Enclosure-II

(Latest Modified e-NIT 'Standard Format' for works of 'Tender Value' (Amount Put to Tender) above Rs 45.0 lakh)



Government of West Bengal

Irrigation & Waterways Directorate

Office of the Superintending Engineer

Mechanical & Electrical Circle

Jalasampad Bhawan (6th Floor),

Bidhannagar, Kolkata – 700 091 Phone No. 033-23218430

Fax No. 03323218430 E-Mail ID: semeciwd2017@gmail.com.

NOTICE INVITING e-TENDER

Memo No: 648/1T-6 Dated: 24.05.2018

e-NIT No. WBIW/SE/MEC/NIT-01(e)/2018-19

Encrypted electronic bids are hereby invited by the **Superintending Engineer, Mechanical & Electrical Circle, Irrigation & Waterways Directorate** on behalf of the Governor of the State of West Bengal through a single stage two part e-Procurement System; (Part I: Techno-commercial bid and Part II: Financial bid) for the 'LIST OF WORKS' given in the next page from eligible bonafide contractors/agencies/bidders having specified Pre-Qualification (eligibility) credential for execution of works of similar nature and desired financial capabilities. The technical bid in Part-I would require the bidder to qualify for the next phase of financial bid: Part-II, in which L1 bid price would determine the final selection and acceptance of a bidder for award of the Procurement of Goods & Works contract.

Intending contractors/bidders desirous of participating in this e-Tender are required to login to the Government of West Bengal e-Procurement website having URL https://wbtenders.gov.in and locate the instant tender by typing **WBIW/SE** in the search engine provided therein, or by logging-in using their assigned User ID and password. They may also visit the official website of the Irrigation & Waterways Department, Government of West Bengal www.wbiwd.gov.in to locate the same e-Tender by scrolling the "e-Procurement" link.

Contractors/bidders willing to take part in the e-Tender are required to obtain a valid Digital Signature- Certificate (DSC) from any of the authorized 'Certifying Authorities' (CA) under Controller of Certifying Authorities (CCA), Department of Electronics & Information Technology (DEIT), Govt. of India. (viz. NIC, n-Code Solution, Safescrypt, e-Mudhra Consumer Services Ltd, TCS, MTNL, IDRBT) or as notified by the CA /Finance Department, GoWB from time to time. DSC is given as a USB e-Token. After obtaining the Class 2 or Class 3 Digital Signature Certificate (DSC) from any of the above CA, they are required to register the fact of possessing the DSC through the registration system available in the above mentioned websites. A list of such licensed CAs' is also available in the CCA website cca.gov.in. The prospective contractors / bidders may contact the Departmental e-Tendering Help desk located at the 7th Floor of Jalasampad Bhavan at Bidhannagar, Sector-II, Kolkata, through e-mails irrigationhelpdesk@gmail.com and dvcsc6816@gmail.com or Telephone No. 033-23346098 and the State Level e-Procurement Help Desk located at the Ground Floor of Jalasampad Bhavan through e-mail wbehelpdesk@gmail.com or Ph:(033)-2334 5161 on any working day between 10.30AM-5.30PM for any query on e-Tendering procedure, obtaining DSC and free of cost training on e-Procurement procedure.

Intending contractors/bidders are required to download the e-Tender documents directly from either of the websites stated above. **This is the only mode for submission of a tender**. The interested bidders eligible for the tender are required to submit their bids through the e-Procurement System using their valid DSC e-Token with assigned PIN using login ID and password. Details of e-filing procedure for participating in e-tenders under State Government have also been explained in the 'Bidders' Manual', available in the Departmental website www.wbiwd.gov.in.

<u>Last date & time of submission of bid electronically, is on 15.06.2018 till 17.00 Hours IST.</u>

The applicant bidders/contractors are advised to carefully read all the 'Terms & Conditions' contained in this e-Notice Inviting Tender (e-NIT). He/she should particularly go through the minimum desired Pre-qualification (PQ) works credential & financial eligibility criteria and satisfy himself/herself of all the mandatory eligibility requirements. Bidders desirous of participating in the e-Tender should submit bids only if they fulfill the minimum PQ eligibility criteria and are in possession of all the required PQ Credential documents "in original" as these may be summoned by the Tendering authority for verification purposes.

All information published in the website consisting of e-NIT and other related documents uploaded by the selected bidder, WB Works Contract Form No. 2911(i)/2911(ii), Bill of Quantities (BOQ), EMD exemption order, if any, corrigenda and drawings etc. if any, shall form a part of the Agreement / contract document.

LIST OF WORKS

e-NIT No. WBIW/SE/MEC/NIT-01(e)/2018-19

Sl 10	Name of Work/Projector, Procure-ment except services	Designated Executive Engineer to function as DDO & EIC (In case of more than one is engaged, EIC to be decided by the Tender Accepting Authority)	Amount put to Tender (Tender Value) (Rs)	Earnest Money Deposit (Rs)	Time allowed for completion (In English Calendar days)	Source of Fund	Minimum eligibility criteria to match the Prequalification (PQ) works credential in terms of execution of similar previous works contract (*)	'Physical Milestones' for completion of each work within stipulated time (Refer to Clause 19 of the General Terms & Conditions)
1	2	3	4	5	6	7	8	9
1	Up gradation, Renovation and remodelling of Interior layout to South & West Block (Ground floor to 3rd floor) of Jalasampad Bhawan, Salt lake, (Electrical & Air- Conditioning System) Part A Electrical System.	Executive- Engineer, Metropolitan Electrical Division, I&WDte., Govt. of West Bengal	5,47,25,573.46	10,95,000.00	390 days	Core State Plan	Summary of minimum eligibility desired for technical qualification and for next stage of financial bid of this tender: A. Prequalification (PQ) Work Credential: i. Gross notional value of Completion Certificate (CC) of at least one 100% completed single project works contract (defined at clause 6) during the current PY and preceding five PY of similar nature (defined at clause 7) to the particular work in this e-NIT, for which the bidder intends to participate. ii. Gross notional value of that similar work cited by bidder as PQ work credential calculated by multiplying the gross final value of the work as per the CC with a factor as stated under Clause 7 I(a), should not be less than 30% of the estimated cost put to tender i.e. Rs. 164.17 Lakh of similar work for which the bidder chooses to participate. (The same shall be minimum 60% of the estimated cost put to tender i.e. Rs. 328.34 Lakh of similar work for Consortium/JV) iii. Finally, the PQ work criteria of similarity will be established, only if summation of values of any one of the following conglomerate of items, calculated from the uploaded BOQ of the bidders PQ work credential and further multiplying the sum by the factor stated in Clause 7 III and is greater than the monetary value of the corresponding conglomerate of items shown below: a. Major Item description as follows: (i) Supply & installation of electrical panels, cable and cable accessories referred in tender for bidder within 5 years, or (iii) Electrical wiring and accessories referred in tender for bidder within 5 years, and items as mentioned above should be more than equal to Rs. 70.00 lakh multiplied by multiplying index at clause 7 1(a) as applicable. B. Financial capability in preceding three FY within zone of last five FY: a) Average Gross Annual Turnover of the bidder except for Consortiums and Joint Venture Companies for three FYs within preceding five FY as stated in clause 7 V, should be at least of 30% of Amount put to Tender amounting to Rs. 492.51 Lakh. c) Bidder's Net	As per Work Programme prepared and uploaded by the Tender Inviting Authority in the form of Bar Chart or Networking Methods.

^(*) For Consortium & Joint Venture, additional criteria mentioned under Cl. 1 (Note), 4.2B (II) & Cl. 7 V of the General Terms & Conditions in this e-NIT may be referred.

(General Terms & Conditions of contract: 'Tender value' above Rs. 45.00 lakh upto Rs 5000.00 lakh)

1. Eligibility for participation in e-tender under National Competitive Bidding (NCB)

All Bonafide Indian contractors/Agencies/Organizations, Registered Companies/ Firms including Registered Partnership Firms, Proprietorship Firms, Registered Consortiums & valid 'Joint Ventures' and contractors/bidders of equivalent grade or class having Pre-Qualification (PQ) Credential in the Government of West Bengal, Union Government Departments/ Other State Government Departments/ Engineering Wings of Gol /IRCON/RVNL/NHPC, Autonomous Project Authority and other similar organizations of Gol and State Governments/PSU and Corporations of Government of India and other States having successfully completed at least one similar in nature project and not otherwise debarred are eligible to participate, subject to fulfilling other PQ eligibility criteria laid down in the subsequent paragraph.

Note: In case of a Consortium or Joint Venture, the maximum number of constituents shall be restricted up to 3 (Three), and each of the constituents must have at least 20% of tender value as their individual average of annual turnovers from business in any three financial years within the zone of last five financial years and also fulfilling other PQ criteria. Individual constituents of a Consortium or JV cannot form another Consortium or JV to bid in the same work of the e-NIT. Where ever a JV/Consortium has submitted a tender, any of its constituents shall not separately bid for the same serial of work in that e-NIT, or shall have no stake involving another bidder participating in the same serial of work.

2. Participation in more than one serial of work out of list of works published in the one e-NIT.

Any contractor/bidder may bid for any number of Serials of work in a particular e-NIT, if more than one work have been published in that e-NIT, subject to fulfillment of all of the following conditions:

- a. There should be full compatibility (matching between the technical PQ credential submitted by the bidder in the form of Credential Certificate (CC) along with other relevant documents as stated under Clause 4.2B III) relating to any work successfully completed by the bidder and technical PQ criteria specified in the e-NIT for any particular serial of works for which the bidder intends to bid. In other words, technical PQ credential certificate along with relevant documents submitted for any work should at the minimum; satisfy the technical PQ eligibility criteria specified for that work. Normally there should be separate CC along with relevant documents for each of the serial of works, the bidder intends to bid and the serial number relevant to the CC should be clearly written on the body of the CC and also on the other documents stated under Clause 4.2B III. However, the bidder will also reserve the right to submit one CC along with relevant documents for bidding in more than one serial of work, provided cumulative technical PQ credential of all such serials should be fulfilled by one single CC. In such case also, serial numbers of the relevant works for which the CC is submitted should be clearly written on the body of the CC by the bidder. Omission of serial numbers on the body of the CC and also on the other documents stated under Clause 4.2B III, in case of bidding for more than one serial will lead to rejection of all the bids.
- b. Average of gross annual turnover of the individual bidder/Organization/consortium or Joint Venture for any three financial years within preceding five financial years, as stated under Clause 7V, should not less than the summation of turnover requirements of the relevant individual serial of works for which the bidder intends to bid.

3. Pre-bid Meeting:

'Pre-Bid' meeting would be held in the office chamber of the Tender Inviting Authority (TIA) preferably on Day 4 or 5 from the date of publication of e-NIT, which shall be notified in the date schedule of e-NIT for all works having tender value above Rs. 4.00 crore in order to acclimatize the prospective contractors/bidders through an interactive open session, replying to their queries, and clear doubts in connection with the tendered work/s, if any. The minutes of this pre-bid meeting containing clarifications if any, would be uploaded by the TIA within 2 (two) working days in the designated tender folder in e-Procurement portal.

4. Submission of bid

4.1 General procedure for submission of e-bid

Bids are to be submitted electronically in the on-line mode through the e-Procurement portal www.wbtenders.gov.in. All documents uploaded by the Tender Inviting Authority forms an integral part of the works contract. Contractors/bidders are required to upload the entire tender documents along with all other relevant PQ Credential documents as asked for in the e-NIT, electronically, through the above portal within the stipulated date and time as notified in the e-NIT. Tenders are to be submitted in two parts/folders at the same time for each work, one being 'Technical Proposal' and the other 'Financial Proposal'. The contractor/bidder should carefully go through all the documents of the e-tender and upload the scanned copies of his/her/their original documents in 'Portable Document Format' (PDF) files in the designated links in the web portal as their 'Technical Bid'. He/she needs to fill up the financial offer/bid price /rates in percentage above or below or 'At-Par' in the downloaded BOQ of the work in the designated cell in 'Excel sheet only', and upload the same in the designated link of the portal as their 'Financial Bid'. Documents uploaded are virus

scanned and required to be digitally signed using their 'Digital Signature Certificates' (DSC). Contractors/bidders should especially take note of all the *Addenda* or *Corrigenda* notices related to the e-Tender and upload all of these documents forming a part of their e-bid as tender document. Documents digitally signed and uploaded in the e-Tender portal by the contractors/bidders containing requisite information & financial bid/rate comprising '*Technical bid*' and '*Financial bid*' are submitted concurrently, which cannot be changed after end date and time fixed for submission of the e-Tender. Extension of last date for e-bid submission or insertion of any of Addendum/Corrigendum, if unavoidable is to be notified as per Finance Department guidelines in the e-Procurement Portal, Departmental website, Newspapers and in Notice boards. Whenever any corrigendum is issued irrespective of the content (date corrigendum or otherwise), due date of submission of bid will be extended by 7 (seven) calendar days to be published before expiry of the last date for original validity period of bid submission. Extension of last date and time for bid submission by issuance of a Corrigendum shall not be treated as 2nd Call or Re-tender.

4.2 Technical Proposal

The Technical Proposal should contain scanned PDF files of all documents in the following standardised formats in two part covers or folders.

Cover No	Cover	Document Type	Descriptions
1	Pre-Qual/Technical	.pdf	NIT_Corrigendum
		.pdf	Agreement_2911
		.pdf	Forms
		.pdf/jpg/WinRAR	Drawings
		.pdf/jpg	BAR_CHART
2	Finance	.xls	BOQ

4.2 A Descriptions of Technical (Pre-Qual) Covers

- i. 'NIT_Corrigendum folder': e-Notice Inviting Tender is to be downloaded in entirely, digitally signed and uploaded during e-bid submission in "NIT_Corrigendum" folder. 'Corrigenda/Addenda' if published in connection with the NIT is to be digitally signed and uploaded in the 'NIT_Corrigendum' folder merged with e-NIT documents during e-bid submission.
- ii. 'Agreement_2911' folder: Contract /Agreement in WB Form No. 2911(ii) published in the e-Tender is to be downloaded digitally signed and uploaded during e-bid submission in Agreement_2911 folder.
- iii. **'Forms'** folder: Applications for e-Tender: vide self declaration format in specimen <u>Form-1</u>, Self declaration of bidder not having common interest as a different bidder organisation in any other work tendered under different serials of this particular e-NIT *vide specimen <u>Form-2</u>*, Power of Attorney to sign contract/Agreement on behalf of a Registered Company, Government Undertakings, autonomous organisations, *vide specimen <u>Form-3</u>*, and self declaration on antecedents and performance of the bidder in specimen <u>Form-4</u>. In case of consortiums and Joint Ventures, Power of Attorney of lead member to be submitted in Non-Judicial Stamp Paper in accordance with the provision of Registration Act, 1908 in Form-5. *All above forms are to be filled up completely, digitally signed and uploaded during bid submission in "Forms" folder.*
- iv. **Drawings folder:** The GAD/Plan/Map published in the e-Tender by the Tender Inviting Authority is to be downloaded by the bidder, digitally signed and again *uploaded during e-bid submission in "Drawings"* folder
- v. BAR_CHART folder: BAR CHART/Work Programmes in other Networking Methods prepared by TIA in pdf file defining the Physical Milestones of the construction period for implementation of the project is to be downloaded by the bidder digitally signed and again uploaded during e-bid submission in "BAR CHART" folder

4.2A.NOTE:

- i. Contractors/bidders are required to keep track in the e-Procurement website <u>www.wbtenders.gov.in</u> for all the Addenda or Corrigenda notices and other documents published in connection with a particular e-Tender and upload the same, digitally signed along with their e-bids. Tenders submitted without Addendum/Corrigendum are treated as incomplete and thereby liable for disqualification or rejection.
- ii. Form 1, Form 2, Form 4 are mandatory for all bidders. Form-1, Form-2, Form-3 (not applicable for proprietorship and partnership Firms and applicable for Companies/Corporation/Undertakings/autonomous bodies/ consortiums and JVs), Form 4 and Form-5 (only applicable for JV/Consortium) are taken from bidders by TIA as bidders self declarations' or undertakings. These formats are specimens or samples only and deviation from specimen format is not a sufficient ground for rejection of the bid. Relevant blank Forms are to be firstly downloaded by the bidders from the NIT in e-Procurement portal, filled up completely and again uploaded with their electronic bid.

4.2 B. My Document [OID* Cover]:

It is desired that PDF files of all other original documents in support of their eligibility and PQ credential shall have to be submitted under the OID cover folders as detailed below:

My Document Format for uploading in OID folder:

	My Document Format for uploading in OID folder:-				
SI. No.	Category	Sub-category	Sub-category description	Remarks if any	
I	Certificates	1. certificates.pdf 2. GST_registration_ certificates.pdf	 Latest Professional Tax Payment Certificate (PTPC) or, PT deposit challan for current financial year or Government Order for exemption in other States where ever applicable. Valid PAN Card in the name of bidder/organisation Income Tax Return of current Assessment year or, IT Return of immediate preceding Assessment year whichever latest available. Valid GSTIN under GST Act & Rules 	Refer to Clause 4.2C(I) for details	
II	Company Details	companydetails.pdf 1 companydetails.pdf 2	 For Proprietorship Firms, Partnership Firms, Registered Companies, Registered Cooperative Societies, valid Joint Venture or Consortiums Valid Trade License/ acknowledgement or Receipt of application for Trade License/ Revalidation OTHER REQUIREMENTS:- For Partnership Firms: Legally valid Partnership Deed, Form-VIII/ Memorandum of Registration of Registrar of Firms For Companies: Incorporation Certificate, Memorandum of Articles of ROC, List of current owners/ Directors/Board Members For State Registered Co-operative Societies: Society Registration certificate from ARCS of the State, Society by-Laws, latest available Auditor's Report of Directorate of Co-operative Audit within proceeding five years as per Societies Act & Rules For legally constituted Consortiums/ Joint Venture of Firms/ Companies: Registered MoU or Agreement for Consortium /JV, Registration under ACRS/ROC in addition to satisfying requirements stated earlier for individual constituent Firms/Companies forming the Consortium/JV 	Refer to Clause 4.2C(II) for details	
III	work	Credential pdf 1 Credential pdf 2	 BOQ/SoR and Work Order/ Award of Contract of LOA/LOI duly authenticated by issuing authority. Pre-Qualification (PQ) Work credential of one 100% completed work as desired in the NIT as the Credential Certificate (CC) duly authenticated by competent authority. 	Refer to Clause 4.2C(III) for details	
IV	Financial Information	 P/L and audited Balance sheet for year -1.pdf2 P/L and audited Balance sheet for year-2.pdf3 P/L and audited Balance sheet for year-3.pdf4. 	1-3 Profit & Loss accounts and audited balance sheets along with relevant annexures containing the designated Forms 3CA/3CB/3CD, as applicable under IT Act, in the name of the bidder for any three financial years within the zone of preceding five financial years from date of publication of e-NIT	Refer to Clause 4.2C(IV) for details	

^{*} OID denotes Other Important Documents.

