



भारतीय प्रौद्योगिकी संस्थान इंदौर  
*Indian Institute of Technology Indore*

*Infrastructure  
Development  
Office*

# INDIAN INSTITUTE OF TECHNOLOGY INDORE

SIMROL, KHANDWA ROAD, INDORE 453552  
[www.iiti.ac.in](http://www.iiti.ac.in)



## TENDER DOCUMENT FOR

**DESIGN, SUPPLY, INSTALLATION, TESTING, COMMISSIONING &  
STATUTORY APPROVAL OF 1600 KVA, 11/.433 KV DRY TYPE  
TRANSFORMER, L.T TTA PANEL & L.T./ H.T. CABLES AT IIT  
INDORE.**

**NIT No. - IITI/IDO/PR/E/ NIT /ESS-02/EXPANSION/2020-21**



**PART - I**  
**Eligibility Bid Document**



## Index

**Name of Work:** - DESIGN, SUPPLY, INSTALLATION, TESTING, COMMISSIONING & STATUTORY APPROVAL OF 1600 KVA, 11/.433 KV DRY TYPE TRANSFORMER, L.T TTA PANEL & L.T./ H.T. CABLES AT IIT INDORE.

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**INDIAN INSTITUTE OF TECHNOLOGY INDORE**

**NOTICE INVITING TENDER**

The Project in Charge IIT Indore invites on behalf of IIT Indore item rate bids in two bid system for following work(s):-

**NIT No.: IITI/IDO/PR/E/ NIT /ESS-02/EXPANSION/2020-21**

**Name of Work:**

**DESIGN, SUPPLY, INSTALLATION, TESTING, COMMISSIONING & STATUTORY APPROVAL OF 1600 KVA, 11/433 KV DRY TYPE TRANSFORMER, L.T TTA PANEL & L.T./ H.T. CABLES AT IIT INDORE.**

Estimated Composite Cost: ₹ 84, 00,000 /-

Earnest Money: ₹ 1, 68,000/-

Time of Completion: **Three months**

Date of availability of tender document for download from **11.05.2020** to **10.06.2020 (17:00 hrs)** can be seen on website <http://iiti.ac.in/tenders/tender>, and downloaded free of cost and shall be submitted on line on website [www.tenderwizard.com/IIT](http://www.tenderwizard.com/IIT) or central public procurement portal (CPPP).

Pre-bid meeting is scheduled on **26.05.2020** at **11.00 AM**.

Date of submission of bids Up to **5.00 PM** of **10.06.2020**.

Time and date of opening of eligibility bid: **11.06.2020** at **11.00 AM**



**INFORMATION AND INSTRUCTIONS FOR BIDDERS FOR TENDERING FORMING  
PART OF BID DOCUMENT AND TO BE POSTED ON WEBSITE**

The Project in Charge, IIT Indore on behalf of IIT Indore invites online item rate tenders from eligible firms / contractors of repute in two bid system for the following work:

Sl.		Name of work & Location	Estimated cost put to tender	Earnest Money	Period of Completion	Date of Pre-bid meeting	Last date & Time of submission /uploading of eligibility and financial bids and other documents as specified	Time & date of opening of Eligibility bid
1	NIT No. IIT/IDO/PR/E/ NIT /ESS-02/EXPANSION/2020-21	<b>DESIGN, SUPPLY, INSTALLATION, TESTING, COMMISSIONING &amp; STATUTORY APPROVAL OF 1600 KVA, 11/433 KV DRY TYPE TRANSFORMER, L.T TTA PANEL &amp; L.T./ H.T. CABLES AT IIT INDORE.</b>	Rs. 84,00,000/-	Rs. 1,68,000/-	Three months	May 26, 2020.	Up to 5 PM of June 10, 2020.	At 11 AM Of June 11, 2020.

1. Contractors who fulfill the following requirements shall be eligible to apply. Joint ventures are not accepted.

(a) Should have satisfactorily completed the similar works in CPWD / MES / MPPWD / Central PSUs / IITs / IIMs / IISERs as mentioned below during the last five years ending previous day of last date of submission of bids.

Three similar works each costing not less than Rs. 33.6 lakhs,

or

Two similar works each costing not less than Rs.50.4 lakhs

or

One similar work costing not less than Rs. 67.2 lakhs;

Eligible similar work shall mean works of **"Design, Supply, Installation, Testing, Commissioning & statutory approval of minimum 1600 KVA, 11/433 KV Dry Type Transformer, TTA L.T. panels, L.T./ H.T. Cables."**

The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum; calculated from the date of completion to previous day of last date of submission of bids.

(i) Should have an average annual financial turnover of Rs. 50 lakhs during the last three years ending March 31, 2020.

(ii) Should not have incurred any loss (profit after tax should be positive) in more than two years during the last five years ending March 31, 2020.



- (iii) Should have a solvency of Rs. 35 lakhs.
  - (iv) Should have valid 'A' class electrical contractor license from Govt. of M.P. or Govt. of India.
  - (v) Should have GST registration certificate.
  - (vi) Should have EPF registration certificate.
  - (vii) Should have ESIC registration certificate.
  - (viii) Should have PAN CARD registration certificate.
  - (ix) Should have company/firm registration certificate.
  - (x) Should have Building & other construction works (BOCW) registration certificate.
  - (xi) Should have labor license registration certificate.
2. The intending bidder must read the terms and conditions of CPWD-6 carefully. He should only submit his bid if he considers himself eligible and he is in possession of all the documents required and submitted with technical bid.
3. Information and Instructions for bidders posted on website shall form part of tender and bid document.
4. The bid document consisting of plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms & conditions of the contract to be complied with and other necessary documents can be seen from website <http://iiti.ac.in/tenders/tender> and downloaded free of cost and shall be submitted online on website [www.tenderwizard.com/IIT](http://www.tenderwizard.com/IIT) or central public procurement portal (CPPP).
5. The amount of EMD will be paid by online mode only.
6. The tender can only be submitted after uploading the mandatory scanned documents as per list given.
7. Date of availability of tender document for download from **11.05.2020 to 10.06.2020 (17:00 hrs.)** on website [www.tenderwizard.com/IIT](http://www.tenderwizard.com/IIT) and **central public procurement portal (CPPP)**.
8. (i) Copy of Certificate of Work experience, Certificate of Financial Turnover from Chartered Accountant, Bank Solvency Certificate and other documents mentioned above shall be submitted and all documents mentioned in **ELIGIBILITY BID DOCUMENTS** in the prescribed formats of Form 'A' to 'G' and Annexure 'A' to 'F' along with certified copies of supporting documents shall also be submitted. At the time of submission of bid contractor may submit 'Affidavit / Certificate from CA mentioning Financial Turnover of last 5 years or for the period as specified in the bid document and further details, if required shall be asked from the Contractor after opening of Eligibility bid documents. There is no need to upload entire voluminous balance sheet.
- (ii) Bid documents submitted by intending bidders shall be opened only of those bidders, whose Earnest Money Deposit and other documents submitted are found in order.



9. The Eligibility bid shall be opened first on due date and time as mentioned above. The time and date of opening of financial bid of contractors qualifying the eligibility bid shall be communicated to them at a later date.
10. IIT Indore reserves the right to reject any prospective application without assigning any reason and to restrict the list of qualified contractors to any number deemed suitable by it, if too many bids are received satisfying the laid down criteria.
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CPWD – 6

**Indian Institute of Technology Indore**

**Notice Inviting Tender**

1. Project in Charge IIT Indore on behalf of IIT Indore invites item rate bids from eligible firms/contractors of repute in two bid systems for the work of **“DESIGN, SUPPLY, INSTALLATION, TESTING, COMMISSIONING & STATUTORY APPROVAL OF 1600 KVA, 11/433 KV DRY TYPE TRANSFORMER, L.T TTA PANEL & L.T./ H.T. CABLES AT IIT INDORE.”**

- 1.1 The work is estimated to a composite cost of: ₹ 84, 00,000 /- this estimate, however, is given merely as a rough guide.

- 1.1.1 The authority competent to approve NIT for the combined cost and belonging to the major discipline will consolidate NITs for calling the bids. He will also nominate Division which will deal with all matters relating to the invitation of bids. For composite bid, besides indicating the combined estimated cost put to bid, should clearly indicate the estimated cost of each component separately. The eligibility of bidder will correspond to the combined estimated cost of different components put to bid.

**1.2. Criteria of eligibility for contractors:**

Contractors who fulfill the following requirements shall be eligible to apply. Joint ventures are not accepted.

Should have satisfactorily completed the works as mentioned below during the last five years ending previous day of last date of submission of bids.

Three similar works each costing not less than Rs. 33.6 lakhs,

or

Two similar works each costing not less than Rs.50.4 lakhs

or

One similar work costing not less than Rs. 67.2 lakhs;

Eligible similar work shall mean works of **“DESIGN, SUPPLY, INSTALLATION, TESTING, COMMISSIONING & STATUTORY APPROVAL OF MINIMUM 1600 KVA, 11/433 KV DRY TYPE TRANSFORMER, L.T TTA PANEL & L.T./ H.T. CABLES.”**

The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum; calculated from the date of completion to previous day of last date of submission of bids.





- (a) Should have an average annual financial turnover of Rs. 50 lakhs during the last three years ending March 31, 2020.
- (b) Should not have incurred any loss (profit after tax should be positive) in more than two years during the last five years ending March 31, 2020.
- (c) Should have a solvency of Rs 35 lakhs.

**1.3 To become eligible for issue of bid, the bidder shall have to furnish an affidavit as under: -**

I/We undertake and confirm that eligible similar works(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 IIT Indore 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.

- 2 Agreement shall be drawn with the successful bidder on prescribed Form No. CPWD 8 modified / amended up to last date of receipt of tender, Bidder shall quote their rates as per various terms and conditions of the said form which will form part of the agreement.
- 3. The time allowed for carrying out the work will be 3 Months 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 bid documents.
- 4. The site for the work is available at IIT Indore
- 5. 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 except Standard General Conditions of Contract Form, 2014 can be seen on website of [www.iiti.ac.in/tenders/tender](http://www.iiti.ac.in/tenders/tender) or [www.tenderwizard.com/IIT](http://www.tenderwizard.com/IIT) or [central public procurement portal \(CPPP\)](http://central public procurement portal (CPPP)).

- 6 *Earnest Money will be paid in the form of online mode only.*

The bid submitted shall be opened on **June 11, 2020 at 11 am.**

- 7 **Copy of certificate of work experience, Certificate of financial turnover from Chartered Accountant, Bank Solvency Certificate and other documents mentioned shall be submitted within the period of bid submission and all documents mentioned in ELIGIBILITY BID DOCUMENTS in the prescribed formats of Form 'A' to 'G' and Annexure 'A' to 'F' along with certified copies of supporting documents shall also be submitted** At the time of submission of bid contractor must submit 'Affidavit / Certificate from CA mentioning Financial Turnover of last 5 years or for the period as specified in the bid document and further details, if required, shall be asked from the Contractor after opening of Eligibility bid documents.
- 10. The bid submitted shall become invalid and shall not be refunded if:
  - (i) The bidder is found ineligible.
  - (ii) The bidder does not deposit EMD receipt
  - (iii) The bidder does not submit all the documents (including service tax registration/VAT registration/Sales Tax registration) as stipulated in the bid document including the copy of receipt for deposition of EMD.



- (iv) 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 bid opening authority.
- (v) **If a tenderer 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.**
11. The contractor whose bid is accepted will be required to furnish performance bank guarantee of 5% (Five Percent) of the bid amount within the period specified in Schedule F. This guarantee shall be in the form of 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 by the contractor shall be forfeited automatically without any notice to the contractor. The Earnest Money deposited along with 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 / registrations or proof of applying for obtaining labor 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 and program chart (Time and progress) within the period specified in Schedule 'F'.**
12. The description of the work is as follows:  
**The scope of works includes “DESIGN, SUPPLY, INSTALLATION, TESTING, COMMISSIONING & STATUTORY APPROVAL OF 1600 KVA, 11/0.433 KV DRY TYPE TRANSFORMER, L.T TTA PANEL & L.T. / H.T. CABLES AT IIT INDORE.”**
- 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 bids. 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 it has read this notice and all other contract documents and has made itself 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 it by the Government and local conditions and other factors having a bearing on the execution of the work.
13. The competent authority on behalf of the Board of Governance of IIT Indore 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 bidder shall be summarily rejected.



14. Canvassing whether directly or indirectly, in connection with bidders is strictly prohibited and the bid submitted by the contractors who resort to canvassing will be liable to rejection.
  15. The competent authority on behalf of Board of Governance of IIT Indore reserves to himself the right of accepting the whole or any part of the bid and the bidder shall be bound to perform the same at the rate quoted.
  16. The contractor shall not be permitted to bid for works in the IIT Indore in which its near relative is posted as an Accountant or as an officer in any capacity between the grades of Superintending Engineer and Junior Engineer (both inclusive) responsible for award and execution of contracts. It shall also intimate the names of persons who are working with it in any capacity or are subsequently employed by it and who are near relatives to any Gazetted officer in the IIT Indore or in the Ministry of Human Resource Development.
  17. No Engineer of Gazetted 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 its 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 bid or engagement in the contractor's service.
  18. The bid for the works shall remain open for acceptance for a period of **90 days (Ninety days)** from the date of opening of technical bid. If any bidder withdraws its 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 IIT Indore 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.**
  18. The Eligibility bid shall be opened first on due date and time. The time and date of opening of financial bid of contractors qualifying the eligibility bid shall be communicated to technically qualified bidders only at a later date.
  19. This Notice Inviting Bid shall form a part of the contract document. The successful bidder, on acceptance of its 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 bid at the time of invitation of bid 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 8 amended / modified up to last date (or other Standard C.P.W.D. Form as applicable) of receipt of bid.
-



## 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, clauses of contract, Special conditions, Schedule of Rate & other documents and Rules referred to in the conditions of contract and all other contents in the tender document for the work.

