

**TENDER FOR ELECTRICAL,VOICE & DATA CABLING WORKS OF BANK OF INDIA
VIDYUTNAGAR BRANCH AT VADODARA**

ISSUED TO :
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.....
.....

CLIENT :

Zonal Manager
Bank of India
Zonal Office,
Vadodara Zone,
Ellorapark, VADODARA– 390023

ARCHITECT :

Shyamal Gandhi & Associates
21,Virnagar society
Nr. Gyatri hospital, Kiranpark,
Ahmedabad - 380 013
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TENDER DOCUMENT ISSUING LETTER

LETTER ISSUING TENDER DOCUMENT FOR ELECTRICAL VOICE & DATA CABLING WORKS for the BANK OF INDIA, VIDYUTNAGAR BRANCH AT VADODARA

This tender document set for the above work A containing One Volume, totaling 1 to 48 pages in Tender and drawings are issued.

Name of Tenderer :

Address of Tenderer

The Nonrefundable fee for this set of Tender Document is [Rs.300/-](#)

The Tender Document is issued on

For

BANK OF INDIA

LETTER SUBMITTING TENDER

To,
The Zonal Manager,
Bank of India
Zonal office,
Ellorapark,
VADODARA

Dear Sir.

With reference to the tender invited by you for the work.

I/ We hereby offer to execute the work under contract at the respective rates mentioned in the schedule of quantities.

I/ We have seen the site, understood the general conditions of contract, special conditions, additional conditions.

I/ We agree to execute the work as per specifications, general conditions of contract, special conditions and additional conditions.

I/ We deposit earnest money Rs.3000/ by demand draft/ pay order which amount shall not carry any interest. I/we do hereby agree that the sum shall be forfeited by the bank in event our tender is accepted & I/We fail to execute the contract when required to do so.

I /we understand that you are not bound to accept the lowest or any other tender that you received.

Yours faithfully,

(Contractor)

Signature of partner/prop. Of the firm.

In the presence of our banker

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Invitation of tender

MEMORANDUM OF WORK

BANK OF INDIA invites item rates sealed tenders from the interested contractors for the work mentioned below.

1.	Name of work	Electrification, Voice & Data cabling works for B.O.I VIDYUTNAGAR BRANCH AT VADODARA .
2.	Registration and minimum eligibility Criteria	(i) Contractors registered with BANK OF INDIA OR having experience in such type of works. with sound technical & financial capacity The authentic certificates / testimonials in support of minimum eligibility criteria shall have to be enclosed with the tender documents failing which the tender shall be rejected out right.
3	Tender fee	The blank tender forms can be obtained from the Office of the Zonal Manager, Bank of India Building, Third floor, Zonal office, VADODARA between 3.00 PM to 5.00 PM from 05/03/2010 to 14/03/2010 on payment of Rs. 300/- (Rs. Three Hundred Only) in cash or by pay order/ Demand Draft payable at Ahmedabad, non refundable, in favor of M/s. Shyamal Gandhi & Associates Ahmedabad or can be down loaded from Bank's web site www.bankofindia.com and said payment can be made along with tender submission
3.	Time Limit	30 Days
4.	Estimated Cost put to tender	1 month
5.	Earnest Money Deposit	Rs.3000 /- to be submitted in the form of D.D. in favour of Bank Of India, VADODARA (D.D to be enclosed with the tender with technical bid)
6.	Tender documents to be downloaded from B.O.I. website http://bankofindia.com	From Dt 05/03/2010 to 14/03/2010
7.	Last date of receiving tenders.	15/03/2010 up to 14.00 Hrs. Tenders received after this date and time will not be entertained under any circumstances.
8.	Date of Opening of Tender	Technical Bid on Dt. 15/03/2010 at 16.00 Hrs. Price Bid The date will be informed later to qualified contractor
9.	Mode of sending the Tender Documents in duplicate. i.e. two sets	By RPAD or Speed Post or courier or by hand delivery addressed to. THE ZONAL MANAGER BANK OF INDIA ZONAL office, ELLORAPARK VADODARA,

Conditional tenders will not be accepted. BANK OF INDIA reserves the right to reject any or all the tenders without assigning any reasons thereof.

Information to Tenderer

Name of Work: Electrification, Voice & Data cabling works for B.O.I VIDYUTNAGAR BRANCH AT VADODARA

1. Type of work : Electrification, Voice & Data cabling works of B.O.I VIDYUTNAGAR BRANCH at Vadodara
2. Earnest Money Deposit : **Rs.3000 /-** to be submitted in the form of D.D. in favour of Bank of India, VADODARA valid for 180 days
3. (A) Security Deposit : Total 10 % of tender amount as S.D. Initially 2 % to be given after the work is awarded and rest 8 % to be recovered from running bills.
4. Mode of sending the tenders in duplicate. : By registered or hand delivery in tender box
In sealed cover by R P A D/ Speed post / courier or hand delivery only. : In sealed envelope super scribed the name of work.
5. Tender validity period : 90 days
6. Time of completion : 30 Days.(Work shall be taken up on hand immediately after the date of issue of work order)
7. Retention Money : 8 % of tender amount.
8. Defect liability period : 12 months after issue of completion certificate. retention money shall be released after completion of defect liability period.
9. Compensation for delay : 1% of tender amount per week but not exceeding 10 % of total contract value, there after client may arrange to get the work done through some other agency.
10. Last date of receipt of tender by RPAD /speed post /courier : As mentioned in tender notice.
11. Place of receiving Tender Copies : THE ZONAL MANAGER
BANK OF INDIA
ZONAL OFFICE,
ELLORAPARK,
VADODARA,
12. Minimum value of work for interim bills : Nil
13. Insurance: : Workers insurance
Contractor's risk policy

1. The bank will not be bound to accept the lowest tender what so ever. and reserves the right to accept or reject any or all the tenders without assigning any reason
2. The Bank of India, reserves the right that without assigning any reason there of :
 - (a) To accept or reject any tender in whole or in part.
 - (b) To increase or decrease the quantities of any item and tendered has to execute the same at the rate quoted.
3. Tenderer are requested to read the tender documents, general conditions, special conditions, drawing, specifications, schedule of quantities, etc. carefully and offer most competitive rate after visiting site. The clause of notice Inviting tender prevails over general terms and special terms of contract.
4. The date of completion of job is the essence to this contract. The contractors are therefore requested to complete the job in the stipulated time. Any deviation with respect to time or specification bank prejudice has right to
 - (a) Cancel / Revoke the order.
 - (b) Impose penalty up to 10 % of the total value of job.
5. Contractor in their own interest are advised to visit the site & get themselves familiarize in the prevailing situations before submitting their rates. No claim whatsoever for ignorance, misunderstanding shall be entertained later.
6. The work is to be done on ground floor hence contractor has to so plan that minimum damage to the building. He has to work during the day & night also.
7. The contractor shall be responsible for making good in expeditions & workman like manner. Any defects, which may be found with in twelve months of the handing over the premises or premises, put to beneficial use. In case contractor fails to do so, the same would be got done at his cost & risk. The cost incurred by the bank shall be deducted from the retention money or any other dues.
8. Rates quoted shall be inclusive of all taxes, levies, duties & all charges such as freight, insurance, octroi, loading/unloading, unpacking & moving the position in site, etc. for complete item.
9. The schedule of quantities is only approximate & all the work executed shall be paid for in accordance with the actual measurements as per relevant part of IS: 1200 :1974 or otherwise provided.
10. In case of any dispute, the same shall be referred to court at VADODARA and its decision shall be final & binding on both the parties.
11. An item rate tender containing percentage below / above will be summarily rejected. However if the tender voluntarily offers rebate for payment with in stipulated period, this may be considered.
12. The tender documents shall be duly filled in and signed by the tenderer and shall be addressed (in sealed cover) to the office of The Zonal Manager, Bank of India, Ellorapark, VADODARA.
The full name and address of the tenderer and name of the work shall be written on the cover.
13. Unit rates shall be quoted in english in figures as well as in words with reference to each item and for all items shown in the attached schedule of quantities. The amount of each item should be worked out.
14. All entries in the documents shall be clearly written and shall be in ink, corrections if any shall be clearly made any duly signed and dated by the tenderer, erasing and over writings and shall not be permitted and the tender liable for rejection.

15. The tender shall sign and every page of the tender documents including the layout drawings attached here to.
15. Each tender shall be signed by the tenderer with his usual signatures. Tender by partnership of Hindu joint family firm may be signed in the firm's name by one of the partners of the Karta or Manager as the case may be or any other duly authorized representative followed by the name and designation of the person so signing. An attested copy of the partnership firm shall also be attached.. Tender by a shall be signed with the name of the company by persons authorized in this behalf and power of attorney or other satisfactory proof showing the person signing the tender as the authorized person to do such documents on behalf of the company is duly authorized to do so shall accompany the tender.
17. Unless otherwise specified all the rates and prices in the tender shall cover sales taxes, octroi, other taxes and duties, and transportation, sales tax on work contract etc.
18. Tender not containing the full particulars as mentioned above or as called for in the special conditions is liable to summarily rejection.
19. With their quotations the tenderer shall sign all the schedules specifications, special conditions, etc. in taken of acceptance here of. The signature on the tender schedule alone shall also be deemed to be taken as acceptance of all these.
20. The unsealed tenders, tenders not super scribed as the prescribed tender documents, conditional and unsigned tenders, tenders containing absurd rates and amounts, tenders that are incomplete or otherwise considered defective are liable to be rejected.
21. In the event, there are two more parties between whom the work has been split, the contractor carrying out relevant work entrusted to him shall work in close coordination without causing any delay or hindrance to other agencies. Employer has the right to omit at his discretion one or more items of work when placing the order.
22. The work shall be deemed to have commenced from the date on which the contractor takes over the site or issue of work orders whichever is earlier. The site will be handed over to the contractor only on submission of initial security deposit.
23. The contractor shall give a program for the execution of the work during the total contract period and get it approved by the employer and the Architect. In case of delay in progress of work at any stage, the employer shall issue the contractor a memo in writing pointing out the delay in progress and asking the contractor to explain the causes for the delay within 3 days of receipt of the above. The employer reserves the right to determinate the contract and forfeit the security deposit if satisfactory explanation is not offered by the contractor for delay in execution of work.
24. It will be obligatory on the part of the tenderer to sign on each & every page of the tender & all components of the tender. Conditional tender shall be summarily rejected.
25. The samples of all the material & work item shall be got approved from the Architect or his representative before proceeding further on the work.
26. The drawing contains sketches showing salient features details at the various scales indicating extent of work & specifications to be followed. These can be modified by the bank from time to time in accordance with technical requirements at the site.
27. Any damage done to the property of the bank during execution of the work shall be responsibility of the contractor & it shall be made good by him, at his cost to the entire satisfaction of Architect/Bank.
28. The Architects shall have full power to get the material or workmanship etc. inspected & tested by an independent agency for its soundness & adequacy at the cost of contractor.

