



TENDER ID	AHM202001013
DATE	16.01.2020

SBI INFRA MANAGEMENT SOLUTIONS PVT. LTD.
STATE BANK OF INDIA, 3RD FLOOR, LOCAL HEAD OFFICE, BHADRA,
LALDARWAJA, AHMEDABAD-380001

SBIIMS INVITE TENDERS ON BEHALF OF SBI FOR PROPOSED ELECTRICAL
WORKS OF MANGROL HARBOUR BRANCH, DIST. GIR SOMNATH

STATE BANK OF INDIA, RBO - 5, REGIONAL BUSINESS OFFICE,
2ND FLOOR, ABOVE SBI VERAVAL MAIN BRANCH , 80 FT ROAD
VERAVAL

FROM

SBIIMS, AHMEDABAD EMPANELLED ELECTRICAL CONTRACTORS UNDER
CATEGORY UP TO 5.00 LAKH ,RS.20.00 LAKH AND RS. 50.00 LAKH

PART – A: TECHNICAL BID

TENDER SUBMITTED BY:

NAME : _____

ADDRESS : _____

DATE : _____

ARCHITECT:

AR. DEVDATT M. PANDYA
STUDIO 919 ARCHITECTS
2ND FLOOR/8, AJITNATH SOCIETY
B/S PULKIT HIGH SCHOOL
NR. PALDI POST OFFICE
AHMEDABAD-380 007
PHONE: (079) 26630154
Email: 919studio@gmail.com



NOTICE INVITING TENDERS

SBIIMS on behalf of SBI through its Architect M/s. STUDIO 919 ARCHITECTS invites tenders in two bid system from the SBI Empanelled contractors under appropriate category for the captioned work. You are therefore advised to contact e-procurement technologies Limited, Ahmedabad and complete all the formalities at the earliest and participate in tendering process.

The details of tender are as under:

S.No.	Description	
1.	Name of work	Proposed Electrical works of MANGROL HARBOUR branch
2.	Nature of Work	Electrical Work
3.	Time allowed for completion	(45 days) 1½ Months from date of acceptance of work order.
4.	Application Fees	<p>Rs 1,000 /- (Rupees One Thousand Only) NON REFUNDABLE TENDER FEES AMOUNT TO BE PAID ONLY THROUGH SB COLLECT PAYMENT PORTAL AVAILABLE IN SBI site https://www.onlinesbi.com)</p> <p style="text-align: center;">GUIDELINES TO MAKE ONLINE TENDER FEES</p> <p style="text-align: center;">Go to SBI Internet Banking website https://www.onlinesbi.com/</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Select SBI Collect from Top Menu</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Click Check box to Proceed</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Select "All India " in state Corporate/Institution and "Commercial Services" in type of Corporate / Institution after that click go</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Select " SBI INFRA MANAGEMENT SOLUTIONS PVT. LTD." IN Commercial Services Name and Submit</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Select "Tender Application Fee" in Payment category and Enter "Tender ID " and Submit</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">The purchaser will have to fill up the fields</p>



		properly and submit upon making the payment a receipt will be generated with a reference no. on submit. The purchaser has to enclose the receipt along with EMD in Technical Bid.
5.	Earnest Money Deposit	Rs3700.00/- (Three Thousand Seven Hundred only) by means of Demand Draft / Pay Order (Valid for a period of 90 Days from the last date of submission of the tender) from any scheduled Nationalized Bank drawn in favour of SBI Infra Management Solutions Pvt. Ltd. at Bhavnagar
6.	Initial Security Deposit	2% of contract amount including EMD
7.	Total Security deposit	5% of the final bill amount including ISD.
8.	Start and end date for downloading of tender documents from Bank's website	22/01/2020 to 29/01/2020 at LINK: https://sbi.co.in/web/sbi-in-the-news/procurement-news .
9.	Online submission of technical bid on the web site "https://etender.sbi/SBI".	From : 22.01.2020 (time 12.00 hours) To 29.01.2020 (time 18.00 hours)
10.	Last date & time for submission of EMD and application fess in sealed cover	30/01/2020 by 3.00 PM
11.	Address at which (EMD & online Tender fees receipt) has to be submitted on date and Time.	Dy.Manager Electrical, SBI Infra Management Solutions Pvt.Ltd. Ground Floor, SBI Admin Office, Nr. Nilambaugh Circle, Bhavnagar-364001 On or before 30.01.2020 @ 03:00 PM
12.	Date and time of opening of technical bid online	30/01/2020 at 3:30 PM
13.	Date & time for Submission of online indicative price bid.	Date and time for submission of indicative price bid will be informed to the qualified contractor separately after scrutiny of their Technical bid
14.	Date & time for opening of online indicative price bid.	NA
15.	Date & time for e-reverse auction	NA.
16.	Liquidated Damages	0.50% of contract amount per weeks subject to max. 5% of contract value or final bill value.
17.	Defects liability period	12 Months from the date of Virtual Completion
18.	Validity of offer	90 days from the date of opening of Price-bid
19.	Value of Interim Certificate	NO INTERIM
20.	Insurance	The contractor shall obtain all necessary insurance policies as per the law applicable at the centre & shall be required to produce the original policies and receipt of the premium applicable in the matter to the Architect/Bank.



21.	Water & electricity	Water & Electricity shall be provided by the Bank at one point. However further distribution & extension & light fixture etc. with required MCB switches, switch boards, lamps, tube, etc. shall be arranged by the contractor at their own cost within the accepted tender cost. <u>Bank will recover 0.5% of final bill amount consumption of water & electricity.</u>
22.	Agency for arranging online bidding (Technical bid indicative price bid and e re- verse auction).	M/s. e-Procurement Technology , B-705, Wall Street - II, Opp. Orient Club, Ellis Bridge, Ahmedabad – 380006, State Gujarat, India Contact No.-40270506-90, 79-6813 6853 /843 /6835 / 6840 / 6857 /63 / 20 / 52
23.	Contract no of Bank"s Engineer for any technical clarification.	0278 / 2519533 / 7600040003

22. Tenders can be downloaded from the bank's website LINK: <https://sbi.co.in/web/sbi-in-the-news/procurement-news>. It shall be responsibility of the contractor to arrange and ensure that all pages of technical and financial bid are properly bound separately. Tenders in loose pages may be disqualified.
23. The contractor shall sign and stamp each page of the tender document thereby ensuring the number and sequence of all pages.
24. No conditions other than mentioned in the tender will be considered, and if given they will have to be withdrawn before opening of the price-bid.
25. The SBIIMS reserve their rights to accept or reject any or all the tenders, either in whole or in part without assigning any reason for doing so and any claim / correspondence shall be entertained in this regard.
26. Tenders received without EMD and Application Fees shall be summarily rejected and such tenders shall not be allowed to participate in the online price bidding process.
27. In case the date of opening of tenders is declared as a holiday, the tenders will be opened on the next working day at the same time.
28. SBIIMS has the right to accept / reject any / all tenders without assigning any reasons and no correspondence shall be entertained in this regard.

Yours Faithfully,

For:

AR. DEVDATT M. PANDYA
STUDIO 919 ARCHITECTS
 2ND FLOOR/8, AJITNATH SOCIETY
 B/S PULKIT HIGH SCHOOL
 NR. PALDI POST OFFICE
 AHMEDABAD-380 007
 PHONE: (079) 26630154
 Email: 919studio@gmail.com



(a) List of selected empanelled Electrical contractors for works up to Rs.5.0 Lakh:

S No	Name of Applicant	Contact Number/E-mail ID	GSTN No.
1	M/s Utkarsh Electricals, Off 405, Dalal Chamber, bejanji ketwal street, Nanpura, Surat.	9825257117 utkarshlectricals@yahoo.co.in	24AAEFU2705Q1ZX
2	M/s Dhanlaxmi Electricals, B/206, Shreenath Residency, Narol - lambha Road, Narol, Ahmedabad. 382405	9428739476 dhanlaxmielectrical9428@gmail.com	24AUOPB0440M1ZS
3	M/s Umesh Engineering Works Gala No. A-10, D M Singh Compound, Opp. Shradhha Tower, Thakur Complex, Kandiwali East, Mumbai 400101	09821098131,09869428623 umeshengineeringworks@gmail.com	27ABSPJ9380P1ZI
4	M/s Modern Engineering, FF -2, Krishna Arcade, Nr. BSNL Exchange office, Opp. Naroda GIDC, Gate No. 1, Naroda, Ahmedabad. 382330	9998957013 mordernengineering123@yahoo.com	24AKWPP7006K1ZM
5	M/s Priority Solutions, 558, Amrut nagar, Nr. Akshar Appt. Laxmipura Road, Vadodara 390032	9825352496 prioritysolutions2014@gmail.com	24AXYPS5321F2Z3
6	M/s Paresh Electric Co. B/1, Harinagar Scoety, Nr. Gurukrupa School Road, CTM, Ahmedabad26	9824129513 paresh_electric_co.@yahoo.co.in	24AKQPP3545B1Z7
7	M/s R P Enterprise, 309, Saraswati Complex, Manjal pur, Vadodara. 390011	9825467087 rpenterprise7@gmail.com	24AQPPP1197G2ZH
8	M/s Mahadev Electrical C/o Hiren kanabar Matruashish triveni Society, Main Road, Sant kabir Road, Rajkot03.	9824509312 hirenkanabar54@yahoo.com	24AKWPK7262L1ZO
9	M/s Inter Deco No.14, Opp. Agrawala School, Nr. Punjab Association, Somayampalayam post KNG Pudur Pirvu, Coimbatore 641108	9944093216 interdecocbe@gmail.com	33AMMPS9075P1ZZ
10	M/s Harshad Furniture Mart, Sadar, Moti Tanki Chawk, Nr. Elge Travels office, JigarPan Street, Opp. Vedant Hospital, Rajkot 360001.	9898198877 harshad_furniture@yahoo.com	24ABJPG7477K1Z8
11	M/s Jai Shree Tulja Electricals, GF/12, Surya deep Complex, Nr. Old Rupam Cinema, Harni Road, Vadodara.	9825252364 vipulpurohit2013@gmail.com	24AASTPP0592K1Z4
12	Riya Electricals, 64 Shiv Shankar Nagar, Malaya talav, Nr. Anuradha Society,	97239584666 riyaelectricals1988@gmail.com	24AMOPC6458N1ZJ



	Jivraj park,Ahmedabad 51		
13	Pay & Service 309,Sadguru arcade,Dehbar road one way , Nr. Jivan Commercial Bank , Rajkot - 360001	9825075667 payandservice72@gmail.com	24ABBPL8050D1Z7

List of selected empanelled Electrical contractors for works up to Rs.20.0 Lakh:

1	M/s Dhaemesh A Mewada, 123, Sangath Mall 1 Opp. Govt. Engineering College, Visat- Gandhinagar Highway, Motera, Ahmedabad. 05	9725043778, dharmeshmewada17@gmail.com	24AGSPM3021F1ZM
2	M/s Mamta Electricals, 68, Shramjivi Society no. 1, Umra , Ichhanath, Surat.	9898599899 hem_sukhadia@yahoo.com	24AAXFM2580L1ZN
3	M/s Parameter Engineering Projects, Office No. 7&8, 3rd Floor, Jyoti Plaza, Shyaml Cross Road, Satellite, Ahmedabad, 15	9824013257 hnn@parameter.in	24AALFP5055D1ZD
4	M/s Urmi Electric Co. B/5, Jaimini Appt, Nr. Lalbaug Society, Nava Vadaj, Ahmedabad.	9825342374 urmiele@yahoo.co.in	24AERPS0016F1ZO
5	M/s Vikalap Electricals, LL-1, OM Centre, Nr. Shreyas Crossing, Ambawadi, Ahmedabad. 15	9825307125 vikalp1991@yahoo.com	24AAYPP0171F1ZK
6	M/s N.K Electricals, SB/B-3, Indraprasth Complex, Opp. Veg market, Illora Park, Vadodara. 390007	9825061543 ketanna@gmail.com	24 AAGPT2486H1ZG
7	M/s R.B Trading Co. 9,GF,HH Trust Building, Nr. Kothari Pole, Gandhi Road, Ahmedabad. 01.	9824002488 rbtrading99@yahoo.co.in	24ACJPS9065N2ZR
8	M/s Gorisha Electricals A/102, Ayodhya flats, Ayodhya Town ship, B/h Motinagar, Tarsali, Vadodara. 390009	9904757686 rajesh6765@gmail.com	24ACUPJ0231E1ZZ
9	M/s Shreeji Electricals, U-10 Lake view flat, opp. Vastrapur lake, Vastrapur, Ahmedabad,	9726079224 shreejiele10@gmail.com	24BJAPK1760K1ZD
10	Kruti Electricals 626,Mandir Street,postmota,Varachha,Surat,	9723454883 archkrut@gmail.com	24AAPFK2484F2Z6
11	M/s Shivam Electrical 26,Ambikadham Society,GIDC,Vadsar Road, Nr., Vasantbihar Society, Vadodara 390010	9998538042 ajayrajput9684@gmail.com	24AQBPR7028JIZP
12	M/s K.C. Electrical & Trading D- 44, Motinagar 3, Nr. Ayodhya Township, Tarsali, Vadodara.	9408102250 kcelectricalandtrading@gmail.com	24AHQPC3051J1ZH



13	Vaidehi Enterprise 15, Trishala Residency, Nr. Ganesh Park Twin bungalows, opp. sola highcourt, nr. R.C Technical college, Sola , Ahmedabad 380 061	9327014869 piyuspatelbs@yahoo.co.in	24AAZPP4066C1ZF
14	System Protection 301/2, Silver line complex, opp. BBC Tower, Sayanji ganj , Vadodara 390020	909909498 bdm@systemprotection.in	24AAXFS4981P1ZO

List of selected empanelled Electrical contractors for works up to Rs.50.0 Lakh:

1	M/s Royal Electric Sales & Service, F/6, Vikram Chamber, Nr. Sales India, Ashram Road, Ahmedabad.	9558179999 royal.electric@yahoo.co.in	24AGXPP1052G1Z9
2	M/s Maya Transformer & Electricals, C/9, Gopinath Society, Opp. S.K Complex, India Colony Road, bapunagar, Ahmedabad. 380024	9825716962 mayatrel@yahoo.com	24ALQPR5791N1Z2
3	M/s Kirti Traders, Jeevan Mansion, Lathi Bazar, Bhavnagar,	9426538801	. 24ABLPD9631N1ZB
4	M/s Dhriti Engineers, 28, Mahadev Nagar Society, O/S Panigate, B/h Govindrao Park, Ayurvedik, Vadodara. 19	9998981088 dhritiengineers@gmail.com	24AXFPS5964B1ZE
5	M/s A.K. Electricals Engineering, Shaikh Shamsuddin Chawl, R NO. D-5, Qureshnagar, Kurla East, MUMBAI 70.	9869040950 imran@akelectricalengineering.co m	24AABPK5231A1ZD
6	M/s Indian Electric Corporation, A-1, Hemali Bungalows, Nr. Navchetan Highschool, Opp. Katchi jain Samaj, Paldi, Ahmedabad. 07	M: 9327578375 Email: info@iecprojects.co.in	24AAXPM0763B1ZP
7	M/s Niyati Engineers Soham, 1/44 Govt. Hous. Soc, 150 Ring Road, B/h Kidvai nagar, RAJKOT. 360007	9227602074 niyatiengineers@gmail.com	24ABMPC7254K1ZI
8	M/s Vimla Electricals 4, Nayandeep Appt., b/h Chief justice bungalow, Jadge's bungalow Road, Bodakdev, Ahmedabad 54.	9978828663 vimlaelectricals@gmail.com	24AAYKPP2362H1ZM
9	M/s Aum Electric Engineering Pvt.Ltd. 10, Radhenagar Society, PO Ichchhanath, Opp. Sargam Shopping Center, Athvwalines, Surat. 395007	9825093003 aumelectric1994@yahoo.co.in	24AAFCA2743N1ZM
10	M/s Alpha Enterprise A-2, Shrihari Complex, Lad Society Road, Nehrupark, Vastrapur, Ahmedabad. 15	9898516773 alphaenterprise13@gmail.com	24ABXPB6340E1ZS
11	M/s Bhagat Electricals, 101,	9825165426	24ABPPB7859L1Z3



	Shailya Sankul, Nr. Amrapali Railway Crossing, Raiya Road, Rajkot. 360001.	bhagatelectricals@yahoo.co.in	
12	M/s Sai Electrical Works, 19/2/28 Store lane off SA brelvi road, Bahadur Manjil, Fort bazar gate, Mumbai.	7666654111 saielectricworks@gmail.com	27AAAPP3577F1ZM
13	Patel Electricals 1/A Aastha Complex, Nr. Sanskarmandal Chowk, Talaja Road, Bhavnagar. Ph: 0278-2225584,	9374754747,9825088095 patelelectricals55@gmail.com,	24AANFP8435H1ZX
14	Power Control 18,Sur Sarthi complex, b/h Rudra Complex,Ambawadi,Ahmedabad, 08	9904004123 info@powercontrol.co	24AAEFP1154G2ZL
15	S.R.Electricals 4th floor, /402 Sahyog Elena 57 to 60, Chintamani society ,VIP Main Road, Karelibaug, Vadodara390018	9898161070 srelectric73@yahoo.com	24AGTPS9279G1ZH



FORM TENDER

To,
The Circle Head & VP (CIVIL),
Circle Office,
SBI Infra Management Solutions Pvt. Ltd.,
Ahmedabad- 380001.

Dear Sir,

Having examined the drawings, specification, 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 thereto 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, design, drawings and instructions in writing referred to in conditions of tender, the Articles of Agreement, Special Conditions, Schedule of Quantities and Conditions of Contract and with such materials as are provided for by, and in all other respects in accordance with such conditions so far as they may be applicable.

MEMORANDUM

Description of work	Proposed Electrical works of MANGROL HARBOUR branch
Earnest Money	Rs. 3700.00 - (Three Thousand Seven Hundred only) by means of Demand Draft / Pay Order from any scheduled Nationalized Bank drawn in favour of SBI Infra Management Solutions Pvt. Ltd. at Bhavnagar.
Percentage, if any, to be deducted from Bills and total amount to be retained	10 % from Running Bills, subject to maximum Total 5% of contract amount or actual Final Bill value including EMD & Initial Security Deposit.
Time allowed for completion of the Works from fourteenth day after the date of written order or date of handing over of the site (whichever is later) to commence the work	(45 days)

I/We have deposited a sum of **Rs.3,700/- (Three Thousand Seven Hundred only)** of the total tender amount as Earnest Money with the SBIIMS, Bhavnagar which is not to bear any interest. Should I / We fail to execute the Contract when called upon to do so I/ We do hereby agree that this sum shall be forfeited by me/us to SBI Infra Management Solutions Pvt. Ltd.



1) Our Bankers are: i)

ii)

The names of partners of our firm are: i)

ii)

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)

Yours faithfully,

Signature of Contractors.

Signature and addresses of Witnesses

i)

i



ARTICLES OF AGREEMENT

(On non-judicial Stamp Paper of Rs. 500/- or as per latest Govt. Rules)

ARTICLES OF AGREEMENT made the _____ date _____ of _____ between State Bank of India (SBI) , having its office at Mumbai herein after called" the Service Provider" of _____ the One Part and WHEREAS the SBIIMS PVT.LTD. is desirous of _____

and has caused drawings and specifications describing the work to be done to be prepared by **M/s. Studio919 Architects**, its Architects.

AND WHERE AS the said Drawings numbered _____ to _____ inclusive, the Specifications and the Schedule of Quantities 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 herein and to the Conditions set forth herein in the Special Conditions and in the Schedule of Quantities and Conditions of Contract (all of which are collectively hereinafter referred to as "the said conditions") the works shown upon the said Drawings and / or described in the said Specifications and included in the Schedule of Quantities at the respective rates therein set forth amounting to the sum as therein arrived at our such other sum as shall become payable there under (hereinafter referred to as "the said Contract Amount.)

NOW IT IS HEREBY AGREED AS FOLLOWS:

- 1) In consideration of the said Contract Amount 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 upon the said Drawings and described in the said Specifications and the priced Schedule of Quantities.
- 2) The Employer shall pay to the Contractor, the said Contract Amount, or such other sum as shall become payable, at the times and in the manner specified in the said Conditions.

The term "the Architects" in the said Conditions shall mean the **M/s. Studio919 Architects**, or in the event of their ceasing to be the Architects for the purpose of this Contract for whatever reason, such other person or persons as shall be nominated for that purpose by the Employer, not being a person to whom the Contractor shall object for reasons considered to be sufficient by the Employer, PROVIDED ALWAYS that no person or persons subsequently appointed to be Architects under this Contract shall be entitled to disregard or overrule any previous decisions or approval or direction given or expressed in writing by the outgoing Architects for the time being.

- 3) The said Conditions and Appendix thereto shall be read and construed as forming



part of this Agreement, and the parties hereto shall respectively abide by submit themselves to the said Conditions and perform the Agreements on their part respectively in the said Conditions contained.