I/We hereby tender for the execution of the work specified for the President of India 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 Ninety (90) days from the due date of opening of eligibility bid and not to make any modification in its terms and conditions.

A sum of Rs. .... (Rs.....) is hereby forwarded in online mode or Fixed Deposit Receipts of a Scheduled Bank/ Demand Draft of a Scheduled Bank/ Bank Guarantee issued by a Scheduled Bank is scanned and uploaded **(strike out as the case may be)**. If I/We, fail to furnish the prescribed performance guarantee within prescribed period, I/we agree that the said President of India 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 President of India or his successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said performance guarantee absolutely. The said Performance Guarantee shall be guarantee to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to 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 earnest money or performance guarantee 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 IIT Indore 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 Deposited / 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 therefrom 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

Postal Address#

Witness: #

Address: #

Occupation: #

**# To be filled in by the contractor/witness as applicable**



**ACCEPTANCE**

The above tender (as modified vide letters mentioned hereunder) is accepted by me for and on behalf of the IIT Indore for a sum of ₹. \_\_\_\_\_

(Rupees \_\_\_\_\_)

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

- a)
- b)
- c)

For & on behalf of the IIT Indore.

Signature

.....

Dated .....

Designation .....



**FORM OF PERFORMANCE SECURITY BANK GUARANTEE BOND**

1. In consideration of the President of India (hereinafter called "The Government") having offered to accept the terms and conditions of the proposed agreement between.....and.....  
(hereinafter called "the said contractors") for the work .....(hereinafter called "the said agreement") having agreed to production of a irrevocable Bank Guarantee for Rs.....( Rupees.....only) as a security /guarantee from the contractor(s) for compliance of his obligations in accordance with the terms and conditions in the said agreement, we..... (indicate the name of the bank)  
(hereinafter referred to as "the Bank") hereby undertake to pay to the Government an amount ..... not ..... exceeding Rs.....(Rupees.....only) on demand by the Government.
2. We .....(Indicate the name of the Bank) do hereby undertake to pay the amounts due and payable under this Guarantee without any demure, merely on a demand from the Government stating that the amount claimed is required to meet the recoveries due or likely to be due from the said contractors. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this Guarantee. However, our liability under this guarantee shall be restricted to an amount ..... not ..... exceeding Rs.....(Rupees.....only).
3. We, the said Bank further undertake to pay to the Government any money so demanded notwithstanding any dispute or disputes raised by the contractors in any suit or proceeding pending before any Court or Tribunal relating thereto, our liability under this present being absolute and unequivocal. The payment so made by us under this bond shall be a valid discharge of our liability for payment there under and the contractors shall have no claim against us for making such payment.
4. We.....(indicate the name of the Bank) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said agreement and that it shall continue to be enforceable till all the dues of the Government under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged or till Engineer-in-Charge on behalf of the government certified that the terms and conditions of the said agreement have been fully and properly carried out by the said contractors and accordingly discharges this guarantee.
5. We .....(Indicate the name of the Bank) further agree with the Government that the Government shall have the fullest liberty without our consent and without effecting in any manner our obligations hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said contractors from time to time or to postpone for any time or from time to time any of the powers exercisable by the Government against the said contractors and to for-bear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation or extension being granted to the said





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contractors or for any for-bearance, act of omission on the part of the Government or any indulgence by the Government to the said contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision have effect of so relieving us.

6. This guarantee will not be discharged due to the change in the constitution of the Bank or the contractor(s).
7. We ..... (Indicate the name of the Bank) lastly undertake not to revoke this guarantee except with the previous consent of the Government in writing.
8. This guarantee shall be valid upto\_\_\_\_\_ Unless extended on demand by Government. Notwithstanding anything mentioned above, our liability against this guarantee is restricted to Rs.\_\_\_\_\_(Rupees\_\_\_\_\_only) and unless a claim in writing is lodged with within six months of the date of expiry or the extended date of expiry of this guarantee all our liabilities under this guarantee shall stand discharged.

Dated the \_\_\_\_\_ day of \_\_\_\_\_ for  
\_\_\_\_\_ (Indicate the name of Bank).



## **GENERAL CONDITIONS OF CONTRACT**

The names of concerned authorities as per GCC 2016 of CPWD should be read as below:

<b>Sr. No.</b>	<b>Name of Concerned authority as per GCC of CPWD</b>	<b>To be read as</b>
<b>1</b>	<b>2</b>	<b>3</b>
1	President of India	IIT Indore
2	Engineer-In-Charge	Project In charge
3	Director General	Director, IIT Indore
4	Department	Infrastructure Development Office, IIT Indore
5	Chief Engineer CPWD	Project In charge,
6	Director General (works)CPWD	Director, IIT Indore
7	Additional Director General	Dean of Infrastructure Development, IIT Indore
8	The Divisional Engineer	Assistant Engineer, IIT Indore

- The word “CPWD” will remain intact, wherever the rules, forms, formats, annexures, appendices, clauses, rate analysis formats, specifications etc. published by CPWD are referred.

### **DEFINITIONS**

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

The CONTRACT shall mean the documents forming the tender and acceptance thereof together with the documents referred to therein including conditions, specifications, designs, drawings and instructions issued from time to time by the Engineer-in-Charge and all these documents taken together shall be deemed to form one contract and shall be complementary to one another.

The WORKS OR WORK shall, unless there be something either in the subject or context repugnant to such construction, be construed and taken to mean the works, by virtue of the contract contracted, to be executed whether temporary or permanent, and whether original, altered, substituted or additional.

The SITE shall mean the land/or other places on, into or through which work is to be executed under the contract or any adjacent land, path or street through which work is to be executed under the contract or any adjacent land, path or street which may be allotted or used for the purpose of carrying out the contract.

The CONTRACTOR shall mean the individual, firm or company, whether incorporated or not, undertaking the works and shall include the legal personal representative of such individual





or the persons composing such firm or company, or the successors of such firm or company and the permitted assignees of such individual, firm or company.

**General Condition of Contract for CPWD works 2019 as amended up to CON/295 shall become parts & parcel of the tender documents**

The Board of Governors of IIT Indore shall mean its successors also. The Engineer In-charge shall mean the Project in charge IIT Indore or his authorized representative.

The Institute shall mean the Indian Institute of Technology Indore or his nominee as notified. The Accepting Authority shall mean the Director, IIT Indore on the behalf of Board of Governors IIT Indore.

The Expected Risks shall mean risks due to riots (other than those on account of contractor's employees), war (whether declared or not) invasion, act of foreign enemies, hostilities, civil war, rebellion revolution, insurrection, military or usurped power, damages from aircraft, acts of God, such as earthquake, lightening and unprecedented floods, and other causes over which the contractor has no control and accepted as such by the Accepting Authority.

The Market Rate shall mean the rate as decided by the Engineer-in-Charge on the basis of the cost of material and labor at the site where the work is to be executed plus 15% cover all the overheads and profits.

The Schedule(s) referred to in these conditions shall mean the relevant schedule(s) annexed to the tender document and the Standard Schedule of Rates of the Institute with the amendments there to issued up to the date of issue of notice inviting tenders.

The Tendered Amount shall mean the amount of the work as stipulated in the letter of award.

Where the context so requires, words imparting the singular only also include the plural and vice versa. Any reference to masculine gender shall, whenever required, include feminine gender and vice versa.

Headings to the General Conditions of Contract shall not be deemed to form part thereof or be taken into consideration in the interpretation or construction thereof or of the contract.

The contractor shall be furnished, free of cost one certified copy of the contract except standard specifications, Schedule of Rates and such other printed and published documents, together with all the drawings as may be forming part of the contract. None of these documents shall be used for any purpose other than that of this contract.

**WORKS TO BE CARRIED OUT**

The work to be carried out under the Contract shall, except as otherwise provided in these conditions, include all labor, materials, tools, plants, equipment and transport which may be required in preparation of and in the full and entire execution and completion of the works. The descriptions given in the Schedule of Quantities shall, unless otherwise stated, be held to include wastage on materials, carriage and cartage, carrying and return of empties, hoisting, setting, fitting and fixing in position and all other labor necessary in and for the execution and completion of the work as aforesaid in accordance with good practice and recognized principles.



### **SUFFICIENCY OF TENDER**

The contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the rates and prices quoted in the Schedule of Quantities, which rates and prices shall, except as otherwise provided, cover all his obligations under the Contract and all the matters and things necessary for the proper completion and maintenance of the works.

### **DISCREPANCIES AND ADJUSTMENT OF ERRORS**

The several documents forming the Contract are to be taken as mutually explanatory of one another, detailed drawings being followed in preference to small-scale drawings and figured dimensions in preference to scale and special conditions in preference to General Conditions.

In the case of discrepancy between the Schedule of Quantities, the Specifications and/ or the Drawings, the following order of preference shall be observed: -

- Description of Schedule of Quantities. Particular
- Specification and Special Condition, if any.
- Drawings
- CPWD Specifications
- Indian Standard Specifications of BIS.

If there are varying or conflicting provisions made in any one document forming part of the contract, the Accepting Authority shall be the deciding authority with regard to the intention of the document and his decision shall be final and binding on the contractor.

Any error in description, quantity or rate in the Schedule of Quantities or any omission there from shall not vitiate the contract or release the contractor from the execution of the whole or any part of the work comprised therein according to drawings and specifications or from any of his obligations under the contract.

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## **Special conditions of the contract**

The following special instructions/ conditions are applicable to tenderer.

### **1. The tenderer shall supply the following information along with the tender:**

- Names and addresses of the clients whose similar works have been executed by the tenderer. IIT Indore reserves right to verify such credentials.
- Copy of contractor's 'A' class electrical license (wherever applicable) issued by the electrical licensing authorities of Government of M.P. /Govt. of India.
- Any other information the tenderer feels necessary to make his offer complete, without changing or without having intent to modify / change any of the tender condition to be submitted in a separate sheet.
- Deviation/Any exclusion, deviation from specification shall be clearly spelt out and listed at one place in the offer only and tenderer shall substantiate the same with appropriate reasons. In absence of the same, it will be considered that tenderer has followed the specification fully in words and spirit.

### **2. Tools, tackles and consumables:**

- Testing equipments required for the work shall be in good condition (calibrated annually) and arranged by the contractor. The testing instruments shall be of sufficient capacity and quantity as per the site requirements. The instruments like insulation tester, earth tester, earthing rods, multi-meters, testing kits, thermometer etc. shall be required at site during installation, commissioning, testing activities.
- The contractor shall be fully responsible for arranging the supply of required tools & tackles, cable crimping tools, ladders etc. In addition to above, the personal protective equipments of proper rating (PPE) like helmets, safety belts, hand gloves, safety shoes, torch, ladder etc. for all working persons shall also be arranged.

The consumable items like jelly, cotton waste, dungry cloth, emery paper, CRC & CTC and material required for housekeeping including detergents, phenyl, soap etc. shall be provided by the contractor.

3. The contractor shall employ the required number of technical and non-technical manpower. During contract period, the contractor shall depute qualified, experienced and competent manpower as per the site set-up/staff requirement for executing the work. During execution of installation, commissioning, testing activities, in case some additional manpower is required, contractor shall provide the same free of cost. For entry in institute, contractor shall submit the details of the employees i.e. Address proof, I.D. proof, photo etc. for gate pass of all deputies.
4. The contractor shall not be entitled for any additional payment during the tenure of the



contract due to increase in cost of manpower or any.

5. The price offered by the contractor shall include the charges for any minor maintenance, the details of which may not be explicitly available in the tender specification but it is essential for this work.
6. **Housekeeping:** The contractor shall maintain the installations, commissioning, testing activities clean and tidy inside as well as around the installations and substation buildings. This shall also include sweeping, mopping, cleaning of cobwebs, removal of scrap generated during contract period, etc. in the substations building. All required materials for housekeeping like broom, cobweb broom, mop, bucket, soap, detergents, phenyl, etc. shall be arranged by the contractor. No rags and waste etc. shall be thrown near the building. This shall be deposited in the scrap yard and dustbins provided nearby, as per the department instructions. Also furniture and fixture therein shall be maintained.

It is the responsibility of the contractor to hand over the entire system to IITI on completion of the contract period in working condition.

7. The final handing over / taking over will be done after joint inspection by IITI and contractor on the completion of contract period. The liability towards damage/ replacement shall be limited to 05% (Five percent) of the order value.
8. **Inspection:** Inspection will be carried out by IITI as and when required. Inspection by statutory bodies/ authorities will be under the scope of contractor. Contractor shall intimate IITI authority the schedule of such statutory bodies/ authorities inspection.

## 9. Safety

- Specifications and standards: The installations, commissioning, testing activities shall be in conformity with relevant Indian Standard specification, National Electric codes, Indian Electricity Rules.
- The contractor, his agents, representatives, workmen etc. shall strictly observe the orders pertaining to fire/LV/HV/EHV (Electrical) precautions prevailing within the restricted areas/electrical substations etc.
- The contractor, his agents, representatives, workmen etc. shall strictly adhere to the fire/electric shock precautionary measures while working near the explosive areas/HV/LV/Electrical substation areas. During such times, the workmen should be headed by their site supervisor as a precautionary measure. The regular team of the contractor shall be very well aware of firefighting, Cardio-Pulmonary Resuscitation, first aid etc.
- While working at height, Personal Protective Equipments (PPE) like safety belts, helmet, ladder and scaffoldings etc. shall be used as per the recommended safety guidelines.

