

**All India Institute of Medical Sciences Rishikesh 249202 Uttarakhand**

**E-TENDER**

**For**

**Name of Work: Supply Installation testing and commissioning of LT panel for extension of existing panel of Sub-station no. 1&2 for standby Power Supply.**

**Tender No.: - 10/EE/Electrical/2024-25**



|                                |                                   |
|--------------------------------|-----------------------------------|
| <b>NIT No</b>                  | <b>: 10/EE/Electrical/2024-25</b> |
| <b>Publishing Date</b>         | <b>: 12/02/2025</b>               |
| <b>Pre-bid Meeting</b>         | <b>: 20/02/2025</b>               |
| <b>Last Date of Submission</b> | <b>: 06/03/2025</b>               |
| <b>Bid Opening Date</b>        | <b>: 07/03/2025</b>               |
| <b>Estimated Amount</b>        | <b>: ₹ 1,45,14,196/-</b>          |

**Office of Executive Engineer (E), AIIMS Rishikesh. Tel No. 0135-2462954,**

**Email: - [eee@aiimsrishikesh.edu.in](mailto:eee@aiimsrishikesh.edu.in)**

**Index of Tender  
Document**

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**INFORMATION AND INSTRUCTIONS FOR BIDDERS FOR E-TENDERING FORMING PART OF NIT AND TO BE POSTED ON WEBSITE**

The Executive Engineer, AIIMS Rishikesh on behalf of The Executive Director, AIIMS Rishikesh invites Percentage rate e-tenders from enlisted contractor in the appropriate classes and category in CPWD, MES, Railway and state government of Uttarakhand (UPCL, PWD & IRRIGATION Department only) Contractor for the following work:

**Name of Work: Supply Installation testing and commissioning of LT panel for extension of existing panel of Sub-station no. 1&2 for standby Power Supply.**

| S. no | NIT No.                  | Name of work & Location  | Tender Fees | Estimated cost put to bid (Rs.) | Earnest Money  | Stipulated Period of Completion of work (in Days) | Tender filling start date. | Date & time of Pre Bid Meeting | Last date & time of submission of bid, copy of receipt of deposition of original EMD as specified in the NIT | Date & time of opening of bid |
|-------|--------------------------|--|-------------|---------------------------------|----------------|---|----------------------------|--------------------------------|--|-------------------------------|
| 1     | 2                        | 3  | 4           | 5                               | 6              | 7   | 8                          | 9                              | 10   | 11                            |
| 1     | 10/EE/Electrical/2024-25 | Supply Installation testing and commissioning of LT panel for extension of existing panel of Sub-station no. 1&2 for standby Power Supply. | Nil         | Rs. 1,45,14,196/-               | Rs. 7,25,710/- | 120 days.   | 12.02.2025                 | AT 03:00 PM on 20.02.2025      | Up to 03:00 PM on 06.03.2025   | At 03:00 PM on 07.03.2025     |

- 1. The intending bidder must read the terms and conditions of CPWD-6 form carefully.** He should only submit his bid if he considers himself eligible and he is in possession of all the documents required.
- 2.** Information and Instructions for bidders posted on website shall form part of bid document.
- 3.** The bid document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents can be seen and downloaded from website [www.aiimsrishikesh.edu.in](http://www.aiimsrishikesh.edu.in) or <https://eprocure.gov.in>
- 4.** But the bid can only be submitted after deposition of original EMD in favor of AIIMS Rishikesh within the period of bid submission and uploading the mandatory scanned documents for deposition of original EMD in the office of Executive Engineer (E) and other documents as

specified.

5. Those contractors who are not registered on the website mentioned above, are requested to get registered beforehand participating in the tender.
6. The intending bidder must have valid class-III digital signature to submit the bid.
7. On opening date, the contractor can login and see the bid opening process. After opening of bids, he will receive the competitor bid sheets.
8. All the bidder (s) should upload eligibility documents in the form of PDF Format.
9. Contractor must ensure to quote rate in the prescribed columns meant for quoting rate in figures.

However, if a bidder quotes nil rates against each item in item rate tender, the tender shall be treated as invalid and will not be considered as lowest bidder.

10. The contractor should quote the rate of item including GST as per statutory rules.
11. (i) The bidder shall pay the respective amount of Bid Security (EMD) as mentioned in table by Demand Draft/Fixed Deposit/Term Deposit in favor of "AIIMS, Rishikesh" drawn on any Nationalized Bank/ Scheduled Bank and payable at AIIMS Rishikesh and must be valid for 135 days from last date of submission of Bid (**Bid validity period – 90 days + 45**) days beyond bid validity period). The EMD shall be scanned or uploaded to the CPP Portal website within period of bid submission. The original EMD should be deposited in the office of EXECUTIVE ENGINEER (E) within due date mentioned in the NIT. EMD receiving authority shall issue receipt of deposition to the bidder in prescribed format. Bid received without Earnest Money deposit (EMD) shall stand rejected and thus shall not be considered for evaluation etc. at any stage.

(ii). Earnest Money deposited with AIIMS, Rishikesh in connection with any other tender enquiry even if for same/similar material / Stores by the tenderer will not be considered against this tender.

(iii). The EMD will be forfeited if the bidder withdraws or amends its tender or impairs or derogates from the tender in any respect within the period of validity of its tender or if it comes to the notice that the information/ documents furnished in its tender is incorrect or false.

12. The bid security (EMD) without interest shall be returned to the unsuccessful bidders after finalization of contract with successful bidder.

13. The successful bidders have to execute a contract on Indian non judicial stamp paper of Rs.100/- (Rupees one hundred only) within fifteen (15) days from the date of award of this tender in his favour and also required to furnish the security deposit **@ 7.5% against performance guarantee** of contract value in the form of Fixed Deposit/Bank Guarantee/Term Deposit from any Nationalized/Schedule bank duly pledged in favour of AIIMS, Rishikesh & payable at Rishikesh only and must remain valid for a period of 60 (sixty) days beyond the date of completion of all contractual obligations of the contractor, including Defect Liability Period (DLP). The EMD deposited by successful bidder may be adjusted towards Security Deposit as demanded above. If the successful bidder fails to furnish the full security deposit or difference amount between Security Deposit and EMD within 15 (fifteen) days after the issue of Letter of Award of Work, his bid security (EMD) shall be forfeited automatically without any notice to contractor and award of tender in Contractor favour automatically stands terminated at his cost & liability, unless time extension has been granted by AIIMS, Rishikesh. The earnest money deposited along with bid shall be returned after receiving the

14. Aforesaid performance guarantee. The contractor whose bid is accepted will also be required to furnish either copy of applicable licensee / registration etc.

15. The bid shall be valid and open for acceptance by the competent authority of AIIMS Rishikesh for a period of **90 (ninety)** days from the date of opening of technical bid and no request for any variation in quoted rates and / withdrawal of tender on any ground by bidders shall be entertained. The unilateral withdraw at any stage will cause forfeiture of EMD in addition to any

remedy that the purchaser may have under the law. If any bidder withdraws his bid before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the bid which are not acceptable to the department, then the AIIMS shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further the bidders shall not be allowed to participate in the re-bidding process of the work.

**16. List of self-attested Documents to be scanned and uploaded on the CPP portal linked with the particular tender within the period of bid submission failing which the bid of the tenderer shall be rejected.**

- I. Demand Draft/Fixed Deposit/Term Deposit/Copy of deposit of EMD in the institute account /Fixed Deposit Receipt/ Bank guarantee of any scheduled bank against EMD.**
- II. Certificate of Registration for GST and acknowledgement of filed return of previous quarter.**
- III. Certificate of work experience along with copies of Contract Agreement/Purchase Order/Work Order and its completion certificate not signed below to the rank of Executive Engineer or project Manager (As specified in Clause 1.2.1 of CPWD- 6).**
- IV. In case of Work completed in Private sector Copy of Completion certificate with Form 26 AS/TDS Certificate from IT Department**
- V. Annual Financial Turnover should be at least 30% of the estimated cost put to tender and Average Financial turnover during the immediate last three consecutive financial years, duly audited and certified by the chartered Accountant.**
- VI. Signed with company seal on each page of NIT and documents uploaded with bid.**
- VII. Audited Balance sheet by chartered Accountant of last 3 Years.**
- VIII. Valid Authorization certificate from OEM for the make of Panel and Busduct for mentioned make.**
- IX. Hard Copy of the uploaded documents, EMD and NIT need to be submitted before last date and time of bid submission.**
- X. Valid Email ID, Communication address and contact no. on their letterhead.**
- XI. Valid Electrical License from government authority.**
- XII. Enlisted order of firm/contractor issued by CPWD, MES, Railway and state government (UPCL PWD & Irrigation department only).**
- XIII. The Contractor has to submit Solvency Certificate upto 40% of estimated cost.**

**17.** Only Authorized signatory will be permitted to sign any type of documents.

**18.** The soft copies of documents uploaded by contractors on CPP Portal.

**19.** If uploaded scanned documents/tender form are not downloaded successfully, due to any technical error/corrupt files then AIIMS Rishikesh will not be liable.

**20. Submissions to be made along with the offer:**

- The bidder shall be Original Equipment Manufacturer (OEM) or authorized dealer /supplier of manufacturing firm for the panel and BBT/Panel. The offered equipment should have been designed, manufactured and tested as per relevant IS/IEC standards with latest amendments. If not OEM, the dealer/supplier shall submit valid authorization letter of OEM for supply and after sale services for the offered equipment.

**Note: Offer without copies of the above-mentioned documents shall be liable for summary rejection.**

**Govt. of India  
AIIMS, Rishikesh  
Notice Inviting e-Tender**

The Executive Engineer, AIIMS Rishikesh on behalf of The Executive Director, AIIMS Rishikesh invites Percentage rate e-tenders from enlisted contractor in the appropriate classes and category in CPWD, MES, Railway and state government of Uttarakhand (UPCL, PWD & IRRIGATION Department only) Contractor for the following

**Name of Work: Supply Installation testing and commissioning of LT panel for extension of existing panel of Sub-station no. 1&2 for standby Power Supply.**

- 1.1 The work is estimated to Cost Rs. **1,45,14,196/-** This estimate however is given merely as a rough guide.
- 1.2 Intending tenderer is eligible to submit the bid provided he has definite proof from the appropriate authority, which shall be to the satisfaction of the competent authority, of having satisfactorily completed similar works of magnitude specified below: -

**Criteria of eligibility for submission of bid documents.**

**1.2.1 Criteria of eligibility**

Three similar works each of value not less than **Rs.5805678.00** or two similar work each of value not less than **Rs.87,08,518.00** or one similar work of value not less than **Rs. 1,16,11,357.00** in last 7 years ending last day of the month previous to the one in which the tenders are invited.

**Similar works means "Supply Installation testing & commissioning of LT Panel, Bus Duct or Substation Equipment".**

The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of interest @7% per annum; calculated from the date of completion to last date of receipt of tenders.

- 1.2.2 Agreement shall be drawn with the successful bidders on prescribed Form No. CPWD 7 (**or other standard Form as mentioned**) which is available as a Govt. of India Publication and also available on website [www.cpwd.gov.in](http://www.cpwd.gov.in). Bidders shall quote his rates as per various terms and conditions of the said form, which will form part of the agreement.
- 1.2.3 **The time allowed for carrying out the work will be 120 Days from the date of start as defined in schedule 'F' or from the first date of handing over of the site, whichever is later, in accordance with the phasing, if any, indicated in the tender documents.**
- 1.2.4 The site for the work is available.
- 1.2.5 The bid document consisting of plans if any, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents except Standard General Conditions of Contract Form can be seen from **website [www.aiimsrishikesh.edu.in](http://www.aiimsrishikesh.edu.in) or <https://eprocure.gov.in>.**
- 1.2.6 ~~The cost of tender is **Rs.1180** (inclusive GST). Those who download the tender document from website should upload scan copy of DD/PO for Rs. 1180.00 (non-refundable) in favour of "AIIMS, Rishikesh", payable at Rishikesh~~
- 1.2.7 After submission of the bid the contractor can re-submit revised bid any number of times but before last time and date of submission of bid as notified.
- 1.2.8 While submitting the revised bid, contractor can revise the rate of one or more item(s) any number of time (he need not re-enter rate of all the items) but before last time and date of

submission of bid as notified.

**1.2.9** Earnest Money in the form of Treasury Challan or Demand Draft or Pay order or Bankers Cheque or Deposit at Call Receipt or Fixed Deposit Receipt (drawn in favour of AIIMS Rishikesh shall be scanned and uploaded to the e-tendering website within the period of tender submission. The original EMD should be deposited in the office of Executive Engineer whose inviting bids. The EMD receiving Executive Engineer shall issue a receipt of deposition of earnest money deposit to the bidder in a prescribed format (enclosed) uploaded by tender inviting EE in the NIT. This receipt shall also be uploaded to the e-tendering website by the intending bidder up to the specified bid submission date and time.

**1.2.10** Online bid documents submitted by intending bidders shall be opened only of those bidders, whose original EMD deposited (as per the latest guidelines of Ministry of finance and department of expenditure) and other documents scanned and uploaded are found in order. EMD must be valid for 135 days from last date of submission of bid (**Bid validity period 90 days+45 days beyond bid**).

**1.2.11** The Bid submitted shall become invalid and e-Tender Processing Fee shall not be refunded if:

- (i) The bidders are found ineligible.
- (ii) The bidders do not upload scanned copies of all the documents (including GST) as stipulated in the bid document.
- (iii) If any discrepancy is noticed between the documents as uploaded at the time of submission of bid and hard copies as submitted physically by the lowest bidder in the office of tender opening authority.
- (iv) If a tender quotes nil rates against each item in item rate tender or does not quote any percentage above/below on the total amount of the tender or any section/ sub head in percentage rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer.

**1.2.12** The contractor whose bid is accepted will be required to furnish performance guarantee of **7.5%** or as per latest guidelines of ministry of finance and Department of expenditure of the bid amount within the period specified in Schedule F and must remain valid for a period of 60 (Sixty) days beyond the date of completion of all contractual obligations of the contract. This guarantee shall be in the form of cash (in case guarantee amount is less than Rs. 10000/- ) or Deposit at Call receipt of any scheduled bank/Banker's Cheque of any scheduled bank/Demand Draft of any scheduled bank/Pay order of any Scheduled Bank (in case guarantee amount is less than Rs. 1, 00,000/-) or Government Securities or Fixed Deposit Receipts or Guarantee Bonds of any Scheduled Bank or the State Bank of India in accordance with the prescribed form. In case the contractor fails to deposit the said performance guarantee within the period as indicated in Schedule 'F' including the extended period if any, the Earnest Money deposited (as per the latest guidelines of ministry of finance and department of expenditure) by the contractor shall be forfeited automatically without any notice to the contractor. The earnest money deposited along with the bid shall be returned after receiving the aforesaid performance guarantee. The contractor whose bid is accepted will also be required to furnish either copy of applicable licenses/registration or proof of applying for obtaining labour licenses, registration with EPFO, ESIC and BOCW welfare Board including Provident Fund Code No. if applicable and also ensure the compliance of aforesaid provisions by the sub-contractors, if any engaged by the contractor for the said work within the period specified in schedule F.

