

**ESTATE (E & M) WORKS SECTION
INDIAN INSTITUTE OF TECHNOLOGY, KHARAGPUR**

Notice Inviting Quotation

Quotation No: - IIT/E/E&M/2018-19/Qtn/75

Date: - 01.01.2019

Sealed quotations on item rate basis are invited by Sr. EE (EW) from enlisted and approved Electrical contractors of IIT Kharagpur/CPWD/MES/WBPWD/Kharagpur municipality and Other bonafide contractors having valid GST, PAN, Updated trade license and updated Electrical contractor license for below mentioned work. The approximate cost of the work is ₹1,54,708.00/- (Rupees One lakh Fifty four thousand Seven hundred Eight only)

NAME OF THE WORK

: Electrical renovation and modification work in Security sec, Civil Engg Transportation Lab, Com sc. R-111, Mechanical Engg Laser Lab, Industrial & Systems Engg, Mathematics R-N-342, Chemical Mech.-op Lab, Met& Mat R-313 at IIT Kharagpur.

ISSUE OF QUOTATION

: **FROM 02.01.2019 to 16.01.2019**

LAST DATE OF SUBMISSION OF QUOTATION

: - **16.01.2019 UPTO 3:30 PM**

QUOTATION OPENING DATE

: - **16.01.2019 TIME: 4:30 PM**

TENDER DOCUMENTS can be downloaded from the Institute website www.iitkgp.ac.in & <https://eprocure.gov.in>. Requisite Earnest Money amounting to **Rs. 3100/- (Rupees Three Thousand one hundred only)** to be paid by in demand draft in favour of "Indian Institute of Technology Kharagpur" on any nationalized Bank of India payable at Kharagpur Branch at the time of submission of Bid. **Tenders without Earnest Money shall be summarily rejected.** For any amendment /corrigendum please visit the Institute website www.iitkgp.ac.in & <https://eprocure.gov.in>.

The following documents to be submitted at the time of submission of bid:

- i) GST
- ii) PAN
- iii) Work Completion Certificates justifying eligibility criteria
- iv) Updated Electrical Contractor License
- v) Updated Trade License
- vi) Make list format to be submitted along with bid (Format enclosed).

Eligibility criteria:

Contractors who fulfill the following requirement shall be eligible to apply:

The bidder must have done at least ONE similar work of value of 80% of the estimated cost or TWO similar works for projects each of value 60% of the estimated cost or THREE similar work for projects each of value 40% of the estimated cost.

Sr. Executive Engineer (EW)

Signature of contractor

Copy to:

- 1) Registrar, I.I.T Kharagpur.
- 2) Chief Engineer
- 3) Joint Registrar (S&P)
- 4) Dy. Registrar (F &A)
- 5) Superintending Engineer (Elect.)
- 6) Sr. Executive Engineer (Civil)
- 7) Sr. Executive Engineer (E&M)
- 8) Notice Board, EPDS.
- 9) Notice Board, Estate (E &M) Head office, Old Building
- 10) Office file.

Signature of contractor

Tender Document

For

Name of work: Electrical renovation and modification work in Security sec, Civil Engg Transportation Lab, Com sc. R-111, Mechanical Engg Laser Lab, Industrial & Systems Engg, Mathematics R-N-342, Chemical Mech.-op Lab, Met& Mat R-313 at IIT Kharagpur.

Sealed quotations on item rate basis are invited by Sr. EE (EW) from enlisted and approved Electrical contractors of IIT Kharagpur /CPWD/MES/WBPWD/Kharagpur municipality and Other bonafide contractors having valid GST, PAN, Updated trade License . The approximate cost of the work is ₹1,54,708/- (Rupees One lakh Fifty four thousand Seven hundred Eight only)

The work to be completed within **60 (Sixty) days** from the date of acceptance of work order placed by IIT Kharagpur

1. The Bidders are required to complete quotation, quote rate as per the schedule of quantities and sign on each page of tender documents before submission. The quotation will not be accepted other than our format. The completed set is to be enclosed in a sealed envelope addressed to:

**Sr. Executive Engineer (EW).
Indian Institute of Technology, Kharagpur
Kharagpur -721302 (WB)**

Tenders will be received up to 3.30 PM on 16.01.2019 with all necessary documents i.e. GST, PAN, Electrical contractor license and updated Trade License in the office of Estate (E & M), Old Building, IIT Kharagpur.

