## INSTRUCTIONS TO CONTRACTORS.

1. This tender is for the "**INTERNAL ELECTRICAL WORKS FOR VISHVESHWARAIAH LAYOUT 4TH BLOCK BRANCH (NEW BRANCH), BANGALORE**". It is a Single Bid containing Technical and Price Bid.

In their own interest the contractors are advised to use their own specific seals and desist from using currency coins for the purpose. Tenders with incomplete or broken seals are liable to be rejected, the matter solely resting at the discretion of the EMPLOYER / ARCHITECTS. If a Contractor does not quote for one or more items, the Tender will be considered as incomplete and will be rejected.

2. The EMPLOYER reserve to itself the right to accept or reject any tender without assigning any reason for doing so and does not bind itself to accept the lowest or any other tender.

3. General Specifications are for guidance only. The latest ISI codes and Specifications and mode of measurements will be referred to during execution.

4. The term "THE ARCHITECTS" in the said conditions shall mean Bank Engineer (as Architect not appointed)

5. Employer or Bank shall mean Deputy General Manager (B&O), SBI, AO-01, Bengaluru.

## TENDER FORM

*PROJECT:* INTERNAL ELECTRICAL WORKS FOR VISHVESHWARAIAH LAYOUT 4TH BLOCK BRANCH (NEW BRANCH), **BANGALORE**

Dear Sirs,

I/We the undersigned have carefully gone through and clearly understood after visiting the site and the Tender drawings and tender documents comprising of the tender form, Notice to contractors, and conditions for building contract, Special Conditions, Specifications and Schedule of Probable quantities and Draft Agreement.

I/We do hereby undertake to execute and complete the whole or part of the work (as desired by you) at the respective rates which/I/We have quoted for the respective items of the Probable Bill of Quantities.

I/We are depositing as Earnest Money a sum of Rs.11,500/-, in favour of SBI, payable at Bangalore . Along with this tender for due execution of the work at my/our tendered rates together with any variations which shall be adjusted by the Architects at prices based on our tendered rates. I/We shall deposit further sum equivalent to 2% of tender amount, less EMD paid in the event of my/our tender being accepted, towards initial security deposit.

In the event of this Tender being accepted I/We agree to enter into an agreement as and when required and execute the contract according to your form of Agreement, within 7 days of receipt of work order, in default thereof, I/We do hereby bind my-self/ourselves to forfeit the aforesaid initial security deposit.

I/We further agree to complete the work covered in the said schedule of quantities within 45 days from

the 3rd day reckoned from the date of issue of the work order to commence the work or on which contractor is instructed to take possession of the site, whichever is later.

I/We agree not to employ Sub-contractors other than those that may be specifically approved by the Bank for this contract work.

I/We agree to and to get the work, workers, employees (of contractor, Architect & Employer) engaged on the work at site and all materials at site for execution of the work shall be insured comprehensive insurance including fire/accidents/ rain/ floods/riots/CAR policy (contractor's all risk insurance policy) and the insurance shall cover the period from date of start of work to date of actual completion of work plus 3 months. In case part work is taken over by the Employer before final completion of the whole work, such parts may not be covered by the insurance from the date of taking over that part of work by the Employer. Draft Insurance deed will be got vetted by the Architect, before obtaining the same. All the rates quoted by me/ us are inclusive of the same in full and nothing extra shall be claimed anytime on account of any of these.

I/We agree to pay Income tax, to be deducted at source, at the rate prevailing from time to time on the Gross value of the work done, and the rates quoted by me/we are inclusive of same.

I/We have read thoroughly the following Annexures mentioned in pages 8 to 54 of the technical bid consisting of the following details;

1. Notice to Contractor
2. Articles of Agreement
3. Appendix to General Conditions of contract
4. General & Special Conditions of Contract
5. General and Technical Specifications
6. General Specifications – Interior Works

**Contractor shall upload compulsorily Pg.1 to 9i.e the (i) Notice Inviting E-Tender (ii) Instructions to contractors and (iii) Tender form of the Technical bid without fail in the e-tendering portal after putting the signature and seal. Failing to upload as stated above, the tender will be rejected.**

**I / We Confirm that we strictly adhere to the terms and conditions mentioned in the above 6 (Six) subheads of this tender.**

Yours faithfully,

Contractor's Signature

Address: Date:

# NOTICE TO CONTRACTOR

ADDRESS:

_____

_____

**PROJECT:INTERNAL ELECTRICAL WORKS FOR** VISHVESHWARAIAH LAYOUT 4TH BLOCK BRANCH (NEW BRANCH) , **BANGALORE**

Dear Sirs,

1. We have pleasure in inviting you to tender for the aforesaid work.

2. ***The scope of work broadly as given below is for INTERNAL ELECTRICAL WORKS FOR VISHVESHWARAIAH LAYOUT 4TH BLOCK BRANCH (NEW BRANCH) , BANGALORE Tender Documents should be filled and uploaded on the site of https://etender.sbi.***

3. The tenderer must obtain for himself, on his own responsibility and at his own expenses, all the information which may be necessary for the purpose of filling this tender and for entering into a contract for the execution of the same and must examine the drawings and inspect the site of the work and acquaint himself with all local conditions and matters pertaining thereto.

5. Each of the tender documents page is required to be signed by the person or persons submitting the tender in token of his/their having acquainted himself/themselves with the General conditions etc., as laid down. Any tender with any of the documents not so signed will be rejected.

6. The tender documents must be filled in English and all the entries must be made by hand and written in ink. If any of the documents are missing or un-signed, the tender shall be considered invalid.

7. Each and every one of all erasures and additions/alterations made, while filling the tender, must be attested by initials of the tenderer. Over-writing of figures must be attested by initials of the tenderer. Overwriting of figures is not permitted. Failure to comply with either of these conditions will render the tender void. After submission of the tender no advice or any change in rate or conditions will be entertained. All the amount should be quoted both in figures and words. In-case of any discrepancy in rates quoted in words/figures and the amounts, the rate quoted in words shall be taken as final and binding.

8. The tender shall be valid for a period of 90 days from the date of opening.

9 TOTAL SECURITY DEPOSIT : shall comprise of:

a. Earnest Money deposit
b. Initial Security deposit& ASD
c. Retention money

9.1 The intending tenderer shall deposit with **SBI,** by Demand Draft a sum of Rs.11,500/-(as the Earnest Money), as a guarantee of good faith, which amount shall be forfeited as liquidated damages, in

the event of any evasive/direct refusal or delay in starting the work and or signing the contract. The deposit of the unsuccessful tenderers will be returned, without interest, immediately after a decision is taken regarding the award of the contract. The Earnest money of the successful tenderer will be adjusted towards Security Deposit. A tender not accompanied by Earnest money deposit will not be considered. **Bank reserves the right to obtain additional security deposit if: The price Bid is below 7.5% of the estimated cost put to tender. The amount of such ASD/APG shall be• the difference between 92.5% of the estimated cost put to tender and the quoted price.**

9.2 The successful tenderer will have to pay further sum equivalent to 2% of his contract value, less EMD already paid, as Initial Security Deposit (ISD) by means of a D.D/Banker's cheque within7 days from the date of issue of work order to commence work. The EMD and Security deposit thus paid shall be held by the State Bank of India as Security deposit, for due execution and fulfillment of the contract, till the completion of the work and defect liability period in all respects and shall not bear any interest.

9.3 Together with the money paid under clause 9.1 & 9.2 above, further retention of 10% of the value of the work done will be deducted from every running bill, till total retention, including EMD and initial SD paid earlier, comes to 5% of the contract value, and same shall be held by the Bank as Total Security Deposit. On the Architect's certifying the completion of work, 50% of the total security deposit shall be released to the contractor along with the final certificate of payment, and the balance amount will be retained in the manner stated elsewhere for a further period of Twelve Months after the completion date recorded in completion certificate, issued by the Architects and agreed to by the Bank.

10. Within one month of the receipt of intimation from the Architects of the acceptance of his/their tender, the successful tenderer shall be bound to sign an agreement, on a stamp paper in accordance with the Draft Agreement and conditions of contract attached herewith, but the work order or the written acceptance of a tender by the Employer will constitute a binding agreement between the Employer and the person tendering whether such formal contract is or not signed by the contractor.

11. All compensation or other sums of money payable by the contractors to the clients, under the terms of this contract, may be deducted from the Security Deposit or from any sum that may be or may become due to the contractor on any account whatsoever, and in the event of the Security deposit being reduced by reasons of any such deductions, the contractor shall within 15 days of being asked to do so make good in cash or cheque, any sum which have been deducted from his security deposit.

12. The rates quoted by the Contractor shall include all eventualities, such as heavy rain, sudden floods, accidents, fire, riots etc., which may cause damage to the executed work or which may totally wash out the work. Until the completion certificate is issued to the Contractors, neither the Architect nor the clients will be responsible for such damage or wash out of the construction work.

13. Time is the essence of the contract. The work should be completed **within 45 days** from the date of commencement. The date of commencement shall be within ONE day after confirmation.

a) 3rd day from the date of issue of work order.

Or

b) The day on which the contractor receives the possession of the site whichever is later.

Or

c) The contractor is asked in writing to take over the possession of the site.

The successful contractor will have to give a CPM/PERT chart of various activities of work to be done so that the work gets completed within the stipulated time. The chart shall be submitted within 3 days from the date of acceptance of the tender.

14. If the contractor fails to complete the work by the Scheduled date of completion or within any sanctioned extended time, he will have to pay liquidated damages at the rate of ½% of contract amount for each week of delay the work remains incomplete beyond the completion(Original/extended date), subject to maximum of 5% of the contract value (without extra items) as per clause 31 of the General conditions of contract.

15. The quantities contained in the Schedule are only indicative. The work as actually carried out and done will be measured up from time to time, for which payment will be made subject to the terms and conditions of contract.

16. The unit prices shall be deemed to be fixed prices. In case of extra items, a record of labour charges paid shall be maintained and shall be presented every month for extra/substituted items regularly to the Architects for checking. The settlement will be made based on figures arrived at jointly and taking into account unit prices of items of work mentioned in the contract assigned to the successful tenderer. In case, of extra items, where similar or comparable items are quoted in the tender, extra rates shall invariably be based on those tender rates to the extent reasonable. **The rates quoted shall be exclusive of GST . However the GST as applicable shall be reimbursed to the contractor.**

17. SBI, do not bind themselves to accept the lowest or any tender and reserve to themselves the right to accept or reject any or all tenders, either in whole or in part, without assigning any reason whatsoever for doing so.

18. No employee of the bank is allowed to work as a contractor for a period of two years of his retirement from bank service, without the previous permission of the bank. This contract is liable to be cancelled, if either the contractor or any of his employees is found at any time to be such a person who had not obtained the permission of the bank or SBI as aforesaid before submission of the tender or engagement in the contractor's service.

19. The tenderer, apart from being a competent contractor must associate himself with agencies of the appropriate class who are eligible to tender for (1) Electrical (2) Air-conditioning works (3) Fire fighting systems & (6) Interiors (fixed furniture), as the case maybe.

20. Release of security deposit:

    i) 50% of the total security deposit will be released along with the final certificate of payments as stipulated in Appendix to General Conditions of contract,

ii) Balance 50% of Retention money will also be released as noted under(i) above, subject to submission of a Bank Guarantee, to the satisfaction of SBI for an equivalent amount. This Bank Guarantee shall be valid upto completion of defects/removal liability period plus 3 months.

## ARTICLES OF AGREEMENT

ARTICLES OF AGREEMENT made the _____ day of _____ 2023between_____of_____ _____(hereinafter called the "Employer") of the one part and _____ of _____ (hereinafter called "The Contractor") of the other part, where as the Employer is desirous of getting the work of "_____" executed and has caused drawings, conditions of contract, specifications and schedule of quantities etc., describing the works prepared by **SBI , Bengaluru**

AND WHEREAS the SAID DRAWINGS numbered as per list attached inclusive of and the conditions of contract, specifications and schedule of quantities etc., have been signed by or on behalf of the parties hereto.

AND WHEREAS THE CONTRACTOR has agreed to execute upon and subject to the conditions set forth in the Schedule hereto (hereinafter referred to as "Said Conditions") the works shown upon the said drawings and described in the same specifications and included in the said schedule of quantities for such sum as may be ascertained to be payable in terms of the Bills of Quantities, and which sum is estimated to be Rs. _____ (Rupees_____ (hereinafter referred to as "Said Contract Amount").

NOW IT IS HEREBY AGREED AS FOLLOWS:

1. In consideration of the said sum to be paid at the times and in the manner set forth in the said conditions, the contractor shall upon and subject to the said conditions, execute and complete the work shown in the said drawings and described in the said specifications.
2. The Employer shall pay the contractor the said sum or such sums as shall become payable hereunder at the times and in the manner specified in the said conditions.
3. Tender documents containing work order Notice to the Contractor, Conditions of Contract, Appendix thereto, Special Conditions of Contract, Specifications 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 the conditions and stipulations and perform the agreement on their part respectively in such conditions contained.

4. The contract is neither a fixed lumpsum contract or a piece work contract, but is a contract to carry out work in respect of the entire works to be paid for according to actual measured quantities, including variations from BOQ at the rates contained in the Schedule of rates and Probable bill of quantities or as provided in the said conditions.

5. The Employer through the Architect, reserves to himself the right of altering the drawings and natures of the work, of adding/substitution to or omitting any items of work or having portions of the same carried out through alternate agencies without prejudice to this contract.

6. Time shall be considered a the essence of this agreement and the contractor hereby agrees to commence the work soon after the site is handed over to him but within 3 days reckoned from the date of issue of work order to execute the work, as provided for in the said conditions and complete the entire work in**45days** subject to nevertheless to the provisions for extension of time.