## 10. Accident or injury to workmen:

- IITI shall not be responsible for any injury or loss of any workers of the contractor that



may take place while on work. Any compensation or expenditure towards treatment for such injury or loss of life shall be the sole responsibility of the contractor. The contractor is solely responsible for any damage or injury or accident that may occur to any of his personnel working under this contract. He will not claim any compensation from IITI.

- In order to meet any type of emergency, a dedicated vehicle along with driver shall be made available by the contractor in IIT Indore.

#### **11. Theft of Parts:**

Contractor shall be fully responsible for theft, burglary, fire or any mischievous deeds by his workers/ staff and shall replace the items under such category. Any loss occurred due to negligence will be recovered from the contractor. Security/ Safety of all installations in substations will be the responsibility of contractor.

#### **12. Materials, Consumables & Tools etc.:**

For performance of contract, the Contractor will arrange all the materials/ consumables, tools & machines/ testing equipment's required for execution of said jobs, which will be included in quoted rates. No extra payment for the same will be made by the Institute.

13. During the period of installations, commissioning, testing activities, no extra payment what so ever towards replacement of parts or consumables etc. shall be entertained. It shall be included in rates quoted.
14. Rates quoted in the financial bid must be inclusive of all central, state and local taxes etc. including trade tax on works contract. Rate are also inclusive of payment to the Labor Department in accordance with the prevailing Labor law, including all statutory liability fixed by the Labor commissioner or any other law enforcement agency. Also, if new taxes are introduced, same also would be applicable.
15. All the statutory fees/ charges need to be paid for functional/ operational of the equipments shall be paid to government bodies by contractor. IITI will reimburse the same after the submission of original receipt to IITI.
16. Rates quoted in the financial bid must be include re-setting of relays by secondary injection of current and tighten the screws, nuts/bolts, HT/LT Connections, HT cable gantry, rising mains, bus gantry etc. of the electric substation.
17. Contractor shall be solely responsible for payment of wages/salaries and allowances to their personnel as per the rules or act applicable under government order. All central, state, local laws & bye laws applicable will be observed by the contractor and IIT Indore will be kept indemnified of such payable by the contractor.
18. Any unauthorized person (or visitor) shall not be allowed to come inside the campus without the approval of Engineer in charge and Security officer. Staff deployed at IIT Indore will get the temporary ID card and which shall be available with the concern at the time of duty. For the purpose of proper identification of the employees of the contractor deployed for the work,



contractor shall issue identity cards bearing their photographs/ identification etc. and such employees shall display their identity cards at the time of duty.

19. Engineer-in-charge, IIT Indore shall be at liberty to carry out surprise check on the persons as deployed by the contractor in order to ensure that persons deployed by him are doing their duties.
20. For performing the assigned work, the contractor shall deploy medically and physically fit persons (Preferably below the age of 50). The contractor shall ensure that the persons are punctual and disciplined and remain vigilant in performance of their duty. Persons so engaged by the contractor shall be from amongst properly trained electrician of high integrity and good conduct, and shall be conversant in the local language i.e. Hindi. In no circumstances, persons below 18 years of age should be employed.
21. The contractor shall further keep the IIT Indore indemnified against any loss to the IIT Indore property and assets. IIT Indore shall have further right to adjust and/or deduct any of the amounts as aforesaid from the payments due to the contractor under this contract.
22. The contractor shall ensure that the persons so deployed do not allow any property of the IIT Indore related to Equipment's to be taken out of the premises without a Gate Pass signed by the Engineer in-charge of the IIT Indore.
23. Saturdays / Sundays should be utilized primarily for the installations, commissioning, testing activities, where shutdown is required, in consultation with & approval of the engineer-in-charge of IIT Indore.
24. In case, any staff not found up to the mark and not able to work properly or behave improperly, he will have to be changed as per the instruction of the Engineer in charge, IIT Indore.
25. **SUSPENSION**: - IITI may by written notice of suspension to the contractor, suspend all payments to contractor hereunder if the later fails to perform any of its obligations under this contract, including the carrying out of the services provided that such notice of suspension (i) shall specify the nature of the failure and (ii) request the contractor to remedy such failure within the period not exceeding fifteen (15) days, after such notice of suspension.
26. **TERMINATION**: - Termination to the contractor may be given after the occurrence of any of the events specified below:
  - a) If the contractor fails to remedy a failure in the performance of their obligations.
  - b) If the contractor fails to comply with any final decision reached as a result of arbitration proceedings.
  - c) If the IITI, in its sole discretion and for any reason whatsoever, decides to terminate this





contract.

- d) If the contractor, in the judgement of the IITI has engaged in corrupt or fraudulent practices in executing the contract.
  - e) In case the contract is terminated, the balance amount of fee if any, paid earlier (advance) shall be paid back by the contractor to IITI within thirty days of termination letter, failing which the same shall be recovered by encashing the existing performance bank guarantee/security deposit submitted by contractor.
- 27.** Approval of the statutory bodies like CEA/ local bodies and shall be deemed to be included in the contract. The contractor shall notify IIT Indore in writing about such approvals to be taken and inform the compliance of the same. The fees paid to the CEA/ local bodies as per the challan will be reimbursed to the contractor by IIT Indore. The original challan and approvals shall be handed over to IIT Indore.
- 28.** The persons deployed by the contractor for the services mentioned above shall be the employees of the contractor for all intents and purposes and that the persons so deployed shall remain under the control and supervision of the contractor.
- 29.** The contractor shall at his own cost, if required, take necessary insurance cover up to the handing over in respect of the aforesaid services rendered to IIT Indore and shall comply with the statutory provisions of Contract Labor (Regulation & Abolition) Act, 1970; Employees State Insurance Act; Workman's Compensation Act, 1923; Payment of Wages Act, 1936; The Employees Provident Fund (and Miscellaneous Provisions) Act, 1952; Payment of Bonus Act, 1965; The Minimum Wages Act, 1948; Employer's Liability Act, 1938; and/or any other rules/ regulations and/ or statutes that may be applicable to them. The contractor shall indemnify the Institute against all claims which may be made upon the Institute whether under the aforesaid statutes or any other statute in force during the currency of this contract.
- 30.** Contractor shall deploy his persons in such a way that they get weekly rest. The working hours / leave, for which the work is taken from them, do not violate relevant provisions of Shops and Establishment Act. The contractor shall arrange to provide reliever equally qualified in case of absence/leave/off etc. The contractor shall in all dealings with the persons in his employment have due regards to all recognized festivals, days of rest and religious or other customs. In the event of the contractor committing a default or breach of any of the provisions of the Labor Laws including the provisions of Contract Labor (Regulation and Abolition) Act, 1970 as amended from time to time or in furnishing any information, or submitting or filling any statement under the provisions of the said regulations and rules which is materially incorrect, he shall without prejudice to any other liability pay to the Director, IIT Indore, a sum as may be claimed by IIT Indore.
- 31.** Contractor shall be deposit 5% of the contract value along with the acceptance of contract as performance bank guarantee (format for performance bank guarantee will be provided to the successful bidder) to IIT Indore and this will be refunded after the successful completion of the contract. The validity of the performance bank guarantee should be beyond 180 days



of warranty/defect liability period.

32. Contractor shall keep the IIT Indore indemnified against all claims whatsoever in respect of the employees deployed by the contractor, in case any employee of the contractor so deployed enters in dispute of any nature whatsoever, it will be the primary responsibility of the contractor to contest the same. In case IIT Indore is made party and is supposed to contest the case, the IIT Indore will be reimbursed for the actual expenses incurred towards Counsel fee and other expenses, which shall be paid in advance by the contractor to IIT Indore on demand. Further, the contractor shall ensure that no financial or any other liability comes on IIT Indore in this respect of any nature whatsoever and shall keep IIT Indore indemnified in this respect.
33. No accommodation & transportation facility will be provided by the IIT Indore.
34. **PAYMENT:** - Payment will be made as per **clause 1 of commercial conditions** after satisfactory completion of services and on presentation of bill. No advance payment will be made. Income tax and all other statutory tax deduction at source as per the rules in force will be deducted from the bill.  
**GST:** - The amount of GST, if any, charged by the contractor from the Institute on account of the services rendered by him, will be reimbursed on submission of the copy of challan with next month bill.
35. Institute reserves the right to curtail or enhance the scope of work either by deletion of certain items entirely or by reducing/ increasing the quantities of certain items as required and reviewed by the Institute from time to time and therefore, the final value of the work shall be worked out and paid to the extent of work actually carried out.
36. In the event of any question, dispute/ difference arising under the agreement or in connection herewith (except as to matters the decision of which is specially provided under the agreement) the same shall be referred to the sole arbitration by the Director, IIT Indore & his decision will be final and binding to the contractor.
37. The Arbitrator may give interim awards and/or directions, as may be required, Subject to the aforesaid provisions the Arbitrator & Conciliation Act, 1996 and the rules made hereunder and any modification thereof from time to time being in force shall be deemed to apply to the arbitration proceedings under this clause.
38. **JURISDICTION:** Disputes of any nature that may be arise in connection with the execution of this order shall be governed by the laws of India and subject to the jurisdiction of courts situated in Indore, India only.

Place:

Date:

Name:

Signature





## **BRIEF PARTICULARS OF THE WORK**

### **COMMERCIAL AND ADDITIONAL CONDITIONS**

#### **GENERAL:**

**This specification covers “DESIGN, SUPPLY, INSTALLATION, TESTING, COMMISSIONING & STATUTORY APPROVAL OF 1600 KVA, 11/.433 KV DRY TYPE TRANSFORMER, L.T TTA PANEL & L.T./ H.T. CABLE AT IIT INDORE.”**

**Location:** The work is to be executed in the premises of IIT, Indore.

These conditions are intended to amplify the General Conditions of Contract, and shall be read in conjunction with the same. For any discrepancy between the General Conditions and these Special Conditions, the more stringent shall apply.

The Agency shall submit the detailed drawings in duplicate supplied with all components of work (civil, Architectural, structural, electrical & mechanical) within 05 days after award of work. The department will scrutinize the drawings and will be returned to the agency suggesting any alteration, deviation and modifications etc. The agency should submit 3 copies of the same to respective offices for final approval and distribution to various office concerned.

These additional specifications are to be read in conjunction with the specifications given in the tender. In case any item/ items or part thereof are not covered under these specifications, the same shall be carried out as per relevant part of the CPWD General Specification for Electrical Works Part-I Internal -2016, Part –II External -2005 amended up to dates, relevant electricity act BIS/IEC and as per direction of Engineer –in - Charge. These additional specifications are to be read in conjunction with above and in case of variations- specifications given in this additional conditions shall apply. However, nothing extra shall be paid on account of these additional specifications and conditions, as the same are to be read along with schedule of quantities for the work. In case of discrepancy among the specifications/conditions as mentioned above the precedence given in general condition of contract shall be followed.

The tenderer should in his own interest visit the site and get familiarize with the site conditions before tendering.

No T&P shall be issued by the Department and nothing extra shall be paid on account of this.

### **COMMERCIAL CONDITIONS:**

**Type of Contract:** The work to be awarded by this tender shall be treated as indivisible works contact.

### **Submission and opening of Tenders:**

- (i) The tender shall be submitted through e-tendering online.
- (ii) The tenderers are advised not to deviate from the technical specifications / items, commercial terms and conditions of NIT like terms of payment, guarantee, arbitration clause, escalation.

**The Eligibility documents will be uploaded electronically which shall be comprised of the following:**

- i) The EMD as per described in NIT.
- ii) Documents meeting eligibility criterion given in the "INFORMATION AND INSTRUCTIONS FOR CONTRACTORS FOR e-TENDERING FORMING PART OF NIT AND TO BE POSTED ON WEBSITE".

The price bid will be opened through e-tendering only, at the defined time and date of only those firms who are eligible.

Firms should clearly note that price bids with any condition including that of conditional rebates shall be rejected forthwith.

The department reserves the right to reject any or all the price bids and call for fresh prices /tenders as the case may be without assigning any reason.

### **1. Payment**

Following payment terms shall be applicable.

- a) No advance payment shall be made.
- b) Following percentage of contract rates shall be payable against the stage of work shown herein:
- c) Payment related to design, supply, installation testing & commissioning.

Sr. No.	Stage	Amount in %
1.	On supply of material at site in good condition on pro-rata basis along with test certificates, guarantee of manufacturer against defect, performance and availability of spare parts for required number of years as per tender document, insurance till handover to the department.	60%
2.	On commissioning and completion of successful running in period	30%
3.	Handing over of the total installations to the Department & submission of required statutory approvals	10%

Deduction of security deposit from above shall be governed by standard/ relevant clause of the CPWD 7/8.

For other items, the terms of payment will be decided by the Engineer- In-Charge and shall be binding on the contractor.

## **2. Termination for Insolvency**

The Department may at any time terminate the Contract by giving written notice to the Contractor, if the Contractor becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the Contractor, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the Department.

## **3. Termination on account of willful misrepresentation**

The contract is liable to be terminated if at any stage it is found that the contract was obtained by willful miss-representation in terms of documents or undertakings by the contractor.

## **4. Settlement of Disputes**

If any dispute or difference of any kind whatsoever shall arise between the Department and the Contractor in connection with or arising out of the contract, the parties shall make every effort to resolve amicably such dispute or difference by mutual consultation.