**1.2.13 Intending bidders 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 (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their bid. A**

**bidder shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. The bidder shall be responsible for arranging and maintaining at his own cost all 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 contract documents. Submission of a bid by a bidder implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant, etc. will be issued to him by the Government and local conditions and other factors having a bearing on the execution of the work.**

- 1.2.14** The competent authority on behalf of the Executive Director of AIIMS Rishikesh does not bind itself to accept the lowest or any other bid and reserves to itself the authority to reject any or all the bids received without the assignment of any reason. All bids in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the tenderer shall be summarily rejected.
- 1.2.15** Canvassing whether directly or indirectly, in connection with bidders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable to rejection.
- 1.2.16** The competent authority on behalf of the Executive Director of AIIMS Rishikesh reserves to himself the right of accepting the whole or any part of the tender and the tenderer shall be bound to perform the same at the rate quoted.
- 1.2.17** The contractor shall not be permitted to tender for works in AIIMS Rishikesh in which his near relative is posted as Divisional Accountant or as an officer in any capacity between the grades of Superintending Engineer, Executive Engineer and Junior Engineer (both inclusive). He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any Gazetted officer in AIIMS Rishikesh. Any breach of this condition by the contractor would render him liable to reject his Bid submitted by him.
- 1.2.18** No Engineer of Gaetted rank or other Gazetted Officer employed in Engineering or Administrative duties in an Engineering Department of the Government of India is allowed to work as a contractor for a period of one year after his retirement from Government service, without the previous permission of the Government of India in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government of India as aforesaid before submission of the tender or engagement in the contractor's service.
- 1.2.19** The bid for the works shall remain open for acceptance for a period of **90 (Ninety)** days from the date of opening of Financial bids.
- 1.2.20** **This notice inviting Bid shall form a part of the contract document. The successful bidders /contractor, on acceptance of his tender by the Accepting Authority shall within 15 days from the stipulated date of start of the work, sign the contract consisting of: -**
- a) The Notice Inviting Bid, all the documents including additional conditions, specifications and drawings, if any, forming part of the tender as uploaded at the time of invitation of tender and the rates quoted online at the time of submission of bid and acceptance thereof together with any correspondence leading thereto.**
  - b) Standard C.P.W.D. Form 7 or other Standard C.P.W.D. Form as applicable.**
  - c) C.P.W.D General Condition of Contract (Construction work) -2023 with updated amendment (s) if any.**



- 1.2.21** In case the bidder withdraws tender or make any modification in the terms & condition of the tender which is not acceptable to the department. On view of earnest money will be forfeited the contractor and shall be suspended for two year and shall not be eligible to bid for AIIMS, Rishikesh tenders from date of issue of suspension order.
- 1.2.22** AIIMS Rishikesh reserves the right to get the quality inspection of ongoing or completed work done from third party. The defects/observations/shortcomings noticed during inspection by third party will be addressed and fixed by the contractor without any extra cost. The payment to the contractor shall be made after rectification and compliance of defects, observations and shortcomings noticed during third party inspection. The date of such third-party inspection shall be informed to the contractor in advance. The cost of third-party inspection shall be borne by AIIMS whereas it shall be the responsibility of the contractor to make arrangement of inspection at site of work with tool/plant and instruments as per Indian & International standards. If defects/observations/shortcomings are not rectified by the contractor to the satisfaction of third party, the cost of onward re-inspections of third party shall be borne by the contractor. If contractor fails to rectify the defects/shortcomings/observations noticed by third party with in specified time, the same shall be got done at the risk and cost of the contractor and recovery of the expenditure incurred will be made from the contractor's bill.
- 1.2.23** The successful lowest bidder will submit, along with performance guarantee after acceptance of the bid, an undertaking from the OEM of system regarding:
- a) The OEM will unconditionally support the lowest bidder technically throughout the execution of contract as well as for maintenance/ comprehensive maintenance contract for the useful life of the system.
  - b) OEM provides all the spares required for healthy functioning of the equipment for at least seven years from the date of supply and installation of equipment.

**GOVERNMENT OF INDIA  
AIIMS Rishikesh**

DIVISION :- **Electrical**

**Percentage rate tender & contract for composite works**

**Tender for the work of: - Supply Installation testing and commissioning of LT panel for extension of existing panel of Sub-station no. 1&2 for standby Power Supply.**

**TENDER**

I/We have read and examined the notice inviting tender, schedule, A, B, C, D, E & F. Specifications applicable. Drawings & Designs, General Rules and Directions, Conditions of Contract, clause of contract, Special conditions, Schedule of Rate & otheb documents and Rules referred to in the conditions of contract and all other contents in the tender documents for the work.

I/We hereby tender for the execution of the work specified for the Director AIIMS–New Delhi within the time specified in Schedule 'F', viz., schedule of quantities and in accordance in all respects with the specifications, designs, drawings and instructions in writing referred to in Rule-1 of General Rules and Directions and in Clause 11 of the Conditions of contract and with such materials as are provided for, by, and in respects in accordance with, such conditions so far as applicable.

**I/We agree to keep the tender open for 90 days from the date of opening of tenders not to make any modification in its terms and conditions.**

**A sum of Rs. 7,25,710.00 is hereby forwarded in Receipt Treasury Challan / Deposit at call Receipt of a Scheduled Bank / fixed Deposit receipt of scheduled Bank/ Demand draft of a scheduled Bank, issued by a scheduled bank as earnest money. If I/We fail to furnish the prescribed performance guarantee within prescribed period, I/We agree that the said DIRECTOR AIIMS or his successors in office shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Further, If I/ We fail to commence work as specified, I/We agree that DIRECTOR AIIMS or his successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said and the performance guarantee absolutely, the said P.G. shall be a guarantee to execute all the works referred to in the tender documents upon the terms and conditions contained or referred those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the tender form. Further, I/We agree that in case of forfeiture of Performance Guarantee or Earnest money as aforesaid, I/We shall be debarred for participation in the re-tendering process of the work.**

**I/We undertake and confirm that eligible similar work(s) has/have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of Department, then I/We shall be debarred for tendering in CPWD in future forever. Also, if such a violation comes to the notice of Department before date of start of work, the Engineer-in-Charge shall be free to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee.**

**I/We hereby declare that I/We shall treat the tender documents drawings and other records connected with the work as secret/confidential documents and shall not communicate information/derived there from to any person other than a person to whom I/We am/are authorized to communicate the same or use the information in any manner prejudicial to the safety of the State.**

#Dated

#Signature of Contractor

#Witness:

# Postal Address

#Address:

#Occupation:

### **ACCEPTANCE**

The above tender (as modified by you as provided in the letters mentioned hereunder) is accepted by me for an on behalf of the Executive Director, AIIMS Rishikesh for a sum of Rs.

.....(Rupees.....  
.....).

The letters referred to below shall form part of this contract / agreement:-

(a)

(b)

(c)

For & on behalf of Executive Director  
Signature .....

**vuqlwfp;ka SCHEDULES**  
**[ FOR MAJOR COMPONENT ]**

vuqlwph ^d\* **SCHEDULE 'A'**  
ek=kvksa dh vuqlwph %layXu½

Schedule of quantities (Enclosed)

**Page No. – 48**

vuqlwph ^[k\* **SCHEDULE 'B'**  
Bsdsnkj dh fuxZr dh tkus okyh lkefxz;ksa dh vuqlwph  
Schedule of materials to be issued to the contractor.

As per NIT

**vuqlwph ^x\* SCHEDULE 'C'**

Bsdsnkj dks HkkM+s ij fn, tkus okys vkStkj ,oa la;=

Tools and plants to be hired to the contractor

| Øe la-<br>Sl. No. | fooj.k<br>Description | HkkM+k izHkkj izfrnu<br>Hire charges per day | fuxZr LFKku<br>Place of Issue |
|-------------------|-----------------------|--|-------------------------------|
| 1                 | 2                     | 3  | 4                             |
| <del>NIL</del>    |                       |  |                               |

**vuqlwph ^?k\* SCHEDULE 'D'**  
**NIT**

**As per Terms and Condition of**

dk;Z ds fy, fo'ks"k vis{kk,a@nLrkost] ;fn dksbZ gksa] dh vfrfjDr vuqlwph  
Extra schedule for specific  
requirements/documents for the  
work, if any.Addl. Specifications  
attached.

**vuqlwph %M½ SCHEDULE 'E'**

Bsds dh lkekU; 'krksZ dk lanHkZ  
Reference to General Conditions of contract  
and special

General conditions of contract for CPWD works  
-2023 as amended up to date correction slip

Conditions attached herewith the tender  
Document except clause-25.

Name of work :- **Supply Installation testing and commissioning of LT panel for extension of existing panel of Sub-station no. 1&2 for standby Power Supply.**

dk;Z dh vuqqekfur ykxr Estimated cost of work  
(i) /kjksgj jkf'k Earnest money

: **Rs. 1,45,14,196/-**  
: **Rs.7,25,710/-**

(ii) fu"iknu xkjaVh Performance guarantee :

**7.5 % of tendered** value. fufofnr ewY; dk  
7.5 izfr'kr

(iii) izfrHkwfr fu{ksi% Security Deposit:

2.5% of tendered value.

vuqlwph ^p\* **SCHEDULE 'F'**

lkekU; fu;e ,oa fn'kkfunsZ'k%

**General Rules & Directions:**

fufonk vkea=.k djus okyk izkf/kdkjh

Officer inviting tender -

**EE (E), AIIMS Rishikesh**

dk;Z dh enksZ dh ek=k ds fy, vf/kdre izfr'kr flls vf/kd

fu"ikfnr enksa ds fy, njksa dk fu/kkZj.k [k.M 12-2 vkSj 12-3 ds fuEukuqlkj

vuqlkj gksxk

Maximum percentage for quantity of items of  
work to be executed beyond which rates are to  
be determined in accordance with Clauses see below  
12.2 & 12.3.

Definitions:

2(v) Hkkjlk/kd bathfu;j

Engineer-in-Charge

**EE , AIIMS Rishikesh**

2(viii) Lohdkj drkZ izkf/kdkjh

Accepting Authority

**ED , AIIMS Rishikesh**

2(x) vfrfjDr vkSj ykHkksa dks iwjk djus ds

fy, Je ,oa lkefxz;ksa dh ykxr ij izfr'krk

Percentage on cost of materials and

labour to cover all overheads and profits.

**15% (Fifteen per cent)**

2(xi) Standard Schedule of Rates:

Market rates

2(xii) Department:

AIIMS Rishikesh

9(ii) Standard CPWD contract Form:

GCC Maintenance work 2023, CPWD Form  
7 modified & Corrected up to Correction slip  
received on the date of receipt of tender

**[k.M Clause 1**

(i) Lohd`fr i= tkjh gksus dh rkjh[k ls fu"iknu  
xkjaVh ds izLrqrdh.k ds fy, vuqer le;  
Time allowed for submission of Performance

Page **13** of **59**

Signature of the Bidder with Company Seal

Guarantee, and applicable labour licenses, registration with EPFO, ESIC and BOCW Welfare Board or proof of applying thereof from the date of issue of letter of acceptance : 12 days

(ii) ¼mi;qZDr i½ esa nh xbZ vof/k ds lk'pkr~ vf/kdre vuqes; ,DIVsa'ku  
Maximum allowable extension with late fee @ 0.10% per day of performance guarantee amount beyond the period as provided in (i) above : 03 days

**[k.M Clause 2**

[k.M 2 ds rgr izfrdkj fuf'pr djus okyk izkf/kdkjh

Authority for fixing compensation under clause 2

**SE AIIMS Rishikesh**

**[k.M Clause 2A**

D;k [k.M 2 d ykxw gksxk  
Whether clause 2A shall be applicable

**No**

**[k.M Clause 5**

dk;Z vkjaHk dh rkjh[k dh x.kuk ds fy, Lohd`fr i= ds tkjh gksus dh rkjh[k ls fnuksa dh la;k  
No. of days from the date of issue of letter of acceptance for reckoning date of start

**15 days**

y{; uhps nh xbZ lkj.kh ds vuqlkj

**Milestone(s): -**

**N.A**

dk;Z fu"ikfnr djus ds fy, vuqer; le;  
Time allowed for execution of work

**120 Days**

Authority to decide

- (i) Extension of Time
- (ii) Rescheduling of mile stones

**SE AIIMS Rishikesh**  
**SE AIIMS Rishikesh**

- (iii) Shifting of date of start in case of delay in handing over of site

**EE AIIMS Rishikesh**

**[k.M Clause 6**

[kaM ykxw&¼6 ½

Applicable (CMB)

**[k.M Clause 7**

varfje Hkqxrku ds fy, ik= gksus ds fy, vafre ,sls Hkqxrku ds ckn dqy Hkqxrku ,df=r lkefxz;ksa ds vfxzksa ds lek;kstu lfgr fd;k tkus okyk dqy dk;Z  
Gross work to be done together with net Payment/adjustment of advances for material collected, if any since the last such payment for being eligible to interim payment

**Rs.40, 00,000/-**

**[k.M 10 d Clause10A**

dk;ZLFky iz;ksx'kkyk esa Bsdsnkj }kjk miyC/k dj; s tkus  
ijh{k.k midj.k dh lwph  
List of testing equipment to be provided by the contractor at site lab. **N.A.**

**[k.M Clause 10B(ii)]**

D;k [k.M 10 [k (ii) ykxw gksxk  
Whether clause 10B (ii) shall be applicable **N.A.**

**[k.M Clause 10C]**

Component of labour expressed as  
Percent of value of work **N.A.**

**[k.M Clause 10CC - NOT APPLICABLE.]**

[k.M 10 xx mu lafonkvksa ij ykxw gksxk flesa dk;Z  
lekiu dh vof/k] vxys dkye esa n□□□□ZbZ xbZ vof/k ls  
vf/kd vuqcaf/kr gSA  
Clause 10CC to be applicable in **DELETED**  
with stipulated period of compensation  
exceeding the period shown in next column .....**Months**

**[k.M Clause 11]**

dk;Z fu"iknu ds fy, vuqiky  
Specifications to be followed for execution of work

CPWD Specification-2023 part Internal,  
With up to correction slip received on the  
date of receipt of tender.

**[k.M Clause 12 (Deviation/Variations Extent and Pricing)]**

(a) Authority to decide deviation upto 1.25 times  
Of tendered amount.

Executive Engineer (E )

(b) Authority to decide deviation beyond 1.25  
times up to 1.50 times of Tendered Amount

**Superintending Engineer**

**12.2 & 12.3** - Deviation Limit beyond which  
clauses 12.2 & 12.3 shall apply for building work  
For building work/ maintenance / Additional /  
Alternation work.

As per CPWD GCC-2023 for maintenance work as  
Amended /modified up to last date of submission  
of bid.

**12.5-** Deviation Limit beyond which clauses 12.2  
& 12.3 shall apply for foundation work.

As per CPWD GCC-2023 for maintenance work as  
amended /modified up to last date of submission  
of bid.

**[k.M Clause 16]**

Competent Authority for deciding reduced rates.

**Superintending Engineer, AIIMS, Rishikesh.**

**[k.M Clause 18 (Contractor to Supply T and P)]**

List of mandatory machinery, tools & plants to be deployed by the contractor at site.