Note:

i. It is desirable but not mandatory that all documents stated above in PDF files shall be uploaded by bidders only in specified designated folders. No off-line document will be accepted and considered during tender evaluation stage from bidders before publishing result of final selection of L1 by publication of FBE sheet. Verification of authenticity of bid documents during bid evaluation by TEC/HTEC may be undertaken from bidders or directly from PQ Credential issuing authority.

- ii. Validity of documents submitted by bidder shall stand determined on the date of publication of tender notice (e-Notice Inviting Tender)
- **4.2 C(I)** Certificate/s: The documents mentioned below under Serial a, b & c are to be uploaded as 'PDF' files in Certificate.pdf1 (name of the file should be "certificates.pdf")

The document mentioned under SI. d below is to be uploaded in GST Registration Certificate.pdf file.

- a. Latest available Professional Tax Payment Certificate (PTPC) or the PT payment challan/ receipt for current financial year/Waiver Order of competent authority in other States if applicable.
- b. Valid PAN Card of the bidder/s are required;
- c. Income Tax Return of current Assessment Year or, IT Return of immediate preceding Assessment year under IT Act & Rules, whichever latest available with the bidder.
- d. Valid 15 digit Goods and Service Tax payer Identification Number (GSTIN) as per GST Act, 2017 & Rules of the bidder to be uploaded *in 'GST registration certificate pdf'*.
- **4.2C(II)** All documents mentioned in tabular format under Clause 4.2B and also detailed below should be uploaded during electronic bid submission in *PDF* files with the *name of file should be "companydetails.pdf1/2"*
 - i. For Partnership Firms: Documents of Registration of Partnership Firms in the certified copy of 'Form No. VIII,' issued under Indian Partnership Act, 1932 (Act-IX of 1932) by the Registrar of Firms. In case a Partnership Firm is yet to receive Form No. VIII, a "Memorandum" issued by the Registrar of Firms may also be accepted.
- ii. For Companies: Incorporation Certificate, valid Trade License or acknowledgement of issuing authority of receipt of application for Trade License / renewal, 'Memorandum of Articles' registered under the Registrar of Companies (ROC) under the Indian Companies Act, List of owners/ Directors/Board Members are to be uploaded with the e-bid.
- iii. For State Registered Co-operative Societies:
 - a. Society Registration certificate from ARCS (Assistant Registrar of Co-operative Societies, GoWB) and By-Laws for Cooperative Societies under West Bengal Co-operative Societies Act, 2006 and Rules, 2011 and all amendments.
 - b. Latest Auditor's Report of Directorate of Co-operative Audit under Department of Co-operative, Government of West Bengal within preceding five financial years as per Societies Act & Rules.
- iv. For Consortiums or Joint Ventures formed by Organisations/ Firms or Companies:

Registered Agreement/Memorandum of Understanding, and deed of Consortium formed out of Proprietorship and /Partnership Firms, and documents of Registration of Partnership Firms in the certified copy of 'Form No. VIII,' issued under Indian Partnership Act, 1932 (Act-IX of 1932) by the Registrar of Firms.

For Consortiums/Joint Ventures formed by individual Companies, Memorandum of Understanding/ Agreement of Consortium or JV. In a Joint Venture all documents are to be mandatorily signed by all constituents of that JV. The lead member of the Consortium/Joint Venture of Companies should be clearly declared in a registered Non Judicial Stamp paper of appropriate value during submission of e-bid in specimen Form-4 inside 'Forms' folder.

Any change in the constitution of the Consortium or any of its constituent Firms should also be intimated to the office of the Registrar of Firms prior to submission of the bid and a certified copy of the revised Form No. VIII, showing changes in its constituents are required to be submitted with the e-bid. Also, the lead member of the Consortium/JV should be clearly declared in the 'Forms' folder in specimen Form-5.

Self declarations in specimen Form-3 regarding authorized user of DSC and signing of bills and works contract if selected and in Form-5 regarding such authorization for Consortium/Joint Venture is required to be submitted with the e-bid. Power of Attorney of competent owners/first promoters is to be submitted, if the power is delegated for signing of Agreements/s to persons on behalf of the bidder/s.

4.2C(III) Eligibility criteria based on Credential of work/Pregualification Work Credential "credential.pdf"

- i. Bill of Quantities (BOQ) along with Work Order/Award of Contract; duly authenticated by the competent issuing authority is to be submitted under Technical cover (name of file should be "credential.pdf 1).
- ii. Pre-Qualification (PQ) credential of one 100% completed work of Gross Notional Value as desired in the NIT as the Credential Certificate (CC) duly authenticated by competent authority. (Name of file should be "credential.pdf 2).

4.2C(IV) Financial credential explanation:

a. Profit & Loss Accounts and Audited Balance Sheets of any three financial years within zone of preceding five financial years, duly authenticated by licensed auditor regarding Annual Turnover from business containing relevant Annexure of IT Form 3CA/3CB/3CD as applicable for the bidder, having Annual Turnover above Rs 1.0 crore in each financial year. It is to be evaluated by the Tender Evaluation Committee as average or arithmetic mean over the said three financial years, to be uploaded in Profit & Loss & Balance Sheet.pdf. Auditor's certificate should preferably contain his/her Membership /

Registration no. of Registered Audit/CA Firm and contact details for verification purposes.

As per IT Act for all type of Firms having Annual Turnover from business less than Rs. 1.00 crore, Profit & Loss accounts and audit balance sheets only is required, which is required to be certified by a Licensed CA Firm/Audit Firm.

- **Note**: a. If the bidder Company/Firm was set up less than three years ago, audited balance sheets and P/L Accounts for the number of years since inception are to be submitted under Technical cover and the average value would be evaluated only for the period since inception and not three years.
 - b. Any additional document considered necessary by the bidder related to 4.2B (IV).
 - c. No file in Technical / Pre-Qual cover or OID cover folder is allowed to be kept blank/empty. Where ever the Forms and documents are uploaded by the Tender Inviting Authority, the same is to be downloaded, duly filled up, converted to PDF file, and again uploaded after digital signing, forming a part of tender document. No offline document is acceptable during evaluation stage.

4.3 Financial proposal / bid under Financial cover:-

The financial bid should contain the following documents in one cover or folder.

- i. <u>Bill of Quantities (BOQ)</u>: The contractor/bidder is required to quote the financial offer/ bid price or rate as percentage above or below the estimated amount put to tender or 'at-par' with tender value, in the space marked for quoting rate in the BOQ of the tendered work.
- ii. Only the downloaded sheet of the above document in Excel format is required to be uploaded by the contractor/bidder.
- iii. BOQ without a valid numeric rate at the designated space provided in the BOQ will be disqualified and rejected outright. Contractors/bidders willing to quote "at-par" rate shall need to write "0" in the 'space' provided for rates in the BOQ of the tendered work.

5. Tender Fee and Earnest Money Deposit (EMD)

i. Tender Fees:

Entire set of e-Tender documents are made available free of cost through the State Government e-Procurement portal having URL https://wbtenders.gov.in and also available in the e-Procurement link of Departmental website www.wbiwd.gov.in. Cost for tender documents will not be charged even during execution of a formal tender contract/agreement. However, the contractors/bidders may wherever necessary shall be suitably charged for additional/multiple copies of drawings, specifications; Schedule of Rates booklet etc. and such fee may be suitably determined by the Tender Inviting Authority as per existing Rules. Finance Department has exempted from payment of EMD to State Registered Labour Cooperative Societies, Mackintosh Burn Limited, Westinghouse Saxby Farmer Limited & Britannia Engineering Limited only. State & Central Govt SSI Units are exempted from EMD for tenders for procurements and supply of **Goods only** and not works contracts. However, all other PQ credentials are to be fulfilled by each.

ii. (a) Earnest Money Deposit (EMD):

Bidders are required make payment of Earnest Money (EMD) through the e-Payment banking system, on-line and should read in advance the instructions carefully, particularly those contained in the challan generated in the e-transaction of the portal, if opted for EMD payment through RTGS/NEFT. Only if the bidder is exempted from payment of EMD by the State Finance Department, the Govt order for such exemption is to be uploaded while opting for EMD exemption category. Any misjudgement and resultant non submission of EMD will lead to summarily rejection of the bid/tender.

(b) Additional Performance Bank Guarantee:

"Additional Performance Security" has been made mandatory which shall be obtained only from the successful L1 bidder, if the accepted bid price is below by more than 20% of the amount put to tender. This Additional Performance Security shall be equal to 10% of the **tendered amount** i.e. the L1 bid price.

The Additional Performance Security shall have to be submitted by the selected L1 bidder after issuance of Letter of Acceptance / Letter of Invitation (LoA/LoI) within seven working days and before issuance of Award of Contract (AoC) in the form of "Bank Guarantee" of any Scheduled Bank approved by RBI, payable at Kolkata or / in West Bengal, as per specimen format Form-6. If the bidder fails to submit the said value of BG as Additional Performance Security within the seven working days, he may pray for extension of BG submission date within the prescribed 7 days period by another seven days with reasons to be recorded in writing (which is 14 working days from date of issuance of LoA). Else, its/their Earnest Money Deposit (EMD) will be forfeited without any prejudice by the Tender inviting authority and the defaulting bidder also debarred from further participation in all future I&WD tenders for a period of one year for committing the offence on the first occasion and for a period of two years for recurrence of the same offence.

The said Bank Guarantee (BG) shall have to be valid up till the end of the contract/Agreement period including extended time period till 100% physical completion of work in all respects and shall be renewed within validity period accordingly if required. The said Bank Guarantee shall remain in custody of the DDO & Executive Engineer in-charge of the work, which shall be returned to the bidder/contractor after successful physical completion of the work as per contract. If the bidder fails to complete the work successfully, this Additional Performance Security shall be forfeited at any time during

the pendency of the contract period after serving suitable notice to the contractor/bidder agency. Necessary provisions regarding deduction of security deposit from progressive bills of the contractor in respect of the tendered work shall be governed as per relevant clauses of the tender contract/Agreement which will in no way be affected / altered due to this Additional Performance Security.

5A. Login by bidder:

- a. A bidder desirous of taking part in e-tender floated by the State Government shall login to the e-Procurement portal of the Government of West Bengal www.wbtenders.gov.in using his/her login ID and password by using their valid DSC.
- b. He/she will select the tender to bid and initiate payment of pre-defined EMD fixed for that tender by selecting from either of the following payments modes:
- i. Net-Banking (any of the banks listed in the ICICI Bank Payment Gateway) in case of payment through ICICI Bank Payment Gateway;
- ii. RTGS/NEFT in case of off-line payment through bidder's bank accounts in any Bank approved by RBI in India.

5B. EMD payment procedure:

- a. Payment by Net Banking out of any listed bank through ICICI Bank Payment Gateway:
- i. On selection of Net Banking as the payment mode, the bidder will be directed to ICICI Bank Payment Gateway (along with a string containing a Unique ID) where he/she will select the Bank through which he/she wants to electronically transact the EMD.
- ii. Bidder will make the payment after entering his Unique ID and password of the bank to process the e-transaction.
- iii. Bidder will receive a confirmation message on registered mobile phone regarding success/failure of the transaction.
- iv. If the transaction is successful, the amount paid by the bidder will get credited in the respective Pooling account of the State Government maintained with the Focal Point Branch of ICICI Bank at R.N Mukherjee Road, Kolkata for collection of EMD against unique codes for identification of the tendering authority.
- v. If the transaction is failure, the bidder will again try for payment by going back to the first step.

b. Payment through RTGS/NEFT:

- On selection of RTGS/NEFT as the payment mode, the e-procurement portal will show a pre-filled challan having the details to process RTGS/NEFT transaction.
- ii. The bidder will print the challan and use the pre-filled information to make RTGS/NEFT payment using his/her own designated Bank account.
- iii. Once payment is made, the bank would provide an "UTR remittance number" for successful transaction with which the bidder will come back to the e-Procurement portal after expiry of 2 to 3 bank working days to enable the NEFT/RTGS process to complete, in order to verify the payment made and continue with his/her bidding process.
- iv. If verification is successful, the fund get credited to the respective Pooling account of the State Government maintained with the Focal Point Branch of ICICI Bank at R.N Mukherjee Road, Kolkata for collection of EMD.
- v. Hereafter, the bidder will go to e-Procurement portal for final submission of his/her e-bid within pre-assigned last date of submission of e-tender.
- vi. If the payment verification is unsuccessful, the amount will be returned automatically by the system to the bidder's bank account.

Note: EMD made through RTGS/NEFT would require additional 2 to 3 bank working days after date of transaction in the bank before the procedure is completed for enabling the bidder to continue with the bidding process in the on-line final bid submission. Thus, the bidder is to take precaution in case of RTGS/NEFT transfers, so that the entire process of submission of e-tender is completed within last date of on-line submission of his/her tender. However, Net-banking transaction through ICICI bank payment Gateway would be on real time basis. At present Finance Department, GoWB has exempted

5C. Refund/Settlement Process for EMD:

- i. After decrypting/admitting of all e-bids, the preliminary technical bid evaluation (TBO) summery sheet would be published in the Portal after two working days, and thereafter at least after four working days, the Final technical evaluation (TBE) summery sheet would be published in the Portal with simultaneous electronic processing in the e-Procurement portal by the tender inviting authority done so that status of the all bids as qualified or disqualified; based on the Final Bid Evaluation Sheet (FBE) is made available to all bidders along with the details of the unsuccessful bidders to ICICI Bank by the e-Procurement portal through web services.
- ii. On receipt of the information from the e-Procurement portal, the Bank will refund through an automated process the EMD of the bidders disqualified at the technical evaluation to the respective bidders' bank accounts from which they made the EMD on-line transaction. Such refund will take place within T+2 Bank working days where T will mean the date on which information on rejection of bid is uploaded to the e-Procurement portal by the Tender Inviting Authority.
- iii. Once the financial bid evaluation is electronically processed in the e-Procurement portal, EMD of the technically qualified bidders other than that of the L1 will be refunded, through an automated e-process, to the respective bidders' bank accounts from which they made the payment transaction. Such refund will take place within T+2 Bank working days where T will mean the date on which information on rejection of financial bid is uploaded to the e-Procurement portal by the tender inviting authority.

- iv. As soon as the L1 bidder is awarded the contract (AOC), the same is processed electronically in the e-Procurement portal for transfer to Government Receipt under Public Accounts of the State through GRIPS where under the security deposit will also be collected in connection with the work.
- v. All refunds will be made mandatorily to the Bank account from which the payment of EMD was initiated.
- vi. If the e-tender is cancelled, then the EMD would be reverted to the original bidder's bank account automatically after such cancellation order is processed online by the Tender Inviting Authority.
- vii. TIA reserves the right to forfeit the EMD electronically in case of breach/violation of tender rules as defined under clause 9 & 10.

6. Credential Certificate (CC) as Prequalification Work Credential:

- i. Credential Certificates (CC) for one/single 100% completed work within last five financial years on the date of publication of NIT will only be accepted as valid PQ credential of work. Incomplete ongoing work shall not be considered for valid PQ Credential. Payment Certificate without containing mandatory details shall not be treated as valid CC.
- ii. It is desirable that <u>CC should preferably contain</u> the name with designation, postal address of office, contact Telephone No./FAX / e-mail ID of the authority issuing the CC for the work along with name of work, amount put to tender, date of completion of the work, gross final billed value of the 100% completed work, certificate of issuing authority indicating successful and satisfactory completion. Illegible certificates, incomplete contact details making it time consuming for verification purposes of CC issued by authorities outside the State are liable to be rejected by the Tender Evaluation Committee (HTEC/TEC).
- iii. Credential Certificates (CC) of successfully completed works in any Department/autonomous authority of the Government of West Bengal will be considered. CC of 100% completed works executed under any other State / Central Government Ministry / Department / Nationalised Financial Institutions Organisation / Govt. Undertaking / Govt. Enterprises or Government Institutions or Local Government Bodies(Municipalities, Zilla Parishad & Panchayat Samities within West Bengal, will also be considered as valid PQ Credential. Such CC are to be issued by an officer/authority not below the rank of Executive Engineer / Divisional Engineer /District Engineer/Project Manager of the State/Union Government Departments/ Organisations; authorised signatories of CC for Panchayat Samities and Municipalities shall be the BDO & Executive Officers or equivalent administrative officers respectively. It is desirable to have telephone and FAX or e-mail addresses of the signatory of the CC for all offices outside West Bengal for verification purposes.

7. Pre Qualification (PQ) eligibility criteria

Prequalification (PQ) eligibility of a contractor/ bidder based on one single 100% completed works contract and financial capacity achieved within the zone of last five financial years will be determined as per Rules stated below:

7 I (a). Firstly, the gross value of the work submitted as PQ Credential as per CC of similar in nature completed during the current financial year before date of publishing of e-NIT or within the preceding five FY will be multiplied by the following factors to take care of the inflationary effects to arrive at the gross notional amount.

Year	Description	Multiplying factor to arrive at gross notional amount
Current The financial year of floating of e-NIT		1.00
1 st	1 year preceding the current financial year	1.08
2 nd 2 years preceding the current financial year		1.16
3 rd 3 years preceding the current financial year		1.26
4 th 4 years preceding the current financial year		1.36
5 th 5 years preceding the current financial year		1.47

Note: For cases where two contractors/bidders are participating in a e-Tender for a particular work are such that one happens to have worked as a sub-contractor of the other, and both the contractors/bidders submit PQ work credential of having completed the same job either wholly or partly, then in such case the PQ credential of the principal contractor will be considered while that of the sub-contractor will not be taken into consideration for determining the eligibility criteria of the contractor/bidder during technical evaluation of the tender. If the PQ Credentials submitted by hitherto contractors/bidders are for different works, then both the PQ Credentials will be considered for determining the eligibility criteria of the individual contractors/bidders.