7. This agreement and contract shall be deemed to have been made in Bengaluru and any questions or dispute rising out of or in any way connected with this Agreement and Contract shall be deemed to have arisen in Bengaluru and only the courts in Bengaluru shall have jurisdiction to determine the same. The limitation period will be 90 days from the date of dispute having arisen.

AS WITNESS our hand this _____ day of _____ 2023

EMPLOYER

CONTRACTOR

Signed by the said in the presence of:
WITNESS : SIGNATURE

NAME :

ADDRESS :

WITNESS : SIGNATURE

NAME :

ADDRESS :

## APENDIX TO GENERAL CONDITIONS OF CONTRACT

1. Earnest Money Deposit (EMD) :Rs.11,500/-

2. Initial Security Deposit (ISD) :2% of contract value including EMD.

3. Period of completion :45 days

4. Defects Liability period :12 months after completion as recorded in the completion certificate.

5. Agreed Liquidated Damages : ½% of contract amount per week of delay subjected to a maximum of 5% of contract value.

6. Period of final measurement : One month after completion as recorded in the completion certificate.

7. Minimum value of work to be : Minimum ₹6LAKHS

| | | | |
|---|---|---|---|
| | Executed for issue of interim Certificates for making payment | | |
| 8.a) | Retention money from each bill | : | 10% of gross value of each interim bill, subject to 8(b) below. |
| b) | Total retention money including Earnest money and initial security Deposit | : | 5% of the contract value. |
| 9. | Release of Security deposit | : | 50% of the total security to be released along with final certificate of payment, but only after removing all his materials, equipment, labour, huts/force, temporary sheds/stores, all his installations, machinery etc., from the site. Balance payment to be released on submission of Bank Guarantee on any Scheduled Bank, Other than SBI in the prescribed manner and valid till the completion of defects liability period of 12 months. |
| 10. | Period for honouring certificate | : | 15 working days from date of Architects certificate of payment for interim bills and 45 working days for final certificate. |

Virtual completion.

**INDEX TO GENERAL CONDITIONS OF CONTRACT**


1. Interpretations
2. Scope of Contract
3. Drawings and Specifications
4. Schedule of Quantities
5. Sufficiency of Schedule of Quantities
6. Errors in schedule of Quantities
7. Contractor to provide everything necessary
8. Authorities, Notices, Patent rights and royalties
9. Materials and workmanship to confirm to description.
10. The setting out
11. Removal of all offensive matters
12. Opening up works
13. Contractor's superintendence and representative on the work
14. Dismissal of workmen
15. Access to works
16. Employer's representative/PMC
17. Assignment of sub-letting
18. Sub-contractors
19. Variations not to vitiate contract
20. Measurement to works
21. Prices of Extras etc., Ascertainment of
22. Unfixed materials

23. Removal of improper work and materials
24. Defects after completion
25. Certificate of virtual completion
26. Other persons engaged by the Employer
27. Insurance in respect of damage to persons and property
28. Contractor's All risk policy
29. Minimum amount of third-party Insurance
30. Commencement and completion
31. Delay and extension of time
32. Damages for Non-completion
33. Failure by contractor to comply with Employer's instructions
34. Supervision of works
35. Prime cost and provisional sums
36. Certificates and payments
37. Notices
38. Termination of contract by the Employer
39. Termination of contract by the contractor
40. Matters to be finally determined by the Employer
41. Settlement of dispute (Arbitration)
**42. LOCAL LAWS, ACTS, REGULATIONS**

## GENERAL CONDITIONS OF CONTRACT

### 8. INTERPRETATIONS:

In constructing these conditions and the specifications, schedule of quantities and contract agreement, the following words shall have the meaning herein assigned to them except where the subject or context otherwise required:

a. (Employer" shall mean **State Bank of India, RBO-04 ,AO-2, Bangalore** which is represented by RM, RBO-04, AO1) include his/their heirs, legal representatives, assignees and successors.

b. "Contractor" shall mean and shall include his/their heirs, legal representatives, assignees and successors.

c. "Employers Engineer" shall mean any Engineer who is employed by SBI or any other Engineer appointed from time to time by the Employer, and certified in writing to the contractor, to act as Engineer for the purpose of the Contract in place of the said engineer.

d. "Works" shall mean the works to be executed in accordance with contract specifications, quantities etc.

e. "Contract" shall mean the Articles of Agreement, the General Conditions, Special Conditions, the Appendix, the Schedule of Quantities, Specifications and drawings, work order etc., attached hereto and duly signed.

f. "Contract Price" shall mean the sum named in the Tender, subject to such amount additions thereto or deductions there from as may be made under the provisions, hereinafter contained.

g. "Site" shall mean the Premises, on which the works are to be, provided, by the Employer or

Employer for the purpose of the Contract.

h. "Drawings" shall mean the drawings referred to in the contract etc., and any modifications of such drawings approved in writing by the Employer and such other drawings as may from time to time be furnished or approved in writing by the and Employer.

i. "Notice in Writing" or written notice shall mean a notice in writing, typed or printed characters sent (unless delivered personally or otherwise provided to have been received) by registered post to the last known private or business address or registered office of the address and shall be deemed to have been received, when in the ordinary course of post, it would have been delivered.

j. "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 amending such original.

k. "Net Prices" if in arriving at the Contract Amount, the contractor has added to or deducted from the total of the items of the Tender any sum, either as a percentage or otherwise, then the net price of any items, in the tender, shall be the sum arrived at by adding to or deducting from the actual figure appearing in the Tender, as the price of that item, a similar percentage or proportionate sum. Provided always that in determining the percentage or proportion of the sum so added or deducted by the contractor, the total amount of any Prime cost items and provisional sums of money shall be deducted from the total amount of the Tender. The expression "net rates" or "net prices" when used with reference to the contract or account shall be held to mean rates or prices so arrived at.

l. "Virtual Completion" shall mean that the work is in the opinion of the Employer, sufficiently completed for occupation by the Employer, in relation to the scope of work of this contract.

m. Words importing persons include firms and corporations. Words importing the singular only, also include the plural and vice versa, where the context requires.

**9.** **SCOPE OF CONTRACT:-**The brief scope of work involves the following.:

1. Electrical, Data, Telephone wirings etc.
2. Main Panels, Db's etc.
3. Laying of main cables, wirings etc.
4. UPS,R Power, Lightings circuits etc.
5. Supply/Installation of fixtures etc.

All the works involves latest finishing as per instruction of Architects/Engg and specifications.

The contractor shall carry out and complete the said work in every respect in accordance with this contract with the directions of and to the satisfaction of the Employer. The variations or modifications of the designs, quality or quantity of works or the addition or omission or substitution of any work.

a. Any discrepancy in the drawings or between the Schedule of Quantities/ or drawings and/or specifications etc.

b. The removal and/or re-execution or any works executed by the contractor.

c. The removal from the site of any material brought there on by the contractor, and the substitution of any other material there from.

d. The dismissal from the works of any person employed thereupon.

e. The opening up for inspection of any work covered up.

f. The amending and making good of any defects under clause 24 “Removal of Improper works and Materials”.

The contractor shall forthwith comply and fully execute any work comprised in such Employer’s instruction, provided always that instructions, directions and explanations given to the contractor or his representative upon the works by the Employer shall, if involving a variation, be confirmed in writing by the contractor or within 7 days, and if not dissented from in writing within further 7 days by the Employer, such shall be deemed to be the Employer’s instructions within the scope of contract.

If compliance with the Employer’s instructions as aforesaid involved work and/or expense and/or loss beyond that contemplated by the contract, then unless the same were issued owing to some breach of this contract by the contractors, the employer shall pay to the Contractor, the price of the said work (as an extra to be valued as herein after provided) and/or expense and/or loss. **TENDERER SHALL VISIT THE SITE**Intending tenderer shall visit the site and make himself thoroughly acquainted with the local site condition, nature and requirements of the works, facilities of transport conditions, effective labour and materials, access and storage for materials and removal of rubbish. The tenderer shall provide in their tender for cost of carriage, freight and other charges as also for any special difficulties and including police restriction for transport etc., for proper execution of work as indicated in the drawings. The successful tenderer will not be entitled to any claim of compensation for difficulties faced or losses incurred on account of any site condition

**10. DRAWINGS AND SPECIFICATIONS:**

The works shall be carried out to the entire satisfaction of the EMPLOYER, in accordance with the signed contract document, drawings and specifications and such further drawings and details as may be provided by the Employer and in accordance with such written instructions, directions and explanations, as may from time to be given by the Employer, whose decision as to the sufficiency and quality of the work and materials shall be final and binding on the contractor. If the work shown on any such further drawings or work that may be necessary to comply with any such instructions, directions or explanations, be in the opinion of the contractor outside the scope of work or reasonably could not be inferred from the contract, he shall before proceeding with such work, give notice in writing to this effect to the Employer and the Employer 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 Employer and the contractor fail to agree, as to whether or not there is an extra, then, if the Employer decided that the contractor is to carry out the said work, the contractor shall do so, and the question whether or not there is any extra and if so, the amount thereof, shall failing agreement be settled by Arbitration as hereinafter provided, but such reference shall in no way delay the fulfillment of this contract.

One complete set of the signed drawings and a copy of contract document (specifications and schedule of quantities etc.) shall be furnished by the Employer. The original contract documents shall remain in the custody of employer.

**11. SCHEDULE OF QUANTITIES:**

The Schedule of Quantities unless otherwise stated shall be deemed to have been prepared in accordance with the Standard Procedure of the Employer and shall be considered to be approximate and no liability shall attach to the Employer for any error/variations that may be discovered therein.

**12. SUFFICIENCY OF SCHEDULE OF QUANTITIES:**

The contract 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 things necessary for the proper completion of the works.

**13. ERRORS IN SCHEDULE OF QUANTITIES:**

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 be dealt with as an authorized extra or deduction.

**14. CONTRACTOR TO PROVIDE EVERYTHING NECESSARY:**

The contractor shall provide everything necessary for the proper execution of works according to the true intent and meaning of the drawings, specifications and the Schedule of Quantities etc., taken together, whether the same may or may not be particularly shown or described there in, provided the same can be inferred therefrom. The several documents forming the contract are to be taken as mutually explanatory to one another; detailed drawings and figured dimensions in preference to scale, and special conditions in preference to General conditions and particular specifications in preference to General specifications.

In case of discrepancy between the Schedule of Quantities, the specifications and/or the drawings, the following order of preference shall be observed: -

i) Description of Schedule of Quantities.
ii) Particular specifications and special condition, if any.
iii) Drawings.
iv) C.P.W.D. specifications.
v) Indian Standard specifications of B.I.S.

If there are varying or conflicting provisions made in any document forming part of the contract, the Employer shall be the deciding authority, with regard to the intention of the document and his decision shall be final and binding on the contractor.

Any error in description, quantity or rate in schedule of quantities or any omission there from shall not vitiate the contract or release the contractor from the execution of the whole or any part of the works expressed therein according to drawings and specifications or from any of his obligations under the contract.

The contractor shall make his own arrangements for providing water, for carrying out the work, at his own cost. If water from any source other than Municipal main is to be used for construction, the same shall be tested at the contractor's cost, and a report submitted to the Employer for his approval, before such water is used for the works. Temporary Electrical connections shall be obtained by the contractor to facilitate execution and completion of work at their cost and all the charges there of should be borne by them.

The contractor shall supply, fix and maintain at his cost, during the execution of any works, all the necessary scaffolding, staging, hoarding, watching and lighting during nights as well as by day required not only for the proper execution and protection of the said works, but also for the protection of the public and the safety of any adjacent road, streets, cellars, vaults, pavements, walls, houses, buildings and all other erections, matters or things. The Contractor shall take down and remove any or all such scaffolding, staging, etc., as occasion shall require or when ordered or so to do, and shall fully reinstate at his own cost and make good all the matters and things disturbed during the execution of the works to the satisfaction of the Employer.

**15. AUTHORITIES, NOTICES, PATENT RIGHTS AND ROYALTIES:**

The contractor shall conform to the provisions of the statutes relating to the works, and to the regulation and by laws of any local authority, and of any water, lighting and other companies or authorities, with whose systems the structures are proposed to be connected; and shall before making any variation from the drawings or specifications, that may be necessitated by so conforming, give to the Employer a 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 with the provisions, regulations or by laws in question.

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

The contractor shall indemnify the Employer against all claims in respect of patent rights, designs, trademarks or name or other protected rights in respect of any constructional plant, machine, work or material used for or in connection with works or temporary works and from and against all claims, demands, proceedings, damages, costs, charges, and expenses whatsoever in respect thereof or in relation thereto. The Contractor shall defend all actions arising from such claims, unless he has informed the Employer, before any such infringement and received their permission to proceed, and shall himself pay all royalties, license fees, damages, cost and changes of all and every sort that may be legally incurred in respect thereof.
Please refer clause 23 of special conditions of contract.

9. **MATERIALS AND WORKMANSHIP TO CONFORM DESCRIPTION:**

All materials and workmanship shall, so far as procurable be of the respective kinds specified in the Schedule of Quantities and/or specifications and in accordance with the Employer's instructions and the contractor shall on the request of the Architects furnish to them all invoices, accounts, receipts and the other vouchers to prove that the materials comply therewith. The contractor shall at his own cost arrange for and/or carry any test of any materials, which the Employer may require. The costs of materials used for testing, packing, transportation and testing shall be borne by the contractor and his quoted rates/amounts shall include all such expenses/contingencies.

9a. In case of non-availability of specified Make/brand of any material the alternate make/brand will be given by the Employer.

**10. THE SETTING OUT:**

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

11. **REMOVAL OF ALL OFFENSIVE MATTERS:**

All debris arising out of the work shall be disposed off as per the rules and regulations of the

Local authorities concerned.