- a. If, after thirty (30) days the parties have failed to resolve their dispute or difference by such mutual consultation, then either the Department or the Contractor may give notice to the other party of its intention to commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given.
- b. Any dispute or difference in respect of which a notice of intention to commence arbitration has been given in accordance with this clause shall be finally settled by arbitration. Arbitration may be commenced prior to or after delivery of the Goods under the contract.
- c. Arbitration proceedings shall be conducted in accordance with the rules of procedure specified in the GCC.
- d. Notwithstanding any reference to arbitration herein,
  - i. the parties shall continue to perform their respective obligations under the contract unless they otherwise agree; and
  - ii. the Department shall pay the Contractor any monies due the Contractor for the part of work which is not under dispute.



## **5. Limitation of liability**

Except in cases of criminal negligence or willful misconduct, and in the case of infringement pursuant to Clause 6,

- i. The Contractor shall not be liable to the Department, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the Contractor to pay liquidated damages to the Department and
- ii. The aggregate liability of the Contractor to the Department, whether under the contract, in tort or otherwise, shall not exceed the total contract price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment.

## **6. Governing language**

The contract shall be written in English. All correspondence and other documents pertaining to the contract which are exchanged by the parties shall be written in the same language.

## **7. Applicable Law** The applicable laws shall be that of Union of India

### **Notices**

Any notices given by one party to the other pursuant to this Contract shall be sent to other party in writing or by E-mail, tele-fax, or facsimile and confirmed in writing to the other party's address as below:

#### **The Project in Charge**

**IIT Indore, Infrastructure Development Office,  
Indore.**

A notice shall be effective when delivered or on the notice's effective date, whichever is later.

## **8. Rates**

The rate quoted by bidder, shall be firm and inclusive of all taxes (including GST etc.), duties and levies and all charges for packing, forwarding insurance, freight and delivery, installation, testing, commissioning etc. at site including temporary constructional storage, risks, overhead charges, general liabilities/obligation etc. A certificate of TDS shall be issued by the department to the contractor. The tendered rates must be inclusive of all such taxes.

#### **Taxes and Duties**

- a. A local Contractor shall be entirely responsible for all taxes, duties, license fees, etc, incurred until delivery of the contracted Goods to the Department.
- b. Income Tax, GST, labor cess & other statutory deduction etc. shall be made at source as per the prevalent laws. The deductions of security deposit, income- Tax, etc. shall be done



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**Indian Institute of Technology Indore**

**Infrastructure  
Development  
Office**

after calculation of the above due payments as per clauses and net payment shall be reduced accordingly.

- c. Contractor will be entirely responsible for all taxes, stamp duties, license fees, etc and other such levies imposed outside India, custom duties, as well as for taxes and levies to be charged in connection with supplies made from India and services performed in India, and the Department shall pay all the customs duties and import taxes in consequence of the importation of the goods.
- d. Contractors will be entirely responsible for all taxes, duties, license fees, octroi, road permits, etc in connection with delivery of goods at site including incidental services and commissioning. Price bid submitted by the Contractor shall include all taxes in the contract price. No 'C' / 'D' form shall be issued by the Department
- e. Income / Corporate Taxes in India:
  - i. The Contractor shall be liable to pay all corporate taxes and income tax that shall be levied according to the laws and regulations applicable from time to time in India and the price bid by the Contractor shall include all such taxes in the contract price.
  - ii. Wherever the laws and regulations require deduction of such taxes at the source of payment, the Department shall effect such deductions from the payment due to the Contractor. The remittance of amounts so deducted and issuance of certificate for such deductions shall be made by the Department as per the laws and regulations in force. Nothing in the Contract, shall relieve the Contractor from his responsibility to pay any tax that may be levied in India on income and profits made by the Contractor in respect of this contract.
  - iii. The Contractor 's staff, personnel and labor will be liable to pay personal income taxes in India in respect of such of their salaries and wages as are chargeable under the laws and regulations for the time being in force, and the Contractor shall perform such duties in regard to such deductions thereof as may be imposed on him by such laws and regulations.

**iv. CONTRACTOR INTEGRITY:**

The Contractor is responsible for and obliged to conduct all contracted activities in accordance with the contract using state-of -the-art methods and economic principles and exercising all means available to achieve the performance specified in the Contract.

**9. SECURITY DEPOSIT:**

Security Deposit shall be deducted from each running bill and the final bill to the extent of 2.5% of the gross amount payable subject to a maximum amount of 2.5% of the tendered value as per clause 17 of GCC. This is against defect liability period/warranty period of one year.



**10. PERFORMANCE GUARANTEE:**

The successful tenderer shall submit an irrevocable performance guarantee of 5% of the tendered amount in addition to other deposits mentioned elsewhere in the contract for his proper performance of the contract agreement within 10 days of issued of letter of acceptance of tender. This guarantee shall be in the form of Demand draft/Pay order or irrevocable bank guarantee bond of any scheduled bank or the State bank of India in the specified format or in the form of Government security, fixed deposit receipt pledged in favor of Registrar/Executive Engineer or as specified in the letter of acceptance of tender. The performance guarantee shall be initially valid up to stipulated date of defect liability period/warranty period plus 180 days beyond. This bank guarantee shall be kept valid till the recording of completion certificate for the work by the competent authority. This guarantee shall be submitting directly through the bank.

**11. CONTRACTOR'S OBLIGATIONS:**

Unless otherwise mentioned in the tender documents, the following works shall be done by the contractor and therefore, their cost shall be deemed to be included in their tendered cost-whether specifically indicated in the schedule of work or not: -

- i) Complete wiring.
- ii) Making good all damages caused to the structure during installation and restoring the same to their original finish.
- iii) Minor building work necessary for installation of equipments, making opening in the wall/floors/slabs/tables or modifications in the existing openings wherever provided and restoring the same to their original condition/ finish and necessary grouting etc. as required. Opening in the slab/retaining walls/brick wall etc. shall be made by means of core cutting machines only.
- iv) Sealing of all floor slab/wall openings provided by the Department or made by the contractor for laying cables from fire safety points of view.
- v) Suspenders, brackets and floor/wall supports for suspending/supporting cable tray, cables etc.
- vi) Removal & disposal of the all the malba/ debris occurs during the execution of work from the site.
- vii) The Contractor is obliged to work closely with the Departments staff, act within its own authority and abide by directives issued by the Department and implementation activities.
- viii) The Contractor will abide by the job safety measures prevalent in India and will free the Department from all demands or responsibilities arising from accidents or loss of life the cause of which is the Contractor's negligence. The Contractor will pay all indemnities arising from such incidents and will not hold the Department responsible or obligated.
- ix) The Contractor is responsible for managing the activities of its personnel or sub-contracted personnel and will hold itself responsible for any misdemeanors. The Contractor will treat as confidential all data and information about the Department, obtained in the execution of his responsibilities, in strict confidence and will not reveal such information to any other party without the prior written approval of the Department.

**12. PATENT RIGHTS (Clause 6):**

In the event of any claim asserted by a third party of infringement of copyright, patent, trademark or industrial design rights arising from the use of the Goods or any part thereof in the





Department's country, the Contractor shall act expeditiously to extinguish such claim. If the Contractor fails to comply and the Department is required to pay compensation to a third party resulting from such infringement, the Contractor shall be responsible for the compensation including all expenses, court costs and lawyer fees. The Department will give notice to the Contractor of such claim, if it is made, without delay.

### **13. Safety Codes and Labor Regulations**

- i) In respect of all labor employed directly or indirectly on the work for the performance of contractor's part of work, the contractor at his own expense, will arrange for the safety provisions as per the statutory provision, B.I.S. recommendations, factory act, workman's compensation act, CPWD code and instructions issued from time to time. Failure to provide such safety requirements would make the tenderer liable for penalty for Rs. 2000/- for each violation. In addition, the Engineer-in-charge, shall be at liberty to make arrangements and provide facilities as aforesaid and recover the cost from the contractor.
- ii) The contractor shall provide necessary barriers, signals and other safety measures while executing the installation or wherever necessary so as to avoid accident. He shall also indemnify Department against claims for compensation arising out of negligence in this respect. Contractor shall be liable, in accordance with the Indian law and Regulations for any accident occurring due to any cause. The department shall not be responsible for any accident occurred or damage incurred or claims arising their form during the execution of work. The contractor shall also provide all insurance including third party insurance as may be necessary to cover the risk. No extra payment would be made to the contractor due to the above provisions thereof.

### **14. Power Supply**

- i. Power supply shall be provided by the department if available to contractor at one point for installation at site suitable for 5 KW load. Termination switchgears with energy meter however, shall be provided by the contractor. Further extension if required shall be done by the contractor. For final system commissioning & handing over, power supply of 3 Phase, 415 volts, or 1Phase, 230 V, 50 Hz as applicable shall be made available in the control room(s) of the respective systems. The recovery of electricity so consumed shall be made from their bill as per tariff in force.
- ii. The contractor shall not use the power supply for any other purpose than that for which it is intended for. No major fabrication work shall be done at site. Power supply shall be used only for welding/ cutting works. Power supply shall be disconnected in case of such defaults and the contractor shall then have to arrange required power supply at his cost.

### **15. Water Supply**

The water supply for testing and commissioning of the complete installation shall be made available by the Department as per applicable tariff/rate to the contractor.

### **16. Machinery for Erection**

All tools and tackles required for unloading/ handling of equipments and materials at site, their assembly, erection, testing and commissioning shall be the responsibility of the contractor.

### **17. Compliance with Regulations and Indian Standards:**

- i. All works shall be carried out in accordance with relevant regulation, both statutory and those specified by the Indian Standards related to the works covered by this specification. In particular, the equipment and installation will comply with the following:



- a. Factories Act.
- b. Indian Electricity Rules.
- c. B.I.S. & other standards as applicable.
- d. Workmen's compensation Act.
- e. Statutory norms prescribed by local bodies like CEA, Power Supply Co., etc.

ii. Nothing in this specification shall be construed to relieve the successful tenderer of his responsibility for the design, manufacture and installation of the equipment with all accessories in accordance with currently applicable statutory regulations and safety codes.

iii. Successful tenderer shall arrange for compliance with statutory provisions of safety regulations and departmental requirements of safety codes in respect of labor employed on the work by the tenderer. Failure to provide such safety requirement would make the tenderer liable for penalty of Rs. 500/- for each default. In addition, the department will be at liberty to make arrangement for the safety requirements at the cost of tenderer and recover the cost thereof from him.

#### **18. Co-ordination with other Agencies**

The contractor during the execution of the works shall co-ordinate with other agencies associated work with the project and shall work in harmony with them without causing any hindrance or obstruction on the progress of work in any way.

#### **19. Mobilization Advance:**

No mobilization advance shall be paid for this work.

#### **20. Insurance and Storage:**

All consignments are to be duly insured up to the destination from manufacturer's place/warehouse at the cost of the contractor. The insurance covers shall be valid till the equipment is handed over duly installed, tested and commissioned.

#### **21. VARIATION IN QUANTITY:**

Quantities shown against each item of work or supply are tentative which may vary on either side (plus or minus). The contractor should ensure from the Engineer-in-charge the actual quantity required/ to be used/ to be supplied before bringing the materials at site. In case the actual quantity of material required at the site is less than the stipulated quantity, the contractor cannot claim to supply entire quantity stipulated in the schedule of quantities of work as well as cannot demand for payment thereof. The contractor shall therefore, be very careful about the quantity of materials to be supplied /brought at site. The decision of the Engineer-in-charge in this regard shall be final and binding on the part of the contractor.

#### **22. Quality of Materials and Workmanship**

- i) The components of the installation shall be such design so as to satisfactorily function under all conditions of operation.
- ii) The entire work of manufacture/fabrication, assembly and installation shall conform to sound engineering practice.
- iii) All equipments and material to be used in work shall be manufactured in factories of good repute having excellent track record of quality manufacturing, performance and proper after





sales service.

- iv) All equipments and materials to be used in the work shall be brand new having its date of manufacturing not more than 6 months old from the date of delivery at site with manufacturer's certificates, warrantee cards, technical catalogues, instructions, manuals and wiring diagrams, drawings etc.
- v) In order to ensure genuineness of equipments/materials, copy of invoice of each equipments/materials, custom clearance paper in case of imported materials duly authenticated by bidder shall be invariably produce to engineer-in-charge.

### **23.Care of the Building**

Care shall be taken by the contractor during execution of the work to avoid damage to the building. Care shall also be taken by the contractor to avoid the damage to any of these existing service/service lines, any part of the building etc. If any damage is caused to any of the existing services/service lines, or any part of the building the same shall be repaired/rectified and made functional or restored so its original finish by the contractor immediately at his own expenses failing which the same shall be repaired/ rectified and made functional by department at the risk and cost of the contractor. The decision of the Engineer-in-charge in this regard shall be final & binding. He shall also remove all unwanted and waste materials arising out of the installation from the site of work from time to time.

### **24.After Sales Services**

The contractor shall ensure adequate and prompt after sales service free of cost during guarantee period, and against payment after guarantee period is over, in the form of maintenance, spares and personal as and when required during normal life span of the equipments and shall minimize the breakdown period. In case of equipment supplied by other manufacturers, the firm shall submit the guarantee from manufacturer for the same before the entire installation is taken over.

### **25.Liaisoning and Co-operation with other agencies:**

The successful tenderer shall co-ordinate with other contractors and agencies engaged in the operation and maintenance of the building so as to make the execution of this works contract smooth. If any unreasonable hindrance is caused to other agencies / damage is caused to the existing installation resulting in loss of work or disruption in services during the course of work, such expenditure incurred upon restoration and loss of work shall be recovered from the successful tenderer. Water proofing of pits shall not be damaged under any circumstances.

26.All the debris due to the works shall be cleared every now and then and site shall be kept clean by the contractor at all times.

27.The electrical work shall be carried out according to the drawing & schedule supplied subject to change if any made by the Engineer –in –charge.

