



Standard Bidding Document

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Technical Specifications

Name of Work	:	Design, Supply, Installation, Testing & Commissioning of LT Floor Panel for Building of New Legislature Complex, Jammu.
Unit	:	Unit-4, JKPCCLtd. Rail Head Complex, Panama Chowk, Jammu
Time of Completion	:	45 days

Sig. Of Bidder



J&K PROJECTS CONSTRUCTION CORPORATION LTD.

(A J&K State Govt. Undertaking)

NOTICE INVITING TENDER

E-NIT No: 04 of 2018-19 Dated 30 .07.2018

On behalf of Managing Director, Jammu & Kashmir Projects Construction Corporation Ltd., the Deputy General Manager, Unit-4, JKPC Ltd., Jammu invites e-tenders from OEM'S(Original Equipment Manufacturers)/authorise representative for the following work:

S. No	Name of Work	Estimated Cost (Rs. in lacs)	Cost of document (in Rs.)	Earnest Money (Rs. in Lacs)	Time of completion	Class of Contractor
1.	Design, Supply, Installation, Testing & Commissioning of LT floor Panel for Building of New Legislature Complex, Jammu (inclusive of all taxes).	25.00	2000	0.50	45 Days from the date of award of contract	"A "

Qualification criteria, scope of work, tender documents, BOQ and all other terms & conditions can be seen and downloaded from www.jktenders.gov.in.

Critical Dates:

1.	Period of downloading of NIT	01.08.2018 from 1000 Hrs. to 21.08.2018 upto 1400 Hrs.
2.	Pre-Bid Meeting	07.08.2018 at 1200 Hrs. in Office of General Manager, JKPC Ltd., Rail Head Complex, Jammu
3.	Bid submission dates	07.08.2018 from 1000 Hrs. to 21.08.2018 upto 1400 Hrs.
4.	Last date of uploading Cost of Tender Document and EMD	21.08.2018 upto 1400 Hrs
5.	Date of opening of Bid	23.08.2018 at 1200 Hrs. in Office of General Manager, JKPC Ltd., Rail Head Complex, Jammu
6.	Hard Copies of Technical Bid will be invited from L1 only	

Any other information regarding e-tendering process can be had from the office of Deputy General Manager, Unit-4, JKPC Ltd. Rail Head Complex, Jammu or e-tendering Cell, Jammu.

Deputy General Manager,
Unit 4, JKPC Ltd.
Jammu.

No: DGM/

Dated:

Copy to the: -

1. Managing Director JKPC Ltd, Srinagar for information.
2. Executive Director, JKPC Ltd., Jammu for information.
3. General Manager (J), JKPC Ltd Jammu for information.
4. Deputy Director Information Jammu for information. It is requested that the notice may please be published in two leading English daily newspapers of State and one National Paper for its wide publicity.
E-Tendering Cell for uploading the Tender on www.jktenders.gov.in and www.jkpc.com

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OFFICE OF THE DEPUTY GENERAL MANAGER UNIT-ELECTRIC, JKPCCLtd- JAMMU.
NOTICE INVITING TENDER

E-NIT No: 04 of 2018-19 Dated 30.07.2018

INVITATION:

On behalf of Managing Director, Jammu & Kashmir Projects Construction Corporation Ltd., the Deputy General Manager, Unit- 4, JKPCCLtd., Jammu invites e-tenders from OEM's or from authorize representative for *Design, Supply, Installation, Testing & Commissioning of LT floor Panel for Building of New Legislature Complex, Jammu.*

NAME OF WORK:

Design, Supply, Installation, Testing & Commissioning of LT floor Panel for Building of New Legislature Complex, Jammu.

INSTRUCTIONS TO BIDDERS

- 1) The bidding documents can be downloaded from the website <http://jktenders.gov.in> from 01-08-2018 time 1000 Hrs to 21-08-2018 upto 1600 hrs
 - a) The bids shall be deposited in electronic format on the website <http://jktenders.gov.in> from 1000 Hrs on 07-08-2018 to 21-08-2018 upto 1600 Hrs.
 - b) A pre bid meeting shall be convened with the intending bidders on 07.08.2018 in the office Chamber of General Manager, JKPCCLtd., Jammu at 1300 Hrs.
 - c) Technical bids of bidders shall be opened online in the office of General Manager, JKPCCLtd., Jammu on 23-08-2018 at 1200 Hrs
- 2) Bid documents can be seen at and downloaded from the website <http://jktenders.gov.in> Bid documents contain qualifying criteria for bidders, specifications, bill of quantities, conditions and other details.
- 3) All the relevant original instruments (Hard copies) in respect of successful bidder only, shall be submitted to General Manager, JKPCCLtd., Jammu before award of the contract.
- 4) Bids must be uploaded by bid security in shape of CDR / FDR payable at Jammu pledged in favour of Deputy General Manager, JKPCCLtd., Unit-4th, Jammu and shall be valid upto 01.08.2019 and cost of tender document shall be deposited into the Bank accounts by the bidder for which the following information can be used by the bidder.
 - i) Name of the Bank = J&K Bank Ltd
 - ii) Account title = Financial Controller JKPCCLtd., (Current Account)
 - iii) Account No. = 0084010100002408
 - iv) Branch = New Secretariat Road Srinagar.
 - v) IFSC Code = JAKAOPROMPT
 - vi) Swift Code = JAKABBINRSGR – Optional
5. The bidders shall upload scanned copy of bank payment acknowledgement slip.
6. The bid for the work shall remain open for acceptance for a period of 90 days from the date of opening of bids. If any bidder/ tenderer withdraws his bid/ tender before the said period or makes any modifications in the terms and conditions of the bid, the said earnest money shall stand forfeited.
7. A bidder shall not be permitted to bid for works in the jurisdiction of officer responsible for award and execution of contract in which his or his spouse's near relative (defined as first blood relations, and their spouses) is posted as Divisional Accountant or as an officer in any capacity between the grades of Superintending Engineer and Assistant Engineer (both inclusive).

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8. No engineer of gazette rank or other Gazetted officer employed in Engineering or Administrative duties in an Engineering department of the State Government is allowed to work as a contractor for a period of two years after his retirement from Government service, without Government permission. This contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the government as aforesaid before submission of the tender or engagement in the contractor's service.
9. Other details can be seen in the bidding documents.
10. Any other information regarding e-tendering process can be had from the Office Deputy General Manager, JKPCCLtd., Unit 4th, Jammu contact Nos:9419151534.
11. Instruction to bidders regarding e-tendering process.
 - a) The interested bidder can download the bid from the website <http://jktenders.gov.in>. Bidders are advised to download bid submission manual for the help of bid submission process from the Downloads option as well as from Bidders Manual Kit on website <http://jktenders.gov.in>
 - b) To participate in bidding process, bidders have to get digital signature certificate card as per information technology Act- 2000, to participate in online bidding. This certificate will be required for digitally signing the bid. Bidders can get above mentioned digital signature certificate card from any approved vendors. The bidders who already possess valid digital signature certificates card, need not to procure new digital signature certificate card.
 - c) The bidders have to submit their bids online in electronic format with digital signature. The bids proposed without digital signature will not be accepted
 - d) Bids will be opened online as per time schedule mentioned in the tender document.
 - e) Before submission of online bids, bidders must ensure that scanned copy of all the necessary documents have been attached with bid
 - f) The department will not be responsible for delay in online submission due to any reasons.
 - g) All required information for bid must be filled and submitted online. The bidder should recheck his online document before submission on line otherwise damaged/ corrupt document shall not be considered in any case.
 - h) The details of hard copies of original instruments in respect of cost of bid Documents & Earnest Money specified in the tender documents should be the same as submitted online otherwise tender will summarily be rejected.
 - i) Bidders are advised to use My Documents area on their used on JK tender e tendering portal to store important documents which are used in all tenders like, sales Tax clearance Certificate etc and attach these certificate as Non Statutory Documents while submitting their bids.
 - j) Bidders are advised not to make any change in BOQ contents or its name in no case they should attempt to create similar BOQ manually. The BOQ downloaded should be used for filling the net item rate inclusive of all taxes and it should be saved with the same with the same name as it contains.
12. Bidders are advised to scan their documents at 100 DPI (Dots per inch) resolutions with Black and white, JPEG scan properly convert scanned images to PDF
13. The guidelines for bidders to submit bid online can be downloaded from website <http://jktenders.gov.in>
Dy. General Manager, JKPCCLtd. Unit 4th, Jammu

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General Work-Experience:

The Applicant should have the Experience of Supply, Installation, testing and commissioning of one or more similar type of works in preceding five (5) years. The reference date for considering the period of preceding five years for experience is 31-03-2018.

Turnover:

The Applicant should have achieved an annual financial turnover of 50% of the advertised amount during any 3 years of preceding 5 years. Further,

Selection Criteria:

The bidder should have successfully completed 1(One) work of 80% of total Value of the Estimated Cost.

Or

The bidder should have successfully completed 2(Two) work of 60% of total Value of the Estimated Cost.

Or

The bidder should have successfully completed 3(Three) work of 50% of total Value of the Estimated Cost.

Note:

- a. Other income shall not be considered for arriving at Annual Turnover.
- b. As a proof of turnover, audited Profit & Loss account along with Statutory Auditor's report for last three years is required to be submitted. In case where audited profit and loss account for the immediately preceding year is not available, then a statement of profit and loss account duly certified by the statutory auditors with his comments shall be enclosed with the application along with the copy of appointment letter of the statutory auditor.
- c. Each bidder must produce:
 - The current income-tax challan, PAN No. valid OEM/ Electrical Contractor License and EPF Registration No.
 - A declaration that the information furnished with the bid documents is correct in all respects; and
 - Such other certificates as defined in the ITB. Failure to produce the certificates shall make the bid non-responsive.
- d. Each bidder must demonstrate:
Availability of technical personnel for Erection/ work
- e. Even though the bidders meet the above qualifying criteria, they are subject to be disqualified if they have :
 - Made misleading or false representations in the forms, statements, declarations and attachments submitted in proof of the qualification requirements; and/or
 - Record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures etc.

**Deputy General Manager,
Unit 4, JKPCCLtd.
Jammu.**

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Essential Document for opening Technical Bid

A. Cost of tender document & EMD.

Bids must be accompanied by bid security and cost of tender document failing which bid will be rejected without giving further notice.

B. Affidavit & Certificates.

1. **Copies** of original documents from L1 only defining constitution/ legal status, place of registration and principal place of Business.
2. **Copies** of original Valid TIN. & PAN.
3. **Copy** of original valid OEM/Electrical Contractor License.
4. **Copy** of valid EPF Registration No.
5. The bidders shall provide **Affidavit** along with the bid document with the following undertakings:
 - a. That JKPCCLtd. is authorized to seek references from Bidders bankers.
 - b. That the bidder would be able to invest a minimum of 25% of Contract Value.
 - c. That the bidder is not black listed/debarred by any Govt. or Semi-Govt. Departments from participation in tendering.
 - d. That bid will remain valid for a period of ninety (90) days from the date of opening of Technical bids.
 - e. Affirming that the information submitted by the bidder with the bid / supporting documents is true & correct to the best of his knowledge and belief.
 6. The Applicant should have achieved an annual financial turnover of 50% of the advertised amount during any 3 years of proceeding 5 years, duly attested by a Chartered Accountant.

The Applicant should have the Experience of executing one or more similar type of work of **Design, Supply, Installation, Testing & Commissioning of LT Floor Panel for Building of New Legislature Complex, Jammu.**

Experience Certificate issued by an engineer not below the rank of **Executive Engineer/s (Electrical)** from J&K State/CPWD/ Railways and other State/ Central Govt. Undertaking certify that:

- The bidder have successfully completed 1(One) work of 80% of total Value of the Estimated Cost. – or-
- The bidder have successfully completed 2(Two) work of 60% of total Value of the Estimated Cost. –or-
- The bidder have successfully completed 3(Three) work of 50% of total Value of the Estimated Cost.

Note:- *Even though the bidders meet the above qualifying criteria, they are subject to be disqualified if they have made misleading or false representation in the forms, statements and attachments submitted in proof of the qualification requirement and/or record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, litigation history, or financial failures etc and/or participated in the previous bidding for the same work and has quoted unreasonably high bid prices and could not furnish rational justification to the employer.*

**Deputy General Manager,
Unit 4, JKPCCLtd.
Jammu.**

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General Conditions of Contract

1 TIME FOR COMPLETION

The TIME FOR COMPLETION of the Work, including time required for creation of construction facilities etc, shall be 45 Days.