As per site requirement to be arranged by contractor

**[k.M CLAUSE-19C]**

Engineer in charge shall be deciding authority for penalty for each default

**[k.M CLAUSE-19D]**

Engineer in charge shall be deciding authority for penalty for each default

**[k.M CLAUSE-19G]**

Engineer in charge shall be deciding authority for penalty for each default

**[k.M CLAUSE-19K]**

Engineer in charge shall be deciding authority for penalty for each default

**[k.M CLAUSE-25 (Settlement of Disputes and Arbitration)]**

Constitution of Dispute Redressal Committee (DRC)

As per approval of Director, AIIMS, Rishikesh.as modified at below pages

**[k.M Clause 32 Employment of Technical Staff and Employee)**

“Requirement of Technical Representative (s) and Recovery Rates”

| Cost of work in Rs.                 | Requirement of Technical Qualification | Number of (Major +Minor Component) | Designation ( Technical Staff )         | Minimum Experience (Years ) | Rate at which recovery shall be made from the contractor in the event of not fulfilling |
|-------------------------------------|--|------------------------------------|---|-----------------------------|---|
| More than 15 lakhs up to 1.5 Crores | Graduate Engineer OR Diploma Engineer  | 1 of major component               | Planning/Quality/Site /Billing Engineer | 2 or 5 respectively         | Rs. 15000/- per month per person  |



**Sub: - Amendment in general conditions of contractor (GCC) maintenance works -  
2023 The following provision of GCC-2023 is modified as under**

| Existing Provision  | Modified Provision   |
|---|--|
| <p><b>Clause 25</b></p> <p>Except where otherwise provided in the contract, all questions and disputes relating to the meaning of the specifications, design, drawings and instructions here-inbefore 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 works 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:</p> <p>(i) If the contractor considers any work demanded of him to be outside the requirements of the contract, or disputes any drawings, record or decision given in writing by the Engineer-in-Charge or if the Engineer in Charge considers any act or decision of the contractor on any matter in connection with or arising out of the contract or carrying out of the work, to be unacceptable and is disputed, such party shall promptly within 15 days of the arising of the disputes request the Chief Engineer/ CPM, or where there is no Chief Engineer/CPM, the Additional Director General/Special Director General (CE/ADG/SDG) who shall refer the dispute to Dispute Redressal Committee (DRC) within 15 days along with a list of disputes with amounts claimed if any in respect of each such dispute. The Dispute Redressal Committee (DRC) give its decision within a period of 60 days extendable by 30 days by consent of both the parties from the receipt of reference from CE/CPM/ADG/SDG. The constitution of Dispute Redressal Committee (DRC) shall be as indicated in Schedule 'F'. Provided that no party shall be represented before the Dispute Redressal Committee by an advocate/legal counsel etc.</p> <p>The DRC will submit its decision to the concerned ADG/SDG for acceptance. ADG/SDG in a time limit of 30 days from receipt of DRC decision will convey acceptance or otherwise on the said decision if the Dispute Redressal Committee (DRC) fails to give its decision within the aforesaid period or the ADG/SDG fails to give his acceptance in the aforesaid time limit or any party is dissatisfied with the decision of Dispute Redressal Committee (DRC) ADG/ SDG then either party may within a period of 30 days from the receipt of the decision of Dispute Redressal Committee (DRC), ADG/SDG or on expiry of aforesaid the time limits available to DRC/ ADG/SDG may give notice to the Chief Engineer/CPM, CPWD, in charge of the work or if there be no Chief Engineer/ CPM, the Additional Director General /Special Director General of the concerned region of CPWD or if there be no Additional Director General/ Special Director General, the Director General, CPWD for appointment of arbitrator one prescribed proforma as per Appendix XVII under intimation to the other party. It is a term of contract that each party invoking arbitration must exhaust the aforesaid mechanism of settlement of claims/disputes prior to invoking arbitration.</p> <p>The CE/CPM/ADG/ SDG shall in such case appoint the sole arbitrator or one of the three arbitrators as the case may be within 30 days of receipt of such a request and refer such disputes to arbitration. Wherever the Arbitral Tribunal consists of three Arbitrators, the contractor shall appoint one arbitrator within 30 days of making request for arbitration or of receipt of request by Engineer-in-charge to CE/ADG/SDG /DG for appointment of arbitrator, as the case may be, and two appointed arbitrators shall appoint the third arbitrator who shall act as the Presiding Arbitrator In the event of</p> | <p><b>Arbitration &amp; Reconciliation</b></p> <p>a) In case amicable settlement is not reached in the event of any dispute of difference arising out of the execution of the contract or the respective rights and liabilities of the parties or in relation to interpretation of any provision by the contractor in any manner touching upon the contract, such dispute or difference shall (except as to any matters, the decision of which is specifically provided for therein) be referred to the sole arbitration of the arbitrator appointed by AIIMS.</p> <p>b) The award of the Arbitrator shall be binding upon the parties to the dispute.</p> <p>c) Subject as aforesaid, the provisions of Arbitration and Reconciliation Act 1996 (India) or statutory modifications or reenactments thereof and the rules made there under and for the time being in force shall apply to the arbitration proceedings under this clause. The venue of the arbitration shall be held at Rishikesh and the language of the proceedings shall be in English. Subject to the above, the Courts at Rishikesh alone shall have the jurisdiction to deal any disputes between the Parties pertaining to the contract.</p> <p>d) The cost of arbitration shall be borne equally by both the parties.</p> <p>e) Work under the contract shall be continued during the arbitration proceedings.</p> <p>f) Failure to comply with any of the above conditions can result in termination of the</p> <p>Contract, forfeiture of the security deposit, penalty as may be decided by AIIMS and future blacklisting of the contractor.</p> |

- a) A party fails to appoint the second Arbitrator, or  
b) The two appointed Arbitrators fail to appoint the Presiding Arbitrator, then the Director General; CPWD shall appoint the second or Presiding Arbitrator as the case may be.

- (ii) Disputes or difference shall be referred for adjudication through arbitration by a Tribunal having sole arbitrator where claimed amount is Rs. 20 Crore or less. Where claimed Value is more than Rs. 20 Crore, Tribunal shall consist of three Arbitrators as above. The requirements of the Arbitration and Conciliation Act, 1996 (26 of 1996) and any further statutory modification or re-enactment thereof and the rules made there under and for the time being in force shall be applicable.

It is a term of this contract that the party invoking arbitration shall give a list of disputes with amounts claimed, if any, in respect of each such dispute along

with the notice for appointment of arbitrator and giving reference to the decision of the ADG/ SDG on the finding / recommendation of DRC. It is also a term of this contract that member(s) of the Arbitration Tribunal shall be a Graduate Engineer with experience in handling public works engineering contracts, and further he shall have earlier worked at a level not lower than Chief Engineer/ equivalent (i.e. Joint Secretary level of Government of India). This shall be treated as a mandatory qualification to be appointed as arbitrator. Parties, before or at the time of appointment of Arbitral Tribunal may agree in writing for fast track arbitration as per the Arbitration and Conciliation Act, 1996 (26 of 1996) as amended in 2015. Subject to provision in the Arbitration and Conciliation Act, 1996 (26 of 1996) as amended in 2015 whereby the counter claims if any can be directly filed before the arbitrator without any requirement of reference by the appointing authority. The arbitrator shall adjudicate on only such disputes as are referred to him by the appointing authority and give separate award against each dispute and claim referred to him and in all cases where the total amount of the claims by any party exceeds Rs. 1,00,000/-, the arbitrator shall give reasons for the award.

It is also a term of the contract that fees payable to arbitral tribunal shall be as approved by DG, CPWD, OM issued vide no.2/2006/SE(TLC)/CSQ /137 dated 19-11- 2019 (or its latest amendment as approved by DG, CPWD). This fee shall be shared equally by parties. The place of arbitration shall be as mentioned in Schedule F. In case there is no mention of place of arbitration, the arbitral tribunal shall determine the place of arbitration. The venue of the arbitration shall be such place as may be fixed by the Arbitral Tribunal in consultation with both the parties. Failing any such agreement, then the Arbitral Tribunal shall decide the venue.

**Amendment in CPWD GCC 2023 Maintenance Work.**

| Sr.no | Existing Provision                              | Modified Provision (Read as)                     |
|-------|---|--|
| 1     | C.P.W.D   | AIIMS Rishikesh.                                 |
| 2     | President of India                              | Executive Director of AIIMS Rishikesh            |
| 3     | SE of Circle                                    | SE of AIIMS Rishikesh.                           |
| 4     | CE of Zone                                      | Executive Director of AIIMS Rishikesh.           |
| 5     | DDH   | EE (Civil)                                       |
| 6     | Government of India                             | AIIMS Rishikesh                                  |
| 7     | CPWD Contractor's Labour Regulations.           | Labour Regulations of Government of India/State. |
| 8     | ADG   | Executive Director of AIIMS Rishikesh.           |
| 9     | Settlement of Disputes & Arbitration(Clause 25) | Modified (attached at page no.16)                |

## **TERMS AND CONDITIONS**

1. The work shall be carried out strictly in accordance with CPWD specifications for electrical works Part-I Internal 2023 and 2023 (external) as amended up to date and in accordance with Indian Electricity Rules, 1956, Indian Electricity Act, 1910 as amended up to date and as per instructions of the Engineer-in-Charge, including as below and nothing will be paid extra.
2. All materials to be used on this work by the contractor shall be got approved from the Engineer-in-Charge and deptt.
3. The poor workmanship will not be accepted and defects shall be rectified at contractor's cost of the satisfaction of the Engineer-in-Charge. The Programme of works are to be coordinated in accordance with the building work and no claim for idle labour will stipulated in the tender.
4. All the debris of the Electrical/Civil works should be removed and the site should be cleared by the contractor immediately after the accruing of debris. Similarly, any rejected material should be immediately cleared off from the site by the contractor.
5. The contractor or his representative is bound to sign the site order book as and when required by the Engineer-in-Charge and to comply with the remarks therein.
6. The contractor shall make his own arrangement at his own cost for electrical/general tools and plants required for the work.
7. **No Central/State Tax, GST or any other taxes imposed by central/State shall** be separately paid by the department. The rates tendered should be inclusive all taxes and duties. Deduction of contract tax at source shall be made while releasing payment through running/final bills as applicable. A certificate specifying the rate and amount of deduction shall however be issued.
8. The entire installation shall be at the risk and responsibility of the contractor till the guarantee/DLP period.
9. Notwithstanding the schedule of quantities, all items of interrelated works considered necessary to make the installation complete and operative are deemed to be included shall be provided by the contractor at no extra cost.
10. The design parameter will have to restore, if there is any deviation in efficiency or design parameter will be intimated initially. Party has to provide Electrical/Mechanical Drawing if any change has to require for making full functional.
11. All system must have third party certification of the product if required.
12. All Electrical work will be carried out to conformity IE act, IE Rules in standards.
13. Any type of License/NOC/ Approval from Government/ Local Body is will be in the scope of Vendor.
14. Any type of Inspection of Internal /External Authority will be done by Vendor.
15. Storage and custody of material will be in scope of Vendor.
16. Site clearance will be in the scope of vendor after completion of work.
17. Conditional bids would be summarily rejected.
18. **T&P: Shall Be arranged by the Contractor, AIIMS will not issue any T&P for execution of the work.**

19. **FINAL INSPECTION:** - It will be carried out by Engineer-in –Charge. In case any deficiency noticed during demonstration the same will be attended by the Vendor at his own cost & risk.
20. **Site Inspection:** Before submission of offer, the bidders must inspect the sites and be well acquainted themselves with the actual the scope of works and other prevalent conditions, facilities available, position of material and labor, means of transport and access to Site, accommodation, etc. No claim will be entertained later on the grounds of lack of knowledge of any of these conditions.
21. All necessary work/ spear/ tool/ any type item required for completeness of will be scope of vender and nothing will be paid extra by AIIMS.
22. The Contractor should submit details of the terms and conditions of the personnel deployed by him at AIIMS. The contractor shall also ensure the police verification of each and every person deployed by him at AIIMS. The contractor shall also submit copies of the appointment letters of the personnel deployed at AIIMS, at the time of commencement of the contract or whenever change/replacement of any person (s) takes place during the period of the contract. AIIMS may ask to furnish the details of personnel deployed by the contractor at any time during the period of contract.
23. It is an electrical job hence contractor is advised to inspect the site carefully before quoting the rates. The contractor shall be deemed to have satisfied himself to the nature & extent of work at site & no claim for extra payment/or time extension will be allowed on the ground that he was not conversant with condition providing at the site. The rate shall be inclusive of all taxes, accessories, machining & labor, dismantling i.e. site clearance & shifting the debris from work place to specified place at site etc.
24. **Shut Downs: No routine shut down shall be permitted during office hours. The contractor shall be at liberty to carry out work on holidays and after office hours but with prior permission of AIIMS.**
25. AIIMS will not be responsible for any lapse on the part of the Contractor in enforcing of provisions of any Labour Acts /Laws, viz., Payment of Wages Act, Minimum Wages Act, Contract Labour (Regulation & Abolition) Act, 1970 and (Central) Rules, 1971 / Industrial Disputes Act, 1947 and (Central) Rules 1957, Employee’s State Insurance Act, 1948 (ESI), Employee’s Provident Funds and Miscellaneous Provisions Act, 1952 EPF), Gratuity, Workmen Compensation Act, Bonus Act, etc. It will be the contractor’s responsibility to abide by all Statutory Laws/Regulations applicable to the contract labour engaged by him on the Contract Work. Receipt of any complaints on this ground viewed seriously. It is expressly understood that the manpower deployed by the contractor are not on the rolls of AIIMS and no legal relationship of whatsoever subsists between AIIMS and such personnel employed by the contractor.
26. This being a pure Electrical work, the personnel engaged by the contractor and deployed by him at AIIMS premises will be in no way be deemed as working under employment of AIIMS and there shall not exist any employer-employee relationship between AIIMS and the contractor or his personnel deployed by him. The Contractor or personnel shall have nothing to do with AIIMS either in respect of wages/salary or such other statutory benefits or compensation etc. under the Labour Laws and other related Laws i.e. Gratuity, Bonus or Workmen Compensation Act or any other law in force. The contractor shall obtain an appropriate/adequate Policy i.e. Contractor All Risks (CAR) Policy so as to meet any obligation in any eventuality. The Contractor will be responsible for providing benefits like ESI, PF, Bonus, Group Insurance Scheme etc. under the relevant rules/laws of the State and Central Government. The Contractor shall be solely liable for any dispute that might arise in any matter in future for violation/non-compliance of Labour Laws/regulations and AIIMS will have no responsibility, whatsoever.
27. The employee of the contractor will ensure strict discipline and behavior and diligent performance

of their duties most befitting to the decor of the most modern mechanized building and the employees of the contractor shall not in any manner cause any interference, annoyance, nuisance etc. to AIIMS staff or its business or working and will be liable for immediately replacing/relocating the individual employee if the services rendered by him are not found to be satisfactory.

28. In case of any damage to AIIMS's property/premises for which contractor is accountable, the contractor will be liable to pay the compensation to AIIMS as may be advised by AIIMS. The contractor shall also take full responsibility and compensate AIIMS for any loss/damage/break-down caused to the installation due to negligence of his workers.

**29. AIIMS will not be responsible for any accident/injury/death caused to the employees provided by the contractor at site. It will be the sole responsibility of the contractor to abide with the all the provisions of the Workmen Compensation Act, 1923 and no compensation, whatsoever shall be paid by AIIMS in this regard.**

30. Technical bids submitted by the bidder will be opened first and evaluated for fulfilling the Pre-qualification criteria and other conditions in NIT/Tender documents, based on documentary evidences submitted along with the offer.

31. AIIMS will not take any type of responsibility for the item to be supplied by the vendor before successful commissioning; the guarantee period will be start the date of handing over.

**32. Performance Guarantee:**

Upon acceptance of Tender, the successful Bidder is required to deposit an amount equivalent to **7.5 % or as per the latest guidelines** of the contract value as Performance Bank Guarantee. The Performance bank guarantee should be furnished within 12 days from the date of Letter of acceptance to the contractor. Performance bank guarantee may be furnished in the following forms:-

- a) Bank Guarantee from Scheduled Banks/Public Financial Institutions as defined in the Companies Act. in the form of FDR only.
- b) The Bank Guarantee shall not carry any interest.
- c) The Performance Bank Guarantees should **remain valid for a period of sixty days beyond the date of completion of all contractual obligations of the contractor including warranty obligations and the same shall be kept valid by proper renewal till the acceptance of Final Bills of the Contractor, by AIIMS and same will be release after sixty days of Successful completion of work and satisfaction of Engineer-in – charge.**
- d) It is the responsibility of the bidder to get the Bank Guarantees revalidated/extended for the required period as may be advised by AIIMS. AIIMS shall not be liable for issue of any reminders on expiry of the Bank Guarantees.
- e) In case the Bank Guarantees are not extended before the expiry date, AIIMS reserves the right to invoke the same by informing the concerned Bank in writing, without any advance notice/communication to the concerned bidder/contractor.
- f) Bidders to note that any corrections to Bank Guarantees shall be done by the issuing Bank only through and amendment in an appropriate non-judicial stamp paper.
- g) The Original Bank Guarantee may be sent directly by the Bank to AIIMS under Registered Post (Acknowledgement Due), addressed to the Executive Engineer (E), AIIMS, Virbhadra Road Shivaji Nagar, Near Barrage, Stuaida colony, Rishikesh-249203.
- h) AIIMS reserves the right of forfeiture of Security Deposit in addition to other claims and penalties in the event of the Contractor's failure to fulfill any of the contractual obligations or in the event of termination of contract as per terms and conditions of contracts with AIIMS.