12. **OPENING UP WORKS:**

In the event of the Employer feels that the work is not carried out as per tender specifications, contractor at his cost shall open the concealed work at his cost for which no Extra cost will be paid.

**13 .CONTRACTOR'S SUPERINTENDENCE & REPRESENTATIVE ON THE WORKS:**

The contractor shall give all necessary personal superintendence during the execution of the works and so long thereafter as the Employer may consider it necessary until the expiration of the "Defects Liability Period" stated in clause 24. The Contractor shall meet the Employer or his representative, whenever required and so informed by the Employer.

The Contractor shall maintain and be represented at site at all times, while the work is in progress, by a responsible and efficient foreman, approved by the Employer and who must thoroughly understand all the trades entailed and be constantly in attendance while the menare at work. Any directions, explanations, instructions or notices given by the Employer to such foreman shall be deemed to have been given to the contractor and shall be binding as such on the contractor. The Foreman shall be thoroughly conversant with the English language and should be able to read, write and speak English.

**14 .DISMISSAL OF WORKMEN:**

The contractor shall on the request of the Employer immediately dismiss from the works any person employed thereon who may, in the opinion of the Employer and its representative's 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 Employer.

**15 ACCESS TO WORKS:**

Employer and any person authorized by them shall at all reasonable times have free access to the works and to the workshops, factories or other places where materials are being prepared or constructed by 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 Employer's representatives for inspection and examination and test of the materials and workmanship. No person, unless authorized by the Employer, except the representatives of Public authorities, shall be allowed on the works at any time. If any work is to be done at a place other than the site of works, the contractor shall obtain the written permission of the Employer for doing so.

**16 EMPLOYER'S REPRESENTATIVE:**

The Employer may appoint an assistant to the Engineer, any Site Engineer, who shall be the representative of the Employer. The duties of the Employer's representatives are to watch and supervise the works and to test any materials to be used and of workmanship employed in connection with the works. He shall have no authority either to relieve the contractor of any of his duties or obligations under the contract, or except those expressly provided hereunder, to order any work involving delay or any extra payment by the Employer or any variation of or in the works.

The contractor shall afford the Employer's representative every facility and assistance for examining the works and materials and checking and measuring item and materials. Neither the

Employer's representative nor any assistant to the Engineer shall have power to revoke, alter, enlarge or relax the requirements of this contract, or to sanction any new-work, additions, alterations, deviations or omissions unless such an authority may be specially conferred by a written order of the Employer.

The Employer's representative shall have to give notice to the Contractor or his representative about the non-approval 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 Employer is obtained. The work will from time to time be examined by the Employer's representative, but such examinations shall not in any way exonerate the contractor from the obligation to remedy any defects, which may be found to exist at any stage of the work or after the same is completed. Subject to the limitations of the clause, the contractor shall take instructions only from the Employer's representative.

**17 ASSIGNMENT OF SUB-LETTING:**

The works included in the contract shall be executed by the contractor and the contractor shall not directly or indirectly transfer, assign or underlet the contract or any part/share thereof or interest therein without the written consent of the Employer and no undertaking shall relieve the contractor from the full and entire responsibility of the contract or from active superintendence of the works during their progress.

**18 SUB-CONTRACTORS:**

All specialists, merchants, tradesmen, and others, executing any work or supply and fixing any goods for which prime cost prices or provisional sums are included in the Schedule of Quantities and/or specifications, who may be nominated or selected by the Employer and hereby declared to be sub-contractors employed by the Contractor, are herein referred to as nominated sub-contractors. No nominated sub-contractors shall be employed on or in connection with the works, against whom the contractor shall make reasonable objection or (see where the Employer's engineer and contractor shall otherwise agree), who will not enter into a contract provided.

a. The nominated sub-contractors shall indemnify the contractor against the same obligations in respect of the sub-contract as the contractor is under, in respect of this contract.

b. The nominated sub-contractors shall indemnify the contractor against claims in respect of any negligence by the sub-contractor, his servants or agents or any misuse by him or them of any scaffolding or other plant, the property of the contractor or under any Workman's Compensation Act in force.

c. Payment shall be made by the contractor to the nominated sub-contractor, within 14 days of receipt of the Employer's certificate, provided that before any certificate is issued, the contractor shall upon request furnish to the Employer, proof that all nominated sub-contractor's account included in the previous certificates have been duly discharged; in default whereof the Employer may pay the same upon a certificate of the Employer and deduct the amount thereof from any sums due to the contractor. The exercise of this power shall not create any contract between Employer and Sub-contractor.

**19 VARIATIONS NOT TO VITIATE CONTRACT:**

The contractor shall when directed in writing by the Employer, omit from or vary works shown upon the drawings or described in the specifications or included in the priced schedule of

quantities, but the contractor shall not make any alterations or additions to or omissions from the works or any deviations from the provisions of the Contract without such authorizations or direction in writing from the Employer.

No claim for any extra item or deviations shall be allowed, unless it shall have been executed by the Authority of the Employer as herein mentioned. Any such extra item or deviation is hereinafter referred to as an authorized extra item or deviation. 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 Employer's engineer in accordance with the provisions of clause 20, hereof.

**20 MEASUREMENTS OF WORKS:**

The Employer 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 agent to assist Employer's engineer in taking measurements and calculations, and to furnish all particulars or give all assistance required by either of them.

Should the contractor no attend or neglect or omit to send such an agent, then the measurements and calculations, and to furnish all particulars or give all assistance required by either of them.

Should the contractor not attend or neglect or omit to send such an agent, then the measurements taken by the Employer's representative approved by them shall be taken to be the correct measurements. The mode of measurements wherever not mentioned in contract documents be taken in accordance with the Indian Standard of Method of measurements of Electrical works (I.S codes) and its revisions, if any. In case of any discrepancy between various contract documents on mode of measurements, the mode given in Bill of Quantities will take precedence over others.

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 variations made without the Employer's knowledge, if substantially sanctioned by him in writing shall be included in such measurements.

21. **PRICES FOR SUBSTITUTIONS/EXTRA ETC., ASCERTAINMENT OF:**

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 specified for the works in the priced schedule of quantities of work thus ascertained are less or greater than the amounts and/or tender or that any variations, is made, and any substituted/ extra (new) items have been executed, the valuation of such quantities/items, amounts or variations, unless previously or otherwise agreed upon, shall be made in accordance with the following rules:

a. The net rates or prices in the original tender shall determine the valuation of the extra (additional quantities and or extra/substituted item of work), where that work is of a similar character and executed under similar conditions of the work priced therein. This applied to extra and substituted items of work to the extent; they are similar in nature to the items in the contract.

b. The net prices given in the original ender shall determine the value of the items omitted, provided if omissions vary the conditions under which any remaining items of work are carried out, the prices for the same shall be valued under thereof.

c. Where extra/substituted item of works are not of similar character (either partly & fully) and/or executed under similar conditions as aforesaid or where the omissions vary the conditions under which any remaining items of works are carried out or if the amount of any 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 Architects the net rate or price contained in the priced schedule of quantities or tender or for any item of the work involves less or more beyond that reasonably contemplated by the Contractor or is by reason of such omission or addition rendered unreasonable for in-applicable, the Employer shall fix such other rates or prices as in the circumstances he shall think reasonable and proper, which shall be final and binding on the contractor. For extra and substituted items this will apply for portions of the items for which, items of similar nature are not available in the contract.

d. Where extra and or substituted items of work cannot be properly measured or valued, the contractor shall be allowed based on the net local day work rates and wages for the district and prevalent market rates for materials etc., at the time of ordering that item; provided that in either case vouchers for wages paid specifying the daily time (and if required by the Employer, the workmen's name) and materials employed at or before the end of the week following that in which the work has been executed.

The measurements and valuations in respect of the extra and substituted items of work shall be completed within the "Period of final measurement" or within 3 (three) months from the completion of the contract works as defined under clause No.26 (certificate of virtual completion.

22. **UNFIXED MATERIALS:**

When any materials intended for the works shall have been placed at site by the contractor, such materials shall not be removed there from (except for the purposes of being used on the works) without the written authority of the Employer and when the contractor shall have received payment in respect of any certificate in which the Employer's engineer 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.

23. **REMOVAL OF IMPROPER WORK AND MATERIALS:**

The Employer shall, during the progress of the works, have power to order in writing from time to time the removal from the works, within such reasonable times as may be specified in the order, of any materials which in the opinion of the Employer's engineer are not in accordance with the specifications or the instructions of the Employer; and the substitution with proper materials and the removal and proper re-execution of any work, which has be executed with materials or workmanship, not in accordance with the contract/drawings and specifications or instructions etc., the contractor shall forthwith carry out such orders at his own cost. In case of default on the part of the contractor to carry out such orders, the Employer shall have the 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 the contractor by the Employer, from any money due or may become due to the contractor for this work or on any other account.

Instead of this procedure for work not done in accordance with the contract, the Employer may allow such work to remain, and in that case may make allowance for the difference in value together with such further allowance for damages to the Employer, as in Employer's opinion may be reasonable. This allowance shall be recoverable from the contractor by the Employer, or may be deducted by the Architect, from any money due or may become due to the contractor for this

work or on any other accounts. The decision of the Employer in these matters shall be final and binding on the contractor.

24. **DEFECTS AFTER COMPLETION:**

Any defect, shrinkage, settlement or other faults which may appear with in the "Defects Liability Period" stated in the Appendix on Page 13 i.e. within 12 months after the virtual completion of the works arising in the opinion of the Employer, from materials or workmanship not in accordance with the contract, shall upon the directions and writing of the Employer and within such reasonable time as shall be specified therein, be rectified and made good by the Contractor at his own cost. In case of default, the Employer may employ any other person to amend and make good such defects, shrinkage, settlements or other faults. All damages, loss and expenses consequent therein 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 may be deducted by the Employer, the damages, loss and expenses from any sums that may be due to the contractor or amount retained under condition 38 (termination of contract by contractor) and payment) and in event of the amount retained being insufficient recover the balance from the amount held against EMD & Security deposit under clause 9.3 (Page No 8) or any other amounts due or may become due later.

25. **CERTIFICATE OF VIRTUAL COMPLETION:**

The contractors shall intimate in writing to the Employer, as and when the works are complete in all respects in order to take possession of the same. The works shall not be considered as virtually completed, until the Employer has certified in writing that the same have been "Virtually completed" and accepted by the Employer. The defects liability period shall commence, only from the date of such virtual completion certificate.

**26. OTHER PERSONS ENGAGED BY THE EMPLOYER:**

The Employer reserves the right to use the premises and any portions of the site for the execution of any work not included in this contract which he may desire to carry out through other persons, and the contractor is to allow all reasonable facilities for the execution of such work, except by special arrangement with the Employer. Such work shall be carried out in such a manner a 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.

**27. INSURANCE IN RESPECT OF DAMAGE TO PERSONS AND PROPERTY:**

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

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

The contractor shall indemnify the Employer against all claims which may be made against the Employer, by any member of the Public or other party, in respect of anything which may arise in respect of the works or in consequence thereof and shall at his own cost, effect and maintain until one month after the works are taken over by the Employer or three months after the date of completion of the contract with an approved office, a policy of Insurance in the joint names of the Employer and the contractor against such risks and signing of the contract. The contract shall also indemnify the Employer against all claims which may be made upon the Employer whether under the Workmen's compensation act or any other statute in force during the currency of this contract or at common law in respect of any employees of the contractor or of any sub-contractor and shall at his own expense effect and maintain until one month beyond the virtual completion of the contract, with an approved office. A policy of Insurance in the joint names of the Employer and the Contractor against such risks and deposit such policy or policies with the Employer from time to time, during the currency of the contract. In default of the contractor insuring as provided above, the Employer may so insure and may deduct the premiums paid from any money due or which may become due to the contractor.

The contractor shall be responsible for anything which may be excluded from the Insurance Policies above referred to and also for all other damages to any property arising out of and incidental to the negligent or defective carrying out of this contract however, such damage shall be caused.

The Contractor shall also indemnify the Employer in respect of any costs, charges or expenses arising out of any claim or proceedings and also in respect of any Award of or compensation of damages arising therefrom.

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

28. **CONTRACTOR'S ALL RISK POLICY:**

The contractor shall within 7 days from the date of commencement of the work insure the works at his cost and keep them insured until one month after the works are taken over by the Employer or three months after the date of completion whichever is earlier, against loss or damage by fire and usual risks other than fire against which insurers generally provide cover in a CONTRACTOR'S ALL RISK POLICY, with an insurer to be approved the Employer, in the joint names of the Employer and contractor (the name of the former being placed first in the policy), progressively for the full amount of the contract, in three stages, beginning with 1/3 of the contract value, and for any further sum as called upon to do so by the Employer's engineer, with the prior written consent of the Employer, the premium of such further sum being allowed to the contractor as an authorized extra. Such policy shall cover the property of the Employer only and surveyor's fees for assessing the claim and in connection with his services generally in reinstatement and shall not cover any property of the contractor of any subcontractor or employee. The contractor shall deposit the policy and receipts for the premiums paid with the Employer's engineer, within twenty one days of the date of commencement of work, unless otherwise instructed, as provided above failing which the Employer on his behalf may insure and may deduct the premium paid from any money that may be due or that may become due to the contractor. The contractor shall as soon as the claim under the policy is settled, or the work reinstated by the insurers should they elect to do so, proceed with all due diligence with the completion of the works in the same manner as though the fire or other such risk had not occurred and in all respects under the same conditions of contract.

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

Please refer Special Conditions of Contract, clauses.

**29. . MINIMUM AMOUNT OF THIRD-PARTY INSURANCE:**

Such insurance shall be effected with an insurer and in terms approved by the Employer which approval shall not be reasonably withheld and for at least the amount stated below. The contractor shall, whenever required, produce to the Architect/Consultant the policy or policies of insurance cover and receipts for payment of the current premium.