2 CONSTRUCTION PROGRAMME:

The Bidder shall include in his Bid, the detailed construction programme for executing the work, describing broad Components, Methodology for **Design, Supply, Installation, Testing & Commissioning of LT Floor Panel for Building of New Legislature Complex, Jammu.**

3 SITE VISIT

The bidder at his own cost/expenses is advised to visit and examine the Site of Works and its surroundings and obtain for himself on his own responsibility, all information that may be necessary for preparing the bid and entering into a Contract .

Bidders shall familiarize themselves especially with the rules and regulations, local Laws applicable to carry out such Work in J&K. The Owner shall not entertain any request for clarifications from the Bidders, regarding such statutory provisions.

4 BID DOCUMENTS

4.1 The Bid Documents shall comprise Instruction to Bidders (ITB), General Conditions of Contract and Special Conditions of Contract (SCC), Technical Specifications, BoQ and Appendix Forms.

4.2 Amendment to Bid Documents

(a) At any time prior to the deadline for submission of bids, the Owner may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the Bid Documents by issuance of an Addendum .

(b) The Addendum will be sent in writing or by fax/e-mail to all prospective bidders who have been issued the Bid Documents and will be binding upon them. Prospective bidders shall promptly acknowledge receipt thereof to the Owner.

(c) In order to afford prospective bidders reasonable time sufficient to take an Addendum into account in preparing their bids, the Owner may, at its discretion, extend the deadline for the submission of bids .

4.3 Preparation of Bids

(a) The bid shall be in English language only Failure to comply with this shall disqualify a bid .

(b) The Bid must contain the name and places of business of the person or persons making the bid and must be signed by the duly authorized representative with his usual signature and sealed by the Bidder the name(s) and designation(s) of persons signing should also be typed or printed below the signature.

(c) Bid by Companies/Firms/Parties must be furnished with full names of Companies/Firms and be signed by their legally authorised representative(s)

(d) Satisfactory evidence of authority of the person(s) signing on behalf of the Bidder shall be furnished with the bid.

(e) The Bidder's name stated on the proposal shall be the exact legal name of the firm/Company/Parties.

(f) Erasures or other changes in the Bid Document including the proposal documents shall be over the initials of the persons signing the bid.

Bids not conforming to the above requirements of signing are liable to be rejected.

4.4 Specific Issues

(a) A prospective bidder is expected to examine all instructions, terms & conditions, forms and Owner's Specifications/Requirements in the Bid Document and fully inform himself as to all the conditions and matters which may in any way affect the Works, his bid or the cost thereof Further, failure to furnish all information required by the Bid Document or submission of

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incomplete offers, conditional bids and proposals containing deviations from the Bid Document shall be rejected as non-responsive .

- (b) It will be imperative for each Bidder to fully inform himself of all local conditions and factors which may have any effect on the execution of the Works covered under Scope of Works and these Documents .

It would be understood and deemed that such factors have been properly considered by the bidder while submitting the bids Owner accepts no liability for the lack of such clear information or its effect on the cost of the Works to the Bidder .

- 4.5 Bidders shall assess their requirement of infrastructure and construction facilities to suit their methodology for successful implementation of the work .

Thus, while working out their bid price, the bidders are required to take into account entire scope of the work defined in Bid Documents.

5. **PRICE BASES, CURRENCIES**

Bidders shall quote their Prices in Indian Rupees in the Performa as given for Schedule of Prices/Bill of Quantity Bidders shall quote for the entire package on a single source responsibility basis. Bidders shall give "Bill of Quantities" and rates covering entire scope of the Works. The prices are fixed No price variation/adjustment shall be allowed in the currency of contract.

The Bidder shall quote his prices logically in bid form. The Bidder is advised to avoid offering of rebate/discount/loading. However, in case of exceptional circumstances, the rebate/discount/loading offered by the Bidder should be only in the Performa of Bill of Quantity. The bidder should offer the rebate on a percentage basis applied uniformly to all the Prices in the Performa given in BoQ.

The quoted rates should be inclusive of all duties, levies, taxes, costs like transportation, handling, insurance etc.

6. **SUBMISSION OF BIDS AND**

The priced Bill of Quantities/ Schedule of Prices to be submitted online only.

Deadline for Submission of Bids

Hard Copy of Bid shall be acknowledged from L1 only by the Owner at the address specified not later than the last date and time for submission of bids.

The Owner may, in exceptional circumstances and at its discretion, extend the deadline for submission of bids by issuing an Addendum, in which case all rights and obligations of the Owner and the bidders previously subject to the original deadline will thereafter be subject to the deadline as extended.

Modification, Substitution and Withdrawal of Bids

The bidder may modify, substitute, or withdraw his original bid after its submission but in any case before the official deadline for submission, if a corresponding written notice of the modification, substitution or withdrawal is received by the Owner prior to the deadline for submission of bids .

The bidder's modification, substitution, or withdrawal shall be prepared, sealed, marked, and delivered in with the outer and inner envelopes additionally marked "MODIFICATION", "SUBSTITUTION" or "WITHDRAWAL", as appropriate.

No bid shall be modified, substituted or withdrawn by the bidder after deadline for submission of bids.

Withdrawal of the Bid during the interval between the deadline for submission of Bids and expiration of the period of bid validity shall result in the forfeiture of the bid security .

Bid Guarantee/ Security/EMD

- i) The bid shall be accompanied by a bid security for an amount indicated.

The bid security shall be in the form of FDR/CDR and shall be issued by an Indian Nationalized / Scheduled Bank or a Foreign Bank notified as a Scheduled Bank under the provisions of the 'Reserve Bank of India Act' through any of its Branches in India .

Bank Guarantee for Bid Security in original shall be submitted along with the bid. However, the issuing Bank shall submit an unstamped duplicate copy of Bank Guarantees directly by Registered post to the Owner with a forwarding letter

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- ii) The Bid Security of the successful Bidder to whom a Contract is awarded will be returned after the said Bidder provides the Contract Performance Guarantee as per stipulations elsewhere in the Bid Documents. The successful Bidder shall be required to extend the validity of the Bid Security till the Contract Performance Guarantee is accepted by the Owner .
- iii) The Bid Security may be forfeited:
 - a) If the bidder withdraws or modifies its bid.
 - b) If the bidder is found to have indulged in corrupt or fraudulent or collusive or coercive practice(s).
 - c) In the case of a successful bidder, if he fails within the specified time limit to;
 - i) Sign the Agreement, or
 - ii) Furnish the required performance security
 - iii) Bid Security of all the unsuccessful Bidders will be returned as promptly as possible after Notification of Award in terms of this ITB but not later than 30 days after the expiry of the bid validity.
 - iv) Any bid not accompanied by the bid security in accordance with above provisions will be rejected by the Owner as 'non-responsive'
 - v) Interest or any other charges, whatsoever, will not be payable by the Owner on the above Bid Security amount.

7. GST REGISTRATION NUMBER:

The successful Bidder shall furnish to the Owner his GST number obtained from commercial taxes department under GST Act. No payment shall be made to the Contractor unless he submits his GST Number

8. VALIDITY OF BID

The bid should be kept valid for acceptance for a period of 90 days from the date of opening of Bids. In exceptional circumstances the Owner may solicit the bidder's consent to an extension of the period of the validity .The request and the response thereto shall be made in writing (including telefax). The Bid Security shall also be extended by the same period as the extension in the validity of the bid. A bidder accepting the request will not be permitted to modify its bid.

9. OPENING AND EVALUATION OF BIDS

i) Bid Opening

The Owner will open the bids, including WITHDRAWALS, SUBSTITUTIONS and MODIFICATIONS made hereof, in the presence of bidders' designated representatives who choose to attend, at the time, date, and location stipulated in the hereof. The bidders' representatives who are present shall sign a register evidencing their attendance. No Bid shall be rejected at the Bid opening except for the late Bids pursuant.

ii) Envelopes will be opened in the following order;

- a. Withdrawal notices
 - b. Substitution
 - c. Original bid along with modifications, if any
 - d. Original bids for which an acceptable notice of withdrawal has been submitted shall not be opened.
- All important information and any such other details as the Owner may consider appropriate, will be announced by the Owner at the Bid opening. This shall include but may not be limited to the Bidders' names, the Bid Prices including deviations, any discounts, withdrawals, substitutions and bid modifications, and the presence (or absence) of Bid Security .

Bids not opened and read out at bid opening shall not be considered further for evaluation, irrespective of the circumstances.

iii) Bid Evaluation

General

The Bids will be evaluated by the Owner to ascertain the lowest evaluated technically and commercially responsive bid for the complete scope of the proposal, as covered under these Bid Documents. The evaluation of techno-commercial bids shall be carried out on the techno-commercial submission of the bidder for the entire Scope of Work meeting Owner's Specifications/Requirements and Qualification Criteria as detailed in these Bid Documents.

Preliminary Examination:

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The Owner will examine the bids to determine whether the documents have been properly signed, whether required sureties have been furnished, whether computational errors for price bids have been made and whether the bids are generally in order.

Prior to detailed evaluation, the Owner will determine the substantial responsiveness of each bid to the Bid Documents. A substantially responsive bid is one, which conforms to all the terms and conditions of the bidding documents, without material deviation or reservation. A material deviation or reservation is one (a) which affects in any substantial way the scope, quality, or performance of the Works or inconsistent with the Bidding Documents; (b) which limits in any substantial way, the Owner's rights or the Bidder's obligations under the Contract; or (c) Technical proposal is such, as if the bidder has not understood the work implementation (d) whose rectification would affect unfairly the competitive position of other bidders presenting substantially responsive bids . The Owner's determination of bid's responsiveness is to be based on the contents of the bid itself without recourse to extraneous evidence.

A bid determined as not substantially responsive will be rejected by the Owner and may not subsequently be made responsive by the bidder by correction of the non-conformity.

The Owner may waive any minor non-conformity or irregularity in a bid which does not constitute a material deviation provided such waiver does not prejudice or effect the relative ranking of bidder .

Correction of Errors

In the Bill of Quantities the rates shall be written both in words and in figures. Bidder shall also show the total on each page and the Grand Total of the whole Contract. Corrections, if any, shall be made by crossing out, initialing, dating and rewriting.

If on check, found differences between the rates given by the contractor in words and figures or in the amount worked out by him in the Bill of Quantities and General Summary, the same shall be adjusted in accordance with the following rules:

- a) In the event of a discrepancy between description in words and figures quoted by a tenderer, the description in words shall prevail.
- b) In the event of an error occurring in the amount column of Bill of Quantities as a result of wrong multiplication of unit price and quantity, the unit price shall be regarded as firm and multiplication shall be amended on the basis of the price.
- c) All errors in totaling in the amount column and in carrying forward totals shall be corrected.
- d) The General Summary and the tendered sum shall be amended accordingly. The tendered sum so altered shall, for the purpose of tender, be substituted for the sum originally tendered and considered for acceptance instead of the original sum quoted by the Bidder.

10. COMPARISON OF BIDS

Prices quoted by the Bidder for Complete Scope of Work including defect liability period shall be Considered for Comparison of Bids .

Taxes and duties

The Bid Prices shall be inclusive of all taxes and duties .The effect of all applicable taxes, duties, other levies and charges etc should be ascertained by the bidder and included in his Bid Price.

11. AWARDS

The Owner will award the Works to the bidder whose bid has been determined to be substantially responsive to the Bidding Documents and who has offered the lowest Evaluated Bid Price .

12. NOTIFICATION OF AWARD (LETTER OF ACCEPTANCE)

Prior to expiration of the period of bid validity, the Owner will notify the successful bidder by tele fax confirmed by registered letter or courier that its bid has been accepted. This letter (hereinafter and in the Conditions of the Contract called the "Letter of Acceptance") shall specify the sum which the Owner will pay the Contractor in consideration of the execution and completion of the Works and the remedying of any defects therein by the Contractor as prescribed by the Contract.

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13 PERMANENT ACCOUNT NUMBER (PAN):

Within 28 days from the date of issue of the Letter of Acceptance, the successful Bidder shall furnish to the Owner his Permanent Account Number issued by the Income Tax Authorities in India. No payment shall be made to the Contractor unless he submits his Permanent Account Number.