Agency has to submit the self-attested copy of the documents .Without these documents tender will not be accepted.

2. No tender will be received after the expiry of the date and time notified for receiving tenders under any circumstances whatsoever.
3. The tender will be opened at 4.30 PM on **16.01.2019** at above address in the presence of authorized representative of Bidder and Tender opening committee of IIT Kharagpur
4. Tender shall remain valid for acceptance for a period of 120 days from the notified last date of tender submission.
5. The price should be for the complete finished item of work and include all labour charges, material, taxes, overhead, duties, cess etc.
6. **Earnest Money, amounting to Rs. 3100/- (Rupees Three Thousand one hundred only)** in Demand Draft in favour of " Indian Institute of Technology Kharagpur" on SBI, Kharagpur must accompany each tender and each tender is to be in a sealed cover **super scribed** with , "**Electrical renovation and modification work in Security sec, Civil Engg Transportation Lab, Com sc. R-111, Mechanical Engg Laser Lab, Industrial & Systems Engg, Mathematics R-N-342, Chemical Mech.-op Lab, Met& Mat R-313 at IIT Kharagpur.**" and the NIQ No. **IIT/E/E&M/2018-19/Qtn/75.**
7. The earnest money deposited shall not carry any interest and will be refunded to the unsuccessful tenderers. Earnest money paid by the successful contractor will be retained by the IIT Kharagpur as a part of security deposit.
8. Institute will deduct a sum at the rate of 10% of the gross amount of each running bill of the Contractor till the sum along with the sum already deposited as earnest money, will amount to security deposit of 10 % of the bid value of the work. Security deposit will be refunded to bidder after successful completion of warranty period of **Six month.**

9. All tenders in which any of the prescribed conditions are not fulfilled or incomplete in any respect are liable to be rejected.
10. The Institute reserves the right to reject any or all bid without assigning any reason .If any information furnished by the applicant is found incorrect at a later stage, he shall be debarred from tendering and taking up of any work in IIT Kharagpur.
11. The quantities given in BOQ against each items may vary i.e. increase or decrease as per site requirement, but rate will be firmed.
12. This tender notice shall form part of the contract documents.
13. Penalty will be imposed against delay of work as per the Institute rule.
14. The agency is fully responsible for the safety of working personnel and has to follow all government safety rules.
15. Tenderers are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their bids as to the nature of the ground and sub soil, laying route, the form and nature of site, the means to access the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risk, contingencies and other circumstances which may influence or affect their tender. A bidder shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charges consequent on any misunderstanding or otherwise shall be allowed. The bidder shall be responsible for arranging and maintaining at his own cost of materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the bid documents. Submission of tender by a tenderer implies that he has read this notice and all other tender documents and has made himself aware of the scope and specifications of the work to be done and local conditions and other factors having bearing on the execution of the work.
16. All the Govt. labour rules, regulations and latest Indian Electricity Rule are followed by the contractor while executing the Electrical work.
17. All statutory deduction will be deducted as per government rules.
18. Rates quoted by the contractors in item rate tender in figures and words shall be accurately filled in so that there is no discrepancy in the rates written in figures, and in word. However, if a discrepancy is found the rates which correspond with the amount worked out by the contractor shall be taken as correct.
19. If the amount of an item is not worked out by the contractor or it does not correspond with the rate written either in figures or in words that the rate quote by the contractor in words should be taken as correct.
20. Where the rate quoted by the contractor in figures and in words tally but the amount is not worked out correctly, the rate quoted by the contractor will be taken as correct, not the amount.
21. The Tenderer whose tender is not accepted shall not be entitled to claim any costs, charges and expenses incidental to or incurred by him through or in connection with his submission of tender or its consideration by the Purchaser, even though the Purchaser may elect to modify/withdraw the Invitation to Tender or does not accept the tender.
22. Bidders are requested to witness the bid opening.

Signature of contractor

Schedule of Quantities

Name of work: Electrical renovation and modification work in Security sec, Civil Engg Transportation Lab, Com sc. R-111, Mechanical Engg Laser Lab, Industrial & Systems Engg, Mathematics R-N-342, Chemical Mech.-op Lab, Met& Mat R-313 at IIT Kharagpur.