The minimum insurance cover for physical property, injury, and death is Rs. 5.00 lakhs per occurrence with the number of occurrences limited to four. After each occurrence contractor will pay additional premium necessary to make insurance valid for four occurrences always.

**30. COMMENCEMENT AND COMPLETION:**

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

**31. DELAY AND EXTENSION OF TIME:**

If in the opinion of the Employer, the works be delayed:

8. by force majeure, or

9. by reason of any exceptionally inclement weather, or

10. by reason of proceedings taken on threatened by or dispute with adjoining or neighboring owners or public authorities arising otherwise, then through the contractor's own default, or

11. by the works or delays of the contractors or tradesmen engaged or nominated by the Employer and not referred to in the Schedule of Quantities and/or specifications, or

12. by reason of civil, commotion, local combination of workmen or strike or lock-out affecting any of the buildings/traders, or

13. by reason of the Employer's instruction as per clause 2, or

14. In consequence of the contractor not having in due time, necessary instructions from the Employer, for which he shall have specifically applied in writing ahead of time, giving reasonable time to prepare such instructions.

The Employer shall make a fair and reasonable assessment for extension of time, for completion of the contract works which may be approved by the Employer.

In case of such strike or lock-out, the contractor shall as soon as possible, give written notice thereof to the Employer, 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 Employer to proceed with the work.

**32. DAMAGES FOR NON-COMPLETION:**

If the contractor fails to complete the works by the date stated in clause 31 (date of completion) or within any extended time certified under clause 32 (extension of time) and if the Employer shall certify in writing on or before the date of issue of the certificate for the last payment to which the contractor may become entitled hereunder that the works could have been reasonably completed by the said date or within the said extended time, then the contractor shall pay to the Employer or allow the employer to recover from dues to the contractor on any account the sum stated in clause 16 of "Notice to contractors" (liquidated damages and not by way of penalty), subject to a maximum amount of 5% as stated in Appendix of General Conditions of contract and as stated in clause 14 of "Notice to contractors" and such damages may be deducted from any money due or which may become due to the contractor.

The deduction of such sums shall not, however, absolve the contractor of his responsibility and obligations to complete the work in its entirety.

**33. FAILURE BY CONTRACTOR TO COMPLY WITH EMPLOYER'S INSTRUCTIONS:**

If the contractor after receipt of written notice from the Employer requiring compliance with such further drawings and/or instruction, fails within seven days to comply with the same, the Employer may employ and pay 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 contractors by the employer as a debit or may be deducted by him from any money due or which may become due to the contractors.

**34. SUSPENSION OF WORKS:**

If the contractor, except on account of any legal restraint upon the employer preventing the continuance of the works, or on account of any of the causes mentioned in the clause "Extension of time" or in the case of certificate being withheld or not paid when due, shall suspend works, 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 24 (removal of improper work and materials), the Employer have the power to give notice in writing to the contractor required that the works be provided within a reasonable manner, and with reasonable dispatch, such notice shall not be unreasonably given and must signify that it purports to be a notice under the provisions of this clause and must specify the acts or defaults on the part of the contractor upon which it is based. After such notice shall have 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 work, and the Employer shall have lien upon such plants and materials to subsist from date of such notice being given until the notice shall has been complied with, provided always that such line shall not under any circumstances subsist after the expiration of 30 (thirty) day from the date of such notice given, unless the employer shall have entered upon and taken possession of the works and site, as hereinafter provided.

If the contractor shall fail for 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 site, and of all such plants, machinery and materials thereon intended to be used for the works, and the Employer shall retain and hold a lien upon all such plants, machinery and materials until the work 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 times during the progress of the works to inspect, survey and measure the works. Such written appointments or a copy thereof shall be delivered to the Employer before the person appointed

comes on to the works and the Employer shall take such steps as in the opinion of the Employer may be reasonably necessary for completion the works, without undue delay or expenses using for that purpose the plant, machinery and materials above mentioned in so far as they as they are suitable and adopted to such use.

Upon completion of the works, the Employer shall certify the amount of the expenses properly incurred consequent on and incidental to the default of the contractor as aforesaid and in completion the works by other persons.

Should the amount so certified as the expenses properly incurred be less than amount which should have been due to the contractor upon the completion of the works by him, the difference shall be paid to the contractor by the Employer, should the amount of the former exceed the later, the difference shall be paid by the contractor to the Employer. The Employer shall not be liable to make any further payments or compensation to the contractor for or on accounts of the proper use of the plant for the completion of the works under the provisions herein before mentioned other than such payments as is included in the contract.

After the works shall have been so completed by persons other than the contractor, under the provisions herein before contained, the Employer shall give notice to the contractor to remove his plan 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 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 from the sale of the plant in the event of the contractor not removing it after notice.

**35. PRIME/ BASIC COST AND PROVISIONAL SUMS:**

a. Where "Prime/ Basic Cost" (P.C.) prices or provisional sums of money are considered for any goods or works in the specifications or Schedule of quantities or deviations hereof, the same are exclusive of any trade discounts, or allowances, discount for cash, or profit which the contractor may require and or carriage and fixing, loading/unloading, wastages, taxes etc.

b. All goods or work, for which prime cost prices or provisional sums of money are considered may be selected or ordered from any manufacturer's or firms, at the discretion of the Employer. The Employer reserves to himself the right of paying directly for any such goods or work and the Employer may deduct the said prices or sums from the amount of the contract. Should any goods or works for which prime cost prices or provisional sums are considered or portions of same be not required, such prices or sums, together with the profits allowed for such additional amount as the contractor may have allowed for carriage and fixing will be deducted in full from the amount of the contract. Whether the goods be ordered by the contractor or otherwise, the contractor shall at his own cost fix the same, if called upon to do so, and the contractor shall also receive and sign for such goods and be responsible for their safe custody as and from the date of their delivery upon the works.

c. In cases in which provisional quantities of items/materials are contained in the contract, the contractor shall provide such materials and or execute such items to such amounts or to greater or lesser amounts as the Employer shall direct in his schedule of quantities.

d. No prime cost sum or sums (or any portion thereof) shall be included in any certificate for payment to the contractor until the receipted accounts relating to them have been produced by the contractor to the Employer. Such accounts shall show all discounts and any sum or sums in respect of such discounts shall be treated as a trade discount. Provided always, that should the

contractor in lieu of producing such receipted accounts, request the Employer in writing to issue a certificate to the Employer for such sum or sums, due either on account or in settlement to a sub-contractor direct, the Employer shall, upon satisfying himself that the sub-contractor is entitled to the same, so issue the certificate and such sum or sums be deducted from the amount of the contractor, at the settlement of accounts and any profit or sum to which the contractor is properly entitled, in respect of such sub-contract, and which is in conformity with the terms of contract as though the amount of such certificates to the sub-contractor has been included in a certificate drawn in favour of the contractor.

e. If the contractor neither produces the receipt not gives authority to the Employer to issue a certificate in favour of such sub-contractor direct, the Employer may upon giving the contractor SEVEN DAYS NOTICE in writing of his intentions to do so, issue to the sub-contractor such certificate direct to the sub-contractor and obtain a receipt from the sub-contractor, which receipt shall be deemed as a discharge for the amount of such certificates, as though given by the contractor. In such event, the contractor shall not be allowed any profit he may have added in the Schedule of Quantities upon such sub-contract.

f. The exercise of the option before referred to by the Contractor and the issue of certificates, as before described to sub-contractor direct of certificates by the Architect, shall not however, relieve the contractor from any of the liabilities in respect of insufficient, faulty of incomplete work of the sub-contractor for which he may be liable under the terms of the contract.

**36. CERTIFICATES AND PAYMENTS:**

The contractor shall be paid by the Employer after due checking and after making necessary correction from time to time, by instalments under Interim Certificates to be issued by the Employer on account of the works executed by the contractor based on the joint measurements taken by the Employer's representative and the contractors representative when in the opinion of the Employer, work to the approximate value named in the Appendix on Page 10 as "Value of work for Interim Certificates", (or less at the reasonable discretion of the Employer) has be executed in accordance with the Contract, subject however, to a retention of the percentage of such value named in the Appendix hereto mentioned as "Retention Percentage for Interim Certificates", until the total amount retained shall reach the sum named in the appendix as Total Retention Money, after which time the instalments shall be up to the full value of the work subsequently so executed plus such amount as he may consider proper on account of materials delivered upon the site by the contractor for use in the work and available on the date of billing.

And when the works have been virtually completed and the Employer shall have certified in writing that they have been so completed, the contractor shall be paid by the Employer after satisfying himself in accordance with the certificate to be issued by the Architect, the sum of money named in the Appendix as 'Instalment after Virtual Completion' being a part of the said Total Retention Money.

The Contractor shall be entitled to the payment of the final balance (balance security deposit/retention money) in accordance with the final certificate to be issued in writing by the Employer at the expiration of the period referred to as 'The Defects Liquidation Liability period' in appendix , from the date of virtual completion or as soon after the expiration of such period as the work shall have been finally completed and all defects made good according to the true intent and meaning hereof, whichever shall happen, provided always that the issue by the Employer of any Certificate during the progress of the works or after the completion shall not relieve the contractor from his liabilities in cases of fraud, dishonesty or fraudulent concealment relating to the works or materials or any matter dealt within the certificate, and in case of all such defects and insufficiencies in the works or materials, which reasonable examination would have disclosed. No certificate of the Employer shall by itself be conclusive evidence that any works or materials to which it relates are in accordance with the contract.

The Employer shall have power to withhold any Certificate, if the works or any parts thereof are not being carried out to employer's satisfaction. The Employer may by any certificate make any correction in any previous certificate, which shall have been issued by Employer. Payment upon the Employer's certificates shall be made within the period named in the Appendix as 'Period of Honouring of Certificates, after such certificates have been delivered to Employer.

**37. NOTICES:**

Notices for the Employer or the contractor may be served personally or by being left at or sent by registered post to the last known place of abode or business of the party to whom the same is to be given or in the case of the contractor by being left on the works. In case of a company or corporation, notices may be served at or sent by registered post to the Registered Offices 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.

**38. TERMINATION OF CONTRACT BY THE EMPLOYER:**

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

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

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

Or shall assign or sublet this contract without the consent in writing of the Employer first obtained.

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

Or if the Employer shall certify in writing to the contractor,

1. has abandoned the contract or

2. has failed to commence the works, or has without any lawful excuse under these conditions suspended the progress of the works for 7 days, after receiving from the Employer written notice to proceed, or

3. 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

4. has failed to remove materials from the site or to pull down and replace work for 7 days after receiving from the Employer written notice that the said materials or work were condemned and rejected by the Employer under these conditions, or

5. has neglected persistently to observe and perform all or any of the acts, matters or things

by this contract to the observed and performed by the Contractors for 7 days after written notice shall have been given to the contractor requiring the contractor to observe or perform the same, or

6. has to the determent of good workmanship or in defiance of the Employer 's instructions to the contrary, sublet any part of the contract.

Then and in any of the said cases the Employer, may notwithstanding any previous waiver, after giving 7 days' notice in writing to the contractor, determine the contract, but without hereby affecting the powers of the Employer to continue in force as full 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 or by his Agents, or servants may enter upon and take possession of the works and all plants, tools, scaffoldings, sheds, machinery, and other equipment and materials also laying 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 completion 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 not act, matter or thing to prevent or hinder such other contractor or other persons or person employed for completing and finishing or using the materials and plant for the works. When the works shall be completed or soon thereafter as convenient, the Employer 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 7 days, after receipt thereof by him, the Employer shall sell the same by publication and shall give credit to the contractor for the amount realized. The Employer shall thereafter ascertain and certify in writing under his hand when (if anything) what shall be due to or payable by the Employer for the value of the said plant and materials so taken possession of by the Employer, and the expense or loss, which the Employer shall have incurred due 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.

**39. <u>TERMINATION OF CONTRACT BY CONTRACTOR:</u>**

If payment of the amount payable by the Employer is unpaid for 45 (Forty Five) days after notice in writing requiring payment of the amount, as aforesaid shall have been given by the contractor to the Employer, or if the Employer obstructs the issue of any such certificates, or if the employer commits any Act of insolvency, or if the Employer (being an incorporated company) shall have an order made against him or pass an effective Resolution for winding up, either compulsorily or subject to the supervision of the Court or voluntarily, or if the Official Liquidator or the Employer shall repudiate the contract, or if the if the Official Liquidator in any such winding up shall be unable within 15 days' notice to him requiring him to do so, to the reasonable satisfaction of the contractor that he is not able to carry out and fulfill the contract and to give security for the same (including Earnest money), or if the works be stopped for any payments due, and to become due thereunder and if required under the order of the Employer or by an injunction or other order of any court of law, then in any of the said cases, the contractor shall be at liberty to determine the contract by notice in writing to the Employer, and he shall be entitled to recover from the Employer, payment for all works executed and for any losses he may sustain, upon any plant or materials supplied or purchased or prepared for the purpose of the contract.

In arriving at the amount of such payment, the net rates contained in the contract shall be followed, or where the same may not apply, valuation shall be made in accordance with clause 20 thereof.

40. Matters to be finally determined by the Employer (Called excepted matters) – (refer 43(a) below), which shall be final, conclusive and binding on the following matters:

a) Instructions
b) Transactions with local authorities
c) Proof of quality of materials
d) Assigning or under letting of the contract,
e) Certificate as to the causes of delay on the part of the contractor and justifying extension of time or otherwise,
f) Rectification of defects pointed out during the defect's liability period.
g) Notice to the contractor to the effect that he is not proceeding with due diligence.
h) Certificate that the contractor has abandoned the contract.
i) Notice for determination of the contract by the Employer.