- 4) The Plans, Agreements and Documents mentioned herein shall form the basis of this Contract.
- 5) This Contract is neither a fixed lump-sum contract nor a piece work contract but a contract to carry out the work in respect of the entire building complex to be paid for according to actual measured quantities at the rates contained in the Schedule of Quantities and Rates or as provided in the said Conditions.
- 6) The Contractor shall afford every reasonable facility for the carrying out of all works relating to ELECTRICAL works, installation of lifts, Telephone, electrical installations, fittings air-conditioning and other ancillary works in the manner laid down in the said Conditions, and shall make good any damages done to walls, floors, etc. after the completion of his work.
- 7) The SBIIMS reserves to itself the right of altering the drawings and nature of the work by adding to or omitting any items of work or having portions of the same carried out without prejudice to this Contract.
- 8) Time shall be considered as the essence of this Contract and the Contractor hereby agrees to commence the work soon after the Site is handed over to him or from the date of issue of formal work order as provided for in the said Conditions whichever is later and to complete the entire work within **45 days** subject to nevertheless the provisions for extension of time.
- 9) All payments by the SBI under this contract will be made only at Ahmedabad.
- 10) All disputes arising out of or in any way connected with this agreement shall be deemed to have arisen at Ahmedabad and only the courts in Ahmedabad shall have jurisdiction to determine the same.
- 11) That the several parts of this Contract have been read by the Contractor and fully understood by the Contractor.

IN WITNESS WHERE OF THE SBIIMS and the Contractor have set their respective hands to these presents and two duplicates hereof the day and year first hereinabove written.

SIGNATURE CLAUSE

SIGNED AND DELIVERED by the

_____By the (Employer)

hand of Shri _____



(Name and Designation) In the

(Signature of Employer)

presence of:

1) Shri /Smt. _

(Signature of Witness)

Address _____

(Witness)

SIGNED AND DELIVERED by the

_____ By the
(Contractor)

(Signature of Contractors)

in the presence of:

Shri/ Smt. _____

(Signature of Witness)

Address _____

(Witness)



SAMPLE BUISNESS RULE DOCUMENT

ONLINE E-TENDERING FOR PROPOSED ELECTRICALS WORKS OF MANGROL HARBOUR BRANCH DIST.GIR SOMNATH

(A) Business rules for E-tendering:

1. Only empanelled **Electrical** contractors with SBI under appropriate category who are invited by the project Architect/SBIIMS shall only be eligible to participate.
2. SBIIMS will engage the services of an E-tendering service provider who will provide necessary training and assistance before commencement of online bidding on Internet.
3. In case of e-tendering, SBIIMS will inform the vendor in writing, the details of service provider to enable them to contact and get trained.
4. Business rules like event date, closing and opening time etc. also will be communicated through service provider for compliance.
5. Contractors have to send by email, the compliance form in the prescribed format (provided by service provider), before start of E-tendering. Without this the vendor will not be eligible to participate in the event.
6. The Contractors will be required to submit the various documents in sealed Envelope to the office of SBI Infra Solutions Pvt Ltd. at the address mentioned hereinbefore by the stipulated date i.e. (1) Hard Copy of Technical Bid duly signed and stamped on each page (2) Demand Draft of specified amount of EMD (3) **Online Tender Fees receipt**. Contractors not submitting any one or more documents shall not be eligible to participate in the on-line price bidding.
7. E-tendering will be conducted on schedule date &time.
8. **The e-tendering will be treated as closed only when the bidding process gets closed in all respects for the item listed in the tender.**

(B) Terms & conditions of E-tendering:

SBIIMS shall finalize the Tender through e-tendering mode for which **M/s. e-Procurement Technology, Ahmedabad** has been engaged by SBIIMS an authorized service provider. Please go through the guidelines given below and submit your acceptance to the same along with your Commercial Bid.

1. E-tendering shall be conducted by SBIIMS through **M/s. e-Procurement Technology, Ahmedabad.**, on pre-specified date. While the Contractors shall be quoting from their own offices/ place of their choice, Internet connectivity and other paraphernalia requirements shall have to be ensured by Contractors themselves. In the event of failure of their Internet connectivity,(due to any reason whatsoever it may be) it is the bidders' responsibility.



In order to ward-off such contingent situation bidders are requested to make all the necessary arrangements/alternatives such as back-up power supply whatever required so that they are able to circumvent such situation and still be able to participate in the E-tendering successfully. Failure of power at the premises of Contractors during the E-tendering can not be the cause for not participating in the E-tendering. On account of this the time for the E-tendering can not be extended and SBIIMS is not responsible for such eventualities.

2. M/s. **e-Procurement Technology, Ahmedabad.**, shall arrange to train your nominated person(s), without any cost to you. They shall also explain you all the Rules related to the E- tendering. You are required to give your compliance on it before start of bid process.
3. BIDDING CURRENCY AND UNIT OF MEASUREMENT: Bidding will be conducted in Indian currency & Unit of Measurement will be displayed in Online E-tendering.
4. BID PRICE: The Bidder has to quote the rate as per the Tender Document provided by SBIIMS their appointed Architects.
5. VALIDITY OF BIDS: The Bid price shall be firm for a period specified in the tender document and shall not be subjected to any change whatsoever.
6. Procedure of E-tendering:

i. Online E-tendering:

- (a) The hard copy of the Technical as well as Price Bid is available on the Bank's website during the period specified in the NIT.
 - (b) Online e-tendering is open to the empanelled bidders who receive NIT from the Architect and qualified for participating in the price bidding as provisions mentioned hereinabove through SBIIMS approved Service Provider.
 - (c) The Price-Bid shall be made available online by the Service Provider wherein the contractors will be required to fill-in their Item-wise rates for each item.
 - (d) The Contractors are advised not to wait till the last minute to submit their online item-wise quote in the price bid to avoid complications related with internet connectivity, network problems, system crash down, power failure, etc.
 - (e) It is mandatory to all the bidders participating in the price bid to quote their rates for each and every item.
 - (f) In case, contractor fails to quote their rates for any one or more tender items, their tender shall be treated as **"Incomplete Tender"** and shall be liable for rejection.
7. LOG IN NAME & PASSWORD: Each Bidder is assigned a Unique User Name &



Password by M/s. **e-Procurement Technology, Ahmedabad**. The Bidders are requested to change the Password after the receipt of initial Password from M/s. **e-Procurement Technology, Ahmedabad**. All bids made from the Login ID given to the bidder will be deemed to have been made by the bidder.

8. BIDS PLACED BY BIDDER: Bids will be taken as an offer to execute the work as specified. Bids once made, cannot be cancelled / withdrawn and the Bidder shall be bound to execute the work at the quoted bid price. In case the L-1 Bidder backs out or fail to complete the work as per the rates quoted, SBIIMS shall at liberty to take action as deemed necessary including de-paneling such contractors and forfeiting their EMD
9. At the end of the E-tendering, SBIIMS will decide upon the winner. SBIIMS decision on award of Contract shall be final and binding on all the Bidders.
10. SBIIMS shall be at liberty to cancel the E-tendering process/tender at any time, before ordering, without assigning any reason.
11. SBIIMS shall not have any liability to bidders for any interruption or delay in access to the site irrespective of the cause.
12. Other terms and conditions shall be as per your techno-commercial offers and other correspondences till date.
13. OTHER TERMS & CONDITIONS:
 - The Bidder shall not involve himself or any of his representatives in Price manipulation of any kind directly or indirectly by communicating with other suppliers / bidders.
 - The Bidder shall not divulge either his Bids or any other exclusive details of SBIIMS to any other party.
 - SBIIMS decision on award of Contract shall be final and binding on all the Bidders.
 - SBIIMS reserve their rights to extend, reschedule or cancel any E-tendering within its sole discretion.
 - SBIIMS or its authorized service provider M/s. **e-Procurement Technology, Ahmedabad** shall not have any liability to Bidders for any interruption or delay in access to the site irrespective of the cause.
 - SBIIMS or its authorized service provider M/s. **e-Procurement Technology, Ahmedabad** is not responsible for any damages, including damages that result from, but are not limited to negligence.



- SBIIMS or its authorized service M/s. **e-Procurement Technology, Ahmedabad** will not be held responsible for consequential damages, including but not limited to systems problems, inability to use the system, loss of electronic information etc.

N.B.

- All the Bidders are required to submit the Process Compliance Statement (Annexure-II) duly signed to M/s. **e-Procurement Technology, Ahmedabad**.
- **All the bidders are requested to ensure that they have a valid digital signature certificate well in advance to participate in the online even**



PROCESS COMPLIANCE STATEMENT (ANNEXURE II)

(The bidders are required to print this on their company's letter head and sign, stamp before emailing)

To,
M/s. **e-Procurement Technology**,
B-705, Wall Street - II, Opp. Orient Club, Ellisbridge,
Ahmedabad – 380006,
State Gujarat, India

E:yashrajsinh@auctiontiger.net

D: +91 79 40016815/6824

Email:

AGREEMENT TO THE PROCESS RELATED TERMS AND CONDITIONS FOR THE ONLINE E-TENDERING FOR PROPOSED ELECTRICALS WORKS OF MANGROL HARBOUR BRANCH. DIST. GIR SOMNATH

Dear Sir,

This has reference to the Terms & Conditions for the E-tendering mentioned in the Tender document

This letter is to confirm that:

- 1) The undersigned is authorized representative of the company.
- 2) We have studied the Commercial Terms and the Business rules governing the E-tendering as mentioned in RFP of SBIIMS as well as this document and confirm our agreement to them.
- 3) We also confirm that we have taken the training on the E-tendering tool and have understood the functionality of the same thoroughly.
- 4) We confirm that SBIIMS and M/s. **e-Procurement Technology, Ahmedabad** shall not be liable & responsible in any manner whatsoever for my/our failure to access & bid on the e-E-tendering platform due to loss of internet connectivity, electricity failure, virus attack, problems with the PC, any other unforeseen circumstances etc. before or during the E- tendering event.
- 5) We confirm that we have a valid digital signature certificate issued by a valid Certifying Authority
- 6) We, hereby confirm that we will honor the Bids placed by us during the E-tendering process.

With regards,

Date:

Signature with company seal Name:

Company / Organization:

Designation within Company / Organization: Address of Company / Organization:

Scan it and send to this Document on -----



SECTION – 1

INSTRUCTIONS TO THE TENDERERS

1.0 Scope of work

Sealed Tenders are invited by SBIIMS for and behalf of SBI for the work of Proposed Electrical works for Mangrol Harbour Branch Dist. Gir Somnath

1.1 Site and its location

The proposed work is to be carried out Mangrol Harbour Branch Dist. Gir Somnath

2.0 Tender documents

- 2.1** The work has to be carried out strictly according to the conditions stipulated in the tender consisting of the following documents and the most workmen like manner.

Instructions to tenderers

General conditions of Contract

Special conditions of Contract

Additional Specifications

Drawings

Priced bid A

- 2.2** The above documents shall be taken as complementary and mutually explanatory of one another but in case of ambiguities or discrepancies, shall take precedence in the order given below;

- a) Price Bid
- b) Additional Specifications
- c) Technical specifications
- d) Drawings
- e) Special conditions of contract
- f) General conditions of contract
- g) Instructions to Tenderers

- 2.3** Complete set of tender documents including relative drawings can be downloaded from the website www.sbi.co.in

- 2.4** The tender documents are not transferable.

3.0 Site Visit:

- 3.1** The tenderer must obtain himself on his own responsibility and his own expenses all information and data that may be required for the purpose of filling this tender document



and enter into a contract for the satisfactory performance of the work. The tenderer is requested satisfy himself regarding the availability of water, power, transport and communication facilities, the character quality and quantity of the materials, labour, the law and order situation, climatic conditions local authorities requirement, traffic regulations etc; The tenderer will be fully responsible for considering the financial effect of any or all the factors while submitting his tender.

4.0 Earnest Money:

- 4.1 The tenderers are requested to submit the Earnest Money **Rs3700.00/- (Three Thousand Seven Hundred only)** by means of Demand Draft / Pay Order (Valid for a period of 90 Days from the last date of submission of the tender) from any scheduled Nationalized Bank drawn in favour of SBI Infra Management Solutions Pvt. Ltd. at Bhavnagar.
- 4.2 EMD in any other form other than as specified above will not be accepted. Tender not accompanied by the EMD in accordance with clause 4.1 above shall be rejected.
- 4.3 No interest will be paid on the EMD.
- 4.4 EMD of unsuccessful tenderer will be refunded within 30 days of award of Contract.
- 4.5 EMD of successful tenderer will be retained as a part of security deposit.
- 5.0 Initial Security Deposit:

The successful tenderer will have to submit a sum equivalent to 2% of accepted tender value less EMD by means of DD drawn in favour of SBI Payable at Veraval within a period of 7 days of acceptance of tender.

5.1 Security Deposit:

Total security deposit shall be 5% of contract value. Out of this 2% of contract value is in the form of Initial Security Deposit (ISD). Balance 3% shall be deducted from the running account bill of the work at the rate of 10% of the respective running account bill i.e., deduction from each running bill account will be @ 10% till Total Security Deposit (TSD) including ISD reaches to 5% of contract value. The 50% of the Total Security Deposit shall be paid to the contract on the basis of architect's certifying the virtual completion. The balance 50% would be paid to the contractors after the defects liability period as specified in the contract.

5.2 Additional Security Deposit:

In case L-1 bidder quotes abnormally low rates (i.e. 10% or more, below estimated project cost), the bank may ask such bidder to deposit additional security deposit (ASD) equivalent to difference of estimated cost vis-à-vis L-1 quoted amount for due fulfillment



of contract. Such ASD could be in the joint name of the Bank and bidder in the form of FDR / Bank's guarantee as per format approved by the Bank. On successful completion of work ASD will be returned to the contractor. In case contractor fails to complete the work in time or as per tender specification or leave the job incomplete, the bank will be at liberty to recover the dues from ASD or to forfeit such ASD as the case may be within its sole discretion.

No interest shall be paid to the amount retained by the Bank as Security Deposit for the defect liability period of one year from the date virtual completion certificate (VCC). However, interest on FDR for additional security deposit will be received by the bidder.

5.3 Signing of contract Documents:

The successful tenderer shall be bound to implement the contract by signing an agreement and conditions of contract attached herewith within 15 days from the receipt of intimation of acceptance of the tender by the Bank. However, the written acceptance of the tenders by the Bank will constitute a binding agreement between the Bank and successful tenderer whether such formal agreement is subsequently entered in to or not.

6.0 Completion Period:

Time is essence of the contract. The work should be completed in all respect accordance with the terms of contract within a period of **45 days** from the date of award of work.

7.0 Validity of tender:

Tenders shall remain valid and open for acceptance for a period of 90 days from the date of e-reverse auction. If the tenderer withdraws his/her offer during the value period or makes modifications in his/her original offer which are not acceptable to Bank without prejudice to any other right or remedy the Bank shall be at liberty forfeit the EMD.

8.0 Liquidated Damages:

The liquidated damages shall be 0.50% per week subject to a maximum of 5% of contract value.

9.0 Rate and prices:

9.0.1 In case of item rate tender:

The tenderers shall quote their rates for individual items both in words and figure. In case of discrepancy between the rate quoted in words and figures, the unit rate quantity 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 need not quote their rates for which no quantities have been given. In



case the tenderers quote their rates for such items those rates will be ignored and will not be considered during execution.

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 Architect/ SBIIMS

Each page of the BOQ shall be signed by the authorized person and cutting or over writing shall be duly attested by him.

Each page shall be totaled and the grand total shall be given.

The rate quoted shall be firm and shall include all costs, allowances, materials, labours, taxes etc. except G.S.T, which shall be payable / reimbursed at actual

The SBIIMS reserve their rights to accept any tenders, either in whole or in part or may entrust the work in phases or may drop the part scope of work at any stage of the project within its sole discretion without assigning any reason(s) for doing so and no claim / correspondence shall be entertained in this regard.

SIGNATURE OF THE CONTRACTOR WITH SEAL



GENERAL CONDITIONS OF CONTRACT

1.0 Definitions:-

“Contract means the documents forming the tender and the acceptance thereof and the formal agreement executed between SBI Infra Management Solutions Pvt. Ltd. (client) and the contractor, together with the documents referred there in including these conditions, the specifications, designs, drawings and instructions issued from time to time by the Architects / Bank and all these documents taken together shall be deemed to form one contract and shall be complementary to one another.

In the contract the following expressions shall, unless the context otherwise requires, have the meaning hereby respectively assigned to them.

1.0.1 ‘SBIIMS’ shall mean SBI Infra Management Solutions Pvt. Ltd.(Project Management Services Provider-PMS) having its Circle Office at Third Floor, SBI, LHO, Bhadra, Laldarwaja, Ahmedabad-380001 and includes the client’s representatives, successors and assigns.

1.0.2 ‘Architects/ Consultants’ shall mean **M/s Studio 919**, Architects & Interior Designers, Ahmedabad.

1.0.3 ‘Site Engineer’ shall mean an Engineer appointed by the SBIIMS at site as their representative for day-to-day supervision of work and to give instructions to the contractors.

1.0.4 ‘The Contractor’ shall mean the individual or firm or company whether incorporate not, undertaking the works and shall include legal personal representative of individual or the composing the firm or company and the permitted assignees of individual or firms of company.

The expression ‘works’ or ‘work’ shall mean the permanent or temporary work description in the “Scope of work” and/or to be executed in accordance with the contract includes materials, apparatus, equipment, temporary supports, fittings and things of kinds to be provided, the obligations of the contractor hereunder and work to be done by the contractor under the contract.

1.0.5 ‘Engineer’ shall mean the representative of the Architect/consultant.

1.0.6 ‘Drawings’ shall mean the drawings prepared by the Architects and issued by the Engineer and refer red to in the specifications and any modifications of such drawings as may be issued by the Engineer from time to time Contract value shall mean value of the entire work as stipulated in the letter of acceptance of tender subject such additions there to or deductions there from as may be made under the provide herein after



contained.

1.0.7 Specifications' shall mean the specifications referred to in the tender and modifications thereof as may time to time be furnished or approved by the Architect/Consultant.

1.0.8 "Month" means calendar month.

1.0.9 "Week" means seven consecutive days.

1.0.10 "Day" means a calendar day beginning and ending at 00 Hrs and 24 Hrs respectively.

1.1.11 "SBIIMS's Engineer" shall mean The Civil/Electrical Engineer in-charge of the Project, as nominated by the Circle Head and Vice President, SBIIMS, Ahmedabad

1.1.12 The following shall constitute the Joint Project Committee (herein under referred to as JPC) for assessing and reviewing the progress of the work on the project and to issue instructions or directions from time to time for being observed and followed by the Architects Site Engineer / PMC and other consultants / contractors engaged in the execution of the project.

- i) Vice President – Circle Head of SBIIMS
- ii) SBIIMS Engineer (Civil and Electrical) in-charge of the Project
- iii) Concerned partner of the Architects and their Resident Architect Member.

CLAUSE

1.0 Total Security Deposit

Total Security deposit comprise of Earnest Money Deposit, Initial security deposit and Retention Money

1.1 Earnest Money Deposit-

The tenderer shall furnish EMD of **Rs. 3,700/- (Rupees Three Thousand Seven Hundred only)** in the form of Demand draft or bankers cheque drawn in favour of **SBI Infra Management solutions Pvt. Ltd. payable** at Bhavnagar., on any Scheduled Bank. No tender shall be considered unless the EMD is so deposited in the required form. No interest shall be paid on this EMD. The EMD of the unsuccessful tenderer shall be refunded soon after the decision to award the contract is taken without interest. The EMD shall stand absolutely forfeited if the tenderer revokes his tender at any time the period when he is required to keep his tender open acceptance by the SBIIMS or after it is accepted by the SBIIMS , the contractor fails to enter into a formal agreement or fails to pay the initial security deposit as stipulated or fails to commence the commence the work within the stipulated time.

1.2 Initial Security Deposit (ISD)

The amount of ISD shall be 2% of accepted value of tender including the EMD in the form of DD/Fixed Deposit Receipt (FDR) drawn on any scheduled Bank and shall be



deposited within 15 days from the date of acceptance of tender.

1.3 ADDITIONAL SECURITY DEPOSIT / PERFORMANCE GUARANTEE

In case L-1 bidder quotes abnormally low rates (i.e. 10% or more, below estimated project cost), the bank may ask such bidder to deposit additional security deposit (ASD) equivalent to difference of estimated cost vis-à-vis L-1 quoted amount for due fulfillment of contract. Such ASD could be in the joint name of the Bank and bidder in the form of FDR / Bank's guarantee as per format approved by the Bank. On successful completion of work ASD will be returned to the contractor. In case contractor fails to complete the work in time or as per tender specification or leave the job incomplete, the bank will be at liberty to recover the dues from ASD or to forfeit such ASD as the case may be within its sole discretion.

No interest shall be paid to the amount retained by the Bank as Security Deposit for the defect liability period of one year from the date virtual completion certificate (VCC). However, interest on FDR for additional security deposit will be received by the bidder.

1.4 Retention Money:

Besides the SD as deposited by the contractor in the above said manner, the Retention money shall be deducted from the running account bill at the rate of 10% of the gross value of work done by the contractor and claimed in each bill provided the total security deposit i.e. ISD plus EMD plus Retention Money shall both together not exceed 5% of the contract value. The 50% of the total security deposit shall be refunded to the contractor without any interest on issue of Virtual Completion certificate by the Architect/consultant. The balance 50% of the total security deposit shall be refunded to the contractors without interest within fifteen days after the end of defects liability period provided the contractor has satisfactorily attended to all defects in accordance with the conditions of contract including site clearance.

2.0 Language:

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

3.0 Errors, omissions and discrepancies:

In case of errors, omissions and/ or disagreement between written and scaled dimensions on the drawings or between the drawings and specifications etc., the following order shall apply.

- i) Between scaled and written dimension (or description) on a drawing, the latter shall be adopted.
- ii) Between the written or shown description or dimensions in the drawings and the corresponding one in the specification the former shall be taken as correct.
- iii) Between written description of the item in the specifications and descriptions in bills of quantities of the same item, the former shall be adopted:=
 - a) In case of difference between rates written in figures and words, the rate in words shall prevail.



