted on wall, interconnected wiring complete with earthing lugs housing following switchgears : (Similar to MDS / equivalent approved make)				
a	1 no., 63/40A, DP MCB as incomer				
b	14 nos, 10/16/20A, SP, MCB outgoing				
	Full Set as above	2	Nos		
Rate in words :-					
31	Supply & Installation of 20/25A, SP, MCB, box with 20A, metal clad / modular plug-socket including power circuit of (2x4 + 1x4) sq. mm FRLS copper flexible wires directly taken from the relevant DB through PVC conduits for room Geyser including all necessary hardware & accessories, etc. (Schneider / Hager / Legrand / Siemens / L&T make)	89	Nos		
Rate in words :-					
32	Supply & Installation of 20/25A, DP, MCB, box with 20A, metal clad / modular plug-socket for Pantry Equipments including all necessary hardware & accessories, etc. (Schneider / Hager / Legrand / Siemens / L&T make)	0	Nos		
Rate in words :-					

S.N.	PARTICULARS	QTY	UNIT	RATE PER UNIT	AMOUNT (Rs.)
33	Supply & Installation of 16/20/25A, 2P+E-DP, MCB with metal encloser including temptra plug socket for terminating supply to machines, Kitchen equipment, Other machines, etc. as required. (for indoor / outdoor applications) (Schneider / Legrand / equivalent approved make)	5	Nos		
Rate in words :-					
34	Supply & Installation of 32A/40A, 2P+E-DP, MCB with metal encloser including temptra plug socket for terminating supply to machines, Kitchen equipment, Other machines, etc. as required. (for indoor / outdoor applications) (Schneider / Legrand / equivalent approved make)	16	Nos		
Rate in words :-					
35	Supply & Installation of 20/32A, 3P+N+E-FP, MCB with metal encloser including temptra plug socket for terminating supply to machines, Kitchen equipment, Other machines, etc. as required. (for indoor / outdoor applications) (Schneider / Legrand / equivalent approved make)	2	Nos		
Rate in words :-					
36	Supply & Installation of 40A/63A, 3P+N+E-FP, MCB with metal encloser including temptra plug socket for terminating supply to machines, Kitchen equipment, Other machines, etc. as required. (for indoor / outdoor applications) (Schneider / Legrand / equivalent approved make)	4	Nos		
Rate in words :-					
37	Supply & Installation of 100A,25/36 kA TPN MCCB with Enclosure alongwith all necessary hardware & accessories, etc. complete as required. (Schneider / Hager / Legrand / Siemens / L&T make) (For UPS In-put/Out-put)	2	Nos		
Rate in words :-					
38	Supply & Installation of 63/40A, TPN MCB with Enclosure alongwith all necessary hardware & accessories, etc. complete as required. (Schneider / Hager / Legrand / Siemens / L&T make) (For UPS In-put/Out-put)	1	Nos		
Rate in words :-					
39	Supply & Installation of 63/40A, TPN MCB with weather-proof Enclosure alongwith all necessary hardware & accessories, etc. complete as required. (Schneider / Hager / Legrand / Siemens / L&T make)	7	Nos		
Rate in words :-					
40	Supply & Installation of 63/40/32A, DP MCB with enclosure alongwith all necessary hardware & accessories, etc. complete as required. (Schneider / Hager / Legrand / Siemens / L&T make) (For UPS In-put/Out-put)	1	Nos		
Rate in words :-					

S.N.	PARTICULARS	QTY	UNIT	RATE PER UNIT	AMOUNT (Rs.)
41	Providing Scaffolding for Electrical works at required height in Auditorium	1	LS		
Rate in words :-					
	TOTAL of SECTION (A)				

B	CABELS / MAINS				
1	Supply & Installation of 1100V grade armoured cable having sector / circular shaped aluminium / copper conductor PVC insulated cores, laid up, PVC tape wrapped inner sheathed, GI strip / wire armoured and overall extruded PVC sheathed conforming to IS: 1554, laid on wall / ceiling using GI clamps & spacers / underground at necessary depth as required as per site conditions & as per route shown / approved at site and further as directed by Consultant / Client at site in the following sizes :-				
	NOTE :- All Armoured cables shall be provided with temporary labelling at every 5mtrs & then finally with metal identification tags showing the size & the location from/to the respective Panel / DB, at both the ends.				
1.1	3 1/2 C x 300 Sq.mm Aluminium Armoured cable with 2 runs of 8 SWG GI bare wire)	40	Mtrs		
Rate in words :-					
1.2	3 1/2 C x 150 Sq.mm Aluminium Armoured cable with 2 runs of 8 SWG GI bare wire)	135	Mtrs		
Rate in words :-					
1.3	3 1/2 C x 120 Sq.mm Aluminium Armoured cable with 2 runs of 8 SWG GI bare wire)	260	Mtrs		
Rate in words :-					
1.4	3 1/2 C x 70 Sq.mm Aluminium Armoured cable with 2 runs of 8 SWG GI bare wire)	115	Mtrs		
Rate in words :-					
1.5	3 1/2 C x 50 Sq.mm Aluminium Armoured cable with 2 runs of 8 SWG GI bare wire)	0	Mtrs		
Rate in words :-					
1.6	4C x 16 Sq.mm Copper Armoured cable with 2 runs of 12 SWG GI bare wire.	540	Mtrs		
Rate in words :-					
1.7	4C x 10 Sq.mm Copper Armoured cable with 2 runs of 12 SWG GI bare wire.	185	Mtrs		
Rate in words :-					
1.8	4C x 6 Sq.mm Copper Armoured cable with 2 runs of 12 SWG GI bare wire.	500	Mtrs		
Rate in words :-					
1.9	4C x 4 Sq.mm Copper Armoured cable with 2 runs of 12 SWG GI bare wire.	125	Mtrs		
Rate in words :-					
1.10	3C x 16 Sq.mm Copper Armoured cable	160	Mtrs		
Rate in words :-					
1.11	3C x 10 Sq.mm Copper Armoured cable	245	Mtrs		
Rate in words :-					
1.12	3C x 6 Sq.mm Copper Armoured cable	860	Mtrs		
Rate in words :-					
1.13	3C x 4 Sq.mm Copper Armoured cable	2515	Mtrs		
Rate in words :-					
1.14	3C x 2.5 Sq.mm Copper Armoured cable	0	Mtrs		
Rate in words :-					
1.15	3C x 1.5 Sq.mm Copper Armoured cable	2050	Mtrs		
Rate in words :-					

S.N.	PARTICULARS	QTY	UNIT	RATE PER UNIT	AMOUNT (Rs.)
1.16	35 Sq.mm Copper flexible lead wire through flexible PVC conduit	0	Mtrs		
Rate in words :-					
1.17	25 Sq.mm Copper flexible lead wire through flexible PVC conduit	30	Mtrs		
Rate in words :-					
2	GLANDING & TERMINATION :- Supply & Installation of end termination of above mentioned cables including compressed type brass glands , crimping type copper lugs, insulation tape etc. as 'required complete with earthing of glands in following sizes :-				
2.1	3 1/2 C x 300 Sq.mm Aluminium Armoured cable with 2 runs of 8 SWG GI bare wire)	6	Nos		
Rate in words :-					
2.2	3 1/2 C x 150 Sq.mm Aluminium Armoured cable with 2 runs of 8 SWG GI bare wire)	8	Nos		
Rate in words :-					
2.3	3 1/2 C x 120 Sq.mm Aluminium Armoured cable with 2 runs of 8 SWG GI bare wire)	18	Nos		
Rate in words :-					
2.4	3 1/2 C x 70 Sq.mm Aluminium Armoured cable with 2 runs of 8 SWG GI bare wire)	4	Nos		
Rate in words :-					
2.5	3 1/2 C x 50 Sq.mm Aluminium Armoured cable with 2 runs of 8 SWG GI bare wire)	0	Nos		
Rate in words :-					
2.6	4C x 16 Sq.mm Copper Armoured cable with 2 runs of 12 SWG GI bare wire.	22	Nos		
Rate in words :-					
2.7	4C x 10 Sq.mm Copper Armoured cable with 2 runs of 12 SWG GI bare wire.	14	Nos		
Rate in words :-					
2.8	4C x 6 Sq.mm Copper Armoured cable with 2 runs of 12 SWG GI bare wire.	22	Nos		
Rate in words :-					
2.9	4C x 4 Sq.mm Copper Armoured cable with 2 runs of 12 SWG GI bare wire.	10	Nos		
Rate in words :-					
2.10	3C x 16 Sq.mm Copper Armoured cable	1	Nos		
Rate in words :-					
2.11	3C x 10 Sq.mm Copper Armoured cable	8	Nos		
Rate in words :-					
2.12	3C x 6 Sq.mm Copper Armoured cable	46	Nos		
Rate in words :-					
2.13	3C x 4 Sq.mm Copper Armoured cable	190	Nos		
Rate in words :-					
2.14	3C x 2.5 Sq.mm Copper Armoured cable	0	Nos		
Rate in words :-					
2.15	3C x 1.5 Sq.mm Copper Armoured cable	86	Nos		
Rate in words :-					
2.16	35 Sq.mm Copper flexible lead wire through flexible PVC conduit	0	Nos		
Rate in words :-					
2.17	25 Sq.mm Copper flexible lead wire through flexible PVC conduit	5	Nos		
Rate in words :-					
	TOTAL of SECTION (B)				

S.N.	PARTICULARS	QTY	UNIT	RATE PER UNIT	AMOUNT (Rs.)
C	EARTHING (GENERAL / DEDICATED)				
1	Supply & Installation of earth pit comprising of 600mm x 600mm x 3mm thick GI plate buried at a minimum depth of 2.5 meter including necessary materials like charcoal,salt etc as required conforming to BIS standards having brick masonry chamber with hinged cover and watering arrangement. (Electrical Earthing Pit)	8	Nos		
Rate in words :-					
2	Supply & Installation of earth pit comprising of 600mm x 600mm x 3mm thick Copper plate buried at a minimum depth of 2.5 meter including necessary materials like charcoal,salt etc as required conforming to BIS standards having brick masonry chamber with hinged cover and watering arrangement. (Dedicated Earthing Pit)	1	Nos		
Rate in words :-					
3	Supply & Installation of copper /GI earthing wires/strips in following sizes including all necessary hardware & accessories, etc.:-				
3.1	25 x 5 GI. Strip through PVC sleeve (Electrical Earthing) (From Electrical Earthing Pit to Main Electrical Earthing Busbar)	450	Mtrs		
Rate in words :-					
3.2	Supply & installation of 1C x 16 sq.mm flexible Cu. Wire through 20/25mm heavy guage PVC conduit conceled / surface on wall or underground from earth pit to building wall including all necessary hardware & accessories, etc. complete as required.	5	Mtrs		
Rate in words :-					
3.3	Supply & installation of 1C x 25 sq.mm flexible Cu. Wire through 25/32mm heavy guage PVC conduit conceled / surface on wall or underground from earth pit to building wall including all necessary hardware & accessories, etc. complete as required.	100	Mtrs		
Rate in words :-					
4	Supply & Installation of (50 x 6)mm of 300mm length GI. earthing bus with enclouser with sufficient no. of hole for connecting earthing wire with necessary accessories, hardware, etc. (General Electrical Earthing BUS)	3	Nos		
Rate in words :-					
	TOTAL of SECTION (C)				

D	INTERNAL LIGHTING & POWER WIRING				
1	Supply & Installation of surface light point / ceiling fan point / call bell point wiring using 600V FRLS grade 3R (P+N+E) x 1.5 Sq.mm copper conductor PVC insulated wires (with proper R,Y,B color code) pulled through PVC conduit laid concealed or on the ceiling Including 3R (P+N+E) x 2.5 Sq.mm circuit wires from the relevant DB and also Including 2.5 sqmm green color copper earth wire and approved make modular type switch plate, switches, MS concealed back box, etc. as required & as approved by the consultant. (Each circuit shall not feed more than 8 points OR 800 watts as per following configuration.) (The item rate shall Exclude Lighting / Raw / UPS Power Circuit wiring from relevent DB to the switch board with 3Rx2.5 Sq.mm FRLS wires & from switch board to next switch board OR to the first light point / primary point / full point)				
	All wiring shall be of concealed / surface type as required & directed / instructed at site by Client / Consultant. Price to include (i) wires & PVC conduits with accessories (ii) end connections of wires (iii) ceiling roses & fan hooks / lamp holder in case of light / fan point (iv) all circuits & sub circuits (v) switch, socket, plate, PVC / Metal Conceled / surface back box as required complete with all necessary hardware & accessories, etc.				