**41. <u>ARBITRATION:</u>**

a. When the contractor is dissatisfied with the decision of the Employer, the contractor is required to give a notice to the Employer within 30 days of the receipt of such decision, for the appointment of the Arbitrator for the settlement of the outstanding disputes.

b. SBI Bengaluru shall be appointed to refer those disputes for adjudication to a sole arbitration.

c. It is also a term of the contract that if the contractor does not make any demand for Arbitrator in respect of any claims within 90 days of receiving the intimation from the Employer that the final bill is ready for payment, the claims if any received after 90 days period shall be absolutely barred from reference to the Arbitrator.

d. All disputes or differences of any kind whatsoever, which shall at any time arise between the parties hereto touching or concerning the works or the execution or maintenance thereof this contract, or the rights touching or of this contract, effect thereof, or to the rights or liabilities of the parties arising out of or in relation thereto, whether during progress or after determination, foreclosure or breach of the contract (other than those in respect of which the decision expressed to be final and binding in cases listed out in condition 40 above), the Employer shall, after written notice to either party to the contract and to the appointing Authority, who shall be appointed for this purpose by the employer refer those disputes for adjudication to a sole arbitrator, to be appointed as hereinafter provided.

e. For the purpose of appointing the sole arbitrator referred to above, the Appointing authority will send, within thirty days of receipt by him of the written notice aforesaid, to the contractor a panel of three names of persons, who shall be presently unconnected with the organization for which the work executed.

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

g. If the Appointing Authority fails to send to the contractor the panel of three names as aforesaid within the period specified, the contractor shall send to the appointing authority a panel of three names of persons, who shall be unconnected with either party. The Appointing Authority shall on receipt by him of the names as aforesaid select any one of the persons named and appoint his as the sole arbitrator. If the Appointing Authority fails to select the person and appoint him as

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

h. If the Arbitrator so appointed is unable or unwilling to act or resigns his appointment or vacates his office due to any reasons whatsoever, another sole arbitrator shall be appointed as aforesaid.

i. The work under the contract, shall however, continue during the arbitration proceedings and no payment due or payable to the contractor shall be withheld on account of such proceedings.

j. The arbitrator shall be deemed to have entered on the reference, on the date he issues notice to both the parties, fixing the date of first hearing.

k. The arbitrator may from time to time, with the consent of the parties, enlarge the time for making and publishing the award.

l. The Arbitrator shall give a separate award in respect of each dispute or difference referred to him. The Arbitrator shall decide each dispute in accordance with the terms of the contract and give a reasoned award. The venue of arbitration shall be such a place, as may be fixed by the Arbitrator in his sole discretion.

The fees, if any, of the Arbitrator, if required to be paid before the award is made and published, shall be paid half and half by each of the parties. The costs of the reference and of the award including the fees, if any, of the Arbitrator, who may direct to any by whom and in what manner such costs or any part there of shall be paid and may fix or settle the amount of costs to be so paid.

m. The award of the Arbitrator shall be final and binding on both the parties.

n. Subject to aforesaid, the provisions of the Arbitration and Conciliation Act, 1996, or any statutory modifications or re-enactments thereof, and the rules made thereunder, and for time being in force, shall apply to the arbitration proceedings under this clause.

**42. LOCAL LAWS, ACTS, REGULATIONS**

The contractor should abide by the central labour regulation and also shall strictly adhere to all prevailing labour laws inclusive of contract labour (Regulation and abolition act of 1970) and other safety regulations. The agency shall comply with the provision of all labour legislation including the latest requirements of all the acts, laws, any other regulations that are applicable to the execution of the tests.

1. Minimum wages act, 1948 (Amended)
2. Payment of wages act,1936 (Amended)
3. Workmen's compensation act 1923 (Amended)
4. Contract labour Regulation and Abolition act 1970 and Central rules 1971 (Amended)
5. Chief Labour Commissioner( C) , Ministry of Labour &Employment vide Gazette notification No.F.No.1/13(3)/2017-LS-II dated 20th April 2017 on minimum wages
6. Apprentice act 1961 (Amended)
7. Industrial employment (Standing order) Act 1946 (Amended)
8. Personal injuries (compensation insurance ) Act 1963 and other modifications
9. Employees' Provident Fund and Miscellaneous Provisions Act 1952 and amendment thereof
10. Shop and Establishment Act
11. Employer's Liability Act.
12. Any other Act or enactment thereof and rules framed there under from time to time.

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

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

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

## INDEX TO SPECIAL CONDITIONS OF CONTRACT


1. Inspection of drawings
2. Contractor to visit site
3. Execution of work (Prices to include)
4. Schedule of Quantities
5. a. Quantities liable to alterations
5 b. Filling of tenders
6. Access for inspection
7. Dimensions
8. Program of works
9. Water and Electricity
10. Procurement of materials
11. Facilities to other contractors
12. Testing
13. Site meetings
14. Custody and security of materials
15. Treasure trove
16. Notices
17. Statutory regulations
18. Measurement's to be recorded before work is covered up.
19. Working at night or on holidays.
20. Working on holidays
21. Action where there is no specification
22. Reporting of accident
23. Cleaning the site on completion/determination of work
24. Possession of buildings/work completed
25. Typographic, Clerical and other errors.
26. Information to be supplied by the Contractors.
27. Benchmarks
28. Force Majeure
29. Employer's drawings and instructions

30. Completion of work and liquidated damages
31. Bill of payments
32. Workmanship
33. Schedule of quantities
34. Site Supervision
35. Engagement of Apprentices
36. Rates
37. Income tax
38. Extra items rates
39. Service drawings/shop drawings/catalogue
40. Payment
41. Permission
42. Maintaining Registers at site
43. Agreement
44. Insurance
45. Indebtedness and liens
46. Work performed at contractor's risk
47. Photographs
48. Inspection by the Chief Technical Examiner
49. Special conditions of contract B.I.S. Codes

## SPECIAL CONDITIONS OF CONTRACT

### 1. INSPECTION OF DRAWINGS:

Before filling in the tender, the contractor will have to check up all drawings and Schedule of quantities and will have to get immediate clarifications from the Employer on any point that he feels is vague or uncertain. No claim/damages or compensation will be entertained on this account.

### 2. CONTRACTOR TO VISIT SITE:

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

The existing adjacent buildings belonging to Govt/private which are in close proximity of the proposed Interiors, hence the contractor shall cater for all arrangements to carry out the work without causing any disturbance to the occupants by providing screens with bamboo matting or other suitable material approved by Architects/Engineer. The contractor shall ensure that no dust or construction material falls near/around the existing buildings.

### 3. EXECUTION OF WORK (PRICES TO INCLUDE):

The whole of the work as described in the Contract (including the Schedule of Quantities, the specifications and all drawings pertaining thereto) and as advised by the Employer from time to time is to be carried out and completed in all its parts to the entire satisfaction of the Employer. Any minor details of construction, which may not have been definitely referred to in this contract, but which are usual in sound building, road and all construction practice and essential to the work, are deemed to be included in this contract. Rates quoted in the Tender are inclusive of transportation and other over heads.

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

a) 1. Carrying
2. Hauling
3. Labour
4. Fixing
5. Watering
6. Cleaning
7. Making good and
8. Maintenance etc.

b) The contractor should arrange timely at his cost for all required.

i) Plant, machinery, scaffolding, formwork, ladders, ropes, nails, spikes, shuttering, temporary supports, platforms, tools, all materials etc., required for executing the work, and protecting them from weather and other normal/natural causes.

ii) Covering/protecting for the walling and other works, during inclement weather, strikes etc., as and when necessary and or as directed.

iii) All temporary canvas covers/covering, lights, tarpaulin, barricades, water shoots etc.

iv) All stairs and steps, thresholds and any other requisite protection for the works.

v) All required temporary weather-proof sheds at such places and in a manner approved by the Architect, for the storage and protection of materials, against the effects of sun and rain.

vi) All required temporary fences, lighting/signboards etc., guards, approaches and roads as may be necessary for execution of the contract works and for safeguarding the public.

c) The Employer will be the sole judge in deciding as to the suitability or otherwise of the tools/formwork/machinery or plant that may be brought to the work site by the contractor for the proper execution of the work.

d) The rates quoted by the tenderer in the Schedule of Probable items of work will be deemed to be for the finished work.

**e) The rates quoted shall be exclusive of GST.**

## 4. SCHEDULE OF QUANTITIES:

The Schedule of quantities forms part of the contract, but the Employer reserves the right to modify the same or any part thereof as per variation clause stated herein below. The contractor shall not be allowed any compensation or damages for the work which is so omitted or cancelled or added or substituted by the Employer.

## 5. QUANTITIES LIABLE TO VARY:

This clause applies for unlimited variations (+ or -) for items of foundations and those executed below plinth level. For all other items, only in case where + variations of any item exceeds 100%

of Quantities of respective items given in the schedule of quantities of the contract, such additional quantities of those items shall be treated as extra items and valued as per clause 45 of special conditions of contract, considering of that rates for these items cannot be derived from the contracted items of work.

The quantities indicated in the bill of quantities are only approximate, and hence may vary on either side (+ or -) for accomplishing the works enunciated under the scope of works, in accordance with designs, drawings and specifications and or instructions of the Employer. Variations may also occur, consequent upon addition or deletion or substitution of particular items, change of designs or specifications during the course of execution. The contractor, in either case, is bound to carry out the modified quantities up to +100% (plus one hundred percent) variation, without any enhancement in rates and at the same rates as per accepted original tendered rates.

Please refer clause 4, 5 & 6 of General conditions of contract.

6. **FILLING OF TENDERS:**

The rates and amounts for each tendered item should filled in separate columns provided for in the Schedule of quantities and all the amounts should be totalled up in order to show the aggregate value of the entire tender. All rates shall be filled in both words and figures. These figures and words shall be preceded by 'Rs' and 'Ps' as the case may be, and while filling in words, must end with "Only". Example:

i) Rs.15.25 (Rupees fifteen and paisa twenty-five only)
ii) Rs.20.00 (Rupees twenty only)

The rates quoted in figures should be clearly show the rates in full. While filling rates in words, each line should end in '-', and if continued further, last line for the rate of each item shall end in "Only". All corrections, by the contractor in the tender schedule shall be duly attested by the initials of the tenderer. Corrections which are not attested or overwriting in rates may entail the rejection of the tender.

In case the rate written in figures/words/amount differ, the following procedure shall be followed:

a) When there is a difference between the rates in figures and in words, the rates which correspond to the amounts worked out by the contractor will be taken as correct.

b) When the amount of an item is not worked out by the contractor or it does not correspond with the rate written either in figures or in words, then the rate quoted by the contractors in words shall be taken as correct.

c) When the rates quoted by the contractor in figures and in word tallies, but the amount is not worked out correctly, the rate quoted by the contractor shall be taken as correct and not the amount.

7. **ACCESS OF INSPECTION:**

The contractor is to provide at all times, during the progress of the works and the maintenance period, means of access with ladders, gangways etc., and the necessary attendants to move and adopt the same as directed for the inspection or measurement of the work by the Employer or any other agency employed by the Employer.

8. **DIMENSIONS:**

In all cases figured dimensions are to be accepted in preference to scaled sizes. Large scale details shall take precedence over small scale details/drawings. In case of any discrepancy, the contractor shall ask for a clarification, before proceeding with the work. Accordingly, if any work is executed without prior clarification, it is liable to be rejected and shall not be paid for,

9. **PROGRAMME OF WORKS:**

The contractor on starting the work shall furnish to the Employer a PERT/CPM programme, for carrying out the work stage by stage in the stipulated time, for the approval of the Employer, and follow strictly the approved time schedule by incorporating changes, if any, so authorized by the Employer, to ensure the completion of construction work ins stipulated time. A graph or chart on individual item/group of items/trades of work shall be maintained, showing the progress both in terms of quantities and value, week by week. The contractor shall submit to the Employer weekly progress report stating the number of skilled and unskilled labourers employed on the work, working hours done, quantity of cement, steel and other major items of materials (quantity and value wise) used and corresponding place, type and quantity of work done during the period.

The contractor must inform the Employer, 3 days in advance of requirement of respective drawings and details by him, from time to time. The contractor shall strictly adhere to the approved programme and arrange for the materials and labour etc., accordingly.

Despite repeated instructions, if the contractor fails to show satisfactory progress of the work, the Employer take suitable action as deemed fit, including levying of liquidated damages not exceeding half percentage of contract price for delay of every week or part thereof, subject to a limit of total liquidated damages levied under this clause to 5% of contract price without prejudice to any terms and conditions of the contract.

10. **OFFICES, STORES, SHEDS ETC., ON THE SITE:**

a. The contractor shall provide for all necessary storage on the site, in a specified area for all materials, in such a manner that all such materials, tools etc., shall be duly protected from damages by weather or any other cause. Stores for storage of cement shall have all weatherproof floors, walls and roof and have proper locking arrangements and must be secure. All these must be maintained till the work is completed and so certified by the Employer. Necessary and adequate watch and ward for all such accommodations and stores shall be provided for by the contractor at his cost and same included in the rates/amounts quoted by him. All such stores shall be cleared away and the ground left in good and proper order on completion of this contract unless otherwise expressly mentioned herein.

b. All materials which are stored on the site such as plywood, false ceiling material etc., shall be stacked in such a manner as to facilitate rapid and easy checking of quantities of such materials and prevent deterioration in quality due to water etc.

11. **WATER AND ELECTRICITY:**

Contractor shall make his own and adequate arrangements for water required for drinking and construction purposes and also for required electric supply at site for satisfactory execution and completion of the work, at his own cost. The contractor shall get the water used for construction purpose tested periodically as per relevant BIS codes at his cost and shall get the same approved from Employer before using such water for the work.