7 I (b). Gross notional amount calculated from the Credential Certificate (CC) uploaded as the PQ Credential of a single similar work stated in 7(I) (a) above and completed within immediate five preceding financial years on the date of e-NIT, should be at least 30% of the amount put to tender i.e Tender Value. However, for Consortium/JV where CC of individual entities of the Consortium/JV are to be considered, sum of gross notional value of work in respect of the CC of individual entities for works of similar in nature (one for each entity), aggregate should be at least 60%

of the amount put to tender for which the tender is invited.

7 II Guidelines for ascertaining works of similar in nature

- 7 II. Following major items/conglomeration of items having weight age of 25% or more in terms of monetary values in respect of amount put to tender for a work are to be identified and the monetary value of each of the major item is to be calculated by the Tender Inviting Authority for any particular serial of work listed in the e-NIT by summing up the associated items of the BOQ coming up under any of the major items as described below:
- a. <u>Earthwork (Type A)</u>: Earthwork in **dry excavation** in rivers/canals / drainage channels / embankments on river banks/ sea coasts / irrigation canals from borrow pit earth or transported earth, by manual / mechanical means including leads, lifts, cross bundhs, temporary diversions and disposal by transportation etc complete.
- b. <u>Earthwork (Type B)</u>: Earthwork is **wet excavation** in flowing channels/rivers/canals/ reservoirs by barge/pontoon mounted excavators including all leads & lifts, machineries and disposal by transportation etc complete.
- c. <u>Brickwork /Boulder Masonry Work (other than in Buildings)</u>: Brickwork/boulder masonry work and cement plaster, excluding brick block pitching.
- d. <u>Concrete work (other than those for Buildings & Roads):</u> PCC inclusive of shuttering and formwork with staging, RCC of all grades inclusive of all reinforcements & insert plates & formworks- shuttering with staging complete & MS liners for bore piles & MS or special alloy sheet piles as cut-off walls in all types of hydraulic concrete structures (i.e structures on rivers, streams, jhoras. Drainage channels, irrigation canals, offshore and onshore structures etc but excluding concrete works included under Cl. 7 II(f) below.
- e. <u>Structural Steel works</u>: All types of structural steel works including cast iron components but excluding reinforcement rods and all types of MS sheet piles complete.
- f. Protection work (Type-A): CC blocks/cement concrete lining / toe walls/Brick or PCC or RCC bank protection works for rivers, channels, canals or stabilization works or retaining walls inclusive of shuttering, form works, staging & reinforcement for RCC and all types of sheet piles used in such rivers/channels/bank protection stabilisation or retaining walls / boulders of all kind, dry brick pitching / brick block pitching / loose boulder apron / crated boulder dumping, boulder/blocks in PP rope-gabions / brick-bat dumping for sausage or aprons or under water, scour hole depth filling by boulders / brick bats, HDPE bags/Geo-synthetics bags, RCC tetra-pods, RCC porcupines, Reinforced walls, sand/earth filled geo-bags, HDPE bag laying of inverted filters below pitching by conventional brick bats / jhama bags or geo-jute or geo-synthetics, including supply, carriage and laying at site etc complete.
- g. <u>Protection work (Type B):</u> Bank protection work with bullah and bamboo, porcupine cages/groynes or spurs made with porcupines, pitching/dumping by loose poly-bags or crated poly bags, including supply, carriage, placing/driving in position at site etc complete.
- h. Road work (Type A): All items related to construction / renovation /improvement of bituminous roads/rigid concrete pavements etc complete. CC with Type-A are eligible for tenders having major items containing either Type-A or Type B, in road works.
- i. Road work (Type B): All types of fair weather roads involving use of boulder/brick bats/jhama bats/river bed materials/moorum etc.
- j. <u>Building work</u>: All items related to brickwork, cement work including PCC and RCC, formworks, staging, shuttering, plastering, carpentry works, painting and flooring, plumbing, electrical connection all finishing items fittings & fixtures except draperies & furniture complete.
- k. Any other major item or conglomeration of items not mentioned above, namely procurement of goods, equipments, machineries, Tools & Plants, Mechanical, Electrical works, specialised jobs, Fitting, Fixtures etc determined as Major items in respect of the SOR/BoQ of tendered items fulfilling the required criteria.
- I. Any other item contained in the PWD (SoR) or the I&WD, USoR not included herein above will be decided by the HTEC/TEC with recommendation of Chief Engineer concerned.

Note: Mechanical and Electrical Circles are required to suitably prepare major items based on the above principle.

- 7 III. Monetary values of each of the 'major items' or 'conglomeration of items forming a major item' contained in the 'BOQ' of this e-tender is to be multiplied by <u>a factor 0.40</u> to arrive at the minimum required Technical PQ Credential in terms of execution of similar items and clearly stated in absolute terms as amount in rupees in column 8 of 'List of Works'.
- **7 IV.** If value of summation of those items contained in the BOQ of the AOC submitted by the bidder as its PQ Work Credential matches with at least one of the major items or conglomeration of items stated in the minimum PQ Credential at column 8 of the 'List of Works' in the e-tender and is equal to or exceeds the amount of any one of the PQ financial eligibility criteria specified at column 8, bidders PQ Credential may be considered as similar in work subject to fulfilment of the following conditions:

- a. After summation, the value may further be multiplied by the factors stated in the table under clause 7 (I) to take care of the inflationary factors.
- b. Whenever PQ Credential of individual entities of a Consortium/Joint Venture is considered, multiplying factor of 0.40 stated in Clause 7 III should be considered as **0.80** of combined values of the BOQ.

Note:-

- i. If the items of work contained in the tender are such that even after combination and addition of those into categories of major items defined as illustrated in clause 7 II, the aggregate amount being less than 25% of the amount put to tender, the Tender Accepting Authority shall decide on appropriate major items, one or two among the list of predominant items in the tender BOQ and direct the Tender Inviting Authority to fix the financial PQ eligibility requirement (monetary value of such items) accordingly in column No. 8 of the list of works of the tender for determination similar nature.
- ii. PQ Credential for Type 'B' earth work may also be considered to ascertain similarity in nature for work involving Type 'A' earthwork but the reverse cannot be considered. Similarly, PQ Credentials for Type 'A' protection works may also be considered to ascertain similarity in nature for work involving Type 'B' protection work but not vice-versa.
- iii. Eligibility for similar nature of work will be judged on the basis of items of works in the BOQ/SoR of the that particular serial of work in the e-tender, mentioned in absolute terms in rupees, and the corresponding Major items with that of the AOC with BOQ uploaded by the bidder as PQ work Credential in support of the CC.
- 7 V. Eligibility criteria based on average annual financial turnover of the bidder:
- a. Apart from satisfying eligibility criteria based on PQ Credential stated in Clause 7 I to IV, the Annual financial Turnover requirements stated below must also be satisfied to declare a bidder qualified for a particular work in financial bid stage.
- b. Average of Annual turnover from business of any three FY with the zone of immediate preceding five FY as stated in clause 4.2 B(IV) should be at least 30% of the amount put to tender of work in which the bidder intends to participate. However, for Consortium/JV, such Average Annual Turnover should be at least 90% of the amount of tender in which the Consortium /JV intends to participate and each entity should have 20% of required Average Annual Turn Over for three preceding financial years. Documents sought under Technical & OID cover folders are mandatory for all the entities of the Consortium/JV.
- c. 'Net financial worth' of the bidder should be positive in the three financial years for which the Annual turn over documents referred under 7Vb. have been uploaded, for qualifying in technical bid. It would inter alia mean that the <u>total assets</u> of a financial year <u>minus</u> Gross <u>total liabilities</u> as per Audited Balance Sheet <u>should be of</u> positive value.
- 8. Additional eligibility criteria for participating in more than one serial of work in a e-NIT

If the same bidder bids separately for on behalf of another Firm or in a different capacity having financial interests in the same work, all the tenders would be rejected.

9. Penalty for suppression / distortion of facts and withdrawal of L1 bidder before acceptance of LOI

If a contractor/bidder fails to physically produce the originals of documents (especially the Credential Certificates and P/L accounts with audited balance sheets), or any other bid document on demand by the Tender Evaluation Committee (HTEC/TEC) which were submitted as soft copies in PDF files with their e-bids within a specified time frame, need arising due to any material deviations detected in the uploaded soft copies, leading to specific doubts which could not be cleared by enquiry from issuing authority of these documents or if there is any suppression/distortion/falsification noticed/detected/ pointed out at any stage of the e-tender process at any stage prior to signing of Contract-Agreement or the issue of LOA or AOC, the Tender Inviting Authority will immediately bring the matter to the notice of the concerned Chief Engineer and appropriate penal measures as stated in Clause 10 below will be taken. The concerned Chief Engineers then will issue the necessary order in writing with intimation to the defaulting contractor/bidder, other Chief Engineers, Centralized e-Tender Cell and also the Government in the Irrigation & Waterways Department. Copy of the order/starting penal measures should invariably be communicated to the Nodal Officer, e-Governance Cell of the Department with a request for uploading the order in the Departmental website in the link "List of suspended/debarred contractors".

10. PROCEDURE FOR SUSPENSION AND DEBARMENT OF SUPPLIERS/ CONTRACTORS

A. SCOPE:

The procedures laid down in subsequent paragraphs shall govern the suspension and debarment of suppliers, contractors and bidders ("Contractors" for brevity) involved in Government procurement for offenses or violations committed during competitive bidding and contract implementation, or even later for the works under Irrigation & Waterways Department, Government of West Bengal. The concerned Chief Engineer shall publish the suspension and debarment order in the Departmental website in the designated link with the prior approval of the Department within 1 (one) working day of issuance of such order. The TIA shall recommend the case to HTEC/TEC who with opinion of Chief Engineer will place it before DTC/QBEC/DTTC for approval.

B. PROHIBITION ON SUSPENDED / DEBARRED PERSONS / ENTITIES TO PARTICIPATE IN THE BIDDING OF GOVERNMENT PROJECTS / CONTRACTS OF THE DEPARTMENT

A person / entity that is suspended / debarred by a procuring entity shall not be allowed to participate in any procurement process under Irrigation & Waterways Department during the period of suspension / debarment unless the same has been revoked by the competent authority.

A Joint Venture or Consortium which is suspended / debarred or which has suspended / debarred member/s and/or partner/s as well as a person/entity who is a member of suspended / debarred Joint Venture or Consortium shall, likewise, not be allowed to participate in any procurement process under Irrigation & Waterways Department during the period of suspension / debarment unless the same has been revoked.

C. DEFINITION OF TERMS:-

i. Bidder: A person/Contractor/Agency/Joint Venture/Consortium/Corporation participating in the procurement process and/or a Person/Contractor/Agency/Joint Venture/Consortium/ Corporation having an Agreement/ Contract for any procurement with the Department shall be referred as bidder.

ii. Bid Evaluation Committees or Tender Evaluation Committees (HTEC/TEC/QBEC/DTTC in short):

a. Amount put to tender above Rs 45.00 lakh upto Rs 200.0 lakh.

'Bid/Tender Evaluation Committee' (TEC) for the bids invited by the Superintending Engineer up to Rs. 200.00 lakh value will be comprising of i) Concerned Superintending Engineer as Chairperson and Convener, ii) Concerned Executive Engineer as Member, iii) T.A to Superintending Engineer of concerned Circle or any other Executive Engineer of the Circle as Member, (iv) Junior Engineer functioning as an Estimator of the Circle Office as Member.

b. Amount put to tender above Rs 200.00 lakh.

High value Bid/Tender Evaluation Committee (HTEC) for the bids above Rs. 200.00 lakh tender value to be invited by the Superintending Engineer will be comprising of i) Concerned Superintending Engineer as Chairperson and Convener, ii) At least one Superintending Engineer within the zone as per High Value Tender Evaluation Committee order as Member, iii) Concerned Executive Engineer as Member.

- **c.** The Quotation cum Bid Evaluation Committee (QBEC) or Departmental Technical & Tender Committee (DTTC) or any other Evaluation Committee constituted by the Department from time to time.
- iii. Consolidated Debarment List: A list prepared by the Departmental Debarment Committee/Chief Engineer containing the list of bidders debarred by the Irrigation & Waterways Department, Government of West Bengal. The list would be displayed prominently in the designated link in website of the Department clearly stating the period of suspension/debarment.
- iv. Contract implementation: A process of undertaking a project in accordance with the contract /Agreement documents.
- v. **Debarment:** An administrative penalty, in addition to the contract/Agreement provisions, disqualifying a bidder from participating in any procurement process under Irrigation & Waterways Department, Government of West Bengal for a given period.
- vi. Debarred Bidder: A Bidder who was disqualified by the competent authority of the Irrigation & Waterways Department, Government of West Bengal.
- vii. Department: Irrigation & Waterways Department, Government of West Bengal.
- viii. Entity: A person/Contractor/Agency/Joint Venture/Consortium/Corporation participating in the procurement process and/or a Person/Contractor/Agency/Joint Venture/Consortium/Corporation having an agreement/ contract for any procurement with the Department shall be referred as entity.
- ix. Offence: A violation or breach of the Constitution of India, laws, regulations, laid down procedure, etc under Prevention of Corruption Act, 1988, Code of Criminal Procedure, 1973 u/s 195(1) and Section 197(1), Competition Act, 2007 and IT Act, 2000 as amended.
- x. Procurement: It is the act of buying goods, services or works from an external source. It is favourable the goods, services or works are appropriate and that they are procured at the best possible cost to meet the needs of the acquirer in terms of quality and quantity, time and location.
- xi. Procuring Entity/Authority: The officer authorised by the Irrigation & Waterways Department, Government of West Bengal for procurement.
- **xii. Suspension:** Temporary disqualification of a bidder from participating in the procurement process of Irrigation & Waterways Department for a period of 6 (six) months when an offence is made against a bidder.

D GROUNDS FOR SUSPENSION AND DEBARMENT

- i. Submission of eligibility requirements containing false information or falsified documents.
- ii. Submission of Bids that contain false information or falsified documents, or the concealment of such information in the Bids in order to influence the outcome of eligibility screening or any other stage of the bidding process.

- iii. Unauthorised use of one's name/digital signature certified for purpose of bidding process.
- iv. Any documented unsolicited attempt by a bidder to unduly influence the outcome of the bidding in his favour.
- v. All other acts that tend to defeat the purpose of the competitive bidding such as lodging false complaints about any bidder, posting baseless allegation about any officer duly authorised by the Department, restraining any interested bidder to participate in the bidding process etc.
- vi. Refusal to accept an award after issuance of 'Letter of Acceptance' or enter into contract with the Government without justifiable cause.
- vii. Refusal or failure to post the required performance security/earnest money within the prescribed time without justifiable cause.
- viii. Subcontracting of the contract or any part thereof without prior written approval of the procuring entity.
- ix. Failure solely due to fault or negligence of the Contractor, to mobilize and start work within the specified period as mentioned in the 'Letter of Acceptance' / 'Letter of Acceptance cum work Order' / 'Work Order' / 'Notice of Process' / 'Award of Contract' etc. ultimately resulting in rescindment of contract.
- x. Failure to fully and faithfully comply with the contractual obligations without valid cause, or failure to comply with any written lawful instruction of the procuring entity or his representative(s) pursuant to the implementation of the contract, ultimately resulting in rescindment of contract.
- xi. For the procurement of goods, unsatisfactory progress in the delivery of the goods by the manufacturer, supplier or distributor arising from his fault or negligence and / or unsatisfactory or inferior quality of goods, vis a via as laid down in the contract.
- xii. Refusal or failure to upload a self-declaration in specimen format of Form-4 to the effect of any previous debarment imposed by I&WD, any other Department of State Government and or Central Government.
- xiii. Wilful or deliberate abandonment or non-performance in a project or contract by the contractor / suppliers resulting to substantial breach thereof without lawful and / or just cause(s).
- xiv. Non-submission of authentic Bank Guarantee of required amount by the selected bidder in a tender for Procurement of Goods & Works, if the bid price is below 20% of the tender value within the period as prescribed in the e-NIT, 7 working days from date of issue of LOA which may be extended upto maximum 14 working days.

E. CATEGORY OF OFFENSE:

- a. First degree of offense: Clause 10 D (i) up to (vii), (xii) & (xiv) is to be considered as first degree of offense.
- b. Any of the offence under Clause (viii) to (xi) & (xiii) shall lead to termination of contract and its determinations in accordance with Clause (ii) & Clause (iii) of Agreement Form No. WB-2911 and simultaneous debarment for a period of 2 years
- c. Second degree of offense: Any one of the offenses as mentioned under Clause 10D (i) to (xiv), committed by a particular bidder/contractor/supplier on more than one occasion would be considered as second degree of offense. Period of debarment will be 2 times the corresponding period penalty applicable for 1st degree offence in addition to other penal provisions contained in 1st degree offence.
- **F.** Debarment procedure and rules with guiding principles are published as Departmental Notification to be read in conjunction with corrigenda issued thereto from time to time available in the Notification link of Departmental website wbiwd.gov.in.

G. PENALTY FOR OFFENSE:

- a. For committing 1st degree offense any of the cases referred under Clause 10 D (i) to (v), forfeiture of earnest money and debarment for a period of six months, if the offense is detected during technical evaluation. If the offence is detected after award of the contract and if the offender happens to be the agency selected for work, and such selection is made due to oversight, forthwith termination of the contract and determination of contract value in accordance with clause 3(ix) (c) of West Bengal Form No. 2911(i)/ (ii), and simultaneous debarment for a period of six months. Further, in case the offense is detected after completion of work and payment of final bill the Work credential earned would be declared as 'null and void', so that the same cannot be used in future as PQ credential for securing other works contracts in the Irrigation & Waterways Department, together with debarment for a period of six months.
 - b. For committing 1st degree offense in any of the cases referred under Clause 10D (vi), (vii),(xiii) to (xv), forfeiture of earnest money and debarment for a period of one year. For committing offenses under Clause 10D (xv), debarment period shall be for one calendar year preferably from the date on which the due date for submission of BG had expired (i.e 8th/15th) working day from date of receipt of LOA /LOI) by the Departmental Debarment Committee to be notified in the Departmental website.

- c. For committing 1st degree offense in any of the other cases under Clause 10 D (viii) to (xii), termination of contract and its determination in accordance with Clauses 2 & 3 of West Bengal Form No. 2911(i)/(ii), including debarment for a period of two years.
- d. For committing 2nd degree offenses under above all categories, period of debarment will be twice the corresponding period for 1st degree offenses, in addition to other penal provisions for 1st degree offense.