- b) Between the duplicate / subsequent copies of the tender, the original tender shall be taken as correct.

4.0 Scope of Work:

The contractor shall carryout complete and maintain the said work in every respect strictly accordance with this contract and with the directions of and to the satisfaction Bank to be communicated through the architect/consultant. The architect/consultant at the directions of the SBIIMS from time to time issue further drawings and / or write instructions, details directions and explanations which are here after collectively references to as Architect's / consultant's instructions in regard to the variation or modification of the design, quality or quantity of any work or the addition or omission or substitution work. Any discrepancy in the drawings or between BOQ and / or drawings and/or specifications. The removal from the site of any material brought thereon by the Contractor and any substitution of any other materials therefore the removal and/or re-execution of any work executed by him. The dismissal from the work of any person engaged the re upon.

5.0 i) Letter of Acceptance:

Within the validity period of the tender the SBIIMS shall issue a letter of acceptance directly or through the architect by registered post or otherwise depositing at the of the contractor as given in the tender to enter into a Contract for the execution of the work as per the terms of the tender. The letter of acceptance shall constitute a bind contract between the SBIIMS and the contractor.

ii) Contract Agreement:

On receipt of intimation of the acceptance of tender from the SBIIMS /Architect the successful tenderer shall be bound to implement the contract and within fifteen days there of shall sign an agreement in a non-judicial stamp paper of appropriate value.

6.0 Ownership of drawings:

All drawings, specifications and copies thereof furnished by the SBIIMS / SBI through its Architect / consultants are the properties of the SBIIMS They are not to be used on other work.

7.0 Detailed drawings and instructions:

The SBIIMS through its architects / consultants shall furnish with reasonable proper additional instructions by means of drawings or otherwise necessary for the execution of the work. All such drawings and instructions shall be consistent with contract documents, true developments thereof and reasonably inferable there.

The work shall be executed in conformity there with and the contractor prepare a detailed programme schedule indicating therein the date of start and completion of various activities on receipt of the work order and submit the same to the SBIIMS through the architect/consultant



7(a) Copies of agreement:

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

8.0 Liquidated damages:

If the contractor fails to maintain the required progress in terms of clause 6.0 of GOC or to complete the work and clear the site including vacating their office on or before the contracted or extended date or completion, without justification in support of the cause of delay, he may be called upon without prejudice to any other right of remedy available under the law to the SBIIMS on account of such breach to pay a liquidated damages at the rate of 0.50% of the contract value which subject to a maximum of 5% of the contract value.

9.0 Materials, Appliances and Employees:

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

10.0 Permits, Laws and Regulations:

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

11.0 Setting out Work:

The contractor shall set out the work and shall be responsible for the true and perfect setting out of the same and for the correctness of the positions, levels, dimensions, and alignment of all parts thereof and get it approved by the architect / consultant before proceeding with the work. If at any time any error in this respect shall appear during the progress of the works, irrespective of the fact that the layout had been approved by, the architect / consultant the contractor shall be responsible for the same and shall his own expenses rectify such error, if so, required to satisfaction of the SBIIMS



12.0 Protection of works and property:

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

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

13.0 Inspection of work:

The SBIIMS / Architect / Consultant or their representatives shall at all reasonable times have free access to the work site and / or to the workshop, factories, or other places where materials are lying or from where they are obtained and the contractor shall give every facility to the SBIIMS/Architect/consultant and their representatives necessary for inspection and examination and test of the materials and workmanship. No person unless authorized by the SBIIMS/ Architect

/Consultant except the representative of Public authorities shall be allowed on the work at any time. The proposed work either during its construction stage or its completion can also be inspected by the Chief Technical Examiner's Organization a wing of Central Vigilance commission.

14.0 Assignment and subletting:

The whole of work included in the contract shall be executed the contractor and he shall not directly entrust and engage or indirectly transfer, assign or underlet the contract or any part or share there of or interest therein without the written consent of the SBIIMS through the Architect and no undertaking shall relieve the contractor from the responsibility of the contractor from active & superintendence of the work during its progress.

15.0 Quality of materials, workmanship & Test:

All materials and workmanship shall be best of the respective kinds described in the contract and in accordance with Architect/consultant instructions and shall be subject from time to time to such tests as the architect/consultant may direct at the place of manufacture or fabrication or on the site or an approved testing laboratory. The contractor shall provide such assistance, instruments, machinery, labor, and materials as are normally required for examining measuring sampling and testing any material or part of work before in corporation in the work for testing as may be selected and required by the architect/consultant.



ii) Samples:

All samples of adequate numbers, size, shades & pattern as per specifications shall be supplied by the contractor without any extra charges. If certain items proposed to be used are of such nature that samples cannot be presented or prepared at the site detailed literature / test certificate of the same shall be provided to the satisfaction of the Architect/consultant before submitting the sample/literature the contractor shall satisfy himself that the material / equipment for which he is submitting the sample / literature meet with the requirement of tender specification. Only when the samples are approved in writing by the architect/consultant the contractor shall proceed with the procurement and installation of the particular material / equipment. The approved samples shall be signed by the Architect / Consultant for identification and shall be kept on record at site office until the completion of the work for inspection / comparison at any time. The Architect/Consultant shall take reasonable time to approve the sample. Any delay that might occur in approving the samples for reasons of its not meeting the specifications or other discrepancies inadequacy in furnishing samples of best qualities from various manufacturers and such other aspects causing delay on the approval of the materials / equipment etc. shall be to the account of the contractor.

iii) Cost of tests:

The cost of making any test shall be borne by the contractor if such test is intended by or provided for in the specification or BOQ.

iv) Costs of tests not provided for:

If any test is ordered by the Architect/ Consultant which is either

- a) If so intended by or provided for or (in the cases above mentioned) is not so particularized, or though so intended or provided for but ordered by the Architect / Consultant to be carried out by an independent person at any place other than the site or the place of manufacture or fabrication of the materials tested or any Government / approved laboratory, then the cost of such test shall be borne by the contractor.

16.0 Obtaining information related to execution of work:

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

17.0 Contractor's superintendence:

The contractor shall give necessary personal superintendence during the execution the works and as long, thereafter, as the Architect/Consultant may consider necessary until the expiry of the defects liability period, stated hereto.

18.0 Quantities:

The bill of quantities (BOQ) unless or otherwise stated shall be deemed to have been



prepared in accordance with the Indian Standard Method of Measurements and quantities. The rate quoted shall remain valid for variation of quantity against individual item to any extent. The entire amount paid under Clause 19, 20 hereof as well as amounts of prime cost and provision sums, if any, shall be excluded.

19.0 Works to be measured:

The Architect/Consultant may from time to time intimate to the contractor that he requires the work to be measured and the contractor shall forthwith attend or send a quantity representative to assist the Architect in taking such measurements and calculation and to furnish all particulars or to give all assistance required by any of them. Such measurements shall be taken in accordance with the Mode of measurements detail in the specifications. The representative of the Architect / Consultant shall take measurements with the contractor's representative and the measurements shall be entered in the measurement book. The contractor or his authorized representative shall sign all the pages of the measurement book in which the measurements have been recorded in token of his acceptance. All the corrections shall be duly attested by both representatives. No over writings shall be made in the M book should the contractor not attend or neglect or omit to depute his representative to take measurements the measurements recorded by the representative of the Architect/consultant shall be final. All authorized extra work, omissions and all variations made shall be included such measurement.

20.0 Variations:

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

21.0 Valuation of Variations:

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

- (i) The net rates or prices in the contract shall determine the valuation of the extra work



where such extra work is of similar character and executed under similar conditions as the work price herein.

(ii) Rates for all items, wherever possible should be derived out of the rates given in the priced BOQ.

The net prices of the original tender shall determine the value of the items omitted, provided if omissions do not vary the conditions under which any remaining items of Works are carried out, otherwise the prices for the same shall be valued under sub-Clause 'c' hereunder.

Where the extra works are not of similar character and/or executed under similar conditions as aforesaid or where the omissions vary the conditions under which any remaining items or works are carried out, then the contractor shall within 7 days of the receipt of the letter of acceptance inform the Architect/ consultant of the rate which he intends to charge for such items of work, duly supported by analysis of the rate or rates claimed and the Architect/consultant shall fix such rate or prices as in the circumstances in his opinion are reasonable and proper, based on the market rate.

Where extra work cannot be properly measured or valued the contractor shall be allowed day work prices at the net rates stated in the tender, of the BOQ or, if not, so stated then in accordance with the local day work rates and wages for the district; provided that in either case, vouchers specifying the daily time (and if required by the Architect/Consultant) the workman's name and materials employed be delivered for verifications to the Architect /consultant at or before the end of the week following that in which the work has been executed.

It is further clarified that for all such authorized extra items where rates cannot be derived from the tender, the Contractor shall submit rates duly supported by rate analysis worked on the 'market rate basis for material, labour hire / running charges of equipment and wastages etc. plus 15% towards establishment charges, contractor's overheads and profit. Such items shall, not be eligible for escalation.

22.0 Final measurement:

The measurement and valuation in respect of the contract shall be completed within two months of the virtual completion of the work.

23.0 Virtual Completion Certificate (VCC):

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

Clear the site of all scaffolding, wiring, pipes, surplus materials, contractor's labour equipment and machinery.

Demolish, dismantle and remove the contractor's site office, temporary works, structure



including labour sheds/camps and constructions and other items and things whatsoever brought upon or erected at the site or any land allotted to the contractor by the SBIIMS not incorporated in the permanent works.

Remove all rubbish, debris etc. from the site and the land allotted to the contractor by the SBIIMS and shall clear, level and dress, compact the site as required by the SBIIMS

Shall put the SBIIMS in undisputed custody and possession of the site and all land allot by the SBIIMS

Shall hand over the work in a peaceful manner to the SBIIMS

All defects / imperfections have been attended and rectified as pointed out by the Architects to the full satisfaction of SBIIMS

Upon the satisfactory fulfillment by the contractor as stated above, the contractor is entitled to apply to the Architect / consultant is satisfied of the completion of work. Relative to which the completion certificate has been sought, the Architect/ consultant shall within fourteen (14) days of the receipt of the application for completion certificate, issue a VCC in respect of the work for which the VCC has applied.

This issuance of a VCC shall not be without prejudice to the SBIIMS's rights and contractor liabilities under the contract including the contractor's liability for defects liability nor shall the issuance of VCC in respect of the works or work at any site be construction as a waiver of any right or claim of the SBIIMS against the contractor in respect of or work at the site and in respect of which the VCC has been issued.

24.0 Work by other agencies:

The SBIIMS / Architect / consultant reserves the rights to use premises and any portion the site for execution of any work not included in the scope of this contract which it may desire to have carried out by other persons simultaneously and the contractor shall not only allow but also extend reasonable facilities for the execution of such work. The contractor however shall not be required to provide any plant or material for the execution of such work except by special arrangement with the SBI. Such work shall be carried out in such manner as not to impede the progress of the works included in the contract.

25.0 Insurance of works:

Without limiting his obligations and responsibilities under the contract the contractor shall insure in the joint names of the SBIIMS And the contractor against all loss of damages from whatever cause arising other than the excepted risks, for which he is responsible under the terms of contract and in such a manner that the SBIIMS and contractor are covered for the period stipulated I clause of GCC and are also covered during the period of maintenance for loss or damage arising from a cause, occurring prior to the commencement of the period of maintenance and for any loss or damage



occasioned by the contractor in the course of any operations carried out by him for the purpose of complying with his obligations under clause.

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

The constructional plant and other things brought on to the site by the contractor to the replacement value of such constructional plant and other things.

Such insurance shall be effected with an insurer and in terms approved by the SBIIMS which approval shall not be unreasonably withheld and the contractor shall whenever required produce to the Architect / consultant the policy of insurance and the receipts for payment of the current premiums.

26.0 Damage to persons and property:

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

- a) The permanent use or occupation of land by or any part thereof.
- b) The right of SBIIMS to execute the works or any part thereof on, over, under, in or through any lands.
- c) Injuries or damages to persons or properties which are unavoidable result of the execution or maintenance of the works in accordance with the contract.
- d) Injuries or damage to persons or property resulting from any act or neglect of the SBIIMS their agents, employees or other contractors not being employed by the contractor or for or in respect of any claims, proceedings, damages, costs, charges and expenses in respect thereof or in relation thereto or where the injury or damage was contributed to by the contractor, his servants or agents such part of the compensation as may be just and equitable having regard to the extent of the responsibility of the SBIIMS, their employees, or agents or other employees, or agents or other contractors for the damage or injury.

27.0 Contractor to indemnify SBIIMS:

The contractor shall indemnify the SBIIMS against all claims, proceedings, damages, costs, charges and expenses in respect of the matters referred to in the provision sub-clause 26.0 of this clause.

28.0 Contractor's superintendence:

The contractor shall fully indemnify and keep indemnified the SBIIMS against any



action, claim, or proceeding relating to infringement or use of any patent or design or any alleged patent or design rights and shall pay any royalties which may be payable in respect to any article or part thereof included in the contract. In the event of any claim made under or action brought against SBIIMS in respect of such matters as aforesaid the contractor shall be immediately notified thereof and the contractor shall be at liberty, at his own expenses to settle any dispute or to conduct any litigation that may arise there from, provided that the contractor shall not be liable to indemnify the SBIIMS if the infringement of the patent or design or any alleged patent or design right is the direct result of an order passed by the Architect / consultant in this behalf.

29.0 Third Party Insurance:

Before commencing the execution of the work the contractor but without limiting his obligations and responsibilities under clause 25.0 of GCC shall insure against his liability for any material or physical damage, loss, or injury which may occur to any property including that of SBIIMS, or to any person, including any employee of the SBIIMS, by or arising out of the execution of the works or in the carrying out of the contract, otherwise than due to the matters referred to in the provision to clause 25.0 thereof.

30.0 Minimum amount of Third Party Insurance:

Such insurance shall be affected with an insurer and in terms approved by the SBIIMS 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 premiums.

The minimum insurance cover for physical property, injury, and death is Rs.5 Lakh 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.

31.0 Accident or Injury to workman:

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

32.0 Insurance against accidents etc. to workmen:

The contractor shall insure against such liability with an insurer approved by the SBIIMS During the whole of the time that any persons are employed by him on the works and shall, when required, produce to the architect / consultant such policy of insurance and receipt for payment of the current premium. Provided always that, in respect of any



persons employed by any sub-contractor the contractor's obligation to insured as aforesaid under this sub-clause shall be satisfied if the sub-contractor shall have insured against the liability in respect of such persons in such manner that SBIIMS is indemnified under the policy but the contractor shall require such sub-contractor to produce to the Architect /consultant when such policy of insurance and the receipt for the payment of the current premium.

33.0 Remedy on contractor's failure to insure:

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

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

34.0 Commencement of Works:

The date of commencement of the work will be reckoned from the date of award of letter by the SBIIMS

35.0 Time for completion:

Time is essence of the contract and shall be strictly observed by the contractor. The entire work shall be completed within a period of **45 days** from the date of commencement. If required in the contract or as directed by the Architect / consultant. The contractor shall complete certain portions of work before completion of the entire work. However, the completion date shall be reckoned as the date by which the whole work is completed as per the terms of the contract.

36.0 Extension of time:

If, in the opinion of the Architect/consultant, the work be delayed for reasons beyond the control of the contractor, the Architect/consultant may submit a recommendation to the SBIIMS to grant a fair and reasonable extension of time for completion of work as per the terms of contract. If the contractor needs an extension of time for the completion of work or if the completion of work is likely to be delayed for any reasons beyond the due



date of completion as stipulated in the contract, the contractor shall apply to the SBIIMS Through the Architect' Consultant in writing at least 30 Days before the expiry of the scheduled time and while applying for extension of time he shall furnish the reason in detail and his justification if an', for the delays. The architect/consultant shall submit their recommendations to the SBIIMS in the prescribed format for granting extension of time. While granting extension of time the contractor shall be informed the period extended time which will qualify for levy of liquidated damages. For the balance period in excess of original stipulated period and duly sanctioned extension of time by the provision of liquidated damages as stated under clause 10.0 shall become applicable. Further the contract shall remain in force even for the period beyond the due date of completion irrespective whether the extension is granted or not.

37.0 Rate of progress:

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

38.0 Work during nights and holidays:

Subject to any provision to the contrary contained in the contract no permanent work shall save as herein provided be carried on during the night or on holidays without the permission in writing of the Architect/consultant, save when the work is unavoidable or absolutely necessary for the saving of life or property or for the safety of the work in which case the contractor shall immediately advise the Architect / consultant. However the provisions of the clause shall not be applicable in the case of any work which becomes essential to carry by rotary or double shifts in order to achieve the progress and quality of the part of the works being technically required / continued with the prior approval of the Architect / consultant at no extra cost to the SBIIMS.

All work at night after obtaining approval from competent authorities shall be carried out without unreasonable noise and disturbance.

39.0 No compensation or restrictions of work:

If at any time after acceptance of the tender SBIIMS shall decide to abandon or reduce the scope of work for any reason whatsoever and hence not required the whole or any part of the work to be carried out. The Architect / consultant shall give notice in writing that effect to the contractor and the contractor shall act accordingly in the matter. The



contractor shall have no claim to any payment of compensation or otherwise what so ever on account of any profit or advantage which he might have derived from the execution of the Work fully but which he did not derive in consequence of the fore closure of the whole or part of the work.

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

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

40.0 Suspension of work:

The contractor shall, on receipt of the order in writing of the Architect / consultant (whose decision shall be final and binding on the contractor) suspend the progress of works or any part the offer such time and in such manner as Architect/consultant may consider necessary so as not to cause any damage or injury to the work already done or endanger the safety thereof for any of following reasons:

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

The contractor shall, during such suspension, properly protect and secure the works the extent necessary and carry out the instructions given in that behalf by the Architect / consultant.

i) If the suspension is ordered for reasons (b) and (c) in sub-para (i) above:

The contractor shall be entitled to an extension of time equal to the period of every such suspension. No compensation whatsoever shall be paid on this account.



41.0 Action when the whole security deposit is forfeited:

In any case in which under any clause or clauses of this contract, the Contractor shall have rendered himself liable to pay compensation amounting to the whole of his security deposit the Architect / consultant shall have the power to adopt any of the following course as they may deem best suited to the interest of the SBIIMS:

To rescind the contract (of which rescission notice in writing to the contractor by - Architect / consultant shall be conclusive evidence) and in which case the security, deposit of the contractor shall be forfeited and be absolutely at the disposal of SBIIMS.

To employ labour paid by the SBIIMS and to supply materials to carry out the work, or part of the work, debiting the contractor with the cost of the labour and materials cost of such labour and materials as worked out by the Architect / consultant shall final and conclusive against the contractor) and crediting him with the value of the work done, in all respects in the same manner and at the same manner and at the same rates as if it had been carried out by the contractor under the terms of this contract certificate of architect /consultant as to the value of work done shall be final conclusive against the contractor.

To measure up the work of the contractor, and to take such part thereof as shall unexecuted, out of his hands, and to give it to another contractor to complete in which case any expenses which may be incurred in excess of the sum which would have been paid to the original contractor, if the whole work had been executed by him (The amount of which excess the certificates in writing of the Architects / consultant shall final and conclusive) shall be borne by original contractor and may be deducted any money due to him by SBIIMS under the contract or otherwise, or from his security deposit or the proceeds of sale thereof, or sufficient part thereof.

In the event of any of above courses being adopted by the SBIIMS the contractor shall have no claim to compensation for any loss sustained by him by reasons of his having purchased or procured any material or entered into any engagements or make any advances on account of, or with a view to the execution of the work or the performance of the contract and incase the contract shall be rescind under the provision aforesaid, the contractor shall not be entitled to recover or to be paid any sum or any work thereto for actually performed under this contract, unless, and until the Architect / consultant will have certified in writing the performance of such work and the value payable in respect thereof, and he shall only been titled to be paid the value so certified.

42.0 Owner's right to terminate the contract:

If the contractor being an individual or a firm commit any 'Act of insolvency' or shall be adjusted an insolvent or being an incorporated company shall have an order for compulsory winding up voluntarily or subject to the supervision of Govt. 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 to do so, to show to the reasonable satisfaction of the Architect / Consultant that he is able to carry out and fulfill the contract, and to dye security therefore if so required by the Architect /Consultant.

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

Or shall assign or sublet this contract without the consent in writing of the SBIIMS through the Architect/Consultant or shall charge or encumber this contract or any payment due to which may become due to the contractor there under:

has abandoned the contract; or

has failed to commence the works, or has without any lawful excuse under these conditions suspended the progress of the works for 14 days after receiving from the SBIIMS through the Architect / consultant written notice to proceed, or

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

When the works shall be completed or as soon thereafter as convenient the SBIIMS Or



architect/consultant shall give a notice in writing to the contractor to remove his surplus materials and plants and should the contractor fail to do so within 14 days after receive thereof by him the SBIIMS sell the same by publication, and after due publication, and shall, adjust the amount realized by such auction. The contractor shall have no right to question any of the act of the SBIIMS incidental to the sale of the materials etc.

43.0 Certificate of payment:

The contractor shall be entitled under the certificates to be issued by the Architect / consultant to the contractor within 10 working days from the date of certificate to payment from SBIIMS From time to time SBIIMS shall recover the statutory recovering other dues including the retention amount from the certificate of payment. Provided always that the issue of any certificate by the Architect / consultant during progress of works or completion shall not have effect as certificate of satisfaction relieve the contractor from his liability under clause.