14 PERFORMANCE SECURITY:

Within a period of 21 days from the date of issue of Letter of Acceptance, the successful bidder shall furnish to the Owner, Bank Guarantee for amounts equal to 10 per cent (%) of the Contract Price in the form Bid Security annexed in the List of Forms.

Failure of the successful bidder to comply with the requirement of Clause 15 shall constitute a breach of contract, cause for annulment of the award, forfeiture of the Bid Security, and any such other remedy the Owner may take under the provisions of the Contract.

15 CORRUPT OR FRAUDULENT PRACTICES

It is expected from the Bidders that they will observe the high standard of ethics during the procurement and execution of such Contracts. In pursuance of this policy:

(a) For the purpose of this provision, the terms set-forth below shall mean as under:

(i) **"corrupt practice"** means the offering, giving, receiving or soliciting, directly or indirectly of anything of value to influence the action of a public official in the procurement process or in Contract execution;

(ii) **"Fraudulent practice"** means a misrepresentation or omission of facts in order to influence a procurement process or the execution of a Contract

(iii) **"Collusive practices"** means a scheme or arrangement between two or more bidders with or without the knowledge of the Borrower, designed to establish bid prices at artificial, non-competitive levels;

(iv) **"Coercive practice"** means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in a procurement process, or affect the execution of a contract;

(b) A bid may be rejected by the Owner if it is determined at any stage that respective bidder has engaged in corrupt or fraudulent or collusive or coercive practices in competing for the Contract in question;

The Owner may declare a firm/Party ineligible, either indefinitely or for a stated period of time, to be awarded a Contract if it at any time determines that the firm /Party has engaged in corrupt or fraudulent or collusive or coercive practices in competing for, or in executing a Contract.

Representative of vendors, suppliers, contractors, consultants, service providers or any other agency (ies) doing any type of business with JKPCCLtd is expected and shall be responsible to ensure that there is no fraudulent act being committed in their areas of responsibility/ control. As soon as he/ she comes to know of any fraud or suspected fraud or any other fraudulent activity must report such incident(s) Such reporting shall be made to the designated Nodal Officer(s), nominated in Project/ Corporate Centre The reporting of the fraud normally should be in writing. In case the reporter is not willing to furnish a written statement of fraud but is in a position to give sequential and specific transaction of fraud/ suspected fraud, then the officer receiving the information/ Nodal Officer shall record such details in writing as narrated by the reporter.

16 Contract:

16.1 Following documents shall be attached/annexed to the Agreement and thus form part of the Contract;

- a) General Conditions of Contract.
- b) Bill of Quantities.
- c) Special Conditions of Contract.
- d) Technical Specifications
- e) Letter of Award.
- f) Critical conditions of the contract.
- g) Any other document forming part of the Contract.

16.2 In case of any discrepancy between the documents mentioned in Clause 16.1 above the order of documents shall be as follows:

- i. Letter of Award
- ii. Special Conditions of Contract.

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- iii. General Conditions of Contract.
- iv. Technical Specifications
- v. Bill of Quantities.
- vi. Critical conditions of the contract.
- vii. Any other document forming part of the Contract.

17. PRICES:

- 17.1 The prices to be quoted by the intending tenderer shall include the supply, installation, testing and commissioning of works at the site, of all component, ancillary material and other items whatsoever required for carrying out the job to fulfill the intent and purposes as laid down in the Technical specifications.
- 17.2 The tenderer's price shall be deemed to include all components. The contractor shall also include, in his price, all taxes duties or other levies (viz. Excise duty, customs duty, works contract tax, sales tax, entry tax, octroi etc..) which are legally livable on supply of equipments& material and its Installation. Failure to include all livable taxes and duties will not entitle the contractor to any extra claims from the Engineer-Incharge. The contractor's rate shall remain firm and fixed during the currency of the contract.
- 17.3 The prices and unit rates quoted by the bidder in the bid shall be firm and deem to be adequate to cover the entire responsibility involved in the execution and completion of work. No Price Variation/adjustment is payable during the currency of Contract. The price shall not be subject to exchange rate variations. No increase due to change in daily wages of labour be paid, due to any reasons whatsoever.
- 17.4 The rates quoted by the Contractor shall be net so as to include all the requirements described in the contract agreement and no claim whatsoever due to fluctuations in the price of materials and labour will be entertained.
- 17.5 The contractor shall provide all equipments, instruments, labour and such other assistance required by the Engineer-in-charge for measurement of the works, materials etc.

18. Temporary Works

Before any temporary works is commenced the contractor shall submit at least 7 days in advance to the Engineer-in-charge for approval of complete drawings of all temporary works he may require for the execution of the works. The contractor shall carry out the modifications relating to strength, if required by the JKPCC/Engineer-in-charge in accordance with the conditions of contract at his own cost. The contractor shall be solely responsible for the stability and safety of all temporary works and unfinished works and for the quality of the permanent works resulting from the arrangement eventually adopted for their execution. For the Civil works like cutting of walls for conduit works or any other job requirement with necessary repairs as per requirements at site including making well the same, the expenditure shall be borne by the agency/contractor. Contractor shall quote rates accordingly. Nothing extra shall be paid on this account.

19. Water, Power and Other Facilities:

- a) Raw water supply is available at site which the contractor can use for any constructional needs. However for drinking water Contractor shall have to make their own arrangement at their own cost.
- b) Metered JKPDD power supply shall be made available to the contractor who shall have to pay the JKPCC/Engineer-in-charge for energy consumed on per month basis. Generator back up if required shall have to be arranged by the contractor at their own cost.

20. Accommodation:

- a) The contractor shall provide and maintain all necessary offices, workshops, stores, shelters, sanitary facilities, canteens and other temporary structures for themselves in connection with the work at the site at their own cost after getting the approval from the JKPCC.
- b) All temporary buildings and facilities as mentioned above shall be removed on completion of the work or at any other earlier date as directed by the JKPCC.
- c) Watch & ward shall be responsibility of the contractor till the completion of job.

21. Facilities for contractor's employees

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

22. Liquidation of damages

0.25% of contract value for every week of the delay after the schedule date of completion of work to the contractor will be charged. Total recovery amount shall be maximum upto 5%.

23. Disposal of Refuse

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

24. Tools, Storage of Materials, Protective Works and Site Office Requirements

The contractor shall provide, fix up and maintain in an approved position proper office accommodation for the contractor's representative and staff which offices shall be open at all reasonable hours to receive instruction notices or communications and for storage of tools, etc and clear away the same on completion of the works and make good all work disturbed.

All drawings maintained on the site are to be carefully mounted on boards of appropriate size and covered with a coat of approved varnish. They are to be protected from ravages of termites, ants, and other insects and made available to the JKPCC for inspection or such other purposes they may require.

The contractor shall provide at his own cost all artificial light required to complete the work within the specified time.

The contractor shall provide a suitable temporary hut for the watchmen and clear away the same when no longer required and to provide all necessary attendance, lights etc required.

The contractor shall arrange for temporary latrines for the use of workers and field staff and keep the same in a clean and sanitary condition to the satisfaction of the Public Health Authorities and shall cause such latrines and soil to be cleared away whenever necessary and shall make good all the works disturbed by these conveniences.

Every precaution shall be taken by the contractor to prevent the breeding of mosquitoes on the works during the construction, and all receptacles, cistern, water tanks etc used for the storage of water must be suitably protected against breeding of mosquitoes. The contractor shall indemnify the JKPCC against any breach of rules in respect of anti-malarial measures.

The contractor shall not fix or place any placards or advertisement of any description or permit the same to be fixed or placed or upon any boarding gantry, building structures other than those approved by the JKPCC.

Protective Measures: The contractor from time to time of being placed possession of the site must make suitable arrangements for watching, lighting and protecting the work, the site and surrounding property by day, by night, on Sundays and other holidays.

Contractor shall indemnify the JKPCC against any possible damage to the building, roads, or members of the public in course of execution of the work.

The contractor shall provide necessary temporary enclosures, gates, entrances etc for the protection of the work and materials and for altering and adopting the same as may be required and removing on completion of the works and making good all works disturbed.

Storage of Materials: The contractor shall provide and maintain proper sheds for the proper storage and adequate protection of materials etc and other work that may be executed on the site including the tools and materials of nominated sub-contractors and remove same on completion.

So also, steel materials are to be stored above the ground level to prevent the same from getting rusted.

25. Tools:

All measuring tapes shall be of steel. Suitable scaffolding and ladders that may be required for safe working and taking measurement shall be supplied by the contractor.

Supervisors on the works shall always carry with them a one metre or two meter steel tape, a measuring tape of 30 meters, a spirit level and shall check the work to see that the work is being done according to the drawing and specifications. Supervisors shall also carry one test lamp with leads and one neon tester

and necessary working instruments. The Site Engineer will use any or all measuring instruments or tools belonging to the contractors as he chooses for checking the works executed or being executed on the contract. The contractor should cover in his rates for making provisions for all reasonable facilities for the use of his scaffolding, tools and plant etc for their work.

26. Idle Labour:

Whatever the reasons may be no claim for idle labour, additional establishment cost of hire and labour charges of tools and plants would be entertained under any circumstances.

27. Variation in quantities:

The quantities for ancillary works given in the schedule and / or in drawings are for the guidance of the tenderer. The contractor shall be paid on the basis of actual quantities of works carried out. However the contractor shall check these quantities before quoting and will bring to the notice of Consultants / Engineer-In charge for any major variation. The contract shall be on works contract basis and the Client reserves the right to add / delete any items of work during the currency of contract.

When there is likelihood of major variation in the quantity of any item after the finalization of design/drawings, the Contractor shall submit the details of such variation with proper Justification for approval of Engineer-in-charge. Payment of such deviated quantities shall only be made after approval of Engineer-in-charge.

28. Excise Duty, Taxes, Levies etc

The contractor shall pay and be responsible for payment of all taxes, including GST & other taxes as applicable, duties, levies, royalties, fees, cess or charges in respect of the works including but not limited to GST, works contract tax, customs duty, excise duty and octroi, payable in respect of materials, equipment plant and other things required for the contractor. All of the aforesaid taxes, duties, levies, fees and charges shall be to the contractor's account and the JKPC shall not be required to pay any additional or extra amount on this account. If there occurs any Variation of taxes, duties, fees, levies etc or introduction of new Tax or duty or levy or cess imposed under any Statute or Law, after 15 days prior to last date of submission of Bids, during the currency of contract which causes additional or reduced cost to the contractor, the same shall be intimated by the contractor to the owner and shall be paid/recovered to/from the contractor.

29. Approved Make:

The Material/Equipment/Machinery to be supplied and installed for Electric system Works shall be of Approved make as specified in Technical Specifications. The List of Approved makes and manufacturers is Annexed to Technical Specifications.

30. Working Drawings, Maintenance Manuals etc.:

On the award of the work, the contractor shall immediately proceed with the preparation of detailed shop drawings prepared on the computer through the Auto CAD system based on the architectural drawings and site measurement, detailing the components that are to be installed and the ancillary works that are to be carried out. Three sets of all such schematic drawings shall be submitted to the Engineer-In-charge, for their approval as provided in General Conditions of Contract to ensure that the works will be carried out in accordance with the specifications and drawings, including such changes as may have been mutually agreed upon. All the drawings shall be received by the Engineer incharge for their approval, within two weeks of the award of work. The approval of the drawings by the Engineer-In-charge shall in no way relieve the contractor from his obligations to provide a complete and satisfactory System and installation as per intent and purpose as laid down in the specifications. Any omissions and/or errors shall be made good or rectified whether or not the drawings are approved.

Prior to the completion of the work, the contractor shall furnish (4) four sets of a comprehensive manual, describing all components, furnishing a list of instructions for the operations and maintenance of the system.

When the Engineer-In-charge makes any amendments in the above drawings, the contractor shall supply two fresh sets of drawings with the amendments duly incorporated along with check prints for approval.

Within four weeks of approval of all the relevant shop drawings, the contractor shall submit four copies of a comprehensive variation in the quantity statement. The contractor shall also fix in the control room neatly typed and framed, instruction in details, for the starting and running of the system. Any special tools required for the operation or the maintenance of the system shall be supplied free.

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31. Supply, Installation, Testing and Commissioning:

The contractor shall carry out the complete supply, installation, testing and commissioning. All work shall commence on previously prepared locations for the main and sub systems. All the materials shall be moved from their place of storage into the system by the contractor. The contractor shall make his own arrangement to off load materials received at respective Air/Rail/Road transport terminal points, dispatch to site and to store all material received at site. The Engineer-Incharge shall provide clear storage and installation space only. All installation tools and tackles as and when required to suit the installation programme shall be provided by the contractor. All consumables required for installations such scaffolding etc. shall be provided by the contractor. Protective and finish painting shall be carried out by the contractor. The contractor shall indicate the electricity requirements during installation. The contractor shall remove all the waste material or rubbish from and about the work site and leave the job thoroughly cleaned up and ready for use.

32. Testing:

32.1 All types of routines and type tests as required shall be carried out at the works of the contractor or the manufacturers of the components. The routine tests will be carried out in presence of third party inspection viz. CEIL or CPRI in presence of Engineer in charge or his representatives. The inspection Certificate/Release note of the third party inspection agency should be finalized by Dy. General Manager Unit -4, Jammu. The inspection charges should be borne by the Manufacture.

32.2 On the completion of the installation, the contractors shall arrange to carry out various initial tests as detailed in below, in the presence of and to the complete satisfaction of the Engineer-In-charge or their representatives. Any defects or shortcomings found during the tests shall be speedily rectified or made good by the contractor at his own expenses.

32.3 The initial tests shall include but not be limited to the following:

32.4 To operate and check the proper functioning of all electrically operated components.

32.5 On the satisfactory completion of all 'Initial' tests the work shall be considered to be 'virtually complete' for the purpose of taking over by the Engineer-Incharge.

33. Rejection of Defective System:

If on test any portion of the system or components are found to be defective or not fulfilling the intent or the meaning of the specifications, the same shall be replaced or repaired to the entire satisfaction of the Engineer In-charge.

In case the contractor fails to remove the defects, within a period considered reasonable, the Engineer In-charge reserves the right to take necessary remedial measures through other agencies and all expenses thus incurred would be recovered from the contractor.

The Engineer In-charge reserves the right to operate all the equipment and complete system whether or not the Equipment is taken over after the initial test and commissioning. Any defects found during the initial or running tests shall be removed at a suitable time as decided upon by the Engineer In-charge.

34. Maintenance of the system and training of personnel:

The contractor shall arrange to provide at no extra cost operation and comprehensive maintenance of the entire electrical system of the building, regularly for a period of 36 Months (Thirty-six) from the date of commissioning i.e defect liability period.

35. Completeness of the Works:

The contractor shall provide all the required materials, equipment, ancillary items etc. whether or not each and every item is mentioned in the specifications. Any shortcomings noticed at any stage shall be made good at no extra cost.

36. Warranty and Guarantee:

The contractor shall guarantee that all the material, machinery and components supplied, installed, fabricated, by him shall be free from defects due to faulty design material and/or workmanship, that the system shall perform satisfactorily and the efficiency and functioning system of the system and all the components shall not be less than the parameters laid down in the specifications and the performance shall be within the specified design limits. In case of any shortcoming the contractor shall replace the

necessary components/items at no extra cost or alternately the Engineer In-charge shall be entitled to deduct a proportionate amount from payments due to the contractor.

The period of the guarantee shall be minimum of 36 Months/manufacturer's warranty (whichever is more) from the date of commissioning during which period any or all components found to be defective shall be replaced or repaired free of charge and any shortcomings found in the system functioning as specified shall be removed at no extra cost. The contractor shall provide the necessary personnel and tools for fulfilling the above guarantee.

If for any reason the commissioning of the system cannot be carried out due to reasons attributable solely to the Engineer In-charge, then the system shall carry a guarantee for a period of 36 Months from the date of 'virtual completion' - a date which shall be certified by Engineer In-charge.

If the defects are not removed within a reasonable time the Engineer In-charge may arrange to do so at the contractor's risk and cost, without prejudice to any other rights.

37. Safe custody and storage:

Safe custody of all equipments/items supplied by the contractor shall be his own responsibility till the final taking over by the Engineer In-charge. He should, therefore, employ sufficient staff for watch and ward at his own expenses. The Engineer In-charge may, however, allow the contractor to use the Equipment room/rooms etc. for temporary storage of his equipment if such spaces are ready and available.

38. Spares:

The Contractor guarantees to the Owner the supply of spares during defect liability period.

39. Operation and Maintenance (O&M):

The Contractor shall provide all inclusive Operation and Maintenance (O&M) of installed electric system during the defect liability period inclusive of all material, labour and any other costs, as specified in the Contract, after commissioning of Plant/system at no extra cost to the Owner.

40. Site Visit:

The bidders are strongly advised to visit and examine the existing infrastructure and obtain, on their own responsibility, all information that may be necessary for preparing the Bid and entering into a Contract. The costs of visiting the sites shall be at bidders own expenses. JKPCC Ltd will assist for site visit in working days (Monday – Friday) between 9.30 AM to 4.00 PM.

41. Labour laws and safety regulations:

The Contractor will be required to make good for any damage caused during the awarded work. Any injury / casualty to any skilled / unskilled worker during the work execution will be the entire responsibility of the Supplier / Vendor and your labour should be duly insured. Contractor will be responsible for the compliance of the provisions of the various central & State enacted labour laws whichever is applicable to workmen deployed by the contractor party in relation with the subject services. Following rules / regulations may be concerned in particular.

- Employees Provident Fund and Miscellaneous Provisions Act, 1952.
- Employees State Insurance Act, 1948.
- Payment of Wages Act, 1936.
- Minimum Wages Act, 1948.
- Equal Remuneration Act, 1965.
- Contractor Labour (Regulation and Abolition Act), 1970.
- Payment of Bonus Act, 1965.
- The Employee's Compensation Act, 1923.

**Deputy General Manager,
Unit 4, JKPCC Ltd.
Jammu.**

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Special Condition of the Contract

1. Penalty for delay in completion:-

0.25% of contract value for every week of the delay after the schedule date of completion of work to the contractor will be charged. Total recovery amount shall be maximum upto 5%.

2. Time extension:-

Suitable time extension shall be granted in case of increase in scope of work and in the event of delay beyond control of contractor to be determined by the department. The tender receiving authority reserves the right to accept or reject any tender or all tenders without assigning any reason thereof.

3. Restoration of work: -

On completion of contract the contractor shall be responsible to remove all un-used material and restore the site in its original position at his own cost.

4. Defect Liability period:-

The DLP shall be calculated from date of certified completion of work and period shall be 36 months from the certified date of completion by JKPCCLtd.

5. Safety

The contractor shall be responsible for safety of all men, material and machinery at site of work. He shall submit the insurance certificates in this regard within One month of date of allotment.

6. Discoveries

Anything of historical or other interest or of significant value unexpectedly discovered on the site shall be the property of the Govt.

7. Tests

The contractor shall be solely responsible for carrying out the mandatory tests required for the quality control at his own cost and shall submit a test report regarding the physical/ chemical properties as well as structural strength of material.

8. Termination

The employer may terminate the contract if the contractor causes a fundamental breach of the contract. Fundamental breach of contract will include:-

- i. Continuous stoppage of Work for a period of 15 days without authorization of Engineer in-charge.
- ii. Contractor is declared bankrupt.
- iii. Any evidence of involvement of contractor in corrupt practices.
- iv. Contractor delays the completion of work beyond stipulated time of completion.
- v. If In case contractor fails to start /complete the work, within the stipulated time period, his CDR/Earnest Money shall be forfeited after termination of the contract. Besides, defaulting contractor shall be debarred from taking works in JKPCCLtd., at least for two years and shall be recommended for blacklisting as well.

Pursuant to the process of termination of defaulted contract, the employer reserves the right to invite fresh tender for the balance work at the risk and cost of defaulter contractor

The date of start of the work shall be reckoned within 07 Days from the date of issuance of LOI/Contract allotment as the case may be.

9. MAJOR LABOUR LAWS APPLICABLE TO ESTABLISHMENT ENGAGED IN BUILDING AND OTHER CONSTRUCTION WORK:-

- a) Compliance with Labour Regulation Laws of J&K State.

10. Specification/Quality Control:-

All items of works shall conform to specifications as per BOQ

11. Insurance:-

Insurance cover to Labour / Machinery / Work / Plant material / Equipment by the contractor shall be mandatory.

12. Laws Governing the Contract:-

The contract shall be governed by Laws of the land.

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13. Court's Jurisdiction: -In case of any disputes/differences between contractor and Department the jurisdiction shall be J&K State

14. All other terms and conditions are as same as are in vogue in JKPCCLtd.

15. Other conditions:

- i. The contractor/ agency failing to execute the work in part or in full. Action will be taken against him according to the following conditions:-
 - a. A registered notice or notices sent through special messenger by the Engineer I/c to the contractor for non-start of work will amount to breach of contract.
 - b. The corporation may execute the work left by the contractor at his risk and cost. Any additional amount involved for execution of work will be recovered from other claims/resources of the contractor available with the corporation.
 - c. In case contractor evades the receipt of notice or deliberately gives wrong address for the communication where it is not possible to deliver registered letter, the notice will be pasted on the entry gate of his premises in presence of a witness. This will be treated as notice being served upon the contractor.
- ii. Tenderer shall not be entitled for any claim what so ever on account of expenses incurred by him on submission of the tender.
- iii. All terms and conditions of NIT/ Agreement to be drawn by the contractor/ agencies shall be binding upon the contractor/ agencies as soon as the allotment of contract is awarded in favour of contractor/ agency. The terms and conditions contained in other similar nature of contracts of this corporation shall also be applicable.
- iv. Misconduct/ Misbehavior observed during the tender opening process, during the execution of work with any officer / official shall be dealt under rules. He shall be disqualified in the tendering process / his contract shall be liable for termination.
- v. The accepting authority reserves the right to accept or reject any or all the tender before or after their opening after assigning reason thereof. The allotting authority in view of exceptional circumstances reserves the right of granting the contract to any of the tenderer it deems proper in the interest of the work.
- vi. The successful tenderer will abide by all labour laws and will be personally responsible for any casualty/ eventuality/ accident during the period of contract. For such eventualities he will have to insure his all workmen and machinery deployed on the work.
- vii. The watch & ward of the material during execution shall be sole responsibility of the successful tenderer.

16. Performance security (unbalanced bids)

If the bid of the successful bidder is seriously unbalanced in relation to the Engineer's estimate of the cost of work to be performed under the contract the employer may require the bidder to produce detailed price analysis for any or all items of the bill of quantities to demonstrate the internal consistency of these prices with the construction methods.

In case the bid of the lowest bidder is found unbalance the successful bid shall have to produce additional performance security in the shape of CDR /FDR /BG within 21 days of opening of price bid as per the following break-up:

S.No	%-age of unbalanced bid with advertised cost	Additional performance security to be deposited
1	Upto & including 15% below	NIL
2	Greater than 15% below upto 30% below	3%
3	Greater than 30% below	5%

17. Deviation items:

No deviation items shall be executed by the contractor unless until it is approved in writing by the engineer-in-charge (i.e., Dy. General Manager).

18. Security Deposit

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- a) The earnest money of the successful tenderer shall be retained and released after the successful completion of work.
- b) Up-to 2% security deposit deductions shall be made from all interim bills including final bill.
- c) The security deposit at the credit of the contractor shall be refunded to the contractor after the date of expiry of defect liability period of 36 months from the date of taking over of the work and removal of defects after conducting necessary repair to the entire satisfaction of the Engineer-in-charge.
- d) The security deposit shall not bear any interest.
- e) The security deposit shall be liable to forfeit as per the discretion of the Engineer-in-charge if the contractor fails to carry out work or perform/ observe any of the conditions of the contract.

19. Time of completion

The time being essence of any contract, the work is to be completed within 60 days..

20. Replacement of defective work and material

The contractor shall also be personally liable for civil and criminal prosecution under law if the specifications of the materials used are found in contravention to the specification prescribed during execution of the work even after completion and finalization of the contract i.e., at any stage during the prescribed life of the structure.

The tenderers shall in their own interest examine the conditions of the contract and specifications of the work. They shall also inspect the site and satisfy themselves (on their own) as to the climate and other conditions prevailing at the site. The nature and extent of the work, all existing and required roads and other mean of communication and access to site, availability of housing and other facilities, availability of different material, labour and probable sites, for labour camps, stores and godowns etc. They shall themselves obtain all necessary information as to the risks, contingencies and other circumstances which may effect of influence their tender, No extra charges consequent to any misunderstanding or otherwise no on this account shall be allowed.

21. Fundamental breach of contract will include:-

- a. Continuous stoppage of Work for a period of 15 days without authorization of Engineer in-charge.
- b. Contractor is declared bankrupt.
- c. Any evidence of involvement of contractor in corrupt practices.
- d. Contractor delays the completion of work beyond stipulated time of completion.
- e. Pursuant to the process of termination of defaulted contract, the employer reserves the right to invite fresh tender for the balance work at the risk and cost of defaulting contractor.
- f. If in case contractor failed to start /complete the work, within the stipulated time period, his CDR/Earnest Money shall be forfeited after termination of the contract. Besides, defaulting contractor shall be debarred from taking works in JKPCC Ltd. at least for two years.
- g. **Major Labour Laws applicable to establishment engaged in building and other construction Work:-**
 - i. Workmen compensation act 1923.
 - ii. Payment of Gratuity Act 1972.
 - iii. Employees P.F. and Miscellaneous Provision Act 1952.
 - iv. Maternity Benefits Act 1951.
 - v. Contract Labour (Regulation & Abolition) Act 1970.
 - vi. Minimum Wages Act 1948.
 - vii. Payment of Wages Act 1936.
 - viii. Equal remuneration Act 1979.
 - ix. Payment of bonus Act 1965.
 - x. Industrial disputes Act 1947.
 - xi. Industrial employment standing orders Act 1946.
 - xii. Trade Union Act 1926.
 - xiii. Child Labour (Prohibition & Regulation) Act 1986.

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- xiv. Inter State Migrant workmen's (Regulation of employment & Conditions of service) Act 1979.
- xv. The Building and other Construction workers (Regulation of employment and Condition of service) Act 1996 and the Census Act of 1996.
- xvi. Factories Act 1948. & Compliance with Labour Regulation Laws of J&K State.

22. PAYMENTS SCHEDULE.

70% of Payment shall be released after delivery of product at site and 30% payment shall be released after successful commissioning of System.

Note:

- a) The cost of works already executed shall be deducted from the bill.
- b) Any item of work not included BoQ but found necessary shall be paid as per OEM rate list or LMR whichever applicable and the decision of Engineer I/C regarding rates shall be binding upon the Bidder.

23. DRAWINGS AND PHOTOGRAPHS OF THE WORKS

The contractor shall do photograph /video photograph of the site firstly before the start of the work, secondly mid-way in the execution of different stages of work and lastly after the completion of the work. No separate payment will be made to the contractor for this and shall submit a Hard copy and soft copy of the same to the Engineer-in-charge for record and reference.

The contractor shall not disclose details of drawings furnished to him and works on which he is engaged without the prior approval of the Engineer-in-Charge in writing. No photograph of the works or any part thereof or plant employed therein, except those permitted shall be taken or permitted by the contractor to be taken by any of his employees or any employees of his sub-contractors without the prior approval of the Engineer-in-Charge in writing. No Photographs /Video photography shall be published or otherwise circulated without the approval of the Engineer-in-Charge in writing.

**Deputy General Manager,
Unit 4, JKPCCLtd.
Jammu.**

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SPECIFICATIONS
LT PANEL FOR BUILDING

1.0 ADDITIONAL CONDITIONS

1. The works will be executed to comply with the CPWD Technical Specifications for Electrical works Part-I Internal (2013), Part II External (1994) and with up to date amendments and to conform to the Indian Electricity Act & rules, BIS & Direction of Engineer-in-charge/PMC.
2. The items of work shall be executed as per detailed technical specifications and scheme. In case of contradiction between schedule of work with its Additional Specification and the Technical Specification, the former shall prevail.
3. The work will be executed as per general arrangement drawing including conduit layout and detailed fabrication drawings duly approved by the Engineer-in-charge. The various items of equipment will be ordered only after the drawings are approved and quantities in detail of various items are ascertained as per actual requirements. Therefore the actual quantities / measurement may vary from the stipulated quantities, which are only estimate.
4. The contractor/agency will engage suitable qualified/experienced/ licensed engineering supervisor for the work and suitable skilled personnel with required license for doing the erection work. Required special tools to be operated in the execution of the job.
5. The work will be performed as per the day to day instruction and approval of the engineer-in-charge. All materials/ equipment will be used after taking approval of the Engineer-in-charge/PMC.
6. Equipment will be duly inspected in the manufacturer's works / premises before dispatch to the site, as per instructions of Engineer-in charge/PMC.
7. The rates are to be inclusive of all taxes, levies, insurance, freight, octroi etc. except service tax which will be reimbursed by the department, in full, on presentation of receipted original deposit slip, against the work. Nothing extra will be paid.
8. The work will be executed as per the programme of completion of the project. The delivery & erection schedule of various materials/ equipment will be as per approval of Engineer-in-charge.
9. This contract holds the contractor responsible for the entire job as per relevant CPWD specifications. If any item is left out within the schedule of work but if it is considered essential for the completion of the job, the contractor has to carry out the items as extra substituted item.
10. The contractor shall have to make arrangements, at his own risk and cost, for

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transportation of materials from the point of issue of stores to site of work, if any.

11. The contractor shall ensure that the staff employed by him for execution of the electrical work, possess the valid electrical license issued by competent authority. Consequences arising due to the default of the contractor in not complying with the above condition shall be the entire responsibility of the contractor.
12. All concealed work and earthing shall be done in the presence of the Engineer-in-charge or his authorized representative as per approved shop drawings prepared by contractor.
13. The schematic diagram/dimensional drawings of the various electrical cubical panels shall be got approved from the Engineer-in-charge before fabrication and shall comply with CPWD specifications and Indian Electricity Rules. The panels shall conform to IS: 8623/1993. All panels shall be powder coated inside out, in shade approved by the Engineer-in-charge.
14. All panels/DBs/SDBs shall be suitable for 45°C ambient temperature.
15. The MCCB/MCB shall be of the same make as that of DBs/SDBs. Contractor shall obtain approval of the Engineer-in-charge before procurement of MCB DB's. All DB's shall be double door type confirming to minimum IP-43 degree of protection.

Miniature Circuit Breaker shall comply with IS -8828-1996 / IEC 898. Miniature Circuit Breakers shall be quick make and break type for 230 / 415 V A.C. ,50Hz application with magnetic thermal release for over current and short circuit protection. The breaking capacity shall not be less than 10KA at 415V A.C. The MCB shall be DIN mounted. The MCB shall be current limiting type (class – 3).

MCB shall be classified (B, C, D ref. IS standard) as per their tripping characteristics curves defined by the manufacturer. The MCB shall have the minimum power loss (watts) per pole defined as per the IS / IEC and the manufacturer shall publish the values.

The MCB housing shall be heat resistant and having high impact strength. The terminal shall be protected against finger contact to IP20 degree of protection.

All model of modular accessories required for the work shall be got approved from the Engineer-in-charge among the approved makes. The base plate shall be preferably in sheet steel or otherwise in unbreakable polycarbonate. The cover plates shall be screw less type in shade approved by the Engineer-in-charge. The GI box shall be of the same make as the modular accessories.

Contractor shall have to check the site order Book for any instructions of PMC/Engineer-in-charge or his authorized representative and sign the site order

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book. He shall be bound to ensure compliance with the instructions recorded there in.

All the MCCB's shall have microprocessor based trip unit for reliable protection and accurate measurement. The rated Service breaking capacity (kArms) shall be 100% of Ultimate breaking capacity (kArms). All MCCB's shall be current limiting type with features as per relevant IS codes and CPWD specification. All MCCB's shall be rated for minimum operating voltage of 415 V and minimum insulation voltage of 750 V. There has to be total discrimination between the incoming and outgoing MCCB's and MCB's, as required, at the MDB's and DB's level.

MCCB's shall be used with rotary handle and terminal spreaders and all terminals shall be shrouded to avoid direct contact.

Mechanical Castle key interlock shall be provided among the incomer MCCB's, wherever, as applicable, two different incomer sources are provided in the panel as per the directions of the Engineer in charge. The same is deemed included in the scope of work.

General arrangement drawing of the switchboard shall be got approved by PMC/ the Engineer-in-Charge before commencement of manufacturing.

Conduit layout as per switching arrangement shall be prepared by contractor and got approved from the Engineer-in-Charge before slab casting. At all expansion joints in the building suitable arrangement shall be ensured during conduiting.

Ratings, sizes and quantities shall be checked and considered for satisfactory operation of electrical system complete in all respect. Ratings, sizes and quantities mentioned in Bill of Quantities and drawings are indicative and minimum.

16. Conduits, Switchboards, Sockets to be provided on walls shall be recessed type unless specifically approved by Engineer-In-Charge.

Conduits on ceiling in existing system may be provided on surface and in new construction shall be recessed type.

17. All measuring and indicating instruments shall be protected through MCB's and isolating switches.
18. Breaker shall have LCD display to show the metering and protection parameters.
19. The firm shall deploy only licensed personnel as required under IE Rules, for execution of the electrical works. The firm shall be liable to submit the list of such

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personnel along with the attested copy of the licenses at the time of execution.

20. It is important that every equipment is tested fully before dispatch.
21. All materials for the work shall be supplied from approved list of manufacturer and any item, not covered in approved list, shall be supplied after getting approval from PMC/ Engineer- in-charge or his authorized representative.
22. Any materials brought for work which is not matching with specification will be rejected and the rejected materials shall be removed from site on the same day.
23. All fees payable to Electricity Board and Jammu Electrical Inspectorate and other local bodies shall be paid by the contractors and the same shall be reimbursed by department on production of documentary evidence.
24. Contractor shall obtain permit/approval from Competent Authority before commencement of work. All documents/drawings required for such permit/approval shall be prepared by the contractor.
25. Contractor shall have a valid "A" class contract licence with HT installation issued by Competent Authority.
26. Test certificates both type test and routine tests wherever required shall be furnished along with supply for all Electrical/Mechanical items.
27. TESTING/MEASURING/EQUIPMENTS
 - a) The agency shall have the following testing/measuring equipment in addition to standard tools.
 - i) Insulation Tester, 500V, 1000V, 5000V
 - ii) Earth tester with kit, 0, 10,100 ohms with selector switch
 - iii) Tong tester with (1) Ammeter 0-800 A with different ranges and selector switch.
 - iv) Voltmeter 0/300V/600V with different ranges and selector switches.
 - v) Phase sequence tester
 - vi) Multimeter/Avometer:-Digital to measure 0/10/100 mV, mA, ohm, Kilo ohm resistance.
 - vii) Frequency meter 45 to 55 Hz.
 - viii) Lux meter to measure upto 2000 lux with selector switches.
 - ix) Micrometer(digital)
 - x) Vernier Caliper(digital)
 - xi) Data to be furnished by the bidder after award of work.
28. The contractor shall submit following detail shop/fabrication/layout drawings, datasheets and calculations.
 - xii) Internal Electrical Works

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- Conduit layout with number of wires in each conduit, circuiting.
- Phase balancing calculation
- DB, SDB load calculation
- Cable and submain wire sizing
- Conduit layout and wiring diagram with equipment layout drawing for LAN, EPABX, PA, Projection and digital light control, stage lighting, conference system, etc.
- Electrical, UPS, Server, CCTV Room sizing
- xiii) Equipment datasheet, Catalogue and GA drawing
 - MDB
 - Floor DB
 - SDB
 - Light Fittings
 - Wires and cables
 - Switches and sockets
 - Conduit, Junction box
 - Lux level calculation
 - Bus duct and light fitting fixing arrangement
 - Earthing Layout
 - EPABX System, Data communication, PA, Projection, CCTV, digital light control, stage lighting, conference system, etc. and other Low voltage equipment
- xiv) External Illumination Works
 - External lighting layout
 - Circuiting and phase balancing of external illumination scheme
 - Power feeding arrangement
 - Lux level calculation based on final lighting fitting
 - Datasheet and catalogue of light fittings
 - Datasheet, catalogue structural calculation and GA /foundation drawings
- xv) Six Set of copies of installation, operation and maintenance manuals, descriptive bulletins etc., shall be furnished prior to / at the time of despatch of all materials. Manuals shall include the following aspects:
 - Outline dimension drawing showing relevant cross sectional views, earthing details and constructional features including foundation drawing.
 - Rated voltage, current, duty cycle and all other technical information which may be necessary for correct operation of the switchgear.
 - Storage details for prolonged duration.
 - Unpacking.
 - Handling at site.
 - Erection
 - Pre-commissioning test.
 - Operating procedure.
 - Maintenance procedures.
 - Precaution to be taken during operation and maintenance work.