11. Taxes & duties to be borne by the Contractor/bidder

All taxes, duties & cess which may not be limited to income tax, GST, royalty, construction welfare cess & labour insurances, EPF etc are to be borne by the contractor. Rates of items contained in the tender BoQ are inclusive of all the taxes, duties & cess stated above which are enforced on the date of publication of this e-NIT. It is reiterated that there shall not be any change of bid price in the contract. In case of variation of rates of taxes, duties, cess etcduring construction period, no extra claim on these accounts shall be allowed. The bidders are required to bid (i.e below/Above/At-par BoQ as the bidder decides.

12. Site inspection prior to submission of tender

Before submitting a bid, the intending contractor/bidder should make themselves acquainted thoroughly with the local conditions prevailing at site of implementation of the work by undertaking field inspections and taking into consideration all probable likely factors and difficulties to be involved during execution of the work as per specification in all respects including transportation of materials, communication facilities, climate conditions, nature of soil, availability of local labourers and market rates prevailing in the locality etc. and no claim whatsoever will be entertained on those accounts afterwards. In this connection intending contractors/bidders are advised to attend the 'Pre-Bid' meeting with the Tender Inviting Authority on the prefixed date to get his/her doubts cleared if he/she desires. He/She may also contact the office of the designated **Executive Engineer, Metropolitan Electrical Division, Irrigation & Waterways Directorate** in between 11.30 hours to 16.30 hours on any working day, prior to the date of actual submission of e-bid in the e-tender.

13. Conditional and incomplete tender

Conditional and incomplete tenders are liable to be summary rejected. No off-line document will be entertained until completion of e-Tender process by way of acceptance of L1 bid by the competent Tender Accepting Authority/Government.

14. Opening and evaluation of tender

14.1 Opening of a Technical Proposal

- i. Technical proposal will be opened by the Tender Inviting Authority or his/her authorised representative/s electronically in the official website stated earlier, using their authorised valid Digital Signature Certificate/s (DSC).
- ii. Intending contractors/bidders may remain present if they so desire.
- iii. Technical cover documents (vide Clause 4.2.A) will be opened /decrypted first and if found in order, Cover (Folder) for OID (vide Clause 4.2.B) will be opened/decrypted. If there is any deficiency in either of the Technical cover documents, the bidder may be summarily disqualified and rejected.
- iv. Decrypted (transformed into readable format) documents of the Pre-Qual Technical cover and the OID (Other Important Document) Cover will be decrypted/downloaded and handed over the decrypted bid documents in soft and hard copies to the designated Tender Evaluation Committee.
- v. Procedure to be followed for opening of a 'Financial bid' is explained later under clause 14.5 of e-NIT

14.2 Bid/Tender Evaluation Committee

Committees constituted from time to time by the Government in the Irrigation & Waterways Department for evaluation of Technical proposals of the contractors/bidders for e-tenders will function as Tender Evaluation Committee (HTEC/TEC/QBEC/DTTC etc.).

14.3 Uploading of list of technically qualified contractors / bidders in the web portal/s

i. After electronically decrypting on the designated date and time the e-bids received, all the bids will be <u>admitted</u> for downloading of documents without verification by the TIA and placed before the HTEC/TEC for evaluation. The bidders shall receive an automated message through e-mail/text message that their bids have been decrypted. The HTEC/TEC shall within a minimum of 2(Two) working day scruitinise the bids and Technical Bid opening Summery sheet (TBO) shall be uploaded by TIA pursuant to preliminary scrutiny and decision of the Tender Evaluation Committee (HTEC/TEC) with reasons for preliminary rejection, and preliminary list of eligible bidders/ contractors for a particular serial of work whose Technical proposal have been considered for uploading in the web portal/s by the HTEC/TEC.

ii. While evaluating, the HTEC/TEC may, if they so desire, summon the contractors/bidders and seek further clarification/information or seek verifications of original hard copy of any of/all the documents already submitted online, and if these cannot be produced within stipulated timeframe, their bids will be liable for rejection.

14.4 Process of Technical Evaluation during tender

Within 24 hours of uploading the TBO summery sheet containing Preliminary Technical Qualification result, any of the aggrieved bidder, may seek clarification / redressal / review from the HTEC/TEC on the list of bidders, in writing/through e-mail with supporting facts / figures / documents. If such clarification /review relates to eligibility of other bidders, on the grounds of submission of false/ forged / manipulated / inappropriate credentials, modalities prescribed in the Departmental Notification shall be followed. In case, the review only seeks the eligibility of the applicant himself, views of the Tender Evaluation Committee (HTEC/TEC) would be communicated in writing to that bidder within next two (2) working days. If the bidder is not satisfied with the clarification of the TEC, he/she may appeal to the concerned Chief Engineer within 24 hours of receipt of communication from the TEC. The concerned Chief Engineer will dispose such complaints jointly, in associated with at least another available Chief Engineer within next 2 working days. Thereafter final Technical Evaluation Sheet (TBE) of the technically qualified bidders would be uploaded, after incorporating modifications if required. The TIA shall while uploading the final TBE summery sheet accept or reject electronically the admitted bids based on the advice of HTEC/TEC as per TBE summery sheet. Thus at this stage the rejected bidders will get back their EMD. e-mail communication in official e-mail address of TIA or TAA shall be treated as a valid mode of communication. The minimum time period from date of TBO summery sheet uploading and TBE summery sheet uploading shall be 4 working days or more. However, this time period may be curtailed if no clarification/review by any of the bidders within 24 hours of uploading the TBO sheet.

14.5 Opening and Evaluation of Financial Proposal/bid

- i. Financial proposals of the bidders/contractors declared technically qualified by the Tender Evaluation Committee (HTEC/TEC) will be opened electronically by the Tender Inviting Authority in the web portal stated above on the prenotified date and time.
- ii. The encrypted copies will be decrypted and the rates will be read out to the contractors/ bidders remaining present at that time, else they may login their respective e-tender accounts to see the (CS) comparative statement in the web portal.
- iii. After opening the financial proposal, the preliminary summary result containing inter-alia the names of contractors/bidders and the rates quoted by them will be uploaded and the result will be made available in the e-tender web platform.
- iv. If the Tender Accepting Authority (TAA) is satisfied that the rate obtained is fair and reasonable and there is no scope of further lowering down of rate, he/she may after having the comparative statement test checked by the Divisional Accountant / Divisional Accounts Officer attached to the office of the concerned Executive Engineer and after their acceptance by the Tender Acceptance Authority (TAA) instruct the Tender Inviting Authority to upload the financial bid evaluation summary as result containing the name of contractors/bidders and the rates quoted by them against each work.
- v. If there is any scope for lowering down of rate in the opinion of the Tender Accepting Authority being abnormally high, i. e above 10% of the amount put to tender (Tender value), the e-NIT shall be cancelled and invited afresh 2nd or 3rd re-tender. **No post tender negotiations are permitted.**
- vi. If there is no contractor/bidder or the number of contractors / bidders in the 1st tender is less than three, the e-tender has to be cancelled. In case of participation of more than three bidders, if the number of technically qualified bidder falls below three, the tender/e-NIT is to be cancelled as well and fresh e-tender vis-a-vis 2nd call e-Tender or even 3rd call e-Tender may be invited by suitably lowering of minimum eligibility PQ criteria (work & financial) for bidders with wide publicity of Re-tender notices through electronic and print media.
- vii. Final result after acceptance of the rate by the Tender Accepting Authority, if within the delegated power of acceptance would have to be uploaded in the e-Procurement platform. Otherwise, the matter may be referred to the Government Appointed DTC and the appropriate Government for decision.
- viii. The Tender Accepting Authority may ask the L1 bidder/contractor to submit analysis of rates to justify the rate quoted by that bidder after declaration of financial bid evaluation result.
- ix. If the lowest (L1) bidder/contractor backs out there should be Re-tendering in a transparent and fair manner. In such a situation the TIA may call for re-tender with bid submission time period should normally be 21 days for value above Rs. 100.00 lakh, and 14 days for value exceeding Rs. 10.00 lakh but upto Rs. 100.00 lakh.

14.6 Procedure to be followed for final acceptance of tender & Award of Contract

- i. The lowest (L1) financial bid for all works tenders is accepted as a rule. If for any reason the lowest (L1) bid is not accepted, reference is to be made to the appropriate Government for orders as to which of the contractor /bidder the work should be awarded.
- ii. Maximum 5 % excess beyond the 'Tender Value' (Amount put to Tender) may be accepted as per delegated power to the Superintending Engineer up to Rs 2.00 crore, and at least three valid bids have been received in the financial bid stage, provided tender value after abatement is within the administratively approved cost. Maximum 5 % excess beyond the 'Tender Value' (Amount put to Tender) may be accepted above tenders of value beyond Rs2.00 crore with the recommendation of DTC by the Chief Engineer if at least three valid bids have been received in the financial bid stage. In case of 5% excess over administratively approved amount, proposal for revised administrative approval would have to be submitted to the Government, but acceptance of tender and issue of work order may not be kept pending for want of revised administrative approval.
- iii. Above 5% and up to 10% of the Tender Value can be recommended to the Government for acceptance by the Departmental Tender Committee (DTC) subject to the conditions that valid technically qualified bids should not be less than three and L1 bid is accepted and tendered amount is within the administratively approved cost. In case of excess over administratively approved amount, revised administrative approval would have to submitted to the Government but acceptance of tender, and issue of work order may not be kept pending for want of Revised Administrative Approval/Revised Financial sanction.
- iv. If the response to an e-Tender is less than three, then Tender should be invited afresh. Such Re-Tender notice shall be published in widely circulated dailies as per guidelines and also through e-Tender web portals. Prior to invitation of Re-Tender / fresh e-Tender, the eligibility criteria and other terms & conditions as contained in the first 'Notice Inviting e-Tender' (e-NIT) shall have to be reviewed/relaxed by the Tender Inviting Authority, to ascertain whether (i) it was too much restrictive, say, specifications and qualifications were fixed at higher standards than required, (ii) advertisements in the widely circulated Newspapers were properly published and (iii) other related procedural matters were observed in its entirety.
- v. If the number of valid bids received even in re-tender is less than three, it should be referred by the TIA to the DTC and the appropriate Government along with the recommendation of the DTC for decision, in accordance with Finance Department Memorandum and other relevant orders in vogue at the time of publication of the tender.
- vi. For acceptance of L1 bid after 2nd / 3rd re-tenders is still above 10% of the Tender Value (Amount put to tender), upon specific recommendation of the DTC as mentioned at clause 14.5 (v), with that of the Department shall have to be sent to the Finance Department for decision.

15. General guidelines for acceptance of e-Tender

Lowest valid rate should normally be accepted in accordance with the procedure laid down in clause 14.6. The Tender Accepting Authority reserves the right to distribute the work amongst more than one contractor/bidder with same L1 rate or even cancel the tender and invite fresh re-tender.

16. Tender Accepting Authority*

As per delegation of power for tender acceptance, competent accepting authorities for different values of tenders is stated below, provided at least three valid bids are received in the financial bidding stage of the tender/Re-tender:

- i. For tenders up to Rs 200.00 lakh plus 5%*: Superintending Engineer of the Circle, Irrigation & Waterways Directorate
- ii. For tenders above Rs 200.00 lakh*: Concerned Chief Engineer, I&W Directorate. Lowest bid for tenders of value above Rs. 200.00 lakh obtained is above the estimated cost put to tender, approval of DTC before acceptance of tender by Chief Engineer is required even if three valid bids have been received.
 - * Procedure to be followed in terms of Finance Department Notifications on delegation of powers for acceptance applicable at the time of bid acceptance.

17. Signing of formal tender contract/agreement after acceptance of e-tender

The contractor/bidder, whose bid is approved for acceptance, shall within 15 days of the receipt of Letter of Invitation (LOI) or Letter of Acceptance (LOA) in his / her favour, will have to execute a 'Formal Agreement' with the Engineer-in-Charge in quadruplicate in W.B.F. 2911(i)/2911(ii) and all other contract documents, entire set of which may be obtained free of cost from the office of the designated **Executive Engineer, Metropolitan Electrical Division, Irrigation & Waterways Directorate** in-charge of the work tendered.

If the selected L1 bidder fails to turn up even after 30 days after the initial 15 days from the date of uploading of the AOC in the e-Procurement portal or the despatch date of official communication for signing of the Contract/Agreement, the selected bidder is liable for penal actions which shall comprise blacklisting, debarring from future participation in Government tenders, immediate forfeiture of the Earnest Money deposited in the tender, other penal actions as stipulated under clause 9 & 10 of the e-NIT, the Departmental Notification and also contained in contract W.B Form No. 2911(i)/2911(ii)/Agreement.

18. Payment against bills raised by the contractor

Periodic Tax invoice/bills containing bidders GSTIN & other details needs to be submitted by the supplier/contractor to the DDO for raising claims for receiving payments of work executed under this contract /upon achieving physical Milestones clearly showing separately the Tax charged in accordance with the provisions of the GST Act, 2017. The payment of Running Account as well as final bill for any work based on progress and performance will be made according to availability of fund and no claim due to delay in payment will be entertained.

19. No cost escalation in any form is included in the Tender Contract Agreement.

20. Bid validity

The Bid will be normally valid for **120 days** from the date of opening of the financial proposal. However, extension of bid validity may be suitably considered by the Tender Inviting Authority, if required, subject to written confirmation of the contractor/bidder (s) to that effect.

21. Definition of Physical Milestones:

The time allowed for carrying out the work as entered in the tender shall be strictly observed by the contractor, and which shall be reckoned from the date on which the order to commence work is given to the contractor. The work shall throughout the stipulated period of the contract be proceeded with all due diligence. Time being deemed to be the essence of contract on the part of the contractor; the contractor shall be bound in all cases, to achieve the 'Milestones' as specified in this NIT into various 'Identifiable and quantifiable construction related stages' pertaining to the work. For all works the contractor within 15 days of receipt of Letter of Acceptance shall submit a work programme commensurate with period of construction in the form of a Bar Chart of uploaded work programme, stating the timeline of such different Milestones. In the event of the contractor failing to comply with any of the conditions related to achieving the 'Milestones' within the specified time period prescribed for such 'Milestone' plus one month, he/she shall be liable to pay compensation.

If the contractor fails to commence and/or maintain required progress over the total time allotted for its full completion and fails to complete the work and clear the site on or before the end of contract period or extended date of completion, he/she shall, without prejudice to any other rights or remedy available under the law on account of such breach, pay as agreed compensation to the implementing Department. This will also apply to items or group of items for which a separate period of completion has been specified. The bidder is required to digitally sign and upload the work programme in the form of Bar Chart or otherwise in the 'Declaration' folder during bid submission for all works tenders.

22. Withdrawal of bid in a Tender

Withdrawal of e-Tender once the bid has been submitted online and after passing of end date for submission and has been accepted for further processing, is not allowed. EMD will be forfeited by the Government and the L1 bidder/contractor penalised in terms of clause 9 referred earlier would be applicable.

23. Modification of standard e-NIT format for works of tender value above Rs. 50.00 crore

For e-tenders beyond amount put to tender values of Rs. 50.00 crore, the instant standard e-NIT format may be judiciously modified by the concerned Chief Engineer with the approval of Government Appointed Departmental Tender Committee (DTC), provided such modifications shall in no way and manner be in contrary to the orders and spirit of guidelines and orders of the I & W Department and that of the Finance Department, GoWB.

24. Critical dates of this e-Tender

SI. No	Activity	Date & Time	Remarks	
1.	e-tender Publishing Date in Newspaper	25.05.2018		
2.	Document Download start date	25.05.2018 at 17.00 Hrs		
3.	Pre-bid Meeting to be held at the office of Tender Inviting Authority	30.05.2018 at 11.00Hrs	To be made available with	
4.	Bid submission start date	25.05.2018 at 17.00 Hrs	the e-NIT in the website	
5.	Document Download end date & bid submission end date	15.06.2018 at 17.00 Hrs.		
6.	Bid submission end date	15.06.2018 at 17.00 Hrs.		
SI. No	Activity	Date & Time	Remarks	
7.	Technical Bid opening date	18.06.2018 at 10.00 Hrs.		
8.	Technical Bid opening Summery sheet (TBO) containing Preliminary Technical Bid Evaluation Summary uploading date	To be suitably decided by TIA		
8.	Uploading of final summery sheet of Technically qualified bidders or Technical Bid Evaluation Sheet (TBE)	To be suitably decided by TIA		
9.	Financial Bid opening date	To be suitably decided by TIA	To be notified	
10.	Uploading of Financial Bid evaluation sheet (FBE)	-do-	to concerned bidder/s through e-	
11.	Uploading of the Letter of Invitation / Acceptance (LOI/LAO)	-do-	mail & SMS through auto-	
12.	Uploading of Award of Contract (AOC) (Work Order)	-do-	generation in the system.	

^{*}TIA: e-Tender Inviting Authority
*TAA: e-Tender Accepting Authority

Special Terms & Conditions of the contract

- 1. The Executive Engineer of the concerned Division shall be the Engineer-in-Charge in respect of the works contract and all correspondence concerning rates, claims, change in specifications and/or design and similar important matters will be valid only if accepted/recommended by the Engineer-in-Charge. If any correspondence of above tender is made with Officers other than the Engineer-in-charge for speedy execution of works, the same will not be valid unless copies are sent to the Engineer-in-Charge and also approved by him/her. Instructions given by the Sub-Divisional Officer/Assistant Engineer and the Junior Engineer/Section Officer (SO) on behalf of the Engineer-in-Charge shall also be valid (who have been authorized to carry out the work on behalf of the Engineer-in-Charge) regarding specification, supervision, approval of materials and workmanship. In case of dispute relating to specifications and work, the decision of Engineer-in-Charge shall be final and binding. The Engineer-in-Charge will however take all decisions relating to works contract only after recommendation/ advice of the Tender Accepting Authority. If there is more than the Executive Engineer assigned for the tender, the Chief Engineer would designate the Engineer-in-Charge for the work.
- 2. Acceptance of the tender including the right to distribute the work between two or amongst more than two bidders with same L1 rates will rest with the Tender Accepting Authority without assigning reason thereof to any of the bidders. The tender accepting authority reserves the right to reject any or all tenders without assigning sufficient justification thereof to the bidder/contractor. No additional or excess work or additional items of work beyond the tendered amount would be generally allowed. All excess, supplementary or substitute supplementary items of work, if unavoidable are to be accepted by the Tender Accepting Authority only if the total value of work on completion is within the tendered amount. The exiting contract would be terminated after achieving work up to tendered cost (gross value) and balance work would be taken up afresh after fresh sanction and new tender, except in the interest of public services, in rare & special cases under specific approval of the Government.