The Architect / consultant shall have power to withhold the certificate if the work or in part thereof is not carried out to their satisfaction. The Architect/consultant may by any certificate make any corrections required previous certificate.

The SBIIMS shall modify the certificate of payment as issued by the architect/ consultant from time to time while making the payment

The contractor shall submit interim bills only after taking actual measurements and properly recorded in the Measurement books.

The Contractor shall not submit interim bills when the approximate value of work done by him is less than **NA**.

The final bill may be submitted by contractor within a period of one month from the date of virtual completion and Architect / consultant shall issue the certificate of payment within a period of two months. The SBIIMS Shall pay the amount within a period of three months from the date of issue of certificate provided there is no dispute in respect of rates and quantities.

The contractor shall submit the interim bills in the prescribed format with all details.

44.0

A. Settlement of Disputes and Arbitration:

Except where otherwise provided in the contract all questions and disputes to the meaning of the specifications, design, drawings and instructions herein before mentioned and as to the quality of workmanship or materials used on the work or as to any other question , claim, right, matter or thing whatsoever in any way arising out of or relating to the contract, designs, drawings specifications, estimates, instructions orders or these conditions or otherwise concerning the work or the execution or failure to execute the same whether arising during the progress of the work or after the cancellation, termination, completion or abandonment thereof shall be dealt with as mentioned hereinafter:



If the contractor considers that he is entitled to any extra payment or compensation in respect of the works over and above the amounts admitted as payable by the Architect or in case the contractor wants to dispute the validity of any deductions or recoveries made or proposed to be made from the contractor raise any dispute, the contractor shall forthwith give notice in writing of his claim, or dispute to The Senior Vice President, SBIIMS, Head Office, Mumbai and endorse a copy of the same to the Architect, within 30 days from the date of disallowance thereof or the date of deduction or recovery. The said notice shall give full particulars of the claim, grounds on which it is based and detailed calculations of the amount claimed and the contractor shall not be entitled to raise any claim nor shall the SBIIMS Pvt. Ltd be in any way liable in respect of any claim by the contractor unless notice of such claim shall have been given by the contractor to the Senior Vice President, SBIIMS, Head Office, Mumbai in the manner and within the time as aforesaid. The Contractor shall be deemed to have waived and extinguished all his rights in respect of any claim not notified to the Senior Vice President, Head Office, Mumbai in writing in the manner and within the time aforesaid.

B. Settlement of Disputes and Arbitration:

The Senior Vice President, Head Office, Mumbai shall give his decision in writing on the claims notified by the receipt of the contractor may within 30 days of the receipt of the decision of the Sr. V.P., Head Office / Submit his claims to the conciliating authority namely the M.D. & C.E.O., SBIIMSPL, Head Office, Mumbai for conciliation along with all details and copies of correspondence exchanged between him and the SBIIMS

If the conciliation proceedings are terminated without settlement of the disputes, the contractor shall, within a period of 30 days of termination thereof shall give a notice to the concerned M.D. & C.E.O. of the SBIIMS for appointment of an arbitrator to adjudicate the notified claims falling which the claims of the contractor shall be deemed to have been considered absolutely barred and waived.

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

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



of arbitrator.

It is also a term of this contract that no person other than a person appointed by such Chief General Manager as aforesaid should act as arbitrator. The conciliation and arbitration shall be conducted in accordance with the provisions of the Arbitration & Conciliation Act 1996 or any or any accordance modification or reenactment thereof and the rules made there under.

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

It is also a term of the contract that the Arbitrator shall be deemed to have entered on the reference on the date he issues notice to both the parties calling them to submit their statement of claims and counter statement of claims. The venue of the arbitration shall be such place as may be fixed by the arbitrator in his sole discretion. The fees, if any of the arbitrators shall, if required to be paid before the award is made and published, be paid half and half by each of the parties. The Cost of the reference and of the award (including the fees, if any of the arbitrator) shall be in the discretion of the arbitrator who may direct to any by whom and in what manner, such costs or any part thereof, shall be paid and fix or settle the amount of costs to be so paid.

45.0 Water supply:

The contractor shall make his own arrangements for water required for the work and nothing extra will be paid for the same. This will be subject to the following condition.

- i) That the water used by the contractor shall be fit for construction purposes to the satisfaction of the Architect /consultant's.
- ii) The contractor shall make alternative arrangements for the supply of water if the arrangement made by the contractor for procurement of water in the opinion of the Architect / consultant is unsatisfactory.
- iii) In case contractor is permitted to use SBIIMS's source of water i.e. Municipal connection, Bore well (existing or new) etc., the SBIIMS Pvt. Ltd will recover as per clause 51.0 of this document from the final bill of contractor.

The contractor shall construct temporary well / tube well in SBIIMS Pvt. Ltd land for taking water for construction purposes only after obtaining permission in writing from the SBIIMS The contractor has to make his own arrangements for drawing and distributing the water at his own cost. He has to make necessary arrangements. To avoid any accidents or damages caused due to construction and subsequent maintenance of the wells. He has to obtain necessary approvals from local authorities, if required, at his own cost. He shall restore the ground to its original condition after wells are dismantled



on completion of work or hand over the well to the SBIIMS without any compensation as directed by the architect /consultant.

46.0 Power supply:

The contractor shall make his own arrangements for power and supply / distribution system for driving plant or machinery for the work and for lighting purpose at his own cost, the cost of running and maintenance of the plants are to be included in his tender prices, He shall pay all fees and charges required, by the power supply and include the same in his tendered rates and hold the owner free from all such costs. He has to obtain necessary approval from the appropriate authorities, if required.

In case contractor is permitted to use Bank's source of power supply provided at one point, the SBIIMS will recover as per clause 51.0 of this document from the final bill of contractor.

47.0 Treasure trove etc.

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

48.0 Method of measurement:

Unless otherwise mentioned in the schedule of quantities or in mode of measurement, the measurement will be on the net quantities or work produced in accordance with up to date rules laid down by the Bureau of Indian Standards. In the event any dispute/ disagreement the decision of the Architect / consultant shall be final and binding on the corrector.

49.0 Maintenance of registers:

The contractor shall maintain the following registers as per the enclosed perform at site of work and should produce the same for inspection of SBIIMS /Architect / consultant whenever desired by them. The contractor shall also maintain the records / registers as required by the local authorities / Govt. from time to time.

- i) Register for secured advance
- ii) Register for hindrance to work
- iii) Register for running account bill
- iv) Register for labour

50.0 Force Majeure:

Neither contractor nor SBIIMS shall be considered in default in performance of the obligations if such performance is prevented or delayed by events such as but not war, hostilities revolution, riots, civil commotion, strikes, lockout, conflagrations, epidemics, accidents, fire, storms, floods, droughts, earthquakes or ordinances or any act of or for any other cause beyond the reasonable control of the party affected or prevents or delayed. However, a notice is required to be given within 30 days from the happening of the event with complete details, to the other party to the contract ,if it is not possible to serve a notice, within the shortest possible period without delay.



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

From the date of occurrence of a case off or force majeure obligations of the party affected.

51.0 Water power and other facilities:

The rate quoted by the contractor shall include all expenses that are required for providing all the water required for the work and the contractor shall make his own arrangements for the supply of good quality water suitable for the construction and good quality drinking water for their workers If necessary the contractor has to sink a tube well / open well and bring water by means of tankers at his own cost for the purpose The SBIIMS will not be liable to pay any charges in connection with the above

The rate quoted in the tender shall include the expenses for obtaining and maintaining power connections and shall pay for the consumption charges

The contractors for other trades directly appointed by the SBIIMS shall be entitled to take power and water connections from the temporary water and power supply obtained by the contractor However, the concerned contractor shall make their own arrangements to draw the supply and pay directly the actual consumption charges at mutually agreed rates between them. All municipal charges for drainage and water connection for Construction purposes shall be borne by the contractor and charges payable for permanent connections, if any, shall be initially paid by the contractor and the SBIIMS will reimburse the amount on production of receipts.

The SBIIMS as well as the Architect / consultant shall give all possible assistance to the Contractor's to obtain the requisite Permission from the various authorities, but the responsibility for obtaining the same in time shall be of the contractor.

In case contractor is permitted to use Bank's source of water and power supply provided at one point, the SBIIMS will recover @ 0.50% of final bill amount for water and electricity (combined) from the bill of contractor.

52.0 Facilities for contractor's employees:

The contractor shall make his own arrangement for the housing and welfare of his staff and workmen including adequate drinking water facilities. The contractor shall also make the arrangements at his own cost for transport where necessary for his staff and workmen to and from site of work at his own cost.

53.0 Lighting of works:

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

54.0 Firefighting arrangements:



The contractor shall provide suitable arrangement for firefighting at his own cost. This purpose he shall provide requisite number of fire extinguishers and adequate number of buckets, some of which are to be always kept filled with sand and some with water these equipment shall be provided at suitable prominent and easily accessible place and shall be properly maintained.

Any deficiency in the fire safety or unsafe conditions shall be corrected by the contractor at his own cost and, to the approval of the relevant authorities. The contractor make the following arrangements at his own cost but not limited the following:

- a) Proper handling, storage and disposal of combustible materials and waste.
- b) Work operations which can create fire hazards.
- c) Access for fire-fighting equipment.
- d) Type, number and location of containers for the removal of surplus materials and rubbish.
- e) Type, size, number and location of fire extinguishers or other fire fighting equipment.
- f) General housekeeping.

55.0 Site order book:

A site order book shall be maintained at site for the purpose of quick communication between the Architect / Consultant. Any communication relating to the work may be conveyed through records in the site order book. Such a communication from one party to the other shall be deemed to have been adequately served in terms of contract Each site order book shall have machine numbered pages in triplicate and shall carefully maintained and preserved by the contractor and shall be made available to the architect /consultant as and when demanded- Any instruction which the architect/consultant may like to issue to the contractor or the contractor may like to bring to the architect / consultant two copies of such instructions shall be taken from the site order book and one copy will be handed over to the party against proper acknowledgment and the second copy will be retained for their record.

56.0 Temporary fencing/barricading:

The contractor shall provide and maintain a suitable temporary fencing/barricading and gates at his cost to adequately enclose all boundaries of the site for the protection of the public and for the proper execution and security of the work and in accordance with the requirement of the architect/consultant and regulations of local authorities. These shall be altered, relocated and adopted from time to time as necessary and removed on completion of the work.

57.0 Site meetings:

Site meetings will be held to review the progress and quality evaluation. The contractor shall depute a senior representative along with the site representative and other staff of approved sub-contractors and suppliers as required to the site meetings and ensure all follow up actions. Any additional review meetings shall be held if required by the



architect/ consultant.-

58.0 Disposal of refuse:

The contractor shall cart away all debris, refuse etc. arising from the work from the site and deposit the same as directed by the architect / consultant at his own cost. It is the responsibility of the contractor to obtain from the local authorities concerned to the effect that all rubbish arising out of contractor's activities at the construction site or any other off-site activities borrow pits has been properly disposed off.

59.0 Contractor to verify site measurement:

The contractor shall check and verify all site measurements whenever requested other specialists contractors or other sub-contractors to enable them to prepare the own shop drawing and pass on the information with sufficient promptness as will in any way delay the works.

60.0 Displaying the name of the work:

The contractor shall put up a name board of suitable size as directed by the architect/ consultant indicating there in the name of the project and other details as given by the architect/consultant at his own cost and remove the same on completion of work.

61.0 As built drawings:

For the drawings issued to the contractor by the Architect / Consultant. The architect Consultant will issue two sets of drawings to the Contractor for the items for some changes have been made. From the approved drawings as instructed by the SBIIMS / Architect / Consultant. The contractor will make the changes made on these copies and return these copies to the architect / Consultant for their approval. In cases revision is required or the corrections are not properly marked the architect/Consultant will point out the discrepancies to the contractor. The contractor will have to incorporated these corrections and / or attend to discrepancies either on copies as directed by the architect / consultant and resubmit to him for approval. The architect / consultant will return one copy duly approved by him.

For the drawings prepared by the contractor:

The contractor will modify the drawing prepared by him wherever the changes made by the SBIIMS / architect / consultant. And submit two copies of such modified drawings to the architect/ consultant for approval. The architect / consultant will return one copy of the approved drawing to the contractor.

62.0 Approved make:

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



63.0 Procurement of materials:

The contractor shall make his own arrangements to procure all the required materials for the work. All wastages and losses in weight shall be to the contractors account

64.0 Excise duty, taxes, levies etc.:

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

65.0 Acceptance of tender:

The SBIIMS shall have the right to reject any or all tenders without assigning any reason. They are not to bind to accept the lowest or any tender and the tenderer or tenderers shall have no right to question the acts of the SBIIMS. However adequate transparency would be maintained by the SBIIMS

66.0 Photographs:

The Contractor shall at his own expense supply to the Architects with duplicate hard copies of large photographs not less than 25 cm. x 20 cm. (10" x 8") of the works, taken from two approved portions of each building, at intervals of not more than one months during the progress of the work or at every important stage of construction.

In addition to above, the contractor shall be bound to submit adequate no. of site photographs along with each Running Bill for the project clearing showing major progress of work measured and claimed therein failing which the Architect/ SBIIMS may consider returning the Bill to the contractor and no claim for delay on this account will be entertained.

67.0 Safety Codes:

1. First aid appliances including adequate supply of sterilized dressing and cotton wool shall be kept in a readily accessible place.
2. An injured person shall be taken to a public hospital without loss of time, in cases when the injury necessitates hospitalization.



3. Suitable and strong scaffolds should be provided for workmen for all works that cannot safely be done from the ground.
4. No portable single ladder shall be over 8 meters in length. The width between the side rails shall not be less than 30 cm. (clear) and the distance between two adjacent rungs shall not be more than 30 cm. When a ladder is used an extra labour shall be engaged for holding ladder.
5. The excavated material shall not be placed within 1.5 meters of the edge of the trench half of the depth of trench whichever is more. All trenches and excavations shall be provided with necessary fencing and lighting.
6. Every opening in the floor of a building or in a working platform be provided with suitable means to prevent the fall of persons or materials by providing suitable fencing or railing whose minimum height shall be one meter.
7. No floor, roof or other part of the structure shall be so overloaded with debris or material as to render it unsafe.
8. Workers employed on mixing and handling material such as asphalt, cement, mortar, concrete and lime shall be provided with protective footwear and rubber hand gloves.
- 9 Those engaged in welding works shall be provided with welders' protective eye shield and gloves.
10. (i) No paint containing lead or lead products shall be used except in the form of paste readymade paint.
(ii) Suitable face masks should be supplied for use by the workers when the paint applied in the form of spray or surface having lead paint dry rubbed and scrapped.
11. Overalls shall be supplied by the contractor to the painters and adequate facilities shall be provided to enable the working painters to wash during cessation of work.
- 12 Hoisting machines and tackle used in the works including their attachments anchor and supports shall be in perfect condition.
13. The ropes used in hoisting or lowering material or as a means of suspension shall be durable quality and adequate strength and free from defect



APPENDIX HEREIN BEFORE REFERRED TO

1) Name of the organization Offering Contract: The Circle Head & Vice President. SBIIMS, Circle Office, SBI, LHO, Bhadra, Laldarwaja, Ahmedabad-1

2) Consultants : **A R . Devdatt M Pandya**

M/s Studio919 Architects

3) Site Address: State Bank of India, MANGROL HARBOUR branch

4) Scope of Work : Proposed Electrical works of SBI MANGROL HARBOUR branch

5) Name of the Contractor : _____

6) Address of the Contractor : _____

7) Period of Completion : 45 days from the date of
• Issue of work order.

8) Earnest Money Deposit : **Rs. 3700/- (Rupees Three Thousand seven hundred only) by means of Demand Draft/Pay Order** (Valid for a period of 180 Days from the last date of submission of the tender) from any scheduled Nationalized Bank drawn in favor of **SBI Infra Management Solutions Pvt. Ltd., Payable at Bhavnagar.**

9) Retention Money : As per clause no. 1.4 of
general Conditions

10) Defects Liability Period : Twelve Months from the date of
Virtual completion.

11) Insurance to be undertaken by the : 125% of Contract Value
Contractor at his cost (Contractor's all risk policy)

12) Liquidated damages : 0.5% of the Contract amount
shown in the tender per week subject to max. 5% of the contract value or actual final bill value.

13) Value of Interim Bill (Min.) : Rs. 3.00 Lakhs.

14) Date of Commencement : From the date of work order
issued to the Contractor/ or the day on which the Contractor is instructed to take possession of the site whichever is earlier.



- 15) Period of Final Measurement : 2 Months from the date of Virtual Completion.
- 16) Initial Security Deposit : 2% of the Accepted Value of the Tender.
- 17) Total Security Deposit : 5% of the final bill amount including ISD.
- 18) Refund of initial Security Deposit
Comprising of EMD and ISD. : 50% of the Security Deposit
shall be refunded to the Contractor on completion of the work and balance refunded only after the Defect Liability Period is over.
- 19) Period for Honoring Certificate : One Month for R.A.Bills
- 20) The final bill will be submitted by the Contractor within one month of the date fixed for completion work and the Bill shall be certified within 3 months from the date of receipt of final bill provided the bills are submitted with all pre-requisite documents/test reports etc. prescribed in the tender.

Signature of Tenderer.

Date:



LETTER OF DECLARATION

To,
The C.H. &V.P., Circle Office,
SBI Infra Management Solutions Pvt. Ltd., Third Floor, SBI, LHO,
Bhadra, Laldarwaja,
Ahmedabad-1

Dear Sir,

PROPOSED ELECTRICAL WORKS OF MANGROL HARBOUR BRANCH.

Having examined the terms & conditions, drawings, specifications, design 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 thereto and affecting the quotation, I/We hereby offer to execute the works specified in the said memorandum within the time specified in the said memorandum on the item rate basis mentioned in the attached schedule and in accordance in all respect with the specifications, design, drawings and instructions in writing referred to in conditions of Tender, the articles of agreement, conditions of contract and with such conditions so far as they may be applicable.

MEMORANDUM

(a)	Description of work	Proposed Electrical works for MANGROL HARBOUR branch.
(b)	Earnest Money	Rs. 3700.00 - (Rupees Three Thousand Seven Hundred only) by means of Demand Draft / Pay Order from any scheduled Nationalized Bank in favor of SBI Infra Management Solutions Pvt. Ltd., Payable at Bhavnagar.
(c)	Time allowed for completion of work from the date of issue of work order.	45 days from the date of commencement as per tender.

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 hereto so far as they may be applicable or in default thereof to forfeit and pay to SBIIMS, the amount mentioned in the said conditions.



I/we have deposited Demand Draft / Banker's Cheque / FDR for a sum of **Rs 3700 /- (Rupees Three Thousand Seven Hundred only)** as Earnest money deposit with the SBI Infra Management Solutions Pvt. Ltd. Should I/we do fail to execute the contract when called upon to do so, I/we hereby agree that this sum shall be forfeited by me/us to SBI Infra Management Solutions Pvt. Ltd.

We understand that as per terms of this tender, the SBIIMS may consider accepting our tender in part or whole or may entrust the work of various buildings proposed (i.e. Institute Building, Staff Qtrs. And Director's Bungalow/Interior work) in phases. We, therefore, undertake that we shall not raise any claim/compensation in the eventuality of Bank deciding to drop any of the building/buildings from the scope of work of this tender at any stage during the contract period. Further, we also undertake to execute the work entrusted to us in phases on our approved rates and within the stipulated time limit without any extra claim for price escalation as provided for in Clause 9.0.1 "Instructions to Tenderers" of this tender.

We, hereby, also undertake that, we will not raise any claim for any escalation in the prices of any of the material during the currency of contract/execution/completion period.

Yours faithfully,

Signature of contractor With Seal



PROFORMA FOR RUNNING A/C BILL
TABLE - XIII

- i. Name of Contractor/ Agency :
- ii. Name of Work :
- iii. Sr. No. of this Bill:
- iv. No. & Date of previous Bill :
- v. Reference to Agreement No. :
- vi. Date of Written order to commence :
- vii. Date of Completion as per Agreement :

S. No	Item Description	Unit	Rate (Rs.)	As per Tender		Up to Previous R.A. Bill		Up to Date (Gross)		Present Bill		Remarks
				Qty	Amount (Rs.)	Qty	Amount (Rs.)	Qty	Amount (Rs.)	Qty	Amount (Rs.)	
1	2	3	4	5	6	7	8	9	10	11	12	13

Note:

1.	If part rate is allowed for any items, it should be indicated with reasons for allowing such a rate.	<div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div> <div style="border-bottom: 1px solid black; height: 1.2em; width: 100%;"></div> <p style="text-align: center;">Net Value since previous bill</p>
2.	If ad-hoc payment is made, it should be mentioned specifically.	



CERTIFICATE

The measurements on the basis of which the above entries for the Running Bill No.----- were made have been taken jointly on ----- and are recorded at pages ----- to ----- of measurement book No.-----.

-----	-----	-----
Signature and date of Contractor	Signature and date of Architects Representative (Seal)	Signature and date of Site Engineer

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

-----	-----
Architect	Signature and date of Site Engineer



TABLE - XV

MEMORANDUM FOR PAYMENT

R/A BILL NO.