**33. Security Deposit :-**

Security Deposit 2.5 % of tendered value will deducted by the AIIMS Rishikesh, the following shall be complied with:

- a) Security deposit will be deducted from Running bill/ Final bill of the contractor.

**34. Return of Security Deposit:-**

Security Deposit will be released to the Contractor after deducting all expenses /other amounts due to AIIMS, penalty amount if any, after defect liability/warranty/ guarantee period of the contract.

**35. Before payment from AIIMS, the contractor has to submit an affidavit regarding timely payment of wages (as per govt. rule) for labour working under vendor on respective site.**

**36. The wages will be paid as per the rule listed by Government. No Juvenile/Minor worker should be engage in site.**

**37. Labor CESS will be deducted @1% as per Government rule.**

**38. No any type of Advance given to contractor.**

**39. Payment Terms:-**

100% payment after successful commissioning. Standard deduction Like GST/IT(TDS) /Labour cess and security deposit as per the govt. rules / as per NIT.

**40. Payment will be made as per terms and conditions of tender document. However, it may depend on availability of funds. It can be delay due to scarcity of funds.**

**41. Site Availability: Site Will We handed over to the contractor in Piece meal manner as per convenience and less hindrance to patient care. Contractor has to be work as per Site availability and as per direction of Engineer in Charge.**

**Executive Engineer (E),  
AIIMS Rishikesh**

**FORM OF EARNEST MONEY (BANK GUARANTEE BOND)**

WHEREAS, contractor..... (Name of contractor) (Hereinafter called "the contractor") has submitted his tender dated..... (date) for the construction of (name of work) (hereinafter called "the Tender")

KNOW ALL PEOPLE by these presents that we ..... (name of bank) having our registered office at .....(hereinafter called "the Bank") are bound unto.....(Name and division of Executive Engineer) (hereinafter called "the Engineer-in-Charge") in the sum of Rs.....(Rs. in words

..... ) for which payment well and truly to be made to the said Engineer-in-Charge the Bank binds itself, his successors and assigns by these presents.

SEALED with the Common Seal of the said Bank this.....day of ..... 20... .

**The Conditions of this obligation are:**

- (1) If after tender opening the Contractor withdraws, his tender during the period of validity of tender (including extended validity of tender) specified in the Form of Tender;
- (2) If the contractor having been notified of the acceptance of his tender by the Engineer-in-Charge:
  - (a) fails or refuses to execute the Form of Agreement in accordance with the Instructions to contractor, if required; OR
  - (b) fails or refuses to furnish the Performance Guarantee, in accordance with the provisions of tender document and Instructions to contractor, OR
  - (c) fails or refuses to start the work, in accordance with the provisions of the contract and Instructions to contractor, OR
  - (d) fails or refuses to submit fresh Bank Guarantee of an equal amount of this Bank Guarantee, against Security Deposit after award of contract.

We undertake to pay to the Engineer-in-Charge either up to the above amount or part thereof upon receipt of first written demand, without the Engineer-in-Charge having to substantiate his demand, provided that in his demand the Engineer-in-Charge will note that the amount claimed by him is due to him owing to the occurrence of one or any of the above conditions, specifying the occurred condition or conditions.

This Guarantee will remain in force up to and including the date.\* after the deadline for submission of tender as such deadline is stated in the Instructions to contractor or as it may be extended by the Engineer-in-Charge, notice of which extension(s) to the Bank is hereby waived. Any demand in respect of this Guarantee should reach the Bank not later than the above date.

DATE

SIGNATURE OF THE BANK

WITNESS

SEAL

(SIGNATURE, NAME AND ADDRESS)

\*Date to be worked out on the basis of validity period of 6 months from last date of receipt of tender.

## **GENERAL CONDITIONS OF CONTRACTS (GCC)**

1. The contractor shall keep proper upkeep of all areas under the contract.
2. Thorough checking of employees of the contractor during entry/exit would be done by security Staff of AIIMS.
3. **Rejection of Tender and Other Conditions**
  - a) AIIMS reserves the right to accept or reject the tenders without assigning any reason whatsoever.
  - b) Conditional tenders, unsolicited tenders, tenders which are incomplete or not in the form specified or defective or have been materially altered or not in accordance with the tender conditions, specifications etc., are liable to be rejected.
  - c) Tenders are liable to be rejected in case of unsatisfactory performance of the bidder with AIIMS or bidder who do not comply with the latest guidelines of Ministry/Commissions of Govt. of India. AIIMS reserves the right to reject a bidder in case it is observed that they are overloaded and may not be in position to execute this job as per the required schedule. The decision of AIIMS will be final in the regard.
  - d) If a bidder who is a proprietor expires after the submission of his tender or after the acceptance of his tender, AIIMS may at their discretion, cancel such tender. If a partner of a firm expires after the submission of tender or after the acceptance of the tender, AIIMS may then cancel such tender at their discretion, unless the firm retains its character.
  - e) AIIMS will not be bound by any Power of Attorney granted by changes in the composition of the firm made subsequent to execution of the contract. They may, however, recognize such power of attorney and changes after obtaining proper legal advice, the cost of which will be chargeable to the contractor concerned.
  - f) If the bidder gives wrong information in his tender, AIIMS reserves the right to reject such tender at any stage or to cancel the contract if awarded and forfeit the Earnest Money/Security Deposit/any other money due.
  - g) Canvassing in any form in connection with the tenders submitted by the Bidder shall make his offer liable to rejection.
  - h) In case the proprietor, Partner or Director of the Company/Firm submitting the Tender, has any relative or relation employed in AIIMS, the authority inviting the Tender shall be informed of the fact as per specified format as per relevant annexure attached along with the offer.
  - i) The successful bidder should not sub-contract part or complete work detailed in the tender specification undertaken by him.
  - j) The Tender submitted by a techno commercially qualified bidder shall become the property of AIIMS who shall be under no obligation to return the same to the bidder. However, unopened financial bids and late tenders shall be returned to the bidders.
  - k) AIIMS shall not be liable for any expenses incurred by the bidder in the preparation of the tender irrespective of whether the tender is accepted or not.
4. **Cancellation of Contract in Full or in Part**

AIIMS at its sole discretion can terminate the contract at any time during the period of contract, If the Contractor:

  - a) At any time makes defaults in proceeding with the works with due negligence and continues to do so even after a notice in writing from the AIIMS, Rishikesh.; or



- b) Commits default in complying with any of the terms and conditions of Contract and does not remedy it or take effective steps to remedy it within 15 days after a notice in writing is given to him in that behalf by the AIIMS, Rishikesh.; or
- c) Fails to yearly performance evaluation of the service provider/contractor by AIIMS or third party inspection report or both; or
- d) Violates any of the terms and conditions stipulated in the agreement/tender document.

5. **Law Governing the Contract and Court Jurisdiction**

The contract shall be governed by the law for the time being in force in India. The civil court having original civil jurisdiction at Rishikesh shall have an exclusive jurisdiction in regard to all claims in respect of the Contract. No other civil court shall have jurisdiction in case of any dispute, under this contract.

6. **Use of Office Space:** No space belonging to AIIMS shall be occupied by the contractor without written permission of AIIMS.

7. **Rights of AIIMS, Rishikesh**

- a) AIIMS reserves the following rights in respect of this contract during the original contract period or its extensions if any, as per the provisions of the contract, without entitling the contractor for any compensation.
- b) To terminate the contract or get any part of the work done through other agency or deploy AIIMS's own/hired/otherwise arranged resources, at the risk and cost of the contractor after due notice period of two weeks by AIIMS in the event of:
  - (i) Contractor's continued poor progress
  - (ii) Withdrawal from or abandonment of the work before completion of the work
  - (iii) Contractor's inability to progress the work for completion as stipulated in the contract
  - (iv) Poor quality work
  - (v) Corrupt act of Contractor
  - (vi) Insolvency of the Contractor
  - (vii) Persistent disregard to the instructions of AIIMS
  - (viii) Assignment, transfer, sub-letting of contract without AIIMS's written permission
  - (ix) Non fulfilment of any contractual obligations
  - (x) In the opinion of AIIMS, the contractor is overloaded and is not in a position to execute the job as per required schedule.

- c) To effect recovery from any amounts due to the contractor under this or any contract or in any other forms, the moneys AIIMS is statutorily forced to pay to anybody, due to contractor's failure to fulfil any of his obligations. AIIMS shall levy overheads of 5% on all such payments.

8. **Responsibilities of the contractor in respect of local laws, employment of works etc.**

The contractor shall fully indemnify AIIMS against any claims of whatsoever nature arising due to the failure of the contractor in discharging any of his responsibilities. The following are the responsibilities of the contractor in respect of observance of local laws, employment of personnel, payment of taxes etc.:

- a) The contractor at all times during the continuance of this contract shall, in all his dealings with local labour for the time being employed on or in connection with the work, have due regard to all local festivals and religious and other customs.

b) The contractor shall comply with all applicable State and Central Laws, Statutory Rules, Regulations etc. such as Payment of Wages Act, Minimum Wages Act, Workmen Compensation Act, Employer's Liability Act, Industrial Dispute Act, Employers Provident Act, Employees State Insurance Scheme, Contract Labour (Regulation and Abolition) Act 1970, Payment of Bonus & Gratuity Act and other Acts, Rules and Regulations for labour as may be enacted by the Government during the tenure of the Contract and having force or jurisdiction at Site. The Contractor shall also give to the local Governing Body, Police and other relevant Authorities all such notices as may be required by the Law.

c) The Contractor shall pay all taxes, fees, license charges, deposits, tolls, royalties, commission or other charges which may be liable on account of his operations in executing the contract.

d) Contractor shall be responsible for provision of Health and Sanitary arrangements (more particularly described in Contract Labour Regulation & Abolition Act), Safety precautions etc. as may be required for safe and satisfactory execution of contract.

e) The Contractor shall be responsible for proper accommodation including adequate medical facilities for personnel employed by him.

f) The Contractor shall ensure that no damage is caused to any person/property of other parties working at site. If any such damage is caused, it is responsibility of the contractor to make good the losses or compensate for the same.

g) The Contractor shall arrange, coordinate his work in such a manner as to cause no hindrance to other agencies working in the same premises.

h) All safety rules and codes applied by the AIIMS at site shall be observed by the contractor without exception. The contractor shall be responsible for the safety of the equipment/material and works to be performed by him and shall maintain all light, fencing guards, slings etc. or other protection necessary for the purpose. Contractor shall also take such additional precautions as may be indicated from time to time by the Engineer with a view to prevent pilferage, accidents, fire hazards. Due precautions shall be taken against fire hazards and atmospheric conditions. Suitable number of Clerical staff, watch and ward, store keepers to take care of equipment/materials and construction tools and tackles shall be posted at site by the contractor till the completion of work under this contract.

i) The contractor shall arrange for such safety devices as are necessary for such type of work and carry out requisite site tests of handling equipment, lifting tools, tackles etc. as per prescribed standards and practices.

j) Contractor has to ensure the implementation of Health, Safety and Environment (HSE) requirements as per directions given by AIIMS/Customer. The contractor has to assist in HSE audit by AIIMS/Customer and submit compliance Report. The contractor has to generate and submit record/reports as per HSE plan/activities as per instruction of AIIMS/Customer.

k) The contractor will be directly responsible for payment of wages to his workmen. A pay roll sheet given all the payments given to the workers and duly signed by the contractor's representative should be furnished to AIIMS site for record purpose, if so called for.

l) In case of any class of work for which there is no such specification as laid down in the contract, such work shall be carried out in accordance with the instructions and requirements of AIIMS.

## 9. **Insurance**

a) It is the sole responsibility of the contractor to insure his materials, equipment's, workmen, etc. against accidents and injury while at work and to pay compensation, if any,

to workmen as per Workmen's compensation Act. The work be carried out in protected area and all the rules and regulations of the AIIMS in the area of project which are in force from time to time will have to be followed by the contractor.

b) If due to negligence and or non-observation of safety and other precautions by the contractors, any accident/injury occurs to the property/manpower belong to third party, the contractor shall have to pay necessary compensation and other expense, if so by the appropriate authorities.

c) The contractor will take necessary precautions and due care to protect the material, while in his custody from any damage/loss due to theft or otherwise till the same is taken over by AIIMS or customer. The contractor will submit necessary documents for lodging/processing of insurance claim. AIIMS will recover the loss from the contractor, in case the damage /loss is due to carelessness / negligence on the part of the contractor. In case of any theft of material under contractor's custody, matter shall be reported to police by the contractor immediately and copy of FIR and subsequently police investigation report shall be submitted to AIIMS for taking up with insurance. However this will not relieve the contractor of his contractual obligation for the material in his custody. Vendor responsible to complete assignment as per term and condition NIT subsequently agreement as signed with AIIMS.

#### 10. **Force Majeure**

The following shall amount to Force Majeure:

a) Acts of God, act of any Government, War, Sabotage, Riots, Civil commotion, Police action, Revolution, flood, Fire, Cyclones, Earth quake and Epidemic and other similar causes over which the contractor has no control.

b) If the contractor suffers delay in the due execution of the contractual obligation due to delays caused by force majeure as defined above, the agreed time of completion of the job covered by this contract or the obligations of the contractor shall be extended by a period of time equal to period of delay, provided that on the occurrence of any such contingency, the contractor immediately reports to AIIMS in writing the causes of delay and the contractor shall not be eligible for any compensation.

#### 11. **Arbitration & Reconciliation**

a) In case amicable settlement is not reached in the event of any dispute of difference arising out of the execution of the contract or the respective rights and liabilities of the parties or in relation to interpretation of any provision by the contractor in any manner touching upon the contract, such dispute or difference shall (except as to any matters, the decision of which is specifically provided for therein) be referred to the sole arbitration of the arbitrator appointed by AIIMS.

b) The award of the Arbitrator shall be binding upon the parties to the dispute.

c) Subject as aforesaid, the provisions of Arbitration and Reconciliation Act 1996 (India) or statutory modifications or reenactments thereof and the rules made there under and for the time being in force shall apply to the arbitration proceedings under this clause. The venue of the arbitration shall be held at Rishikesh and the language of the proceedings shall be in English.

Subject to the above, the Courts at Rishikesh alone shall have the jurisdiction to deal any disputes between the Parties pertaining to the contract.

d) The cost of arbitration shall be borne equally by both the parties.

e) Work under the contract shall be continued during the arbitration proceedings.

f) Failure to comply with any of the above conditions can result in termination of the contract, forfeiture of the security deposit, penalty as may be decided by AIIMS and future

blacklisting of the contractor.

12. General Conditions of **the Contract (GCC) 2023, Tender** form and Special Conditions of the Contract (SCC) will form the part of the contract.
13. All Annexures are to be submitted with the bids duly signed.

**TENDER ACCEPTANCE**  
**LETTER**  
**(To be given on Company Letter Head)**

Date:

To,  
Executive Engineer (E)  
AIIMS, RISHIKESH  
RISHIKESH-

Sub: Acceptance of Terms & Conditions of Tender.