- 3. The Contractor/bidder shall have to comply with the provisions of (a) Contract Labour (Regulation & Abolition) Rules, 1970 including its revisions (b) Minimum Wages Act 1948 and the modification thereof or any other laws relating thereto as will be in force from time to time.
- 4. Engineer-in-Charge shall not entertain any claim whatsoever from the contractor for payment of compensation on account of idle labour on such grounds including non-possession of encumbrance free land. Escalation of cost due to inflationary effects or any other reason is not permitted during construction period or extended time period of contract.
- 5. Engineer-in-Charge shall not be held liable for any compensation due to machines & equipments becoming idle or any circumstances including untimely rains, other natural calamities, strikes etc.
- 6. All statutory taxes, viz. GST / labour welfare cess, labour insurance etc or revision of taxation rates even after AOC or commencement and before final completion of the work are to be borne by the contractor/bidder. Original tax invoice/challan or bill of those materials, which are procured by the bidder, may be asked to be submitted for verification if required.
- 7. Labour Welfare Cess @ 1% of the cost of construction works shall be deducted from the Gross value of all works bills. Also it is instructed to compulsorily register his/her establishment under the Act, under the competent registering authority, i.e. Assistant Labour Commissioner / Dy. Labour Commissioner of the region for disbursing PF and ESI benefits of workers. The bidder should be mandatorily be registered online with Employees Provident Fund Organisation (EPFO) in the on-line system and posses EPF code and all current documents. Penalties and complaints due to non compliance of on-line EPF registration and default is the full responsibility of the bidder even if the TIA is by default the Principal employer
- Adjustment of original bid prices/escalation cost/ mobilization advance / secured advance shall not be permitted for any reason whatsoever due to cost and time over run unless specified otherwise in the contract or the e-Notice Inviting Tender.
- 9. GST, Cess, License fees, Royalty for construction materials, forest product etc, Toll Tax, Income Tax, Ferry Charges and other Statutory Government Taxes as applicable during project implementation are to be paid by the contractor/bidder. The rates of supply and finished work items are inclusive of these taxes and levy. Tax invoice/bills needs to be submitted by the supplier/bidder for raising claims under the contract after attaining of physical milestones showing separately the tax charged in accordance with the provisions of GST Act, 2017.
- 10. All working tools & plants, scaffolding, construction of vats & platforms and arrangement of Labour Camps will have to be arranged by the contractor at his/her own cost. The contractor shall clear the site of work and restore all damages made due to the Labour camp, erection of yards and godowns, stores etc within 30 days of completion of work.
- 11. The contractor shall supply mazdoors, bamboos, ropes, pegs, flags T&P, Machineries and equipments etc. for laying out the work and for taking and checking measurements for which no extra payment will be made.
- 12. The contractor/bidder should see the site of works and tender documents, drawings etc. before submitting tender and satisfy himself/herself regarding the condition and nature of works and ascertain difficulties that might be encountered in executing the work, carrying materials to the site of work, availability of drinking water and other human requirements & security etc. Work on river banks may be interrupted due to a number of unforeseen reasons e.g. sudden rise in water levels, inundation during flood, inaccessibility of working site for carriage of materials. Engineer-in Charge may order the contractor to suspend work that may be subjected to damage by climate conditions. No claim will be entertained on this account. There may be variation in alignment, height of embankment or depth of cutting, location of revetment, structures etc. due to change of topography, river condition and local requirements etc. between the preparation and execution of the scheme for which the tendered rate and contract will not stand invalid. The contractor will not be entitled to any claim or extra rate on any of these accounts.
- 13. A machine page numbered Site Order book (with triplicate copy) will have to be maintained at site by the contractor and the same has got to be issued from the Engineer-in-Charge before commencement of work. Instructions given by inspecting officers not below the rank of Assistant Engineer will be recorded in this book and the contractor must note down the action to be taken by him in this connection as quickly as possible.
- 14. The contractor shall be bound to comply with all the Central & State Pollution Control Acts & Rules during entire construction period.
- 15. All possible precautions should be taken for the safety of the people and work force deployed at worksite as per safety rule in force. Contractor will remain responsible for his labour in respect of his liabilities under the Workmen's Compensation Act etc. He must deal with such cases as promptly as possible. Proper road signs as per P.W.D. practice will have to be erected by the contractor at his own cost while operating public thoroughfares. Also, display boards containing brief description and name of project with completion target dates shall be erected at a prominent location at

the work site by the contractor for public awareness. Insurance of workers and materials is the responsibility of the bidder during entire construction period.

- 16. The contractor will have to maintain qualified technical employees and/or Apprentices at site as per prevailing Apprentice Act or as stipulated in the contract. No compensation for establishment charge will be entertained.
- 17. The contractor will have to accept the work programme as per modifications and priority of work fixed by the Engineer-in-Charge so that most vulnerable reach and/or vulnerable stretch is completed before impending monsoon or rise in river flood water level or commencement of canal irrigation water release or for other suitable reasons.
- 18. Quantities of different items of work mentioned in the departmental tender schedule/BOQ or in work order are only tentative. In actual work, these may vary considerably. Payment will be made on the basis of works actually completed in different items as per specifications and codes, and no additional claim will be entertained for reduction of quantities in some items or for omission of some items. For execution of any additional item or supplementary works within the tendered value with the total completion value remaining within the accepted tendered cost, approval of the Tender Accepting Authority/Government in the Irrigation & Waterways Department would be required.
- 19. In order to cope with the present system of e-pradan billing, departmental supply of construction materials is discouraged. However, Departmental materials may be issued to the contractor/ bidder to the extent of requirements as assessed and following accounts procedure in the Treasury system of bill payment and in instalments as decided by the Engineer-in-Charge. Issue of materials may be of three categories.
 - a) Materials issued directly to the work and subject to recovery.
 - b) Materials issued from departmental go down and subject to recovery.
 - c) Materials issued free of cost.

Decision of the Engineer-in-Charge should be final and binding in this regard. He also stands solely responsible for reconciliation of accounts, if materials are issued to the contractor.

- 20. Any materials brought to site by the contractor subject to approval of the Engineer-in-Charge. The rejected materials must be removed by the contractor from the site at his own cost within 48 hours of issue of the order to that effect. The rates in the schedule are inclusive of cost and carriage of all materials to worksite. The materials will have to be supplied in phase with due intimation to the Sub-Divisional Officer/Assistant Engineer concerned in conformity with the progress of the work. For special type of materials, i.e. Geo Synthetic Bags, HDPE Bags, Geo Textile Filter, Geo jute Filter etc. if any, relevant Data Sheet containing the name of the Manufacturers, Test Report etc. will also be submitted in each occasion. Engineer-in-Charge may conduct independent test on the samples drawn randomly before according approval for using the materials at site. In this regard decision of Engineer-in-Charge shall be final and binding.
- 21. For materials under category 19(a),(b)&(c), the contractor will act as the custodian thereof. The materials will have to be carried from the nearest Departmental go-down to worksite by the contractor at his own cost. The contractor shall remain responsible for the proper storage and safety of the materials. Suitable Go-down/ Store shall have to be made by the contractor at his/her own cost. Penalty charges shall be levied at higher rate for loss, wastage, misuse. Surplus materials of the departmental if any, shall have to be returned to the issuing Go-down or store at the contractor's cost within the time frame as fixed by Engineer-in-Charge, otherwise, the cost at penal rate will be recovered from the bill. Indent for departmental materials shall be submitted by the contractor to the AE/S.D.O. at least 7 days in advance of actual requirement. No claim will be entertained for non-issuance of such materials in time but reasonable extension of time will be granted. All materials, whatever be the category thereof, shall be properly stored by the contractor in suitable go downs near the site of work at his own cost & under no circumstances whatsoever shall any material be removed from the site of work without prior written permission of the Engineer-in-Charge. The contractor shall be responsible for any damage, wastage or loss of such materials.
- 22. The contractor shall also have to satisfy the Engineer-in-Charge regarding the proper utilization of materials which have been issued departmentally.
- 23. Value of the material, under category (a) & (b) of clause 19, will be recovered from the bills of the contractor in one or successive instalments as may be decided by the Engineer-in-Charge.
- 24. Requisite quantity of cement as may be required for the work will be supplied from the nearest Departmental go down if stock permits. The issue rate of cement is shown in the Schedule of materials attached. Any excess consumption of cement by more than 5% over the final consumption statement drawn up as per consumption rate specified in the Schedule will be recovered at a penal rate shown in schedule.
- 25. Reinforcement steel rods/MS sheet piles/bitumen will be issued if stock permits, from the nearest departmental go-down where such material is available in marketable length/quantities. While issuing the same, for any particular work the quantity actually required as per approved drawing shall only be issued. While executing the work, it will be responsibility of the Contractor/bidder as well as the Engineer-in-Charge to get this quantity properly utilized in the work. Cut pieces, if any will not be taken back by the Department. Recovery for the total quantum of steel issued will be made at the issue rate shown in the Schedule below. In case of misuse over +10%, deduction will be made at a penal rate shown in the

Schedule below. This whole principle shall apply in case of other M.S materials like sheet piles and structural steel members as well.

- 26. The work is to be executed strictly as per specification attached with e-NIT and shall confirm relevant Indian Standard Codal provisions and good industry practice. In the absence of any such provision in some items, the tending authority reserves the right to adopt suitable International Code/specifications/standards.
- 27. All queries and disputes arising out of the works contract during construction phase are to be brought to the notice of the Chairman of the 'Department Dispute Redressal Committee' in writing for decision within 15 days.

28. SCHEDULE OF RECOVERY RATES OF DEPARTMENTALLY SUPPLIED CONSTRUCTION MATERIALS

SI. No.	Name of materials	Issue rate (in`)	Unit	Penalty recovery rate for loss or misuse or wastage (if otherwise not mentioned specifically in the SoR)	Place of delivery
0 1	Cement		MT	2 (Two) times issue rate	Departmental Godown
0 2	Reinforcement steel rods, structural steel members, M.S sheet Piles		MT	2 (Two) times issue rate	-do-
0	Bitumen		MT	2(Two) times issue rate	-do-

Sd/-Superintending Engineer Mechanical & Electrical Circle Irrigation & Waterways Directorate Government of West Bengal

(DIGITAL SIGNATURE IS SUFFICIENT)

Technical Specification

1.1 LV SWITCHBOARDS:

TECHNICAL SPECIFICATION OF LT PANELS (SWITCHBOARD)

1.1.1 GENERAL

This section covers the detailed requirements of medium voltage switchboard shall be as under

a. Supply voltage : 415V± 10%, 3Ph

b. Frequency : $50 \text{ Hz} \pm 5\%$

c. Combined voltage/frequency variation : ±10%

d. System earthing : Solidly Earthed

2.1 SWITCHBOARDS

2.1.1 This specification covers the design, manufacture and testing of industrial type metal enclosed factory assembled All LV Panels ..

Used in electrical systems of up to 690V. In general, the LV panels are referred to as LV switchboard panels in this specification.

2.1.2 Throughout this specification reference is made to "specified elsewhere or as specified". Details for requirements of this type are to be found in the single-line diagram.

CODES AND STANDARDS

The LV Switchgear shall be designed manufactured and tested in accordance with the latest applicable sections of the IEC61439-1&2. The latest edition shall always be used. LV Switchgear manufactured in India shall be designed, manufactured and tested in accordance with either I EC or IS codes and standards.

- 2.1.3 Conflicts between referenced documents shall be identified to the CLIENT in writing for resolution. In general the order of precedence is:
- Single-Line Diagram (When reference to the Single-line diagram is made in the following part of this specification, it shall be deemed to include reference to the associated schedules)
- Approved Drawings & Datasheets
- Specification
- BOQ
- IS/ International Standards

IEC /IS STANDARDS

IEC 60269(2009)	Low-Voltage Fuses
IEC 61439	Low-voltage Switchgear and Control gear assemblies
IEC 60044(2003)	Instrument Transformers.
IEC 60051(1997)	Direct acting indicating analogue electrical measuring instruments and their accessories.
IEC 60073(2002)	Basic and Safety Principles for Man-Machine Interface, Marking and Identification - Coding Principles for Indicators and Actuators.
IEC 60255(2009)	Electrical relays.
IEC60417DB(2005)0	Graphical symbols for use on equipment.
IEC 62052-11(2003)	Electricity metering equipment (AC) General requirements, tests and test conditions Part 11: Metering equipment-First Edition.
IEC 62052-21(2004)	Electricity metering equipment (A.C.) General requirements, tests and test conditions Part 21: Tariff and load control equipment-First Edition
IEC 60715(1995)	Dimensions of low-voltage switchgear and Control gear. Standardized mounting on rails for mechanical support of electrical devices in switchgear and Control gear installations
IEC 61439-1&2	Low-Voltage Switchgear and Control gear Assemblies.
IEC 62208(2002)	Empty enclosures for low-voltage switchgear and Control gear assemblies General requirements and Control gear assemblies General requirements-First Edition.
IEC 60228(2004)	Conductors of Insulated Cables.
IEC 60947-4-1 & IS 13947-1)	Contactors and motor starters.

- 2.1.4 The LT panels shall in all respects, be suitable for operations in service conditions and withstanding the stresses to the seismic conditions.
- 2.1.5 The Vendor shall furnish the Single Line Diagram for CLIENT's approval.
- 2.1.6 All Components shall be rated as per the electrical system. For circuit breakers, special reference shall be made in respect of enhanced circuit making requirements
- 2.1.7 The Short circuit current with minimum duration of 1 sec for LV switchgear panels shall be as indicated in SLD/BOQ

2.2.1 General

- 2.2.1.1 The LV switchboards shall be type tested assemblies (TTA) all type tests as defined in latest IEC 61439-1&2 built up from compartments housing circuit breakers, Control gear, relays, bus bars, controls and other items of equipment as per BOQ. The design of the switchboard shall be tested design & manufactured by OEM (main switchgear manufacturer)
- 2.2.1.2 The LV main switchboards and the associated equipment, including switchgear, control gear and bus bar assemblies shall be certified for the category of duty specified. The LV Main Switchboard shall be identical in mechanical construction to the LV Switchboard which had been type-tested by an acceptable, multi fold design (9-fold design) with impact test IK07-IK10 as per IEC62262 and internal Arc tested. accredited and independent testing laboratory for the fault conditions, temperature rise limits. Any manufacturer not having the above will not be considered for supply.
- 2.2.1.3 The design temperature for the equipment provided in the main low voltage switchboards shall be + 45 $^{\circ}$ C. The relative humidity shall be 75% at a temperature of + 45 $^{\circ}$ C.
- 2.2.1.4 Where armoured multi core cables terminate inside the switchboard enclosure, glanding plates or glanding brackets shall be provided for securing the cables to the switchboard. Glanding plates, glanding brackets and extension boxes shall be removable and shall be of adequate size for the particular cables to be terminated. Separate current transformers shall be provided for each protection device and for instrumentation. The switchgear assembly/sub-assemblies or panels shall be termite and rodent proof. The sub-assemblies of similar equipment shall be interchangeable.
- 2.2.1.5 Switchboards shall have a short circuit level withstand as per Schedule of Quantities and drawings.
- 2.2.1.6 The enclosures shall be designed to take care of normal stress as well as abnormal electro- mechanical stress due to short circuit conditions. All covers and doors provided shall offer adequate safety to operating persons and provide ingress protection of IP:43 and IP unless otherwise stated. Ventilating openings and vent outlets, if provided, shall be arranged such that same ingress protection of IP 43 is retaine
- 2.2.1.7 Switchboards shall also have test certificate for Seismic withstand.
- 2.2.1.8 The switchboard along with ACBs and connections should have been be type tested design at CPRI/ERDA/Independent international test house for short circuit, temperature rise, protective earth short circuit test and dielectric tests of the ratings required .
- 2.2.1.9 For operator safety IP2 X (touch proof) protection to be available even after opening the feeder compartment door. The compartmentalization to be achieved by using metal separators, use of PVC sheet / Hylem sheets shall not be allowed.
- 2.2.1.10 As specified in the BOQ the switchboard shall be form 4b for Main LT Panel and rest panels shall be Form 3b. For form of separation only metallic covers shall be used. Hylem / PVC sheets shall not be allowed.

2.2.2 **Switchboard Configuration**

- 2.2.2.1 The Switchboard shall be configured with Air Circuit Breakers, MCCB's, MCB's and other equipment as called for in the schedule of quantities.
- 2.2.2.2 The MCCBs shall be arranged in multi-tier formation whereas the Air Circuit Breakers shall be arranged in multi-tier formation as per manufacturing standard only to facilitate operation and maintenance.
- 2.2.2.3 The Switchboards shall be of adequate size with a provision of spare space to accommodate possible future additional switch gear.

2.2.3 Constructional Features

2.2.3.1 The equipment shall be arranged within each compartment such that all normal maintenance can be carried out through hinged access doors or removable covers, and where possible from the front. The switchboard shall have a rated short time withstand current as per SLD and a fault withstand for a supply voltage of 440V AC between phases at 50Hz as per boq.

- 2.2.3.2 Protection against shock in normal service shall be achieved by the provision of barriers or enclosures both vertical and horizontal and between adjacent units to ensure segregation and prevent accidental contact with live parts, or by complete insulation of all live parts. Control cables shall be segregated from primary conductors.
- 2.2.3.3 The Switchboards shall be metal clad totally enclosed, floor mounted free standing type of modular extensible design suitable for indoor mounting.
- 2.2.3.4 Switchboards construction shall employ the principle of compartmentalized and segregation for each circuit.
- 2.2.3.5 The LVSBs shall be provided with front and back access and the maximum height shall not exceed 2.60 m. All relays and indicating instruments shall be at least 500 mm and not higher than 1.8 m above floor level. The clearance in front, back and side of all assemblies of switchgear and control gear shall be generally not less than 1.2 metres. The switchgear shall be considered in the fully drawn out condition for this purpose.
- 2.2.3.6 Incomer and bus section panels or sections shall be separate and independent and shall not be wired with sections required for feeder. The incomer panel shall be suitable for receiving bus trunking or MV cable of size specified.
- 2.2.3.7 Switchboards shall be made up of requisite vertical sections, which when coupled together, shall form continuous dead front switchboards.
- 2.2.3.8 Switchboard shall be readily extensible on both sides by addition of vertical sections after removal of the end covers.
- 2.2.3.9 The switchboards shall be designed for use in high ambient temperature and humid tropical conditions as specified. Ease of inspections, cleaning and repairs while maintaining continuity of operation shall be provided in the design.
- 2.2.3.10 PU based gaskets between all adjacent units and beneath all covers shall be provided to render the joints dust and vermin proof to provide a degree of protection of IP 43 as stipulated in schedule of quantities. The unused openings within the switchboards shall be closed using suitable grommets.
- 2.2.3.11 Special care to be taken to ensure effective earthing of the frame and doors of the switchboards.
- 2.2.3.12 Each vertical section shall be provided with a rear chamber housing the cable end connections and power/control cable terminations. There should be generous availability of space for ease of installation and maintenance with adequate safety for working in one vertical section without coming into contract with any live parts. The design of the switchboard shall allow standard extension chambers if required to accommodate cables.
- 2.2.3.13 Some switchboards may be required to be installed against the wall, for such application- documented designs shall be available.
- 2.2.3.14 Switchboard shall have all structural members made of galvanized steel of thickness 1.5 mm with Multifold (9-folds) and all other members like door, covers etc of CRCA Sheet of 2.0 mm. While gland plate shall be 3mm CRCA Sheet and load bearing plates shall be of 2 mm thickness. All above components shall be made of continuously hot dip zinc coated low carbon sheet steel with zinc coating of 140 mm i.e Z140 category
- 2.2.3.15 All panels and covers shall be properly fitted and square with the frame. The holes in the panel shall be correctly positioned.
- 2.2.3.16 Switchboard shall be provided with "Danger Notice Plate" conforming to relevant Indian Standards.
- 2.2.3.18 The LVSBs shall be mounted on a robust base frame made up of steel channels with a minimum height of 75mm. The base frame shall be able to withstand the static and dynamic loads of the LVSBs. The steel channels shall be painted with epoxy polyster paint.

2.2.3.19 Gland plates of not less than 3.0 mm thick shall be provided at the top and bottom of the LV main switchboards for the termination of incoming and outgoing power cables or bus-ways.

2.3 Switchboard Compartmentalization

- 2.3.1 For compartmentalized switchboards, separate totally enclosed compartments shall be provided for horizontal busbars, vertical busbars, ACBs, MCCBs, and cable alloys.
- 2.3.2 The Main LT Panel shall be with Form 4b Construction.
- 2.3.3 Earthed metal or insulated shutters shall be provided between drawout and fixed portion of the switchgear such that no lives parts are accessible with equipment drawn out. Degree of protection within compartments shall be at least IP: 2X.
- 2.3.4 Sheet steel hinged lockable doors for each separate compartment shall be provided and duly interlocked with the breaker in "ON" and "OFF" position.
- 2.3.5 For all Circuit Breakers separate and adequate compartments shall be provided for accommodating instruments, indicating lamps, control contactors and control MCB etc. These shall be accessible for testing and maintenance without any danger of accidental contact with live parts of the circuit breaker, busbars and connections.
- 2.3.6 Each switchgear cubicles shall be fitted with label in front and back identifying the circuit, switchgear type, rating and duty. All operating device shall be located in front of switchgear only.
- 2.3.7 A horizontal wire way with screwed cover shall be provided at the top to take interconnecting control wiring between vertical sections.
- 2.3.8 Separate cable compartments running the height of the switchboard in the case of front access boards shall be provided for incoming and outgoing cables.
- 2.3.9 Cable compartments shall be of adequate size for easy termination of all incoming and outgoing cables entering from bottom or top. The construction shall include necessary and adequate and proper support shall be provided in cable compartments to support and clamping the cable in the cable alley / cable chamber.

2.4 Switchboard Bus Bars

Busbars and busbar connections shall be constructed in accordance with the requirements of IEC 61439-1&2

- 2.4.1 The short-time withstand current rating shall be at least 50 kA for 1 second at 415 V.
- 2.4.2 Busbars shall be of rectangular section hard drawn high conductivity copper (99.99 grade as per IS standard) or aluminium adequately rated and supported by non-tracking moulded insulators spaced at suitable intervals. The complete assembly shall be capable of withstanding the maximum mechanical stresses to which it may be subjected to under fault conditions.

shall

- 2.4.3 Busbar, busbar connection and conductors forming part of the equipment of the switchboards comply with IEC 61439-1&2 on current carrying capacity and limits of temperature rise.

 Busbars shall be provided with colour coded ruberised sleeves bands for phases and Neutral identification
- 2.4.4 All conductors between the busbars and the switchgear shall be of high conductivity alluminium bar, having a current rating of not less than that of the frame size of the switchgear to which they are connected. The conductors shall be insulated and colour coded for phase identification.
- 2.4.5 The busbars shall be extendible from both ends.
- 2.4.6 The maximum temperature of the bus-bars and the bus connections shall as per IEC 61439-1/2
- 2.4.7 The bus bar system may comprise of a system of main horizontal bus bars and auxiliary vertical bus bars run in bus bar alloy on either side in which the circuit could be arranged with front access for cable entrances

- 2.4.8 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 requirement.
- 2.4.9 Clearances between phases-phases, phase -Earth/ neutral should be in line with IEC.

2.4.1 Switchboard Interconnection

- 2.4.1.1 All connection and tap offs shall be through adequately sized connectors appropriate for fault level at location. This shall include tap off to feeders and instrument/control transformers.
- 2.4.1.2 For unit ratings upto 100 amps, PVC insulated 105 deg.C withstand, copper conductor wires of adequate size to carry full load current shall be used. The terminations of such interconnections shall be crimped. Solid connections shall be used for all rating of above 100 amps.
- 2.4.1.3 All connections, tappings, clamping, shall be made in an approved manner to ensure minimum contact resistance. All connections shall be firmly bolted and clamp with .even tension. Before assembly joint surfaces shall be filed or finished to remove burrs, dents and oxides and silvered to maintain good continuity at all joints. All screws, bolts, washers shall be zinc plated. High Tensile grade nuts and bolts shall be used for busbar connections.

2.5 Instrument Accommodation

- 2.5.1 Al voltmeter and ammeter and other instruments shall be flushed mounted type of size 96 sq. mm conforming to class 1.0 to IS 1248 for accuracy. All voltmeter shall be protected with MCB's.
- 2.5.2 Instruments and indicating lamps shall not be mounted on the Circuit Breaker Compartment door for which a separate and adequate compartment shall be provided and the instrumentation shall be accessible for testing and maintenance without danger of accidental contact with live parts of the Switchboard.
- 2.5.3 For MCCBs, instruments and indicating lamps can be provided on the compartment doors.
- 2.5.4 The current transformers for metering and for protection shall be mounted on the solid copper busbars with proper supports.
- 2.5.5 On all the incomers of switch boards ON/OFF indicators lamps shall be provided suitable for operation on AC 230 volts supply. All lamps shall be protected by MCBs.

2.6 Wiring

2.6.1 All wiring for relays and meters shall be with FRLS copper conductor wires. The wiring shall be coded and labeled with approved ferrules for identification. The minimum size of copper conductor control wires shall be 1.5 sq. mm. Runs of wires shall be neatly bunched and suitably supported and clamped. Current circuit shall be 2.5Sqmm. Means shall be provided for easy identification of wires. Identification ferrules shall used at both end of wires. All control wires meant for external connections are to be brought out on a terminal board. The cables and control wires shall be suitable for withstanding 105 deg C.

2.7 Space Heaters

2.7.1 Anti- condensation heaters shall be fitted in each cubicle together with an ON/OFF isolating switch suitable for electrical operation at 230 volts A.C 50 Hz single phase of sufficient capacity to raise the internal ambient temperature by 5^O C. The electrical apparatus so protected shall be designed so that the maximum permitted rise in temperature is not exceeded if the heaters are energized while the switchboard is in operation. As a general rule, the heaters shall be placed at the bottom of the cubicle.

2.8 Earthing

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

2.9 Sheet Steel Treatment And Painting

2.9.1 Sheet steel used in the fabrication of switchboards shall undergo a rigorous cleaning and surface PT Spray nine tank process comprising of alkaline degreasing, descaling in dilute sulphuric acid and a recognised phosphating process after which a coat of primer paint compactively with the final paint shall be applied over the

treated surface. Final paint coat of oven baked powder coating, of minimum 50-90 micron thickness with powder coated with RAL7035 coat with matt finish, of sheet approved by Engineer-in-Charge shall then be provided.

2.10 Name Plates And Labels

2.10.1 Suitable engraved white on black name plates and identification labels of metal for all Switchboards and Circuits shall be provided. These shall indicate the feeder number and feeder designation. Nameplate shall carry the name of the original switchgear manufacturer and also the manufacturing franchise partner.

2.11 Testing at Works

2.11.1 Copies of type test carried out at ACB/ MCCB manufacturers works. Type tests for the switchboard as per IEC61439 shall be submitted along with the verification tests .

Routine tests carried out at the switchboard fabricators shop shall be furnished along with the delivery of the switchboards. Engineer-in-Charge reserves the right to get the switchboard inspected by their representative at fabricators works prior to dispatch to site to witness the followings.

- a. 2.11.1.1 Physical Variation and Dime
- b. Physical variation and dimensional check
- c. 2.11.1.2 Verification of bill of material
- d. 2.11.1.3 Functional check
- e. 2.11.1.4 HV test

2.12 ACB Specification

3. AIR CIRCUIT BREAKERS (ACB)

Air Circuit Breakers shall be confirmed to IEC 60947 / IS 13947 (part 1 & 2) and suitable for

- f. Rated system voltage 690 V
- g. Rated insulation voltage 1000 V
- h. Rated impulse withstand voltage 12 kV
- i. ACB shall have lcs = lcu = lcw
- j. Icw rating shall be for 1 sec

Air Circuit Breakers shall be sheet metal enclosed flush front, draw out type and shall be provided with a trip free manual operating mechanism or as indicated in drawings and bill of quantities with mechanical "ON" "OFF" "TRIP" indications.

The ACB shall be 3/4 pole with modular construction, drawout, manually operated as per BOQ. In case of 4 pole version neutral rating shall be 100% of phase And shall be capable of providing short circuit, overload and earth fault protection through micro processor based control unit sensing the true RMS valve to ensure accurate measurement meeting the EMI/EMC requirement as per standard.

Air Circuit Breakers shall have same height & depth for the entire range irrespective of frame size

ACB shall have facility to change from manual version to electrical version at site (MF - EF, MDO - EDO)

The circuit breakers shall be for continuous rating and service short Circuit Breaking capacity shall be as specified on the single line diagram and shall be equal to the short circuit withstand values. The ACB shall be suitable for ingress protection IP 40

Circuit breakers shall be designed to `close' and `trip' without opening the circuit breaker compartment door. The operating handle and the mechanical trip push button shall be at the front of the breakers panel and integral with the breaker.

The ACB shall be provided with a door interlock. The contacts shall be of silver plated copper with a feature of contact wear inspection, indicating the life of the contacts. The ACB shall have double insulation (Class-II) with moving and fixed contacts totally enclosed for enhanced safety and inaccessibility to live parts.

3.1 CRADLE

The cradle shall be so designed and constructed as to permit smooth withdrawal and insertion of the breaker into it. The movements shall be free from jerks, easy to operate and shall be on steel balls/rollers and not on flat surfaces.

There shall be 4 distinct and separate position of the circuit breaker on the cradle.

Service Position : Main Isolating contacts and control contacts of the breaker are engaged. **Test Position :** Main Isolating contacts are isolated but control contacts are still engaged.

Isolated Position: Both main isolating and control contacts are isolated.

Maintenance: Circuit breaker fully outside the panel ready for maintenance after the cubicle

door is opened. There shall be provision for locking the breaker in any or all of the first three positions.

3.2 PROTECTIONS

a. Release Unit

ACB shall be provided with microprocessor based protection unit with the following

- a. Protection L, S, I, G with
 - i. `L' settable from 0.4 1.0 times of `In'
 - ii. Settable characteristics from 5 30 sec
 - iii. Thermal memory selectable (ON/OFF)
 - iv. 'S' settable from 1.5 10 times of 'Ir'
 - v. Selectable characteristics with t=constant & i2t=constant
 - vi. `I' settable from 2 15 times of `In' with `Icw' as maximum setting
 - vii. 'G' settable from 0.2 1.0 times 'In'
 - viii. Selectable characteristics with t=constant & i2t=constant
- b. Neutral protection settable 0 50 100 % of 'Ir'
- c. Input to protection release shall be thru 'rogowski' coil
- d. Release shall be provided with LCD display with the following
 - i. Current measurement & display with bar graph
 - ii. Date & Time stamping for events
 - iii. Last trip data and last 20 trip data

Release shall be provided with individual LED indication for faults (L, S, I, G)

- a. Release shall have over temperature protection to protect the release with first alarm (75o C) and then tripping (95o C)
- Release shall have in-built logic selectivity / zone selectivity to assist selectivity between ACB ACB as well as ACB – MCCB
- c. Release shall be provided with battery back-up to assist user to diagnose in the events of fault
- d. Release shall have `TEST' facility to check proper functioning of release

b. Thermal Memory

When the breaker shall reclose after tripping on overload, then the thermal stresses caused by the overload if not dissipated completely, shall get stored in the memory of the release and this thermal memory shall ensure reduced tripping time in case of subsequent overloads. Realistic Hot/Cold curves shall take into account the integrated heating effects to offer closer protection to the system.

c. Defined time-current characteristics

A variety of pick-up and time delay settings shall be available to define the current thresholds and the delays to be set independently for different protection zones thereby achieving a close-to-ideal protection curve. Available pick-up and time delay settings shall have flexibility for over two million different I-t characteristics to suit different applications.

d. Trip Indication

Electromechanical fault status indicators shall be provided to display the type of fault that caused a trip, without any auxiliary supply or battery, resulting in faster fault diagnosis and reduced system down time.

e. Test Facility

Test facility to test the operation of the release in different protection zones by simulating CT inputs externally through a testing kit.

f. Self powered

The release shall draw its power from the main breaker CTs and shall require no external power supply for its operation.

g. Tripping of the breaker

The release shall trip the breaker through a flux shift device which shall directly act on the breaker trip rod.

h. Zone Selective Interlocking

The release shall be suitable for communication between breakers to enable zone selective interlocking. This feature shall be provided for both short circuit and ground fault protection zones to offer intelligent discrimination between breakers. This feature enables faster clearance of fault conditions, thereby reducing the thermal and dynamic stresses produced during fault conditions and thus minimizes the damage to the system.

i. Auxiliary Contacts:

ACB shall be supplied with 4 auxiliary contacts (combinations of NO / NC shall be selected at site) and 1 trip contact. If need arise there shall be facility to add additional auxiliary contacts (6 nos.)

ACB shall have provision to use 'Ready to Close' contact

The contact shall be rated 5 amps. The auxiliary contacts blocks shall be so located as to be accessible from the front. The auxiliary contacts in the trip circuits shall close before the main contacts have closed.

All other contacts shall close simultaneously with the main contacts. The auxiliary contacts in the trip circuits shall open after the main contacts open.

All current carrying parts shall be silver plated and suitable arcing contacts with proper arc chutes shall be provided to protect the main contacts. The heat generated in the contacts due to tripping under fault conditions shall be very nominal. All air circuit breakers shall be labelled.

3.3 SAFETY FEATURES

- I. The safety shutter shall prevent inadvertent contact with isolating contacts when breaker is withdrawn from the Cradle.
- II. It shall not be possible to interchange two circuit breakers of two different thermal ratings. III. There shall be provision of positive earth connection between fixed and moving portion of the ACB either thru connector plug or sliding solid earth mechanism. Earthing bolts shall be provided on the cradle or body of fixed ACB.
- IV. Arc Chute covers wherever necessary shall be provided.
- VI. It shall be possible to bolt the drawout frame not only in connected position but also in TEST and DISCONNECTED position to prevent dislocation due to vibration and shocks.

4. MOULDED CASE CIRCUIT BREAKER (MCCB)

All MCCB's shall confirm to IEC- 60947 and IS-13947 – Part 1 & 2. and comprise of Quick Make -break switching mechanism, arc extinguishing device and the tripping unit shall be contained in a compact, high strength, heat resistant, flame retardant, insulating moulded case with high withstand capability against thermal and mechanical stresses.

All MCCB shall have three / four poles and manual fixed type as per SLD in case of 4pole the Neutral protection shall have a settings: 0 - 50% - 100% Ir.

All MCCB's shall be capable of defined Variable overload adjustment. All MCCB's rated 200 Amps and above shall have adjustable Magnetic short circuit pick up.

The trip command shall override all other commands.

The breaking capacity of MCCB's shall be asked for in the schedule of quantities. The breaking capacities specified will be ICU=ICS i.e type-2. Co-ordination as per relevant BIS and IEC Codes.

The MCCB's shall be provided with rotary handle operating mechanism. The handle position shall give positive indication of 'ON', 'OFF' or 'Tripped' thus qualifying to Disconnection as per the IS/IEC indicating the true position of all the contacts.

MCCB shall be selected as per the lcs values mentioned in the SLDs and rated at ambient 40°C.

MCCB shall comply with the isolation function requirement of IEC-60947-2 section 7.1.2 to be marked as suitable for isolation / disconnection to facilitate safety of person in use.

.

- MCCB shall have line load reversibility. Three phase breakers shall be designed to break all the poles simultaneously and they shall have a single mechanism.
- MCCB shall be provided with an inverse time delay electronic over current trip devices. The trip device shall be direct acting.

Protection Unit

- For Thermal Magnetic Release:
 - a) The overload setting should be from 0.7 to 1 times of Ir.
- For Microprocessor Release:
 - a) The microprocessor based release should have the following settings:
 - Overload Settings: 0.4 to 1 times of Ir
 - Short Circuit Settings: 1.5 to 10 times of Ir.
 - Earth fault Settings: 0.2 to 1 times of In. (to be provided if asked in BOM)
 - Neutral protection settings: 0 − 50% − 100%Ir. (to be provided if asked in BOM)
 - b) Separate LED indication for each fault.
 - c) LED indication for internal temperature of 75° C and above.
 - d) LED pre overload alarm at 90% of Ir and 105% of Ir.
 - e) The MCCB should have inbuilt feature of logical selectivity by which it can give a time delay of 50msec between upstream and downstream MCCB and ACB
 - f) Facility for segregating Priority and Non-Priority loads must be available in the MCCB.

