



भारत सरकार का उपक्रम A Government of India Undertaking



REGIONAL OFFICE, CUTTACK,
M-14, BARAMUNDA H. B. COLONY, BHUBANESWAR, ODISHA

TENDER DOCUMENT

FOR ELECTRICAL INSTALLATION & DATA WORK OF KUMANDA **BRANCH**
AT KUMANDA, ANGUL.

NAME OF THE TENDERER : _____

ADDRESS OF THE TENDERER : _____

LAST DATE OF SUBMISSION OF TENDER : 27-05-2022 UPTO 3.30 PM

DATE OF OPENING OF THE TENDER : 27-05-2022 AT 4.00 PM

ARCHITECT / CONSULTANT

Techno Arch

Plot No-71/7, Jadupur. Near Ranasinghpur Mo Bus Stop

Bhubaneswar-751019.

Mobile No -9437189632

NOTICE INVITING TENDER

Sealed item rate tenders in duplicate, are invited only from Electrical Contractors, empanelled by Union Bank of India, Regional Office, Cuttack, M-14, Baramunda H. B. Colony, Bhubaneswar for the following work:-

- 1) Name of the work : Electrical Installation & Data Work of Kumanda Branch of Union Bank of India.
- 2) Place of the work : Kumanda, Angul
- 3) Date of Commencement of work : 7 (Seven) Calendar days from the date of issue of work-order.
- 4) Time of completion : 14 (Fourteen) Calendar days.
- 5) Defect Liability Period : 1 (One) Year
- 6) Earnest Money : Rs.5000.00.
- 7) Estimated Cost : Rs. 2,38,970.00 Plus GST
- 8) Issue of Tender Paper : Tender Documents can be downloaded from Bank's official Website i.e. www.unionbankofindia.co.in from 06-05-2022 to 27-05-2022 upto **2.00 P.M.**
- 9) Time, Date and Place of Submission of Tender Paper : **On or before 3.30 P.M. on 27-05-2022**
At the office of :-
The Regional Head,
Union Bank of India,
Regional Office, Cuttack,
M-14, Baramunda H. B. Colony, Bhubaneswar
- 10) Time, date and place of opening of Tender : The Tender will be opened at **4.00 P.M.** on **27-05-2022** at the office of :-
The Regional Head,
Union Bank of India,
Regional Office, Cuttack,
M-14, Baramunda H. B. Colony, Bhubaneswar
- 11) Tender to be addressed to : The Regional Head,
Union Bank of India,
Regional Office, Cuttack,
M-14, Baramunda H. B. Colony, Bhubaneswar
- 12) Validity of Tender : Three (3) calendar months from the stipulated last date of submission of tender.

- 13) Liquidated Damages : Rs. 500.00 (Rupees five hundred) only per day if the work remains unfinished after the date of completion or the date extended subject to maximum of 10% of the value of work.
- 14) The rates quoted shall include all Taxes, Transport, handling charges on materials, labour etc. but exclude GST.
- 15) Delay in submission arising out of postal or any other irregularities will not be considered. The Bank in any case will not be responsible for any damage in transit in case of postal delivery.
- 16) The Bank will not be bound to accept the lowest tender and reserves the rights to accept or reject any or all the tenders without assigning any reason whatsoever.

The Regional Head,
Union Bank of India,
Regional Office, Cuttack,
M-14, Baramunda H.B. Colony,
Bhubaneswar

INSTRUCTION TO THE TENDERERS

1. The tenderer should study all the tender documents carefully and understand the tender contract conditions, drawings, and specifications etc., before quoting. If there are any doubts, they should get clarifications in writing, but this shall not be a justification for submission of late tender or extension of opening date. Tender should be strictly in accordance with Architects' drawings, specifications and other tender documents.
2. The tenderer should visit the site and acquaint himself with the site conditions before quoting. He is also expected to know about the availability of water supply, electricity supply, approach road, construction materials as per consultant's specifications and any other ancillary facilities since these are to be provided/arranged by him (unless otherwise specified) at his cost to execute the works. All the above factors must be taken into account in the rates quoted.
3. The tenderer should quote his rates for all items in the tender schedule. All the rates given in the tender schedule should be expressed both in figures and words, and where there is a difference between the two, the rates given in words will be taken as authentic. Should there be any discrepancy between unit rate and amount, the unit rate will be considered as the correct one.
4. All entries in tenderer documents should be handwritten in ink. All corrections should be attested under the full signature of the contractor. Corrections where necessary should be made by scoring the wrong word figures by drawing a line across them and attesting these with the full signature of the contractor. These shall not be erased or overwritten.
5. Every page of the tenderer document should be duly signed by the tenderer.
6. Rates:- The quoted rates should be inclusive of all equipment's, materials, leads, labour, octroi duties, sales tax on work's contract, turnover tax, Excise, Customs etc. but exclusive of GST, required in connection with the completion of work to the entire satisfaction of the Corporation and Consultants. All the materials are to be supplied by the contractor unless otherwise stated. No claim for upward revision of rates will be allowed on account of any increase in tax, duty etc.
7. The quoted rates shall be valid for a period of six months from the date of opening of the tender. No upward revision of rates will be accepted after opening of the tender. If the Tenderer fails to accept the work order, if placed at his originally quoted rates, or subsequently negotiated rates, as the case may be, the earnest money will be forfeited. Once the quotations are accepted and the work order placed on the successful tendered, the rates shall be valid till the entire work is 100% complete.
8. Tenderer shall quote his rates for all items of work described in the bills of quantities, irrespective of whether they are main items or alternate items. The Bank reserves to itself the right to adopt any of the alternate items, either in scrutinizing and deciding upon the tender or later when the works are being executed.
9. Incomplete tenders, conditional tenders, tenders received late or tenders not confirming to the terms and conditions prescribed in the tender documents or not accompanied by the requisite earnest money will be rejected. The bank is not bound to accept the lowest tender and reserves the right to reject any or every tenders without assigning any reason whatsoever and/or to carry out negotiations with the tenderers in the manner considered suitable by the Bank.
10. Tenderers may have to attend the concerned office of the Bank for negotiations/clarifications required by them in respect of their quotations without any commitment on the part of the Bank.
11. In case of negotiations, the tenderer should send the confirmation of successful negotiations so as to reach the Bank within three days from the date of negotiation failing which the Bank reserves the right to ignore the quotation.
12. Payment of Bills: No advance payment will be made. You will not ask for payment of Running Bill. Full and Final Bill will be paid to you after completion of the work to the satisfaction of Architect/Bank. You must ensure that there will be no compromise in Quality of Work. Payment will

not be released if the work is not found Satisfactory. 7% of the bill amount payable will be retained with the bank as security deposit for defect liability for a period of one year and IT deduction for considering part payment as above.

13. Insurance: Till the tendered job is totally completed and handed over to the bank after satisfactory completion the contractor shall keep all the materials and equipment's etc. at his sole risk and responsibility a shall keep them insured at his cost and risks. Bank will not be responsible for any loss or damage to the materials or equipment's of the contractor.