28.Termination of wires/cables shall be crimped properly with copper/aluminium lugs connection. All the stranded wires must be terminated to the boards/ MCB's etc. through suitable lugs by crimping for which no extra payment will be made.

29.Proper sleeving should be provided to the bare earth conductor for which no extra

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payment will be made.

30. All chases, holes, recess etc. for conduits and other allied work shall be done to the original finish as per requirement without any additional cost.
31. Bad - workman ship is liable to be rejected in total.
32. The contractor or his authorized representative will have to sign the site order book and comply with the remarks therein every now and then.
33. Contractor has to follow the local security/safety rules and regulations and such instructions on restricted hours of work as may be imposed on him by the department / local authorities, while working in security/restricted zones, and no claim on account of the loss of labor/ idle labor will be entertained.
34. All repairs and patch works shall be neatly carried out to match with the original finish by the contractor to the entire satisfaction of the Engineer -in-Charge.
35. The agency has to obtained approval of the department/Engineer-in-Charge to the drawings & more subsequent changes, additions, deviations etc. as required without extra charge.
36. No quantity deviation is permitted without written approval of the competent authority. Permissible deviation shall be sanctioned by the competent authority as per the agreement. Deviation beyond permissible limits shall be sanctioned by the competent authority as per the prevailing Local Market Rates only and the decision of the department is final and binding on the contractor.
37. The quantities given in schedule of work for all the items are tentative. The work shall be carried out as per actual requirement and as approved by the Engineer -in – Charge.
38. All statutory / Mandatory recoveries enforce and as notified by competent authority from time to time shall be recovered from the bills of the agency.
39. Contractor should submit completion plan and certificate along with final bill, failing which 2.5% of value of work, subject to a ceiling of Rs. 15,000/- will be deducted from the bills or the final bill shall not be paid. Decision of Engineer-in-charge shall be final and binding in this regard. However, the completion plan is not necessary for maintenance contractors and this recovery condition shall not be applicable.
40. The Contractor has to make his own arrangement for the safety of his workman. Department shall not be responsible in case of any accident taking place during the work.
41. All the staff engaged by the contractor shall be purely his liability and department in no way shall be responsible for any compensation for any of their acts/ accidents. In case any accident occurs during the execution of the work leading to injuries, damages to human being equipment and or loss of life, the contractor shall be fully responsible for setting all claims and indemnity the department against any claims arising out of such accident.



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42. **2.5% of Bill Amount** will be deducted as Security Deposit for Warrantee period of One year and which will be released after successful completion of warrantee period.

**LOCATION / SITE DETAILS**

- |   |                                  |
|---|----------------------------------|
| 1 Address of site                             | IIT Indore                       |
| 2 Location                                    | Simrol, Indore (Madhya Pradesh.) |
| 3 Ambient temperature                         | 42 °C max., 10 °C min,           |
| 4. Latitude - 22.52°N,<br>Longitude - 75.92°E |                                  |

**CONTRACTORS ARE ADVISED TO VISIT THE SITE BEFORE QUOTING THE RATES. OTHERWISE IT WILL BE ASSUMED THAT THE PARTY HAS ALREADY VISITED THE SITE BEFORE QUOTING THE TENDER. AN UNDERTAKING SHOULD BE FURNISHED IN ACCORDANCE WITH ANNEXURE ENCLOSED.**

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## **PART -II**

### **SCHEDULE OF QUANTITY, TECHNICAL SPECIFICATIONS AND APPROVED MAKES**

Sr. No.	DESCRIPTION OF ITEM	QTY.	UNIT
	<b>SUB HEAD - TRANSFORMER</b>		
1	Design, Manufacture, Supply, installation, testing, commissioning & statutory approval of 11/.433 KV, 1600 KVA Dry Type Transformer.	01	No.
2.	Design, Manufacture, supply, installation, testing & commissioning of LT TTA Panel as described below:	01	No.
	Incomer – 3200 Amps. ACB	02	No.
	Bus-Coupler – 3200 Amps. ACB	01	No.
	Outgoing – 1250 Amps. ACB	01	No.
	Outgoing – 800 Amps. ACB	02	No.
	Outgoing – 630 Amps. ACB	02	No.
3.	Design, Supply, Installation, Testing & Commissioning of 3200 Amps. 1000 volts, 50 Hz. Four pole (65 KA for 1 sec.) Sandwich construction bus duct, aluminum bus bars insulated with 100% neutral & 100% earth bus, expansion joints, Flange End, Adaptor Box, Copper Flexible with support hangers including 90-degree bends etc. as per specifications covered under of the Tender.	20	meter
4.	Supply, laying, testing, end termination of 1.1 KV, 3.5 C X 300 sq. mm. L.T. Cable	1000	meter
5.	Supply, laying, end termination of 11 KV, 3 C X 300 sq. mm. H.T. Cable	100	meter
	<b>Location – ESS-02 of Indian Institute of Technology, INDORE..</b>		

**NOTE:** Either item no. 03 Bus duct or item no. 04 L.T. cable to be executed, depending upon the site conditions.



**TECHNICAL SPECIFICATION**

**1. TRANSFORMER - DRY TYPE**

**1. Scope**

Design, manufacture, testing, & supplying of Cast resin type (Indoor) 11000/433 volts step down, transformer as per specification. Class F insulation with air natural cooling (AN).

**2. Standard**

Transformer shall Conform to Indian Standard IS:2026-1977 (Part I to IV), IS : 11171 - 1985 / IEC 60076-11.

**3. Rating**

Transformer shall be suitable for continuous operation and maximum rating shall be as given in the schedule of quantities.

**4. Connections and vector group**

Delta on High Voltage side and star on low voltage side with neutral terminal brought out for solid earthing corresponding to the Vector Symbol Dyn - 11.

**5. System of supply**

3-phase, 50 Cycles, 11 KV earthed system.

**6. Temperature rise**

Continuously rated for full load, temperature rise not exceeding 70°C corresponding to Class "F" with ambient of 50 deg. C.

**7. Type**

Indoor type.

**8. Terminals**

The cable box with glands on H T side shall be suitable for 3 core XLPE cable of specified capacity. Flanges with bus duct on LT side shall be suitable for aluminum conductor armored cables / LT bus duct of size mentioned in BOQ. All cable glands shall be earthed.

**9. Cooling**

A N Cooled

**10. Insulation**

Epoxy Cast resin type and class 'F'.



#### **11. Earthing**

Two earthing terminals shall be provided at the bottom on both sides.

#### **12. Fittings and accessories**

The following fittings and accessories shall be provided.

- i. Transformer shall be provided with 4 Nos bi-directional rollers fitted on cross channels to facilitate the movement of the transformer in both direction.
- ii. Lifting lugs
- iii. Diagram and rating plate shall be provided indicating the details of transformer, connection diagram, Vector group, tap changing diagram etc.
- iv. Thermistors for Alarm and Trip.
- v. HV Cable terminating facility for XLPE cable.
- vi. LV Cable terminating facility /bus duct termination flange.
- vii. Winding Temperature Relay unit.
- viii. Winding Temperature indicator with provision for 4-20mA signal for SCADA
- ix. Disconnecting chamber shall be provided for cable termination.
- x. Neutral Bushing.

#### **13. Iron core**

The core shall consist of grain oriented laminations which shall be insulated on both sides for low losses. This will be made from laminations of insulated silicon steel, and will be protected against corrosion with a coat of varnish. To reduce the power consumption at no load losses, the magnetic core to be stacked using overlapping interlocking technology and noise damping device to be considered for noise reduction in magnetic cores.

#### **14. Winding**

High Voltage and Low Voltage windings shall be made of copper and insulation shall be of class F. High voltage and low voltage windings, shall be completely impregnated and cast under vacuum into moulds. This process shall form the insulation system of uniform glass fiber epoxy laminate of highest electrical and mechanical quality, into which windings shall be voidlessly embedded.

Both the high voltage and low voltage windings of each phase shall be separately cast as one rigid tubular coil.

#### **15. Enclosure**

The transformer shall be housed in 2 mm thick CRCA sheet steel enclosure mounted on bi-directional rollers. Enclosure shall be provided with metal screen at top and bottom for ventilation. Degree of protection of enclosure shall be IP-32. Transformer enclosure/doors shall be openable type and shall be provided with limit switches and wired accordingly to trip the HT Breaker if the same is opened when the transformer is ON.

#### **16. Drawings and leaflets**



Three copies of manual giving complete instructions for the installation, operation and maintenance with circuit diagram & foundation details shall be provided with the transformer.

### **17. Tests**

- All routine tests as per IS2026-1977 / IS:11171-1985/ IEC – 60076-11 which is applicable shall be carried out at the factory and copies of test reports shall be submitted for approval and records.
- Heat Run Test shall be carried out at an NABL approved test lab as per IS:2026-1977 at no extra cost.
- Impulse test shall be carried out at an NABL test lab as per IS:2026-1977
- Measurement of winding resistance.
- Ratio polarity and phase relationship.
- Impedance voltage.
- Load Losses.
- No-Load losses and no-load current.
- Insulation resistance.
- Induced over voltage with-stand.
- Temperature rise.

### **18. Fire behavior classification**

These transformers will be of class F1 as defined in IEC 60076-11. F1 class will be indicated on the rating plate.

The manufacturer must produce a test report from an official laboratory on a transformer of the same design as those produced and on the same transformer which have initially passed the here above Climatic and Environmental tests.

This test must have been performed in accordance with IEC 60076-11. Class

F as per IEC – 60076-11/16.

**a. TECHNICAL DATASHEET**

Sl. No.	Particulars	1600 KVA
1	Specification	IS 2026, Part I - 1977 Part II - 1977 Part III - 1981 Part IV -1977 IS 11171 - 1985
2.	Type	Three phase, core type, cast resin dry type
3.	Duty	Indoor, installed in room
4.	Degree of Protection of Enclosure	IP32 for indoor and
5.	Voltage HV/LV	11 / 0.433 kV
6.	Frequency	50 Hz
7.	No. of phase	3
8.	Continuous rating	1000 kVA
9.	Conductor	Copper
10.	Insulation class	Class F
11.	Cooling	AN
12.	Winding connection	Delta / Star
13.	Vector group	Dyn 11
14.	Neutral grounding	Effectively earthed
15.	System earthing	HV Resistance Earthed
		LV Effectively earthed





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16.	Percentage impedance	6.25 %
17.	Termination	17.
	HV	
	LV	
18.	Temperature rise over 50°C ambient temp c) In winding (measured by Resistance method) d) Core and other adjacent parts of winding	70°C 70°C
19.	Bushing mounted CT's CT in LV Neutral bushing for standby E/F protection	Ratio : 250/5 A Class : 10P15
20.	Off circuit tap changer g) Range h) Total tap positions i) Taps above nominal voltage j) Taps below nominal voltage k) Voltage per step variation l) Tap change controls	Bolted Link type ±5% 5 2 2 2.5 % Manual
21.	Impulse test withstand voltage	As per IS 2026, Part III – 1981
22.	One-minute dry and wet power frequency withstand voltage	- do -
23.	Short circuit level on Primary side	450 MVA
24.	Time duration to withstand 3 phase short circuit at secondary terminals, without any injury.	2 Secs.
25.	Flux Density at rated voltage	1.5 T (Max)
26.	Magnetizing current	1 % of FLC (Max)
27.	Current density	2.5 A / sq mm
28.	Losses at rated voltage & freq at 75 deg C	
29.	Iron Loss (No Load Loss)	2.5 kW (Max)



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30.	Copper Loss (Load Loss)	12 kW (Max)
31.	Auxiliary supply voltage	240 V AC
32.	Parallel operation	Suitable for parallel operation with transformers of similar ratings
33.	Overload capacity	As per IS 6600 –

		1972
34	Air clearances	As per CBIP manual

**LIST OF APPROVED MAKES  
FOR DRY TYPE TRANSFORMER**

- M/s Schneider Electric
- M/s Kirloskar Electric
- M/s ABB
- M/s Crompton Greaves Ltd.

Note:

1. Unless otherwise specified, the brand/make of the material as specified in the item nomenclature or in the particular specifications or in the list of approved materials attached in the tender shall be used in the work.
2. The Contractor shall obtain prior approval from the Engineer-in-charge before placing order for any specific material/ Brand/ Make.
3. Whenever the specified brand of material is not available than, the Engineer-in-charge may approve any material equivalent to that specified subject to proof being offered by the Contractor for its equivalence and its non-availability to his satisfaction.



## 2. TYPE TESTED L.T. PANEL & SWICHGEARS

### 1. Scope

The scope of supply covers design, manufacture, testing and supply of LV PCC Panels up-to 1000 V. Panels must conform to Totally Type Tested (TTA) as per IEC 61439-1/2. Type Test Certificates for short circuit withstand of 50kA 1 sec along with ACB mounted in the Switchboards is mandatory for submission.

Switchboard shall be suitable for Seismic Zone III as per IEC standards. The same shall be tested at ERDA / CPRI / International lab for all tests.

Switch Board shall pass internal Arc containment test as per IEC 61641.

These shall be branded and/or assembled/fabricated from a factory of repute. All switchgears shall be fully rated at an ambient of 50° C – for this, Vendors shall provide de-rating Charts for their Switchgears

Degree of protection as per IEC 62262 against mechanical impact shall be IK 09.

### 2. Type of Panel

The switch board panel shall comprise of any one of the following types of switchgears or combination thereof as specified.

Air Circuit breakers draw out MCCBs of suitable Ics ratings. MCCBs shall invariably be Current Limiting type. Features like Double / Single Break, Positive Isolation functions shall be Integral feature of the device.