Safety Arrangement and Interlock

- Manually closing mechanism should be accommodated in a Moulded housing of robust and vermin-proof construction.
- MCCB shall be provided with double insulation (insulation between front cover and 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 shall be made of high strength heat resistant and flame retardant thermosetting insulating material.

5 Current Transformers (CT'S)

Accommodation shall be provided in the circuit breaker panel to mount one set of three number dual core ratio CT's for metering and protection purposes. Access to the CTs for cleaning, testing or changing shall be from front, back or top of the panel.

Current transformers ratings shall be dual core and dual ratio CTs of suitable burden (but not less than 15 VA) shall be preferred with 5 Amp secondary.

Secondary terminals of CT shall be brought out suitably to a terminal block which will be easily accessible for testing and terminal connections.

The protection CTs shall be of accuracy class 5 P 10 of IS 2705 – Part – III -1992.

The Metering CTs shall conform to the metering ratio and accuracy class 0.5 of IS 2705 – 1992.

Current transformers shall conform to latest edition to relevant standards. The Current transformers shall be epoxy

resin cast with bar Primary or ring type.

The design and construction shall be sufficiently robust to withstand thermal and dynamic stresses due to the maximum short circuit current of the circuit.

CT core laminations shall be of high grade silicon steel.

Rating plate details and terminal markings shall be according to the latest edition of relevant Indian Standard specification.

Current transformers (core) shall be used for metering and protection.

6 Incomer / Termination

Incomer termination shall be suitable for receiving bus trunking / underground cables. Cable shall invariably be through terminal blocks (Polyamide or Superior) or brought out solid terminals.

The housing material shall have unbreakable and fire retardant characteristic. All the metal parts shall be made up of copper alloy including the screws. Mounting shall be DIN or G-Rail type. Screws shall be captive type. No protection cover is required and the block shall be touch proof.

Control Terminal Block

- (i) Box clamp type, 650V grade line up terminals of minimum 2.5 sqmm size shall be provided. Connection to terminals shall be from front.
- (ii) Not more than one wire on each side shall be connected on any terminal. Where duplication of terminals block/s is necessary, suitable solid bonding links shall be incorporated.
- (iii) Terminal blocks at different voltage shall be segregated into groups and distinctly labeled.
- (iv) Current transformer secondary leads shall be brought to terminal blocks having facility for short circuiting and grounding the secondary.
- (v) Terminals shall be numbered for identification and grouped according to function. Engraved back on white PVC labels shall be provided on the terminal blocks describing the function of the circuit.
- (vi) Separate terminal stems shall be provided for internal and external wiring.
- (vii) Control terminal blocks shall be so located that control cables are fully segregated from power cables. Suitable insulated or earthed metal race ways shall be provided for control wiring. Separate unrolled removable gland plate shall be provided for the control cables at the bottom of each panel.
- (viii) Minimum 10% of total number spare terminals shall be provided for future use.

Contactors

The contactors shall be air break type, equipped with three main contacts and minimum 2NO + 2NC auxiliary contacts. The main contacts of a particular contactor shall have AC 3 ratings for unidirectional motors & AC 4 for reversible motors.

The auxiliary contacts shall be rated for minimum 5 Amps at 240V AC and 1.3 Amps at 110V DC (Inductive load).

Unless specified otherwise, the coil of the contactor shall be suitable for operation on 240V, (+) 10% & (-) 15% 1-Ø, AC supply. The drop off voltage of contractor shall be 15% to 65% of the rated coil voltage.

Drawings and Information

The Vendor shall furnish following drawings/documents in accordance with enclosed requirements:

- 1. General Arrangement drawing of the Switchboard, showing front view, plan, foundation plan, floor cutouts/trenches for external cables and elevations, transport sections and weights.
- 2. Sectional drawings of the circuit breaker panels, showing general constructional features, mounting details of various devices, bus bars, current transformers, cable boxes, terminal boxes for control cables etc.
- 3. Schematic and control wiring diagram for circuit breaker and protection including indicating devices, metering instruments, alarms, space heaters etc.
- 4. Terminal plans showing terminal numbers, ferrules markings, device terminal numbers and function details etc.
- 5. Relay wiring diagrams.
- 6. Equipment List.

Vendor shall furnish required number of copies of above drawings for purchaser's review. Fabrication of switch boards shall start only after purchaser's clearance for the same. After final review, required number of copies and reproducible shall be furnished as final certified drawings.

The information furnished shall include the following:

- 1. Technical literature giving complete information of the equipment.
- 2. Erection, Operation and Maintenance Manual complete with all relevant information, drawings and literature for auxiliary equipment and accessories, characteristics curves for relays etc.
- 3. A comprehensive spare parts catalogue.

	TECHNICAL DATA SHEET /COMPLIANCE SHEET					
SrNo	Description	Recommended Specification	Confirmation by the Bidders			
1	Type of Enclosure	Form 3b/4b as per BOQ				
2	Reference IEC	TTA AS PER IEC : 61439-1&2				
3	Type of Mounting	Main Enclosure - Free standing Floor Mounted.				
4	Fault kA	** kA -1 Sec ** as per SLD/BOQ				
5	Thickness of sheets					
Α	Covers and doors & Load Bearing Member	2.0 mm CRCA				
В	Mechanical Impact	IK 08 as per IEC62262				
С	Non Load Bearing member	1.5mm, 9-folds Constructions				
D	Base channel	CRCA 2mm of 75mm Height				
Е	Gland plate	3mm				
F	Painting/ Process	Epoxy Powder coating with Nine-tank pre treatment process				
G	Paint shade;					
	a. Inside & Outside	Preferred RAL7035				
6	Busbars	Pre fabricated assembly with E99.99 grade Copper of specified rating				
		all Horizontal BUSBAR Phase & Neutral shall be Run Together as per Clearance of respective IEC				
7	Cable Entry	For a. Top/ Bottom				
8	Enclosure Protection/	IP -43				
	Ventilation					
9	Switchgears	MCCB up to 630A MCCB and Above ACB to be Considered				
а	МССВ	up to 250A Thermal Magnetic O/C & S/C rel and above MP Based O/C, S/C & E/F rel				
b	ACBs	All ACBs Shall be EDO and MP Based O/C, S/C & E/F Rel.				
10	Control Wiring/	Insulated 1100Volts Cu FRLS wire.				
	Power Wiring					
Α	Voltage Circuit (P.T.)	Minimum 1.5 sq mm				
В	Current Circuit (C.T.)	Minimum 2.5 sq mm				
С	Minimum size of	4 sq mm				
	Power wiring CKt					
10	Cable Lugs / Cable	Tinned copper lugs and brass glands				
	Glands & termination					
11	Operating Height	2200 max.				
12	Mounting height of Relays/Meters	Minimum 300mm & maximum 1900mm				
	ControlSwitches					

13	Type of CTs	Cast Resin
14	Design Ambient Temp	40 Deg.C.
15	Makes Of the components to be used	As per approved make list
Α	ACBs	As per approved list.
В	MCCB	As per approved list.
С	Meters	As per approved list.
D	Ammeter/	As per approved list.
	Voltmeter selector switches	
E	Wires	As per approved list.
F	C,Ts	As per approved list.
G	Control Fuses	As per approved list.
16	Components rating	Required rating for continuous operation, as per BOQ & SLD

	APPROVED MAKE					
1	ACB	LEGRAND-DMX3(MP4) / ABB(Emax-PR122)/ SIEMENS- 3WL ETU45B/ Schneider -(NW-7.0A)				
2	MCCB	LEGRAND-DPX3 / SCHNIEDER NSX / ABB – Tmax/ SIEMENS -3VL				
3	MCB / RCCB	LEGRAND-DX3/SCHNIEDER-Acti9/Siemens- Betagaurd 10KA				
4	Distribution Boards	LEGRAND-Ekinox3 / SCHNIEDER-Acti9/ Siemens Betagaurd 10KA				
	Power Contactor/ MPCB	LEGRAND / SCHNIEDER-Tesys /Siemens-SIRIUS				
5	INSTRUMENT TRANSFORMER	PRECISE/G&M/MATRIX				
6	OTHER PROTECTION	ABB/ SCHNIEDER/CSPC				
7	GENERATOR PROTECTION RELAY	ABB / AVKSEGC / SCHNIEDER/ALSTOM				
8	AMF RELAYS	WOODWARD / SIEMENS /CSPC				
9	CAPACITOR CONTROL RELAY	BELUK / EPCOS / LEGRAND/SCHNEIDER				
10	PLC	ALLEN BRADLEY / SIEMENS / SCHNIEDER				
11	CAPACITORS / DETUNED FILTERS	LEGRAND/DUCATI / EPCOS/Schneider				
12	DIGITAL METER	ABB / SCHNIEDER/SIEMENS				
13	LED INDICATING LAMPS / PBS	TECHNIC / SIEMENS/VAISHNO				
14	ANNUNCIATOR	LOCAL APPROVED ENGINEER IN CHARGE				
15	MODULAR TYPE SOCKETS & SWITCHES	Legrand-Myrius / CRABTREE -Murano/ MK- Elements				
16	INDUSTRIAL PLUG & SOCKET	LEGRAND / SCHNEIDER / GEWISS				
17	PVC - INSULATED COPPER WIRES - FRLS TYPE	FINOLEX / HAVELLS / POLYCAB / LAPP				
18	LT SINGLE CORE / MULTI CORE COPPER CA	FINOLEX / HAVELLS / POLYCAB / LAPP				
19	LT CABLES	POLYCAB / HAVELLS / SKYTONE / KEI/FINOLEX				
20	CONTROL CABLES	FINOLEX / HAVELLS / POLYCAB				
21	FRLS CONDUIT	AKG / BEC / PRECISION / EQUAL APPROVED				
22	MS / GI CONDUIT	AKG / BEC / PRECISION / EQUAL APPROVED				
23	LT PANEL	LEGRAND-XL3/SCHNEIDER-BLOKSET/ SIEMENS-SIVACON/ ABB-MNS				
24	SANDWICH BUS DUCT	LEGRAND-ZUCCHINI /SCHNEIDER-ILINE2 /SIEMENS				
25	CABLETRAY	LEGRAND / OBO-Betterman / GEWISS				
26	LIGHT FIXTURES	PHILIPS / CG/HAVELLS/GE				
27	TVSS	SCHNIEDER / ASCO / LEGRAND				
28	ATS - (UPTO 1000 AMPS	ASCO / SOCOMAC / GE				
29	MAINTENANCE FREE EARTH PITS	ERICO / LIGHTNING PROTECTION INTERNATIONAL				
30	UPS	Numeric/Emerson/APC				

BILL OF MATERIAL

1	G+10 MAIN BUILDING LT PANEL (WEST BLOCK) (MAIN BUILDING PANEL-1)	1	No.	
	Indoor, Single Front, Fixed Type, Floor Mounted with 4000A Tinned Copper Busbar. (XL ³ Legrand Make Panel - CRCA Sheet Enclosure), Form-3B Construction			
	INCOMER			
	3200A FP EDO ACB (65kA) with built-in Microprocessor Based Release for (O/C, S/C & E/F Protection) (CABLE CONNECTION)	1	No.	
	Breaker Control Switch with (T-N-C)	1	No.	
	Auto/Manual Selector Switch	1	No.	
	Auxiliary Contactor 2NO+2NC	2	Nos.	
	Digital Voltmeter with selector switch, Cl1.0 96x96sq.mm., Flush Mounted	1	No.	
	Digital Ammeter with selector switch, Cl1.0 96x96sq.mm., Flush Mounted	1	No.	
	Digital Multifunction Meter EM6400NG or Equivalent with RS485 Communication Port, Cl1.0, 96x96sq.mm., Flush Mounted	1	No.	
	CTs 3200/5A, Class-1.0, 15VA for Metering (Resin Cast)	3	Nos.	
	Indicating lamps - R/Y/B/ON/OFF/TRIP	6	Nos.	
	1A SP Control MCB (10kA), C-Curve	7	Nos.	
	OUTGOINGS			
	2500A FP MDO ACB (65kA) with built-in Microprocessor Based Release for (O/C, S/C & E/F Protection) (CABLE CONNECTION)	1	No.	
	Indicating lamps - ON/OFF/TRIP	3	Nos.	
	1A SP Control MCB (10kA), C-Curve	5	Nos.	
	630A FP Manually Operated Fixed Type MCCB (65kA) with built-in Thermal Magnetic Based Release for (O/C, S/C Protection) & ROM	1	No.	

2	G+10 MAIN BUILDING LT PANEL (WEST BLOCK) (MAIN BUILDING PANEL-2)	1	No.	
	Indeen Single Front Fixed Type Floor Mounted (VI 3			
	Indoor, Single Front, Fixed Type, Floor Mounted (XL ³ Legrand Make Panel - CRCA Sheet Enclosure), Form-3B Construction			
	2500A FP EDO ACB (65kA) with built-in			
	Microprocessor Based Release for (O/C, S/C & E/F Protection) (CABLE CONNECTION)	1	No.	
	, ,			
	Breaker Control Switch with (T-N-C)	1	No.	
	Auto/Manual Selector Switch	1	No.	
	Auxiliary Contactor 2NO+2NC	2	Nos.	
	Digital Voltmeter with selector switch, Cl1.0	1	No.	
	96x96sq.mm., Flush Mounted			
	Digital Ammeter with selector switch, Cl1.0	1	No.	
	96x96sq.mm., Flush Mounted			
	Digital Multifunction Meter EM6400NG or Equivalent			
	with RS485 Communication Port, Cl1.0, 96x96sq.mm.,	1	No.	
	Flush Mounted			
	CTs 2500/5A, Class-1.0, 15VA for Metering (Resin Cast)	3	Nos.	
	Indicating lamps - R/Y/B/ON/OFF/TRIP	6	Nos.	
	1A SP Control MCB (10kA), C-Curve	7	Nos.	
3	G+4 MAIN BUILDING LT PANEL (SOUTH BLOCK) (MAIN BUILDING PANEL-3)	1	No.	
	Indoor, Single Front, Fixed Type, Floor Mounted with			
	2000A Tinned Copper Busbar. (XL ³ Legrand Make			
	Panel - CRCA Sheet Enclosure), Form-3B Construction			
	INCOMER			
	1600A FP EDO ACB (65kA) with built-in			
	Microprocessor Based Release for (O/C, S/C & E/F	1	No.	
	Protection) (CABLE CONNECTION)			
	Breaker Control Switch with (T-N-C)	1	No.	
	Auto/Manual Selector Switch	1	No.	
	Auxiliary Contactor 2NO+2NC	2	Nos.	
	Digital Voltmeter with selector switch, Cl1.0	1	No.	

96x96sq.mm., Flush Mounted			
Digital Ammeter with selector switch, Cl1.0 96x96sq.mm., Flush Mounted	1	No.	
Digital Multifunction Meter EM6400NG or Equivalent with RS485 Communication Port, Cl1.0, 96x96sq.mm., Flush Mounted	1	No.	
CTs 1600/5A, Class-1.0, 15VA for Metering (Resin Cast)	3	Nos.	
Indicating lamps - R/Y/B/ON/OFF/TRIP	6	Nos.	
1A SP Control MCB (10kA), C-Curve	7	Nos.	
OUTGOINGS			
630A FP Manually Operated Fixed Type MCCB (65kA) with built-in Thermal Magnetic Based Release for (O/C, S/C Protection) & ROM	1	No.	
320A FP Manually Operated Fixed Type MCCB (65kA) with built-in Thermal Magnetic Based Release for (O/C, S/C Protection) & ROM	4	Nos.	
100A FP Manually Operated Fixed Type MCCB (65kA) with built-in Thermal Magnetic Based Release for (O/C, S/C Protection) & ROM	1	No.	
100A FP Manually Operated Fixed Type MCCB (65kA) with built-in Microprocessor Based Release for (O/C, S/C Protection) & ROM	1	No.	
320A FP Manually Operated Fixed Type MCCB (65kA) with built-in Thermal Magnetic Based Release for (O/C, S/C Protection), Aux. Cont., Trip Cont. & ROM	1	No.	
Digital Ammeter with selector switch, Cl1.0 96x96sq.mm., Flush Mounted	1	No.	
Digital kWh Meter EM1200 or Equivalent with RS485 Communication Port, Cl1.0, 96x96sq.mm., Flush Mounted	1	No.	
CTs 320/5A, Class-1.0, 15VA for Metering (Resin Cast)	3	Nos.	
Indicating lamps - R/Y/B/ON/OFF/TRIP	6	Nos.	
1A SP Control MCB (10kA), C-Curve	4	Nos.	
250A FP Manually Operated Fixed Type MCCB (65kA) with built-in Thermal Magnetic Based Release for	1	No.	

	(O/C, S/C Protection) & ROM			
	100A FP Manually Operated Fixed Type MCCB (65kA) with built-in Thermal Magnetic Based Release for (O/C, S/C Protection) & ROM	1	No.	
4	1ST- FLOOR PANEL-1 (WEST BLOCK)	1	No.	
	Indoor, Single Front, Fixed Type, Floor Mounted with 500A Tinned Copper Busbar. (XL³ Legrand Make Panel - CRCA Sheet Enclosure), Form-3B Construction			
	INCOMER			
	400A FP Manually Operated Fixed Type MCCB (50kA) with built-in Thermal Magnetic Based Release for (O/C, S/C Protection), Aux. Cont., Trip Cont. & ROM	1	No.	
	Digital Voltmeter with selector switch, Cl1.0 96x96sq.mm., Flush Mounted	1	No.	
	Digital Ammeter with selector switch, Cl1.0 96x96sq.mm., Flush Mounted	1	No.	
	Digital Multifunction Meter EM6400NG or Equivalent with RS485 Communication Port, Cl1.0, 96x96sq.mm., Flush Mounted	1	No.	
	CTs 400/5A, Class-1.0, 15VA for Metering (Resin Cast)	3	Nos.	
	Indicating lamps - R/Y/B/ON/OFF/TRIP	6	Nos.	
	1A SP Control MCB (10kA), C-Curve	7	Nos.	
	OUTGOINGS			
	160A FP Manually Operated Fixed Type MCCB (50kA) with built-in Microprocessor Based Release for (O/C, S/C Protection) & ROM	3	Nos.	
	100A FP Manually Operated Fixed Type MCCB (50kA) with built-in Microprocessor Based Release for (O/C, S/C Protection) & ROM	4	Nos.	
5	1ST- FLOOR PANEL-2 (SOUTH BLOCK)	1	No.	
	Indoor, Single Front, Fixed Type, Floor Mounted with 700A Tinned Copper Busbar. (XL ³ Legrand Make Panel - CRCA Sheet Enclosure), Form-3B Construction			
	INCOMER			
	630A FP Manually Operated Fixed Type MCCB (50kA) with built-in Thermal Magnetic Based Release for	1	No.	