29. The contractor shall examine all drawings before quoting & commencing of actual work & report to the Architect/Bank any discrepancies for omission & shortcomings in the drawings.
30. The work shall be of highest standard both as regard to material & workmanship. Modern tools & first-class latest techniques shall be employed for its execution.
31. The work shall be done as per accordance with the IBA guidelines.

Form of Tender

To,
ZONAL MANAGER ,
BANK OF INDIA,
VADODARA ZONAL OFFICE,
VADODARA.

Dear Sir,

Having examined the drawings, specifications, design and schedule of quantities relating to the works specified in the memorandum hereinafter set out and having visited and examined the site of the works specified in the said memorandum and having acquired the requisite information relating there to as affecting the tender. I/We hereby offer to execute the works specified in the said memorandum at the rates mentioned in the attached schedule of quantities and in accordance in all respects with the specifications, designs, drawings and instructions in writing referred to in condition of tender, the Articles of Agreement special conditions, schedule of quantities and conditions of contract and with such material as are provided for, by and in all other respects in accordance with such conditions so far as they may be applicable.

memorandum

1.
 - A Description work: Electrification, Voice & Data cabling works in BANK OF INDIA, VIDYUTNAGAR BRANCH at VADODARA, Gujarat
 - B Earnest money: Rs.3000 /-
 - C Security Deposit: 2 % of the accepted tender amount less earnest money
 - D Percentage if any to be deducted from bills: 8% (eight percent) from the running bills of the contractors excluding earnest money and initial security Deposit.
 - E Time allowed for completion of the work: 30 Days
From the date of commencement of work
 - F. Liquidated damage: 1 % of contract value per week. Maximum 10 % of the contract value
2. We under take to complete and deliver the whole of the works comprised in the contract with in the time stated in the schedule A to the general conditions of the contract.
3. We have independently considered the amount of liquidated damages in the schedule A to the conditions of the conditions of the contract and agree that it represents fair estimated the loss likely to be suffered by you in the event of the works not being completed in time.
4. If our tender is accepted, we will required to furnish the security deposit of the contract for the due performance of the contract as specified in the general conditions of the contract.

5. We agree to abide by this tender for the period of 90 days from the date fixed for opening the second cover (i.e. price bid) and it shall remain binding upon and may be accepted at time before expiry of period.
6. Unless and until a formal agreement is prepared and executed this tender together with your written acceptance there of shall constitute a binding contract between us.
7. We understand that you are not bound to accept the lowest or any tender you may receive.
8. Should this tender be accepted, I/We hereby agree to abide by and fulfill the terms and provisions of the said conditions of contract annexed to so far as they may be applicable or in default thereof to forfeit and pay to the Bank Of India, The amount mentioned in the said conditions.
9. We are enclosing the bank draft for a sum of 3000/- as earnest money draft of the Bank Of India, VADODARA Which amount will not bear any interest. Should we fail to execute the contract when called upon to do so, I/We do hereby agree that the BANK OF INDIA shall forfeit this sum.
10. The details of plant, machinery, major tools, equipment employees list of such major works executed technical personal along with the copies of last two years I.T. assessment orders are enclosed for your perusal and consideration.
11. Our Bankers are:
12. The names of the partners of our firm are:

Name of the Partner of the firm
authorized to sign

OR

Name of person having power of
attorney to sign the contract.
(Certified true copy of the power
of attorney should be attached.)

(Signatures and address of
Witnesses.)

Yours faithfully,
Signature of contractor.

(1)

(2)

General instructions to contractor

- 1 Sealed Tender in should be addressed to The Zonal Manger, Bank of India, Ellorapark, VADODARA.
- 2.No tender will be received after 2.00 p.m. on date 15/03/2010 under any circumstances whatsoever.
- 3.The contractors are not expected to include any conditions contrary to tender provisions. However, if it is necessary to include certain conditions, the same should be submitted in separate sealed cover. To facilitate the processing of offers, two separate sealed envelopes, one containing conditions or non-conditions statement and the other containing the prices tender only in the stipulated form should be submitted. All letters, enclosures, tenders etc., should be submitted in duplicate. The tenders should be put in 2nd envelope. The covers should be suitably super scribed indicating the contents. All letters, enclosures, tenders etc., should be submitted in duplicate. The tenders should clearly indicate on each copy of the priced tender, under their full signature, whether it is the original or duplicate copy.

A. mode of submission of TENDER:

The tender shall be submitted in accordance with the procedure detailed herein. Specified documents shall be sealed in two envelopes of appropriate sizes and envelope should be properly super scribed as: envelope no. 1. EMD and other documents; and envelop no. 2; prices & bill of quantities only.

(a) envelope marked as first COVER:

Envelope marked as first shall contain

- I. Earnest money deposit
- II. Covering letter to the tender and tender documents issued by the Architects. (excluding priced tender duly signed.)
- III. Any comment which the tenderer desired to make in the form of a statement as brief as possible and with proper reference to the items, clauses and pages of the documents to which the comments pertain.
- IV. The name and addresses of the bankers to the tenderer. The solvency certificate issued by these bankers.
- . Complete set of tender drawings with signature of the tenderer and seal.
- . V. Details of registration with Nationalized Banks / Public sector undertakings / government / Semi Government organizations.
- Vi. Certificate of performance from their previous clients.
- vii Detail about constitution of firm - whether proprietorship, partnership, private public ltd Co., cooperative body etc.
- . Please take a careful note that the quoted tender price should not be indicated in any of the documents enclosed in envelope marked first.
- . The aforesaid information / document EMD along with tender documents (excluding priced tender) issued by the Architects should be put in the envelope marked first in duplicate and duly signed by the tenderer and should

(b) envelop marked as second COVER:

Envelop marked second cover shall contain only price tender in duplicate duly signed and duly filled in rates and amount in words and figures by the tenderer and should be properly sealed.

B. OPENING OF TENDERS:

- (a) The sealed envelopes marked first cover containing the tender documents / EMD / other information as mentioned in a paragraph A (a) above shall be opened in the office of The Zonal Manger, Bank of India, Ellorapark on date which informed later on in presence of

representatives of the Architects and authorized representatives of tenderers who choose to remain present.

- (b) If the earnest money deposit and other information / documents called for are not found as prescribed in paragraph A(a) above, the tender shall be rejected.
 - (c) The tender which is found suitable technically as well as financially whose past performance is found satisfactory to carry out works of similar nature and magnitude as per the details submitted by them and who have fulfilled all other requirements as mentioned in paragraph A(a) will be considered for discussing conditions, if any and then priced tender enclosed in envelope marked as SECOND Cover will be opened of such selected contractors. on Dt. 15/03/2010 . at 4 P.M The price bid of rejected tenderer keeping in view the first cover will not be opened and E.M.D. without interest will be returned to them as soon as the bank takes any decision to this effect.
 - (d) The selected contractors will be intimated by the bank regarding opening of the second cover containing priced tender. The tenderer or his authorized representative who is competent to take on the spot decision in the matter should be present. After discussing the conditions, if any, and after standardizing / withdrawing the conditions, the selected contractors will have to submit their offer in a separate cover and sealed cover containing priced tender (submitted earlier) will be opened simultaneously.
 - (e) After opening the envelope containing the offer on the standardized conditions and opening of the priced tender, no correspondence / revised offer whatsoever may be in nature, will be entertained.
 - (f) The tender shall remain open for acceptance by the bank for a period of 3 (three) months from the date of opening of the second cover containing the priced tender which may be extended further by mutual agreement and the tenderer during validity period failing which EMD will be forfeited.
 - (g) The tenderer must use only the tender forms/documents issued by the Bank. If given space falls short for furnishing the information / separate sheet may be added duly signed by the contractors.
 - (h) The bank reserves the right to reject or select the tender for opening the priced tender and also the bank will not be bound to accept the lowest tender and reserve the right to accept or reject any or all the tenders without assigning any reason whatsoever.
4. The site for work shall be made available in phases (two or more) so that normal functioning of the branch is not hampered.
 5. The time allowed for the completion of work will be 30 Days from the date of issue of work order.
 6. The contractor should quote in figures as well as in words the rate, the amount tendered by them. The amount for each item should be worked out and requisite totals given.
 7. Intending tenderers shall pay as earnest money a sum of Rs.3,000/ by Bank Draft, drawn in the name The Zonal Manger, Bank of India, Ellorapark. payable at VADODARA. A tender, which is not accompanied by such an earnest money, will not be considered. The earnest money will be returned to the tenderer if his tender is not accepted, but without any interest.
 8. The contractor whose tender is accepted will be required to furnish by way of security deposit for the due fulfillment of his contract, such sum as will amount 2 % of total tender amount, including earnest money deposit.