12. **PROCUREMENT OF MATERIALS:**

Contractor shall procure all the materials for the work from the open market. Time is the essence of the contract. Acceptance of the completion date by the contractor shall mean that he has taken into consideration the availability of all materials of approved make and quality in sufficient quantities at respective markets/sources, to enable him to complete the entire work in the stipulated period.

Contractor will get samples of all materials approved by the Employer, before placing order/purchase/procurement. They shall conform to relevant B.I.S. codes and or tender specifications as applicable.

For all materials, the contractor shall quote for the best quality of the materials of best make/source or supply and they should be got approved by the Employer, before procurement.

In case sufficient quantities of approved quality materials from approved sources are not available in time, contractor may have to procure the same from neighbouring areas even with longer leads, as required and directed, at no extra cost.

13. **SANITARY ACCOMMODATION IN SITE:**

The contractor shall provide and maintain at his own cost and expense adequate closet and sanitary accommodation for the use of his workmen and others in accordance with the rules and regulations of the relevant local authorities.

14. **FACILITIES TO OTHER CONTRACTORS:**

The contractor shall give full facilities and co-operation to all other contractors working at site doing plumbing, Electrical, civil works etc., as directed by the Employer and shall arrange his programme of work, so as not to hinder the progress of other works. The decision of the Employer, on any point of disputes between the various contractors, shall be final and binding on all parties concerned.

15. **TESTING:**

The contractor shall, as and when directed by the Employer, arrange to test materials and/or portions of the work at site in any approved laboratory at his own cost, in order to provide their soundness and efficiency. The contractor shall transport all the materials from site to the approved laboratory at his own cost. The contractor shall carryout all the mandatory tests as per list attached at the frequencies stated therein. Even after such tests, any materials brought to site or incorporated in the works are found to be defective or unsound or not as per approved samples, the contractor shall remove the same and re-erect at his own cost and without any additional time/period for the same, with reference to the date fixed for completing the work. In case these tests are not carried out at the frequencies stated, then proportionate costs of materials not so tested, including cost of testing and quantities of items of work executed with such materials, if otherwise accepted for retention in the work, will be deducted from the dues to the contractor. The deductions will be worked out by the Employer and shall be final and binding on him.

Tolerance on various material and items of work shall be allowed laid down in the documents below and the order of precedence shall be:

a) Relevant Indian Standards Specifications.
b) CPWD norms.
c) Manufacturer's Specifications.

In absence of above Employer's decision basing on the general practice being following shall be

final.

17. **SITE MEETINGS:**

A senior representative of the contractor shall attend weekly meetings at works site; and in additions, meetings as and when arranged by Employer to discuss the progress of the work and sort out problems, if any, and ensure that the work is completed in the stipulated time.

18. **CUSTODY AND SECURITY OF MATERIALS:**

The contractor shall be responsible for the custody and security of all materials and equipment at site and he will provide full time watchman/watchmen to look after his materials, stores, equipment's etc., including cement and steel at site and ensure that at no time unauthorized persons gains any access at works site.

23. **NOTICES:**

The contractor shall give all notices and pay all necessary and relevant fees and shall comply with all Acts and Regulations, for the successful completion of the contract work.

24. **STATUTORY REGULATIONS:**

The whole of the work is to be complied with, as per the requirements and bylaws of the relevant statutory authorities, including Contract Labour (Regulation and Abolition) Act, 1970 of Central Government.

25. **MEASUREMENT TO BE RECORDED BEFORE WORK IS COVERED UP:**

The contractor shall take joint measurements with the Employer's representative (any Engineer identified by the Employer) before covering up or otherwise placing beyond the reach of measurement any item of work. Should the contractor neglect to do so, the same shall be uncovered at the contractor's expense or in default thereof, no payment or allowance shall be made for such work or the materials with which the same was executed.

26. **WORKING AT NIGHT OR ON HOLIDAYS:**

The contractor can carry out major work at night, only with prior permission of the Site Engineer of Employer and with proper supervision. However, all concrete work will be carried out only during the day light.

**WORKS AT NIGHT:**

If the contractor is required to do preliminary works at night, in order to complete the work within the Time Schedule, the contractor shall provide and maintain at his own cost necessary and sufficient barricades/lights etc., to enable the work to proceed satisfactorily without danger. Approaches to the site also shall be sufficiently lighted by the contractor.

**27 WORKING ON HOLIDAYS:**

No work shall be done on Sunday or other Bank holidays that may be notified by the Employer, without the specific sanction in writing of the Employer or its representatives.

28. **ACTION WHERE THERE IS NO SPECIFICATION:**

In case of any item/class of work, for which there is no specification mentioned (either in part or full), the same will be carried out in accordance with the relevant CPWD specifications (only for the specifications missing in the contract) and if not available even there (either in part or full) in, relevant standards of BIS shall be followed (only for the portions of specifications missing in the contract specifications and CPWD specifications). Indian standard specifications, subject to the approval of the Employer& Employer.

29. **REPORTING OF ACCIDENT TO:**

The contractor shall be responsible for the safety of all persons employed by him on the works and shall report serious accidents to any of them, whenever and wherever occurring on the works, to Employer who shall make every arrangement to render all possible assistance. This shall be without prejudice to the responsibility of the contractor, under the Insurance clause of the General Conditions. Contractor shall take all the precautions as detailed in the safety code attached separately.

30. **CLEARING THE SITE ON COMPLETION/DETERMINATION OF WORKS:**

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

31. **POSSESSION OF BUILDINGS/WORK COMPLETED:**

The contractor shall hand over to the Employer, possession of the completed works in stages, as and when required, and as directed by the Employer.

The Employer will take over the possession of completed works in stages and defects liability period will commence only from the date of final handing over of all the work accordingly.

**32. TYPOGRAPHIC, CLERICAL AND OTHER ERRORS:**

The Employer's clarification regarding partially omitted particulars or typographical, clerical and other errors shall be final and binding on the contractors.

**33. INFORMATION TO BE SUPPLIED BY THE CONTRACTOR:**

The contractor shall furnish to the Employer the following from time to time:

a. Detailed industrial statistics regarding the labour employed by him, etc., every month (within 5th of succeeding month),

b. The Power of Attorney, name and signature of his authorized representative, who will be in charge for the execution of work.

c. The list of technically qualified persons (to be approved by the Employer) employed by him for the execution of the work within 3days from date of start of work,

d. The total quantity and quality of materials used for the works, every month within 5th of succeeding month.

In all these matters the decision of the Employer shall be final and binding.

**34. FORCE MAJEURE:**

Neither party shall be held responsible by the other for breach of any condition of this Agreement, attributable to any "Act of God", Act of State, Strike, lock-out or control or any other reason, beyond the control of the parties and any breach of clauses arising from such Force Majeure conditions as aforesaid shall not be regarded as breach of the provisions of this Agreement.

**35. ARCHITECTURAL DRAWINGS AND INSTRUCTIONS:**

A set of major drawings, along with the contract documents shall be provided to the contractor. If any clarification or further drawings are required by the contractor during or before the start of construction work, the contractor shall inform the Employer sufficiently in advance in writing to provide the same. Working details will be given to the Contractor from time to time, during the progress of work, as and when required. In case, any other drawing/detail is required by the contractor, he will give a minimum of fifteen days' notice to the Employer.

36. **COMPLETION OF WORK AND LIQUIDATED DAMAGES:**

The work shall be completed in 30 days , and reckoned as under: WITHIN ONE DAY AFTER CONFIRMATION or

(a) 3 days from the date of issue of work order.

or

(b) The day on which the contractor receives the possession of the site whichever is later.

or

1. The contractor is asked in writing to take over the possession of the site.

Time is the essence of the Contract. The Contractor shall strictly adhere to the programme/chart agreed to. In case the contractor fails to complete the work as mentioned above, the liquidated damages may be imposed at the rate of 0.5% (half percentage) per each week (or part thereof) of delay, subject to a maximum of 5% of contract amount.

**37 BILLS OF PAYMENTS:**

The minimum value of work for interim payments will be Rs. 10 LAKHS-, as stated in Appendix. The contractor shall submit interim bills, once a month on the basis of joint measurements recorded at site by the contractor and the Employer's representatives. The bill will be certified by the Employer within 15 working days from the date of submission of the bill by the contractor, and the make payment as stated in the Appendix to General Conditions of Contract. All such interim payments shall not be considered as an admission of the due performance of the contract or any part thereof in any respect and shall not preclude the requiring of bad unsound and imperfect or unskilled work to be removed and taken away and reconstructed or re-erected at contractor's cost, all as per Employer's instruction and directions.

38. **WORKMANSHIP:**

Quality of materials and workmanship shall conform strictly to specifications given/stipulated in the tender/contract, and contractor will ensure that the best quality of work will be done to the satisfaction of the Employer, with strict control on the materials, workmanship and supervision.

**39. SCHEDULE OF QUANTITES:**

Quantities mentioned in the Schedule of Quantities, included in the contract, are approximate and are subjected to variations as per actual site conditions & requirements and as directed by the Employer. The work shall be executed and completed accordingly.

**40. SITE SUPERVISION:**

The contractor shall appoint at his own cost competent and adequate number of qualified

Engineers at site, for (1a) joint measurements and preparations of bills. (2b) for testing materials at site and outside laboratory. (c) for concreting and reinforcement work. (d) for other general supervision. Their appointment shall be approved by the Employer. The site engineers shall not be removed from the site without the written consent of the Employer.

41. **ENGAGEMENT OF APPRENTICES:**

The Contractor shall during the currency of the contract, when called upon by the Employer, engage and also ensure engagement by sub-contractors and others employed by the contractor in connection with the works such number of apprentices in the categories mentioned in the act and for such period as may be required by the Employer. The contractor shall train them as required under the Apprentice Act 1961 and the Rules made there under and shall be responsible for all obligations of the Employer under the said Act, including the liability to make payment of apprentices, as required under the said Act.

42. **RATES:**

Contractor shall quote all the rates both in figures and in words and any alterations shall have to be initialled by the contractor. Rates quoted by the contractor for the same item in different schedules shall be same, and in case different rates are quoted, the lowest will be taken as correct and the schedule corrected accordingly. In case of discrepancy between rates given in words and figures or in the amount worked out, the following procedure will be followed:

In case of item rate tender:

The tenderers shall quote their rates for individual items both in words and figures in case of discrepancy between the rates quoted in words and figures the unit rate quoted in words will prevail. If no rate is quoted for a particular item, the contractor shall not be paid for that item when it is executed.

The amount of each item shall be calculated, and the requisite total is given. In case of discrepancy between the unit rate and the total amount calculated from multiplication of unit rate and the quantity the unit rate quoted will govern and the amount will be corrected.

The tenderers should not change the units as specified in the tender. If any unit is changed the tenders would be evaluated as per the original unit and the contractor would be paid accordingly.The tenderer should not change or modify or delete the description of the item. If any discrepancy is observed he should immediately bring to the knowledge of the Employer.

**43. INCOME TAX:**

Income tax shall be deducted at source by the client from the contractor's interim and final bill payments as required by law.

**44. EXTRA/SUBSTITUTED ITEM RATES:**

Such items shall be executed as per directions/instructions of the Engineers of the employer.

The work on extra/substituted items shall be started only after the receipt of written order from the Employer. Rates for additional/extra or substituted (altered) items of work, which are not covered in the contract cannot be derived from the contract item rates either in full or partly, shall be calculated on the basis of actual costs plus 15% for overhead and profit etc., only to the extent not derivable from the contract item rates.

45. **SERVICES DRAWINGS/SHOP DRAWINGS/CATALOGUE:**

After getting approval from the Employer, the contractor shall submit to the concerned local authorities' necessary services drawings showing layouts etc., for getting approval of the schemes. On completion, the contractor shall arrange to get Drainage Completion Certificate and other Certificate necessary for obtaining Building Completion certificate. The contractor shall furnish completion drawings of all services in triplicate, showing the work as actual executed, along with levels. Contractor shall submit for approval 4 copies of shop drawings/ catalogue/ equipment characteristics/ manufacturer's specifications, drawings etc., as and when required and directed by the Employer. Costs of all these are deemed to have been included in the respective item rates quoted by the contractor and nothing extra shall be paid on account of any of these requirement/acts.

46. **PAYMENT:**

No payment whatsoever shall be made by the Employer, if the Contractor abandons the work, due to any site difficulties etc.,

47. **PERMISSION:**

The contractor shall also obtain necessary permission approvals from the relevant authorities shall be obtained by the contractor at no extra cost.

**48. MAINTAINING REGISTERS AT SITE:**

The contractor shall maintain registers for consumption of various specials, testing of materials etc., in the proforma which shall be given by the Employer from time to time.

**iii) AGREEMENT:**

The successful contractor shall be required to enter into an agreement in accordance with the Draft Agreement and Schedule of Conditions etc., within 7 days from the date the contractor is advised by the Employer that his tender has been accepted. The contractor shall pay for all stamps and legal expenses incidental thereto. However, the written acceptance of the tender by the Employer, will constitute as a binding contract between the Employer and contractor, whose tender has been accepted, whether such formal agreement is or is not subsequently executed.

**iv) INSURANCE:**

The contractor shall provide insurance in respect of damage to persons and property and firm insurance as per clause 27 and 28 of General conditions of contract. In addition, he will also insure against riots and civil commotion. The insurance shall also cover third party and all the persons working at site and visitors including contractor's, worker's, and Employer's people, other contractor's workers etc. The contractor shall indemnify the Employer against any claim or compensation or mishaps of whatsoever nature at site during the progress of work.

The contractor shall prove to the Employer from time to time that he has taken out all the insurance policies as required and directed and has paid the necessary premium for keeping the policies valid as per clause 27 & 28 of the General Conditions of Contract.

In case of failure by the contractor or sub-contractor to effect and keep in force the insurance policies, then the client, without being bound to, may pay such premiums as may be necessary and deduct the same from any money due or which may become due to the contractor or recover the same as a debt due from the contractor.