	(O/C, S/C Protection), Aux. Cont., Trip Cont. & ROM			
	Digital Voltmeter with selector switch, Cl1.0 96x96sq.mm., Flush Mounted	1	No.	
	Digital Ammeter with selector switch, Cl1.0 96x96sq.mm., Flush Mounted	1	No.	
	Digital Multifunction Meter EM6400NG or Equivalent with RS485 Communication Port, Cl1.0, 96x96sq.mm., Flush Mounted	1	No.	
	CTs 630/5A, Class-1.0, 15VA for Metering (Resin Cast)	3	Nos.	
	Indicating lamps - R/Y/B/ON/OFF/TRIP	6	Nos.	
	1A SP Control MCB (10kA), C-Curve	7	Nos.	
	OUTGOINGS			
	250A FP Manually Operated Fixed Type MCCB (50kA) with built-in Microprocessor Based Release for (O/C, S/C Protection) & ROM	3	Nos.	
	160A FP Manually Operated Fixed Type MCCB (50kA) with built-in Microprocessor Based Release for (O/C, S/C Protection) & ROM	1	No.	
	100A FP Manually Operated Fixed Type MCCB (50kA) with built-in Microprocessor Based Release for (O/C, S/C Protection) & ROM	4	Nos.	
6	2 ND , 3 RD , FLOOR PANEL – 1 each (WEST BLOCK)	2	Nos.	
	Indoor, Single Front, Fixed Type, Floor Mounted with 700A Tinned Copper Busbar. (XL³ Legrand Make Panel - CRCA Sheet Enclosure), Form-3B Construction			
	INCOMER			
	500A FP Manually Operated Fixed Type MCCB (50kA) with built-in Thermal Magnetic Based Release for (O/C, S/C Protection), Aux. Cont., Trip Cont. & ROM	1	No.	
	Digital Voltmeter with selector switch, Cl1.0 96x96sq.mm., Flush Mounted	1	No.	
	Digital Ammeter with selector switch, Cl1.0 96x96sq.mm., Flush Mounted	1	No.	
	Digital Multifunction Meter EM6400NG or Equivalent with RS485 Communication Port, Cl1.0, 96x96sq.mm.,	1	No.	

Nos. Nos.	
Nos.	
N	
NI	
Nos.	
Nos.	
Nos.	
No.	
No.	
No.	
No.	
Nos.	
Nos.	
Nos.	
Nos.	
Nos.	
	Nos. No. No. No. Nos. Nos. Nos. Nos. Nos.

	(50kA) with built-in Microprocessor Based Release for			
	(O/C, S/C Protection) & ROM			
8	GROUND FLOOR SWITCH PANEL (FLOOR PANEL -1 WEST BLOCK)	1	No.	
	Indoor, Single Front, Fixed Type, Floor Mounted with 700A Tinned Copper Busbar. (XL ³ Legrand Make Panel - CRCA Sheet Enclosure), Form-3B Construction			
	INCOMER			
	630A FP Manually Operated Fixed Type MCCB			
	(50kA) with built-in Thermal Magnetic Based Release for	1	No.	
	(O/C, S/C Protection), Aux. Cont., Trip Cont. & ROM			
	Digital Voltmeter with selector switch, Cl1.0	1	No.	
	96x96sq.mm., Flush Mounted	1	NO.	
	Digital Ammeter with selector switch, Cl1.0	1	No.	
	96x96sq.mm., Flush Mounted	1	NO.	
	Digital Multifunction Meter EM6400NG or Equivalent			
	with RS485 Communication Port, Cl1.0, 96x96sq.mm., Flush Mounted	1	No.	
	CTs 630/5A, Class-1.0, 15VA for Metering (Resin Cast)	3	Nos.	
	Indicating lamps - R/Y/B/ON/OFF/TRIP	6	Nos.	
	1A SP Control MCB (10kA), C-Curve	7	Nos.	
	OUTGOINGS			
	250A FP Manually Operated Fixed Type MCCB			
	(50kA) with built-in Microprocessor Based Release for	4	Nos.	
	(O/C, S/C Protection) & ROM			
	160A FP Manually Operated Fixed Type MCCB			
	(50kA) with built-in Microprocessor Based Release for	1	No.	
	(O/C, S/C Protection) & ROM			
	100A FP Manually Operated Fixed Type MCCB			
	(50kA) with built-in Microprocessor Based Release for	4	Nos.	
	(O/C, S/C Protection) & ROM			

FORM 1

(To be submitted in plain paper/letter head as per specimen, duly filled up and uploaded with digital signature which shall be treated as the self declaration of the bidder)

APPLICATION FOR e-TENDER

To,
The Superintending Engineer
Mechanical & Electrical Circle,
I&W Directorate, Govt. of West Bengal
Jalasampad Bhawan, (6th Floor)
Bidhannagar, Kolkata-700091.

e- Tender No:- WBIW/SE/MEC/ NIT-01(e) /2018-19

Serial No. of Works applied for :-

Amount put to e-Tender: Rs

Dear Sir.

Having examined the Technical PQ cover, OID cover, Corrigendum (*optional) & entire e-NIT documents, I/we hereby would like to state that I/we wilfully accept all your conditions and offer to execute the work as per the tenders rules in e-NIT, terms & conditions, specifications, drawings, bill of quantities and corrigenda/addenda, SoR, and Agreement (WB Form No. 2911(i)/(ii) involving the e-Tender and Serial no of work stated above. I/We acknowledge that the making of our bid shall be regarded as an unconditional and absolute acceptance of the terms & conditions of the e-NIT. I/We also agree to remedy the defects during execution and upto end of security period of the above work in conformity with the conditions of contract, specifications, drawings, bill of quantities and addenda/corrigenda.

Dated this	_day of	201	
Full name of Bidder	r / Contractor:		
Name in full of Sign	natory/s*:		
In the capacity* of:			
Duly authorized to	sign bid		
for & on behalf of (N	Name of Firm):		 -
(In block Capital let	tters or typed)		
Office address with	seal:		
Telephone no(s) (off	ice):		
Mobile No:			
Fax No:			
E mail ID:			

^{*}In case of Joint Venture & Consortium the Lead Member to submit this format.

FORM – 2

Ref:- e-NIT No:

Declaration against Common Interest

(To be submitted in plain paper/letter head as per specimen, duly filled up and uploaded with digital signature, which shall be treated as the self declaration of the bidder)

e-Tender ID No:

SI. No. of work :	
To, The Superintending Engineer Mechanical & Electrical Circle, I&W Directorate, Govt. of West Bengal Jalasampad Bhawan, (6 th Floor) Bidhannagar, Kolkata-700091.	
I/We, Sri/Smt.	, the authorized signatory on behalf of
do	o hereby affirm that I/We/any of the member
of bidding against e - NIT No	Sl. No do
not have any common interest either as a partner in any other p	partnership firm /consortium/Joint Venture or as
Proprietor / Principal Share Holder of any other Firm/Company in the same	e serial for the work I / we want to participate.
Dated this day of 201	
Full name of Bidder / Contractor:	
Authorised Signatory:	
In the capacity of:	
Duly authorized to sign bid	
for & on behalf of (Name of Firm):	
(In block Capital letters or typed)	
Office address with seal:	
Telephone no(s) (office):	
Mobile No:	
Fax No:	
E mail ID:	

*In case of Joint Venture & Consortium the Lead Member to submit this format.

(DIGITAL SIGNATURE OF BIDDER)

FORM - 3

Power of Attorney for signing of Contract/Tender Agreement *

(May be submitted if the bidder is a Company, Autonomous Body, Undertaking, Corporation, and NGO, in plain paper or otherwise in any legally acceptable format which shall be treated as the self declaration of the bidder)

Know all men by these presents, I/We,
is presently employed with us/ the Lead Member of our Consortium/Joint Venture and holding the position of
AND we hereby agree to ratify and confirm and do hereby ratify and confirm all acts, deeds and things done or caused to be done by our said Attorney pursuant to and in exercise of the powers conferred by this Power of Attorney and that all acts, deeds and things done by our said Attorney in exercise of the powers hereby conferred shall and shall always be deemed to have been done by us.
IN WITNESS WHEREOF WE,, THE ABOVE NAMED PRINCIPALS HAVE EXECUTED THIS POWER OF ATTORNEY ON THIS
(Signature Name date designation and address of the bidder/(s) & Contact No. & e-mail ID)
Witnesses: (Full Name with permanent addresses and contact nos.)
1. 2.
Signed & accepted

Notes:

1 The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law in India and the charter documents of the executants and when it is so required, the same should be under common seal affixed in accordance with the required procedure.

Notarized

- 2 Wherever required, the Bidder should submit for verification the extract of the charter documents and documents such as a board or shareholders' resolution/ power of attorney in favour of the person executing this Power of Attorney for the delegation of power hereunder on behalf of the Bidder.
- 3 For a Power of Attorney executed and issued overseas, the document will also have to be legalized by the Indian Embassy and notarized in the jurisdiction where the Power of Attorney is being issued. However, the Power of Attorney provided by Bidders from countries that have signed the Hague Legislation Convention, 1961 are not required to be legalized by the Indian Embassy if it carries a conforming Apostle certificate.
- This is only a specimen format and the bidder may submit any other legally valid format by bidder organisation except Proprietorship Firms.

FORM – 4

Declaration on antecedents and performance

(To be submitted in plain paper/letter head as per specimen, duly filled up and uploaded with digital signature, which shall be treated as the self declaration of the bidder)

Ref:- e-NIT No	e-Tender ID No
List of Work SI. No	
To, The Superintending Engineer	
Mechanical & Electrical Circle, I&W Directorate, Govt. of West Bengal Jalasampad Bhawan, (6 th Floor) Bidhannagar, Kolkata-700091.	
I/We, Sri/Smt.	, the authorized signatory on behalf of
	do hereby affirm that I/We/any of the member
of bidding against e - I	NIT No SI. No are
not black listed suspended or debarred from participation	in State Government procurements and tenders in the Irrigation &
Waterways Directorate, Government of West Bengal, othe	er Departments of the State Government and Government of India
on the date of publication of this Notice Inviting Tender (NI	Γ).
If at a later stage this submission (undertaking) is fou	nd incorrect, the bidder company along with all its constituent
members/owners/partners would be liable to penal actions a	as decided by the Government under the law.
Dated this day of 201	
Full name of Bidder / Contractor:	
Authorised Signatory:	
In the capacity of:	
Duly authorized to sign bid	
for & on behalf of (Name of Firm):	
(In block Capital letters or typed)	
Office address with seal:	
Telephone no(s) (office):	
Mobile No:	
Fax No:	
E 115	

(DIGITAL SIGNATURE OF BIDDER)

FORM-5*

Power of Attorney for Lead Member of Consortium/Joint Venture

(To be submitted in Non-Judicial Stamp Paper of appropriate value, which shall be treated as the self declaration of the bidder Consortium/Joint Venture as their joint affidavit-Specimen format, bidder may furnish in any other legally accepted format)

Whereas the Governor of West Bengal represented by
AND Whereas, (1)
Whereas, it is necessary for the Members of the Consortium/JV to designate one of them as the Lead Member with all necessary power and 'The Authority' to do for and on behalf of the Consortium/Joint Venture, all acts, deeds and things as may be necessary in connection with the Consortium/Joint Venture's bid for the Project and its execution;
NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS
We,
AND hereby agree to ratify and confirm and do hereby ratify and confirm all acts, deeds and things done or caused to be done by our said Attorney pursuant to and in exercise of the powers conferred by this Power of Attorney and that all acts, deeds and things done by our said Attorney in exercise of the powers hereby conferred shall and shall always be deemed to have been done by us/ Consortium/Joint Venture.
IN WITNESS WHEREOF WE THE PRINCIPALS ABOVE NAMED HAVE EXECUTED THIS POWER OF ATTORNEY ON THIS DAY OF 20
For

(To be executed by all the Members of the Consortium/Joint Venture)

Notes:

- The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executants (s) and when it is so required, the same should be under common seal affixed in accordance with the required procedure.
- 2 Wherever required, the Bidder should submit for verification the extract of the charter documents and documents such as a board or shareholders' resolution/ power of attorney in favour of the person executing this Power of Attorney for the delegation of power hereunder on behalf of the Bidder.
- 3 For a Power of Attorney executed and issued overseas, the document will also have to be legalized by the Indian Embassy and notarized in the jurisdiction where the Power of Attorney is being issued. However, the Power of Attorney provided by Bidders from countries that have signed The Hague Legislation Convention, 1961 are not required to be legalized by the Indian Embassy if it carries a conforming Apostle certificate.

(* This is a specimen sample and the Consortium/Joint Venture is at liberty to furnish this affidavit in any legally valid format in India for Works contract)

FORM-6*

SPECIMEN FORMAT FOR THE BANK GUARNATEE FOR ADDITIOANAL PERFORMANCE SECURITY DEPOSIT

(*To be submitted only **if the bid price quoted by the bidder is below 20% of the estimated cost put to tender**, non submission within 7 working days from date of issuance of LOA/LOI will lead to rejection of selected bidder. Similar standard format issued by RBI approved Bank pledging Bank Guarantee of the required value and period in favour of Engineer-in-Charge is acceptable)

dated

(name and address of Contractor) (hereafter called "the Contractor") has

to execute

(name of Contract and

To,

WHEREAS

The Superintending Engineer Mechanical & Electrical Circle,

I&W Directorate, Govt. of West Bengal Jalasampad Bhawan, (6th Floor) Bidhannagar, Kolkata-700091.

undertaken, in pursuance of Contract No:

except with the previous consent of you in writing.

brief description of Works) (hereinafter called "the Contractor").

Bank Guarantee by a Scheduled	ed by you in the said Contract that the Contractor shall furnish you with a commercial bank for the sum specified therein for 'ADDITIONAL T' for compliance with his obligation in accordance with the Contract:
AND WHEREAS we Contractor such a Bank Guarantee:	(Indicate the name of the bank and branch) have agreed to give the
of guarantee) (in we cavil or argument, a sum within the lim	(Indicate the name of bank and branch) hereby affirm that we are on behalf of the Contractor, upto a total of Rs. (amount ords). We undertake to pay you, upon your first written demand and without its of (amount of guarantee) as aforesaid without your needings for your demand for the sum specified therein.
We (Indicate the nather the said debt from the contractor before	ame of the bank and branch) hereby waive the necessity of your demanding e presenting us with the demand.
demanded not withstanding any disput	e name of the bank and branch) further agree to pay to you any money so te or disputes raised by the contractor(s) in any suit or proceeding pending ereto, our liability under this present absolute and unequivocal.
The payment/so made by us under this the contractor(s) shall have no claim ag	s bond shall be a valid discharge of our liability for payment there under and gainst us for making such payment.
other modification of the terms of the C documents which may be made between	name of the bank and branch) further agree that no change or addition to or contract or of the works to be performed there under or of any of the contract een you and the contractor shall in any way release us from any liability raive notice of any such change, addition or modification.
We (Indicate the r	name of the bank and branch) lastly undertake not to revoke this guarantee

This guarantee shall be valid upto -----. It come into force with immediate effect and shall remain in force and valid for a period upto the time of completion of the work under the stated contract plus claim period of

guarantee is restricted to Re	s (Rs.) and	unless a cl	tioned above, our liability against the aim in writing is lodged with us within the ilities under this guarantee shall cease	he
Signed and sealed this	day	of	20	at		
					SIGNED, SEALED AND DELIVERE	ĒD
					For and on behalf of the BANK by	' :
					(Signature)	
					(Name)	
					(Designation)	
					(Code Number)	
					(Address)	

NOTES:

- i. The bank guarantee should contain the name, designation and code number of the officer(s) signing the guarantee
 - The address, telephone number and other details of the Head Office of the Bank as well as of issuing Branch (within West Bengal only to be accepted) should be mentioned on the covering letter of issuing Branch.

Memo No: 648/1T-6 Dated: 24.05.2018

Copy submitted for favour of kind information to:

- 1) The Secretary to the Govt. of West Bengal, I&W Department.
- 2). The Chief Engineer, South, I&W Directorate, Govt. of West Bengal.
- 3) The Chief Engineer, West, I&W Directorate, Govt. of West Bengal.
- 4) The Chief Engineer, South-West, I&W Directorate, Govt. of West Bengal.
- 5) The Chief Engineer, North-East, I&W Directorate, Govt. of West Bengal.
- 6) The Chief Engineer, Design & Research, I&W Directorate, Govt. of West Bengal.
- 7) The Joint Secretary (Works) to the Govt of West Bengal, I&W Department, Govt. of West Bengal.
- 8) The Deputy Secretary (Works) to the Govt of West Bengal, I&W Department, Govt. of West Bengal.
- 9) The Superintending Engineer, Metropolitan Drainage Circle, I&W Dte., Govt. of West Bengal.
- 10) The Superintending Engineer, Western Circle-I, I&W Dte., Govt. of West Bengal.
- 11) The Superintending Engineer, Eastern Circle, I&W Dte., Govt. of West Bengal.
- 12) The Superintending Engineer, Mechanical & Electrical Circle, I&W Dte., Govt. of West Bengal.
- 13) The Superintending Engineer, North Bengal Mechanical & Electrical Circle, I&W Dte.,
- 13) The Executive Engineer, Metropolitan Drainage Mechanical Division, I&W Dte., Govt. of West Bengal.
- 14) The Executive Engineer, Metropolitan Electrical Division, I&W Dte. Govt. of West Bengal.
- 15) The Director of Information, Department of Information & Cultural Affairs, Nabanna, Shibpur, Mandirtala, Howrah-711102 for wide circulation.
- 16) Notice Board of Mechanical & Electrical Circle.

Sd/(S.K. Dey)
Superintending Engineer
Mechanical & Electrical Circle
I & W Dte., Govt. of West Bengal.