9. The security deposit shall be collected as detailed in clause no 12 (twelve) of the General conditions of the contract.
10. The EMD of the contractor whose tender is accepted shall be forfeited in full in case he does not submit the initial security deposit within the stipulated period of start the work by the stipulated date mentioned in the award letter.
11. The acceptance of the tenderer will rest with the bank which does not bind itself to accept the lowest tender, and reserves to itself the authority to reject any or all the tenders received without assignment of a reason. All tenders in which any of the prescribed conditions are not fulfilled or are incomplete in any respect are liable to be rejected.
12. Canvassing in any form with tenders is strictly prohibited and the tender submitted by the contractors who resort to canvassing will be liable to rejection.
13. All rates shall be quoted in the bill or quantities of the tender alone.
14. An item rate tender containing percentage below / above will be summarily rejected. However where a tenderer voluntarily offers a rebate for payment within a stipulated period this may be considered.
15. On acceptance of the tender, the name of the accredited representative(s) of the contractor who would be responsible for taking instructions from the Employer / Architect shall be communicated to the Employer.
16. Special care should be taken to write the rates in figures as well as in words and the amount in figures only in such a way that interpolation is not possible. The total amount should be written both in figures and in the words. In case of figures, the words "Rs." should be written before the figures of rupees and the word "p" and after the decimal figure, e.g. Rs. 2.15 'p' and in case of words the word 'Rupees' should precede and the word 'paise' should be written at the end, unless the rate in whole Rupees followed by words only it should invariably be up to two decimal places. While quoting the rate in schedule of quantities, the word 'only' should be written closely following the amount and it should be written in the next line.
17. The bank does not bind itself to accept the lowest or any tender and reserves to itself the right of accepting the whole or any part of the tender and the tender shall be bound to perform the same at the rate quoted.
18. The contractor shall give the list of his relatives if any working with the bank along with their designations and address.
19. No employee of the bank is allowed to work as a contractor for a period of two years of his retirement from 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, as aforesaid before submission of the tender or engagement in the contractor's service.
20. The tender shall not be witnessed by a contractor or contractor who himself / themselves has / have tendered for the same work. Failure to observe this condition would render the tender of the contractor tendering as well as witnessing the tender liable to summary rejection.
21. It will be obligatory on the part of the tenderer to sign the tender documents for all the component parts and that, after the work is awarded, he will have to enter into an agreement for each component with the competent authority in the bank.
22. Prices quoted by the tenderer should include all taxes, local taxes, octroi, sales tax, excise duty, sales tax on work contract etc. materials, labour, delivery, installation charges etc. no extra will be paid on any account.

23. Prices quoted by the tenderer shall remain firm during execution of the work and no escalation shall be entertained on account of variation in the prices of raw materials, labour, taxes and any Government levies etc.
 24. Tenderer not interested in execution of the above work shall return blank tender and drawings together with their covering letter in a sealed envelop at the address mention above before last date of submission.
 25. Sales tax or any other tax on material or on finished work like work's contract tax, turn over tax etc. in respect of this contract shall be payable by the contractor and the bank will not entertain any claim what so ever in this respect.
 26. The Contractor has to supply and adhere to the specific makes and specifications of all the items, which are mentioned below.
 27. All quantities indicated in tender are approximate & are likely to change. Contractor must take actual measurement at site, before starting the work.
 28. Billing to be done as per actual measurement of work done at site.
 29. Contractor to furnish sample of various items to be used for approval.
 30. Rates quoted in tender should be inclusive of all taxes, transportation, loading/unloading etc.
 31. Work has to be got executed at site in co-ordination with various other agencies.
 32. Some of the above items may not be operated at all. It will be client's / Architect's discretion. Contractor cannot claim any charges/compensation for non-operation of any items.
 33. The contractors would use all the materials for various items strictly as per enclosed list of approved brands and makes and he should justify the purchase of all the materials to the Architect's and Bank's Engineer's satisfaction.
 34. All measurement should be taken as per I.S. 1200.
 35. If the tenderer has a relative employed in any capacity with the Bank of India, he shall inform the authority calling the tenders of the fact when submitting his tender, failing which his contract may be rescinded, and if the fact subsequently comes to light, he shall be liable to make good to the Employer any loss of damage. 37. No addition of extra work outside the contract, however patty, may be carried out except under in accordance with a duly executed agreement or on a special written authority from duly authorized officer of the Employer.
 36. No agreement is valid unless signed by the contractor or his duly authorized agent and by a competent person on behalf of the employer.
- 37The agreement, The tender, invitation to Tender, instruction to tenderers, General condition of contract, special condition contract, specification, Drawings, Time schedules, and the rates and the amount quoted against the item of the tender schedule together with the letter of Intent awarding the work shall from the contract. if there is any conflict between any of provisions in the special conditions and any of other documents refund, the provision in the special conditions of contract shall prevail. Similarity, if there be any difference between the description in the specification and drawings and works item in the schedule of quantities, the description in the schedule of quantities shall prevail.

Signature of contractor with seal.

Date:

GENERAL CONDITIONS

- (1) Sealed tenders should be addressed to The Zonal Manager, Bank of India, Ellorapark, VADODARA. and superscripted
Name of work : Electrification voice & data cabling works of VIDYUTNAGAR BRANCH AT VADODARA, and should reach the bank before 2:00 PM on 15/03/2010
No tenders will be considered received after 2.00 p.m.
and the tenders Technical bid open on dt 15/03//2010 & Price bid on which date will be informed later on .
- (2) The tenders will remain valid for a period of 3 months from the date of opening of tenders. Bank reserves the right to accept or reject any or all the tenders without assigning any reason to do so. Bank does not bind itself for accepting the lowest tender.
- (3) At the time of submission every tender must be accompanied by a demand draft only in favor of The Zonal Manager, Bank of India, Ellorapark, VADODARA. as earnest money. No interest will be paid on earnest money. Any tender which is not accompanied by the earnest money shall be rejected.
- (4) The tenders should quote the rates in figures as well as in words.
- (5) All erasures, corrections and alterations made while initials of tenderer must attest filling the tender. Overwriting of the figures is not permitted.
- (6) The earnest money of the successful tender shall be adjusted in the security deposit.
- (7) The bank reserves the right to reject any or all the tenders, accept part of any tender or entrust the entire work to any contractor or divide the work to more than one contractor (item wise) without assigning any reason or giving any explanation. The rates quoted by the contractor will hold good for this bifurcation and no compensation will be paid on this account.
- (8) Joint tenders shall not be considered.
- (9) Within 7 days of receipt of Intimation regarding acceptance of his tender by the Bank, the tenderer should send his acceptance of the work order in writing. If the tender does not do that, or does not start the work within 7 days of such intimation to him or fails to give justified reasons not to do so, acceptance of his tender would be with drawn and earnest money deposit would be liable to be forfeited.
- (10) The rates quoted in the tender shall include all charges of scaffolding, lift, any tools and plants railway freight labour conditions and fluctuation in the rates, excise duty, sales tax, octroi and any other taxes or expenditure for carrying out the work.

- (11) The contractor will arrange for water and electricity for completing the work. In case water and electricity are already available at the site, the Bank will provide the same
- (12) No escalation in rates will be allowed under any circumstances.
- (13) The successful tenderer is bound to carry out entire work within the period stipulated in the Appendix. The tenderer will have to pay liquidated damages for non-completion of job within stipulated period at the rate of Rs. 300/- per day after expiry of period of completion subject to maximum of 10 % of the contract value.
- (14) The liquidated damages as mentioned above may not be refaced if the contractor applies sufficiently in advance for extension of time mentioning the unavoidable reasons for extension. The Bank shall, if in its opinion (which shall be final and binding upon the contractor) finds genuine reasons shown by the contractor for such request, grant suitable extension in time, limit. Any claim for damage or compensation in relation there to by contractor is not permissible. Also other terms and conditions of the contract will remain unaltered in the extended period.
- (15) The successful tenderer is bound to carry out items of work necessary for completion of job even though the same are not included in the schedule of quantity. Rates of extra items will be derived from the tender. In case the rates do not exist in the tender and extra item is not similar to tender time, then the rates will be worked out on similar to tender item, then the rates will be worked out on actual cost of material and labour, any other expenditure for completing that work plus 10 % towards contractor's profit & overheads. For this contractor must submit the rate analysis supported by original vouchers for purchase and labour.
- (16) The contractor must co-operate with other contractors appointed by the bank so that entire work shall proceed smoothly with least possible delay and to the satisfaction of the bank.
- (17) The contractor shall remove all rubbish etc. out of site/premises wash and clean the floors and hand over the site in proper and tidy condition non-the completion of work.
- (18) The tenderer shall acquaint himself with the site conditions making his own arrangement for storing of material at site, lift, cartage etc.
- (19) Contractor shall be prepared to work at times convenient to the Bank. No charges shall be paid for the same.
- (20) 8 % percent of the value of work done shall be deducted as security deposit from the bills of the contractor, of the same shall be released after the defects liability period, provided no defects are noticed during the period. The security deposit includes earnest money deposited by the contractor with the tender. However security deposit does not carry any interest.
- (21) The contractor will attend to all defects noticed fails to attend during defect liability period. If the contractor fails to attend the defects within a reasonable time the bank will rectify these defects and the expenditure incurred on this account will be recovered from security deposit, or any other money due on to time.