***All Panels shall be extensible on both sides by the addition of side section after removal of end covers***

The Panel shall be indoor type having incoming sectionalization and outgoing switchgears as specified. The design shall be cubical type. The degree of enclosure protection shall be IP 42 as per IS: 61947 (Part-I).

Panels/Boards shall be suitable for operation on 3 Phase/single phase, 415/240 volts, 50 cycles, 4 wire system with neutral grounded at transformer. All Distribution panels shall be CPRI / ERDA / ANY OTHER International ACCEDEATED labs tested design and manufactured by an approved manufacturer. CPRI certificate shall be made available. Distribution panels shall comply with the latest International Standards and Electricity Rules and Regulations and shall be as per Low Voltage switchgear & control gear IEC 61947. Switchboard shall be able to with stand Relative humidity 95% at 55°C.



### **3. Construction Features**

Distribution panels shall be 2 mm thick CRCA sheet steel cabinet for indoor installation, dead front, floor mounting type and shall be form 3b construction. For operator safety IP4 X (touch proof) protection to be available even after opening the feeder compartment door. The compartmentalization to be achieved by using metal separators, use of PVC sheet / Hylem sheets shall not be allowed. The Distribution panels shall be totally enclosed, completely dust and vermin proof and shall be with hinged doors and folded covers, Neoprene gasket, padlocking arrangement and bolted back. All removable/ hinged doors and covers shall be grounded by flexible standard connectors. Distribution panel shall be suitable for the climatic conditions as specified in Special Conditions. Steel sheets used in the construction of Distribution panels shall be 2 mm thick and shall be folded and braced as necessary to provide a rigid support for all components. Joints of any kind in sheet metal shall be seam welded bolted type & modules in nature all welding, slag shall be rounded off and welding pits wiped smooth with plumber metal. The LV switchboards shall be as per the standards IEC 61439-1/2. The switchboards and the associated equipment including switchgear, control gear, Busbar supports, Busbar orientation, Busbar links etc. shall be identical in construction to the assembly which has undergone the type test. The drawings of the type-tested assemblies shall be made available for inspection. The designs of the switchboards should be with switchgear manufacturer, and all the general arrangement (GA) drawings must be available in the factory beforehand & for voltage up to and including 1000 V AC. Operational voltage 415 VAC.

All ACB panels shall be single tier only. The design of the Distribution Board shall be such that each fuse switch/switch fuse units/MCCB shall be fully compartmentalized. Operation height of switchgear shall be minimum 450mm and maximum 1800mm.

All panels and covers shall be properly fitted and square with the frame, and holes in the panel correctly positioned. Fixing screws shall enter into holes tapped into an adequate thickness of metal or provided with wing nuts. Self-threading screws shall not be used in the construction of Distribution panels. A base channel of 75 mm x 40 mm x 5 mm thick shall be provided at the bottom for floor mounted panels. Minimum operating clearance of 275 mm shall be provided between the floor of Distribution panels and the lowest feeder compartment.

Distribution panels shall be of adequate size with a provision of spare switchgear as indicated on the Single Line Diagram. Knockout holes of appropriate size and number shall be provided in the Distribution panels in conformity with the location of cable/conduit connections. Removable sheet steel plates shall be provided at the top to make holes for additional cable entry at site if required.

Every cabinet shall be provided with Trifoliate or engraved metal name plates. All panels shall be provided with circuit diagram engraved on PVC sheet. Clearances between phases should be in line with IEC (min 14mm).



#### **4. Type test reports**

Vendor shall submit all following type test report which are less than 5 years old and as per latest IEC 61439-1/2 Standards:

- a. Short Circuit withstand test for main Busbar and neutral Busbar
- b. Temperature rise test
- c. IP test
- d. Dielectric Properties
- e. Continuity of Protective Circuit
- f. Clearance & Creepage Distances
- g. Impulse withstand voltage stage

#### **5. Bus Bar Connections**

Bus bars shall be made of high conductivity, and high strength Aluminum E91 grade as per IS 5082-1981 Bus bars shall be of rectangular cross sections better suitable for full load current for phase bus bars and half/ full rated current for neutral bus bar or as stipulated in schedule of quantities. Busbar shall be suitable to withstand the stresses of fault level of 35 KA as specified in schedule of quantities.

The bus bars shall be supported on non-breakable, non-hygroscopic epoxy resin or glass fiber reinforced polymer insulated supports able to withstand operating temperature of 110<sup>0</sup> C at regular intervals, to withstand the forces arising from a fault level as stipulated in schedule of quantities. The material and the spacing of the Busbar supports should be same as per the type tested assembly (TTA). All bus bars shall be provided in a separate chamber and all connections shall be done by bolting. The temperature rise shall be as per IEC - 61439-1/2 with ambient of 50 deg.C.

Panel shall be provided with ACB/MCCB of appropriate capacity as per Single Line Diagram.

Continuous earth bus sized for prospective fault current shall be provided with arrangement for connecting to station earth at two points. Hinged doors/ frames shall be connected to earth through adequately sized flexible braids

#### **6. Cable Compartment**

Cable compartment of adequate size shall be provided in the panel for easy clamping of all incoming and outgoing cables entering from the top/bottom. Adequate supports shall be provided in cable compartment to support cables.

#### **7. Instruments**

All Multi-Function Meters, voltmeters and ammeters shall be flush mounted of size minimum 96 mm conforming to class 0.5 of IS: 1248 for accuracy. All voltmeters shall be protected with MCB. They shall be suitable for semi-flush with only flanges projecting on vertical panels.



## **8. Indicating Lamps**

On all the incomers of panels, ON/OFF indicating LED lamps shall be provided and shall be suitable for operation on AC supply. Phase indicating LED lamps shall be associated with necessary ON/OFF toggle switch.

## **9. Small Wiring**

All small wiring for Controls, Indication etc. shall be of with suitable FRLS (halogen free fire retardant) copper conductor cables. Wiring shall be suitably protected within switch board. Runs of wires shall be neatly bunched, suitably supported and clamped. Means shall be provided for easy identifications of the wires. Where wires are drawn through steel conduits, the works shall conform to CPWD General Specifications for Electrical works (Part I- Internal)- 2005 and IS:732 as the case may be. Identification ferrules shall be used at both ends of the wires. All control wiring meant for external connections are to be brought to separate terminal board.

## **10. Protection**

All ACBs & MCCBs shall have inbuilt LSIG protections and shall be provided with microprocessor based releases

### **LIST OF APPROVED MAKES FOR SWITCHGEARS OF LT TTA PANEL**

- **M/s Schneider Electric**
- **M/s Siemens**
- **M/s ABB**
- **M/s L & T**

- Note:1. Unless otherwise specified, the brand/make of the material as specified in the item nomenclature or in the particular specifications or in the list of approved materials attached in the tender shall be used in the work.
- 2.The Contractor shall obtain prior approval from the Engineer-in-charge before placing order for any specific material/ Brand/ Make.
- 3.Whenever the specified brand of material is not available than, the Engineer-in-charge may approve any material equivalent to that specified subject to proof being offered by the Contractor for its equivalence and its non-availability to his satisfaction.



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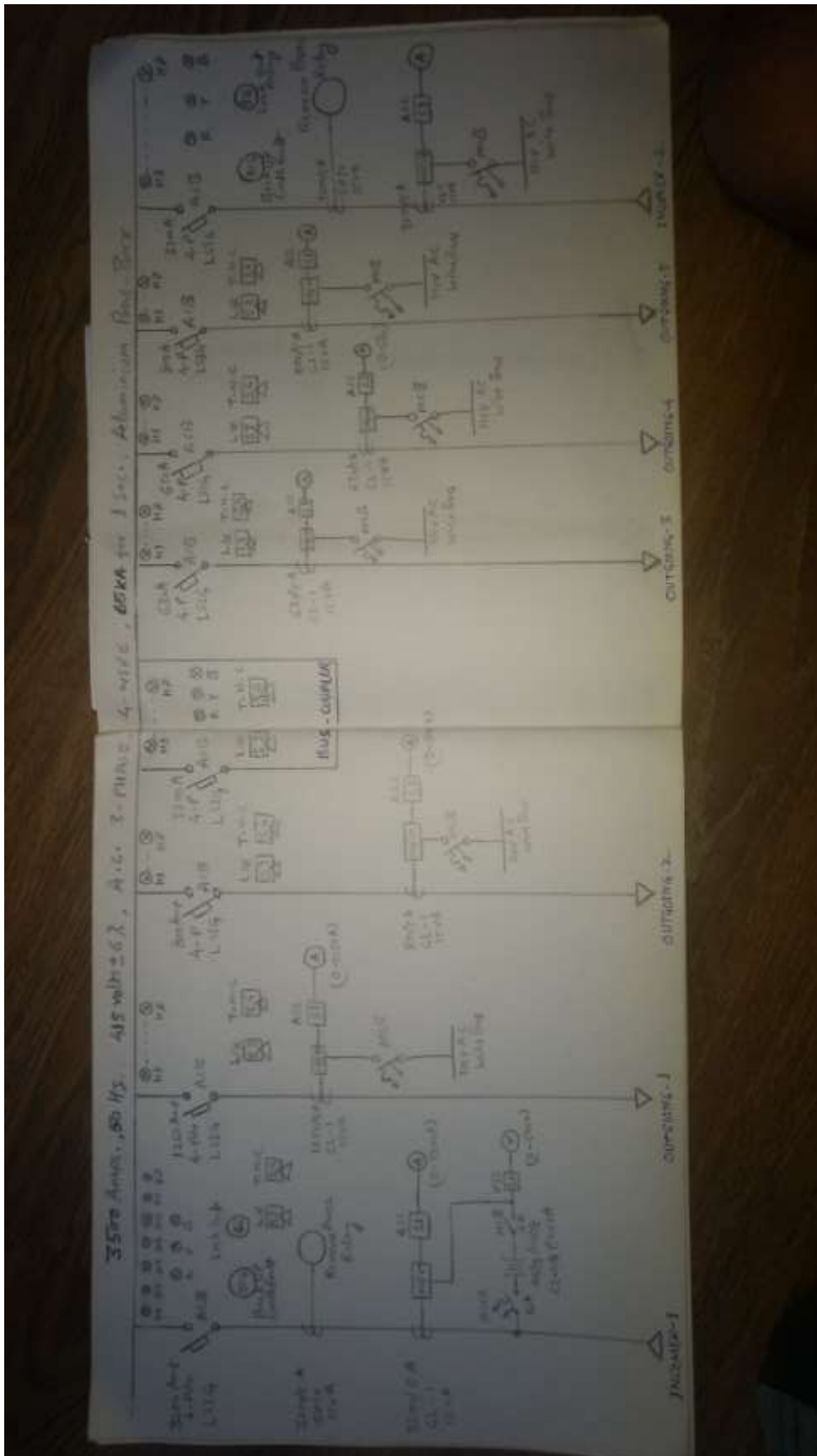
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**SLD of LT TTA PANEL (TENTATIVE)**





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### 3. BUS DUCTS

#### **a. Scope**

The specification covers design, manufacturing, supply, installation, testing and commissioning of Sandwich type bus bar trunking for use as feeder bus bars for interconnection between separate electrical equipment/ load centers, and for use as plug in bus bar risers.

#### **b. System details**

The bus bar shall be suitable for operation in a **1000V** system, with frequency of 50 Hz having 100% neutral and integral earth. The bus duct shall conform to IEC **60439-6** for all protection certification.

#### **c. Design & Construction requirements – Sandwich bus bars**

##### 3.1 General

The bus bars shall be of sandwich construction, non-ventilated design. It shall be possible to mount the bus bar system in any orientation, without affecting the current rating.

The bus duct shall consist of three phases and neutral bus bar permanently positioned dust and vermin proof and the degree of enclosure protection shall be IP 54 for indoor installation.

##### 3.2 Bus bars

The bus bars shall of high conductivity Aluminum.

Where an earth conductor is required, it shall be a separate, integral earth conductor, of the same high conductivity material as the phase conductors.

##### 3.2 Insulation

The bus bars shall be insulated throughout their length by epoxy coating / Mylar. The insulation material used shall be of Class B (130 deg. C). The insulation must comply to UL 94 V-O. It shall be Halogen Free.

Housing: The housing shall be made of extruded Aluminum case duly enameled sheet steel, with an epoxy powder coated paint finish. The housing shall be profiled, to provide higher strength and efficient heat dissipation. The width of the housing shall preferably be the same for all ratings of bus bars, in order to provide interchangeability of tap off boxes.

##### 3.3 Joints

The joints between sections shall be made so as to provide flexibility during installation and expansion / contraction of bus bar during operation.



The joints shall be of the single bolt type and shall be removable as separate sub assembly.

The joint construction must have the following features: -

- a) Heat expansion of at least 3mm per joint.
- b) The joint insulation must be of one piece molded design and not have any cut edges which can absorb moisture.
- c) The joint construction must allow a +/- 14mm adjustment at the time of installation, for ease of adjusting to site measurement variations.
- d) The joint bolt must be insulated with a bolt insulator. The bolt insulator must be of molded one piece.
- e) The joint system must be designed in a way that the installer cannot insert the bus duct length too far and damage the bolt insulator.
- f) The bus bar ends shall not have holes or slots at the joints – the electrical continuity shall be through pressure plates, achieving a high area of joint cross section and expansion capability.
- g) It shall be possible to install and remove the joints without disturbing the bus bar run.

### 3.4 End termination

At the termination either on the transformer side or on the panel side, bus duct shall be provided with flange ends, adopter box and copper flexible (preferably multi sheet types) to connect bus bar of bus duct to bus bar of panels or transformer terminals. Rubber bellows at the transformer end to be provided

Accessories:

A full range of accessories like bends, end flanges, end feed units, and support brackets etc. shall be available.