1.	Total value of work done since previous bill (A)	Rs.....
2.	Total amount of secured advance due since Previous Bill (B)	Rs.....
3.	Total amount due since Previous Bill (C) (A+B)	Rs.....
4.	PVA on account of declaration in price of Steel, Cement and other materials and labour as detailed in separate statements enclosed.	Rs.....
5.	Total amount due to the Contractor	Rs.....
	<u>OBJECTIONS:</u>	
i)	Secured Advance paid in the previous R/A	Rs.....
ii)	Retention money on value of works as per accepted tenders up to date amount Rs.	Rs.....
	Less already recovered	Rs.....
	Balance to be recovered	Rs.....
iii)	Mobilization Advance, if any	Rs.....
(a)	Outstanding amount (principal + interest) as on date	Rs.....
(b)	To be recovered in this bill	Rs.....
iii.	Any other Departmental materials cost to be recovered as per contract, if any	Rs.....
iv.	Any other Departmental service charges to be recovered if any, as per contract (water, power etc.) enclose statement.	Rs.....



The bill amount to Rs. ----- (both figures and words) has been scrutinized by us after due checking of the measurements of work as required and is recommended for payment.

Date:-----

Signature of Architect
with Seal

The bill amount to Rs.-----certified by Consultants has been scrutinized by me after due test checking of measurements of works as required and is recommended for payment for an amount of Rs.

Date : -----

Signature of Banks/ SBIIMS Engineer

	<u>STATUTORY DEDUCTION:</u>	
i)	Total Amount due (E)	Rs. -----
ii)	Less I.T. Payable	Rs. -----
iii)	Less S.T. Payable	Rs. -----
	Net Payable	Rs. -----

This figures given in the Memorandum for payable has been verified and bill passed for payment ----- (in words and figures)

Date:-----

Signature of the Circle Head & VP



SPECIFICATIONS FOR ELECTRICAL WORKS

General:

The scope of work covers execution and completion of the electrical installation work of the proposed **ELECTRICAL WORKS FOR BANK OF INDIA, MANGROL HARBOUR BRANCH** in accordance with drawings & specifications.

Rules & Regulations:

The installation shall be generally carried out in conformity with the requirements of Indian Electricity Act 1910 (as amended up to date) and the latest Indian Electricity Rules and supplementary Regulations of the State Electricity Departments and Electricity Undertakings and where the installation is subject to inspection and approval of Fire Insurance and Explosives Authorities, such installation shall be planned and executed to conform to their special Rules.

1.0 Point Wiring:

1.1 Supply:

The following material shall be included in a point wiring and accessories.

- a) Conduit - PVC rigid 2.0mm thick conduit and accessories.
- b) Wires - PVC insulated copper conductor multi-stranded flexible type wires ISI mark of 1.0, 1.5, 2.5, 4.0, 6.0, 10, 16sq.mm
- c) Switches - 5 Amp single pole, two way switch, 5 amp socket, 15 Amp switch and socket, fan Regulators with flush metal boxes wherever concealed and front plates and boxes of company make for surface mounting all of approved make.
- d) Cover plates for outlet boxes - 3 mm thick Formica / Hylam sheet specially for electrical purposes.
- e) Hardware - screws and washers non rusting type brass type.
Switch Boards and outlet Boxes - Factory made boxes of approved make for flush mounting for switches and accessories and 16 SWG m.s. sheet with GI boxes as outlet boxes with knock-outs for conduit entries and tapped holes for screws.
Holders - Pendant holders / angle holders / ceiling rose etc. of approved make white in color.
- g) Industrial Sockets - Industrial type metal clad with metallic top.

1.2 Installation:

All conduit shall be concealed / surface mounted in / on walls, beam, column, slabs or concealed in false ceiling in all A/C areas etc. by necessary charis or clamping with saddles, spacers of hot deep GI. made. Charis shall be made in walls to conceal the



conduits and then refilling of the charis with cement mortar. All switch boards and outlet boxes (placed for bracket wall points) shall be concealed / surface in/on walls and should be kept in line and level with help of spirit level. Fan boxes shall be provided with nut welded on top with threaded hook and check nut. Wire drawing should be done with the help of draw wire. The conduits shall be cleaned of all foreign materials before inserting the wires. Drawing of wires should be done such that the insulation of wires is not damaged.

All works shall be done as per instruction and satisfaction of the Consultant.

For surface conducting wiring, the conduit fitting switch/ceiling fan regulator boxes etc. shall be installed surface exposed. Flexible conduits shall not be used earth continuity conductors. Separate earth wire shall be provided either inside or outside the flexible conduits which shall be connected by means of earth clips to the earth system at one end and to the equipment at the other end as per IS 3043-1987.

Size of wire shall be chosen to limit Voltage drop within 5 %. Area of conductor shall be 1.0, 1.5, 2.5, 4.00 and 10.0 sq. mm copper. Generally not more than 8 to 10 points shall be wired in one circuit.

1.3 Testing:

After completion of wiring, installation of switches etc., testing shall be done for insulation resistance as specified in the tender

Notes No Joints shall be allowed in any wires in the conduits, all wires shall only be joined and connected at termination points. All circuits shall have individual neutrals and one neutral shall riot complete the whole wiring system.

Circuit's mains shall start from Distribution board to switch board or from Meter board to Distribution. The circuits mains includes supply and installation of two nos. of wires with earth wire for single phase mains and Four nos. of wires with earth wire for three phase mains.

2.1 Supply:

a) Conduit - PVC rigid 2.0mm thick conduit and accessories.

b) Wires - PVC insulated copper conductor multi-stranded flexible type wires ISI mark of 1.0, 1.5, 2.5, 4.0, 6.0, 10, 16 sq.mm

2.2 Installation:

a) For conceal wiring system all conduits shall be laid in the slab before casting of slab and shall be concealed in walls by making charts in walls and refilling the same before the final plaster of wall is done. All the switch boards and outlet boxes also shall be installed concealed in line and level.

b) For surface wiring system all conduits / PVC trunking shall be clamped with hot deep Gl. saddles / spacers on wall, ceiling, beam, column etc. in line align with the help of spirit level. All the switch boards and outlet boxes shall be surface mounted type and to



be installed in line and level.

c) Wires shall be drawn in conduit after cleaning of conduits and drawn with the help of draw wires. No damage to the insulation of wires should be done while drawing.

2.3 Testing:

After completion of wiring, installation of switches etc. testing shall be done for insulation resistance as specified in the tender.

3.0 Distribution Boards:

3.1 Supply:

Distribution boards shall be of sheet metal with rated bus bars, factory made. They shall be for three-phase or single phase distribution system as per the requirements or schedule of quantities.

3.2 Installation:

The distribution board shall be concealed in wall, flush mounted or surface mounted and should be in line and level. These shall be factory tested. Final MCBs on sub circuits shall be marked by permanent markers on the DB door

3.3 Test:

After installation of MCBs, it shall be tested.

4.0 M.C.B & ELMCB.

4.1 Supply:

MCB : These shall be SP.SPN.TP or TPN as specified in drawings Rating of 2A, 6A, 16A, 25A. 30A, 63A. 10KA fault level, as per IS-8828--S978; BS 3871-part I.

ELMCB : These shall be of SPN. TPN and specified in drawings of rated value. ELMCB - BS-4293 neutral advance feature at closing neutral will be first to contact at the time of opening neutral breaks last after allowing the phases to open first Since the ELCB is to be used as main switch, it shall have safe interrupting clearance as per IEC 408/IS 4064. The ELCB shall have terminals to terminate aluminum conductor up to 25 mm². The ELMCB shall have sensitivity of 30 - 300 ma as per requirements

4.2 Installation:

All ELMCB and MCBs shall be installed in the DB on din rail provided in the DB, spares shall be blocked by blank plates.



4.3 Testing:

All ELMCB should be tested for overloading, short circuit, earth leakage tripping and MCBs should be tested for overloading and short circuit tripping

5.0 Material:

All materials, fittings and appliances used in the electrical installation shall be of the best quality of approved manufacturer and shall conform to the latest Indian Standard Specifications wherever these exist.

6.0 Workmanship:

Good workmanship and neat appearance are the prerequisites for compliance with the various sections of these specifications. The work shall be carried out under direct supervision of a person holding Certificate of Competency issued by the State Government and in accordance with the statutory rules and regulations in force. The relevant ISI code of practice shall be followed wherever applicable.

7.0 Drawing:

The set of all relevant electrical drawings, with specifications are furnished to the Contractor for his own use until the completion of the contract. However wherever required, detailed drawings shall be prepared and got approved.

On completion of the work, completion drawings shall be prepared and five copies of the same should be submitted to the Employer. The completion drawings shall indicate clearly the main switch board, the runs of various mains and sub-mains, position of points and their controls. All circuits shall be clearly indicated and numbered in the wiring diagrams and all points shall be given the same number as the circuit to which they are electrically connected.

8.0 Marking & Apparatus:

When a board is connected to voltage higher than 250 volts, all the terminals or leads of the apparatus mounted on it shall be marked in the following colours to indicate the different poles or phases to which the apparatus or its different terminals may have been connected.

Three Phases	--	Red, Blue & Yellow
Neutral	--	Black
Off wire	--	White or Grey
Earth wire	--	Green

Where four wire three phase wiring is done, the neutral shall be in black color and the other three wire in another color. Where has more than one switch, each such switch



shall be marked to indicate which section of the installation it controls. The main switch shall be marked as such and where there is more than one main switch in the building, each such switch shall be marked to indicate which section of the installation it controls. All marking required under this clause shall be clear and permanent.

9.0 Materials:

All materials used in the construction of fittings shall be of such quality, design and construction that will provide adequate protection in normal use against mechanical and electrical failures and exposures to the risk of injury or electric shock and shall withstand the effects of exposure to atmosphere.

10.0 Ceiling Rose:

Ceiling rose and similar attachments - A ceiling rose or any other similar attachments shall not be used on a circuit, the voltage of which normally exceeds 250 Volts. Normally only one flexible cord shall be attached to a ceiling rose. Specially designed ceiling roses shall be used for multiple pendants

11.0 Socket Outlets & Plugs:

A socket outlet shall not embody fuse terminals as an integral part of it. But the fuse may be embodied in plug in which case the plug shall be non-reversible and shall be so arranged and connected that the fuse is connected to an outer or phase conductor or the non-earthed conductor of the circuit. Every socket outlet shall be controlled by switch will be on the live side of the line. In an earthed system of supply, the outlet and plug shall be three pin type and the third terminal connected to earth.

Every lighting fitting shall be controlled by a switch and where control at more than point is necessary by as many as two ways and intermediate switches as there are control points. Lights, fans and socket outlets shall be so located as to provide maximum comfort to the occupant and to enable him to utilize the electricity in the most economical manner.

Where conductors are required to be drawn through tube or channel leading to the fittings, the tube or channel must be free from sharp angles or protecting edges and of such size as will enable them to be wired with the conductors used for the final sub-circuit without removing the braiding or taping. As far as possible all tubes or channels should be of sufficient size to permit looping back.

c) Where a light fitting is supported by one or more flexible cords, the maximum weight to which the twin flexible cords can be subjected shall be as follows:

SIZE OF TWIN FLEXIBLE CORDS

Nominal cross sectional	No. & diameter area of in	Maximum
	wires	permissible



Sq.Inch	Sq.mm.	Sq.Inch	Sq.mm.	weight Sq.Inch	Sq .m m
0.006	0.5	14/0.0076	14/0.193	1.4	3
0.0010	-	23/0.0076	23/0.93	2.3	5
0.0017	1.5	40/0.0076	40/0.193	4.3	10

Where a weight is greater than 4.5kgs.(10 Lbs) then it has to be supported, two or three twin flexible cords shall be used so that the maximum weight to which any cord is subjected does not exceed the above values, or Alternatively other support viz. suitable metal pipe or suitable support shall be provided.

No inflammable shade shall form a part of a light fitting unless such shade is well protected against all risks of fire. Celluloid shade or light fitting shall not be used under any circumstances.

Enclosed type fittings shall be provided with a removable glass receptacle, arranged to enclose the lamp completely and of such size or construction as to prevent undue heating of the lamp or if the position of fitting be such that the glass receptacle is liable to mechanical damage the glass shall be protected by a suitable wire guard.

12.0 Fittings Wire:

The use of fitting wire shall be restricted to the internal wiring of the lighting fittings. Where fittings wire is used for wiring fittings, the sub-circuit leads shall terminate in a ceiling rose or connector from which they shall be carried into the fittings.

13.0 Lamp Holders:

Lamp holders for use on brackets and the like shall have not less than 1.3 cm (1/2") 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.

14-0 Lamps:

All incandescent lamps, unless otherwise required, shall be hung at height of 2.5m (8 ft.), above the floor level they shall be provided with caps of the following patterns:



- | | |
|---|------------------------|
| Up to and including 200 watt. | - Standard Bayonet (B) |
| Above 200 watts and not exceeding 300 watts | - Edison Screw (E.S.) |
| Above 300 watts | - Golliath Screw (GS) |

15.0 Fans, Regulators and Clamps:

Ceiling Fans: Ceiling fans including their suspension shall conform to IS: 374-1951 and to the following requirements:

All ceiling fans shall be wired to ceiling roses or to special connector boxes and suspended from hooks or shackles with insulators between hooks and suspension rods. There shall be no joint in the suspension rod but if joints are unavoidable then such joints (2") minimum length and both ends of the pipes shall touch together within couplers and shall in addition to, be secured by means of split pins; alternatively the two pipes may be welded.

Canopies on top of suspension rod shall effectively hide the suspension.

The leadings-in-wire shall be of nominal cross section area not less than 0.002 sq.inch (3.00.029") and shall be protected from abrasion.

- ii) Exhaust fans shall be erected at the places indicated by the Architects. For fixing an exhaust fan, a circular hole shall be provided in the wall to suit the size of the frame, which shall be fixed by means of rag bolt embedded in the wall. The exhaust fan shall be aired as near to the hole as possible by means of a flexible cord, care being taken that the blades rotates in the proper direction.

TESTING OF INSTALLATION

16.0 Insulation Resistance:

The insulation resistance shall be measured by applying between earth and the whole system of conductors or any section thereof with all fuses in place and all switches closed and except in earthed concentric wiring all lamps in position or both poles of the installation otherwise electrically connected together, a direct current pressure of not less than twice the working pressure provided that it need not exceed 500 volts for medium voltage circuits. Where the supply is derived from the three wire (AC or DC) or a poly phase system, the neutral pole of which is connected to earth either direct or through added resistance, the working pressure shall be deemed to be that which is maintained between the outer or phase conductor and the neutral.



The insulation resistance measured as above shall not be less than 50, divided by the number of points on the circuits provided that the whole installation shall be required to have an insulation resistance greater than one mega ohm.

Control rheostats, heating and power appliances and electrical sings may, it required, be disconnected from the circuit during the test, but in that event the insulation resistance between the case of frame work and all live parts or each rheostat appliance and sign shall not be less than that specified in the relevant IS specifications shall not be less than half a mega ohm.

The insulation resistance shall also be measured between all conductors connected to one or phase conductor of the supply and all the conductors connected to the middle wire or the neutral or to the other pole or phase conductors of the supply and its value shall not be less than that specified in sub clause(b)

On completion of an electric installation (or an extension to an installation) a certificate shall be furnished by the contractor countersigned by the qualified supervisor the installation was carried out. The certificate shall be in the prescribed form as required by the local Electrical Supply Authorities. One such recommended form is given in Appendix-B.

Testing of earth continuity path: The earth continuity conductor including metal conduits and metallic envelopes of cables in all cases shall be tested for electric continuity and the electrical resistance of the same along with the earthling lead but excluding any added resistance or earth leakage circuit-breaker measured from the connection with the earth electrode to any point in the earth continuity conductor in the completed installation shall not exceed one ohm.

Testing of polarity of non-linked single pole switches:

In a two wire installation a test shall be made to verify that all non-linked single pole switches have been fitted in the same conductor throughout and such conductor shall be labeled or marked for connection to an outer of phase conductor or to the non-earthed conductor of the supply.

In a three wire or a four wire installation, a test shall be made to verify that every non-linked single pole switch is fitted in a conductor which is labeled or marked for connection to one of the outer or phase conductor of the supply.

17.0 CONDUIT CAPACITY:

Maximum number of PVC insulated cables confirming to IS: 694-1977 that can be drawn in one conduit shall be as follows:

Nominal cross sectional SIZE OF CONDUIT
area of conductor

	20 mm	25mm	32mm	38mm	51mm		
64mm	S	B	S	B	S	B	S
B							



1.5	5	4	10	8	18	12	--	--	--
2.5	5	3	8	6	12	10	--	--	--
4	3	2	6	3	10	8	--	--	--
6	2	-	5	4	8	7	--	--	--
10	2	-	4	3	6	5	8	6	--
16	-	-	2	2	3	3	6	5	10
25	-	-	-	-	3	2	5	3	8
35	-	-	-	-	-	-	3	2	6
50	-	-	-	-	-	-	-	-	5
70	-	-	-	-	-	-	-	-	4

NOTE:

1. The above table shows the max. Capacity of conduits for a simultaneous drawing of cables.
- 2 The columns headed 'S' applies to runs of conduit which have distance not exceeding 4.25m between draw in boxes and which do not deflect from the straight by an angle of more than 15 The columns headed 'B' apply to runs of conduit which deflect from the straight by an angle of more than 15.

18.0 CABLES

18.1 Cables shall be supplied by Electrical Contractor.

18.2 Cable Specifications:

All cables shall be as per latest IS 1554 Part I PVC insulated heavy duty electric cables Part I for working Voltages up to and including 1100 V.

All power cables shall be PVC insulated, armored, inner sheathed, PVC insulated aluminum conductor. Control cables shall be of copper conductor.

The core insulation and inner sheath shall confirm to the requirement of Type A IS 5831 STI IS respectively. Similarly for outer sheath. Cables shall have armour of steel wire upto 0 D of 18 mm and flat steel strip for higher OD.

Cables shall be supplied in drums of 1000 mts. for and upto 6 sq mm and 10 sqmm and above in 500 mts.

18.3 Cabling:

Cabling shall be done with help of jack and rollers. Cable shall be passed through RCC Hume Pipe wherever road crossing or pathway crossing is there. All cables shall rise form cable trenches in GI Pipes. Cable shall be tagged as per cable schedule at every 30 mts. by Aluminum tags of minimum 2mm thick securely fastened. They shall also be identified near the terminations



Above the cable trenches cable route markers shall be installed as per rules and regulations at every 30 mts and at every turnings of the cables or branching of cables. All cables shall be laid in trenches at a depth of 750mm and as shown in drawings. Before laying of cables sand shall be spread then the cable shall be laid which shall again be covered with sand minimum 150mm from the top of the largest dia of the cable. Then second class bricks shall be laid across the trench completely covering the trench, lastly excavated soil shall be back filled and compacted by watering intermittently.

All cables after laid shall be checked for insulation level and measured before back filling. Cable entries in GI pipes or Hume pipes shall be sealed by cable compound or putty for smaller dia of pipes.

If required for the- cable- to run on cable trays then the cable shall be clamped by 16 SWG GI saddles and dampers. All works should be done to the satisfaction of the Engg - in Charge.

18.4 Terminations

Cable shall be terminated by means of single compression glands and terminated by solder less crimped type lugs. All should be done to the satisfaction of the Engg.-in-Charge. If the cores do not have any color identification, then they should be identified by insulation tape of various phases. Cable shall enter any termination point by means of double compression glands, using reducers if required or drill of holes in gland plates. IF panel installed on a cable trench which does not have any bottom excess then holes shall be drilled in one line for the cables then the gland plates is cut into two halves from the centre of the hole. Cables inserted and sealed and the armour in the bottom should open and earthed to the earth bus. Crimping of lugs shall be done by hand crimping tool or hydraulic crimping tool with conducting jelly applied to conductors. Insulation shall be cut immediately after the lugs and care should be taken that the conductor is not left open. All jointing and crimping shall be carried out by licensed and experienced jointers approved E.I.C. and termination and straight joint shall be of 'Taped' or heat shrinkable type as specified.

18.5 Testing:

Before energizing, the mugger test shall be carried out for insulation resistance between phase to phase and phase to earth.

For cable up to 1.1 KV grade 1000 KV mugger shall be used.

D.C. High Voltage test shall be conducted after installation on the following and test results are recorded as per format furnished by the Engineer-in-charge.

a) All 1000 Volts grade cables in which straight through joints have been made.

b) All cables above 1100 V grade.

For record purposes test data shall include the measure values of leakage current verses time.

The DC High voltage test shall be performed as detailed below in the presence of the



EIC or his authorized representative only.

Cables shall be installed in final position with all straight through joints complete. Termination shall be kept on unfinished so that the motors, switchgears, t transformers, etc. are not subjected to test Voltages

The Test Voltage shall be as under:

- i) for cable 3.3 KV Grade 5.4 KV DC
- ii) for cable 66 KV Grade 10.8 KV DC
- iii) for cable 11 KV Grade 18 KV DC

Cable schedule and layout drawings must be marked for AS BUILT conditions during the installations work and shall be approved by the Site Engg.

IDENTIFICATION OF EARTHED AND EARTHED NEUTRAL CONDUCTORS AND POSITION OF SWITCHES AND CUTOUTS THEREIN:

Where the conductors include an earthed conductor of two-wire system or an earthed neutral conductor of a multi-wire system or a conductor which is to be connected thereto, the following conditions shall be complied with

1. An indication of a permanent nature shall be provided by the owner of the earthed or earthed neutral conductor, or the conductor which is to be connected thereto, to enable such conductor to be distinguished from any live conductor. Such indication shall be provided.

a) Where the earthed or earthed neutral conductor is the property of the bidder, at or near the point of commencement of the supply.

b) Where a conductor forming part of a consumer's system is to be connected to the bidder's earthed or earthed neutral conductor, at the point where such connection is to be made.

c) In all other cases, at a point corresponding to the point of commencement of supply or at such other point as may be approved by an inspector.