Contractors' Signature with Seal

GENERAL CONDITIONS OF CONTRACT

1.1 PROJECT INFORMATION

- (i) Owner : Union Bank of India, Regional Office, Cuttack, M-14, Baramunda H.B. Colony, Bhubaneswar
- (ii) Architect : Techno Arch
- (iii) Site : Kumanda Odisha
- (iv) Work : Electrical Installation & Data Work

1.2 SITE CONDITION:

Tenderer shall visit the site to check the actual site condition prevailing at site. The tenderer shall visit the site and acquaint himself fully of the conditions and no claims what so ever will be entertained on the plea of ignorance or difficulties involved in the execution of work or for carriage of materials, storage, stacking etc., of material. The contractor shall also acquaint himself with existing electrical layout and position of electrical point.

1.3 SCOPE:

The work consists of Electrical Installation work which includes Electrical Wiring, Supply & Fixing of Electrical Fixtures like lights, fans, bell, Computer Wiring, Earthing, Distribution Boards and Switch Boards etc.

All work during its progress and upon completion shall confirm to the lines, elevation and grades, as shown on the drawings furnished by Architect, should any detail essential for completion of work be omitted from the drawings and specifications, it shall be the responsibility of contractor to inform the Owner/ Architect and to furnish and install such details with and ready for use.

Owner/ Architect may in their absolute discretion issue further drawings & or written instructions, directions in regard to:

- (a) The variation, alteration, modifications of the design, quality or quantity of work or Substitution of any work.
- (b) The removal from site of any defective material brought thereon by the contractor.
- (c) The demolition, removal and/or re execution of any work executed by the contractor.
- (d) The rectification & making good of any defects under clauses hereinafter mentioned and defects arising during the maintenance period.
- (e) The rates of items not mentioned in the schedule of quantities shall be fixed by the Owner in consultation with the Architect as provided in the clause of variation.

1.4 GOVERNMENT AND LOCAL RULES:

The contractor shall confirm to the provisions of all the local bye-laws and act relating to the work and to the regulations etc., of the Government and local authorities and of any company with whose system the structure is proposed to be connected. The contractor shall give all notices required by the said Act, Rules, Regulations and bye-laws and pay all fees payable to such Authority/ Authorities for execution of the work involved. The cost, if any shall be deemed to have been included in his quoted rates, taking in account all liabilities for Licenses, fees for footpath encroachment and restoration etc., and shall indemnify the Employer against such liabilities and shall defend all actions arising from such claims or liabilities.

1.5 TIME OF COMPLETION.

The total work shall be completed as per the stipulated period, in all respect. The work shall not be considered as complete until the Owner / Architect has certified in writing and the defect liability period shall commence from the date of such certificate.

1.6 EXTENSION OF TIME:

If in the opinion of the Employer/ Architect the works be delayed (a) by reason of any exceptionally inclement weather, or (b) by reasons of instruction from the Employer in consequence of proceedings taken or threatened by or disputes, with adjoining or neighboring owners or (c) by the works, or delay, of other contractors or tradesmen engaged or nominated by the Employer and not referred to in the specification or (d) by reason or authorized extra additions or (e) by reasons of any combination of workmen or strikes or lock out affecting any of the building trades or (f) from other causes which the Employer may consider are beyond the control of contractor, the Employer at the completion of the time allowed for the contract shall make fair & reasonable extension of time for completion in respect thereof. In the event of the Employer failing to give possession of the site upon the day specified above, the time of completion shall be extended suitably and no claim or extra rate shall be given.

1.7 REMOVAL OF IMPROPER WORK:

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

1.8 DAMAGE TO PERSON AND PROPERTY:

The contractor shall be responsible for all injury to the work or workmen to persons, animals or things and for all damages to the structural and/ or decorative parts of the property which may arise from the operations or neglect of himself or of any sub contractor or of any of his or a sub contractor's employees, whether such injury or damage arise from carelessness, accident or any other cause whatsoever in any way connected with the carrying out of this contract. The clause shall be held to include inter alia, any damage to buildings whether immediately adjacent or otherwise, and any damage to roads, streets, footpaths, or ways as well as damages caused to the buildings and the works forming the subject of this contract by rains, wind or other inclemency of the weather. The contractor shall indemnify the Employer and hold harmless in respect of all and any expenses arising from any such injury or damages to persons or property as aforesaid and also in respect of any acts of compensation or damage consequent upon such claim. The contractor shall reinstate all damages of every sort mentioned in the clause, so as to deliver the whole of contract works complete and perfect in every respect and so as to make or otherwise satisfy all claims for damages to the property of third parties.

1.9 SECURITY:

The contractor will make his own arrangements for the security of his materials of & decoration, electrical, etc., or any other material at site and the Bank will have no liability of any nature against the security.

1.10 POWER SUPPLY:

The power supply required will be made available by the owner.

1.11 ELECTRICAL WORK:

For electrical fixtures and light points required as per drawings the contractor has to draw the wires from existing position of light points, power points where ever and if available. The contractor shall submit the certificate from electrical contractor holding required license from M.P.E.B. and shall also get the old/ new meter, additional connection if required. Any charges towards the deposit/ replacement of meter or for any additional load shall however be borne by the Bank but rest all or any other charges shall be borne by the Contractor himself.

TESTING & COMMISSIONING: Before the lighting/ power installation is made alive the Contractor shall carry out tests enumerated below in presence of Employer/ Architect or his authorized representative. All testing equipments necessary to carry out the tests shall be arranged by the Contractor and the test results recorded on approved preformed. Nothing extra shall be payable for testing.

01. Measure insulation resistance of each circuit without lamps being in place and it should be less than 5 mega ohms to earth.
02. Before energizing, measure insulation resistance of the cable from phase to phase and that from phase to ground. Insulation resistance of the bus bars at the lighting panel from phase to phase and from phase to ground shall be measured before energizing the panel and should comply latest IS codes.
03. Current and voltage of all phase shall be measured at the lighting panel bus bars with all circuits on the fixtures and also in all switch boards.
04. Check the earth continuity for all socket outlets. A fixed relative position of the phase & neutral connection inside the socket shall be established for the sockets.
05. The earth electrodes shall be tested for earth resistance by means of standard earth tester. The resistance between earthing system and the general mass of earth shall not be greater than 1 ohm.
06. While crossing the expansion joints of building, conduits shall be provided with flexible pipe and shall not be more than 250mm, at both the ends of conduit, proper flexible couplings shall be provided and earth wire shall be properly connected to earthing terminal of coupling.
07. Contractor should quote after site visit only. In case for cable trench, street light pole, pit, earthing pit, etc., or any place where Contractor has to dig the earth in hard strata or rock he has to do so at quoted rates only for item. No blasting shall be allowed for such digging.
08. For earthing of street light tubular pole earth spirit shall be used & 8 SWG G.I. wire as per standard specifications.

1.12. VARIATION / DEVIATION:

The contractor may when authorized and shall when directed in writing by the Employer add and or omit, or vary the works given in the drawings or described in the specifications of included in the priced schedule or quantities. The contractor on his own accord shall make no addition, omission or variation without such authorization or direction. A verbal authorization or direction by the Employer shall when confirmed correctly by the contractor in writing within 3 days shall be deemed to have been given in writing. The price of all such additional items will be worked out on basis of rates quoted for similar items in the contract wherever existing or on engineering rate analysis based on prevalent fair price of labor, material and other components as required.