- (22) The contractor shall make adequate arrangement for watch and ward of his material and shall ensure the safety, breakage and any theft of material fixed or unfixed by him or other subcontractors.
- (23) The work executed should be got approved by the bank and contractor shall rectify any bad workmanship pointed out at any stage and remove from site all the rejected material immediately.
- (24) The contractor shall be responsible for application of labour laws, compensation for injury and accident to person, whether employed by his or by sub-contractor.
- (25) The contractor will take necessary precautions for carrying out the work avoiding any damage to fixed or loose furniture, structures/decorative parts of the property. The contractor will rectify any damages done at his cost.
- (26) The contractor shall ensure that workmen employed by him for execution of work are suitably covered against workmen's compensation Act and that all liabilities arising out of workmen's compensation Act, ESIS and other legislative enactments applicable to such works and workmen shall be to the contractor's account.
- (27) The contractor shall inform the bank to check quality/measurements of any work, which is likely to be hidden before covering.
- (28) The contractor will submit running bills for the value of work done not less than interim payments (as mentioned in the Appendix) mentioning full nomenclatures of items, rates, amount, measurements sheets, reasons for part rates claimed, if any.
- (29) In case of non-completion or delay in completion of work or removal of defects in time, the bank shall be free to appoint another agency to get the job done at contractor's risk and cost.
- (30) In come-Tax at the rate of 2.16% (or Applicable rate) of the bill Amount will be deducted at source from the contractor's bill and will be deposited with the I.T.O as per rules.
- (31) The Bank may delay the progress of work without, in any way, vitiating the contract and grant such extension of time for the commencement/completion of the contract as it may think proper and sufficient in consequence of such delay and the contractor shall not make claim for compensation or damage in relation there of.
- (32) The contractor will not execute any extra item without bank's permission in writing.
- (33) The quantities mentioned in the schedule of quantities are approximate. payment will be on actual work done by the contractor. However the contractor should not deviate the quantity without bank's permission.
- (34) Conditional tenders quoted by the tender are liable to be rejected.
- (35) The bank has a right to alter the nature of work and to add or omit any items of work or to have the option of the same carried out departmentally or otherwise and such alternations or variations shall be carried out without prejudice to this contract.

- (36) The bank has a right to terminate the contract, if the contractor abandons the work, or fails to commence and complete the work in time, or fails to abide by the contract conditions.
- (37) Measurement for all items shall be taken as per actual work done and no claim for any wastage in all material shall be considered.
- (38) Contractor must quote balanced rates as quantities mentioned in the tender are approximate and may vary to any extent, no extra rates shall be given on this account.
- (39) All the electrical work shall conform to relevant ISI. Contractor shall provide all necessary test certificates required by the bank.

SPECIAL CONDITIONS OF THE CONTRACT:-

1. Tenderer shall go through all documents before quoting rates, & provide for necessary cost as may be included in either bill or material of specifications.
2. Tenderer shall give prices in blank column. Entries in English shall be made in ink. To arrive at the grand total must also fill in all "Rate only columns" and sign all corrections.
3. Tenders shall be invalid unless all rates are filled in. No extra conditions shall be submitted. Tenders shall be signed by all the legal partners of the firm.
4. The tenderer shall sign each page of the tender documents.
5. The tenderer whose tender is accepted shall be bound to implement the contract within eight days of intimation from Architect.
6. Work shall be done night & day without extra charge, if necessary.
7. Tenderer shall provide for stacking materials in such a way as to facilitate rapid checking of quantities.
8. Materials supplied by owner shall be used only in owner's site.
9. Contractors shall pay any local charges relating to execution of work.
10. The rate quoted by contractor is including wastages.
11. Contractors shall arrange for all temporary connections.
12. No extra shall be paid for variation in the quantity. Quantity sheets & drawings both are to be considered jointly and Architect/Bank's Engineer is the final authority for the interpretation.
13. Site instruction shall be deemed sufficient for proper execution, and shall be carried out without extra charge.
14. Order book with numbered pages shall be kept on site. Contractor shall carry out all instructions properly.
15. Contractors shall insure whole work against fire, PIC & third party.
16. Contractor shall submit samples of or for the approval of the Architect/Bank before commencing the bulk of work. The rest of the work shall be completed only on the express approval of the Architect.
17. The mentioned specifications to be applicable for all the tender items whether mentioned or not mentioned in the individual item description.
18. Prices quoted by the tenderer shall remain firm during execution of the work and no escalation shall be entertained on account of variation in the prices of raw materials, labour, taxes and any Government levies etc.

19. Sales tax or any other tax on material or on finished work like work's contract tax, turn over tax etc. in respect of this contract shall be payable by the contractor and the bank will not entertain any claim what so ever in this respect.
20. All quantities indicated in tender are approximate & are likely to change. Contractor must take actual measurement at site, before starting the work.
21. Billing to be done as per actual measurement of work done at site.
22. Work has to be got executed at site in co-ordination with various other agencies. The contractors would use all the materials for various items strictly as per enclosed list of approved brands and makes and he should justify the purchase of all the materials to the Architect's and bank's engineer's satisfaction.
23. The contractor is instructed of get approval of all the material, fixtures, color and shade before starting the work. If required, he should provide different sample of materials for approval, before execution of work.
24. Contractor is strictly instructed to get it approved the samples of each and every item before putting the finishing material on it.
25. No changes in the design should be done without any discussion with the Architect and for any clarification, the architects may be contacted.
26. If the tenderer has a relative employed in any capacity with the Bank Of India, he shall inform the authority calling the tenders of the fact when submitting his tender, failing which his contract may be rescinded, and if the fact subsequently comes to light, he shall be liable to make good to the employer any loss of damage.
27. If extra items are to be executed the rate will be paid on actual cost of material and labour and additional 10% as contractor's profit, the rate for extra items given by architect would be final.
28. Work shall be carried out as per specifications in tender schedules / C.P.W.D specification 1977 Volume I & II & along with the latest correction slips and the relevant Indian Standard Codes of practice & of as specified by the Architect. In case of doubts the decision of the Bank. Shall be final and binding on the contractor.
29. The General conditions of contract and standard contract form of the work will be followed as per Circular No. ADV/ © /Gen-53/71/CIR/ 103-73 dated 6th February 1973 issued by the Bureau of Public Enterprises, Ministry of Finance with latest modifications and as amended by bank. In their Paint Work procedure to suit their requirement.
30. Contractor shall be responsible for any damage to the property of the bank equipment or structure injury to personnel during the progress of the work and he shall be liable to pay such compensation or

- may be decided by the engineer-in charge in respect of such damages/ injuries. The contractor should rectify the damages at his cost of entire satisfaction of the architect / bank engineer.
31. The serviceable materials out of the dismantled materials will be property of Bank/ Employer and shall be properly streaked by the Contractors as directed by the Engineer-in-charge on the serviceability on the contractor.
 32. All labour employed by the contractor shall be covered by works men's compensation Act. Any death, injury of mishap to the workman of the contractor will entirely be at the Contractor's responsibility and bank / employer shall not be liable to pay any damages for the same.

Signature of contractor with seal.

Date

APPENDIX REFERED TO IN THE GENERAL CONDITIONS

1. Defects liability period : 12 Months
2. Date of commencement : Immediately from the date of issue of letter awarding the job.
3. Date of completion : 30 Days from issue of letter of intent.
4. Stipulated period for completion : 30 Days
5. Minimum value of work done for interim payment : Nil
6. Interim Payment : Nil
7. Security deposit for defects liability period : 8% of the total value of work (including the earnest money)
8. Liquidated damages for non-completion of work within stipulated period : Rs. 300/- per day subject to a maximum of 10% of total cost of work done.

LIST OF APPROVED MAKE FOR THE MATERIALS TO BE USED.

MCB/MCB-DB	-	IndoKopp/ MDS/ Standard/ or eq.
SWITCHES AND ACCESSORIES	-	Mk India/ ABB or eq.
ELECT PVC WIRES	-	Finolex F.R.P.quality or eq.
PVC CONDUIT / PIPES AND ACCESSORIES	-	Precision/ Clipsal / Polycab
DATA CABLE		De-link or Avya cat-6
ARMOURED CABLE	-	Finolex / Policab
CABLE GLANDS	-	HMI/Comet
CABLE LUGS AND SOCKETS	-	Dowell's/3D
CONNECTORS	-	As Specified
MCCB	-	L&T/ Siemens/ M.D.S
ELCB / RCCB	-	GE/MDS
TELEPHONE WIRES	-	Delton/ National
METAL CLAD SOCKET	-	MDS/ Clipsal /Haeger
PVC Junction Box	-	Precision/ Clipsal
SWITCH BOARDS	-	According to Switch
EXHAUST FAN	-	Usha/ Khaitan/ GEC
WALL/PEDESTAL FANS	-	Crompton/ Usha
SPEAKERS	-	Ahuja/ Bosch/ Phillips
LIGHT FIXTURES	-	Philips/ Wipro/ Bajaj/ Crompton/ Oasis Basic rate Rs3200/
SFU & GRC Fuses	-	L&T Siemans
BUS COPPLER	-	Clipsal /GE/ L&T
T.V CABLE	-	Finolex

Note : In case of non availability of any material of specified make, the alternative should be used only after its due approved by the Employer of the Architect.

The last decision of the choice of any of the agency rest with Architect.

All Dimensions given are for considerations can be changed as per site dimensions.

For all items only exposed elevation measurement shall be taken for bill amount.

The Client, Architect, Consultants have right to check the challans of supplier.

SIGNATURE OF CONTRACTOR WITH SEAL
DATE:

INSTALLATION TESTS CERTIFICATE BY ELECTRICAL CONTRACTOR

This contractor is to certify that the work is carried out work confirming to IE Rules and code of practice. He has to give The test report is as under.