2. No cut-out, link or switch other than a linked-switch arranged to operate simultaneously on the earthed or earthed neutral conductor and live conductor shall be inserted or remain inserted in any earthed or earthed neutral conductor of a two-wire system or in any earthed or earthed neutral conductor of a multi-wire system or in any conductor connected thereto with the following exceptions

a) A link for testing purposes - OR -

b) A switch for use in controlling a generator or transformer.

ELECTRICAL CODE OF PRACTICE

The following ISI code of practice for providing and installation of the electrical items shall be deemed any deviation from the code should be approved from the Electrical Inspector.

a) ISI 694-1977 : PVC insulated cables for working voltages up to and including 1100 Volts.

b) ISI 1554-1976: PCV insulated (heavy duty) (part-I) electric cables for working voltages up to and including 1100 V.



c) ISI 1554-1981: PVC insulated (Heavy duty) electric (PART-I) cables for working voltages from 3.3 KV up to and including 11 Kv.

d) ISI 2551-1963: Danger notice plates.

e) ISI 3043-1966: Earthing

f) ISI 5578-1970: Guide for marking of insulated conductors.

g) ISI 5216-1969: Guide for safety procedures and practices in electrical works.

h) ISI 3072-1975: Installation and maintenance of switch gears.

i) ISI 1886-1967: Installation & maintenance of transformers.

j) ISI 1944-1970: Lighting of Public thoroughfares.

k) ISI 2309-1969 : Protection of building and allied structures against lighting.

i) ISI 3106-1966: Selection, installation and maintenance of fuses (Voltages no exceeding 650 volts).

m) ISI 8923-1978: Warning symbol for dangerous voltages. n) ISI 2208-1962: HRC cartridge fuse links upto 650 V. o) ISI 8724-1978: Rewireable fuses upto 650 V.

p) ISI 10118-1982: Switchgear and control gear, selection, (PART-III) installation and maintenance code of practice.

Part III: Installation.

Part IV: Maintenance.

q) Transformers, selection, installation and maintenance of code of practice.

Part II

Installation : 10028 (Part II) 1981.

Part III

Maintenance: 10028 (Part II) 1981.



GENERAL SPECIFICATION FOR PANELS (LIGHTING & POWER)

- Panel shall be fabricated from CRCA sheet, main frame with 14 SWG sheet and compartments with 16 SWG sheet
- Bus Bars shall be of Aluminum /copper (as per SLD dwgs) PVC sleeved with the rating of as stated in drawing.
- The panel shall have gone through seven tank processes and shall be painted with shade no 631 or approved, oven baked.
- Panel shall be Dust and Vermin Proof
- Cable entries shall be from the bottom / top (as per the dwg) and all gland plates are to be detachable.
- All outgoing feeders shall have elmex make terminals to be provided in cable alley compartment.
- A continuous earth bulbar to be provided at the bottom of panel.
- All internal wiring / inter-connections shall be made by using copper conductor
- PVC insulated ISI wires (flexible type specially used in Panel) according rating of feeders.
- All compartment doors shall be provided with neoprene rubber gasket and shall have door interlocking arrangement such that the compartments do not open when the switch is in ON position.
- Bus Bar alleys can be opened only with castle panel key while the Cable Alleys may have screw type knob arrangement.
- A suitable Base frame of with ISMC channel shall be provided.
Panel should be rated for 415 V, 3 phase 4 wire, 50 c/s, A.C. supply system having a fault level of 40 KA (sys) for 1 second. Ambient temperature 45 degree and temperature rise of bus bar is to be limited so that end temperature does not exceed 85 degree C. Bus bars will be mounted on epoxy insulators of adequate strength. Aluminum earth bus bar of appropriate cross section should be provided continuously at the bottom of the panel. The incoming and outgoing feeders shall be as per Single Line Diagram.



IMPORTANT POINTS TO BE NOTED

1. Rates for LIGHT, FAN, EX. FAN, CALL BELL, RAW POWER ETC. POINTS includes the cost of main wires and PVC pipes from LDB-ROW POWER DB to DIFFERENT SWITCHBOARDS WITH REQUIRE CIRCUITS.
2. Rates for COMPUTER POWER POINTS include the cost of wires and PVC pipes from UPS DB to COMPUTER POWER POINTS.
3. Rates for COMPUTER I/O include the cost of DATA cables and PVC pipes from SERVER SWITCH to COMPUTER NODES.
4. Rates for TELE POINTS include the cost of TELEPHONE Wires and PVC pipes from EPABX/CRONE BOX to TELE. POINTS.
5. Rates for A.C. / POWER POINTS include the cost of wires and PVC pipes from A.C. DB to DIFFERENT A.C. AND POWER POINTS WITH REQUIRE CIRCUITS.
6. THE CONTRACTOR SHOULD SUBMIT THE BUILTUP SLD OF PANEL, SLD OF DIFFERENT DBS TO DIFFERENT SWITCHBOARDS WITH NUMBERING, SLD OF DATARACK TO DIFFERENT I/O POINTS WITH NUMBERING, TELE. KRONE BOX TO DIFFERENT TELE. POINTS WITH NUMBERING, ETC. AFTER EXECUTION OF THE BRANCH. – 2 SETS OF COPIES – 1 WITH LAMINATION.
7. THE CONTRACTOR SHOULD USE MAX. 3 CIRCUITS IN ONE CONDUIT FOR UPS & RAW POWER POINTS.
8. THE CONTRACTOR SHOULD USE MAX. 3 WIRES OF DATA & TELE. IN ONE CONDUIT.
9. EVERY CONDUIT FOR UPS , RAW POWER , DATA & TELE., POWER POINTS, AC POINTS , LIGHTING POINTS SB SHOULD BE SEPARATE.
10. FOR DATA & TELE. POINTS, BIG JUNCTION BOX MUST BE REQUIRED.
11. FOR UPS & RAW POWER POINTS, BIG/ SMALL JUNCTION BOX MUST BEREQUIRED.
12. EMPTY CONDUIT MUST BE LAID FOR SECURITY SYSTEM.
13. PVC CONDUITS MUST BE CLAMPED WITH SADDLES IN CEILING ONLY.
14. ELE. CONTRACTOR MUST SUBMIT CERTIFIED LOAD LIST WITH ELE. LICENSE NO. / SUPERVISOR CERTIFICATE NO.
15. CONTRACTOR SHOULD SUBMIT TEST REPORT.
16. CONTRACTOR SHOULD PRESENT EARTHING PLATES BEFORE EXECUTION.



ADDITIONAL SPECIFICATION & CONDITIONS

1. Wherever the specifications are not specified in details the work shall be carried out as per CPWD specifications or Manufacturer's instructions or architects instructions depending upon the site conditions as directed by the Bank/ Architects
2. The tenderer must visit the site and acquaint themselves with the site conditions. It must be noted that the work is to be carried out in the functional branch without hindering the normal functioning of the Branch. The work shall generally be carried out on holidays or after Banking hours only.
3. The contractor has to work in coordination with the other contractors and daily/weekly schedule of working shall be prepared in consultation with the Architects/Banks. Regular updating / modification of such schedule shall be required.
4. For normal functioning of the Bank/Branch the contractor shall be required to shift the furniture etc and/or relocate the existing and/or new loose and/or fix furniture and/or any other item of works and/or any such materials at new location at times. The contractor shall carry out all such activities with utmost priority and without any additional/extra cost to the bank. The tenderer shall quote the rates inclusive of all such activities/works as may be required as per site conditions. The rates quoted by the tenderer shall be inclusive of all such temporary/semi-permanent works/activities.
5. The contractor shall be required to obtain satisfactory execution and/or application certificate from the manufacturer and/or authorized dealer/s in respect of specialized items of work such as water proofing etc as decided by the Bank/Architects. The contractor shall arrange for the visit and inspection of the work in respect of the representatives of such firms/manufacturers within the rates quoted/accepted by the bank.
6. The contractor shall produce the bills / challans / documentary evidences and proof in respect of genuineness of materials used by him when so ever asked/demanded by the Architects/Bank
7. Please note that in case of a percentage rate tender and individual item rates are not to be filled and/or tempered with and/or altered and/or changed. Only the percentage & amount above (+) or below (-) the estimated rates & amount are to be filled and the Net Tender Amount is to be worked out.
8. No running bill payments shall be made. The contractor has to submit the Final Bill on satisfactory Completion of the Work. However the contractor shall ensure that the measurements are recorded by them and got checked from the Architects from time to time particularly for hidden/concealed item of works.
9. The Bank will be absolutely authorized and entitled to recover the amount on account of loss to third party and / or Bank and / or workmen and / or any statutory recovery etc. from the contractors bill and / or any amount due to be paid to the contractor, in case contractor fails to settle such claims and or fails to pay against such claims/recoveries promptly to the satisfaction of the bank/architects.
- 10.



TECHNICAL SPECIFICATIONS

1. This is an item rate tender.
2. Wherever the specifications are not specified in details the work shall be carried out as per CPWD specifications or Manufacturer's instructions or architects instructions depending upon the site conditions as directed by the Bank/ Architects.
3. The tenderer must visit the site and acquaint themselves with the site conditions. It must be noted that the work is to be carried out in the functional branch without hindering the normal functioning of the Branch. The work shall generally be carried out on holidays or after Banking hours only.
4. The contractor has to work in coordination with the other contractors and daily/weekly schedule of working shall be prepared in consultation with the Architects/Banks. Regular updating / modification of such schedule shall be required.
5. For normal functioning of the Bank/Branch the contractor shall be required to shift the furniture etc and/or relocate the existing and/or new loose and/or fix furniture and/or any other item of works and/or any such materials at new location at times. The contractor shall carry out all such activities with utmost priority and without any additional/extra cost to the bank. The tenderer shall quote the rates inclusive of all such activities/works as may be required as per site conditions. The rates quoted by the tenderer shall be inclusive of all such temporary/semi-permanent works/activities.
6. The contractor shall be required to obtain satisfactory execution and/or application certificate from the manufacturer and/or authorized dealer/s in respect of specialized items of work such as water proofing etc as decided by the Bank/Architects. The contractor shall arrange for the visit and inspection of the work in respect of the representatives of such firms/manufacturers within the rates quoted/accepted by the bank.
7. The contractor shall produce the bills / challans / documentary evidences and proof in respect of genuineness of materials used by him when so ever asked/demanded by the Architects/Bank.
8. Please note that in case of a percentage rate tender and individual item rates are not to be filled and/or tempered with and/or altered and/or changed. Only the percentage & amount above (+) or below (-) the estimated rates & amount are to be filled and the Net Tender Amount is to be worked out.
9. No running bill payments shall be made. The contractor has to submit the Final Bill on satisfactory Completion of the Work. However the contractor shall ensure that the



measurements are recorded by them and got checked from the Architects from time to time particularly for hidden/concealed item of works.

- 10.** The Bank will be absolutely authorized and entitled to recover the amount on account of loss to third party and / or Bank and / or workmen and / or any statutory recovery etc. from the contractors bill and / or any amount due to be paid to the contractor, in case contractor fails to settle such claims and or fails to pay against such claims/recoveries promptly to the satisfaction of the bank/architects.
- 11.** The necessary permission / permit / work pass required to be obtained from the local authority shall be taken by the contractor at his own cost. However the Bank will assist the contractor in obtaining these permissions etc.
- 12.** Sizes of various furniture items mentioned in BOQ / schedule of quantities may vary slightly as per site conditions and / or as per instructions of architects that is maximum by up to + or – 2". No deduction or additional payment shall be made to the contractor if the variation is within the said limits.

Unless otherwise mentioned in item description / bill of quantities/drawings and / or instructed by architects/Engineer following specifications shall be adopted All works to be carried as per detail drawing and instructions of Architect/Engineer in-charge.



SAFTY CODE

1. All working person of the contractor within the site must to wear with safety helmets, mask, goggles, safety shoes, safety bell, and first aid kit and head gloves etc.
2. Adequate precautions shall be taken to prevent danger form electrical equipment. No materials on any of the sites of work shall be so stacked or placed as to cause danger inconvenience to any person or public.

PERSONAL SAFETY WQUIPMENT

3. When the work is done near any public place where is risk of drawings all necessary equipment's should be provided and kept ready for se and all necessary steps taken for prompt rescue of any person in danger and adequate provision should be made for prompt first aid treatment of all injuries likely to be sustained during the course of the work.
4. 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 use.
5. These safety provisions should be brought to the notice of all concerned by display on a notice board at a prominent place at work spol. The person responsible for compliance of the safety code shall be named therein by the contractor.
6. To ensure effective enforcement of the rule and regulations relating to safety precautions the arrangements made by the contractor shall be open to inspection by the labour officers. Engineer of the department or their representatives.
7. Notwithstanding the above clause from (1) to (7). There is nothing in these to example the contractors from the operations of any other act or rule in force in the republic of India.



**BOQ : Interior Decoration & Furniture work : ELECTRICAL WORK
of MANGROL HARBOUR BRANCH, RBO VERAVAL, BAO for State Bank of India. (Not To Be Filled)**

Sr. No.	DESCRIPTION	QTY	UNIT
	NOTE : ALL CHARIS OR CHASES IN WALLS / COLUMNS / SLABS MADE BY THE ELECTRICAL CONTRACTOR FOR INSTALLATION OF CONDUITS / S.B. / BOXES ETC. THE FILLING OF THE SAME IS IN THE SCOPE OF THE ELECTRICAL CONTRACTOR INCLUDING ALL NECESSITY MATERIAL AND LABOUR.		
	PART - A :::: BRANCH		
A	INTERNAL WIRING :Phase wire must be Red colour for LDB, Yellow colour for PDB & Blue for ACDB, Neutral Wire of Black colour & Green Wire for Earthing. Color code must be maintained. Tagging from DB MCB and Switch board must be done.		
1	P and M point wiring in concealed in walls, furniture's & for above false ceiling, or on ceiling, on beams shall be fixed with saddles & spacers etc., with conduits taken in slab with 20 mm dia PVC Rigid conduits 1.5 mm thick ISI mark with 2 nos. of 1.5 sq. mm. phase & nutral & 1 nos. of 1.0 sq. mm. earthing with modular switch with company made flush metal box/surface PVC box etc. comp. with nec. main lines for switch board from LDB of mains of 2 nos. of 2.5 sq.mm wire and 1 no.of 1.0 sqmm pvc Insulated copper conductor wire FRLS type laying in with 20 mm/25 mm dia PVC rigid conduits 1.5 mm thick ISI mark . These will be used with point wiring of light, fan, ex. fan, callbell points, etc { Max. 3 Switchboards in one circuit - One Sp MCB }.Phase wire must be Red colour, Nutral Wire must be Black color & Green Wire for Earthing. Color code must be maintained. Tagging from Lighting DB MCB and Switch board must be done.		
1.1	One 5A switch controlling one light / fan point.	35	nos
1.2	One switch controlling Two light points .	19	nos
1.3	5A socket outlet with 5A switch (on common board) (1 FOR WATER COOLER).	18	nos
1.4	5A socket outlet with 5A SP switch (as an independent point) [for ex. Fan, wall fan , QMS, Token M/C Display, etc. points.]	10	nos
1.5	Call bell point with bell push complete.	1	nos
1.6	SITC of one plug point for digital time clock near signboard (in elevation) as per standard layout of DP MCB from <u>Main panel</u> of mains of 2 nos. of 2.5 sq.mm wire and 1 no.of 1.0 sqmm pvc Insulated copper conductor earth wire laying in with 20 mm/25 mm dia type PVC rigid conduits 1.5 mm thick ISI mark. <u>This Point is need to made near Signboard at Entrance for Digital Moving Display Board or Digital Clock.</u>	Nil	nos



1.7	SITC of loop light points Of 2 nos. of 1.5 sq. mm. off wires & 1 nos. of 1.0 sq. mm. earth wire from Main panel timer of mains of 2 nos. of 2.5 sq.mm wire and 1 no.of 1.0 sqmm pvc Insulated copper conductor earth wire laying in with 20 mm/25 mm dia type PVC rigid conduits 1.5 mm thick ISI mark (<u>This point is for Signage and Down Lighter Points at Entrance</u>)	2	nos
2.1	SITC of 6/16 Amp. Switch and socket complete with necessary require wiring from LDB of 2 no of 2.5 sq mm wires and 1 no of 1.0 sq mm PVC Insulated copper conductor earth wire laying in with 20 mm/25 mm dia PVC rigid conduits 1.5 mm thick ISI mark. These will be used with point wiring of power points ,etc. No Looping of Neutral or earthing is allowed. Each point needs to provide seperate circuit.This Points Need to Be Connected through LDB. (16 A points for Cash room, locker room, record room, etc Supply).	3	nos
2.2	SITC of 6/16 Amp. Switch and socket complete with necessary require wiring from PDB of 2 no of 4.0 sq mm wires and 1 no of 2.5 sq mm PVC Insulated copper conductor earth wire laying in with 20 mm/25 mm dia PVC rigid conduits 1.5 mm thick ISI mark. These will be used with point wiring of power points ,etc. (For Printer, Water Cooler, Freeze, Motor, Note Counting Machine points). No Looping of Neutral or earthing is allowed. Each point needs to provide seperate circuit.This Points Need to Be Connected through PDB. (15 A points for Printer , Pantry etc. Supply)	3	nos
3	SITC of 20 A/ 25 A , 230 V, with DP ELCB., 100 mA all enclosed in a prefabricated M S boxes complete to the satisfaction of E.I.C. For SPLIT AC 1.5TR / 2.0 TR unit with necessary require wiring from ACDB of 2 no of 4.0 sqmm wires and 1 no of 2.5 sqmm PVC Insulated copper conductor wire FRLS type laying in with 20 mm/25 mm dia PVC rigid conduits 1.5 mm thick ISI mark. These will be used with point wiring of A.C. points ,etc . Server Room AC Supply need to be given through Main Panel. Color code must be maintained. Tagging from ACDB MCB and AC point must be done. This point should be installed near Split AC in concealed manner. No Looping of Neutral or earthing is allowed. Each point needs to provide seperate circuit.]. For Cassate AC power supply indoor or outdoor need to be given as per AC vendor's requirement. The height of switchboard must be at reachable point for easily operation. From that point to Split AC , empty conduit + necessary bends must in concealed mode by ele. contractor.	6	nos
B	LIGHTING FIXTURES :		
	(NOTE : ANY OF FIXTURES AND FITINGS SHALL BE RE-CONFIRMED WITH THE ARCHITECTS / CONSULANTS BEFORE ORDERING THEM.		



4	installation, testing and commissioning (including supply and fixing flexible wires from holder to fixtures hardwares etc.) of.... - The LED lamps should be of same make as fixture make. - The marking & cutting of fixtures should be in ele. contractor's scope.. fixtures should be approved by bank's ele. engineer / ele. consultant / architect. from the given make list before installations. LM 79 & LM 80 test reports to be submitted. nichia / LUMileds / cree - LED should be used by manufacture. Lighting Luminaire of LED for Office single piece die cast aluminium M24 housing complete with driver unit, mirror optic and other accessories Lamps of about 100 lumen/W injection moulded PC diffusers with high brightness complete unit complying with international standard (LU49, LH801) - opertive on 190V - 270 V 50 Hz with Mini 3 years warranty complete with mounting system and lamp dully wired and tested Details as under.		
4.1	Installation of 1 X 36 W LED Light chains or hook arrangement with ceiling, connected to supply wire with PVC connector. Earthing connection with lugging need to given to body of Fixture, etc. complete.(Fixture will be supply at Bank's End)	14	nos
4.2	Installation of 1x15 W Square / Round LED DOWN LIGHT to be recessed in false ceiling with all necessary hardwares, chains, hook etc. complete. Earthing connection with lugging need to given to body of Fixture..(Fixture will be supply at Bank's End)	39	nos
4.3	Supply and Installation LED tube light 1 x10 W (560 lumens) Surface mounting type with LED tube, complete. (Wipro make Cat. No. MEGMA-P 7007 or Equivalent PHILIPS / GE make) . For Toilet area.	2	nos
4.4	Supply and insallation of Call bell with Indicatore. (Max or equivalent make)	1	nos
4.5	Supply and installation of Exhaust fan of 300 mm, fresh air vantilator type complete & 6 Amp. 3 pin TOP. (Crompton/ Khaitan / Havells make) [Wooden mounting frame should be fixed in coordination with carpenter - furniture contractor.] - One Ex. Fan is of heavy duty industrial for Ups room.	3	nos
4.6	Supply and instalation of 48" Ceiling Fan with fan step socket modular regulator, Max. 3 feet Fan Rode, Anchor Fastner, etc. (WHITE COLOUR - BEE 5 star labeled ceiling fan Alluminium body and copper winding.) (Orient PSPO or equivalent approved make in Crompton / Havells).	6	nos
4.7	instalation of 1 x 18W led batten light fixture (T-5) with electronic driver and tube complete with necessary hardwares, etc a.(Fixture will be supply at Bank's End)	11	nos
4.8	Supply and installation of metal body and blade type400 mm sweep wall mounted fan with metal stand, guard and blade with on site 2 years warranty (Crompton model - High Flow or Equivelent Make as mention in the Recommened make (AS APPROVED BY THE ARCHITECT/BANK) .. (Off white colour) .	9	nos.