2.0 COMMERCIAL TERMS:

2.1 PAYMENTS:

All bills shall be prepared by the Contractor in the form prescribed by Owner/ Architect, accompanied by detailed measurement in support of the quantities of work done. The Architect shall issue a certificate after due scrutiny of contractor's bill. The owner shall make the payment within 15 days of the date of certified bill by the Architect, after making deduction as per clauses. No advance payment / running bill payment will be done for this work. Only final payment after certification of Architects will be done.

2.2 RETENTION AMOUNT:

Retention money shall be deducted from final bill to make 10% including of EMD.

2.3 INCOME TAX:

Prevailing rate of income tax shall be deducted from the payment of each running bill for which required certificate shall be issued by the owner.

3.0 RIGHT TO REJECT BIDS:

Bank reserves the right to accept or reject any or all the tenders in full or part or to waive any informally, minor deviations and omissions without assigning any reasons, right to reject conditional tenders and also relax any contract condition at its discretion.

3.1 RIGHT TO ACCEPT:

Bank is not in any way bound to accept the lowest or any quotation and reserves to itself, the right to accept any or in whole or any part of the quotation or portion of the quantity offered and reserves the right to negotiate with any /all the contractors.

3.2 RIGHT OF OWNER TO DETERMINATE/ TERMINATE CONTRACT:

Bank shall at any time be entitled to determinate the contract if in the opinion of the Owner; session of the work becomes necessary owing to paucity of funds or from any other cause whatsoever. The cost of approved materials at the site at the current market rates or original purchase rates whichever is lower as verified and decided by Bank and the value of such work done to date by the contractor shall be paid in such occurrence.

4.0 DEFECT LIABILITY PERIOD:

On completion of the work at site as certified by the Architect and the Engineer-in-charge the contractor shall be responsible against the manufactured and installation for the decoration as executed by him for a period of 12 months. He shall rectify any defects pointed by In-charge Officer of the bank & ensure proper performance of the job done by him till such time.

5.0 EXTRA ITEMS:

If necessary, the contractor shall execute any other item of work not covered up by the schedule of quantities of item and the working drawings which shall be paid to the contractor as extra item. Rates of such extra items shall be settled on the basis of market rate and decision of Regional Head of Bank and will be final and binding on the recommendation of the Architect. Before execution of such extra item, prior approval of item and rate must be taken by the contractor from the In-charge / Architect.

TECHNICAL SPECIFICATION OF MATERIAL TO BE USED

01. 11 KV (UE) 3 Core, ZLPE : CCI/INCAB/RETCO.
armoured cable (ISI marked).
02. 11 KV cable termination. : INCAB/ CCI/M-SEAL./RR KABLE
03. 100/500 KVA, 11/0.433 KV : OEU/KT PVT. LTD./KEO/ALPHA.
DYN-II, 0NAN Type cooling.
04. LT switch board panel. : L&T / MDS / C&S/ Hager
05. Switch fuse/fuse switch : L&T /Hager/ LEGRAND .
units.
06. Protective Relays. : English Electric/GEC/Seimens/L&T.
08. Voltmeter and Ammeter. : A.E / Equivalent or MDS.
09. Voltmeter and Ammeter : Kaycee / MDS / L&T.
Selector switch.
10. HRC Fuse. : Hager / L&T/ Legrand .
11. HRC fuse base and carries. : Hager / L&T/ Legrand .
12. 1.1KV grade PVC insulated : INCAB / NICCO / RR.CABLE/RETCO.
& sheathed/ insulated
aluminium wire and flexible
cord (ISI marked).
13. 1.1 KV grade PVC insulat : CCI/INCAB / RETCO./ RR KABLE
ed armoured aluminium cable

(ISI marked).

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|-----|---|--|
| 14. | 1.1KV grade PVC insulated :
copper wire and flexible cords. | Finolex /Havell's/ RR KABLE |
| 15. | RCCB/ELCB/MCCB. : | L&T / LEGRAND/ Hageer |
| 16. | Switch fuses with rewirable :
Fuses. | L&T/ LEGRAND/ Hager |
| 17. | Isolator. : | L&T / LEGRAND/ Hager |
| 18. | Changeover Switch. : | L & T / LEGRAND/ Hager |
| 19. | MCB Distribution Board. : | L&T/LEGRAND/Hager |
| 20. | MCB/MCB type Isolator. : | L&T/ LEGRAND/Hager |
| 21. | 30/32A DP moulded Isolator :
-ing Switch. | Hager/ LEGRAND |
| 22. | 15/5 Amp switch & plug :
socket. | CRABERTEE / LEGRAND |
| 23. | 15/5Amp modular switch :
and socket. | CRABERTEE / LEGRAND |
| 24. | 15/5 Amp piano key type :
Switch/ flushed type plug
Socket. | CRABERTEE / LEGRAND |
| 25. | Ceiling Rose. : | Anchor / Cona. |
| 26. | Buzzer/Call Bell. : | Cona / L.K FUGA |
| 27. | Electrical fitting fixtures : | Philips / Crompton / Wipro (Light),
Crompton / Orient (fan) |

ABSTRACT

Electrical work of Branch:- Rs._____

Electrical work of ATM :-Rs._____

TOTAL :- Rs._____

Total amount in words:-

B.O.Q FOR ELECTRICAL WORK FOR UNION BANK OF INDIA BRANCH AT KUMANDA.					
SL.N O.	DESCRIPTION OF ITEMS	UNI T	QUANTIT Y	RATE	AMOUNT
	1. ELECTRICAL WIRING WORK				
	1.1 LIGHT & POINT WIRING WORK				
1.0	Concealed / resessed / surface point etc. wiring using 1100V FRLS grade 3R (P+N+E) x 1.5 Sq.mm FRLS multi stranded copper conductor PVC insulated wires (with proper R,Y,B color code) pulled through rigid FR/FRLS PVC conduits of 20mm Dia 1.5 mm thick laid concealed over false ceiling or in wall chases or on the ceiling in case of an open ceiling, with modular type switch plate, switches, GI concealed back box, etc. of legrand mylinc or equivalent make. S.I.T.C.(Supply Installation Testing And Commissioning) as directed by the Engineer-in-charge. (Each circuit shall not feed more than 8 points OR 800 watts as per following configuration.)				
	NOTE:- 1. Only FRLS wire shall be used; 2. The wires from ceiling junction to light points / light fixture shall be drawn in flexible PVC conduit with adptor & cover for junction box & crimp type lugs at both the ends alongwith necessary hardware & accessories, etc. as required; 4. Looping of Neutral / Earth wire between two seperate Primary / Full Points is strictly not allowed; 5. Looping of Neutral / Earth wire between two seperate circuits on similar or other phase is strictly not allowed; 6. Ferulling / numbering / taggning to wires with circuit number & db name for all lighting & raw / ups power shall be strictly followed at both DB & switch board / switch socket boards ends.				
1.1	Primary light/Call bell points including the cost of clip in type 6A Modular switch of legrand mylinc or equivalent make. S.I.T.C. as directed by the Engineer-in-charge.(1 light controlled by one switch)	Nos.	15.00		
1.2	Primary Fan points including the cost of clip in type 6A Modular switch of legrand mylinc or equivalent make. S.I.T.C. as directed by the Engineer-in-charge.(1 fan controlled by one switch)	Nos.	2.00		
1.3	Subsequent point (Looped From Primary)	Nos	15.00		
1.4	Independent point using one 6 Amp Modular Switch and one 6 Amp, 2/3 pin Modular scoket mounted on a sutable size Box for wall fans.	Nos	10.00		

1.5	6 Amp 2/3 pin Modular socket with 6A Modular switch. (on common switch Board.)	Nos.	2.00		
1.6	Primary light points including the cost of clip in type 6A Modular switch of legrand mylinc or equivalent make & model as approved by project in charge. (1 light controlled by one switch UPS point)	Nos.	2.00		
	TOTAL FOR LIGHT & POINT WIRING WORK			Rs.	
	1.2 POWER POINT WIRING WORK				
1.0	Concealed power point using 16 Amp 3 Pin plug socket with 16 Amp Modular switch of legrand mylinc or equivalent make mounted on separate board using suitable size galvanized iron junction & switch boxes & clip in type modular type switch plate,etc. Supply taken from R.D.B./ Nearest L.D.B wiring using 1100V FRLS grade 2R (P+N) x 2.5 Sq.mm +1R (E) x 1.5 Sq.mm FRLS multi stranded copper conductor PVC insulated wires (with proper R,Y,B color code) pulled through rigid FR/FRLS PVC conduits of 20mm Dia 1.5 mm thick . The point should not taken from any switch Board. S.I.T.C. as directed by the Engineer-in-charge.	Nos	1.00		
2.0	Concealed raw power point using 6 Amp, 2/3 Pin Modular plug socket with 6 Amp Modular switch of legrand mylinc or equivalent make on separate board using galvanized iron junction & switch boxes & clip in type modular type switch plate, switches, GI/PVC concealed back box, etc. Supply taken from Nearest L.D.B.wiring using 1100V FRLS grade 2R (P+N) x 2.5 Sq.mm +1R (E) x 1.5 Sq.mm FRLS multi stranded copper conductor PVC insulated wires (with proper R,Y,B color code) pulled through rigid FR/FRLS PVC conduits of 20mm Dia 1.5 mm thick. Maximun 3 Points per Circuit for counter & Table	Nos	8.00		
	TOTAL FOR POWER POINT WIRING WORK			Rs.	
	1.3 COMPUTER WIRING WORK				
1.0	Supplt and fixing of concealed UPS power points using 1 nos. of 16 Amp, Modular switches to be provided on table top + 3 nos. 6 Amp 3 Pin Modular socket below table top of legrand mylinc or equivalent make taken from Nearest C.D.B with suitable size galvanized iron/PVC junction & switch boxes & clip in type modular type switch plate, GI/PVC concealed back box, etc. Maximun 3 Points per Circuit for counter & Table. S.I.T.C. as directed by the Engineer-in-charge.	SET	8.00		

2.0	Suppl't and fixing of concealed UPS power points using clip in modular type 5 No. of 6/16 amp socket points controlled by 2 No of 16 amp modular switch with indicator of legrand mylinec or equivalent make taken from Nearest C.D.B with galvanized iron junction & switch boxes & clip in type modular type switch plate, switches, GI concealed black box, etc. . The point should not from any switch Board S.I.T.C. as directed by the Engineer-in-charge.	SET	1.00		
3.0	Supply of all required materials and wiring to circuits/ submains with following number and sizes of PVC insulated 1100V FRLS grade 3R (P+N+E) x following size FRLS multi stranded copper conductor PVC insulated wires (with proper R,Y,B color code) pulled through rigid FR/FRLS PVC conduits of 20mm Dia 1.5 mm thick ISI mark laid concealed over false ceiling or in wall chases or on the ceiling in case of an open ceiling including of as required and multy stranded copper wire of folling size as earth continuity conductor and complete in all respect including making good to all damages caused and as per the direction of Consultant and Engineer-in-charge.				
3.1	Concealed wiring with (2Rx2.5sqmm +1Rx1.5sqmm) copper wire (C.D.B. to Computer Points)	Mts	80.00		
3.2	Concealed wiring with (2Rx4.0 sqmm +1Rx2.5sqmm) copper wire (U.P.S. OUTPUT to C.D.B.)	Mts	15.00		
	TOTAL FOR COMPUTER WIRING WORK			Rs.	
	1.4 A.C. WIRING WORK				
1.0	Supply & Installation of all required materials and wiring to Split AC point 25 Amp 3 Pin Modulat socket mouted on suitable size concealed GI Box near to the AC controlled by 25 Amp DP switch of Legrand or Equivalent make taken from Nearest A.C..D.B/ M.L.D.B. with galvanized iron junction & switch boxes & clip in type modular type switch plate, switches, GI concealed back box, etc. of legrand mylinec or equivalent make.The point should not taken from any switch Board S.I.T.C. as directed by the Engineer-in-charge.	Nos.	4.00		

2.0	Supply and Installation of all required materials and wiring to circuits/ submains with following number and sizes of PVC insulated 1100 volt grade standard FRLS copper wire run through rigid FR/FRLS PVC conduits of 20mm/32mm Dia 1.5 mm thick ISI mark as required and copper wire as earth continuity conductor and complete in all respect including making good to all damages caused and as per the direction of Consultant and Engineer-in-charge.				
2.1	Concealed wiring with 2 X 4sq. mm + 1 X 2.5sqmm copper wire (From Main Panel Board to Split A.C. points.)	Mts	80.00		
	TOTAL FOR AC WIRING WORK			Rs.	
	1.5 CABLE, MAINS & SUBMAINS.				
1.0	Supply of all required materials and wiring to circuits/ submains with following number and sizes of PVC insulated 1100 volt grade multi standard FRLS copper wire run inside rigid FR/FRLS PVC conduits of 20mm Dia 1.5 mm thick of ISI mark as required and copper wire as earth continuity conductor and complete in all respect including making good to all damages caused and as per the direction of Consultant and Engineer-in-charge.				
1.1	Recessed wiring with (2Rx2.5sqmm +1Rx1.5sqmm) copper wire (LDB/RDB to Common Switch board and Points)	Mts	90.00		
1.2	Recessed wiring with (2Rx4.0sqmm +1Rx2.5sqmm) copper wire	Mts	50.00		
	TOTAL FOR CABLE, MAINS & SUBMAINS.			Rs.	

	2.PANEL BOARD & DISTRIBUTION BOARDS.				
1.0	Main Panel Board	Set	1.00		
	Supply, delivery, installation , testing , commissioning , of indoor wall mounted , type distribution boards made out of 2 mm thk. CR sheet metal painted with 2 coats of enamel paint compartment arrangement for each equipment & bus bar chamber on the top of the panel running horizontal through , vermin proof having provision cable by conduit entry , earthling stud as per specification mentioned below duly factory wired confirming to the relevant ISS & as per special condition of contract , making good the damages M.S. Cubical type Panel board should have hinged door at the front. The panel shall be provided with all accessories & following arrangements complete in all respect & direction of EIC (before fabrication of panel board drawing is to be approved by Engineer-in-charge). The Contractor should Submit The Testing Certificate to the Client after Installation.				
	Incoming :-				
	1No 100A- 16KA - 4POLE -MCCB.				
	1 set of 125A TPN copper bus bar (18 X6 mm)				
	1No 63A- 10KA - 4POLE -MCB.				
	1 set of 100A TPN copper bus bar(16 X 5 mm)				
	63A, 4-POLE Change over				
	1 set of 100 A TPN copper bus bar(16 X 5 mm)				
	Out going :-				
	1 Nos 40A, DP MCB, for U.P.S.				
	4 Nos 25 A SP MCB for 1.5 ton Split A.C.				
	2 Nos 25 A SP MCB Spare				
	1 Nos 32 A DP MCB for L.D.B.				
	1 Nos 32 A DP MCB for ATM				
	1 Nos 25 A SP MCB for Glow sign board & Outer Lighting				
	All MCB must be class C Type				
	1No. Digital Volt meter with Volt meter selector switch & Control fuse.				

	1No. Digital Ammeter with Ammeter selector switch & CT.				
	Cable tray.				
	Termination bar for each out put				
	6 Nos Phase indicator L.E.D. lamps				
2.0	Supply and installation of SPN, Metal type Distribution Board. (hager IP43, legrand make Ekinox3 model or equivalent make as approved by Engineer-in-charge), surface / flush mounted on wall, interconnected wiring complete with earthing lugs, including DB wiring, termination of circuits with ping type copper lugs, blank plates, etc. housing following switchgears :				
2.1	L.D.B (Light Distribution Board)	Set	1.00		
	8 way SPN DB				
	Incoming :- 1 No. 32A DP MCB				
	Outgoing :- 6 No. 6-10 A SP MCB				
	All MCB must be 'C' Series				
2.2	C.D.B (Computer Distribution Board)	SET	1.00		
	8 way SPN DB				
	Incoming :- 1 No. 32A DP-10 kA - MCB				
	Outgoing :- 6 No. 6-10 A SP-10 kA - MCB				
	All MCB must be class C Type				
2.3	U.P.S Incoming DB	SET	1.00		
	4 way SPN DB				
	40 Amp DP-10 kA - MCB - 2 nos (1main & 1 spare).				
	All MCB must be class C Type				
2.4	U.P.S Outgoing DB	SET	1.00		
	4 way SPN DB				
	Incoming :- 40 Amp DP-10 kA - MCB - 1 No				
	Out going :- 2 No. 25 A SP-10 kA - MCB				
	All MCB must be class C Type				
	TOTAL FOR PANEL BOARD & DISTRIBUTION BOARDS.			Rs.	

	3. FITTINGS OF FIXTURES				
	(NOTE : ANY OF FIXTURES AND FITINGS SHALL BE RE-CONFIRMED WITH THE ARCHITECTS / CONSULTANTS BEFORE ORDERING THEM.				
	Supply , Installation, testing and commissioning of lighting fixtures with lamps and LED driver as per the details below including necessary hardware such as clamps, nuts, bolts, nails, screws and suspension rods as required for fixing the fixtures in position as directed by architect / consultant / client including supply and fixing flexible wires from holder to fixtures hardwares etc. Note :- All Light Fixtures, Fans, Exhaust Fans & other fittings samples shall be approved by the Client / Architect / Consultant before placing order to the Light Fixture Vendor / Supplier makes are specified. Client / Architect / Consultant reserves right to approve / select final Light Fixtures from any make as required.				
1.0	Supply,installation and testing of recess LED lights fittings (31 - 34 W) of square type (2'-0"x2'-0") with all accessories complete of Crompton Equivalent Make as required as per direction of Engineer in charge.	Nos.	10.00		
2.0	Supply,installation and testing of recess LED lights fittings (12W) of spot type with all accessories complete of Crompton Equivalent Make as required as per direction of Engineer in charge.	Nos.	15.00		
3.0	Providing and fitting of 450 mm sweep High Flo Wall fan of Orient/ Crompton Equivalent Make as required as per direction of Engineer in charge.	Nos.	10.00		
4.0	Providing and fitting of 225 mm sweep heavy duty Exhaust fan of Orient/ Crompton Equivalent Make as required as per direction of Engineer in charge.	Nos.	3.00		
5.0	Providing and fitting of 1200 mm sweep ceiling fan of Orient/ Crompton High Speed Equivalent Make as required as per direction of Engineer in charge.	Nos.	2.00		
6.0	Providing and fitting of Modular type step fan regulator of approved make .	Nos.	2.00		
7.0	Supply & fixing of fan-hook,by cutting roof slab and welding 10 mm dia.Fan hook with main reinforcement of roof slab complete in all respect.	Nos.	2.00		
8.0	Supplying , fixing of 1x 20W LED Batten lights fittings with all accessories complete of Philips BN021C LED20S PSU CDL/NW GR Equivalent Make as required as per direction of Engineer in	Nos.	4.00		

	charge.				
9.0	Supply,installation and testing of LED Bulb fittings (1x9wt) with angle holder of Philips/ Crompton/ Syska or equivalent as required as per direction of Engineer in charge.	Nos	4.00		
10.0	Providing and fitting of call bell Remote Controlled with Battery of approved make .	Nos.	1.00		
	TOTAL FOR FITTINGS OF FIXTURES			Rs.	
	4. EARTHING				
1.0	Supplying and fixing Earthing with G.I. earth plate of size 600 mm X 600 mm X 6.36 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with alternative layer of 150mm thick charcoal/ coke and salt as required.	Nos.	1.00		
2.0	Supplying and fixing of Earthing with copper earth plate of size 600 mm X 600 mm X 3.18 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with alternative layer of 150mm thick charcoal/ coke and salt as required.	SET	1.00		
3.0	Supplying and laying 25 mm X 5 mm G.I. strip on surface or in recess for connections etc. as required.	Mts	20.00		
4.0	Supplying and laying 4.00 mm dia copper wire on surface or in recess for loop earthing as required.	Mts.	15.00		
	TOTAL EARTHING			Rs.	
	5. COMPUTER NETWORKING				
1.0	Supply of all required materials and laying of CAT-6 LAN wiring from server to Hub and Hub to computer I/O Points of approved brand ((D-Link/Digilink/Amps) laid through rigid FR/FRLS PVC conduits of 20mm Dia 1.5 mm thick of ISI mark duly buried 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 as in all respect including making good to all damages caused and as per the direction of Consultant and Engineer-in-charge.	Mts	110.00		

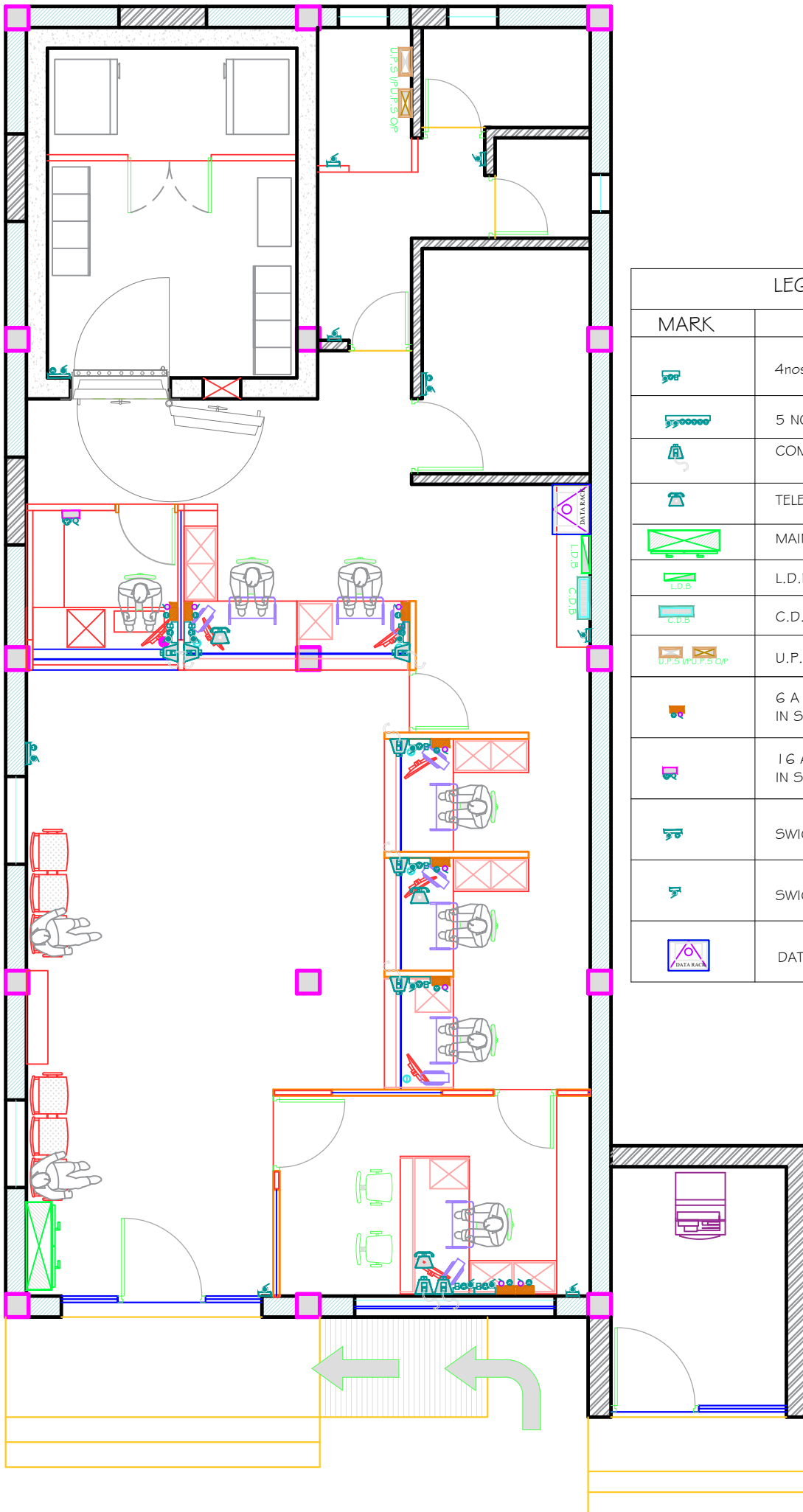
2.0	Supply , fixing of RJ 45 information outlet (I/O) with safety shutter of D-link make with front modular cover plate, flush box metallic or PVC for trucking system etc.	Nos.	9.00		
3.0	Removing and refittings of existing data rack, switches , patchpanel etc as per direction including all labour and materials.	Set	1.00		
	TOTAL DATA / TELEPHONE WAIRING			Rs.	
	6. TELEPHONE SYSTEM				
1.0	Supply of all required materials & laying 2 pairs 0.51 cross section telephone wires of ITI approved laid through rigid FR/FRLS PVC conduits of 20mm Dia 1.5 mm thick of ISI mark duly buried 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 as in all respect including making good to all damages caused and as per the direction of Consultant and Engineer-in-charge.	Mtrs .	30.00		
2.0	Supply , fixing , testing of RJ45 Modular Telephone socket point with suitable GI boxes complete in all respect as per direction of EIC .	Nos.	2.00		
	TOTAL DATA / TELEPHONE WAIRING			Rs.	
	1.1 LIGHT & POINT WIRING WORK				
	1.2 POWER POINT WIRING WORK				
	1.3 COMPUTER WIRING WORK				
	1.4 A.C. WIRING WORK				
	1.5 CABLE, MAINS & SUBMAINS.				
	2.PANEL BOARD & DISTRIBUTION BOARDS.				
	3. FITTINGS OF FIXTURES				
	4. EARTHING				
	5. COMPUTER NETWORKING				
	6. TELEPHONE SYSTEM				
	TOTAL				

B.O.Q FOR ELECTRICAL WORK FOR BANK OF UNION BANK OF INDIA ATM AT KUMANDA.					
SL.NO.	DESCRIPTION OF ITEMS	UNIT	QUANTITY	RATE	AMOUNT
	1. ELECTRICAL WIRING WORK				
	1.1 LIGHT & POINT WIRING WORK				
1.0	Concealed / ressed / surface point etc. wiring using 1100V FRLS grade 3R (P+N+E) x 1.5 Sq.mm FRLS multi stranded copper conductor PVC insulated wires (with proper R,Y,B color code) pulled through rigid FR/FRLS PVC conduits of 20mm Dia 1.5 mm thick laid concealed over false ceiling or in wall chases or on the ceiling in case of an open ceiling, with modular type switch plate, switches, GI concealed back box, etc. of legrand mylinc or equivalent make. S.I.T.C.(Supply Installation Testing And Commissioning) as directed by the Engineer-in-charge. (Each circuit shall not feed more than 8 points OR 800 watts as per following configuration.)				
	NOTE:- 1. Only FRLS wire shall be used; 2. The wires from ceiling junction to light points / light fixture shall be drawn in flexible PVC conduit with adptor & cover for junction box & crimp type lugs at both the ends alongwith necessary hardware & accessories, etc. as required; 4. Looping of Neutral / Earth wire between two seperate Primary / Full Points is strictly not allowed; 5. Looping of Neutral / Earth wire between two seperate circuits on similar or other phase is strictly not allowed; 6. Ferulling / numbering / taggning to wires with circuit number & db name for all lighting & raw / ups power shall be strictly followed at both DB & switch board / switch socket boards ends.				
1.1	Subsequent point (Looped From Primary)	Nos	2.00		
1.2	Primary light points including the cost of clip in type 6A Modular switch of legrand mylinc or equivalent make & model as approved by project in charge. (I light controlled by one switch UPS point)	Nos.	2.00		
	TOTAL FOR LIGHT & POINT WIRING WORK			Rs.	
	1.2 POWER POINT WIRING WORK				