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- List of spares for two years trouble free operation.
- Note:** For complete execution and satisfactory performance of installation, drawings / documents for all items whether or not mentioned above shall be submitted for approval.

29. Test Certificates

- i) Type/Routine test certificate for all types of equipment, cables, etc. included in the order.
- ii) Specified number of copies of the approved test certificates shall be furnished to the Engineer-in-Charge before dispatch of all materials / equipment and cables, etc.
- iii) On completion of work the contractor shall submit six sets of all drawings, manuals and test certificates, etc. for all equipment / materials ordered and as specified by the Engineer-in-Charge.

2.0 LT SWITCH GEAR PANEL (FOR BUILDING)

2.1. SCOPE

This specification covers manufacture, assembly factory test, supply, delivery, field test and installation of L.T. Switchgear panel of voltage not exceeding 1000 V AC complete in all respect with all equipment fittings and accessories for efficient and trouble free operation as required here under.

2.2. CODES & STANDARDS

The design, construction, manufacture and performance of equipment shall conform to latest applicable standards and comply with all currently applicable statutes, regulations and safety codes in the locality where the equipment shall be installed. Nothing in this specification shall be construed to relieve the BIDDER of this responsibility.

Equipment shall conform to the latest applicable Standards as mentioned. In case of conflict between the Standards and this specification, this specification shall override.

IS:60947 (Part 2&5), 1993 -Low voltage switchgear & control gears

IS:2147, 1966-Degree of protection

IS:60947 (Part 4, Sec.I),1993

BS:60947-4-1, 1992:IEC:158-Contactor for voltage not exceeding 1000V AC.

IS:375, 1993-Marking and arrangement of bus bars

IS:694, 1990 & IS:8130, 1984-PVC Insulated cables and aluminium conductor

IS:1248,1991-Direct acting electrical indicating instruments

IS:13703, 1991 -Low voltage fuses

IS:13118 (All parts), 1991 -Alternating current circuit breakers

IS:2705 (Part 1 to 4), 1992-Current transformers

IS:3156 (Part 1 to 3), 1992-Voltage transformers

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2.3. POWER SUPPLY SYSTEM

The incoming power supply shall be 415V, 3 phase, 4 wire, 50 Hz, effectively earthed AC system. The fault level for the switchgear shall be as indicated in BOQ and drawings.

Variation of voltage and frequency from their rated values shall be as per IE rules.

2.4. AMBIENT CONDITIONS

The following site conditions shall be considered for the design of panels:

Reference temperature : 45°C

2.5. SHEET METAL WORK

The switchgear frame shall be fabricated using suitable mild steel structural sections or pressed and shaped cold rolled sheet steel of thickness not less than 2.0 mm & all cable gland plate steel of thickness not less than 3.00 mm.

Frames shall be enclosed by sheet steel of thickness not less than 2 mm cold rolled, smoothly finished, levelled, and free from flaws. Doors and covers shall be made of sheet steel of thickness not less than 1.6mm cold rolled. Angle iron Stiffeners shall be provided wherever necessary.

All panel edges and door edges shall be reinforced against distortion by rolling, bending or by the addition of welded reinforcement members.

Cut-outs shall be true in shape and avoid sharp edges.

The complete structure shall be rigid, self-supporting, free from vibration, twists and bends.

2.6. PAINTING

All sheet steel work shall be phosphated in accordance with the following procedure and in accordance with applicable standards

Oil, grease and dust shall be thoroughly removed by hot emulsion cleaning.

Rust and scale shall be removed by pickling with dilute acid followed by washing with running water, rinsing with slightly alkaline hot water and drying.

After phosphating, thorough rinsing shall be carried out with clean water, followed by final rinsing with dilute dichromate solution and oven drying.

A smooth coat of powder coating of minimum 70 micron to be provided of approved colour.

Finished painted appearance of equipment shall present an aesthetically pleasing appearance like Siemens grey, free from dents and uneven surfaces.

2.7. CONSTRUCTIONAL FEATURES

Switchgear panel shall be of Form IV (Type – 4 and above):

- of the metal enclosed, indoor, floor mounted modular type
- made up of the requisite vertical sections
- of dust and vermin proof construction
- Provided with a degree of protection of IP-42 for indoor panels and IP 54 for outdoor feeder pillar.
- Easily extendable on both sides by the addition of vertical sections after removing the ends cover.
- Provided with a metal sill frame made of structural steel channel section properly drilled for mounting the Switchgear along with necessary mounting hardware. Hardware shall be zinc plated and passivated.
- With labels on the front indicating the switchgear designation.
- of uniform height of not more than 2400mm and operating handle of the highest unit shall be at a height not more than 1.7 mtr.
- of single front execution
- Provided with self-adhesive PU foam type/neoprene gaskets all-round the perimeter of adjacent panels, panel and base frame, removable covers and doors.
- Provided with aluminium bus bars running at the top, as required, all along the length of the switchgear in a separate sheet steel enclosure.
- Feeder pillars/kiosk shall be fabricated from 2.00 mm thick CRCA steel and conform to IP: 54 degree of protection.

Operating devices shall be incorporated only in the front of the Switchgear.

The switchgear shall be provided in distinct vertical sections each comprising:

- a) A completely metal enclosed bus bar compartment running horizontally.
- b) Individual feeder modules arranged in multi-tier formation. It is essential that the modules are integral multiples of the basic unit size to provide for flexibility in changes, if any, at site.
- c) Enclosed vertical bus bars serving all modules in the vertical section. For safety isolation of the vertical bus bars, insulating barrier with cut-outs shall be provided to allow the power stab contacts to engage with vertical bus bars.
- d) The cable alley shall be of adequate size.
- e) A horizontal separate enclosure for all auxiliary power and control buses, as required, shall be located so as to enable easy identification, maintenance and segregation from the main power buses. Tap-off connections from these buses shall be arranged separately for each vertical section.

Each vertical section shall be equipped with space heaters with thermostat and CFL lamp with power socket.

One metal sheet shall be provided between two adjacent vertical sections running to the full height of the switchgear except for the horizontal bus bar compartment. However, each shipping section shall have metal sheets at both ends.

All equipment associated with a single circuit shall be housed in a separate module compartment of the vertical section. The compartment shall be sheet steel enclosed on all sides and the rear, with the withdrawable units in position or removed, except on the cable alley side. A plate cover with a slot to permit wiring connections shall be provided on the side corresponding to the cable alley. The front of the compartment shall be provided with a hinged door.

For draw out type, ACB modules, only the handles of control and selector switches, push buttons, knobs and cut-outs for lamps and meters shall be arranged on the front doors of the respective compartments to permit operation without opening the door. On circuit breaker controlled circuits, protective relays shall be mounted on the front door of the compartment. All other equipment pertaining to a circuit shall be mounted on the withdrawable chassis. All cut-outs shall be provided with gaskets for the purpose of dust-proofing. Control circuit must have separate compartment and separated from power circuit.

Current transformers shall be mounted with suitable base and shall not be directly mounted on the buses. Current transformers on circuit breaker controlled circuits shall be mounted on the fixed portion of the compartment.

In breaker compartments, suitable barriers shall be placed between circuit breakers and all control, protective and indication circuit equipment including instrument transformers. External cable connections shall be carried out in separate cable compartments for power and control cables.

The withdrawal chassis shall move on suitable guides and on suitably plated steel or stainless steel rollers or balls to facilitate easy withdrawal.

Cable alleys shall be provided with suitable hinged doors. Adequate number of slotted cable support arms shall be provided for dressing the cables.

All doors shall be provided with concealed type hinges and captive screws with locking arrangement and suitably earthed with 2.5 sq. mm copper conductor flexible cable.

The withdrawable chassis housing circuit breakers shall be of the fully draw out type.

The withdrawable chassis housing feeder control and motor control equipment not incorporating circuit breakers shall be of the fully-draw out, or fixed type.

Interchangeability

All identical equipment and corresponding parts including chassis of draw out modules of the same size shall be fully interchangeable, without having to carry out modifications. For

trouble free interchangeability, the draw out arrangements shall be designed such that normal dimensional variations are taken care of by self-aligning feature of the modules.

Components and equipment that are not fully interchangeable are liable for rejection. BIDDER shall replace all such equipment by fully interchangeable equipment at his cost.

The draw-out contacts shall be only between copper/copper alloy faces, which are silver or tinned.

Switchgear shall be designed in such a way that all component equipment and bus-bars operate satisfactorily without exceeding their respective maximum permissible rise in temperature under ambient temperature conditions prevailing within the switchgear cubicle, with reference ambient temperature outside the switchgear cubicles.

All dummy cubicles necessary to meet the requirements of this specification shall be included in the Bidder's scope.

No equipment/devices associated with a particular circuit shall be mounted in any other circuit module.

2.8. MAIN BUSES & TAPE

Switchgear shall be provided with three phase bus bars and neutral.

Bus bars shall be of uniform cross section throughout the length of the switchgear

The bus bars shall be made of high conductivity electrolytic Aluminium, suitable to withstand a fault current as specified in BOQ and SLD.

Bus bars shall be provided with at least the minimum clearances in air as per applicable standards for a 500V, 3 phase, 4 wire system.

All bus-bars, bus-taps shall be insulated with close fitting sleeve of hard, smooth, dust and dirt free plastic insulation of high dielectric strength (450 V/mil) to provide a permanent high dielectric non-ageing and non-tracking protection; impervious to water, tropical conditions and fungi. The insulation shall be non-inflammable and self-extinguishing and in fast colours to indicate phases. The dielectric strength and properties shall hold good for the permissible temperature rise.

Bus bar shall be adequately supported and braced to withstand the stresses due to the specified short circuit currents for the associated switchgear. Bus bar supports shall be made of glass reinforced moulded plastic material (DMC/SMC).

Separate supports shall be provided for each phase of the bus bars. If a common support is provided for all three phases, antitracking barriers shall be incorporated.

Bus bar joints shall be complete with high tensile steel bolts, washers and nuts. Bus bars shall be thoroughly cleaned at the joint locations and suitable contact grease shall be applied just before making a joint.

Auxiliary Buses

Auxiliary buses for control power supply, space heater power supply or any other specified service shall be provided. These buses shall be insulated, adequately supported and sized to suit specific requirements. The material of control power supply buses shall be electrolytic copper. The material for space heater power supply buses shall be same as that for the main power buses. Supply transformer(s), auxiliary bus bars and necessary connections to the supply transformers and associated circuits shall be in the Bidder's scope.

2.9. AIR CIRCUIT BREAKERS (ACB)

The ACBs shall comply to IS/ IEC 60947 Part I & II and shall be suitable for operation on 415 Volts, 50 Hz 3 Phase systems.

The circuit breakers shall be for continuous rating and service short Circuit Breaking capacity (Ics) shall be equal to the Ultimate breaking capacity (Icu) and short circuit withstand values (Icw) for 1 sec.

The ACB should be designed at an ambient temperature of 45 Deg C. However there should be no de rating of ACB at inside panel temperature of 50 deg C.

The breaker shall comply with Isolation function requirements of IEC 60947, Part-II, section 7.1.2 and shall be clearly marked as "Suitable for Isolation/ Disconnection" to ensure safety of operating personnel. The ACB shall have rated operational voltage = 415 V, rated insulation voltage = 1000 V and rated impulse withstand voltage = 12KV for main circuit and utilization category 'B'.

Main current carrying parts shall be silver plated and suitable arcing contacts with proper arc chutes shall be provided with to protect the main contacts. For ease of maintenance it shall be possible to remove Arc Chutes preferably without using any tools. The ACB shall not close if any of the Arc Chutes are missing

The ACB shall be provided with a door interlock. i.e. door should not be open when circuit breaker is closed and breaker should not be closed when door is open

All 4 pole ACBs should have fully Rated Neutral Pole.