C	COMPUTER POWER SUPPLY & NETWORKING - TELE. SYSTEM.: Phase wire must be Yellow colour for UPS O/P DB, Red colour for PDB , Neutral Wire of Black colour & Green Wire for Earthing. Color code must be maintained. Tagging from DB MCB and Switch board must be done.		
5	SITC of 2 nos. of 6 A, 5 pin Sockets and 1 no. of 6 \ 16 A socket below table outlets with one 16 A switch with indicator Computer power supply with concealed company made metallic boxes or PVC flush box on walls / furniture's / trunking etc complete all respect with necessary wiring of mains of 2 no of 2.5 sq mm and 1 no of 1.5 sqmm pvc insulated copper conductor multi-stranded flexible wire with 20/25 dia. PVC conduits with accessories duly burried under floor with necessary chasing / breaking in floor and to be refinished with all necessary civil material etc. complete from UPSDB to Computer power supply boards.{Maxi. 3 computers in one circuit}. complete with necessary termination etc. complete.[White Colour Outer Plate For These Switchboards]. LOOP POINTS MUST BE OF SAME SIZED WIRES. Phase wire must be Red colour, Nutral Wire must be Black color & Green Wire for Earthing. Color code must be maintained. Tagging from UPS O/P DB MCB and Switch board must be done.	23	nos
6	S & I of 2 nos. of 6 A, 5 pin Sockets and 1 no. of with one 6 A switches raw power supply with concealed company made metallic boxes or PVC flush box on walls / furniture's / trunking etc complete all respect with necessary wiring of mains of 2 no of 2.5 sq mm and 1 no of 1.5 sqmm pvc insulated copper conductor multi-stranded flexible wire with 20/25 dia. PVC conduits with accessories duly burried under floor with necessary chasing / breaking in floor and to be refinished with all necessary civil material etc. complete from PDB to Computer power supply boards.{Maxi. 3 Raw Power Points in one circuit}. complete with necessary termination etc. complete.. [Black Colour Outer Plate For These Switchboards]. LOOP POINTS MUST BE OF SAME SIZED WIRES. Phase wire must be Red colour, Nutral Wire must be Black color & Green Wire for Earthing. Color code must be maintained. Tagging from UPS O/P DB MCB and Switch board must be done.	10	nos
7	Providing, installing, testing, commissioning of CAT 6 UTP pvc insulated copper conductor data cable of D - Link with 20/25 dia. PVC conduits with accessories duly burried under floor with necessary chasing / breaking in floor and to be refinished with all necessary civil material etc. or to be cleated on wall / ceiling with saddles / spacer etc. necessary termination etc. with ferrule numbering at both ends of each piece of cable complete. [2 Lines from BSNL Krone to new krone in server room].	60	mtr



8	Supply, installation, testing and commissioning of CAT 6, RJ 45 information outlet (I/O) of D-link mke with front modular cover plate, flush box metallic or PVC for trucking system etc. complete with terminations etc complete.with Providing, installing, testing, commissioning of CAT 6 UTP pvc insulated copper conductor data cable of D-link make with 20/25 dia. PVC conduits with accessories duly burried under floor with necessary chasing / breaking in floor and to be refinished with all necessary civil material etc. or to be cleated on wall / ceiling with saddles / spacer etc. necessary termination etc. with ferrule numbering at both ends of each of piece of cable etc. complete as per the requirement from data rack to I/O points below tables. etc. _(One for LCD & Two for ATM & one for IP phone in BM cabin). Dual jack plate will not be allowed. Cross Ferruling need to be provided for each point. on Data point tagging must be done).	26	nos
9	Supply, installation, testing and commissioning of 9 U metal rack for computer clamping switch etc complete with Tray Mounting Fan + power supply board. Bank's hardware - port switch / patch panel must be installed by ele. Contractor in this rack. - (make : D Link / Digi Link / Elixer).	1	nos
10	SITC of 24 - port ithubernet switch. (make : D Link / Digi Link).	NIL	nos
11	SITC of 24 port patch panel for computers mounting in metal rack. (make : D Link / Digi Link).	NIL	nos
12	Supply and crimping of RJ 45 connector with proper testing.	NIL	nos
13	Supply & fixing the Patch cord 1 mtr. Long (factory built) .-When supplying , then first ask to BM / Consultant / Architect / Bank Authority.	Nil	nos
14	Supply & fixing the Patch cord 2 mtr. Long (factory built) .-When supplying , then first ask to BM / Consultant / Architect / Bank Authority.	14	nos
15	Supply and installing telephone point with Telephine socket outlets of RJ 11 of aapproved make with company made concealed boxes in walls / furniture's etc. complete with Providing, installing, testing, commissioning of 2 pair of 0.51 cross section pvc insulated copper conductor telephone wire of ITI approved with 20/25 dia. PVC conduits with accessories duly burried under floor with necessary chasing / breaking in floor and to be refinished with all necessary civil material etc. or to be cleated on wall / ceiling with saddles / spacer etc. necessary termination etc. complete.from krone box to tele. RJ - 11 sockets below tables. etc.- for Intercom / fax / direct Tele. facility. Cross Ferruling need to be provided for each point. on Telephone point tagging must be done.	9	nos
16	SITC of 20 pair jelly filled armoured cable for tele. Lines from GF BSNL BOX to GF FLOOR NEW KRONE BOX / EPABX.	NIL	mtr



17 (A)	Supply, installation, testing and commissioning of 20 pair krone telephone tag block duly enclosed in sheet metal powder coated box with locking arrangement complete with necessary terminations.	1	nos
17 (B)	Supply, installation, testing and commissioning of 10 pair krone telephone tag block duly enclosed in sheet metal powder coated box with locking arrangement complete with necessary terminations o/s the branch.	1	nos
D	DISTRIBUTION BOARD AND PANELS :		
18	Supply, installing, testing and commissioning of metallic double door type distribution board with all necessary connection complete to be installed concealed in wall / surface mount complete to the satisfaction of the Engineer in charge. The DB should be of same make as MCB make.		
18.1	8 - WAY SPN DB : (LDB). All MCB should be ' B ' type.	1	nos
	incoming : 25 A DP ELCB, 100 mA - 1 NO .		
	outgoing : 6 to 10 A SP MCB (6 nos).		
18.2	12 - WAY SPN DB : (PDB). ALL MCBs SHOULD ' C ' TYPE.	1	nos
	incoming : 40 A FP ELCB, 100 mA. - 1 NO .		
	outgoing : 6 to 10 A SP MCB (8 nos).		
18.3	6 WAY TPN DB : (ACDB). - All MCBs must be C Type Characteristic.	1	nos
	incoming : 63A FP MCB- 1 NO .		
	outgoing : 20 A / 25 A DP MCB (6 nos) for HI- WALL SPLIT AC / CASSETTE AC points. (UP TO 2.0 TR 1 PHASE AC.).		
18.4	12 WAY SPN DB : (UPS DB) OUTPUT. - All MCBs must be C Type Characteristic.	1	nos
	incoming : 25 A DP 100 mA ELCB.-2 nos.		
	outgoing : 6 to 10 A SP MCB (6 nos).		
18.5	UPS METAL DP ENCLOSURE. (For ATM, Inverter, UPS output). - All MCBs must be C Type Characteristic.	3	nos
	outgoing : 10 A / 20 A. DP MCB -1 NO FOR SERVER OUTPUT.		
18.6	UPS 12 WAY SPN DB (For all computers). - All MCBs must be C Type Characteristic.	1	nos
	incoming : 40 A FP MCB - 1 NO		



	outgoing : 25 A DP MCB - 1 NO FOR 1 - phase INVERTER.		
	outgoing : 25 A DP MCB - 1 NO FOR 1 - phase UPS..		
	outgoing : 25 A DP MCB - 1 NO FOR 1 - phase UPS..		
19	SITC of 25 A / 32 A / 40 A / 63 A FP ELCB, 100 mA (C - Curve) with powder coated compny made metallic double door IP 65 weatherproof sheet stell enclosure complete at outdoor unit connection of three phase 3.0 / 5.5 / 8.5 TR VRF / DUCTABLE / CASSETTE AC units. This will be executed near trap door of indoor unit at reachable height. (as per IP 65 protection). THE ENCLOSURE SHOULD BE SAME MAKE AS MCB MAKE.	2	nos
20	Supply, installation, testing and commissioning of Main panels as per drawing and specifications. Panel should be dust and vermin proof. Panel shall be fabricated from 14/ 16 SWG CRCA sheet metal duly powder coated of approved paints. Panel should be as per the sepecifications of ERDA/CPRI. fabrication, Switch gear installation. Internal wiring and Test Certificate from Manufacturer to be submitted. - All MCBs must be C Type Characteristic. Panel Drawing Need to be approved by Electrical Consultanat / Bank's Engineer before starting work.		
	MAIN PANEL :	1	nos
	Incoming feeder : 100 A C&S Make CSE1N125ETM4P-100A or L& T MAKE; CM921530000AG-100A or LEGRAND MAKE: DPX3-160A:4201 15-100A (1 No.). The MCCB should have inbuilt Earth Fault & Nutral Overload Protection with Power Supply & Display Module for Metering & Fault Recording.		
	* 80 A, FP Change over switch (1 No.).		
	* 160 AMP. 500 Volts, 3 phase 50 Hz FP Alu. bus bars of suitable length -Current ratio shall be 1 sq mm = 1.2 A.		
	* Digital AVF Meter with control fuses. C.T. shall be of 15VA class 1 type and shall be resin cast type.		
	* Phase indicator lamps phase wise.		
	* Outgoing feeder:		
	* 25 A DP MCBS (1 no - SERVER AC).		
	* Timer of L & T make Cat. No. 67DDTO digicom Timer with 16A. 4P contactor / Theben make Cat no. SUL 180 a - T180 0 001 ANALOG Timer with L & T make contactor MNX 18 (operating coil voltage 230V, 50 Hz). (24 hrs).- 1 No for signage light.		
	* 20 A DP MCB (1 no - Sign board).		
	* 63 A FP MCB (1 NO - UPSDB).		
	* 40 A FP MCB (1 NO - PDB) .		
	* 32 A,100mA FP ELCB (1 NO - 3 PHASE CASSETTE 3 TR. ACDB) .		
	* 63 A FP MCB (1 NO - ACDB) .		
	* 40 A FP MCB (1 NO - SPARE DB).		



21	Providing and Installing of 100A FP SFU(36KA) Unit M. S. compartment enclosure IP65 with hinged door & locking arrangement duly fabricated from 18 SWG sheet metal box duly painted with one coat of red-oxide paint and two coats of approved enamel paints with 100A OPEN TYPE MCCB UNIT with Phase indicator lamps phase wise , control fuses & wooden back complete. THIS WILL BE INSTALLED NEAR MAIN DOOR - INSIDE OR OUTSIDE - OF THE BANK. (first ask to BM / Consultant / Architect / Bank Authority.	1	nos
22	SITC of 40 / 63 A FP MCB (C - Curve) with powder coated compny made metallic double door sheet stell enclosure complete For CAPACITOR BANK unit with 30 KVA CAPACITOR BANK near energy meter with load wires for connecting capacitor bank.	NIL	nos
E	EARTHING SYSTEM:		
23	Providing and making Earthing Pit with all necessary mattterial and making masonry kundi, watering arrangment etc complete as per ISI 3043-1987 (FOLLOWING ITEMS MAY OPERATE). Resistivity as per IEC / IS. (3 years Manufacturer Warranty. Earthing Certificate Need to Attached). (At the Time of buried of earthing Photograph must be taken Without Photographic Proof Earthing Will be Rejected. Earthing Rod Photo Must be attached with Bill.) . Earthing need to measure at Site and it should be less than 5 Ohm. If found less than 5 ohm than will be rejected. Earthing Pit Must be Provided for both Cu as well as GI earthpit.		
23.1	ECO SAFE environment friendly electrical grounding system with T-193- Hot Dip Galvanised, having 50mm dia. of outer pipe and 25 mm dia. of inner pipe and length of 3mtrs with 50kg Back Fill Compound as per UL 476, of Powerfill Eco friendly electrical grounding backfill compound and clamp (DB - PANEL) - G. I. -(Chemical GI Earthing) ERDA & NSIC approved, E link or ETP MAKE or ASHLOK MAKE. Any other make will not be consider. (DB - PANEL) .	1	nos
23.2	ECO SAFE environment friendly electrical grounding system with T-193- Copper electrode used upto 11 KV, having 50mm dia. of outer pipe and 25 mm dia. of inner pipe and length of 3mtrs with 50kg Back Fill Compound as per UL 476, of Powerfill Eco friendly electrical grounding backfill compound and clamp (UPS) - Chemical GI Earthing) ERDA & NSIC approved, E link or ETP MAKE or ASHLOK MAKE. Any other make will not be consider. - Cu. (UPS) .	1	nos
24	Supply, laying and jointing of following wire / strip / earth cable on walls, ceiling etc. With necessary non rusting clamps, washers, nuts and bolts etc complete.		
24.1	25 x 3 mm G.I. Strip - From G. I. Earthpit to Main Panel + From Cu. Earthpit to UPS I / P DB.	35	Rmt
24.2	25 x 3 mm CU.strip.	Nil	Rmt
24.3	8 SWG G.I. Wire with 20 mm dia. PVC rigid conduit duly cleated / concealed / burried in floor etc. complete for ELE. PANEL, ALL DBS , ETC.	79	Rmt



24.4	8 SWG CU. Wire with 20 mm dia. PVC rigid conduit duly cleated / concealed / buried in floor etc. complete.	15	Rmt
F	CABLES & CABLE TERMINATIONS:		
25	Supply, Lying, installation, testing and commissioning of following sizes of PVC insulated PVC sheathed copper / aluminum conductor armoured cable to be laying in existing cable trench or to be laid in existing pipes of with necessary clamps, spacers with cleating on wall ceiling etc. complete to the satisfaction of EIC. All types of cable excavation works should be in contractor's scope.(LENGTH TO BE VERIFY AT SITE). With End termination Lugging, Metal Glanding Complete.		
25.1	4 C x 2.5 sq. mm Cu . Conductor YWY cable. (for Signboard).	20	mtr
25.2	4 C x 4.0 sq. mm Cu. Conductor YWY cable. (From 3 phase cassette AC DB to 3 phase cassette AC 4 P ELCB to outdoor units.) .	50	mtr
25.3	4 C x 6.0 sq. mm Cu. Conductor YWY cable. (Main Panel to UPS I/P DB) .	25	mtr
25.4	4 C x 10 .0 sq. mm Cu. Conductor YWY cable. (Main Panel to 3 PHASE CASSETTE AC DB) .	3	mtr
25.5	4 C x 16.0 sq mm Alu. Conductor AYFY cable. (Main Panel to LDB, ACDB, PDB, ATMDB.) .	Nil	mtr
25.6	3.5 C x 50.0 sq. mm Alu. Conductor AYFY cable. (main cable from Panel to main mccb nr. energy meter) (LENGTH as per site condition) .	30	mtr
25.7	4.0 C x 25.0 sq mm Alu. Conductor AYFY cable. (Main Panel to DG SET) .	Nil	mtr
25.8	25.0 sq. mm single core Cu. wire supply & laying for main load wire from meter to main switch in flexible pipe.	8	mtr
25.9	3 C X 10.0 sq. mm flexible Cu. cable with 20 mm/25 mm dia PVC rigid conduits 1.5 mm thick ISI mark . (UPS to UPS O/P DB & UPS I/P DB to UPS).	Nil	mtr
25.10	3 C X 6.0 sq. mm flexible Cu. cable with 20 mm/25 mm dia PVC rigid conduits 1.5 mm thick ISI mark . (UPS to UPS O/P DB & UPS I/P DB to UPS).	8	mtr
25.11	3 C X 4.0 sq. mm. flexible PVC Insulated copper conductor cable laying in with 20 mm/25 mm dia PVC rigid conduits 1.5 mm thick ISI mark from AC indoor unit to AC outdoor unit. (For 2.0 TR CASSETTE - SPLIT AC units.) .	35	mtr



G	MISCELLANEOUS ITEMS :		
27	Supply and installation of 300 x 300 x 40 mm size GI box duly fabricated from 18 SWG m.s. sheet with top cover of s. s. sheet complete with necessary knock outs at all the sides of box for conduit entries duly fixed in floor, including breaking in floor and re-finished the same etc. complete (Wire Draw Box).	9	nos
28	Supply and installation of 150 x 150 x 40 mm size GI box duly fabricated from 18 SWG m.s. sheet with top cover of s. s. sheet complete with necessary knock outs at all the sides of box for conduit entries duly fixed in floor, including breaking in floor and re-finished the same etc. complete (Wire Draw Box).	2	nos
29	Supply an installation of 24 Hr, 7 days A/C timer with 2 nos. power contector of M.D.S, L & T ,SEIMENS,THEBEN (indoasian) Make. All enclosed in sheet steel <u>powder coated enclosure of 400 X 400 mm</u> complete with all necessary termination for system room A.C & E lobby AC. <u>Here Ready made Cyclic Timer Will not be permitted.</u>	2	nos
30	Supply and installation of 2.5 sq. mm. 3 core flexible cable of approved make (3 mtr. Length) with heavy duty industrial pvc flexible pipe & 15 amp. 3 pin top of approved make for the supply of locker room.	3	nos
31	Supply and installation of 4.0 sq. mm. 3 core flexible cable of approved make (5 mtr. Length) with heavy duty industrial pvc flexible pipe & 20 A. industrial plug socket with metal box & provision of DP MCB slot of approved make for the supply of locker room AC point.	Nil	nos
32	SITC of CABLE TV cable line with proper fixing and connecting with modular Co-Axial TV Socket. - 2 run.	40	mtr
33	Supply & laying of the empty conduit . - 25 mm.	Nil	mtr
34	Existing floor cutting for laying conduits & finished by sand - cement mixer for strong finishing (PCC works).	Nil	mtr
35	SITC of core cutting in slab for cables.	Nil	job
36	Laisoning work (addition Load) WITH Electric supply Co. in branch & Apporoval and Neccessary cirtificate.	1	job



37	Providing Necessary plug points & light points for tube lights (including necessary wiring) at various locations as required by various contractors for execution of various works / to run equipments such as drill / cutter etc. during the entire execution process. The accessories used for this purpose shall be of temp. nature (anchor piano or eq.) & the contractor has to take back the same on completion of the project. The supply for this shall be taken from the temporary connection provided at / from nearby general meter under co.ordination with the LANDLORD. & also providing temporary power supply for computers and data connection for computers with wiring, switchboard, Comp. I/O Points, etc. for smoothly running of the branch with removing & reshifting of the computers, printers, etc. bank hardware accessories.	Nil	job
	<u>TOTAL ::</u>		
	<u>% DISCOUNT IF ANY ::</u>		
	<u>GRAND TOTAL ::</u>		
	Net Tender Amount in words : Rupees'.....		
1	ALL RATES SHOULD BE INCLUDE OF ALL TAXES EXCLUDING GST WHATEVER IS APPLICABLE.		
2	THE CONTRACTOR SHOULD DEPUTE ONE PERSON AT SITE FROM START OF WORK TO FINISH FOR GIVING TEMPORARY CONNECTIONS & ATTENDING PROBLEMS.		
3	THE CONTRACTOR SHOULD WORK ACCORDING TO THE FINAL LAYOUT.		
4	THE CONTRACTOR SHOULD SUBMIT & APPROVE MAKE LIST WITH ARCH./ BANK'S ENGINEER / ELE. CONSULTANT BEFORE WORKING & SUBMIT SIGNED COPY WITH FINAL BILL SUBMISSION.		
5	THE CONTRACTOR SHOULD CHECK ELE. APPROVED MAKE LIST BEFORE QUOTE.		
6	THE CONTRACTOR SHOULD SUBMIT TEST CERTIFICATE OF PANEL FROM PANEL BUILDER AS PER PERFORMA GIVEN IN TENDER. BUT THE PANEL SHOULD BE MADE AS PER CPRI TERMS & CONDITIONS & ALSO APPROVED BY BANK'S ELE. ENGINEER / CONSULTANT . THE CONTRACTOR SHOULD FOLLOW THE GA DRAWING & PANEL SLD IF GIVEN IN TENDER.		
7	LOWEST BIDDER SHALL BE DECIDED AFTER DEDUCTING THE BUYBACK VALUE.		
8	THE CONTRACTOR SHOULD SUBMIT BANK GUARANTEE OR WARRANTY OF FIXTURES - LED FOR MIN. 3 YEARS.		
9	CONTRACTOR SHOULD BE SUBMITTED THE CERTIFICATE OF WIRES THOSE USED FOR THE BRANCH FROM DULY SIGNED BY COMPANY AUTHORISED PERSON. - PER PROJECT BASIS.		
10	EARTH RESISTANCE SHOULD BE CHECKED & SUBMITTED THE REPORT WITH DULY SIGNED BY ELE. CONTRACOTR AT THE TIME OF BILL CHECKING.		