Tender Reference No: \_\_\_\_\_

Name of Tender / Work: **Supply Installation testing and commissioning of LT panel for extension of existing panel of Sub-station no. 1&2 for standby Power Supply.**

Dear Sir,

1. I/ We have downloaded / obtained the tender document(s) for the above-mentioned 'Tender/Work' from the web site(s) namely: [www.aiimsrishikesh.edu.in](http://www.aiimsrishikesh.edu.in) as per advertisement, given in the above mentioned website(s).
2. I / We hereby certify that I / we have read the entire terms and conditions of the tender documents of all pages (including all documents like annexure(s), schedule(s), etc.), which form part of the contract agreement and I / we shall abide hereby by the terms / conditions / clauses contained therein.
3. The corrigendum(s) issued from time to time by department/ organization too has also been taken into consideration, while submitting this acceptance letter.
4. I / We hereby unconditionally accept the tender conditions of above-mentioned tender document(s) / corrigendum(s) in its totality / entirety.
5. I / We do hereby declare that our Firm has not been blacklisted/ debarred by any Govt. Department/Public sector undertaking/Private organization.
6. I / We certify that all information furnished by the our Firm is true & correct and in the event that the information is found to be incorrect/untrue or found violated, then department/ organization shall without giving any notice or reason therefore or summarily reject the bid or terminate the contract, without prejudice to any other rights or remedy including the forfeiture of the full said earnest money deposit /Security deposit or both absolutely.

Date:  
Place:

Signature of authorized person  
Full Name & Designation:  
Company's Seal

**DECLARATION BY AUTHORISED SIGNATORY OF BIDDER**  
(To be typed submitted in the letter Head of the Company/firm of Bidder)

---

To,  
Executive Engineer (E)  
AIIMS, RISHIKESH  
RISHIKESH-

Dear Sir,

Sub: **Declaration by Authorized Signatory**  
Ref: i) NIT/Title of the work. Name of Tender No.....  
ii) All other pertinent issues till date

I/We hereby certify that all the information and data furnished by me with regard to the above Tender Specification are true and complete to the best of my knowledge. I have gone through the specifications, condition, stipulations and other pertinent issues till date, and agree to comply with the requirements and Intent of the specification.

I further certify that I am authorized to represent on behalf of my company/firm for the above-mentioned tender and a valid Power of Attorney/Authorization letter to this effect is also enclosed.

Yours faithfully,

(Signature, Date & Seal of  
Authorized Signatory of  
the Bidder)

Date:

Enclosed: Power of Attorney/Authorization letter

**DECLARATION CONFIRMING KNOWLEDGE ABOUT SITE CONDITIONS**  
(To be typed submitted in the letter Head of the Company/firm of Bidder)

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To,  
Executive Engineer (E)  
AIIMS, RISHIKESH  
RISHIKESH-

Dear Sir,

Sub: **Declaration confirming knowledge about Site conditions**

Ref: i) NIT/Tender No .....,  
ii) All other pertinent issues till date

I/We \_\_\_\_\_ hereby declare and confirm that we have visited the site as referred in AIIMS Tender Specifications and acquired full knowledge and information about the site conditions including Wage structure, Industrial Climate, the Law & Order and other conditions prevalent at and around the site. We further confirm that the above information is true and correct and we shall not raise any claim of any nature due to lack of knowledge of Site conditions.

I/We, hereby offer to carry out works as detailed in above-mentioned Tender Specification, in accordance with Terms & Conditions thereof.

Yours faithfully,

(Signature, Date & Seal of Authorized  
Representative of the Bidder)

Date:  
Place:

**NO DEVIATION  
CERTIFICATE**

(To be typed submitted in the letter Head of the Company/firm of Bidder)

---

To,  
Executive Engineer  
(E)  
AIIMS, RISHIKESH  
RISHIKESH-

Dear Sir,

Sub: **No deviation certificate**  
Ref: i) NIT/Tender No..... ,  
ii) All other pertinent issues till date

We hereby confirm that we have not changed/modified/materially altered any of the tender documents as downloaded from the website/issued by AIIMS and in case of such observance at any stage, it shall be treated as null and void and this tender shall deemed to be withdrawn.

We also hereby confirm that we have neither set any Terms and Conditions and nor have we taken any deviation from the Tender conditions together with other references applicable for the above referred NIT/Tender Specification.

We further confirm our unqualified acceptance to all Terms and conditions, unqualified compliance to Tender Conditions, Integrity Pact (if applicable) and acceptance to Reverse bidding process.

We confirm to have submitted offer in accordance with tender instructions and as per aforesaid reference.

Thanking you,

Yours faithfully,

(Signature, Date & Seal of  
Authorized  
Signatory of the  
Bidder)



**DECLARATION**

(TO BE TYPED ON NON-JUDICIAL STAMP PAPER OF RS.10/-)

To,  
Executive Engineer  
(E)  
AIIMS, RISHIKESH  
RISHIKESH-

Ref: 1) NIT/Tender No. \_\_\_\_\_

Dear Sir,

1. We have carefully read and understood all the terms and conditions of the tender and hereby convey our acceptance to the same.
2. The information / documents furnished along with the above offer are true and authentic to the best of my knowledge and belief. We are well aware of the fact that furnishing of any false information / fabricated document would lead to rejection of our tender/Order at any stage besides liabilities towards prosecution under appropriate law.
3. We are agree to bear penalty imposed upon us due to nonperformance or deficiencies or delay in work or poor workmanship in the services on our part.
4. We have no objection, if enquiries are made about the work listed by us.
5. We have not been under suspension/termination/banned/blacklisted in the preceding 2 years, till last date of submission of bid, by any PSU/Govt. Departments/PSU Banks/AIIMS or any other organization where we have worked. Further, if any of the partners/directors of our organization /firm is black listed or having any criminal case against them, our bid/offer shall not be considered. At any later point of time, if this information is found to be false, AIIMS may terminate the assigned contract immediately.
6. We have not been found guilty by a court of law in India for fraud, dishonesty or moral turpitude.
7. We agree that the decision of AIIMS in selection of Bidders will be final and binding to us.

Signature of authorized person  
Full Name & Designation

Company's Seal:

Date:

Place:

1. The above declaration, duly signed and sealed by the authorized signatory of the company, should be enclosed with Technical Bid.
2. The filling of this declaration is mandatory while submitting the tender documents failing which the tender will rejected out rightly.

**FINANCIAL INFORMATION**

**Financial Analysis** - Details to be furnished duly supported by figures in balance sheet/profit & Loss account duly certified by the Chartered Accountant, as submitted by the applicant to the Income Tax Department (Copies to be attached).

**I) Gross Annual Turn Over of Last Three years ending: -**

| <b>Descriptions</b>              |  |  |  |
|----------------------------------|--|--|--|
| Gross Annual Turn Over           |  |  |  |
| Average turn-over of three years |  |  |  |

**II) Profit / Loss for last Three years ending :-**

| <b>S.No.</b> | <b>Financial Information in Rs. Equivalent</b> |  |  |  |
|--------------|--|--|--|--|
| 1            | Total Assets                                   |  |  |  |
| 2            | Current Assets                                 |  |  |  |
| 3            | Total Liabilities                              |  |  |  |
| 4            | Current Liabilities                            |  |  |  |
| 5            | Profit before Tax                              |  |  |  |
| 6            | Profit after Tax                               |  |  |  |
| 7            | Net Worth                                      |  |  |  |

Signature of Bidder(S) with Seal

Signature of Chartered Accountant with Seal

Signature of the Bidder with Company

Seal

On the letter head of OEM

To  
Executive Engineer (E)  
AIIMS Rishikesh.

**Subject: - Authorization letter against tender no: - 10/EE/Electrical/2024-25.**

Sir,

We (Name of OEM) \_\_\_\_\_ (Address of OEM) \_\_\_\_\_  
Do hereby authorized M/s (Bidders firm Name and address who is participating) \_\_\_\_\_  
: To offer their quotation, and conclude the contract against the tender no. 10/EE/Electrical/2024-25.

We (Name of OEM), hereby support warranty \_\_\_\_\_ through our  
authorized dealer M/s (Bidders firm Name) against this tender.

Authorized Signatory  
(On behalf of OEM)  
With company seal

Name: - \_\_\_\_\_

Designation:- \_\_\_\_\_

Contact no:- \_\_\_\_\_

Email id:-

**Check List****Annexure-9**

| <b>S.no.</b> | <b>Information for bidder</b>   | <b>Remarks</b> | <b>Refer page no. of submitted bid</b> |
|--------------|---|----------------|--|
| 1.           | Notice Inviting Tender (read and duly signed)   | Yes/No         |  |
| 2.           | Whether three similar works each of value not less than <b>40%</b> of the estimated cost put to the tender <b>OR</b> Two similar works each of value not less than <b>60%</b> of the estimated cost put to Tender <b>OR</b> One similar works each of value not less than <b>80%</b> of the estimated cost put to Tender (details provided) | Yes/No         |  |
| 3.           | Acceptance of Tender Condition (read and duly signed)   | Yes/No         |  |
| 4.           | General Conditions of Contract (read and duly signed)   | Yes/No         |  |
| 5.           | Performa of Schedules (read and duly signed)  | Yes/No         |  |
| 6.           | Copy of Income Tax Return Acknowledgement for last Three years (submitted)  | Yes/No         |  |
| 7.           | Valid Electrical License from government authority .  | Yes/No         |  |
| 8.           | Solvency certificate  | Yes/No         |  |
| 9.           | Enlisted order of firm/contractor issued by CPWD, MES, Railway and state government (UPCL PWD & Irrigation department only) .   | Yes/No         |  |
| 10           | Copy of PAN Card (submitted)  | Yes/No         |  |
| 11           | Copy of GST Registration (submitted)  | Yes/No         |  |
| 12           | Annexure-1 (duly filled & signed)   | Yes/No         |  |
| 13           | Annexure-2 (duly filled & signed)   | Yes/No         |  |
| 14           | Annexure-3 (duly filled & signed)   | Yes/No         |  |
| 15           | Annexure-4 (duly filled & signed)   | Yes/No         |  |
| 16           | Annexure-5 (duly filled & signed)   | Yes/No         |  |
| 17           | Annexure-6 (duly filled & signed)   | Yes/No         |  |
| 18           | Annexure-7 (duly filled & signed)   | Yes/No         |  |
| 19           | Annexure-8 (duly filled & signed)   |                |  |
| 20           | Check list filled (duly filled & signed)  | Yes/No         |  |
| 21           | Valid Authorization certificate from OEM/OEA of TTA Type Electrical Panel and Sandwich Type Bus Duct.   | Yes/No         |  |

### **Other Terms and Conditions**

**A. In general, the scope of works to be performed under this contract shall include but not limited to: -**

- Design, engineering manufacture, inspection & testing at works, supply, transportation to site, loading, unloading, storage, installation, testing, commissioning and handing over of Electrical System at AIIMS Rishikesh: -
- Designing, engineering, providing all materials, equipment and services specified or otherwise, which are required to fulfill the intent of ensuring operability, maintainability, completeness and reliability of the total work shall be in the scope of the bidder. Any equipment, material, component, accessories which are not specifically mentioned in price bid and technical specifications, but necessary for satisfactory installation and trouble-free operation adopting good engineering practice shall be in the scope of the bidder.
- Supply, installation, testing & integrated commissioning of the complete system as per the approved drawings/documents.
- Effective co-ordination with the other agencies (internal & external) to carry out the work smoothly.
- Proper handing over of the installations in satisfactory working conditions along with required as built drawings, documents and items as specified in the tender. All required test which is necessary for complete the work and as per required by engineering in charge will be scope of vendor.

**B. INSPECTION OF SITE:**

- The bidder to inspect and examine the site and its surrounding and shall satisfy as to the nature, space availability for Electrical Panel/BBT, the quantities and nature of work, materials necessary for completion of the work and their availability, means of access to site and in general to obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect his offer. No extra claim consequent on any misunderstanding or otherwise shall be allowed.

**C. PRICE:**

- Price shall be inclusive of all taxes & duties whatsoever, like GST, or any tax imposes by State or Central Agencies (if any), work contract tax, commissioning spares, labor, tools & plants, packing, freight/ transportation & insurance up to the site, loading, unloading, fee (s) for testing, license, inspection, documents, etc., where applicable. AIIMS Rishikesh does not give any confessional forms/ certificates/ permits towards any taxes, duties & other levies like sales tax, customs duty, road taxes/ permits, etc. Prices shall be firm throughout the contract period.

**D. MAKES**

- In general, make of various items shall be as per the list enclosed. Wherever makes have not been indicated in the list, the items shall be of ISI marked subject to approval by AIIMS Rishikesh Engineer in Charge. Sample of the items or makes or the items for manufacture/ supply/ use in the work irrespective of appearing in the approved list shall be got approved from Engineer- in-charge before incorporation.

**E. NEW MATERIALS**

- All equipment, materials used in the work shall be brand new and free from manufacturing defects. And shall be Approved from Engineer in Charge Before placing order.

**F. REPLACEMENT OF DEFECTIVE/ DAMAGED ITEMS**

- All defective/damaged items shall be replaced with the good ones without any extra cost as per guarantee clause.

**G. TOOLS & TACKLES:**

- All the required special tools & tackles for executing this work shall be in the scope of the vendor.

**H. MAN POWER:**

- Authorized, experienced, competent and skilled work force shall be deployed with competent supervision. They should possess requisite qualifications/ valid permits/ license/ competency certificates to work on LT Electrical Installations.

**I. QUALITY OF WORK & WORKMANSHIP:**

- The quality of work, workmanship, finishing etc. should be satisfactory to the AIIMS Rishikesh. No payment shall be made for inferior quality or rejected work.

**J. TESTING AND INSPECTION:**

- All equipment/systems to be supplied shall conform to type tests as per the relevant standards. The bidder shall furnish the reports of all the type tests carried out. These reports should be for the tests conducted on identical/similar components/equipment/systems to those offered /proposed to be supplied under this contract. In case type test reports are not found to be meeting the specifications/relevant standard requirement then all such tests shall be conducted under this contract by the contractor free of cost to owner and reports shall be submitted for approval.
- All acceptance and routine tests as per relevant standards and specifications shall be carried out. Charges for all the tests shall be deemed to be included in the bid price. Routine test/acceptance test shall be carried out in the presence of the inspecting officer from AIIMS Rishikesh.
- All major items listed in list of approved makes for electrical items and items pertains to Negative pressure rooms shall be factory inspected. The decision to inspect/waive shall rest with the AIIMS Rishikesh. The list of approved makes enclosed is indicative, AIIMS Rishikesh. can add/delete/modify the same in the interest of organization/work from time to time considering cost, quantity, significance, completion schedules etc.
- At least 15 days advance notice to be given for inspection. While inspection call is given, the actual status and details of test to be offered shall be communicated. Relevant applicable Indian standards & International standards shall be made available.
- If any equipment/material fails in the tests conducted during inspection, necessary rework/replacement shall be done and equipment shall be re-offered for inspection without any cost to owner.

**K. DRAWING & DOCUMENTATION TO BE SUBMITTED BY SUCCESSFUL BIDDER AFTER AWARD OF CONTRACT:**

- All required drawings/documents/technical information required during various stages of works shall be submitted as and when required by the purchaser. All drawings submitted shall provide sufficient detail indicating type, size, general arrangement & foundation drawing, weight, the external connections, fixing arrangement required, the dimensions required for installation and interconnections with other equipment and materials, clearances and space required between various portions of equipment and any other information specifically requested.

- All the above document shall be furnished in 3 sets to AIIMS Rishikesh for review. One set shall be returned with comments / approval. The document shall be modified incorporating the comments given by AIIMS Rishikesh and 3 sets of corrected documents shall be submitted by contractor within 10 days' time.

**L. STATUTORY LAWS/RULES/APPROVALS/LICENSE:**

- The contractor/agency shall abide by the relevant statutory rules, laws, and guidelines and arrange for the approvals, if any required. That include adhering to labour laws, abiding local electricity rules etc.

**M. SITE TESTS/ PERFORMANCE TESTS:**

- Necessary site tests/ performance shall be conducted to ascertain the functional / design/ site requirements. Reports shall be prepared recording the various values, parameters, observations, settings made etc. In case of unsatisfactory results, the same shall be replaced/ rectified as per the requirement without any extra cost.