#### **d. Installation**

Bus ducts running along the wall shall be supported at intervals not exceeding 1.5 m. In case of branching, there shall be support on all branches at a distance of 300 mm from the point of branching, Support shall not be less than 40 x 40 x 6 mm MS angle secured in an approved manner. Supports may also be provided in the form of brackets fixed to walls where the duct runs along the wall. In case of ceiling suspended bus ducts, supports made out of 40x40x6 mm MS angle iron shall be provided along with 12mm dia MS rod with threading and nut bolts. The horizontal distance between two such supports shall not be more than 1200 mm. The ducts support shall be suspended from suitable approved suspension devices provided in the ceiling. Fire barrier shall be provided at each floor/wall crossing as per relevant IS code. Continuous earth bus of suitable size shall be provided along with throughout the length of Bus duct. Fire barrier of 2hrs rating shall be provided on each floor.



**e. Testing**

The bus bars shall be type tested at a reputed international test laboratory (ASTA or CPRI) for short circuit withstand 65 KA. The test shall be for a minimum duration of 1 second. Tests shall be performed for all current ratings, covering the different frame sizes of the manufacturer.

Degree of ingress protection (IP rating) shall also be tested at any reputed independent laboratory. This test shall be for IP54 for indoor application. All tests should be as per IEC 60439 -6.

The following tests shall be carried out at site and test results to be recorded: -

- a) Insulation resistance shall be tested with 1000 V megger and shall be not less than 100 mega ohms.
- b) Earth continuity test

**LIST OF APPROVED MAKES  
FOR SWITCHGEARS OF LT TTA PANEL**

- **M/s Schneider Electric**
- **M/s Legrand**
- **M/s Bajaj**
- **M/s GE**

- Note:1. Unless otherwise specified, the brand/make of the material as specified in the item nomenclature or in the particular specifications or in the list of approved materials attached in the tender shall be used in the work.
- 2.The Contractor shall obtain prior approval from the Engineer-in-charge before placing order for any specific material/ Brand/ Make.
- 3.Whenever the specified brand of material is not available than, the Engineer-in-charge may approve any material equivalent to that specified subject to proof being offered by the Contractor for its equivalence and its non-availability to his satisfaction.
-

#### 4. 1.1 KV GRADE LT CABLE

##### 1. Standards of Codes

This covers the specifications for supply and laying of Medium Voltage XLPE insulated PVC sheathed FRLS cables for 1100 volts.

All equipments, components, materials and entire work shall be carried out in conformity with applicable and relevant Bureau of Indian Standards and Codes of Practice, as amended up to date. In addition, relevant clauses of the Indian Electricity Act 1910 and Indian Electricity Rules 1956 as amended up to date shall also apply. Wherever appropriate Indian Standards are not available, relevant British and /or IEC Standards shall be applicable.

##### 2. Power Cables

Medium voltage power cables shall be aluminum (as specified in BOQ) conductor XLPE insulated, FRLS PVC sheathed, armored conforming to latest IS. Cables shall be rated for 1100 Volts.

Conductors shall be insulated with high quality XLPE base compound. A common covering (bedding) shall be applied over the laid up cores by extruded sheath of un-vulcanized compound. Armoring shall be applied below outer sheath of PVC sheathing. The outer sheath shall bear the manufacturer's name and trade mark at every meter length. Cores shall be provided with following color scheme of PVC insulation. Inner sheath shall be ST1 & outer sheath shall be of ST2.

1 Core	:	Red/Black/Yellow/Blue
2 Core	:	Red and Black
3 Core	:	Red, Yellow and Blue
3 ½ /4 Core	:	Red, Yellow, Blue and Black

##### 3. LAYING

Cables shall be laid as per the specifications given below:

##### **Power Cables in Hume Pipes**

Contractor has to consider the maximum precautions while drawing of cables in Hume pipes so that no damages in outer insulations sheath should be seen. It is advised to pull the cables by using a lubricating material for making slippery surface of cables. Internal surfaces of all hume pipes shall be made burr less before the laying. During lying, one Hume pipe shall be fully utilized before using of another Hume pipes.



### **Power Cables in outdoor trenches**

Cable shall be laid in outdoor trenches wherever called for. The depth of the trenches shall not be less than 75cm from the final ground level. The width of the trenches shall not be less than 45 cm. However, where more than one cable is laid, an axial distance of not less than 15 cm. shall be allowed between the cables. The trenches shall be excavated in reasonably straight line with vertical side walls and with uniform depth. Wherever there is a change in direction suitable curvature shall be provided complying with the requirements. Suitable shoring and propping may be done to avoid caving in of trench walls. The bottom of the trench shall be level and free from stone brick bats etc. The trench shall then be provided with a layer of clean, dry sand cushion of not less than 8 cm. in depth.

The cable shall be pulled over rollers in the trench steadily and uniformly without jerks and strains. The entire cable length shall as far as possible be paved of in one stretch. However, where this is not possible the remainder of the cable may be removed by "Flaking" i.e. by making one long loop in the reverse direction. After the cable has been uncoiled and laid into the trench

over the rollers, the cable shall be lifted slightly over the rollers beginning from one end by helpers standing about 10 mtrs. apart and drawn straight. The cable should then be taken off the rollers by additional helpers lifting the cable and then laid in a reasonably straight line.

For short cut runs and sizes up to 50 sq.mm of cables up to 1.1 KV grade any other suitable method of direct handling and laying can be adopted with the prior approval of the Engineer-in-charge.

When the cable has been properly straightened, the cores are tested for continuity and insulation resistance and the cable length then measured. The ends of all cables shall be sealed immediately. In case of PVC cables suitable moisture seal tape shall be used for this purpose.

Cable laid in trenches in a single tier formation shall have a covering of clean, dry sand of not less 17 cms. Above the base cushion of sand before the protective cover is laid. In the case of vertical multi-tier formation after the first cable has been laid, a sand cushion of 30 cms shall be provided over the initial bed before the second tier is laid. If additional tiers are formed, each of the subsequent tiers also shall have a sand cushion of 30 cms as stated above. The top most cable shall have final sand covering not less than 17 cms before the protective cover is laid.

Unless otherwise specified, the cables shall be protected by the second class bricks of not less 20 cms x 10 cms x 10 cms (nominal size) protection covers placed on top of the sand (bricks to be laid breadth wise) for the full length of the cable. Where more than one cable is to be laid in the same trench, this protective covering shall cover all the cables and project at 5 cm. over the sides of the end



cables. The trenches shall be taken back filled with excavated earth free from stones or other sharp edge debris and shall be rammed and watered, if necessary, in successive layers not exceeding 30 cm, unless otherwise specified.

#### **Cables in indoor trenches**

Cables shall be laid in indoor trenches on cable tray wherever specified. The trench shall be made of concrete with smooth cement mortar finish with suitable removable covers (i.e. precasted slabs or chequered plates). The dimensions of the trenches shall be determined depending upon the maximum number of cables that is expected to be accommodated and can be conveniently laid. Cables shall be arranged in tier formation in trenches and if necessary, cables may be fixed with clamps. Suitable clamps, hooks and saddles shall be used for securing the cables in position. Spacing between the cables shall not be less than 15 cm center to center. Wherever specified, trenches shall be filled with fine sand and covered with RCC or steel chequered trench covers.

#### **4. Jointing and Termination's**

Cable jointing shall be done as per the recommendations of the cable manufacturer. All jointing work shall be done only by qualified/licensed cable jointer.

All jointing pits shall be of sufficient dimensions as to allow easy and comfortable working.

Jointing materials and accessories like conductor, ferrules, solder, flex, insulating and protective tapes, filling compound, jointing box etc. of right quality and correct sizes, confirming to relevant Indian Standards.

Each termination shall be carried out using brass compression glands and cable sockets. Hydraulic crimping tool shall be used for making the end termination's. Cable gland shall be bonded to the earth by using suitable size copper wire/tape.

#### **5. Specific Requirements - Power Cables**

The cables shall be 1100V grade, single / multicore, stranded XLPE insulated aluminum/copper conductor and FRLS PVC sheathed. The cables for emergency services shall be with additional FRLS properties. The cables shall conform to IS. IS 7098-Part-I for multicore cables, fillers used to fill in the space between the phases shall be non-hygroscopic, chemically inert and non-putrescent.

Cables laid outside the building, either buried or in trench shall be of armored type. All power cables shall be armored type. Following FRLS properties to be considered.



Oxygen index  $\geq$  21% as per ASTM-D-2863.  
 Smoke density  $\leq$  60% as per ASTM-D-2843.  
 Acid generation  $\leq$  20% as per IEC-60754-1.  
 Temperature Index  $\leq$  250-degree C as per ASTM-D-2863.

## 6. Design Criteria for Cable Sizing

Power cables shall be selected on the following basis:

- a) Power cable shall carry the full load current of the circuit continuously under site conditions considering the various derating factors like ambient air temperature (45 deg. C), grouping, laying methods etc.
- b) Power cables shall be sized to restrict the voltage drop to 3% and a voltage dip of 10% for motors.
- c) Cable shall have less than 1% loss as per the GRIHA norms
- d) Power cable shall withstand the fault current of the circuit for the duration not less than the maximum time taken by the primary protective system to isolate the fault.

## 1. Testing of Cables

Cables shall be tested at works for all routine tests as per IS including the following tests before being dispatched to site by the project team.

Insulation Resistance Test.  
 Continuity resistance test.  
 Earth test. (in armored cables)  
 Hi Pot Test.

Test shall also be conducted at site for insulation between phases and between phase and earth for each length of cable, before and after jointing. On completion of cable laying work, the following tests shall be conducted in the presence of the Owner's site representative.

Insulation Resistance Test (Sectional and overall)  
 Continuity resistance test.  
 Earth test.

All tests shall be carried out in accordance with relevant Standard Code of Practice and Electricity Rules. The Contractor shall provide necessary instruments, equipment and labor for conducting the above tests and shall bear all expenses in connection with such tests. All tests shall be carried out in the presence of the Engineer in charge/ his representative, results will be noted and

signed by all present and record be maintained. All the test certificate shall be submitted by contractor.

### LIST OF APPROVED MAKES FOR SWITCHGEARS OF LT TTA PANEL

- **M/s Universal**
- **M/s Havells**
- **M/s Finolex**
- **M/s RPG**

Note:1. Unless otherwise specified, the brand/make of the material as specified in the item nomenclature or in the particular specifications or in the list of approved materials attached in the tender shall be used in the work.

2.The Contractor shall obtain prior approval from the Engineer-in-charge before placing order for any specific material/ Brand/ Make.

3.Whenever the specified brand of material is not available than, the Engineer-in-charge may approve any material equivalent to that specified subject to proof being offered by the Contractor for its equivalence and its non-availability to his satisfaction.

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## **5. 11 KV GRADE H.T. CABLE**

### **1. General**

Cables shall be aluminum conductor, unearth type, FRLS, cross linked polyurethane construction and shall be supplied, inspected, laid, tested and commissioned in accordance with drawings, specifications, relevant Standard Specifications and cable manufacturer's instructions.

#### **a. Material**

**Conductor**

The Conductor shall be made from electrical grade aluminum, stranded wires compacted together, circular.

**Insulation**

High quality - XLPE unfilled insulating compound of natural color shall be used for insulation. Insulation shall be provided by extrusion process and shall be chemically cross linked in continues vulcanization process.

**Shielding**

Cables shall be provided with conductor shielding as well as insulation shielding and shall consist of extruded semi-conducting compound, additionally insulation shield shall be provided with semi-conducting and metallic tape shield over the extruded insulation shield. XLPE insulation and outer core shielding shall be extruded in one operation. Metallic tape rating 1 kA/ 1 sec.

INNER SHEATH- Inner sheath shall be extruded of ST2.

#### Armoring

Armoring shall be provided over the inner sheath and shall comprise of flat steel wires (strips).

#### Outer Sheath (with FRLS)

Tough outer sheath of heat resisting PVC ST-2 compound shall be FRLS extruded over the armoring in case of armored cables, or over inner sheath in the case of unarmored cables.

### b. Tests

Cables shall be type tested and routine tested in accordance with IS:7098 (Part II).

The following tests shall be carried out at site for insulation between phases and between phase and earth before and after the cable laying is complete.

- a) Insulation Resistance Test.
- b) Continuity resistance test.
- c) Sheathing continuity test.
- d) Earth test.
- e) High Voltage test.
- f) FRLS Test

Before laying of cables megger values shall be taken and shall be recorded.

### c. End Termination of HT Cable

Pre-molded cable terminations for XLPE cable shall be used as per manufacturer's instructions. The heat shrinkable Raychem shall consist of highly track resistant insulating section vulcanized to a semi-conducting section. The pad material shall have cold-flow properties and shall be flame retardant.

Each end terminal shall undergo Hi Pot Test at site. Necessary equipment shall be arranged at site by contractor.

## 2. Laying of HT Cables

### RCC/MASONRY TRENCH

For laying of HT cable in RCC/Masonry trench refer detail as per IS-1255-1983.

### HT Cables in Hume Pipes

Contractor has to consider the maximum precautions while drawing of cables in Hume pipes so that no damages in outer insulations sheath should be seen. It is advised to pull the cables by using a lubricating material for making slippery surface of cables. Internal surfaces of all

Hume pipes shall be made burr less before the laying. During laying, one hume

Pipe shall be fully utilized before using of another hume pipes.

**LIST OF APPROVED MAKES  
FOR SWITCHGEARS OF LT TTA PANEL**

- **M/s Universal**
- **M/s Havells**
- **M/s Finolex**
- **M/s RPG**

Note:1. Unless otherwise specified, the brand/make of the material as specified in the item nomenclature or in the particular specifications or in the list of approved materials attached in the tender shall be used in the work.