S.N.	PARTICULARS	QTY	UNIT	RATE PER UNIT	AMOUNT (Rs.)
	NOTE :- 1. Only FRLS wire shall be used; 2. Conduit / Casing capping carrying circuit wiring should not carry point wiring and Conduit / casing capping carrying point wiring should not carry submain/circuit wiring; 3. Flexible conduits & Elbows are not allowed; 4. The wires from ceiling junction to light points / light fixture shall be drawn in flexible PVC conduit with adaptor & cover for junction box & crimp type lugs at both the ends alongwith necessary hardware & accessories, etc. as required; 5. Proper ferrules, lugs, must be used in all cabling and wiring on both load / source end; 6. Each switch board must be provided with respective ferrules representing the respective DB, Phase & Circuit numbers; 7. Looping of Neutral / Earth wire between two separate Primary / Full Points is strictly not allowed; 8. Looping of Neutral / Earth wire between two separate circuits on similar or other phase is strictly not allowed; 9. Ferulling / numbering / tagging to wires with circuit number & db name for all lighting & raw / ups power shall be strictly followed at both DB & switch board / switch socket boards ends.				
1.1	Primary light points including the cost of 5A switch.	1011	Nos		
Rate in words :-					
1.2	Primary light points including the cost of 5A switch. (15-25 mtr Point)	20	Nos		
Rate in words :-					
1.3	Secondary light points looped from the above point	238	Nos		
Rate in words :-					
1.4	Two way light point including the cost of 5A two way switch	2	Nos		
Rate in words :-					
1.5	Fan Point including 120W Electronic type step regulator, anchor fastner, 'S' type fan hook & Required size Fan rod in ceiling to suspend ceiling fan by cutting / chiesling / painting as required	225	Nos		
Rate in words :-					
1.6	Modular Bell push switch point with modular switch plate with indicator having reset switch / Bell Buzzer outside cabin, attendant, peon, clerk etc. as location directed.	143	Nos		
Rate in words :-					
1.7	Exhaust fan point consisting of 5A socket near fan and switch on light switch board	108	Nos		
Rate in words :-					
1.8	Secondary 5A Plug Point socket on Existing lighting switch board / loop from nearest power point.	287	Nos		
Rate in words :-					
1.9	5A plug point as primary point independent mounted on wall / partition / on work station, etc. (UPS / RAW Power) (Only five to six workstations / independent mounted raw power points shall be looped in one raw power circuit)	592	Nos		
Rate in words :-					
2	Supply & installation of 16A Key Tag Main Switch in Modular Plate with necessary Hardware & accessories etc.	12	Nos		
Rate in words :-					
3	Supply & installation of 32A Key Tag Main Switch in Modular Plate including 3 x 4 sq.mm FRLS Grade Circuit wire from Main DB in conduit / casing patti (Approx length 3 mtr.) with necessary Hardware & accessories etc.	76	Nos		
Rate in words :-					
4	Supply & installation of 5/15A Plug Point directly taken from DB for Pantry / zerox / printer / fridge, etc. including 2 x 2.5 sqmm FRLS grade circuit wires directly taken from the relevant DB and also including 2.5 sqmm green color copper earth wire all laid through PVC conduits with all necessary hardware& accessories, etc. (UPS / Raw Power)	146	Nos		
Rate in words :-					

S.N.	PARTICULARS	QTY	UNIT	RATE PER UNIT	AMOUNT (Rs.)
5	Supply & installation of 5/15A Modular MCB Switch / socket Plug Point directly taken from DB for AC etc. including 2 x 4 sqmm FRLS grade circuit wires directly taken from the relevant DB and also including 4 sqmm green color copper earth wire all laid through PVC conduits with all necessary hardware & accessories, etc. (Raw Power)	150	Nos		
Rate in words :-					
5	Supply & Installation of point wiring for UPS or stabilized power plug points on workstations / table for computers using 3R X2.5 Sqmm FRLS grade copper conductor PVC sheathed flexible wire pulled through PVC conduits / existing floor raceways. Each point consisting of 2 nos of 5A , 2/3 pin sockets & 1 No., 15A Switch , wired together forming one point. The earth wire of 3 core flexible cable to be of yellow-green color only. (ONLY FOUR tables served by one circiut from DB)	250	Nos		
Rate in words :-					
6	Supply & Installation of point wiring for UPS or stabilized power plug points on workstations / table for computers using 3R X2.5 Sqmm FRLS grade copper conductor PVC sheathed flexible wire pulled through PVC conduits / existing floor raceways. Each point consisting of 7 nos of 5A , 2 pin sockets & 1 No., 15A Switch , wired together forming one point. The earth wire of 3 core flexible cable to be of yellow-green color only. (ONLY FOUR tables served by one circiut from DB)	10	Nos		
Rate in words :-					
7	Supply & Installation of TV socket outlet point including approved make modular switchboard / in the existing switch board including all the necessary hardware & accessories, etc.	47	Nos		
Rate in words :-					
8	Supply & Installation of RG6 TV cable through heavy guage PVC conduit to be laid surface / cancelled including all necessary hardware & accessories, etc.	1450	Rmt.		
Rate in words :-					
9	Supply & Installation of Occupancy cum Movement Sensor suitable for 'ON/OFF' control of LED / CFL / PL, etc. type light fixtures / fittings along with required control wiring from sensor to ballast/switch board as required including necessary hardware & accessories, etc. Detection range for movement shall be 6m diameter with installation height of 2.5 meter approximately. (Hager / Honeywell / Lutron / equivalent make & model in Schneider / Wipro / Philips / CG / GE make)	60	Nos		
Rate in words :-					
10	Supply & Installation of Occupancy cum Presence Sensor suitable for 'ON/OFF' control of LED / CFL / PL, etc. type light fixtures / fittings & shall be able to detect micro moments along with required control wiring from sensor to ballast/switch board as required including necessary hardware & accessories, etc. Detection range for movement shall be 7 meter diameter with installation height of 2.5 meter approximately. (Hager / Honeywell / Lutron / equivalent make & model in Schneider / Wipro / Philips / CG / GE make) (For Principal Cabin)	2	Nos		
Rate in words :-					
	TOTAL of SECTION (D)				

E	TRENCHING / FLOOR -RACEWAYS				
1	Supply and laying Raceways / Conduits (for under floor trenches / On trays) on existing flooring. Raceways / conduits shall be fixed to the flooring with GI clamps for finished levels as per the site conditions or through partitions with all accessories. The rate shall include preparation of trenches of required sizes by carefully removing the malwa on existing floor for laying Raceways/conduits for power, data, telephone cables etc. The depth of the trenches shall be at least 2 inches from the finished floor level or upto RCC of the slab. The rate shall include the cost of the Raceways/conduits. The rate shall also include the activity of clearing the debris generated from the preparation of trenches & filling the same with PCC. (FOR THE PORTION WITHOUT FALSE FLOORING)				

S.N.	PARTICULARS	QTY	UNIT	RATE PER UNIT	AMOUNT (Rs.)
1.1	100 x 40 x 1.6mm thick Aluminium Raceways	225	Mtrs		
Rate in words :-					
1.2	80 x 40 x 1.6mm thick Aluminium Raceways	550	Mtrs		
Rate in words :-					
1.3	60 x 40 x 1.6mm thick Aluminium Raceways	700	Mtrs		
Rate in words :-					
1.4	32 mm heavy guage PVC conduit to be laid cancelled / surface in / on wall / floor as required as per the above mentioned specifications	950	Mtrs		
Rate in words :-					
1.5	25 mm heavy guage PVC conduit to be laid cancelled / surface in / on wall / floor as required as per the above mentioned specifications	1300	Mtrs		
Rate in words :-					
2	Supply & Installation of floor junction boxes without top cover for above raceways, of following sizes , fabricated out of M.S. sheets, fully powder coated with provision for removable M.S. / S.S. screwed cover plates on all four sides for blocking the entry into the junction box. All the junction boxes to be (with stud) 'properly earth - bonded with the raceways pipe using 12 SWG Copper bare wire as directed at site.				
2.1	Junction Box of size (250mm x 250mm x 50mm x 2.5mm thick)	65	Nos		
Rate in words :-					
2.2	Junction Box of size (300mm x 300mm x 50mm x 2.5mm thick)	25	Nos		
Rate in words :-					
2.3	Junction Box of size (350mm x 350mm x 50mm x 2.5mm thick)	10	Nos		
Rate in words :-					
3	Supply & Installation of suitable sizes 2mm thick removable cover plate screwed on all four sides of M.S. sheet, fully powder coated, for blocking the entry into the floor junction box for following sizes of junction boxes with rounded corners as per the instruction given & sample approved by the client / architect / consultant at site. Cover plate shall have required no.s of 1' dia knockouts for flexible conduit outlets as per the requirement.				
3.1	for Junction Box of size (250mm x 250mm x 50mm x 2.5mm thick)	65	Nos		
Rate in words :-					
3.2	for Junction Box of size (300mm x 300mm x 50mm x 2.5mm thick)	25	Nos		
Rate in words :-					
3.3	for Junction Box of size (350mm x 350mm x 50mm x 2.5mm thick)	10	Nos		
Rate in words :-					
4	Providing necessary opening within slab by mechanical drill of approximate size (600W x 150D)mm without disturbing the existing reinforcement and making it good with concrete after laying of necessary armoured cables, cable tray, channels, conduits, etc. & clearing the site complete including all necessary hardware and accessories,etc.	6	Nos		
Rate in words :-					
5	Supplying & fixing of 2mm thick G.I. Perforated type cable Trays of Asian /Profab Engineers approved make. The cable tray shall be fixed to the ceiling / wall with MS angle support with 35mmx2mm thick GI slotted 'C' channel patti at an interval of 1 meter or the MS angle iron fabricated support depending upon the location. The rate shall include the cost of Supports, hardware & accessories, etc. complete as required.				
5.1	Cable Tray :- 150 mm wide x 50 mm height x 2mm thick.	200	Mtrs		
Rate in words :-					

S.N.	PARTICULARS	QTY	UNIT	RATE PER UNIT	AMOUNT (Rs.)
5.2	Cable Tray :- 300 mm wide x 50 mm height x 2mm thick.	360	Mtrs		
Rate in words :-					
	TOTAL of SECTION (E)				

F	LIGHTING FIXTURES				
	Supply & Installation of lighting fixtures with lamps as per the details below including necessary hardware such as clamps, nuts, bolts, nails, screws and suspension rods as required for fixing the fixtures in position as directed by architect / consultant / client.				
	Note :- All Light Fixtures shall be approved by the Client / Architect / Consultant before placing order to the Light Fixture Vendor / Supplier. All Light Fixtures shall be of Philips / CG / GE / Bajaj make only unless & otherwise other makes are specified. Client / Architect / Consultant reserves right to approve / select final Light Fixtures from any make as required.				
1	LED Type Light fixture suitable for Modular Ceiling				
1.1	Supply & Installation of (29/30/36W) (2' X 2') LED Mirror optic Light fixture. The fitting shall be surface mounted / to be hanged from the ceiling at the height approved by architect. (PHILIPS Cat No. :- RC380B 29W or equivalent category & model in Bajaj / CGL / GE make as approved by client / architect / consultant.)	117	Nos		
Rate in words :-					
2	LED Type Light fixture suitable for Modular Ceiling / Plain Ceiling				
2.1	Supply & Installation of (24 W) LED Spotlight flush mounted Light fixture. (CG Cat No. :- LSDRM-24-CDL or equivalent category & model in Bajaj / Philips / GE make as approved by client / architect / consultant.)	40	Nos		
Rate in words :-					
2.2	Supply & Installation of (15/18 W) LED Spotlight flush mounted Light fixture. (PHILIPS Cat No. :- DN193 LED 12S or equivalent category & model in Bajaj / CGL / GE make as approved by client / architect / consultant.)	84	Nos		
Rate in words :-					
2.3	Supply & Installation of (10/12 W) LED Spotlight flush mounted Light fixture. (PHILIPS Cat No. :- Ultima DN 092 or equivalent category & model in Bajaj / CGL / GE make as approved by client / architect / consultant.)	90	Nos		
Rate in words :-					
3	S & I of (2 x 18/20W / 1 x 40 W) (4') LED Suspended / Surface Mounted Mirror optic light fitting. (Make - Bajaj / CG / GE / Philips make)	28	Nos		
Rate in words :-					
4	S & I of (18/20W) (4') LED Tubelight. (Bajaj - Cat .no.-BJCEB-169396 or equivalent model in CG / GE / Philips make)	479	Nos		
Rate in words :-					
5	S & I of (9/10W) (2') LED Tubelight. (Bajaj / CG / GE / Philips make)	138	Nos		
Rate in words :-					
6	S & I of (5/6W) LED Mirolta fitting (Bajaj / CG / GE / Philips make)	112	Nos		
Rate in words :-					
7	Supply & Installation of Decortive Indoor type Light fixture (LED type preferably). Basic cost of the fitting including lamp shall be not be more than Rs. 1500/-(Inclusive of all taxes, duties, etc.). The fitting shall be surface mounted / to be hanged from the ceiling at the height approved by architect.	111	Nos		
Rate in words :-					
8	S & I of Wall mounted exhaust fan (12" dia.) of decorative plastic body and blade with louvers on the outside of approved make	105	Nos		
Rate in words :-					