**N. HANDING OVER/ CERTIFIED DATE OF COMPLETION:**

- Up on the satisfactory commissioning of the entire system, the system shall be observed for 15 days. After this satisfactory trial period, the work shall be handed over officially and completion date recorded by Engineer-in- charge with all the necessary formalities for handing over.
- This date shall be reckoned, as the certified date of completion and the defects liability period shall commence from this date. Until the handing over of the installation, the responsibility lies with the vendor for safety, upkeep etc.

**O. TRAINING/ FAMILIARIZATION ABOUT OPERATION & MAINTENANCE**

- The contractor to AIIMS Rishikesh staff shall give training / familiarization regarding operation & maintenance of the equipment /system at site.

**P. Payment Terms**

- After successful supply Installation testing, commissioning and handing over of system to AIIMS Rishikesh
- **Payment shall be release after deduction of Mandatory Govt Taxes Like GST/IT/Labour Cess etc. as applicable as per rule.**
- Security Deposit @ 2.5 % shall be released after successful completion of Guarantee period.  
Note: - 1. If any fault or damage to existing installations during work, cost of rectification of fault or damage shall be borne by contractor.
- Rectification of defects shall be attended within a week from date of complaint registered, failing which equivalent period will be added as extended guarantee period or the equivalent amount on new parts will be deducted from security deposit.

**TECHNICAL SPECIFICATIONS**

1. All hardware items such as screws, thimbles, G.I. wires etc. which are essentially required for completing an item as per specifications will be deemed to be included in the item even when the same have not been specifically mentioned.
2. All hardware materials such as nuts/bolts/screws/washers etc. to be used in the work shall be zinc/cadmium plated iron.
3. Any conduit which is not be wired by the contractor shall be provided with GI fish wire for wiring by some other agency subsequently. Nothing extra shall be paid for the same.

4. While laying conduit, suitable junction boxes shall be left for pulling the wires.
5. Copper wire shall be FRLS PVC insulated multi-stranded conductor. Termination of multi-stranded conductors shall be done using crimping type thimbles at both the ends. Nothing extra shall be paid for the same.
6. The make of material have been indicated in the list of acceptable makes. No other make will be acceptable. The material to be used in the work shall be got approved from the Engineer-in-Charge before its use at site. The Engineer-in-Charge shall reserve the right to instruct the contractor to remove the material which, in his opinion, is not as per specifications.
7. The proof of purchase in the form of Invoice/cash memo, of all the major components such as Cables, Wires, Fittings, MCB DB's, Geysers, Exhaust fans etc. shall have to be produced by the contractor at the time of final bill or as and when demanded by the deptt.
8. Test report of all the XLPE insulated PVC sheathed armored power cables used at site of work shall have to be submitted by the contractor at the time of submission of final bill.
9. The MCB distribution boards shall be factory fabricated in the works of the manufacturer of the MCB's of any of the makes specified and the same shall be duly pre-wired in the works. The board shall be brought to site in ready for installation condition. The MCBs and the MCB distribution board shall be of the same make.
10. The earthing shall be carried out in the presence of the Engineer-in-Charge or his authorized representative.
11. All fittings/fans will be earthed as per specifications.
12. The firm will have to depute their Engineer for installation and on load trials at our plant without any cost to AIIMS Rishikesh.
13. The contractor will be responsible for malfunctioning of Material/spares supplied by him, it might be due to poor workmanship or due to spare supplied by him, for a period of One year from the date of satisfactory completing the job at own cost.

## **DETAILED TECHNICAL SPECIFICATION FOR LT PANELS**

### **GENERAL DESCRIPTION**

Supply, installation, testing and commissioning of front operated indoor cubicle type free standing, LT distribution panels as per the Schedule, suitable for operation on 415V, three phase, 4 wire, 50 HZ, AC supply system and to withstand a short circuit level of 50 kA RMS symmetrical. The panels shall be fabricated out of 14 SWG CRCA sheet steel with necessary anti-corrosive surface treatment and shall be dust and vermin proof construction with the following facilities:

1. Surface treatment for the panel, frame and all steel parts shall be carried out through at minimum seven tank process or more.
2. Panels shall be painted by powder coating (with Siemens grey) process with two coats of zinc chromate primer and two coats of powder painting. Fire and corrosion resistant coating similar to VIPER FR - 1101 shall be applied inside of the panels in two coats with necessary primer.
3. Fire retardant DMC / SMC filling for openings around bus bar near the sectional barriers. Shall have



- fire barriers at appropriate locations inside.
4. Facilities in the terminals to have direct termination with busbar / aluminium cables (As per design). The terminals of the MCCBs are required to be extended inside the cable alley adequately to cater for termination of cables.
  5. Shall have high mechanical and dielectric strength.
  6. Switchgear body shall be made of fire retardant / heat insulating materials.
  7. Switchgears shall be as per specification.
  8. All the meters in the panel shall be of digital type and as specified in the schedule.
  9. The panels shall be suitable for horizontal expansion in future on both sides.
  10. Panels shall be mountable in any position in vertical plane for operation.

**List of Annexures enclosed:**

- Annexure A : DETAILED SPECIFICATIONS / GUIDE LINES FOR LT PANEL CONSTRUCTION
- Annexure B : DETAILED SPECIFICATIONS / GUIDE LINES FOR BBT/Sandwich Type Bus Trunking
- Annexure C : TESTS TO BE DONE AT FACTORY/WORKS PRIOR TO DESPATCH
- Annexure D : DETAILS OF TESTING AND COMMISSIONING AT SITE
- Annexure E : GENERAL CONDITIONS

**Annexure -A**  
**DETAILED SPECIFICATIONS / GUIDE LINES FOR LT PANEL CONSTRUCTION**

**DESIGN AND CONSTRUCTION:**

**DESIGN REQUIREMENTS:**

The LT panels shall be suitable for operation on 415 volts, 3 phase, 50 HZ system to withstand a short circuit level of 50 KA RMS symmetrical and for one second 105 KA peak the panel builder shall be in possession of necessary CPRI type test certificate to this requirement. The LT panels shall be designed for operation in high ambient temperature up to 55 deg.C and high relative humidity up to 95% and tropical atmospheric conditions and panel should compliance of Seismic Zone V with Inbuild arc test of 70KA for 0.5 Second. **SCOPE**

- This Specification covers the design, engineering, manufacture, testing at manufacturer's works before dispatch, packing, forwarding and delivery, supervision of erection, testing at site and commissioning of cubicle type indoor, floor mounted, dust and vermin proof main free standing 415V LT distribution panel / sub distribution panels as per the rating and configuration stated in BOQ complete with all accessories such as protection relays, control wiring, auxiliary contacts, indicating lamps etc.

**1. STANDARDS**

- In general, the equipment shall conform to all relevant IS/IEC standards. In case of any contradiction between the IS/IEC and this specification, the more stringent of the two shall apply.

| STANDARD                   | DESCRIPTION   |
|----------------------------|---|
| IEC 61439                  | Low-voltage switchgear and control gear assemblies  |
| IEC 60228                  | Conductors of insulated cables  |
| IEC 60255                  | Measuring relays and protection equipment   |
| IEC 60529                  | Degrees of protection provided by enclosures (IP Code)  |
| IEC 60831                  | Shunt power capacitors of the self-healing type for AC systems having a rated voltage up to and including 1000 V                            |
| IEC 60871                  | Shunt capacitors for AC power systems having a rated voltage above 1000 V   |
| IEC 60898                  | Electrical accessories – Circuit-breakers for over current protection for household and similar installations                               |
| IEC 60947-6-1/EN 60947-6-1 | low-voltage and control gear Multiple function equipment. Automatic transfer switching equipment.   |
| IEC 60947-2/EN 60947-2     | Specification for low-voltage switchgear and control gear circuit breakers  |
| IEC 60947-1                | Specification for low-voltage switchgear and control gear. Contactors and motor- starters. Electromechanical contactors and motor-starters. |
| IEC 61008                  | Residual current operated circuit-breakers without integral over current protection for household and similar uses (RCCBs)                  |
| IEC 62262                  | Degrees of protection provided by enclosures for electrical equipment against mechanical impacts (IK code)                                  |
| IEC 61641                  | Enclosed low-voltage switchgear and control gear assemblies - Guide for testing under conditions of arcing due to internal fault.           |
| IEC 61869/BSEN 61869       | Instrument transformers   |
| IS 13779                   | ac Static Watt-hour Meters, Class 1 and 2   |
| IS 13947-5-2               | Low-Voltage Switchgear and Control gear, Part 5: Control Circuit Devices and Switching Elements, Section 2: Proximity Switches              |
| IS 13947-5-1               | Low-Voltage Switchgear and Control gear, Part 5: Control Circuit Devices and Switching Elements, Section 1:                                 |

|              |   |
|--------------|---|
|              | Electromechanical Control Circuit   |
| IS 13947-4-1 | Low-Voltage Switchgear and Control gear: Part 4 - Contractors and Motor-Starters  |
| IS 13947-3   | Low voltage switchgear and control gear, part 3: switches, disconnectors, switch-disconnectors and fuse combination units |
| IS 13947-2   | Low-Voltage Switchgear and Control gear, Part 2: Circuit Breakers   |
| IS 13947-1   | Low-voltage switchgear and control gear, Part 1: General rules  |
| IS 5553      | Reactors – Specification  |

#### **CONSTRUCTIONAL REQUIREMENTS:**

- The LT panels shall be of: IS Standard IEC61439-1 & 2
- i) Metal clad, cubicle, indoor, free standing type and **compartment arrangement**
  - ii) Made up of the requisite vertical sections, which when coupled together shall form continuous dead front switch board.
  - iii) Dust and damp protected, the degree of protection shall be IP-43 as specified in IS-2147.
  - iv) Readily extendable on both sides by the addition of vertical sections after removal of the end covers.
  - v) OEM should have TTA Panel ASTA certification
  - vi) The LT panels shall have the feeder ratings as indicated in the schedule of quantities and constructed only of materials capable of withstanding the mechanical, electrical and thermal stresses as well as the effects of humidity, which are likely to be encountered in normal service.

#### **VERTICAL SECTIONS:**

Each vertical section shall complete a front framed structure rolled / folded sheet steel channel section of minimum 2 mm thickness rigidly bolted together. This structure shall house the components contributing the major weight of the equipment, such as switchgear, main horizontal bus bars, vertical risers and other front mounted accessories. The structure shall be mounted on a rigid base frame of ISMC 100 channel. The design shall ensure that the weight of the components is adequately supported without deformation or loss of alignment during transit or during operation.

Suitable cable chamber housing the cable end connections, power and control cable terminations shall be provided. The design shall ensure generous availability of space for ease of installation and maintenance of cabling and adequate safety for working in one vertical section without coming into accidental contact with live parts in the adjacent section.

A cover plate at the top of the vertical section shall be provided with necessary ventilating arrangements. Any aperture for ventilation shall be covered with a perforated sheet having less than 1 mm diameter perforations to prevent entry of vermin.

#### **SHEET STEEL CUBICLE :**

The sheet steel cubicle shall be designed in fully segregated multi-tier formation. Each cubicle shall have hinged front access door with easy operating fasteners. All doors and covers shall be heavily gasketed to make the compartment dust tight. Each cubicle shall have a covering at the bottom to make a dust and vermin proof construction. Door hinges shall be of concealed type.

The cubicle shall be of minimum 2 mm thick sheet steel. Sheet steel shrouds and partitions shall be of minimum 1.6mm thickness. During fabrication, all sheet steel works forming the exterior of switch boards shall be smoothly finished, leveled and free from flaws. The corners shall be rounded and the overlap of the sheet steel and skeleton structure shall be suitably made such that no gaps, where in dust can accumulate, are left on the exterior sides.

The apparatus and circuits in the LT panels shall be so arranged as to facilitate their operation and maintenance and at the same time to ensure the necessary degree of safety.

Apparatus forming part of the LT panels and Bus Duct shall have the following minimum clearances.

- |                                |     |       |
|--------------------------------|-----|-------|
| i) between phases              | --- | 25 mm |
| ii) between phases and neutral | --- | 25 mm |
| iii) between phases and earth  | --- | 25 mm |
| iv) between neutral and earth  | --- | 19 mm |

Clearance shall be maintained during normal service conditions. Creepage distances shall comply with those specified in relevant standards.

All insulating materials used in the construction of the equipment shall be non- hygroscopic, duly treated to withstand the effect of high humidity, high temperature and tropical ambient service conditions.

Metallic/insulated barriers shall be provided within vertical sections and between adjacent sections to ensure prevention of accidental contact with:

- i) main bus bars and vertical risers during operation, inspection or maintenance of functional units and front mounted accessories.
- ii) cable terminations of one functional unit, when working on those of adjacent unit / units.

All doors/covers providing access to live power equipment/circuits shall be provided with tool or key operated fasteners to prevent unauthorized access. Provisions shall be made for permanently earthing the frames and other metal parts of the switch gear by two independent connections.

### **METAL TREATMENT AND FINISH:**

All steel works used in the construction of the switch boards and Bus Duct shall have undergone a suitable rigorous metal treatment seven tank process so as to remove oxide scales and rust formation and to facilitate a durable coating of the paint on the metal surfaces and to prevent spreading of rust, even in the event of paint film being mechanically damaged.

Powder coated paint as a finishing coat to the shade as specified in the purchase order shall be given. The thickness of paint shall not be less than 50 microns. The interiors of panels shall be painted with fire retardant paint.

## **2. SITE CONDITIONS**

- The LV panel will be located indoors and shall be designed to operate satisfactorily at rated load under the service conditions. This equipment will be subject to the ambient temperature conditions at the site as specified in the Project Requirements

|                                      |   |                                    |
|--------------------------------------|---|------------------------------------|
| <u>Location</u>                      | - | <u>Indoor</u>                      |
| <u>Altitude above main sea level</u> | - | <u>&lt; 2000M above sea level.</u> |
| <u>Design Ambient Temperature</u>    | - | <u>35 Deg. C</u>                   |
| <u>Temperature rise</u>              | - | <u>As per IEC 61439</u>            |
| <u>Relative Humidity Max</u>         | - | <u>95%</u>                         |
| <u>Relative Humidity Min</u>         | - | <u>10%</u>                         |
| <u>Pollution</u>                     | - | <u>Up to Degree of pollution-3</u> |
| <u>Application</u>                   | - | <u>Indoor</u>                      |

## **3. DESIGN AND PERFORMANCE REQUIREMENT**

- All the 415V AC, devices/equipment like bus support insulators, circuit breakers, VTs, etc., mounted inside the switchgear shall be suitable for continuous operation and satisfactory performance under the following supply conditions:
  - (a) Variation in supply voltage: 5%
  - (b) Variation in supply frequency: 3%

#### **4. SWITCHBOARD CONSTRUCTIONAL FEATURES**

- The switchboards shall be based on IEC 61439 OEM certified design supplied by OEM authorized franchises.
- The enclosures shall be designed to take care of normal stress as well as abnormal electro-mechanical stress due to short circuit conditions.
- The Switchboards shall be metal clad totally enclosed, floor mounted freestanding, fully compartmentalized bolted type of modular extensible design suitable for indoor mounting.
- Switchboards shall be made up of requisite vertical sections, which when coupled together, shall form continuous dead front switchboards.
- All covers and doors provided shall offer adequate safety to operating persons and provide ingress protection not be less than IP43.
- Ventilating openings and vent outlets, if provided, shall be arranged such that same ingress protection is retained.
- Switchboard panels and cubicles shall be fabricated with CRCA Sheet Steel of thickness not less than 1.6 mm in general and load bearing members with 2 mm and shall be folded and braced as necessary to provide a rigid support for all components. The doors and covers shall be fabricated from CRCA sheet steel of thickness not less than 1.6 mm.
- Switchboard shall be readily extendible on both sides by addition of vertical sections after removal of the end covers.
- Sheet steel barriers shall be provided between two adjacent vertical panels running to the full height of the switchboard, except for the horizontal busbar compartment. Each shipping section shall have full metal sheets at both ends for transport and storage.
- All equipment's associated with a single circuit except MCB circuits shall be housed in a separate compartment of the vertical section. The Compartment shall be sheet steel enclosed on all sides. The front of the compartment shall be provided with the hinged door, with locking facilities.
- All doors and covers shall also be fully gasketed with D-type gaskets to prevent any ingress of dust and vermin.
- The enclosure protection shall not be less than IP43 unless other specified in BOQ and IP2X on opening of the doors.
- There should be generous availability of space for ease of installation and maintenance with adequate safety for working in one vertical section without coming into contact with any live parts.
- The temperature rise limits of horizontal & vertical bus bars when carrying rated current along its full run shall be as per type tested design of OEM.
- All identical circuit breakers and module chassis of same test size shall be fully interchangeable without having to carryout modifications.
- The MCCBs shall be arranged in multi-tier formation whereas the Air Circuit Breakers shall be arranged in Single or Double tier formation only to facilitate operation and maintenance.
- Wherever two breaker compartments are provided in the same vertical section, insulating barriers and shrouds shall be provided in the rear cable compartment to avoid accidental touch with the live parts of one circuit when working on the other circuit.
- The Switchboard shall be configured with Air Circuit Breakers, MCCBs, and other equipment as called for in the schedule of quantities.
- The LV switchboards shall be minimum of Form 4B separation, except MCB feeders.