2.The Contractor shall obtain prior approval from the Engineer-in-charge before placing order for any specific material/ Brand/ Make.

3.Whenever the specified brand of material is not available than, the Engineer-in-charge may approve any material equivalent to that specified subject to proof being offered by the Contractor for its equivalence and its non-availability to his satisfaction.

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# **PART-III**

## **TECHNICAL BID**

**(A) List of Documents to be submitted within the period of bid submission:**

- (a)** Online deposited receipt/acknowledgement against EMD.
- (b)** Certificate of Registration for GST.
- (c)** Certificate of Registration for EPF.
- (d)** Certificate of Registration for ESIC.
- (e)** Certificate of Registration for PAN Card.
- (f)** Certificate of Registration for company/firm.
- (g)** Certificate of Registration for Building & other construction works (BOCW).
- (h)** Certificate of Registration for labor license.
- (i)** Valid 'A' class electrical contractor's license issued from Govt. of M.P. or Govt. of India.
- (j)** Duly signed & stamped of complete downloaded tender document.

**(B) Data Sheets to be filled up by the Tenderers/ Bidders**

Sl. no.	Information	Format of submission	Compliance
1	Obligation / Compliance To Be Insured By Contractor	Annexure- "A"	Yes/No
2	Tax	Annexure- "B"	Yes/No
3	Indemnity by contractor	Annexure- "C"	Yes/No
4	Joint Venture Details (if applicable)	Annexure- "D"	Yes/No
5	Certificate in prescribed format	Annexure- "E"	Yes/No
6	Letter of Transmittal	Annexure- "F"	Yes/No

**Note:**

- 1 If necessary, additional sheets may be added to the forms.
- 2 Some of the forms will require attachments. Such attachments should be clearly marked as follows: Attachment I to Form # Attachment 2 to Form #. etc.

### **Annexure- “A”**

#### **Obligation/Compliance to be insured by Contractor**

Sr. No.	Items	Compliance of Contractor to be filled by Contractor	
		YES	NO
1	Registration		
2	Compliance of provisions of Child Labor Act, and Workmen compensation Act		
3	To ensure treatment in case of accident / injuries suffered in Performance of work including wages and compensation under WC Act.		
4	Send accident report to Regional Labor Commissioner (RLC)		

### **Annexure –“B” TAX**

Attach copy of current last three years' income tax returns details.



### **Annexure- “C” INDEMNITY**

(To be filled by Contractor)

I on behalf of M/s ..... hereby agree and undertake that I have understood all the safety rules and procedures and all staff working on behalf of M/s..... will follow all safety rules and procedures. I declare that I M/s ..... will be responsible for any safety violations/ accident etc. IIT Indore will not be responsible in case of any accident / incident and will not compensate financially or otherwise.

I hereby declare that I am sole responsible on behalf of M/s.....

..... for giving such declaration.

-----  
Name of Indemnifier

-----  
Signature of Indemnifier

Stamp/Seal of the Indemnifier /Contractor

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### **Annexure- “E”**

#### CERTIFICATE

(to be provided on letter head of the firm)

I hereby certify that the above firm has not been ever blacklisted by any Central/State Government/Public Undertaking/Institute on any account.

I also certify that the above information is true and correct. In every respect and in any case at a later date, if it is found that any details provided above are incorrect, any contract given to the above firm may be summarily terminated and the firm blacklisted.

Date:

Place:

Signature of Contractor



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**Indian Institute of Technology Indore**

**Infrastructure  
Development  
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**Annexure-“F”**

**LETTER OF TRANSMITTAL**

**From:**

**To**

The Project in Charge,  
IIT Indore (MP).

**Name of work: - “Non- Comprehensive Annual Operation & Maintenance Contract of 33/11 KV Main Receiving Substation, 4 Nos. of 11/0.433 KV Loaded Substations & 11 KV DG set”**

Sir,

Having examined the details given in Press Notice and bid documents for the above work, I/we hereby submit the relevant information.

1. I / we hereby certify that all the statements made and information supplied in the enclosed forms A to E and accompanying statement are true and correct.
2. I / we have furnished all information and details necessary for eligibility and have no further pertinent information to supply.
3. I / we submit the requisite certified solvency certificate and authorize PIC, IIT Indore to approach the Bank issuing the solvency certificate to confirm the correctness thereof. I / we also authorize PIC, IIT Indore to approach individuals, employers, firms and corporation to verify our competence and general reputation.
4. I / we submit the following certificates in support of our suitability, technical knowledge and capability for having successfully completed the following eligible similar works:

**Name of work**

**Certificate from**

- |         |       |
|---------|-------|
| 1. .... | ..... |
| 2. .... | ..... |
| 3. .... | ..... |

**CERTIFICATE:** It is certified that the information given in the enclosed eligibility bid are correct. It is also certified that I/We shall be liable to be debarred, disqualified/ cancellation of enlistment in case any information furnished by me / us found to be incorrect.

Enclosures:-

Seal of bidder

Date of submission

SIGNATURE(S) OF BIDDER(S)

**(C) Data Sheets to be filled up by the Tenderers/ Bidders**

Sl. no.	Information	Format of submission	Compliance
1	Financial Information	Form - "A"	Yes/No
2	Solvency Certificate	Form - "B"	Yes/No
3	Experience of Similar Nature of Works	Form - "C"	Yes/No
4	Performance Reports of above referred works in Form 'C'	Form - "D"	Yes/No
5	Structure & Organization details	Form - "E"	Yes/No
6	List of the projects under execution or awarded	Form - "F"	Yes/No
7	Compliance Sheet	Form - "G"	Yes/No

**FORM 'A'**

**FINANCIAL INFORMATION**

- I Financial Analysis - Details to be furnished duly supported by figures in balance sheet / profit & loss account (after tax) for the last five years duly certified by the Chartered Accountant, as submitted by the applicant to the Income Tax Department (Copies to be attached).

Financial Year	15-16	16-17	17-18	18-19	19-20
Gross Annual turnover on construction works					
Profit/Loss					

- II. Financial arrangements for carrying out the proposed work.

Signature of Chartered Accountant with Seal.

SIGNATURE OF BIDDER(S)

Solvency Certificate from Bankers of bidders in the prescribed Form “B”.

### FORM ‘B’

#### **FORM OF BANKERS’ CERTIFICATE FROM A SCHEDULED BANK**

This is to certify that to the best of our knowledge and information that M/s / Shri..... having marginally noted address, a customer of our bank are / is respectable and can be treated as good for any engagement up to a limit of Rs. .... (Rupees.....).

This certificate is issued without any guarantee or responsibility on the bank or any of the officer.

(Signature)  
For the Bank

Note (1) Bankers certificates should be on letter head of the Bank, addressed to tendering authority.

(2) In case of partnership firm, certificate should include names of all partners as recorded with the Bank.

**FORM 'C'**

DETAILS OF ELIGIBLE SIMILAR NATURE OF WORKS COMPLETED DURING THE LAST SEVEN YEARS ENDING PREVIOUS DAY OF LAST DATE OF SUBMISSION OF TENDERS

S. No.	Name of work/project and location	Owner or sponsoring organization	Cost of work in crores of rupees	Date of commencement as per contract	Stipulated date of completion	Actual date of completion	Litigation/ arbitration cases pending/in progress with details*	Name and address / telephone Number of officer to whom reference may be made	Whether the work was done on back to back basis— Yes/No
1	2	3	4	5	6	7	8	9	10

\*Indicate gross amount claimed and amount awarded by the Arbitrator.

Signature of bidder(s)





**FORM 'D'**

**PERFORMANCE REPORT OF WORKS REFERRED TO IN FORMS "C"**

1. Name of work/project & location :
2. Agreement no. :
3. Estimated cost :
4. Tendered cost :
5. Date of start :
6. Date of completion
  - (i) Stipulated date of completion :
  - (ii) Actual date of completion :
7. (a) Whether case of levy of compensation for delay has been decided or not? : Yes / No
  - (b) If decided, amount of compensation levied for delayed completion, if any. :
8. Performance Report
  - (1 ) Quality of work : Outstanding/Very Good/Good/Poor
  - (2 ) Financial soundness : Outstanding/Very Good/Good/Poor
  - (3 ) Technical Proficiency : Outstanding/Very Good/Good/Poor
  - (4 ) Resourcefulness : Outstanding/Very Good/Good/Poor
  - (5 ) General Behavior : Outstanding/Very good/Good/Poor

Dated:

Executive Engineer or Equivalent



**FORM 'E'**  
**STRUCTURE & ORGANISATION**

- 1 Name & address of the bidder
- 2 Telephone no./Telex no./Fax no.
- 3 Legal status of the bidder (attach copies of original document defining the legal status) :
  - i. An Individual
  - ii. A proprietary firm
  - iii. A firm in partnership
  - iv. A limited company or Corporation
- 4 Particulars of registration with various Government Bodies (attach attested photocopy)  
Organization /Place of registration/Registration No.
  - 1.
  - 2.
  - 3.
- 5 Names and titles of Directors& Officers with designation to be concerned with this work.
- 6 Designation of individuals authorized to act for the organization
- 7 Has the bidder or any constituent partner in case of partnership firm, Limited Company /Joint Venture ever were convicted by the court of law? If so, give details.
- 8 In which field of E&M Engineering construction the tenderer has specialization and interest.
- 9 Any other information considered necessary but not included above.

Signature of bidder(s)

### FORM 'F'

#### List of the projects under execution or awarded

S. No.	Name of work/project and location	Owner or sponsoring organization	Cost of work in crores of rupees	Date of commencement as per contract	Stipulated date of completion	Upto date percentage progress of work	Slow progress if any and reasons thereof.	Name and address / telephone Number of officer to whom reference may be made	Remarks
1	2	3	4	5	6	7	8	9	10

**Certified that the above list of works is complete and no work has been left out and that the information given is correct to my knowledge and belief.**

Signature of bidder(s)

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**FORM 'G'**

Sr. No.	Description	Compliance	Remarks
1	Name of the Contractor/Agency		
2	Address & Contact number		
3	Name of person, who has signed the tender		
4	Details of EMD (Receipt/Acknowledgement) (copy should be attached)	YES/NO	
5	GST Registration number (copy should be attached)	YES/NO	
6	EPF registration number (copy should be attached)	YES/NO	
7	ESIC registration number (copy should be attached)	YES/NO	
8	Permanent Account Number (copy should be attached)	YES/NO	
9	Company/Firm Registration Number (copy should be attached)	YES/NO	
10	Building & other construction works (BOCW) Registration (copy should be attached)	YES/NO	
11	Labour License Registration (copy should be attached)	YES/NO	
12	Valid "A" Class Electrical Contractor license. (copy should be attached)	YES/NO	
13	Duly signed & stamped of complete downloaded tender document. (copy should be attached)	YES/NO	



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Office*

# **PART-IV**

# **FINANCIAL BID**

**Proforma for Quoting the Rates**

<b>NIT Number: IITI/IDO/PR/E/ NIT /MRS/2020-21</b>	<b>April 22, 2020</b>
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**BILL OF QUANTITY**

Sr. No.	Item Description	Unit	Qty	Rate in figure	Rate in words	Amount
1	Design, Supply, Installation, Testing, Commissioning & Statutory Approval of 1600 KVA, 11/.433 KV Dry Type Transformer, having system as per specifications covered under of the Tender. (Rates shall include all Taxes and Duties)	No.	01			
	Total (in figures) (inclusive all the taxes, duties, charges)					
	Total (in Words) (inclusive all the taxes, duties, charges)					
2.	Design, Supply, Installation, Testing & Commissioning of LT TTA Panel having system as per specifications covered under of the Tender. (Rates shall include all Taxes and Duties)	No.	01			
	Total (in figures) (inclusive all the taxes, duties, charges)					
	Total (in Words) (inclusive all the taxes, duties, charges)					
3.	Design, Supply, Installation, Testing & Commissioning of 3200 Amps. 1000 volts, 50 Hz. Four pole (65 KA for 1 sec.) Sandwich construction bus duct, aluminum bus bars insulated with 100% neutral & 100% earth bus, expansion joints, Flange End, Adaptor Box, Copper Flexible with support hangers including 90-degree bends etc. as per specifications covered under of the Tender. (Rates include all Taxes / Duties)	RM	20			

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	Total (in figures) (inclusive all the taxes, duties, charges)	
	Total (in Words) (inclusive all the taxes, duties, charges)	

4.	Supply, Laying, end termination, testing & commissioning of 3.5 X 300 sq.mm. 1100 volts, L.T. Cable in the existing trench/hume pipes, having system as per specifications covered under of the Tender. (Rates include all Taxes / Duties)	Meter	1000			
	Total (in figures) (inclusive all the taxes, duties, charges)					
	Total (in Words) (inclusive all the taxes, duties, charges)					
5.	Supply, Laying, End Termination, Testing & Commissioning of 3 X 300 sq.mm. 11 KV H.T. Cable in the existing trench/hume pipes, having system as per specifications covered under of the Tender. (Rates include all Taxes / Duties)	Meter	100			
	Total (in figures) (inclusive all the taxes, duties, charges)					
	Total (in Words) (inclusive all the taxes, duties, charges)					
6.	GRAND TOTAL (in figures) (1 + 2 + 3 + 4 + 5) (inclusive all the taxes, duties, charges)					
7.	GRAND TOTAL (in Words) (1 + 2 + 3 + 4 + 5) (inclusive all the taxes, duties, charges)					

**NOTE:** Either item no. 03 Bus duct or item no. 04 L.T. cables to be executed, depending upon the site conditions.

Date:

Seal & Signature of Tenderer