S.N.	PARTICULARS	QTY	UNIT	RATE PER UNIT	AMOUNT (Rs.)
9	S & I of approved make Ceiling Fan (4'dia / 1200 mm dia) (BEE 5 star rated) (Colour :- White / Brown / Ivory as approved by client / architect / consultant) alongwith required hardware & accessories, etc.	231	Nos		
Rate in words :-					
10	S & I of approved make 400 mm dia. Decorative Wall Fan alongwith required hardware & accessories, etc. as approved by Architech / Consultant / Client.	3	Nos		
Rate in words :-					
11	Supply & fixing of 1 x 10/20w LED Wall / Street light fitting with acrylic cover & all accessories. The fitting shall be fixed to wall with angled GI bracket of required diameter. The brackets shall be fixed with clamps to the wall. The rate shall include 6"x 6" junction box, weather proof with 4 no.s of 10A elmex terminals & a kit-kat fuse. The rate to include connection with 3core 0.5Sq.mm cable from JB to fitting & 36w CFL.(Make - PHILIPS / CG / BAJAJ / GE or equivalent)	30	Nos		
Rate in words :-					
12	Supply & Installation of 9 / 12 / 15 W LED Gate Light Fitting Complete as approved by Client / Cunsaltant.(Make - PHILIPS / CG / BAJAJ / GE or Equivalent)	4	Nos		
Rate in words :-					
13	Supply & Installation of 9 / 12 / 15 W LED Garden Pole Light Fitting Complete with cement/concrete foundation required size as approved by Client / Cunsaltant.(Make - PHILIPS / CG / BAJAJ / GE or Equivalent)	20	Nos		
Rate in words :-					
	TOTAL of SECTION (F)				
G	VOICE NETWORKING				
1	Supply & Installation of RJ-11 telephone socket outlet point alongwith PVC back box including 2 pair telephone cable from Telephone MDF upto individual Telephone socket outlet with required size medium gauge PVC conduits including all necessary hardware & accessories, etc. complete as required.	159	Nos.		
Rate in words :-					
2	Supply, installation, testing and commissioning of indoor type telephone Main Distribution Frame (MDF) / Box with suitable S.S. frame for mounting tag module, cable, wires and incorporated in 16 SWG MS box with proper lockable cover. The box should be fixed on wall with suitable fasteners including painting & earthing. This also includes fixing the cable, distribution chart sufficient space for the cables, wires etc.to be provided in the box for :-				
2.1	Supply & Installation of 100 pair MDF with Krone module including all hardware & accessoriied , etc. complete as required.	2	Nos.		
Rate in words :-					
2.2	Supply & Installation of 50 pair MDF with Krone module including all hardware & accessoriied , etc. complete as required.	5	Nos.		
Rate in words :-					
2.2	Supply & Installation of 20 pair MDF with Krone module including all hardware & accessoriied , etc. complete as required.	1	Nos.		
Rate in words :-					
2.2	Supply & Installation of 10 pair MDF with Krone module including all hardware & accessoriied , etc. complete as required.	5	Nos.		
Rate in words :-					
3	Supply & Laying of 5 pair telephone cable with required size medium guage pvc conduit including all necessary hardware & accessories, etc.	140	Rmt		
Rate in words :-					
4	Supply & Laying of 10 pair telephone cable with required size medium guage pvc conduit including all necessary hardware & accessories, etc.	400	Rmt		
Rate in words :-					

S.N.	PARTICULARS	QTY	UNIT	RATE PER UNIT	AMOUNT (Rs.)
5	Supply & Laying of 50 pair telephone cable with required size medium guage pvc conduit including all necessary hardware & accessories, etc.	50	Rmt		
Rate in words :-					
	TOTAL of SECTION (G)				

H	DATA NETWORKING				
1	Supply, Installation, Termination & Testing of Data point including approved make Cat - 6 UTP cable through already laid underfloor trenches / raceways / conduits & including in case of concealed in wall / on surface for above false ceiling, RJ45 information outlet, single / dual / quad type face plate, PVC back box etc. including Termination, Testing and Documentation of UTP Points complete as required.	332	Nos.		
Rate in words :-					
2	Supply & installation of 24 Port 10/100 Mbps Unmanage switch	18	Nos.		
Rate in words :-					
3	Supply & installation of 24 port jack panel	18	Nos.		
Rate in words :-					
4	Supply & Installation of 12/15U Network rack with necessary accessory with cable trays and PDU alongwith all necessary hardware & accessories as required.	6	Nos.		
Rate in words :-					
5	Supply of mounting cord (7 feet')	332	Nos.		
Rate in words :-					
6	Supply of mounting cord (3 feet')	332	Nos.		
Rate in words :-					
	TOTAL of SECTION (H)				

I	MISCELLANEOUS WORKS.				
1	Preparation & submission of all the required Electrical Services Panel GA & Control Circuit Drawings & approval from the client / consultant & As-Built drawings, Submission of testing reports, opearating manuals, warranty / guarantee cards etc. complete as required. (Including Submission of 3/4 hard copies of the documents as required alongwith soft copy wherever possible.)	1	JOB		
Rate in words :-					
2	Providing & fixing M.V. danger plate of 200 mm x 150 mm, made of mild steel, at least 2 mm thick, & vitreous enamelled white on both sides, & with inscription in single red colour on front side as required.	3	Nos.		
Rate in words :-					
3	Supplying & shock treatment / restoration with Artificial respiration charts written in Hindi and English duly framed and covered with 2.8mm glass as required.	3	Nos.		
Rate in words :-					
4	Supply & fixing of standard first aid box with necessary antiseptic cream, medicine for use on wounds due burn, crepe bandage, guage bandage, medicated ready to use bandage (Band aid) adhesive tape for medicinal use, scissors,antiseptic solution (Savlon or similar)etc. (All above contents shall be of standard makes.)	3	Nos.		
Rate in words :-					
5	Supplying & laying rubber matting of 6 mm thickness as per IS:5424 and of required length and breadth with good insulation property for 11 kV in Electrical Room / Near Electrical Panel & DB's, etc. as required.	12	Sq.mtr		
Rate in words :-					

S.N.	PARTICULARS	QTY	UNIT	RATE PER UNIT	AMOUNT (Rs.)
6	Lumpsum charges for arranging temporary power supply and lighting for all the contractor at site including the required number of tubelight fittings, sufficient number of plug points with plug tops, providing temporary supply arrangements for temporary workstations and including all the necessary safety devices like ELCB etc. to ensure SAFE & CONTINUED supply at site. Also removing of all type of existing electrical installations including light fittings, conduits, switch, socket, casing-capping, DB's MCB's Switchgears & Panels, etc. complete as directed by the client / consultant at site & handing over to the client / Branch Manager at site. (Item shall be quoted as one JOB on Lumpsum (LS) basis.)	1	LS		
Rate in words :-					
7	Providing Scaffolding for Electrical works to work at required height in Auditorium alongwith all safety arrangements for safe working at desired heights.	1	LS		
Rate in words :-					
	TOTAL of SECTION (I)				

J	MUSIC CUM PUBLIC ADDRESS SYSTEM				
1	Supply, Installation, Testing, Commissioning of point wiring for music - cum PA system comprising of 2x 1.0 sqmm stranded , copper conductor , flexible PVC insulated and PVC Sheathed wire pulled through 20 mm dia. PVC heavy gauge conduits and looped from one speaker to other and to the volume control switch wherever applicable and finally terminated an tagblock.	132	Nos.		
Rate in words :-					
2	Supply, Installation, Testing, Commissioning of of 6" dia music speakers to be flushed mounted on false ceiling similar to Ahuja / approved equivalent make. All speakers to be equipped with matching transformer for direct connection to 100v output line	40	Nos.		
Rate in words :-					
3	Supply, Installation, Testing, Commissioning of of 6W Wall mounted music speakers to be mounted on wall / partition similar to Ahuja / equivalent make. All speakers to be equipped with matching transformer for direct connection to 100v output line	70	Nos.		
Rate in words :-					
4	Supply, Installation, Testing, Commissioning of volume control - cum - ON - OFF switch flush mounted on wall along with other electrical switches .The size and plate of the regulating knob should match with other switches nearby.	12	Nos.		
Rate in words :-					
5	Supply, Installation & Testing of Wired Mic of Ahuja / approved equivalent make	2	Nos.		
Rate in words :-					
6	Supply, Installation & Testing of Amplifier for Public Address System suitable to operate on 230V A.C. / 12V D.C. supply with two low impedance microphone input, tone control, protection circuit complete for the speakers output lines. (Ahuja / approved equivalent make)	2	Nos.		
Rate in words :-					
7	Removing, Reinstallation & Testing of Existing Wall Mounted Speakers with necessary hardware & accessories etc.	22	Nos.		
Rate in words :-					

S.N.	PARTICULARS	QTY	UNIT	RATE PER UNIT	AMOUNT (Rs.)
8	Removing, Reinstallation & Testing of Existing Amplifier & Mics with necessary hardware & accessories etc.	11	Nos.		
Rate in words :-					
	TOTAL of SECTION (J)				

K	SMOKE DETECTION & FIRE ALARM SYSTEM (CONVENTIONAL)				
1	Supply, Installation & Testing of Apollo / equivalent approved make optical type Smoke detector with MS Powdercoated Junction Box - Above False ceiling / Surface Mounted.	82	Nos.		
Rate in words :-					
2	Supply, Installation & Testing of Apollo / equivalent make optical type Smoke detector	85	Nos.		
Rate in words :-					
3	Supply, Installation & Testing of Apollo make Heat detector	8	Nos.		
Rate in words :-					
4	Supply, Installation & Testing of Response Indicator	59	Nos.		
Rate in words :-					
5	Supply, Installation & Testing of Hooter complete with line matching transformer & connected to the main control panel amplifier to produce alter / evacuation tone for public	17	Nos.		
Rate in words :-					
6	Supply, Installation & Testing of of Manual Call Point with a glass cover marked " IN CASE OF FIRE BREAK GLASS"	17	Nos.		
Rate in words :-					
7	S & Laying of FRLS Grade Fire Cable of 2C X 1.5 Sq mm cu Ar Cable type 'RED' coloured as per relevent IS standard with necessary accessories and hardware etc.	4020	Rmt		
Rate in words :-					
8	Supply, Installation, Testing & commissioning of 12-Zone Fire panel alongwith all necessary hardware & accessories, etc. complete as required.	1	Nos.		
Rate in words :-					
9	Supply, Installation, Testing & commissioning of 4-Zone Fire panel alongwith all necessary hardware & accessories, etc. complete as required.	1	Nos.		
Rate in words :-					
	TOTAL of SECTION (K)				

M	BUY - BACK OF REMOVED UNUSABLE ELECTRICAL MATERIAL				
1	Safe Removing, storing & Buy -Back of all removed un-useable electrical materials including wires, pvc conduits, casing caping, switches, sockets, tube lights, light fitngs, MCB's, DB's, Panel, etc. as per instructions given & approved by the Client / Manager / Bank's Engineer / Consultant at site. Contractor shall take approval & official permission before dispatching the buy-back material from site. (Item to be quoted as one JOB on Lumpsum (LS) basis.)	1	LS		
Rate in words :-					
	TOTAL of SECTION (M)				

LIST OF APPROVED MANUFACTURERS FOR LT ELECTRICAL WORKS

S.N.	MATERIALS	APPROVED MANUFACTURERS
1	Moulded Case Circuit Breaker (MCCB)	i) Schneider ii) Hager iii) Siemens iv) L & T v) Legrand
2	Switch Fuse Unit (SFU)	i) L & T ii) Siemens iii) ABB
3	Power Contactors	i) L & T ii) Siemens iii) Schneider
4	Meters	i) HPL ii) IMP iii) L & T
5	Armoured LT cable	i) Polycab ii) Finolex iii) R R Kabel iv) CCI
6	Cable Termination	i) Dowells ii) Comet
7	PVC Conduit & Accessories	Precisions make only
8	Wires (FRLS only)	i) RR Kabels ii) Polycab iii) Finolex
9	Modular Switches & Sockets with PVC Box	i) MK - (Wrapround model) ii) Crabtree (Havells) - (Verona model) iii) L&T - (Oris model) iv) Schneider - (Opale model)
10	Distribution Board, MCB, RCCB & RCBO	i) Schneider ii) Hager iii) L & T iv) Siemens v) Legrand
11	Voice Cable & accessories	i) RR Kabels ii) Finolex iii) Polycab
12	Light Fixtures	i) Philips ii) CGL iii) Havells iv) Wipro v) Bajaj
13	Tubes, PL's & CFL's	i) Philips ii) Osram

S.N.	MATERIALS	APPROVED MANUFACTURERS
14	Ceiling Fan	i) CG ii) Havells iii) Bajaj iv) Orient
15	Exhaust Fan	i) CG ii) Almonard iii) Alstom
16	Speakers	i) BOSCH ii) Ahuja
17	Amplifier	i) BOSCH ii) Ahuja
18	Electrical LT Panel	CPRI Approved & ISO 9001:2008 Certified Panel Manufacturer Only
19	Capacitors	i) Siemens ii) L & T iii) GE iv) ABB iii) Universal
20	CT'S / PT'S	i) AE ii) Kappa iii) Ricco iv) Rishabh
21	APFC Relay.	i) HPL ii) Enercon iii) Alstom iv) Beluk v) L & T
22	Contactor / Timer	i) Schneider ii) Hager iii) L & T iv) Siemens iv) Legrand
23	Energy Meters	i) HPL ii) Schneider iii) L & T iv) Tecnic v) AE

NOTE :-

- 1 All approved material samples shall be approved from the client / consultant / architect
- 2 Client / consultant / architect reserves final right to select any make for any item from the above mentioned list of make.
- 3 Client / consultant / architect reserves final right to reject any material if found out of approved list of make / not upto the acceptable standards.