#### **5. SWITCHBOARD DIMENSIONAL LIMITATIONS**

- A base channel 50 mm x 3 mm thick shall be provided at the bottom.
- The overall height of the switchboard shall be limited to 2200 mm.
- The height of the operating handle, push buttons etc. shall be restricted between 250 mm to 1800 mm from finished floor level.

#### **6. SWITCHBOARD COMPARTMENTALIZATION**

- For compartmentalized switchboards, separate totally enclosed compartments shall be provided for horizontal bus bars, vertical bus bars, ACBs, MCCBs and cable alleys.

- Hinged lockable doors for each separate compartment shall be provided and duly interlocked with the breaker in "ON" and "OFF" position.
- For all Circuit Breakers separate and adequate compartments shall be provided for accommodating instruments, indicating lamps, control contactors and control MCB etc. These shall be accessible for testing and maintenance without any danger of accidental contact with live parts of the circuit breaker, bus bars and connections.
- Each switchgear cubicles shall be fitted with label in front and back identifying the circuit, switchgear type, rating and duty. All operating device shall be located in front of switchgear only. Minimum height from floor level for any device mounted on panel cover shall be 300 mm.
- Cable compartments shall be of adequate size for easy termination of all incoming and outgoing cables entering from bottom or top.

#### **7. SWITCHBOARD BUS BARS**

- Bus bars shall be made of high conductivity, high strength aluminium alloy, complying with requirements of grade E 91E of IS 5082 – 1981 with minimum conductivity of 55% IACS. Bus bars shall be of rectangular cross sections suitable for full load current for phase bus bars and neutral bus bars or as stipulated in schedule of quantities. Busbar shall be suitable to withstand the stresses of fault level as specified in schedule of quantities.
- The ratings and configuration of bus bars shall be as per type tested design of OEM.
- The bus bars shall be extensible on either side of the switchboard.
- The bus bars shall be supported on non-breakable, non-hygroscopic SMC insulated supports at regular intervals, to withstand the forces arising from a fault level as stipulated in schedule of quantities. They should have minimum Comparative Tracking Index (CTI) of 600V.
- All bus bars shall be color-coded.
- The components critical for robustness of the switchboards like busbar supports, hinges etc. should be supplied by the OEM.
- Minimum clearances between phases / live parts shall be 25mm and phases/ live parts/ neutral to ground shall be 19mm except on the equipment terminals.

#### **8. EARTHING**

- One earthing terminal shall be provided on each side of switchboard.
- An earth bar size must be at least 1: 6 x 50 sqmm Aluminium (same can be provided with GI or Cu also, if required).
- The earth bar shall be electrically continuous and shall run the full extent of each board. This earth shall be on the same side as the cable entry.
- Each unit shall be constructed to ensure satisfactory electrical continuity between all metal parts which are not intended to be alive.
- Suitable holes with bolts and nuts shall be provided at each end of earth bar of switchgear for connection to a main earthing grid.
- The earth bar shall be accessible in each cable entering compartment either directly or through a branch extension to ground the cable armour and shields.
- Door earthing shall be provided for all doors by multi-strand copper wires.

#### **9. INSTRUMENT ACCOMODATION**

- Instruments and indicating lamps shall not be mounted on the Air Circuit Breaker Compartment door. A separate and adequate compartment shall be provided and the instrumentation shall be accessible for testing and maintenance without danger of accidental contact with live parts of the Switchboard.
- For MCCBs, instruments and indicating lamps can be provided on the compartment doors.
- The current transformers for metering and for protection shall be mounted on the solid aluminium bus bars with proper supports.

#### **10. WIRING**

- All wiring for relays and meters shall be with PVC insulated copper conductor wires.
- The wiring shall be coded and labelled with approved ferrules for identification.

- The minimum size of copper conductor control wires shall be 2.5 sq. mm.
- Runs of wires shall be neatly bunched and suitably supported and clamped.
- Means shall be provided for easy identification of wires.
- Identification ferrules shall use at both end of wires.
- All control wires meant for external connections are to be brought out on a terminal board.

#### **11. CABLE TERMINATION**

- Knockout holes of appropriate size and number shall be provided in the Switchboard in conformity with the location of incoming and outgoing conduits/cables.
- The cable terminations of the Circuit Breakers shall be brought out to terminal cable sockets suitably located.
- The cable terminations for the MCCB's shall be brought out to the rear in the case of rear access switchboards.
- Removable gland plates shall be provided for power and control cables. The gland plates shall be 3 mm thick and for single core cables shall be of non-magnetic material.

#### **12. PAINTING AND FINISHING**

- Sheet steel used in the fabrication of switchboards shall undergo a rigorous cleaning and surface treatment seven tank process comprising of alkaline degreasing, descaling in dilute sulphuric acid and a recognized phosphating process after which a coat of primer paint with the final paint shall be applied over the treated surface. Final paint coat of oven baked powder coating, of minimum 50-micron thickness shall then be provided.

#### **13. NAME PLATES AND LABELS**

- Suitable engraved white on black nameplates and identification labels of metal for all Switchboards and Circuits shall be provided. These shall indicate the feeder number and feeder designation.

#### **14. TESTING AND INSPECTION**

- The switchgear shall be completely assembled, wired, adjusted and all routine tests as specified by the applicable standard code shall be conducted.
- Visual Inspection and Dimensional Check.
- Verification of Bill of Material.
- Check of conformity with wiring diagrams and plans.
- Mechanical operation tests, and checking of interlocks.
- Testing of the interchange ability of moving parts.

#### **15. CURRENT TRANSFORMERS:**

Current transformers shall comply with the requirements of relevant latest amended IS. They shall have ratios, outputs and accuracy as specified in the schedule of quantities.

#### **16. INDICATING METERS:**

All indicating instruments shall be of flush mounted digital multifunction type compatible for SCADA.

#### **17. INDICATING LAMPS:**

Indicating lamps shall be of LED type only, provided with translucent lamp covers. Lenses shall be easily replaceable from the front. LED module shall be suitable for direct operation on 415V/230V 50 Hz AC.

#### **18. CABLE TERMINATIONS:**

Cable entries (knock outs) and terminals shall be provided in the switch board to suit the number, type and size of aluminium conductor power cables including provision for future additional cable entries. Necessary numbers of terminal blocks with sufficient ways for termination of the cables shall be provided in the cable alleys. The outgoing terminals of all switchgear shall be conveniently extended up to cable

alley and facilitate easy termination of all cables as indicated by Dept. after award of order.

Provision shall be made for bottom entry of cables as required. Generous size of cabling chambers shall be provided with the position of cable glands and terminals such that cables can be easily and safely terminated.

Barriers or shrouds shall be provided to permit safe working at the terminals of one circuit without accidentally touching that of another live circuit. Cable risers shall be adequately supported to withstand the effects of rated short circuit currents without damage and without causing secondary faults.

#### **19 CONTROL WIRING:**

All control wiring shall be carried out with 1100 V grade single core FRLS PVC insulated cable conforming to relevant IS having stranded copper conductors of minimum 2.5 sq.mm section. Wiring shall be neatly bunched, adequately supported and properly routed to allow easy access and maintenance.

Wires shall be identified by numbered ferrules at each end. The ferrules shall be of the ring type and of non-deteriorating material. They shall be firmly located on each wire so as to prevent free movement.

All control circuit fuses/MCB shall be mounted in front of the panel and shall be easily accessible.

#### **20. SPACE HEATERS:**

The switchboard panel shall be provided with space heaters to prevent moisture condensation. The space heaters with porcelain connectors shall be located at the bottom of each panel and shall be supplied from 240V AC auxiliary bus for space heaters. The space heaters shall be provided with thermostat having variable settings 30-70 deg C.

#### **21. TERMINAL BLOCKS /LABELS / DANGER BOARDS:**

Terminal blocks shall be of 500 volts grade of the stud type. Insulating barriers shall be provided between adjacent terminals. Terminal blocks shall be shrouded. Provisions shall be made for label inscriptions. Labels shall be of anodized aluminium, with white engraving on black background. The nomenclature for engraving on the label plates shall be furnished by Department. They shall be properly secured with fasteners. Danger plates of size and descriptions as recommended in the relevant IS, shall be provided on the Panels.

#### **22. TESTS:**

- a) The LT panels shall be completely assembled, wired, adjusted and tested for operation under stimulated conditions to ensure correctness of wiring and interlocking and proper functioning of all components.
- b) Each LT panels and components shall be subjected to standard routine tests as per applicable clauses of relevant standards.
- c) All current carrying parts and wiring of power control center shall be subjected to power frequency voltage withstand test.

The above tests shall be successfully carried out at factory in the presence of Department Engineers before dispatch of LT panels by the supplier.

#### **1000-3200 AMP ACBs:**

1. ACB Release Protection ACB should have O/L, S/C, Inst., E/F, Neutral Protection.
2. Inbuilt ZSI- Inbuilt Current Zone Selectivity for S/C, E/F.
3. Metering- Current metering, % Loading, Max. & Min. Current display, Current bar graph.



4. Trip record- Last 20 trip data.
5. ACB shall have communication facility via RS485 Port Modbus Protocol providing Status of ACBs (ON/OFF) & shall also be capable of Controlling the ACB (ON/OFF) through Remote.
6. ACB shall be  $I_{cu}=I_{cs}=I_{cw}$  for 1 Second with Combined Test Sequence Certification.

**250-630 Amp Moulded Case Circuit Breaker (MCCB)**

1. Rated Insulation Voltage ( $U_{imp}$ ) – 800Vac (Minimum)
2. Both sides of MCCBs shall be with inter phase barrier to be supplied by MCCB manufacturer only.
3. Both sides of MCCBs shall be supplied with spreaders by MCCB manufacturer only.
4. MCCB Shall have finger proofing & terminal shrouds.
5. All Accessories (Aux, TAC, Shunt, UVR) shall be pre-wired to facilitate quick connection.
6. All MCCB should have Microprocessor release with E/f inbuilt ( $I_{CU} = I_{CS} = 100\%$ )
7. All MCCB should have Double break switch.
  - i. Microprocessor release should have Thermal memory and can have option of switch ON and OFF from MCCB.
  - ii. Full microprocess range - s.c. should be with time delay option for better coordination.
  - iii. On microprocessor Release, setting should be done through DIP switch for accurate setting.
8. All MCCBs shall have Minimum Electrical Life as below:
  - Up to 250A: 10000 Operations
  - 315A to 630A : 4000 Operations

**Annexure B****GENERAL SPECIFICATIONS – LOW VOLTAGE BUSDUCT / BUS RISER / BUSBAR TRUNKING SYSTEM****1. Scope:**

These specifications are intended for design, manufacturing & testing of 3 Phase 4 Wire (100%N) / with earth Sandwich type Aluminum Busbar Trunking System.

**2. System details:**

The Busbar Trunking System shall be suitable for operational Voltage of 415V / with supply frequency of 50Hz, **minimum insulation voltage of 1000 V & impulse withstand voltage of 8kV & higher.**

**3. Standards:**

The Busbar Trunking System shall be designed to comply in accordance with the following international standards,

**IEC 61439 – Part 1 : Low voltage switchgear & control gear assembly- General rules**

**IEC 61439 – Part 6 : Busbar Trunking Systems (busways)**

**IEC 60529 : Degree of protection**

**IS 8623 – Part 2 : Specification for Low Voltage Switchgear & Control gear Assemblies**

**IS 1893 – Part 1 : Criteria for Earthquake Resistant Design of Structures**

**IEEE 693:2005 : High Seismic Qualification Level**

**Wherever required and specified, the Busbar Trunking System shall conform to Fire Rating of 600 deg C for 2 Hours.**

**Busbar Trunking System should also have Seismic Zone-5, Flame Propagation and Fire Resistance certification.**

**4. Manufacturer:**

The manufacturer must have an established track record in design and manufacture of sandwich busbar trunking system, and must have supplied busbar trucking systems for at least 10 years.

The manufacturer must have ISO 9001:2008 certification.

**5. Design & Construction requirements:****5.1 General:**

The Busbar Trunking System shall be of sandwich construction, non-ventilated and natural cooled design. It shall be possible to mount the Busbar Trunking System in any orientation without affecting the current rating.

**5.2 Busbars:**

**5.2.1** The busbars should be made of high conductivity electrical grade Aluminum (>56.8% IACS)

**5.2.2** Purity of Aluminum conductor should not be less than 97%

**5.2.3** Aluminum busbars should be Tin plated at the joint area to avoid oxidation

**5.3 Insulation:**

- 5.3.1** Each bus bar shall be individually insulated by means of Class-F Insulation (preferably Polyethylene Terephthalate), if it is multilayer insulation then each layer must have temperature withstand capacity of 155 deg C (Class-F) as well as breakdown voltage of minimum 6kV.
- 5.3.2** Mica insulation is not allowed which can't be wrapped completely on conductor edges
- 5.3.3** The insulation should be UL certified
- 5.3.4** Insulation must be Halogen free & RoHS compliance

**5.4 Housing:**

- 5.4.1** The housing shall be made with 1.6mm thick electro-galvanized sheet steel of superior grade with Epoxy powder coating to withstand stringent site conditions; e.g. Humid, Costal, Acidic, etc
- 5.4.2** Enclosure must be dust & vermin proof and Provision for mounting external earth strip should be available on Busduct.
- 5.4.3** IP rating of indoor busduct must be IP-54 / IP-55 for protection of Busduct from direct sunlight & heavy rains.
- 5.4.4** Enclosure must be powder coated from both sides (internal & external)

**5.5 Joints:**

- 5.5.1** The joint design shall have inbuilt provision of absorbing expansion & contraction of 12mm per joint during operation.
- 5.5.2** The joint insulation must be of single piece molded design of thermoset material for longer life and higher temperature withstand & better insulation property.
- 5.5.3** The joint construction must allow +/- 3mm adjustment at the time of installation, for ease of adjusting to site measurement variations.
- 5.5.4** Stopper arrangement must be provided at every joint to prevent excessive insertion of conductors while jointing
- 5.5.5** The joint bolt must be insulated with a bolt insulator. The bolt insulator must be of molded one piece.
- 5.5.6** The joint design shall have inbuilt provision to prevent excessive insertion of busduct which can damage the bolt insulator.
- 5.5.7** The busbar ends shall not have holes or slots at the joints to avoid reduction in cross section area which will lead to temperature increase. The electrical continuity shall be through pressure plates, achieving a high contact area of joint cross section and expansion capability.
- 5.5.8** It shall be possible to install and remove the joints without disturbing the adjacent feeder section
- 5.5.9** Joint set should have insulators with temperature withstand capacity of class-F

**6. Testing:**

- 6.1** The busduct shall be type tested at a reputed test laboratory (certified by ASTA or ERDA) for the tests as per IEC-61439 Part-1 (Low voltage switchgear & control gear assembly- General rules) & Part 6 (Bus bar trunking systems & bus ways)
- 6.2** Short circuit testing of busduct should be for duration of 1 Sec. Neutral & Earth conductor should also be tested for 60% short circuit rating of phase conductor
- 6.3** Degree of ingress protection (IP rating) shall also be tested at any reputed independent laboratory as per IEC-60529
- 6.4** Busduct tested for maximum severe Seismic condition of Zone-5 as per IS 1893-2002 and High Seismic Qualification Level as per IEEE 693-2005. Seismic testing done in severe most combination and orientation (Horizontal + Vertical installation along with Plug-in box in live condition)

**ANNEXURE C****TESTS TO BE DONE AT FACTORY/WORKS PRIOR TO DESPATCH**

**FOR TTA Panel:** Once the panel is fabricated and kept ready for seven tank metal treatment processes, the supplier shall inform the status to Department. In case the Department desires, an inspection will be arranged for checking the dimensional requirements of the panel structure by when the components/switchgear of the panel which are going to be housed in the panel will also be inspected.