**v) INDEBTEDNESS AND LIENS:**

The contractor agrees to furnish the details to the Employer from time to time, during the progress of the work as requested, verified statement showing the contractor's total outstanding indebtedness in connection with the work covered by the contract. Before final payment is made, the Employer may ask the contractor to furnish the 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-contractor or other 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 indebtedness is paid, or apply the same towards the discharge thereof.

52. **WORK PERFORMED AT CONTRACTOR'S RISK:**

The contractor shall take all precautions necessary and shall be responsible for the safety of the work and shall maintain all lights, guards, signs, barricades, temporary passages or other protection necessary for the purpose. All work shall be done at the contractor's risk and if any loss or damage shall result from fire or from any 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 in Bank's premises or of others without interference with the operation of existing machinery or equipment, if any.

53. **PHOTOGRAPHS:**

The contractor at his own cost shall take photographs of site and individual buildings during the progress of the work as directed by the Employer and submit two copies of each photograph with minimum size 20 cm x 15 cm to the Employer.

**54. INSPECTION BY THE CHIEF TECHNICAL EXAMINERS (VIGILANCE):**

The proposed work covered under this tender, during the progress and/ or after completion, can also be inspected by the Chief Technical Examiner/ Technical Examiner or Officers of the Central Vigilance Commission, Government of India, on behalf of Bank to ascertain that the execution of the work has been done with materials and workmanship all as stipulated in the contract and as directed.

Contractor shall afford all reasonable facilities to the above vigilance staff and also provide them with ladders, tapes, plum bob, level etc., as required and directed and also necessary labourers skilled/unskilled to enable them to complete their inspection/study/technical scrutiny and no extra shall be admissible to the contractor on this account.

55. **SPECIAL CONDITIONS OF CONTRACT:**

In the event of any discrepancy with clauses mentioned anywhere else in the tender with the clauses mentioned within special conditions of contract, the clauses mentioned within the special conditions of contract shall supersede there mentioned elsewhere.

56. **BIS CODES**

It is compulsory for the contractor to keep all the B.I.S. codes mentioned in this tender document at his cost at the site to ensure the proper supervision/quality of work and materials.

57. **AS BUILT DRAWINGS**

The contractor shall prepare and submit a set of as-built drawings, duly certified by the Employer's engineer. The set consists of 2 soft copies and 3 sets of hard copies.

## TECHNICAL SPECIFICATIONS/ INTERNAL ELECTRIFICATION

## CHAPTER 1

**1.0 Scope:**

This specification is intended to cover the requirements of supply, installation, testing and commissioning of electrical wiring installation and other accessories required for its satisfactory operation. This covers the essential requirements or precautions regarding wiring installations for ensuring satisfactory and reliable service.

2.0 Standards:

The Electrical wiring installations and other accessories shall comply with latest IS: 732 - 1989 and National Electrical code – 1985 and to the latest amendments from time to time.

3. Construction

Wall mounted switch boards shall be installed such that the bottom is at a minimum height of 1.35 m above finished floor level wherever applicable, as indicated in the drawing.

Equipment which is on the front of a switch board shall be so arranged that inadvertent personnel contact with live parts is unlikely during the manipulation of switches, changing of fuses or similar operation.

In every case in which switches and fuses are fitted on the same pole, these fuses, shall be so arranged that the fuses are not live when their respective switches are in 'OFF' position.

No fuses other than fuses in instrument circuit shall be fixed on the back or behind a switch board panel or frame.

4. Capacity of circuit:

Lighting Circuits shall not have more than a total of ten points of fans, 5A socket outlets and light points and its total load shall not exceed 800 watts. Lights, fans, and 5A socket outlets can be wired on a single common circuit. If fan circuit is drawn separately, circuit shall not be used more than eight points and load shall not exceed more than 800 watts. In the circuit, the neutral and earth wires can be looped up to 10points. From distribution boards Neutral & Earth wires shall be run for every circuit.The power circuits shall not have more than two outlets per circuit if load to be fed by each outlet is less than 1KW, and if load is more than 2KW, each outlet shall be connected to a separate circuit.

Switches: All switches shall be placed in the live conductor of the circuit and no single pole switch or fuse shall be inserted in the earth or earthed neutral conductor of the circuits. Single pole switches (other than for multiple control) carrying not more than 15amperes may be of the piano flush type and the switch shall be 'ON' When the knob is down.

Lamp holders : Lamp holders for use on brackets and the like shall have not less than 1.3 cm nipple and all those for use with flexible pendant shall be provided with cord grips. All lamp holders shall be provided with shade carriers. Where centre contact Edison screw lamp holders are used, the outer or screw contact shall be connected to the 'middle wire' or the neutral or to the earthed conductor of the circuit.

Lamps: All incandescent lamps, unless otherwise specified shall be hung at a height of not less than 2.5 m above the finished floor level.

Ceiling rose: a). A ceiling rose or any other similar attachment shall not be used on circuit, the voltage of which normally exceeds 250 volts.

A ceiling rose shall not embody fuse terminals as an integral part of it.

Every socket outlet shall be controlled by a switch. The switch controlling the socket shall be on the 'live' side of side line.5 Amps and 15 Amps socket-outlet shall normally be fixed at any convenient place 60 cm above the floor level or near such level as indicated in drawing. 15 Amps socket outlets in kitchen shall be fixed at convenient place 23cm above the working platform. In a room containing a fixed bath or shower, there shall be no socket outlet and there shall be no provision for connecting a portable appliance.

5 Recessed PVC conduit wiring system

a) Making of chase : The chase in the wall shall neatly be made and shall be of suitable dimension to permit the conduit to be fixed in the manner desired by the Engineer-in-charge. In the case of buildings under construction, chases shall be provided in the wall, ceiling, etc. at the time of their construction and shall be filled up neatly after erection of conduit and brought to the original finish of the wall.
b) Fixing of conduit in chase: The conduit shall be fixed by means of staples or by means of saddles not more than 600 mm apart. Fixing of standard bends or elbows shall be avoided as far as practicable and all curves maintained by bending the conduit pipe itself with a long radius which will permit easy drawing-in of conductors. All the threaded joints of rigid steel conduits shall be treated with approved preservative compound to ensure protection against rust.
c) Inspection boxes : To permit periodical inspection and to facilitate replacement of wires, suitable inspection boxes shall be provided at convenient locations. They shall be mounted in flush with the wall. The minimum size of inspection boxes shall be 75 x 75 mm. Suitable ventilating holes shall be provided in the inspection box covers.
d) Types of accessories to be used: All outlets, such as switches and sockets, may be either of flush mounting type or of surface mounting type.

The switches and other outlets shall be mounted on such boxes. The metal box shall be efficiently earthed with the earth continuity wire run along the conduit.

When crossing through expansion joints in buildings, the conduit sections across the joint may be through flexible copper bellows of the same size as PVC conduit. The Number of wires that can be drawn through a conduit shall be strictly as per IS 732 and as mentioned in Drawings.

6. TESTING OF WIRING:

The following tests shall be carried out on all types of wiring on completion of the work and before energizing the installation:

i) Insulation resistance test,

ii) Electrical continuity test,

iii) Earth continuity test,

iv) Earth electrode resistance test,

v) Switch polarity test.

i) Insulation Resistance test:
The insulation resistance shall be measured by using 500 v megger between the following points.

Phase and neutral conductor with all fuses in position and all switches in closed condition and main switch in OFF position with lamps and other devices removed.

Between earth and whole system of conductors with all fuses in place, all switches closed and all lamps in position.

Between all conductors connected to one phase of the supply of the above tests shall not be less than 50 divided by the number of points on the circuit. Where a whole installation is being tested, a lower value than that given by the above formula is acceptable subject to a minimum of one mega ohm.

The insulation resistance in mega ohm as obtained by each of the above tests shall not be less than 50 divided by the number of points on the circuit. Where a whole installation is being tested, a lower value than that given by the above formula is acceptable subject to a minimum of one mega ohm.

(ii) Electrical continuity test:

Each and every circuit shall be tested for electrical continuity by using a multimeter.

(iii) Earth continuity test:

The earth continuity conductor including metal conduit shall be tested for electrical continuity and the resistance of the same along with the ear thing lead measured from the connection with the earth electrode to any point in the earth continuity conductor in the complete installation shall not exceed one ohm.

iv) Earth electrode resistance test:

The earth electrode resistance shall be tested as specified in section

(v).Switch polarity test:
Test shall be made to verify that all switches in every circuit have been fitted in the same conductor throughout and such conductor shall be marked for connection to the phase conductor.

8 Distribution Boards:

All the distribution boards shall be with MCBs as described in the respective schedule.

The distribution boards shall be controlled by a switch fuse, miniature circuit beaker or an isolator as described in the respective schedule. Each outgoing circuit shall be provided either with MCB or a fuse on the phase. The neutral shall be connected to a common link and be capable of being disconnected individually for testing purposes.
The distribution boards shall be located as indicated in the respective electrical working drawings and as directed by Engineer - in - charge. The distribution boards shall be fixed on wall in the niche provided and marked with the details of circuits, source of supply, size of incoming wires Etc.,

All marking shall be clear and legible.

The total load of the consuming devices shall be evenly distributed between the numbers of ways of distribution board.

The consuming devices circuit shall be connected to distribution board in proper sequence, so as to avoid unnecessary crossing of wires.

Cables shall be connected to a terminal only by crimped lugs.

Cables shall be rigidly fixed in such a manner that a clearance of at least 2.5cm is maintained between conductors of opposite polarity or phase and between the conductors and any material other than insulating material.

The incoming and outgoing cables shall be neatly bunched.

9. MOUNTING HEIGHTS:

The Mounting heights of various fixtures shall be as specified in the Drawings.
10. **Flexible conduits are strictly not envisaged, only industrial type GI Bind flexible conduit shall be used in a spot where the conduits and bends cannot be possible to run.**

## CHAPTER 2
## EARTHING

1.0 **SCOPE:**

This specification is intended to cover the requirements of supply, installation, testing and commissioning of
a) Pipe earthing
b) Plate earthing
c) Strip earthing

2.0 **STANDARDS:**

Earthing installations shall conform to the Indian Electricity Rules - 1956, as amended from time to time and IS 3043-1989 “code of practice for earthing", with latest amendments.

3.0 Earth **electrode arrangement**:

3.1 Pipe electrode:
3.1.1 Electrode shall be made of CI pipe having a clean surface and not covered with paint, enamel or poorly conducting material. Galvanized pipe shall not be smaller than 100 mm ID. Earthing with pipe electrode shall be done as per the details indicated in IS : 3043/87 .

3.1.2 Electrodes shall be embedded below permanent moisture level.
3.1.3 The length of pipe electrodes shall not be less than 2.5 m. if rock is encountered, pipes shall be driven to a depth of not less than 2.5 m with suitable inclination. Pipe shall be in one piece and deeply driven.
3.1.4 To reduce the depth of burial of an electrode without increasing the resistance, a number of rods or pipes may have to be connected together in parallel. The distance between two electrodes in such a case shall not be less than twice the length of the electrode. The earthing lead shall be connected by means of a through bolt, nuts and washers and cable socket.
3.2 Plate **electrode**:

For plate electrodes, minimum dimensions of the electrode shall be as under.

3.2.1 GI plate electrode: 600 x 600 x 6 mm thick.

3.2.2 Copper plate electrode: 600 x 600 x 3.15 mm thick

3.2.3 The electrode shall be buried in ground, with its faces vertical and top not less than 2.5 M from the surface of the ground.

3.2.4 Earthing using plate electrode shall be done as per details, indicated in drawing.

3.2.5 Plate electrodes shall have a galvanized iron water pipe, buried vertically and adjacent to the electrode. One end of pipe shall be at least 5 cm above the surface of the ground and need not be more than 10 cm. The internal diameter of the pipe shall be at least 19 mm. The length of pipe under the earth's surface shall be such that it shall be able to reach the center of the plate. The earthing lead shall be securely bolted the plate with two bolts, nuts, check nuts and washers.

3.3. **Strip or conductor electrodes**:
3.3.1. Strip electrode shall not be smaller than 25 x 1.6 mm, if of copper and 25 x 3 mm, if of galvanized iron and steel. If round conductors are used as earth electrodes, their cross sectional area shall not be smaller than 3 sq.mm , if of copper and 6 sq.mm. If galvanized iron and steel.

3.3.2. Conductor shall be buried in trenches not less than 0.5 m deep.

4.0 General:
i) All materials used for connecting the earth lead with electrode shall be of GI in case of GI pipe and GI plate electrodes, and of tinned brass in case of copper plate electrode. The earthing lead shall be securely connected at the other end to the main board.

ii) The earthing lead from electrode onwards shall be suitably protected against mechanical injury by routing the earth wire / strip through a suitable size of GI pipe.

iii) All medium voltage equipments shall be earthed by two separate and distinct connections with the earth. In the case of high and extra high voltages, the neutral points shall be earthed by not less than two separate and distinct connections with the earth, each having its own electrode at the generating station or substation.

iv) All materials, fittings etc. used in earthing shall conform to Indian standard specifications wherever they exist. In the case of materials for which Indian standard specifications do not exist, such materials shall be approved by the Engineer-in-Charge.

v) The earth electrode shall be kept free from paint, enamel and grease.

vi) It shall be ensured that similar materials for respective earth electrodes and earth conductors are used.

vii) Earth electrode shall not be installed in proximity to a metal fence.

viii) Copper/GI strip shall be connected to the respective earth electrodes, either by brazing or welding respectively. The Copper/GI strip shall be jointed only either by brazing or by riveting at the end of over lapping portions. The over lap shall
Not be less than 50 mm.

ix) Earthing clamps used for supporting earth strips shall be made of such materials so as to avoid bimetallic action between strip and clamps.