2.0	Concealed power point using 16 Amp 3 Pin plug socket with 16 Amp Modular switch of legrand mylinc or equivalent make mounted on separate board using suitable size galvanized iron junction & switch boxes & clip in type modular type switch plate,etc. Supply taken from R.D.B./ Nearest L.D.B wiring using 1100V FRLS grade 2R (P+N) x 2.5 Sq.mm +1R (E) x 1.5 Sq.mm FRLS multi stranded copper conductor PVC insulated wires (with proper R,Y,B color code) pulled through rigid FR/FRLS PVC conduits of 20mm Dia 1.5 mm thick . The point should not taken from any switch Board. S.I.T.C. as directed by the Engineer-in-charge.	Nos	2.00		
	TOTAL FOR POWER POINT WIRING WORK			Rs.	
	1.6 A.C. WIRING WORK				
1.0	Supply & Installation of all required materials and wiring to Split AC point 25 Amp 3 Pin Modulat socket mouted on suitable size concealed GI Box near to the AC controlled by 25 Amp DP switch of Legrand or Equivalent make taken from Nearest A.C..D.B/ M.L.D.B. with galvanized iron junction & switch boxes & clip in type modular type switch plate, switches, GI concealed back box, etc. of legrand mylinc or equivalent make.The point should not taken from any switch Board S.I.T.C. as directed by the Engineer-in-charge.	Nos.	1.00		
2.0	Supply and Installation of all required materials and wiring to circuits/ submains with following number and sizes of PVC insulated 1100 volt grade standard FRLS copper wire run through rigid FR/FRLS PVC conduits of 20mm/32mm Dia 1.5 mm thick ISI mark as required and copper wire as earth continuity conductor and complete in all respect including making good to all damages caused and as per the direction of Consultant and Engineer-in-charge.				
2.1	Concealed wiring with 2 X 4sq. mm + 1 X 2.5sqmm copper wire (From Main Panel Board to Split A.C. points.)	Mts	15.00		
	TOTAL FOR AC WIRING WORK			Rs.	
	1.7 CABLE, MAINS & SUBMAINS.				

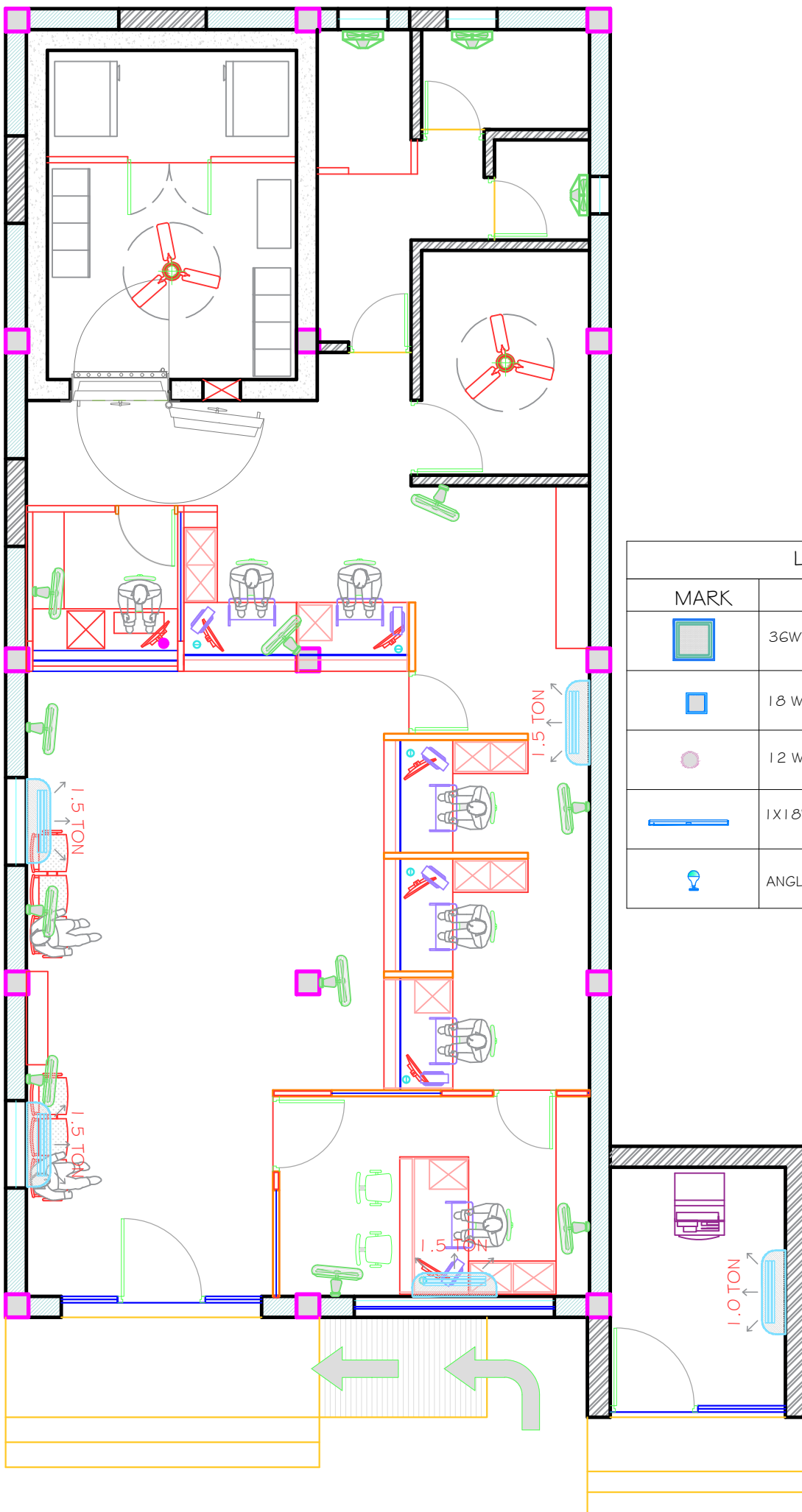
1.0	Supply of all required materials and wiring to circuits/ submains with following number and sizes of PVC insulated 1100 volt grade multi standard FRLS copper wire run inside rigid FR/FRLS PVC conduits of 20mm Dia 1.5 mm thick of ISI mark as required and copper wire as earth continuity conductor and complete in all respect including making good to all damages caused and as per the direction of Consultant and Engineer-in-charge.				
1.1	Recessed wiring with (2Rx2.5sqmm +1Rx1.5sqmm) copper wire (LDB/RDB to Common Switch board and Points)	Mts	30.00		
	TOTAL FOR CABLE, MAINS & SUBMAINS.			Rs.	
	3. FITTINGS OF FIXTURES				
	(NOTE : ANY OF FIXTURES AND FITINGS SHALL BE RE-CONFIRMED WITH THE ARCHITECTS / CONSULANTS BEFOTE ORDERING THEM.				
	Supply , Installation, testing and commissioning of lighting fixtures with lamps and LED driver as per the details below including necessary hardware such as clamps, nuts, bolts, nails, screws and suspension rods as required for fixing the fixtures in position as directed by architect / consultant / client including supply and fixing flexible wires from holder to fixtures hardwares etc. Note :- All Light Fixtures, Fans, Exhaust Fans & other fittings samples shall be approved by the Client / Architect / Consultant before placing order to the Light Fixture Vendor / Supplier makes are specified. Client / Architect / Consultant reserves right to approve / select final Light Fitxtures from any make as required.				
1.0	Supply,installation and testing of recess LED lights fittings (12W) of spot type with all accessories complete of Crompton LSCRM-6W-CDL/NW/WW Equivalent Make as required as per direction of Engineer in charge.	Nos.	2.00		
	TOTAL FOR FITTINGS OF FIXTURES			Rs.	