The LT panels shall be tested for all acceptance/ routine tests as specified in the relevant latest Indian standards, before dispatch in the presence of Department Engineers at the works of the supplier, and the test certificates shall be furnished in triplicate.

Subject to the clearance from Department after the satisfactory completion of above tests at factory / works shall only the panel can be dispatched.

**FOR Sandwich Type Bus Duct:** The Sandwich type Bus Duct manufacture at factory , the supplier shall inform the status to Department well in advance. In case the Department desires, an inspection will be arranged for checking the dimensional requirements of the Bust Duct

The Bus Duct shall be tested for all acceptance/ routine tests as specified in the relevant latest Indian standards, before dispatch in the presence of Department Engineers at the works of the supplier, and the test certificates shall be furnished in triplicate.

The panel can be dispatched after clearance from Department after the satisfactory completion of above tests at factory / works.

**ANNEXURE –D****DETAILS OF INSTALLATION, TESTING AND COMMISSIONING AT SITE****Site Inspection: -**

The panel board shall be supplied in properly packed conditions. After ascertaining that there is no damage to the packing, all the items shall be inspected after unpacking. It shall be ensured that the panel boards are in accordance with the requirements as described in the schedule and drawings. It shall also be ensured that all the components like relays, indication lamps, meters etc, are in good condition and have not suffered any damage during transit. Any such damaged components shall be replaced at site at no extra cost by the supplier. Any damage over the finished section including scratches on the paint etc shall also be attended and suitably finished by the supplier.

**Installation: -**

The Panel board shall be installed using necessary bolts for grouting of the panels and shall furnish the drawings / templates if any required for grouting the foundation bolts.

In case the panels are transported in sections, the supplier shall depute a person to site to properly connect back the bus bar sections.

All loading and unloading arrangements and transporting of the panels to sites with necessary plants / equipment and tools shall be the part of the scope of work and all required man power shall also be provided by the supplier for unloading of the panels in the panel room at site.

**Testing and commissioning:-**

The following tests shall be conducted on the panel boards by the supplier at Department site prior to their commissioning and necessary test certificates shall be submitted to the department.

1. Insulation resistance between the phases and individual phases and earth.
2. Earth continuity.
3. All protective relays and tripping mechanism shall be tested for their proper operation.
4. Operation and functionality tests of switchgears.

**ANNEXURE-E****GENERAL CONDITIONS:-**

1. General arrangement drawings of LT panel with all details such as makes of Relays, CTs, PTs and all Meters etc shall be submitted to the department and prior approval shall be obtained from the department before taking up the fabrication works of the panels.

2. C B and all the Equipment associated instruments and meters etc. supplied shall be guaranteed for a period of 18 months from the date of supply or 12 months from the date of commissioning whichever is earlier. Defects if any noticed during this period shall be attended by the supplier/Contractor including replacement of the defective materials / equipment at free of cost.

3. Following documents shall be essentially furnished in triplicate during supply.

- a) Detailed maintenance manual panel.
- b) Detailed user manuals / maintenance instructions in respect of the protection relays, digital meters installed in the panel.
- c) Final GA / schematic / control wiring **drawings** and other drawings as necessary.
- d) **Type test certificates** in respect of the panel.
- e) **Factory test reports** for panel and the bought-out items like meters / relays / CT.

However, the standard commercial terms and conditions along with tender shall be read carefully before furnishing the above details.

**Executive Engineer (E)**

### **Accepted Makes of Materials**

The Contractor shall obtain prior approval from the Engineer-in-charge before placing order for any specific material. Unless otherwise specified, the brand/make of the material as specified in the item nomenclature, in the particular specifications and in the list of approved materials attached in the tender, shall be used in the work.

| S. No. | Description of Items                 | Approved Makes  |
|--------|--------------------------------------|---|
| 1.     | LT Panel TTA Type                    | Schnieder(blokset)/ Schnieder(Prima)/Lauritz Knudsen (Formerly L&T) (Energys) /Seimens(sivacon s8 )/ABB (ArTurk) and Equivalent model of BCH. |
| 2.     | Copper wire FRLS/ Al. armoured cable | Havells, Skytone, Polycab, Finolex  |
| 3.     | MCCB                                 | Lauritz Knudsen (Formerly L&T)/BCH /Seimens/ABB/ Schnieder  |
| 4.     | MCB                                  | Schnieder/Lauritz Knudsen (Formerly L&T)/BCH/Seimens/ABB  |
| 5.     | ACB                                  | Schnieder/Lauritz Knudsen (Formerly L&T)/BCH/Seimens/ABB  |
| 6.     | Indicator                            | Schnieder/Lauritz Knudsen (Formerly L&T)/BCH/Seimens/ABB  |
| 7.     | Multi-meter                          | Schnieder/Lauritz Knudsen (Formerly L&T)/BCH/Seimens/ABB  |
| 8.     | Control wire                         | Havells, Skytone, Polycab, Finolex,   |
| 9.     | DIGITAL VAF METER                    | Lauritz Knudsen (Formerly L&T)/AE   |
| 10.    | Sandwich type Bus Duct               | Lauritz Knudsen (Formerly L&T) ( S-Line)/ Legrand (Zucchini)/ Schneider (I Line II)/ Siemens (Sivacon 8PS)/ (C & S).                          |

**Note:**

- 1. Electrical Panel and Switchgears shall be Same Make.**
- 2. TTA Panel should Be Transparent Door Opening Type.**

**Executive Engineer (E)**

**Financial Bid****Schedule of Works**

**Name of Work: - Supply Installation testing and commissioning of LT panel for extension of existing panel of Sub-station no. 1&2 for standby Power Supply.**

| S.No. | Description of Items  | Qty | Unit  | Rate        | Amount       |
|-------|---|-----|-------|-------------|--------------|
| 1     | Design, Fabrication, Supply, Installation, testing and commissioning of cubical typed TTA pane of size ( L 8800 mm * W 1200mm * H 2200 mm ).The Panel will confirm to IEC-61439-Factory built assemblies with totally enclosed free standing type dust and vermin proof LT Panel board, fully compartmentalized fabricated from 14(2MM)/16(1.6MM) SWG smooth and wrinkle free, CRCA sheet steel, approx. with 1200 mm depth for incomer and outgoing 4 pole Draw-out ACBs/MCCBs i/c TPN strip type aluminium bus bar of 4000 Amps. capacity complete with cable alley, duly powder coated in approved colour suitable for use on 415volt three phase with Neutral, 50Hz. AC Supply, indicating lamps, as protection relays, control wiring, auxiliary contacts, R, Y, B indicating lamps, Uniform Busbar, Multimeter, CTs, and Electrical and mechanical interlocking etc. As per site requirement and total no's of incoming and outgoing metering and their accessories metering incoming and outgoing switch gear removable gland plate from <b>TOP, Bust duct/cable entry from TOP</b> along with following accessories: - <b>01 Nos.</b><br><b>(Note: The technical specification of panel along with ACB, MCCB, Relays, metering and accessories must comply to CPWD general specification of electrical works.</b> | 1   | P/JOB | ₹ 1291857.7 | ₹ 1291857.7  |
| 2     | <b>Incomer</b><br>Supply, Installation, Testing and commissioning of Electrically Charged EDO Type Microprocessor based, Draw out type 3200 Amps,75 KA, 4 Pole ACB along with protection relays, Electrically and mechanically charged with On/Off indication and associate accessories in existing panel, will have inbuilt 6NO+6NC Auxiliary contact, safety shutter assembly, racking handle, door seal frame, push button cover and rating error preventer with Complete control wiring as per direction of engineer on charge.<br><b>Note :The incomer must be suitable for connecting 02 nos of sandwiched Busduct of 4000 ampere.</b>  | 3   | Each. | ₹ 561169.13 | ₹ 1683507.39 |
| 3     | <b>BusCoupler</b><br>Supply, Installation, Testing and Commissioning of Electrically Charged EDO Type Microprocessor based, Draw out type 3200 Amps,75 KA, 4 Pole ACB along with protection relays, Electrically and mechanically charged with On/Off indication and associate accessories in existing panel, will have inbuilt 6NO+6NC Auxiliary contact, safety shutter assembly, racking handle , door seal frame, push button cover and rating error preventer with Complete control wiring as per direction of engineer on charge.<br><b>Note :The incomer must be suitable for connecting 02 nos of sandwiched Busduct of 4000 ampere.</b>  | 2   | Each. | ₹ 561169.13 | ₹ 1122338.26 |



|    |   |     |         |             |             |
|----|---|-----|---------|-------------|-------------|
| 4  | <b>Outgoing</b><br>Supply, Installation, Testing and Commissioning of Electrically Charged EDO Type Microprocessor based, Draw out type 1000 Amps, 65 KA, 4 Pole ACB along with protection relays, Electrically and mechanically charged with On/Off indication and associate accessories in existing panel, will have inbuilt 6NO+6NC Auxiliary contact, safety shutter assembly, racking handle, door seal frame, push button cover and rating error preventer with Complete control wiring as per direction of engineer on charge. | 2   | Each.   | ₹ 404964.55 | ₹ 809929.10 |
| 5  | Providing and fixing 630 Amps, 50 KA, FPMCCB rating and breaking capacity MCCB with Microprocessor based release and terminal spreaders in existing cubicle panel board including drilling holes in cubicle panel, making connections, With Rotary Handle etc. as required.   | 4   | Each.   | ₹ 46264.87  | ₹ 185059.48 |
| 6  | Providing and fixing 400 Amps, 50 KA, FPMCCB rating and breaking capacity MCCB with Microprocessor based and terminal spreaders in existing cubicle panel board including drilling holes in cubicle panel, making connections, With Rotary Handle etc. as required.   | 10  | Each.   | ₹ 45806.43  | ₹ 458064.30 |
| 7  | Providing and fixing 250 Amps, 50 KA, FPMCCB rating and breaking capacity MCCB with Microprocessor based and terminal spreaders in existing cubicle panel board including drilling holes in cubicle panel, making connections, With Rotary Handle etc. as required.   | 4   | Each.   | ₹ 19,766.60 | ₹ 79066.40  |
| 8  | Supplying and installing following size of perforated Hot Dipped galvanized Iron cable tray (Galvanization thickness not less than 50 microns) with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with G.I. suspenders including G.I. bolts & nuts, etc. as required. 600 mm width X 75 mm depth X 2.0 mm thickness   | 60  | R/Metre | ₹ 2,049.56  | ₹ 122973.60 |
| 9  | Supplying and installing following size of perforated Hot Dipped Galvanized Iron cable tray (Galvanization thickness not less than 50 microns) with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with G.I. suspenders including G.I. bolts & nuts, etc. as required. 300 mm width X 50 mm depth X 1.6 mm thickness   | 50  | R/Metre | ₹ 939.43    | ₹ 46971.50  |
| 10 | Earthing with copper earth plate 600mmX600mmX3mm thick including accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7-meter-long etc. with charcoal/cock and salt complete as required  | 2   | Set     | ₹ 14856.89  | ₹ 29713.78  |
| 11 | Supplying and laying 25 mm X 5 mm copper strip at 0.50 metre below ground as strip earth electrode, including connection/ terminating with nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of brass nut bolt & spring washer spaced at 50mm)   | 50  | R/Metre | ₹ 1043.56   | ₹ 52178.50  |
| 12 | Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on existing cable tray as required. A) Above 185 sq. mm and up to 400 sq. mm (clamped with 40x3mm MS flat clamp)  | 200 | R/Metre | ₹ 198.63    | ₹ 39726.00  |
| 13 | Supplying and making indoor end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required. a) 3½ X 300 sq. mm (70 mm)   | 12  | Each    | ₹ 1282.90   | ₹ 15394.80  |

|    |   |     |         |            |                    |
|----|---|-----|---------|------------|--------------------|
| 14 | Supplying and making straight through joint with heat shrinkable kit including ferrules and other jointing materials for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required. A) 3½ X 300 sq. mm  | 10  | Each    | ₹ 6556.66  | ₹ 65566.60         |
| 15 | Supplying, installing by suspension on ceiling, testing and commissioning of following capacity Sandwich Type Rising Mains/Bus Duct for use on 3 phase 4 wire 415 volts, 50Hz A.C. supply with metal clad enclosure having IP-54 rating after fixing the tap off boxes and all accessories, made of 1.6mm thick steel sheet duly powder coated in convenient sections complete with 4 Nos aluminium bus bars having current density of 130 A/ sqcm at nominal current rating, necessary joints, elbow joints & expansion joints and bends, fire barrier , copper flexible for joints, continuous earthing with 2 Nos aluminium strip of suitable size (one on each side) including, G.I. clamping brackets, suspenders, Horizontal/Vertical Bend, Flange end with equalizer,/sortin plate , couplers, tinned copper braided flexible not less than 360 mm with hardware angle iron bracket, steel fasteners, threaded rod connecting to earthing system etc. as required with below mentioned technical specification: As Per temporize design as per latest IEC 614439 part 1 and 6 as per direction of Engineer in charge.<br><b>A) 4000 A 50kA SC for 1 sec 415V/690V/1000V sandwich construction Busbar trunking System with Multilayer Class- F insulation end Conductor : Aluminium Rating 4000 Amp configuration : 3P4W IP rating: IP54 Impulse Withstand Voltage :12 KV Straight Run feeder</b> | 120 | R/Metre | ₹ 65629.80 | ₹ 7875576.00       |
| 16 | Supply of following sizes PVC/XLPE insulated, PVC sheathed aluminium conductor 660/1100-volt grade armoured cable confirming to IS 1554 complete as required A 3.5x300 Sqmm   | 200 | Each.   | ₹ 3123.93  | ₹ 624786.00        |
| 17 | Dismantling of 12-15 nos of cable of size 3.5 * 300 sq mm from existing LT panel in AC Plant of AIIMS Rishikesh and Shifting cable to Sub-sation work include removing of cable glands, cutting/fixing/removing/pulling cable from existing LT panel and re routing the cable to new LT panels with the help of necessary tools as required to the satisfaction of Engineer -incharge and as directed by Engineering incharge.  | 1   | Job     | 11487.00   | 11487.00           |
|    | <b>Total amount including GST</b>   |     |         |            | 14514196.41        |
|    | <b>Total</b>  |     |         |            | 14514196.41        |
|    | <b>Say</b>  |     |         |            | <b>14514196.00</b> |