Sl. No.	Description	Unit	Qty.	Rate	Amount
1	Wiring for light point / fan point / call bell point / exhaust fan point with 1.5 sq mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, with modular switch, modular plate, suitable size GI box and earthing the point with 1.5 sq mm FRLS PVC insulated copper conductor single core cable etc as required .Make - Wire:-Finolex/RR Kabel/Havells.Pipe:-(MMS type) Prestoplast/Precision/polycab / AKG, Switch Socket :-crabtree Thames range/Legrand Myrius range/MK(wraparound plus) / Equivalent approved by EIC.				
a)	Upto 6 metres.	Point	20		
2	Wiring for circuit / submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor , single core cable in surface / recessed medium class PVC conduit as required .Make-Wire:- Finolex/Havells/RR Kabel/.Pipe:- Prestoplast/Precision /polycab(MMS type) / Equivalent approved by EIC				
a)	2 X 1.5 sq mm +1 X 1.5 sq mm for E.C.C	Mtr.	8		
b)	2 X 2.5 sq mm +1 X 2.5 sq mm for E.C.C	Mtr.	101		
c)	2 X 4 sq mm +1 X 4 sq mm for E.C.C	Mtr.	37		
d)	2 X 6 sq mm +1 X 6 sq mm for E.C.C	Mtr.	40		
e)	2 X 10 sq mm +1 X 6 sq mm for E.C.C	Mtr.	20		
f)	4 X 6 sq mm +2 X 6 sq mm for E.C.C	Mtr.	20		
g)	4 X 10 sq mm +2 X 6 sq mm for E.C.C	Mtr.	30		
3	Supplying and fixing following sizes / modules ,GI box along with modular base & cover plate for modular switches in recess etc as required .Make- Crabtree Thames range/Legrand Myrius range/MK(wraparound plus) / Equivalent approved by EIC				
a)	6 Module	Each	6		
4	Supplying and fixing following modular switch / socket on the existing modular plate & switch box including connections but excluding modular plate etc as required .Make- Crabtree Thames range/Legrand Myrius range/MK(wraparound plus) / Equivalent approved by EIC				
a)	5 /6 amps switch	Each	6		
b)	15 /16 amps switch	Each	6		
c)	3 pin 5 /6 amps socket outlet	Each	6		
d)	6 pin 15 / 16 amps socket outlet	Each	6		
5	Supplying & Fixing suitable size GI box with modular plate and cover in front on surface or in recess, including providing and fixing 25 A modular socket outlet and 25 A modular SP MCB, "C" curve including connections, painting etc. as required. Make-Crabtree Thames /Legrand Myrius./ (MK wraparound plus) / Equivalent approved by EIC	Each	1		

6	Supplying & fixing of 36 to 42 watt LED fittings 2 ft X 2 ft 6000 k watt LED fittings 36000 k Lumen> 1800 Efficacy > 100 CRI>80 THD< 15% - Make:- Havells/Philips/Bajaj/ Equivalent approved by EIC.All the luminaires should be warranted for 5 years at site with free of cost.Permanent numbering of LED luminaires are mandatory during installation at site.	Each	7		
7	Supplying & fixing of 2 X 18 watt watt LED fittings along with 18 watt LED tube 6000 k Lumen> 1800 Efficacy > 100 CRI>80 THD< 15% -Regal Batten LED fittings along with 18 watt LED tube 6000 k -Regal Batten Make:- Havells/Philips/Bajaj/ Equivalent approved by EIC.II the luminaires should be warranted for 5 years at site with free of cost.Permanent numbering of LED luminaires are mandatory during installation at site.	Each	4		
8	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 kV grade of following size on wall surface as required incl. S+F of 1 X 10 SWG GI wire for E.C.C making holes and manding good the damages to original finish incl painting.(Cable Dept supply)				
a)	Upto 35 sq mm (clamped with 1 mm thick saddle)	Mtr.	68		
9	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 kV grade of following size direct in ground including excavation, sand cushioning, protective covering @ 8 bricks per metre on each cable and refilling the trench etc. as required.				
a)	Upto 35 sq. mm	Mtr.	20		
10	Supplying and making end termination with brass compression gland and lugs for following size of PVC insulated and PVC sheathed/XLPE aluminium conductor cable of 1.1 kV grade as required.Make-ARUN/Dowells/ Equivalent approved by EIC				
a)	3.5 X 25 sq mm	Each	4		
11	Supplying and fixing following way, single pole and neutral, sheet steel, MCB distribution board, ip-43 240 V, on surface/ recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator) Make-Legrand/Hager/L&T/Siemens/Schneider./ Equivalent approved by EIC				
a)	6 way , Double door		4		
12	Supplying and fixing of following ways surface/ recess mounting, horizontal type, 415 V, TPN MCB distribution board ip-43 of sheet steel, dust protected, duly powder painted, inclusive of 200 A, tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCBs (but without MCBs and incomer) as required. Make-Legrand/Hager/L&T/.Siemens/Schneider / Equivalent approved by EIC				
a)	4 way (4 + 12), Double door	Each	2		
13	Supplying and fixing 5 A to 32 A rating, 240/415 V, 10 kA, “C” curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required. Make- Legrand/Hager/L&T/.Siemens/Schneider / Equivalent approved by EIC				
a)	Single pole	Each	12		
b)	Double Pole	Each	8		