	4. EARTHING				
1.0	Supplying and fixing of Earthing with copper earth plate of size 600 mm X 600 mm X 3.18 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with alternative layer of 150mm thick charcoal/ coke and salt as required.	SET	1.00		
2.0	Supplying and laying 4.00 mm dia copper wire on surface or in recess for loop earthing as required.	Mts.	10.00		
	TOTAL EARTHING			Rs.	
	5. COMPUTER NETWORKING				
1.0	Supply of all required materials and laying of CAT-6 LAN wiring from server to Hub and Hub to computer I/O Points of approved brand ((D-Link/Digilink/Amps) laid through rigid FR/FRLS PVC conduits of 20mm Dia 1.5 mm thick of ISI mark duly buried 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 as in all respect including making good to all damages caused and as per the direction of Consultant and Engineer-in-charge.	Mts	40.00		
2.0	Supply , fixing of RJ 45 information outlet (I/O) with safety shutter of D-link make with front modular cover plate, flush box metallic or PVC for trucking system etc.	Nos.	2.00		
	TOTAL DATA / TELEPHONE WIRING			Rs.	
	1.1 LIGHT & POINT WIRING WORK				
	1.2 POWER POINT WIRING WORK				
	1.6 A.C. WIRING WORK				
	1.7 CABLE, MAINS & SUBMAINS.				
	3. FITTINGS OF FIXTURES				
	4. EARTHING				
	5. COMPUTER NETWORKING				
	TOTAL				



LEGEND	
MARK	DESCRIPTION
	4nos 6A SOCKET WITH 1nos 16A SWITCH
	5 NO OF 6/16A SOCKET + 2 No of 16A SWITCH
	COMPUTER TERMINAL (CAT 6 I.O BOX)
	TELEPHONE TERMINAL (CAT 6 I.O BOX)
	MAIN PANEL BOARD
	L.D.B
	C.D.B
	U.P.S INPUT & U.P.S OUTPUT
	6 A SOCKET WITH 6 A SWITCH. IN SEPARATE BOARD
	16 A SOCKET WITH 16A SWITCH. IN SEPARATE BOARD
	SWICH BOARD WITH 5A. SOCKET
	SWICH BOARD
	DATA RACK

Clint Name. UNION BANK	Drg. Title. DATA PLAN	Rev. No. 01234 56789	Drg. No.TA/UBI/KMD/E/03 Drawn by.S. S. A. Date. 28/03/2022	 Plot No.- 71/7, Jadupur, Near Ranasinghpur Moo Bus stand. Bhubaneswar Ph. 0674-2551479 Mobile. 9437189632
Location. KUMANDA				



LEGEND OF LIGHT		
MARK	DESCRIPTION	NOS
	36W RECESS TYPE LED	10
	18 W RECESS TYPE LED	2
	12 W RECESS TYPE LED	15+2
	1X18W WALL MOUNTED T5 LED LIGHT	4
	ANGLE HOLDER WITH 9 W LED LIGHT	4

Clint Name.
 UNION BANK
 Location.
 KUMANDA

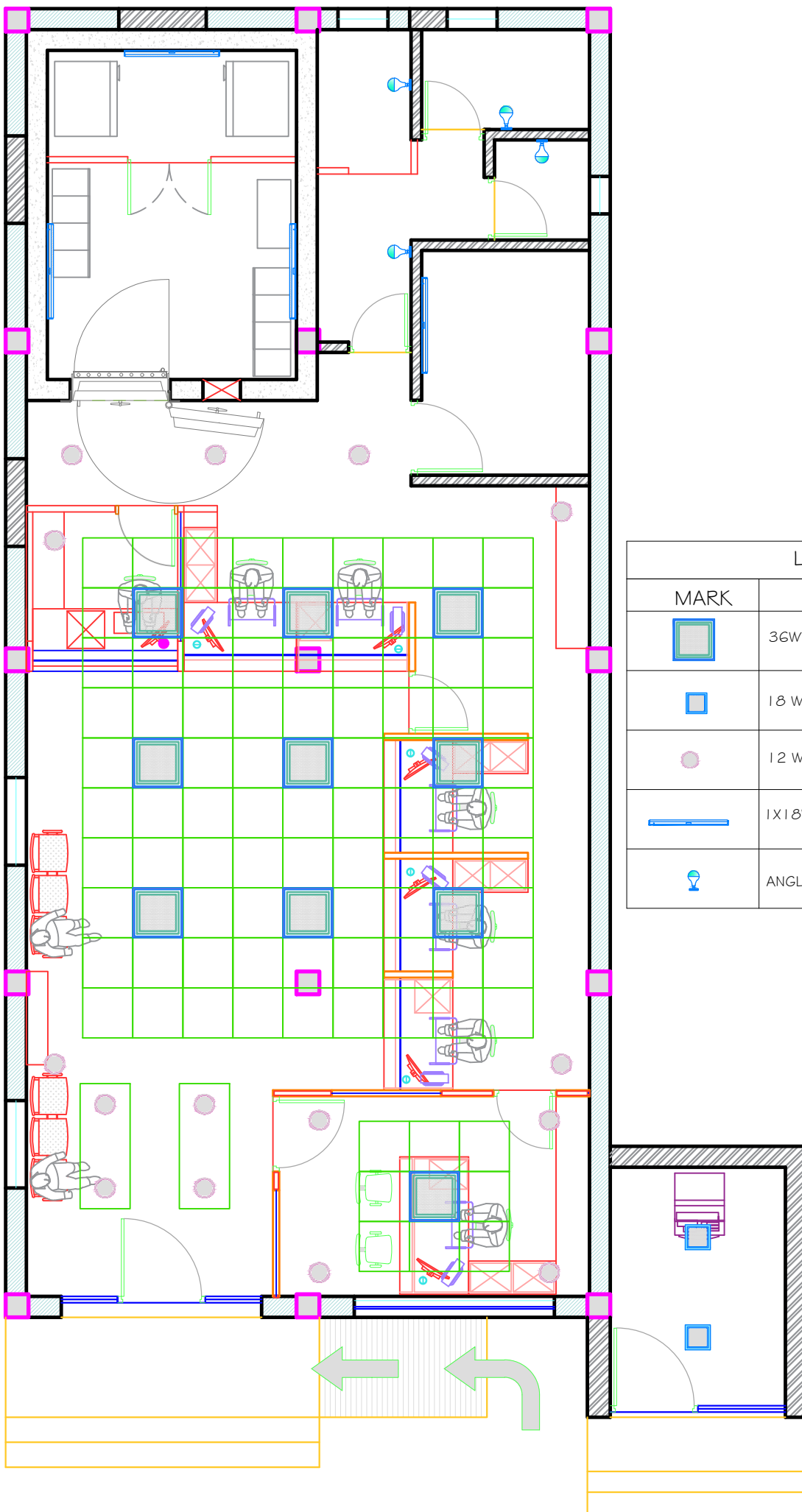
Drg. Title.
 FAN & AC FITTING PLAN






Rev. No.
 01234
 56789

Drg. No.TA/UBI/KMD/E/02
 Drawn by.S. S. A.
 Date. 28/03/2022

Techno Arch

Plot No.- 71/7, Jadupur, Near Ranasinghpur Moo Bus stand.
Bhubaneswar Pin. 0674-2551479 Mobile. 9437189632



LEGEND OF LIGHT		
MARK	DESCRIPTION	NOS
	36W RECESS TYPE LED	10
	18 W RECESS TYPE LED	2
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	1X18W WALL MOUNTED T5 LED LIGHT	4
	ANGLE HOLDER WITH 9 W LED LIGHT	4