MAIN ENTRANCE

LEGEND

S.N	SYMBOL	DESCRIPTION
1		136W LED MIRROR OPTIC
2		18W LED SPOT LIGHT
3		10/12W LED SPOT LIGHT
4		EXHAUST FAN
5		LED TUBE LIGHT (4')
6		LED TUBE LIGHT (75/2')
7		TUBE LIGHT WITHOUT COVER (4')
8		TUBE LIGHT WITHOUT COVER (2')
9		BRACKET LIGHT
10		LIGHTING DISTRIBUTION BOARD
11		SWITCH BOARD
12		CEILING FAN (1200MM/3' DIA)
13		LED STRIP
14		124W LED SPOT LIGHT
15		40W LED MIRROR OPTIC
16		OCCUPANCY SENSOR

LIFT

AUDITION ROOM

GREEN ROOM

GROUND FLOOR

REFLECTED CEILING PLAN WITH LOOP

REV-00

DATE : 30-12-16

ELECTRICAL CONSULTANT :

S.M. ENGINEERS

CONSULTANTS, DESIGNERS, ENGINEERS & CONTRACTORS
C-107, NERUL RAILWAY STATION COMPLEX,
FIRST FLOOR, NERUL(EAST), NAVI-MUMBAI-400 706

LEGENDS

	CRACKS IN BEAM/ DROP PARADI/ LINTEL
	CRACKS IN COLUMN
	CRACKS IN CEILING
	SEEPAGE MARKS IN BEAM/ WALL/ DROP PARADI
	SEEPAGE MARKS IN CEILING
	RISING DAMPNES IN INTERNAL WALL
	SAPERATION CRAKS IN BEAMS/COLUMNS/BRICKS
	HOLO SOUND IN SLABS/COLUMNS/BEAMS



PROJECT MANAGEMENT
CONSULTANTS

CREATIVE CONSULTANTS

5-B, Bhagwanji Mavji Building,
Next YWCA 54/A, J.P. Road,
Andheri (West), Mumbai - 4000 58.

CLIENT NAME

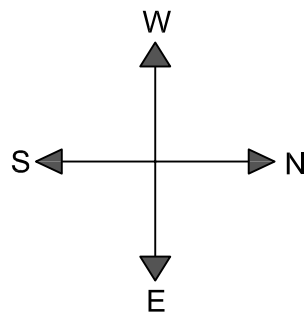
CENTRAL BANK OF INDIA
SPBT COLLEGE, VILE PARLE (WEST),
MUMBAI-400 056.

DRY BY: ISMAIL

CKD BY : RAFIQ

SCALE : N.T.S.

DATE :20/10/2014



LEGEND		
S.N.	SYMBOL	PARTICULARS
1		5 A SOCKET POINT
2		15 A SOCKET POINT
3		5 A SOCKET STABILISED
4		15 A SOCKET STABILISED
5		5/15 A SWITCH
6		5/15 A SWITCH STABILISED
7		T.V. POINT
8		20/32 A MODULAR PLUG SOCKET

MAIN ENTRANCE

LEGEND		
S.N.	SYMBOL	PARTICULARS
1		TELEPHONE SOCKET OUTLET
2		COMPUTER SOCKET OUTLET
		V
		V
		V
		V
		V



GROUND FLOOR

ELECTRICAL & DATA VOICE POINTS

REV-00

DATE : 30-12-16

ELECTRICAL CONSULTANT :

S.M. ENGINEERS

CONSULTANTS, DESIGNERS, ENGINEERS & CONTRACTORS
C-107, NERUL RAILWAY STATION COMPLEX,
FIRST FLOOR, NERUL(EAST), NAVI-MUMBAI-400 706

LEGENDS	
	CRACKS IN BEAM/ DROP PARADI/ LINTEL
	CRACKS IN COLUMN
	CRACKS IN CEILING
	SEEPAGE MARKS IN BEAM/ WALL/ DROP PARADI
	SEEPAGE MARKS IN CEILING
	RISING DAMPNES IN INTERNAL WALL
	SAPERATION CRAKS IN BEAMS/COLUMNS/BRICKS
	HOLO SOUND IN SLABS/COLUMNS/BEAMS



**PROJECT MANAGEMENT
CONSULTANTS**
CREATIVE CONSULTANTS

5-B, Bhagwanji Mavji Building,
Next YWCA 54/A, J.P. Road,
Andheri (West), Mumbai - 4000 58.

CLIENT NAME

CENTRAL BANK OF INDIA
SPBT COLLEGE, VILE PARLE (WEST),
MUMBAI-400 056.

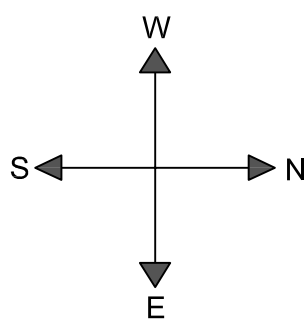
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SCALE : N.T.S.

DATE :20/10/2014

LEGEND		
S.N.	SYMBOL	DESCRIPTION
1		SPEAKER
2		VOLUME CONTROL
3		END OF LINE
4		AMPLIFIER
5		WALL MOUNTED SPEAKER



MAIN ENTRANCE

LIFT

AUDITION ROOM

GREEN ROOM

WC

WC

WC

WC

WC

WC

TOILET

TOILET

OFFICE (8)

STORE ROOM

STAFF ROOM

METER ROOM

STEEL EXPOSED

DOCTOR ROOM

LUNCH ROOM

MR. CAPTAIN OFFICE

PARTITION

ACCOUNT DEPARTMENT

FACILITATION

PRINCIPAL OFFICE

TOILET

TOILET

VICE PRINCIPAL OFFICE

PRINCIPAL PA ROOM

TOILET

FEMALE TOILET

WC

WC

WC

WC

TOILET

STORE ROOM

GROUND FLOOR

PA SYSTEM LAYOUT REV-00 DATE : 03-12-16

ELECTRICAL CONSULTANT :

S.M. ENGINEERS

CONSULTANTS, DESIGNERS, ENGINEERS & CONTRACTORS
C-107, NERUL RAILWAY STATION COMPLEX,
FIRST FLOOR, NERUL(EAST), NAVI-MUMBAI-400 706

LEGENDS	
	CRACKS IN BEAM/ DROP PARADI/ LINTEL
	CRACKS IN COLUMN
	CRACKS IN CEILING
	SEEPAGE MARKS IN BEAM/ WALL/ DROP PARADI
	SEEPAGE MARKS IN CEILING
	RISING DAMPNESS IN INTERNAL WALL
	SAPERATION CRAKS IN BEAMS/COLUMNS/BRICKS
	HOLO SOUND IN SLABS/COLUMNS/BEAMS



**PROJECT MANAGEMENT
CONSULTANTS**
CREATIVE CONSULTANTS
5-B, Bhagwanji Mavji Building,
Next YWCA 54/A, J.P. Road,
Andheri (West), Mumbai - 4000 58.

CLIENT NAME

CENTRAL BANK OF INDIA
SPBT COLLEGE, VILE PARLE (WEST),
MUMBAI-400 056.

DRY BY: ISMAIL

CKD BY : RAFIQ

SCALE : N.T.S.

DATE :20/10/2014

SMOKE DETECTION SYSTEM LEGEND

SYMBOL	DESCRIPTION
	SMOKE DETECTOR BELOW FALSE CEILING
	SMOKE DETECTOR ABOVE FALSE CEILING
	HEAT DETECTOR
	MANUAL CALL POINT
	HOOTER
	RESPONSE INDICATOR
	END OF LINE
	FIRE PANEL

MAIN ENTRANCE

LIFT

AUDITION ROOM

GREEN ROOM

WC

WC

WC

WC

WC

WC

TOILET

TOILET

OFFICE(8)

STORE ROOM

STAFF ROOM

METER ROOM

STEEL EXPOSED

DOCTOR ROOM

LUNCH ROOM

MR.CAPTAIN OFFICE

PARTITION

ACCOUNT DEPARTMENT

FACILITATION

PRINCIPAL OFFICE

TOILET

TOILET

VICE PRINCIPAL OFFICE

PRINCIPAL PA ROOM

FEMALE TOILET

WC

WC

WC

WC

TOILET

STORE ROOM

GROUND FLOOR

SMOKE DETECTION SYSTEM

REV-00

DATE : 30-12-16

ELECTRICAL CONSULTANT :

S.M. ENGINEERS

CONSULTANTS, DESIGNERS, ENGINEERS & CONTRACTORS
C-107, NERUL RAILWAY STATION COMPLEX,
FIRST FLOOR, NERUL(EAST), NAVI-MUMBAI-400 706

LEGENDS

	CRACKS IN BEAM/ DROP PARADI/ LINTEL
	CRACKS IN COLUMN
	CRACKS IN CEILING
	SEEPAGE MARKS IN BEAM/ WALL/ DROP PARADI
	SEEPAGE MARKS IN CEILING
	RISING DAMPNESS IN INTERNAL WALL
	SAPERATION CRAKS IN BEAMS/COLUMNS/BRICKS
	HOLO SOUND IN SLABS/COLUMNS/BEAMS



PROJECT MANAGEMENT
CONSULTANTS

CREATIVE CONSULTANTS

5-B, Bhagwanji Mavji Building,
Next YWCA 54/A, J.P. Road,
Andheri (West), Mumbai - 4000 58.

CLIENT NAME

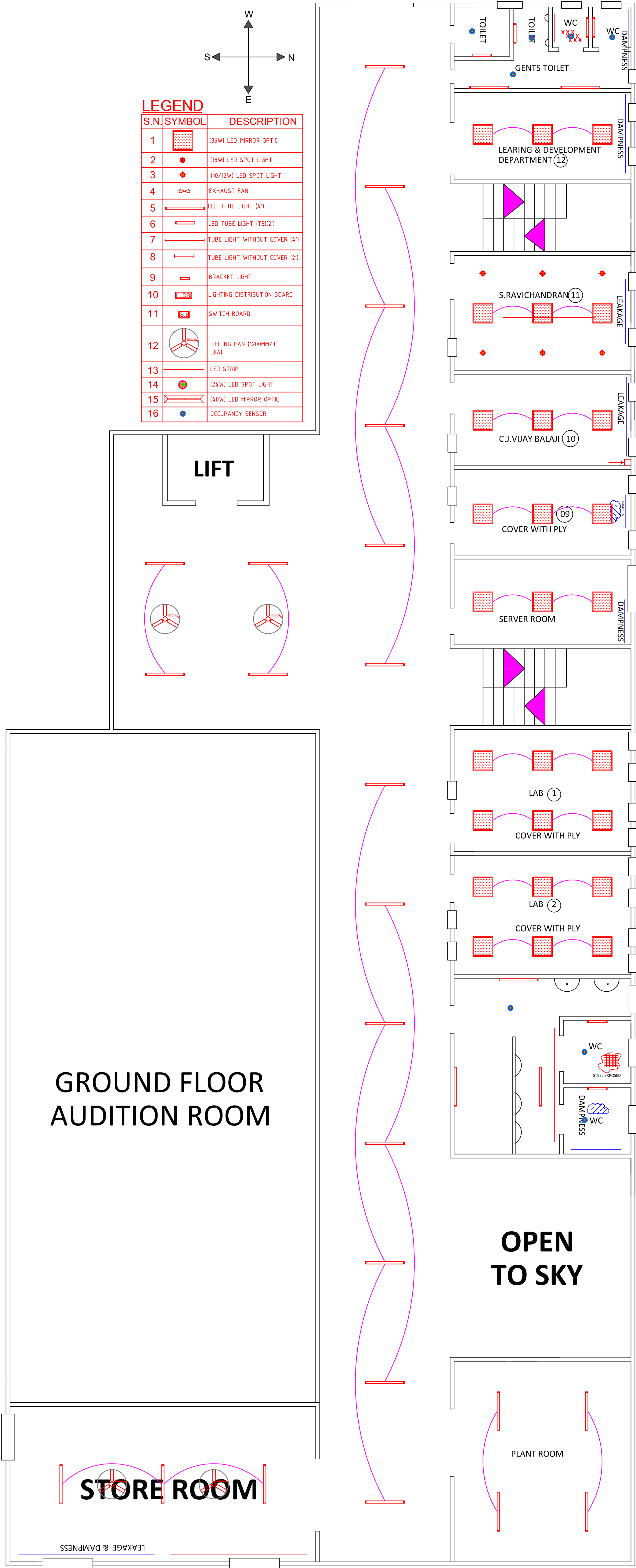
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SPBT COLLEGE, VILE PARLE (WEST),
MUMBAI-400 056.

DRY BY: ISMAIL

CKD BY : RAFIQ

SCALE : N.T.S.