2.9.1. Circuit Breakers

Circuit breaker shall be:

- of the air break type

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- provided with mechanically operated targets to show 'Open', 'Closed', 'Service' and 'Test' positions of the circuit breaker.
- provided with mechanically operated, red 'trip' push button, shrouded to prevent accidental operation.
- provided with locking facilities in the 'Service', 'Test', and 'Isolated', positions. In test position the breaker shall be tested without energising the power circuits. The breaker shall remain fully housed inside the compartment in the test position.
- provided with minimum 4 NO and 4 NC potential free auxiliary contacts, rated 10A at 240V A.C. The cubicle compartment of the ACB in the LT panel shall be provided with 'red', 'green' and 'amber' indicating lamps to show 'closed', 'open' and 'Auto-trip' conditions of the circuit breaker when breaker operation is controlled by a control switch.
- The ACB panel shall be provided with electrical / mechanical indicator (ready to close) on the front facia to facilitate safety of the operator before closing the ACB.
- Circuit breakers shall be provided with the following interlocks.
- It shall not be possible to plug-in a closed circuit breaker, or to draw out a circuit breaker in the closed position.
- It shall not be possible to operate a circuit breaker unless it is in the fully plugged-in, test, or fully isolated position.
- Circuit breaker closing and trip coils shall be rated for satisfactory operation on a control supply system indicated of 240V AC.
- Closing and trip coil shall operate satisfactorily under the following conditions of supply voltage variation:
 - Closing coils-85% to 110% of rated voltage
 - Trip coils - 70% to 110% of rated voltage

2.9.2. Operating Mechanism

- The spring charging motor shall be rated at 240V AC.
- The closing action of the circuit breaker shall charge the tripping spring ready for tripping.
- Speed of closing of contacts shall be independent of the speed with which the handle is operated.
- All stored energy mechanisms shall be provided with mechanical indicators to show the 'charged' and 'discharged' conditions of the spring.
- Circuit breakers provided with stored energy operating mechanisms shall be provided with the following interlocks.
- The circuit breaker shall not close unless the spring is fully charged.
- Shocks, vibrations, or failure of springs shall not operate the breaker or prevent intended tripping.
- Mechanical contact wear indicator shall be mounted directly on the moving contacts ton indicates the degree of erosion of the contacts.

2.9.3. Protection coordination

The Microprocessor based release shall be an integral part of all ACB provided on circuit breaker for short circuit, over load, instantaneous and earth fault protection with adjustable current & time settings along with LED / LCD display for displaying of instantaneous value of 3 phases, neutral currents.

The release shall incorporate microprocessor to offer accurate, faster and versatile protection with complete flexibility and shall offer complete over current protection to the electrical system in the following zones.

- i) Overload (Phase & Neutral) or long time protection with adjustable time delay
- ii) Short circuit or short time protection with adjustable time delay.
- iii) Instantaneous protection with no intentional delay.
- iv) Ground fault protection with time delay.
- v) Release shall have facility of online changing of current and overload setting.
- vi) For all TP ACBs used in 3 phase 4 wire system, Neutral CT shall be provided to avoid nuisance tripping due to unbalance loads.

The release should provide local indication of actual %age loading of individual phase at any instant. The release should be able to communicate on MODBUS RTU protocol using inbuilt RS485 port and shall be integral part of supply with trip unit. It shall be possible to upgrade protection release for Power metering i.e. display of all electrical parameters like Current, Voltage, Frequency, Power Factor, Active & reactive Power & energies, Maximum Demand etc.

Release should be able to capture fault current on which ACB has tripped. The last 5 trips and 10 alarms shall be stored in memory with the date & time stamping along with type of fault and alarm.

The microprocessor based trip units shall be provided with following features also:-

1. Designed to withstand tough industrial environments i.e. high ambient temperatures, switching surges, electromagnetic interferences.
2. Reliably self-powered by built in current transformers.
3. LED display indication of each of over load, short circuit and earth fault.
4. Testing of release shall be possible without tripping the breaker through integrated test button which shall check the healthiness of trip unit electronics and associated CT circuits without tripping the breakers.
5. LED alarm display for microprocessor fault.

All ACB's must be rated ambient temp 45°C.

Mechanical operation counter to be provided for all ACBs

The short circuit breaking capacity and operation of ACB shall be supported by test certificates of neutral independent authority (CPRI / ERDA). Manufacturers should submit Combined Sequence test certificate as per IS/IEC 60947-II

2.10. MOULDED CASE CIRCUIT BREAKER (MCCB)

The Moulded case circuit breaker (MCCB) shall conform to latest IEC-60 947-2/ IS13947- 2. The circuit breaker shall comply with the isolation function requirement of IEC 60 947-2 section 7.1.2 to marked as suitable for isolation/ disconnection to facilitate safety of operating personnel while the breaker is in use.

Moulded case circuit breakers shall be fixed type, Thermal Magnetic or microprocessor release having adjustable O/L & fixed S/C settings with trip-free, manually closing mechanism, accommodated in a Moulded housing of robust and vermin-proof construction matching with switchboards.

MCCBs shall be provided with Microprocessor based release should have inbuilt Earth Fault protection. All TP MCCBs with Microprocessor release / thermomagnetic should be provided with external Neutral CT to avoid nuisance tripping due to unbalance loads and Neutral Overload protection.

MCCBs used in APFC Panels shall be Thermal Magnetic Type with adjustable O/L & adjustable S/C protections.

All MCCBs shall be designed and tested to IS /IEC- 60947 Part II to breakers shall be provided with an inverse time delay electronic over current trip device. The trip device shall be direct acting.

The MCCB shall have rated operating voltage = 415V with Rated Insulation voltage = 750V and rated impulse withstand voltage = 8KV.

MCCB shall be provided with double Insulation between front cover & internal power circuits to avoid any accidental contact with live current carrying path with the front cover open.

The tripping devices shall be ambient temperature compensated type. The insulating case and cover shall be made of high strength heat resistant and flame retardant thermosetting insulating material.

They shall have line load reversibility. 3-phase breakers shall be designed to break all the poles simultaneously and they shall have a single mechanism.

They shall have auxiliaries and accessories whenever required for signalling, interlocking, shunt trips, under voltage release, castle lock, etc.

All the circuit breakers used shall have guaranteed breaking capacities sufficient for the maximum short circuit duties that could possibly be imposed on the different breakers. The MCCBs fixed in main switchboard shall have breaking capacity as indicated in BOQ & SLD.

The MCCB shall have a rated short circuit breaking capacity of not less than 35 kA at 415 volts AC or as specified in BOQ. MCCB shall have $I_{cs} = 100\% I_{cu}$ for the entire range as per BOQ and rated at ambient 45°C.

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The short circuit breaking capacity and operation of MCCB shall be supported by test certificates of neutral independent authority (CPRI / ERDA).

MCCB's shall be used with rotary handle and Copper terminal spreaders (above 63A), phase barrier and all terminals shall be shrouded to avoid direct contact.

2.11. MINIATURE CIRCUIT BREAKERS (MCB)

MCBs shall be hand operated, air break, quick make, quick break type conforming to applicable standards.

MCB shall be provided with overload/short-circuit protective device for protection under overload and short-circuit conditions. The minimum breaking capacity of MCBs shall be 10 kA r.m.s. at 415V AC. It shall comply to Class III energy limiting class.

MCB shall comply with IS – 8828 – 1996/IEC 898. MCB shall have minimum power loss (watts) per pole defined as per IS/IEC and the manufacturer shall publish the values.

The MCB housing shall be heat resistant and heavy a high impact strength. The terminal shall be protected against finger contact to IP 20 degree of protection.

All MCBs should have ON & OFF status indication on front facia.

2.11.1. Measuring Instruments, Metering & Protection

2.11.1.1. General

Direct reading electrical instruments shall be in conformity with IS-1248. The accuracy of all measuring instruments shall be as specified in the BOQ. The errors due to variations in temperature shall be limited to a minimum. The meter shall be suitable for continuous operation between -10 degree Centigrade to + 50 degree Centigrade. All meters shall be of flush mounting type of 96mm square pattern. The meter shall be enclosed in a dust tight housing. The housing shall be of steel or phenolic mould. The design and manufacture of the meters shall ensure the prevention of fogging of instruments glass. Instruments meters shall be sealed in such a way that access to the measuring element and to the accessories within the case shall not be possible without removal of the seal.

The specifications herein after laid down shall also cover all the meters, instrument and protective devices required for the electrical work. The ratings type and quantity of meters, instruments and protective devices shall be as per BOQ.

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2.11.1.2. **Digital Ammeters**

Ammeters shall be digital type 7 segment LED display. The ammeters shall be capable of carrying sustained overloads during fault conditions without damage or loss of accuracy.

2.11.1.3. **Digital Voltmeters**

Voltmeter shall be digital type 7 segment LED display. The voltmeter shall be provided with MCB of suitable capacity.

2.11.1.4. **Multi Function Meter**

It shall be suitable for measuring, saving and supervision of electrical parameters in low and medium voltage mains.

The Meter shall have following Features.

- Clear LCD Display
- Visualization of all the three phase grid parameters like V, I, PF, Active & reactive power & energies, Percentage loading, Maximum demand etc with Min/Max/Measured/average.
- The meter shall have communication port of RS 485 and shall be compatible with SCADA System.
- It shall come along with the software for data acquisition.
- It shall be compatible with PLC.
- The accuracy class shall not be more than 0.5%

2.11.1.5. **Current Transformers**

Current transformers shall be in conformity with IS: 2705 (part I,II& III) in all respects. All current transformers used for medium voltage applications shall be rated for 1kv. Current transformers shall have rated primary current, rated burden and class of accuracy as required. However, the rated secondary current shall be 5A unless otherwise specified.

Current transformers shall be capable of withstanding without damage, magnetic and thermal stresses due to short circuit fault of the system. Terminals of the current transformers shall be marked permanently for easy identification of poles. Separate CT shall be provided for measuring instruments and protection relays. Each C.T. shall be provided with rating plate.

Current transformers shall be mounted such that they are easily accessible for inspection, maintenance and replacement. The wiring for CT's shall be done with minimum 2.5 sq. mm copper conductor, ZHFR wires with proper termination lugs and wiring shall be bunched with cable straps and fixed to the panel structure in a neat manner.

2.11.2. **Miscellaneous**

Control switches shall be of the heavy duty rotary type with escutcheon plates clearly marked to show the operating position. They shall be semi-flush mounting with only the front plate and operating handle projecting.

Indicating lamps shall be of the LED type.

Push buttons shall be of the momentary contact, push to actuate type fitted with self-reset contacts & provided with integral escutcheon plates marked with its functions.

2.11.3. **Cable Terminations**

Cable entries and terminals shall be provided in the Distribution Boards to suit the number, type and size of aluminium conductor power cables and copper conductor control cable specified.

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

Barriers or shrouds shall be provided to permit safe working at the terminals of one circuit without accidentally touching that of another live circuit.

Cable risers shall be adequately supported to withstand the effects of rated short circuit currents without damage and without causing secondary faults.

2.11.4. **Labels**

Labels shall be anodised aluminum with white engraving on black background shall be provided for each incoming and outgoing feeder of Distribution Boards. Labels shall be properly secured with fasteners.

2.11.5. **Test At Manufactures Work**

All routine tests specified in IS: 8623-1977 shall be carried out and test certificates produced to the Department.

Type test for one LT panel as per department's choice shall be arranged by the contractor which shall be witnessed by department officials/authorised agency. Nothing extra shall be paid for this type test.

2.11.6. **Testing and Commissioning**

Commissioning checks and tests shall be included all wiring checks and checking up of connections. Primary/secondary injection tests for the relays adjustment/setting shall be done before commissioning in addition to routine meggar test. Checks and tests shall include the following.

- a) Operation checks and lubrication of all moving parts.
- b) Interlocking function check.
- c) Continuity checks of wires, fuses etc. as required.
- d) Insulation test : Testing shall be as per CPWD specification.
- e) Trip tests & protection gear test.

2.12. **PUSH BUTTONS**

Push buttons shall be:

- of the momentary contact, push to actuate type rated to carry 10A at 240V AC and 1A (inductive breaking) at 220V DC.
- fitted with self reset, 2 NO and 2 NC contacts.
- provided with integral escutcheon plates marked with its function.