(i) Insulation Resistance test is

R	-	N	M-	Ohms
Y	-	N	M-	Ohms
B	-	N	M-	Ohms

(ii) Load test :-

5A - 1000 W Power Point - 15 Minutes

15A - 3000 W Power Point - 15 Minutes

(iii) Earth resistance for eah electrode

1	-	Ohm
2	-	Ohm
3	-	Ohm

Signature of Contractor with seal

Date:

GENERAL CONDITION

APPLICABLE STANDARDS

Sr. No.	IS No.		Description
1)	IS:2026-1977 IS 3639	:	Distributing transformers & fittings. Fittings and acc. For P.T.
2)	IS:7886 IS:660	:	Installation of Transformer.
3)	IS:2516-1972	:	Specification for AC circuit breakers.
4)	IS:335	:	Insulating oil for Transformers & switch gear.
5)	IS:2705	:	CT for measuring and protection.
6)	IS:3155	:	Voltage (Potential) Transformers.
7)	IS:3236 Part II	:	Voltage Transformer.
8)	IS:373	:	Busbar arrangement and marking.
9)	IS:2099	:	Bushing
10)	IS:5621	:	Large Hollow Porcelains
11)	IS:2544	:	Insulators
12)	IS:2629 & 2633	:	Hot Dip Galvanizing
13)	IS:3842	:	Relays.
14)	IS:1248-1958	:	Meters (measuring).
15)	IS:3072-1975	:	Installation of Switch gears.
16)	IS:692	:	HV cable.
17)	IS:1255	:	Installation of HV cables and jointing.
18)	IS:3043	:	Code of practice for ear thing.
19)	IS:4047-1977	:	HD Air breaker, Switch gears and fuses for Voltage not exceeding 1000 Volts.
20)	IS:8106-1966	:	Selection, installation and maintenance of fuses up to 650 Volts.

- 21) IS:4237-1967 for voltage not exceeding 1000 Volts.
- 22) IS:2607-1976 : Air-break isolators for Voltage not exceeding 1000 Volts.
- 23) IS:8623-1977 : Factory built assemblies of switch gears and control gears for voltage up to and including 1000 Volts A.C. and 1200 Volts D.C.
- 24) IS:375-1963 : Marking and arrangement of switch gear busbars main connectors and auxiliary wiring.
- 25) IS:2147-1962 : Cubical Boards.
- 26) IS:8084-1972 : Insulated conductor rating.
- 27) IS:2675-1983 : Enclosed distribution fuse boards and cutouts for Voltage not exceeding 1000 Volts.
- 28) IS:8828-1978 : Miniature Circuit Breaker.
- 29) IS:9926-1981 : Fuse wire used in re-wearable type electric fuses upto 650Volts.
- 30) IS:1554 (Part I) : PVC insulated electric cables Heavy duty.
- 31) IS:3961 (Part II) : Recommended current rating for cables.
- 32) IS:2982 : Copper conductor in insulated cables and cores.
- 33) IS:8130 : Conductor for insulated electric cables and flexible cords.
- 34) IS:3975 : Mild steel wires, strips and tapes for armoring cables.
- 35) IS:5831 : PVC insulation and sheath of electric cables.
- 36) IS:1753 : Aluminum conductor for insulated cables.
- 37) IS:4288 : PVC insulated and PVC sheathed solid aluminum conductor cables of voltage rating not exceeding 1100 volts.
- 38) IS:961 : Recommended current rating for Cable.
- 39) S:732 : Code of practice for electrical wiring installation system Voltage not exceeding 650 Volts.

40)	IS:1646	:	Code of practice for fire safety of Buildings (general) electrical installation.
41)	IS:1653	:	Rigid steel conduits for electrical wiring.
42)	IS:2667	:	Fittings for rigid steel conduits for electrical wiring.
43)	IS:3480	:	Flexible steel conduit for electrical wiring.
44)	IS:3837	:	Accessories for rigid steel conduits for electrical wiring.
45)	IS:694	:	PVC insulated cables (wires).
46)	IS:2509	:	Rigid non-metallic conduits for electrical wiring.
47)	IS:6946	:	Flexible (playable) nonmetallic conduits for electrical installation.
48)	IS:1293	:	Three pin plugs and sockets.
49)	IS:8180	:	Conductors for insulated electrical cables and flexible codes.
50)	IS:9537-1980	:	Specification for conduit for electrical installation.
51)	IS:3419	:	Accessories for non-metallic conduits for electrical wiring.
52)	IS:3854	:	Switches.
53)	IS:6538	:	Plugs.
54)	IS:2834-1954	:	Shunt Capacitors for power systems.
55)	IS:2208	:	HRC cartridge fuse and links up to 660 volts.
56)	IS:1913-1969	:	General and safety requirement for lighting fittings.
57)	IS:2944-1981	:	Code of practice for lighting public thorough fares.
58)	IS:3528	:	Waterproof electric lighting fittings.
59)	IS:3553-1966	:	Water tight electric lighting fitting.
60)	IS:1239-1958	:	Mild Steel tubular and other wrought steel pipe fitting.
63)	IS:2149-1970	:	Luminaries for street light.

- | | | | |
|-----|--------------|---|---|
| 64) | IS:9224 | : | HRC fuses having rupturing capacity of 90 KA. |
| 65) | IS:2312-1967 | : | Exhaust Fan. |
| 66) | IS:374-1979 | : | Class I Ceiling Fan. |

NOTE : All codes and standards means the latest where not specified otherwise the installation shall generally follow the Indian Standard codes of practice or relevant British Standard Codes of Practice in the absence of corresponding Indian Standards.

PLEASE FOLLOW :

- a. Indian Electricity Act of 1910 and rules issued there under revised up to date.
- b. Special Attention should be given to Rule No. 50.
- c. Regulations for electrical equipment in building issued by The Council of insurance Association of India.

ELECTRICAL MATERIAL SPECIFICATION

DISTRIBUTION BOARDS

The scope of work shall cover supply, installation testing and commissioning of all Standards :

AS PER SCHEDULE OF INDIAN STANDARDS, ATTACHED IN THE DOCUMENT.

Distribution Boards :

Distribution boards along with the controlling MCB's/Fuse or Isolator as shown shall be fixed in an M.S. Box with hinged door suitable for recessed mounting in wall. Distribution boards shall be made of 18 SWG steel sheet duly rust inhibited through a process of de-greasing, acid pickling, phosphating and powder coated to an approved colour of adequate micron rating duly approved by architect/consultant.

Three phase boards shall have phase barriers and a wire channel on three sides. Neutral bars shall be solid tinned copper bars with tapped holes and chase headed screws. For 3 phase DB's, 3. independent neutral bars shall be provided. All DB's shall be internally pre-wired using copper insulated PVC wires brought to a terminal strip of appropriate rating for outgoing feeders.

Conduit knockouts shall be provided as required/shown on drawings and the entire board shall be rendered dust and vermin proof with necessary sealing gaskets. The top and bottom side of DB should be detachable.

MCB's shall have quick make and break non-welding self wiping silver alloy contacts for 10 KA short circuit both on the manual and automatic operation. Each pole of the breaker shall be provided with inverse time thermal over load and instantaneous over current tripping elements, with trip-free mechanism. In case of multi-pole breakers, the tripping must be on all the poles and operating handle shall be common. Breakers must conform to BS 3871 with facility for locking in OFF position. Pressure clamp terminals for stranded/solid conductor insertion are acceptable upto 4 sq.mm. aluminum or 2.5 sq.mm. copper and for higher ratings, the terminals shall be suitably shrouded. Wherever MCB isolators are specified they are without the tripping elements.

Fuses shall be HRC link type re-wireable with necessary fuse carriers and with rating of not less than 25 MVA. Bottle type fuses are not acceptable. Fuse carrier terminals shall be suitably shrouded. Re-wireable fuse carriers shall be porcelain. HRC fuses for motor duty should be time lag type.

Distribution boards shall have HRC/re-wireable fuses as shown on the schedule and drawings. Board shall meet with the requirements of IS 2675 and marking arrangement of busbars shall be in accordance with I.S. standards.

Bus bars shall be suitable for the incoming switch rating and sized for a temperature rise of 35° C over the ambient. Each board shall have two separate earthing terminals. Circuit diagram indicating the load distribution shall be pasted on the inside of the DB as instructed. One earthing

terminal for single phase and two terminals for 3 phase DB's shall be provided with an earth strip connecting the studs and the outgoing ECU earth bar.

In the case of MCB distribution boards, the backup fuses wherever shown shall be not less than 63 A with a delayed characteristic and a minimum pre-arcing time of 0.5 sec. At 9 KA/3 KA fault current.

All outgoing feeders shall terminate on a terminal strip which in turn is interconnected to the MCB/Fuse base by means of insulated single conductor copper wires as follows :

Upto 15 A	2.5 sq.mm.	40 A	10 sq.mm.
25 A	4.0 sq.mm.	63 A	16 sq.mm.
32 A	6.0 sq.mm.		

RCCB / MCB :

The RCCB should suffices all the requirements of IS as per code IS – 12640 – 1988. The RCA should be current operated and not on line voltage.

The RCCB should ensure mainly the following functions.

Measurement of the fault current value.

Comparison of the fault current with a reference value.

The RCCB should have a torroidal transformer witch has the main conductors of primary (P – N) which check the sum of the current close to zero.

All metal parts should be inherently resistant to corrosion and treated to make them corrosion resistant.

It should be truly current operated.

It should operate on core balance torroidal transformer.

It's accuracy should be $\pm 5\%$.

It should operate even in case of neutral failure.

It should trip at a present leakage current within 30 M.S.

It's enclosure should be as per IP 30.

It's mechanical operation life should be more than 20,000 operations.

It should provide full protection as envisaged by IE rules – 61-A, 71 – ee, 73 – ee, 1985 and also rule 50 of IE rule1956.

It should conform to all national and international standards like IS 8828 : 1993, IS 12640 – 1988, BS 4293 – 1983, CEE 27 (International commission Rules for the approved of electrical equipment).

MEDIUM VOLTAGE CABLING

Scope :

The scope consists of Laying & testing L. T. Cable and its termination.