DATE :20/10/2014



1ST FLOOR
REFLECTED CEILING PLAN WITH LOOP REV-00 DATE : 30-12-16

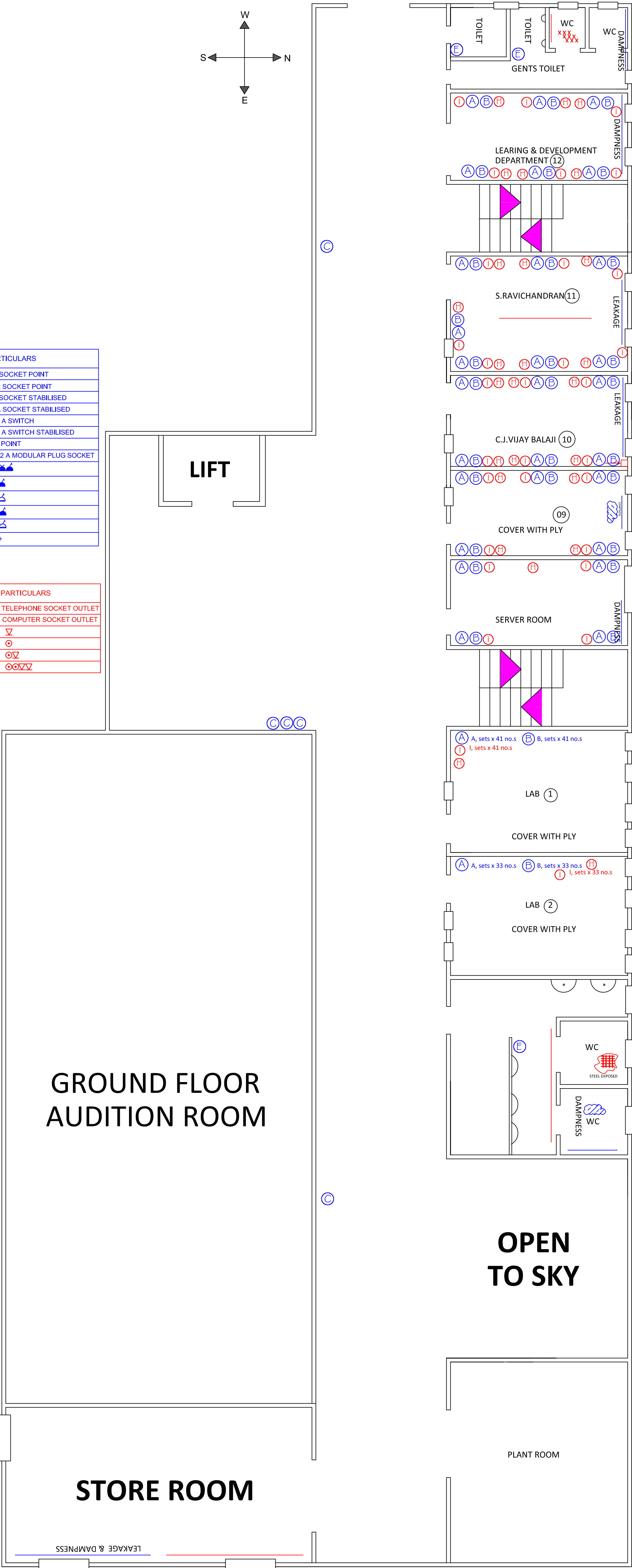
ELECTRICAL CONSULTANT :
S.M. ENGINEERS
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C-107, NERUL RAILWAY STATION COMPLEX,
FIRST FLOOR, NERUL(EAST), NAVI-MUMBAI-400 706

LEGENDS	
	CRACKS IN BEAM/ DROP PARADI/ LINTEL
	CRACKS IN COLUMN
	CRACKS IN CEILING
	SEEPAGE MARKS IN BEAM/ WALL/ DROP PARADI
	SEEPAGE MARKS IN CEILING
	RISING DAMPNESS IN INTERNAL WALL
	SAPERATION CRAKS IN BEAMS/COLUMNS/BRICKS
	HOLO SOUND IN SLABS/COLUMNS/BEAMS



PROJECT MANAGEMENT
CONSULTANTS
CREATIVE CONSULTANTS
5-B, Bhagwanji Mavji Building,
Next YWCA 54/A, J.P. Road,
Andheri (West), Mumbai - 4000 58.

CLIENT NAME	
CENTRAL BANK OF INDIA SPBT COLLEGE, VILE PARLE (WEST), MUMBAI-400 056.	
DRY BY: ISMAIL	CKD BY : RAFIQ
SCALE : N.T.S.	DATE : 20/10/2014



LEGEND		
S.N.	SYMBOL	PARTICULARS
1		5 A SOCKET POINT
2		15 A SOCKET POINT
3		5 A SOCKET STABILISED
4		15 A SOCKET STABILISED
5		5/15 A SWITCH
6		5/15 A SWITCH STABILISED
7		T.V. POINT
8		20/32 A MODULAR PLUG SOCKET

LEGEND		
S.N.	SYMBOL	PARTICULARS
1		TELEPHONE SOCKET OUTLET
2		COMPUTER SOCKET OUTLET
		V
		V
		V
		V
		V

1ST FLOOR
ELECTRICAL & DATA VOICE POINTS REV-00 DATE : 30-12-16

ELECTRICAL CONSULTANT :

S.M. ENGINEERS

CONSULTANTS, DESIGNERS, ENGINEERS & CONTRACTORS

C-107, NERUL RAILWAY STATION COMPLEX,
FIRST FLOOR, NERUL(EAST), NAVI-MUMBAI-400 706

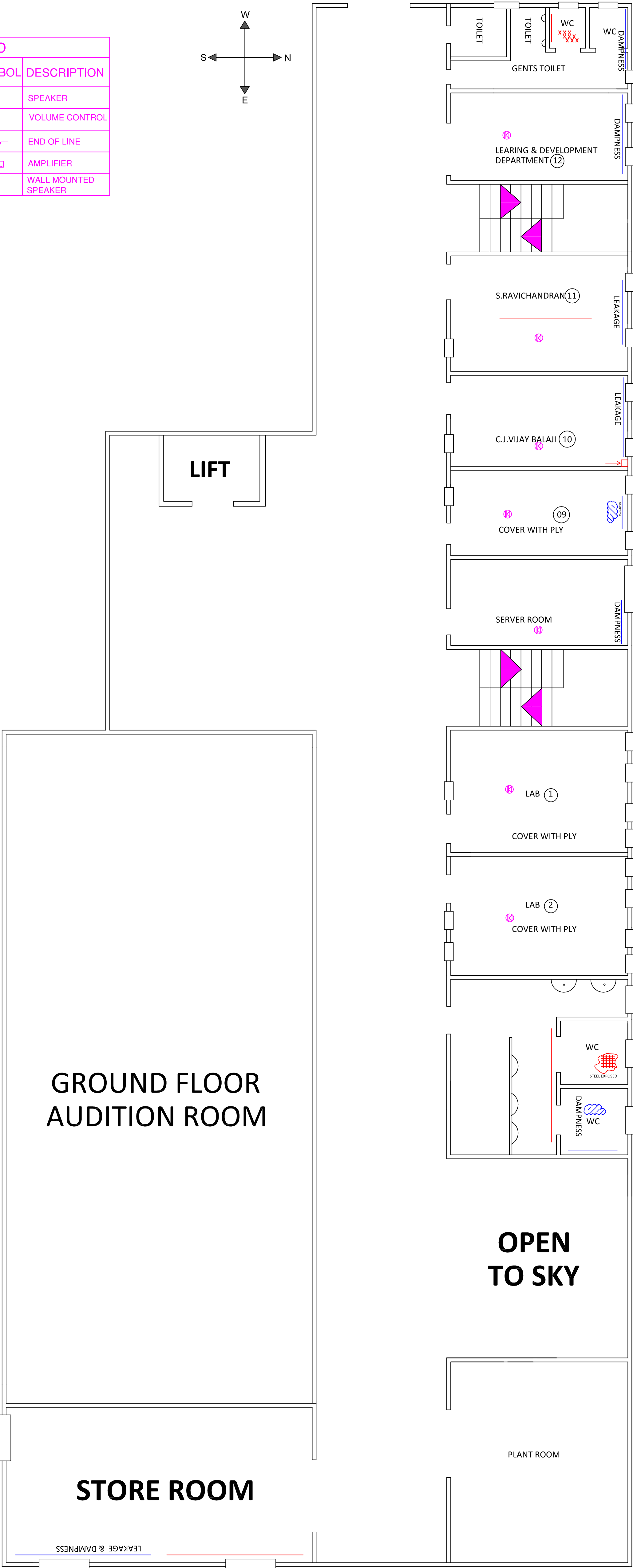
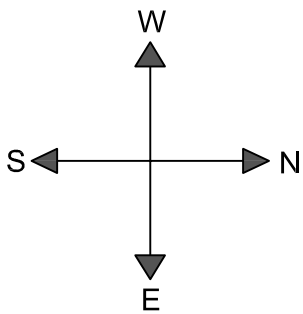
LEGENDS	
	CRACKS IN BEAM/ DROP PARADI/ LINTEL
	CRACKS IN COLUMN
	CRACKS IN CEILING
	SEEPAGE MARKS IN BEAM/ WALL/ DROP PARADI
	SEEPAGE MARKS IN CEILING
	RISING DAMPNESS IN INTERNAL WALL
	SAPERATION CRAKS IN BEAMS/COLUMNS/BRICKS
	HOLO SOUND IN SLABS/COLUMNS/BEAMS



PROJECT MANAGEMENT
CONSULTANTS
CREATIVE CONSULTANTS
5-B, Bhagwanji Mavji Building,
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Andheri (West), Mumbai - 4000 58.

CLIENT NAME	
CENTRAL BANK OF INDIA SPBT COLLEGE, VILE PARLE (WEST), MUMBAI-400 056.	
DRY BY: ISMAIL	CKD BY : RAFIQ
SCALE : N.T.S.	DATE :20/10/2014

LEGEND		
S.N.	SYMBOL	DESCRIPTION
1		SPEAKER
2		VOLUME CONTROL
3		END OF LINE
4		AMPLIFIER
5		WALL MOUNTED SPEAKER



1ST FLOOR
PA SYSTEM LAYOUT REV-00 DATE : 03-12-16

ELECTRICAL CONSULTANT :

S.M. ENGINEERS

CONSULTANTS, DESIGNERS, ENGINEERS & CONTRACTORS

C-107, NERUL RAILWAY STATION COMPLEX,
FIRST FLOOR, NERUL(EAST), NAVI-MUMBAI-400 706

LEGENDS	
	CRACKS IN BEAM/ DROP PARADI/ LINTEL
	CRACKS IN COLUMN
	CRACKS IN CEILING
	SEEPAGE MARKS IN BEAM/ WALL/ DROP PARADI
	SEEPAGE MARKS IN CEILING
	RIISING DAMPNESS IN INTERNAL WALL
	SAPERATION CRAKS IN BEAMS/COLUMNS/BRICKS
	HOLO SOUND IN SLABS/COLUMNS/BEAMS



PROJECT MANAGEMENT
CONSULTANTS

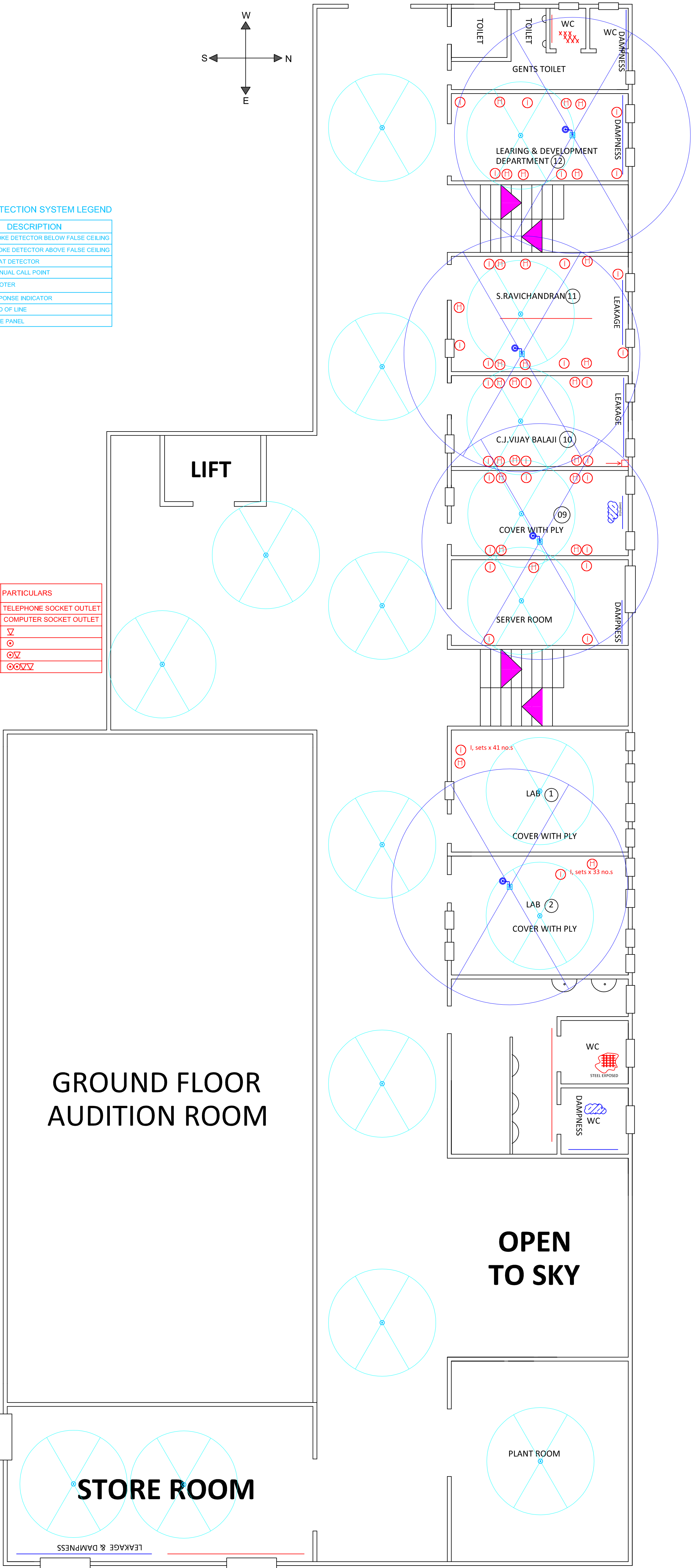
CREATIVE CONSULTANTS

5-B, Bhagwanji Mavji Building,
Next YWCA 54/A, J.P. Road,
Andheri (West), Mumbai - 4000 58.

CLIENT NAME	
CENTRAL BANK OF INDIA SPBT COLLEGE, VILE PARLE (WEST), MUMBAI-400 056.	
DRY BY: ISMAIL	CKD BY : RAFIQ
SCALE : N.T.S.	DATE :20/10/2014

SMOKE DETECTION SYSTEM LEGEND	
SYMBOL	DESCRIPTION
	SMOKE DETECTOR BELOW FALSE CEILING
	SMOKE DETECTOR ABOVE FALSE CEILING
	HEAT DETECTOR
	MANUAL CALL POINT
	HOOTER
	RESPONSE INDICATOR
	END OF LINE
	FIRE PANEL

LEGEND		
S.N.	SYMBOL	PARTICULARS
1		TELEPHONE SOCKET OUTLET
2		COMPUTER SOCKET OUTLET



1ST FLOOR
SMOKE DETECTION SYSTEM REV-00 DATE : 30-12-16

ELECTRICAL CONSULTANT :	
S.M. ENGINEERS CONSULTANTS, DESIGNERS, ENGINEERS & CONTRACTORS C-107, NERUL RAILWAY STATION COMPLEX, FIRST FLOOR, NERUL(EAST), NAVI-MUMBAI-400 706	

LEGENDS	
	CRACKS IN BEAM/ DROP PARADI/ LINTEL
	CRACKS IN COLUMN
	CRACKS IN CEILING
	SEEPAGE MARKS IN BEAM/ WALL/ DROP PARADI
	SEEPAGE MARKS IN CEILING
	RIISING DAMPNESS IN INTERNAL WALL
	SAPERATION CRAKS IN BEAMS/COLUMNS/BRICKS
	HOLO SOUND IN SLABS/COLUMNS/BEAMS



PROJECT MANAGEMENT
CONSULTANTS
CREATIVE CONSULTANTS
5-B, Bhagwanji Mavji Building,
Next YWCA 54/A, J.P. Road,
Andheri (West), Mumbai - 4000 58.

CLIENT NAME	
CENTRAL BANK OF INDIA SPBT COLLEGE, VILE PARLE (WEST), MUMBAI-400 056.	
DRY BY: ISMAIL	CKD BY : RAFIQ
SCALE : N.T.S.	DATE :20/10/2014



2ND FLOOR
REFLECTED CEILING PLAN WITH LOOP

REV-00

DATE : 30-12-16

ELECTRICAL CONSULTANT :

S.M. ENGINEERS

CONSULTANTS, DESIGNERS, ENGINEERS & CONTRACTORS
C-107, NERUL RAILWAY STATION COMPLEX,
FIRST FLOOR, NERUL(EAST), NAVI-MUMBAI-400 706

CLIENT NAME

CENTRAL BANK OF INDIA
SPBT COLLEGE, VILE PARLE (WEST),
MUMBAI-400 056.

DRY BY: ISMAIL

CKD BY : RAFIQ

SCALE : N.T.S.

DATE : 20/10/2014

LEGENDS

	CRACKS IN BEAM/ DROP PARADI/ LINTEL
	CRACKS IN COLUMN
	CRACKS IN CEILING
	SEEPAGE MARKS IN BEAM/ WALL/ DROP PARADI
	SEEPAGE MARKS IN CEILING
	RISING DAMPNESS IN INTERNAL WALL
	SAPERATION CRAKS IN BEAMS/COLUMNS/BRICKS
	HOLO SOUND IN SLABS/COLUMNS/BEAMS



PROJECT MANAGEMENT
CONSULTANTS

CREATIVE CONSULTANTS

5-B, Bhagwanji Mavji Building,
Next YWCA 54/A, J.P. Road,
Andheri (West), Mumbai - 4000 58.

LEGEND		
S.N	SYMBOL	PARTICULARS
1		5 A SOCKET POINT
2		15 A SOCKET POINT
3		5 A SOCKET STABILISED
4		15 A SOCKET STABILISED
5		5/15 A SWITCH
6		5/15 A SWITCH STABILISED
7		T.V. POINT
8		20/32 A MODULAR PLUG SOCKET

LEGEND		
S.N	SYMBOL	PARTICULARS
1		TELEPHONE SOCKET OUTLET
2		COMPUTER SOCKET OUTLET



2ND FLOOR

ELECTRICAL & DATA VOICE POINTS

REV-00

DATE : 30-12-16

LEGENDS	
	CRACKS IN BEAM/ DROP PARADI/ LINTEL
	CRACKS IN COLUMN
	CRACKS IN CEILING
	SEEPAGE MARKS IN BEAM/ WALL/ DROP PARADI
	SEEPAGE MARKS IN CEILING
	RISING DAMPNESS IN INTERNAL WALL
	SAPERATION CRAKS IN BEAMS/COLUMNS/BRICKS
	HOLO SOUND IN SLABS/COLUMNS/BEAMS



**PROJECT MANAGEMENT
CONSULTANTS**
CREATIVE CONSULTANTS

5-B, Bhagwanji Mavji Building,
Next YWCA 54/A, J.P. Road,
Andheri (West), Mumbai - 4000 58.

ELECTRICAL CONSULTANT :
S.M. ENGINEERS
Consultants, Designers, Engineers & Contractors
CONSULTANTS, DESIGNERS, ENGINEERS & CONTRACTORS
C-107, NERUL RAILWAY STATION COMPLEX,
FIRST FLOOR, NERUL(EAST), NAVI-MUMBAI-400 706

CLIENT NAME

CENTRAL BANK OF INDIA
SPBT COLLEGE, VILE PARLE (WEST),
MUMBAI-400 056.

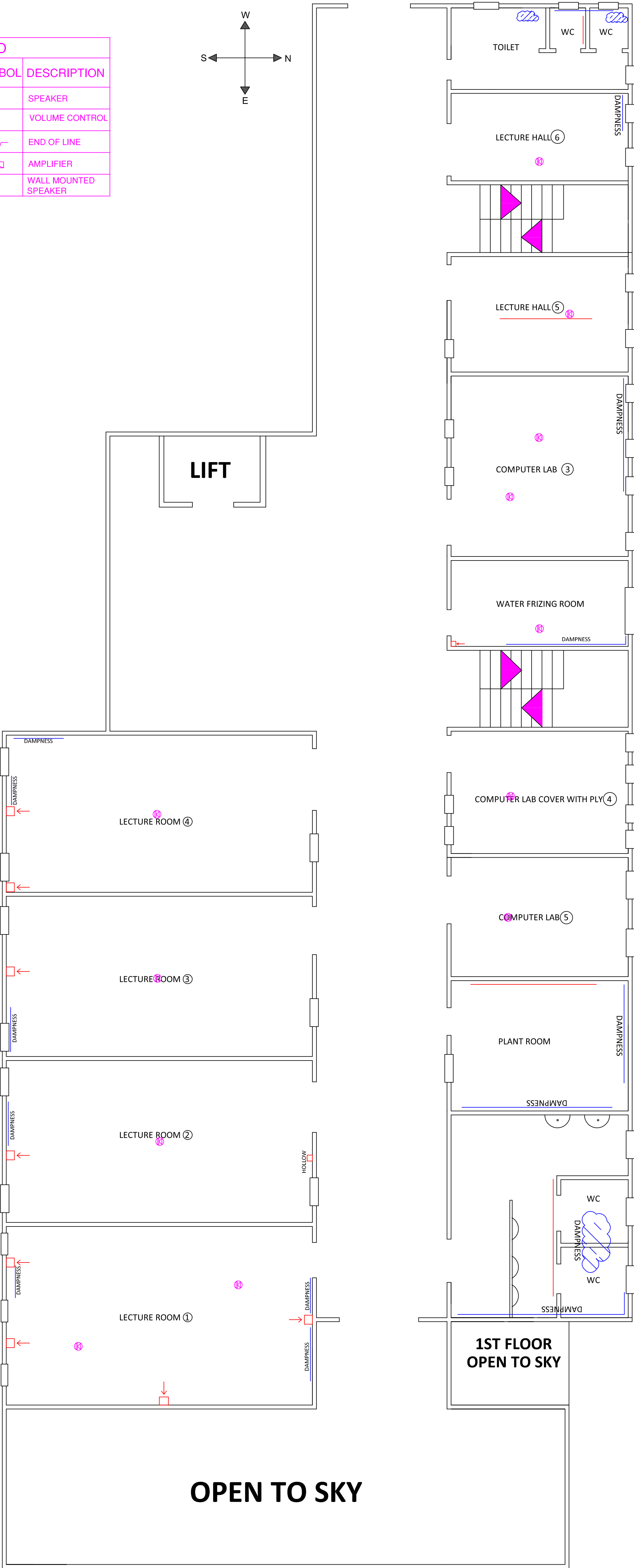
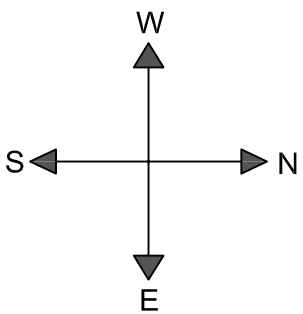
DRY BY: ISMAIL

CKD BY : RAFIQ

SCALE : N.T.S.

DATE : 20/10/2014

LEGEND		
S.N.	SYMBOL	DESCRIPTION
1		SPEAKER
2		VOLUME CONTROL
3		END OF LINE
4		AMPLIFIER
5		WALL MOUNTED SPEAKER



2ND FLOOR

PA SYSTEM LAYOUT REV-00 DATE : 03-12-16

ELECTRICAL CONSULTANT :

S.M. ENGINEERS

Consultants, Designers, Engineers & Contractors

CONSULTANTS, DESIGNERS, ENGINEERS & CONTRACTORS
C-107, NERUL RAILWAY STATION COMPLEX,
FIRST FLOOR, NERUL(EAST), NAVI-MUMBAI-400 706

LEGENDS	
	CRACKS IN BEAM/ DROP PARADI/ LINTEL
	CRACKS IN COLUMN
	CRACKS IN CEILING
	SEEPAGE MARKS IN BEAM/ WALL/ DROP PARADI
	SEEPAGE MARKS IN CEILING
	RIISING DAMPNESS IN INTERNAL WALL
	SAPERATION CRAKS IN BEAMS/COLUMNS/BRICKS
	HOLO SOUND IN SLABS/COLUMNS/BEAMS



PROJECT MANAGEMENT
CONSULTANTS

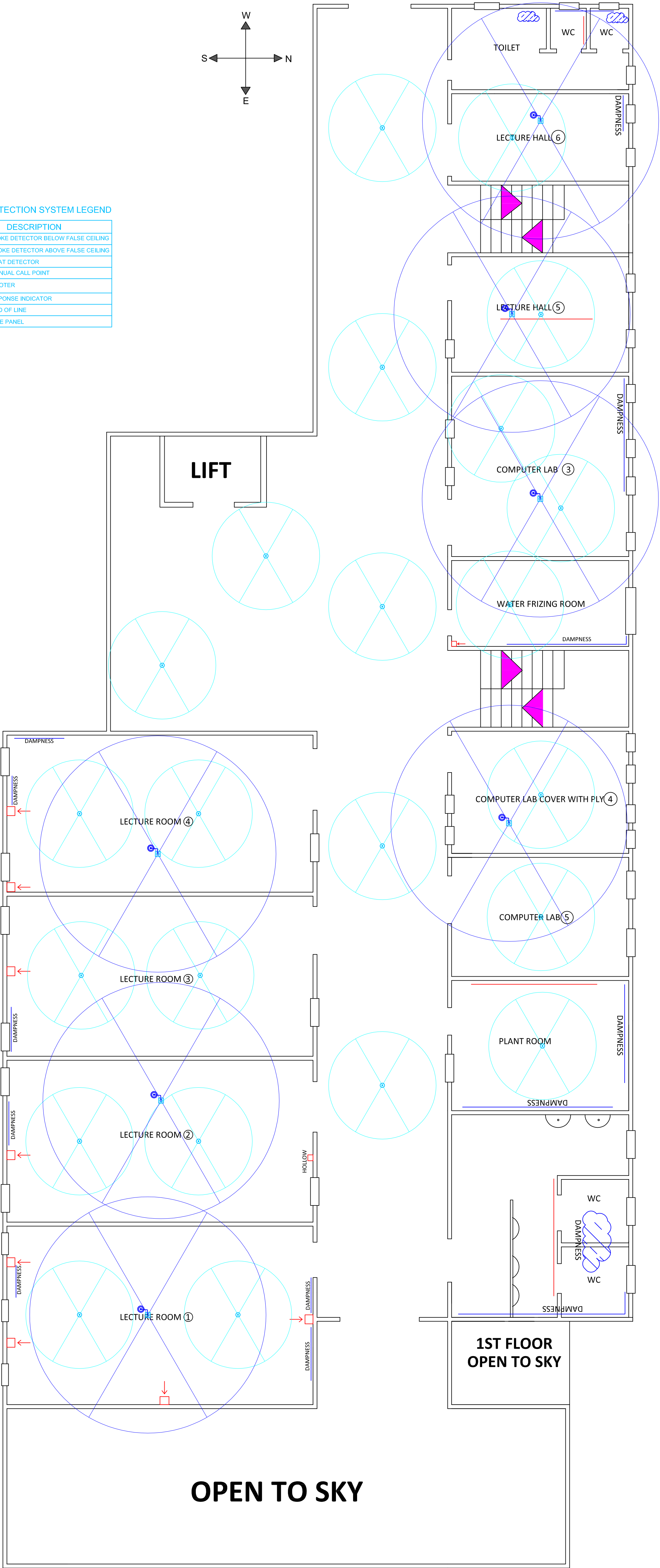
CREATIVE CONSULTANTS

5-B, Bhagwanji Mavji Building,
Next YWCA 54/A, J.P. Road,
Andheri (West), Mumbai - 4000 58.

CLIENT NAME	
CENTRAL BANK OF INDIA SPBT COLLEGE, VILE PARLE (WEST), MUMBAI-400 056.	
DRY BY: ISMAIL	CKD BY : RAFIQ
SCALE : N.T.S.	DATE :20/10/2014

SMOKE DETECTION SYSTEM LEGEND

SYMBOL	DESCRIPTION
	SMOKE DETECTOR BELOW FALSE CEILING
	SMOKE DETECTOR ABOVE FALSE CEILING
	HEAT DETECTOR
	MANUAL CALL POINT
	HOOTER
	RESPONSE INDICATOR
	END OF LINE
	FIRE PANEL



2ND FLOOR

SMOKE DETECTION SYSTEM REV-00 DATE : 30-12-16

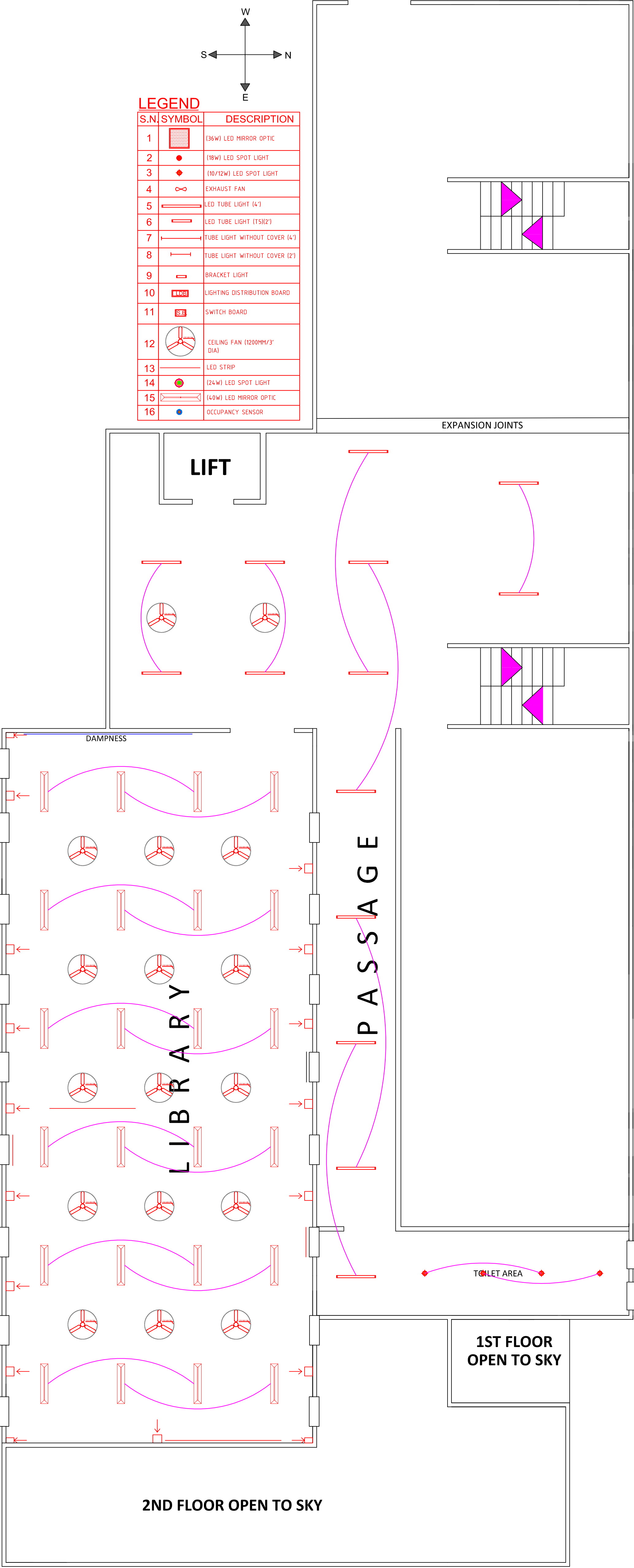
LEGENDS	
	CRACKS IN BEAM/ DROP PARADI/ LINTEL
	CRACKS IN COLUMN
	CRACKS IN CEILING
	SEEPAGE MARKS IN BEAM/ WALL/ DROP PARADI
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	RISING DAMPNESS IN INTERNAL WALL
	SAPERATION CRAKS IN BEAMS/COLUMNS/BRICKS
	HOLO SOUND IN SLABS/COLUMNS/BEAMS



**PROJECT MANAGEMENT
CONSULTANTS**
CREATIVE CONSULTANTS
5-B, Bhagwanji Mavji Building,
Next YWCA 54/A, J.P. Road,
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ELECTRICAL CONSULTANT :
S.M. ENGINEERS
Consultants, Designers, Engineers & Contractors
CONSULTANTS, DESIGNERS, ENGINEERS & CONTRACTORS
C-107, NERUL RAILWAY STATION COMPLEX,
FIRST FLOOR, NERUL(EAST), NAVI-MUMBAI-400 706

CLIENT NAME	
CENTRAL BANK OF INDIA SPBT COLLEGE, VILE PARLE (WEST), MUMBAI-400 056.	
DRY BY: ISMAIL	CKD BY : RAFIQ
SCALE : N.T.S.	DATE : 20/10/2014



3RD FLOOR LAYOUT PLAN & TERRACE AREA

REFLECTED CEILING PLAN WITH LOOP

REV-00

DATE : 30-12-16

ELECTRICAL CONSULTANT :

S.M. ENGINEERS

Consultants, Designers, Engineers & Contractors

CONSULTANTS, DESIGNERS, ENGINEERS & CONTRACTORS
C-107, NERUL RAILWAY STATION COMPLEX,
FIRST FLOOR, NERUL(EAST), NAVI-MUMBAI-400 706

CLIENT NAME

CENTRAL BANK OF INDIA
SPBT COLLEGE, VILE PARLE (WEST),
MUMBAI-400 056.

DRY BY: ISMAIL

CKD BY : RAFIQ

SCALE : N.T.S.

DATE : 20/10/2014

LEGENDS

	CRACKS IN BEAM/ DROP PARADI/ LINTEL
	CRACKS IN COLUMN
	CRACKS IN CEILING
	SEEPAGE MARKS IN BEAM/ WALL/ DROP PARADI
	SEEPAGE MARKS IN CEILING
	RISING DAMPNESS IN INTERNAL WALL
	SAPERATION CRAKS IN BEAMS/COLUMNS/BRICKS
	HOLO SOUND IN SLABS/COLUMNS/BEAMS



CREATIVE CONSULTANTS

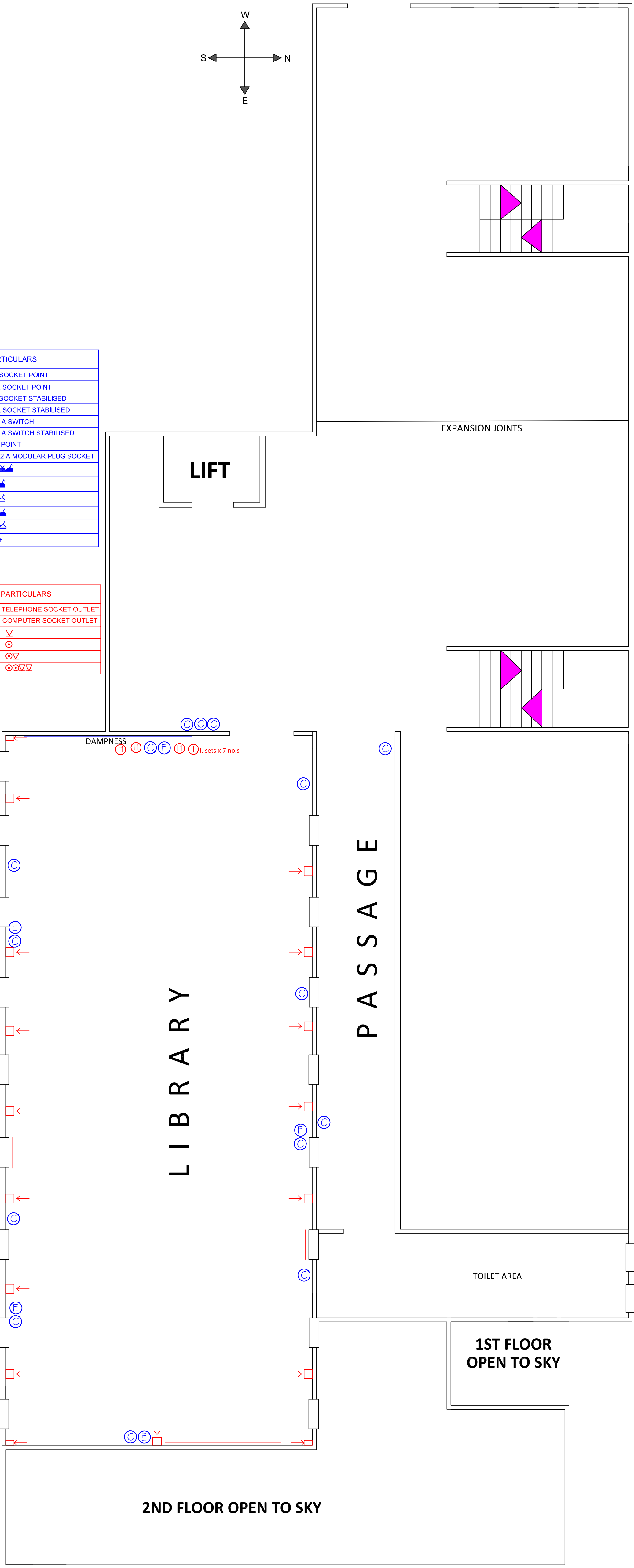
PROJECT MANAGEMENT CONSULTANTS

CREATIVE CONSULTANTS

5-B, Bhagwanji Mavji Building,
Next YWCA 54/A, J.P. Road,
Andheri (West), Mumbai - 4000 58.

LEGEND		
S.N.	SYMBOL	PARTICULARS
1	⚡	5 A SOCKET POINT
2	⚡	15 A SOCKET POINT
3	⚡	5 A SOCKET STABILISED
4	⚡	15 A SOCKET STABILISED
5	⚡	5/15 A SWITCH
6	⚡	5/15 A SWITCH STABILISED
7	TV	T.V. POINT
8	⚡	20/32 A MODULAR PLUG SOCKET
	(A)	⚡⚡⚡
	(B)	⚡⚡
	(C)	⚡
	(D)	⚡
	(E)	⚡
	(F)	⚡

LEGEND		
S.N.	SYMBOL	PARTICULARS
1	☎	TELEPHONE SOCKET OUTLET
2	💻	COMPUTER SOCKET OUTLET
	Ⓜ	▽
	Ⓜ	○
	Ⓜ	Ⓜ▽
	Ⓜ	ⓂⓂ▽



3RD FLOOR LAYOUT PLAN & TERRACE AREA

ELECTRICAL & DATA VOICE POINTS REV-00 DATE : 30-12-16

ELECTRICAL CONSULTANT :

S.M. ENGINEERS

CONSULTANTS, DESIGNERS, ENGINEERS & CONTRACTORS

C-107, NERUL RAILWAY STATION COMPLEX,
FIRST FLOOR, NERUL(EAST), NAVI-MUMBAI-400 706

LEGENDS	
—	CRACKS IN BEAM/ DROP PARADI/ LINTEL
→	CRACKS IN COLUMN
X X X	CRACKS IN CEILING
—	SEEPAGE MARKS IN BEAM/ WALL/ DROP PARADI
Ⓜ	SEEPAGE MARKS IN CEILING
RD	RIISING DAMPNNESS IN INTERNAL WALL
SC	SAPERATION CRAKS IN BEAMS/COLUMNNS/BRICKS
PH	HOLO SOUND IN SLABS/COLUMNNS/BEAMS



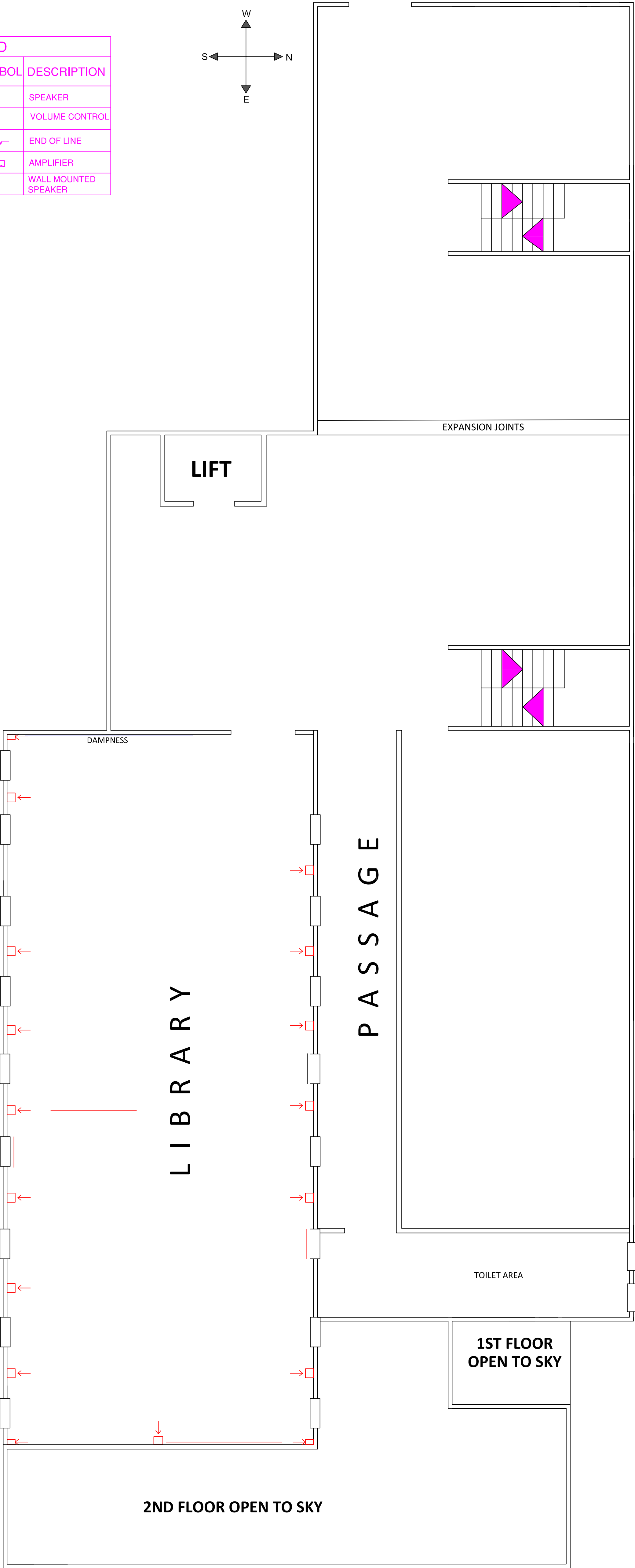
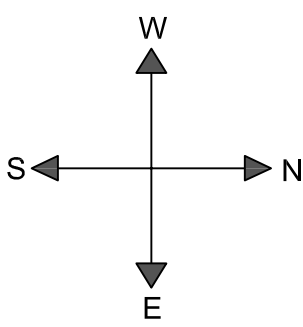
PROJECT MANAGEMENT
CONSULTANTS

CREATIVE CONSULTANTS

5-B, Bhagwanji Mavji Building,
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Andheri (West), Mumbai - 4000 58.

CLIENT NAME	
CENTRAL BANK OF INDIA SPBT COLLEGE, VILE PARLE (WEST), MUMBAI-400 056.	
DRY BY: ISMAIL	CKD BY : RAFIQ
SCALE : N.T.S.	DATE :20/10/2014

LEGEND		
S.N.	SYMBOL	DESCRIPTION
1		SPEAKER
2		VOLUME CONTROL
3		END OF LINE
4		AMPLIFIER
5		WALL MOUNTED SPEAKER



3RD FLOOR LAYOUT PLAN & TERRACE AREA

PA SYSTEM LAYOUT REV-00 DATE : 03-12-16

ELECTRICAL CONSULTANT :

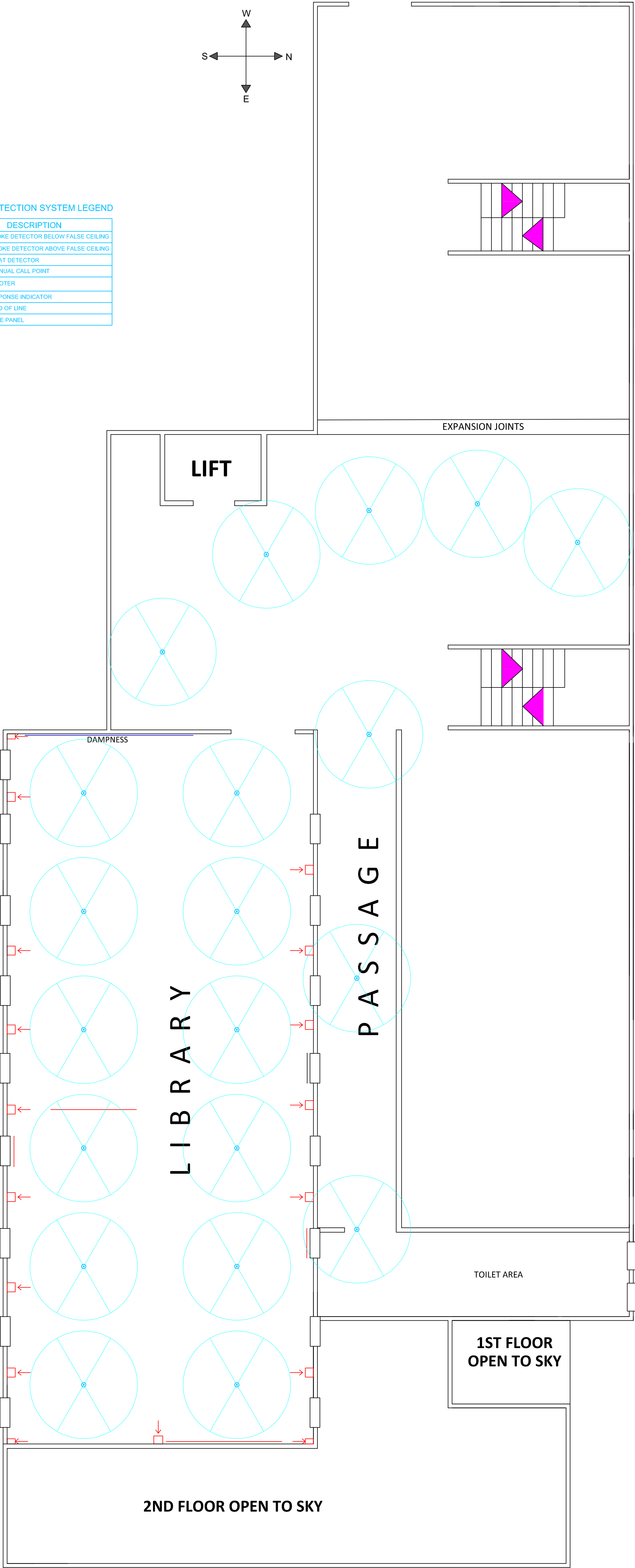
S.M. ENGINEERS

Consultants, Designers, Engineers & Contractors

CONSULTANTS, DESIGNERS, ENGINEERS & CONTRACTORS
C-107, NERUL RAILWAY STATION COMPLEX,
FIRST FLOOR, NERUL(EAST), NAVI-MUMBAI-400 706

LEGENDS		 CREATIVE CONSULTANTS	PROJECT MANAGEMENT CONSULTANTS CREATIVE CONSULTANTS 5-B, Bhagwanji Mavji Building, Next YWCA 54/ A, J.P. Road, Andheri (West), Mumbai - 4000 58.		CLIENT NAME	
	CRACKS IN BEAM/ DROP PARADI/ LINTEL			CENTRAL BANK OF INDIA SPBT COLLEGE, VILE PARLE (WEST), MUMBAI-400 056.		
	CRACKS IN COLUMN			DRY BY: ISMAIL CKD BY : RAFIQ SCALE : N.T.S. DATE : 20/10/2014		
	CRACKS IN CEILING					
	SEEPAGE MARKS IN BEAM/ WALL/ DROP PARADI					
	SEEPAGE MARKS IN CEILING					
	RIISING DAMPNESS IN INTERNAL WALL					
	SAPERATION CRAKS IN BEAMS/COLUMNS/BRICKS					
	HOLO SOUND IN SLABS/COLUMNS/BEAMS					

SMOKE DETECTION SYSTEM LEGEND	
SYMBOL	DESCRIPTION
	SMOKE DETECTOR BELOW FALSE CEILING
	SMOKE DETECTOR ABOVE FALSE CEILING
	HEAT DETECTOR
	MANUAL CALL POINT
	HOOTER
	RESPONSE INDICATOR
	END OF LINE
	FIRE PANEL



3RD FLOOR LAYOUT PLAN & TERRACE AREA

SMOKE DETECTION SYSTEM REV-00 DATE : 30-12-16

ELECTRICAL CONSULTANT :

S.M. ENGINEERS

CONSULTANTS, DESIGNERS, ENGINEERS & CONTRACTORS

C-107, NERUL RAILWAY STATION COMPLEX,
FIRST FLOOR, NERUL(EAST), NAVI-MUMBAI-400 706

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	HOLO SOUND IN SLABS/COLUMNS/BEAMS



PROJECT MANAGEMENT
CONSULTANTS

CREATIVE CONSULTANTS

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CLIENT NAME	
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DRY BY: ISMAIL	CKD BY : RAFIQ
SCALE : N.T.S.	DATE :20/10/2014

3.5C X 120 Sq.mm .AL,ARM

1nos 32 X 5 mm CU. STRIP.

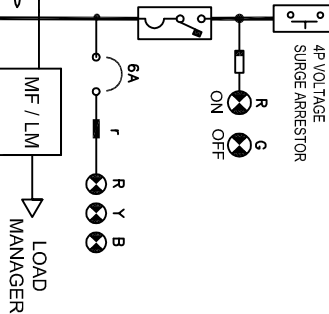
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LIGHTING PANEL

LOCATION - METER ROOM

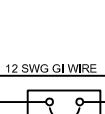
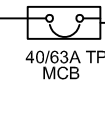
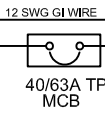
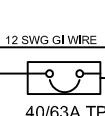
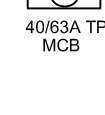
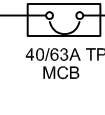
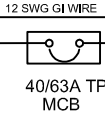
125 A FP MCCB
MICROPROCESSOR BASED
WITH BUILT IN O/C, S/C &
E/F RELEASES SUITABLE
FOR 415V, 50Hz & FAULT
LEVEL OF 36 KA

CT#1 125/5A
15VA CLASS-1.0
FOR METERING



160A TPN CU. B/B

R
Y
B
N



S.N.	CABLE SIZE & TYPE	1	2	3	4	5	6	7	8	9	10	11	12	13
		1R4C6 Sq.mm Cu. Arm. Cable	1R4C6 Sq.mm Cu. Arm. Cable	1R4C6 Sq.mm Cu. Arm. Cable	1R4C6 Sq.mm Cu. Arm. Cable	1R4C6 Sq.mm Cu. Arm. Cable	1R4C6 Sq.mm Cu. Arm. Cable	1R4C6 Sq.mm Cu. Arm. Cable	---	---	---	1R3C6 Sq.mm Cu. Arm. Cable	---	---
		GR.FLOOR, SIDE - A - LDB	GR.FLOOR, SIDE - B - LDB	1ST FLOOR, SIDE - A - LDB	1ST FLOOR, SIDE - B - LDB	2nd FLOOR, SIDE - A - LDB	2nd FLOOR, SIDE - B - LDB	3RD FLOOR, -LIBRARY - LDB	SPARE	SPARE	SPARE	OUTDOOR -LDB	SPARE	SPARE