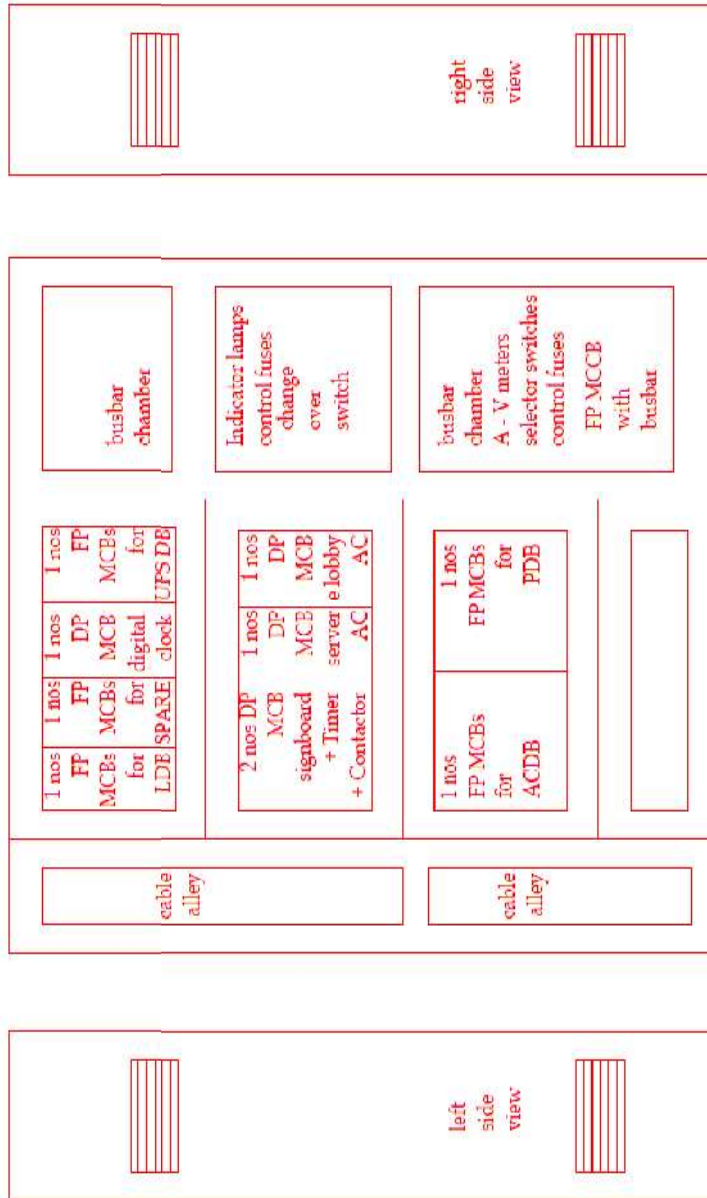


11	SINGLE LINE DIAGRAM SHOULD BE SUBMITTED AT BRANCH & ONE COPY SHOULD BE ATTACHED NEAR DB / MAIN PANEL.
12	SHOCK TREATMENT CHART SHOULD BE PEST NEAR DB / MAIN PANEL. STICKERS SHOULD BE PEST ON DBS / MAIN PANEL.
13	THE CONTRACTOR'S PRESENCE MUST BE COMPULSORY FOR SHIFTING / INSTALLING OF UPS , DATA RACK, EPABX SYSTEMS. - MUST HELP TO BANK'S VENDORS LIKE PCS (HARDWARE), UPS , DATACRAFT (PORT SWITCH - SOFTWARE), ETC.
14	CONFIRMATION/ RECEIVED SIGNATURE FROM BRANCH MANAGER REQUIRED FOR SUPPLY OF PATCH CORDS.
15	THE RATES QUOTED BY THE CONTRACTOR IN THE COLUMN WHERE QUANTITY & UNIT ARE NOT MENTIONED IN THE TENDER ARE NOT NECESSARY BE ACCEPTED , IF LATER THE SAME ARE TO BE FIXED ON SITE.
16	THE CONTRACTOR SHOULD BE ADVISED NOT TO LAY ANY CONDUIT / CABLE MAIN LINES THROUGH THE CASH ROOM / LOCKER ROOM / RECORD ROOM FOR SECURITY SAFETY AUDITS.
17	IF THE CONTRACTOR HAS NOT CARRIED OUT ELECTRICAL WORK AS PER STANDARD SPECIFICATION THEN CONTRACTOR IS LIABLE TO REMOVE AND REWORK AS PER STANDARD SPECIFICATION AND WHATEVER THE DAMAGE IN CONNECTION WITH CIVIL/ FURNITURE/ AC WORK WILL BE BEAR BY CONTRACTOR. IF CONTRACTOR WILL NOT DONE REWORK THEN WHATEVER BEEN THE COST FOR REWORK WILL BE DEDUCTED FROM CONTRACTOR'S BILL.
18	THE CONTRACTOR SHOULD BE ADVISED TO FIX 2 / 3 INCH SIZE PIES FOR HOLES IN OUTSIDE AREA WHERE THERE WILL BE CREATED THE HOLES IN WALL FOR CABLES / EARTH STRIP LAYING WORKS. FILLED WITH CEMENT / MORTAR WITH END CAPS OF PIPES.

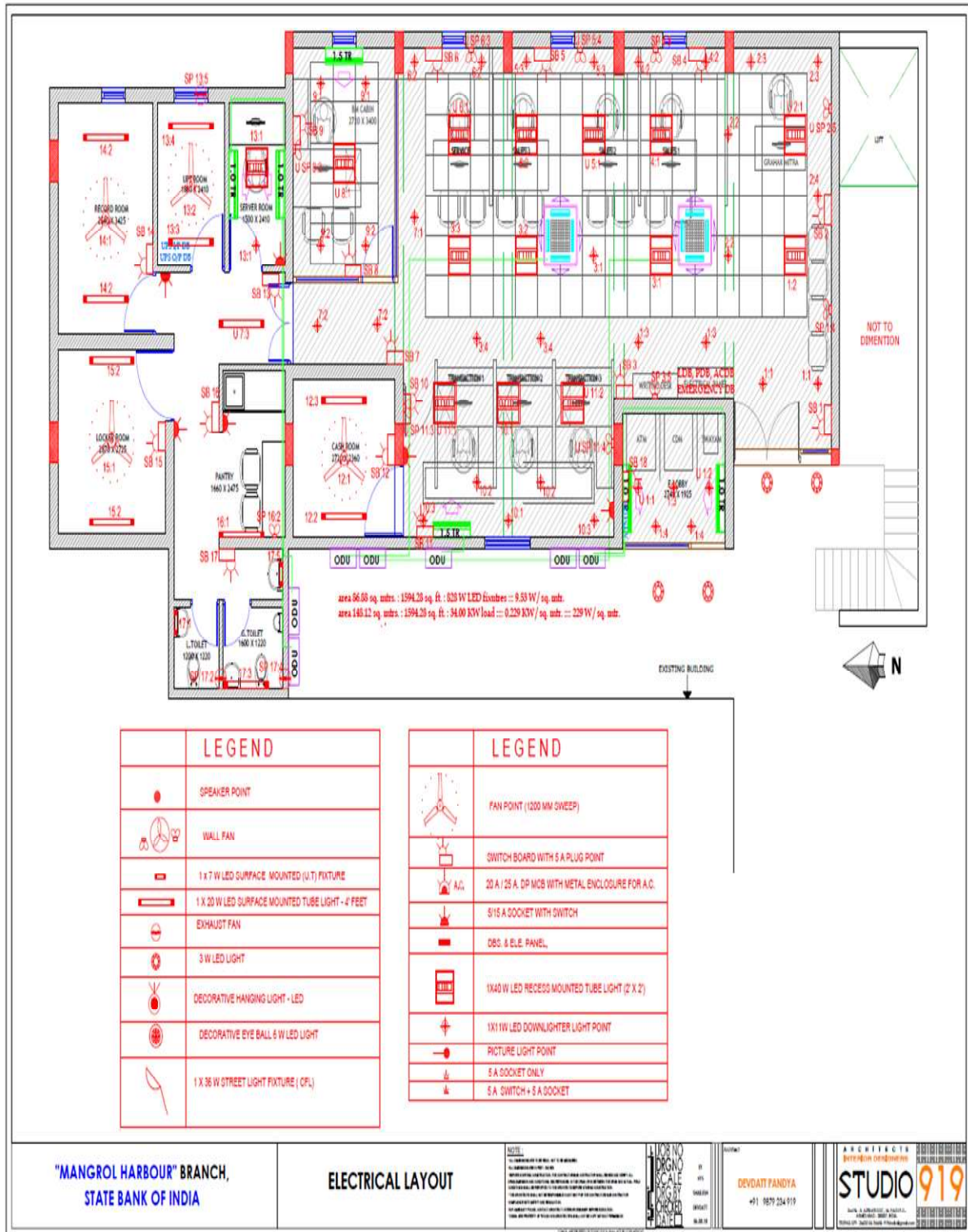


APPROVED MAKE LIST OF EQUIPMENT AND ACCESSORIES

1	PVC rigid conduits & Accessories:	1.5 mm thick (MMS) ISI and FIA approved - Precision/ Vraj/ Nihir/ BLP/ PFI/ Anchor/ Polycab/ Astral make. (Only white coloured pipes FRLS type to be used.).
2	L.T. Cables:	Havells/ KEI/ Polycab/ R. R. Kable/ Finolex.
3	Wires (FRLS):	Havells/ KEI/ Polycab/ R. R. Kable/ Finolex/ Anchor.
4	Main Distribution Boards:	MDS Legrand (Lexic)/ Hager/ Crabtree XPOA/ Schneider (Eazy 9)/ C & S Wintrip/ Siemens Bitaguard.
5	ELCB/ RCCB/ Miniature Circuit Breaker:	MDS Legrand (Lexic)/ Hager/ Crabtree XPOA/ Schneider (Eazy 9)/ C & S Wintrip/ Siemens Bitaguard.
6	Switch gears:	MDS Legrand (Lexic)/ Hager/ Crabtree XPOA/ Schneider (Eazy 9)/ C & S Wintrip/ Siemens Bitaguard.
7	Change Over Switch:	HPL Socomac/ Havells/ L & T/ Hager.
8	Domestic fittings:	
	a) All Switching Modular Accessories.	Schneider Livia/ Anchor Roma Plus / Crabtree Verona/ Legrand Myris.
	b) Holders/ ceiling roses	Anchor or equivalent approved make.
	c) Adhesive Tape	Bhor (Steel Grip) or approved .
9	10 - 30 A Polycarbonate Socket & Top:	MDS Legrand (Lexic)/ Hager/ Crabtree XPOA/ Schneider (Eazy 9)/ C & S Wintrip/ Siemens Bitaguard.
10	Telephone Wires/ Cable:	Finolex/ R. R. Kable/ Havells/ L & T/ Polycab.
11	Telephone tag block:	Krone make.
12	Cable Lugs:	Dowell/ Lotus / Jainson/ 3 D.
13	Cable gland Single/ Double Compression:	HMI/ Comet/ 3D.
14	Ammeter/ Voltmeter:	AE/ HPL/ MECO/ Enercon make.
15	Selector switches:	L & T salzer/ Kaycee make.
16	Indicator lamps:	LED type Teknic/ Precifine/ Binay.
17	Connector strips:	Wago/ Elmex make.
18	Lighting Fixtures :	Wipro/ Philips/ GE/ Crompton/ C & S.
19	Exhaust fan (Light duty):	Khaitan/ Crompton/ Havells.
20	Ceiling Fan (5 star rated):	Crompton (High Breeze Plus) / Havells.
21	Wall mounted Fan (5 star rated):	Crompton (High Flow Wave) / Havells.
22	Data Cable - I/ O Unit:	D - Link/ Digi Link.
LIGHTING/ FAN FIXTURES - SEE CAT NO. & SPECIFIED MAKE IN THE PRICE BID.		
CONTRACTOR SHOULD USE ONLY ONE COMPANY FOR ALL SWITCHBOARDS/ DBS.		
CONTRACTOR SHOULD SUBMIT SIGNED COPY OF MAKE LIST BEFORE WORK STARTED.		



G. A. DRAWING FOR MAIN PANEL - SBI MANGROL
HARBOUR BRANCH, MANGROL, RBO VERAVAL, RAO.





INSULATION TEST CERTIFICATE BY ELECTRICAL CONTRACTOR

THIS CONTRACTOR IS TO CERTIFY THAT THE WORK IS CARRIED OUT CONFIRMING TO **IE** RULES & CODE OF PRACTICE. HE HAS TO GIVE THE TEST REPORT IS UNDER :

(I) INSULATION RESISTANCE TEST IS

R - N M. OHMS :
Y - N M. OHMS :
B - N M. OHMS :

(ii) LOAD TEST IS

5 A - 1000W Power Point - 15 Minutes :

15 A - 1000W Power Point - 15 Minutes :

(iii) EARTH RESISTANCE FOR EACH ELECTRODE IS

1 OHM :
2 OHM :
3 OHM :
4 - N - E Volts :

(iv) CERTIFICATE OF MAKES OF MATERIALS USED
IN THE WORK :

(v) CIRCUIT DIAGRAM:

(vi) CERTIFIED THAT THE ELECTRIFICATION WORK HAS BEEN CARRIED OUT UNDER THE
SUPERVISION OF LICENSED ELECTRICAL SUPERVISOR :

(vii) CERTIFIED THAT THE EARTHING PALTE / PIPE HAS BEEN VERIFIED AND PLACED AT CORRECT
DEPTH CONFIRMING TO **IE** RULES.:

SIGNATURE OF ELECTRICAL SUPERVISOR -
PERMIT NO.:

SIGNATURE OF ELECTRICAL
CONTRACTOR - LICENSE NO.:

DATE:

PLACE:

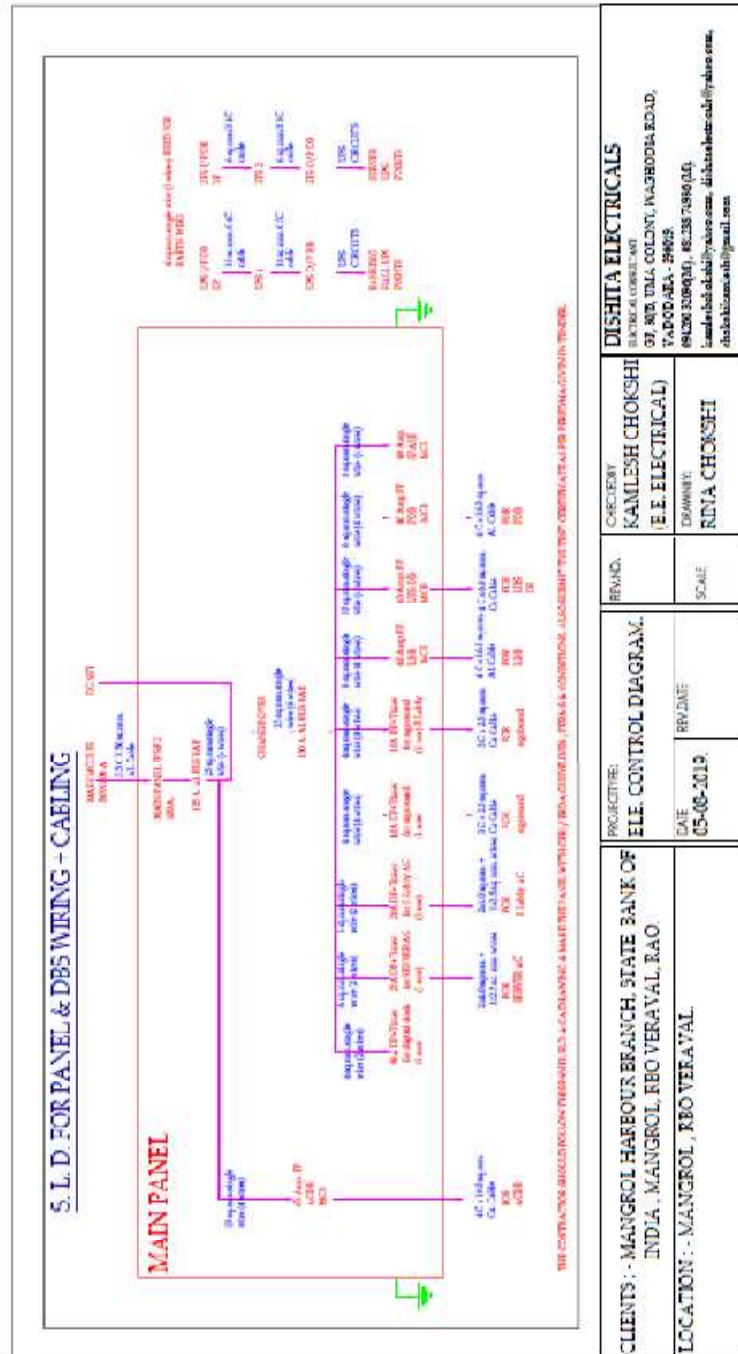
KAMLESH CHOKSHI



IMPORTANT POINTS TO BE NOTED

- 1) Rates for **LIGHT, FAN, EX. FAN, CALL BELL, and RAW POWER ETC. POINTS** include the cost of main wires and PVC pipes from **LDB-ROW POWER DB** to **DIFFERENT SWITCHBOARDS WITH REQUIRE CIRCUITS**.
- 2) Rates for **COMPUTER POWER POINTS** include the cost of wires and PVC pipes from **UPS DB** to **COMPUTER POWER POINTS**.
- 3) Rates for **COMPUTER I/O** include the cost of **DATA** cables and PVC pipes from **SERVER SWITCH** to **COMPUTER NODES**.
- 4) Rates for **TELE POINTS** include the cost of **TELEPHONE Wires** and PVC pipes from **EPABX/CRONE BOX** to **TELE. POINTS**.
- 5) Rates for **A.C. / POWER POINTS** include the cost of wires and PVC pipes from **A.C. DB** to **DIFFERENT A.C. AND POWER POINTS WITH REQUIRE CIRCUITS**.
- 6) THE CONTRACTOR SHOULD SUBMIT THE BUILTUP **SLD OF PANEL, SLD OF DIFFERENT DBS TO DIFFERENT SWITCHBOARDS WITH NUMBERING, SLD OF DATARACK TO DIFFERENT I/O POINTS WITH NUMBERING, TELE. KRONE BOX TO DIFFERENT TELE. POINTS WITH NUMBERING, ETC.** AFTER EXECUTION OF THE BRANCH. - 2 SETS OF COPIES - 1 WITH LAMINATION.
- 7) THE CONTRACTOR SHOULD USE MAX. 3 CIRCUITS IN ONE CONDUIT FOR **UPS & RAW POWER POINTS**.
- 8) THE CONTRACTOR SHOULD USE MAX. 3 WIRES OF **DATA & TELE.** IN ONE CONDUIT.
- 9) EVERY CONDUIT FOR **UPS , RAW POWER , DATA & TELE., POWER POINTS, AC POINTS , LIGHTING POINTS SB** SHOULD BE SEPARATE.
- 10) FOR **DATA & TELE. POINTS**, BIG JUNCTION BOX MUST BE REQUIRED.
- 11) FOR **UPS & RAW POWER POINTS**, BIG/ SMALL JUNCTION BOX MUST BE REQUIRED.
- 12) EMPTY CONDUIT MUST BE LAID FOR SECURITY SYSTEM.
- 13) PVC CONDUITS MUST BE CLAMPED WITH SADDLES IN CEILING ONLY.
- 14) ELE. CONTRACTOR MUST SUBMIT CERTIFIED LOAD LIST WITH ELE. LICENSE NO. / SUPERVISOR CERTIFICATE NO.
- 15) CONTRACTOR SHOULD SUBMIT TEST REPORT.
- 16) CONTRACTOR SHOULD PRESENT EARTHING PLATES BEFORE EXECUTION.

KAMLESH CHOKSHI





ELE. CONSULTANT:
KAMLESH CHOKSHI
DISHITA ELECTRICALS
VADODARA

LOAD CALCULATION

09426032096 (M)
08128874936 (M)

**BRANCH: SBI MANGROL HARBOUR BRANCH, MANGROL, RBO
VERAVAL, RAO.**

No.	NO.	Load Items	Qty	Kw.	Total Kw.
A]		A.C.			
	1	1.0 TR HW	1	1.20	1.20
	2	1.5 TR HW	2	1.80	3.60
	3	2.0 TR HW		2.40	0.00
	4	3.0 TR CASSETTE		3.60	0.00
	5	4.0 TR CASSETTE	2	4.80	9.60
	6	7.5 TR DUCTABLE		9.00	0.00
	7	8.5 TR DUCTABLE		10.20	0.00
	8	17.0 TR VRF		21.00	0.00
B]		LIGHTING FIXTURES			
	1	1 X 40 W LED SQUARE	14	0.04	0.56
	2	12 W LED FIXTURE	36	0.015	0.54
	3	1 X 7 W MINOLTA	2	0.01	0.02
	4	1 X 20 W T/L	11	0.02	0.22
	5	CEILING FAN	4	0.06	0.24
	6	WALL FAN / PEDSTRAL FAN	9	0.06	0.54
	7	EX. FAN	4	0.07	0.28
	8	LCD	2	0.25	0.50
	9	WATER COOLER / FREEZE	1	0.3	0.30
	10	SIGN BOARD	1	1.00	1.00
	11	1 X 36 W STREETLIGHT		0.04	0.00
	12	BORE MOTOR		0.75	0.00
C]		COMPUTER SYSTEM			
	1	UPS - 10 KVA		8.00	0.00
	2	UPS - 5 KVA	1	4.00	4.00
	3	UPS - 3 KVA		2.40	0.00
	4	UPS - 2 KVA	1	1.60	1.60
	5	UPS - 1 KVA		0.80	0.00
	6	COMPUTERS	12	0.25	3.00
	7	PRINTERS - BIG	1	0.30	0.30
	8	PRINTERS - DRAFT / PASSBOOK	5	0.30	1.50
	9	NOTE COUNTING M/C	2	0.50	1.00
	10	ATM	1	4.00	4.00
		TOTAL LOAD REQUIRED KW			34.00
		TOTAL LOAD SANCTIONED			
		EXTRA LOAD DEMANDED KW			34.00
		DIVERSITY FACTOR 75 % KW			25.50

DEMAND LOAD IN KVA	25.33
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KW = 1.71 * V * I * 0.85
PER PHASE AMP.

39.87