Standards :

AS PER SCHEDULE OF INDIAN STANDARDS; ATTACHED IN THE DOCUMENT

Cables :

All cables shall be 1100 Volt grade XLPE insulated, sheathed with or without steel armoring as specified and with an outer PVC protective sheath. Cables shall have high conductivity stranded aluminum or copper conductors and cores colour coded to the Indian Standards. All cables laid up to load should be without any joint.

All cables shall be new without any kind or visible damage. The manufacturers name, insulating material, conductor size and voltage class shall be marked on the surface of the cable at every 600 mm centers.

Cable joints and termination:

Connectors :

Cable terminations shall be made with copper Heavy duty long neck copper crimping lugs only crimped type solderless lugs for all aluminium cables and stud type terminals. For copper cables copper crimped solderless lugs shall be used.

Crimping shall be done with the help of hydraulically operated crimping tool. All cable lugs should be long neck type only.

Cable Glands :

Cable glands shall be of heavy duty brass single compression type as specified. Generally single compression type cable glands shall be used for indoor protected locations and double compression type shall be used for outdoor locations. Glands for classified hazardous areas shall be CMRS approved.

Ferrules :

Ferrules shall be of self sticking type and shall be employed to designate the various cores of the control cable by the terminal numbers to which the cores are connected, for ease in identification and maintenance.

Cable joints :

Kit type joint shall be done and filled with insulating compound. The joint should be for 1.1 KV grade insulation.

CONDUIT WIRING

1.0 Scope :

1.1 The scope of work shall cover supply, installation testing and commissioning of all.

2.0 Standards :
As per annexure - iv

3.0 Rigid and Flexible conduits :

3.1 All PVC conduits shall be laid in open/concealed manner which are approved by F.I.A. & I.S.I. & of 25 mm. Diameter.

3.2 Flexible conduits shall be formed from a continuous length of spirally wound interlocked steel strip with a fused zinc coating on both sides. The conduits shall be terminated in brass adapters.

4.0 Accessories :

4.1 PVC conduit fittings such as bends, elbows, reducers, chase nipples, split couplings, plugs etc. shall be specifically designed and manufactured for their particular application. All conduit fittings shall conform to IS:2667-1974 and IS:3887-1966. All fitting associated with galvanized conduit shall also be galvanized.

5.0 Wires :

5.1 All wires shall be single core multi-strand/ flexible copper or single strand Aluminium/Copper, PVC insulated as per IS:694 and shall be 660v/ 1100V grade.

5.2 All wires shall be colour coded as follows :

Phase	Colour of wire
R	Red
Y	Yellow
B	Blue
N	Black
Earth	Green (insulated)
Control (If any)	Grey
All off wires	Same as Phase wire

5.3 Colour code should be strictly used for all wiring.

- ii) Installation, commissioning and testing.
- iii) Cable marking.

For cable buried underground :

- i) Cables and protective bricks & tiles.

- ii) Installation, commissioning & testing.
- iii) Cable markers.

6.0 Switches & Sockets:

6.1 Switches shall be module type/ flush piano type with silver-coated contacts. Sockets shall be 3 pin with switch and plate type cover. Combination of multiple switch units and sockets should be used to minimize the switch boxes.

6.2 For heavy duty, metal clad sockets with M.C.B./ Isolator mounted in a galvanized steel box shall be provided.

6.3

7.0 Installation:

7.1 Conduits shall be kept at a minimum distance of 100 mm. From the pipes of other non-electrical services. And maintain minimum 300 mm distance between telephone, TV & Computer piping.

7.2 Separate conduits/raceways shall be used for:

1. Normal lights and 5 A 3 pin sockets on lighting circuit.
2. Separate conduit shall be laid from D.B. to switch board or point.
3. Power outlets – 15 A 3 pin 20 A/30 A, 2 pin scraping earth metal clad sockets.
4. Emergency lighting.
5. Telephones.
6. Fire alarm system.
7. Public address system & Music system.
8. For all other voltages higher or lower than 230 V.
9. T.V. Antenna.
10. Water level guard.
11. Computer Wiring.

7.3 Call bell wiring layout of conduits shall be generally indicated on drawings and the layout shall be supplemented and complemented by contractor on site with approval of the Engineer.

7.4 Wiring for short extensions to outlets in hung ceiling or to vibrating equipments, motors etc., shall be installed in flexible conduits. Otherwise rigid conduits shall be used. No flexible extension shall exceed 1.25 m.

7.5 Conduits run on surfaces shall be supported on metal 12 mm. thick saddles which in turn are properly screwed to the wall or ceiling. Saddles shall be at intervals of not more than 500 mm. Fixing screws shall be with round or cheese head and of rust-proof materials. Exposed conduits shall be neatly run parallel or at right angles to the walls of the building. Unseemly conduit bends and offsets shall be avoided by using fabricated mild steel junction/pull through boxes for better appearances. No cross-over of conduits shall be allowed unless it is necessary and entire conduit installation shall be clean and neat in appearance.

7.6 Conduits embedded into the walls shall be fixed by means staples at not more than 500 mm. intervals. Chases in the walls shall be neatly made and refilled after laying the conduit and brought to the finish

- of the wall but final finish will be done by the building contractor. The contractor shall provide wire mesh before making rough plaster.
- 7.8 Conduits buried in concrete structure shall be put in position and securely fastened to the reinforcement and got approved by the Engineer, before the concrete is poured. Proper care shall be taken to ensure that the conduits are neither dislocated nor choked at the time of pouring the concrete suitable fish wires shall be drawn in all conduits before they are embedded.
- 7.9 Inspection boxes shall be provided for periodical inspection to facilitate withdrawal and removal of wires. Such inspection boxes shall be flush with the wall or ceiling in the case of concealed conduits. Inspection boxes shall be spaced at not more than 12 meters apart or two 90° solid bends or equal. All junction and switch boxes shall be covered by 6 mm. clear Perspex plate truly cut and fixed with cadmium plated brass screws. These junction boxes shall form part of point wiring or conduit wiring as the case may be including the cost of removing the Perspex cover for painting and re-fixing. No separate charges shall be allowed except where specially mentioned.
- 7.10 Conduits shall be free from sharp edges and burrs and the threading free from grease or oil. The entire system of conduits must be completely installed and rendered electrically continuous before the conductors are pulled in. conduits should terminate in junction boxes of not less than 32 mm. deep.
- 7.11 An insulated earth wire of copper rated capacity shall be run in each conduit for entire length.
- 8.0 Lighting & Power Wiring:
- 8.1 all final branch circuits for lighting and appliances shall be single conductor/ stranded/ flexi-cables run inside conduits. The conduit shall be properly connected or jointed into sockets, bends, and junction boxes.
- 8.2 All circuits shall preferably be kept in a separate conduit upto the Distribution Board. No other wiring shall be bunched in the same conduit except those belonging to the same phase. Each lighting branch circuit shall not have more than ten outlets or 800 watts whichever is lower. Each conduit shall not hold more than three branch circuits of same phase.
- 8.3 Flexible cords for connection to appliances, fans and pendants shall be 650/1100V grade (three or four cores i.e with insulated neutral wire of same size) with tinned stranded copper wires, insulated, twisted and sheathed with strengthening cord. Colour of sheath shall be subject to the Engineer's approval.
- 8.4 Looping system of wiring shall be used. Wires shall not be jointed. Where joints are unavoidable, they shall be made through approved mechanical connectors. No such joints shall be made unless the length of the sub-circuit, sub-main or main is more than the length of the standard coil.
- 8.5 Control switches shall be connected in the phase conductors only. Switches shall be fixed in 3 mm. thick painted or galvanized steel boxes with cover plates as specified. Cadmium plated brass screws shall be used.
- 8.6 Power wiring shall be distinctly separate from lighting wiring. Conduits not less than 25 mm. and wires not less than 2.5 sq. mm. copper shall be used.

8.7 Every conductor shall be provided with identification ferrules at both ends matching the drawings.

9.0 Testing :

9.1 The entire installation shall be tested for :

- a) Insulation resistance.
- b) Earth continuity.
- c) Polarity of single pole switches.

A test certificate shall be submitted in the Performa shown under Appendix – I.

10.0 Mode of measurement:

10.1 The definition of point wiring shall be in accordance with sketch drawing and should wiring from D.B. onwards together with all junction boxes, connectors, earth wire, fixing accessories, connection to all light fittings switches etc. as specified and shown on drawings. The point rate shall include circuit wiring from distribution board to switch board and/or directly to the point. The circuit wire shall be in separate conduit. The contractor may draw maximum 2/3 circuits of the same phase in circuit mains conduit.

10.2 All switches sockets with boxes, earthing interconnection and plate type silver contact switch shall be inclusive in point wiring.

10.3 All empty conduit runs, including junction boxes fish wires etc. shall be paid on the basis of unit length.

Measurements shall be along the conduit and concurrent length of sub-circuit wiring.

10.4 Buzzer indicator of the ways specified shall consist of indicating lamps, reset button, electromagnet, Perspex cover plate, chromium plated brass screws etc. shall be considered as on unit for measurement and payment.

10.5 Two way light points shall be classified according to and consist of 2 Nos. 2 way plate type switches, wiring from the 1st 2 way switch to the 2nd 2 way switch to the first light controlled. Subsequent lights, if any, shall be measured as ordinary secondary point.

EARTHING

Scope :

The Scope of work shall cover supply of earthing stations, laying copper earth strips and connecting the power panels, DB's and switch boards.

Standards :

AS PER ANNEXURE – IV.

Plate Earthing Station :

The substation earthing shall be with copper plate earthing station unless otherwise specified.

The earthing station shall be as shown on the drawing. The earth electrodes shall be 450 x 450 x 3 mm / 600 x 600 x 6 mm. Copper plate – as specified in B.O.Q. The earth resistance shall be maintained with a suitable soil treatment as shown on drawings.

The resistance of each earth station should not exceed 1 ohms.

The earth lead shall be connected to the earth plate through copper/brass bolts as shown on the drawing.