'Start', 'Open', 'Close' push buttons shall be green in colour.

'Stop' push buttons shall be red in colour.

All other push buttons shall be black in colour.

Emergency stop' push buttons shall be of the lockable in the pushed position type and shall be shrouded to prevent accidental operation. Key shall not be required for the operation of the push button.

2.13. **INTERNAL WIRING**

Wiring inside the switchgear/panel shall be carried out with 1.1 kV grade, zero halogen FR stranded conductor wires. Minimum size of conductor for power circuits is 4 sq mm copper. Control circuits shall be wired with copper conductor of at least 2.5 sq. mm for CT circuits and 1.5 sq.mm for other circuits.

Engraved identification ferrules, marked to correspond with the wiring diagrams shall be fitted to each wire. Ferrules shall be of yellow colour with black lettering.

Wires forming part of a tripping circuit of circuit breaker shall be provided with an additional red ferrule marked 'T'.

Spare auxiliary contacts of all equipment forming part of the switchgear shall be wired up to the terminal blocks.

Spare and unassigned modules shall be complete with internal wiring.

Wiring shall be terminated on screw less terminal blocks upto 4 sq. mm size.

Not more than two connections shall be made on any one terminal.

2.14. **TERMINAL BLOCKS**

Terminals for circuits with voltage exceeding 125 V shall be shrouded. Terminal blocks shall be grouped depending on circuit voltage. Different voltage groups of terminal blocks shall be segregated.

Terminal blocks shall be adequately rated to carry the current of the associated circuit. Minimum rating of the terminal block is 10A.

Terminals shall be numbered for identification.

Terminal blocks shall be arranged with at least 100mm clearance between two sets of terminal blocks.

Screw less, cage clamp type terminal blocks shall be used for cable sizes upto 6 sq. mm. Screw type terminal blocks shall be used for cables above 6 sq. mm.

2.15. **EARTHING**

Each Panel shall be provided with an earth bus bar running along the entire length of the board. Material and size of the earth bus bar shall be as per IS. At either end of the earth bus, one (1) clamp type terminal with nuts, bolts and washers shall be provided for bolting the earthing conductor of size and material indicated in data sheets. In case the earth bus is provided near top of the switchgear, one down comer at either end shall be provided for connection to the earthing conductor.

Earth bus bars shall be supported at suitable intervals.

Positive connection between all the frames of equipment mounted in the switchboard and earth bus bar shall be provided by using insulated copper wires/bare bus bars of cross section equal to that of the bus bar, or equal to half the size of circuit load current carrying conductor, whichever is smaller.

All instrument and relay cases shall be connected to the earth bus bar using 650 V grade, 2.5 sq. mm stranded, copper ZHFR, earthing conductor.

All tests shall be carried out on all associated equipment as per relevant standards.

Certified copies of all test certificates shall be submitted for the approval of Engineer-in-Charge before dispatch of the switchgear.

Routine test shall be witnessed at the manufacturer's works by the representative of Engineer-in-charge.

DATA SHEET FOR LT PANELS**A) SWITCHGEAR PARTICULARS**

1. DESIGNATION :
2. BUS BAR MATERIAL : ALUMINIUM
3. TP/TPN : 4 POLE/TPN
4. TYPE : INDOOR
5. CABLE ENTRY : FROM TOP/BOTTOM

B) SWITCHGEAR AND BUS BAR RATING

1. SUPPLY SYSTEM : 415V, 3-phase, 4W, 50HZ EFFECTIVELY EARTHED
2. MAX SYSTEM VOLTAGE : 433 ± 10%
3. BUS BAR RATING : AS PER BOQ/SLD
4. ONE MINUTE POWER

FREQUENCY VOLTAGE

- A. POWER CIRCUITS : 2500 V
- B. CONTROL CIRCUITS : 1500 V
- C. AUX. CIRCUITS : 2000 V

CONNECTED TO SECONDARY OF CTS

5. REFERENCE AMBIENT TEMPERATURE : 45°C
6. MAX. TEMPERATURE OF BUS BARS AND DROPPERS : 85°C
7. SHORT CIRCUIT WITHSTAND
 - A) SHORT TIME (1 SEC) : 50/35 KA (RMS) as required.

C) SWITCHGEAR CONSTRUCTION REQUIREMENTS

1. THICKNESS OF SHEET STEEL (COLD ROLLED)
 - A. FRAME : 2.0 MM
 - B. DOORS : 1.6 MM
 - C. COVERS : 1.6 MM
2. DEGREE OF PROTECTION : IP-42 OF IS-2147 as required as per BOQ
3. COLOUR FINISH AS PER IS-5)
 - A. INTERIOR : GLOSSY WHITE
 - B. EXTERIOR : LIGHT GREY, SEMI-GLOSSY, POWDER COATING.
4. CLEARANCES IN AIR OF LIVE PARTS
 - A. PHASE TO PHASE : 32.0 MM

- B. PHASE TO EARTH : 26.0 MM
C. PHASE TO NEUTRAL : 26.0MM

LIST OF APPROVED MAKES

LT Panels	ADVANCE PANELS & SWITCHGEAR / SPC ELECTROTECH LTD. / SIEMENS / SCHNEIDER/ ELECTRICFIELD /ANY OTHER MAKE TYPE TESTED BY CPRI
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**Deputy General Manager,
Unit 4, JKPCCLtd.
Jammu.**

Sig. Of Bidder

QUALIFICATION FORMS

APPLICATION FORM - 1
General Information

PAGE ____ OF ____ PAGES

1.	Name of firm	
2.	Head office address	
3.	Telephone Fax Email	
4.	Contact Person(s) Name Title/Position	
5.	Place of incorporation / registration Date	
6.	Legal status of firm	
7.	Field of specialty in business	
8.	Number of persons	

Date _____

Signature _____

Sig. Of Bidder

Name of the Applicant

General Work-Experience:

1. Annual Turnover

The information supplied should be the annual turnover of the Applicant (separately for each partner of a joint venture/ each member of a consortium), in terms of the amounts paid by the clients for each year in the last five (5) years. Unless specifically asked for, Applicants need not to enclose testimonials, certificates, and publicity material with their applications; they will not be taken into account in the evaluation of qualifications.

Fiscal Year	Turnover (unit)
1.	
2.	
3.	

Fiscal year begins on _____ in each calendar year.

2. Selection Criteria:

Experience as Contractor (relevant categories of works) completed in the last Five(5) years to demonstrate the Applicant's business experience should be listed in separate sheets in a form as shown below:

No.	Name of Project	Role of the Applicant (sole contractor, or partner in JV/Consortium)
1		
2		
3		

Date _____ Signature _____

NB : To please attach detailed data sheet wherever possible.

Sig. Of Bidder

Current Contract Commitments/ Works in Progress

Name of Applicant

Applicants shall provide detail about current List of projects on which he is working

Name of contract	Description of works	Stipulated date of completion
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Date _____

Signature

Sig. Of Bidder

AFFIDAVIT

1. I, the undersigned, do hereby certify that all the statements made in the required statements are true & correct.
2. The undersigned also hereby certifies that neither our firms M/s _____ have abandoned any work in JKPCC Ltd. or any other Department nor any contract awarded to us for such works have been rescinded, during last five years prior to the date of this bid.
3. The undersigned hereby authorizes (s) and request (s) any bank, person, firm or corporation to furnish pertinent information deemed necessary & requested by the department to verify this statement or regarding any (our) competence and general reputation.
4. The undersigned understands and agrees that further qualifying information may be requested and agrees to furnish any such information at the request of the department/project implementing authority.

(Signed by an Authorized Officer of firm)

Title of Officer

(Name Firm)

(Date)

TENDER PROFORMA OF BID

Managing Director,
JKPCC Ltd.,
Jammu.

**Sub: Design, Supply, Installation, Testing & Commissioning of LT Floor Panel for Building of New
Legislature Complex, Jammu.**

Sir,

This has reference to above mentioned NIT and our offer against the same is as under:

1. I/We hereby affirm that I/We have read and have fully understood all terms, conditions and technical specifications of tender document.
2. I/We hereby offer to supply genuine goods and material at the rates and quantities as described in our subject offer and shall execute the work(s) truly and faithfully within the time specified and set forth in the aforesaid offer. The goods and material to be supplied will be of the quality answerable in every respect with our offer / tender quoted above.
3. I/We shall be responsible for all complaints as regard the quality of material and all material and equipment shall comply in all respects with the requirement of quoted standard specifications.
4. I/We do hereby certify that the material and equipment offered are free from legal encumbrances and any claim regarding infringement and any patent of country of origin or India and shall be defended by us at our own cost and damages/ cost, if forwarded against purchaser in such a suits shall be borne by us.
5. I/We shall be hereby responsible for all complaints as regards quality of the material/ bad workmanship and for all such complaints the decision of the Corporation will be final and binding on us.
6. I/we enclosed a DD No. : _____ dt: _____ for the prescribed amount of Rs: _____ (Rs: _____) drawn in favour of _____ "as Cost of Tender Document and CDR/FDR: _____ dt: _____ for the prescribed amount of Rs: _____ (Rs: _____) drawn in favour of _____ "as earnest money and as required in terms of tender specification. I/we fully understand that in the event of my / our tender being accepted, the earnest money shall be returned back to me after successful completion of the work.
7. I/we shall have no claims to the refund of the earnest money prescribed against this tender in the event of my / our non-compliance of the work order, provided such order is placed within the period of validity of my / our tender as indicated in paragraph 10 below.
8. I/we further understand that my earnest money will stand forfeited even if I withdraw my tender at any stage during the currency of the period of validity.
9. My/our tender shall remain valid for a period of 90 days from the date of opening of the tender against the **NIT No:-E-NIT No. 04 of 2018-19.**
10. My/our tender along with the terms and conditions with relevant columns and annexure duly filled in under my / our attestation and with each page of the tender papers including the enclosed terms and conditions signed by me / us (in the capacity of sole owner / general or special / attorney, in proof of which power of attorney is attached) is submitted for your favorable consideration.
11. I/we have read the enclosed terms and conditions carefully and have signed the same in token of their absolute and unqualified acceptance. My/our tender constitute a "firm" offer under the J&K contract Act and is open to an acceptance, in whole or in part. My/our offer, if accepted on the attached terms and conditions will constitute a legal binding contract and shall operate as contract as defined in the J&K Contract Act and the Sales of Goods Act.
12. I/We understand that Managing Director, JKPCC Ltd., reserves the right to accept or reject the tender without giving any reason thereof.

Thanking you,

Yours faithfully

Signature

Name & Full address of tenderer with stamp

Place

Date.....

Sig. Of Bidder

**Bid Security Forms
Bank Guarantee**

Date: _____

(Name of Contract)

To: (Name and address of Employer)

WHEREAS (name of Bidder) (hereinafter called "the Bidder") has submitted its Bid dated (date of bid) for the performance of the above-named Contract (hereinafter called "the Bid")

KNOW ALL PERSONS by these present that WE (name of Bank) of (address of bank) (hereinafter called "the Bank"), are bound unto (name of Employer)(hereinafter called "the Employer") for the sum of: (amount), for which payment well and truly to be made to the said Employer, the Bank binds itself, its successors and assigns by these presents.

THE CONDITIONS of this obligation are as follows:

1. If the Bidder withdraws its Bid during the period of bid validity specified by the Bidder in the Bid Form, or adopts corrupt and fraudulent practices.
2. If the Bidder, having been notified of the acceptance of its Bid by the Employer during the period of bid validity
 - a) Fails or refuses to sign the Contract Agreement when required, or
 - b) Fails or refuses to submit the performance security in accordance with the bidding documents or.
 - c) Adopts corrupt or fraudulent practices.

WE undertake to pay to the Employer up to the above amount upon receipt of its first written demand, without the Employer having to substantiate its demand, provided that in its demand the Employer will mention that the amount claimed by it is due , owing to the occurrence of one or both of the two above-named CONDITIONS, and specifying the occurred condition or conditions.

This guarantee will remain in force up to and including (date 90 days after the period of bid validity), and any demand in respect thereof must reach the Bank not later than the above date.

For and on behalf of the Bank

in the capacity of Common Seal of the Bank

Sig. Of Bidder