14	Supplying and fixing 40 A to 63A rating, 240/415 V, 10 kA, “C” curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required. Make-Legrand/Hager/L&T/Siemens/Schneider / Equivalent approved by EIC				
a)	Double Pole	Each	2		
15	Supplying and fixing 160 A rating, 240/415 V, 16 kA, MCCB with icu=ics (for 1 sec) adjustable overload setting (Thermal magnetic MCCB) with 2 sets of copper spreader terminals. suitable for inductive load of following poles in the existing MCCB DB complete with connections, testing and commissioning etc. as required. Make-Legrand/Hager/L&T/Siemens/Schneider / Equivalent approved by EIC				
a)	Four pole	Each	1		
16	Installation of exhaust fan in the existing opening including of all hardwares & making good the damage connection, testing, commissioning etc. complete as required.				
a)	Upto 450 mm sweep	Each	1		
17	Supply and fixing of Wall mounted fan 400 mm sweep with roof control speed regulator with connection as required model Mist Air Duos, white colour of Usha Make:- Usha/Polar/ Bajaj/CG/Orient/Havells/ Equivalent approved by EIC	Each	11		
18	Supply and fixing of 48 "(1200 mm sweep) delux (DBB) Orient white colour ceiling fan with all accessories and connection complete with 3X1.5 sq mm copper wire Make-USHA/Bajaj/CG/Polar/Orient/Havells./ Equivalent approved by EIC	Each	2		
19	Fixing only 240V SPN/415V TPN Sheet Steel Main Switch or DP/TP/FP sheet steel enclosure or SP/TP Industrial Plug,Socket directly on surface / recessed /on flat iron legs on wall along with required DP/TP/FP MCB including necessary connection, testing as required. (Enclosure/Main switch / Industrial Socket : Department supply).	Each	1		
		Total			

Total amount in words inclusive GST (Please mention applicable GST %):

N.B:1) All materials to be used after prior approval of Engineer in charge.

2 .a) All LED Light Fittings should be numbered with permanent marker before installation

2.b) 5 years replacement warranty for LED luminaries along with Driver are to be given at site free of cost after successfully commissioning at site unless otherwise specially mentioned in the BOQ.

3) Suitable connectors are to be used for making connections of the neutral and earth wire in the switch boards.

4) No electrical wiring are allowed to lay on the false ceiling .

5) No joints are allowed in the wiring.

6) suitable Al or Cu lugs are to be used during any connection, connection without using lugs are not allowed.

7)suitable brass glanding of the cables are to be done for cable end termination .

8)GI anti rust screws are to be used during fixing of pipes,c ables, condutes,light fittings etc on the wall.

9) valid challans and test/guarantee certificates of all the materials supplied by the contractor are to be submitted before execution of work.

Signature of contractor

Signature of contractor

Make list format

Name of the Work: Electrical renovation and modification work in Security sec, Civil Engg Transportation Lab, Com sc. R-111, Mechanical Engg Laser Lab, Industrial & Systems Engg, Mathematics R-N-342, Chemical Mech.-op Lab, Met& Mat R-313 at IIT Kharagpur.

Sl. No.	Description of items	Approved makes proposed by the contractor	Makes approved by the Department
1.			
2.			
3.			
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16.			

Signature of E (EW)

Signature of Sr.E.E.(EW)

Signature of S.E (E&M)

Signature of contractor

Special Condition for Electrical work

1. The work shall be carried out as per national code or C. P. W. D specifications for works with correction slips issued up-to date unless otherwise specified in the schedule of quantities for the works.
2. The following Indian Standard Specifications and Codes of Practice will apply to the equipment and the work covered by the scope of this contract. In addition the relevant clauses of the Indian Electricity Act 1910 and Indian Electricity Rules 1956 as amended upto date shall also apply. Wherever appropriate Indian Standards are not available, relevant British and/or IEC Standards shall be applicable.

BIS certified equipment shall be used as a part of the Contract in line with Government regulations. Necessary test certificates in support of the certification shall be submitted prior to supply of the equipment.

It is to be noted that updated and current Standards shall be applicable irrespective of those listed below.

Low voltage Switchgear and Controlgear specifications	IS 13947 : 1993
Part 1 – General	
Part 2 – Circuit Breakers	
Part 3 – Switch Fuse Units	
Part 4 – Contactors and Motor Starters	
Part 5 – Control Circuit Devices	
Electrical Relays for power system protection	IS 3231 : 1986
Low voltage Switchgear and Control gear assemblies	IS 8623 : 1993
Marking of Switchgear busbars	IS 11353 : 1985
Degree of Protection of Enclosures for low voltage switchgear	IS 2147 : 1962
Code of Practice for selection, installation and maintenance of Switchgear	IS 10118 : 1982

4. No under-ground work or above the false ceiling shall be covered until the same has got approved by the Engineer-in-charge. The contractor will supply the drawings of specific works for approval, if required
5. All the old wiring has to be dismantled with proper care. The reusable old materials if any are to be handed over to departmental store with proper documentation and the other non reusable (nil reselling value) will be disposed by the contractor. The contractor shall clear the site thoroughly of all scaffolding materials & rubbish etc. left out of his work & dress the site around the building to the satisfactions & his decision in writing shall be final & binding on all concerned
6. Special care to be taken to avoid any theft of electrical fittings and fixtures while executing the work.
7. The location of Panel / DB / Switch board / Light point / Fan point will be as per existing location or as per the instruction of Engineer-in-charge.
8. All the wiring will be done with feruling and cable / Wire termination by required size or lugs of required materials and It should be noted that license wire man shall only be allowed for the wiring work.

Electrical safety at work site

The contractor will identify one of the supervisors for taking care of implementation of Safety systems.

The Contractor should follow the following General Guidelines governing the safety rules as laid down under:

Signature of contractor

Usage of eye protection equipment shall be ensured when workmen are engaged for grinding, chipping, welding and gas-cutting. For other jobs as and when site safety co-coordinator insists eye protection has to be provided.

1. All safety appliances like Safety shoes, Safety gloves, Safety helmet, Safety belt, Safety goggles etc. shall be arranged before starting the job.
2. All excavated pits shall be barricaded & barricading to be maintained till the backfilling is done. Safe approach to be ensured into every excavation.
3. All the dangerous moving parts of the portable / fixed machinery being used shall be adequately guarded.
4. Ladders being used at site shall be adequately secured at bottom and top. Ladders shall not be used as work platforms.
5. Material shall not be thrown from the height. If required, the area shall be barricaded and one person shall be posted outside the barricading for preventing the tre-passers from entering the area.
6. Other than electricians no one is allowed to carry out electrical connections, repairs on electrical equipment or other jobs related thereto.
7. All electrical connections shall be made using 3 or 5 core cables, having a earth wire.
8. Inserting of bare wires for tapping the power from electrical sockets is completely prohibited.
9. A tools and tackles inspection register must be maintained and updated regularly.
10. Debris, scrap and other materials to be cleared from time to time from the workplace and at the time of closing of work every day.
11. All the unsafe conditions, unsafe acts identified by contractors, reported by site supervisors and / or safety personnel to be corrected on priority basis.
12. No children shall be allowed to enter the workplace.
13. All the lifting tools and tackles shall be stored properly when not in use.
14. Clamps shall be used on Return cables to ensure proper earthing for welding works.
15. All the pressure gauges used in gas cutting apparatus shall be in good working condition.
16. Proper eye washing facilities shall be made in areas where chemicals are handled.
17. Connectors and hose clamps are used for making welding hose connections.
18. All underground cables for supplying construction power shall be routed using conduit pipes.
19. Spill trays shall be used to contain the oil spills while transferring / storing them.
20. Tapping of power by cutting electric cables in between must be avoided. Proper junction boxes must be used.
21. Non-compliance to above shall invite a penalty recovery as per 3.22.8.