Minimum distance between two earth pits shall be 2 Mts.

All earth pits shall be minimum 1 Mt. Away from building foundation.

Pipe Earthing Station :

The earth station shall be as shown on the drawing and shall be used for equipment earth grid. The earth electrode shall be 2.5 m. long 50 mm. Diameter galvanized steel pipe. The earth resistance shall be maintained with a suitable soil treatment as shown on drawings.

The resistance of each earth station should not exceed 5 ohms.

The earth lead shall be fixed to the pipe with a and safety set screws. The clamps shall be permanently accessible.

Earth leads and connections :

Earth lead shall be bare copper or aluminium or galvanized steel as specified with sizes shown on drawings. At road crossings necessary hume pipes shall be laid. Earth lead run on surface of wall or ceiling shall be fixed on saddles or wall.

The complete earthing system shall be mechanically and electrically bonded to provide an independent return path to the earth source.

Equipment Earthing :

All apparatus and equipment transmitting or utilizing power shall be earthed in the following manner. Copper earth wires shall be used unless otherwise indicated in the schedule of work and drawings.

Power transmission apparatus :

Metallic conduit shall not be accepted as an earth continuity conductor. A separate insulated/bare earth continuity conductor of size 50% of the phase conductor subject to the minimum and maximum shall be provided.

Non-metallic conduit shall have an insulated earth continuity conductor of the same size as for metallic conduit. All metal junction and switch boxes shall have an inside earth stud to which the earth conductor shall be connected. The earth conductor shall be distinctly colored (green) for easy identification.

In the case of cable, an earth continuity conductor shall either be run outside along the cable or should form a separate insulated core of the cable.

Three Ph. Power panels and distribution boards shall have 2 distinct earth connections of the size correlated to the incoming cable size. In case of 1 Ph. DB's a single earth connection is adequate. Similarly for 3 Ph and 1 Ph isolating switches there shall be 2 and 1 earth connections respectively, sizes being correlated to the incoming cable.

Testing :

The following earth resistance values shall be measured with an approved earth meggar and recorded.

Each earthing station

Earthing system as a whole

Earth continuity conductors

Mode of measurements :

Providing earthing station complete with excavation, electrode, watering pipe, soil treatment, masonry chamber with cast iron cover etc. shall be treated as one unit of measurement.

The following items of work shall be measured and paid per unit length covering the cost of the earth wires/strips clamps, labor etc.

Main equipment earthing grid and connections to the earthing stations.

Connections to the switchboard, power panels, distribution boards etc.

The cost of earthing the following items shall become part of the cost of the item itself and no separate payment for earthing shall be made.

Isolating switches and starters should form part of mounting frame, switch starter etc.

Light fittings – form part of installation of the light fitting.

Conduit wiring cabling – should form part of the wiring or cabling.

TELEPHONE DISTRIBUTION

This cover supply, installation, testing, commissioning of telephone system.

1) The scope of work shall cover supply, installation, commissioning and testing of :

Telephone cables

Telephone Tag Blocks

Telephone wiring in conduits

The telephone exchange and the hand sets shall be supplied by the clients.

2) Conduits :

Conduits shall be as given below :

Indoor : medium gauge Rigid PVC conduit.

If in flooring provide heavy gauge.

The conduit shall generally be as specified under section `CONDUIT WIRING`.

3) Cables and Wires :

The type of cables and the services shall be as follows :

Indoor Multi pair, PVC insulated sheathed armored and sheathed.

Inside Twin core PVC insulated with conduit twisted cores.

All multi core cables and wires shall be of tinned copper conductor of not less than 0.5 mm dia and shall be colour coded twisted pairs with rip cord.

The conductor resistance shall be less than 150 ohms per KM and the insulation resistance between the conductors not less than 50 megohms and the nominal capacitance of about 0.1 micro farad per kilometer.

Cables laid under ground or locations subject to dampness and flooding shall be filled with polyethylene compound and shall have sufficient protection against moisture and water ingress.

All armoring shall be of galvanized steel wires and protected against corrosion by an outer sheath of PVC in the case of indoor cables and polyethylene in the case of outdoor cables. Outer sheathing must be fire retarding and anti-termite.

All unarmored single core cables and inner sheath of armored cables shall be provided with rip cord.

All single pair cables for final extension to the telephone outlet box shall be unarmored tinned copper conductors of not less than 0.6 mm. Diameter and shall be drawn in conduits. All telephone outlets shall consist of 2 A 2 pair polythene connector in G.I box with 6 mm usbar cover with usbar edges and chromium plated brass hardware.

Tag blocks :

The telephone tag blocks shall be suitable for the multi core telephone cables and shall have two terminal blocks, cross connect type. All incoming and outgoing cables shall be terminated on separate terminal blocks and termination shall be silver soldered. The cross connecting jumpers shall be insulated wires of same diameter and screw connected.

The tag blocks shall be mounted inside fabricated sheet steel boxes with removable hinged covers and shall be fully accessible. The enclosure shall be painted with 2 coats of red oxide and stove usbar d.

Installation :

The installation of conduits shall generally be as specified under section 'CONDUIT WIRING'.

Telephone / Data pipes shall be kept 100 from power conduit.

Separate J.B. shall be provided for telephone & Computer.

All cables shall be on cable racks and neatly stitched together.

The connection at the tag blocks shall be silver soldered so as to achieve minimum contact resistance.

The final branch connections with single pair cables in conduits and the maximum number of cables in each conduit shall be as follows :

Conduit diameter	Max. No. of cables	
inch	mm.	
¾"	20	2 Nos. single pair
1"	25	6 Nos. single pair
1¼"	32	12 Nos. single pair
1½"	40	18 Nos. single pair

DATA DISTRIBUTION

This cover supply, installation, testing, commissioning of computer distribution.

Conduits :

Conduits will be supplied by contractor

Data Cables and Wires :

Data cables & wires will be supplied by contractor

Hub & Rack

Hub & Rack. Will be supplied by Bank
Installation :

The installation of conduits shall generally be as specified under section `CONDUIT WIRING`.

All cables shall be on cable racks and neatly stitched together.

The connection at the hub rack shall be crimped so as to achieve minimum contact resistance.

The final branch connections with single pair cables in conduits and the maximum number of cables in each conduit shall be as follows:

Conduit diameter Inch mm.	Max. No. of cables
¾" 20	2 Nos. single pair
1" 25	6 Nos. single pair
1¼"32	12 Nos. single pair
1½"40	18 Nos. single pair

LIGHT FIXTURES AND FANS

1.0 Scope :

1.1 The scope of work shall cover the providing, Assembly, and testing of fluorescent and incandescent light fixtures and ceiling fans.

2.0 Standards :

As per annexure – iv

3.0 General Requirements :

3.1 All fixtures shall be complete with accessories necessary for installation whether so detailed under fixture description or not.

3.2 Fixture housing, frame or canopy shall provide a suitable cover for the fixture outlet box or fixture opening.

3.3 Fixtures shall be installed at mounting heights as detailed on the drawings or instructed on site by the Architect/Consultant.

3.4 Fixtures and/or fixture outlet boxes shall be provided with hangers to adequately support the complete weight of the fixture. Design of hangers and method of fastening other than shown on the drawings or herein specified shall be submitted to the Architect/Consultant for approval.

3.5 Pendant fixtures within the same room or area shall be installed in plumb and at a uniform height from the finished floor. Adjustment of height shall be made during installation as per Architect's/Consultant's.

4.0 Ceiling Fans :

4.1 Ceiling fans shall be complete with fan suspension stem canopies and regulators. 30 cm suspension stem shall be standard accessory and stems shall be heavy duty galvanized steel tubes to IS 1239-1958.

4.2 Fans shall be mounted on a pre-embedded hook with hard rubber isolator. Regulators shall be no-step type mounted in the switch box. The box in all such cases shall be large enough to accommodate the regulator and switches. One sample box with top cover shall be got approved before procurement.

5.0 Mode of measurement :

5.1 Each fixture shall be measured as a unit complete with accessories, lamp, connectors, earthing, mounting arrangement, clamps etc.

5.2 Suspension stems for light fittings shall be measured as bare conduits and paid at the rate per unit length.

- 5.3 Fans shall be measured as a unit complete with all accessories, Reqd size suspension rods, fan hook, etc.

INSTRUCTIONS FOR CONTRACTORS - TO BE PLEASE READ THIS CAREFULLY

- a. The rate for items in schedule of Quantities must be given in words and figures. Amount of each items must also be entered in column and grand total of amount must be stuck out by the tenderer.
- b. If the tenderer is taken in favor of the company, a power of attorney in favor of the person who may have signed the tender for the company must accompany the tender.
- c. All pages of schedule of quantities etc. should be initialed by the contractor.
- d. Discrepancies and adjustment of errors.

Any error in quantity or amount in schedule of quantities showing item or work to be carried out shall be adjusted in accordance with the following rules:

- a. In the event of a discrepancy between description in words and figures quoted by a tenderer in the rates column, the description in words shall prevail.

In the event of an error occurring in the amount column of the schedule of quantities showing items of work, as a result of wrong multiplication of the unit rate and quantity, the unit rate shall be regarded, as firm and multiplication shall be amended on the basis of the rate.

- b. All errors in totaling in amount column in carrying forward total shall be corrected.

- c. Any rounding of amount against 'items' or in 'totals' shall be ignored.

The tendered sum so altered shall for the purpose of the tender be substituted for the sum originally tendered and considered for acceptance.

The clients/consultants have right to:

- 1) Reject any no. of quantities in the tender.
- 2) To decrease or to increase or to delete any quantity in the tender.
- 3) In case extra items are there it will be settled as exact cost of material +exact cost of labour + 10% profit including wastage.
- 4) The contractor has to submit as built drawings in computerized manner to the following & have to be signed by electrical consultants.