5.0 **Testing:** The earth resistance of each electrode shall be measured by using a reliable and calibrated earth megger and the value shall be as per IS/IE rules.

**LED Fixture:-**

2’x2’LED Recess /Surface Fixtures
Frame/Body :-Mandatory back Lit body only, Fixture should be powder coated metal body which supports better heat transparent except plastic, Fixture should have diffuser sheet to avoid glare and efficiency of the diffuse sheet should be more than 70% ,Fixture should have proper hanging accessories for installations, LED: LM 80 Certified LED's , expected lifetime of the LED's Should be above 50000 + Burning hours, Per watt Lumen output of the LED should be more than 120Lumens, Dispersion angle should be of 120 deg, Approved make of LED's are Osram/Cree/Nichia/Bridgelux/Everlite/Edison and Lumiled or equivalent .

Electronic Driver: Electronic driver should comply with the below specifications, Approved Driver Makes Philips/Fulham/Meanwell/BAG/Osram or any Equivalent BIS Approved driver, BIS Approval is mandatory for Drivers, I/p operating Voltage 180-260 V, Efficiency >85%, Driver components life should be above 30000 hours, Surge protection >3Kv, Frequency 50Hz, Over voltage protection up to 320VAC, Power factor >.90, THD <20%, Should adhere to Clauses of IEC 62384, IEC 61347-2-13, IEC 61547

Light Performance: Wattage range 35-40W Complete light should give min 250Lux on the table from height of 2.20 meter, Suggest to use low power LED to Avoid glare, Secondary optics should not be used for the light distribution, LED should not over drive above specified current levels, After 24 months usage LED lumen Degradation should be less than 5%,Warranty should be of 24 months from the date of supply and Installations, Supplier need to provide necessary accessories for installation, Proper packing should be provided

DOWN LIGHTERS:-
A. 15w Fixture: Mandatory back Lit body only, Fixture should be powder coated Aluminum body which supports better heat transparent , Fixture should have diffuser sheet to avoid glare and efficiency of the diffuser sheet should be more than 70%, LED: LM 80 Certified LED's , expected lifetime of the LED's Should be above 50000 + Burning hours, Per watt Lumen output of the LED should be more than 120Lumens, Dispersion angle should be of 120 deg, Approved make of LED's are Osram/Cree/Nichia/Bridgelux/Everlite/Edison and Lumiled or equiv.

Electronic Driver: Electronic driver should comply with the below specifications, Approved Driver Makes Philips/Fulham/Meanwell/BAG/Osram or any Equivalent BIS Approved driver, BIS Approval is mandatory for Drivers, I/p operating Voltage 180-260 V, Efficiency >85%, Driver components life should be above 30000 hours, Surge protection >3Kv, Frequency 50Hz, Over voltage protection upto 320VAC, Power factor >.90, THD <20%, Should adhere to Clauses of IEC 62384, IEC 61347-2-13, IEC 61547
Light Performance: Wattage range 15W Complete light should give min 150Lux on the table from height of 2.20 meter Suggested to use low power LED to Avoid glare, Secondary optics should not be used for the light distribution, LED, should not over drive above specified current levels, After 24 months usage LED lumen Degradation should be less than 5%,Warranty should be of 24 months from the date of supply and Installations, Supplier need to provide necessary accessories for installation, Proper packing should be provided.

B. 5-7w Fixtures:- ----do--- as above only light performances will be proportionately change.

**SAFETY CODE**

Suitable scaffolds should be provided for workman for all the works that cannot safely be done from the ground or from solid construction, except in cases of short duration works, which can be done safely from ladders. When a ladder is used, an extra mazdoor shall be engaged for holding the ladder and if the ladder is used for carrying materials as well, it shall be of rigid construction made either of good quality wood or steel. The steps shall have a minimum width of 450mm and a maximum rise of 300mm. Suitable foot and hand hold of good quality wood or steel shall be provided, and the ladder shall be given an inclination not steeper than 1 in 4 (1 horizontal to 4 vertical).

Adequate precautions shall be taken to prevent danger from electrical equipment. At the work site, no materials shall be so stacked or placed as to cause danger or inconvenience to any person or the public. The contractor shall also provide all necessary fencing and lights to protect the public from accident, and shall be bound to bear the expenses of defense of every suit, action or other proceedings at law that may be brought by any person for injury sustained owing to neglect of the above precautions and to pay damages and costs, which may be awarded in such suit, action or proceedings to any such persons or which may with the consent of the contractor be paid to compromise any claim by any such person.

**Demolition:**

Before any demolition work is commenced and also during the progress of the work.

a. All roads and open areas adjacent to the work site shall either be closed or suitably protected.

b. No electric cable or apparatus which is liable to be a source of danger over a cable or apparatus used by the operator shall remain electrically charged.

c. All practical steps shall be taken to prevent danger to persons employed, from the risk of fire or explosion or flooding. No floor, roof or other part of the building shall be so over-loaded with debris or materials, so as to render it unsafe.

All necessary personal safety equipment as considered adequate by the Employer's engineer hould be kept available for the use of the persons employed on the site and maintained in a condition suitable for immediate use and the contractor should take adequate steps to ensure proper use of equipment by the concerned.

a. Workers employed in mixing asphaltic materials, cement and lime mortars shall be provided with protective footwear and protective gloves.

b. Those engaged in white washing and mixing or stacking of cement bags or any materials which are injurious to the eyes shall be provided with protective goggles.

c. Those engaged in welding works shall be provided with welder's protective (eye) shields.

d. Stone breakers shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.

e. The contractor shall not employ men below the age of 18 years and women on the work of painting with products containing lead in any form. Wherever men above the age of 18 years are employed on the work of lead painting, all precautions should be taken.

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

g. Overalls shall be supplied by the contractors to the workers and adequate facilities for washing shall be provided to the working painters during and on cessation of work.

h. When the work is done near any place, where there is risk of drowning, all necessary equipment should be provided and kept ready for use and all necessary steps taken for prompt rescue of any person in danger and adequate provisions should be made for prompt first aid treatment of all injuries likely to be sustained during the course of the work.

i. Use of hoisting machine and shackle including their attachments, in charge and supports shall conform to the following standards or conditions.

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

k. These shall be of good mechanical construction, sound material and adequate strength and free from any patent defects and shall be kept in good working order.

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

Every crane driver or hoisting appliance operator shall be properly qualified and no person under the age of 21 years should be in charge of any hoisting machine including any scaffolding or give signals to the operator.

In case of every hoisting machine and of every chain, ring hook, shackle swivel and pulley block used in hoisting or lowering or as means of suspension, the safe working load shall be ascertained by adequate means. Every hoisting machine and all gear referred to above shall be plainly marked with the safe working load. In case of a hoisting machine having a variable safe working load, each safe working load and the condition under which it is applicable shall be clearly indicated. No part of any machine or any gear referred above in this paragraph shall be loaded beyond the safe working load except for the purpose of testing.

In case of departmental machines, the safe working load shall be notified by the clients. As regards contractor's machines the contractor shall notify the safe working load of the machines to the consultants, whenever he brings any machinery to site of work and get it verified by the consultants.

Motors, gearing, transmission, electric wiring and other dangerous parts of hoisting appliances should be provided with efficient safeguards. Hoisting appliances should be provided with such means as will reduce and minimize the risk of accidental descent of loads. Adequate precautions should be taken to reduce to the minimum risks of any part of a suspended load becoming accidentally displaced. Sleeves and boots as may be necessary should be provided, whenever workers are employed on electrical installations. The workers should not wear any rings, watches and carry keys or other materials, which are good conductors of electricity.

All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in safe condition. No scaffold, ladder, or equipment shall be altered or removed while it is in use. Adequate washing facilities should be provided at or near place of work.

To ensure effective enforcement of the rules and regulations relating to safety precautions, the arrangements made by the contractor shall be open to inspection by the Employer's engineer.

These safety provisions should be brought to the notice of all concerned by display of a notice board at a prominent place of the work spot. The person, responsible for compliance of the safety

code, shall be named therein by the contractor.

Notwithstanding the above clauses for (i) to (xiv), there is nothing in these to exempt the contractor from the operation of any other Act or Rules in force in the Republic of India.

**LABOUR LAWS AND RULES :-**The Site Engineer shall ensure that the contractor maintains relevant records and fulfils all conditions and requirements in accordance with

a. The payment of Wages Act

b. Employer's Liability Act

c. Workmen's Compensation Act

d. Contract Labour (Regulations & Abolition) Act 1970 and Central Rules 1971.

e. Apprentices Act 1961.

f. Any other Act or enactment relating thereto, and rules framed thereunder from time to time.

The Site Engineer shall refrain from involving himself and the supervisors under him by comments/advice/attempts at mediation in any kind of labour dispute at site. His job is only to report to his superiors any happenings of this sort in an objective manner.

**EMPLOYER'S RESPONSIBILITY – CONTRACT LABOUR (REGULATIONS AND ABOLITION) ACT 1970 AND RULES 1971**

With a view to ensuring that the provisions of the Act are not contravened, the Site Engineer should give particular attention to the following points and see that all the provisions of the Act are enforced:

1. Principal Employer (State Bank of India) is registered as per the Act.

2. Contractor holds a license under the Act from the Local Labour Commissioner for the appointment of contract labour.

3. Required notice boards, registers and records as provided in section 29 of the Act are maintained by the contractor.

4. Payment of proper wages as per the rules are effected within the prescribed time limits by the contractor.

5. Prescribed facilities and amenities are provided by the contractor.

6. Proper efforts are made by the contractor to set right contravention of law, as soon as the notice pointing out the same is received from the Labour Enforcement Officer, and reports "on action taken" are sent to the Labour Enforcement officer at the earliest with copies to the Employer.

**BRIEF PROCEDURE ON ONLINE REVERSE AUCTION (IF APPLICABLE ONLY) :**

A) Download the tender document from our Web site www.sbi.co.in under procurement
B) Submit EMD and Tender cost physically at our office, (at the address mentioned above).
C) Submit technical documents in online website: **https://etender.sbi**
D) The Technical Bids will be opened first. After evaluation of technical Bids, verification of technical

details, the qualified vendors list will be finalized. Only the technically qualified vendors will be allowed to participate in next stages of tendering.

E) Online e-reverse auction will be conducted from the technically qualified vendors. The date and time of the e-reverse auction will be communicated to only qualified vendors. The indicative price bids will be obtained before the e-reverse auction

**F) The start price, decrement values will be announced before the reverse auction.**

**LIST OF APPROVED MANUFACTURERS OF MATERIALS TO BE USED IN THE ELECTRICAL WORKS SUBJECT TO THE APPROVAL OF SAMPLES BY THE CONSULTANT/ ENGINEER**

| S.No. | Material Name. | Brand / Manufacturer / Recommended Make. |
|---|---|---|
| 1. | Switches/Sockets | MDS (Mosaic)MK India (wrap around)/ Anchor Roma/ Woods / Schneider- Clipsal./ Crabtree/Wipro (North west)/ GM Four- Five/ HPL, Kolorsetc |
| 2. | Copper Conductor wires | Finolex /Anchor/RR Cable/Havel's/ Power flex/ Poly Cab/ HPL/ KEI/ V- Guard/ Lapp |
| 3. | PVC conduits, Casing , Caping& Accessories /Bends / JN Boxes etc | VIP/Precision / Sudhakar/ Avon plast/ FINOLEX/Universal- Mocoplast for UPVC ranges wit BIS/IS standards-9537/part-III |
| 4. | MS Conduits | AKG/BEC/Vimco |
| 5. | Metal clad Sockets | MDS /L&T- Hager /Merlin gerin /BCH |
| 6. | MCBs /MCB Distribution boards | ABB/Siemens/ Legrand- MDS/ Schneider /L&T/ Hager /Indo Asian (OPTI -PRO)/HPL/Havells |
| 7. | MCCBs/Switchgear | GE Power /Merlin Gerin(Compact) /L&T/ Indo Asian (OPTI-PRO)/ ABB/MDS / Schneider/ Legrand/ Siemens/Havells |
| 8. | Underground Cables | CCI /Nicco /Havells/ Universal/ Poly Cab/ V-Guard/Finolex/HCL |
| 9. | Cable Glands | HMI /Comet/ Cosmos/Dowells (Biller India)/ Hax Brass (Copper Alloy India) |
| 10. | Capacitor Bank | Epcos /Neptune/ Tibcon/Siemens/ABB/Meher |
| 11. | Cable Lugs | Dowell's / 3D |
| 12. | MV Panels (PCCs) | Original Manufacturers or Fabricated PCC with technical Spec with CPRI Test Certificate. |
| 13. | ELRs/CBCT | Prokdvs /Nagoba |
| 14. | Measuring Instruments | Conzerv/ CMS/ El measure/IME/ L&T/ Nippen/ Schneider Electric |
| 15. | Selector Switches | Vaishno / Salzer / Kaycee |
| 16. | Indication Lamps LED (protected type) | Schneider / Vaishno / Binay |
| 17. | Resign cast CTs | AE / Kappa |
| 18. | Telephone Wires | Lapp / Delton / Poly cab/ Finolex/Anchor |

| | | |
|---|---|---|
| 19. | Light Fixtures (LED) | Philips / Bajaj/ GE/ Havells/ CG/ Wipro complying with the Specification mentioned in page 63/67 |
| 20. | Ceiling Fans, Wall mounted fans & Exhaust Fans | Havells/Bajaj/ CG/Usha or equivalents |

**NOTE:**
**The contractor shall use only above-mentioned material, however, Employer willFinalizethe make on submission of samples from approved brand by the L1Vendor.**
**All other materials shall confirm to the specifications laid down.**
**The tenderer shall take this into account while tendering rates / prices.**