Branch manager

Responsible desk officer

Premises engineer of bank

Floppy & a drawing to consultants

NOTE: Unless these four sets are not submitted with the final bill then the final bill will not be certified.

- 5) Contractor will have to use jarry cutter. The scope is making good the same.

The contractor will have to use the first brand specified in the specified make list. If the same is not available then he has to take written prior approval of the consultant before using the same. Note The work is to be done in running branch of bank so the contractor has to take ut-most care the working of bank may not be disturb, the working shall be done in the evening on permission.

**B.O.Q. FOR ELECTRIFICATION, VOICE, & DATA CABLING WORKS OF
B.O.I VIDYUTNAGAR BRANCH AT VADODARA .**

Sr. No	Description	Qty	RATE Rs	Unit	AMOUNT Rs
1	Supply and installation testing 415V125A TPN SFU with 100 A HRC 3 no. fuses, on angle iron frame grouted. on wall. etc. as directed.	1		No	
2.	Supply installation testing and commissioning of Elect. mainPanel ,Power distribution & U.P.S distribution boards Supply installation, testing & commissioning main panel ,lighting D.B & wiring for Distribution panel swiches incl wiring & busbar madeof 16 gauge CRC sheet powder coated mounted angle iron frame grouted on wall, complete wired with suitable size PVC insulated copper wire, for incoming cables and covers for incoming and outgoing conduits and cables as under. A Main Panel boards of required sizes B Individual lighting D.B for G.F.& F.F each C U.P.S.Distribution boards(in coming & out going)	1 2 1		No No No	

3	<p>Supply installation testing and commissioning of Elec.Power control switches in distriElect. mainPanel ,Power distribution & U.P.S distribution boards</p> <p>A . 125 A MCCB</p> <p>B 63 FP MCB of 10 KA at 415 volt</p> <p>C 40 A D.P.M.C.B</p> <p>D 32 A D.P.M.C.B of 5 KA at 415 volt</p> <p>E . 6 to 25 A SP M.C.B</p> <p>F Blank plate</p>	1 4 2 3 18 6		No No No No No No	
4.	<p>CABLES : Supplying & Laying PVC cable of 1100 V grade of Copper/ aluminum conductor of following sizes in with necessary termination & clamping</p> <p>16x 4 core copper cable</p> <p>6 x 4 core Copper cable (meter to panel board)</p>	20 50		Rmt Rmt	
5.	<p>INTERNAL WIRING : Supply installation testing and commissioning INTERNAL WIRING using FIA & BIS approved make Wiring of points to be done in open/concealed manner in 25 mm dia medium guage Rigid PVC pipe. Wiring shall be done with FRLS type flexible wire of 650V/1100V. Separate pipe should be taken for circuit mains. Nos of ciruit of the same phases may be taken in same conduit as per specification. The circuit shall be laid in 38/40 mm dia medium guage rigid PVC pipe.The point rate shall include all the necessary piping and wiring from sub panel / Distribution board to switch board & switch board to the batten holder / angle holder / connector / ceiling rose all inclusive except sub panel / Dist board. The wiring shall be done as per IS standard. The looping of the wiring should be done in the switch boxes or light and fan point outlet boxes to avoid the junction boxes. The junction boxes and switch boxes for the ceiling light point, fan point, plug point etc shall be minimum 60/75 deep. All the necessary jarry should be done with machine cutter only , also jarry should be filled with cement, sand and wire mesh as required, the material cost for rough finish shall be included in point rate. Whenever pipes are required to be</p>				

	<p>laid in flooring for lighting the same shall be of heavy guage.Wiring should be done as per distribution details. Each circuit should have dedicated phase, neutral & earth wire. Wire sizes to be used as under</p> <p>For Light Points /fan point/ wall fan / 5A 3 Pin Plug</p> <ul style="list-style-type: none"> - DB to SB - 2.5sqmm for Phase & Neutral & 1.5 sqmm for Earth - SB to Point - 1.5 sqmm for Phase & Neutral & Earth <p>For 6A plug point</p> <ul style="list-style-type: none"> - 1.5 sqmm for Phase, Neutral & Earth <p>For 6/16A general purpose plug point</p> <ul style="list-style-type: none"> - 2.5 sqmm for Phase, Neutral & 1.5 sq. mm Earth <p>For 20/16A plug point for A/C and Geyser</p> <ul style="list-style-type: none"> - 4 sq.mm for Phase, Neutral & 2.5 sq. mm Earth <p>Point Wiring</p> <p>One light point controlled by one single way 6 A switch. 30 No</p> <p>Two light point controlled by single 6 A switch 16 No</p> <p>One light point controlled by two, two way 6 A switch 2 No</p> <p>15 A point for water cooler & etc</p> <p>6 A Plug point 12 No</p> <p>ceiling & Wall fan outlet point controlled by one 6 A switch and 300 W hum free electronic regulator 15 No.</p> <p>Exhaust fan outlet point controlled by one 5 single way switch located at different location. 4 No.</p> <p>Buzzer point controlled by Bell push. 3 No</p> <p>Labour for fixing Existing fan incl. servicing 12 No</p> <p>4 sq.mmline for A.C 7 No</p>				
6.	<p>POWER POINTS FOR COMPUTERS</p> <p>Supply all material & doing computer supply point with 3 nos of 6 amp 5 pin plugs with 3 nos of 6 A switch with indicator & wiring of computer point will be done through 2.5 sq. mm 3 core round flexible wire. (This cost includes the wiring from DB to Computer point.)</p>	17		No	
7	<p>DATA DISTRIBUTION :</p> <p>Installation, connection, testing and commissioning of DATA system with laying of date cables Cat 6 type as per specification and drawings. The unit rate considered on running meter basis includes laying, connection, testing and commissioning of multipair data cables through rigid PVC conduit from server to each floor / of specific area. The cable shall be installed in a concealed manner in the vertical riser including fixing &Supply & laying of 25 mm dia. rigid PVC conduit of medium gauge.</p>				

	Data Outlet Point Supplying installing, testing and commissioning of data outlet point to be done with the data wire from hub rack to individual point in pipe & with data outlet socket RJ-45 (jack type) and box. (Wire & Socket of Avaya Lucent Make)	18		No	
8.	LIGHT FIXTURES & FANS Providing & fixing, installation, testing & commissioning of light fittings & Fan as specified and shown on drawing complete with: 2x36 W Recessed Mounted type mirror optic fitting with copper ballast with tube.Philips make 2x11W Minolta type fitting with copper ballast with tube. Labour for fixing 1x36W Patti type fitting with necessary servicing of ballast with tube. 2 x 18 W square fixture Lab our P/F Fan of 42 inches Crompton make T5 fixtures Exhaust Fan	24 3 20 16 12 10 2		No No No No No No No	
9	TELEPHONE DISTRIBUTION: Supply, installation, connection, testing and commissioning of telephone system with supplying of telephone cables as per specification and drawings. The unit rate considered on running meter basis includes supply, laying, connection, testing and commissioning of multi pair telephone cables through rigid PVC conduit from tag block of each floor / of specific area to MDF located in the reception area / near EPABX CONDUITS Supply & laying of 25 mm dia. rigid PVC conduit of medium gauge. CABLING Supplying and Laying of Cat-5e cable 10 pair Flexible telephone wire where ever required in prepaid conduit. Telephone wiring shall be done with Cat-5e cable. The unit rate shall be done considered on running meter basis including supply, laying, connection, testing and commissioning of telephone voice cable. The wiring shall be done through in floor pipes for telephone outlet point including supply and fixing of terminal junction box. Approved make outlet box. Cover plates of	100 100		Rmt Rmt	

	Rj-11 with I/O connection for telephone. LOCKABLE TAG BLOCK WITH KRONE Supply & fixing of 10 pair lockable tag block with KRONE terminal TELEPHONE OUTLET POINT. Supplying, installing, testing and commissioning of one telephone point to be done with 2pair telephone wire of approved make in pre laid 25 mm dia PVC LMS pipe & with telephone 10 No. outlet socket RJ-11 (jack type) and box of the specified make.	1		No	
		6		No	
10.	EARTHING : Earthing Stations : (A) Providing earthing stations for equipment earthing as specified and shown in IS:3043 with copper plate of mentioned size complete with : a Excavation in hard soil. b Watering of pit c Brick masonry with hinged covers. d Charcoal and Salt fill. e 25mm x 3mm Cu. Strip up to Ground level f The minimum depth should be 3.5 MT or till the wet soil is reached. (B) Earth wire/ strips: Supply and laying cu. earthing strips for interconnecting the earthing stations, panels, DB's etc. in built-up trenches, on walls/ceiling, buried in ground generally as specified and shown on drawings complete. with : a Fixing accessories. b) Corrosion protection of buried conductors with bituminous coating and covered with PVC tapes. c 25 x 3 mm cu. strips. d 8 Gauge bare cu earth wire. e 40mm x 6 mm earth link fixed by necessary screws on wall. (Rate only)	Job		R.O	
10.	MUSIC SYSTEM Supplying and laying 25 mm dia P.V.C medium gauge pipe in concealed manner Supplying and laying 1.0 sq.mm x 2 core shielded wire in pre laid pipe Supplying and fixing speaker suitable for recess mounting Supplying and fixing speaker controller with base box and plate	100 100 8 2		Rmt Rmt No No	
11	Supply,Installation Testing & Commissing 9U rack incl. patchmax panel	1		job	

12	Supply,Installation Testing & Commissing. Patchcord 2feet to 3 feet	18		No	
13	Labour for removal of existing elec.& Data cable wiring. Labour for removal of existing elec.& Data cable wiring in such amanner that normal functions of bank may not disturb.	1		Job	
	Total Amount in Rs				

Amount In Words.

Less Discount (If any)

Net tender Amount

Amount In Words

Signature of contractor with seal.

Date:



